

Office of the Executive Engineer
MODS Zone-7, DWASA
107/1/A/1/A, North Jatrabari
Near Ideal School & College, Dhaka.

BoQ

Name of the Work : Repairing & Maintenance of Kutubkhali-1 and kutubkhali-2 pump house, pump compound and related works under MODS zone-7, Dhaka WASA.

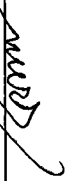
Sl no	Basis of Rate	Group	Description	Unit	Qty	Unit Rate (Tk.)	Amount (Tk)
1	PWD-2018, item no-1.4	Civil	Mobilization and cleaning site before commencing actual physical work and during contract period and demobilization after completion of the works under contract to be accepted by the Engineer-in-charge. This work shall also covers clayey cleaning and clearing, cutting or filling, dressing the project area on and in the ground to an extent that all the events of works of the project can be executed smoothly in a working environment with a particular attention on safety and security in all respects, and to stockpile the end outcome to a place for disposal agreed by the Engineer-in-charge, where, payments are to be based on ground area determined by the Engineer-in-charge and be proportionate to the percentage progress of work under contract as a whole in all respects and approved by the Engineer-in-charge	Sqm	190.000	169.000	32,110.000
2	PWD-2018, item no-2.1.3	Civil	Earthwork in excavation in foundation trenches up to 1.5 m depth and maximum 10 m lead: in medium stiff clayey soil.	Cum	15.300	126.000	1,927.800
3	PWD-2018, Item no-2.2	Civil	Bailing out of trapped water caused by inundation or rain, by pump from foundation trenches.	Hr	4.000	424.000	1,696.000
4	PWD-2018, Item No-2.10.1	Civil	Sand filling in foundation trenches and plinth with sand having F.M. 0.5 to 0.8 in 150 mm layers including leveling, watering and compaction to achieve minimum dry density of 95% with optimum moisture content (Modified proctor test) by ramming each layer up to finished level as per design supplied by the design office only, all complete and accepted by the Engineer-in-charge.	Cum	28.500	635.000	18,097.500

Sandip

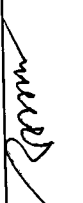
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Sl no	Basis of Rate	Group	Description	Unit	Qty	Unit Rate (Tk.)	Amount
5	PWD-2018, Item No-2.11	Civil	50 mm down graded picked jhama khoa consolidation in foundation trenches by mixing the same with best quality local sand (F.M. 1.2) in 2:1 (khoa: sand) proportion to achieve minimum dry density of 95% with optimum moisture content (Modified proctor test) including breaking and screening chips, laying and spreading in 150 mm layers uniformly and compacting etc. all complete and accepted by the Engineer-in-charge.	Cum	2.888	4,239.000	12,240.113
6	PWD-2018, Item no-3.1	Civil	One layer brick flat soling in foundation or in floor with first class/picked jhama bricks including preparation of bed and filling the interstices with local sand, leveling etc. complete and accepted by the Engineer-in-charge	Sqm	45.000	420.000	18,900.000
7	PWD-2018, Item No- 3.3	Civil	Brick on end edging including preparation of bed and filling the interstices with local sand, leveling, maintaining alignment and grid etc. all complete and accepted by the Engineer-in-charge	M	18.000	104.000	1,872.000
8	PWD-2018, Item no- 3.1.4	Civil	Mass concrete (1:3:6) in foundation or in floor with cement, sand (F.M. 1.2) and picked jhama brick chips including breaking of chips, screening, mixing, laying, compacting to required level and curing for at least 7 days including the supply of water, electricity, costs of tools & plants and other charges etc. all complete and accepted by the Engineer-in-charge. (Cement: CEM-II/A-M). Mass concrete in foundation (1:3:6) with cement, brick chips and sand of F.M. 1.2	Cum	2.250	6,647.000	14,955.750
9	PWD-2018, Item No- 3.4.2	Civil	Mass concrete (1:2:4) in foundation or in floor with cement, sand (F.M. 1.2) and picked jhama brick chips including breaking of chips, screening, mixing, laying, compacting to required level and curing for at least 7 days including the supply of water, electricity, costs of tools & plants and other charges etc. all complete and accepted by Engineer-in-charge. (Cement: CEM-II/A-M). Mass concrete in floor (1:2:4) with brick chips and local sand of F.M. 1.2.	Cum	5.063	7,575.000	38,348.438
10	PWD-2018, Item no-3.7	Civil	Supplying and laying of single layer polythene sheet weighing one kilogram per 6.5 square meter in floor or any where below cement concrete complete in all respect and accepted by Engineer-in-charge.	Sqm	63.000	42.000	2,646.000
11	PWD-2018, item No- 4.3	Civil	Brick works with first class bricks with cement sand (F.M. 1.2) mortar (1:4) in exterior walls including filling the interstices with mortar, raking out joints, cleaning and socking the bricks at least for 24 hours before use and washing of sand, necessary scaffolding, curing at least for 7 days etc. all complete including cost of water, electricity and other charges (measurement to given as 250 mm width for one brick length and 375 mm for one brick and a half brick length) accepted by the Engineer-in-charge. (Cement: CEM-II/A-M) In ground floor	Cum	5.063	6,769.000	34,268.063


Sl no	Basis of Rate	Group	Description	Unit	Qty	Unit Rate (Tk.)	Amount
12	PWD-2018, item no-4.27	Civil	38 mm thick artificial patent stone (1:2:4) flooring with cement, best quality coarse sand (50% quantity of Sylhet sand or coarse sand of equivalent F.M. 2.2 and 50% best quality local sand of FM 1.2) and 12 mm down well graded brick chips including breaking chips, screening, laying the concrete in alternate panels, compacting and finishing the top with neat cement and curing at least for 7 days in all floors including cost of water, electricity and other charges etc. all complete and accepted by the Engineer-in-charge. (Cement: CEM-III/A-M) In ground floor.	Sqm	23.500	468.000	10,998.000
13	PWD-2018, item no-7.1.1	Civil	Reinforced cement concrete works with minimum cement content relates to mix ratio 1:2:4 having minimum $f_{cr} = 24$ MPa, satisfying a specified compressive strength $f_{c'} = 19$ MPa at 28 days on standard cylinders as per standard practice of Code ACI/BNBC/ASTM, cement conforming to BDS EN-197-1-CEM-I, 52.5N (52.5 MPa) / ASTM-C 150 Type - I, best quality sand [50% quantity of best local sand (F.M. 1.2) and 50% quantity of Sylhet sand or coarse sand of equivalent F.M. 2.2] and 20 mm down well graded picked jhama brick chips conforming to ASTM C-33 including breaking chips and screening, making and placing shutter in position maintaining true to plumb, making shutter water-tight properly, placing reinforcement in position; mixing in standard mixer machine with hopper fed by standard measuring boxes or mixing in batching plant, casting in forms, compacting by vibrator machine and curing at least for 28 days, removing centering-shuttering after specified time approved; including cost of water, electricity, testing charges of materials and cylinders as required, other charges etc. all complete, approved and accepted by the Engineer-in-charge. (Rate is excluding the cost of reinforcement and its fabrication, placing, binding etc. and the cost of shuttering & centering)	Cum	0.200	7,517.000	1,503.400
14	PWD-2018, item no-8.1.2	Civil	Grade 400 (RB 400 /RB 400W: complying BDS ISO 6935-2:2006) ribbed or deformed bar produced and marked according to Bangladesh standard, with minimum yield strength, f_y (ReH)= 400 MPa but f_y not exceeding 450 MPa and whatever is the yield strength within allowable limit as per BNBC/ ACI 318, the ratio of ultimate tensile strength f_u to yield strength f_y , shall be at least 1.25 and minimum elongation after fracture and minimum total elongation at maximum force is 16% and 8% respectively : up to ground floor.	Kg	15.100	82.000	1,238.200


Sl no	Basis of Rate	Group	Description	Unit	Qty	Unit Rate (Tk.)	Amount
15	PWD-2018, Item No-12.15.2	Civil	Supplying, fitting and fixing M.S. door shutter made with 38 mm x 38 mm x 6 mm angle outer frame, inner member 25 mm x 6 mm F.I. bar, cladding with 16 BWG M.S. sheet, 04 nos. 75 mm long hinge, 02 nos locking arrangement with 50 mm x 50 mm x 6 mm M.S. angle chowkat including all charges for welding, riveting etc. including cost of supplying all essential fittings like iron hinges, socket bolts, clamps, for fitting and fixing the frame, making necessary holes in brick walls and R.C.C works and fitting with C.C. (1:2:4) and mending good the damages including all cost of carriage, workshop charges, electricity, and labour for fittings, fixing, curing etc. all complete and accepted by the Engineer-in charge. (Rate is excluding the costs of painting).	Sqm	2.000	5,870.000	11,740.000
16	PWD-2018, Item No-15.1	Civil	Minimum 12 mm thick cement sand (F.M. 1:2) plaster (1:4) with fresh cement to both inner-and outer surface of wall, finishing the corner and edges including washing of sand, cleaning the surface, curing at least for 7 days, cost of water, electricity, scaffolding and other charges etc. all complete in all respect as per drawing and accepted by the Engineer-in-charge. (Cement: CEM-II/A-M) ground floor.	Sqm	132.325	243.000	32,154.975
17	PWD-2018, Item No-15.3	Civil	Minimum 12 mm thick cement sand (F.M. 1:2) plaster with neat cement finishing to dado with cement (1:4) up to 150 mm including washing of sand, finishing the edges and corners and curing at least for 7 days, cost of water, electricity, scaffolding and other charges etc. all complete in all respect as per drawing and accepted by the Engineer-in charge. (Cement: CEM-II/A-M) ground floor.	Sqm	25.200	295.000	7,434.000
18	PWD-2018, item no-16.1.1	Civil	Exterior standard acrylic emulsion paint of approved best quality and color having water resisting properties and resistance properties against fungi, fading & flaking delivered from authorized local agent of the manufacturer (Berger weather coat smooth/ Elite smooth exterior/ Asian apex weather coat or equivalent brand) in a sealed container; applying to exterior surface with surface preparation including cleaning, drying, making free from dirt, grease, wax, removing all chalked and scaled materials, fungus, mending good the surface defects using sand paper and necessary scaffolding; applying 1 coat of exterior sealer of specified brand on prepared surface; then applying 1 coat of exterior putty of specified brand for levelling, spot filling, crack filling and cutting by sand paper/zero water paper; finally applying 2 coats of exterior emulsion paint spreading by brush/roller/spray & necessary scaffolding etc. upto desired finishing, elapsing specified time for drying or recoating; all complete in all floors and accepted by the Engineer-in charge.	Sqm	317.690	238.000	75,610.220



 Engineer-in-charge

Sl no	Basis of Rate	Group	Description	Unit	Qty	Unit Rate (Tk.)	Amount
19	PWD-2018 Item No- 16.2.1	Civil	Interior standard acrylic emulsion paint (plastic or matt finish) of approved best quality and colour delivered from authorized local agent of the manufacturer (Berger obbialac plastic emulsion/Asian apcolite plastic emulsion or equivalent brand) in a sealed container; applying to interior wall and ceiling with surface preparation including cleaning, drying, making free from dirt, grease, wax, removing all chalked and scaled materials, fungus, mending good the surface defects using sand paper and necessary scaffolding; applying 1 coat of interior sealer of specified brand on prepared surface; then applying 1 coat of interior putty of specified brand for levelling, spot filling, crack filling and cutting by sand paper/zero water paper; finally applying 2 coats of interior emulsion paint spreading by brush/roller/spray & necessary scaffolding etc. upto desired finishing, elapsing specified time for drying or recoating; all complete in all floors and accepted by the Engineer-in charge.	Sqm	155.800	234.000	36,457.200
20	PWD-2018, item no- 16.3.	Civil	Standard synthetic enamel paint of approved best quality and colour delivered from authorized local agent of the manufacturer (Berger jhilik synthetic enamel/Elite quick drying/Asian decora synthetic enamel or equivalent brand) in a sealed container, having high water resistance, high bondability, flexibility property; using specified brand thinner applying to metallic or wooden surface by brass/roller/spray in 2 coats over single coat anti-corrosive coating including cleaning, drying, making free from dirt, grease, wax, removing all chalked and scaled materials, all complete in all floors and accepted by the Engineer-in-charge.	Sqm	50.288	189.000	9,504.338
21	PWD-2018, item No- 17.5.1	Civil	25 mm thick ferroceement treatment work for water proofing on roof having minimum cement content relates to mix ratio 1:2 cement conforming to BDS EN-197-1-CEM-I, 52.5N (52.5MPa)/ASTM-C 150 type-1, and best quality coarse sand (F.M. 2.2) including, the supply of all materials, cutting, binding of one layer of 20 BWG galvanized wire mesh having minimum yield strength fy = 450 MPa & having 2 mesh per 25 mm in both ways, clear cover 12 mm at the middle of the ferroceement lining, with washing of sand, chipping, cleaning the surface, watering, grouting, casting, laying on proper level of roof top or floor in panels (1.25 m x 1.25 m). Compaction including leveling, curing at least for 21 days including cost of water, electricity, in all respect as per drawing, design and accepted by the Engineer-in-charge.	Sqm	36.350	1,265.000	45,982.750

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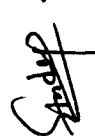
Sl no	Basis of Rate	Group	Description	Unit	Qty	Unit Rate (Tk.)	Amount
22	PWD-2018, item no- 26.5.1.1	Civil	Supplying, fitting and fixing of Bangladesh pattern, long pan with foot-rest, made of vitreous China clay and preparing the base of pan with cement mortar (1:4) and with wire mesh or rods, if necessary in all floors including making holes wherever required and mending good the damages and fitting, fixing, finishing etc. complete with all necessary fittings and connections approved and accepted by the Engineer- in- charge. 26.5.1 530 mm x 430 mm x 210 mm size & 12.5 kg of weight, White	each	2.000	1,737.000	3,474.000
23	PWD-2018, Item no- 26.22	Civil	Supplying, fitting and fixing of super quality C.P. towel rail of 600 mm long and 20 mm in dia with C.P. holder including making drills in walls and mending good the damages with cement mortar (1:4) etc. all complete approved and accepted by the Engineer- in- charge.	each	2.000	711.000	1,422.000
24	PWD-2018, item no- 26.26.1	Civil	Supplying, fitting and fixing of standard size soap tray including making holes in walls and mending good the damages with cement mortar (1:4) etc. all complete approved and accepted by the Engineer- in- charge. 26.26.1 C.P. soap tray	each	2.000	242.000	484.000
25	PWD-2018, Item No- 26.37.1	Civil	Supplying different inside dia best quality uPVC pressure pipe for water supply having specific gravity 1.35 - 1.45, and other physical, chemical, thermal, fire resistivity properties etc. as per BSTI approved manufacturer standards or ASTM, BS/ISO/IS standards fitted and fixed in position with sockets, bends, with all accessories such as Round grating/domed roof grating, bends, sockets etc. approved and accepted by the Engineer in-charge. 26.37.1 12 mm dia wall thickness 1.7 mm - 2.8 mm	M	20.000	102.000	2,040.000
26	PWD-2018, Item no- 26.80.1.	Civil	Construction of masonry inspection pit with 250 mm thick brick work in cement mortar (1:4) including necessary earth work, side filling and one layer brick flat soiling, 75 mm thick (1:3:6) base concrete for making invert channel and 12 mm thick (1:2) cement plaster with neat finishing etc. all complete up to a depth of 700 mm approved and accepted by the Engineer- in- charge. 26.80.1 Clear 450 mm x 450 mm and depth 450 mm to 600 mm, average 525 mm for single 150 mm dia R.C.C. pipes and 400 mm PVC pipe.	each	2.000	3,530.000	7,060.000
27	PWD-2018, Item No- 26.35	Civil	26.35 Supplying 150 mm inside dia best quality uPVC soil, waste and ventilation pipe having specific gravity 1.35 - 1.45, wall thickness 4.5 mm - 5.2 mm, and other physical, chemical, thermal, fire resistivity properties etc. as per BSTI approved manufacturer standards or ASTM, BS/ISO/IS standards fitting and fixing in position with sockets, bends, with all accessories such as Round grating/domed roof grating bands, sockets etc. approved and accepted by the Engineer- in- charge.	M	15.000	1,075.000	16,125.000




Sl no	Basis of Rate	Group	Description	Unit	Qty	Unit Rate (Tk.)	Amount
28	PWD-2018, item no-32.1	Civil	32.1 Stripping of unserviceable plaster including racking out joints, cleaning etc	Sqm	157.525	25.000	3,938.125
29	PWD-2018, Item no-32.1	Civil	32.2.1 Picking-up of unserviceable patent stone from floor and dado etc. and removal of debris to a safe distance.	Sqm	23.500	39.000	916.500
30	PWD-2018, Item No-32.3	Civil	32.3 Picking up of damaged/unserviceable terraced (lime concrete) floor or roof etc. and removal of debris to a safe distance	Sqm	36.350	53.000	1,926.550
31	PWD-2018, Item No-EM-4.4.1(i)	E/M	Providing & fixing on a prepared board 250 volt grade following single pole miniature circuit breaker (SPMCBS) having minimum breaking capacity 6-KA with thermal over current and instantaneous electromagnetic short circuit release provision.4.4.1 SPMCBS of DORMAN SMITH / MEM / SIEMENS / VIRTZRO / HAGER / FEDERAL / KAWAMURA / ABB / HAVELLS / LEGRAND / MERLIN GERIN / SCHNEIDER or equivalent brand accepted / approved by the engineer. 4.4.1 (i) 5 - 40 Amps.	each	4.000	640.000	2,560.000
32	PWD-2018, item no-E/M-1.1.1(i)	E/M	Channel point wiring (BYM) (without switch) 1.1.1 Surface channel wiring for the following point looping at the switch board with earth terminal with 1C-2x1.5 sqmm PVC insulated and sheathed stranded cable (BYM) and same size PVC insulated ECC(BYA) (Green / White Color) including circuit wiring with 1C-2x2.5 sqmm PVC insulated and sheathed stranded cable (BYM) & same size PVC insulated ECC(BYA) Green / White color through minimum 1 mm thick PVC channel complete with 18 SWG GP sheet / PVC switch board (preferably concealed) with 3mm thick ebonite sheet cover, circular box, without switch, fixing materials, other accessories etc. as required and mending the damages good. All electrical contacts shall be of brass / copper connected through connector or soldering (no twisting shall be allowed) and cables shall be manufactured and tested according to relevant IEC / BDS / BS / VDE standards and as per detailed specification mentioned in Annexure-1. The work shall be carried out as per direction & approval of the Engineer. Cables manufactured by govt. of BANGLADESH owned / shared company ltd. (Eastern cables) approved by the Engineer. 1.1.1 (i) Light / exhaust or wall bracket fan point	point	12.000	814.000	9,768.000

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Sl no	Basis of Rate	Group	Description	Unit	Qty	Unit Rate (Tk.)	Amount
33	PWD-2018, Item No-E/M-4.11.1(iv)	E/M	4.11 Providing & fixing 250 volts. 5 / 6 amps (minimum) concealed type following switch / switch socket manufactured and tested in accordance with relevant IEC / VDE / NEMA / BS / JIS standards mounted on required size 18 SWG galvanized plain sheet / PVC board (Self-extinguishing 650oC) of 76.2 mm (3") depth. All electrical contacts shall be of brass / copper. (Manufacturer shall have certificate of standard which they follow) 4.11.3 Assembled and made in BANGLADESH / CHINA / INDIA.. / TURKEY / VIETNAM .4.11.1 (iv) Four gang switch	each	4.000	308.000	1,232.000
34	PWD-2018, Item no-E/M-4.11.1(v)	E/M	4.11.1 (v) One gang switch & one 5 amps. 2-pin socket combined	each	2.000	646.000	1,292.000
35	PWD-2018, Item no-E/M-4.12(iii)	E/M	4.12(iii) Assembled and made in BANGLADESH / CHINA / INDIA / TURKEY / VIETNAM	each	2.000	767.000	1,534.000
36	PWD-2018, Item No-E/M-6A.6(ii).a	E/M	Supply & fixing of LED tube / panel light fitting of the following features, size and model with all necessary elements such as driver, chips etc. complete. Model & sample shall be approved by the Engineer.6A.6 (ii).(a) (i) GLORIA cat No- GTF (LED). 774 or equivalent product of ENERGY+, ENERGYPAC, SUNKO etc. (ii) Rated life : 30,000 hr.(minimum) (iii) Luminous flux : 100 + 1m/w (iv) LED chips : EDISON / EPISTOR / OSRAM / PHILIPS / CREE/ BRIDGELUX. (v) Driver: MEANWELL / OSRAM / PHILIPS / IEC standard. (vi) Size : 2 ft. and 4 ft.6A.6 (ii).(a).1'2' x 9 W	each	4.000	1,050.000	4,200.000

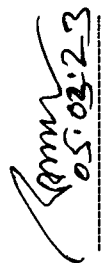


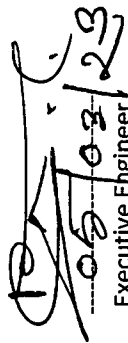


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37	PWD-2018, Item no- 6A.9.(iii).(a)	E/M	Supply & fixing of LED flood light fitting of the following features and model with all necessary elements such as driver, chips etc. complete. Model & sample shall be approved by the Engineer. 6A.9.(iii).(a) (i) SUNKO model no - SES - FL50 / 50 W or equivalent product of ENERGY +, GLORIA etc. (ii) Rated life : 50,000 hr. (minimum) (iii) Luminous flux : 100 + 1m/w (iv) LED chips : EDISON / EPISTOR / OSRAM / PHILIPS / CREE / BRIDGELUX. (v) Driver: MEANWELL / OSRAM / PHILIPS / IEC standard. (vi) Body: Aluminium body	each	3,000	4,528.000	13,584.000
38	PWD-2018, item no-E/M- 6A.21.3	E/M	6A.21 Supply & fixing of the following LED bulbs & tube lamps manufacturers by ENERGY+ / MEP / HARMONICS / ELECTRO / SUNTEC / GE / TRANSTEC / ENERGYPAC or equivalent brand accepted / approved by the Engineer. 6A.21.3 - 5 watt LED bulb (white).	each	2,000	302.000	604.000
Total Tk.						481,844.920	

In word: Four lakh eighty one thousand eight hundred forty four point nine two zero taka only.


Sub-Assistant Engineer
MODS Zone-7
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Assistant Engineer/ SDE
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Executive Engineer
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