

\* SCHEDULE OF QUANTITY \*

Estimated cost:- Rs. 270000.00

Name of work:-

Annual repair and maintenance of lift water supply scheme  
Kosri Thachru in Tehsil Jaisinghpur District Kangra HP  
(SH)Replacement of pumping machinery of stage 2nd set No.-  
II.

Earnest money:- Rs. 5400.00

Time :- Six months

Sr. No.	Description of items.	Quantity	Rate in		Unit	Amount.
			Figure	Words.		
1	Providing horizontal spindle, horizontal/radial split casing and suction (backpull out arrangement) single/double/multistage centrifugal pumps or combination of pumps in series/parallel of recommended make such as Mather and Platt/KSB/Beacon weir/Kirloskar/BE as per BIS-1520-1980 with upto date ammendments read with IS:9137-1978 or latest edition suitable for lifting water for under mentioned characteristics with bronze, impeller/priming funnels, casing ring and shaft sleeves of bronze, shaft of steel grade with cast iron casing coupled directly through a flexible coupling on a common C.I./cast steel base plate (base plate to be from the manufacturer of pumping unit only) to slipping/squirrel cage screen protected drip proof induction motor/motors of standard make such as Kirloskar/BHEL/Crompton/NGEF/GEC/Siemens/Jyoti and suitable for operation on 415 (+/-) 5%volts, 50 cycles/second, 3 phase AC electric supply. The power of electric motor/motors should be atleast +10% in excess of the maximum power required by the pump/pumps in the operation range of (+) 10% and (-) 25% of the duty point head. The motor/motors as per IS:325-1978 with upto date ammendments read with IS:900-1972. It should include the cost of bearings, nuts, bolts and painting etc. and should meet the following requirements:-	a) Pump 1  sets of 60 horse power  b) Motor  c) Coupling  d) Base			Per  horse  power	
i)	Location of site :	The site is located at a distance of 40 Kms from Maranda railway station on Palampur Jaisinghpur Road. (Site is located at 145 KM from Pathankot, & 500 mtres by head load.				
ii)	The altitude of place in which pumping set is intended to work:	Altitude of place is 700 m above MSL the motor is intended.				
iii)	Type of current.	AC three phase with frequency of 50 cycle/second.				
iv)	Rated voltage :	415V + 10% -( 25%)				
v)	Type of water : (Raw/Treated).	clear water from collection tank.				
vi)	Charatristics of water	a) Temperature - 20°C b) Turbidity NTU PPM c) PH 7.4 d) Hardness Mg./litre(as CaCO.)				

	e) Total solids	Mg./litre
	f) Others	
vii) Depth of tank/well.	3 metre	
viii) L.W.L. in tank/Sump well.	-metre	
ix) Centre line level of pump.	800.85 metre	
x) Suction head.	+ve suction	
xi) Discharge level of highest point.	1070.44 metre	
xii) Nos. of pump required.	1 Number pumps	
xiii) Capacity.	7.07 LPS for each pump.	
xiv) Static head in meters.	269.59 metre	
xv) Total head in meter.	309.85 metre	
xvi) Length of rising main.	1845 metre	
xvii) Dia of Rising main. )	100 mm dia G.I pipe.	
xviii) Pumping hours per day. )	16 hours continuously for 7 days	
xix) Limits of pump operation.	(-) 25% to (+) 10% of total head at duty point.	
xx) HP of motor/drive unit.	Required BHP of pump at (+) 10% & (-) 25% of total or BHP with following margins/multiplying factor at duty point, whichever is higher.	
	a) Upto 2 H.P. = 1.50	d) 10 to 20 H.P. = 1.2 H.P.
	b) 2 to 5 H.P. = 1.40	e) 20 to 100 HP = 1.15 H.P.
	c) 5 to 10 H.P.= 1.30	f) Above 100 HP = 1.10 H.P.
xxi) R.P.M. of pump (2900/1450 RPM)	2955 RPM	
xxii) Test Run. )	16 hours contiinueously for 7 days.	
xxiii) NPSH available. )	metre	

**Note:- Terms and condition attached separately.**

- 1 The firm shall forward a copy of supply order/indent placed by it for the supply of pumps and motors on the manufactures/ authorized dealers of the pumps and motors to the consignee within 30 days after the issue of the letter of intent/ award by the Engineer-in-Charge. The copy of the supply order/indent to the consignee should also accompany the dealership certificate of the dealer for the pumping machinery in case the pumps and motors are arranged from the authorized dealers.
- 2 The firm shall arrange dispatch of offered pumps and motors to the consignee direct from the manufacturers/ their authorized dealers of the pumping machinery for which the supply order/indent has been placed by the firm. The packing slip should indicate the details of materials the package and material of construction of pumps and motors.
- 3 The shop test for pumps and motors shall be carried out at manufactures works in the presence of representative of the department as per IS 325-1978. The test performance certificate of the pumping machinery shall be arranged by the firm from the manufactures and get it approved from the Engineer-in-charge before actual dispatch of the pumping machinery.
- 4 The firm shall supply the recommended list of spares and quantities required for normal working of the pumping machinery (Two years) from the manufactures of the aforesaid equipment at the time of quoting rates and shall quote items rate for the same also.
- 5 The firm shall supply the manufacturer's manual for the operation and maintenance of the pumping equipment.
- 6 The firm shall arrange operation and maintenance training to the operating staff for the pumping machinery (without extra cost ) for a period of seven days i.e. during the testing period.
- 7 The characteristics curves of the pumping equipment shall be supplied with the offer, otherwise, the tender shall be rejected.
- 8 The firm shall supply layout drawing in respect of various components, such as suction pipes, valves, cable trenches, control panel etc. from the foot valve location of the common header which shall extend up to 5 meters from the outer walls of the pump house towards rising main. The details of foundations required for various components shall also be supplied by the firm within 30 days of the letter of intent/ award.
- 9 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 to the test report and nothing extra shall be paid on this account.
- 10 All the civil works shall be constructed by the department.  
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 authorized officer. Any defect pointed out shall be rectified by the firm without any extra cost. The wiring and installation of all electrical equipment shall be done by a licensed contractor of approved class of HPSEB authorities on their approved format (Form D) for release of power connection by the firm without extra cost.
- 11
- 12 The temporary electric connection, if required during installation shall be arranged by the firm at its own cost and energy charges shall also be paid directly by the firm to the HPSEB.
- 13 Prices of all items shall be F.O.R. site of work inclusive of all leads and shall be inclusive of all charges of transportation, insurance, packing, taxes and duties such as sales tax, excise duty and local taxes etc.
- 14 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.
- 15 The rates offered for the specified marks in the schedule of quantities only shall be considered. Rates quoted for the part or non specified marks shall lead to rejection of the tender.
- 16 The location of site can be ascertained by the concerned Assistant Engineer & the rates quoted by the firm shall be inclusive of all mechanical and manual transport within all leads and lifts to the site of work.
- 17 All the equipment/material shall confirm to the relevant BIS specifications wherever applicable and in its absence to any accepted National/International standards.
- 18 The general specifications of the work shall conform to HP. PWD/Punjab PWD specifications as per direction to the Engineer-in-charge.
- 19 The validity of the tender shall not be less than 120 days, otherwise, the tender shall be summarily rejected.  
All the equipment shall be guaranteed against any manufacturing defect including metallurgy and its performance for a period 12 (twelve) 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 with 15 days of bringing the same to its notice. The guarantee clause shall be substantiated by a guarantee bond of a nationalized bank for an amount equal to the cost of pumping and electrical equipment (accessories included) pledged in the name of the Executive Engineer in charge at the time of applying for refund of security deposits. The guarantee bond shall be released after the expiry of the guarantee period.
- 20  
The installed pumping machinery and other allied accessories shall be tested daily for stipulated pumping hours in the N.I.T. for a period of seven days without extra cost. However, the cost of electricity and water shall be borne by the department. During the guarantee period efficiency of the pumping and the 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 set shall be rejected and cost of the effected pump set recovered from the pledged bank guarantee and or from the security deposit as the case may be.
- 21  
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 machinery i.e. pump and motors 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.
- 22  
90% (Ninety percent) installation charges shall be released after satisfactory installation of all the pumping and electrical equipment. Remaining 10 % of installation charges shall be released after testing of the entire equipment.
- 23
- 24 In absence of performance curve, no offer will be entertained.
- 25 The firm agreed to complete the work within 6 months.
- 26 The firm agreed to supply a copy of order placed on the manufacturer to the divisional officer.
- 27 The Executive Engineer will satisfy himself regarding model/make and characteristics of pump set before releasing any payment. The firm shall submit a copy of test report along with supplies and Executive Engineer on scrutiny of test report only, shall release any payment.
- 28 The pump set and all accessories shall carry a warrantee of 12 months from date of successful commissioning.
- 29 The item of earthling includes all civil works required.
- 30 The firm agreed to pay all taxes applicable including GST (Goods Service Tax) and nothing shall be claimed extra.

**\* SCHEDULE OF QUANTITY \***

Estimated cost:- Rs. 405000.00

Name of work:-

Annual repair and maintenance of lift water supply scheme  
Ashapuri in Tehsil Jaisinghpur District Kangra HP  
(SH)Replacement of pumping machinery of stage 2<sup>nd</sup> set No.-II.

Earnest money:- Rs. 8100.00

Time :- Six months

Sr. No.	Description of items.	Quantity	Rate in		Unit	Amount.
			Figure	Words.		
1	Providing horizontal spindle, horizontal/radial split casing and suction (backpull out arrangement) single/double/multistage centrifugal pumps or combination of pumps in series/parallel of recommended make such as Mather and Platt/KSB/Beacon weir/Kirloskar/BE as per BIS-1520-1980 with upto date ammendments read with IS:9137-1978 or latest edition suitable for lifting water for under mentioned characteristics with bronze, impeller/priming funnels, casing ring and shaft sleeves of bronze, shaft of steel grade with cast iron casing coupled directly through a flexible coupling on a common C.I./cast steel base plate (base plate to be from the manufacturer of pumping unit only) to slipping/squirrel cage screen protected drip proof induction motor/motors of standard make such as Kirloskar/BHEL/Crompton/NGEF/GEC/Siemens/Jyoti and suitable for operation on 415 (+/-) 5%volts, 50 cycles/second, 3 phase AC electric supply. The power of electric motor/motors should be atleast +10% in excess of the maximum power required by the pump/pumps in the operation range of (+) 10% and (-) 25% of the duty point head. The motor/motors as per IS:325-1978 with upto date ammendments read with IS:900-1972. It should include the cost of bearings, nuts, bolts and painting etc. and should meet the following requirements:-	a) Pump 1 sets of 90 horse power  b) Motor  c) Coupling  d) Base Plate.			Per horse power	
	i) Location of site :		The site is located at a distance of 25 Kms from Maranda railway station on Palampur Thural Harsi Road. (Site is located			
	ii) The altitude of place in which pumping set is intended to work:		Altitude of place is 700 m above MSL the motor is intended.			
	iii) Type of current.		AC three phase with frequency of 50 cycle/second.			
	iv) Rated voltage :		415V + 10% -( 25%)			
	v) Type of water : (Raw/Treated).		clear water from collection tank.			
	vi) Chararistics of water		a) Temperature - 20°C b) Turbidity NTU PPM c) PH 7.4 d) Hardness Mg./litre(as CaCO.) e) Total solids Mg./litre f) Others			
	vii) Depth of tank/well.		3 metre			
	viii) L.W.L. in tank/Sump well.		-metre			
	ix) Centre line level of pump.		303 metre			
	x) Suction head.		Negative suction			
	xi) Discharge level of highest point.		618.89 metre			
	xii) Nos. of pump required.		1 Number pumps			
	xiii) Capacity.		10.98 LPS for each pump.			
	xiv) Static head in meters.		315.89 metre			
	xv) Total head in meter.		347.67 metre			
	xvi) Length of rising main.		1150 metre			
	xvii) Dia of Rising main. )		125 mm dia G.I pipe.			
	xviii) Pumping hours per day. )		16 hours continueously for 7 days			
	xix) Limits of pump operation.		(-) 25% to (+) 10% of total head at duty point.			
	xx) HP of motor/drive unit.		Required BHP of pump at (+) 10% & (-) 25% of total or BHP with following margins/multiplying factor at duty point,whichever a) Upto 2 H.P. = 1.50 d) 10 to 20 H.P. = 1.2 H.P. b) 2 to 5 H.P. = 1.40 e) 20 to 100 HP = 1.15 H.P.  c) 5 to 10 H.P.= 1.30 f) Above 100 HP = 1.10 H.P.			
	xxi) R.P.M. of pump (2900/1450 RPM)		2955 RPM			

xxii Test Run. 16 hours continuously for 7 days.  
)  
xxiii NPSH available. metre  
)

**Note:- Terms and condition attached separately.**

- 1 The firm shall forward a copy of supply order/indent placed by it for the supply of pumps and motors on the manufactures/ authorized dealers of the pumps and motors to the consignee within 30 days after the issue of the letter of intent/ award by the Engineer-in-Charge. The copy of the supply order/indent to the consignee should also accompany the dealership certificate of the dealer for the pumping machinery in case the pumps and motors are arranged from the authorized dealers.
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- 3 The shop test for pumps and motors shall be carried out at manufactures works in the presence of representative of the department as per IS 325-1978. The test performance certificate of the pumping machinery shall be arranged by the firm from the manufactures and get it approved from the Engineer-in-charge before actual dispatch of the pumping machinery.
- 4 The firm shall supply the recommended list of spares and quantities required for normal working of the pumping machinery (Two years) from the manufactures of the aforesaid equipment at the time of quoting rates and shall quote items rate for the same also.
- 5 The firm shall supply the manufacturer's manual for the operation and maintenance of the pumping equipment.
- 6 The firm shall arrange operation and maintenance training to the operating staff for the pumping machinery (without extra cost ) for a period of seven days i.e. during the testing period.
- 7 The characteristics curves of the pumping equipment shall be supplied with the offer, otherwise, the tender shall be rejected.
- 8 The firm shall supply layout drawing in respect of various components, such as suction pipes, valves, cable trenches, control panel etc. from the foot valve location of the common header which shall extend up to 5 meters from the outer walls of the pump house towards rising main. The details of foundations required for various components shall also be supplied by the firm within 30 days of the letter of intent/ award.
- 9 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 to the test report and nothing extra shall be paid on this account.
- 10 All the civil works shall be constructed by the department.
- 11 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 authorized officer. Any defect pointed out shall be
- 12 The temporary electric connection, if required during installation shall be arranged by the firm at its own cost and energy charges shall also be paid directly by the firm to the HPSEB.
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- 17 All the equipment/material shall conform to the relevant BIS specifications wherever applicable and in its absence to any accepted National/International standards.
- 18 The general specifications of the work shall conform to HP. PWD/Punjab PWD specifications as per direction to the Engineer-in-charge.
- 19 The validity of the tender shall not be less than 120 days, otherwise, the tender shall be summarily rejected.
- 20 All the equipment shall be guaranteed against any manufacturing defect including metallurgy and its performance for a period 12 (twelve) months from the date of commissioning/ 15 (fifteen) months from the date of supply
- 21 The installed pumping machinery and other allied accessories shall be tested daily for stipulated pumping hours in the N.I.T. for a period of seven days without extra cost. However, the cost of electricity and water shall be
- 22 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 machinery i.e. pump and motors received
- 23 90% (Ninety percent) installation charges shall be released after satisfactory installation of all the pumping and electrical equipment. Remaining 10 % of installation charges shall be released after testing of the entire
- 24 In absence of performance curve, no offer will be entertained.
- 25 The firm agreed to complete the work within 6 months.
- 26 The firm agreed to supply a copy of order placed on the manufacturer to the divisional officer.
- 27 The Executive Engineer will satisfy himself regarding model/make and characteristics of pump set before releasing any payment. The firm shall submit a copy of test report along with supplies and Executive Engineer on
- 28 The pump set and all accessories shall carry a warrantee of 12 months from date of successful commissioning.
- 29 The item of earthing includes all civil works required.
- 30 The firm agreed to pay all taxes applicable including GST (Goods Service Tax) and nothing shall be claimed extra.

**\* SCHEDULE OF QUANTITY \***

Estimated cost:- F 426217.00

s

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Name of work:-

Construction of flow irrigation scheme Garuhl kuhl in Gram Panchayat Banuri, Holta, Banuri (SH)Construction of reinforcement cement

Earnest money:-

F 8530.00

s

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Time :-

Three months

Sr. No	Description of items.	Qty.	Rate in Figure	Words.	Unit	Amount.
1	Excavation in drain and channels etc. in all kinds of soil such as pick work,jumper work,blasting work soft and hard rock and saturated soil including dressing of sides and beds and disposing of	30.30			Per cubic metre	
2	Providing and laying cement concrete 1:4:8 (One cement is to four sand is to eight graded stone aggregate 40 milimetre nominal size) and curing complete excluding the cost of form work in foundation	13.50			Per cubic metre	
3	Providing and laying cement concrete 1:2:4 (One cement is to two sand is to four graded stone aggregate 20 milimetre nominal size) and curing complete excluding the cost of form work and					
(a)	Foundation,footings bases of column and the like mass concrete within all leads and lifts as per the direction of Engineer-in-charge.	20.00			Per cubic metre	
(b)	Walls (any thickness) butt not less then 0.10 metre thickness) attached pillasters, buttresses, plinth and string courses etc. from top of foundation up to floor two level with in all leads and lifts as per	25.00			Per cubic metre	
4	Providing form work with steel plates 3.15 milimetre thick welded with angle iron in frame 30*30*5 milimetre so as to give a fair finish including centring,shuttering,strutting and propping etc. with wooden					
a)	Vertical surfaces such as walls(any thickness)partitions walls and the like including attached pillasters,buttreses plinth string courses and the like within all leads and lifts as per the direction of Engineer-	450.00			Per square metre	
5	Providing and laying mild steel/tor steel reinforcement for reinforced cement concrete work including bending binding and placing in position complete upto floor two level within all leads and lifts as per	1800.00			Per Killo-gramme	
6	Providing & laying P.V.C. water stop seal 230x6 mm thick 20 metre center to center of expansion cum construction joint within all leads and lifts as per the direction of Engineer-in-charge.	14.00			Per running metre	
	<u>Terms and conditions:-</u>					
a)	Cement will be issued @ Rs.303/-per bag from Departmental Divisional store Differpat.					
b)	Steel will be issued @ Rs.4800/-per quintal to the contractor from Divisional store.					
c)	Crushed stone aggregate and mechanically mixture concrete shall					
d)	The work shall be completed with in stipulated period.					
e)	Required No. of test cubes of cement concrete 1:2:4 (1 cement:2 sand:4 graded stone agg. of 20 mm nominal size) from site shall be					
f)	Conditional and telegraphy tender are liable to be rejected.					
g)	All pages of the tender from must be signed before submitting the					
h)	The work shall be executed as per IPH/HPWD specification and					
i)	The security, income tax, sale tax and surcharge and labour welfare cess if any shall deducted from each running bill of the					
j)	All necessary documents such as income tax clearance certificate, renewal of registration, CST/GST nos shall have to be produced by					
k)	The offer shall be valid fore 120 days from the date of the opening					
l)	The rate of all item should be inclusive of all taxes, duties, levies, carriage of material within all leads and lifts etc. to site of work.					
m)	Any damages caused to any public and private property during the course of execution of work shall be restored by the contractor and if,					
n)	Nothing shall be paid for the rejected work/material.					
o)	The contractor shall be fully responsible for watch and ward of					

**\* SCHEDULE OF QUANTITY \***

Estimated cost:- F 340890.00  
s  
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Name of work:- Providing water facility to lower Menjha Ward No. 5 in gram panchayat in Tehsil Palampur District Kangra(HP).

Earnest money:- F 6820.00  
s  
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(SH) Laying, jointing and testing of galvanised iron Time :- Three months

Sr. No	Description of items.	Qty.	Rate in Figure	Words.	Unit	Amount.
1	Excavation in foundation trenches etc. in earth work in all kinds of soil such as pick work,jumper work,blasting in soft and hard rock and chiselling work including saturated soil slushy soil and under floor upto all depth and stacking the excavated soil not more than 3 metre clear from the edge of excavation and then returning the	783.88			Per cubic metre	
2	Laying and jointing in trenches galvanised mild steel tubes,tube a) 80 milimetre dia	2800.00			Per running metre	

**Terms and conditions:-**

- G.I. pipes will be issued free of cost to the contractor from Divisional store Differpat.
- Nothing shall be paid for the rejected work/material.
- The work should be carried out as per specifications.
- The work shall be completed with in stipulated period.
- Material should be ISI marked.
- The work should be executed as per recommendation of CPHEEO
- Statement of length where pipe is not buried under ground due to