

Dhaka Water Supply & Sewerage Authority, DWASA
Office of the Executive Engineer
MODS Zone-10

Estimate

Name of Work: Construction of 01 (One) Nos Delivery main and wash out line of Dhamal Court-1 DTW with related works including supply of all necessary materials Under MODS Zone-10.

Sl. No	Basis of Rate	Description of item	Qty	Unit	Rate (BDT)	Amount (BDT) (4x6)
1	2	3	4	5	6	8
PART-B						
Schedule-1: Construction of delivery main and washout line.						
1	WASA-1	Supply, lay, fitting and fixing of uPVC (Unplasticized polyvinyl chloride)/DI/PE/MS/HDPE water pipelines (including supply of materials, fittings, Equipment described in schedule) in accordance with the technical specification and the standard detailed drawings, of any diameter specified below. The rate includes • for excavation in all kinds of soil, BFS/HBB/Bituminous road, CC, RCC road surface except rock to the full depth of trench required by the specifications, precautions necessary to avoid damage of underground utility services, (any damage Contractor shall repair by his own cost) including removing the excavated earth & stacking the same to safe distance without any traffic obstacles, dewatering of the trench to keep dry condition at all times, including all necessary shoring, boxing, must be protected from any collapse of trench sides, preparation of trench bottom, at depth of 1.2.M, transport (all kinds of materials, equipment, pipes & fittings) to site, laying, jointing and cleaning of the water pipes; disposal of surplus excavated material and transport back surplus materials to Dhaka WASA stores (materials supplied by Dhaka WASA described in Annexure ----) as per specifications and direction of Engineering in charge (cost of excess excavated earth would be deducted as per depts material rate)				
	WASA-1/3/o	i) 200 mm dia HDPE Pipe PN 10, SDR17 & PE100	0	m	2,318.001	-
	WASA-1/3/m	ii) 160 mm dia HDPE Pipe PN 10, SDR17 & PE100	0	m	1503.001	-
	WASA-1/7/d	iii) 200 mm dia (6mm wall thickness) M.S. Pipe.	6	m	3526.001	21,156.006
2	WASA-3	Supply, lay, fitting and fixing of DI/CI/MS/GI fittings for PVC/HDPE pipes in accordance with the technical specifications, standard detailed drawings and direction of Engineering in charge.				
	WASA-3/12/b	i) 150×90° MS Bend (6mm thick)	2	Each	4862.001	9,724.002
	WASA-3/16/c	ii) 200×150mm MS Reducer	1	Each	3330.001	3,330.001
	WASA-3/11/c	iii) 200×45° M.S. bend (6mm thick)	2	Each	7527.001	15,054.002
	WASA-3/14/e	iv) 200×150×200 M.S (with flange) Tee	1	Each	4239.001	4,239.001
	WASA-5/1/b	v) 150 mm dia flange type Gate Valve	0	Each	20787.001	-
	WASA-5/1/c	vi) 200 mm dia flange type Gate Valve	0	Each	31557.001	-
	WASA-4/6/c	vii) 200 mm dia M.S Flange adopter	2	Each	1380.001	2,760.002
	WASA-4/2/b	viii) 150 mm dia C.I Dresser Coupling in/c nut-bolts	2	Each	1411.001	2,822.002
	WASA-4/2/c	ix) 200 mm dia C.I Dresser Coupling in/c nut-bolts	2	Each	1668.001	3,336.002
	Analysis	x) 150 mm dia MS Special (M.S. - HDPE) Dresser Coupling	1	Each	1574.001	1,574.001
	Analysis	xi) 200 mm dia MS Special (M.S. - HDPE) Dresser Coupling	3	Each	1929.001	5,787.003
	WASA-1/7/d	xii) 200 mm dia (short Piece) (6mm wall thickness) M.S. Pipe.(If Flowmeter not found in Dhaka WASA store.)	2	m	3526.001	7,052.002

3		Supply, lay, fitting and fixing of HDPE Fittings for PVC/HDPE pipes in accordance with the technical specification, standard detailed drawings and direction of Engineering in charge.				
	Analysis	i) 200×200×200mm dia HDPE EF Tee	0	Each	5073.001	-
	Analysis	ii) 160×90° HDPE EF Bend	0	Each	1861.001	-
	Analysis	iii) 160mm dia HDPE EF Sleeve	0	Each	1173.001	-
	Analysis	iv) 200mm dia HDPE EF Sleeve	0	Each	2282.001	-
4	WASA-24	Supply, lay, fitting and fixing of different types of fittings for Delivery main & washout line in accordance with technical specifications, standard detailed drawings and direction of Engineering in charge.				
	WASA-24/a	i) 200 mm dia Non-return Valve	0	Each	11866.001	-
	WASA-24/b	ii) 200 mm dia Flow meter SCADA compatible	1	Each	1516.001	1,516.001
	WASA-24/c	iii) 3" to 4" dia Pressure meter 300 PSI Made in UK/USA/Japan.	1	Each	978.001	978.001
	WASA-24/d	iv) 350-200×20 mm th M.S Flange	4	Each	633.001	2,532.004
	WASA-24/e	v) 350-150×20 mm thick M.S Flange	0	Each	518.001	-
	WASA-24/f	vi) 75×20 mm dia Nut Bolts	120	Each	58.001	6,960.120
	WASA-24/h	vii) 20 mm dia M.S Anchor nut Bolt	4	Each	345.001	1,380.004
	Analysis	viii) 350-200×5 mm thick rubber gasket	40	Each	75.001	3,000.040
	Analysis	ix) 350-150×5 mm thick rubber gasket	10	Each	70.001	700.010
	Analysis	x) 50 mm dia flange type Air release Valve (double acting) with necessary gate valve and accessories.	1	Each	3773.001	3,773.001
	Analysis	xi) 50 mm dia flange type SS Gate Valve (Provision for Fire hydrant) with necessary accessories.	1	Each	6494.001	6,494.001
5		Supply, lay, fitting and fixing of DI/CI/MS/GI fittings for Installation of Delivery line in accordance with the technical specifications, standard detailed drawings and direction of Engineering in charge.				
	Analysis	i) 200 x 150 mm dia 90° MS Reducing Bend	1	Each	5775.001	5,775.001
	Analysis	ii) Base plate 8 mm Thickness (one pair)	1	Each	3150.001	3,150.001
	Analysis	iii) Clamp (one pair)	2	Each	3676.001	7,352.002
	Analysis	iv) 150/100 mm dia (short Piece with flange) (6mm wall thickness) M.S. Pipe.	0	m	3516.001	-
6	PWD-2.10.1	Pipe bedding surrounding: Supply, depositing and compaction of fine sand (FM 0.8) bedding, surrounding and above pipes up to required depth with proper ramming of 150mm layer as per specifications, standard detailed drawings and direction of Engineering in charge.	6.14	Cum	635.001	3,897.660
7	PWD-2.10.1	Main backfill of trenches: Supply depositing and compaction of fine sand back filling (FM 0.8) at all required depth in accordance with the technical specification and direction of Engineering in charge, and standard detail drawings for all water pipe line diameters. .	7.68	Cum	635.001	4,878.713
8	WASA-7	Back filling by excavated granular soil including depositing and compaction at all required depth in accordance with the technical specification by excavated soil for kutcha road surface.	2.02	Cum	134.001	270.682
9	WASA-8	Temporary reinstatement of rigid and flexible paved road by compacted sand (FM 1.2) of 75 mm thick and one layer brick soling by full burned 1st class bricks of appropriate size (excavated bricks of proper sizes and quality is allowed to use) of the existing surfaced road in accordance with the technical specification and direction of Engineering in charge, and standard detail drawing for all water pipeline of any diameters for the type of road Surface given below				
		A. Asphalt/concrete road surface.	11.70	Sqm	73.601	861.132
		B. Katcha road/BFS/HBB Rd.	2.02	Sqm	36.801	74.338

0	WASA-9	Excavation and removal of loose soil from site and the back fill of the excess excavation with approved fill materials/ excavated earth all in accordance with technical specification.	5.74	Cum	331.001	1,900.608
11	WASA-13	The excavation of trial holes and the completion of back fill with approved fill materials, all in accordance with the technical specification.	20.25	Cum	184.001	3,726.020
12	WASA-14	Interconnection of water pipelines to any existing water supply networks, the rate includes for excavation, cutting, necessary plugging, de-watering, cleaning and unplugging, protection and repair of any existing structures. All works shall be done in accordance with Technical Specification and direction of Engineering in charge and Standard detail Drawings for the diameter of the existing water pipelines given below.				
	WASA-14/1-3	a) 100 to 225mm dia PVC	1	No.	2284.001	2,284.001
13	PWD-3.4	Placing of Mass concrete 1: 3:6 for the anchor blocks at all bends, tees end caps and reducers, including the supply of all materials in accordance with the technical specification necessary additional excavation ; supply of all materials and for the wrapping of all PVC jetting encased in concrete with two layers of heavy duty polytheist sheeting .	0.24	Cum	7643.001	1,857.249
14	WASA-20	Hire charge of de-watering pump: Bailing out of all water from pipe line trench with supply of de-watering pump required size including supplying of fuel lubricants and all other required of the trench to keep the trench in a dry condition at all timed etc. All complete as per direction of the E/C.	1	day	2141.001	2,141.001
15	PWD-16.3.1	Painting to Delivery main & washout line: 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.	0.54	Sqm	189.001	101.260
Sub total (Shedule-1) Tk=						142,436.873

Shedule-2: Construction of sluice valve chamber & pillar for delivery line support.

16	PWD-2.1.3	Earth work in excavation in all kinds of soil for foundation trenches including layout, providing center lines, local bench-mark pillars, levelling, ramming and preparing the base, fixing bamboo spikes and marking layout with chalk powder, providing necessary tools and plants, protecting and maintaining the trench dry etc., stacking, cleaning the excavated earth at a safe distance out of the area enclosed by the layout etc. all complete and accepted by the Engineer-in-charge, subject to submit method statement of carrying out excavation work to the Engineer-in-charge for approval. However, engineer"s approval shall not relieve the contractor of his responsibilities and obligations under the contract.				
		Earthwork in excavation in foundation trenches up to 1.5 m depth and maximum 10 m lead: in medium stiff clayey soil.	2.58	Cum	126.00	324.941

17	PWD-3.1	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	0.91	Sqm	420.001	381.151
18	PWD-3.4.1	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	0.07	Cum	7643.001	520.202
19	PWD-2.10.1	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.	1.99	Cum	635.001	1,263.017
20	PWD-2.13	Earth filling in foundation trenches and plinth in 150 mm layer with earth available within 90 m of the building site to achieve minimum dry density of 95% with optimum moisture content (Modified proctor test) including carrying, watering, leveling, dressing and compacting to a specified percentage each layer up to finished level etc. all complete and accepted by Engineer-in-charge.	1.00	Cum	149.001	149.001
21	PWD-4.3	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	6,769.001	-
22	PWD-7.1.1	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)	0.45	Cum	7,515.001	3,381.750

23	PWD-7.15.1	Form work for centering and water tight shuttering as per drawing with wooden planks (Jam/Jarul) of different thickness including supply of polythene sheet (1kg covering 6.5sqm) for making shuttering leakproof for all sorts of R.C.C. works in building construction including fitting, fixing by nails, tie rods, nuts and bolts to desired shape and size including leveling and removing the forms etc. after specified period including the cost of all materials as per direction of Engineer in charge. Individual and continuous footing of column, raft etc. With 25mm thick wooden planks.	5.70	Sqm	399.001	2,274.306
24	PWD-8.1.2	Supplying, fabrication and fixing to detail as per design : ribbed or deformed bar reinforcement for Reinforced cement concrete, produced and marked in accordance with BDS ISO 6935 - 2: 2006 (or standard subsequently released from BSTI) including straightening and cleaning rust, if any, bending and binding in position with supply of G.I. wires, necessary laboratory tests (excluding splices or laps) etc. complete in all respect and accepted by the Engineer-in-charge (Measurement shall be recorded only on standard mass per unit length of bars, while dia of bars exceeds its standard)				
		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, fy (ReH)= 400 MPa but fy not exceeding 450 MPa and whatever is the yield strength within allowable limit as per BNBC/ ACI 318, the ratio of ultimate tensile strength fu to yield strength fy, 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.	56.43	Kg	82.001	4,627.218
25	PWD-15.2	Minimum 12 mm thick cement sand (F.M. 1.2) plaster with neat cement finishing to plinth wall with cement (1:4) up to 150 mm below ground level 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	280.001	-
26	WASA-10	Bituminous coating to the external faces of chamber and service pits at all depths, in accordance with the Technical Specification. To include for the supply of all materials.	-	Sqm	120.001	-
27	WASA-11	Water tightness testing of completed Gate valve and washout chambers in accordance with the technical specification, standard detailed drawing, supplying all necessary materials and testing water as per direction of the Engineer in charge.	4	Nos.	508.001	2,032.004
28	L.S.	Site Cleaning as per direction of E/C	2	Item	4091.415	8,182.830
Sub total (Shedule-2) Tk						23,136.420

Summary of Cost

Schedule-1 (Installation) 142,436.873

Schedule-2(S/V Chamber & Pillar) 23,136.420

Total Cost (PART-B)

165,573.293

Tender Amount Tk.=

165,573.293

Taka in word : (One Lac Sixty Five Thousand Five Hundred Seventy Three Point Two Nine Three) only.

02/12/28

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প্রকৌশলী

02/12/28