

City of Lynchburg
Procurement Division
900 Church Street
Lynchburg, Virginia 24504
Telephone No.: (434) 455-3970
Fax No.: (434) 845-0711

**Addendum No. 1 for Invitation for Bids
Multipurpose Unit with Interchangeable Snow Blower, Broom Sweeper and Snow Plow
Attachments for the Lynchburg Regional Airport
2017-017**

Date: 08/31/2016
From: Lisa Moss, Buyer VCA
RE: Addendum No. 2

This Addendum supplements and amends the original Plans and Specifications and shall be taken into account in preparing proposals and shall become a part of the Contract Documents. The Bidder shall indicate receipt of this Addendum and all previously issued Addenda on the Bid Form.

1. **Clarification of Specifications: Displacement plow length shall be 22' (feet)**
2. We are beginning our review of IB #2017-014. In regards to item #58 on page 14 of the bid documents. This item identifies a "Certificate of Authority" must be secured for the term of the contract.
 - 1) Will this certificate be required for this bid?
 - 2) Is form SCC759/921 the correct document for the "Certificate of Authority"?
 - 3) Our company is an LLC. Would we need to submit an "LLC-1052" form also or in place of SCC759/921 for doing business in Virginia as a Foreign Limited Liability Company?
 - 4) Will the certificate be required at the time of bid opening, or will it be required at time of contract execution?

Bidder is required to be registered with the State of Virginia SCC prior to bidding. A registered SCC number is to be provided on page 21; Limited Liability Form and is to be included in the bid packet.

3. **Revisions to Specifications:**

Page: Multipurpose Unit-1; 1.3 Cab – Remove “all-steel” from the first sentence. “The vehicle cab shall be a heavy duty two man type and fully insulated.”

Page: Multipurpose Unit-2; 1.7 Engine/Transmission – Remove “on-highway” from the first sentence.

“The vehicle shall have a current model EPA, four stroke diesel, six (6) cylinders, developing a minimum of 425 horse power at 2,100 rpm, 1,550 lb-ft of torque at 1,200 rpm and shall be equipped with the latest diesel electronic control and management system.”

Page: Multipurpose Unit-4; 1.13 Transfer Case – The transfer case shall be of single or dual speed type. “The transfer case shall be a single or dual speed type with an automatic locking/unlocking differential to control the torque between front and rear axles.”

Unit will be equipped with the following radios and equipment pre-installed:

- 1. One ICOM A120 VHF Air Band transceiver radio (or approved equivalent)**
- 2. One XGM75M mobile radio with a 731 hand held controller (microphone) in the 800 Mhz band with EDACS and P25 (or approved equivalent)**
- 3. One David Clarke Model H10-30 headset (or equivalent) for use with the Air Traffic Control radio.**

One speaker will be provided in the cab for each installed radio. Speakers to be placed such that operator can easily hear transmissions. Radios to be placed where the controls are visible and reachable for the operator in a regular sitting position. Hand operated push-to-talk microphones to be provided. Hooks and/or attachments to be provided within reach of the operator while microphone(s) is(are) not in use.

4. Page Equipment-1, Equipment Description Specification: Frequency will be provided by the Airport. One radio will be for communication with the air traffic control tower and the second for communication with Airport Operations.

Requested: Please provide the radio frequencies for the: One radio will be for communication with the air traffic control tower and the second for communication with Airport Operations.

The air traffic control frequency requirement is ability to transmit and receive between 118.00 and 136.00 Mhz with channel spacing of .05 Mhz (for example: 127.65 Mhz). The contractor is to supply and install radios.

5. Page Equipment-1, Equipment Description Specification: A Whelan 800 amber strobe beacon or approved equal shall be center mounted on the forward portion of the cab roof. An additional matching amber strobe beacon shall be installed on the top of the rear engine enclosure.

Requested: For the unit for this bid, will a Hella K-50 be an acceptable equal?

The Hella K-50 has an SAE J845 approval and is an acceptable approved equal.

6. Page Quality and Safety Standards-1, Quality and Safety Standards Specification: Vehicle manufacturer certifies that the vehicle meets or exceeds 40 CFR CH.1 (pass by noise levels in accordance with SAE J366) requirements based on documented test results. Documented test results shall be provided with the bid prior to delivery of the vehicle.

Requested: Pass by noise level tests have not been performed with our proposed engine yet because the vehicle is designed for Air Side use (non- on highway use). Standard as referenced (SAE J366) establishes the test procedure, environment and instrumentation for determining the maximum exterior sound level for highway motor trucks, truck tractors and buses. The operator's environment is comfortably quieter than EPA interior noise levels.

The proposed unit meets all of the other listed standards.

Revision to Specification: Removal of requirement to provide noise test documentation.

7. Page Multipurpose Unit-1, 1.3, CabSpecification: The vehicle cab shall be a heavy duty two-man type, all steel, fully insulated.

Requested: The vehicle cab shall be a heavy duty two-man type, all steel or aluminum, fully insulated.

insulated.

See #3 Revisions to specifications.

8. Page Multipurpose Unit-2, 1.7, Engine/TransmissionSpecification: The vehicle shall have a current model EPA on-highway compliant four stroke diesel, six (6) cylinders, developing a minimum of 425 horse power at 2,100 rpm, 1,550 lb-ft of torque at 1,200 rpm and shall be equipped with the latest diesel electronic control and management system.

Requested: The vehicle shall have a current model EPA engine and shall meet Tier 3 or Tier 4 environmental requirements, four stroke diesel, six (6) cylinders, developing a minimum of 425 horse power at 2,100 rpm, 1,550

lb-ft of torque at 1,200 rpm and shall be equipped with the latest diesel electronic control and management system.

Reason: To allow for the use of EPA approved engines that do not require the use of exhaust after treatment. The advantage to the airport is the reduced maintenance cost associated with Tier 3 engines that do not have after treatment. No after treatment fluid needed, no costly regeneration system to maintain. Engines that require regeneration have been found to be unreliable in this application due to the high amount of idling time and low operating RPMs these units are exposed to during use. Often, the unit must be stopped to perform a regeneration operation that can take up to 45 minutes to complete. If these mandatory regenerations are not completed it may require the representative of the engine manufacturer to come in to perform a “forced regeneration” which is extremely costly to the airport

See #3 Revision to specifications

9. Page Multipurpose Unit-2, 1.7, Engine/Transmission Specification: The vehicle transmission shall be five-speed electronic control automatic.

Requested: The vehicle transmission shall be minimum five-speed electronic control automatic.

This is acceptable.

10. Page Multipurpose Unit-2, 1.8, Fuel Specification: The tank shall be constructed of heavy gauge steel and be properly fastened to the frame.

Requested: The tank shall be constructed of heavy gauge steel or aluminum and be properly fastened to the frame.

This is acceptable.

11. Page Multipurpose Unit-4, 1.12, Suspension Specification: The vehicle suspension shall include alloy steel springs of the semi-elliptical type.

Requested: The vehicle suspension shall include alloy steel springs of the semi-elliptical or tapered parabolic type.

This is acceptable.

12. Page Multipurpose Unit-4, 1.13, Transfer Case Specification: The transfer case shall be a two speed type with an automatic locking/unlocking differential to control the torque between front and rear axles.

Requested: The transfer case shall be of optional single or two speed type with an automatic locking/unlocking differential to control the torque between front and rear axles.

Reason: The transfer case provided for the unit in this bid will be a single speed. Single speed transfer case utilizes a limited slip differential which constantly and automatically proportions power to all drive axles. Normally there is a constant 50/50 split between the front and rear axles. As traction conditions warrant this split can be applied ranging from 75/25 (front-rear axles) or 25/75 (front-rear axles). No operator input is required. By utilizing all six available gears (Allison RDS) the one speed transfer allows for maximum low speed/low gear power performance without the need to bring the vehicle to a complete stop in order to shift a two speed transfer case into low range.

This has already been addressed in Addendum #1.

13. Page Multipurpose Unit-4, 1.14, Windows, Windshields, and Mirrors Specification: The vehicle windshield shall be reverse slope design to avoid snow buildup and be equipped with four variable speed intermittent operating wipers, wet arm type.

Requested: The vehicle windshield shall be a forward or reverse slope design to avoid snow buildup and be equipped with four variable speed intermittent operating wipers, wet arm type.

This has already been addressed in Addendum #1.

14. Page Multipurpose Unit-4, 1.14, Windows, Windshields, and Mirrors Specification: The windshield washer reservoir shall have a capacity of at least 10 gallons.

Requested: The windshield washer reservoir shall have a capacity of at least 6 quarts. Is the 10-gallon requirement in reference to wanting a deluge system?

Reason: The unit for this bid will have a standard windshield washer reservoir capacity of 6 quarts.

This has already been addressed in Addendum #1.

15. Page Multipurpose Unit-4, 1.14, Windows, Windshields, and Mirrors Specification: The cab shall be equipped with sun visors inside the vehicle cab used in the operation of the cab's heating system.

Requested: Please explain "sun visors inside the vehicle cab used in the operation of the cab's heating system".

This has been removed from the specifications.

16. Page Multipurpose Unit-4, 1.15, Wheels and Tires Specification: The tires shall be 395/85 R20 XZL or approved equal.

Requested: The tires shall be 395/85 R20 XZL, 445/65R22.5, or approved equal.

This is acceptable.

17. Page Multipurpose Unit-4, 1.15, Wheels and Tires Specification: The wheels shall be of the steel disc type with an 11.25- inch bolt circle.

Requested: The wheels shall be of the steel disc type or polished aluminum with an 11.25-inch bolt circle.

This is acceptable.

18. Page High Speed Rotary Plow-2, High Speed Rotary Plow Specification: Auxiliary Engine Assembly

Requested: Please clarify the requirements for the auxiliary engine assembly.

This information is listed in the project manual.

19. Page Displacement Plow-1, 2.1, General Specification: The overall width of the plow assembly in the folded position (wings retracted) with required casters must be allowed to enter the federally funded snow removal building (AC 150/5200-18, Buildings for Storage and Maintenance of Airport Snow and Ice Control Equipment and Materials) that houses the snow plow and other such equipment. Doors are 26' wide.

Requested: Please clarify the required cutting edge length.

See response to #1: 22'

20. Page Displacement Plow-1, 2.3, Color Specification: Moldboard= Safety Yellow for high visibility on airfield

Requested: Moldboard= Safety Yellow or green for high visibility on airfield

Any color plow is acceptable to the airport as long as it meets FAA standards outlined in the Advisory Circulars.

21. Page Displacement Plow-1, 2.4, Cutting Edge/Steel Moldboard Specification: Steel Moldboard

Requested: Steel or Poly Moldboard (see picture above)

Steel Cutting Edges

22. Page Broom Sweeper-1, 3.1, Air Blower Specification: The air ducts shall rise with the width of the tires of the chassis for transport and storage. There shall be a minimum 12 inches of ground clearance when raised.

Requested: The air ducts shall rise with the width of the tires of the chassis for transport and storage. There shall be a minimum 8 inches of ground clearance when raised.

This is acceptable.

23. Page Broom Sweeper-3, 3.7, 2, Head Specification: The broom head shall provide a minimum sweep path of 16 feet. It shall be 46 inches in diameter and be capable of producing a minimum of 4,800 ft-lbs of torque and a minimum of 500 RPM...

Speed of broom shall be infinitely variable from 0 to a minimum of 500 RPM. Available torque at the broom shaft shall be a minimum of 4,800 ft- lbs at maximum hydraulic pressure of 5100 psi for maximum snow moving capabilities.

Requested: The broom head shall provide a minimum sweep path of 16 feet. It shall be 46 inches in diameter and be capable of producing a minimum of 3,621 ft-lbs of torque and a minimum of 440 RPM...

Speed of broom shall be infinitely variable from 0 to a minimum of 440 RPM. Available torque at the broom shaft shall be a minimum of 3,621 ft- lbs at maximum hydraulic pressure of 5075 psi for maximum snow moving capabilities

This is acceptable.

24. Page Broom Sweeper-4, 3.10, Hydraulic System Specification: Shut off valves for all filters below tank fluid level shall be installed to allow filter changes without loss of oil.

Requested: If required by design, shut off valves for all filters below tank fluid level shall be installed to allow filter changes without loss of oil.

Reason: For the unit in this bid, a manual shut-off valve is not required for routine servicing of the hydraulic system. A manual shut-off valve poses the potential for catastrophic hydraulic component failure in the event it is left in the closed position prior to starting an engine. Provisions will be made in the hydraulic system to minimize the loss of oil during routine filter changes.

This is acceptable as long as the manufacturer can show through documentation that filters can be changed with minimal loss of hydraulic fluid. This documentation needs to be provided with the bid documents.

25. General

Is this project funded, or intended to be funded with Federal Funds?
No

26. Equipment -1 – Paragraph One (1 and 8)

Specification : SAE ARP 5539 standards are referenced.

Comment : Please revise to most current AC and ARP standards.

Request : As of September 2014 AC 150/5220-20A is the most current circular, along with SAE ARP 5539 for Rotary Plow Equipment, ARP 5564 for Rotary Broom Equipment, and ARP 5943

for Runway Plows. Please update and reference these current to date documents.

The vehicle shall comply with all applicable requirements of the most current FAA Advisory Circular (AC) 150/5220-20 Airport Snow and Ice Control Equipment and must be in accordance with all applicable Society of Automotive Engineers (SAE) Aerospace Recommended Practices. (ARP).

27. Equipment -1 Paragraph 2 Radio Equipment

Request: Please supply all bidders with exact model numbers, frequencies, trunking if required, and all options as required so all bidders are providing equal offerings.

- Please specify internal/external speakers and microphones are required

One speaker will be provided in the cab for each installed radio. Speakers to be placed such that operator can easily hear transmissions. Radios to be placed where visible and reachable for the operator from a sitting position. Each transmitting radio will have a hand microphone that works with the radio. Microphones to be provided with hooks or attachments to keep microphone within easy reach of the operator while not in use. One headset, David Clarke Model H10-30 (or equivalent) for use with the Air Traffic Control Radio.

28. 1.1 Axle – Multi-Purpose Unit – Rear Axle

Comment: Please clarify if the rear axle shall also be of the steering type.

This has been addressed in the first addendum. The front and rear axle shall be of the driver/steer type. This should be 4 wheel steering.

29. 1.7 Engine/Transmission

Specification: “The vehicle transmission shall be five-speed electronic control automatic”

Comment: Our proposed unit can utilize a four or five speed transmission with a two speed transfer case. With a two-speed transfer case our unit can reach 45mph in fourth gear. Speeds exceeding 45mph are typically not approved by the tire manufacturers for units of this size.

Request : Please change to “minimum four speed” transmission.

4, 5 or 6 speeds are acceptable.

30. 1.10 Instruments and Transmission Controls

Specification: For safety purposes, snow removal attachment and transmission controls shall be located to the right had side of the operator”

Comment: The requirement to have the transmission controls located at the right hand side of the vehicle is restrictive as designed by a specific manufacture.

Request : Please remove right and location for transmission shift location, and state for safety purposes, transmission controls shall be located in a easy to reach within forward eye sight location of the operator.

This is acceptable.

31. 1.11 Lighting

Specification: “The vehicle shall be provided with three (3) sets (6 total) of LED auxiliary lights.....”

Comment: LED lighting is more prone to ice and snow build up due to low heat transfer of the LED.

Request : For safety purposes, please remove the LED requirement, or allow halogen lighting.

LED or halogen lighting is acceptable. Incandescent is not acceptable.

32. 1.11 Lighting

Specification: “One (1) set shall be mounted on the side of the cab with an interior handle to allow for adjustment.....”

Comment: This design requires a cab penetrating hole that could allow moisture and oxidizing chemicals inside the cab or cab frame. Also, the handles may be difficult for the operator to reach while safely seat belted in the operator seat.

Request: Please allow Two (2) remote controlled spotlights mounted on the cab light bar, with a wireless hand held remote control for each spot light.

This is acceptable.

33. 1.16 Auger

Request– Please specify minimum speed adjustments available in the cab by the operator.

- Our product offering consists of a 2-Speed Ribbon for our standard blower, or to upgrade we can offer up to a 6-speed selectable dial to increase ribbon speed for additional versatility.

The vehicle auger shall be “ribbon” style auger approximately 55 inches in diameter with a hydraulic override. The drive must be reversible.

34. 2.1 General – Displacement Plow

Specification: Power reversible high speed ramp plow.

Comment : Not all manufacturers build this type of ramp plow for airport runway snow removal. These types of plows are more commonly seen on other types of carrier vehicles.

Request : Please allow a solid 24 foot high speed straight moldboard runway plow with quick hitch and tungsten steel cutting edge. At full tilt, the plow would be approximately 22 feet wide, and will fit into the 26 foot door way.

The blade will be 22' wide. This is also referenced in the specifications.

35. 3.5 Controls and Instrumentation – Broom Sweeper

Specification: “The operators control in the chassis shall have a Monitor, Diagnostic, and Control (MDC) station for the broom.

Comment: The reference to “MDC” is propriety to a single manufacturer.

Request – Please remove the reference to “MDC” and reference section “6.17 Controls and Instrumentation” from SAE ARP 5564 to better allow all bidders to meet compliance.

This is acceptable.

Company Name: _____ Address: _____ Date: _____

Authorized Signature: _____ Title: _____

Print Name: _____ Telephone No.: _____ Fax No.: _____