



Request for Bids

Mississippi Valley State University

**THIS IS
NOT AN
ORDER**

14000 Hwy 82-W #7244
Itta Bena MS 38941-1400

Web Address: www.mvsu.edu/purchasing/

Phone No: (662) 254-3319 Fax (662) 254-3314

Bid Title:

Date:

Requester and Requesting Department:

Bid No.

Number of Pages

Change Order:

Term – End of Month

Bids/Proposals – Do not include State or Federal Taxes in your bids/proposals. The University is exempted from these taxes. All order will be placed with successful bidder by Official Purchase Order.

Mississippi Valley State University is considering the purchase of the following item (s). **We ask that you submit your Bids/Proposals in three copies.** Rights are reserved to accept, or reject any and all parts of your bid/proposals. Your bid/proposals will be given consideration if received in this Office on or before the date and time below.

This bid/proposal will be awarded on a line by line basis

This bid/proposal will be awarded on a all or none basis

However, the University reserves the rights to award any and all bids/proposals in the best interest of the University.

Bid/Proposal opening {Date and Time}
Mississippi Valley State University <i>Carla T. Williams</i>
By: Carla T. Williams, Purchasing Director

Email: ctwilliams@mvsu.edu

NOTE: If you cannot quote on the exact material shown, please indicate any exceptions, giving brand names and complete specifications on any alternate. Mississippi Valley State University reserves the rights to accept any alternate of equal or greater quality or performance. We also reserve the rights to waive any irregularities that may appear in the Bids/Proposals specifications.

ITEM	QUANTITY	DESCRIPTIONS	UNIT PRICE	TOTAL NET PRICE
<i>Please show Bid/Proposals No. on outside of Envelope</i>				

If checked, Mississippi Valley State University reserves the rights for an additional 60 days to purchase and additional 20% of this bid/proposal at the same cost.

We quote you as above F.O.B – Mississippi Valley State University. Shipment can be made within _____ days from receipt of the order.

<p>Terms: <input style="width: 100%;" type="text"/></p> <p>Date: <input style="width: 100%;" type="text"/></p> <p>Phone/Fax: <input style="width: 100%;" type="text"/></p> <p>Official Signature:</p>	<p>Company Quoting</p>
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Mississippi Valley State University



Request for Bid #1001028
Mississippi Valley State University
Bid Specification
28 yd³ yard High Compaction Front Loading
Refuse Collection Body

Due September 9, 2021

Mississippi Valley State University
Bid Specification
28 yd³ Yard High Compaction Front Loading
Refuse Collection Body

BIDDER SHALL COMPLETE BY CHECKING THE FOLLOWING.
IF NOT COMPLIANT, STATE SPECIFICALLY ITEMS BEING OFFERED

INTENT:

This specification describes a hydraulically actuated partial pack front loader and chassis with a container hoisting device capable of handling 1-10 cubic yard containers with side pockets. The body shall be capable of compacting and transporting refuse to a landfill or transfer station and dispensing the load by means of hydraulically ejecting the load from the body. The manufacturer shall have produced this refuse collection equipment for a period of at least twenty (20) years.

GENERAL TERMS:

The manufacturer of all equipment provided under this contract shall be ISO 9001 certified. All equipment furnished under this contract shall be new, unused and the same as the manufacturer's current production model. Accessories not specifically mentioned herein, but necessary to furnish complete unit ready for use, shall also be included. Unit shall conform to the best practice known to the body trade in design, quality of material and workmanship. Assemblies, sub-assemblies and component parts shall be standard and interchangeable throughout the entire quantity of units as specified in this invitation to bid. The equipment furnished shall conform to ANSI Safety Standard Z245.1-1999, and shall be manufactured in the United States of America.

GUARANTEE:

- One (1) year body warranty
- Five (5) year pack/eject cylinder warranty
- Five (5) year/250,000 mile engine and after treatment warranty
- Five (5) year/unlimited mile transmission warranty

PARTS MANUAL:

Bidder shall furnish all complete parts, maintenance, and operator's manual with each body sold.

BID QUOTATION:

Bidder shall complete every space in the specification bidder's proposal column with a check mark to indicate if the item being bid is exactly as specified. If not, the "NO" column must be checked and a detailed description of the deviation from the specification must be supplied. Bidder shall complete every space in the specification bidder's proposal column with a check mark to indicate if the item being bid is exactly as specified.

TOTAL F.O.B Itta Bena, MS \$ _____

ESTIMATED TIME OF DELIVERY: _____

	YES	NO	OFFERED
I. BODY			
<i>CAPACITY</i>			
The body shall have a capacity, excluding the receiving hopper, of not less than: 28 yd ³	<input type="checkbox"/>	<input type="checkbox"/>	_____
The hopper shall have a capacity of twelve (12) cubic yards.	<input type="checkbox"/>	<input type="checkbox"/>	_____
<i>Body shall be ANSI Z 245.1-1999 compliant and be manufactured in an ISO 9001 certified facility.</i>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<i>BODY DIMENSIONS</i>			
Body length including 52"cab shield is 354"	<input type="checkbox"/>	<input type="checkbox"/>	_____
Overall length with arms down and forks in full tuck position is 409"	<input type="checkbox"/>	<input type="checkbox"/>	_____
Overall length with arms down and forks in horizontal position is 447"	<input type="checkbox"/>	<input type="checkbox"/>	_____
Body width, outside shall be no more than 96".	<input type="checkbox"/>	<input type="checkbox"/>	_____
Body width, inside should be a maximum of 88".	<input type="checkbox"/>	<input type="checkbox"/>	_____
Body height, inside should be a minimum of 85".	<input type="checkbox"/>	<input type="checkbox"/>	_____
Body height above chassis rail, arms down is 108".	<input type="checkbox"/>	<input type="checkbox"/>	_____
Body height above chassis rail, arms up with full tuck forks is 120".	<input type="checkbox"/>	<input type="checkbox"/>	_____
Height above frame with tailgate raised including rear underride guard is 199".	<input type="checkbox"/>	<input type="checkbox"/>	_____
Hopper width (bottom), above guide tracks, must be no less than 80".	<input type="checkbox"/>	<input type="checkbox"/>	_____
Hopper width (top) must be a minimum of 81".	<input type="checkbox"/>	<input type="checkbox"/>	_____
Hopper length at roof must be a minimum of 94".	<input type="checkbox"/>	<input type="checkbox"/>	_____
Hopper depth must be a minimum of 91".	<input type="checkbox"/>	<input type="checkbox"/>	_____
<i>BODY CONSTRUCTION</i>			
Packer body will have flat hopper and body floor with curved roof and body sides and of overhead loading design. Hopper will be designed to properly handle containers from 1-10 cubic yard capacity.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Roof - Minimum 8 gauge high tensile steel sheet 80,000 PSI minimum yield.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Body sides – minimum 7 gauge high tensile steel sheet, 80,000 PSI minimum yield.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Body floor – minimum 1/4" AR400 plate steel, 184,000 PSI minimum tensile strength and 150,000 PSI typical yield strength.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Cross members shall be 7 gauge 80,000 PSI minimum typical yield, 6" x 3" formed channel. Members shall be spaced on approximately 21-1/2" centers in low compaction zone and 17-1/4" centers in high compaction zone. Cross members shall be full width, single piece construction.	<input type="checkbox"/>	<input type="checkbox"/>	_____

	YES	NO	OFFERED
Cross members shall interlace with body longitudinals to fully support the floor.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Body Longitudinals (Long Members) - Shall be minimum of 7 gauge 80,000 PSI minimum yield formed box section.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Upper longitudinal corner brace shall be 12 gauge 80,000 PSI minimum typical yield 4" x 6" deep formed channel fully welded to the roof and body side sheets.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Lower longitudinal corner brace shall be 11 gauge 80,000 PSI minimum typical yield 5" x 19" deep formed channel fully welded to the body side sheets.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Forward vertical body side bolster shall be 7 gauge, 80,000 PSI minimum typical yield 7.75" x 7" deep formed channel conforming to the curved body sides and fully welded to the body sides.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Rear vertical body side bolster shall be 3/16", 80,000 PSI minimum yield 6.7" x 5" deep formed channel conforming to the curved body sides and fully welded to the body sides.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Side Access Door - The side access door shall be located at the front street side of the body with minimum opening of 26.5" x 29.5" (796.5 in ²). Steps and grab handles shall be provided for ease of entry. An electrical interlock shall be provided to disable the pump whenever the side door is open. The hopper side will include a rubber bumper to keep the door from damaging the body side	<input type="checkbox"/>	<input type="checkbox"/>	_____
Roof Access Ladder - A ladder shall be provided on the rear of the tailgate for access to the body roof. Steps must be of "non-slip" material.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Front Head Closure - A 47" x 77" front head closure screen made of 1/4" expanded metal shall be provided to prevent loose debris from entering the area in front of the packer and to prevent unauthorized entry by non-service personnel.	<input type="checkbox"/>	<input type="checkbox"/>	_____

HOPPER

Hopper floor – minimum 1/4" AR400 plate steel, 184,000 PSI minimum tensile strength and 150,000 PSI typical yield strength.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Lower hopper sides – minimum 3/16" AR400 abrasion resistant steel plate, 184,000 PSI tensile strength and 150,000 PSI typical yield strength.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Upper hopper sides – minimum 0.118" steel sheet with a minimum of 110,000 PSI typical yield	<input type="checkbox"/>	<input type="checkbox"/>	_____
The bottom side brace shall be a minimum 11 gauge formed 9.5" x 2" channel, 110,000 PSI typical yield.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Lower and intermediate side bracing – minimum of four (4) 11 gauge 110,000 PSI minimum typical yield 8.5" x 1.5" formed angles of lap construction.	<input type="checkbox"/>	<input type="checkbox"/>	_____
All external welds of hopper side bracing shall be continuous full seam.	<input type="checkbox"/>	<input type="checkbox"/>	_____

	YES	NO	OFFERED
A hydraulically actuated sliding top door will be provided to cover the hopper for traveling to the discharge site. The top door cylinder shall be double acting and have a minimum 2-3/4" bore x 90" stroke with a 1-1/2" diameter chrome plated rod with a sensor embedded within the cylinder to notify when door is in the fully opened position. An in-cab mounted light will be provided to indicate when the top door is not fully open	<input type="checkbox"/>	<input type="checkbox"/>	_____
PACKING MECHANISM			
A hydraulically actuated packer traversing a minimum of 81", from the front head, shall clear the hopper of material.	<input type="checkbox"/>	<input type="checkbox"/>	_____
The lower packing panel face will be a minimum 3/16" AR400 abrasion resistant steel plate with minimum of 184,000 PSI tensile strength and 150,000 PSI yield strength. The upper vertical face will be a minimum 11 gauge, 80,000 PSI typical yield. The packer will be reinforced with a combination of structural members for maximum rigidity.	<input type="checkbox"/>	<input type="checkbox"/>	_____
The hopper zone packer guide rails (2) in the side of the body shall be comprised of 3/8" 50,000 PSI minimum yield structural angle welded to 3-1/2" x 1/4" ASTM A500 Grade B structural tubing on each side of body. The structural tubing shall be of a continuous piece the full interior length of the hopper, 128" long.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Abrasion resistant wear bars, AR500 215,000 PSI minimum yield 230,000 tensile x 500 BHN typical, shall be clad to the hopper zone guide rails, each side, in the following manner:	<input type="checkbox"/>	<input type="checkbox"/>	_____
Bottom horizontal track wear bar shall be 1/4" thick x 3-1/2" wide and located 3-1/2" above floor at corner.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Top horizontal track wear bar shall be 1/4" thick x 2-1/2" wide.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Outer vertical track wear bar shall be 1/4" thick x 2-1/2" wide.	<input type="checkbox"/>	<input type="checkbox"/>	_____
The ejection zone guide rails shall be 3/8" 50,000 PSI minimum yield structural angle welded to the full length 3-1/2" x 3-1/2" x 3/16" ASTM A500 Grade B structural tube. A 1/4" x 2-1/2" H.R.S. wear bar shall be welded to the vertical and undersides surface of the guide rail assembly. The top wear surface shall be clad with 1/4" x 3-1/2 H.R.S. steel.	<input type="checkbox"/>	<input type="checkbox"/>	_____
The packer panel shall be guided on each side of the body with 3" x 6" x 1/4" ASTM A500 Grade B structural tubing clad with AR500 abrasion resistant with typical 184,000 PSI tensile strength and 150,000 PSI yield strength wear bars in the following manner::	<input type="checkbox"/>	<input type="checkbox"/>	_____
Bottom horizontal packer panel wear bar: 3/8" thick x 3" wide x 41" long.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Top horizontal packer panel wear bar: 1/4" thick x 3" wide x 41" long.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Two (2) vertical packer panel wear bars, located below the structural tubing, shall be 1/4" thick x 2" wide x 18" long.	<input type="checkbox"/>	<input type="checkbox"/>	_____

	YES	NO	OFFERED
The packer panel shall be provided with bolt-on lugs for each of the two (2) packing cylinders. The cylinders shall be attached to the packer panel lugs via two inch (2") diameter pins. Cylinder removal may be accomplished by either pulling the pins or by removing the entire bolt-on lugs. The lugs shall be attached to the packing panel with six (6) 3/4" diameter bolts for each lug assembly.	<input type="checkbox"/>	<input type="checkbox"/>	_____
The body front head shall also be provided with bolt-on lugs for packing cylinders. The lugs shall retain cylinder pins with four (4) 3/4" diameter bolts.	<input type="checkbox"/>	<input type="checkbox"/>	_____
The packer will be hydraulically actuated by two (2) double acting telescopic cylinders with 5-1/2" bore	<input type="checkbox"/>	<input type="checkbox"/>	_____
Packer cylinders shall have spherical bearings on both ends.	<input type="checkbox"/>	<input type="checkbox"/>	_____
The Packer cylinder grease zerks that are located on the rod and base end shall be equipped with a remote lube system that is accessible from the ground	<input type="checkbox"/>	<input type="checkbox"/>	_____
Packing force – minimum cylinder compaction force shall be 117,000 pounds.	<input type="checkbox"/>	<input type="checkbox"/>	_____
<i>BUSTILE TAILGATE</i>			
Tailgate must be one piece; top hinged and shall open approximately 4° above horizontal. Tailgate shall not slide against body seal material when opening/closing to keep seal wear/damage to a minimum.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Tailgate back sheets shall be constructed of a minimum 10 gauge, 80,000 PSI minimum typical yield steel.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Tailgate side sheets shall be constructed of a minimum 11 gauge, 110,000 PSI minimum typical yield steel.	<input type="checkbox"/>	<input type="checkbox"/>	_____
The tailgate shall be reinforced by a minimum 1/4" 80,000 PSI minimum yield, horizontal boxed braces.	<input type="checkbox"/>	<input type="checkbox"/>	_____
The tailgate will be secured to the body by two (2) sets of hinges with 2" hinge pins at the roof line. The tailgate hinge shall be equipped with greaseless bearings	<input type="checkbox"/>	<input type="checkbox"/>	_____
A heavy duty rear door positive seal of rubberized gasket material will be installed the full length of the bottom and 68" up the sides of the tailgate to prevent leakage.	<input type="checkbox"/>	<input type="checkbox"/>	_____
The tailgate shall be secured in the closed position by means of a fully automatic latching mechanism actuated by a separate control in the cab.	<input type="checkbox"/>	<input type="checkbox"/>	_____
The tailgate shall be raised and lowered hydraulically actuated by two (2) double acting cylinders with a minimum bore of 3" x 35" stroke with 1-3/4" diameter hardened chrome plated rod. Cylinder design shall also include an orifice fitting in the base port which will prevent the rapid descent of the tailgate in the event of a hydraulic failure. The cylinders shall use greaseless bearings in the rod and base ends to eliminate the need for greasing	<input type="checkbox"/>	<input type="checkbox"/>	_____

	YES	NO	OFFERED
The tailgate shall be locked by two (2) lock cylinders with a minimum bore of 3" x 3-5/8" stroke with 1-1/2" diameter hardened chrome plated rod. Lock and tailgate raise cylinders shall be actuated by separate controls in the cab. Both cylinders should have embedded sensors that sense when cylinders are fully extended.	<input type="checkbox"/>	<input type="checkbox"/>	_____
An in-cab mounted display shall display a warning message to indicate that the tailgate is not fully closed.	<input type="checkbox"/>	<input type="checkbox"/>	_____
LIFT ARMS			
The lift arms will be 3" x 8" box reinforced type construction rated and capable of lifting 8,000 pound gross container and payload.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Lift arms shall be capable of lifting loaded containers from a truck dock with 10' maximum pocket height.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Lift arm cycle time will be approximately 19-21 seconds @ 35GPM	<input type="checkbox"/>	<input type="checkbox"/>	_____
Pick-up, dump, and disengagement will be done without the need for assistance and without the driver leaving the cab.	<input type="checkbox"/>	<input type="checkbox"/>	_____
The lift arms, during the dump cycle must not obstruct or interfere with the opening of the truck cab doors on either side.			
The two (2) 3" x 8" rigidly constructed lift arms will be held tight to the torque tube using 4" thick ASTM A-487, 60,000 PSI yield cast steel clamping devices, and secured using two (2) 7/8" Grade 8 bolts and lock nuts on each side.	<input type="checkbox"/>	<input type="checkbox"/>	_____
The arm torque tube will be mounted in four (4) split bearing blocks with four (4) replaceable split bronze bushings with grease provisions. The split bearing blocks will be rigidly welded to the lower front of the body.	<input type="checkbox"/>	<input type="checkbox"/>	_____
The lift arms will be hydraulically actuated by two (2) double acting cylinders 4-1/2" bore x 41-1/2" stroke with a 2-1/2" diameter induction hardened and chrome plated rod.	<input type="checkbox"/>	<input type="checkbox"/>	_____
The cylinders will be located outside the body at the body floor level and directly attached to the lift arms.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Two (2) 1-1/2" x 59" grip high tensile, 50,000 PSI minimum typical yield forks shall be welded to a 4-1/2' O.D. x 3/8" wall C-1018 Seamless tubing fork cross shaft assembly. This assembly shall include rubber bumpers to reduce impact and prevent damage to containers.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Fork cross shaft assembly shall be attached to the arms with two (2) split bearing blocks with replaceable split bronze bushings fitted with grease provisions.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Fork Hydraulics - The forks will be hydraulically actuated by two (2) double acting cylinders, 3.5" bore x 25" stroke with a 2" diameter induction hardened and chrome plated rod.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Forks shall be designed to provide the necessary dump angle to assure complete discharge of materials from the refuse containers.	<input type="checkbox"/>	<input type="checkbox"/>	_____

	YES	NO	OFFERED
Lift arms shall be brought to a smooth stop in the raised and lowered position by use of cushioned hydraulic arm cylinders.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Heavy duty bolt-on hard rubber arms stops located at the side of the body will cushion and prevent over travel of the lift arms.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Maximum height with the lift arms raised in the full up and forks fully tucked position will be 13'6" (based on a chassis rail height of 42").	<input type="checkbox"/>	<input type="checkbox"/>	_____
An in-cab mounted display shall display a warning message to indicate when any part of the arms are raised above 13'6".	<input type="checkbox"/>	<input type="checkbox"/>	_____
HYDRAULICS			
The maximum operating pressure of the system will be 2500 PSI.	<input type="checkbox"/>	<input type="checkbox"/>	_____
The hydraulic pump shall be a front engine, crank driven, single vane pump with electronic over-speed control. The packer panel operation shall be limited to a flow 55 GPM @ 1500 RPM in neutral or foot on brake.	<input type="checkbox"/>	<input type="checkbox"/>	_____
The hydraulic circuit shall consist of (2) electric over hydraulic controlling valves with in cab controls to prevent the need for the operator from exiting the cab to operate. The packing, arms raise/lower, and the fork valve assembly will be located under the mid body on the street side of the unit. This valve will be protected with a steel cover to prevent contamination and damage. This valve assembly shall consist of a relief to prevent overload damage to the body. The tailgate cylinders, top door cylinders, and the tailgate lock cylinders shall be controlled by a valve assembly located on the street side rear body side skirt. This valve shall also be protected by with a steel cover.	<input type="checkbox"/>	<input type="checkbox"/>	_____
The valve controlling arm, fork and packing functions shall shall be limited to a flow 55 GPM @ 2500 PSI and designed to properly operate all the hydraulic components. The valve tailgate, tailgate lock and top door movement functions shall have a minimum capacity of 13 GPM @ 2500 PSI and designed to properly operate all the hydraulic components. Hydraulic valves located behind the cab near high-temperature engine exhausts are not acceptable due to the difficulty of servicing and the potential risk to hydraulic components due to excessive engine temperatures.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Pump-to-body hard plumbing shall be provided and shall be securely supported and clamped to prevent vibration, abrasion, and excessive noise. Flex hoses shall be provided at each end of the hard plumbing to provide adequate flexure to prevent hydraulic leaks	<input type="checkbox"/>	<input type="checkbox"/>	_____
The hydraulic oil reservoir shall have a gross capacity of 51 gallons filled with 43 gallons of hydraulic fluid	<input type="checkbox"/>	<input type="checkbox"/>	_____
The tank shall be complete with a screened fill pipe and cap, filter breather, clean out cover, shut off valve, oil level sight, and temperature gauge.	<input type="checkbox"/>	<input type="checkbox"/>	_____
The hydraulic system shall be protected by a three (3) micron, in tank, return line filter along with a 100 mesh (140 micron) reusable oil strainer with 3 PSI by pass in the suction line.	<input type="checkbox"/>	<input type="checkbox"/>	_____

	YES	NO	OFFERED
The return line filter shall also include an in-cab filter by-pass monitor which shall alert the operator or service personnel when the filter is need of replacement.	<input type="checkbox"/>	<input type="checkbox"/>	_____
A hydraulic pump shut down system shall also be included which shall prohibit prolonged operation of the hydraulics when the filter is in the bypass mode.	<input type="checkbox"/>	<input type="checkbox"/>	_____
All hydraulic hoses shall conform to ISO 18752 3000PSI Type AC standards for designed pressure. Bends shall not be a smaller radius than recommended by ISO 18752 3000PSI Type AC standards. Flat Spots in hoses will not be acceptable. 4 wire hoses are not utilized due to reduced bend radius and increased opportunities for loosened fittings.	<input type="checkbox"/>	<input type="checkbox"/>	_____
All pressure hoses shall be protected abrasion resistant hose covering tested to ISO 6945 standard and resulting in a 300X wear improvement when compared to standard covering.	<input type="checkbox"/>	<input type="checkbox"/>	_____

CONTROLS

Arm, fork, packer, top door, tailgate raise, and tailgate lock controls shall be provided. Arm and fork movement shall be accomplished by an air over hydraulic, self-centering joystick that returns to the neutral position when released. An arm rest shall be provided for operator comfort. Packer, top door, tailgate raise, and tailgate lock controls shall be air toggle type. All controls shall be located inside the cab within easy access to the driver. A separate in-cab control shall be provided for tailgate lock function.	<input type="checkbox"/>	<input type="checkbox"/>	_____
All controls shall be properly labeled and indicate the direction of travel (i.e., arms up, arms down, etc.) with warning lights to indicate “Tailgate Open”, “Top Door Closed”, “Arms Above Transit Position”, “Low Oil”, “Arm and Fork Over height” .	<input type="checkbox"/>	<input type="checkbox"/>	_____

ELECTRICAL

A 32-bit mobile controller with control center and display shall be provided in the body and cab to monitor system functions and Operation of the truck. The controller shall be able to withstand the vibration, moisture, dirt ingress, and climate variations that are present in the location of the body where mounted. The controller shall use solid-state technology with no mechanical relays or switches inside the controller. The controller shall use IEC 61131-3 software and will have SAE J1939 built into the controller for communication to the vehicle powertrain. The controller shall comply with IP 67 water ingress standards installed in a location to be accessible from the ground and shall display self-diagnosing error codes in readable text format which identify the potential trouble source. Both audio and text alerts must be made available to aid in locating trouble source. The display should be a minimum of 7” in diagonal measurement and mounted in a centralized location in the cab.	<input type="checkbox"/>	<input type="checkbox"/>	_____
The display shall be a minimum of 7” on diagonal measurement and mounted in a centralized location in the cab. Display also shall utilize pushbuttons for operator interface, no touch screen interface shall be allowed. The pushbuttons should be backlit to allow easy visibility in dark environments. Display shall allow CAN interfacing and be programmable using IEC 61131-3 software. Capability of performing display program updates s via USB shall be available. Display shall also allow connection and display of analog inputs, such as body cameras. There should be a day and night function available to dim and brighten the display as needed depending on the user needs.	<input type="checkbox"/>	<input type="checkbox"/>	_____

	YES	NO	OFFERED
A non-contact arc position sensor must be used for packer panel operation. This sensor must have ability to operate in a range of 0°-100° of movement and comply with IP69K water ingress standards. The sensor must also utilize ASIC (Application-Specific Integrated Circuit) and an array of MR (magneto-resistive) sensors to accurately and reliably determine the position during full range packer panel motion	<input type="checkbox"/>	<input type="checkbox"/>	_____
Remote Controller Nodes/Modules facilitating distributed I/O and utilizing CAN communication protocol shall be utilized to isolate the tailgate control valve communications. This node should reduce wiring in the body and assist with electrical troubleshooting. The node shall comply with IP 67 water ingress standards use LEDs to assist with diagnosis and status indication. This node shall be located as close as possible to the tailgate valve to reduce wiring	<input type="checkbox"/>	<input type="checkbox"/>	_____
All switches not manually operated shall be proximity in type. Mechanical switches are not acceptable.	<input type="checkbox"/>	<input type="checkbox"/>	_____
LIGHTING			
Clearance, back up, and directional lights shall be Acrylic or Lexan lens, shock mounted in a protective housing. The whole unit shall be pop out and replaceable.	<input type="checkbox"/>	<input type="checkbox"/>	_____
All lights shall be LED and provided in accordance with FMVSS#108, plus mid body turn signals on each side of the body and a center brake light on the rear.	<input type="checkbox"/>	<input type="checkbox"/>	_____
<i>A hopper light illuminating the hopper area shall be provided and controlled by an on/off switch in the cab.</i>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<i>Single LED windscreen mounted container light</i>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<i>Dual cab guard mounted flood lights</i>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<i>Multi-function "smart" lights – tailgate – lights on for corners of tailgate functions as strobe lights and turn signals</i>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<i>LED Body side back assist lights</i>	<input type="checkbox"/>	<input type="checkbox"/>	_____
SAFETY & CONVENIENCE			
Anti-sail / anti-splash mud flaps shall be mounted to the front and rear of the back tires.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Unit equipped with shovel kit mounted on the rear of the packer. Kit includes bracket and plastic scoop.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Remote lube system for packer and tailgate hinges.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Safety triangle kit shall be provided	<input type="checkbox"/>	<input type="checkbox"/>	_____
20lb. Mounted fire extinguisher	<input type="checkbox"/>	<input type="checkbox"/>	_____
Arm / Fork over height warning kit – audible & visual	<input type="checkbox"/>	<input type="checkbox"/>	_____
The body shall be equipped with a rear under-ride guard as standard equipment, to meet Federal Motor Carrier Safety Regulation.	<input type="checkbox"/>	<input type="checkbox"/>	_____

	YES	NO	OFFERED
<i>PAINTING</i>			
The entire body shall be properly cleaned of all dirt, grease, and weld slag before painting. Cleaning shall be in keeping with accepted industry practices.	<input type="checkbox"/>	<input type="checkbox"/>	_____
A seal coat, primer coat and two-component polyurethane enamel topcoat is to be applied.	<input type="checkbox"/>	<input type="checkbox"/>	_____
The body is to be equipped with ICC regulation high visibility tape. The reflective tape is to be installed on lower body side perimeter and across rear hopper lip.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Body undercoat of external surfaces	<input type="checkbox"/>	<input type="checkbox"/>	_____
Spray-in coating of all bolsters and cavities to prevent rusting from the inside.	<input type="checkbox"/>	<input type="checkbox"/>	_____
The body color shall be white to match chassis cab.	<input type="checkbox"/>	<input type="checkbox"/>	_____
<i>ADDITIONAL FEATURES</i>			
3 rd Eye Dual camera system (rear and hopper views)	<input type="checkbox"/>	<input type="checkbox"/>	_____
3" hopper drain plug	<input type="checkbox"/>	<input type="checkbox"/>	_____
Bolt on fender extension kit to keep body clean of road spray	<input type="checkbox"/>	<input type="checkbox"/>	_____
Butterfly style quick disconnects for service plumbing	<input type="checkbox"/>	<input type="checkbox"/>	_____
<i>II. CHASSIS</i>			
Cab-over style with LH steering	<input type="checkbox"/>	<input type="checkbox"/>	_____
¼" Inside Channel Reinforcement	<input type="checkbox"/>	<input type="checkbox"/>	_____
210" WB, 207" CA, 113" AF	<input type="checkbox"/>	<input type="checkbox"/>	_____
<i>ENGINE & EQUIPMENT</i>			
355 HP @ 1500-1800 RPM	<input type="checkbox"/>	<input type="checkbox"/>	_____
1260 lb. ft. Torque	<input type="checkbox"/>	<input type="checkbox"/>	_____
160 AMP Alternator	<input type="checkbox"/>	<input type="checkbox"/>	_____
(3) Batteries 1000/3000 CCA	<input type="checkbox"/>	<input type="checkbox"/>	_____
Battery disconnect switch	<input type="checkbox"/>	<input type="checkbox"/>	_____
1500W Engine block heater	<input type="checkbox"/>	<input type="checkbox"/>	_____
<i>TRANSMISSION</i>			
Allison 4500 RDS 6-Speed Automatic	<input type="checkbox"/>	<input type="checkbox"/>	_____
Direct mount transmission oil cooler	<input type="checkbox"/>	<input type="checkbox"/>	_____

	YES	NO	OFFERED
<i>Synthetic transmission fluid</i>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<i>Allison programming Gen 5 package</i>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Main Driveline: Spicer 1810HD with coated splines (or equal)	<input type="checkbox"/>	<input type="checkbox"/>	_____
Inter-Axle Driveline: Spicer 1710HD with coated splines (or equal)	<input type="checkbox"/>	<input type="checkbox"/>	_____
FRAME EQUIPMENT			
Steel, swept back front bumper	<input type="checkbox"/>	<input type="checkbox"/>	_____
Skid plate under bumper and radiator	<input type="checkbox"/>	<input type="checkbox"/>	_____
Front tow pin	<input type="checkbox"/>	<input type="checkbox"/>	_____
FUEL TANK			
80 Gallon RH	<input type="checkbox"/>	<input type="checkbox"/>	_____
6.6 Gallon RH DEF tank	<input type="checkbox"/>	<input type="checkbox"/>	_____
FRONT AXLE/EQUIPMENT/TIRES			
Axle: 20,000lbs	<input type="checkbox"/>	<input type="checkbox"/>	_____
Suspension: Multileaf 20,000lb.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Meritor "S" CAM type 16.5" x 6" Q+ front brakes	<input type="checkbox"/>	<input type="checkbox"/>	_____
Front shock absorbers	<input type="checkbox"/>	<input type="checkbox"/>	_____
Power steering	<input type="checkbox"/>	<input type="checkbox"/>	_____
REAR AXLE/EQUIPMENT/TIRES			
46,000 lbs. Capacity tandem rear axle	<input type="checkbox"/>	<input type="checkbox"/>	_____
Suspension: Multi-leaf Spring 46,000 lb. capacity	<input type="checkbox"/>	<input type="checkbox"/>	_____
Bronze bushings	<input type="checkbox"/>	<input type="checkbox"/>	_____
Rear axle ratio: 4.8	<input type="checkbox"/>	<input type="checkbox"/>	_____
Brakes: Meritor Q+ cam 16.5" x 8"	<input type="checkbox"/>	<input type="checkbox"/>	_____
50" Axle spacing	<input type="checkbox"/>	<input type="checkbox"/>	_____
Bendix abs w/o traction control	<input type="checkbox"/>	<input type="checkbox"/>	_____
30/30 Type rear spring brake chamber	<input type="checkbox"/>	<input type="checkbox"/>	_____
Power divider lockout with warning light and buzzer	<input type="checkbox"/>	<input type="checkbox"/>	_____
CAB INTERIOR			
<i>Mid-Back Air suspension driver seat</i>	<input type="checkbox"/>	<input type="checkbox"/>	_____

	YES	NO	OFFERED
<i>Fixed mid-back non-suspension passenger seat</i>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<i>Vinyl seat coverings</i>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<i>Seat belts – lap & shoulder (both seats) orange in color</i>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<i>AM/FM Radio with CD/WB/BT</i>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<i>Integral air conditioner and heat</i>	<input type="checkbox"/>	<input type="checkbox"/>	_____
CAB EXTERIOR			
<i>Low profile cab over style</i>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<i>Twin air horn – under cab</i>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<i>Flat mirrors - polished finish, heated</i>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<i>8” Convex, LH& RH</i>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<i>Windshield protector</i>	<input type="checkbox"/>	<input type="checkbox"/>	_____
WHEELS & TIRES			
<i>315/80R22.5 (2) Front tires</i>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<i>22.5x9.00 (2) Aluminum disc wheels</i>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<i>315/80R22.5 (8) Rear tires</i>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<i>22.5x9.00 (8) Rear; Aluminum disc wheels</i>	<input type="checkbox"/>	<input type="checkbox"/>	_____
PAINT			
<i>Manufacturer’s White</i>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<i>Chassis Running Gear: Black Urethane water base</i>	<input type="checkbox"/>	<input type="checkbox"/>	_____
PTO/SPECIALTY/ADDITIONAL			
<i>PTO: Front crankshaft adapter 1350 series flange for refuse front mount PTO drive</i>	<input type="checkbox"/>	<input type="checkbox"/>	_____

All responses shall be addressed and returned to:

**Mrs. Carla T. Williams
Mississippi Valley State University
Purchasing Director
14000 Hwy 82 West
Box 7244
Itta Bena, MS 38941-1400
662-254-3319**

Schedule of Proposal Submission

- | | |
|---|-------------------|
| 1. First Date of Advertisement | August 19, 2021 |
| 2. Second Date of Advertisement | August 26, 2021 |
| 3. Deadline for submitting written inquires | August 25, 2021 |
| 4. Inquires Addressed | August 31, 2021 |
| 5. Proposal Due to the Purchasing Office | September 9, 2021 |

Note: All inquiries concerning this Request for Bid should be emailed to Mr. Terrence Hurssey, Facilities Management Director at terrence.hurssey@mvsu.edu. All inquiries will be answered and added to www.mvsu.edu/purchasing as an addendum by the Purchasing Office.