State of Illinois

Department of Transportation

Bureau of Business Services

**Specifications and Questionnaire for Road Widening & Shouldering Machine**

August 2018

This specification and questionnaire covers a lay down, road widener, with shoulder spreading capabilities for spreading rock and/or asphalt shoulder materials by the Department of Transportation highway maintenance operations. The Department of Transportation is specifying acceptable units by Make, Model, and Required 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.

* 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.
* 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.**

|  |
| --- |
| **Proposed with his bid:** |
| Make: |       |
| Model: |       |
| Manufactured By: |       |
| Address: |       |
|  |       |
|  |       |
| Telephone: |       |
| Contact Name: |       |
| Email: |       |

The following model(s) are for reference and descriptive purposes only. These machines have been used in Department of Transportation Operations in the recent past. Other manufacturers of similar equipment meeting the requirements and performance standards within will be considered as equal and evaluated for award.

Road Widener

Model FH-R – Dual Discharge Model or equivalent.

(Model FH-R – Single Discharge Model if called for in Bid Proposal – *Right Side Only*)

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

The machine shall consist of a hopper with a reversible conveyor belt at the bottom and hydraulically extendable side shoes used to place material dumped into the hopper by dump trucks. The Widener is powered by a skid steer, track steer, wheel loader, or motor grader and connected into the prime-mover’s hydraulic system. The prime-mover’s hydraulics power the conveyor and adjust the width of the shoes and is controlled by a wireless remote.

Complies: Yes [ ]  No [ ]

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

**Mounting Pad:**

The widener shall include a universal type hitch pad that will be functional with any type wheel loader, track steer, motor grader, etc. The widener shall also include a pintle hitch push plate to accommodate our single and tandem axle dump trucks.

Complies: Yes [ ]  No [ ]

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

The hydraulic operation of the conveyor and shoes shall be standard hydraulic requirements 17.5 gpm to 24.2 gpm with quick connects to the prime mover.

Complies: Yes [ ]  No [ ]

|  |  |  |
| --- | --- | --- |
| Hydraulic requirements: |       | GPM |

**Remote Control:**

The wireless remote shall allow the full operation of the widener by either the prime-mover operator or another individual from a safe location away from the prime-mover.

Complies: Yes [ ]  No [ ]

The remote shall include a lanyard and/or clip to attach to the belt of the operator.

Complies: Yes [ ]  No [ ]

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

The remote shall include the following functions and operations:

* Learn/left side
* Power on
* Right side
* Shoe out
* Shoe down
* Conveyor on
* Shoe float Power off
* Conveyor speed decrease
* Conveyor speed increase
* Shoe up button
* Shoe in

Complies: Yes [ ]  No [ ]

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

**Hopper:**

The hopper shall be designed to accept material dumped from 8 and 12 cubic yard standard dump bodies or combination tractor/trailers.

Complies: Yes [ ]  No [ ]

At the bottom of the dumping hopper shall be a bi-directional conveyor belt to direct the flow of material. The conveyor shall be 96” in length and approximately 24” wide.

Complies: Yes [ ]  No [ ]

|  |  |  |
| --- | --- | --- |
| Conveyor length: |       | Inches |
| Conveyor width: |       | Inches |

The direction of the conveyor shall be controlled by the operator using a hand-held wireless device.

Complies: Yes [ ]  No [ ]

The widener shall have dual, extendable rollers to contact the rear wheels of the truck. The rollers and the construction of the hopper shall be robust to allow the pushing of a fully loaded single or tandem axle truck on an up-hill grade. The hopper shall include roller extensions for use with combination tractor trailer units.

Complies: Yes [ ]  No [ ]

The hopper shall have an overall width (shoes retracted) of approximately 138”, an overall height of approximately 49”, an overall length of approximately 98”. The height to clear the push rollers shall be approximately 21”.

Complies: Yes [ ]  No [ ]

|  |  |  |
| --- | --- | --- |
| Overall width: |       | Inches |
| Overall height: |       | Inches |
| Overall length: |       | Inches |
| Height to clear rollers |       | Inches |

The hopper shall be supported on the bottom by two (2) yokes of two (2) caster wheels for smooth support of the widener. They shall have steel hubs with hard poly covers at a diameter furnished by the manufacturer.

Complies: Yes [ ]  No [ ]

|  |  |  |
| --- | --- | --- |
| Caster diameter: |       | Inches |

**Conveyor:**

The conveyor belt shall be approximately 24” wide with a belt on chain design and capable of discharge from the right side only (unless the option to spread from both sides is called for in the bid documents).

Complies: Yes [ ]  No [ ]

The length of the conveyor shall be approximately 96”.

|  |  |  |
| --- | --- | --- |
| Length of conveyor: |       | Inches |

The belt shall withstand heat of approximately 350° F rated for aggregate or hot asphalt use and be fully adjustable.

Complies: Yes [ ]  No [ ]

|  |  |  |
| --- | --- | --- |
| Belt temperature rating: |       | Degrees |

**Drive system:**

The conveyor shall be operated by a reversible hydraulic motor. The hydraulic motor shall drive a sprocket and chain type conveyor with idler shafts.

Complies: Yes [ ]  No [ ]

All drive or idler shafts with non-sealed bearings shall be drilled and tapped with grease zerks for ease of maintenance in the field.

Complies: Yes [ ]  No [ ]

The drive system shall allow for adjustment of conveyor chain in the field and shall not require disassembly to perform adjustments.

Complies: Yes [ ]  No [ ]

The drive system shall include all fittings and hoses needed to operate the conveyor when installed.

Complies: Yes [ ]  No [ ]

**Shoes:**

The widener shall include hydraulically extendable shoe(s) or side plate on the right and left side of the machine (depending on the type discharge called for in the bid). They shall be capable of being fully closed or extendable to from 1’ to 4’ and provide a positive lock and hold to any dimension in between.

Complies: Yes [ ]  No [ ]

|  |  |  |
| --- | --- | --- |
| Shoe extension dimensions |       | Feet |

The shoes shall be capable of being raised, lowered, or operated in a “float” position, all controlled by the wireless remote.

Complies: Yes [ ]  No [ ]

The shoes shall be sized to prevent material from going over the top.

Complies: Yes [ ]  No [ ]

**Paint/Finish:**

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

Complies: Yes [ ]  No [ ]

**General:**

Three copies of all operator's manuals, parts lists, and warranty information shall be provided at time of delivery to each location.

Complies: Yes [ ]  No [ ]

***Note:*** The manuals, parts lists, and service or shop manuals listed above may be furnished on DVD in lieu of paper.

Instruction and training by qualified factory and dealer personnel covering operation and maintenance of the machine shall be provided at time of delivery.

Complies: Yes [ ]  No [ ]

**Requirements Covering Items Detailed Above:**

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.

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 [ ]

Full coverage warranty for a minimum 12 months shall be provided. The bidder shall attach a copy of warranty with the 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 render prompt parts and service.

|  |  |
| --- | --- |
| Describe warranty: |       |
|       |  |

The vendor or manufacturer of the unit which is seriously 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 in question.

Complies: Yes [ ]  No [ ]

**Delivery:**

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

Complies: Yes [ ]  No [ ]

**Bid Package:**

Bidders will need to send two copies of each of the following with their proposal.

1. Specification Questionnaire
2. Descriptive Literature

Complies: Yes [ ]  No [ ]