

**BILL OF QUANTITY OF PROPOSED DRILLING, EQUIPPING AND CIVIL WORKS OF LAFEY GIRLS
SECONDARY SCHOOL BOREHOLE**

B.O.Q. No. 1: PRELIMINARIES AND GENERAL ITEMS

ITEM	DESCRIPTION	QTY	UNITS	RATE KSHS	AMOUNT
1.0	PRELIMINARIES & GENERAL ITEMS				
1.1	Mobilization of materials & equipments to site	1,050	Kms	600	630,000
1.2	Fabrication, printing, erection & maintenance of project Sign Board	1	Item	60,000	60,000
1.3	(transport + per diems) including 20% contractor's cost	1	Item	400,000	400,000
	TOTAL FOR BOQ NO. 1:PRELIMINARIES & GENERAL ITEMS			KSHS	1,090,000

B.O.Q. No. 2: DRILLING AND PUMP-TESTING OF A BOREHOLE IN THE VICINITY OF THE SCHOOL

ITEM	DESCRIPTION	QTY	UNITS	RATE KSHS	AMOUNT
2.0.	BOREHOLE DRILLING				
2.1	Engage a Registered Hydro-Geologist to conduct a comprehensive Hydro-geological survey to site a suitable Borehole drilling site within the vicinity of the school (i.e, within school compound or a site not more than 300m of the existing underground water storage tank)	s	Item	180,000	180,000
2.2	Apply for and acquire a Borehole drilling permit from WRA on behalf of the client; including payment of all fees payable to WRA for acquisition of the Borehole drilling permit	1	Item	70,000	70,000
2.3	Erection of Camps, sanitary facilities on site and ensure continuous supply of water to site for drilling and other site uses	1	Item	350,000	350,000
2.4	Erection and dismantling of the drilling equipment and allied machinery at the site	1	Item	100,000	100,000
2.5	Drilling of Borehole with minimum diameter of 205mm through all type of strata including disposal of excavated materials taking any remedial measures to overcome caving in or over drilling to accommodate sloughed materials and keeping drilling records as specified between ground level and 100m b.g.l.	100	m	4,000	400,000
2.5a	Ditto item A.1.5 but between 100 & 200m b.g.l	100	m	4,500	450,000
2.5b	Ditto item A.1.5 but between 200 & 280m b.g.l	40	m	5,400	216,000
2.6	Supply and install 152mm dia. Plain steel casings	204	m	4,500	918,000
2.7	Supply and install 152mm dia. Slotted steel casings	36	m	5,000	180,000
2.8	Allow for taking of drilling cutting samples at 2m intervals	1	Item	15,000	15,000
2.9	Supply & install gravel pack (rounded 2-4mm diameter)	15	Tons	10,000	150,000
2.10.	Grout between casings and the Borehole for the top 10m	1	Item	20,000	20,000
2.11	Physical and chemical development of the Borehole including inserting & removal of development equipment				0
2.11a	Physical Development of Borehole	24	hours	10,000	240,000
2.11b	Chemical Development of Borehole	8	hours	10,000	80,000
2.12	Undertake constant discharge test as specified	32	hours	5,000	160,000
2.13	Undertake water level observation & record recovery	10	hours	10,000	100,000
2.14	Carry out Borehole Sterilization	1	Item	10,000	10,000
2.15	Install Well head, Well Cap, Serial Number & cement with slab of dimensions 1x1x1m around well head	1	Item	10,000	10,000
2.16	Supply of Water & drilling fluids for drilling operations and field camp uses	1	Item	100,000	100,000

4.3	Transportation of materials to site-1100km from Nairobi to Mandera	1	Item	220,000	220,000
4.4	Labour for erection on site	1	Item	300,000	300,000
PIPE WORK					
4.5	Supply, cut, join and install 75mm steel inlet, outlet, overflow and scour pipes for 12m ³ elevated steel tank up to ground level	1	Item	180,000	180,000
4.6	Reinforced concrete foundations of size 1.5mx1.5mx1.5m deep. Please note that it will be charged extra in case where the foundation has to be done deeper than the above size.	14	M3	15,000	210,000
TOTAL WEIGHT (APPROX.) 7,832 KG				Sub-total	
TOTAL FOR BOQ No. 4: 12M3 ELEVATED STEEL WATER				KSHS	2,150,000

B.O.Q No.5: 90MM DIAMETER & 300M LONG HDPE RISING MAI

NO	ITEM DESCRIPTION	QTY	UNITS	RATE	AMOUNT
<i>Preparation, Excavation, Pipe laying, joining and fittings</i>					
5.1	Carry out bush clearing along rising main route 500mm wide	150	SM	100	15,000
5.2	Excavate and backfill pipeline trench (after laying of pipe) 450mm wide and between 0.6m and 1.5m deep (50% in very rocky ground)	300	M	200	60,000
5.3	Lay 90mm diameter HDPE 6 Bar (Class B) pipes	300	M	900	270,000
5.4	Provide the following fittings for joining of the pipes				0
	i) Master meter 75mm diameter	1	No	48,000	48,000
	ii) 75mm Valve Sockets	4	No	1,200	4,800
	iii) 75mm GI Nipple (Provisional)	8	No	600	4,800
	iv) 75mm GI 90 degrees Tees	5	No	4,500	22,500
	v) 75mm GI Non return Valve	1	No	36,000	36,000
	vii) 75 x 20mm GI Reducing Bushes	3	No	2,200	6,600
	viii) 75mm GI Gate Valves	2	No	7,000	14,000
	ix) 75mm GI Sockets	6	No	1,500	9,000
5.5	Provide & fit 75mm dia GI Elbows	3	No	2,200	6,600
5.6	Provide & fit 20mm Air Valves	1	No	17,700	17,700
5.7	Provide & fit 20mm dia GI Gate Valves	1	No	2,000	2,000
5.8	Provide & fit 20mm dia GI Barrel Nipples	2	No	500	1,000
5.9	Provide & fit 20mm dia GI Sockets	4	No	400	1,600
5.10.	Provide & fit 20mm dia pieces of class A pipes 300mm long each and threaded on both ends to hold Air Valves	2	No	1,240	2,480
5.11	Construct Valve Chambers for Air Valves and Wash-outs as shown drawings No NWSB 2010/09/005-006	3	No	10,000	30,000
TOTAL FOR BOQ NO. 4: PRIMARY SERVICE LINE				KSHS	552,080

B.O.Q No.6: INTERNAL WATER DISTRIBUTION SYSTEM

NO	ITEM DESCRIPTION	UNIT	QNTY	RATE	AMOUNT
<i>Preparation, Excavation, Pipe laying, joining and fittings</i>					
6.1	Carry out bush clearing along rising main route 500mm wide	160	SM	100	16,000
6.2	Excavate and backfill pipeline trench (after laying of pipe) 450mm wide and between 0.6m and 1.5m deep (50% in very rocky ground)	320	M	200	64,000

6.3	Provide, lay and join 50mm Main Distribution using HDPE 6 Bar (Class C) pipes	200	M	600	120,000
6.4	Provide and lay 20mm Tertiary Distribution using uPVC 6 Bar (Class B) pipes	120	M	200	24,000
6.5	Provide Provisional sum for fittings, appertunances and contingencies	1	Item	68,000	68,000
TOTAL FOR INTERNAL WATER DISTRIBUTION PIPELINES				KSHS	292,000

GRAND SUMMARY

NO	ITEM DESCRIPTION	UNIT	QNTY	RATE	AMOUNT
1	B.O.Q No. 1: PRELIMINARIES AND GENERAL ITEMS			KSHS	1,090,000
2	B.O.Q No. 2: DRILLING AND PUMP-TESTING OF A BOREHOLE IN THE VICINITY OF THE SCHOOL			KSHS	4,109,280
3	B.O.Q No. 3: BOREHOLE EQUIPPING			KSHS	1,829,000
4	B.O.Q No.4: SUPPLY, ERECTION & CONSTRUCTION OF 12M3 ELEVATED STEEL TANK ON A 12M HIGH STEEL			KSHS	2,150,000
5	B.O.Q No.5: 90MM DIAMETER & 300M LONG HDPE RISING MAIN			KSHS	552,080
6	B.O.Q No.6: INTERNAL WATER DISTRIBUTION SYSTEM			KSHS	292,000
GRAND TOTAL FOR LAFEY LEVEL 4 HOSPITAL WATER SYSTEM				KSHS	10,022,360