

No.: PHE/MDNS/DB/ 3946-53  
Dated: 24-08-2023.

M/s Buhroo Mechanical Private Ltd.  
Azad Gunj Baramulla-193101  
GST No: 01AAKCB6235H1ZY  
Cell No: 7006302261

Adv. Cost:	Rs 41.354 Lacs
Allotted Cost:	Rs 39.612 Lacs

Subject: Electrical and mechanical works to be carried at WSS Kanhar Colony Botengo under JJM

- Reference: 1. This office e-NIT No.: e-NIT No. 37 of 2022-23, S. No. 02<sup>1</sup> issued under endorsement No.: PHE/MDNS/DB/5443-55, dated: 07-01-2023 and this office corrigendum No. PHE/MDNS/DB/5847-49, dated 28-01-2023.
2. Authorization awarded by Member Secretary DJJM Superintending Engineer Shakti (PHE) Hydraulic Circle Baramulla/Bandipore HQ at Sopore issued vide SE/Hyd/DB/2135-49, dated: 30-05-2023.

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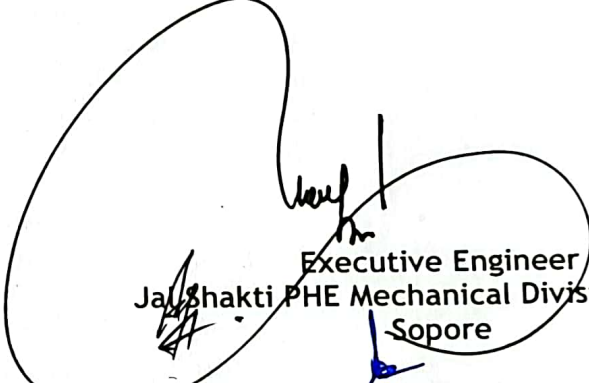
Dear Sir,

For and on behalf of Lt. Governor of J&K U.T contract for execution of "**Electrical mechanical works to be carried at WSS Kanhar Colony Botengo under JJM**" is hereby awarded to firm on the quoted/negotiated rates, as per 'General Terms & Conditions' and 'Schedule of cost quantities' annexed herewith as under:

Annexure A: General Terms & Conditions.

Annexure B: Schedule of cost and quantities.

Encl.      leaves

  
Executive Engineer  
Jal Shakti PHE Mechanical Division (North)  
Sopore

Copy to the:

1. Chief Engineer Jal Shakti (PHE) Department Kashmir, Srinagar for favour of information.
2. District Development Commissioner \_\_\_\_\_, for favour of information.
3. Superintending Engineer Jal Shakti (PHE) Mechanical Circle (North) Srinagar, for favour of information.
4. Superintending Engineer Jal Shakti (PHE) Hydraulic Circle \_\_\_\_\_ HQ at \_\_\_\_\_, for favour of information.
5. Executive Engineer Jal Shakti (PHE) Division \_\_\_\_\_, for favour of information.
6. Provisional Head, TPIA JJM Kashmir, (WAPCOS Limited) Corporate Office 76-C Institution Sector-18 Gurugram-122015 (Haryana) for favour of information.
7. Assistant Executive Engineer Jal Shakti (PHE) Mechanical Sub-Division \_\_\_\_\_ for favour of information necessary action.
8. File concerned.

**Annexure "B" Schedule of cost and quantities**  
to this office Allotment Order No: PHE/MDNS/DB/394-57, dated: 24-09-23.

Name of work: Electrical and Mechanical works to be carried out at WSS Khanhar Colony Botengo under JJM.

S. No.	Description of Work / Item(s)	No. of Qty	Units	Rate	Amount
1	<p>Design, supply, providing, installation, successful testing and commissioning of vertical turbine pumping unit as per IS 1710 driven by VT motor for pumping water at Stage 1st of following parameters.</p> <ul style="list-style-type: none"> <li>•Site Condition</li> <li>Altitude = 1580 Meters/Greater (AMSL)</li> <li>Ambient Temperature = +40°C to - 15°C</li> <li>Relative Humidity = 60%</li> <li>•Type of water = Raw water having specific gravity of unity average.</li> <li>•Quality of water = Raw water with silt having medium to coarse sand.</li> <li>•Sump/liner Bed Level = 4.5 m/otherwise specified below from Machine floor level</li> <li>•Water column in liner/sump = 2 m/as specified otherwise above from sump/liner bed level</li> </ul> <p><b>A.PUMP</b></p> <ol style="list-style-type: none"> <li>1.Discharge = 5000 GPH</li> <li>2.Type = Self water lubricated, VT pump, open line shaft.</li> <li>3.Liquid to be handled = Raw Water</li> <li>4.RPM = 1450</li> <li>5.Head = 170 M</li> <li>6.Efficiency = Not less than 50%</li> <li>7.Impeller = Semi-enclosed mixed flow all bronze/stainless steel</li> <li>8.Line shaft/head shaft = Stainless steel</li> </ol>	Job	2	5,89,881.60	11,79,763.20
	<ol style="list-style-type: none"> <li>9.Length of each line shaft = 1 m maximum</li> <li>10.Total length of line shaft = 10 m/as specified (excluding Head shaft)</li> <li>11.Impeller shaft = Stainless steel</li> <li>12.Line shaft bearing = Cut less rubber/ Neoprene rubber</li> <li>13.Line shaft coupling = Stainless steel</li> <li>14.Suction Strainer = MS fabricated</li> <li>15.Suction Bowl/Bell mouth= Cast iron</li> <li>16.Pump Bowl = Cast iron</li> <li>17.Column pipe = Mild Steel of wall thickness not less than 8mm flanged type in assorted lengths</li> <li>18.VT Pump to be designed with minimum number of stages.</li> </ol>				
	<p><b>B.Prime Mover</b></p> <ol style="list-style-type: none"> <li>1.Type = Vertical hollow shaft, AC squirrel cage induction motor</li> <li>2. Rating = Corresponding to the head and discharge not less than 30 HP.</li> <li>3.Power Supply = 03 Phase, 415V+ 15% AC</li> <li>4.Frequency = 50Hz + 3%</li> <li>5.RPM = 1450 Synchronous</li> <li>6.Efficiency = Not less than 90%</li> <li>7.HP = As per requirement</li> <li>8.Class of insulation = F or above</li> <li>9.Type of duty = Continuous</li> <li>10.Type of rotor = suitable among single squirrel cage / double squirrel cage , single or double skewed squirrel cage.</li> <li>11.GD2 = suitable for above parameters.</li> <li>12.Motor thrust bearing = Anti friction ball /roller bearing</li> <li>13.Method of starting = star/delta</li> </ol> <p>The motor should be able to with stand fluctuations in voltage and should be conforming to latest IS specifications.</p> <p><b>C.Accessories</b></p> <ul style="list-style-type: none"> <li>•Each pump unit shall be provided with suitable discharge head with proper stiffening box arrangement, non-reverse ratchet, coupling etc as per standard specification besides all other accessories required for satisfactory performance and mechanical works required for installation of pumping unit at site are included in the job.</li> </ul> <p><b>Note:</b> Providing of test certificate &amp; Characteristic Curve of pumping equipment is compulsory and pumping unit is to be approved from the concerned authority before procuring.</p>				



2	<p>Providing/supplying and fitting of 100mm dia G.I flanged Rising Main at site. The Pipe shall be hot dip Galvanized, class-C conforming to IS 1239. The Job includes providing and fitting of M.S Flanges conforming to BIS 6392/1997 Table 17 (Rating PN16) for Y junction and washout. The flanges shall be double welded both from inside and outside of the pipe using standard electrode of reputed make.</p> <p>Size : 100 Class: C (Heavy) Flanges (as per IS 6392/1997 Table:17) Thickness shall conform to IS 6392 Part 1st Table-17. The flange welding shall be carried out in double layers using reputed make electrodes to form strong welding joint. Welding Electrode DC Arc Welding using welding electrode having diameter not less than 4mm. Nuts and Bolts Nuts and Bolts (conforming to IS:1363 Part 1st) Rubber Insertion Gaskets Rubber Insertion Gaskets (conforming to IS: 638/79) to be used between flanged joints.</p>	Meters	30	2,189.00	
3	<p>Cutting of hot dip galvanized 100mm dia G.I, C-Class pipe across the section by dint of pipe cutter/ gas cutter. The job also includes Providing and welding of M.S flanges to the two ends of pipe. The Thickness of flange shall conform to IS 6392 Part 1st Table-17. The flange welding shall be carried out in double layers using electrodes to form strong welding joint by dint of DC arc welding. The job further includes Providing and Fitting of nuts and bolts (conforming to IS:1363 Part 1st) and Rubber Insertion Gaskets (conforming to IS: 638/79) to be used between flanged joints</p>	Job	10	1,544.00	15,440.00
4	<p>Fabrication, Providing and fitting of 100mm dia Y- junction having 1m length (Approx.) of each arm to be fabricated out of hot dip galvanized G.I, C-Class pipe. The job also includes Providing and welding of M.S flanges to the ends of each arm. The Thickness of flange shall conform to IS 6392 Part 1st Table-17 fastened with weld joints on three ends. The flange welding shall be carried out in double layers using reputed make electrodes to form strong welding joint by dint of DC arc welding. The job further includes Providing and Fitting of nuts and bolts (conforming to IS:1363 Part 1st) and Rubber Insertion Gaskets (conforming to IS: 638/79) to be used between flanged joints.</p>	Job	1	9,737.00	9,737.00
5	<p>Providing and fitting of DN100 Ductile Iron double flanged PN 1.6/16, non-rising spindle soft seated glandless gate/ sluice valves as per IS14846 for regulating the water supply outside the pumping units . The body and bonnet of the valve shall be of ductile iron, wedge with fully vulcanized EPDM rubber(Approved for drinking water) and NBR seal. The Gate/Sluice valve shall be compatible for buried applications and shall be safe to install in both horizontal and vertical positions It shall have electrostatic epoxy coating(approved for drinking water) both inside and outside of the valve. The valve shall be supplied along with hand wheel. Cost on account of Nuts, bolts, gaskets, etc required for the job is included in the scope of work. The job includes providing and fitting of 02 nos. M.S flanges (Table flanges) perfectly adaptable to the inbuilt flanges of the valve which shall be fitted with rising main of the pumping unit at appropriate spots as per site requirement. The job includes the cost on account of P/F of nuts, bolts and gasket required for the job.</p>	No	3	19,094.00	57,282.00
6	<p>Providing and fitting of 100mm dia Ductile Iron double flanged PN:1.6/16, Slanted seat swing check valve( NRV) as per IS 5312. The body shall be of ductile cast iron with fully encapsulated vulcanized EPDM rubber(Approved for drinking water). The valve shall be compatible for buried applications and shall be safe to install in both horizontal and vertical positions. It shall have electrostatic epoxy coating (approved for drinking water) both inside and outside of the valve. Cost on account of Nuts, bolts, gaskets, etc required for the job is included in the scope of work. The job includes providing and fitting of 02 nos. M.S flanges (Table flanges) perfectly adaptable to the inbuilt flanges of the valve which shall be fitted with Rising main of the pumping unit at appropriate spots as per site requirement. The job includes the cost on account of P/F of nuts, bolts and gasket required for the job.</p>	No	2	20,581.00	41,162.00
7	<p>Fabrication, providing and fitting of 100mm dia 90-120 degree bend/elbow to be fabricated out of Class B GI pipe, 1 m length and flanged on both ends and to make it leak proof. The flanges shall be M.S Flanges conforming to BIS 6392/1997 Table 17 (Rating PN16) and welded on both sides. The job includes nuts, bolts, gaskets etc. as per site requirement.</p>	job	7	3,614.00	25,298.00
8	<p>Fabrication, providing and fitting of washout Tee 100mm with arm length 1.2 feet each (Approx.). The Tee shall be fabricated out of G.I C-class pipe with M.S Flanges conforming to BIS 6392/1997 Table 17 (Rating PN16) fastened with weld joints on three ends. The size of the Tee is given Below:</p>	Job	1	5,122.00	5,122.00

ation of pole...  
specifications given...  
Type: HT/LT...  
Type of...  
Date...

65,613,111




9	Creation of pole mounted, outdoor type 100KVA Level II Electric Sub Station as per the technical specifications given here under - Specifications conforming to IS: 1180 (Part 1) 2014 with latest amendments. Type: HT/LT Transformer Type of cooling: ONAN. Operating conditions: Input =11000 volts Output =433 volts AC supply in 3- phase. Terminals: Input=3 No. HT bush rods with insulators, washer, nuts etc. Output=4 No. LT bush rods switch insulators, washers, nuts etc. Core: The core shall be of high permeability to reduce core losses and the strips shall be of suitable size and gauge. Transformer Coils: Suitable number of HT and LT coils in each leg of the core. The transformer coils shall be fabricated out of superior quality aluminum wire/strips, properly wound. The HT transformer is completely filled with suitable grade transformer oil up to required level. The job includes carriage, and all leads and lifts involved. The HT transformer shall be of reputed make from an ISO certified company as per relevant standards and a test certificate shall be provided before installation. The transformer shall also be provided with breather fill with silica jell crystals, conservator with oil level indicator, explosion vet and adequate radiator fins/ Tubes. The impedance of transformer shall be as per IS: 1180 (Part 1) 2014 with latest amendments. NOTE: The scope of the work shall include obtaining of necessary inspection/clearance certificate from the concerned department for all the required equipment. The testing and commissioning shall be completed only after obtaining above certificate.	Job	1	2,09,945.00	2,09,945.00
10	Supply, installation, erection of 9 mtrs long H.T pole of specifications ST- 410 (sp-33) . The job further includes drilling of holes for installation of various accessories .wherever required the job further includes G.I wire earthing of pole as per REC standard.	Nos	20	20,686.00	4,13,720.00
11	Cement Bottoming 1:2:4 mix as per REC standards 0.5 cum/pole	Job	20	4,582.00	91,640.00
12	G.I V cross with top Bracket including clamps	Kgs	338.2	163.90	55,430.98
13	11 kVa Polymeric Insulators 12 kv ,5kN , Lighting impulse 75 kv Positive and 80 kv Negative with creepage distance 320mm	Nos	66	347.00	22,902.00
14	P/F of Galvanized nuts, bolts of various sizes as per site requirement.	Kgs	29	142.00	4,118.00
15	P/F of Danger plate with clamps	Nos	20	153.00	3,060.00
16	P/F of Anti climbing Device with clamps	Nos	20	136.00	2,720.00
17	Painting of poles with Red Oxide coating	Ltr	20	306.00	6,120.00
18	Painting of poles Aluminum paint	Ltr	20	510.00	10,200.00
19	P/F of Stone pad (300mm x300mm x75mm)	Nos	20	244.00	4,880.00
20	Providing and fitting of ACSR as per IS 398 (part-2) 1996 for 50 Sq.mm ACSR (Galvanised steel reinforced) for fitment of various accessories	m	1800	60.00	1,08,000.00
21	GI Channel/Angle/Flat of sizes including clamps	Kgs	352	212.00	74,624.00
22	Supply, Installation, Testing and commissioning of Polymeric Gang operated Air break switch, outdoor type, triple pole, suitable for vertical installation, single break provided with locking arrangement at both ON and OFF position consisting of HT post double insulator, copper or copper alloy high pressure heavy contact assembly, rod with bearings, operating handle and 2 length of 32mm dia. GI pipe conforming to IS 1818 1961, 06 No. of insulators, rated voltage 11KV 200A complete as per IS specs .	Set	2	11,730.00	23,460.00
23	11 kv polymeric composite Disc Insulator 12 kv, Min failing load 45kN, Lighting Impulse 75kv Positive and 80 kv Negative, creepage distance 320mm	Nos	6	357.00	2,142.00
24	Supply, Installation, Testing and commissioning of Gapless Surge arrester station class, 10KA, 9KV, LA With polymer housing, Station Type including providing and fitting of DO set	No	1	7,754.00	7,754.00
25	Earthing of Panel board, stabilizer, Motors, heating points, lighting points, D.G sets, electric substation, comprising of company fabricated earthing electrode as per IS: 3043. The job includes Auguring of bore of required dia/depth for installation of electrode along with backfill compound mixed with soil and all other items required thereof for achieving the best result. The job includes connecting of electric gadgets through GI strip as per relevant standards. Safe earthing electrode size : 65/80 mm dia (As specified), Length : 2000 mm Back fill compound : 30 kg	Nos	3	10,462.00	31,386.00
5	Providing and fitting of Galvanized stay set with 50 X 8 mm Stay Clamp , Guy insulator (2no.), Anchor plate (200X200X6mm) , nuts and bolts , 2 NO- turn buckle , 1.8 m long , 16 mm diameter solid G.I stay rod & 7/3.15 mm dia. G.I stranded wire complete.	Set	4	5,018.00	20,072.00
7	P/f of Wedge connectors / PG Clamps	Nos	6	434.00	2,604.00
8	Sundry items like Aluminium Lugs , Jumpr, binding Tape	LS	1	1,105.00	1,105.00
	35 sq mm AB(HT) Cable (3x35+1x70 sqmm) XLPE (11 kv , 3C+Earth)	m	10	818.00	8,180.00
	Heat Shrinkable Outdoor cable termination Kit	Nos	2	8,994.00	17,988.00
	Providing & Fitting of 35 sq mm Single Core Copper Conductor (Flexible) PVC Insulated Heavy Duty Industrial Cables (Unsheathed), 1100 Volts Conforming to IS: 694- for connecting motors from panel , stabilizers in rubber conduit . Job includes providing & laying of flexible conduit for cu cable with lugs as per requirement Heat Shrinkable Outdoor cable termination Kit	M	180	546.00	98,280.00



Distribution Busbar  
 Type — Electric Grade  
 of adequate section  
 Rating

32	<p>Providing, installation, testing of power service cable for working voltage up to and including 1100 volts; 95 sq mm armored aluminum 3.5 core cable as service line from output terminals of HT/LT transformer to cubical panel. Cost includes laying of cable in trenches in Pvc conduit where ever it is to be laid underground as per site requirement included is termination of ends with suitable Aluminum tube terminals dully crimped &amp; taped.</p> <p>NOTE:- The cable terminal ends for connection to switchgear at various requisite points shall be Al. Thimbles of reputed make and of appropriate size and connected by hydraulic crimp tool only.</p>	M	120	837.00	1,00,440.00
33	<p>Providing, fitting, testing and commissioning of 75KVA voltage stabilizer as per specifications below:</p> <p>Type of voltage controller: Manually operated copper wound, 3-phase, AC power supply multi step.</p> <p>Type of Regulator : Double plate type with electrolytic copper contacts.</p> <p>Input voltage :250-400 volts.(3 phase)</p> <p>Output voltage :400 ±10% volts.</p> <p>Frequency :50 ±3 C/S.</p> <p>Windings : Electrolytic grade copper of adequate section, vacuum impregnated and Oven-dried.</p> <p>Insulation : Fiber glass insulations to tested parameters.</p> <p>Cooling :Naturally, Oil cooled</p> <p>Temp. Rise (Max):30°C above ambient</p> <p>Mounting :On Uni-directional wheels.</p> <p>Correction rate :30 volts per step</p> <p>Wave form distortion :virtually nil</p> <p>Duty cycle :100% continuous.</p> <p>Enclosure : MS sheet enclosure in pressed CGR Sheet powder coated with radiators.</p> <p>Core laminates : High grade, low eddy loss, grain oriented silicon steel laminations.</p> <p>Load : Three phase induction motor load.</p>	Job	2	1,63,721.00	3,27,442.00
	<p>Load Amperes (continuous)</p> <p>Overload in 24-hours operation: 10% above continuous Ampere rating.</p> <p>The voltage stabilizer shall have T-oil level indicator gauge preferably glass type tube or otherwise visible to naked eye. The top of the container to have a display panel for housing 02 numbers Digital voltmeters (0-500V) along with 4-way selector switch and set of neon indicators for incoming and outgoing phases (06 No's).</p> <p>Insulating media (T. Oil) of 11 KVA grade to be provided and filled up to top level, with dielectric strength of 5 KV at 4m air gap. The T-Oil of specific grade should be provided in separate barrels and filled at site up to top level.</p> <p>The voltage Stabilizer shall be accepted with manufacturers dully stamped test certificate and shall have name plate with specifications.</p>				
34	<p>Design, manufacturing, providing, fitting, testing &amp; commissioning of Star-delta Motor control gear Panel.</p> <p>The Star-delta Motor control gear Panel shall be fabricated out of 14 SWG CRCA Sheets Modular, compartmentalized, Free Standing, Floor Mounting, Front hinged doors for indoor use, removable bottom gland plates for incoming cables, dust and vermin proof (IP: 55 protection) with TP Copper Buses as per load, complete with connection, internal wiring, neon indicators for each phase, starter buttons, name plates, painting, vents etc. generally as per details furnished below:</p> <p>Rated Voltage of the Panel — 440 Volts</p> <p>Frequency — 50 HZ</p> <p>No of Phases — Three</p> <p>Enclosure Details — Free Standing, Floor mounted, Compartmentalized Design.</p> <p>Material — CRS</p> <p>Thickness of sheet steel used — 02mm</p> <p>Application — Indoor</p> <p>Cable Entry — Bottom</p> <p>Painting — Shade Siemens grey.</p> <p>a) Main Circuit Breaker incoming combined</p> <p>Type — On load 4 pole MCCB</p> <p>Rating : 250A</p> <p>Qty — 2 Nos ( for Main and Standby/DG Set Supply)</p> <p>No. of poles — 4</p> <p>Rated operational voltage — 415 V AC ± 15%</p> <p>Rated frequency — 50 ± 3% Hz</p> <p>Ultimate S.C Breaking cap at (415 volt A C , 50 Hz ) — 50kA</p>	Job	1	3,55,811.00	3,55,811.00

<p>b) Distribution bus bar                  Type ---- Electric grade Cu with red, blue &amp; yellow tapings of adequate section.                  Rating ---- 200 Amp</p> <p>c) Change over Switch                  Qty ---- One                  Type ---- Front Operated on load 4 pole (open execution)                  Rating ---- 200 Amp</p> <p>d) Circuit Breaker units                  Type ---- MCCB                  Qty ---- 2 Nos                  No. of poles ---- 3                  Rated current ---- 200 Amp                  Thermal release range-                  Rated operational voltage ---- 415 V ± 15%                  Rated frequency ---- 50 ± 3% Hz                  Ultimate S.C Breaking capacity at (415 volt A C, 50 Hz) ---- 50kA</p> <p>e) Starters (FASD)                  Power Specification ---- 3 phase, 415 ± 15% v &amp; 50 Hz                  Contactors :                  Line Contactor ---- AC3 110 A                  Delta Contactor --- AC3 110 A                  Star Contactor ---- AC3 90 A                  Timer ---- Star Delta Electronic                  Thermal overload relay – direct/CT operated Suitable/available range                  Coil Voltage : 220/240V                  Qty ---- 2 Nos</p>				
<p>f) Aux. panel                  Circuit breaker—MCCB 63 Amp                  Qty—01 no.                  No. of poles—04                  Rated operational Voltage—415+15%                  Ultimate S.C. Breaking Capacity—35 KA at (415AC,50 Hz)</p> <p>g) Stabilization unit for both starters                  Qty—02 no                  Rating— 1 KvA single phase automatic voltage stabilizer                  Input :90V-300                  Out Put : 220/240 ( as per coil voltage of contractors)                  Enclosure— to be housed within the cubical panel in separated chamber with additional meter , LED fitted outer side                  MCB DP —10A—1nos</p> <p>h) Protection Details:                  Compact Motor Protection Relay including other related accessories like single phase preventer relay, timer relay , overload-under load, phase difference etc.                  Display — LED/LCD and all setting is to be done at display                  Compact motor protection relay                  Qty :01 nos)                  Protections :                  • Flush Mounting with display                  • Last trip data recording                  • Protections:                  - Thermal Overload with pre- alarm                  - Short Circuit                  - Earth fault</p>				
<p>- Phase loss, Unbalance, Phase reversal                  - Under Current                  - Prolong starting, Locked Rotor.                  -Single phase protection- Single Phasing condition- Phase Reversal condition- Phase Unbalance condition-                  Modes of Operation</p> <p>i) M-Power module for mobile starters and Earth fault relay as Auxiliary                  Protection                  Earth Fault Relay ---- 3 phase Earth fault, ground fault module                  Range as per requirement                  MCB ---- MCB SP , 10A (10 Ka)                  j) Water level control relay for including wiring and capsules required at site keeping depth of sump 10 meters in consideration: 01 unit complete (not for production wells)</p> <p>g) Metering Details:                  •Incomers (Panel Mounted)                  (a) Multi-Function Meters LCD Display (1 No)                  Voltage of each phase , Current of each phase                  3ϕ power (Active, Apparent) , 3ϕ Power factor                  Frequency , Energy                  (b) Analog voltmeter S/S operated (1 No) - Rishabh make.</p> <p>•(b) Outgoing                  (Analog voltmeter (0-500) S/S operated (1Nos) .                  Analog Ammeters 0-100 Amp (2Nos) for both starters                  Each outgoing with S/S CT operated (Rishabh make )</p> <p>h)M-power module for mobile starter for submersible motor suitable region north India.                  j) Water level controller                  Note: Name of Scheme ; Allotment No ; should be imprinted on the machine with capital letters</p>				



Earthing of P  
substation, C  
includes Auger  
comp. point  
44  
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35	<p>Providing, installation and testing of manual type triple spur gear chain pulley block along with monorail geared travelling trolley having following features</p> <p>Gears: The hoist shall have precision machine case Hardened alloy steel gear mounted on bearings and housed in a dust proof gear box. The lubrication of gears should be of high viscosity and temperature for longer life of gears.</p> <p>Load Chain: The load chain be made of high tensile alloy steel having wear resistance and greatest mobility. The chain should be accurately collaborated, tested and have adequate in-built factor of safety for safer operation.</p> <p>Load chain wheel: the load chain well should be double ball bearing supported and specially designed, perfectly machined wheel providing correct grip of load chain to makes the hoist most safe and reliable against any failure. The main specifications of C.P Block are given below:          Make = Reputed make          Capacity = 3 ton (P)          No. Of load chain falls = 2 or above          Min. Height of lift = 6 M</p>	Job	1	62,972.00	62,972.00
36	<p>Illumination of Premises:</p> <p>Providing and erection of 9 Mtr long Hot Dip Galvanized octagonal pole (single Section) with bottom 150mm, top 75mm wide, thickness 3mm with 70 Microns Zinc coating having inside arrangement for providing of power connection along with following items.</p> <p>1)3 Way Terminal Connector 20 Amp.          2)3 No MCB 8 Amp.</p> <p>The job includes fabrication, providing and fitting of three arm GI structure at the top having 120° angle between arms and each arm having 15° Inclination with respect to horizontal plane. Each arm should be of 2' length and size and shape appropriate as per requirement of the luminary.</p> <p>The job also includes providing and fitting of required length of flexible multi strand 2 mm copper wire from each terminal connector to each holding arm.</p> <p>The pole is mounted on 1:2:4 Cement concreting of size not less than 2'x2'x6" (cost of concreting not included in the job) using 04 No anchor bolts of required size not less than 7" in length. The complete job includes earthing in GI Electrode as per relevant IS Code</p>	Job	1	22,226.00	22,226.00
37	<p>Providing, installation, testing and commissioning of area lighting 120 Watt LED (Street Light Type) on top of octagonal pole</p> <p>Having following specs:          Input: 90-240 V 50 Hz          Power Factor: &gt;0.9          Colour Temperature: 4K - 6.5K          Beam Angle: 120° - 170°          Lumens: &gt;12000          Operating Temperature: -20°C to 60°C</p> <p>The LED is pressure die cast aluminum housing with power coated finish and having Ingress Protection up to IP-68.</p> <p>The LED is properly fitted on the arm of the pole and connected to the copper wire as provided in the high mast pole</p>	Job	3	9,486.00	28,458.00
38	<p>Providing and installation of Junction Box with DP 32Amp MCB to serve as a main switch for LED lighting including complete wiring min 20-30 m from panel board.</p>	job	1	2,227.00	2,227.00
39	<p>Providing, Installation and testing of 2KVA fully automatic voltage stabilizer with input voltage 70-240 V and output 220 V. The stabilizer shall be installed and connected to the electric circuit as per location provided by site in charge.</p>	Job	1	8,154.00	8,154.00
40	<p>Providing &amp; fitting of lighting points for ( machine room , operators room,) as per site requirement in 1.5 mm<sup>2</sup> multistranded single core 1100 volts, pvc insulated copper conductor through pvc conduit pipe by way, switches, socket modules , regulators ,indicators, 08/10 watt LED lamps Surface light Make. .Included is cost on account of modular switch boards with the wooden frames as per site requirements</p>	Job	10	1,680.00	16,800.00
1	<p>Providing fitting of heating points in 2.5mm<sup>2</sup> multistranded single core 1100 volts, pvc insulated copper conductor through pvc conduit by way of p / f of 15 Amp switches, 6 pin socket on modular fitting as per site requirements. Heating points are to be connected from main control panel. All accessories required is to be provided by the firm</p>	Job	2	1,470.00	2,940.00
2	<p>Providing and fitting of 9" x 9" exhaust fan with complete wiring in 1.5 mm cu wire through conduit and 6 A modular control complete job. Make Providing and fitting of 9" x 9" exhaust fan with complete wiring in 1.5 mm cu wire through conduit and 6 A modular control complete job.</p>	Job	1	2,625.00	2,625.00
	<p>Providing, fitting of Distribution Board of reputed make 4 way S P N single door powder coated sheet steel enclosure for surface mounting fitted with bus bar, DIN channel, neutral link and incoming contact. the above DB is to be provided /fitted with double pole 40 amp MCB for Main. 32 A for heating circuit &amp; rest 3 of 16/6 amps each for premises luminary, auxiliary circuit of reputed make. Further job includes providing / fitting 4 mm<sup>2</sup> multistranded single core 1100 volts, pvc insulated copper conductor through pvc conduit as service line from main panel as per site requirements. Connections should be made in such a way Lighting points is to be connected via automatic transformer by way of p/f switch socket arrangement with allied fixtures &amp; and heating points to main panel. Job includes dismantling of existing damaged conduit , wires, conduit and cleaning the surface properly</p>	Job	1	5,775.00	5,775.00



44	Earthing of Panel board, stabilizer, Motors, heating points, lighting points, D.G sets, electric substation, comprising of company fabricated earthing electrode as per IS: 3043. The job includes Auguring of bore of required dia/depth for installation of electrode along with backfill compound mixed with soil and all other items required thereof for achieving the best result. The job includes connecting of electric gadgets through GI strip as per relevant standards. Safe earthing electrode size : 65/80 mm dia (As specified), Length : 2000 mm Back fill compound : 30 kg	Job	2	10,462.00	20,924.00
45	Painting on steel structure/pipe with synthetic enamel paint/emulsion of approved brand and manufacturer of required colour to give an even shade on new work( Two or more coats) including a coat of approved steel/cement primer but excluding a coat of mordant solution. (ref 13.61) schedule2021	sqm	50	147.00	7,350.00
46	Fabrication, providing, fitting of base frame for pumping units , covering of holes , fabrication of gantry, ladder ,DG set covering, HT/Lt transformer Bed with gantry fabricated out of ISMC/ISMB/ISA/Bars/MS Pipe/MS plain-chequered Sheets. Including making of holes in concrete, including metal primer 1 coat and two coats of approved shade all complete welded. The works is to be executed as per site requirement and as per dimentions of Pumping unit and as per directions of site engineer. Job Includes fabrication of Structural steel in built up sections , trusses and framed work, including cutting , hoisting , fixing in position.	kgs	1200	135.00	1,62,000.00
47	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shuttering. All work upto plinth level 1:2:4 with stone aggregate 20 mm nominal size. For DG Set foundation /concrete beds for rising-main as per requirement	cum	2	6,756.00	13,512.00
48	Centering and shuttering including strutting, propping etc and removal of form work for foundation, footing , base	sqm	1	303.00	303.00
49	Earth work in excavation by manual means in trenches for foundations, drains , pipes , cables etc (Not exceeding 1.5 m in width) and ramming of bottoms lift 1.5 m , including getting out excavated earth and disposal of surplus excavated earth as directed ( All kinds of soil) (2.81 schedule)	cum	10	291.00	2,910.00
50	Providing and laying of soling stone	cum	5	713.00	3,565.00
51	Cement plaster in find sand in 1:3 mix finished with a coat of neat cement and curing complete 18 mm thick. (s-11.8)	sqm	3	588.00	1,764.00
52	Supply, installation, Testing & commissioning of 1000VA Full Sine wave power inverter including Providing / Installation of 12V, 180AH Tubular inverter Battery with trolley and cover. with 2-core 4 mm <sup>2</sup> Cu (25 m) wiring as per site requirement along with other accessories like SS-Combine (02 No's), 3-pin plugs etc of reputed make for proper fitment and installation of the item.	job	1	34,053.00	34,053.00
53	Providing, laying & fixing of shock proof rubber mats with adhesive/bonding material on the floor of the pump house, covering area around electro-mechanical machinery for safeguarding the life & limb of the workmen due to possible leakage of current & short circuit. The floor surface shall be made good & shall be free from dust, grease, foreign material & moisture free. The mats shall be as per IS 15652:2006 & shall have the following specifications: - Composition: Rubber (synthetic mats for electrical purpose) Thickness: - 2.5mm Size: - 1M wide. The rubber mats shall be accepted with manufacturers test certificate.	M	6	1,205.00	7,230.00
54	TOOL KIT For Maintenance: The Tool Kit for maintenance shall comprise of the following and all the items as mentioned below shall be of: Providing of tool kit consists of following items i.Double ended Spanner (Chrome plated) 02 sets complete ii.Double ended Ring spanners chrome plated 02 sets complete iii.Allen key set black finish 02 sets complete iv.Combination Pliers insulated with thick C.A sleeve; size in mm 165, 210, 255 each – 02 No. v.Long nose plier insulated with thick C.A sleeve; size in mm 165, 205 each – 02 No. vi.Side cutting plier insulated with thick C.A sleeve; size in mm 165, 205 make – 02 No. vii.Insulated screw Drivers Blade length in mm /Blade dia. in mm /Tip dimensions in mm / Quantity 50 3 1.6 x 0.4 02 75 3 1.6 x 0.4 02 100 3 3 x 0.4 02 125 3.5 3.5 x 0.5 02 150 3.5 3.5 x 0.5 02 200 4 4 x 0.6 02 300 5 5 x 0.8 02	Job	1	28,840.00	28,840.00

*[Handwritten signature]*



55	<p>a) Providing of good quality bedding for night stay/Shift consisting of: -  i) Mattress with warm cover size 6'x3' (6Kg)- 02 No's  ii) Quilt with warm cover size 5'x8' (6Kg)- 02 No's  iii) Pillows with covers - 02 No's  iv) Single bed warm blankets with one sided Fur- 02 No's  The filling material for mattress, quilt and pillow shall be of good quality cotton  b)The job also includes providing of pressure cooker 5ltr 02 No's, Steel patella (utensil) 5ltrs 02 No's, cooking heater 01 No., room heater 01 No., steel buckets 10 litre capacity 01 No., Plastic bucket 10 litre capacity with Mug 02 No's each, steel glasses 06 No's, steel Plates with large spoons and bowls 03 No's each, Cup and Saucer set (01 No. Set) and, 5kg Gas cylinder with burner/ stove. The job also includes providing of thermo-cool 15'x12' along with excel matting of 15'x12' size. The job also includes providing of unbreakable Plastic Chair table set consisting of chairs 04 No's, extra heavy Table 01 No. The job also includes providing of good quality safety Door locks (03 No's) of Godrej, Link locks,</p>	Job	1	39,619.00	39,619.00
56	Providing and fitting of 01 No. angle iron/sheet metal board duly painted showing various specifications of the mechanical and electrical equipments installed at site. The legs are to be grouted in cement concrete.	sft	24	209.00	5,016.00
57	Providing corrugated G.S Sheet roofing including vertical/ curved surface fixed with polymer coated J or L Hooks, bolts and nuts 8 mm dia. diameter with bitumen and G.I limpet washers filled with white lead, including a coat of approved steel primer and two coats of approved paint on overlapping of sheets complete (upto any pitch in horizontal /vertical or curved surface) excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required. 1.25 mm thick with zinc coating not less than 350 gram/m2	Sqm	3	1,799.00	5,397.00
58	Fabrication of 6' x 6' angle iron bed by way of providing and fitting of Structural steel in built up sections, trusses and framed work, including cutting, hoisting , fixing in position and applying a priming coat of approved steel primer all complete welded	Kg	94.75	114.00	10,801.50
59	Providing and fitting of 19 mm thick multilayered ply sheet of size 6 x 3 feet , 2 no's including cutting , fixing all complete including painting of the play sheet by one coat of primer and two coats of enamel paint	sft	36	150.00	5,400.00
60	Providing of solar/ electrical lantern chargeable on both solar & electrical 220v supply.	Job	1	1,911.00	1,911.00
61	Providing of bamboo ladder 18 feet long with 15 feet long link rods and HT gloves pair (01 each)	Job	1	7,350.00	7,350.00
62	Providing of 1 KW heat convector for operators for winter season.	Job	1	1,205.00	1,205.00
63	Providing and fitting of 01 No. LED (scroll type) sign board fabricated out of stainless steel and metal showing the names of water supply scheme and the Department. Size: 6'x1'6" = 9 Sft	Sft	9	3,998.00	35,982.00
64	Providing and fitting of 01 No. angle iron/sheet metal board duly painted showing various specifications of the mechanical and electrical equipments installed at site. The legs are to be grouted in cement concrete.	sft	24	209.00	5,016.00
65	Providing corrugated G.S Sheet roofing including vertical/ curved surface fixed with polymer coated J or L Hooks , bolts and nuts for DG Set and overhead gantry with bitumen and G.I limpet washers filled with white lead, including a coat of approved steel primer and two coats of approved paint on overlapping of sheets complete (upto any pitch in horizontal /vertical or curved surface) excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required. 1.25 mm thick with zinc coating not less than 350 gram/m2	Sqm	3	1,799.00	5,397.00
Rupees Thirty Nine Lakh(s) Sixty One Thousand Two Hundred Twenty Only			Total allotted amount:		39,61,220.00

  
Executive Engineer  
Jayaprakash (PHE) Mechanical Division (North)  
Sopore