Government of Jammu & Kashmir

Office of the Executive Engineer, Jal Shakti (PHE) Mechanical Division (North) Sopore

Website: phekashmir.com Email ID : phe.mdns@gmail.com

No.: PHE/MDNS/DB/ 3018-25
Dated: 26-07-2023

M/s New Kashmir Electrical and Mechanical
Galwanpora Gulshanabad, Srinagar
GST No: 01AIWPH9098K1ZI
Cell No: 6006202415

Adv. Cost:	Rs 53.431 Lacs
Allotted Cost:	Rs 48.622 Lacs

Subject: Supply, installation, testing and commissioning of electro-mechanical works for WSS Karihama under JJM.

Reference:
1. This office e-NIT No.: e-NIT No. 16 of 202-2 , S. No. 13 issued under endorsement No.: PHE/MDNS/DB/1619-24, dated: 17-06-2023.
2. Authorization awarded by District Development Commissioner, Kupwara through Minutes of Meeting issued vide No. DDCK/Plg/JJM/2744-67, dated: 17-07-2023.

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Dear Sir,

For and on behalf of Lt. Governor of J&K UT contract for execution of ***"Supply, installation, testing and commissioning of electro-mechanical works for WSS Karihama under JJM"*** is hereby awarded to your firm on the quoted/negotiated rates, as per 'General Terms & Conditions' and 'Schedule of cost and 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 Bla., 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 Bla. HQ at Sop., for favour of information.
5. Executive Engineer Jal Shakti (PHE) Division Bla, for favour of information.
6. Provisional Head, TPIA JJM Kashmir, (WAPCOS Limited) Corporate Office 76-C Institutional area Sector-18 Gurugram-122015 (Haryana) for favour of information.
7. Assistant Executive Engineer Jal Shakti (PHE) Mechanical Sub-Division _____ for information & necessary action.
8. File concerned.

Annexure "B" Schedule of cost and quantities

to this office Allotment Order No: PHE/MDNS/DB/_____, dated: _____

ame of work: Supply, installation, testing and commissioning of electro-mechanical works for WSS Karihama under JJM

S. No.	Item Description	Qty	Units	Rate In Rs	Amount In Rs
1.	Design, supply, providing, installation, successful testing and commissioning of vertical turbine pumping unit as per IS 1710 driven by VT motor for pumping water from Dug well of following parameters. • Site Condition Altitude = 1640 Meters (AMSL) Ambient Temperature = +40ºC to - 15ºC Relative Humidity = 60% • Type of water = Raw water having specific gravity of unity average. • Quality of water = Raw water with silt having medium to coarse sand. • Sump/liner Bed Level = 9m below from Machine floor level • Water column in liner/sump = 3 m above from sump/liner bed level A. PUMP 1. Discharge = 5000 GPH 2. Head = 120 Meter 3. Type = Self water lubricated, VT pump, open line shaft. 4. Liquid to be handle = Raw Water 5. RPM = 1460 6. Head = As per requirement 7. Efficiency = Not less than 60% 8. Impeller = Semi-enclosed mixed flow all bronze/stainless steel 9. Line shaft/head shaft = Stainless steel 10. Length of each line shaft = 1 m maximum 11. Total length of line shaft = 10 m excluding head shaft 12. Impeller shaft = Stainless steel 13. Line shaft bearing = Cut less rubber/ Neoprene rubber 14. Line shaft coupling = Stainless steel 15. Suction Strainer = MS fabricated 16. Suction Bowl/Bell mouth= Cast Iron 17. Pump Bowl = Cast iron 18. Column pipe = Mild Steel of wall thickness not less than 8mm flanged type in assorted lengths. At least 10 metres column pipes to be provided however exact length o f the column pipes shall be determined at the site. VT Pump to be designed with minimum number of stages. B. Prime Mover 1. Type = Vertical hollow shaft, AC squirrel cage induction motor not less than 17.5 HP 2. Power Supply = 03 Phase, 415V ± 10% AC 3. Frequency = 50Hz ± 3% 4. RPM = 1450 Synchronous 5. Efficiency = Not less than 90% 6. HP = corresponding to above head and discharge 7. Class of insulation = F or above	2.00	Jobs	510000.00	1020000.00

	8. Type of duty = Continuous 9. Type of rotor = suitable among single squirrel cage / double squirrel cage, single or double skewed squirrel cage. 10. GD^2 = suitable for above parameters. 11. Motor thrust bearing = Anti friction ball /roller bearing 12. Method of starting = star/delta The motor should be able to with stand fluctuations in voltage and should be conforming to latest IS specifications. C. Accessories • 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 . Note: Providing of test certificate & Characteristic Curve of pumping equipment is compulsory and pumping unit is to be approved from the concerned authority before procuring.				
2.	Fabrication, providing and fitting of split type MS clamps 10 mm thick, Length as per sump opening and 3 inch wide for lowering and holding of pumping unit fitted. The job includes the cost of required size nuts and bolts.	2.00	Jobs	1801.00	3602.00
3.	Fabrication, laying and installation of delivery manifold out of 100 mm dia MS pipe class of length of 6 mtrs which includes fabrication of Y junction which is to be welded to 80 mm dia MS rising main on one side and is to be joined to 02 No. pumping units on other side (delivery side of the pump). The job is inclusive of fabrication of bends and flanges as required at site. The thickness of the pipe shall be 4.8 mm.The job also includes providing and fitting of the control valves as indicated below. Tail pieces to be used for the work shall form part of the job. Job includes priming and painting of the pipe with the departmental approved color as directed by the site engineer. Providing and fitting of Ductile Iron double flanged, Slanted seat swing check valve (NRV) 100 mm,PN 16 as per IS 5312. The body shall be of ductile cast iron with fully encapsulated vulcanized EPDM rubber (Approved for drinking water). 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 as per table 17 perfectly adaptable to the inbuilt flanges of the valve. The job includes the cost on account of P/F of nuts, bolts and gasket required for the job.(2Nos) *Providing and fitting of, Ductile Iron double flanged, non-rising* spindle soft seated glandless gate/ sluice valves 100 mm, PN 16 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 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 as per table 17 perfectly adaptable to the inbuilt flanges of the valve. The job includes the cost on account of P/F of nuts, bolts and gasket required for the job.(2Nos)	1	Job	120000.00	120000.00

	Providing, installation, testing of power wiring for working voltage up to 1100 Volts, 35 mm sq PVC insulated stranded annealed copper conductor from changeover switch to voltage stabilizer, for connecting motors to individual starters .Connections shall be made proper by appropriate Cu thimbles using crimping tools. The power cable is to be carried through pvc pipe class C conduit as a protection. From Stablizers to bus-bars of Panel then to connection box of the motor. Included is termination of ends with suitable Cu thimbles and tapings.	150.00	Meter	500.00	75000.00
5.	Design, Manufacturing, Providing, Fitting, Installation, testing and commissioning of star delta Starter and Auto power factor Panel of size (6'Hx7'Lx1.5'B) fabricated out of 14 SWG sheet and one feet additional high of MS channeled black painted stand to withstand the overall weight of panel, having required openings, vents and Protection, CRCA Sheets Modular, Free Standing, Floor Mounting, Front hinged doors for indoor use, removable bottom gland plates for incoming cables, dust and vermin proof (IP: 42 protection) with TPN Aluminum Buses, complete with connection, internal wiring, name plates, sufficient names written out side on each door to indicate the purpose of particular cabin, painting etc, fitted with accessories. generally as per details furnished below : Rated Voltage of the Panel ----- 440 Volts Frequency ----- 50 HZ No of Phases ----- Three Enclosure Details ----- Free Standing, Floor mounted, Compartmentalized Design. Material ----- CRS Thickness of sheet steel used ----- 1.67 mm Application ----- Indoor Cable Entry ----- Bottom Painting ----- Shade Siemens grey. Distribution bus bar Type -----Electric grade copper with red, blue &yellow tapings of adequate section. Rating ----- 100 Amp Change Over Switch Type : On-load Front operated No. Of Poles : 04 Rating : 100 A Makes : L&T Qty : 01 Circuit Breaker Incomer Type ----- MCCB Qty ----- 1 No Make ----- L & T /Schneider No. of poles ----- 4 Rated current-----160 Amp Operation ----- Extended Rotary Handle Rated operational voltage----- 415 V ± 15 Rated frequency ----- 50 ± 3 Hz Ultimate S.C Breaking cap at (415 volt A C , 50 Hz) ----- 50KA Type of release ----- Thermal magnetic Circuit Breaker out going unit. Type ----- MPCB Qty. ----- 2 No's	1.00	Job	220000.00	220000.00

	Make ----- L & T/Siemens Duty Range ----- (24- 32) Rated operational voltage----- 415 V ± 15% Rated frequency ----- 50 ± 3% Hz Ultimate S.C Breaking capacity at (415 volt A C , 50 Hz) 37 FASD Starter 17.5 HP Power Specification -----3 phase, 415 ± 15 v & 50 Hz Contactors : Main Contractor : 40 A 3P AC3 Rating -- 01 Delta Contactor : 40 A 3P AC3 Rating -- 01 Star Contactor : 40 A 3P AC3 Rating -- 01 Thermal Overload Relay (CT Based) (20–30) – 01No. Single Phase preventer 01 No. Star Delta Timer (0-60 Sec) – 01 Power dressing for contactors with appropriate size of copper bus bar. Make : L&T Qty : 02 On/Off push buttons to be provided on the front door Emergency stop push button to be provided. Instrument Transformers: Auxiliary wiring of the starters to be done through 415/220V PT 500VA Burden PT 415V/220V 500 VA Burden connected/ provided for each starter Motor Protection Relay: Motor Protection Relays for starters Operation – Auto manual. Make: - Proton. Display ----- LED/LCD b) Multi Function Meter: - MFM meter (1 No) at incoming circuit. Current Transformers – 100/5A, 10VA Class 1.0 Encapsulated c) MFM meter at outgoing circuit of each starter. Current Transformers – 100/5A, 10VA Class 1.0 Encapsulated Indicator lamps to indicate following Active phase three No. with Red, Yellow and Green Color. Pump running indication. Pump tripped indication. Each outgoing with S/S CT operated Current Transformer 100/5A, 10VA Class 1.0 Encapsulated. Auxiliary Wiring & Protection: Auxiliary Wiring to be done with 0.75 MM Sq wire) CT Wiring to be done with 1 MM sq wire Aux MCB 63 A for lighting and heating load. Aux MCB 2A SP to be provided at every input and output connection of instrumentation. (1 Comp. Job). The entire panel should be complete with panel door lock double for every compartment.				
6.	Providing, fitting, testing and commissioning of 50 KVA voltage stabilizer as per specifications below: Capacity: 50 KVA, 3-phase Type of voltage controller: Manually operated copper wound, 3 phase, AC power supply multi- step. Type of Regulator: Double plate type with electrolytic copper contacts. Input voltage: 150 volts. (3 phase) Output voltage: 415 ±10 volts.	1.00	Job	107401.00	107401.00

	Frequency: 50 ±3 C/S Windings: Electrolytic grade copper of adequate section, vacuums impregnated and Oven dried. Insulation: Fibre glass insulations of tested parameters. Cooling: Naturally Oil cooled. Temp. Rise (Max) : 30°C above ambient Mounting: On uni-directional wheels. Correction rate: 30 volts per step Wave form distortion: virtually nil Duty cycle: 100% continuous. Enclosure: MS sheet enclosure in pressed CGR Sheet powder coated with radiators of adequate thickness. Core laminates: High grade, low eddy loss, grain oriented silicon steel or CRG core. Load: Three phase induction motor load. The voltage stabilizer shall be capable to withstand load 10% above maximum load for 02 hour operation. 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 shall have a display panel for housing 02 numbers voltmeters (0-500V) along with 4-way selector switch and set of neon indicators for incoming and outgoing phases (06 No's).Insulating media (T. Oil) of 11 KVA grade with 62 dielectric value is to be provided and filled up to top level. The T-Oil of above grade should be provided in separate barrels and filled at site up to top level. The voltage Stabilizer shall be accepted with manufacturers duly stamped test certificate and shall have name plate with specifications, name of manufacturer and name of Water Supply Scheme				
7.	Providing and Fitting of 3.5-Core, 70 Sq. mm XLPE, and 11KV grade Armoured Aluminum Cable of various sizes conforming to IS: 7098 part 1st as service line from the HT transformer to control panel including necessary thimblings, crimping, taping etc. to be fitted from changeover panel to modular panel. The job also includes P/F of Aluminum thimbles of various sizes as per site requirement including crimping and taping.	25.00	Meter	668.00	16700.00
8.	Providing and fitting of 80 mm Dia G.I flanged Rising Main at site. The Pipe shall be hot dip Galvanized, class medium confirming to IS 1239. The job includes providing and fitting of M.S Flanges conforming to BIS 6392/1997 Table 17 (Rating PN16). The flanges shall be double welded both from inside and outside of the pipe using standard electrode of reputed make. 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 electrodes to form strong welding joint. The electrodes shall be having diameter not less than 4mm, Nuts and Bolts, Rubber Insertion Gaskets of reputed makes to be used between flanged joints.	1500.00	Meter	1251.00	1876500.00
9.	Earth work excavation for rising main and allied works by mechanical means in trenches for foundation, drains, pipes, cables (not exceeding 1.5 m in width) and for shafts, wells, cesspits, gravel pack cum holding mechanism etc. and the like not exceeding 10 Sq m on plan, including dressing of sides and reaming of bottom lift up to 1.5 m, including getting out excavated earth and disposal of surplus excavated earth as directed. Under road way a minimum clear cover of 1.5m is to be provided,	400	Cum	263.00	105200.00

	same can be modified to suit local conditions. The job includes back filling and cleaning of road.				
10.	Fabrication, providing and fitting of washout Tee with arm length as per site requirement but not less than 1.5'x1.5'x1.5'. 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. Nominal Dia -80 mm	1.00	Job	5122.00	5122.00
11.	Earth work excavation for rising main and allied works by manual means in trenches for foundation, drains, pipes, cables (not exceeding 1.5 m in width) and for shafts, wells, cesspits, gravel pack cum holding mechanism etc. and the like not exceeding 10 Sq m on plan, including dressing of sides and reaming of bottom lift up to 1.5 m, including getting out excavated earth and disposal of surplus excavated earth as directed. All kinds of soil.	100	Cum	479.30	47930.00
12.	Backfilling of the excavated earth in trenches in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering lead up to 50 m and lift up to 1.5 meters.	450	Cum	219.00	98550.00
13.	Fabrication, Providing and fitting of 90-120 Degree bend /elbow with flanges, fabricated out of Class C GI pipe (5.4mm thickness) of length as per site requirement and flanged on both ends. The flanges shall be M.S Flanges conforming to BIS 6392/1997 Table 17 (Rating PN 16) and welded on both sides. The job includes nuts, bolts, gaskets etc as per site requirement. Nominal Dia -80mm	12.00	Job	2797.00	33564.00
14.	Providing and fitting of Ductile Iron double flanged, Slanted seat swing check valve (NRV) 80 mm,PN 16 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 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. Preferably makes : VAG / AVK / SIGMA FLOW	4.00	Job	17489.00	69956.00
15.	Providing and fitting of, Ductile Iron double flanged, non-rising spindle soft seated glandless gate/ sluice valves 80 mm, PN 16 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 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	2.00	Job	15497.00	30994.00

	gasket required for the job.				
16.	Fabrication of gantry mechanism, bed for staff and base frame and support for Rising Mains and allied works by way of providing 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 The job also includes painting of complete Structure in one coat of red oxide and 02 coats of enamel metal paint. The quantity of the steel members like ISMB 200/150/100 , MS chequered sheet, ISMC 100, ISMC 75, ISA 50X 50 X5mm /40X 40 X 6mm, Square bars, railing pipe, MS pipes, angles, tubes, shall be used as per directions of site engineer, same may vary as per site requirement as it is conditional to civil structures being constructed.	3500	Kg.	115	402500.00
17.	The above steel structure shall be covered with 26 SWG CGI color coated laminated sheets with desired jointing arrangement complete, including Chaja, ridge and Morkh as per requirement.	150	SM	848	127200.00
18.	Providing, installation and testing of manual type triple spur gear chain pulley block along with monorail geared travelling trolley having following features 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. 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. 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. i. Make = Indeff / Pull lift ii. Capacity = 2 Ton Iii. No. Of load chain falls = 2 iv. Min. Height of lift = 6 M	1.00	Job	44473.00	44473.00
19.	Supply, installation, Testing & commissioning of 1100 VA Full Sine wave power inverter including Providing / Installation of 12V, 180AH Automotive inverter Battery with trolley and cover. with 2-core 4 mm2 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. Make : Exide / Luminous / Amaron	1.00	Job	34053.00	34053.00
20.	Illumination of Premises: 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. 1) 3 Way Terminal Connector 20 Amp. 2) 3 No MCB 8 Amp. The job includes fabrication, providing and fitting of three arm GI structures at the top having 120° angle between arms and each arm having 15° inclination with respect to horizontal plane. Each	1.00	Job	22226.00	22226.00

	arm should be of 2' length and size and shape appropriate as per requirement of the luminary. 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. The pole is mounted on 1:2:4 Cement concreting of size not less than 2'x2'x6" 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				
21.	Providing, installation, testing and commissioning of area lighting 120 Watt LED (Street Light Type) on top of octagonal pole having following specifications: Input: 90-210 Volts Power Factor: >0.8 Color Temperature: 4K - 6.5 K Beam Angle: 120° - 170° Lumens: >12000 Operating Temperature: -20°C to 60°C The LED is pressure die cast aluminium housing with power coated finish and having Ingress Protection up to IP-68. The LED is properly fitted on the arm of the pole and connected to the copper wire as provided in the high mast pole.	3.00	Job	9486.00	28458.00
22.	Providing and installation of Junction Box with DP 32 A MCB to serve as Main switch for LED Lighting. The job includes making of electric connection to the circuit.	1.00	Job	2227.00	2227.00
23.	Providing and Fitting of 2-Core, 10 sq mm XLPE, and 1.1KV and 11KV grade Armoured Aluminum Cable of various sizes conforming to IS: 7098 part 1st as service line from the HT transformer to control panel including necessary thimblings, crimping, taping etc. To be fitted from auxiliary MCCB of panel to main junction box of octagonal pole.	50.00	Meter	162.00	8100.00
24.	a) Providing of good quality bedding for night stay/Shift consisting of: - I) Mattress with warm cover of size 6'x3' (6Kg) white cotton - 02 No's ii) Quilt with warm cover of 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 white cotton b) The job also includes providing of pressure cooker 5ltr (02 Nos), Steel patella (utensil) 5ltrs (02 Nos), cooking heater (01 No.), room heater (01 No), steel buckets 10 liter capacity (01 No), Plastic bucket 10 liter capacity with Mug (02 Nos) each, steel glasses (06 Nos), steel Plates with large spoons and bowls (03 Nos) 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, heavy Table 01 No. The job also includes providing of good quality safety Door locks (03 No's).	1.00	Job	50000.00	50000.00
25.	Providing, laying & fixing with adhesive/bonding material of insulation rubber mats 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	6.00	Meter	1205	7230.00

	specifications: Composition: Rubber (synthetic mats for electrical purpose) Thickness: - 2.5mm Size: - 1M wide. The rubber mats shall be accepted with manufacturers test certificate. Make : Jyoti / Dunlop				
26.	Providing of solar/ electrical lantern chargeable on both electrical and solar 220 V supply.	1.00	Job	1911.00	1911.00
27.	Providing of bamboo ladder-18 feet long along with 15 feet long link rod and HT glove pair (01 No each)	1.00	Job	7350.00	7350.00
28.	Providing of 02` KW heat convector for staff for winter season.	2.00	Job	1205.00	2410.00
29.	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.	36.00	Sft	154.00	5544.00
30.	Supply , installation , commissioning and creation of pole mounted, outdoor type 63 KVA capacity Level II Electric Sub Station as per the amendment No. 4 March 2021 to IS: 1180 (Part 1) 2014 (Fourth Revision). 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.	1.00	Job	171000.00	171000.00
31.	Providing and fitting G.I Channel /Angle/ Flat of sizes including clamps (for transformer bed, taping point , brackets of poles etc)	240.00	Kg.	123.00	29520.00
32.	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(01 no. at existing tapping point and another at existing substation).	2.00	Job	11730.00	23460.00

33.	Supply, Installation, Testing and commissioning of 11KV polymer fuses Set Horn Gap 3-phase 200 A suitable for vertical installation.	1.00	Set	4983.00	4983.00
34.	Supply, installation, Fixing, testing and commissioning Drop Out Fuse Set Current Rating-100 Amp Size- standard	1.00	Set	6000.00	6000.00
35.	Supply, installation, Fixing, testing and commissioning Link Set with Voltage Level- 11KV, Frame- Galvanized channel base Current Rating-100 Amp Size- Standard	2.00	Set	7000.00	14000.00
36.	Supply, Installation, Testing and commissioning of Gapless Surge arrestor station class, 10KA, 9KV, LA With polymer housing, Station Type.	1.00	Set	7754.00	7754.00
37.	Supply and fitting of 11 KV polymeric composite pin insulator 12 KV, 5KN, Lighting impulse 75KV Positive, and 80 KV Negative , creepage distance 320 mm.	36.00	No.	300.00	10800.00
38.	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.	12.00	Job	20686.00	248232.00
39.	P/F of Galvanized nuts, bolts of various sizes as per site requirement for fitment of electric substation, poles etc.	60.00	Kg.	130.00	7800.00
40.	Earthing of poles complete by GI Rod 20 mm 2.5 mtr long through GI Strip as per REC Standard	12.00	Job	1100.00	13200.00
41.	P/F Danger Plate with clamps	12.00	Job	153.00	1836.00
42.	Providing and fixing G.I Barbed wire as anti-climbing devices	6.0	Kg.	136.00	816.00
43.	Providing and fitting of Galvanized stay set with 50 X 8 mm Stay Clamp , Guy insulator (2no.), Anchor plate (200X200X6mm) , nuts and bolts , 2 N0- turn buckle , 1.8 m long , 16 mm diameter solid G.I stay rod & 7/3.15 mm dia. G.I stranded wire complete.	5.00	Set	4922.00	24610.00
44.	Painting of poles by Red oxide .	7	Liter	306.00	2142.00
45.	Painting of poles Aluminum paint	7	Liter	510.00	3570.00
46.	P/L of ACSR conductor 0.03 as per relevant IS code	1000	Meter	39.00	39000.00
47.	Providing and fitting of PG clamps.	12.00	No.	350.00	4200.00
48.	Providing and fitting of three phase, 4 wire commercial LT Prodigy Meter with all allied Accessories and fixtures.	1.00	Job	29000.00	29000.00
49.	P/I of earthing for electric substation, LT panel and stabilizer 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 : 80 mm Dia Length : 2000 mm Back fill compound : 30 kg	4.00	Job	10462.00	41848.00
50.	Earth work in excavation by mechanical means (hydraulic excavator) in trenches for foundations, drains, pipes, cables etc. (not exceeding 1.5 m in width) and for shafts, wells, cesspits and the like not exceeding 10 Sq m on plan, including dressing of sides and ramming of bottoms lift up to 1.5 m, including getting out excavated earth and disposal of surplus excavated earth as	20.00	CM	262.70	5254.00

	directed, within a lead of 50 meters: All kinds of soil				
51.	Providing and laying of soling stone	3.00	CM	740.00	2220.00
52.	Providing and laying in position cement concrete of specified grade including curing but excluding the cost of centring and shattering. All works up to plinth level with 1:2:4 mix (1 cement, 2cores sand, and 4 graded stone aggregate 20mm nominal size).	10.00	CM	7200.00	72000.00
53.	Centering and shattering including strutting, propping etc. and removal of from work for foundation, footings, base for columns	20.00	SM	286.35	5727.00
Estimated / advertised amount:					**5343173.00**
Percentage quoted by L1 firm {-9%}:					**480885.57**
Total allotted amount: **(Rupees Forty Eight Lakh Sixty Two Thousand Two Hundred and Eighty Seven Only)**					**4862287.00**

Executive Engineer
Jal Shakti PHE Mechanical Division (North)
Sopore