

Proposal Details Report

6/27/2025

Customer: Roswell, NM **Bid Number:** 357 B

Representative Travis Ownby **Job Number:** TBD

Requirements Manager: **Organization:** Siddons Martin

Description: Stock 6x6 2025

Chassis: 6x6

Body: Striker Roof Turret (RT)

OptionCode	Type	Option	ProposalText
0540326		Performance Bond, Not Requested	
7000817		Build Location, Neenah, WI	
7000802		Domiciled Location, USA, Domestic	
7001931		Striker Roof Turret (RT)	
7001925	6x6		Vehicle Performance Figures/Measurements Balances and Clearances The vehicle weight will be distributed as equally as practical over the axles and tires. The difference in tire load between tires on any axle will not exceed 5 percent of the average tire load for that axle. The difference in load between axles will not exceed 10 percent of the load on the heaviest axle meeting NFPA 414 requirements using the 24R21 tire size. Approach & Departure Angles 30 degrees Inter Axle Clearance Angle 12 degrees Underbody Clearance 22.26 inches (565 millimeters) Under Axle Clearance at Differential Housing Bowl 16.5 inches (419 millimeters) Wall-to-Wall Turning Circle Diameter (Front Steer) 106 feet (32 meters) Exterior Dimensions The overall vehicle height, length, and width of the vehicle will be consistent with the rated payload and operational performance. Overall Length 475 inches (12,065 millimeters) Overall Width (Excluding Mirrors) 120 inches (3,048 millimeters) Overall Height (Top of Handrails Fully Laden) 136 inches (3,454 millimeters) *Overall vehicle height and length indicated in table is with standard height handrails and rear roof access ladder equipped* Acceleration Performance The fully laden vehicle acceleration will be from 0-50 mph (0-80 km/h) in 29 - 31 seconds depending on vehicle configuration as well as road and wind conditions. The fully laden vehicle acceleration time will not exceed 35 seconds per NFPA 414 requirements. Top Speed Performance The fully laden vehicle will have a minimum top speed of 71 mph (115 km/h) on a flat, level, improved (paved) surface. Braking Performance The brake system will meet the following performance requirements at gross vehicle weight (fully laden): Service Brake: Stopping Distance From 20 mph (32 km/h) 33 feet (10 meters) Maximum Stopping Distance From 40 mph (64 km/h) 121 feet (37 meters) Maximum Hold Fully Laden Vehicle On Grade 50% Minimum Descending 50% Minimum Ascending Emergency Brake: (Depending on vehicle configuration) Stopping Distance From 40 mph (64 km/h) 288 feet (88 meters) Maximum Parking Brake: Hold Fully Laden Vehicle on Grade 20% Minimum Descending 20% Minimum Ascending Suspension Performance An off-road, high mobility Oshkosh® TAK-4®, all-wheel independent suspension system will be provided resulting in no more than 0.5 g rms acceleration at the seat of the vehicle when traversing an 8 inch (24 centimeter) half round at 35 mph (56 km/h) without causing injury to the

operating personnel, loss of vehicle control, or damage to the vehicle. The design will allow the vehicle to travel safely at minimum off-road speeds of 35 mph (56 km/h). The Oshkosh® TAK-4®, Independent suspension system design will allow for a minimum of 16 inches (406 millimeters) of total wheel travel and is NFPA414 and 150/522-10E certified.

Gradeability

The vehicle will be able to:

Ascend a smooth, dry, paved road having a 20 percent grade and maintain a speed of at least 8 mph (13 km/h).

Ascend and descend a dry, hard surface incline having a 50 percent grade at not less than 1 mph (1.6 km/h).

Climb a vertical wall at least 18 inches (450 millimeters) high and negotiate terrain that will deflect the opposite wheels of the truck in alternately contrary directions at least 14 inches (360 millimeters).

Dynamic and Static Stability

The vehicle will meet the following stability requirements:

Side Slope Stability (Tilt Table Meeting SAE J2180)

30 degrees (58 percent grade)

Dynamic Balance (Min. Speed on 30 m (100 ft.) Radius Circle)

22 mph (35 km/h)

Capable of performing NATO double lane change at speed up to

50 mph (80 km/h)

Environmental Conditions

The vehicle will be capable of withstanding the following conditions without detrimental effect to the operation:

Dust particles, as encountered in desert areas

The corrosive effects of salt fog

Material decay from fungus and mildew

Relative humidity up to 100 percent

Ambient temperature ranging from 17.6 to 122 degrees Fahrenheit (-8 to 50 degrees Celsius)

Altitude ranging from 0 to 1,968 feet (0 to 600 meters)

Chassis Design

The vehicle frame will be designed to provide the required strength and torsional rigidity of the ARFF vehicle application. The chassis frame rail will be high strength steel alloy with a minimum yield strength of 80,000 psi (551,500 kPa) and a section modulus of 49.4 in3 (809 cm3). The main frame rails will be rectangular tube type with minimum dimensions of 12 inches (305 millimeters) by 4 inches (102 millimeters) with a minimum wall thickness of .47 inch (12 millimeters). Frames will use bolted-in crossmembers with class 10.9 metric fasteners. The minimum width to the outside of the main frame rails of an assembled chassis will be 36 inches (914 millimeters). The vehicle frame, suspension, and mounting of major components will provide for diagonally opposite wheel motion of up to 14 inches (360 millimeters) above the ground without raising the remaining wheels from the ground or causing interference. The integrity and longevity of the main frame rails will not be compromised by any welding of bracketry, suspension parts, or reinforcements.

Towing Devices

Four (4) towing hooks / eyes with shackles will be attached directly to the frame rails. Two (2) will be provided at the front of the vehicle and two (2) will be provided at the rear of the vehicle.

7001387	Paint Process
7001384	Paint, Single Color, Cab
7000872	Paint, Single Color, Body 6x6

Paint Process

The vehicle shall be painted per Oshkosh Airport Products procedures and standards per PQCP-0309. All aluminum components shall be pre-treated prior to paint using an aluminum conversion coating process. All parts of the vehicle shall be cleaned, treated and primed prior to assembly and final painting. The paint applied to the vehicle shall be a durable, single color acrylic urethane.

Cab Paint

The cab will be painted #101 Gloss Black (FLNA 40119), the fenders will be painted #35 Safety Lime (FLNA 10322), and the skidplate inserts will be painted #35 Safety Lime (FLNA 10322). Final colors and layout will be confirmed prior to vehicle construction.

Body Paint

The body will be painted #35 Safety Lime (FLNA 10322) , the chassis will be #99 Semi-Gloss Black (FLNA 41735) and the hubs will be painted #101 Gloss Black (FLNA 40119). Final paint colors and layout will be confirmed prior to vehicle construction.

7001434	Graphics, Standard Graphics Package	Reflective Striping / Graphics Striping and lettering will be provided and installed on the vehicle. The following items will be included in the standard graphics package: Four (4) 16 inch (406.4 millimeter) retroreflective graphic film unit numbers; one (1) on left side and of the vehicle, one (1) on the right side of the vehicle, one (1) on the rear of the vehicle, and one (1) on the front of the vehicle One (1) 24 inch (609.6 millimeter) retroreflective graphic film unit number on the cab roof of the vehicle The airport name in up to 6 inch (152.4 millimeter) retroreflective graphic film lettering on the left side of the vehicle and on the right side of the vehicle Two (2) up to 24 inch (609.6 millimeter) retroreflective graphic film airport logos/insignias, one (1) on the left side and on the right side of the vehicle Two (2) up to 16 inch (406.4 millimeter) retroreflective graphic film fire department logos/patches, one (1) on the left side of the vehicle and on the right side of the vehicle An 8 inch (203.2 millimeter) retroreflective graphic film horizontal band along the left side bodywork and right side bodywork An 8 inch (203.2 millimeter) retroreflective graphic film horizontal band across the rear bodywork The numbers, lettering, airport logo and/or fire department logos can have the retroreflective graphic film substituted with vinyl to align with logo complexity, marketing, airport branding requirements or end user preferences. The graphics package will be presented to and confirmed by the end user prior to approval packet submission.
7000796	Labels, w/o HRET	Labels The vehicle will be furnished with all informational, functional and safety related labels necessary for operating the vehicle and systems as required by local requirements. The labels will be in the English language.
7000551	Winterization, 50,000 BTU System With Roof Turret or R50 Snozzle	Environmental Conditions The vehicle will be capable of operation in temperatures ranging from -40 C (-40 F) to 43 C (110 F). Winterization System The vehicle will have an Espar compartment interior winterization system consisting of a diesel fueled heater, liquid to air heat exchangers and liquid circulating lines which will distribute heat to the lower body storage compartments. The winterization system will provide cold weather protection down to -40 C (-40 F). The heat output for the system will be minimum of 50,000 BTU/hr. The burner head will have an electronic control and diagnostic module. The burner head will feature a 24-volt DC electric ignition spark generator with electrodes, an integrated optical flame monitor and an overheat sensor. The burner will have a 24-volt DC electric combustion air blower. The diesel fuel pump will have an integrated solenoid actuated supply valve and will draw fuel from the main vehicle fuel tank. The burner exhaust will be routed to a safe location outside the vehicle.
7002133	Cab, Standard	Cab Ergonomics and Accessories Cab Features The cab will be 3-point mounted on rubber bushings and constructed of welded aluminum extrusions, aluminum plates and bonded fiberglass panels. The design and construction of the cab will provide the best strength to weight ratio to prevent cab collapse in the event of a vehicle rollover. The cab will comply with ECE R29-3 standards/directive for occupant protection of a commercial vehicle. The cab will include gutters of sufficient size to prevent foam and water from dripping onto the windshield and side windows during turret discharge operations. The cab will have a minimum internal volume of 275 cubic feet (7.79 cubic meters) with a lateral field of vision of 254 degrees (127 degrees left and right of center), with 90 degrees upward and 25 degrees downward visibility when measured from the center of the cab. The cab ground visibility for the driver will be a minimum nearest point of 8.8 feet (2.7 meters) in front of the vehicle. The cab will have the following features: - Control console provided between driver and officer positions - Dashboard console and gauges in front of driver position - Integrated electronic control and diagnostic systems - Interior surface coating will be a painted durable grey spatter type finish
7000576	Glass, Cab, Installation	Cab Visibility There will be a total of 7.8 m² (84 ft².) area for superior visibility of shatterproof automotive tinted safety glass installed in the cab for all windows certified to DOT and ECE 43. The window measurements will be as follows: - A tinted single-piece laminated windshield 3.99 m² (42.9 ft².) - Tinted tempered glass upper door window with surface area of 0.66 m² (7.15 ft².) - Tinted tempered glass upper rear cab window with surface area of 0.41 m² (4.44 ft².) - Tinted tempered glass front angled lower corner window with surface area of 0.34 m² (3.7 ft².) - Tinted tempered glass lower door window with surface area of 0.5 m² (4.9 ft².)
7000788	Windows, Electric/Power	Cab Door Windows The cab doors will be equipped with electric controlled slide type windows. There will be a control switch provided for each cab door sliding window that are accessible by the seated driver and turret operator. located on the center console.

7000547	Mirrors, Cab, Heated & Electric With Spotter	Cab Mirrors The vehicle cab will be equipped with two (2) Rosco 8 inch x 17 inch (203 millimeters x 432 millimeters) door mounted combination flat and convex mirrors, one (1) located on each side of the cab. The mirrors will be heated and electrically adjustable. The horizontal rotational viewing range will be no less than 60 degrees. Electrical switches for the mirror adjustment and heating feature will be provided within easy reach of the driver. Two (2) rectangular convex lens spotter mirrors will be provided on the A pillars of the cab structure to eliminate blind spots in front of the vehicle. One (1) mirror will be mounted on the left side of the vehicle and one (1) mirror will be mounted on the right side of the vehicle.
7000953	Cab Deluge System	Cab Deluge System The cab windshield will be equipped with a windshield deluge system. Four (4) brass nozzles will be spaced across the face of the cab above the windshield to distribute clear water from the vehicle water tank. The deluge system will have a 24-volt DC pump motor with an in-line strainer and will automatically drain the deluge system piping outside the compartments automatically when deactivated. The deluge system will be activated by a switch in the cab and when switched on, the windshield wipers will also be activated automatically while the system is in operation.
7000785	Step, Cab	Cab Steps There will be a heavy duty step provided below the left side and right side cab doors. The steps will include an aggressive pattern on the stepping surface to provide high traction when entering or exiting the cab. The step design will be self-cleaning so that a maximum amount of water, snow, mud or other debris can fall off or through the step. The step will be collapsible and spring loaded to allow the step to contact obstacles and ensure that the required 30 degree angle of approach at the front of the of the vehicle and return to the default shape.
7001965	Hinged Doors	Cab Doors Access to the cab will be gained with a single hinged door located on each side of the vehicle that opens at least to a 90-degree angle. Woven nylon door check straps will be installed on each door to limit opening travel. The bottom of the cab door openings will include scuff plates for surface protection.
7002136	Cab, Grab Handles, Door, Interior, Standard, Hinged Doors	Cab Door Interior Grab Handles The cab doors will have angled tubular grab handles with an integrated door opening mechanism. The door opening mechanism will be operable with a gloved hand and release the door latch when the interior button/lever is depressed. The door grab handles will have a durable single stage semi-gloss black paint applied to the surface.
7002138	Cab Trim, Interior, Insulated, w/Rubber Flooring	Cab Interior The cab will be weather-tight, acoustically and thermally insulated to provide noise level not to exceed 85 dB (A) at the driver's ear position. Foam-backed black textured rubber material will cover the interior floor of the cab. The rear wall of the cab will have vinyl covered foam material to dampen noise.
7002519	Grab Handles, Cab, Interior	Cab Grab Handles There will be grab handles covered with cushioned and slip resistant material located inside the driver's and passenger door openings to facilitate safe entry and exit from the cab. The grab handles will be placed to ensure three-point contact can be maintained.
7002134	Cab, Center Console, Ergo	Cab Center Console The cab will have an angled top center console located between the driver and turret operator seating positions. The upper surface of the center console will be angled upward toward the rear of the cab to raise the installed components to a more ergonomic height for the driver and turret operator.
7000787	Roof Hatch, Cab, Acrylic	Roof Hatch The roof hatch will be constructed from acrylic and will be located on the left side of the cab roof above the outermost seat. The roof hatch will have two (2) manual latches to secure the hatch closed and two (2) gas shocks to hold the hatch lid in the open position.
7000540	Seat, Drivers, Non-SCBA, Air, Tilt, Slide, Vinyl	Crew Space Driver Position (Center) The driver's seat will be Seats, Inc., 911 Series non-SCBA type with an integral 3-point seat belt. The seat will be air-ride adjustable, include a manual tilt seatback adjustment and a manual forward/backward slide adjustment feature. The seat cover material will be black vinyl resistant to wear and staining.

7000528	Seat, Right Turret Operator, SCBA, Non-Adjustable, Fixed, Slide, Vinyl	Right Turret Operator Seat Position The right side turret operator/officer seat will be a Seats, Inc., 911 Series SCBA type with an integral 3-point seat belt. The seat will include a fixed back design and will be a slide adjustable, non-suspension type. The seating material will be vinyl, black in color and resistant to wear and staining.
7000516	Seat, Left Inside, SCBA, Non Adjustable, Fixed, Non Slide, Vinyl	Left Inside Seat Position The left inside seat will be a Seats Inc., 911 Series SCBA compatible with an integral red 3-point seat belt. The seat will have a non-adjustable design and will be fixed mounted. The seating material will be vinyl, black in color and will be resistant to wear and staining.
7000522	Not Provided, Seat Left Outside	Left Outside Seat Position No seat will be provided in the left outside seating position.
7000507	SCBA Bracket, Ziamatic ULLH Storage Bracket	Right Inside Seat Position There will be a universal SCBA holder installed in the right inside seat position. The SCBA holder will be a Zico Ziamatic ULLH Load and Lock bracket.
7000783	HVAC, Dual, Front & Rear, Scania	Cab HVAC (Heating, Ventilation, Air Conditioning) The cab will be heated and cooled by a dual air conditioning and heating system with two (2) separate HVAC units. The controls for the HVAC will be backlit and provided to the left of the driver seating position with: A rotary control for temperature control from hot to cold A rotary control for vent control to blend from full defrost to full vent A rotary control for fan speed with OFF, LOW, MEDIUM, and HIGH positions A button to activate air conditioning with indicator light A button to activate the recirculate function with indicator light A Bergstrom HVAC unit will be incorporated into the structure of the cab dashboard and a remote Bergstrom HVAC unit will be mounted to the rear wall of the cab behind the driver seat. The dashboard HVAC unit will have an output of 22,300 BTU for cooling and 48,300 BTU for heating the remote HVAC unit will have an output of 19,000 BTU for cooling and 37,000 BTU for heating. Air Conditioning Operation The cab air conditioning system will be charged with HFC R134A refrigerant. The air conditioning system compressor will have a displacement of 313cc and will be driven by a serpentine belt drive mounted on the engine. Heat Operation The cab heating system will use a propylene glycol/water mixture. The cab heating system will be incorporated into the engine cooling system and will use coolant circulated by the engine water pump.
7000776	Siren/PA, Whelen 295SL, (1) SA315 Speaker	Siren / PA System Siren Head The vehicle will be equipped with a full function siren with public address capability. The siren will be a Whelen, Model 295SL series. The siren head will be backlit for visibility in dark or low light conditions. The siren system will include a hard wired microphone. Siren Speaker There will be one (1) Whelen, Model SA315 Series 100-watt speaker mounted at the lower portion of the front skidplate assembly.
7000774	Air Horns, Dual Bendix	Air Horns There will be dual Bendix air horns mounted underneath the cab, forward of the driver. The air horns will be activated by a switch located in the center of the steering wheel.
7000495	Control, Footswitches, Air Horn & Siren, Driver & Turret Operator	Foot Switches Driver Position There will be two (2) foot switches provided in the cab at the driver seating position. One (1) foot switch will activate the vehicle air horns and one (1) foot switch will activate the siren or public address system. Turret Operator Position There will be two (2) foot switches provided in the cab at the turret operator seating position. One (1) foot switch will activate the vehicle air horns and one (1) foot switch will activate the siren or public address system.
7002920	Camera, Thermal Imaging, Fixed, Roof Turret Mounted, FLIR MD625 NFPA2020	Video Systems Thermal Imaging Camera There will be a Teledyne FLIR, MD-625, NFPA 2020 compliant thermal imaging camera fix mounted to the roof turret. The thermal imaging camera will aid the driver and crew during complete darkness, severe weather, smoky, foggy or other low visibility conditions. The camera will follow the turret movement for rotation and elevation.

7000772	Camera, Rear Facing w/Vertical Ladder	Rear Navigation Camera There will be a rear facing navigation camera to aid in movement while traveling in reverse or to view the area directly behind the vehicle. A compact, fixed image color camera will be provided and will feature LED infrared illuminators to enhance the visible image in low-light situations. The infrared LEDs will have automatic day/night sensing to adjust the image in all lighting conditions. The camera will be mounted at the midpoint of the rear ladder, will activate automatically when the vehicle is placed in reverse and will have a manually activated switch in the cab. The camera image will be shown on the in-cab 12 inch (304.8 mm) color display.
7000927	Instruments, Standard	Controls All instruments, warning lights and controls relative to truck operation will be displayed to the left of the driver so that they will be useful, convenient, and visible to the driver. All instruments, warning lights and controls relative to the firefighting system will be displayed to the right of the driver for center steer so that they will be ergonomic, convenient, and visible to both the driver and the officer (turret operator). Agent activation to be clearly identified with color coded switches providing the operator immediate identification of the agents. Blue will identify water, Yellow will identify water/foam, and Purple will identify dry chemical powder. There will be a 12 inch (304.8 mm) display provided in the center of the cab control panel to aid the driver and turret operator. The display will show pump pressure, water levels, foam levels, roof turret position as well as diagnostics with fault codes. The display utilizes the Oshkosh designed control electronics which is CAN based and uses D-Series modules. The display can be user customizable and be programmed for any language. The following cab mounted controls will be provided as a minimum: - Accelerator Pedal - Air Conditioner Controls - Brake Pedal - Color Coded Complementary Agent / System Activation - Rotary Differential Lock Control - Dome Light Switch Manual / Door Activated - Foam Concentrate Reservoir Control Valve - Headlight Switch w/ Dimmer Control - Heater / Defroster Controls - Horn Control - Master Electrical Disconnect Switch (located in engine compartment) - Panel Lights Switch with Dimmer - Parking Brake Control - Power Adjustable Mirror Control - Rotary Ignition Start/Stop Switch - Siren Switch with Microphone - Switches for Emergency Beacon(s) / Strobe(s) - Switches for Exterior Lights - Switches for Non-Emergency Amber Beacon(s) / Strobe(s) - Tilt / Telescoping Steering Wheel Column - Transmission Range Selector - Turret Control - Windshield deluge - Windshield Wiper and Washer, column mounted - Cup Holders - Hand throttle Instruments and Warning Lights The following instruments and warning lights will be provided in the cab: - Air Pressure (brake and other air-driven accessories) - Complementary Agent Tank-Charged Indication - Beacon / Strobe Indicator (s) - Foam Agent Tank Level Indicator - Water Tank Level Indicator - Water Pump Pressure - Low Air Pressure Warning - Compartment Door Open Indicator - Differential Lock Indicator - Engine Coolant Temperature - Engine Tachometer - Fuel Level - Headlight Beam Indicator - Speedometer / Odometer - Voltmeter - Low Engine Coolant Audible / Visual Alarm - Digital clock - Low Oil Pressure / High Water Temperature Audible / Visual Alarm - Complementary Agent System Pressure Indicator - Two (2) 12-volt DC accessory power outlets, one (1) each side - Two (2) 5-volt DC USB A ports, one (1) each side
7001191	Gauges	
7000769	LG Alert	Lateral Accelerometer There will be an electronic rollover warning system provided. The system will detect "g" forces exerted on the vehicle. A display will be integrated into the vehicle dash in view of the driver and include an audible alarm. The sensor base unit will be installed in an easily accessible location within the cab.

7000767	MADAS, Data Logger System, TAK-4 Axles - Scania	Monitoring and Data Acquisition System (MADAS) A Monitoring and Data Acquisition System (MADAS) which is an electronic vehicle system analyzer that constantly records preprogrammed vehicle characteristics will be installed for the collection of various performance measurements to monitor, as a minimum, the following: - Vehicle speed - Transmission gear - Vehicle heading - Lateral acceleration - Vertical acceleration - Longitudinal acceleration and deceleration - Brake Application - Engine rpm - Throttle position - Steering input - Vehicle braking input (pedal position and brake pressure) - Date, time, and location for all data collected The MADAS system will record information and store the critical period of time including 120 seconds before an event and 15 seconds afterwards. It will require a customer supplied portable PC. The MADAS system will include software to download and to use the data. The MADAS system will require no operator input, and until it is triggered by an event all of its' operation will be fully automatic. When an event occurs, the MADAS will provide a fault code to the operator on the main display screen in the cab. When active and ready to record vehicle attributes, it will report that to a visual indicator in the cab. The MADAS system will be capable of recording a minimum of thirty events. Data logger capacity will be indicated to the operator via the main display. Access to the memory for downloading, viewing or deleting will require a pass code. The data software will include native features such as graphing analyses. The system will be designed so that the data being recorded will not be lost or overwritten immediately after the incident due to the use of an emergency shut-off or a master electrical disconnect switch.
7000765	Lighting, Vehicle FMVSS	Electrical System Lighting and Marking System The vehicle will be equipped with lighting designed and installed to be compliant with requirements of Federal Motor Vehicle Safety Standard - FMVSS 108. Clearance / Marker Lighting All clearance and marker lights will be LED type, 24-volt DC. The lights will be placed in the required locations at the front, sides and rear of the vehicle. A minimum of four (4) amber LED side marker lights will be located on each side of the vehicle. One (1) red LED marker light will be located on each side of the vehicle nearest to the rear. Five (5) amber LED clearance lights will be mounted at the front of the vehicle. A centered high mount red LED brake light will be installed at the rear of the vehicle and a series of five (5) red LED clearance lights will be mounted at the rear across the top of the bodywork. Turn Signal Indicators Amber LED lights will be integrated into the headlight placed at the front bumper to function as front marker and turn signal indicator lights. Two (2) LED light assemblies will be installed at the rear of the vehicle with integrated reverse, stop, tail and turn light functions. The amber turn signal indicators will be located at the outside edge of each assembly, the red tail/brake lights will be located in the middle and clear backup lights will be located to the inside of the housing. The turn signals will be self-cancelling by the cancel cam in the steering column.
7000475	Lighting, Headlights, LED, FMVSS/ECE, RH Traffic w/DRL	Headlights There will be two (2) FMVSS/ECE compliant LED headlights installed, one (1) on each side at the front of the vehicle. The headlights will be certified for local requirements for right-hand traffic (RHT/left-hand steering). A rotary headlight activation switch will be provided on the dashboard and a high/low beam headlight dimmer switch will be provided on the steering column. The headlights will include a daytime running light (DRL) feature. When the transmission is shifted into neutral and the parking brake is set the daytime running lights (DRL) will be deactivated automatically.
7000743	Lighting, Headlights, Alternating, Wig-Wag, W/Mstr Wrn Swt Wig-Wag Swt	Headlight Alternating Flash The high beam headlights will have an alternating flash emergency lighting function. An activation switch will be provided in the cab emergency lighting switch panel to control the high beam flash. The headlight flash switch will be enabled only when the ignition and master warning light switches are both in the on position. The alternating flash functions will automatically be deactivated when the headlight switch is active and the high beam headlights are activated.
7000762	Lights, Ground, LED (8)	Ground Lighting There will be ground lighting installed under the vehicle to illuminate the adjacent ground/work area. The ground lights will be IP 68 rated Luma Bar white LED strip lights encased in aluminum housings. There will be an ON/OFF ground lighting activation switch located in the cab and in addition, the ground lighting will only operate with the parking brake applied and transmission in neutral. The eight (8) lights will be distributed as follows: - Two (2) under the cab doors, one (1) on each side - Four (4) under the body compartments, two (2) on each side - Two (2) under the rear of the vehicle, one (1) on each side aimed rearward

7000760	Lights, Fog/Driving, FMVSS/ECE	Fog / Driving Lights There will be two (2) LED driving lights and two (2) LED fog lights. The lights will be mounted one (1) of each on the left side and one (1) of each on the right side in a common recessed bezel. The fog lights will be located at the front of the vehicle directly below the headlight assemblies. The fog and drive lights will be activated by switched located on the cab dashboard to the left side of the driver.
7000822	Lighting, Accent Lights, LED	Skidplate Accent Lights Two (2) 24-volt DC strip lights will be installed on the front skidplates, one (1) on the left side and one (1) on the right side. The lights will operate as additional marker lights.
7000471	Lighting, License Plate, (1) Left Front & (1) Left Rear w/Bracket	License Plate Illumination There will be two (2) license plate brackets with LED lights provided on the vehicle to install standard U.S. sized license plates. One (1) license plate bracket with LED illumination will be installed on the left the front skidplate and one (1) license plate bracket with LED illumination will be installed at the left rear of the vehicle. The license plate lights will be activated with the marker lights.
7000757	Cab Worklights, 24VDC, (2) JW Speaker 7250T	Cab Scene / Worklights There will be two (2) 24-volt DC J.W. Speaker 7250T light emitting LED front worklights provided above the cab windshield. The spotlights will have a trapezoidal beam pattern with an output of 3,150 raw lumens and an output of 1,400 effective lumens. The light housings will be constructed from black polycarbonate and the lens will be clear polycarbonate. The cab worklights will be activated from an ON/OFF momentary rocker switch in the cab.
7000756	Side Worklights, 24VDC, JW Speaker 7250T, (2) LH & (2) RH	Scene / Worklights - Side There will be four (4) 24-volt DC, J.W. Speaker LED side worklights provided on the vehicle. Two (2) lights will be installed on the left side of the vehicle and two (2) lights will be installed on the right side of the vehicle. Each worklight will have a trapezoidal beam pattern with an output of 3,150 raw lumens and an output of 1,400 effective lumens. The light housings will be constructed from black polycarbonate and the lens will be clear polycarbonate. The rear worklights will be switched from an ON/OFF momentary rocker switch in the cab and from an external ON/OFF momentary toggle switch on each side of the vehicle. The exterior toggle switches will activate the worklights on their respective sides.
7000755	Rear Worklights, 24VDC, (2) JW Speaker 7250T, LED	Scene / Worklights - Rear There will be two (2) 24-volt DC J.W. Speaker LED rear worklights provided at the top of the of the vehicle bodywork. The spotlights will have a trapezoidal beam pattern with an output of 3,150 raw lumens and an output of 1,400 effective lumens. The light housings will be constructed from black polycarbonate and the lens will be clear polycarbonate. The rear worklights will be switched from an ON/OFF momentary rocker switch in the cab and from an external ON/OFF momentary toggle switch at the rear of the vehicle accessible from ground level. The lights will automatically illuminate when the vehicle is shifted into the reverse gear.
7000747	Lights, Perimeter Warning, Red LED, Whelen 700 Series, Qty (10)	Warning Lights Perimeter Warning Lights There will be ten (10) Whelen, 700 Series, 3 inch (76.2 millimeter) x 7 inch (178 millimeter) red LED warning lights installed around the lower perimeter of the vehicle at or near bumper height. Three (3) lights will be installed on the left side, three (3) lights will be installed on the right side, two (2) lights will be installed at the front and two (2) lights will be installed at the rear of the vehicle. The perimeter warning lights will be switched independently from upper warning lights.
7000432	Lights, Warning, Top Stand-By, (2) Whelen, L40AP, Amber LED	Standby Lighting There will be two (2) Whelen, Model L40AP, amber LED standby beacon lights with amber dome located on the roof of the vehicle. The lights will be located close to the mid-point of the water tank, one (1) on the left side and one (1) on the right side for 360-degree visibility and switched from within the cab.
7000423	Lights, Warning, Upper Front, LED Beacons, (2) Whelen, L40RF	Front Upper Warning Lights There will be two (2) Whelen, Model L40, red LED warning beacon lights installed on the roof of the vehicle near the front of the body. One (1) light will be installed on the left side and one (1) light will be installed on the right side. The lights will be activated with the upper warning light switch in the cab.
7000414	Lights, Warning, Upper Rear, LED Beacons, (2) Whelen, L40 Series	Upper Rear Warning Lights There will be two (2) Whelen, Model L40BF, red LED warning beacons installed on the roof of the engine cowl at the rear of the vehicle. One (1) beacon will be installed on the left side and one (1) beacon will be installed on the right side. The upper rear warning lights will be activated by a switch in the cab on the left side of the dash panel.

7000751	Lighting, Compartment, MaoMao, LED, White	Compartment Lighting There will be 24-volt DC white LED strip lighting provided to illuminate the interior of the compartments. The compartment lighting will be switched with the opening or closing of the roller shutter door with the ignition in the "ON" position. Each compartment will have a magnetic switch to activate and deactivate the compartment lights when the doors are opened or closed. An indicator light in the cab will illuminate when a compartment door is not in the closed position to alert the driver. If the parking brake is released, or the vehicle shifted out of neutral an audible alarm will sound and the compartment door indicator light will flash.
7001935	Generator, Harrison 10 kW Hydraulic, 60 Hz	Power Generation There will be a Harrison 10kW, 120/240-volt AC, 60Hz power generator on the vehicle placed in the right rear lower body compartment with full and easy access for maintenance and inspection. The generator will be hydraulic type powered from an on-board PTO and hydraulic power source and be switched from within the cab. An output display and circuit breaker panel will be located adjacent to the generator. The generator will be equipped with an automatic shut-down based on the following conditions: Frequency Too High Frequency Too Low Invalid speed signal from integral hydraulic motor
7000451	Not Provided, Lighting, Cab Floodlights	
7000448	Lighting, Side Floodlights, 120VAC, Tele, (1) Ea/Side FRC K20 LED, Wht Housing	Side Mounted Widelights There will be two (2) FRC Spectra, model K20, 20,000 lumen, 120-volt AC LED widelights with white housings provided, one (1) on each side of the vehicle. The lighthead will be adjustable, mounted on manually raised telescopic poles. The lights will be powered by the on board generator electrical system and activated by a switch on the center console in the cab. An indicator light in the cab will illuminate when the lights are not in the stowed position to alert the driver.
7000748	Not Provided, Rear Floodlights	
7000439	Outlets, Compartment, 120VAC, 15A GFI, Duplex, Strt Bld/Twist Lock, (1) Ea/Side	Outlets There will be two (2) 120-volt AC, 15-amp duplex receptacles with one (1) NEMA L5-15R twist-lock outlet and one (1) NEMA 5-15R straight-blade outlet provided, one (1) on each side of the vehicle mounted to the rear wall of the front lower body compartments. The outlets will have hinged weatherproof covers and be GFI protected. The compartment outlets will receive power from the on-board generator.
7001348	Batteries, Standard, Lead Acid	Power Supplies A 24-volt DC vehicle electrical system will be provided. The vehicle DC power will be supplied by a two (2) alternator charging system with a minimum output of 100 amps each. A warning system will be provided in the cab to indicate an alternator failure. The electrical system will include the following: Four (4) group 31, 12-volt DC maintenance free, top post, flooded lead-acid batteries with a minimum of 950 CCA @ 0 degree F (each) and 190 minutes of reserve capacity @ 25 amps. A warning label will state that connecting incorrectly to a 12-volt DC system will cause electrical system damage. Color coded, heavy duty, insulated battery and ground cables with wire code numbers. A backlit remote voltmeter will be installed adjacent to the batteries to read the battery state of charge. An engine start disable switch will be provided in the left side engine compartment that will prevent the vehicle from being started from the cab during routine maintenance. A lockable total vehicle master electrical disconnect switch rated for full vehicle current to completely de-energize the DC electrical system after the switch. Unused electrical distribution connectors or components located on the walls of the upper and lower compartments will have sturdy protective coverings installed to prevent unwanted contact with stored gear.
7000740	Battery Charger, 85-265 VAC, 25 Amp, 45-65 Hz	Battery Charger There will be a Delta Q, 120/220-volt AC, 60/50 Hz waterproof battery charger installed in the right rear engine compartment to maintain the chassis batteries. The charger will incorporate a microprocessor controller and will charge and maintain the batteries automatically.
7000742	Auxiliary Air Compressor, 110V, 50/60 Hz	Auxiliary Air Compressor There will be an on board auxiliary air compressor provided to maintain the vehicle's air system pressure powered by the AC inlet connection. The auxiliary air compressor will be mounted on the interior of a compartment. The compressor will be the rocking piston type and will have two (2) aluminum cylinders with an inlet air filter. The air compressor drive will be a totally enclosed, 1/2 horsepower, 120-volt AC motor with capacitor start and thermal protection. The design of the air compressor will allow for minimum vibration to be transferred to the mounting surface.

7000739	Engine Preheater, 110/120V, Scania Engine	Engine Coolant Preheater There will be one (1) 110/120-volt AC, 1500-watt engine coolant preheater with thermostat provided to heat and maintain engine temperatures of approximately 100-120 degrees Fahrenheit (38-49 degrees Celsius). The preheater will be connected to and powered by the shoreline inlet on the vehicle.
7000734	Receptacle Inlet, Auto-Eject, Rear, 110V/20A, Batt Chrgr & Cmpr, Sepr EngPrht, YI	Receptacle Inlets There will be two (2) Kussmaul™, 20-amp, 120-volt AC shoreline inlets provided to operate the dedicated 120-volt AC circuits at right rear of the vehicle. One (1) shoreline will be connected to the battery charger and auxiliary air compressor and one (1) shoreline will be connected to the engine pre-heater. The shoreline inlets will include yellow weatherproof flip up covers. There will be a release solenoid wired to the vehicle's starter to eject the AC connectors when the engine is starting. There will be two (2) mating connector bodies supplied with the loose equipment. There will be a label installed near the inlets stating the following: Line Voltage Frequency Load(s) connected to the circuit
7000396	Battery Jumper Studs	Auxiliary Start Feature There will be 24-volt DC positive and negative posts for jump starting the vehicle provided in the right engine access compartment. The jumper studs will be located adjacent to the battery box and will have removeable color coded protective plastic covers; a red cover for the positive stud and a black cover for the negative stud.
7000732	Air Inlet Receptacle, Rear, Auto-Eject, Kussmaul	Air Inlet Receptacle There will be a pneumatic inlet with yellow weatherproof cover located at rear of the vehicle provided to maintain vehicle air pressure when connected to an external pressurized air source. The air inlet connection will be a quick disconnect type with a check valve installed to prevent air from bleeding out the connector when disconnected. There will be a release solenoid wired to the vehicle's starter to automatically eject the air inlet connection when the engine is cranked. A quick release air inlet connection will be provided and shipped with the loose equipment to install on the compressed air line and the end user's facility.
7000728	Not Provided, Air Outlet Receptacle	Air Outlet Receptacle No air outlet receptacle is required.
7000897	Standard Pump & Roll Speed Engine Up To 700HP	Pump and Roll The vehicle will be capable of pump and roll operations up to 20 mph (32 km/h) on a hard, level, improved surface.
7000386	Engine, Scania DC16/V8, 670 HP, Tier 4f	Engine and Accessories Engine There will be a certified EPA Tier 4f, Stage IV, Scania, Model DC16, water cooled V8 design engine with a displacement of 16.4 liters. The engine will produce a maximum of 500 kw (670 hp) and electronically limited to 2,644 Nm (1,950 ft. lbs.) of torque at 2,100 RPM. The engine will have common rail fuel injection system and will be equipped with a single turbo charger with an electronic fuel management system. The engine will have a Selective Catalyst Reduction (SCR) system for the mitigation of engine emissions. The urea tank will be located in the left rear engine cover compartment with a minimum capacity of 27 gallons (102 liters). An engine high idle control will be provided to maintain the engine idle at approximately 1,450 rpm when activated. The control for this system will be safety interlocked to activate only after the transmission has been placed in the neutral position and the parking brake has been set. An electronically controlled engine governor will be provided and set to limit engine speed so that it will not exceed the maximum rpm recommended by the engine manufacturer. Transmission There will be an Allison, EVS-4800 Series, planetary type, fully automatic, electronic controlled seven-speed transmission provided. The shift pad for the transmission will be located in the cab to the left of the driver seating position with backlit switched and a gear indicator display. The transmission will be separate from the transfer case and located at the rear for easier maintenance. The seven-speed transmission creates better gear ratios, smoother shifting, and less wear and tear on drive components. The transmission level dipstick will be located in the left rear engine cover compartment. A single speed transfer case with lockable differential will be provided to supply power to both the front and rear axles. The driveline will be composed of heavy duty metal driveshafts with universal joints at each connection yoke. Power Divider There will be a power divider to allow the pump to be engaged at any speed or engine RPM and in any gear which is automatically activated for pump operation when the pump switch is engaged from the cab. When in pump mode, the pumping RPM will increase automatically only after a discharge orifice is opened, to minimize heat build-up during standby operation.

7000813	Air Cleaner, Scania Tier 3 & 4f, Single Stage	Engine Air Cleaner The engine will be equipped with an easily replaceable canister type single stage air filter with a pleated paper element. The engine fresh air inlet will have a bonnet installed on the intake piping to shed water and will be located on the roof of the vehicle.
7000812	Exhaust, Strt Outlet, Scania Tier 4f Stainless Steel w/Stainless Steel Cap	Exhaust System The vehicle will have a vertical stainless steel exhaust stack with a rain cap. The exhaust outlet will be located on the roof of the vehicle.
7000811	Pump, Electric Fuel Priming, Scania	Fuel Priming Pump The vehicle fuel system will be equipped with a 24-volt DC electric fuel priming pump. The activation switch will be located on the interior of the left engine compartment near the fuel filters.
7000810	Mudflaps	Mudflaps There will be a rubber mud flap provided behind each wheel well to minimize the amount of road debris cast behind the vehicle by the tires.
7000809	Chassis Air, FMVSS, TAK-4 Axles 6x6	Chassis Air The vehicle will be equipped with a Bendix, Model AD-IS, air dryer. The air dryer module will include an integrated air dryer, a reservoir, a governor, a heater and four (4) pressure protection valves. The air dryer will incorporate a spin-off replaceable desiccant cartridge. The chassis air system will be supplied by color coded nylon tubing and will have circuit numbers printed on each section of line for easy identification. The color coding on the air lines will be as follows: Red will represent the primary air circuit (rear brakes) Green will represent the secondary air circuit (front brakes) Orange will represent the parking brake and cab air inlet circuit Yellow will represent the parking brake air delivery circuit Blue will designate auxiliary air circuits (air-ride seats, firefighting system air supply, chassis accessories, etc.) Black will represent the rear air inlet and air system drains
7000808	Fuel Tank, 90 G (341 L), Aluminum	Fuel Tank Capacity The fuel tank will be constructed from formed and welded aluminum with a fluid capacity of 90 gallons (341 liters). The fuel tank will have a bottom drain plug and the filler pipe will be located no higher than 60 inches (152 centimeters) from ground level. The fuel fill will be located in the left rear engine compartment. The fuel tank cap will have provisions to install a lock to prevent the cap from being removed. An anti-drain vent valve will be installed on the fuel tank to prevent fuel spillage in the event of a rollover. A fuel water separator with drain valve will be provided for the main engine. A label will be provided near the fuel fill indicating that diesel fuel is required.
7000807	Steering System, TAK-4 Front Axle w/Rear Steer, 120WB, FMVSS, 6x6	FMVSS Steering & Suspension System The front and rear axles will have adequate capacity to carry the fully loaded vehicle under all intended operating conditions. For vehicle handling, stability and off-runway performance, the axles will have an identical track width of 96 inches (244 cm). The axles will consist of the following: Front Axle - 31,000 pounds (14,061 kg) rating, double reduction (axle housing and wheel end), enclosed steering drive ends, bevel gear differential with driver operated differential lock. Rear Axle - 62,000 pounds (28,123 kg) rating, double reduction (axle housing and wheel end), bevel gear differential with driver operated differential lock. The suspension will incorporate the following design elements: Upper and lower control arms will be used on each side of the axle. Each axle will be equipped with an anti-roll bar for increased cornering stability. Steering and non-steering axles will have an adjustable tie rod for alignment of the wheel to the center of the chassis. Each wheel position will have at least one (1) coil spring and one (1) heavy-duty dual acting shock absorber. All pivot and joints will be designed to meet the 20-year service life of ARFF vehicles and include only two (2) grease points per wheel and with proper Oshkosh factory alignment does not require special maintenance. An off-road, high mobility Oshkosh TAK-4, all-wheel Independent suspension system will be provided resulting in no more than 0.5 g rms acceleration at the seat of the vehicle when traversing an 8 inch (24 cm) half round at 35 mph (56 km/h) without causing injury to the operating personnel, loss of vehicle control, or damage to the vehicle. The design will allow the vehicle to travel safely at minimum off-road speeds of 35 mph (56 km/h). The Oshkosh TAK-4, Independent suspension system design will allow for a minimum of 16 inches (406 mm) of total wheel travel. The chassis will be equipped with power assisted FMVSS compliant steering that will permit manual steering to bring the fully loaded vehicle to a safe stop in the event of power assist failure. A tilt / telescoping steering wheel will be provided. To facilitate a tight cornering radius, to reduce tire scrubbing on the rear tandem, and to provide maximum tire life, the rear most axle in a tandem axle configuration will be steerable and interfaced with the front axle steering by mechanical linkage. The rear steering will be active at all times regardless of vehicle speed.

7000805	Brakes, Drum Brakes, TAK-4 Axle, 120 WB, No CTI, NFPA, 30 Deg Tilt, 6x6	Brake System The vehicle will be equipped with a dual air braking system including front and rear brakes with an overall vehicle tread width of 3,048 mm (120 in.) in accordance with FMVSS 121 Legislation. The brakes will be drum type and equipped with automatic brake adjusters, to be clutch and worm drive type. The system will feature a dual type brake treadle valve with separate supply and delivery circuits. The system to include an all-wheel, split-circuit, powered-assisted service brake, a modulated emergency brake, and a parking brake. There will be a 6S-6M electronic antilock brake system with a sensor and modulator at each wheel controlled by an electronic control unit (ECU). The ECU will monitor wheel speed during braking and modulate the brakes when excessive wheel slip or lockup is detected. The ECU will blend the feedback from steering wheel ends to reduce steering wheel pull during an ABS event. There will be a provision for ABS diagnostics provided. The brake system will have the following features: A Bendix AD-IS, automatic air-drying system downstream of the compressor. Air brake chamber for each brake with self-adjusting mechanisms. Drain on all reservoirs controlled from one (1) common location on the exterior of the vehicle. Three (3) quarter-turn air drain valves will be located on the side of the vehicle below the left rear lower body compartment. Visual and audible low air pressure warning device. A manual parking brake valve will be installed in the cab within easy reach of the driver. The brake system will meet the following design requirements: Capacity to increase air pressure in the supply and service reservoirs from 85 to 100 psi (552 to 690 kPa) when the engine is operating at the vehicle manufacturer's RPM in less than 25 seconds. Capacity for buildup of tank pressure from 0 psi (0 kPa) to the pressure required to release the spring brakes within 15 seconds relying solely on vehicle air compressor. Have a volume 12 times the total combined brake chamber volume at full stroke. The brake system will meet the following performance requirements at gross vehicle weight (fully laden): Service Brake: (Depending on truck configuration) Stopping Distance from 20 mph (32 km/h) : Maximum 33 feet (10 meters) Stopping Distance from 40 mph (64 km/h) : Maximum 121 feet (37 meters) Hold Fully Loaded Vehicle: Minimum 50% Grade Ascending & Descending Emergency Brake: (Depending on truck configuration) Stopping Distance from: 64 km/h (40 mph): Maximum 288 feet (86 meters) Parking Brake: Hold Fully Loaded Vehicle: Minimum 20% Grade Ascending & Descending
7002973	Tires, Techking 24R21, No Beadlocks 6x6	Wheel and Tire Assembly The vehicle will be equipped with TechKing, Model ETMT, size 24R21 all-terrain radial tires. The tires will be tubeless type with full width steel belting and tread non-directional, mounted on steel wheels.
7000326	Tires, Spare, Techking 24R21, Silver with Drum Brakes, No Beadlocks	Spare Tire The quantity of spare tire and wheel assemblies included with the vehicle and shipped loose will be one (1) Each spare tire and wheel assembly will be composed of one (1) new and unused Techking 24R21 ETMT tire and one (1) new wheel assembly. Each spare tire and wheel assembly will be interchangeable with any wheel position on the vehicle.
7001475	Paint, Wheels, Techking	Wheel Paint Color The wheels will be painted #101 Gloss Black (FLNA 40119).
7000725	No Upper Ladder	Upper Mounted Equipment Top Mounted Ladder No ladder or vehicle mounted ladder storage brackets will be provided.

7000722	Dry Chemical, 550 lb (250 kg)	Firefighting System Complementary Agent System Dry Chemical System Agent Container and Components There will be a 550 pound (250 kilogram) capacity dry chemical extinguishing system provided. The powder vessel will be capable of holding potassium based, sodium bicarbonate or other commercially available dry chemical fire extinguishing agents. The weight held in the powder vessel will be dependent on the density of the powder chosen by the end user. The system will include piping, valves, fittings, components necessary for the storage and discharge of dry chemical complementary agent. The container will be constructed and stamped in accordance with ASME Code for Unfired Pressure Vessels. An over pressure safety valve will be integrated into the system. The system will include the following: Quick acting agent system activation controls will be easily accessed by the seated driver and at least one (1) other crew position. Similar controls will be located near the agent handle (if equipped). Cab mounted pressure indicators will be installed that, when the system is activated, will allow the vehicle operator to determine the propellant reservoir pressure as well as the system operating pressure. There will be system clean out / blowdown provisions utilizing the propellant for purging dry chemical agent from all discharge piping and hose after use, saving the remaining dry chemical powder in the vessel. There will be a feature to "fluff" the dry chemical powder within the storage vessel to prevent caking. The procedure will not require the system to be opened or discharge any powder. A 24-volt DC electric winch will be provided to lift and lower the nitrogen cylinder from the ground level to the stored position. The design will be such that it will allow the operator to perform the nitrogen cylinder servicing without the need for any heavy lifting. Remote LED bar graph type pressure gauges will be provided in the cab on the firefighting display to indicate system operating pressure and the propellant cylinder pressure. Propellant, Propellant Containers and Components The propellant gas will be dry nitrogen. All propellant gas cylinders and valves will comply with United States Department of Transportation (DOT) requirements (if provided with the vehicle from the manufacturer). The propellant gas cylinder(s) will be stored vertically and will be easily loaded and removed with the assistance of the integrated lifting device and cylinder guide. One (1) propellant cylinder lifting cradle will be supplied with the system for vehicle storage of one (1) cylinder. A lifting cradle constructed from formed and welded aluminum will be provided. The lifting cradle will be utilized as part of the propellant cylinder storage within the compartment. After the lifting cradle is moved into the storage position there will be a bracket installed to retain the cradle. The cradle will remain installed in the vehicle until the propellant cylinder requires service or replacement.
7000718	Dry Chemical Fill Funnel	Dry Chemical Fill Funnel There will be one (1) dry chemical fill funnel provided and shipped loose with the vehicle. The funnel will measure approximately 18 in. (457 mm) high, 17 in. (432 mm) in diameter at the top opening and 3.75 in. (953 mm) at the bottom opening.
7000721	Nitrogen Cylinder, 400 Cubic/Ft., Full	Nitrogen Propellant Cylinder There will be one (1) full 400 ft³. (11,327 liter) when pressurized to 2,640 psi (182 bar) Nitrogen cylinder(s) provided and mounted in the truck with a pressure gauge and removable carrier. All propellant gas cylinders and valves will comply with United States Department of Transportation (DOT) requirements. Propellant gas cylinder(s) will be stored vertically and must be easily loaded and removed with the assistance of an integrated lifting device and cylinder guide.
7000296	Spare Nitrogen Cylinder, 400 Cubic/Ft., Empty	Spare Nitrogen Cylinder There will be one (1) empty 400 ft³. (11,327 liter) when pressurized to 2,640 psi (182 bar) dry nitrogen propellant gas cylinder(s) with pressure gauge provided and shipped loose with the vehicle.
7000274	Foam System, 3% Around The Pump w/ECO	Water and Foam Systems Around the Pump Foam Concentrate Proportioner The vehicle will be equipped with an "around the pump" (ATP) foam proportioning system capable of metering select 3% foam concentrates in accordance with NFPA. Provisions for flushing the foam system with clean water will be provided. A proportioning plate for 6% foam concentrates will be provided mounted in the left rear lower body compartment of the vehicle. Oshkosh Eco-EFP™ Foam Measurement System A secondary surrogate foam testing system will be provided to measure the foam proportioning system performance from every discharge on the vehicle without necessitating the actual discharge of foam into the environment. The system will measure discharge flow rates for each discharge on the vehicle. The system will be fully on-board, integrated into the vehicle plumbing and the around the pump foam proportioning system. It will measure both the solution and foam fluid flow rates using only water. The system will have ability to archive foam test data for all individual discharges and provide a time and date stamp for up to three (3) years of data. An electronic display will be placed near the water pump in the left rear lower body compartment. The display will provide access to view or control system settings, diagnostics functions, current and historical data and system test function. A USB port will be provided to download digital data.

7000265	Foam Fill, LH, LH Pneumatic Transfer Pump, Fill/Drain Inlet w/Bypass	Foam Transfer Pump There will be a Yamada, Model NDP-20, pneumatic diaphragm foam transfer pump permanently mounted in the left rear lower body compartment. The foam transfer pump will have the capability to fill or drain the vehicle foam concentrate tank. The foam transfer pump will share the primary inlet/drain connection on the left side of the vehicle and will have a selectable valve to bypass the foam transfer pump in the compartment. Foam System Piping There will be one (1) 1.5 in. (38 mm) NSFHT threaded combination foam reservoir fill/drain connection provided on the left side of the vehicle below the left rear lower body compartment.
7000261	Foam Fill Plugs, 1.5" (38 mm) NSFHT Plug w/Link Chain	Foam Fill/Drain Connection The foam fill/drain connection(s) will include one (1) 1.5 in. (38 mm) NSFHT threaded plug(s) with link chain to retain the plug(s) when removed.
7000711	Lights, Foam Tank Level, Left & Right Exterior, No Label	Foam Tank Level Lights There will be four (4) LED foam tank level indicator lights provided on the upper exterior of the left side and right side of the vehicle. The level lights will be vertically stacked and will include the following colors top to bottom: amber, amber, amber, red
7000250	Structural System, 2.5" & 5" (64 mm & 127 mm) w/Aut Suct & Fill Frn Drft, 2K Pmp	Structural Fire Fighting System and Control Panel There will be a Class "A" structural firefighting system capable of 1,000 gpm (3,785 lpm) discharge with fill from draft feature and priming pump provided. All primary pump suction, controls and operator panel will be located in the left rear lower body compartment with a roll-up door for easy access. One (1) 6 inch (152 millimeter) NPT male pump suction inlet connection equipped with a .25 inch (6.35 millimeter) strainer will be installed in the left rear lower body compartment. A mating cap will be provided that will be capable of withstanding pressures of 500 psi (34.5 bar). A manually operated 2.5 inch (64 millimeter) pump suction inlet connection will be installed in the left rear lower body compartment. The pump suction inlet connection types will be described later in this specification. An auto-suction valve will be installed on the large diameter pump suction inlet.
7000707	Display, Structural, Left Side Body Compartment	Structural Panel Display A pump operator's station with LCD display and switch panel will be provided in the left rear lower body compartment. The panel will include at a minimum the following gauges: Engine tachometer gauge Pump discharge pressure gauge Pump suction pressure gauge Engine oil pressure gauge Engine coolant temperature gauge Water tank level gauge Foam tank level gauge The following functions and devices will be provided as part of the structural panel: Manually adjustable pilot relief valve with strainer A mechanical switch to control the operation of the priming pump (if equipped) Structural panel activation switch Water tank valve open / closed switch A means of selecting water or foam induction for discharge Pressure governor / Engine RPM control Increase / Decrease hand throttle or system pressure switch Preset / Idle switch Panel illumination Flush mode activation switch
7000239	Structural/Suction Cap & Plug, 2.5"&4.5" (64mm & 114mm) NSFHT w/AutoSctVa w/Link	Structural Pump Suction Inlets Large Diameter Inlet The left large diameter pump suction inlet will have a 4.5 inch (114.3 millimeter) NSFHT male connection with female blind cap. The blind cap will have a link chain tether. Small Diameter Inlet The small diameter pump suction inlet will have a 2.5 inch (64 millimeter) NSFHT female swivel coupling with a male blind plug. The blind cap will have a link chain tether.
7000835	Discharge Piping, (1) LS & (1) RS 2.5" (64 mm) w/SCBA Storage w/PSI & Structural	Discharge Piping There will be two (2) unregulated, manually operated, 2.5 inch (64 millimeter) structural discharges provided. One (1) will be located in the left front lower body compartment and one (1) will be located in the right front lower body compartment. The discharges will have NSFHT threads and will each be equipped with pressure gauges and bleeder valves. Storage for two (2) SCBA cylinder will be provided on both left and right side front lower body compartments in the discharge panel adjacent to the discharges.
7000225	Discharge Caps, 2.5" (64 mm) NSFHT Female Caps w/Link Chain	Discharge Caps The two (2) 2.5 inch (64 millimeter) discharges will have NSFHT blind caps and link chain lanyards.

7000614	Tank, 3,000 G (11,356 L) Water/420G (1,590 L) Foam	Water Tank There will be a water and foam tank constructed of UV resistant Polypropylene material provided. The minimum tank capacity will be 3,000 gallons (11,356 liters) of water and 420 gallons (1,590 liters) of foam concentrate with a top-fill opening of at least 27 inches (689 millimeters) for water and 23 inches (584 millimeters) for foam. Both reservoirs will be vented with overflow directed to the ground. The tank will be fitted with longitudinal and transverse baffles, anti-swirl baffles, a sump and isolation valve.
7000692	Lights, Water Tank Level, LS & RS Exterior, No Label w/Fbrg	Water Tank Level Lights There will be four (4) LED water tank level indicator lights provided on the upper exterior of the vehicle's body on both the right and left side vertically stacked and include these colors from top to bottom: blue, blue, blue, red
7000690	Pump, Water, Cast Iron, Waterous CRQB, 2,000 gpm (7,570 lpm)	Water Pump and Pump Drive The water pump will be a Waterous, Model CRQB (also commonly referred to as Model CR), single stage centrifugal design that meets all requirements of ICAO, NFPA 414 as well as FAA Advisory Circular 150/5220/10E. The pump will have a rated capacity of at least 2,000 gpm (7,511 lpm) at an operating pressure of 250 psi (17 bar) with suction vacuum at the manifold inlet of 9 IN-Hg. The pump gearbox will be driven by a driveline from the truck power divider. The pump and pump transmission will have the ability to run continuously without overheat issues in ambient temperatures up to 122 degrees Fahrenheit (50 degrees Celsius). The pump body will be vertically split on a single plane for easy removal of the entire impeller assembly including the bronze wear rings. The pump will be constructed of the following materials: Pump Body: Cast gray iron, class 35, 35,000 PSI tensile strength. Impeller: Silicon brass, UNS C87500, 60,000 PSI tensile strength. Impeller Shaft: 17-4 stainless steel, 135,000 PSI tensile strength. Wear Ring: High leaded tin bronze, UNS C93200, 35,000 PSI tensile strength. The water pump will be gravity primed from the vehicle water reservoir. The vehicle will have a water piping system allowing the pump to remain primed while the water pump is not engaged. This reduces the time to discharge water when a discharge is opened providing immediate operations and a quicker response to a user input. The pump drive will be through a power divider to allow the pump to be engaged at any speed and in any gear, which is automatically activated for pump operation when the water pump switch is engaged from the cab. When in pump mode, the pumping RPM will increase automatically only after a discharge orifice is opened, to minimize heat build-up during standby operation. A pressure relief protection system will be provided to prevent over pressurization of the water piping system. An automatic pump overheat protection system will be provided that will discharge to the ground. The pump body and gearbox will be painted in a durable red primer. The entire pump will be bench tested at the original manufacturer to include 400 PSI pressure test and capacity test. A test certificate will be provided with the vehicle.
7000687	Piping, Water Fill, (1) LS & (1) RS 2.5" & 4.5" (64 mm & 114 mm)	Piping, Coupling, Connections and Valves Water Fill Piping There will be one (1) 2.5 inch (64 millimeter) NPT male and one (1) 3 inch (76.2 millimeter) NPT male water fill inlet provided on the left side of the vehicle and one (1) 2.5 inch (64 millimeter) NPT male and one (1) 3 inch (76.2 millimeter) NPT male water fill inlet provided on the right side of the vehicle. The water fill piping will be sized to permit filling in no more than 2 minutes from an 80 psi (5.5 bar) supply source. The water fill connection types for each will be defined later in this document. The water fill piping will be constructed of welded passivated stainless steel with victaulic and threaded connections where necessary. All components in the water fill piping will be manufactured from stainless steel, brass or other corrosion resistant materials. There will be a brass unibody ball valve with stainless steel ball and manually operated quarter-turn handle to control the supply of water to the tank. Each inlet will have a .75 inch (19 mm) drain port with a quarter-turn valve. The drains will each extend through the compartment floor and drain onto the ground below the body.
7000206	Plugs, Water Fill, 2.5" (64 mm) NSFHT w/Link Chain	Water Fill Caps The water fill will be provided with two (2) 2.5 inch (64 millimeter) NSFHT swivel and a 2.5 inch (64 millimeter) NSFHT blind male plug with link chain lanyard.
7000040	Caps, Water Fill, 4.5" (114 mm) NSFHT w/Link Chain	Water Fill Caps The water fill will be provided with two (2) 4.5 inch (114.3 millimeter) NSFHT male adapter and a 4.5 inch (114.3 millimeter) NSFHT blind cap with link chain lanyard.
7002294	304 Stainless Steel	Water/Foam Piping Material The water and foam system piping material will be 304 stainless steel.

7000145	Preconnect Handline, Primary, 200'(60m) x 1.75"(45mm) Wht Hs @ 95gpm(360lpm)	Preconnected Handlines / Crosslays Primary Preconnect Handline There will be a primary, preconnected handline for the discharge of water/foam provided in the forward portion of the front lower body compartments. The crosslay will be transversely mounted with access from the left or right side of the vehicle. The preconnected handline will include 200 feet (60 meters) of 1.75 inch (45 millimeter) white woven soft jacketed hose. An Elkhart Brass pistol grip handline nozzle will be provided on the handline. The minimum discharge flow rate for the primary handline will be 95 gpm (473 lpm). A removeable slide-out, polypropylene plastic crosslay hose storage tray will be provided. The hose sections and handline nozzle will be shipped with the loose equipment.
7000641	Automatic Activation, Preconnect Handline	Primary Preconnect Activation The primary crosslay handline will have automatic activation with controls located in the cab and in the front lower body compartments near the crosslay handline. A safety interlock system will be provided that will only allow charging of the handline after all the hose has been deployed from the crosslay. An indicator light will be provided in the cab to alert operators when the crosslay hose is fully deployed from the primary preconnect hose tray. Throttle ramp up for the pumping RPM will be accomplished automatically when the handline discharge nozzle is opened. An override throttle control will be provided for the initial charging of the primary preconnected hose should the throttle not ramp up automatically due to a kink in the soft jacketed hose or flow through the handline being too low.
7000136	Preconnect Handline, Secondary, 200'(60m) x 1.75"(45mm) Yel Hs @ 95gpm(360lpm)	Secondary Preconnect Handline There will be a secondary, preconnected handline for the discharge of water/foam provided in the forward portion of the front lower body compartments. The preconnected handline will include 200 feet (60 meters) of 1.75 inch (45 millimeter) yellow woven soft jacketed hose. An Elkhart Brass pistol grip handline nozzle will be provided on the handline. The minimum discharge flow rate for the secondary handline will be 95 gpm (360 lpm). A removeable slide-out, polypropylene plastic crosslay hose storage tray will be provided. The secondary preconnected handline hose sections and handline nozzle will be shipped with the loose equipment.
7000640	Automatic Activation, Preconnect Handlines	Secondary Preconnect Activation The secondary crosslay handline will have automatic activation with controls located in the cab and in the front lower body compartments near the crosslay handline. A safety interlock system will be provided that will only allow charging of the handline after all the hose has been deployed from the crosslay. An indicator light will be provided in the cab to alert operators when the crosslay hose is fully deployed from the secondary preconnect hose tray. Throttle ramp up for the pumping RPM will be accomplished automatically when the handline discharge nozzle is opened. An override throttle control will be provided for the initial charging of the secondary preconnected hose should the throttle not ramp up automatically due to a kink in the soft jacketed hose or flow through the handline being too low.

7002449	Low Attack, Elkhart Scorpion	Lower Discharge Low Attack Bumper Turret There will be a front bumper mounted Elkhart Brass Scorpion turret installed on a low attack boom. The lower discharge will have water/foam discharge rates of 625/1,250 gpm (2,365/4,731 lpm) with a minimum straight stream cast distance of 230 feet (70 meters). The bumper turret will have the following design and performance features: Turret Sweep Assembly The turret sweep assembly will consist of two (2) swivel joints allowing the turret to sweep in both horizontal and vertical planes. The horizontal axis rotation will allow the turret discharge to be directed at least 90 degrees to either side of center for a minimum of 180 degree horizontal sweep. The elevation axis will allow the nozzle to be elevated at least 45 degrees above the horizontal and be depressed to discharge agent within 30 feet (9 meters) of the front of the vehicle with the boom in the fully raised position. The turret assembly will be equipped with an auto leveling feature to maintain a consistent turret discharge angle regardless of the position of the boom mechanism during raising or lowering operations. Both the horizontal and vertical drive motors will be permanent magnet type, 24-volt DC electric gear motors and will have a clutch mechanism and/or limit switches to prevent damage to the motors at rotation limits. The motors will be sealed to NEMA 4 requirements. Controls An electronic joystick control will be provided in the cab located within easy reach of the driver and turret operator/officer seating positions with integrated switches for the following: - Water/Foam discharge activation with LED indicator light (momentary or maintained) - Water/Foam discharge rate with LED indicator light, if applicable - Auxiliary agent activation with LED indicator light, if applicable - Nozzle pattern from straight stream to fully dispersed (fog pattern) The joystick fore/aft and left/right inputs will be used to control the movement of the turret position on the X and Y axes. The turret movement speed in the horizontal and vertical planes will be proportional to the amount of input angle applied to the joystick. A switch panel will be installed directly behind the joystick with rocker switches for the following functions: - Turret deploy/stow - Turret oscillate activation - Turret mounted floodlight activation, if applicable - Low attack boom up/down movement activation The rocker switches will be backlit and will be dimmable in tandem with all other cab control switch backlighting. The normal backlighting color will be white and should a malfunction occur, the switch backlighting color will change to red to indicate there is a fault with the control or turret for the lower discharge. Low Attack Boom Design The low attack assembly will be capable of being lowered from the stored position near bumper height to the fully lowered position with the centerline of the turret discharge approximately 24 inches (610 millimeters) above the ground. The low attack boom will utilize a 24-volt DC motor to drive a hydraulic pump when actuated. The hydraulic pump will power two (2) hydraulic cylinders to lower and raise the boom assembly. A linear potentiometer and a proximity switch will be used to determine and communicate the position of the low attack boom during operation with the vehicle firefighting system. The turret assembly will be attached to the front bumper of the vehicle and will be mounted onto the low attack boom. The turret mounting and boom will be adequately reinforced to sustain all anticipated loads and reaction forces when the bumper discharge is activated. The design will allow the turret and nozzle to be stored in a position providing minimum protrusion from the front of the vehicle to maintain a 30 degree angle of approach.
7002446	Akron Akrochem, Non-Air Aspirating (NASP) Hydrochem, Scorpion	Lower Discharge Nozzle NASP Hydrochem Nozzle An Akron Akrochem hydrochem nozzle will be provided on the lower discharge with variable pattern control and an automatic flow mechanism. The automatic flow mechanism will maintain consistent discharge pressure and flow whether in the straight stream or fully dispersed (fog) pattern. The nozzle will be a non-air aspirating (NASP) type with 24-volt DC powered electric infinitely variable pattern actuation for straight stream or fog pattern selection. To maximize distance and accuracy of the dry chemical discharge, the dry chemical powder will be entrained within the water stream. The dry chemical agent discharge rate of the nozzle will be a minimum of 16 pounds (7 kilograms) per second. The nozzle patterns will meet or exceed all performance requirements defined in the latest edition of NFPA-414.
7000632	Light, Turret, Bumper, (1) LED, Low Attack	Bumper Turret Lighting There will be one (1) J.W. Speaker, model 735 24-volt DC light emitting diode (LED) spot light provided on the bumper turret. The spot light will follow the bumper turret movements on the vertical and horizontal axes and will be controlled by a switch bank located near the bumper turret joystick.

7002865	Elkhart Brass Cobra	Upper Mounted Discharge Roof Turret There will be a high volume Elkhart Brass Cobra turret installed on the roof of the vehicle. The upper discharge will have a water/foam flow discharge rate of 625/1,250 gpm (2,366/4,732 lpm) with a minimum straight stream cast distance of 230 feet (70 meters). The turret will include the following design and performance features: Turret Sweep Assembly The nozzle sweep assembly will consist of two (2) separate swivel joints allowing the nozzle to sweep in both the horizontal and vertical planes. The horizontal rotation axis will allow the nozzle to be directed at least 135 degrees to either side of center for a minimum of 270 degrees of horizontal sweep. The vertical elevation axis will allow the nozzle to be elevated at least 45 degrees above horizontal and be depressed 15 degrees below horizontal. Both horizontal and vertical drive motors will be permanent magnet type, 24-volt DC electric gear motors and will be with a clutch mechanism and/or limit switches to prevent damage to the motors at rotation limits. The motors will be sealed to NEMA 4 requirements. Controls An electronic joystick control will be provided in the cab located within easy reach of the driver and turret operator/officer seating positions with integrated switches for the following: - Water/Foam discharge activation with LED indicator light (momentary or maintained) - Water/Foam discharge rate with LED indicator light, if applicable - Auxiliary agent activation with LED indicator light, if applicable - Nozzle pattern from straight stream to fully dispersed (fog pattern) The joystick fore/aft and left/right inputs will be used to control the movement of the turret position on the X and Y axes. The turret movement speed in the horizontal and vertical planes will be proportional to the amount of input angle applied to the joystick. A switch panel will be installed directly behind the joystick with rocker switches for the following functions: - Turret deploy/stow - Turret oscillate activation - Turret mounted floodlight activation, if applicable The rocker switches will be backlit and will be dimmable in tandem with all other cab control switch backlighting. The normal backlighting color will be white and should a malfunction occur, the switch backlighting color will change to red to indicate there is a fault with the control or turret for the upper discharge. Turret Body Design The turret body assembly will be made from hard anodized Elk-O-Lite aluminum alloy for long life and corrosion resistance. The turret assembly and mounting will be adequately reinforced to sustain all anticipated loads and reaction forces when discharging. The design will allow the turret to be stowed in compact a position.
7002860	Elkhart, Non-Air Aspirating (NASP) Water/Foam, Cobra	Upper Discharge Nozzle NASP Nozzle An Elkhart Brass nozzle will be provided on the upper discharge with variable pattern control and an automatic flow mechanism. The automatic flow mechanism will maintain consistent discharge pressure and flow whether in the straight stream or fully dispersed (fog) pattern. The nozzle will be a non-air aspirating (NASP) type with 24-volt DC powered electric infinitely variable pattern actuation for straight stream or fog pattern selection. The nozzle patterns will meet or exceed all performance requirements defined in the latest edition of NFPA-414.
7000587	Light, Turret, Roof, (1) JW Speaker LED, Cobra 625/1,250 gpm (2,366/4,732 lpm)	Roof Turret Lighting There will be one (1) 24-volt DC J.W. Speaker light emitting diode (LED) spotlight provided on the roof turret. The spotlight will have an output of 3,680 effective lumens. The spotlight will be controlled by an activation switch adjacent to the roof turret joystick.
7001482	Lower Discharge Left Side, Upper Discharge Right Side	Joystick Location The turret control joysticks will be located on top of the center console between the driver and turret operator seating positions. The lower discharge joystick and switch panel will be mounted on the left side of the center console, nearest the driver and the upper discharge joystick and switch panel will be mounted on the right side of the center console, nearest the turret operator.
7000601	Platform, Roof Turret w/500 lb. (227 kg) Dry Chemical	
7002958	Nozzles, Undertruck (4) Elkhart Brass 19 gpm (72 lpm) Each	Undertruck Nozzles There will be four (4) undertruck nozzles provided to discharge water/foam beneath the vehicle as well as the inner sides of the wheels and tires spaced in a pattern from the front axle to the rear axle of the chassis. The nozzles will be brass construction and will be capable of flowing 19 gpm (72 lpm) each with a total flow of 76 gpm (288 lpm). The undertruck nozzles will be activated by a switch in the cab.

7000795	Standard Compartment Component, Gortite Aluminum Roller Shutters	Body Components Compartments The body compartments will be weather-tight, vented and drained to allow collected water to run out under the vehicle. Each compartment will be equipped with Gortite brand roller shutter type doors. The doors will have replaceable aluminum slats with an anodized finish. The door lift bar will be constructed from round stainless steel and will have adequate room to be operated with a gloved hand. The spring loaded compartment door roller mechanism will be 3 inches (7.62 mm) in diameter to provide maximum interior space. The vehicle will have adequate compartment space to enclose the firefighting systems and storage of rescue equipment. The body construction will include one (1) upper body compartment and two (2) lower body compartments per side for a total of three (3) on the left and three (3) on the right. The lower compartments will have minimum door opening sizes of 50 inches (127 cm) in height and 62 inches (157.4 cm) in width. The total compartment space will be = 303.33 ft³. (8.59 m³) The left side compartment interior dimensions will be the following: Left side upper: 27 inches (685.8 mm) high x 30 inches (762 mm) wide x 28 inches (711.2 mm) deep = 13.125 ft³. (.37 m³) Left side front lower: 50 inches (1,270 mm) high x 63 inches (1,600.2 mm) wide x 38 inches (965.2 mm) deep = 69.27 ft³. (1.96 m³) Left side rear lower: 50 inches (1,270 mm) high x 63 inches (1,600.2 mm) wide x 38 inches (965.2 mm) deep = 69.27 ft³. (1.96 m³) The right side compartment interior dimensions will be the following: Right side upper: 27 inches (685.8 mm) high x 30 inches (762 mm) wide x 28 inches (711.2 mm) deep = 13.125 ft³. (.37 m³) Right side front lower: 50 inches (1,270 mm) high x 63 inches (1,600.2 mm) wide x 38 inches (965.2 mm) deep = 69.27 ft³. (1.96 m³) Right side rear lower: 50 inches (1,270 mm) high x 63 inches (1,600.2 mm) wide x 38 inches (965.2 mm) deep = 69.27 ft³. (1.96 m³) The compartments will be fabricated from formed, welded and riveted aluminum sheet material. The interior of the compartments will be chemically pre-treated and painted with a durable grey spatter type textured finish.
7000794	Compartment Matting, PVC Rubber Matting, All Floors and Shelves	Compartment Matting The vehicle will have matting placed in the bottom of each body compartment and the bottom of each shelf. The matting will be extruded PVC type or approved equivalent. The matting will be impervious to water or foam. The matting will afford some amount of protection for the floor finish and keep objects from direct contact with the shelving and compartment floor. The matting will allow water to flow to any drains or lowermost part of the compartment floor.
7000793	Rear Access, Vertical Rear Access Ladder	Rear Access Ladder There will be a sturdy vertical ladder attached at the center of the vehicle at the rear of the vehicle to provide access to the roof. The ladder will have a folding design so the lower most section can be stowed out of the way. The folding section will have a positive latching system with latches on both sides to keep the ladder safely in place. The ladder will be constructed from high-grip knurled aluminum material. Handrails There will be extruded aluminum slip-resistant handrails or guardrail at all steps, walkways, and elevated workstations. Running Boards, Steps, And Walkways Running boards, step surfaces, ladder rungs, walkways, and catwalks will have anti-skid treads.
7000552	Rear Body Doors, Rollup Doors With Step & Level Lights	Rear Engine Access Doors Walk-in access to the engine, cooling system and electrical components will be provided on each side of the vehicle by large, vertical roller shutter type doors. The doors will have aluminum slats with an anodized finish. The individual door slats will be replaceable. The opening lift bar will be constructed from stainless steel and will be an easy to open with a gloved hand. An audible alarm will activate in the cab when doors are opened and vehicle is shifted out of neutral or the parking brake released. A heavy duty manually deployed step will be provided for maintenance access to the engine compartments. The steps will have a pin to retain them in the stowed position and will tilt down into place; one (1) on the left side of the vehicle and one (1) on the right side of the vehicle.

7000200	Reel, Air & Elec, 200' (60m) x .5" (12mm) Hose & 200' (60m) x 12/3-20A Crd	Left Upper Compartment Air Reel There will be an air hose reel provided in the left front upper body compartment mounted to the floor equipped with 200 feet (60 meters) of 0.5 inch (12.7 millimeter) I.D. hose. A 0.375 inch (9.6 millimeter) NPT fitting and female style quick disconnect will be connected to the end of the hose. A four-way roller guide will be provided for the hose reel to prevent the hose from chafing and kinking. The hose will be equipped with a rubber ball stop to prevent the hose from pulling through on the roller guides during rewind operations. The hose reel will have a 24-volt DC electric rewind motor and provisions for manual rewind should there be an electrical failure. The manual rewind handle will be securely stored in the compartment near the hose reel. A pressure protected air supply from the chassis air system will be connected to the hose reel. The air supply lines will be routed with minimum bends and will be routed and guarded from damage. Cord Reel There will be an electric cord reel provided in the left front upper body compartment mounted to the ceiling equipped with 200 feet (60 meters) of 12/3 SO cable. The cord reel will be wired through a 120-volt, 20 amp GFCI circuit breaker and receive its power from the generator. A four-way roller guide will be provided for the cord reel to prevent the cord from chafing or kinking. The cord will be equipped with a rubber ball stop to prevent the cord from pulling through the roller guides during rewinding operations. The cord reel will have a 24-volt DC electric rewind motor and provisions for manual rewind. The manual rewind handle will be securely stored in the compartment near the cord reel.
7002568	Reel, Dual Agent, Fixed w/Roll, 100' (30m) x1"(25mm)Hose @ 60 gpm (227 lpm)	Left Front Lower Compartment Dual Agent Hose Reel There will be a fix mounted dual agent hose reel for dry chemical and water/foam discharge in the left front lower body compartment equipped with 100 ft. (30 m) of 1 in. (25 mm) dual agent twinned booster hose. The hose reel will be equipped with a 24-volt DC electric rewind motor and will have manual rewind provisions in case of an electrical failure. The manual hand crank will be mounted in the compartment adjacent to the hose reel. A "Hydro-Chem" handline nozzle will be installed at the end of the hose reel capable of discharging 60 gpm (227 lpm) of water/foam solution and 7 lbs./second (2.3 - 3.2 kg/second) of dry chemical powder with a minimum range of 80 ft. (24 m). Charging of the dry chemical tank and dry chemical handline will be possible from the dry chemical activation switch adjacent to the reel. Dry chemical blowdown procedures will be activated from within the cab. Water pump engagement and foam system activation will be activated from within in the cab or at the structural panel if equipped. The water/foam discharge will be activated by a manually operated quarter turn ball valve. The valve will have a push/pull "T" handle with position locking feature to maintain a partially open position if required. Water/foam reel blow down will be accomplished by a manually operated pneumatic switch at the reel to evacuate the water/foam hose of the wet agent with compressed air. Roller guides will be provided at the sides and bottom of the hose reel to assure ease of deployment when hose is taken off the reel and during rewind operations. A tension device will be installed to prevent the unreeling of the hose when the water/foam or dry chemical lines are charged.
7000018	Shelf, (1) Fixed, Height Adjustable	Right Front Compartment There will be one (1) height-adjustable fixed shelf mounted in the right front lower body compartment. The shelf will have exterior dimensions of 23.25 inches (590 millimeters) wide and 24.38 inches (620 millimeters) deep. The left, right, and rear sides of the shelf will be 7.75 inches (197 millimeters) high and will taper down at a 45 degree angle toward the 2.5 inch (64 millimeters) high front face of the shelf. The shelf will be constructed of .188 inch (5 millimeter) thick formed aluminum with welded corners and will be painted with a multispec paint to match the compartment interior. The corners of the shelf will be open to allow water to drain out.
7002592	Shelf, (1) Fixed, Height Adjustable	Right Rear Compartment Fixed Shelf There will be one (1) height-adjustable fixed shelf provided in the right rear lower body compartment.
7000856	RFP Location, Neenah, WI	

7001094	Manual, Operator's, (1) Hard Copy, (1) USB Flash Drive, English	Manuals The manuals provided will be in a commercial format utilizing primarily line art for parts identification/assembly drawings and a combination of line art and photographs for service and operations related information. Manuals will be identified with a title page to distinguish them from one another. Web Based Support A 24-hour web-based parts and service system will be accessible via an internet browser. Features of this website will include the following: A user-specific, secure login Access to digital copies of service bulletins and technical instructions Access to digital copies of vehicle-specific operator and service manuals, schematics, service diagrams, and parts books An aftermarket parts catalog with live inventory level information A customer support contact page Operator's Manual One (1) hard copy and one (1) digital copy on USB flash drive of the vehicle operator's manual will be provided in the English language. The operator's manual will provide all information required for the safe, efficient operation of the vehicle fire extinguishing systems, equipment, special attachments or auxiliary support equipment. The operator's manual will include: Drawings and descriptions of locations and functions for all controls and instruments Safety information consistent with NFPA and OSHA safety standards All operational checks, inspection procedures, and adjustments prior to putting the vehicle into service upon receipt from the manufacturer Disabled vehicle towing procedure Tire changing procedure Tie-down procedures/lashing for vehicle transport via lowboy trailer Step by step procedures and descriptions to operate the vehicle, firefighting systems, and auxiliary equipment Draining, flushing, re-servicing, etc. post operation procedures Operator daily maintenance inspection checklist and basic troubleshooting procedures Periodic and preventative maintenance schedule in hours, miles, time period, etc. The operator's manual will contain line art drawings of the left side, right side, front, and rear of the vehicle exterior showing basic dimensions and weights. The weights provided will be total vehicle and individual axle weights when unladen (no agent, occupants or equipment).
7001096	Manual, Service/Maintenance, (1) Hard Copy, (1) USB Flash Drive, English	Service and Maintenance Manual One (1) hard copy and one (1) digital copy on USB flash drive of the service and maintenance manual will be provided in the English language. The manual will cover vehicle maintenance, troubleshooting and repair procedures ranging from minor to major services. The manual will identify all special tools and testing equipment for inspection, servicing and maintenance. The manual will contain: Performance specifications Tolerances Fluid capacities Current, voltage and resistance data Test procedures Illustrations and exploded views of assemblies Table of contents Alphabetical index Preventative maintenance schedule Required periodic maintenance schedule Lubrication points and service intervals A set of the following schematics will be included with the service and maintenance manual: Full vehicle electrical diagrams in color Full vehicle water/firefighting system/plumbing diagrams Full vehicle pneumatic diagrams in color Full vehicle hydraulic diagrams in color
7001095	Manual, Parts, (1) Hard Copy, (1) USB Flash Drive, English	Parts Manual One (1) hard copy and one (1) digital copy on USB flash drive of the parts manual will be provided in the English language. The parts manual will provide the necessary information to locate and identify the parts and quantities of parts/hardware of vehicle assemblies and components. The parts manual will contain: Exploded views of parts/assemblies/subassemblies/special equipment Drawings with reference numbers for part identification Description and quantity of each component used in an assembly Size, thread information, and other information of non-standard hardware (bolts, nuts, washers, etc.) Size, thread information, torque specifications and other information of non-standard fittings, lubricants or special components A numerical index
7002363	Tilt Table Not Required	
7000003	Warranty, Basic, 1 Year, Vehicle, Contract Specific	
7001087	Warranty, Engine, Scania, Basic Pro-Rated 4 Year	

7001091	Warranty, Transmission, Allison, Standard 5 Year	Allison Transmission Warranty A five (5) year Allison transmission will be provided.
7001089	Warranty, Pump, Waterous, Basic 5 Year	
7002504	Warranty, Generator, Harrison Hydraulic, Basic 2 year/2,000 Hours	
0000000	STF On-site Commisioning, Contract Specific	
7001003	AIRPORT CHASSIS	