State of Illinois

Department of Transportation

Bureau of Business Services

**Specifications for** **a Single Stage Front End Loader Mounted Snow Blower**

September 2019

This specification and questionnaire covers a Single Stage Front End Loader Mounted Snow Blower for use in Department of Transportation highway maintenance operations. The Department of Transportation is specifying acceptable units by required features and accessories as outlined below.

Each bidder shall submit with their bid **two sets** of descriptive literature and specifications describing all the equipment and options proposed. This information shall be clearly marked to indicate the make, model, and accessories proposed to be furnished.

Bidders quoting on equipment must submit with their bid written proof of the following:

1. The manufacturer of the equipment proposed has been actively involved in the manufacture of the equipment called for in the bid for a period of not less than 5 years.
2. Parts and service for the equipment proposed are readily available within the State of Illinois.

It is the responsibility of each bidder to complete and return this questionnaire with the bid.

**Unless otherwise specified, the proposed equipment shall be complete in all parts and ready for immediate use upon delivery.**

**Bidders are advised to carefully read these specifications as changes have been made since the last solicitation issue.**

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Proposed With This Bid:** | | | | | | | |
| Make: |  | | | | | |
| Model: | |  | | | | |
| Manufactured by: | | | | | |  |
| Bidder: | | |  | | | |
|  | | | |
| Contact name: | | | | |  | |
| Telephone: | | | |  | | |
| Email: |  | | | | | |

The Illinois Department of Transportation reserves the right to waive minor informalities, deficiencies or technical variances which by their nature are restrictive to a given manufacturer, if in its’ judgement, it would be in the best interest of the State to do so and it would not prejudice the rights of other bidders.

Serviceability will be a factor in award. Successful bidder shall either be able to provide service after purchase or shall indicate other qualified service facilities able to service equipment, within a reasonable period of time at agency locations. Bidder shall provide documentation and enumerating service locations. A Review of the bidder's ability to provide prompt parts and service to the State of Illinois and in particular to the delivery location, will be considered in determining award.

Bids will only be accepted from established manufacturers or their authorized dealers. Any dealer submitting a bid hereby guarantees that it is an authorized dealer of the manufacturer and that the manufacturer has agreed to supply the dealer with all quantities of products required by the dealer in fulfillment of its obligations under any resultant contract with the State. Bidder must submit authorized dealer letter upon request.

**Warranty:**

Unless otherwise specified, Manufacturers’ standard warranty shall be provided. **Bidder shall attach copies of warranty with their bid****. Warranty shall commence at the Illinois Department of Transportation in-service date.** If any equipment fails to conform to the warranties during the applicable warranty period, the Vendor or Manufacturer will adjust, repair or replace the equipment at no charge to the Department as soon as possible upon notice from the Department. Equipment shall be repaired on-site and will be performed at no additional cost to the Department.

The Vendor may provide or perform warranty service at a dealer location within the Districts geographic region if on-site repair is not possible. Vendor shall facilitate pickup and delivery of equipment at Vendor's cost if warranty repair(s) are made off-site during the warranty period. The contract Vendor is responsible for any failure of their allied or sub-contractors’ fulfillment of said warranties. Failure to provide this service shall result in a “Complaint to Vendor” that could affect future bid awards.

**Delivery:**

It will be the responsibility of the successful vendor to guarantee delivery within the quoted time and to require allied manufacturers or suppliers to complete the installation of auxiliary equipment in accordance with the quoted delivery time.

Failure to comply with the quoted delivery time because of delays resulting from the inability of suppliers of allied equipment such as bodies, snowplows, spreaders, etc., may be reason to refuse to consider similar items from those suppliers on future bids.

All equipment provided by the Vendor and the sub-contractor(s) shall be fully operational when delivery is made. Any noted defects at the time of delivery shall be addressed by Vendor in the first 30 days of in-service.

Bidder/Vendor acknowledges the requirements above. Yes  No

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| --- | --- | --- | --- |
| Bidder/Vendor Initials: |  | Date: |  |

**Note: If the equipment proposed exceeds the minimums called for in the specification please do not mark NO. Mark Yes and explain with a short comment on how it exceeds.**

**The unit shall include the following standard or optional accessories and equipment:**

**Capacity and Dimensions:**

The Snow Blower shall produce a minimum of eighteen hundred (1800) tons per hour.

Complies:  Yes  No

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| --- | --- | --- |
| Capacity, Tons per hour : |  | Tons per hour |

A minimum sixty five foot (65’) casting distance is required.

Complies:  Yes  No

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| --- | --- | --- |
| Minimum casting distance: |  | Feet |

Note: The bidder shall provide testing verification of their snow blowers tonnage per hour (capacity).

The snow blower shall meet the following dimensions:

Cutting width maximum of ninety six inches (96”) and minimum of ninety four inches (94”).

Cutting height minimum of forty eight inches (48”).

Overall maximum width of ninety eight inches (98”).

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| --- | --- | --- |
| Cutting width maximum: |  | Inches |
| Cutting width minimum: |  | Inches |
| Cutting height minimum: |  | Inches |
| Overall maximum width: |  | Inches |

Complies:  Yes  No

The side cutting bars shall extend a minimum twelve inches (12”) over the cutting height.

Complies:  Yes  No

**Blower Design:**

The blower shall be a self-contained design to load trucks efficiently with a spout height to allow loading into a truck or trailer with side heights of eleven feet (11’) without excessive cast off and the blower resting on the ground. The blower shall have the ability to scrape, break and discharge hard pack snow and ice that builds up along the median barrier wall.

Complies:  Yes  No

Note: Cross feed augers will not be accepted. No rotating component shall protrude ahead of the stationary chute or side of the blower.

The spout shall be designed for all casting and loading operations to be controlled hydraulically by the operator from the cab. The spout shall have a two stage telescoping discharge chute.

Complies:  Yes  No

The spout shall have a minimum of two hundred and seventy degrees (270°) rotation.

Complies:  Yes  No

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| --- | --- | --- |
| Degrees of rotation: |  | Degrees |

The fans shall be shear pin protected and pins easily replaced by the operator in the field. An additional twenty (20) shear pins shall be supplied with the blower.

Complies:  Yes  No

The blower unit shall be equipped with aside draft compensator to prevent the snow from sucking the blower and loader into the ditch.

Complies:  Yes  No

The blower shall feature bolt on wear plates and replaceable cutting edges. One additional set of each shall be supplied with the blower.

Complies:  Yes  No

The blower shall be designed to allow easy removal of foreign objects that jams or obstructs the flow of material. Having to remove structural panels, shafts or other blower components to remove most obstructions is not acceptable.

Complies:  Yes  No

Note: The ability of the blower to ingest foreign objects and not sustain damage is critical due to the emergency nature in which it will be used. Examples of the type of debris found along the roadway include, mufflers, 4”X4” wood blocks, chains and large tire debris. IDOT will review the design and functionality of each bidder’s blower and its ability to ingest foreign material and not cause damage to the blower.

**Engine:**

The unit shall be provided with a current production liquid cooled diesel engine meeting the following:

1. Horsepower shall provide maximum capacity at 100% duty cycle
2. Dry style air cleaner
3. Fuel filter water separator
4. 12 volt electrical system
5. Alternator/regulator
6. Maintenance free battery
7. Hour meter
8. Cold weather starting aid
9. Engine cover(s)
10. Safety shut down for low oil pressure or high engine temperature.

Complies:  Yes  No

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| If no, describe: |  |

Component provided:

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| --- | --- | --- | --- | --- | --- | --- | --- |
| Make: |  | | | | | | |
| Model: |  | | | | | | |
| Number of cylinders: | | |  | |
| Horsepower @ governed RPM: | | | |  | | |
| Rated H.P. (Gross) | |  | | | |

The fuel tank shall provide an approximate 8 hours of run time at maximum capacity. Clearly labeled “Diesel Fuel Only”.

Complies:  Yes  No

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| Tank capacity: |  | Gallons |

System shall be filled with manufacturer’s approved extended life antifreeze and equipped with engine coolant heater if available.

Complies:  Yes  No  Not available

**Gauges:**

A remote in cab gauge system shall be provided allowing the operator to monitor all critical engine and blower functions.

Complies:  Yes  No

**Controls:**

All controls and blower components shall be movable from loader to loader without the use of special tools.

Complies:  Yes  No

The snow blower shall include a wireless hand held controller. This controller shall include the following functions:

* Clutch
* Throttle
* Spout rotation
* Telescoping capper
* Off/On start switch – W/safety shutdown system

The gauges for this machine shall also be wireless and include the ability to monitor the following:

* Tachometer/Hourmeter
* Water temperature
* Oil pressure
* Fuel level
* Voltmeter

Complies:  Yes  No

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| --- | --- |
| If no, describe: |  |
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**Blower Attachment:**

The blower shall be attached to an IDOT existing end loader. See item description in the bid for type of couple required to attach to end loader.

Complies:  Yes  No

**Warranty:**

Full coverage warranty for a minimum two (2) years shall be provided from the in service date. The warranty shall be the standard maximum coverage warranty offered with no additional charges. The bidder shall attach a copy of warranty with the bid.

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| Describe warranty: |  |
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Transportation to complete any warranty repair required for the machine and/or specified accessories or options shall be the responsibility of the bidder or dealer acting as his agent.

Complies: Yes  No

**Delivery:**

This machine is to be delivered in first-class operating condition with acceptance subject to Department of Transportation inspection and approval

Complies: Yes  No

The unit shall be delivered fully serviced and ready for operation.

Complies: Yes  No

The vendor or manufacturer of the unit which is considered for award shall, at the request of the State of Illinois, demonstrate this equipment at a location chosen by the State and in the presence of authorized State personnel to prove out any features which may be in question.

Complies: Yes  No

**Manuals and Books:**

Three (3) copies of all operators’ manuals, parts lists, and warranty information shall be provided at time of delivery to each district receiving one or more units. Electronic versions are acceptable (i.e. CD/DVD or flash drive).

Complies: Yes  No

One (1) set of “Service or Shop” Manuals shall be provided to each delivery location.

Complies: Yes  No

On-site instruction (4 hours minimum) performed by a **qualified** factory or dealer personnel covering the operation and routine service and maintenance of the machine shall be provided upon delivery. The training shall be for all personnel in the assigned headquarters location of the machine. More than a single day may be required to satisfy this requirement. A training video or DVD would be considered provided IDOT has an opportunity to view and approve the video.

Complies: Yes  No

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| Describe : |  |
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**Repair Parts and Service:**

Since continuous operation of this snow blower is of the utmost importance and many times of an emergency nature, it is necessary that the successful bidder be in a position to render prompt parts and service. Review of the bidder’s ability to provide prompt parts and service within the State of Illinois will be made prior to award.

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| List locations where service is readily available: |  |
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**Requirements Covering Items Detailed Above:**

Note to bidders: The Illinois Department of Transportation will inspect and evaluate the successful bidder’s snow blower once it has been received by the District. If IDOT determines the blower does not meet or is not capable of meeting the specification/operational standards set forth herein, the bidder shall make any and all necessary adjustments or changes. In addition to the review noted above the blower will be evaluated for performance during the warranty period when snow is present. If the blower does not perform to the standards and specifications outlined in this document, the successful bidder will be required to make any and all necessary adjustments or changes as determined by IDOT to bring the unit into compliance with the specifications. IDOT at its sole discretion will determine if the unit is operating within the standards and specifications outlined herein.

Complies: Yes  No

All equipment cataloged as standard shall be furnished and in place and shall be included in the purchase price of the unit. Any parts, tools, and/or accessories not specifically called for but required for proper operation shall be provided. All safety features shall be included and in place upon delivery.

Complies: Yes  No

The component parts of the unit shall be of proper size and design to safely withstand maximum stresses imposed by a capacity load, and the manufacturer's rated loads for all component parts shall **not** be exceeded when the unit is so loaded.

Complies: Yes  No

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| If No explain: |  |
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Does the unit proposed meet the above specifications? If **No** to any portion, explain:

Complies: Yes  No

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| --- | --- |
| If No explain: |  |
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**Bid Package:**

If not quoting in BidBuy, bidders will need to send two copies of each of the following with their bid response.

a) Specification Questionnaire

b) Descriptive Literature