

Technical Specification for the procurement of Tipper Truck:

Required Quantity: 1 Unit

S.No.	CRITERIA	DEPARTMENTAL REQUIREMENT	OFFERED SPECIFICATION
1	General	<p>Rear dump type tipping truck, right hand drive with 4X2 drive system with all steel rectangular body with totally flat bottom and sides reinforced to withstand impact of shovel loading, fitted with tailgate.</p> <p>Dump Body (Cargo box) capacity of minimum 7.5 cu.m. With hydraulic tipping gear and standard equipment. Suitable for operation under rough working conditions and adverse climatic condition at operating altitude of 2500 m and ambient temperature.</p>	<p>Make:</p> <p>Model:</p> <p>Country of Origin:</p>
2	Capacity	Gross vehicle weight shall not be less than 16,000. Maximum climbing ability should not be less than 25%. Minimum ground clearance should not be less than 225 mm	
3	Engine	<p>Water cooled diesel engine, developing maximum power output not less than 105 KW and maximum torque should not be less than 470 N-m (engine fully equipped with accessories) at governed RPM</p> <p>for efficient full load operation of truck at operating conditions as stated in the bid documents, shall be equipped with direct electric starting system, heavy duty battery, heavy duty air cleaner & heavy duty fuel filter, fuel tank with water collection Chamber and drain tap.</p>	<p>Make:</p> <p>Model:</p>
4	Emission Standard	The Emission Standard of the offered vehicle, must be in compliance with or superior than the applicable standard as prescribed by 'Nepal Vehicle Mass Emission Standard' which is to be certified by Department of Transport management.	
5	Gauges	Gauges and meters as necessary for efficient operation and maintenance.	
6	Clutch	Heavy duty disc type	
7	Transmission	Manual shift at least Five forward and one reverse	

8	Axles	Front : Steel I section Rear : Heavy duty; Fully floating	
9	Suspension	Front : Heavy duty semi elliptical leaf springs with shock absorber sor equally suitable type Rear: Heavy duty multi leaf springs or equally suitable type	
10	Tires	Front: single Wheel with tyre Rear : dual Wheel with tyre	
11	Steering	Power Assisted/ Power Steering	
12	Brakes	S-Cam air brake with mechanical prking brake and engine exhaust brake	
13	Cab	All steel cab with insulated roof, laminated glass windscreen, wipers, glass windows on doors, proper ventilated system, comfortable seats with separate adjustable seat for driver, sun visor, and suitably located hydraulic tipping gear controls	
14	Chassis and frame	Steel, heavy duty suitable for rough road conditions with toe-hook	
15	Essential Accessories	<ol style="list-style-type: none"> 1. Head light, tail and rear light and turn signals 2. Cabin lights 3. Front and rear two hooks 4. Heavy duty front bumper 5. Spare wheel with tire and tube 6. Hydraulic jack (20 T) with handle 7. Seat belt for driver and co-driver. 8. DVD/MP3 Player. <p>Equipped with all accessories offered in standard model but not limited to the above items.</p>	
16	Instructions	All signs and instructions in the equipment shall be in English	
17	Manuals	One Copy of the Operator's and Owner's instructions, maintenance manual in English shall be supplied with the vehicle.	
18	Tools	A set of tools as required for general maintenance shall be supplied with in a lockable tool box.	
19	Color	Standard Color	

20	Proven performance	1. The machine offered shall be a current model under standard production by the manufacturer for at least one year . 2. The bidder shall provide the manufacturer's data of the performance of the unit to include the fuel consumption, performance curve of the engine and production capacity of the unit.	
21	Warranty	Manufacturer shall provide a minimum of one year warranty after acceptance .	
22	Initial Service	The supplier shall provide with the equipment all the necessary filters and spare parts required for the first services, after the equipment has been commissioned and accepted.	
23	Delivery	The Tipper Truck, RHD 1 unit shall be delivered to: Bagmati Rural Municipality, Office of the Rural Municipal Executive, Jhurjhure, Makawanpur.	

Note:

The major items are indicated by bold and highlighted letters/alphabets/figures in the technical specification. Non-compliance of these major items will result in non-responsiveness of the bid offered.

Prepared By:

Signature:

Name: Babu Ram Kharel

Designation: Senior Divisional Engineer (Mechanical)

Office: Heavy Department of Water resource and Irrigation

Approved By:

Signature

Name:

Designation:

Office:

Cost Estimate for the Purchase of Hydraulic Excavator with Breaker :

The major technical specifications of the Hydraulic Excavator that is intended to be purchased by Bagmati Rural Municipality, Office of the Rural Municipal Executive, Jhurjhure, Makawanpur are as follows:

1. Operating Weight: 20,000 Kg ($\pm 10\%$)
2. Gross Power output at governed RPM: Not less than 152 HP
3. Hydraulic System: Hydraulically operated swing system, travel system and work implement systems equipped with suitable capacity and adequate units of hydraulic cylinder, pumps/ motors
4. Bucket: General-purpose bucket with bolt on teeth SAE rate capacity (nominally heaped) of ($\pm 10\%$) cu.m.
5. Working Range:
Maximum Cutting height: Not less than 9000 mm
Maximum digging depth: Not less than 5800 mm
Maximum digging reach (Ground Level): Not less than 9000 mm
6. Breaker Service Weight: 1700 kg Class ($\pm 20\%$)
7. Essential Accessories: As per stated on Technical Specification
8. Warranty: A minimum of one year warranty after acceptance

Based on the past experiences of procurement, enquiries recently made with suppliers, and budget allocated for the procurement of vehicle, the cost of the Hydraulic Excavator with breaker intended to be purchased having above technical specification is estimated as below:

S. No.	Description	Quantity	Unit Estimated Cost (in NRs.) (Including VAT and other taxes)	Total Estimated Cost (in NRs.) (Including VAT and other taxes)	Remarks
1.	Hydraulic Excavator With Breaker	1 unit	Appx. 1,25,00,000.00 In words: One Crore Twenty Five Lakhs only	Appx. 1,25,00,000.00 In words: One Crore Twenty Five Lakhs only	Estimated cost

Prepared by:

Babu Ram Kharel
Senior Divisional
Engineer (Mechanical)
Department of Water
Resource and Irrigation

Approved by:

Technical Specification of Hydraulic Excavator with Breaker:

Qty: 1 Unit

S.N.	CRITERIA	DEPARTMENTAL REQUIREMENT	OFFERED SPECIFICATION
1.	General	Crawler mounted hydraulic excavator, with heavy duty standard size boom and arm designed specifically for job on rocky, sandy and hilly sites. Suitable for operation under both common and or tough/ adverse climatic condition at operating altitude upto 2500 m and ambient temperature varying between -5° C to 50° C.	Make: Model: Country of Origin:
2.	Engine	Water-cooled, Four stroke, Diesel engine, developing maximum Gross Power not less than 152 HP at governed rpm. Fully equipped with advance technologies and all accessories as necessary to deliver power with superior performance, fuel efficiency, lower emission and smooth operation/ controls to optimize performance of the Excavator machine applications. The engine system shall also be equipped with heavy duty radiator/ cooling system, cold starting system, heavy-duty air cleaner, heavy-duty fuel filter system, direct electric 24 volt starting system heavy duty battery.	Make: Model:
3.	Gauges	Gauges and or meters as necessary for efficient operation, maintenance and safety.	
4.	Hydraulic system	Hydraulically operated swing system, travel system and work implement systems equipped with suitable capacity and adequate units of hydraulic cylinder, pumps/ motors, reservoir, sensors and all other necessary devices for efficient operations/ control and safety of hydraulic system for a maximum operating cycles without overheating.	

5.	Under carriage	<p>Track type undercarriage, heavy duty with track adjustment, sprocket, track rollers and idlers, sealed and lubricated.</p> <p>Track shoe: triple grouser type and</p> <p>Track shoe width: Approx 600 mm</p>	
6.	Working Range/ Performance	<p>Maximum Cutting height : Not less than 9000 mm</p> <p>Maximum digging depth : Not less than 5800 mm</p> <p>Maximum digging reach (Ground Level): Not less than 9000 mm</p>	
7.	Bucket	<p>General-purpose bucket with bolt on teeth SAE rate capacity (nominally heaped) of (1±10%) cu.m.</p>	
8.	Operating Weight	20,000 kg (±10 %)	
9.	Swing Speed	Not less than 12.5 RPM	
10.	Cab	<p>The cab shall be completely enclosed and equipped with tinted safety glass to provide all-round visibility.</p> <p>Ergonomically designed adjustable operator seat and joystick control console system.</p>	
11.	Breaker	<p>The excavator shall have all the arrangements for the attachment and operation of hydraulic Breaker.</p> <p><u>Hydraulic Breaker :</u></p> <p>Breaker Service Weight: 1700 kg Class (±20%)</p> <p>Working tool Diameter: Approx. 120 mm</p> <p>Useful tool length : Not less than 350 mm</p> <p>(The breaker should be compatible with supplied hydraulic excavator and be supplied under the same contract package along with hydraulic excavator)</p>	

12.	Essential Accessories	<ol style="list-style-type: none"> 1. Service hour meter 2. Electric windscreen wipers 3. Heater and defroster 4. Working lights 5. Door locks 6. Travel Alarm 7. Air conditioning <p>To be equipped with all accessories offered in standard model but not limited to the above items.</p>	
13.	Instructions	All signs and instructions in the equipment shall be in English.	
14.	Manuals	<ol style="list-style-type: none"> 1. One copy of the Operator's and Owner's Instructions and Maintenance manual in English with each equipment 2. Five copies of following manuals in English shall be supplied: <ol style="list-style-type: none"> a) Spare parts catalogue b) Comprehensive workshop manual 	
15.	Proven performance	<ol style="list-style-type: none"> 1. The machine offered shall be a current model under standard production by the manufacturer for at least one year. 2. The bidder shall provide the manufacturer's data of the performance of the unit to include the fuel consumption, performance curve of the engine and production capacity of the unit. 	
16.	Tools	A set of tools as required for general maintenance shall be supplied with in a lockable tool box for each unit.	
17.	Warranty	Manufacturer shall provide a minimum of one year warranty after Acceptance by the office.	
18.	Initial Service	The supplier shall provide with the equipment all the necessary filters, lubricants and spare parts required for the first three services, after the equipment has been commissioned and accepted.	