

**SCHEDULE OF QUANTITY**

<b>Name of work: R/M of LWSS Matlour Khdharghat in G.P. Dumehar tehsil sunni(SH:- supplying &amp; erection of submersible Pumping Machinery).</b>	<b>Estimated Amount Rs. 193252/-Earnest Money Rs :- 3900/- Time Limit:- One Month</b>
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S.No	Description of items.	Quantity.		Rates.		Unit.	Amount.
				In fig.	In Words.		
1	Providing 3 Phase submersible pump set of reputed and approved make i.e KSB Model MRXG Conforming to latest BIS specification i.e 8304.The pump set shall be fixed with free flow impellers of suitable flow as per BIS 8631-1976 with upto date amendements for lifting raw water,lubricated bush bearing of suitable alloye and shaft protection sleeves.The pump shall be fixed/coupled to submersible squired cage motor 10HP conforming to BIS 9283-1995 with upto date amendment corresponding to pump fitted with water lubricated bush,bearing and shaft protection sleeves arrangments to counter balance the thrust caused due to water coulumn in Rising main and having cooling arrangment.The pump set should the water level guard erection clamps,cable clips and capable of following requirement:-	1	set			Per set	
(i)	Discharge (Q) 3.63 LPS						
	(a) LWL in sump well(h) 901 Meters						
	(b) Suction lift 3 Meters						
	© Static head 100 Meters						
(ii)	Rising main						
	(a) Length 220 Meters						
	(b) Dia 65mm						
(iii)	Pumping hours 12 hours						
(iv)	Altitude of installation above MSL 670 Meters						
(v)	Characteristics of water						
	(a) Temperature oC						
	(b) Abient Temperature oC						
	© Turbidity Clear water JTU						
	(d) Alkalanity Mg/CA CO3						
	(e) Size of the solids Mm						
	(f) other 2 set each for 50% discharge						
2	Providing MS sheet,steel fabricated floor mounted closed(Almirah type) switch board including angle iron post of suitable height and size ISA 40x40x6mm duly painted with steel sheet of 16 gauge comprising capable of mounting the following accessories with all internal connections.	1	No			Each	

3	Providing double flanged(Swing type) cast sttel Reflux valve of Leader/Bhel/Kirloskar/Kilburn/GLED/Fouress make 65mm dia having bye pass arrangement line of pump and capable of with standing normal pressure as per BS 1868(P.1) with upto date ammendments	1	No			Each	
4	Providing and Laying copper PVC insulated armoured power cable(one cable carrying all the three phases) of suitable size and capacity to and all other electrical equipments as per IS 1554(P-1)1988 or latest with upto date ammendments of Siemens/Gloster/JEC/ICC/EICO National/Grandlay make including all other accessores such as thibbles,flexible.pipe solder,nuts and bolts cable glands etc laid in pipe or trenches under floor.	200	Mtr			Per Merter	
5	Laying and Jointing in trenches GMS(M.G),Tube fitting (earth work in trenches to be measured and paid for separately 65mm dia	190	Rmt			Per Rmt.	
<b>(Rupees</b>						<b>TOTAL</b>	
<b>TERMS AND CONDITIONS.</b>							
1	The Pumping machinery, Rising main and the Pump houses will be handed over to the contractor on as is where is basis in running condition.The contractor will hand over the scheme to the deptt after expiry of the contract in smooth running condition, failing, which penalty at double the amount of repair cost to bring the scheme in running condition shall be recovered from the contractor from any amount /payment due to him from the department.						
2	The agreement will remain operative for 3 years from the date of commencing of O&M , however, the contractual period can be increased/decreased keeping in view the performance of the contractor/agency with mutual consent.						
3	The contractor will be responsible for operation and maintenance including watch and ward of Pumping machinery, Rising main and pump houses of the scheme during the contract period.						
4	The contractor shall be responsible for maintaining sanitary conditions in and around Pump house to avoid pollution of water besides adequate locking arrangement to avoid entry of unscrupulous elements/ stray animals etc to avoid any untoward incidents.						
5	Contractor shall not carry out any ammendment or modifications to any accessories or equipments of scheme/ its components without approval of Engineer-In-Charge in writing.						
6	Contractor will ensure the supply of potable water under the scheme to the beneficiaries as per department norms. With at least 8 hours pumping or more as per direction of Engineer in Charge.						
7	The Pumping machinery, Rising main and Pump houses will be well maintained by the contractor including its periodic cleaning/ disinfection as per direction/instructions of Engineer-in-charge to his satisfaction.						
8	No T& P shall be provided by the department for O&M purposes . The contractor shall have to arrange himself adequate tools and plants required for smooth O&M of pumping Machinery strictly as per Manufacturer's/ vendors O&M Manual.						
9	The O & M staff of contractor/firm shall have to maintain log sheets of P/Machinery on proforma provided by the department and should be submitted to Engineer-in-Charge monthly.						
10	The contractor will not be allowed to sublet the work after award of work, failing which, the Agreement shall be terminated immediately and security deposit will be forfeited including black listing of the firm/contractor.						

11	The contract can be terminated by giving one month notice by the Department, if the firm is unable to operate and maintain the plant/scheme as per satisfaction of Engineer-in-Charge, penalty as inconvenience charges @ 2% of amount put to tender shall be deducted from security or any payment due to the contractor and the scheme shall be operated & maintained at the risk & cost of the firm / contractor / O&M agency concerned.
12	The Contractor shall depute the staff per shift for O&M of pumping machinery and allied accessories at each stage strictly including distribution of water and proper duty roster shall be evolved and got approved from the Engineer-In-Charge & same should be displayed at pump house at nodal points under the guidance/ instructions of Engineer-In-Charge.
13	The firm / contractor must comply with prevailing EPF rules and maintain register showing number of the employees engaged on the scheme as per norms.
14	The Contractor shall be responsible for workmen compensation of workers deputed at site of work for any casualty and he should abide by the labour laws of the State and shall be solely responsible for its violation besides adhering to safety norms/Environment protection laws.
15	The contractor /firm will engage professionals who have requisite qualifications /sufficient experience in O&M of pumping machinery and should be able to understand the advice of the Department either in English or Hindi. The firm will submit Name & Qualification of such professionals,so deployed to the office of the Engineer -in- Charge.
16	All the materials to be used for repair work or replaced shall confirm to the relevant I.S.I.specifications of approved brand /make and Manufacturerer's approved vendors and shall produce the bills /cash memo in support of genuineness of the same.
17	Notwithstanding any thing mentioned above, if any dispute arrises regarding repair/ replacement of parts/ equipment of scheme etc.decision of the Assistant Engineer will be final and binding on the contractor.
18	All valves such as sluice valve, reflux valve, foot valve, non return valves fixed on the scheme will have to be kept operative without leakages and their oiling , greasing etc. be ensured from time to time.
19	If the scheme remains out of order continuously for more than two days and fifteen days in a year due to contractor's negligence, the penalty @ Rs. 5000 per day will be charged from the contractor. Electrical or Mechanical fault will be made good with in 24 hours. The leakage/breakage in Rising main shall be repaired immediately as and when observed/brought to the notice of the contractor. In case scheme is nonfunctional due to nonavailability of power, the matter should be brought to the knowledge of Engineer-In-Charge immediately.
20	Security, GST, labour cess and other deduction will be made as per prevailing rules time to time.
21	Nothing will be paid for the period during which the scheme remains out of the order due to fault of the contractor. In the event of the contractor not providing stipulated service in the contract or in the extent of any damages occuring or being caused by him or in the event of any default or failure in complying with any of the terms and conditions, the Engineer-in-Charge shall with or without prejudice to any other remedies available to it under any law for the time being inforce in the state shall.
	a) Terminate the contract after 15 days notice. Or/and
	b) Recover amount of loss caused by damage,failure or default as may be determined by the Engineer-In-Charge. Or/and
	c) impose penalty not exceeding 10 % value of the contract. Or/and
	d) Forfeit the security / performance guarantee.
22	Energy charges required for operation of scheme (running of pumping machinery and lighting arrangement in the pump pouse) shall be borne by the deptt and paid directly to HPSEB .The contractor shall not use the. the electricity for any other purpose except for the bonafide use of the running /repair of the scheme.
23	The contractor/ firm shall submit copies of logbook at the time of submission of bills and no payment shall be made without production of above documents/records.
	<b>Payment schedule will be as under:-</b>

24	The Payment shall be made monthly /quarterly on the basis of daily bulk meter readings, daily Energymeter readings and daily hour run meter readings which shall be installed by the contractor as mentioned in Item No. (a) & (b) and will be submitted by the contractor, otherwise no payment will be made to the contractor or and deductions up to 10 % per each loss of reading may be made by the Engineer -in- charge.
25	The payment shall only be made electronically through NEFT/RTGS directly crediting the amount in the bank account of the contractor/firm and the following information be supplied to Executive Engineer invariably.
	(i) Bank account No .....
	(ii) Name of Bank and Branch .....
	(iii) IFSC code of Bank Branch .....
26	The site shall be inspected by the contractor/firms before submitting their offer complete in all respect. In case of any defect/ short-coming the same shall be brought to the notice of Engineer-In-Charge and suggest remedial measure to rectify the same, if required. The decision of the Engineer-In-Charge shall be final and binding in this regard.
27	Release of security and final payment shall be subject to satisfactory handing over the pumping Machinery as well as entire scheme in working condition to the Engineer-In-Charge.
28	The arrangement of lights inside or outside of pump house and its maintenance has to be ensured by the contractor by providing lamp, tubes and CFL alongwith fixtures of requisite voltage / wattage of approved brands which are energy efficient and environment friendly. The disposal of fused lamps /CFL etc. shall done scientifically..
29	The installation of pumping machinery above 100 HP shall be inspected by the technical representative of the manufacturers, of rank not less than that of a service engineer, at the work site and inspection certificate shall be supplied to the Engineer-in-charge. This inspection shall be in addition test report and nothing extra shall be paid on this account.
30	The wiring and installation of electric equipment shall be as per HPSEB rules and regulations and subjected to the approval of the Chief Electrical Inspector and or his authorised officer. Any defect pointed out shall be rectified by the firm without any extra cost. The wiring and installation of all electric equipment, shall be done by a licensed contractor of approved class of HPSEB and test report shall be got accepted from the HPSEB authorities on their approved format of (form D) for release of power connection by the firm with extra cost.
31	The temporary electrical connection, if required during installation shall be arranged by the firm at its own cost and energy charges shall also be paid by the firm to the HPSEB.
32	Prices of all the items shall be FOR site of work inclusive of all leads and lifts and shall be inclusive of all charges of transportation, insurance , packing, Taxes and duties such as sales tax, excise duty and local taxes extra.
33	The rates shall be quoted only on the format of schedule of quantities which is attached with the tender document giving all specified data so desired therein.
34	The rates offered for the specified makes in the schedule of quantities only shall be considered. Rates quoted for part and or non specified makes shall lead to rejection of the tender.
35	All the the equipment/material shall confirm to the relevant IS specifications wherever applicable, and in its absence to any accepted National/Internationals standards.
36	The general specifications of work shall conform to Punjab P.W.D/HPPWD. Specifications per direction of the Engineer-in-charge.

37	All the equipment shall be guaranteed against any manufacturing defect including metallurgy and its performance for a period of 12(tweleve) months from the date of commissioning/15(Fifteen) months from the date of supply which ever is earlier. Any defect if noticed within the stipulated period shall be rectified by the firm at its own cost within 15 days of bringing the same to its notice. The guarantee clause shall be substantiated by a gaurantee bond of a Nationalised Bank for an amount equal to the cost of .pumping and electric equipment (accessories included) pledged in the name of the Executive Engineer incharge at the time of applying for refund of security deposits. <u>The guarantee bond shall be released after the expiry of the guarantee period.</u>
38	The installed pumping machinery and other allied accessories shall be tested daily for stipuated pumping hours in the NIT for a period of seven days without extra cost. However the cost of the electricity and water shall be borne by the department.
39	During the guarantee period efficiency of the pumping and electric equipment should not vary beyond the range of (+/-)2.5%. If during guarantee period, the efficiency falls beyond 2.5% to a maximum of 5%, 1% cost of the pump set for 1% fall of the efficiency shall be deducted. In case of fall of efficiency beyond 5% the pump shall be rejected and cost of the effected pump set recovered,from the pledged Bank guarantee & or from the security deposit as the case may be.
40	80% ( Eighty percent) payment of the cost of pumping machinery and equipment less 10% security and other statutory recovery shall be made after receipt of complete pumping mechniry i.e.Pump and Motor received together at site of work in good condition. The balance 20% cost after deduction of the security and other recoveries shall be released after successful and satisfactory installation testing of the entire equipment. Ten percent security deposit shall be released as stipulated in the agreement.

Executive Engineer  
Jal Shakti Division Suni