

Public Safety Committee Meeting
Tuesday, February 7, 2017 6:00 PM
Crete City Hall
243 E 13th Street
Crete, NE 68333

1. Open Meeting

The City has posted a copy of the Open Meetings Act, Laws of the State of Nebraska, in the back of the council chambers. Additional copies are available to read, if anyone wishes one during this meeting, please advise. As each agenda item is considered, if there are any questions concerning the agenda item please advise. The Committee may consider items listed on the agenda in random order. The City has assisted listening devices available, if needed please advise. This meeting was posted in three public places to-wit:

City Hall - 1st Floor
Post Office - Lobby
City Bank and Trust - Front Entry

2. Roll Call

Attendance of Committee members will be recorded to determine the presence of a quorum for official actions.

3. Special Order of Business

The Committee may take action to hear testimony in favor of or in opposition to, discuss/limit discussion and take action to approve or disapprove a recommendation to the City Council on any matter presented under this title.

3.A. Grass Rig Specifications

The Fire and Rescue Department has reviewed specifications for a grass rig skid load

4. Officers' Reports

Reports may be given by Department Heads, other Committees and Council members concerning current operations of the City. Questions may be asked and answered. No action can be taken by the Committee on matters presented under this title except to answer any question posed and to refer the matter for further action.

5. Adjournment

The City Council Committee will review the above matters and take such actions as they deem appropriate. The Committee may enter into closed session to discuss any matter on this agenda when it is determined by the Committee that it is clearly necessary for protection of the public interest or the prevention of needless injury to the reputation of an individual and if such individual has not requested a public meeting, or as otherwise allowed by law. Any closed session shall be limited to the subject matter for which the closed session was called. If the motion to close passes, then the presiding officer immediately prior to the closed session shall restate on the record the limitation of the subject matter of the closed session. The City of Crete assures that no person shall on the grounds of race, color, national origin, age, disability, handicap or sex, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity of the City receiving Federal financial assistance. To report discrimination, contact the City Clerk's office.

Disclaimers & Notices

- The Council may enter into closed session to discuss any matter on this agenda when it is determined that a closed session is clearly necessary for the protection of the public interest or the prevention of needless injury to the reputation of an individual (if such individual has not requested a public meeting) or as otherwise allowed by law. Any closed session shall be limited to the subject matter for which the closed session was called. If the motion to close passes, then immediately prior to the closed session the Mayor shall restate on the record the limitation of the subject matter of the closed session.

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- The complete agenda with attachments is available at www.crete.ne.gov.

Public Safety Committee Meeting
February 07, 2017 6:00 PM
City Hall
Council Chambers
243 East 13th Street

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A. Grass Rig Specifications

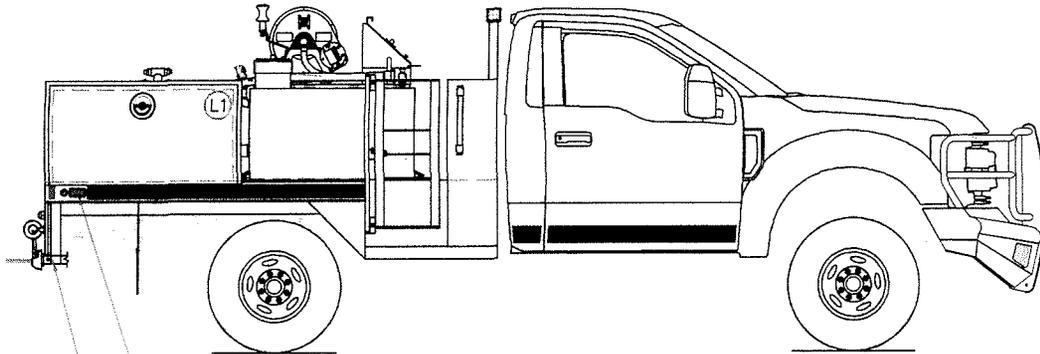
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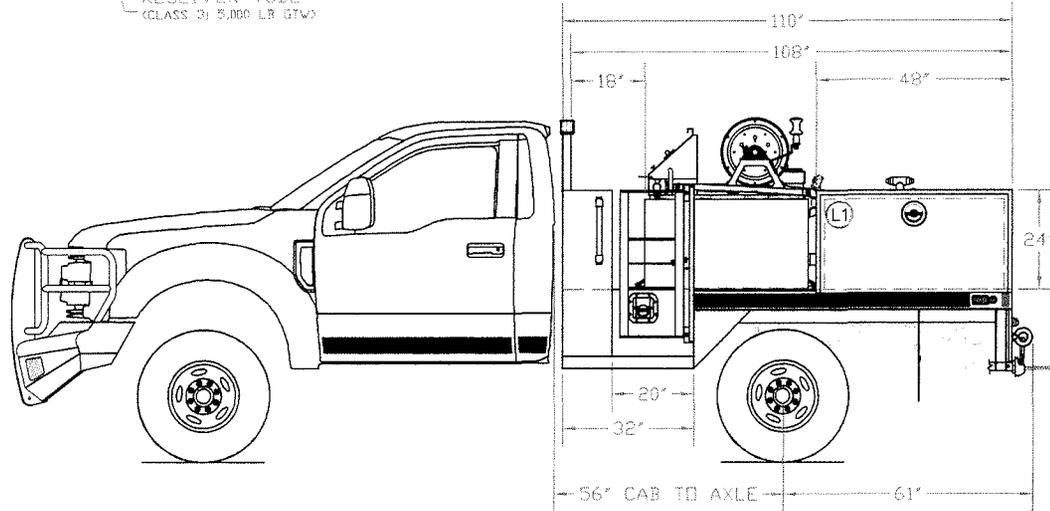
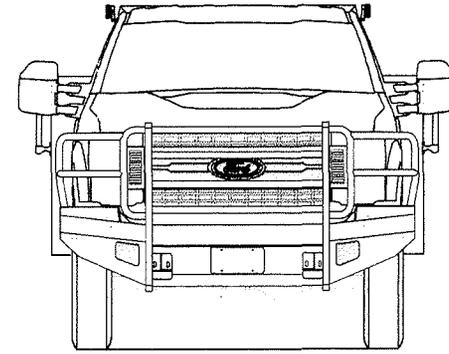
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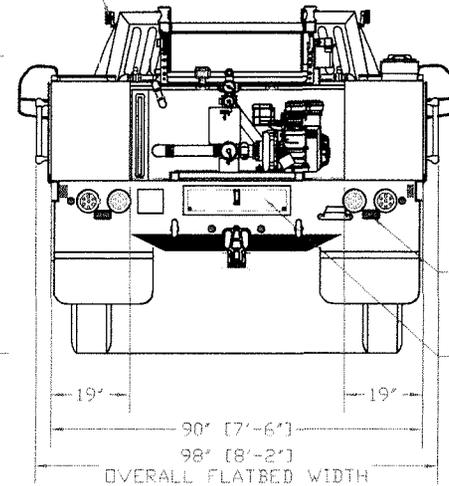


INTERSECTION LIGHTS
(WHELEN LINV2R RED LED)

RECEIVER TUBE
(CLASS 3) 5,000 LB GTW



HEADACHE RACK
LIGHTING
(RIGID INDUSTRIES
50211 LED)



COMPT.	OPENING	DEPTH
L1	44W X 22H	17
R1	44W X 22H	17

TOTAL COMPARTMENT CAPACITY 19 CU FT

PRELIMINARY DRAFT WILDLAND

CRETE FIRE DEPARTMENT
CRETE, NE



DANKO EMERGENCY EQUIPMENT CO.
SNYDER, NEBRASKA www.DANKO.net

PUMP: Waterous 2515LE w/18HP B&S Eng
TANK: 250 Gallon Defender 1 Poly
FOAM: n/a
BODY: 110" Aluminum Flatbed
CHASSIS: Ford F350 Customer Supplied

FILE NAME: Clients\Wildland\

ID: BID-4343

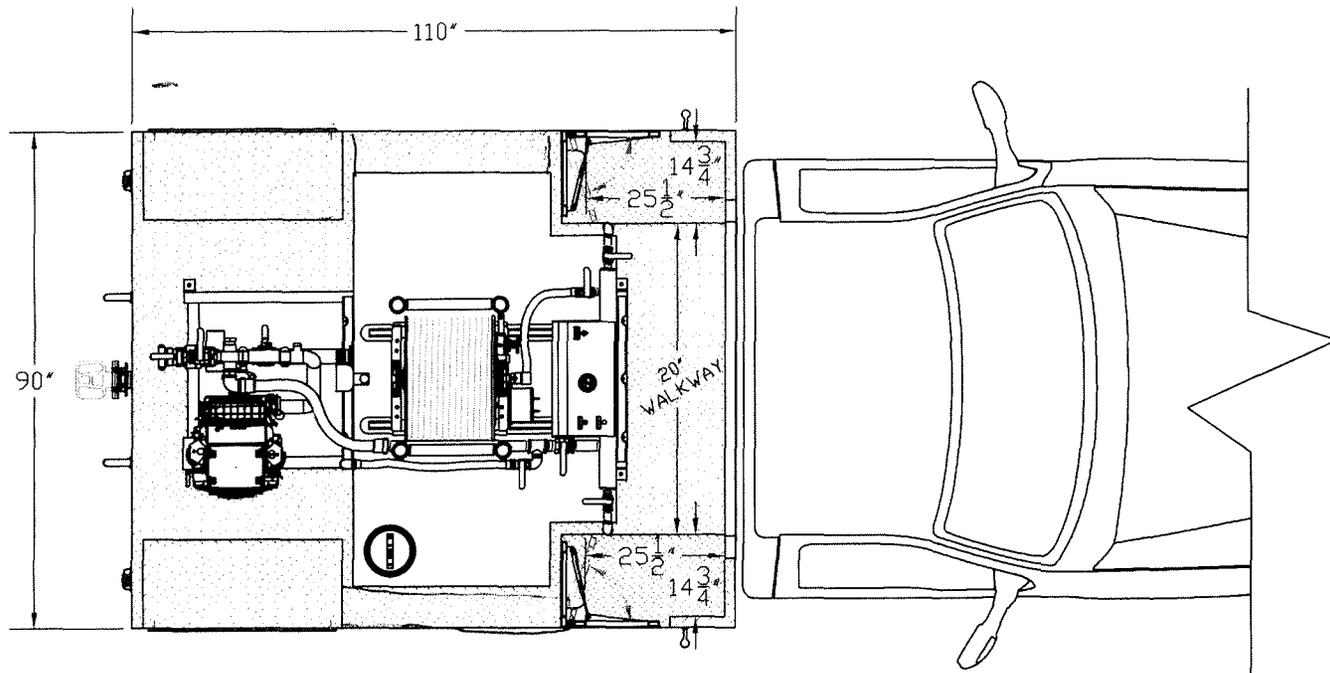
DRAWN BY: CTK

SCALE: BEST FIT

DIMENSIONS SHOWN ARE APPROXIMATE AND SUBJECT TO CHANGE AS MAY BE FOUND NECESSARY DURING CONSTRUCTION. MINOR DETAILS MAY NOT BE SHOWN TO RETAIN CLARITY WITHIN THE DRAWING. THE DRAWING IS FOR REFERENCE PURPOSES ONLY. SPECIFICATIONS SHALL BE THE FINAL AUTHORITY OF WHAT IS SUPPLIED ON THE APPARATUS.

DATE: 01/18/2017

PAGE 1 OF 3



PRELIMINARY DRAFT
 QUICK RESPONSE FLATBED UNIT

DANKO
 DANKO EMERGENCY EQUIPMENT CO.
 SNYDER, NEBRASKA

PUMP: Waterous 2515LE w/18HP B&S Eng
 TANK: 230 Gallon Defender 1 Poly Tank
 FOAM: N/A
 BODY: 110" Aluminum Flatbed
 CHASSIS: Ford F-350 (Customer Supplied)

FILE NAME: Clients\QR Flatbed\Crete-NE

ID: BID-3924

DRAWN BY: CTK

SCALE: BEST FIT

CRETE FIRE DEPARTMENT
 CRETE, NE

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DATE: 11/03/2015

PAGE 2 OF 3

**CRETE FIRE DEPARTMENT
CRETE, NEBRASKA**

**Bidder
Complies**

Yes

No

WILDLAND FIREFIGHTING APPARATUS

NFPA COMPLIANCE NOT REQUIRED

As per the purchaser/end user NFPA compliance is not requested. The end user will be required to sign a statement indicating that it is not their intent to purchase an apparatus based on the requirements of NFPA.

DRAWINGS

A detailed drawing that represents the apparatus as described herein shall be provided with these specifications. Generic layouts or drawings of similar apparatus shall not be acceptable.

NO EXCEPTIONS

DEPARTMENT SUPPLIED CHASSIS

The chassis shall be provided by the department.

The customer supplied chassis is a 2007 Ford 350 single wheel, 4x4, 2dr, pickup box delete chassis. The frame will be a hump frame.

The chassis cab paint shall remain unchanged as received from the department.

FRONT BUMPER REPLACEMENT

The OEM chassis front bumper shall be removed and replaced with a Fab Fours black steel bumper replacement with full grille guard providing heavy-duty protection for the vehicle. The bumper replacement will be constructed from a combination of pipe, tread plate, and punch plate. The bumper shall be finished with a gloss black powder coat.

The aftermarket bumper shall be provided with bolt-on tow hooks.

The departments 2 front warning lights shall be removed and installed on the front bumper replacement.

The front bumper shall have a 2" receiver tube installed.

FUEL FILL

A fuel fill shall be mounted on the left side of the flatbed.

**CRETE FIRE DEPARTMENT
CRETE, NEBRASKA**

**Bidder
Complies**

Yes No

ALUMINUM FLATBED

The flatbed shall be designed to mount on a 56" cab to axle chassis with single rear wheels. The deck shall measure approximately 90" wide x 110" long.

The frame shall consist of 2" x 6" x 1/4" wall channel and 2" x 2" x 1/4" wall support angles. There shall be a minimum of seven (7) 2" extruded aluminum tubular cross members extending the full width of the deck to support selected equipment, compartments, and water tank, etc. Cross members shall be gusseted back to the main channels.

The left and right sides of the flatbed shall consist of 5" extruded aluminum channel and the deck shall be constructed with a combination of 1/8" aluminum treadplate and 1/8" aluminum NFPA embossed treadplate.

FLATBED MOUNTING PROVISIONS

The flatbed shall be fastened to the chassis frame in a minimum of six locations. There shall be two (2) spring loaded u-bolts at the front to allow flexing, two (2) rigid u-bolts, and two (2) bolts or tow eyes through the rear frame flange plate.

REAR PANEL

The rear flatbed panel shall be constructed of smooth aluminum and shall be machine cut for accuracy and quality of finish.

MUDFLAPS

Two (2), mud flaps shall be supplied and mounted one on each side behind the rear wheels. The mud flaps shall be a combination of flat aluminum and rubber. Full height rubber mud flaps shall be unacceptable.

HEADACHE RACK

The body shall have an aluminum headache rack at the front of the flatbed to protect the rear of the chassis cab.

The headache rack shall be designed so it does not extend above the height of the chassis cab.

HEADACHE RACK SPOT LIGHTING

Two (2), Rigid Industries model 50211 LED spot lights shall be provided and mounted one on each side of the headache rack.

An on/off switch shall be provided near the light.

**CRETE FIRE DEPARTMENT
CRETE, NEBRASKA**

**Bidder
Complies**

Yes No

CENTER WALKWAY

There shall be a walkway approximately 16"- 20" wide between the headache rack and the firefighting unit. The walkway shall be covered with embossed treadbrite aluminum to provide a slip resistant surface.

TOP MOUNT CONTROL ACCESS AREA

The front corners of the flatbed directly behind the chassis cab shall be recessed to provide access to the top mount control area, one on each side of the bed. The access area floor shall be approximately 32" wide by 16" deep and constructed of 1/8" aluminum embossed treadbrite.

There shall be an aluminum bulkhead provided at the front of the flatbed. The bulkhead shall be a minimum of 40" high and the full width of the deck extending 12" around the sides of the access area's to provide protection for the firefighters.

There shall be two (2), access area gates constructed of aluminum rectangular tubing and flat bar stock. The gates shall be approximately 15" wide x 35" high and mounted one at each access area. Each gate shall have 1-1/4" diameter hinges with a 3/8" pivot bolt. The hinge shall have a built in safety stop to prevent the gate from swinging out past the side of the apparatus.

The access area gates will swing inward to provide a clear entrance to the top mount controls and shall be equipped with a pneumatic shock to hold the gate in the open or closed position.

The access area gate shall have a DA sanded aluminum finish.

REMOVABLE REAR STEP

The rear step shall have a 2" hitch bar permanently mounted for use with a receiver tube. A pin shall be provided to secure/remove the folding step from the receiver tube.

The standard rear step shall be replaced with a folding step. The step shall be 8" die cast zinc/aluminum alloy folding type. The surface area shall be at least 35 square inches and withstand a load of at least 500 pounds.

TOW EYES

Two (2), heavy duty chrome tow eyes, shall be installed at the rear of the body above the rear step. The tow eyes shall have a 2-3/16" inside diameter eye with a 1-1/4" threaded shaft and nut. The tow eyes will be fastened directly to each rear chassis frame rail.

**CRETE FIRE DEPARTMENT
CRETE, NEBRASKA**

**Bidder
Complies**

Yes

No

HANDRAILS

Handrails to be round extruded aluminum with slip resistant rubber inserts. The handrail brackets to be brass, chrome plated and fastened to the body with stainless steel bolts. The handrails shall be located in the following area(s):

Two (2) handrails shall be supplied and located near the access area, one per side.

COMPARTMENT CONSTRUCTION

All compartments mounted above the flatbed deck shall be 19" deep, with a useable depth of 17".

The compartments shall be constructed entirely of fire apparatus quality 1/8" aluminum treadbrite sheets, using the break-and-bend method of fabrication, then welded together. This uniform method of construction forms the aluminum into a strong, yet flexible structure.

The compartment shall have a smooth aluminum sweep-out floor.

NO EXCEPTIONS

COMPARTMENT VENTING

All body compartments shall be properly vented to relieve the pressure when opening and closing the compartment doors. The vents shall be mounted in a manner that will reduce the amount of dirt and water that may enter the compartment.

COMPARTMENT LIGHTING

The lighting strip shall be sealed in a flexible, water resistant, plastic body with (9) LED's every three inches and rated for 50,000 hours with an output of 33.8 lumens for every 6". This style of lighting will provide uniform and consistent illumination throughout the compartment.

The lighting strip shall be mounted vertically on the inside of the door opening and activated by an automatic switch located at each door.

COMPARTMENT INTERIOR

The interior of the compartments shall be left with a natural aluminum finish.

INNER DOOR PANELS, DA SANDED

All compartment inner door stiffener panels shall be DA sanded in order to create a smooth finish.

**CRETE FIRE DEPARTMENT
CRETE, NEBRASKA**

**Bidder
Complies**

Yes No

DROP DOWN COMPARTMENT DOORS

All horizontally hinged drop-down compartment door(s) shall be furnished with jack knife stops.

The inner panel of the drop down doors shall be welded and glued to the outer door panel. The inner panel shall feature a return bend where the panel attaches to the outer door panel.

Door handles shall be 6-1/8" diameter stainless steel recessed type, with nondirectional bent "D" ring type handles. There shall be a polymer film placed between the handle and door to insulate dissimilar metals. An adjustable rotary "D" compartment latch with a center single point striker pin and double catch shall be furnished on all compartment doors to keep a tight seal.

NO EXCEPTIONS

COMPARTMENT L1

One (1), 48" wide x 24" high compartment shall be mounted on top of the flatbed deck on the left side. This compartment shall have a horizontally hinged drop down door with an opening of approximately 44" wide x 22" high and a useable depth of 17".

The door shall be equipped with two (2) jackknife stops to prevent the door from opening more than 90 degrees.

The compartment door handle shall be non-locking.

This compartment door opening shall be supplied with one (1) lighting strip.

COMPARTMENT R1

One (1), 48" wide x 24" high compartment shall be mounted on top of the flatbed deck on the right side. This compartment shall have a horizontally hinged drop down door with an opening of approximately 44" wide x 22" high and a useable depth of 17".

The door shall be equipped with two (2) jackknife stops to prevent the door from opening more than 90 degrees.

The compartment door handle shall be non-locking.

This compartment door opening shall be supplied with one (1) lighting strip.

UNDER BED COMPARTMENT

There shall be an aluminum storage compartment located under the flatbed deck. This compartment shall be approximately 24" W x 5" H with a depth of 6' and accessible from the rear of the apparatus with a horizontally hinged drop down smooth aluminum door.

**CRETE FIRE DEPARTMENT
CRETE, NEBRASKA**

**Bidder
Complies**

Yes No

12-VOLT ELECTRICAL

All electrical equipment shall be installed using high temperature, copper, multi-strand, crosslink-coated wire. The wiring shall be colored coded and the function labeled every 3" end to end.

All wiring shall be enclosed in a protective loom throughout the electrical system and rubber grommets shall be used where the wiring passes through module walls.

All wire connections located under the apparatus body shall be weatherproofed with a clear, flexible, protective coating.

Compartment wiring shall run on the interiors of the compartments to prevent to prevent accidental damage to the wiring.

SWITCH PANEL

An InPOWER switch module system shall be provided and mounted in an easily accessible location inside the chassis cab. The switch module shall contain an adequate number of push button switches to be used for controlling the vehicle 12-volt auxiliary devices.

All push buttons shall utilize a tactile switch design that ensures a positive operation. Each switch position contains a push button switch and a status LED indicator directly above the switch.

The switch module shall be connected to one or more power modules via a logic cable to provide power outputs and digital input system control. The power modules shall contain 12-volt DC power outputs rated at 15 amps each and include over current and short circuit automatic fault shutdown protection. The digital inputs are provided for monitoring external conditions such as ignition switch on, transmission in park, etc. and can be individually programmed.

APPARATUS BODY 12-VOLT DISCONNECT

One (1), disconnect solenoid with a sufficient amp rating shall be wired from the battery and activated by the chassis ignition to disconnect all electrical accessories added by the body manufacturer. Items such as auxiliary engine starter, winch, booster reel(s), or high amp load items shall be excluded from the disconnect solenoid.

One (1), reset breaker shall be installed between the solenoid output and any electrical load.

One (1), indicator light shall be provided to indicate the apparatus 12-volt system is on. The light shall be located in the chassis cab and be visible from the driver's positions. The light shall be green in color and labeled "BATTERY ON".

**CRETE FIRE DEPARTMENT
CRETE, NEBRASKA**

**Bidder
Complies**

Yes No

DOOR OPEN WARNING LIGHT

A red flashing LED hazardous warning light shall be mounted in the chassis cab. This light shall warn the operator of any open compartment doors, and/or other items permanently attached to the apparatus that may cause damage should the apparatus be moved.

The warning light shall be marked with a decal that states "DO NOT MOVE APPARATUS WHEN LIGHT IS ON".

BACK-UP ALARM

The backup alarm shall be an electronic 97-decibel rated alarm installed at the rear of the vehicle. This alarm shall alert personnel any time the transmission is shifted into reverse.

BRAKE/REVERSE LIGHTS

The rear brake/turn/tail lights shall be 4" round LED with red lens.
The rear reverse lights shall be 4" round LED with clear lens.

CLEARANCE LIGHTS

There shall be 1" LED clearance lights provided to comply with ICC regulations. The clearance lights shall be located one on each side and rear corner of the apparatus body and a triple red light cluster recessed at the rear center of the body for a total of seven clearance lights.

Reflectors shall be supplied on the perimeter of the apparatus as specified by ICC regulations.

LICENSE PLATE BRACKET

A polished aluminum, LED lighted license plate bracket shall be mounted at the rear of the apparatus.

SURFACE LIGHTING

The completed apparatus shall have sufficient lighting provided as per NFPA 13.10.3 to illuminate all work surfaces, steps and walkways.

The surface lighting shall be activated when the emergency or park brake is set. A switch shall also be provided in the cab to activate the surface area and ground lighting when the park brake is not set.

**CRETE FIRE DEPARTMENT
CRETE, NEBRASKA**

**Bidder
Complies**

Yes No

VISUAL WARNING LIGHT SWITCHES

All warning and signal lights shall have switches with an indicator light located inside the chassis cab.

Two (2), customer provided lights shall be moved from the front of the chassis to the front bumper replacement.

One (1) Whelen LINZ6R LED light shall be installed on the **rear passenger's side** of the apparatus. The light shall have red LEDs and a clear lens cover with a chrome flange.

One (1) Whelen LINZ6R LED light shall be installed on the **rear driver's side** of the apparatus. The light shall have red LEDs and a clear lens cover with a chrome flange.

LOWER REAR LIGHTING

Two (2) Whelen LINV2R LED lights shall be installed on the lower, rear area of the apparatus.

The LINV2R includes a warning light and a puddle light. The warning lights have six red LED lights and four white LED lights are installed below to work independently as a surface area illumination light. The lights shall have a chrome flange.

ELECTROLYSIS CORROSION CONTROL

The apparatus shall be assembled using ECK or electrolysis corrosion control, on all high corrosion potential areas, such as door latches, door hinges, trim plates, fenderettes, etc. This coating is a high zinc compound that shall act as a sacrificial barrier to prevent electrolysis and corrosion between dissimilar metals. This shall be in addition to any other barrier material that may be used.

All ¼" diameter and smaller screws and bolts shall be stainless steel with a powdered aluminum coating. This coating shall be bonded metallurgically to the stainless screws to prevent peeling and flaking. This coating is designed to reduce the potential for electrolysis and corrosion to occur where items are assembled and attached.

NFPA COMPLIANT REFLECTIVE STRIPING

Reflective striping shall be applied to the exterior of the apparatus in a manner consistent with NFPA; striping shall consist of a BLACK Scotchlite 4" reflective stripe affixed to the exterior perimeter of the flatbed and chassis cab.

A BLACK reflective stripe shall also be applied to the interior of each chassis cab door and any equipment such as roll-out trays or frames that protrude beyond the body of the apparatus to indicate a hazard or obstruction.

**CRETE FIRE DEPARTMENT
CRETE, NEBRASKA**

**Bidder
Complies**

Yes

No

BODY STRUCTURE LIMITED WARRANTY

The manufacturer shall warrant the body structure of the apparatus to be free of defects in design and workmanship for a period of seven (7) years.

ELECTRICAL WARRANTY

The manufacturer shall warrant to each original purchaser that the supplied electrical equipment are sound and free of all defects of both materials and workmanship, for a period of two (2) years. The warranty shall ensure that the vehicle will be free from defects in the electrical harness and connections under normal use and service within the warranty period.

BASIC LIMITED WARRANTY

The manufacturer shall warrant to each original purchaser that the apparatus is free of defects in material and workmanship for a period of one (1) year.

LETTERING/STRIPING WARRANTY

The manufacturer shall warrant to each original purchaser that the apparatus lettering and/or striping shall be free of defects for a period of three (3) years.

MANUALS/DOCUMENTATION

There shall be one (1) 3-ring binder and one (1) electronic copy of the manufacturer operation and maintenance manual provided that covers the completed apparatus.

The manuals shall include chassis documentation, wiring diagrams, and any other documents or technical data referencing the apparatus. Also included shall be any manufacturers warranties and/or guarantees.

**CRETE FIRE DEPARTMENT
CRETE, NEBRASKA**

**Bidder
Complies**

Yes No

SKID UNIT

250 Gallon UPF Custom Poly Tank

FACTORY INSTALLED SKID UNIT

The skid unit shall be mounted on the above specified fire apparatus and connected to the 12-volt electrical system.

ALUMINUM FRAME

A heavy duty aluminum frame shall be constructed with a combination of 2" x 2" x 1/8" square aluminum tubing and 1-1/2" x 1-1/2" x 1/4" aluminum angle supports. The frame will provide a secure means of attaching the fire pump and plumbing onto the flatbed.

NO EXCEPTIONS

FIRE PUMP

A Waterous 2515LE pump shall be provided and bolted directly to the specified engine and capable of the following performance:

Max Pressure - 75 GPM	@	135 PSI
Max Flow - 150 GPM	@	90 PSI

NOTE: The above manufacturer performance rating is based on maximum full throttle with a flooded suction prior to the installation of associated piping. The impeller shall be high strength corrosion resistant bronze, fully enclosed, double hubbed to balance hydraulic thrust, and mechanically balanced to eliminate vibration. The volute shall be constructed of high strength aluminum alloy, anodized for superior corrosion resistance. A drain valve shall be located on bottom of the pump volute.

The pump shall have a two (2) year warranty.

The pump shall be firmly mounted to the skid frame or platform behind the water tank.

PUMP ENGINE

A Briggs and Stratton model 356447 Vanguard V-Twin 90 OHV 18 HP engine shall be supplied and mounted to the pump. The engine shall be air cooled, constructed of Dura-Bore cast iron cylinder sleeves. It is designed to deliver a maximum output of 18 HP (13.4 kW) @ 3600 RPM.

The engine shall feature a full pressure lubrication system with an automotive style oil filter and an oil fill tube with dipstick.

**CRETE FIRE DEPARTMENT
CRETE, NEBRASKA**

**Bidder
Complies**

Yes No

AUTO THROTTLE

The engine shall be equipped with an automatic throttle which will respond to water flow. The engine shall remain at a fixed idle speed of approximately 2400 RPM at pump by-pass to water tank. The engine shall automatically throttle up to approximately 3750 RPM when a discharge line is opened. The engine shall automatically decelerate down to 2400 RPM when the nozzle is closed.

TOP MOUNT CONTROL OPERATOR'S PANEL

A custom top mount operator's panel shall be provided in the walkway and mounted to the top of the water tank. The panel shall be constructed of smooth aluminum with an abraded aluminum finish. The control panel shall house all necessary controls.

The panel shall be labeled with permanent labels for all instruments and controls and shall be illuminated for nighttime operation. An on/off switch shall be provided for the panel light.

NOTE: The tank to pump shall be operated at the rear of the apparatus.

The engine controls shall be moved to a single location at the top mount control operator's panel.

The pump engine shall have a keyed start/stop provided and mounted on the top mounted operator's panel in the access area.

The pump engine shall have a choke provided and mounted on the top mounted operator's panel in the access area.

The pump engine shall be supplied with a vernier style throttle mounted on the top mount control panel. The operation of the remote throttle shall consist of seven full turns from idle to wide open engine speed. The throttle shall have a red center button to quickly return the engine to idle when depressed.

DISCHARGE PRESSURE GAUGES

There shall be one (1), discharge pressure gauge installed on the top mount control operators panel.

There shall be one (1), additional discharge pressure gauge installed at the rear of the skid unit inline with the plumbing.

The gauges shall be a minimum of 2-1/2" in diameter with a white face and black text.

**CRETE FIRE DEPARTMENT
CRETE, NEBRASKA**

**Bidder
Complies**

Yes

No

TOP MOUNT CONTROL MANIFOLD

A fabricated stainless steel manifold shall be mounted below the top mount control panel near the front walkway. The manifold shall be attached to the discharge side of the pump to facilitate all outlets and reduce friction loss.

ENGINE KILL SWITCH

There shall be a pump kill momentary switch located at the rear of the skid unit to allow for remote shut down of the pump engine.

PUMP ENGINE OIL DRAIN

An engine oil drain valve shall be provided and installed on the engine. The oil drain valve shall have a nipple to accept 3/8" ID hose to allow draining of the engine oil.

PUMP ENGINE COMMON FUEL SYSTEM

The pump engine shall be connected directly to the chassis fuel tank when a common fuel is used. The fuel line shall be connected from the pump engine to an electric fuel pump with a separate siphon tube.

PUMP PRIMER

No pump primer shall be provided.

PUMP SYSTEM CERTIFICATION

The pump shall be tested after the pump and all its associated piping and equipment have been installed on the skid unit by the apparatus manufacturer. Documentation of the test shall be provided with the completed apparatus.

**CRETE FIRE DEPARTMENT
CRETE, NEBRASKA**

**Bidder
Complies**

Yes No

PLUMBING

Plumbing shall be a combination of heavy duty stainless steel pipe and fittings, and high pressure rubber hose.

A round stainless steel manifold shall be used for all discharge's. The manifold shall be engineered to allow adding a foam system or additional discharge's after the unit is completed.

The high pressure rubber hose is designed to handle air, mild chemicals and water and is resistant to abrasion and UV protected.

The stainless steel pipe and fittings shall have a polished natural mill finish.

DISCHARGE MANIFOLD

A stainless steel welded pipe manifold shall be attached to the pump discharge with four (4) 1/4" bolts to facilitate all outlets and reduce friction loss. The manifold assembly shall be constructed of 2" round tubing and capable of accommodating up to two (2) 1" discharges and three (3) 1-1/2" discharge outlets.

SUCTION MANIFOLD

A stainless steel welded pipe manifold shall be attached to the suction side of the pump with a Victaulic clamp for easy removal for service and maintenance. The manifold shall have a tee to facilitate a 2" tank to pump and 2-1/2" intake.

All valves, unless otherwise specified, shall be brass Watts full flow quarter-turn valves.

TANK TO PUMP

The tank to pump shall be equipped with a 2" Watts full flow, quarter turn ball valve with a flexible hose to reduce vibration of the pump engine.

PUMP TO TANK/RECIRCULATE VALVE

One (1) 1" tank fill/recirculate line with a 1" Watts full flow, quarter turn ball valve shall be plumbed directly from the pump discharge at the front manifold to the tank with a flexible hose to reduce vibration of the pump engine.

INTAKE

One (1) 2-1/2" male intake shall be mounted to the pump inlet. The intake shall terminate with a chrome plated 2-1/2" NPT female x 2-1/2" NH male bushing. A zinc screen will be provided to prevent foreign objects from entering the pump.

CAP WITH CHAIN

One (1) 2-1/2" NH vented chrome plated cap with chain shall be supplied for the intake.

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**Bidder
Complies**

Yes No

1-1/2" DISCHARGE

One (1) 1-1/2" NH discharge shall be provided with a 1-1/2" Watts full flow, quarter-turn valve. The discharge shall terminate with a chrome 1-1/2" NPT male x 1-1/2" NH male fitting and be directed to the rear.

CAP WITH CHAIN

One (1), 1-1/2" NH vented chrome cap with chain shall be supplied for the discharge.

1" PROTECTION LINES

Two (2), 1" NH discharge protection lines shall be plumbed, one to each access area, with 1" Watts full flow, quarter turn valves. The valves shall be located one at each side of the top mount control manifold and terminate with chrome plated 1" NPT male x 1" NH male adapters.

PROTECTION LINE HOSE(S)

Two (2), 1" ID x 8' protection line hose(s) with 1" couplings shall be supplied. The protection line shall be shipped loose with the completed unit.

PAC HANDLELOK

Two (2), PAC model 1004-2 Handlelok, with a grip range from 1/8" to 1-3/4" and instant release capabilities shall be mounted to secure the protection line hose nozzle.

BOOSTER REEL

One (1), Hannay model EF steel electric booster reel(s), with a capacity of 150' of 1" booster hose shall be supplied. The reel(s) shall be painted graphite in color. A 1" Watts full flow, quarter turn valve shall be plumbed from the pump discharge and connected to the booster reel with a flexible hose to reduce vibration from the pump engine.

The booster reel(s) is equipped with a standard 1" 90 degree ball bearing swivel joint with 1" female NPT threads and a standard outlet with 1" male NST threads.

The reel(s) shall be capable of withstanding pressures to 1000 psi and temperature ranges from -60° F to 250° F.

An aluminum frame shall be provided under the booster reel to enable the reel to be attached to the top of the poly tank.

Two(2), set of chrome guide rollers shall be mounted high on the left side of the hose reel. The rollers shall provide assistance in pulling the hose off from the reel and guiding it on after use.

One (1), booster reel rewind switch shall be supplied and mounted at the rear of the skid unit.

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Yes No

One (1), 1" x 150' section(s) of 300 PSI working pressure Kochek KBH lightweight red booster hose with 1" NH RTC reattachable hardcoat couplings shall be supplied and installed on the booster reel.

The booster reel shall be mounted lengthwise above the water tank and deploy to the sides of the apparatus.

WATER TANK

The water tank shall be a UPF Defender 1 series custom built tank with a capacity of 250 US gallons.

The tank shall have a LIFETIME WARRANTY as supplied by the tank manufacturer.

The tank shall be constructed of 1/2" thick UPF PT-2E polypropylene sheet stock with AccTuff resin. The material shall be of a certified, high quality, non-corrosive, stress relieved thermoplastic, black in color, and UV stabilized for maximum protection. All joints and seams are to be fully nitrogen welded and electronically tested for maximum strength. The unit shall incorporate transverse partitions manufactured of 3/8" UPF PT2E polypropylene (natural in color) which shall interlock with a series of longitudinal partitions constructed of 1/2" PT2E polypropylene (black in color). All swash partitions shall be so designed to allow for maximum water and air flow between compartments and are fully welded to each other as well as to the inside of the tank.

The tank shall be equipped with a combination vent/overflow and manual fill tower. The fill tower shall be 8" round and 8" high with a blue, molded cover. The cover shall be fastened to the tower with a tether to prevent loss. There shall be a vent/overflow installed inside the tower approximately 2" down from the top. This vent/overflow shall be schedule 40 polypropylene pipe and have an ID of 3". The vent/overflow shall be piped internally toward the passenger side and exit the tank through the sidewall. The overflow pipe shall be flush with the sidewall.

There shall be a vent/overflow installed inside and to the extreme rear of the fill tower. The vent overflow shall be a minimum of schedule 40 polypropylene pipe with a minimum I.D. of 4" that is designed to run through the tank, and shall be piped to discharge water below the body as required by NFPA so as to not interfere with rear tire traction.

There shall be a minimum of two (2) standard tank outlets: one for the tank-to-pump suction line, which shall be sized to provide adequate water flow to the pump; and, one for tank fill line, which shall be sized according to the NFPA minimum size chart for water tanks. All auxiliary outlets and inlets must meet all NFPA guidelines in effect at the time of manufacture.

The water tank shall be tested and certified as to capacity on a calibrated and certified tilting scale. Each tank shall be weighed empty and full to provide precise fluid capacity. Each Poly-Tank® III is delivered with a Certificate of Capacity delineating the weight empty and full and the resultant capacity based on weight.

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Complies**

Yes No

A tag shall be installed on the apparatus in a convenient location and contain pertinent information including a QR code readable by commercially available smart phones. The information contained on the tag shall include the capacity of the water and foam (s), the maximum fill and pressure rates, the serial number of the tank, the date of manufacture, the tank manufacturer, and contact information. The QR code will allow the user to connect with the tank manufacturer for additional information and assistance.

There shall be an internal sump as standard per tank. The sump shall be recessed into the tank floor and be a minimum of 1/4" deep.

TANK DRAIN

There shall be a 1" FNPT female tank drain located on the rear tank wall towards the passenger side with a 1" stainless steel plug.

TANK COVER MOUNTING BLOCKS

The water tank cover shall incorporate two (2) mounting blocks that can accommodate sliding nut fasteners. These mounting blocks shall be welded to the tank cover running from the rear edge of the tank forward and used to mount a booster reel or other equipment if selected.

VISUAL WATER TANK SIGHT LEVEL GAUGE

There shall be an external visual sight gauge located on the rear wall of the tank.

WATER LEVEL GAUGE

One (1), Innovative Controls Inc. electronic water level fluid meter with a sealed probe shall be mounted into the tank. The indicator panel shall feature high intensity LED's and display FULL, 3/4, 1/2, 1/4 and REFILL levels that are easily distinguished at a glance. Level Monitor accuracy is enhanced by an "anti-slosh" feature, which provides steady, accurate fluid level indication despite sloshing inside the tank due to vehicle motion.

The water level gauge shall be located at the top mount operator panel.

12-VOLT ELECTRICAL

All electrical components of the unit shall be wired to a terminal stud block with high temperature, copper, multi-strand, crosslink-coated wire enclosed in a protective loom.

WORK LIGHT

One (1), 12-Volt LED work light shall be mounted on the tank to light up the work area. An ON/OFF switch shall be located at the rear of the skid unit.

BASIC LIMITED WARRANTY

The manufacturer shall warrant to each original purchaser that the apparatus is free of defects in material and workmanship for a period of one (1) year.

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Complies**

Yes

No

STAINLESS STEEL PLUMBING WARRANTY

The manufacturer shall warrant to each original purchaser that the apparatus stainless steel plumbing shall be free of defects for a period of ten (10) years.