

**ONE (1) CURRENT PRODUCTION MODEL  
NEW 5,000 GALLON JET AIRCRAFT REFUELER**

**BID DATE:**

**Thursday, December 7, 2023  
10:00 AM – Dubuque Jet Center Conference Room  
11000 Airport Rd, Dubuque Iowa 52003**

The Dubuque Regional Airport is soliciting bids for one (1) new 5,000-gallon jet aircraft refueler. Bids are scheduled to be received by December 7, 2023, in the office of the Airport Director, 11000 Airport Road, Dubuque, Iowa, 52003.

<b>Name of the Bid</b>	5,000 Gallon Jet Aircraft Refueler
<b>Date of Issuance</b>	November 9, 2023,
<b>Deadline for Bid Submittal</b>	December 7, 2023, before 10:00 a.m. CST Bids time stamped 10:01 a.m. or after are late
<b>Recommendation for Award</b>	December 12, 2023
<b>Method of Submittal</b>	US Mail, Overnight Delivery or In Person. Electronic and fax proposals <b>are not</b> acceptable.
<b>Contact Person, Title</b>	<b>Todd Dalsing, Airport Director</b>
<b>E-mail Address</b>	<a href="mailto:tdalsing@cityofdubuque.org">tdalsing@cityofdubuque.org</a>
<b>Phone Number</b>	563-589-4233

## **NOTICE OF CALL FOR BIDS**

Sealed proposals will be received in the office of the Airport Director,  
11000 Airport Road, Dubuque, Iowa 52003 until:

**10:00 AM – Thursday, December 7, 2023**

For:

One (1) 5,000 Gallon Jet Aircraft Refueler

## INSTRUCTIONS

### ALL BIDS ARE SUBJECT TO THE FOLLOWING:

01. No bid may be withdrawn after scheduled closing time for receiving bids.
02. All bids will be publicly opened. Any bids received after the time designated will be returned unopened.
03. Bid shall be good for 60 days after receipt by City of Dubuque.
04. Envelope containing bids shall be plainly marked – **5,000 Gallon Jet Aircraft Refueler**
05. Exclude any federal excise and state tax.
06. Bidder must complete bid proposal forms in their entirety. Terms and costs of any extended warranties must be stated clearly and completely.
07. Bidder must provide a brochure of the unit being bid. The unit's specifications must be highlighted with no inked-in changes permitted.
08. Upon delivery of vehicle the dealer shall provide the Airport Mechanic with the following information and paperwork:
  - a. Body chassis serial number
  - b. Copy of all warranties pertaining to the purchased unit
09. Vehicle is to be bid FOB Dubuque Regional Airport, 11000 Airport Road, Dubuque, IA 52003. Delivery is to be made directly to the noted facility.
10. City of Dubuque administrative policy 3.10 (purchasing policy): as required by chapter 23a, section 3, Code of Iowa, it shall be the policy to consider purchasing goods or services from locally owned businesses located within the City of Dubuque when other considerations are relatively equal. Bidders located within the Dubuque corporate limits may be given a ten (10) percent preference on purchases up to \$500.00, and a five (5) percent preference on purchases of \$500.00 or more. Purchases made through the formal bid process must be awarded to the low bidder per Iowa Code requirements. Should a hybrid-powered vehicle be bid, the purchase will be awarded based on life cycle-cost.
11. The City reserves the right to reject any and all bids or any part thereof, or to accept any bid or part thereof deemed to be in the best interest of the City.

12. Must meet the following minimum design standards, general description, and flow characteristics:

**A. Minimum Design Standards:**

- a) Must meet US DOT 406 regulations and manufacturer to maintain a US DOT # and a CT #.
- b) Must follow A4A (ATA) Spec. 103, and NFPA 407 (current edition) regulations.
- c) Construction and materials shall conform to current relevant ASTM, ASME and SAE standards as well as EI 1581 (Current Edition), and API/IP 1529 certifications.
- d) Must be built in the USA.

**B. Flow Capacity Provided as Follows:**

- a) Underwing pressure fueling flow rate approximately 300 GPM through a 2" x 50' fueling hose.
- b) Overwing pressure fueling flow rate approximately 70 GPM through a 1 1/4" x 50' fueling hose.
- c) Dual overwing via two overwing reels, approximately 65-70 GPM each hose
- d) Product recirculation at 300 GPM
- e) Bottom loading at 400 GPM

**C. Bottom Loading System:** Shall be mounted on the passenger side of the refueler and shall include a pre-check and an automatic high-level shut-off control and Scully system.

**D. Underwing Fueling:** An underwing hose reel with I-Hub Swivel assembly with a shut-off valve, certified fueling hose, and a single point nozzle with interlock shall be mounted onto a "single-wrap" style hose reel installed between the back of the chassis cab and the front of the product tank, HANNAY reel.

**E. Overwing Fueling:** Two (2) overwing hose reel assemblies with a shut-off valve, certified fueling hose, and an overwing nozzle shall be mounted onto two (2) overwing hose reels and installed in an enclosed equipment module.

**F. Refueler Configuration:**

- a) The "single wrap" underwing hose reel shall be installed behind the chassis cab and in front of the product tank.
- b) The overwing hose reels, hoses and nozzles, flow meters and registers and other equipment (i.e., control panel, bottom loading connection, Deadman controller, etc.) shall be mounted in a driver's side enclosed equipment module.
- c) The filter, storage container, and Deadman/control valve shall be mounted in the passenger's side enclosed equipment module.

**G. Primary Pressure Control:** Shall be provided through a 3" electric bypass valve with regulator cap control valve and set at 40 PSI and test ball valve feature for isolating the bypass valve to test secondary pressure controls.

**H. Secondary Pressure Control:** Shall be through a 3" electric inline/deadman with regulator cap and set at 50 PSI.

# **S P E C I F I C A T I O N S**

## **ONE (1) CURRENT PRODUCTION MODEL NEW 5,000 GALLON JET AIRCRAFT REFUELER**

It is the intent of these specifications to describe the minimum requirements for one (1) 5,000-gallon jet aircraft refueler. All parts not specifically mentioned which are necessary to provide one (1) complete unit shall be provided by the successful bidder at the price bid and shall conform in strength, quality of material and workmanship that is usually provided by standard engineering practices and safety standards. The intended service for this new 5,000-gallon jet aircraft refueler is for fueling jet engine aircraft.

Bidder shall complete all items in these specifications with either a check mark (✓) to indicate that the unit being bid meets or exceeds the specifications or a description to indicate how the unit deviates from the specification.

### **BASIC WARRANTY**

The bidder shall provide with their bid a guarantee by the manufacturer that the unit bid is suitable for the service intended. The bidder shall state the length of time any part found to be defective or not suitable for the intended service shall be replaced without cost. The warranty shall be for not less than thirty-six (36) months.

Meets above specifications      (  ) Yes    (  ) No

Description \_\_\_\_\_

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## **ENGINE AND CHASSIS SPECIFICATIONS**

### **LATEST MODEL**

Bidder shall quote on the latest model as manufactured by the concern they represent and shall provide with the bid the manufacturer's printed brochure or specification sheet for the model bid. No inked-in changes or alterations of printed material will be accepted.

Meets above specifications       Yes     No

Description \_\_\_\_\_  
\_\_\_\_\_

### **ENGINE**

For use in the USA and shall include the newest model Cummins Diesel.

Meets above specifications       Yes     No

Description \_\_\_\_\_  
\_\_\_\_\_

### **CHASSIS MAKE/MODEL**

New International Model HV, 4 x 2 (w/single rear axle) conventional chassis cab (or equal).

Meets above specifications       Yes     No

Description \_\_\_\_\_  
\_\_\_\_\_

### **TRANSMISSION**

Allison 5-Speed automatic 3000/3500 series with PTO provision (or equal).

Meets above specifications       Yes     No

Description \_\_\_\_\_  
\_\_\_\_\_

**WHEELBASE/C.A.**

260" wheelbase (193" cab-to-axle).

Meets above specifications  Yes  No

Description \_\_\_\_\_

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**FRAME**

Heat treated alloy steel "C" channel reinforced frame rails – 120,000 PSI.

Meets above specifications  Yes  No

Description \_\_\_\_\_

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**FRONT AXLE/SUSPENSION**

20,000# capacity, wide track, I-beam type (with power steering). Front spring Multileaf, shackle type, 20,000-lb capacity, less shock absorbers.

Meets above specifications  Yes  No

Description \_\_\_\_\_

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**REAR AXLE/SUSPENSION**

- a) Single rear axle: Meritor RS-35-380 Double Reduction, 38,000-lb Capacity, T Wheel Ends or Meritor RS-38-185 Single Reduction, 38,000-lb Capacity, T Wheel Ends, for Airport Vehicles
- b) Rear Single Suspension: Chalmers 1040 Series 40,000-lb Capacity, Rubber Springs, 12.23"/9.88" Unladen/Laden Ride Height, with Torque Rods, and Shock Absorbers Mounted Ahead of Drive Axle or 38,000-lb Capacity, Vari-Rate Springs, with 4500-lb Capacity Auxiliary Rubber Springs

Meets above specifications  Yes  No

Description \_\_\_\_\_

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## **BRAKES**

Air brakes 16.5" x 6" front, 16.5" x 7" rear with spring activated parking brake. Rated for 56,000 lb. max GVW. The emergency brake shall be rated to exceed gross vehicle weight and must be air operated on both axles. The service brake shall be heavy duty. All wheels shall include backing plates to keep debris out of the brake shoes.

Meets above specifications       Yes     No

Description \_\_\_\_\_

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## **TIRES**

Front (2 each) 12R22.5; Rear (4 each) 315/80R22.5.

Meets above specifications       Yes     No

Description \_\_\_\_\_

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## **ALTERNATOR**

Brush type, 12V, 160 amp.

Meets above specifications       Yes     No

Description \_\_\_\_\_

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## **BATTERIES**

Two (2) 12 Volt 1850 CCA total, maintenance free.

Meets above specifications       Yes     No

Description \_\_\_\_\_

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## **COMPRESSOR**

Bendix Tu-Flow 550/13.2 CFM.

Meets above specifications       Yes     No

Description \_\_\_\_\_

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## **AIR DRYER**

Bendix AD-9 with heater.

Meets above specifications       Yes     No

Description \_\_\_\_\_

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## **EXHAUST**

The exhaust system shall be modified to discharge on the passenger side and in front of the product tank.

Meets above specifications       Yes     No

Description \_\_\_\_\_

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## **ACCESSORIES INCLUDED**

- a) Two (2) front hooks, frame mounted.
- b) Gauges: High water temperature, Low oil pressure light & buzzer, fuel level, transmission fluid temperature, DEF level
- c) Engine Hour Meter
- d) Fuel tank-50 gallon
- e) Engine block heater
- f) Master battery disconnect switch with lock-out provision.
- g) Two (2) Heated Mirrors rectangular with integral convex mirrors, 7.55" x 14.1"
- h) 15-gallon product recovery tank with outlet at least 18" above ground with fully loaded truck
- i) Radio to transmit and receive on aviation frequencies.

Meets above specifications       Yes     No

Description \_\_\_\_\_

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## **PRODUCT TANK**

### **GENERAL TANK DESIGN**

- a) 5,000 US Gallon brushed stainless steel tank or aluminum (including 3% expansion space) with Canopy and Side Cabinets integral to tank.
- b) Single compartment, fully baffled with rigid bulkheads.
- c) Brushed Stainless Steel Tank shell, compartment bulkheads, internal baffles, rollover rails, cradles, framing and skirting.
- d) Bolster style mounted tank with front bolster spring mounted.
- e) Tank shall meet US DOT-406 and include appropriate DOT tags and certification plates.
- f) 5-Year tank warranty

Meets above specifications       Yes  No

Description \_\_\_\_\_

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### **TANK ACCESS OPENINGS**

- a) 20" Diameter access openings with 10" fill covers, and (1) 20" diameter inspection cover
- b) The stainless steel 20" round manholes to be located on the tank center line and centered between the bulkheads with self-closing cover.
- c) The hinge on the 10" fill openings to be located to face the front of the tank.
- d) Location of the manholes and key components inside the tank to be visible for inspection.

Meets above specifications       Yes  No

Description \_\_\_\_\_

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### **OVERTURN PROTECTION**

- a) Overturn protection to include same material as tank, overturn rails extending the full length of the tank with a minimum of 1" clearance over all covers and vents.
- b) Flashing to provide carry-off of spilled fuel and rainwater through drain tubes installed (2) front and (2) rear directed away from engine, exhaust, and electrical system.

Meets above specifications       Yes  No

Description \_\_\_\_\_

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## **TANK VENTS**

One (1) 3" inward opening vent with screen (mechanical) to work in conjunction with internal valves during fueling and bottom loading and (2) emergency vents in dome lid.

Meets above specifications  Yes  No

Description \_\_\_\_\_

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## **ACCESS LADDERS**

- a) One (1) rear mounted access ladder to top of tank with grab handles, meeting US OSHA 29CFR guidelines.
- b) Walkway on top of the tank consisting of non-slip expanding metal, to cover the upper portion of the tank between the overturn rails.

Meets above specifications  Yes  No

Description \_\_\_\_\_

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## **DRAIN VALVES**

1" spring loaded water drain-off valves with a  $\frac{3}{4}$ " ball valves to be located at the lowest point of the tank. Cables operating the spring-loaded valves to be in the passenger side cabinet. A standard tank would require front and rear sumps. If the tank has a trough system, then one drain is acceptable.

Meets above specifications  Yes  No

Description \_\_\_\_\_

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## **INTERNAL VALVES**

One (1) 3" mechanically operated internal bottom load valve for unloading and off-loading of fuel and one (1) recirculation stub driver side of rear tank for maintenance and testing.

Meets above specifications  Yes  No

Description \_\_\_\_\_

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## **REFUELING, PUMPING, CONTROL SYSTEMS AND FUELING COMPONENTS**

### **PRODUCT PUMP**

Shall be a 3", 300 GPM, PTO driven, self-priming centrifugal product pump. PTO must be an electric over hydraulic shifted PTO.

Meets above specifications  Yes  No

Description \_\_\_\_\_

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### **PUMP ENGAGEMENT**

Automatic PTO engagement system to activate the PTO when the mechanical internal valve is opened.

Meets above specifications  Yes  No

Description \_\_\_\_\_

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### **FILTER-SEPARATOR**

Filter/Separator system designed to work at the rated flow rate and meet the latest EI 1581. Spring loaded, normally closed, 3/4" drain valve to be provided. New filter elements and coalescers to be installed at the time of shipment and stamped with the date of installation. Pre-blended location shall have JF filters installed so the flow rate of 300 GPM will be maintained.

- a) **Water Defense:** Along with the filter/separator, a float switch shall be included in the filter sump to close the in-line control valve should unexpected water be introduced. Preferred is a water probe made by FPI Sensors
- b) **Air Eliminator and Pressure Relief Valves:** The filter vessel to include a 1/2" air eliminator mounted on filter with a 3/4" line plumbed back to product tank. A 1/2" pressure relief valve set at 150 PSI, mounted on the filter, plumbed back to the product tank with 1/2" tubing.
- c) **Differential Pressure Gauge (DP):** Direct read 0-30 PSI differential pressure gauge mounted in the open right-hand side of the control panel in the equipment module. The DP gauge to measure the pressure drop across the filter vessel. The DP gauge to include a purge valve to allow for testing and to be plumbed back to the product tank.
- d) **Sample Connections/Sample Ports:** Two (2) 1/4" couplings, with one (1) coupling located upstream of the filter and one (1) coupling located downstream of filter for sampling fuel. Each coupling to be equipped with Millipore or equivalent fuel sampling dry break disconnects with caps.

Meets above specifications  Yes  No

Description \_\_\_\_\_

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## DEADMAN CONTROLLER/STORAGE

12V electric Deadman Gammon style control and heavy-duty orange curly cord to be mounted inside an aluminum Deadman control storage box with flat top lid (drivers' side). Activated Deadman controller to engage the inline deadman valve.

Meets above specifications  Yes  No

Description \_\_\_\_\_  
\_\_\_\_\_

## FLOW METERS AND REGISTERS

- a) Two (2) TCS 3000 electronic Meter registers
- b) Prewired for Electronic Slip Printer with printer stand but no printer.
- c) Prewired for Wireless Data Transfer Kit (without modem)
- d) Each meter must have TCS thermo-well blocks attached to upstream of meter.

Meets above specifications  Yes  No

Description \_\_\_\_\_  
\_\_\_\_\_

## FUELING HOSES

All fueling hoses to be approved for aviation refueling and manufactured to meet the latest API 1529, 6<sup>th</sup> Edition, Grade 2, Type C. Couplings fabricated of non-sparking metal, standard male NPT screw couplings, affixed by machine. Test Certificates to be included.

- a) **Underwing Fueling Hose:** One (1) 2" by 50' underwing (OMNI Brand) fueling hose with MxM couplings installed on the underwing hose reel.
- b) **Overwing Fueling Hoses:** Two (2) 1 1/4" by 50' overwing (OMNI Brand) fuel hoses with MxM couplings installed on each of the drum style multi-wrap hose reels for overwing fueling.

Meets above specifications  Yes  No

Description \_\_\_\_\_  
\_\_\_\_\_

## HOSE REELS

All fueling hose reels to be electric rewind with 12-V DC explosion proof motors, switches and circuit breakers and hose stops to be included.

- a) **Non-Ferrous internals** and aluminum swivel joints with Victaulic connections. Roller Assembly
- b) Ball or roller bearings and allow for the reels to unwind freely.
- c) **Shut-off valves** installed upstream of each hose reel.
- d) **Electrical** lines to the hose reels to be automotive grade wiring harnesses (SAE approved). A manual reset circuit breaker (50-amp) is to be provided for each hose reel. Bars installed underneath each hose reel to prevent hose dragging to the ground.

e) **Manual rewind** systems with friction-type adjustable drag to be included.

Meets above specifications       Yes       No

Description \_\_\_\_\_  
\_\_\_\_\_

### **UNDERWING HOSE REEL**

One (1) 3" electric rewind "single-wrap style", I-Hub swivel, sized for 2" x 50' hose installed behind the chassis cab and in front of the product tank, under the canopy. HANNAY reel

Meets above specifications       Yes       No

Description \_\_\_\_\_  
\_\_\_\_\_

### **OVERWING HOSE REEL**

Two (2) 2" electric rewind "drum style" hose reels sized for 1 1/4" by 50' hoses mounted in the enclosed equipment module.

Meets above specifications       Yes       No

Description \_\_\_\_\_  
\_\_\_\_\_

### **VENTURI**

One (1) aluminum constructed venturi with 150# flanges on inlet and outlet connections to compensate for pressure loss. The venturi includes a needle valve for adjustment. (ClaVal)

Meets above specifications       Yes       No

Description \_\_\_\_\_  
\_\_\_\_\_

### **UNDERWING NOZZLE**

One (1) 2 1/2" standard bayonet underwing nozzle with swivel and heavy-duty nose seal, 100 mesh strainer and dust cap. (Whittaker F116 with Heavy Duty Nozzle Seal)

Meets above specifications       Yes       No

Description \_\_\_\_\_  
\_\_\_\_\_

## **OVERWING NOZZLE**

Two (2) 1 ½" overwing nozzles with 100 mesh strainers, jet flare spouts and dust caps. (OPW 295SAJ-0200)

Meets above specifications  Yes  No

Description \_\_\_\_\_

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## **BRAKE INTERLOCKS/WARNING LIGHTS/NOZZLE INTERLOCKS/NOZZLE**

### **STOWAGE**

All fueling equipment to be equipped with a brake interlock fail safe system. Unit must be locked in the neutral position when an interlock is engaged.

- a) **Nozzle Interlocks and Stowage:** Nozzle stowage brackets to allow for easy removal and stowage of the nozzles. Holders to be installed to ensure hoses are not forced or kinked in stored position.
- b) **Brake Interlocks:** Nozzle holders to include electric proximity switches to send a signal to set chassis brakes and immobilize refueler when nozzles are removed from stowage brackets. All brake interlocks shall activate the chassis parking brake and immobilize the refueler upon the following actions.
  - a. When off-loading internal valve is open (tankers).
  - b. When the bottom loading gate is open (tankers).
  - c. When nozzles are removed from stowage brackets.
  - d. When the refueler is in pump mode or dispensing mode.

An interlock override system to be installed in the dashboard of the chassis cab. The system includes a switch, safety wired in the normal position (i.e., with interlocks fully activated), and to include an "interlock Override" indicator light.

- c) **Brake Interlock Warning Lights and Alarms:** Refueler to be equipped with a 2" amber light to alert the driver if an interlock is engaged, along with a 2" red light that is visible from the outside to alert the driver if the interlock override has been activated and the brake interlock system is bypassed.

Meets above specifications  Yes  No

Description \_\_\_\_\_

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## **BOTTOM LOADING AND HIGH-LEVEL AUTOMATIC SHUTOFF (PASSENGER SIDE)**

One (1) 2 ½" bayonet type adapter and shut-off valve along with associated piping connected to the internal valve.

- a) **Interlock Gate:** A brake interlock gate to be provided to actuate the brake interlock system, open the tank vent automatically, and prevent the refueler from moving during bottom loading.
- b) **Quick Acting Shut-Off:** A quick acting shut-off valve to be installed downstream of the bottom load adapter. A pressure gauge shall be installed to measure the

bottom loading supply pressure and is upstream of the quick acting shut-off valve.

- c) **Pre-Check:** A pre-check valve located in the pressure line to the jet sensor shall be included. Additionally, the shut-off system shall be capable of being tested for proper operation without removal and be capable of being removed or installed from the manhole without entering the product tank (with adequate tubing supplied for this purpose).
- d) **Balanced Piston Type Valve:** the bottom loading emergency valve to be of balanced piston type.

Meets above specifications       Yes     No

Description \_\_\_\_\_

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#### **HIGH-LEVEL AUTOMATIC SHUTOFF (PRIMARY)**

A Primary 2 wire optical sensor for automatic high-level shutoff includes a thermistor socket to send a signal to the fueling rack to shut down when the product level reaches the maximum height.

Meets above specifications       Yes     No

Description \_\_\_\_\_

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#### **HIGH-LEVEL AUTOMATIC SHUTOFF (SECONDARY)**

A secondary automatic high-level shutoff system is to be provided. Shutoff system to use a jet sensor type automatic high-level shut-off to close the Emergency Valve when the product tank is filled to maximum capacity.

Meets above specifications       Yes     No

Description \_\_\_\_\_

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#### **RECIRCULATION ADAPTER**

Tank shall have a recirculation stub on the driver side of rear tank for primary pressure checks, maintenance, and testing. The tank inlet includes a shear section.

Meets above specifications       Yes     No

Description \_\_\_\_\_

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## PIPING AND FITTINGS

All piping and product transfer lines to consist of seamless stainless steel appropriately sized for the rated flow and shall meet the following minimum standards:

- a) **PSI Rating:** All piping shall be rated and tested to 150 PSI working pressure and 225 PSI test pressure.
- b) **Fittings:** All fittings shall be stainless steel with pre-formed belled ends. 3/8" stainless steel couplings with brass plugs may be installed in low points for drains. The tank outlet includes a shear section below the internal valve.
- c) **Victaulic Couplings:** Victaulic couplings to be installed at appropriate points to permit removal of valves and other components for ease of maintenance and to absorb excessive vibration. All gasket material to be a combination cork-Buna N or a non-asbestos type of composition for aviation fuels. No exclusively cork or Buna-N gaskets are permitted. Suitable brackets with U-bolts shall be installed to prevent excessive movement of piping and all components to be adequately supported.
- d) **Closed System:** The refueling system to be arranged so that all fuel which passes through the delivery meter is delivered to the aircraft and cannot be diverted elsewhere.

Meets above specifications       Yes     No

Description \_\_\_\_\_

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## DRAIN, FUEL AND PNEUMATIC LINES

All drain and sump lines consist of Synflex tubing with spring loaded ball valves and terminate in camlock fittings with dust caps.

All pneumatic lines include "push type DOT approved" quick-disconnect fittings, and all fuel lines include "compression type" fittings DOT approved.

Meets above specifications       Yes     No

Description \_\_\_\_\_

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## GAUGE PANEL/CONTROL PANEL AND GAUGES

An aluminum fully accessible gauge panel/control panel shall be installed on the driver's side. All components and gauges on the panel shall be identified with fuel/UV resistant labels and the panel shall be illuminated. The control panel shall include the following:

- a) **Differential pressure gauge:** 0-30 PSI increment direct reading D.P. gauge w/purge valve.
- b) **Nozzle pressure gauge:** a 4", color coded nozzle pressure gauge shall be provided with measurement in 2 PSI increments. A nozzle pressure gauge shall include a gauge test port to allow easy inspection of the gauge (test port via Millipore style connection).

c) **Pump pressure gauge:**

d) **PTO indicator light:**

e) **Water detection indicator:** shall include a water detector light to indicate presence of water.

Meets above specifications  Yes  No

Description \_\_\_\_\_

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### **PROGRAMMABLE LOGIC CONTROLLER**

The refueler shall include a programmable PLC logic control system to reliably manage the functions of the refueler. The PLC system shall manage the following functions:

- a) Brake interlocks, emergency shutdowns, throttle modes, Deadman, etc.
- b) The preferred PLC would be a Supernode II PLC with 24 output and 24 inputs in the module. The PLC must have LED indicators for all inputs and outputs on the PLC. Otherwise an equivalent with all the required LED indicators for all inputs and outputs into the PLC.
- c) PLC must integrate with the chassis J 1939 network for chassis signals.
- d) The PLC shall include a centrally located and easily accessible control panel inside the chassis cab, with LED indicator lights on all inputs and outputs of the PLC, to report the status of every control-related component of the refueling system.
- e) The fueling operator shall be able to immediately determine the status and location of any control related anomaly arising from a failed switch or other irregularity.

Meets above specifications  Yes  No

Description \_\_\_\_\_

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### **ELECTRICAL SYSTEM**

The Electrical system shall include the following:

- a) A master battery disconnect switch to isolate the electrical systems from the battery source.
- b) A twelve-volt electrical system wiring numbered to match the engineering schematics. Each circuit includes over-current protection.
- c) All wires insulated with material impervious to the effects of petroleum fuels.
- d) All conduits are professionally installed to eliminate bends or sharp curves.
- e) All conduits are securely anchored throughout the entire length.
- f) All circuit breakers and solenoids to be mounted in an easily accessible location in cab.
- g) Overcurrent protection shall be provided for each circuit.

Meets above specifications  Yes  No

Description \_\_\_\_\_

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### **LIGHTING SYSTEM**

Refueler to include lighting, clearance lights, and back-up lights and meet applicable U.S. DOT requirements. All light fixtures and junction boxes to be weather, dust and vapor tight. All lenses and bulbs to be easily accessible for replacement. Two clear back-up lights and two red combination stop, tail, and turn signal lights to be mounted on the rear bumper as follows:

- a) Two (2) red marker lights – one (1) on each side of the rear corners of the refueler.
- b) Two (2) amber marker lights - one (1) on each side of the tank, located at tank mid-section. Three (3) red clearance lights on the rear of the overturn rail (per DOT 406 requirements).
- c) Equipment and meter lights covered to prevent glare and direct light onto surrounding equipment.
- d) Equipment and marker lights to operate with the existing chassis parking switches.

Meets above specifications  Yes  No

Description \_\_\_\_\_

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### **PNEUMATICS (MINIMAL USE OF PNEUMATICS)**

A minimal amount of pneumatics shall be used on the refueler. Pneumatic lines shall include "push type" DOT approved quick-disconnect fittings, and all fuel lines include "compression type" DOT Approved brass fittings. Pneumatic lines color coded "green".

Meets above specifications  Yes  No

Description \_\_\_\_\_

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## **ADDITIONAL FEATURES, SAFETY AND TESTING REQUIREMENTS**

### **FLASHING SAFETY BEACON**

Mounted on the front of the tank.

Meets above specifications  Yes  No

Description \_\_\_\_\_  
\_\_\_\_\_

### **MASTER BATTERY**

Shut-off switch.

Meets above specifications  Yes  No

Description \_\_\_\_\_  
\_\_\_\_\_

### **FOLDING LADDER STORAGE BRACKETS**

For two (2) step ladders.

Meets above specifications  Yes  No

Description \_\_\_\_\_  
\_\_\_\_\_

### **LED SPOTLIGHTS**

Two (2) attached to driver's side overturn rails, front/rear. One (1) LED bar light mounted on driver's side of canopy (for illumination of U/wing reel).

Meets above specifications  Yes  No

Description \_\_\_\_\_  
\_\_\_\_\_

### **CAMLOCK DUST CAPS**

On all drains and sump outlets

Meets above specifications  Yes  No

Description \_\_\_\_\_  
\_\_\_\_\_

### **ENGINE HOUR METER**

Truck chassis equipped with engine hour meter.

Meets above specifications  Yes  No

Description \_\_\_\_\_  
\_\_\_\_\_

**ENGINE BLOCK HEATER**

Truck chassis equipped with engine block heater.

Meets above specifications       Yes     No

Description \_\_\_\_\_

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**BACK-UP ALARM**

Activated when chassis is shifting into "reverse" mode.

Meets above specifications       Yes     No

Description \_\_\_\_\_

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**BONDING REEL**

Spring rewind.

Meets above specifications       Yes     No

Description \_\_\_\_\_

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**FJORD DUST COVERS**

Color coded to be included on all fueling nozzles.

Meets above specifications       Yes     No

Description \_\_\_\_\_

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**EMERGENCY SHUT-DOWN SYSTEM**

Two (2) Emergency operators for emergency shutdown. One internal valve operator handle mounted on the driver's side, and one E-Pull cable type mounted on the passenger side (rear). The Emergency Shut down system should close the internal valve and disengage the PTO.

Meets above specifications       Yes     No

Description \_\_\_\_\_

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**FIRE EXTINGUISHERS**

Two (2) 20lb dry agent (BC) fire extinguishers shall be included – one (1) on the driver's side of the refueler, and one (1) on the passenger's side of the refueler.

Meets above specifications       Yes     No

Description \_\_\_\_\_

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## **REAR BUMPER**

A rear-mounted steel channel bumper shall be designed, constructed, and installed in conformance with DOT-406 and will include hooks for storage of customer supplied ladders.

Meets above specifications  Yes  No

Description \_\_\_\_\_

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## **TESTING**

Fueler shall be thoroughly flow tested in accordance with specification to all performance criteria. A test record to be supplied and maintained for future reference.

Meets above specifications  Yes  No

Description \_\_\_\_\_

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## **MANUALS**

One (1) operating manual, one (1) parts manual and one (1) service manual shall be provided at the time of delivery for each unit. Any digital media available from the manufacturer and/or vendor regarding the maintenance, repair and operation of the truck shall also be provided at the time of delivery. The annual license agreement for access to equipment manuals will not be accepted as meeting spec, must be unlimited access at no cost.

Meets above specifications  Yes  No

Description \_\_\_\_\_

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## **PAINTING AND DECALS**

The chassis cab to remain factory white. The product tank to be brushed stainless steel. The fueling equipment and brackets shall be painted one color with polyurethane paint. All appropriate and required decals, operating placards, and warning labels to be included.

Meets above specifications  Yes  No

Description \_\_\_\_\_

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## **PLACARDS**

All Safety/emergency control and fuel product decals are to be installed to comply with NFPA 407.

Meets above specifications  Yes  No

Description \_\_\_\_\_

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**DELIVERY**

The successful bidder shall provide the current production schedule and deliver to the Dubuque Regional Airport, 11000 Airport Road, Dubuque IA when complete.

Meets above specifications       Yes  No

Description \_\_\_\_\_

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**TRAINING**

The vendor must supply a minimum of two (2) hours of factory training for the maintenance and repair of unit at the Dubuque Regional Airport maintenance facility with the Airport Mechanic.

Meets above specifications       Yes  No

Description \_\_\_\_\_

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**SAFETY PROVISIONS**

- a) The unit will have a factory-installed blind-spot monitoring system.

Meets above specifications       Yes  No

Description \_\_\_\_\_

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- b) The unit shall have an OSHA approved electronic back-up alarm.

Meets above specifications       Yes  No

Description \_\_\_\_\_

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- c) The unit shall have a CDL/DOT inspection switch for operator to check lights.

Meets above specifications       Yes  No

Description \_\_\_\_\_

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- d) The unit shall have a highway flare kit which is to be included in the bid.

Meets above specifications       Yes  No

Description \_\_\_\_\_

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e) The unit bid must comply with all EPA and all regulations of the Williams-Steiger Occupational Safety and Health Act of 1970 and all amendments and additions thereto.

Meets above specifications      ( )    Yes    ( )    No

Description \_\_\_\_\_

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f) The complete unit shall meet or exceed all State and/or Federal laws, rules, and requirements.

Meets above specifications      ( )    Yes    ( )    No

Description \_\_\_\_\_

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## PROPOSAL FORM - #5714

Bidders use this Bid Proposal Form

One (1) current production model 5,000-gallon jet aircraft refueler

**Please complete all the following:**

Vehicle Year \_\_\_\_\_ Make \_\_\_\_\_ Model \_\_\_\_\_

Vehicle GVW rating \_\_\_\_\_

Engine Manufacturer \_\_\_\_\_ Displacement \_\_\_\_\_

Engine Horsepower \_\_\_\_\_ @ \_\_\_\_\_ RPM

Engine Torque \_\_\_\_\_ @ \_\_\_\_\_ RPM

Front Axle Capacity \_\_\_\_\_

Rear Axle Capacity \_\_\_\_\_

Front Spring Capacity \_\_\_\_\_

Rear Spring Capacity \_\_\_\_\_

Aux. Spring Capacity \_\_\_\_\_

Cab to Axle Inches \_\_\_\_\_

Delivery Date \_\_\_\_\_

Basic Warranty \_\_\_\_\_

Extended Warranty \_\_\_\_\_

**Bid Date: Thursday, December 7, 2023, at 10:00 am**

**Delivery date of the truck** \_\_\_\_\_.

Delivery Price Including Government Discount (No trade-in)

\$ \_\_\_\_\_ 5,000-gallon jet aircraft refueler

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Authorized Representative

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Dealership

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Date