

COUNTY GOVERNMENT OF BUSIA					
DIRECTORATE OF WATER SERVICES					
REHABILITATION & AUGMENTATION OF WATER SUPPLIES IN BUNYALA SUB COUNTY					
BILL No. 1					
PRELIMINARY AND GENERAL ITEMS					
ITEM No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1.1	CONTRACTUAL REQUIREMENTS				
1.1.1	Allow for provision of insurance against personal injury or death of workmen in compliance with WIBA. Contractor is required to enjoin the client (County Government of Busia). Insurance must cover implimentation and Defect Liability Period.	LS	1.00		
1.2	GENERAL ITEMS				
1.2.1	Allow for mobilization and demobilization of staff and equipment, setting camp, provision of facilities to run and maintain the camp throughout the construction period and demobilizing after completion of works. Rate to include reinstatement of site to the satisfaction of the Project Manager.	LS	1.00		
1.2.2	Allow for erection and maintenance of the Project Signboard as per the drawings or as directed by the Project Manager	No.	3.00		
	PRODUCTION OF AS BUILT DRAWINGS				
1.2.3	Hire of RTK (survey)	Days	4.00		
1.2.4	Lunch allowance 2 No staff for 6 days	Days	6.00		
1.2.5	Local transport in the field-2No staff	Days	6.00		
1.2.6	Allow for Attendance of Item 1.2.3, 1.2.4, and 1.2.5 above	%	10.00		
	SUB-TOTAL CARRIED TO COLLECTION SHEET				

BILL No. 2**REHABILITATION OF SIAKULA WATER SUPPLY**

ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
2.1	BOREHOLE WORKS				
2.1.1	Allow a sum for flushing & test pumping of the borehole	Ls	1		
2.1.2	Allow prime cost sum for water quality analysis	Ls	1		
2.1.3	Allow a sum for branding as instructed by project manager	Ls	1		
2.2	PUMP & ACCESSORIES				
	Rates to include supply, installation and testing of the following as directed by the engineer on site				
2.2.1	Approved stainless steel submersible pump, (6m ³ /hr @TDH of 100m)	No	1		
2.2.2	Approved 3m drop pipes	No	30		
2.2.3	Suspension string	m	100		
2.2.4	Approved borehole cover C/W and Adaptor set	Sum	1		
2.2.5	Woltmann 75mm helix Water Meter	No	1		
2.3	SOLAR POWER SYSTEM				
	Rates to include supply, installation and testing of the following as directed by engineer on site				
2.3.1					
2.3.2	350W Monocrystalline Solar PV modules	No	10		
2.3.3	4 Core 2.5mm submersible cable	m	90		
2.3.4	Londex std dual core cable	m	90		
2.3.5	Hybrid Inverter	No	1		
2.3.6	Electrical AC thermoset XLPE power cables-4core armoured 4mm ²	M	30		
2.3.7	Electrical AC power cables-4core armoured 1.5mm ²	M	30		
2.3.8	PV Cable 6mm (Red & Black)	M	50		

2.3.9	Conduits, cable trays, trunking, and all other materials required for complete installation works	LS	1		
2.3.10	PV protect	No.	1		
2.3.11	PV Disconnect switch	No.	1		
2.3.12	Lightning Protection System to include 10mm ² copper tape, Copper plate, earth pits and lightning arrestors.	Lot	1		
2.3.13	Earthing System to include 10mm ² copper earth cable, earth rods and earth pits	Lot	1		
2.3.14	Provide a cost for installation sundries	Lot	1		
2.4	SOLAR SUPPORT STRUCTURE				
	Rates to include supply, installation and testing of the following as directed by engineer on site				
2.4.1	50x50x3mm SHS	No	6		
2.4.2	50x50x3mm angle lines in braces	No	6		
2.4.3	75x75x3mm SHS	No	6		
2.4.4	50x 3mm flat	No	3		
2.5	10,000 LITER TANK STAND REPAIR				
	Rates to include supply, fabrication, installation and testing of the following as directed by engineer on site.				
2.5.1	120x64x5mm I-beam	No	2		
2.5.2	60x40x3mm RHS	No	6		
2.5.3	MS chequered plate 2440x1220x3mm(for tank stand)	No	6		
2.5.4	25mm MS round bar in ladder	No	4		
2.5.5	50x50x3mm RHS in guard rails	No	6		
2.5.6	M12 bolts & nuts	No	20		
2.5.7	3- coat approved emulsion & gloss paint to metallic surfaces across all water supplies as directed by the Site Engineer.	sm	120		
2.5.8	3 coats of approved emulsion gloss paint to plastered surface across all water kiosks as directed by engineer on site	sm	500		

2.6	REPAIR OF WATER KIOSK				
2.6.1	Repair existing water kiosk, rate to include supply and installation of fittings, consumer water meter, gate valve, MF bend and steel window. 2- coat approved emulsion & gloss paint to walling as directed by engineer on site.	Lsum	1		
2.7	WATER RETICULATION				
	EXCAVATION				
	To include for all trimmings to level, bedding material, compacting, disposal of surplus materials and backfilling with approved soil and reinstatement.				
2.7.1	Excavation in normal soil to a depth n.e 0.75m	CM	1125		
2.7.2	Ditto in hard rock	CM	8.1		
2.8	PIPEWORK				
	Supply, transport to site, store ready for installation including jointing materials, Fittings bolts, gaskets as applicale. Lay and joint the pipeline, include for pressure testing as specified				
2.8.1	OD 50mm, PN10 HDPE pipe in extended distribution network to Budalangi market, Budalangi secondary and Budalangi primary school	m	3000		
2.8.2	OD 40mm GI Class A pipe	m	36		
	SUB-TOTAL CARRIED TO COLLECTION SHEET				

BILL No. 3**REHABILITATION OF SIAMUNGU WATER SUPPLY**

ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
3.1	BOREHOLE WORKS				
3.1.1	Allow a sum for flushing & test pumping of the borehole	Ls	1		
3.1.2	Allow prime cost sum for water quality analysis	Ls	1		
3.1.3	Allow prime sum for branding as instructed by project manager	Ls	1		
3.2	PUMP & ACCESSORIES				
	Rates to include supply, installation and testing of the following as directed by engineer on site				
3.2.1	Approved submersible pump, (8m ³ /hr @TDH of 100m)	No	1		
3.2.2	Approved 3m drop pipes	No	30		
3.2.3	Suspension string	m	100		
3.2.4	Borehole cover C/W Adaptor set	No	1		
3.2.5	Woltmann 75mm helix Water Meter	No	1		
3.3	SOLAR POWER SYSTEM				
	Rates to include supply, installation and testing of the following as directed by engineer on site				
3.3.1					
3.3.2	350W Monocrystalline Solar PV modules	No	10		
3.3.3	4 Core 2.5mm submersible cable	m	90		
3.3.4	Londex std dual core cable	m	90		
3.3.5	Hybrid Inverter	No	1		
3.3.6	Electrical AC thermoset XLPE power cables-4core armoured 4mm ²	M	30		
3.3.7	Electrical AC power cables-4core armoured 1.5mm ²	M	30		
3.3.8	PV Cable 6mm (Red & Black)	M	50		

3.3.9	Conduits, cable trays, trunking, and all other materials required for complete installation works	LS	1		
3.3.10	PV protect	No.	1		
3.3.11	PV Disconnect switch	No.	1		
3.3.12	Lightning Protection System to include 10mm ² copper tape, Copper plate, earth pits and lightning arrestors.	Lot	1		
3.3.13	Earthing System to include 10mm ² copper earth cable, earth rods and earth pits	Lot	1		
3.3.14	Provide a cost for installation sundries	Lot	1		
3.4	SOLAR SUPPORT STRUCTURE				
	Rates to include supply, installation and testing of the following as directed by engineer on site				
3.4.1	50x50x3mm SHS	No	6		
3.4.2	50x50x3mm angle lines	No	6		
3.4.3	75x75x3mm SHS	No	8		
3.4.4	50x 3mm flat	No	3		
3.4.5	MS chequered plate 2440x1220x3mm(for tank stand)	pcs	3		
3.4.6	Mass concrete grade 15/20, Nominal mix 1:3:6 in foundation footings across all solar support structures	cm	15		
3.5	REPAIR OF WATER KIOSK				
3.5.1	Repair existing water kiosk, rate to include supply and installation of fittings, consumer water meter, gate valve, MF bend and steel window. 2- coat approved emulsion & gloss paint to walling as directed by engineer on site.	Lsum	1		
3.6	WATER RETICULATION				
	EXCAVATION				
	To include for all trimmings to level, bedding material, compacting, disposal of surplus materials and backfilling with approved soil and reinstatement.				
3.6.1	Excavation in normal soil to a depth n.e 0.75m	CM	1125		

3.6.2	Ditto in hard rock	CM	8.1		
3.7	PIPEWORK				
	Supply, transport to site, store ready for installation including jointing materials, Fittings bolts, gaskets as applicale. Lay and joint the pipeline, include for pressure testing as specified				
3.7.1	OD 50mm, PN10 HDPE pipe in extended distribution network to Busagwa dispensary, St Anne secondary, Busagwa primary & Busagwa polytechnic	m	3500		
3.7.2	OD 40mm GI Class A pipe	pcs	36		
	REHABILITATION OF BUSAGWA DISPENSARY				
3.8	EXCAVATION WORKS(for reticulation within dispensary)				
	To include for all trimmings to level, bedding material, compacting, disposal of surplus materials and backfilling with approved soil and reinstatement.				
3.8.1	Excavation in normal soil to a depth n.e 0.75m	CM	68.5		
3.8.2	Ditto in hard rock	CM	8.1		
3.9	PIPEWORK				
	Supply, transport to site, store ready for installation including jointing materials, Fittings bolts, gaskets as applicale. Lay and joint the pipeline, include for pressure testing as specified				
3.9.1	PPR pipe 1"	m	250		
3.9.2	PPR pipe 1 1/4"	m	24		
3.9.3	Allow for assorted fittings and connections including non return valve,	Lsum	1		
3.10	ELEVATED TANK (STEEL TOWER 6M HIGH)				
3.10.1	100x100x5mm SHS in columns	No	4		
3.10.2	60x60x5mm angle bracings	No	9		
3.10.3	60x60x5mm angle sections in horizontal struts	No	2		
3.10.4	120x64x5mm I-beam	No	2		
3.10.5	60x40x3mm RHS	No	6		
3.10.6	MS chequered plate 2440x1220x3mm(for tank stand)	No	6		
3.10.7	12mm thick MS gusset plates(brackets)	No	20		

3.10.8	25mm MS round bar in ladder	No	2		
3.10.9	50x50x3mm RHS in guard rails	No	5		
3.10.10	M12 bolts & nuts	No	70		
	SUB-TOTAL CARRIED TO COLLECTION SHEET				

BILL No. 4**REHABILITATION OF MAKHOMA WATER SUPPLY**

ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
4.1	BOREHOLE WORKS				
4.1.1	Allow a sum for flushing & test pumping of the borehole	Ls	1		
4.1.2	Allow prime cost sum for water quality analysis	Ls	1		
4.1.3	Allow prime sum for branding as instructed by project manager	Ls	1		
4.2	PUMP & ACCESSORIES				
	Rates to include supply, installation and testing of the following as directed by engineer on site				
4.2.1	Approved submersible pump, (10m ³ /hr @TDH of 120m)	No	1		
4.2.2	Approved 3m drop pipes 2"	No	36		
4.2.3	Suspension string	m	110		
4.2.4	Borehole cover C/W Adaptor set	No	1		
4.2.5	Woltmann 75mm helix Water Meter	No	1		
4.3	SOLAR POWER SYSTEM				
	Rates to include supply, installation and testing of the following as directed by engineer on site				
4.3.1	350W Monocrystalline Solar PV modules	No	10		
4.3.2	4 Core 2.5mm submersible cable	m	110		
4.3.3	Londex std dual core cable	m	110		
4.3.4	Hybrid Inverter	No	1		
4.3.5	Electrical AC thermoset XLPE power cables-4core armoured 4mm ²	M	30		
4.3.6	Electrical AC power cables-4core armoured 1.5mm ²	M	30		
4.3.7	PV Cable 6mm (Red & Black)	M	50		

4.3.8	Conduits, cable trays, trunking, and all other materials required for complete installation works	LS	1		
4.3.9	PV protect	No.	1		
4.3.10	PV Disconnect switch	No.	1		
4.3.11	Lightning Protection System to include 10mm ² copper tape, Copper plate, earth pits and lightning arrestors.	Lot	1		
4.3.12	Earthing System to include 10mm ² copper earth cable, earth rods and earth pits	Lot	1		
4.3.13	Provide a cost for installation sundries	Lot	1		
4.4	SOLAR PANELS SUPPORT STRUCTURE				
	Rates to include supply, installation and testing of the following as directed by engineer on site				
4.4.1	50x50x3mm SHS	No	6		
4.4.2	50x50x3mm angle lines	No	6		
4.4.3	75x75x3mm SHS	No	8		
4.4.4	50x 3mm flat	No	3		
4.5	10,000 LITRE TANK STAND-9M HIGH				
4.5.1	100x100x5mm SHS in columns	No	6		
4.5.2	60x60x5mm angle bracings	No	18		
4.5.3	60x60x5mm angle sections in horizontal struts	No	6		
4.5.4	120x64x5mm I-beam	No	2		
4.5.5	60x40x3mm RHS	No	6		
4.5.6	MS chequered plate 2440x1220x3mm(for tank stand)	No	6		
4.5.7	12mm thick MS gusset plates(brackets)	No	32		
4.5.8	25mm MS round bar in ladder	No	4		
4.5.9	50x50x3mm RHS in guard rails	No	5		
4.5.10	M12 bolts & nuts	No	150		
4.6	FOUNDATION WORKS				
	Excavation				

	To include for all trimmings to level, bedding material, compacting, disposal of surplus materials and backfilling with approved soil and reinstatement.				
4.6.1	Excavation in normal soil to a depth n.e 1.5m for foundation footings	CM	6		
	Concrete				
4.6.2	Plain concrete grade C10/20; Nominal mix 1:3:6 in 50mm blinding for foundation surfaces	CM	0.20		
4.6.3	Reinforced concrete grade C25/20; Nominal mix 1:2:4 in foundation footing	CM	3.38		
	Provide, support and fix the following reinforcement including all cutting and bending;				
4.6.4	D12 reinforcement bar	kg	55		
4.6.5	D8 reinforcement bar	kg	18		
4.7	REPAIR OF WATER KIOSK				
4.7.1	Repair existing water kiosk, rate to include supply and installation of fittings, consumer water meter, gate valve, MF bend and steel window. 2- coat approved emulsion & gloss paint to walling as directed by engineer on site.	Lsum	1		
4.8	WATER RETICULATION	CM	1125		
	EXCAVATION				
	To include for all trimmings to level, bedding material, compacting, disposal of surplus materials and backfilling with approved soil and reinstatement.				
4.8.1	Excavation in normal soil to a depth n.e 0.75m	CM	1125		
4.8.2	Ditto in hard rock	CM	8.1		
	PIPEWORK				
	Supply, transport to site, store ready for installation including jointing materials, Fittings bolts, gaskets as applicale. Lay and joint the pipeline, include for pressure testing as specified				

4.8.3	OD 50mm, PN10 HDPE pipe in extended distribution network to Khajula dispensary, ACK Musoma secondary, Lugale primary & Rugunga special school	m	3000		
4.8.4	OD 40mm GI Class A pipe	m	36		
4.9	RUGUNGA SPECIAL SCHOOL				
	FOUNDATION WORKS				
	Excavation				
	To include for all trimmings to level, bedding material, compacting, disposal of surplus materials and backfilling with approved soil and reinstatement.				
4.9.1	Excavation in normal soil to a depth n.e 1.5m for foundation footings	CM	6		
	Concrete				
4.9.2	Plain concrete grade C10/20; Nominal mix 1:3:6 in 50mm blinding for foundation surfaces	CM	0.20		
4.9.3	Reinforced concrete grade C25/20; Nominal mix 1:2:4 in foundation footing	CM	3.38		
	Provide, support and fix the following reinforcement including all cutting and bending;				
4.9.4	D12 reinforcement bar	kg	55		
4.9.5	D8 reinforcement bar	kg	18		
4.10	ELEVATED TANK (STEEL TOWER 3M HIGH)				
4.10.1	100x100x5mm SHS in columns	No	3		
4.10.2	60x60x5mm angle bracings	No	9		
4.10.3	60x60x5mm angle sections in horizontal struts	No	2		
4.10.4	120x64x5mm I-beam	No	2		
4.10.5	60x40x3mm RHS	No	6		
4.10.6	MS chequered plate 2440x1220x3mm(for tank stand)	No	6		
4.10.7	12mm thick MS gusset plates(brackets)	No	20		
4.10.8	25mm MS round bar in ladder	No	2		
4.10.9	50x50x3mm RHS in guard rails	No	5		
4.10.10	M12 bolts & nuts	No	70		

4.11	EXCAVATION WORKS(for reticulation within special school)				
	To include for all trimmings to level, bedding material, compacting, disposal of surplus materials and backfilling with approved soil and reinstatement.				
4.11.1	Excavation in normal soil to a depth n.e 0.75m	CM	68.5		
	PIPEWORK				
	Supply, transport to site, store ready for installation including jointing materials, Fittings bolts, gaskets as applicale. Lay and joint the pipeline, include for pressure testing as specified				
4.11.3	PPR pipe 1"	m	250		
4.11.4	PPR pipe 1 1/4"	m	24		
4.11.5	Allow for assorted fittings and connections including non return valve,	Lsum	1		
4.12	KHAJULA DISPENSARY				
	EXCAVATION WORKS(for reticulation within special school)				
	To include for all trimmings to level, bedding material, compacting, disposal of surplus materials and backfilling with approved soil and reinstatement.				
4.12.1	Excavation in normal soil to a depth n.e 0.75m	CM	68.5		
	PIPEWORK				
	Supply, transport to site, store ready for installation including jointing materials, Fittings bolts, gaskets as applicale. Lay and joint the pipeline, include for pressure testing as specified				
4.12.2	PPR pipe 1"	m	250		
4.12.3	PPR pipe 1 1/4"	m	24		
4.12.4	Allow for assorted fittings and connections including non return valve,	Lsum	1		
	ELEVATED TANK (STEEL TOWER 6M HIGH)				
4.12.5	100x100x5mm SHS in columns	No	4		
4.12.6	60x60x5mm angle bracings	No	9		
4.12.7	60x60x5mm angle sections in horizontal struts	No	2		
4.12.8	120x64x5mm I-beam	No	2		
4.12.9	60x40x3mm RHS	No	6		

4.12.10	MS chequered plate 2440x1220x3mm(for tank stand)	No	6		
4.12.11	12mm thick MS gusset plates(brackets)	No	20		
4.12.12	25mm MS round bar in ladder	No	2		
4.12.13	50x50x3mm RHS in guard rails	No	5		
4.12.14	M12 bolts & nuts	No	70		
	SUB-TOTAL CARRIED TO COLLECTION SHEET				

BILL No. 5
IMPROVEMENT OF WATER SUPPLY IN PRIMARY SCHOOLS

ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
5.1	WATER RETICULATION TO PROPOSED SANITATION BLOCK - MUSOMA PRIMARY SCHOOL				
	EXCAVATION				
	To include for all trimmings to level, bedding material, compacting, disposal of surplus materials and backfilling with approved soil and reinstatement.				
5.1.1	Excavation in normal soil to a depth n.e 0.75m	CM	112.5		
	PIPEWORK				
	Supply, transport to site, store ready for installation including jointing materials, Fittings bolts, gaskets as applicale. Lay and joint the pipeline, include for pressure testing as specified				
5.1.2	PPR pipe 1"	m	300		
5.1.3	Stand pipe 1"	No	4		
	FITTINGS				
	Supply, install and test the following fittings as directed by project manager				
	Gate valve 1"	No	8		
5.1.4	Non Return Valve 1"	No	2		
5.1.5	Stop coke 1"	No	6		
5.1.6	Ball valve 1"	No	2		
5.1.7	Air valve 1"	No	2		
5.1.8	Lockable water tap	No	4		
5.1.9	Water meter 1"	No	1		
5.1.10	Elbow 1"	No	26		
5.1.11	Plain socket 1"	No	30		
5.1.12	Nipple 1"	No	30		

5.1.13	Reducing Socket 1" by 3/4"	No	15		
5.1.14	Reducing bush 1" by 3/4"	No	12		
5.1.15	Union	No	16		
5.1.16	Thread seal	No	13		
5.1.17	MF bend 1"	No	8		
5.2	REHABILITATION OF WATER SUPPLY IN RUNYU PRIMARY SCHOOL				
	FOUNDATION WORKS FOR STEEL TOWER				
	Excavation				
	To include for all trimmings to level, bedding material, compacting, disposal of surplus materials and backfilling with approved soil and reinstatement.				
5.2.1	Excavation in normal soil to a depth n.e 1.5m for foundation footings	CM	6		
	Concrete				
5.2.2	Plain concrete grade C10/20; Nominal mix 1:3:6 in 50mm blinding for foundation surfaces	CM	0.20		
5.2.3	Reinforced concrete grade C25/20; Nominal mix 1:2:4 in foundation footing	CM	3.38		
	Provide, support and fix the following reinforcement including all cutting and bending;				
5.2.4	D12 reinforcement bar	kg	55		
5.2.5	D8 reinforcement bar	kg	18		
	ELEVATED TANK TOWER 3M HIGH(For 10,000 liter tank)				
	Rates to include supply, fabrication, installation and testing of the following as directed by engineer on site				
5.2.6	100x100x5mm SHS in columns	No	3		
5.2.7	60x60x5mm angle bracings	No	9		
5.2.8	60x60x5mm angle sections in horizontal struts	No	2		
5.2.9	120x64x5mm I-beam	No	2		
5.2.10	60x40x3mm RHS	No	6		
5.2.11	MS chequered plate 2440x1220x3mm(for tank stand)	No	6		

5.2.12	12mm thick MS gusset plates(brackets)	No	20		
5.2.13	25mm MS round bar in ladder	No	2		
5.2.14	50x50x3mm RHS in guard rails	No	5		
5.2.15	M12 bolts & nuts	No	70		
5.3	SOLAR POWER SYSTEM				
5.3.1	Approved submersible pump 1.5kW	No	1		
5.3.2	Approved 3m drop pipes	No	12		
5.3.3	Suspension string	m	50		
5.3.4	Borehole cover C/W Adaptor set	No	1		
5.3.5	Woltmann 75mm helix Water Meter	No	1		
5.3.6	350W Monocrystalline Solar PV modules	No	4		
5.3.7	4 Core 2.5mm submersible cable	m	50		
5.3.8	Londex std dual core cable	m	50		
5.3.9	Hybrid Inverter	No	1		
5.3.10	Electrical AC thermoset XLPE power cables-4core armoured 4mm ²	M	30		
5.3.11	Electrical AC power cables-4core armoured 1.5mm ²	M	30		
5.3.12	PV Cable 6mm (Red & Black)	M	50		
5.3.13	Conduits, cable trays, trunking, and all other materials required for complete installation works	LS	1		
5.3.14	PV protect	No.	1		
5.3.15	PV Disconnect switch	No.	1		
5.3.16	Lightning Protection System to include 10mm ² copper tape, Copper plate, earth pits and lightning arrestors.	Lot	1		
5.3.17	Earthing System to include 10mm ² copper earth cable, earth rods and earth pits	Lot	1		
5.3.18	Provide a cost for installation sundries	Lot	1		
	Solar support structure				
5.3.19	50x50x3mm SHS	No	1		
5.3.20	50x50x3mm angle lines	No	1		
5.3.21	75x75x3mm SHS	No	2		
5.3.22	50x 3mm flat	No	1		

	RETICULATION				
5.3.23	Allow for pipes(PPR 1") and fittings for reticulation upto a distance of 250m. Rates to include excavation, installation and testing.	Lsum	1		
5.4	REHABILITATION OF WATER SUPPLY IN BUDALA PRIMARY SCHOOL				
	SHALLOW WELL PROTECTION				
5.4.1	Allow a prime sum for protection of existing shallow well including repair of the well head and installation of protective apron	Lsum	1		
	ELEVATED TANK TOWER 3M HIGH(For 10,000 liter tank)				
5.4.2	100x100x5mm SHS in columns	No	3		
5.4.3	60x60x5mm angle bracings	No	9		
5.4.4	60x60x5mm angle sections in horizontal struts	No	2		
5.4.5	120x64x5mm I-beam	No	2		
5.4.6	60x40x3mm RHS	No	6		
5.4.7	MS chequered plate 2440x1220x3mm(for tank stand)	No	6		
5.4.8	12mm thick MS gusset plates(brackets)	No	20		
5.4.9	25mm MS round bar in ladder	No	2		
5.4.10	50x50x3mm RHS in guard rails	No	5		
5.4.11	M12 bolts & nuts	No	70		
5.5	SOLAR POWER SYSTEM				
5.5.1	350W Monocrystalline Solar PV modules	No	4		
5.5.2	4 Core 2.5mm submersible cable	m	50		
5.5.3	Londex std dual core cable	m	50		
5.5.4	Hybrid Inverter	No	1		
5.5.5	Electrical AC thermoset XLPE power cables-4core armoured 4mm ²	M	30		
5.5.6	Electrical AC power cables-4core armoured 1.5mm ²	M	30		
5.5.7	PV Cable 6mm (Red & Black)	M	50		
5.5.8	Conduits, cable trays, trunking, and all other materials required for complete installation works	LS	1		

5.5.9	PV protect	No.	1		
5.5.10	PV Disconnect switch	No.	1		
5.5.11	Lightning Protection System to include 10mm ² copper tape, Copper plate, earth pits and lightning arrestors.	Lot	1		
5.5.12	Earthing System to include 10mm ² copper earth cable, earth rods and earth pits	Lot	1		
5.5.13	Provide a cost for installation sundries	Lot	1		
	Solar support structure				
5.5.14	50x50x3mm SHS	No	1		
5.5.15	50x50x3mm angle lines	No	1		
5.5.16	75x75x3mm SHS	No	2		
5.5.17	50x 3mm flat	No	1		
	RETICULATION				
5.5.18	Allow for pipes(PPR 1") and fittings for reticulation upto a distance of 300m. Rates to include excavation, installation and testing.	Lsum	1		
	SUB-TOTAL CARRIED TO COLLECTION SHEET				

DIRECTORATE OF WATER SERVICES

REHABILITATION & IMPROVEMENT OF WATER SUPPLIES IN BUNYALA SUB COUNTY

CONTRACTING AUTHORITY: COUNTY GOVERNMENT OF BUSIA

FUNDED BY: UNICEF KENYA

BILL OF QUANTITIES

GRAND SUMMARY

All prices are inclusive of Taxes, Profit and Other Costs

S/No.	DESCRIPTION	COST (Ksh.)
BILL No.1	PRELIMINARY AND GENERAL ITEMS	
BILL No.2	REHABILITATION OF SIAKULA WATER SUPPLY	
BILL No.3	REHABILITATION OF SIAMUNGU WATER SUPPLY	
BILL No.4	REHABILITATION OF MAKHOMA WATER SUPPLY	
BILL No.5	IMPROVEMENT OF WATER SUPPLY IN PRIMARY SCHOOLS	
	TOTAL	