State of Illinois

Department of Transportation

Bureau of Business Services

**Specifications and Questionnaire for installing a New Boom Flail**

**Style Mower/Brush Cutter on an Existing Tractor**

September 2019

This specification and questionnaire covers the installation of a tractor manufacturer approved, new mid-mounted, hydraulically powered, boom type flail brush and grass cutting type mower with the necessary controls, for use by the Department of Transportation. The Department of Transportation is specifying acceptable units as outlined below.

Each bidder shall submit with their bid **two sets** of descriptive literature and specifications describing **all** the equipment 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 proposal 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.**

|  |
| --- |
| **Proposed With This Bid:** |
|  |
| Make: |       |
| Model: |       |
| Manufactured By: |       |
| Bidder: |       |
|  |       |
|  |       |
| Telephone: |       |
| Contact Name: |       |
| 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.**

**Boom Type Mowers:** Reference Diamond DBM-C-N/DBF050-H or equal unit.

The vendor shall mount the specified mowers on the following tractors:

Make: John Deere

Model: 6130M 4WD

Code: 00R7L

Make: John Deere

Model: 6110M 4WD

Code: 4228L

The tractor(s) will be delivered to the awarded vendor within Illinois. The mounting shall include the removal of any existing equipment, frame and hydraulics, mounting the new boom mower, frame, and all controls including any hardware to make the unit fully functional as prescribed by the mower manufacturer.

Complies: Yes [ ]  No [ ]

The successful bidder shall perform all work on the mounting upon their own premises. Upon completion the tractor(s) shall be delivered by the awarded vendor to:

**Line 1**

IDOT District 6

650 N. Lincoln Ave.

Springfield, IL 62702

Contact: Andy York

Phone: Office 217 524 4970

**Line 2**

IDOT District 1

4051 N. Harlem Ave.

Chicago, IL 60634

Contact Tony Aiello

Phone: Office 847 705 4164

 Cell 847 846 2790

When returned all functions and features shall be operational

Complies: Yes [ ]  No [ ]

The installation shall include all protective screens or replacement of existing tempered glass with a more protective polycarbonate with anti-abrasion coating on Cab models

Complies: Yes [ ]  No [ ]

The protective screens shall not impede the operators’ vision while performing normal mowing operations.

Complies: Yes [ ]  No [ ]

The tractor and allied equipment and their condition shall be the responsibility of the successful bidder while in their possession and until returned and accepted by The Illinois Department of Transportation.

Complies: Yes [ ]  No [ ]

A representative from the district will inspect the tractor upon return to ensure proper operation before acceptance.

Complies: Yes [ ]  No [ ]

**Boom:**

The boom shall be a mid-mounted design and capable of swinging from front to rear of tractor. The boom head shall hydraulically swivel to allow the boom to stow in the rear in a narrow stowed position (legal rear stow) while still allowing the factory 3 point hitch and PTO to remain functional. The boom frame mounting shall not cross over hood or block operators vision while driving. **Note:** Cutting or welding on the Tractor chassis is not acceptable per manufacturer’s warranty.

Complies: Yes [ ]  No [ ]

The boom turret mounting shall be a high mount design to allow first boom stage to clear a minimum 30” guardrail.

Complies: Yes [ ]  No [ ]

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| --- | --- | --- |
| Turret mounting height: |       | In. |

A rear boom rest shall be included to support the boom during transport. The rest shall not interfere with the factory 3 point hitch or PTO.

Complies: Yes [ ]  No [ ]

The hydraulic cylinders shall feature a nitrogen accumulator or equal system to provide smooth response and reduce shock loads to the boom.

Complies: Yes [ ]  No [ ]

The boom shall include a Quick attach or Quick coupler system to allow for changes between mower or cutting heads in the field.

Complies: Yes [ ]  No [ ]

All boom pivot points shall include grease zerks for ease of maintenance in the field.

Complies: Yes [ ]  No [ ]

The boom shall be designed and configured to provide the following approximate reach dimensions:

Cutter reach outward 22’-0”.

Cutter reach upward19’-7”

Cutter reach downward 10’-7”

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Reach Outward: |       | Ft. |       | In. |
| Reach Upward: |       | Ft. |       | In. |
| Reach Downward: |       | Ft. |       | In. |

Complies: Yes [ ]  No [ ]

**Note:** It is understood reach dimensions may be affected by tractor and tire configuration. Manufacturer’s published specifications will be reviewed with specific bidders to resolve these differences if necessary.

**Flail/Cutting Head:**

The flail cutting head shall be 50” in cutting width with a minimum continuous cutting capacity diameter of 3”.

Complies: Yes [ ]  No [ ]

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| Cutting width: |       |
| Cutting capacity diameter: |       |

The cutter head shall include a drum style or a reinforced round bar stock carrier. Minimum 6” in O.D.

Complies: Yes [ ]  No [ ]

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| --- | --- | --- |
| Carrier thickness: |       | In. |
| Carrier diameter: |       | In. |

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| --- | --- |
| If NO, describe drum carrier: |       |
|       |

The drum carrier shall be capable of holding approximately 48 replaceable and reversible full swinging knives.

Full swing knives: Yes [ ]  No [ ]  Complies: Yes [ ]  No [ ]

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| --- | --- | --- |
| Knife length: |       | In. |
| Knife thickness: |       | In. |
| Number of knives: |       |  |

The cutter head shall be powered by a domestic manufactured gear type hydraulic motor rated at approximately 80 HP. Belt driven models shall include auto-adjusting belt tensioners.

Complies: Yes [ ]  No [ ]

|  |  |  |
| --- | --- | --- |
| Motor rating: |       | HP |

The cutter head shall include a roller(s) or adjustable skid shoes to prevent turf scalping during cutting operations.

Complies: Yes [ ]  No [ ]

**Hydraulics:**

The hydraulic system shall be a self-contained system, designed to operate independent of the tractor’s system preventing any cross contamination of the hydraulic fluid. Hydraulic cooler with reversible fan and front guard shall be included.

Complies: Yes [ ]  No [ ]

The hydraulic system pump shall be domestic manufactured, recommended size for flail head provided. It shall be driveshaft driven by the crankshaft on the front of the tractor. Crankshaft adapter and shaft shall be rated in excess of hydraulic pump HP rating.

Complies: Yes [ ]  No [ ]

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| --- | --- | --- |
| Pump rating: |       | HP |
| Pump flow: |       | GPM |

All hoses shall be sized by the manufacturer to prevent restrictions, reinforced and protected to prevent failure under the harshest conditions. All hose connections shall be color coded or labeled to prevent connection errors.

Complies: Yes [ ]  No [ ]

The hydraulic reservoir shall be manufacturers recommended capacity for proper cooling during extended use.

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| --- | --- | --- |
| Reservoir capacity: |       | Gal. |

The hydraulic system shall include an external spin-on filter or an “in-tank” cartridge style filter with readily visible restriction gauge and site gauge on tank.

Complies: Yes [ ]  No [ ]

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| --- | --- |
| If NO, explain: |       |
|       |

A front axle stabilizer included?

Complies: Yes [ ]  No [ ]  Not required [ ]

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| If NO, explain: |       |
|       |

**Operator controls:**

Operator’s controls shall provide easy reach for the operator without limiting access to the cab or other tractor/mower controls. The main control shall be a joystick design with thumb and/or fingertip switches.

Complies: Yes [ ]  No [ ]

A safety lockout shall be included for the controls while the mower is in transport mode.

Complies: Yes [ ]  No [ ]

The operator controls shall feature a single activation Emergency Stop Safety switch located next to the joystick. This shutdown feature shall stop all boom mower functions when activated.

Complies: Yes [ ]  No [ ]

**General:**

The unit shall be complete with hydraulic pump, hoses, hydraulic tank, mounting frame, operator controls, safety related items, additional counter weighting and hardware.

**Note:** Liquid tire filling is not acceptable for counter weighting.

Complies: Yes [ ]  No [ ]

**Paint/Finish:**

All exterior surfaces normally painted shall be painted or powder coated manufacturer’s standard color.

Complies: Yes [ ]  No [ ]

**Training:**

Instruction 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.

Complies: Yes [ ]  No [ ]

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| --- | --- |
| Describe training: |       |
|       |

**Note:** This is not a sales call*.* Training not meeting IDOT expectations will be cause for a “Complaint to Vendor”.

One copy of the service manual shall be included at delivery of each unit.

Complies: Yes [ ]  No [ ]

Two (2) 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 in lieu of paper (i.e. CD/DVD or flash drive).

Complies: Yes [ ]  No [ ]

**Requirements Covering Items Detailed Above:**

All equipment cataloged as standard or safety related 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.

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.

Complies: Yes [ ]  No [ ]

Standard tool kits shall be supplied, if required.

Complies: Yes [ ]  No [ ]

A standard parts and labor warranty shall be provided for a minimum of 12 months. **Bidder shall attach copy of warranty with bid.** Since the continuous operation of this equipment is of the utmost importance and sometimes of an emergency nature, it is necessary that the successful bidder be in a position to render prompt parts and service within the State of Illinois. The successful bidder shall be responsible for warranty service.

Complies: Yes [ ]  No [ ]

List service locations:

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|       |
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The vendor or manufacturer of the unit which is considered for award shall, at the request of the State of Illinois, demonstrate this equipment within the receiving District in the State of Illinois in the presence of authorized State personnel to prove out any features which may be in question.

Complies: Yes [ ]  No [ ]

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

Complies: Yes [ ]  No [ ]

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| --- | --- |
| If NO to any portion, 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