

Contract Specifications
Three (3) New Tandem Tilt Cab, 2020 or newer Model, 66,000 GVW Cab and Chassis with
Right Steer 27-Cubic Yard Automated Side Loading Refuse Compactor Body

<u>DESCRIPTION</u>	<u>MINIMUM REQUIREMENTS</u>	<u>COMPLY YES/NO</u>
ENGINE	Minimum 385 horsepower 1450 torque Rating minimum. Must be capable of effectively Operating the body functions at idle and low rpm	_____
	State torque at 800 rpm, 1000 rpm	_____, _____
	State max torque and RPM	_____
	Engine to be programmed for city operation	_____
	Full variable speed governor	_____
	25 cubic feet air compressor, gear driven with air intake plumbed to the clean side of the main engine air filter	_____
	Oil filters – spin-on type	_____
	Heaviest duty Radiator (1200 sq in) available with no coverage by cab or etc. with maximum cooling - heavy duty top and bottom.	_____
	Stationary Grille	_____
	Block Heater, 120v – 1500 watt	_____
	Anti-freeze to 34° below zero	_____
	12-volt, 160 amp minimum alternator	_____
	3 – 12-volt maintenance free batteries 2700 c.c.a. External mounted <u>on the left side of truck</u>	_____
	Battery disconnect to kill all power from battery at the battery	_____
	Air cleaner, two stage, Donaldson 16" Cycloflo - outside air intake, or equal	_____
	Fuel tank 60-gallon minimum	_____
TURNING RADIUS	Turning radius—34.89 ft. max	_____
	Curb-to-curb—71.84 ft. max	_____
	Wall-to-wall—76.44 ft. max	_____

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<u>DESCRIPTION</u>	<u>MINIMUM REQUIREMENTS</u>	<u>COMPLY YES/NO</u>
TRANSMISSION	Allison automatic 4500 RDS with synthetic transmission fluid.	_____
	Right side shift stations, and auto-neutral shifting.	_____
	Power take-off opening	_____
BRAKES	S-Cam type "Q" Series or larger front & rear air brake with Arvin Meritor automatic slack adjusters with brake backing plates, no exception (Gunitite not acceptable)	_____
	Bendix air dryer/with replaceable spin-out element with heater, or equal	_____
	Central manifold with petcocks for air tank drains	_____
	Emergency air brakes and dash mounted with dash-mounted warning light	_____
SUSPENSION	Front Axle, Arvin Meritor MFS20, or equal, 20,000 lb capacity with 20,000-pound springs	_____
	Rear axle Hendrickson HMX 460 46,000 lb. rating	_____
	Heavy duty front shocks	_____
	Power steering, extra heavy duty with right-hand ram	_____
REAR AXLE	Arvin Meritor RT46-160 with a gear ratio to be determined based upon engine	_____
	Rear axle to have power divider lock-out with dash-mounted light	_____
	Main drive line to be 1810 series, or equal	_____
	Transverse torque rods	_____
TIRES	Three (3) Michelin 315/80R22.5 (L) XZUS2 or equal, 10-hole budd rims, hub piloted wheels, steel hubs.	_____

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<u>DESCRIPTION</u>	<u>MINIMUM REQUIREMENTS</u>	<u>COMPLY YES/NO</u>
	Ten (10) Michelin 11R22.5 (H) XDE M/S or equal, 10-hole budd rims, hub piloted wheels, steel hubs.	_____
CAB	Fresh air heater and defroster	_____
	Integral air conditioner (not roof mounted)	_____
	Dual windshield wipers, variable	_____
	Auxiliary cab fan (one)	_____
	Right air ride type seats	_____
	Full coverage fender with rubber fender flares	_____
	Electric door windows, both sides	_____
	Two (2) motorized and heated mirrors, and convex mirror with dash switch kit. Door mounted	_____
	Rear Corner Windows each side with full visibility for drivers to see behind	_____
	Air horns mounted under cab	_____
	Fully insulated and sound deadened. Must be insulated between cab and engine. Padded door liners and head liner required.	_____
	Grab handle - both sides	_____
	Engine hour meter	_____

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<u>DESCRIPTION</u>	<u>MINIMUM REQUIREMENTS</u>	<u>COMPLY YES/NO</u>
Cab (cont)	Water temperature gauge - direct reading	_____
	Oil gauge - direct reading	_____
	Voltmeter - direct reading	_____
	Air pressure gauge - direct reading	_____
	Transmission temperature gauge - direct reading	_____
	Fuel gauge - direct reading	_____
	Audio alarm for low radiator, high water temperature (205 degrees), low oil, and transmission temperature (225 degrees)	_____
	Audio alarm and engine shutdown system	_____
	Audio warning - low brake pressure	_____
	Back up alarm	_____
	AM/FM Radio w/ Bluetooth connectivity	_____
FRAME	Extra heavy duty to match or exceed G.V.W. Frame rails 3/8" steel variable drop, no exceptions. Frame must meet RBM of 3,400,000 in/lb per rail.	_____
	Skid plate protecting engine and pumps	_____
	Standard front bumper	_____
	Two (2) front frame mounted extra heavy-duty tow hooks or pins	_____
	Two (2) rear hooks	_____
ELECTRICAL & LIGHTING	All lights (LED where applicable) and reflectors to conform to Montana Vehicle and Federal Specifications	_____
	All wiring harnesses under body or frame shall be sealed where connections are made	_____
PAINT	Dupont P3131 Teal or equal	_____
2020 Side Load		

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<u>DESCRIPTION</u>	<u>MINIMUM REQUIREMENTS</u>	<u>COMPLY YES/NO</u>
WARRANTY CAB & CHASSIS	One year minimum on all parts and labor except glass, lubrications, and filters. <u>Two years minimum on all parts & labor on engine and transmission.</u> Warranty shall be by a company in Billings. Tech support shall be required Name and address _____ _____	_____
MISCELLANEOUS	Shall meet all DOT & OSHA Requirements One (1) set of operating, service, & parts manuals with wiring diagrams <u>for each truck cab & chassis</u> The truck shall have a minimum of 12 inches of ground clearance between front and rear axle Truck shall have a clearance of 13'6" Truck shall include a Body Builders Junction Block	_____ _____ _____ _____
STEERING	Right-hand steering, truck manufacturer installed with engine oil, transmission oil & water gauges, start button, engine shutdown, turn signals, & transmission control. Steering Gear, Ross TAS65 or equal, to provide minimum 50° turning cut. 18 inch steering wheel	_____ _____ _____
PACKER BODY	Min. 27-cubic-yard exclusive of hopper capacity, all welded construction of framed steel sections. Interior shall be smooth and free of all obstructions to allow easy flow of refuse. Body shall be water tight at least 12" above the floor with gasket at Body sides 10-gauge and body roof 10-gauge high tensile steel, 80,000 psi min. yield Floor of body 3/16" hi-tensile steel, 170,000 psi min. yield,	tailgate. _____ BHN321
Packer Body (cont) 2020 Side Load	Hopper floor 3/16" hi-tensile steel,	_____

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<u>DESCRIPTION</u>	<u>MINIMUM REQUIREMENTS</u>	<u>COMPLY YES/NO</u>
	180,000 psi min. yield, BHN321, 3/16" Liner Steel channel reinforcement on front & sides Hopper sides minimum 3/16" high tensile steel	_____
	sheet, 180,000 psi minimum yield. BHN321	_____
	The packer shall have a body lift for cleaning Access under the packer body	_____
	Tailgate hydraulic operated automatic locking & of 10-gauge steel with tailgate prop	_____
	The side access door shall be located at the front street side of the body. Steps and grab handles shall be provided for ease of entry to hopper. An electrical interlock shall be provided to prevent packer panel motion whenever the side door is open.	_____
	Mud flaps shall be mounted both behind & ahead of rear tires.	_____
	The packing mechanism shall be capable of continuous operation whether loading or not, and when moving. Maximum cycle time of 16 seconds.	_____
	Compactor must either enable containers to be unloaded at anytime, or must be coordin- ated to begin its cycle after containers are unloaded & complete the cycle before another container is dumped in normal operation.	_____
	Packer plate shall be constructed of min. 1/4" and 3/16" hi-tensile steel with adequate box framing & bracing to withstand maximum packing pressure without distortion.	_____
	Packer shall have tight seal with hopper and body to prevent material from falling behind blade.	_____
	Hydraulic system shall be continuous operating low rpm (engine) system designed to maintain oil temperature within acceptable operating ranges with ambient temperatures of 115°F.	_____
Packer Body (cont)	Compacting operations will be performed while	

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	vehicle is both moving or stopped and shall concurrently serve the lift device.	_____
	40-gallon hydraulic reservoir equipped with a suction line shut-off valve, drain plug, and a visual oil level gauge visible from ground, top center mounted vent.	_____
	Hydraulic fittings shall be standard hydraulic fitting - no pipe fittings.	_____
	Filter return line, replaceable 10-micron cartridge type with easy access for servicing.	_____
	Suction-line cartridge type filter, or strainer, located where it is easily accessible.	_____
	Electronic over speed switch or TCM	_____
	Body shall be a full eject model with separate "eject" button. Eject shall be a full blade so that all garbage is removed with one pass, no fingers. Interlocks shall be provided to:	_____
	a. Prevent packer panel to fully eject unless the tailgate is open.	_____
	b. Prevent packer panel movement unless the hopper side access door is securely latched.	_____
	c. Prevent opening of grabbers while container is in dump position. Lift, packer, & tailgate controls shall be mounted in cab & within easy reach of the operator.	_____
	Lift Control shall be air or electric over hydraulic and shall be of the single lever joy stick type to control all three dump motions.	_____
	An ergonomically designed padded arm rest shall be provided to help support the operator's arm.	_____
Packer Body (cont)	Dual set of heated LED stop, signal, & park lights, 4" minimum size. One set to be higher on tailgate, approximately 6 feet from ground. Directional signals on side of body.	_____
	Two (2) work lights (LED) shall be provided to	_____

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	illuminate the lift area and the hopper area with cab mounted on/off switch.	_____
	Strobe light LED mounted on tailgate and run off separate fused switch mounted in the cab	_____
	All wiring shall be in metal conduit where possible and where impractical shall have rubber grommets to provide for chafe protection. All wiring to be extra heavy duty.	_____
	All wiring shall be coded and grouped in harness where possible.	_____
	Two (2) complete wiring diagrams shall be provided for complete body and pickup mechanism.	_____
	Paint color to be DuPont P3131 Teal or equal with one coat of primer compatible to finish coat and 2 coats of finish.	_____
	Unit shall have a 5 year supplemental Power Arm Structure Assembly Warranty	_____
	Packer warranty shall be 12-month minimum of all parts and labor, except for lubrication and filters. The City shall be furnished (at no charge) copies of invoices for all work performed under warranty. They shall show all parts and labor charges.	_____
	All Cylinders shall have a 5 year warranty	_____
	All packer warranty work shall be done by a company located in Billings. Bidder shall state name and location of warranty dealer: _____ _____	_____
	Two complete sets of operating parts and service manuals for the packer body shall be provided	_____
Packer Body(cont)	A tool box, minimum size 24"x18"x16" shall be mounted on side under body.	_____
	A ladder shall provide access to top of body in hopper area.	_____

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<u>DESCRIPTION</u>	<u>MINIMUM REQUIREMENTS</u>	<u>COMPLY YES/NO</u>
	Full sweep mechanism to prevent any material hanging up in the hopper. Sealed system at front of truck	_____
	Lift device shall have min. 2,000-pound lift	capacity. _____
	Lift cycle time shall be 8 seconds or less	_____
	Lift device shall be strong enough to not break, bend, crack, warp, or change from its original dimensions in the normal day-to-day operation of dumping 300-gallon barrels	- _____
	Lift device shall have belt grabbers or steel grabbers capable of dumping 300, 90, & 60-gallon barrels without changing grabbers or dropping barrels.	_____
	Unit shall have crankshaft mounted PTO, dry-valve type, tube-type driveshaft.	_____
	A 20 pound, type ABC fire extinguisher shall be mounted on the side of body	_____
	Unit shall have truck mounted support for lift device in stowed position. <u>No batteries on work side</u>	_____
	Packer and arm functions shall be capable of operation in gear at idle speed	_____
	Packer unit shall have three camera system with one camera on back of truck, one camera to monitor the hopper area and one on driver side. The cameras and monitor shall be Alliance Tech, Inc. 3 rd Eye Mobile Vision AWT07MLESDT - Built in DVR monitor and three cameras AWT102OT – HD.	_____
	Broom and shovel rack right side of body	_____
OPTIONAL WARRANTY (show prices)	In addition to the warranty specified earlier, bidder shall show prices to purchase extended parts and labor warranties on the engine and transmission as follows:	

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	<u>Transmission</u>	<u>Engine</u>	
Full 3 year	\$ _____	\$ _____	
Full 4 year	\$ _____	\$ _____	
Full 5 year	\$ _____	\$ _____	

TRADE UNIT GENERAL INFORMATION SHEET

STYLE	<u>#0161</u> Rear Load
PACKER MAKE	Labrie Full Eject
PACKER SIZE	31 yard
YEAR/MAKE	2009 Mack LEU613
# OF AXLES	Tandem w/ Tag
VEHICLE ID	1M2AU02C29M002558
CURRENT METER	8,775 Hrs
ENGINE	MACK 325HP
TRANSMISSION	Allison Automatic 4500
REAR AXLE	
FRONT AXLE	FXL20
FRONT TIRES	315/80R22.5 Caps
REAR TIRES	11R22.5 Caps
LIFT AXLE TIRES	255/70R22.5
GENERAL	Cab & Body Fair

Bidder to verify condition of trade units before submitting bid. The City of Billings will continue to operate these trucks until new units are delivered and ready to be placed into service. Trades will be released when new units are able to provide 40 hours of continuous service without a breakdown.

TRADE UNIT GENERAL INFORMATION SHEET

STYLE	<u>#0162</u> Rear Load
PACKER MAKE	Labrie Full Eject
PACKER SIZE	31 yard
YEAR/MAKE	2009 Mack LEU613
# OF AXLES	Tandem w/ Tag
VEHICLE ID	1M2AU02C49M002559
CURRENT METER	6,550 Hrs
ENGINE	MACK 325HP
TRANSMISSION	Allison Automatic 4500
REAR AXLE	
FRONT AXLE	FXL20
FRONT TIRES	315/80R22.5 Caps
REAR TIRES	11R22.5 Caps
LIFT AXLE TIRES	255/70R22.5
GENERAL	Cab & Body Fair

Bidder to verify condition of trade units before submitting bid. The City of Billings will continue to operate these trucks until new units are delivered and ready to be placed into service. Trades will be released when new units are able to provide 40 hours of continuous service without a breakdown.

TRADE UNIT GENERAL INFORMATION SHEET

STYLE	<u>#0163</u> Rear Load
PACKER MAKE	Labrie Full Eject
PACKER SIZE	31 yard
YEAR/MAKE	2009 Mack LEU613
# OF AXLES	Tandem w/ Tag
VEHICLE ID	1M2AU02C09M002560
CURRENT METER	8,183 Hrs
ENGINE	MACK 325HP
TRANSMISSION	Allison Automatic 4500
REAR AXLE	
FRONT AXLE	FXL20
FRONT TIRES	315/80R22.5 Caps
REAR TIRES	11R22.5 Caps
LIFT AXLE TIRES	255/70R22.5
GENERAL	Cab & Body Fair

Bidder to verify condition of trade units before submitting bid. The City of Billings will continue to operate these trucks until new units are delivered and ready to be placed into service. Trades will be released when new units are able to provide 40 hours of continuous service without a breakdown.