

Schedule of Quantity

Name of work:- Providing Irrigation facility to both sides of Bakhli Khad from Janjehli to Lamba Thach Tehsil Thunag Distt. Mandi (HP).

Estimated Cost Rs:- 276793.00

SH:-C/O of Head Weir) PHASE II

Earnest Money Rs:- 5540.00

Time:- Three months.

Sr. No.	Sub Head & Item of Work	Quantity	Rate	Unit	Amount
1	Excavation in foundation and trenches etc. in earth work in all kinds of soil such as pick work, jumper work, blasting soft or hard rock or by chiselling soft or hard rock where blasting is prohibited in all leads and lifts including trimming / dressing of sidesand bed stacking the excavated soil clear from the edge of excavation and returning the excavated soil after completion of work in 15cm layers when required into plinth , sides of foundation etc. consolidating each deposited layers by ramming and watering and then disposing of all surplus excavated soil complete in all respect as per the direction and to the entire satisfaction of the Engineer-in-charge.	19.84	cum	Per cum	
2	Providing and laying cement concrete 1:4:8 (1cement:4sand: 8graded stone aggregate 40 mm nominal size) and curing complete excluding the cost of form work in foundation and plinth in all leads and lifts.	37.96	cum	per cum	
3	Providing and laying cement concrete 1:11/2 :3 (1cement: 1 1/2 sand: 3graded stone aggregate 20 mm nominal size)and curing complete excluding the cost of form work and reinforcement in:-				
3.1	Foundation and plinth.	7.33	Cum	Per cum	
4	Providing form work with steel plates 3.15mm thick welded with angle iron 30x30x5mm so as to give a fair finish including centering shuttering strutting and propping etc. height of propping and centering below supporting floor to ceiling not exceeding 4mtrs. and removal of the same for in-situ reinforced concrete and plain concrete work in all leads and lifts.				
4.1	Vertical surface such as walls(any thickness) partitions and the like including attached pillasters buttresses, plinth and string courses and the like	63.00	sqm	per sqm	
5	Providing and laying tor steel reinforcement for RCC work including bending, binding and placing in position complete upto floor two level in all leads and lifts.	293.26	kg	Per kg	

Terms and conditions

- 1 The work shall be executed as per HPPWD/IPH specifications and to the entire satisfaction of the Engineer-in-charge.
- 2 The cement and steel shall be issued by the department from IPH Thunag i.e. Cement @ Rs. 289/-per bag, steel @ Rs.5700/-per qtl.
- 3 The contractor shall be fully responsible for watch and ward of the material at site of work.
- 4 Nothing shall be paid for rejected material.
- 5 GST and labour welfare cess shall be deducted from the each bill of the contractor as applicable
- 6 Crushed stone aggregate shall be used in all concrete work.
- 7 The contractor shall be responsible for any accident caused during the construction of the work and the loss if any will be born by the contractor.

Executive Engineer
I&PH Division, Thunag.

Sr. No.	Sub Head & Item of Work	Quantity	Rate	Unit	Amount
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Schedule of Quantity

Name of work:- Providing Irrigation facility to both sides of Bakhli Khad from Janjehli to Lamba Thach Tehsil Thunag Distt. Mandi (HP).
SH:-Laying,Jointing and testing of G.I pipes in Gravity main from RD 1400/0 to 700m) PHASE-II

Estimated Cost Rs:- 170669.00
Earnest Money Rs:- 3420.00
Time:- Three months.

Sr. No.	Sub Head & Item of Work	Quantity	Rate	Unit	Amount
1.0	Excavation in foundation and trenches etc. (including pipes and pits upto all depths) in all kinds of soil such as pick work, jumper work, blasting and chiselling soft or hard rock where blasting is prohibited in all leads and lifts including trimming and dressing of sides, levelling of bed to correct grade stacking the excavated soil clear from the edge of excavation and returning the excavated soil after laying, jointing and testing of GI pipes in trenches in 15cm layers including consolidating each deposited layers by ramming and watering and then disposing of all surplus excavated soil as directed in all leads and lifts and soring strutting and trimming dressing where ever required including restoration of un-metalled surface to its original condition including cost of diversion for traffic night signals fixing caution board, crossing over trenches for access to houses and fencing etc. complete in all respect.	519.77		cum	Per cum
2.0	Laying,fixing and jointing (by way of circumferential butt welded joints in three layer by electrical arc welding) and testing of GMS pipe of following diameter confirming to BIS 1239 (part 1) of following grade and having wall thickness as specified below with plain end and capable of withstanding required test pressure in rrandom length of 4 to 7 meters, including specials, short pieces, bends, reducers, tees etc. made from parent tube,etc. as per site requirement . The laying of pipe will include all operation such as cutting, welding, jointing, fabrication of bends, tees etc. including lowering and laying in excavated trenches to ensure required level including flushing, cleaning and hydraulic testing complete in all respects to the satisfaction of the Engineer in charge. The fabricated bends shall have three or four cuts having its radius not less than five times the dia of pipe and the damaged portion of the pipes and specials made form the parent tube shall be provided anticorrosive treatment by applying two coats of anticorrosive bituminous paint over a priming coat as per AWWA specifications C-203-1978. The welding electrodes shall be as per IS 814 of Advani Oerlikon/ L&T or ISI marked make. The rates also includes entire carriage of material, flushing, cleaning & hydraulic testing complete to the best satisfaction & direction of Engineer in charge with in all leads and lifts. (Earth work in trenches will be measured and paid for separately).				
2.01	GI pipe 100mm dia (MG)	700.00		Rmt	Per Rmt.
3.0	Providing and fixing Flange (in pairs) for Joints of G.I. Pipes mentioned as below and same shall conform to IS:1239:1990 (Part II) (Latest with upto date amendments) Including the cost of nuts and bolts of required sizes 3 mm thick compressed asbestos fiber/synthetic rubber gaskets conforming to relevant IS standard. The rates also includes entire carriage of flange and welding of one flange in three layers other flange consider in but welding testing, complete to the best satisfaction & direction of Engineer in charge .				
3.01	GI pipe 100mm dia (MG) Table-5	7.00		Pair	Pair

Terms and conditions:-

- The work shall be executed as per HPPWD/IPH specifications and to the entire satisfaction of the Engineer-in-charge.
- The GI pipe shall be issued by the department from IPH store at Thunag for free of cost.
- The contractor shall be fully responsible for watch and ward of the material at site of work.
- Nothing shall be paid for rejected material/work.
- GST and labour welfare cess shall be deducted from each bill of the contractor as applicable.
- The contractor shall be responsible for any accident caused during the construction of the work and the loss if any will be born by the contractor.

**Executive Engineer
I&PH Division,Thunag.**

Schedule of Quantity

Name of work:- Providing Irrigation facility to both sides of Bakhli Khad from Janjehli to Lamba Thach Tehsil Thunag Distt. Mandi (HP).
SH:-Laying,Jointing and testing of G.I pipes in Gravity main from RD 0 to 1840m) PHASE-II

Estimated Cost Rs:- 448183.00
Earnest Money Rs:- 8970.00

Sr. No.	Sub Head & Item of Work	Quantity	Rate	Unit	Amount
					Time:- Three months.
Sr. No.	Sub Head & Item of Work	Quantity	Rate	Unit	Amount
1.0	Excavation in foundation and trenches etc. (including pipes and pits upto all depths) in all kinds of soil such as pick work, jumper work, blasting and chiselling soft or hard rock where blasting is prohibited in all leads and lifts including trimming and dressing of sides, levelling of bed to correct grade stacking the excavated soil clear from the edge of excavation and returning the excavated soil after laying, jointing and testing of GI pipes in trenches in 15cm layers including consolidating each deposited layers by ramming and watering and then disposing of all surplus excavated soil as directed in all leads and lifts and soring strutting and trimming dressing where ever required including restoration of un-metalled surface to its original condition including cost of diversion for traffic night signals fixing caution board, crossing over trenches for access to houses and fencing etc. complete in all respect.	1366.23		cum	Per cum
2.0	Laying,fixing and jointing (by way of circumferential butt welded joints in three layer by electrical arc welding) and testing of GMS pipe of following diameter confirming to BIS 1239 (part 1) of following grade and having wall thickness as specified below with plain end and capable of withstanding required test pressure in rrandom length of 4 to 7 meters, including specials, short pieces, bends, reducers, tees etc. made from parent tube,etc. as per site requirement . The laying of pipe will include all operation such as cutting, welding, jointing, fabrication of bends, tees etc. including lowering and laying in excavated trenches to ensure required level including flushing, cleaning and hydraulic testing complete in all respects to the satisfaction of the Engineer in charge. The fabricated bends shall have three or four cuts having its radius not less than five times the dia of pipe and the damaged portion of the pipes and specials made form the parent tube shall be provided anticorrosive treatment by applying two coats of anticorrosive bituminous paint over a priming coat as per AWWA specifications C-203-1978. The welding electrodes shall be as per IS 814 of Advani Oerlikon/ L&T or ISI marked make. The rates also includes entire carriage of material, flushing, cleaning & hydraulic testing complete to the best satisfaction & direction of Engineer in charge with in all leads and lifts. (Earth work in trenches will be measured and paid for separately).				
2.01	GI pipe 100mm dia (MG)	1840.00		Rmt	Per Rmt.
3.0	Providing and fixing Flange (in pairs) for Joints of G.I. Pipes mentioned as below and same shall conform to IS:1239:1990 (Part II) (Latest with upto date amendments) Including the cost of nuts and bolts of required sizes 3 mm thick compressed asbestos fiber/synthetic rubber gaskets conforming to relevant IS standard. The rates also includes entire carriage of flange and welding of one flange in three layers other flange consider in but welding testing, complete to the best satisfaction & direction of Engineer in charge .				
3.01	GI pipe 100mm dia (MG) Table-5	18.00		Pair	Pair

Terms and conditions:-

- 1 The work shall be executed as per HPPWD/IPH specifications and to the entire satisfaction of the Engineer-in-charge.
- 2 The GI pipe shall be issued by the department from IPH store at Thunag for free of cost.
- 3 The contractor shall be fully responsible for watch and ward of the material at site of work.
- 4 Nothing shall be paid for rejected material/work.
- 5 GST and labour welfare cess shall be deducted from each bill of the contractor as applicable.
- 6 The contractor shall be responsible for any accident caused during the construction of the work and the loss if any will be born by the contractor.

Executive Engineer
I&PH Division,Thunag.

Draft Notice Inviting Tender

Estimated cost Rs. 2,25,418/-
Earnest money Rs. 4510/-
Time: Three months

Name of work:- Improvement of WSS Bharari, galu, Ratti, Shikawari in GP Thunag and Shikawari Tehsil Thunag Distt. Mandi (HP). (SH: - barbed wire fencing around treatment unit of phase-I,II & III)

Sr. No.	Sub Head & Item of Work	Quantity	Rate	Unit	Amount
Sr.No.	Description of item	Qty.	Rate	Unit	Amount
1	Excavation in foundation and trenches etc. in earth work in all kinds of soil such as pick work, jumper work, blasting soft or hard rock or by chiselling soft or hard rock where blasting is prohibited in all leads and lifts including trimming / dressing of sidesand bed stacking the excavated soil clear from the edge of excavation and returning the excavated soil after completion of work in 15cm layers when required into plinth , sides of foundation etc. consolidating each deposited layers by ramming and watering and then disposing of all surplus excavated soil complete in all respect as per the direction and to the entire satisfaction of the Engineer-in-charge.	21.14		cum	
2	Providing and laying cement concrete 1:2:4 (1cement:4sand: 8graded stone aggregate 40 mm nominal size) and curing complete excluding the cost of form work in foundation and plinth in all leads and lifts.	4.32		cum	Per cum
3	Providing and laying cement concrete 1:3:6 (1cement:3sand: 6graded stone aggregate 40 mm nominal size) and curing complete excluding the cost of form work in foundation and plinth in all leads and lifts.	20.25		cum	Per cum
4	Providing and laying tor steel reinforcement for RCC work including bending, binding and placing in position complete upto floor two level including the cost of binding wire complete in all leads and lifts.	302.00		kg	Per kg
5	Fixing of angle iron fencing post size 50x50x6mm in 2.50mtr. long with 9 Nos. cut to fix the GI barbed wire complete including brakct etc. (earth work to be measured and paid for separately) complete in all respect and to the entire satisfaction of the Engineer-in-charge.	118		Nos.	each
6	1.80 meter high fencing with 2.50 mtrs. angle iron posts 2.50 meters center to center with nine horizontal lines and two diagonals of galvanised steel barbed wire (IS: 278-1962 type-I) weighting 9.38 kg/per 100 meter (minimum) strained fixed to posts cost of angle iron post paid for separately) in all leads and lifts.	286.8		Rmt	Per Rmt
7	Steel work in welded built up section including, cutting, hoisting and fixing in position and applying a priming coat of red lead paint in gratuing framed guard bar ladders, railing brakcet and similar work complete as per direction of the Engineer-in-charge in all leads and lifts.	2.344		Qtl	Per Qtl
8	Providing and fixing MS pressed parliamentary hinges with necessary screws etc. complete (125x125x27x2.80mm)	12		Nos.	each
9	Providing and fixing anodized MS sliding door bolts with nuts and nuts screw etc. complete in all leads and lifts.				
	250x16mm	6		Nos	each
					Total:-

Terms and conditions

- (i) The work shall be executed as per HPPWD/IPH specifications and to the entire satisfaction of the Engineer-in-charge.
- (ii) The cement & steel shall be issued by the department from IPH Store Thunag i.e. Cement @ Rs.289/-per bag,Tor steel @ 5000/per Qtl , GI pipe and fencing post free of cost.
- (iii) The contractor shall be fully responsible for watch and ward of the material at site of work.
- (iv) Nothing shall be paid for rejected material.
- (v) Income Tax/Sale Tax, GST & labour cess will be deducted from the bill of the contractor as applicable.
- (vi)The contractor shall be responsible for any accident caused during the construction of the work and the loss if any will be born by the contractor.

Executive Engineer
I&PH Division,Thunag

Sr. No.	Sub Head & Item of Work	Quantity	Rate	Unit	Amount
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Schedule of quantity

Estimated cost Rs. 297568.00
Earnest money Rs. 5950.00
Time:- Three months.

Name of work:- Providing LIS Latogli in GP Saroa Tehsil Chachiot, Distt. Mandi(H.P.)(SH:- C/O R/Wall RD 0 to 15 mtr.& Breast wall RD 0 to 15 mtr.at Pump House)

Sr. No.	Description	Qty.	Rate	Unit	Amount
1	Excavation in foundation and trenches etc. in earth work in all kinds of soil such as pick work, jumper work, blasting soft orhard rock by chiselling soft/hard rock where blasting is prohibited in all leads and lifts including trimming/dressing of sides and beds stacking the excavated soil clear from the edge of excavation and then returning the excavated soil afrter completion of work in 15cm layers when required into plinths, sides of foundation etc. consolidating each deposited layers by ramming and watering and then disposing of all surplus excavatred soil complete in all respect as per direction and to the entire satisfaction of the Engineer-in-charge.	30.30		cum	Per cum
2	Providing form work with steel plates 3.15mm thick welded with angle iron 30x30x5mm so as to give a fair finish including centering shuttering strutting and propping etc. height of propping and centering below supporting floor to ceiling not exceeding 4mtrs. and removal of the same for in-situ reinforced concrete and plain concrete work including all leads and lifts. (a) Vertical surface such as walls(any thickness) partitions and the like including attached pillasters buttresses, plinth and string courses and the like	120.48		sqm	per sqm
3	Providing and laying cement concrete 1:5:10 (1 cement: 5 sand: 10 graded stone aggregate 40mm nominal size) and curing complete excluding the cost of form work in retaining wall/ breast wall complete in all respect and as per direction and to the entire satisfaction of the Engineer-in-charge.	86.62		cum	per cum
4	Boulder filling behinde the retaining wall complete in all leads and lifts	12.30		cum	per cum

Terms and conditions :-

- The work shall be executed as per HPPWD/IPH specification and to the entire satisfaction of the Engineer-in-charge.
- Cement shall be issued by the department cement @ Rs. 289/- per bag, from IPH Store Thunag
- The contractor shall be fully responsible for watch and ward of the material at site of work.
- Nothing shall be paid for rejected material/work.
- GST and labour welfare cess shall be deducted from the bill of the contractor as applicable.

Sr. No.	Sub Head & Item of Work	Quantity	Rate	Unit	Amount
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Executive Engineer
I&PH Division
Thunag

chedule of Quantity

i Khad To Tandri In Tehsil Thunag Distt. Mandi (H.P.)
ing Of Sanitary Items For Inspection Hut At Tandri.

Estimated Cost Rs. 2,40,788/-
Earnest Money Rs. 4,820/-
Time : - Three Months

S. No.	Description Of Items	Qty.	Rate	Unit	Amount
1	Providing Suppling And Fixing Of Wall Tile 12"x18" Cera	73.32		Sqm.	Per Sqm.
2	Providing and laying duro stone vitrified tile (300x300mmx8mm) in grey/coloured or of approved shade in flooring, treads of steps and lai	8.6152		Sqm.	Per Sqm.
3	Providing Suppling And Fixing Of EWC 200mm Cera	2		No.	Each
4	Providing Suppling And Fixing Of Wash Basin With Pedestal	2		No.	Each
5	Providing Suppling And Fixing Of CP Waste Cuppling Cera	2		No.	Each
6	Providing Supplina And Fixing Of Angle Cock Titanium Cera	14		No.	Each
7	Providing Suppling And Fixing Of Waste Pipe Heavy	3		No.	Each
8	Providing Suppling And Fixing Of Center Hole Mixer Titanium	2		No.	Each
9	Providing Supplina And Fixing Of Royle Kastner	10		No.	Each
10	Providing Suppling And Fixing Of Washer Big Size For Kastner	10		No.	Each
11	Providing Supplina And Fixing Of Bib Cock Titanium	2		No.	Each
12	Providing Suppling And Fixing Of Consild Stop Cock	2		Set	Per Set
13	Providing Supplina And Fixing Of Exposed Part For Consild	2		No.	Each
14	Providing Suppling And Fixing Of Divertoe High Flow Single Lever	2		No.	Each
15	Providing Suppling And Fixing Of Exposed Part Of High Flow Divertoe	2		No.	Each
16	Providing Supplina And Fixing Of C.P. Jet Pressure	2		No.	Each
17	Providing Suppling And Fixing Of Heat Faucet ABS Body	2		No.	Each
18	Providing Supplina And Fixing Of Cisten Conventional	2		No.	Each
19	Providing Suppling And Fixing Of Cisten Fittings	2		No.	Each
20	Providing Supplina And Fixing Of C.P. Short Bend 1-1/4"	2		No.	Each
21	Providing Suppling And Fixing Of Steel Sink 18X24X8"	1		No.	Each
22	Providing Supplina And Fixing Of Sink Mixture Titanium	1		No.	Each
23	Providing Supplina And Fixing Of Soap Dish	6		No.	Each
24	Providing Suppling And Fixing Of Towel Ring (Montana)	3		No.	Each
25	Providing Supplina And Fixing Of Glass Self (S.S.) 18"	3		No.	Each
26	Providing Suppling And Fixing Of Center Hole Mixer (Ocean)	3		No.	Each
27	Providing Supplina And Fixing Of Towel Rod 24" Montana	3		No.	Each
28	Providing Suppling And Fixing Of Towel Rod 18" Montana	3		No.	Each
29	Providing Supplina And Fixing Of Corner Set	3		No.	Each
30	Providing Supplina And Fixing Of Bib Cock Long Nose(Ocean)	2		No.	Each
31	Providing Suppling And Fixing Of Bib Cock Short Body(Ocean)	3		No.	Each
32	Providing Supplina And Fixing Of Angle Cock (Ocean)	6		No.	Each
33	Providing Suppling And Fixing Of Over Head Shower	3		No.	Each
34	Providing Supplina And Fixing Of Bath Spout (Gale)	3		No.	Each
35	Providing Suppling And Fixing Of PVC Sleev 35mm	1		No.	Each
36	Providing Supplina And Fixing Of Looking Mirror 18"x24"	2		No.	Each
37	Providing Suppling And Fixing Of Looking Mirror 18"x12"	1		No.	Each
38	Providing Supplina And Fixing Of PVC Connection 18"	12		No.	Each
39	Providing Supplina And Fixing Of C.P. Extion Nipple 1"x15"	24		No.	Each
40	Providing Suppling And Fixing Of Wall Hanger	3		No.	Each
41	Providing Supplina And Fixing Of CPVC BRASS ELBO 3/4"	30		PCS	Each
42	Providing Suppling And Fixing Of CPVC ELBO 3/4"	40		PCS	Each
43	Providing Supplina And Fixing Of CPVC BRASS TEE 3/4"	15		PCS	Each
44	Providing Suppling And Fixing Of CPVC TEE 3/4"	20		PCS	Each
45	Providing Supplina And Fixing Of PIPE HOOK	30		No.	Each
46	Providing Supplina And Fixing Of CPVC CLAMP 3/4"	15		PCS	Each
47	Providing Suppling And Fixing Of CPVC PIPE 3MTR. 3/4" (SDR-11)	45		PCS	Each
48	Providing Supplina And Fixing Of CPVC COUPLER 3/4"	10		PCS	Each
49	Providing Suppling And Fixing Of CPVC MT ADOBTER 1/2"x3/4"	12		PCS	Each
50	Providing Supplina And Fixing Of CPVC PIPE 25MM of 3meter	25		PCS	Each
51	Providing Suppling And Fixing Of CPVC SOCKET 25MM	5		PCS	Each
52	Providing Supplina And Fixing Of CPVC ELBO 25MM	6		PCS	Each
53	Providing Suppling And Fixing Of CPVC REDUCER 20MMX25MM	4		PCS	Each
54	Providing Supplina And Fixing Of CPVC RED BUSH 20MM X 25MM	2		PCS	Each
55	Providing Supplina And Fixing Of CPVC BALL VALVE 20MM	3		PCS	Each
56	Providing Suppling And Fixing Of CPVC BALL VALVE 25MM	1		PCS	Each
57	Providing Supplina And Fixing Of CPVC UNION 25MM	1		PCS	Each
58	Providing Suppling And Fixing Of CPVC UNION 20MM 3/4"	4		PCS	Each
59	Providing Supplina And Fixing Of CPVC TANK CONNECTOR 25MM	1		PCS	Each

Sr. No.	Sub Head & Item of Work	Quantity	Rate	Unit	Amount
60	Providing Suppling And Fixing Of CPVC FEMALE ADAPTER (BRASS THREADS) 1" 25MM	2		PCS	
61	Providing and placing water tank of mark sintex having of capacity of 2000 ltr. With necessary fitting including over flow pipe score pipe e	1		No.	
62	Providing Suppling And Fixing Of Water Geaser Of 25 Ltr. Capacity Of Mark Hindware	2		No.	

Terms and conditions

- 1 The work should be executed as per HPPWD/IPH specification and to the entire satisfaction of Engineer-In-Charge.
- 2 Nothing shall be paid for sub standard work/ material at site work.
- 3 The contractor will be fully responsible to watch and ward of material at site of work.
- 4 GST & 1% labour cess will be deducted from each bill of the contractor as applicable.
- 5 The cement shall be issued by the department from IPH store Thunag @ 289/- Per bag.
- 6 The contractor shall be responsible for any accident caused during the construction of the work and the loss if any will be born by the contractor.

Executive Engineer,
IPH Division, Thunag

Sr. No.	Sub Head & Item of Work	Quantity	Rate	Unit	Amount
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Schedule of Quantity

Name of work:- Providing Irrigation facility to both sides of Bakhli Khad from Janjehli to Lamba Thach Tehsil Thunag Distt. Mandi (HP).
SH:-C/O of sluice valve chambers and Laying, jointing and testing of HDPE pipes in distribution system) PHASE-II.

Estimated Cost Rs:- 259666.00
Earnest Money Rs:- 5200.00
Time:- Three months.

Sr. No.	Sub Head & Item of Work	Quantity	Rate	Unit	Amount
1	Excavation in foundation and trenches etc. in earth work in all kinds of soil such as pick work, jumper work, blasting soft or hard rock or by chiselling soft or hard rock where blasting is prohibited in all leads and lifts including trimming / dressing of sidesand bed stacking the excavated soil clear from the edge of excavation and returning the excavated soil after completion of work in 15cm layers when required into plinth , sides of foundation etc. consolidating each deposited layers by ramming and watering and then disposing of all surplus excavated soil complete in all respect as per the direction and to the entire satisfaction of the Engineer-in-charge.	166.82		cum	Per cum
2	Providing and laying cement concrete 1:4:8 (1cement:4sand: 8graded stone aggregate 40 mm nominal size) and curing complete excluding the cost of form work in foundation and plinth in all leads and lifts.	1.44		cum	per cum
3	Providing and laying cement concrete 1:11/2 :3 (1cement: 1 1/2 sand: 3graded stone aggregate 20 mm nominal size)and curing complete excluding the cost of form work and reinforcement in:-				
3.1	Foundation and plinth.	2.34		Cum	Per cum
4	Providing form work with steel plates 3.15mm thick welded with angle iron 30x30x5mm so as to give a fair finish including centering shuttering strutting and propping etc. height of propping and centering below supporting floor to ceiling not exceeding 4mtrs. and removal of the same for in-situ reinforced concrete and plain concrete work in all leads and lifts.				
4.1	Vertical surface such as walls(any thickness) partitions and the like including attached pillars buttresses, plinth and string courses and the like	11.52		sqm	per sqm
5	Providing and laying tor steel reinforcement for RCC work including bending, binding and placing in position complete upto floor two level in all leads and lifts.	210.60		kg	Per kg
6	Providing, laying, jointing and testing in trenches pre cast reinforced cement concrete pressure pipe spigot and sockets of following dia and class duly ISI marked as per IS :458-2003 with latest amendments including providing and fixing rubber rings type-II duly ISI marked as per IS:5382-1985 with latest amendments, finished with in stiff mortar in cement mortar 1:2 (1 cement :2 sand) of follwing internal diameter including testing of joints in all leads and lifts complete in all respect to the entire satisfaction of engineer-in-charge. (earth work in trenches to be measured and paid for separately)				
6.1	900mm dia NP2	11.25		Rmt.	Per Rmt.
6.2	350mm dia NP2	5.85		Rmt.	Per Rmt.
7	Laying ,jointing and testing High Density Polyethylene pipes in trenches to required grade as per IS: 4984-1995 latest with upto date ammendments of following OD pipes material grade and class of pipe . The joint of pipe should be done by way of butt fusion welding as per relevent IS code and specification including all fittings and accessories e.g.coupling, tees bends, reducers screwed adopter flanged tail piece etc. including carriage of pipes as per direction and to the entire satisfaction of the Engineer-in-charge (earth work in trenches to be measured and paid for separately).				
7.1	90mm, PN 4, PE -80	440.00		Rmt.	Per Rmt.
7.3	110mm, PN 4, PE-80	31.50		Rmt.	Per Rmt.
8	Providing and fixing sluice valve of 100mm dia of approved ISI make with latest ammendments complete in all respect with MS connecting rod 1.50 mtr. Long to operate wheel of sluice valve including jointing of HDPE end cap joint with connection pipe 110mm OD with in all leads, lifts and to the entire satisfaction of engineer incharge.	9.00		Nos.	Each
9	Providing and fixing MS angle bracket to cover and safety of sluice valve in side out let chamber 25x25x4mm@ 1.4 kg/mt. complete in all respect.	98.28		Kg.	Per kg.
10	Providing and fixing ceiling for locking of manhole cover complete in all respect.	9.00		Nos.	Each
11	Providing and fixing HDPE pipe Tee 110mmx90mmx63mm with Qc end (copler on both end of tee) on HDPE pipe with existed pipe of outlet dia 110mm OD (Butt fusion)	9.00		Nos.	Each

Terms and conditions

- The work shall be executed as per HPPWD/IPH specifications and to the entire satisfaction of the Engineer-in-charge.
- The cement , steel and HDPE pipe shall be issued by the department from IPH Thunag i.e. Cement @ Rs. 289/-per bag, steel @ Rs.5700/-per qtl. And HDPEpipe free of cost.
- The contractor shall be fully responsible for watch and ward of the material at site of work.
- Nothing shall be paid for rejected material.
- GST and labour welfare cess shall be deducted from the each bill of the contractor as applicable
- Crushed stone aggregate shall be used in all concrete work.
- The contractor shall be responsible for any accident caused during the construction of the work and the loss if any will be born by the contractor.

**Executive Engineer
I&PH Division,Thunag.**

Sr. No.	Sub Head & Item of Work	Quantity	Rate	Unit	Amount
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Estimated cost Rs. 478000/-
Eanrest money Rs.9560/-
Time:- One Year

Name of work: A/R & M/O Water testing laboratory at I&PH Division Thunag
(S.H:- Running operation and maintenance of water testing lab at Thunag for One year)

Sr. No.	Description of Item	Qty.	Rate	Unit	Amount
1	Operation Running and maintenance of Divisional Water sample testing laboratory at Thunag for one year by providing skilled /unskilled operating staff and good quality materials such as chemicals regents etc. as required for testing of water sample for Physical chemical and bacteriological tests complete process in all respect i.e uploading of test results on web site regularly as per the direction and to the entire satisfaction of engineer in charge.				
a	Physical and chemical test for all 17 parameter (1000 samples per year)the tests are (i) Temperature (ii)Colour (iii) Odour (iv) Taste (v) Turbidity (vi) PH (vii) TDS/Elect Conductivity (viii)Total Alkalinity (ix) Chloride (x) fluoride (xi) Nitrate (xii) iron (xiii) Sulphate (ivx) Total Hardness (xv) free residual chlorine (xvi)Manganese (xvii) Total arsenic Note 250 tests fluoride, Nitrate, Sulphate and iron tests are to be done with Merck colorimeter -Model no Spectroquant move 100 chemicals for which are also to be provided by the contractor/Firm.	1000 Tests of Sample		Per Test	
b	Bacteriological Tests (2000 samples per year)- (1) Total coliforms (2) E.Coli/Thermo tolerant Coliforms Test if total Coliforms are present	2000 Tests of Sample		Per Test	

Total

Special Terms and Condition

- 1 In order to give true picture of water tests and considering the importance of drinking water quality the contractor/Firms is expected to do entire job very carefully.
- 2 The contractor/Firms bidding for the job should preferably have the previous experience of opretion and maintenance of the water testing laboratory.
- 3 The contractor/Firms shall have to employ qualified and well experienced chemist/Assistant Chemist. The desirable qualification for the laboratory staff shall be as per Uniform
- 4 Income Tax, GST, 1% labour cess and other taxes levied by Govt. from time to time shall be deducted as per rules.
- 5 Work shall be done as per specification and to the entire satisfaction of the Engineer-in-charge.
- 6 Period of contract agreement shall be one Year at first instant and can be extended further.
- 7 Unserviceable material received after repair shall be handed over to the Engineer-in-charge.
- 8 The firm/contractor shall engage all skilled/unskilled labour for the smooth running of the Lab.
- 9 The contractor shall hand over the lab with all equipments to the department after expiry of contract period in good condition.
- 10 Security and all other deductions shall be made as per rule of the department.

Executive Engineer
I&PH Division Thunag

Sr. No.	Sub Head & Item of Work	Quantity	Rate	Unit	Amount
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Schedule of Quantity

Name of work:- Providing Irrigation facility to both sides of Bakhli Khad from Janjehli to Lamba Thach Tehsil Thunag Distt. Mandi (HP).

Estimated Cost Rs:- 278444.00

SH-C/O of sluice valve chambers and Laying, jointing and testing of HDPE pipes in distribution system) PHASE-I.

Earnest Money Rs:- 5570.00

Time:- Three months.

Sr. No.	Sub Head & Item of Work	Quantity	Rate	Unit	Amount
1	Excavation in foundation and trenches etc. in earth work in all kinds of soil such as pick work, jumper work, blasting soft or hard rock or by chiselling soft or hard rock where blasting is prohibited in all leads and lifts including trimming / dressing of sidesand bed stacking the excavated soil clear from the edge of excavation and returning the excavated soil after completion of work in 15cm layers when required into plinth , sides of foundation etc. consolidating each deposited layers by ramming and watering and then disposing of all surplus excavated soil complete in all respect as per the direction and to the entire satisfaction of the Engineer-in-charge.	204.84		cum	Per cum
2	Providing and laying cement concrete 1:4:8 (1cement:4sand: 8graded stone aggregate 40 mm nominal size) and curing complete excluding the cost of form work in foundation and plinth in all leads and lifts.	1.44		cum	per cum
3	Providing and laying cement concrete 1:1 1/2 :3 (1cement: 1 1/2 sand: 3graded stone aggregate 20 mm nominal size)and curing complete excluding the cost of form work and reinforcement in:-				
3.1	Foundation and plinth.	2.34		Cum	Per cum
4	Providing form work with steel plates 3.15mm thick welded with angle iron 30x30x5mm so as to give a fair finish including centering shuttering strutting and propping etc. height of propping and centering below supporting floor to ceiling not exceeding 4mtrs. and removal of the same for in-situ reinforced concrete and plain concrete work in all leads and lifts.				
4.1	Vertical surface such as walls(any thickness) partitions and the like including attached pillars buttresses, plinth and string courses and the like	11.52		sqm	per sqm
5	Providing and laying tor steel reinforcement for RCC work including bending, binding and placing in position complete upto floor two level in all leads and lifts.	210.60		kg	Per kg
6	Providing, laying, jointing and testing in trenches pre cast reinforced cement concrete pressure pipe spigot and sockets of following dia and class duly ISI marked as per IS :458-2003 with latest amendments including providing and fixing rubber rings type-II duly ISI marked as per IS:5382-1985 with latest amendments, finished with in stiff mortar in cement mortar 1:2 (1 cement :2 sand) of follwing internal diameter including testing of joints in all leads and lifts complete in all respect to the entire satisfaction of engineer-in-charge. (earth work in trenches to be measured and paid for separately)				
6.1	900mm dia NP2	11.25		Rmt.	Per Rmt.
6.2	350mm dia NP2	5.85		Rmt.	Per Rmt.
7	Laying ,jointing and testing High Density Polyethylene pipes in trenches to required grade as per IS: 4984-1995 latest with upto date ammendments of following OD pipes material grade and class of pipe . The joint of pipe should be done by way of butt fusion welding as per relevent IS code and specification including all fittings and accessories e.g.coupling, tees bends, reducers screwed adopter flanged tail piece etc. including carriage of pipes as per direction and to the entire satisfaction of the Engineer-in-charge (earth work in trenches to be measured and paid for separately).				
7.1	90mm, PN 4, PE -80	550.00		Rmt.	Per Rmt.
7.3	110mm, PN 4, PE-80	31.50		Rmt.	Per Rmt.
8	Providing and fixing sluice valve of 100mm dia of approved ISI make with latest ammendments complete in all respect with MS connecting rod 1.50 mtr. Long to operate wheel of sluice valve including jointing of HDPE end cap joint with connection pipe 110mm OD with in all leads, lifts and to the entire satisfaction of engineer incharge.	9.00		Nos.	Each
9	Providing and fixing MS angle bracket to cover and safety of sluice valve in side out let chamber 25x25x4mm@ 1.4 kg/mt. complete in all respect.	98.28		Kg.	Per kg.
10	Providing and fixing ceiling for locking of manhole cover complete in all respect.	9.00		Nos.	Each
11	Providing and fixing HDPE pipe Tee 110mmx90mmx63mm with Qc end (copler on both end of tee) on HDPE pipe with existed pipe of outlet dia 110mm OD (Butt fusion)	9.00		Nos.	Each

Terms and conditions

- The work shall be executed as per HPPWD/IPH specifications and to the entire satisfaction of the Engineer-in-charge.
- The cement , steel and HDPE pipe shall be issued by the department from IPH Thunag i.e. Cement @ Rs. 289/-per bag, steel @ Rs.5700/-per qtl. And HDPEpipe free of cost.
- The contractor shall be fully responsible for watch and ward of the material at site of work.
- Nothing shall be paid for rejected material.
- GST and labour welfare cess shall be deducted from the each bill of the contractor as applicable
- Crushed stone aggregate shall be used in all concrete work.
- The contractor shall be responsible for any accident caused during the construction of the work and the loss if any will be born by the contractor.

Executive Engineer
I&PH Division,Thunag.

Sr. No.	Sub Head & Item of Work	Quantity	Rate	Unit	Amount
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Schedule of Quantity

Name of work:- Providing Irrigation facility to both sides of Bakhli Khad from Janjehli to Lamba Thach Tehsil Thunag Distt. Mandi (HP).
SH:-Laying,Jointing and testing of G.I pipes in Gravity main) PHASE-I

Estimated Cost Rs:- 438633.00

Earnest Money Rs:- 8800.00

Time:- Three months.

Sr. No.	Sub Head & Item of Work	Quantity	Rate	Unit	Amount
1.0	Excavation in foundation and trenches etc. (including pipes and pits upto all depths) in all kinds of soil such as pick work, jumper work, blasting and chiselling soft or hard rock where blasting is prohibited in all leads and lifts including trimming and dressing of sides, levelling of bed to correct grade stacking the excavated soil clear from the edge of excavation and returning the excavated soil after laying, jointing and testing of GI pipes in trenches in 15cm layers including consolidating each deposited layers by ramming and watering and then disposing of all surplus excavated soil as directed in all leads and lifts and soring strutting and trimming dressing where ever required including restoration of un-metalled surface to its original condition including cost of diversion for traffic night signals fixing caution board, crossing over trenches for access to houses and fencing etc. complete in all respect.	1385.00		cum	Per cum
2.0	Laying,fixing and jointing (by way of circumferential butt welded joints in three layer by electrical arc welding) and testing of GMS pipe of following diameter confirming to BIS 1239 (part 1) of following grade and having wall thickness as specified below with plain end and capable of withstanding required test pressure in rrandom length of 4 to 7 meters, including specials, short pieces, bends, reducers, tees etc. made from parent tube,etc. as per site requirement . The laying of pipe will include all operation such as cutting, welding, jointing, fabrication of bends, tees etc. including lowering and laying in excavated trenches to ensure required level including flushing, cleaning and hydraulic testing complete in all respects to the satisfaction of the Engineer in charge. The fabricated bends shall have three or four cuts having its radius not less than five times the dia of pipe and the damaged portion of the pipes and specials made form the parent tube shall be provided anticorrosive treatment by applying two coats of anticorrosive bituminous paint over a priming coat as per AWWA specifications C-203-1978. The welding electrodes shall be as per IS 814 of Advani Oerlikon/ L&T or ISI marked make. The rates also includes entire carriage of material, flushing, cleaning & hydraulic testing complete to the best satisfaction & direction of Engineer in charge with in all leads and lifts. (Earth work in trenches will be measured and paid for separately).				
2.01	GI pipe 125mm dia (MG)	525.00		Rmt	Per Rmt.
2.02	GI pipe 100mm dia (MG)	170.00		Rmt	Per Rmt.
2.03	GI pipe 80mm dia (MG)	1170.00		Rmt	Per Rmt.
3.0	Providing and fixing Flange (in pairs) for Joints of G.I. Pipes mentioned as below and same shall conform to IS:1239:1990 (Part II) (Latest with upto date amendments) Including the cost of nuts and bolts of required sizes 3 mm thick compressed asbestos fiber/synthetic rubber gaskets conforming to relevant IS standard. The rates also includes entire carriage of flange and welding of one flange in three layers other flange consider in but welding testing, complete to the best satisfaction & direction of Engineer in charge .				
3.01	GI pipe 125mm dia (MG) Table-5	5.00		Pair	Pair
3.02	GI pipe 100mm dia (MG) Table-5	1.00		Pair	Pair
3.03	GI pipe 80mm dia (MG) Table -5	12.00		Pair	Pair

Terms and conditions:-

- 1 The work shall be executed as per HPPWD/IPH specifications and to the entire satisfaction of the Engineer-in-charge.
- 2 The GI pipe shall be issued by the department from IPH store at Thunag for free of cost.
- 3 The contractor shall be fully responsible for watch and ward of the material at site of work.
- 4 Nothing shall be paid for rejected material/work.
- 5 GST and labour welfare cess shall be deducted from each bill of the contractor as applicable.
- 6 The contractor shall be responsible for any accident caused during the construction of the work and the loss if any will be born by the contractor.

**Executive Engineer
I&PH Division,Thunag.**

Sr. No.	Sub Head & Item of Work	Quantity	Rate	Unit	Amount
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Schedule of Quantity

Estimated cost Rs.3,56,786/-
Earnest money Rs.7150/-
Time: Three months.

Name of work :- Improvement of WSS Bharari Galu Retti Shikawari in GP Shikawari & Thunag Tehsil Thunag Distt. Mandi (HP)(SH:- Laying, jointing and testing of GI pipe from pt. A-B from RD 4500 to 9200Rmt)

Sr.No.	Description of item	Qty.	Rate	Unit	Amount
1	Excavation in foundation and trenches etc. (including pipes and pits upto all depths) in all kinds of soil such as pick work, jumper work, blasting and chiselling soft or hard rock where blasting is prohibited in all leads and lifts including trimming and dressing of sides, levelling of bed to correct grade stacking the excavated soil clear from the edge of excavation and returning the excavated soil after laying, jointing and testing of GI pipes in trenches in 15cm layers including consolidating each deposited layers by ramming and watering and then disposing of all surplus excavated soil as directed in all leads and lifts and soring strutting and trimming dressing where ever required including restoration of un-metalled surface to its original condition including cost of diversion for traffic night signals fixing caution board, crossing over trenches for access to houses and fencing etc. complete in all respect.	1809.50 cum		per cum	
2	Laying, jointing and testing of GMS tube in trenches (light grade) of following dia meter including providing and fixing tube fitting such as bends, tees, air valves, unions and collars etc. including carriage of GI pipes as per direction and to the entire satisfaction of the Engineer-in-charge (earth work in trenches to be measured and paid for separately) in all leads and lifts. (i) 32mm dia	4700 Rmt		Per Rmt	

Terms and conditions

- i. The work shall be executed as per HPPWD/IPH specification and to the entire satisfaction of the Engineer-in-charge.
- ii. The contractor shall be fully responsible for watch and ward of the material at site of work.
- iii. The GI fittings shall be provided by the contractor at their own cost.
- iv. Nothing shall be paid for rejected material/work.
- v. The GI pipes shall be supplied by the department free of cost from IPH store Thunag
- vi. Income Tax/Sale Tax , labour welfare cess and GST shall be deducted from the bill of the contractor as applicable.
- vii. The contractor shall be responsible for any accident caused during the construction of the work and the loss if any will be born by the contractor

Executive Engineer
I&PH Division
Thunag

Sr. No.	Sub Head & Item of Work	Quantity	Rate	Unit	Amount
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Schedule of Quantity

Name of work:- Providing Irrigation facility to both sides of Bakhli Khad from Janjehli to Lamba Thach Tehsil thunag Distt. Mandi (HP).
SH:-C/O of Head Weir) PHASE I

Estimated Cost Rs:- 276793.00
 Earnest Money Rs:- 5540.00
 Time:- Three months.

Sr. No.	Sub Head & Item of Work	Quantity	Rate	Unit	Amount
1	Excavation in foundation and trenches etc. in earth work in all kinds of soil such as pick work, jumper work, blasting soft or hard rock or by chiselling soft or hard rock where blasting is prohibited in all leads and lifts including trimming / dressing of sidesand bed stacking the excavated soil clear from the edge of excavation and returning the excavated soil after completion of work in 15cm layers when required into plinth , sides of foundation etc. consolidating each deposited layers by ramming and watering and then disposing of all surplus excavated soil complete in all respect as per the direction and to the entire satisfaction of the Engineer-in-charge.	19.84		cum	Per cum
2	Providing and laying cement concrete 1:4:8 (1cement:4sand: 8graded stone aggregate 40 mm nominal size) and curing complete excluding the cost of form work in foundation and plinth in all leads and lifts.	37.96		cum	per cum
3	Providing and laying cement concrete 1:1 1/2 :3 (1cement: 1 1/2 sand: 3graded stone aggregate 20 mm nominal size)and curing complete excluding the cost of form work and reinforcement in:-				
3.1	Foundation and plinth.	7.33		Cum	Per cum
4	Providing form work with steel plates 3.15mm thick welded with angle iron 30x30x5mm so as to give a fair finish including centering shuttering strutting and propping etc. height of propping and centering below supporting floor to ceiling not exceeding 4mtrs. and removal of the same for in-situ reinforced concrete and plain concrete work in all leads and lifts.				
4.1	Vertical surface such as walls(any thickness) partitions and the like including attached pillars buttresses, plinth and string courses and the like	63.00		sqm	per sqm
5	Providing and laying tor steel reinforcement for RCC work including bending, binding and placing in position complete upto floor two level in all leads and lifts.	293.26		kg	Per kg

Terms and conditions

- 1 The work shall be executed as per HPPWD/IPH specifications and to the entire satisfaction of the Engineer-in-charge.
- 2 The cement and steel shall be issued by the department from IPH Thunag i.e. Cement @ Rs. 289/-per bag, steel @ Rs.5700/-per qtl.
- 3 The contractor shall be fully responsible for watch and ward of the material at site of work.
- 4 Nothing shall be paid for rejected material.
- 5 GST and labour welfare cess shall be deducted from the each bill of the contractor as applicable
- 6 Crushed stone aggregate shall be used in all concrete work.
- 7 The contractor shall be responsible for any accident caused during the construction of the work and the loss if any will be born by the contractor.

Executive Engineer
 I&PH Division,Thunag.

Sr. No.	Sub Head & Item of Work	Quantity	Rate	Unit	Amount
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Schedule of Quantity

Name of work:- Providing Irrigation facility to both sides of Bakhli Khad from Janjehli to Lamba Thach Tehsil Thunag Distt. Mandi (HP).
SH:-C/O of Head Weir) PHASE III

Estimated Cost Rs:- 276793.00

Earnest Money Rs:- 5540.00

Time:- Three months.

Sr. No.	Sub Head & Item of Work	Quantity	Rate	Unit	Amount
1	Excavation in foundation and trenches etc. in earth work in all kinds of soil such as pick work, jumper work, blasting soft or hard rock or by chiselling soft or hard rock where blasting is prohibited in all leads and lifts including trimming / dressing of sidesand bed stacking the excavated soil clear from the edge of excavation and returning the excavated soil after completion of work in 15cm layers when required into plinth , sides of foundation etc. consolidating each deposited layers by ramming and watering and then disposing of all surplus excavated soil complete in all respect as per the direction and to the entire satisfaction of the Engineer-in-charge.	19.84		cum	
2	Providing and laying cement concrete 1:4:8 (1cement:4sand: 8graded stone aggregate 40 mm nominal size) and curing complete excluding the cost of form work in foundation and plinth in all leads and lifts.	37.96		cum	
3	Providing and laying cement concrete 1:11/2 :3 (1cement: 1 1/2 sand: 3graded stone aggregate 20 mm nominal size)and curing complete excluding the cost of form work and reinforcement in:-				
3.1	Foundation and plinth.	7.33		Cum	
4	Providing form work with steel plates 3.15mm thick welded with angle iron 30x30x5mm so as to give a fair finish including centering shuttering strutting and propping etc. height of propping and centering below supporting floor to ceiling not exceeding 4mtrs. and removal of the same for in-situ reinforced concrete and plain concrete work in all leads and lifts.				
4.1	Vertical surface such as walls(any thickness) partitions and the like including attached pillars buttresses, plinth and string courses and the like	63.00		sqm	
5	Providing and laying tor steel reinforcement for RCC work including bending, binding and placing in position complete upto floor two level in all leads and lifts.	293.26		kg	

Terms and conditions

- The work shall be executed as per HPPWD/IPH specifications and to the entire satisfaction of the Engineer-in-charge.
- The cement and steel shall be issued by the department from IPH Thunag i.e. Cement @ Rs. 289/-per bag, steel @ Rs.5700/-per qtl.
- The contractor shall be fully responsible for watch and ward of the material at site of work.
- Nothing shall be paid for rejected material.
- GST and labour welfare cess shall be deducted from the each bill of the contractor as applicable
- Crushed stone aggregate shall be used in all concrete work.
- The contractor shall be responsible for any accident caused during the construction of the work and the loss if any will be born by the contractor.

Executive Engineer
I&PH Division,Thunag.

Sr. No.	Sub Head & Item of Work	Quantity	Rate	Unit	Amount
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Draft Notice Inviting Tender

Estimated cost Rs.	#####
Earnest money Rs.	7872.00
Time:-	Six months

Name of Work :- Providing LWSS to GP Bassi & Dharot Tehsil Chachyot Distt. Mandi (HP) (SH:- Supply and erection of pumping machinery, laying jointing and testing of GI pipe in Rising Main)

S.No	Sub Head and Items of work	Quantity	Rate	Units	Amount.
	RAW WATER STAGE				
1	Supply of submersible raw water pumping set of reputed make such as KSB/CALAMA/ BS /SABAR JOHNSTON make conforming to latest relevant BIS code. The pump should be fitted with free flow impellers of bronze/suitable alloy as per BIS 5659-1970 latest suitable for raw water 900 PPM having greased packer bearing and shaft with bound stator on motor side & with shaft protection sleeve on	1		set of 1HP	0.00
	(A)SITE CONDITIONS				
	(i) Location of site			Dawada Nallah	
	(ii) The altitude of place which the motor is intended to work in ordinary service if it exceeds 1000 mt.			900 mtr.	
	(iii) Humidity	(iii) Humidity		Whether generally remains humid during monsoon season	
	(iv)Nature atmosphere			As normally encountered in Shivalik Range	
	(d) Suction lift.	(v)Detail of quality of water		Raw water	
	(e)Static head	(vi)Water free from sand or not		Free from sand	
	Rising main	(vii) water corrosive or not		Not corrosive	
		(viii) Turbidity (if any)		Upto 900 PPM	
		(ix) Type of well		Jack well	
		(x) Inside size		mtrs.	
		(xi) Depth of water during HFL in		mtrs.	
		(xii) Maximum drawn down		mtrs.	
		(xiii) Depth of well		mtrs.	
	(a) Length	(xiv) Any other information or			
	(b) Dia				
	(B) Pumping hours	OPERATING CONDITIONS			
	Altitude of installation above MSL	(i) Type of current		AC three/single phase	
	Characterstics of water.	(ii) Operating frequency		50 HZ	
	(a) Temperature	(iii) Rated voltage		400(+)- 10% volts.	
	(b) Ambient temp	(iv) System of earthing if any to be adopted		Double loop earthing as per BIS 3043-1987 latest with upto date ammenmdments	
	(c) Turbidity	(v) No. of working hours per day		8 Hours	
	(d) Alkalanility	(vi) Speed of revolution in RPM		To be quoted by tenderer	
		(vii) Direction of rotation		To be quoted by tenderer	
		(viii) The max. temp of cooling air & water in the place in which		35 Degree Centigrade	
	C	MOTOR			
		(i) Ref to BIS code		BIS 325-1978 read with BIS 900-1992(latest) with upto date ammendments.	
		(ii) Type of enclosure of motor		SPDP(As per BIS 4691-1985 (latest)	
		(iii) Type of duty		Continuous	

Sr. No.	Sub Head & Item of Work	Quantity	Rate	Unit	Amount					
		(iv) Mechanical out put in KW			Suitable for driving centrifugal/ reciprocating pumps required for duties specified against pumps. To avoid overloading of motor a margin of about 15-20% may be kept in the rated out put of primer mover					
		(v) Class of insulation			Class- B/Class "F"					
		(vi) Max. permissible temp. rise			-					
		(vii) Particulars of test reqd. & where they are to be conducted			As per terms and conditions.					
		(viii) Particulars as to whether voltage limiting device will be employed.			ATS/Star delta starter /Stator Rotor starter oil immersed, fully automatic to be installed between bus bar chamber and motor shunt capacitor is also proposed to be installed for improving the power factor at site.					
					Note:- Star delta starter upto 37.5 KW ATS between 37.5KW to 50 KW & Stator rotor starter with slip ring motor beyond 50 KW					
		(ix) Motor whether squirrel cage			Submersible					
		(x) Details of shaft extension reqd.			Just sufficient to provide direct drive by flexible coupling to pump.					
		(xi) Type of slip ring gear whether continuously rated or for starting purposes only & whether to be fitted with brush lifting or short circuiting			Continuously rated for Squirrel cage/Slipring motor					
		(xii) Breakway torque in terms of rated load torque & the corresponding breakway starting current which may be taken from the supply with the starting apparatus in circuit			Breakway torque to be given by the tenderer but the starting current should not exceed 2.5 times of the full load current.					

Sr. No.	Sub Head & Item of Work	Quantity	Rate	Unit	Amount					
		(xiii) Nature of load & any information regarding the driven			To work the pump offered.					
		(xiv) Where possible fault capacity of the system to which the motor is connected			The motor should be able to withstand initial current of 2.5 time the rated current for two minutes without suffering damages or permanent deformations.					
D		PUMP BIS 1520-1980) Read with BIS 9137-1978 both latest								
		(a) Nos. of pumps required			1 No. pump					
		(b) Spare parts required			For Two years normal maintenance as recommended by manufacturer.					
		(c) Optional fittings reqd.			Air cock for exhausting air from each stage					
E		PUMP OPERATING CONDITIONS								
(i)		Capacity			1.51 LPS Per set					
(ii)		Total head in Mts.			16.09 mtrs.					
		If total head is not known then								
		(i) Static head								
		(ii) Minimum depth of water								
		(iii) Variation in water level								
		(iv) Ground level to max. water								
		(v) Ground level to delivery point								
		(vi) Pressure in the suction tank			kg/cm2					
		(vii) Pressure in the delivery tank			kg/cm2					
(iii)		Length of R/Main			30 Rmt					
iv)		Dia of rising main			50 mm					
(v)		Drive arrangement			Direct through flexible coupling on a common base plate.					
(vi)		Drive type			Electric driven					
(vii)		NPSH reqd.			To be quoted by tenderer					
(viii)		Limits of total head in which the pump is reqd. to operate			(-) 15% to (+) 10% of total head.					
(ix)		Suction/delivery size of pump			To be specified by the tenderer.					
(x)		Efficiency of pump at			To be specified by the tenderer.					
		(a) Duty head								
		(b) (+) 10% head								
		(c) (-) 15% head								
(xi)		Material of construction			To be specified by the tenderer.					
					(Manufacturers certificate to be appended)					
2		Supply of suitable oil immersed star delta starter/ATS/Staror			1 No.					Each
		Note:- Star delta starter upto 37.5 KW, ATS between 37.5 KW								
3		Providing MS sheet 16 SWG steel fabricated floor mounted			1 No.					Each
		(a) Ammeter AC supply 100mm circular dial Auto			1 No.					Each

Sr. No.	Sub Head & Item of Work	Quantity	Rate	Unit	Amount					
		(i) Ref to BIS code			BIS 325-1978 read with BIS 900-1992(latest) with upto date ammendments.					
		(ii) Type of enclosure of motor			SPDP(As per BIS 4691-1985 (latest)					
		(iii) Type of duty			Continuous					
		(iv) Mechanical out put in KW			Suitable for driving centrifugal/ reciprocating pumps required for duties specified against pumps. To avoid overloading of motor a margin of about 15-20% may be kept in the rated out put of primer mover					
		(v) Class of insulation			Class- B/Class "F"					
		(vi) Max. permissible temp. rise			-					
		(vii) Particulars of test reqd. & where they are to be conducted			As per terms and conditions.					
		(viii) Particulars as to whether voltage limiting device will be employed.			ATS/Star delta starter /Stator Rotor starter oil immersed, fully automatic to be installed between bus bar chamber and motor shunt capacitor is also proposed to be installed for improving the power factor at site.					
					Note:- Star delta starter upto 37.5 KW ATS between 37.5KW to 50 KW & Stator rotor starter with slip ring motor beyond 50 KW					
		(ix) Motor whether squirrel cage			Squirrel cage					
		(x) Details of shaft extension reqd.			Just sufficient to provide direct drive by flexible coupling to pump.					
		(xi) Type of slip ring gear whether continuously rated or for starting purposes only & whether to be fitted with brush lifting or short circuiting			Continuously rated for Squirrel cage/Slipring motor					

Sr. No.	Sub Head & Item of Work	Quantity	Rate	Unit	Amount				
(xi)		Material of construction			To be specified by the tenderer.				
					(Manufacturers certificate to be appended)				
10		Supply of suitable oil immersed star delta starter/ATS/Staror		2 No.					Each
		Note:- Star delta starter upto 37.5 KW, ATS between 37.5							
11		Providing MS sheet 16 SWG steel fabricated floor mounted		1 No.					Each
		(a) Ammeter AC supply 100mm circular dial Auto		2 No.					Each
		(b) Voltmeter AC supply 100mm circular dial Auto		1 No.					Each
		(c) ICTP switches with HRC fuses Kilburn/Larsen &		1 Set					per set
		(d) Busbar chamber having 3 copper bars of suitable rating for		1 Set					per set
		(e) Oil circuit breaker/MCCB of suitable capacity of		1 No.					Each
		(f) 3 phase indicating lamps complete with toggle switches for		1 Set					per set
		(g) Earth leakage circuit breaker of recommended		1 No.					Each
		(h) Hour run meter of reputed make of four digit capacity		2 No.					Each
		(i) Suitable three phase voltage monitor relay with all		1 No.					Each
		(j) Change over switch of reputed make and suitable capacity		1 No.					Each
		(k) Single phase preventor of reputed make & suitable capacity		2 No.					Each
12		Supply of		2 No.					Each
		Note:- The sluice valve shall conform to BIS 780-1984							
(b)		Supply of		1 No.					Each
		Note:- The sluice valve shall conform to BIS 5312-1984							
(c)		Supply of Kirloskar/Kilburn/IVC/Fourcess/Gled/BHEEL/Leader		1 No.					Each
		Note:- The sluice valve shall conform to BIS 780-1984							
(d)		Supply of Kirloskar/Jyoti/IVC/Fourcess/Gled/Leader/Kartar		2 Nos.					Each
13		P/L suitable size copper PVC insulated armoured power 3.1/2		1 Job					Per Job
(b)		Providing and laying 3.00sqm mm core water proof cable as		1 job					Per Job
(c)		P/L double loop earthing with GI plate 600x600x3mm thick		1 Job.					L.S.
(d)		Supply & erection of floor/wall mounted power factor shunt		2 Nos.					Each
14		Supply of standard make 100mm dia circular dial pressure		2 Nos.					Each
15		P/L delivery pipe and suction pipe considering site		1 Job.					L.S.
		Note:- Actual laying to be done as per final drawings to be							
16		Errction of all equipments from Sr. No.9 to 12 & 14 including		1 Job					L.S.
17		Excavation in foundation and trenches etc. (for pipes and pits upto all depths) in all classification of earth work such as pick work, jumper work saturated soil including bailing out water.	518.40	Cum	329.00			Per cubic metre	#####
18		Laying, jointing and testing in trenches to be levelled to grades.							
		Raw water stage:-							
		G.I. pipe 50mm dia (M) Table 17		30 Rmt	151.00			Per Rmt.	4530.00
		Main Stage:-							
		G.I. pipe 50mm dia (H) Table 28 (RD 0 to 48)		48 Rmt	158.00			Per Rmt.	7584.00
19		Laying, jointing (by way of circumferential butt welded joints by							
		G.I pipe 50mm dia (m) RD 48 to 930		882 Rmt	47.00			Per Rmt	41454.00
								Total	#####

Executive Engineer
I&PH Division, Thunag

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TERMS AND CONDITIONS:-

The firm shall forward a copy of supply order/indent placed by it for the supply of pumps and motors on the manufactures/ The firm shall arrange dispatch of offered pumps and motors to the consignee direct from the manufacturers/ their The shop test for the pumps and motors shall be carried out at manufactures works in the presence of representative of the The firm shall supply the recommended list of spares and quantities required for normal working of pumping machinery (2 The firm shall supply the manufactures manuscripts for the operation and maintenance of the pumping equipment. The firm shall arrange operation and maintenance training to the operating staff for the pumping machinery without extra The Characteristic curves of the pumping equipment shall be supplied with the offer other wise the tender shall be rejected. The firm shall supply layout drawing in respect of various components, such as suction pipes, valves, cable, trenches, The installation of pumping machinery above 100 HP shall be inspected by the technical representative of the All the civil work shall be constructed by the department. The wiring and installation of electric equipment shall be as per HPSEB rules and regulations & subjected to the approval of The temporary electrical connection. If required during installation shall be arranged by the firm at its own cost and energy The offer shall be accepted only from manufactures/other authorized dealers/sub dealers who have already executed 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 The rates shall be quoted only on the format of schedule of quantities, which is attached with the tender document giving all The rates offered for the specified makes in the schedule of quantities only shall be considered. Rates quoted for part and The firm/contractor shall visit the site and work out filed detail for supply and erection of pumping machinery as per site All the equipment material shall conform to the relevant BIS specifications wherever applicable and in its absence to any

Sr. No.	Sub Head & Item of Work	Quantity	Rate	Unit	Amount
19					The general specifications of work shall conform to Punjab PWD/HPPWD specifications as per direction of the Engineer-in-
20					The validity of the tender shall be not less than 120 days otherwise the tender shall be summarily rejected.
21					All the equipments shall be guaranteed against any manufacturing defect including metallurgy and its performance for a
22					The installed pumping machinery and other allied accessories shall be tested daily for 16 hours for a period of seven days
23					During the guarantee period efficiency of the pumping and the electric equipment should not vary beyond the range of (+/-)
24					80% (Eighty percent) payment of the cost of pumping machinery and equipment less 10% security and other statutory
25					90% (Ninety percent) installation charges shall be released after satisfactory installation of all the pumping and electrical
26	The work shall be executed as per HPPWD/IPH specifications and to the entire satisfaction of the Engineer-in-charge.				
27					Taxes such as GST, income tax , labour cess etc shall be deducted as per norms.
28	The contractor shall be responsible for watch and ward of all material issued to him and in case of any theft or loss , the recovery shall be made at the double cost of store issue rates.				
29	The rates should be inclusive of carriage of materials in all leads and lifts to the site of work.				
30	Crushed stone aggregate shall be used in all concrete work.				
31	Concrete work shall be done by using vibrator and concrete mixing plant.				
32	Nothing shall be paid for sub standard/ rejected work.				
33	The GI Pipes shall be issued by the department free of cost at IPH Store Thunag				
34	GI fitting shall be provided by the contractor at their own cost.				

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I&PH Division, Thunag