

**SPECIFICATIONS FOR THE
PURCHASE OF
ONE (1)
AUTOMATED SIDE LOADING
GARBAGE REFUSE COLLECTION TRUCK BODY**

**FOR THE
CITY OF MOUNTAIN IRON
ST. LOUIS COUNTY, MINNESOTA**

**PREPARED BY:
DON KLEINSCHMIDT
DIRECTOR OF PUBLIC WORKS**

CALL FOR BIDS

The City of Mountain Iron is accepting sealed bids for the purchase of one (1) Automated Side Loader Refuse Packer. Bid specifications can be obtained at the Mountain Iron City Hall, 8586 Enterprise Drive South, Mountain Iron, MN 55768. Bids will be accepted until 11:00 a.m., CST, on Monday, March 9th, 2009, at which time they will be opened and read aloud in the office of the Director of Public Works, City Hall, City of Mountain Iron. All bids are to be sealed and clearly marked "Bid on Side Loading Refuse Packer". The City Council reserves the right to accept or reject any and all bids and the right to re-advertise.

Don Kleinschmidt

Director of Public Works

Advertise in the MDN on Sunday, February 22 and Sunday, March 1, 2009.

PROPOSAL
FURNISH, MOUNT & DELIVER ONE (1) AUTOMATED SIDE LOADING
REFUSE COLLECTION TRUCK BODY COMPLETE TO THE CITY OF
MOUNTIAN IRON, MINNESOTA

To the Honorable Mayor and City Council of the City of Mountain Iron, St. Louis County, Minnesota:

I/We the undersigned, being familiar with the local conditions and the specifications on file in the Office of the Director of Public Works in the City of Mountain Iron, hereby propose to furnish, mount and deliver one latest current model Automated Side Loading Refuse Collection Body as set forth in the specifications according to the schedule hereafter set forth: Bid will include delivery to the City of Mountain Iron, 8586 Enterprise Drive South, Mountain Iron MN 55768.

TYPE WRITTEN BID PROPOSAL REQUIRED

BASE BID:

1 -New Current Model \$ _____

TRADE-IN ALLOWANCE:

2000 Int'l. Heil Garbage Compactor \$ _____

NET COST TO CITY \$ _____

ALTERNATE BID #1:

1 .New Current Model (No Trade-In) \$ _____

NET COST TO CITY \$ _____

Accompanying this proposal is a (Bidder's Bond) in the amount of \$_____made payable to the City of Mountain Iron, St Louis County, Minnesota, in the amount of not less than five percent (5%) of the total amount of this bid. Bidder shall honor bid price for a minimum of 60 days past bid opening date.

In submitting this bid, it is understood that the right is reserved by the City Council of the City of Mountain Iron, Minnesota, to reject any or all bids, and to waive informalities in bidding to award a contract as the City Council may deem to the best interest of the City of Mountain Iron.

DELIVERY: _____DAYS AFTER AWARD OF CONTRACT

DATED: _____, 2009

FIRM NAME: _____

OFFICIAL ADDRESS: _____

TELEPHONE NUMBER: _____

OFFICIAL SIGNATURE: _____(Signed)

_____(Typed)

SPECIFICATIONS FOR ONE (1) AUTOMATED SIDE LOADING REFUSE COLLECTION TRUCK BODY MINIMUM REQUIREMENTS (OR EQUAL)

	<u>YES</u>	<u>NO</u>	<u>OFFERED</u>
A. CAPACITY			
1. The packer body shall have a capacity, excluding the receiving hopper, of not less than: 20 cubic yards	<input type="checkbox"/>	<input type="checkbox"/>	_____
2. The hopper shall have a capacity of three (3) cubic yards.	<input type="checkbox"/>	<input type="checkbox"/>	_____
3. The structural integrity of the body shall allow high density loading of up to 700 pounds per cubic yards of normal refuse.	<input type="checkbox"/>	<input type="checkbox"/>	_____
B. BODY DIMENSIONS			
1. The maximum inside body width shall be 91 inches.	<input type="checkbox"/>	<input type="checkbox"/>	_____
2. The maximum outside body width shall be 96 inches.	<input type="checkbox"/>	<input type="checkbox"/>	_____
3. The maximum inside body height shall be: <u>CAPACITY</u> <u>Height</u> 20YD ³ 79 inches	<input type="checkbox"/>	<input type="checkbox"/>	_____
4. The maximum outside body height above chassis shall be: <u>CAPACITY</u> <u>Height</u> 20YD ³ 97 inches	<input type="checkbox"/>	<input type="checkbox"/>	_____
5. The maximum overall length of the body, tailgate and loader shall not exceed the following: <u>CAPACITY</u> <u>Length</u> 20YD ³ 216 Inches	<input type="checkbox"/>	<input type="checkbox"/>	_____
6. The maximum bottom hopper depth shall be 72 inches.	<input type="checkbox"/>	<input type="checkbox"/>	_____
7. The maximum hopper length shall be 47 inches.	<input type="checkbox"/>	<input type="checkbox"/>	_____
C. BODY CONSTRUCTION			
1. The body interior shall have a smooth flat floor without a trough. The sides and roof shall be smooth radius cornered construction. All materials shall be steel unless otherwise specified.	<input type="checkbox"/>	<input type="checkbox"/>	_____

	<u>YES</u>	<u>NO</u>	<u>OFFERED</u>
2. No hydraulic cylinders, valve or other hydraulic components shall come in contact with refuse packed into the body.	<input type="checkbox"/>	<input type="checkbox"/>	_____
3. Body sides & roof shall be of reinforced channel Construction interfacing with the 90° cast steel radius corner mainframe bolsters. Bolsters shall be 6" x 1 3/4" x 7 gauge high tensile formed channel interfacing 90° cast steel radius channels at the major upper & lower connecting points of the mainframe.	<input type="checkbox"/>	<input type="checkbox"/>	_____
4. Floor shall be reinforced with 6" x 1 3/4" x 7 gauge high tensile formed structural channels located so as to withstand continuous operation at maximum imposed loads without harmful deformation or excessive wear.	<input type="checkbox"/>	<input type="checkbox"/>	_____
5. Body roof shall be minimum 12 gauge, hi-tensile sheet fully welded to a full width 6" x 1 3/4" x 7 gauge high tensile formed structural channel roof cross members to contain and dissipate forces equally through the roof structure.	<input type="checkbox"/>	<input type="checkbox"/>	_____
6. Body sides shall be minimum 10 gauge, high tensile sheet, fully welded to the sidewall vertical bolsters.	<input type="checkbox"/>	<input type="checkbox"/>	_____
7. Body floor shall be flat with radiused corners at the sidewalls. Floor shall be a minimum 7-gauge 50,000-PSI minimum yield sheet.	<input type="checkbox"/>	<input type="checkbox"/>	_____
8. A 24" x 64" x 3/16", 100,000 PSI yield sheet overlay shall be welded to the body floor at the transition from the hopper floor to the body floor.	<input type="checkbox"/>	<input type="checkbox"/>	_____
9. Floor longitudinals (long members) shall be 10" at 20#/ft. structural channel. Longitudinals shall provide a minimum 2.7" wide sill base.	<input type="checkbox"/>	<input type="checkbox"/>	_____
10. Floor outer members shall be 1 3/4" x 6" x 7 gauge, 40,000 PSI minimum yield formed channels. Cross members shall be supported adjacent the long members with 6" X 16" x 3/8" gussets to fully support the floor. Longitudinal to longitudinal spanner members shall be 1" x 3" hot rolled steel bars.	<input type="checkbox"/>	<input type="checkbox"/>	_____

		<u>YES</u>	<u>NO</u>	<u>OFFERED</u>
D. HOPPER CONSTRUCTION				
1.	Hopper shall be of flat floor & curved vertical sidewalls. The front of the hopper shall be rounded and free of any corners allowing operation of the lifting devise from conventional left hand or right hand drive chassis. Hopper shall be designed to properly handle thirty (30) gallon through three hundred (300) gallon automated side loader carts and containers.	<input type="checkbox"/>	<input type="checkbox"/>	_____
2.	Hopper longitudinal (long members) shall be an extension of the body 10" @ 20#/ft. structural channels.	<input type="checkbox"/>	<input type="checkbox"/>	_____
3.	Hopper floor-minimum 1/2 inch, ASTM-A36 steel specification.	<input type="checkbox"/>	<input type="checkbox"/>	_____
4.	Hopper side shell shall be a minimum 1/2 inch hot rolled steel plate per ASTM-A36 steel specifications.	<input type="checkbox"/>	<input type="checkbox"/>	_____
5.	The curb side hopper wall shall be equipped with a rubber replaceable flap. The flap shall be constructed of 3 ply reinforced, neoprene rubber.	<input type="checkbox"/>	<input type="checkbox"/>	_____
E. PACKING MECHANISM				
1.	A hydraulically actuated packing platen shall be Suspended between two (2) heavy duty, self aligning hardened steel bushings. The packing platen shall be electrically controlled from within the cab, shall complete a pack sweep cycle, displacing a volume of at least three (3) cubic yards, in a maximum of 14-16 seconds with an empty body, and shall be capable of operating continuously so that refuse containers can be dumped with the platen in any position.	<input type="checkbox"/>	<input type="checkbox"/>	_____
2.	The packing platen shall be fabricated from a minimum 1/2" reinforced steel plate. The swinging platen shall utilize both sides of the assembly to distribute the waste equally to both the left and right sides of the body.	<input type="checkbox"/>	<input type="checkbox"/>	_____
3.	The packing platen shall be activated by two (2) hydraulic cylinders mounted under the body and connected to the packing platen using 1 1/4" thick steel bars. The cylinders shall be 5" diameter bore x 1.5" rod x 43" stroke.	<input type="checkbox"/>	<input type="checkbox"/>	_____

	<u>YES</u>	<u>NO</u>	<u>OFFERED</u>
4. The packing platen and support bushings shall be capable of being greased without entering the hopper. A six (6) fitting grease manifold shall be located under the body so that it is accessible from the ground with the empty body resting on the body props. Two (2) additional grease fittings, accessible from ground level, shall be located at the side of the hopper to grease the upper and lower platen bushings.	<input type="checkbox"/>	<input type="checkbox"/>	_____
5. A rocker switch shall automatically start the packing cycle. The packer shall also be capable of manual control operating in either direction. An electric limit switch and/or pressure switch shall be used to automatically reverse the packer.	<input type="checkbox"/>	<input type="checkbox"/>	_____
F. BUSTLE TAILGATE			
1. The tailgate must be one piece, top hinged and shall open approximately 90°.	<input type="checkbox"/>	<input type="checkbox"/>	_____
2. Tailgate shall be constructed of a minimum 10 gauge, high tensile sheet on rear and side walls.	<input type="checkbox"/>	<input type="checkbox"/>	_____
3. The tailgate shall be reinforced by a minimum 1 3/4" x 6" x 7 gauge, 40,000 PSI minimum yield formed perimeter channel.	<input type="checkbox"/>	<input type="checkbox"/>	_____
4. The tailgate will be secured to the body by two (2) sets of hinges at the roof line.	<input type="checkbox"/>	<input type="checkbox"/>	_____
5. A heavy duty rear door removable positive one piece seal of vinyl tube gasket material will be installed the entire length of the bottom and 14" up the sides of the tailgate to prevent leakage.	<input type="checkbox"/>	<input type="checkbox"/>	_____
6. The tailgate shall be raised and lowered, locked and Unlocked by hydraulically actuating two (2) double acting cylinders with a minimum 3" bore x 18.5" stroke x 1.12" diameter chrome plated rod. The cylinder must retract to lock and raise the tailgate. Cylinder design shall include an orifice fitting to prevent the rapid descent of the tailgate in the event of a hydraulic failure.	<input type="checkbox"/>	<input type="checkbox"/>	_____

		<u>YES</u>	<u>NO</u>	<u>OFFERED</u>
7.	Tailgate props shall be provided. Props may be lowered manually and secured in the raised position by a positive locking device.	<input type="checkbox"/>	<input type="checkbox"/>	_____
G. LIFTING MECHANISM				
1.	The lift arm and guide rail shall be of fabricated tube type construction designed with the proper balance of strength and weight. The lift arm shall be constructed of 3/8" 80,000 PSA minimum yield steel with a 4" wide by 16 1/2" tall section in the shoulder of the lift arm to handle the higher stresses in the area tapering down to a 4" x 7 3/4" section at the lower stress areas near the elbow for reduced weight. The vertical portion of the lift arm shall be of 1/2" 80,000 PSI minimum yield fabricated boxed construction. The lift, grab and dump functions shall use spherical bushings at each pivot point.	<input type="checkbox"/>	<input type="checkbox"/>	_____
2.	The standard lifting mechanism shall be capable of lifting round containers ranging from 60 to 300 gallons.	<input type="checkbox"/>	<input type="checkbox"/>	_____
3.	The lifting mechanism shall be capable of individually controlled motion for extending, grabbing, raising, dumping and returning a container from any position. Through use of a, PLC, the lifting mechanism shall have the ability to combine multiple functions into a single switch for ease of operation.	<input type="checkbox"/>	<input type="checkbox"/>	_____
4.	The lifting mechanism shall perform the following lift cycle functions in eight (8) seconds at idle: a. Grab the container b. Lift the container to the full dump position c. Lower the container to the full down position d. Release the grabbers from the container.	<input type="checkbox"/>	<input type="checkbox"/>	_____
5.	The lifting capacity shall be a minimum of 1,600 pounds at any extension.	<input type="checkbox"/>	<input type="checkbox"/>	_____
6.	The lift shall have a minimum reach capable of a 96" reach from the side of the body to the center line of a 90 gallon container.	<input type="checkbox"/>	<input type="checkbox"/>	_____

		<u>YES</u>	<u>NO</u>	<u>OFFERED</u>
7.	The lifting mechanism shall be powered by four (4) hydraulic cylinders. (Reach - 1.75" bore x 71.23" stroke, Grab 3' bore x 8" stroke, Raise 3" x 16" stroke, Dump - 3" x 8" stroke). The cylinders shall be cushioned in both directions and have spherical bushings in the rod and base ends.	<input type="checkbox"/>	<input type="checkbox"/>	_____
8.	The lifting mechanism shall have changeable grabbers. The grabber arms shall use a flexible, self-tensioning belt assembly such that the gripping force applied to the container will be provided by this flexible surface. A roller will be attached to the end of the grabber arms to assist in grasping the container.	<input type="checkbox"/>	<input type="checkbox"/>	_____
9.	The lifting mechanism shall be within the 96" road limit in the down and stowed position with a 13" ground clearance and shall be equipped with an automatic safety lock to restrain the lift arm when not in operation.	<input type="checkbox"/>	<input type="checkbox"/>	_____
H. BODY HOIST				
1.	The body shall be raised by two (2) 4 1/2" bore x 56" stroke, chrome plated single acting two stage telescopic cylinders. The body shall achieve a dump angle of approximately 30° and be lowered by gravity.	<input type="checkbox"/>	<input type="checkbox"/>	_____
2.	Cylinder design shall include an orifice fitting in the base port, which will prevent the rapid descent of the body in the event of a hydraulic failure.	<input type="checkbox"/>	<input type="checkbox"/>	_____
3.	The hoist cylinders shall be mounted outboard of the chassis frame and trunnioned with a 2 1/2" solid through shaft.	<input type="checkbox"/>	<input type="checkbox"/>	_____
4.	Two (2) 3" structural channel body props shall be provided to hold the empty body in a partially raised position for servicing the unit. The props will have a 2" spanner channel and will be secured under the body by a positive type hook latch.	<input type="checkbox"/>	<input type="checkbox"/>	_____

		<u>YES</u>	<u>NO</u>	<u>OFFERED</u>
I.	HYDRAULICS			
1.	The maximum operating pressure of the system will be 2400 PSI.	<input type="checkbox"/>	<input type="checkbox"/>	_____
2.	The pump shall be a remote mount Denison tandem vane pump with transmission driven, constant duty PTO, and electronic over-speed control. Driveline connecting pump to PTO shall be constructed of heavy duty components rated for continuous service. The combined flow shall be 33 GPM @ 800 RPM. The lift pump section shall flow 16.5 GPM @ 800 RPM. The packer panel pump section Shall flow 16.5 GPM @ 800 RPM. The packer panel Pump flow shall flow up to a maximum 36 GPM @ 1800 RPM. Pump shall comply with specification 219-2076 or equal.	<input type="checkbox"/>	<input type="checkbox"/>	_____
3.	The lift hydraulics shall operate at a working pressure of 2200 PSI.	<input type="checkbox"/>	<input type="checkbox"/>	_____
4.	All hydraulic tubes will be securely clamped to prevent vibration, abrasion, and excessive noise.	<input type="checkbox"/>	<input type="checkbox"/>	_____
5.	All hydraulic hoses shall conform to S.A.E, standards for designed pressure. Bends shall not be less than recommended by S.A.E. standards. Flat spots in hoses will not be acceptable.	<input type="checkbox"/>	<input type="checkbox"/>	_____
6.	The hydraulic oil reservoir shall have a gross capacity of 50 gallons.	<input type="checkbox"/>	<input type="checkbox"/>	_____
	a. The tank shall be complete with a screened fill pipe and cap, filter breather, clean out cover, oil level sight, temperature gauge, and suction line shut-off valve.	<input type="checkbox"/>	<input type="checkbox"/>	_____
	b. 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 trainer in the suction line.	<input type="checkbox"/>	<input type="checkbox"/>	_____
	c. 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 in need of replacement.	<input type="checkbox"/>	<input type="checkbox"/>	_____

		<u>YES</u>	<u>NO</u>	<u>OFFERED</u>
d.	The hydraulic system shall operate at an acceptable temperature without the need for external hydraulic oil cooling devices.	<input type="checkbox"/>	<input type="checkbox"/>	_____
J.	LUBRICATION			
1.	All body hinges, cylinder rod ends, cylinder base trunnions and high cycle pivot shall be supplied with grease fittings.	<input type="checkbox"/>	<input type="checkbox"/>	_____
K.	CONTROLS			
1.	The lift controls shall be electric over hydraulic and shall operate a four (4) section stack valve for the lift functions.	<input type="checkbox"/>	<input type="checkbox"/>	_____
2.	All hydraulic valves shall be solenoid controlled soft-shift electric over hydraulic valves. Pneumatically controlled valves and bang-bang electrical valves are not acceptable	<input type="checkbox"/>	<input type="checkbox"/>	_____
3.	The lift controls shall be self centering type, returning to the neutral position when released.	<input type="checkbox"/>	<input type="checkbox"/>	_____
4.	The body controls shall be electrical over hydraulic and located in the cab convenient to the operator. All valve components are to be easily serviceable without changing entire valve body. In-cab remote rocker switch control kit for lift only on RH door.	<input type="checkbox"/>	<input type="checkbox"/>	_____
L.	ELECTRICAL			
1.	The body functions in-cab control center shall be provided for system functions. All in-cab controls shall be electrical and in easy reach of the operator.	<input type="checkbox"/>	<input type="checkbox"/>	_____
2.	All electrical wiring connectors to be automotive double-seal, with wiring in split convoluted loom. All wiring connections to be soldered with rubber molded covering or crimp type connectors with shrink wrap. Unprotected wiring in any application is unacceptable.	<input type="checkbox"/>	<input type="checkbox"/>	_____
M.	LIGHTING			
1.	Clearance, back up, and directional lights shall be Lexan lens, shock mounted in a protective housing. The entire unit shall be replaceable pop out style. Hopper and Lift work light kit – two lights – in cab switch.	<input type="checkbox"/>	<input type="checkbox"/>	_____

	<u>YES</u>	<u>NO</u>	<u>OFFERED</u>
2. All lights shall be provided in accordance with FMVSS #108, ANSI ZZ245.1-1999 plus mid body turn signals on each side of the body and a center brake light on the rear. Peterson Multi-function (Smart) LED Strobe/Turn Lamps – includes LED light package for entire packer unit.	<input type="checkbox"/>	<input type="checkbox"/>	_____
N. REAR UNDER RIDE GUARD			
1. The body shall be equipped with a rear under ride guard as standard equipment, to meet Federal Motor Carrier Safety Regulation (49CFR393.86). TTMA RP No. 41-02, and SAE J682 OCT. 84. Mud Flaps anti-sail/anti-splash ahead of rear tires. Rear fenders for single rear tires.	<input type="checkbox"/>	<input type="checkbox"/>	_____
2. Rear tow hooks.	<input type="checkbox"/>	<input type="checkbox"/>	_____
0. PAINTING			
1. First Step – Smoothing – All weld slag, splatter, or roughness shall be removed with the appropriate hand tools. No sand, shot or glass air blasting shall be permitted to eliminate contamination and possible damage to bearings or pin surfaces and possible distortion of higher gauge sheet materials used on the body.	<input type="checkbox"/>	<input type="checkbox"/>	_____
2. Second Step – Purgation – A heated pressure wash shall drench the entire body with a silicated alkaline phosphate based precleaner to clean all metal surfaces. This solution shall soak through and break down the oil film and other contaminants found on steel. The solution shall be non-corrosive to metals and shall be environmentally friendly.	<input type="checkbox"/>	<input type="checkbox"/>	_____
3. Third Step – Pre-treatment – An organically accelerated phosphoric acid based pretreatment will be applied to all metal surfaces. This step provides a chemical conversion coating which changes the chemical and physical nature of the surface by providing a surface that the next application (prime) will adhere to.	<input type="checkbox"/>	<input type="checkbox"/>	_____

		<u>YES</u>	<u>NO</u>	<u>OFFERED</u>
4.	Fourth Step – Sealing – The entire body shall be coated with an application of the patented Dry-In-Place Seal from Henkel Surface Technologies. This process shall dramatically improve the surface finish’s resistance to rusting that occurs from general wear and tear, and shall provide improvements to paint adhesion and other related corrosion that occurs over the life of the products. This shall help retain the “as new” appearance of the factory paint surface.	<input type="checkbox"/>	<input type="checkbox"/>	_____
5.	Fifth Step – Primer Coat Paint – The seal coat shall be painted using DuPont Corlar – a high performance, low VOC/HAPS epoxy polyamide primer-sealer. Corlar is a two-component gray primer-sealer that is lead and chromate free. This shall be applied in an amount necessary to achieve a dry film thickness of 1.2 ml.	<input type="checkbox"/>	<input type="checkbox"/>	_____
6.	Sixth Step – Finish Top Coat Paint – A high luster finish coat shall be applied using DuPont Imron 5000 – a high-performance, low VOC (<3.5 lbs/gal RTS) two-component polyurethane enamel. An ample amount shall be applied to achieve a dry film thickness of 2 mil and shall result in a finish of 3.2 mil minimum film thickness. Paint color Dupont Centari 48AH Red.	<input type="checkbox"/>	<input type="checkbox"/>	_____
P. WARRANTY				
1.	Warranty shall be full 100% parts and labor for a period of one (1) full year from the time of delivery to the City of Mountain Iron. Repairs to be done on-site or at the Bidders Repair Facility. Any transport cost to be the responsibility of the Bidder.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Q. MANUALS				
1.	Bidder shall furnish a complete set of Parts, Maintenance and Operator’s Manuals for unit bid.	<input type="checkbox"/>	<input type="checkbox"/>	_____
R. MOUNTING				
1.	Mounted on conventional International 7400SFA 4 x 2 Chassis 232” WB 157” CA must be demonstrated approved equal to be considered.	<input type="checkbox"/>	<input type="checkbox"/>	_____

VENDOR LIST

**FOR SIDE LOADING REFUSE PACKER
ADVERTISED ON FEBRUARY 22 & MARCH 1, 2009
BID OPENING AT 11:00 P.M., CST ON MONDAY, MARCH 9th, 2009**

MAILED/GIVEN TO:

DATE:

1.

2.

3.

4.

5.

6.