

ADDITIONAL 65MGD BULK WATER SUPPLY SCHEME FROM HALEJI TO PIPRI, KARACHI						
CONSTRUCTION OF R.C.C LINED CHANNEL & R.C.C CONDUIT FROM HALEJI LAKE TO GHARO PUMPING STATION						
SYPHON WORKS						
BILL OF QUANTITIES (PACKAGE -1)						
S.No	DESCRIPTION	No	QTY	UNIT	RATES (Rs.)	AMOUNT
	All items under this head to be carried out as per specifications, Drawings, relevant BSI/ASTM Standards, complete in all respect to the entire satisfaction of the Employer, and following Sections of the Technical Specifications. Rates shall be applicable on all types of building/structures shown in the drawings under this contract.					
PART-A						
1	<u>EXCAVATION</u> Excavation in foundation of building, bridges and other structures including dagbelling dressing refilling (Backfilling) around structure with (suitable) excavated earth watering, ramming lead upto 5'-0" ft. Complete and disposal of surplus excavated material to designated area i/c all lead & lift. etc. complete in all respects as per standard specification, drawing and entire satisfaction of the Engineer.					
1.1	<u>In Ordinary Soil</u> From ± (0.00) to (1.5m) For Pipe Works, Inlet & outlet Chamber , Washout valve Chamber	1	1,238.0	Cu.m		
	Add for additional lift of every three ft or part there of for excavation for building, bridges, pipelines & storage tanks tranches and pits and					
1.1.2	From (1.5m) to (2.5m) For Pipe Works, Inlet & outlet Chamber , Washout valve Chamber	1	825.0	Cu.m		
1.1.3	From 2.5m to 3.5m For Pipe Works, Inlet & outlet Chamber , Washout valve Chamber	1	776.0	Cu.m		
1.1.4	From 3.5m to 4.5m For Pipe Works, Inlet & outlet Chamber , Washout valve Chamber	1	688.0	Cu.m		
1.1.5	From 4.5m to 5.5m For Pipe Works, Inlet & outlet Chamber , Washout valve Chamber	1	563.0	Cu.m		
1.1.6	From 5.5m to 6.5m For Pipe Works, Washout valve Chamber	1	563.0	Cu.m		
1.1.7	From 6.5m to 7.5m For Pipe Works, Washout valve Chamber	1	375.0	Cu.m		

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1.1.8	From 7.5m to 8.5m For Pipe Works, Washout valve Chamber	1	247.0	Cu.m		
1.1.9	From 8.5m to 9.5m For Pipe Works, Washout valve Chamber	1	124.0	Cu.m		

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1.2	<u>In Hard Soil or soft Murum</u>					
1.2.1	From $\pm (0.00)$ to (1.5m) For Pipe Works, Inlet & outlet Chamber , For Washout valve Chamber	1	532.0	Cu.m		
	Add for additional lift of every three ft or part there of for excavation for building, bridges, pipelines & storage tanks tranches and pits and other structures.					
1.2.2	From (1.5m) to (2.5m) For Pipe Works, Inlet & outlet Chamber , For Washout valve Chamber	1	355.0	Cu.m		
1.2.3	From 2.5m to 3.5m For Pipe Works, Inlet & outlet Chamber , For Washout valve Chamber	1	333.0	Cu.m		
1.2.4	From 3.5m to 4.5m For Pipe Works, Inlet & outlet Chamber , For Washout valve Chamber	1	296.0	Cu.m		
1.2.5	From 4.5m to 5.5m For Pipe Works, Inlet & outlet Chamber , For Washout valve Chamber	1	272.0	Cu.m		
1.2.6	From 5.5m to 6.5m For Pipe Works, For Washout valve Chamber	1	242.0	Cu.m		
1.2.7	From 6.5m to 7.5m For Pipe Works, For Washout valve Chamber	1	161.0	Cu.m		
1.2.8	From 7.5m to 8.5m For Pipe Works, For Washout valve Chamber	1	106.0	Cu.m		
1.2.9	From 8.5m to 9.5m For Pipe Works, For Washout valve Chamber	1	53.0	Cu.m		
2	<u>WOODEN FORMWORKS/SHUTTERING FOR PLAIN CEMENT CONCRETE</u> Providing, fixing, erection and removal of centering for plain cement concrete works of partial wood (shuttering / formwork) of approved quality in horizontal / vertical surface etc. complete in all respects as per standard specification, drawing and entire satisfaction of the Engineer.					
2.1	Inlet & outlet Chamber , For Washout valve Chamber	1	848.0	Sqm.		

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3	<u>PLAIN CEMENT CONCRETE</u> Cement concrete plain including placing compacting, finishing and curing, complete (including screening and washing of stone aggregate without shuttering, complete in all respect, as per specifications & relevant drawings and all works to the entire satisfaction of the Engineer.					
3.1	For Inlet & outlet Chamber (1:4:8), Washout Valve Chamber (1:4:8), (5.8 Mpa 850Psi) (Ratio	1	8.0	Cu.m		
3.2	Concrete Encasement (1:2:4)	1	1,128.0	Cu.m		
4	<u>REINFORCED CEMENT CONCRETE</u> Reinforced cement concrete work including all labour and material except the cost of steel reinforcement and its labour for bending and binding which will be paid separately. This rate also includes steel formwork, moulds lifting shuttering curing rendering and finishing the exposed surface (including screening and washing of shingle) also i/c plasticizer /admixture for strength etc .RC work in roof slab, beams, columns rafts. Lintels and other structural members laid in situ or precast laid in position etc complete in all respect, as per specifications & relevant drawings and all works to the entire satisfaction of the Engineer.					
4.1	Top Slab, Base Slab & Walls (4000psi)					
4.1.1	For Washout Valve Chamber (1:2:4)	1	44.0	Cu.m		
4.1.2	For Inlet & outlet Chamber (1:1-1/2:3)	2	38.0	Cu.m		
5	<u>PRECAST R.C.C (1:2:4)</u> Precast reinforced cement concrete in columns , beams lintels, stairs cases, shelves, plank and cover i/c lifting hook, erecting & fixing in position etc, lift upto 20ft .complete in all respect as per specifications & relevant drawings and all works to the entire satisfaction of the Engineer.					
5.1	For Washout Valve Chamber, Inlet & outlet Chamber	1	1.0	Cu.m		
6	<u>STEEL REINFORCEMENT</u>					

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6.1	<p>Providing, supplying, cutting, fabrication of Tor / deformed steel reinforcement for cement concrete including cutting, bending, laying in position making joints and fastening including cost of binding wire (also includes removal of) etc. complete in all respects as per standard specification, drawing and entire satisfaction of the Engineer. <i>(Bars to be cut and placed in position at any level according to the Bar</i></p> <p>For Washout Valve Chamber, Inlet & outlet Chamber</p>	1	15.8	Ton		

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7	<u>BITUMEN COATING</u> Bitumen coating to plastered or cement concrete surface, complete in all respect, as per specifications & relevant drawings and all works to the entire satisfaction of the Engineer.					
7.1	For Washout Valve Chamber, Inlet & outlet Chamber	1	368.0	Sq.m		
8	<u>WATER STOPS</u> Providing and fixing expansion /construction joint in concrete work of 9" or 225mm wide corrugated PVC water stop (with bulb) i.e soldering and cost of the material and labor etc. complete in all respects as per standard specification, drawing and entire satisfaction of the Engineer.					
8.1	For Washout Valve Chamber, Inlet & outlet Chamber	1	138.0	R.m		
SUB TOTAL AMOUNT PART - (A)						

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PART-B						
9	<u>PUDDLE FLANGE (M.S)</u> Providing and fixing M.s puddle flange of the following diameters, complete in all respect as per drawing and as directed by the engineer.					
9.1	1500mm Dia	2	2.0	Nos		
10	<u>M.S LADDER /RUNGS</u> Providing fabricating and fixing M.S ladder /rungs as shown in drawing complete with all fixing arrangements (rawal bolt, etc.) as shown in drawing enamel painting with rust proof paint (at any height in any floor) etc., complete in all respects as per drawing, standard , specifications and directed by the Engineer.					
10.1	For Washout Valve Chamber, Inlet & outlet Chamber	1	120.0	Nos		
11	<u>PIPE WORKS</u> Manufacturing, supplying, laying, jointing, testing, disinfection & commissioning of Black steel M.S Pipe made out of M.S sheet confirming to API 5L grade X 42 (Spirally Welded) with ERW & Externally asphalt coated with fiber glass 5 mm thick & internally CC Lining 12mm thick as per American Water Works Association (AWWA) Specification i/c jointing with welding in trenches i/c cost of all fittings, bend, tee, yee of any degree & reducer (if required) and testing with water specified pressure for different dia of pipes as below complete in all respect as per drawings, specifications and as directed by the Engineer/Incharge.					
11.1	1500mm (60") I.D x 12mm WT	2	200.0	Rm		
11.2	300mm (12") I.D x 12mm WT	2	20.0	Rm		

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12	<u>BUTTERFLY VALVES</u> Providing, Fixing, testing & commissioning of Ductile Iron Body Butterfly Valve with Flange End as per Design Standard BS 5155 in compliance with DIN 3202/API 594 having Nominal Pressure PN-16 Class 150 S.S Disc Gear operated & Galvanized Steel Bolts & Nuts including cost of Rubber Gas Kit/ Rubber packing & Labour complete in all respect as per specifications & as directed by the Engineer/Incharge.					
12.1	300mm Dia	2	1.0	No		
13	<u>M.S FLANGE</u> Providing & Fxing M.S Flanges-EN 1092/BS4504 Raised face having Nominal Pressure PN-16 & Standard Thickness including the cost of fabrication, fixing, jointing, also including nuts, bolts, washers, rubber packing, etc complete in all respect as per specifications & all work to the entire satisfaction of the Engineer/Incharge.					
13.1	300mm Dia	2	2.0	No		
14	<u>PENSTOCK GATE</u> Providing, fixing and erection of Penstock Gate below given sizes etc. complete in all respect and all works to the entire satisfaction of the engineer incharge.					
14.1	Penstock gate at Inter connection Point Size of (1.8 m x 1.8m)		4.0	No		
SUB TOTAL PART -B (Rs)						
TOTAL AMOUNT OF PART A+B (Rs)						