



PROCUREMENT OF CONTRACTOR FOR: BAMBA-SHIRANGO DISPENSARY WATER SUPPLY PROJECT IN KILIFI COUNTY

Contract No:

Bidders Name:

**BIDDING DOCUMENTS
ISSUED ON 2020**

BILL OF QUANTITIES

JULY 2020

BAMBA- SHIRANGO DISPENSARY WATER

SUPPLY PROJECT GRAND

BILL NO.	SUMITEM ARY DESCRIPTION	AMOUN T Kshs.
1	BILL No.1: Preliminary and General Items	
2	BILL No.2: Bamba-Shirango Pipeline (Bamba-Rimarapera Section)	
3	BILL No.3: Bamba-Shirango Pipeline (Rimarapera-Ndharako Section)	
4	BILL No.4: Bamba-Shirango Pipeline (Ndharako-Shirango Section)	
5	BILL No. 5: Water Kiosks (5 No.)	
6	BILL No. 6: 50m ³ Masonry Tank-Shirango Dispensary	
7	BILL No. 7: 48m ³ Elevated Steel Tank	
8	BILL No. 8: 100m ³ Masonry Tank-Ndharako	
9	BILL No. 9: Rehabilitation works- Solar and Tanks	
	BILL TOTAL (including Contingency)	
	Add 14% VAT	
	GRAND TOTAL	

**BAMBA- SHIRANGO DISPENSARY WATER
SUPPLY PROJECT**

BILL No. 1: Preliminary and General Items

ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	CLASS A: GENERAL ITEMS				
	<u>Contractual Requirements</u>				
	<u>Special Requirements</u>				
	<u>Office and Accommodation for Resident Engineer</u>				
A211.1	Provide rented office for the Resident Engineer within the Project area. Rate to include general maintenance, cleaning, security, water and sanitation services.	month	12		
A211.3	Provide fully furnished and serviced rented 2 Bedroom Accommodation for Resident Engineer (1No.) as detailed in the specifications or instructed by Engineer.	month	12		
A211.5	Allow a provisional sum of KSh.60,000 to cater for airtime, internet etc for the Supervision Team	PS	1		
A231.1	Allow a provisional sum of KShs. 200,000 for furnishing and equipping the R.E's office. To include furniture, digital camera, printer & consumables e.t.c	PS			
A231.1	Allow a provisional sum of KShs. 100,000 for Maintenance of R.E's office. To include printer cartridges, stationery and other consumables.	PS			
A221.3	Percentage adjustment for overheads and profits to the provisional sum for Items A221.1 to A231.1	%			

PAGE TOTAL CARRIED TO BILL 1 COLLECTION

BILL 1 - PRELIMINARY AND GENERAL

ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
A233.1	<u>Equipment for use by Engineer's Staff</u> Provide and maintain Contractor's owned surveying equipment as per the Specifications'.	Month	12		
A251.1	<u>Testing of Materials</u> Concrete Tests	Item	L.S		
A261	Test Running of the Entire Works upon completion of the Works as per the Specifications	Item	L.S		
A268	<u>Setting Out & Survey Work</u> Allow for Setting Out of the Works in all the Project Areas in accordance with the Specifications, and submit Setting out Report to the Engineer for approval.	Item	L.S		
PAGE TOTAL CARRIED TO BILL 1 COLLECTION					-

BILL 1 - PRELIMINARY AND GENERAL

ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
A269.6	Allow for provision of As-Built Drawings and Operation and Maintenance (O&M) Manuals in accordance with the Specifications	Item	L.S		
	<u>Sign Boards</u>				
A279.1	Allow for provision, erection and maintenance of Project Sign Boards at sites to be indicated by the Engineer within the Project Area and removal upon completion of the project Details of the Sign Board are shown on Drawing	Nr	1		
A279.2	Allow for provision and installation of 1No. Project Plaque for project commissioning as directed by Engineer	Nr	1		
	<i>Method Related Charges</i>				
	The tenderer may insert in the Bill of Quantities such items for Method-Related-Charges as he may decide to cover items of the cost of which are not to be considered as proportional to the quantities of the other items and for which he has not allowed in the rates and prices for the other items. Tenderer may include additional sheets of paper if necessary.				
	<i>Accomodation, buildings and services</i>				
A311	Contractor's Camps and Storage Yards: Allow for Establishment of the Contractor's Camp(s), Offices, Storage Yard and other facilities including mobilization, demobilization and Removal on Completion. Include for all equipment, temporary measures, machines, tools, materials, facilities for workers, water and electricity supply etc. for execution of the Works, for the entire Contract Period. Note: The Employer has No Land available to offer for Contractor's Camps and Stores, Storage of Materials, Preparation of Concrete etc. Identification and procurement of suitable land for Contractor's Camp, whether rented or purchased, is the responsibility of the Contractor.	Item	L.S		
A351	Allow for Traffic Diversions, Traffic regulation; establishment, operation and removal for works where provision is not included in the specific bills.	sum	L.S		
PAGE TOTAL CARRIED TO BILL 1 COLLECTION					-

BILL 1 - PRELIMINARY AND GENERAL

ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	<u>Dayworks</u>				
A411	P.C. Sum of Kshs 500,000 for undertaking works under the Dayworks Bill as instructed by the Engineer.	PS			
	<u>Other Provisional Sums</u>				
A422	Allow a Provisional sum of Kshs. 50,000 to cater for facilitation of attendence to monthly site meetings by Project Manager's staff	PS			
A425	P.C. Sum of Kshs 500,000 for Payments demanded by the Authorities for re-location or crossing of existing services, Road/Railway crossings, etc. Liaison with the relevant Authorities shall be the responsibility of the Contractor for the timely execution of the Works.	PS			
A427	Allow provisional sum of Kshs.50,000 for community sensitisation/mobilisation activities, to be spent as directed by the Project Manager	PS			
A42.1	Contractors overhead and profit items A421 - A425	%			
A7	<u>Specific Conditions</u>				
PAGE TOTAL CARRIED TO BILL 1 COLLECTION					-

BILL 1 - PRELIMINARY AND GENERAL

ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	BILL 1 Collection Page				
	Total Page 1				
	Total Page 2				
	Total Page 3				
	Total Page 4				
BILL 1 COLLECTION CARRIED TO GRAND SUMMARY					

BAMBA- SHIRANGO DISPENSARY WATER SUPPLY PROJECT

BILL No 2. Bamba - Rimarapera Gravity line

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	<u>CLASS A: GENERAL ITEM</u>				
A25	<u>Testing of works</u>				
A25.1	Pressure testing and commissioning for the pipeline, including all necessary equipment, materials and labour for the works e.g. delivery of water for testing, fittings, disposal of used water	m	8,442		
A25.2	Disinfection of Pipe lines: flushing with clear water, filling with water containing 0.05 g/l calcium hypochlorite for 24 hours. This includes supply of all necessary equipment, materials, chemicals and water, measurement of residual chlorine, all as specified.	m	8,442		
	<u>CLASS D: DEMOLITION AND SITE CLEARANCE</u>				
D1	General clearance (1.5m wide corridor)	m	8,442		
	<u>Stumps (Provisional)</u>				
D31	Cut down trees, grub up roots and cart away to tips, Girth shall be measured 1.0 m above the ground level Girth: 0.5m - 1.0m	Nr	20		
	<u>CLASS I: PIPE WORK - PIPES</u>				
	<u>Provide and Lay</u>				
	Provide (incl storage and transportation), lay and joint pipes in trench, include for excavation in normal material, preparation of surfaces, disposal of excavated material, shoring sides of excavation and backfilling with suitable selected excavated material				
	<u>Note:-</u> Trench width and minimum cover to pipes is as per the Specification. The cost shall include for strutting, shuttering, stabilizing the earth faces of trenches and keeping the trenches free of water from whatever source by pumping or other means and cost of use of selected soil from the excavated material for compaction in bed and surround to backfilling of trenches, all as specified.				
	<u>Provide and Lay 'High Density Polyethelyne ' (HDPE) PN16 PE 100</u>				
I712	OD 180mm in trench, depth not exceeding 1.5 m	m	7,598		
I713	OD 180mm in trench, depth 1.5 - 2 m	m	844		
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					-

BILL No. 2: Bamba- Rimapera

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	<u>CLASS J: PIPE WORK - FITTINGS AND VALVES</u>				
	<u>Supply, handle, deliver to site, fix in place and test inclusive of all fittings, including flanged tees and steel fittings as per drawings</u>				
	<u>CLASS J: PIPE WORK - FITTINGS AND VALVES</u>				
J611.1	All fittings to PN 16 unless stated otherwise-Butt fused. Rate to include for all Steel-HDPE connection fittings where applicable. <u>OD 180mm HDPE PN16 Elbows (Butt fused)</u> 90°	Nr	1		
	<u>Air Valves and Washouts</u> <u>Rate for valves shall also include for all necessary fittings (Tees, Spigot pipes etc) as per drawings</u>				
	Supply, handle, deliver to site, fix in place and test inclusive of all fittings as in the Standard drawings . Valves to BS 5163 and EN 1074 Standards <i>Air-Valves</i> <i>Anti shock anti surge Air Valve with isolating valve</i>				
J861	Double orifice with 50 mm opening on OD 180 mm pipeline <u>Washout valves</u>	nr	6		
J811.1	Washout Valve (80mm opening) on OD 180 mm pipe <i>Sluice valves</i>	nr	5		
J811.2	DN 150 mm	nr	1		
	<u>Water Meters</u>				
111.1	MultiJet bulk cold water meters. Water meters to be as specified in Clause 404.10 of the specifications DN 150mm	nr	1		
	<u>Flexible couplings</u>				
J641.1	DN 150mm/OD180	nr	4		
	<u>Flange adapters</u>				
J651	DN 150mm/OD180	nr	4		
	<u>Other connections</u>				
J623	Provide for connection from existing UPVC pipe to OD180 PN 16HDPE pipe. To include all fittings	nr	1		
PAGE TOTAL CARRIED TO SECTION COLLECTION PAGE					

BILL No. 2: Bamba Rimapera

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	<p><u>ANCILLARY WORKS</u></p> <p>Chambers, ducts, culverts, crossings, thrust and anchor blocks, reinstatement and others as listed and specified in drawings.</p> <p>Note:- Items for work in this class shall include:- - Excavation, preparation of surfaces, disposal of excavated material, shoring sides of excavation, backfilling and removal of redundant services. - Concrete, reinforcement, formwork, joints and finishes. - Tips for disposal of excavated material or debris to be identified by the Contractor in liaison with the Local Authority.</p> <p><u>In Situ Chambers</u></p> <p>Provide all materials and construct CONTROL VALVE chambers internal dimensions 1000mm x 1000mm. Include for supply and fixing of lockable cover and step irons, as detailed in drawing</p> <p>Depth: not exceeding 2 m</p> <p>Provide all materials and construct WASHOUT chambers internal dimensions 1000mm x 1000mm. Include for supply and fixing of lockable concrete cover and step irons, as detailed in drawing</p> <p>Depth: not exceeding 2 m</p> <p>Provide all materials and construct AIR VALVE chambers internal dimensions 1000mm x 1000mm. Include for supply and fixing of lockable concrete cover and step irons, as detailed in drawing</p> <p>Depth: not exceeding 2 m</p> <p><u>Road Crossings</u></p> <p><i>Extra-overs for normal pipe laying for road crossing works: to include breaking up and permanent reinstatement of roads and provision and laying of GI sleeves (ne 210mm) for road crossings as directed by the Engineer</i></p>				
K211.1		nr	1		
K211.2		nr	5		
K211.3		nr	6		
K731	Pipe bore: n.e. 200 mm on gravel road	m	30		
PAGE TOTAL CARRIED TO SECTION COLLECTION PAGE					-

BILL No. 2:Bamba - Rimarapera

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	<u>Marker Posts</u>				
	<u>Provide RC standard marker posts for:</u>				
K82.1	Air Valves inscribe AV	nr	6		
K82.2	Washouts, inscribe WO	nr	5		
K82.3	Sluice Valves, inscribe SV	nr	1		
K82.4	Pipeline , inscribed "MAJI" and Diameter of the Pipeline	nr	28		
	<u>CLASS L:- PIPEWORK - SUPPORTS AND PROTECTION, ANCILLARIES TO LAYING AND EXCAVATION</u>				
	<u>Extras to Excavation and Backfilling (Provisional)</u>				
L111	Excavation in pipeline trench for rock	m ³	710		
	<u>Note:-</u> Blasting is NOT permitted for Item L11				
	<u>Imported Selected Fill (Provisional)</u>				
	<i>material and compact in bed (100 mm thick) and surround to pipes (200 mm thick) as directed/approved by Engineer</i>				
L321	Bed To pipes nominal bore: n.e. 200 mm	m	2,370		
L351	Surround To pipes nominal bore: n.e. 200 mm	m	2,370		
	<u>Concrete Support, Thrust Blocks and Anchor Blocks</u>				
	<i>Anchor/Thrust blocks (as per Standard drawings) Volume n.e. 0.1 m³</i>				
L711.1	Bends	nr	1		
L711.2	Valves	nr	13		
PAGE TOTAL CARRIED TO SECTION COLLECTION PAGE					-

BILL No. 2:Bamba -

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTIT Y	RATE (Kshs)	AMOUNT (Kshs)
	COLLECTION				
1	From page 1				-
2	From page 2				-
3	From page 3				-
4	From page 4				-
BII TOTAL CARRIED TO GRAND SUMMARY					

BAMBA- SHIRANGO DISPENSARY WATER

BILL No. 3: RIMARAPERA-NDHARAKO TANK GRAVITY LINE

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	CLASS A: GENERAL ITEM				
A25	<u>Testing of works</u>				
A25.1	Pressure testing and commissioning for the pipeline, including all necessary equipment, materials and labour for the works e.g. delivery of water for testing, fittings, disposal of used water	m	17,487		
A25.2	Disinfection of Pipe lines: flushing with clear water, filling with water containing 0.05 g/l calcium hypochlorite for 24 hours. This includes supply of all necessary equipment, materials, chemicals and water, measurement of residual chlorine, all as specified.	m	17,487		
	CLASS D: DEMOLITION AND SITE CLEARANCE				
D1	General clearance (1.5m wide corridor)	m	17,487		
	<u>Stumps (Provisional)</u>				
D31	Cut down trees, grub up roots and cart away to tips, Girth shall be measured 1.0 m above the ground level Girth: 0.5m - 1.0m	Nr	20		
	CLASS I: PIPE WORK - PIPES				
	<u>Provide and Lay</u>				
	Provide (incl storage and transportation), lay and joint pipes in trench, include for excavation in normal material, preparation of surfaces, disposal of excavated material, shoring sides of excavation and backfilling with suitable selected excavated material				
	Note:- Trench width and minimum cover to pipes is as per the Specification. The cost shall include for strutting, shuttering, stabilizing the earth faces of trenches and keeping the trenches free of water from whatever source by pumping or other means and cost of use of selected soil from the excavated material for compaction in bed and surround to backfilling of trenches, all as specified.				
	<u>Provide and Lay 'High Density Polyethylene' (HDPE) PN16 PE 100</u>				
I712	OD160 mm in trench, depth not exceeding 1.5 m	m	0		
I713	OD160 mm in trench, depth 1.5 - 2 m	m	0		
	<u>Provide and Lay 'High Density Polyethylene' (HDPE) PN12.5 PE 100</u>				
I714	OD160 mm in trench, depth not exceeding 1.5 m	m	0		
I715	OD160 mm in trench, depth 1.5 - 2 m	m	0		
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					

BILL No. 3: Rimarapera - Ndharako Gravity

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	<p><u>CLASS J: PIPE WORK - FITTINGS AND VALVES</u> <u>Supply, handle, deliver to site, fix in place and test inclusive of all fittings, including flanged tees and steel fittings as per drawings</u> All fittings to PN 16 unless stated otherwise-Butt fused. Rate to include for all Steel-HDPE connection fittings where applicable.</p>				
J611.1	<p><u>OD 160mm HDPE PN16 Elbows (Butt fused)</u> 90°</p>	Nr	1		
	<p><u>Air Valves and Washouts</u> <u>Rate for valves shall also include for all necessary fittings (Tees, Spigot pipes etc) as per drawings</u> Supply, handle, deliver to site, fix in place and test inclusive of all fittings as in the Standard drawings . Valves to BS 5163 and EN 1074 Standards</p>				
J861	<p><i>Air-Valves</i> <i>Anti shock anti surge Air Valve with isolating valve</i> Double orifice with 50 mm opening on OD 160 mm pipeline</p>	nr	8		
J811.1	<p><u>Washout valves</u> Washout Valve (80mm opening) on OD160 mm pipe</p>	nr	5		
J641.1	<p><u>Flexible couplings</u> DN 150mm/OD160</p>	nr	3		
J651	<p><u>Flange adapters</u> DN 150mm/OD160</p>	nr	3		
PAGE TOTAL CARRIED TO SECTION COLLECTION PAGE					-

BILL No. 3: Rimarapera - Ndarako Gravity

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	<p><u>ANCILLARY WORKS</u></p> <p>Chambers, ducts, culverts, crossings, thrust and anchor blocks, reinstatement and others as listed and specified in drawings.</p> <p>Note:- Items for work in this class shall include:- - Excavation, preparation of surfaces, disposal of excavated material, shoring sides of excavation, backfilling and removal of redundant services. - Concrete, reinforcement, formwork, joints and finishes. - Tips for disposal of excavated material or debris to be identified by the Contractor in liaison with the Local Authority.</p> <p><u>In Situ Chambers</u></p> <p>Provide all materials and construct WASHOUT chambers internal dimensions 1000mm x 1000mm. Include for supply and fixing of lockable concrete cover and step irons, as detailed in drawing</p>				
K211.2	Depth: not exceeding 2 m	nr	5		
K211.3	<p>Provide all materials and construct AIR VALVE chambers</p> <p>Depth: not exceeding 2 m</p>	nr	8		
	<p><u>Road Crossings</u></p> <p><i>Extra-overs for normal pipe laying for road crossing works: to include breaking up and permanent reinstatement of roads</i> <i>road crossings as directed by the Engineer</i></p>				
K731	Pipe bore: n.e. 180 mm on gravel road	m	30		
PAGE TOTAL CARRIED TO SECTION COLLECTION PAGE					-

BILL No. 3: Rimarapera Ndharako Gravity

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	<u>Marker Posts</u>				
	<i>Provide RC standard marker posts for:</i>				
K82.1	Air Valves inscribe AV	nr	8		
K82.2	Washouts, inscribe WO	nr	5		
K82.4	Pipeline , inscribed "MAJI" and Diameter of the Pipeline	nr	58		
	<u>CLASS L:- PIPEWORK - SUPPORTS AND PROTECTION, ANCILLARIES TO LAYING AND EXCAVATION</u>				
	Extras to Excavation and Backfilling (Provisional)				
L111	Excavation in pipeline trench for rock	m ³	1,470		
	Note:- Blasting is NOT permitted for Item L11				
	Imported Selected Fill (Provisional)				
	<i>Provide, transport to site and place imported granular material and compact in bed (100 mm thick) and surround to pipes (200 mm thick) as directed/approved by Engineer</i>				
L321	Bed To pipes nominal bore: n.e. 180 mm	m	4,900		
L351	Surround To pipes nominal bore: n.e. 180 mm	m	4,900		
	Concrete Support, Thrust Blocks and Anchor Blocks				
	<i>n.e.</i>				
	<i>0.1 m³</i>				
L711.1	Bends	nr	1		
L711.3	Valves	nr	13		
PAGE TOTAL CARRIED TO SECTION COLLECTION PAGE					-

BILL No. 3: Rimarapera-Ndharako Gravity Main

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	COLLECTION				
1	From page 1				
2	From page 2				
3	From page 3				
4	From page 4				
BII TOTAL CARRIED TO GRAND SUMMARY					

BAMBA SHIRANGO WATER SUPPLY PROJECT IN KILIFI COUNTY

BILL No. 4: NDHARAKO-SHIRANGO DISPENSARY GRAVITY LINE

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	<u>CLASS A: GENERAL ITEM</u>				
A25	<u>Testing of works</u>				
A25.1	Pressure testing and commissioning for the pipeline, including all necessary equipment, materials and labour for the works e.g. delivery of water for testing, fittings, disposal of used water	m	11,800		
A25.2	Disinfection of Pipe lines: flushing with clear water, filling with water containing 0.05 g/l calcium hypochlorite for 24 hours. This includes supply of all necessary equipment, materials, chemicals and water, measurement of residual chlorine, all as specified.	m	11,800		
	<u>CLASS D: DEMOLITION AND SITE CLEARANCE</u>				
D1	General clearance (1.5m wide corridor)	m	11,800		
	<u>Stumps (Provisional)</u>				
D31	Cut down trees, grub up roots and cart away to tips, Girth shall be measured 1.0 m above the ground level Girth: 0.5m - 1.0m	Nr	20		
	<u>CLASS I: PIPE WORK - PIPES</u>				
	<u>Provide and Lay</u>				
	Provide (incl storage and transportation), lay and joint pipes in trench, include for excavation in normal material, preparation of surfaces, disposal of excavated material, shoring sides of excavation and backfilling with suitable selected excavated material				
	<u>Note:-</u> Trench width and minimum cover to pipes is as per the Specification. The cost shall include for strutting, shuttering, stabilizing the earth faces of trenches and keeping the trenches free of water from whatever source by pumping or other means and cost of use of selected soil from the excavated material for compaction in bed and surround to backfilling of trenches, all as specified.				
	<u>Provide and Lay 'High Density Polyethylene ' (HDPE) PN12.5 PE 100</u>				
I712	OD90 mm in trench, depth not exceeding 1.5 m	m	11,210		
I713	OD90 mm in trench, depth 1.5 - 2 m	m	590		
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					-

BILL No. 4: NDHARAKO-SHIRANGO DISPENSARY

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	<p><u>CLASS J: PIPE WORK - FITTINGS AND VALVES</u> <u>Supply, handle, deliver to site, fix in place and test inclusive of all fittings, including flanged tees and steel fittings as per drawings</u></p> <p>All fittings to PN 12.5 unless stated otherwise-Butt fused. Rate to include for all Steel-HDPE connection fittings where applicable.</p> <p><u>OD90 bend</u></p>				
J311.1	90°	Nr	2		
	<p><u>Air Valves and Washouts</u> <u>Rate for valves shall also include for all necessary fittings (Tees, Spigot pipes etc) as per drawings</u></p> <p>Supply, handle, deliver to site, fix in place and test inclusive of all fittings as in the Standard drawings . Valves to BS 5163 and EN 1074 Standards</p> <p><u>Air-Valves</u></p> <p><u>Anti shock anti surge Air Valve with isolating valve</u></p>				
J861	Double orifice with 50 mm opening on OD 90 mm pipeline	nr	6		
	<u>Washout valves</u>				
J811.1	Washout Valve (50mm opening) on OD90 mm pipe	nr	5		
J811.2	DN 90 mm	nr	1		
	<p><u>Water Meters</u></p> <p>MultiJet bulk cold water meters. Water meters to be as specified in Clause 404.10 of the specifications</p>				
111.1	DN75 mm	nr	1		
	<u>Flexible couplings</u>				
J641.1	DN 75mm/OD 90	nr	5		
	<u>Flange adapters</u>				
J651	DN 75mm/OD 90	nr	5		
	<u>Tapers</u>				
J623	OD 160mm-PN 16/OD 90-PN12.5	nr	1		
PAGE TOTAL CARRIED TO SECTION COLLECTION PAGE					-

BILL No. 4: NDHARAKO-SHIRANGO DISPENSARY

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	<u>ANCILLARY WORKS</u>				
	Chambers, ducts, culverts, crossings, thrust and anchor blocks, reinstatement and others as listed and specified in drawings.				
	Note:- Items for work in this class shall include:-				
	<u>In Situ Chambers</u>				
	Provide all materials and construct CONTROL VALVE/MASTER METER chambers internal dimensions 2000mm x 2000mm.				
K211.1	Include for supply and fixing of lockable cover and step irons, as detailed in drawing Depth: not exceeding 2 m	nr	1		
	Provide all materials and construct WASHOUT chambers internal dimensions 1000mm x 1000mm. Include for supply and fixing of lockable concrete cover and step irons, as detailed in drawing				
K211.2	Depth: not exceeding 2 m	nr	5		
	Provide all materials and construct AIR VALVE chambers internal dimensions 1000mm x 1000mm. Include for supply and fixing of lockable concrete cover and step irons, as detailed in drawing				
K211.3	Depth: not exceeding 2 m	nr	6		
	<u>Road Crossings</u>				
	<i>Extra-overs for normal pipe laying for road crossing works: to include breaking up and permanent reinstatement of roads and provision and laying of GI sleeves (ne 200mm) for road crossings as directed by the Engineer</i>				
K731	Pipe bore: n.e. 180 mm on gravel road	m	30		
PAGE TOTAL CARRIED TO SECTION COLLECTION PAGE					-

BILL No. 4: NDHARAKO-SHIRANGO DISPENSARY

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTIT Y	RATE (Kshs)	AMOUNT (Kshs)
	<u>Marker Posts</u>				
	<u>Provide RC standard marker posts for:</u>				
K82.1	Air Valves inscribe AV	nr	6		
K82.2	Washouts, inscribe WO	nr	5		
K82.4	Pipeline , inscribed "MAJI" and Diameter of the Pipeline	nr	39		
	<u>CLASS L:- PIPEWORK - SUPPORTS AND PROTECTION, ANCILLARIES TO LAYING AND EXCAVATION</u>				
L111	Excavation in pipeline trench for rock	m ³	990		
	Note:- Blasting is NOT permitted for Item L11				
	Imported Selected Fill (Provisional)				
	<i>Provide, transport to site and place imported granular material and compact in bed (100 mm thick) and surround to pipes (200 mm thick) as directed/approved by Engineer</i>				
L321	Bed To pipes nominal bore: n.e. 110 mm	m	3,300		
L351	Surround To pipes nominal bore: n.e. 110 mm	m	3,300		
	Concrete Support, Thrust Blocks and Anchor Blocks				
	<i>Anchor/Trust blocks (as per Standard drawings) Volume n.e. 0.1 m³</i>				
L711.1	Bends	nr	2		
L711.3	Valves	nr	11		
PAGE TOTAL CARRIED TO SECTION COLLECTION PAGE					

BILL No. 4: NDHARAKO-SHIRANGO DISPENSARY GRAVITY LINE

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTIT Y	RATE (Kshs)	AMOUNT (Kshs)
	COLLECTION				
1	From page 1				
2	From page 2				
3	From page 3				
4	From page 4				
BII TOTAL CARRIED TO GRAND SUMMARY					

BAMBA- SHIRANGO DISPENSARY WATER SUPPLY PROJECT IN KILIFI

BILL No. 5: WATER KIOSKS (5No.)

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	<u>CLASS E: EARTHWORKS</u>				
	<u>Excavations</u>				
	<i>Rates for excavation to include for disposal</i>				
E411	Excavations to reduced levels n.e. 0.2m deep and cart away	m ³	1		
E412	Ditto 0.2 - 0.5m deep	m ³	3		
E313	Excavate foundation trenches n.e 1500mm deep from stripped level	m ³	2		
E339	Extra over excavations for excavating in rock at any depth	m ³	2		
	<u>Filling</u>				
	<u>Filling to completed structures including compaction as specified.</u>				
E615.1	300mm Hardcore	m ³	2		
E615.2	50mm stone dust blinding to hardcore	m ³	0.25		
E611	Return fill and ram - make up level	m ³	2		
	<u>CLASS F: CONCRETE WORK</u>				
	<u>Provide and Place Mass concrete Class 15</u>				
F511	75mm Concrete 1:4:8 Blinding	m ³	1		
	<u>Provide and Place structural concrete Class 25</u>				
F622	Strip foundation	m ³	2		
F621	150mm Thick floor and roof slab	m ³	2		
F662	Bases, Column and Beams	m ³	2		
G5	<u>CLASS G: CONCRETE ANCILLARIES</u>				
	<u>REINFORCEMENTS</u>				
	<i>Rates to include for binding wire</i>				
	<u>High yield steel bars to BS 4449</u>				
G522	Diameter: 8mm	kg	80		
PAGE TOTAL CARRIED TO SECTION COLLECTION PAGE					-

BILL No. 5: WATER

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
G523	Diameter: 10mm	kg	230		
G524	Diameter: 12mm	kg	250		
	<u>Steel fabric mesh reinforcement to B.S. 4483</u>				
G562	BRC mesh fabric reinforcement ref A142 (weighing 2.2kg/m ²) laid in Floor slab (measured net-no allowance made for laps)	m ²	15		
	FORMWORK				
	<u>Sawn formwork (fair finish) to: -</u>				
G242.1	Vertical and soffits of slabs	m ²	20		
G242.2	Vertical sides and soffit of beams, columns and fetching bay	m ²	15		
	CONCRETE ACCESSORIES				
G813.1	40mm x 30mm drainage groves in concrete to detail drawings	m	15		
G812	Cement screed on the top surface of roof slab to minimum fall gradient of 1.50	m ²	6		
G813.2	Bituminous felt cover on the surface of the cement screed on the roof slab.Allow for 300mm lapping.	m ²	6		
G831	Allow for 25mm nominal core bore class B G1 pipe through inserts in floor slab, roof slab and window sill	m	2		
	<u>CLASS I: PIPEWORK - PIPES</u>				
I512	100mm nominal bore uPVC pipe class B in trench, depth n.e 1.5m	m	10		
	Piped Building Services				
	Portable water supply installation to detail drawings for Water Kiosk				
Z511	25mm diameter G1 class 'B' pipe to BS 1387, thread joints to BS 21 for interconnection from mains to tank and to the service/ draw off points	M	30		
Z512	25mm nominal bore G1 fittings as follows				
Z512.1	Unions	Nr	3		
Z512.2	Elbows	Nr	7		
Z512.3	Bends	Nr	4		
PAGE TOTAL CARRIED TO SECTION COLLECTION PAGE					-

BILL No. 5: WATER

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
Z512.4	Nipples	Nr	15		
Z512.5	Long thread nipples	Nr	2		
Z512.6	Equal tees	Nr	4		
Z512.7	Back nuts	Nr	4		
Z512.8	<u>Peglers (or equivalent) gate valves</u>	Nr	5		
Z512.10	Floater valve complete	Nr	1		
Z512.11	DN 25 mm cold water meter (Multijet, as specified in Clause 404.10 of the specifications)	Nr	1		
Z525	5,000 litre plastic water tank supported on Roof slab. To be approved by the engineer before purchase	Nr	1		
	<u>CLASS K: PIPEWORK - MANHOLES AND PIPEWORK ANCILLARIES</u>				
K211	1.0 x 1.0 x 1.4mm deep soak pit to detail drawing. Include for 200mm thick granular fill layer outside the walls.	Nr	1		
K330	In situ concrete gulley trap to detail drawing	Nr	1		
	<u>CLASS U: MASONRY</u>				
	<u>Approved stone walling of minimum compressive strength of 10N/mm² bedded in cement sand (1:3) mortar reinforced</u>				
	<u>with and including gauge 12 hoop soft wire gauge hoop iron at every alternate course. Keying to be done on exterior wall surfaces for the superstructure</u>				
U821	200mm Substructure walling	m ²	10		
U811	200mm Superstructure Walling	m ²	10		
U881	50 x 6mm thick hoop iron	m	135		
	<u>Approved damp proof course (bituminous)</u>				
U882	200mm Wide	m	9		
PAGE TOTAL CARRIED TO SECTION COLLECTION PAGE					-

BILL No. 5: WATER

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	<u>SHELVES, WINDOWS AND DOORS</u>				
	Provide and fix 350mm wide x 25mm thick timber shelves (to detail drawings.)	Nr	2		
	<u>Supply and Fix the following purpose made steel windows and door as per detail manufactured from heavy duty standard sections primed with one coat of red oxide primer and fixing to masonry or concrete head and jambs complete with closing mechanism and other fittings.</u>				
	Window size 1200 x 900 mm high overall	Nr	1		
	Glazed single swing door overall size 900 x 2100mm high	Nr	1		
Z343	High security padlock (Large)	Nr	2		
	<u>INTERNAL WALL FINISHES</u>				
	<u>15mm thick lime plaster (1:2:9) as described to:-</u>				
G812.1	Interior surfaces of walls	m ²	12		
G812.2	On roof slab	m ²	6		
G812.2	Exposed front areas of fetching bay. Rate to include instalation of angle sections as per the drawings	m ²	2		
	<u>CLASS V: PAINTING</u>				
	<i>Prepare and apply</i>				
V531	Plastered Internal surfaces of walls 2-coats of emulsion undercoat paint and 3-coats of first grade oil paint	m ²	12		
V113	2-coats of primer paint and 3-coats of first grade oil paint to vertical surfaces of metal doors and windows.	m ²	4		
	<u>CLASS W: WATERPROOFING</u>				
	<u>Damp-proof membrane</u>				
W138	Single layer of 100 gauge polythene sheeting on blinded hardcore with 150 mm side laps to receive concrete	m ²	5		
PAGE TOTAL CARRIED TO SECTION COLLECTION PAGE					-

BILL No. 5: WATER

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	<u>CLASS X: MISCELLANEOUS WORK</u>				
	<u>Anti - termite treatment</u>				
X9.2	Supply and application of Termidor 25EC pesticide treatment for the control of termites to the soil beneath the foundations, executed by a Pesticides Control Products Board licenced professional pest control operator, with a ten year guarantee to surfaces of excavations	m ²	5		
X9.3	Tank shades in GI sheets and steel structure. The tank shades should have Roofing Sheets, Prepainted (Blue colour) Gauge 26 Industrial Tough 5 (IT 5) with polynium sheeting underneath the iron sheet roofing as per the drawings. Include for all the installation accessories. Rate to include bolting to the steel section support framing.	sum	1		
X9.4	Supply and install 5,000 lts plastic water tank above the water kiosk. Rate to include all associated fittings, testing and commissioning	Nr	1		
PAGE TOTAL CARRIED TO SECTION COLLECTION PAGE					-

BILL No. 5: WATER

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTIT Y	RATE (Kshs)	AMOUN T (Kshs)
	COLLECTION PAGE From page 1 From page 2 From page 3 From page 4 From page 5				
BILL TOTAL FOR 1 NO. KIOSK					
BILL TOTAL CARRIED TO GRAND SUMMARY (5No. Kiosks)					

**BAMBA- SHIRANGO DISPENSARY WATER SUPPLY
PROJECT IN KILIFI**

BILL No. 6: 50 m³ Masonry Tank

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTIT Y	RATE (Kshs)	AMOUN T (Ksh s)
D 1	CLEARANCE				
D 1	Clear site of small bushes and grub roots of small trees	ha	0.01		
E	EARTHWORKS				
	<i>Excavations</i>				
E410	200mm top soil and dispose	m2	100		
E325.1	In Ordinary material max. depth 2 - 5 m	m3	90		
E335.2	Extra Over for excavation of rock	m3	20		
E6	FILLING AND COMPACTION				
E617.1	50mm stone dust blinding	m3	1.5		
E617.2	Well compacted hardcore	m3	9.5		
E617.3	Backfill to reduced levels	m3	19		
F	IN-SITU CONCRETE				
	<i>Provide Mass Concrete Grade: 15/20</i>				
F323	75mm thick blinding to foundation and grading of roof slab	m3	2.85		
	<i>Provide Concrete Grade: 25/20</i>				
F333	Base slab, Columns, Beams and Roof slab	m3	19.5		
F5	<i>Place Mass Concrete</i>				
F712	Blinding: Thickness: 100 - 150 mm	m3	2.85		
F8	<i>Place Reinforced Concrete</i>				
F824	Base slab, Columns, Beams and Roof slab	m3	19.5		
G	CONCRETE ANCILLARIES				
	<i>Dimensions as per details on drawings. Formwork; Rough Finish; Plane Vertical.</i>				
G142	External sides of base slab; width <0.2	m2	50		
G5	REINFORCEMENT				
	<i>High yield steel bars to SSRN 126 or 127</i>				
G522	Diameter: 8mm	kg	284.4		
G523	Diameter: 10mm	kg	470		
G524	Diameter: 12mm	kg	260		
G525	Diameter: 16mm	kg	12.32		
G6	JOINTS				
	<i>Formed surface joint with bondex filler at tank bottom</i>				
G641	Width or depth: not exceeding 0.5 m.	m2	2		
G8	CONCRETE ACCESSORIES				
	<i>Finishing of top surfaces</i>				
G812	Steel towel finish	m2	39.25		
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					

BILL No. 6: 50 m³ Masonry Tank

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
I & J	PIPE & PIPE FITTINGS - SUPPLY AND INSTALL				-
1.0	<i>Inlet Pipe</i>				-
	PIPE & PIPE FITTINGS - PROVIDE AND INSTALL				-
					-
	Drain uPVC Pipes				
I112	Class B, 90 mm dia	m	18		
	Inlet Pipework				
I411.1	DN 50 mm flanged spigot GI pipe, 1.8 m long with puddle flange	nr	1		
I411.2	DN 50 mm double flanged GI pipe, 2.5 m long with puddle flange	nr	1		
I411.3	DN 50 mm GI pipe, 1.2 m long	nr	3		
I411.4	DN 50 mm GI pipe, 400 m long	nr	1		
I411.5	DN 50 mm flanged/spigot GI pipe, 400 m long	nr	1		
I411.6	DN 50 mm, 90 degrees short bend	nr	2		
I411.7	DN 50 mm, Flange Adaptors/couplings	nr	3		
I411.8	DN 50 mm, flanged Bulk Meter	nr	1		
I411.9	DN 50 mm, Gate Valve	nr	1		
I411.9	Floater valve complete	nr	1		
	Outlet Pipework				
I411.10	DN 50 mm Bellmouth (steel), L=350mm	nr	1		
I411.11	DN 50 mm flanged spigot GI pipe, 1.2 m long with puddle flange	nr	3		
I411.12	DN 50 mm, Strainer	nr	1		
I411.13	DN 50 mm plain ended pipe, 1.5 m long (steel)	nr	1		
I411.14	DN 150 Flange adaptor/coupling	nr	3		
I411.16	DN 50 mm, Gate Valve	nr	1		
	Overflow and Scour Pipework				
I411.17	DN150mm Double Spigot pipe with puddle flange, 1200mm	nr	2		
I411.18	DN150mm flanged/Spigot pipe with puddle flange, 950mm	nr	1		
I411.19	DN 50 mm Bellmouth	nr	1		
I411.20	DN 50 mm, 90 degrees bend	nr	3		
I411.21	DN 50 mm flanged spigot GI pipe, 0.6 m long with puddle flange	nr	1		
I411.22	DN 50 mm, Flange Adaptors/couplings	nr	1		
I411.23	DN 50 mm flanged/spigot GI pipe, 370 m long	nr	1		
I411.24	DN 50 mm double flanged GI pipe, 2.2 m long with puddle flange	nr	1		
I411.25	DN 150 mm flange adaptor/coupling	nr	3		
I411.26	DN150 mm Single Flanged Pipe L=1000mm	nr	1		
I411.27	DN 150 mm flanged gate valve	nr	1		
I411.28	DN 50/OD 90 mm Flexible Coupling	nr	1		
L	PIPEWORK - SUPPORTS AND PROTECTION, ANCILLARIES TO LAYING AND EXCAVATION				
	<i>Concrete Class 15/20 in Stools and Thrust Blocks</i>				
L713.1	Nominal bore n.e 300 mm; volume 0.2 - 0.5 m ³	nr	3		
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					

BILL No. 6: 50 m³ Masonry Tank

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTIT Y	RATE (Kshs)	AMOUN T (Ksh s)
N	MISCELLANEOUS METALWORK <i>Rate to include supply and fixing and inclusive of foundations where applicable.</i>				-
N231.1	Galvanised mild steel internal ladders with stringers returned to form handrails	m	1.8		
N231.2	Galvanised mild steel external ladders with stringers returned to form handrails	m	1.8		
N9.1	Lockable mild steel sheet metal covers for access manholes	nr	2		
U	BRICKWORK, BLOCKWORK & MASONRY <i>Rates to include for stone dressing and fair finish to the exterior wall surfaces <u>Dense concrete blockwork</u></i>				
U512.1	200mm thick composite construction in vertical curved walls	m2	35		
U512.2	400mm composite construction in vertical curved walls	m2	38		
	<i><u>Blockwork ancillaries</u></i>				
U491	Joint reinforcement using 10mm thick 1:2 cement sand mortar with 10mm dia bars at the center in every course	m	227		
V	PAINTING				
V1	Bituminous paint on masonry to grove formed from cement sand mortar at the bottom of the wall		m2	2.27	
W	WATERPROOFING <i><u>Damp proofing</u></i>				
W154	Using rendering in waterproof cement mortar of internal curved surfaces	m2	34		
X	MISCELLANEOUS WORK				
X9.1	Provide and fix vent pipes	nr	2		
X1	FENCES <i><u>Concrete post and Chainlink</u></i>				
X136	Height : 2.50 - 3.00 m	m	50		
X2	GATES AND STILES				
X237	Metal field gates, width:1.5 m.	nr	1		
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					

BILL No. 6: 50 m³ Masonry Tank

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTIT Y	RATE (Kshs)	AMOUN T (Ksh s)
	COLLECTION PAGE From page 1 From page 2 From page 3				
BILL TOTAL CARRIED TO GRAND SUMMARY					

**BAMBA- SHIRANGO DISPENSARY WATER SUPPLY
PROJECT IN KILIFI BILL NO. 07 - ELEVATED STEEL**

TANK - 48 m3

ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT
	The works include construction of an elevated steel tank - 48 m3 - at the existing Bamba tanks site and pipe interconnection from the existing rising main.				
1.00	Foundation				
E411	Excavate in normal soil for tank footings size 2.0m x 2.0m x 2.0m	m3	8.00		
F662	Supply all materials, deliver to site, mix and vibrate reinforce concrete footings and Column studs. Rate to include all formwork, reinforcement bars for concrete footing and foundation bolts for the tower	m3	18.00		
	Class M: Steel Tower				
M0.1	Supply all materials, deliver to site 18m high tank tower complete with walkway platform and cage ladder.	kg	12,500.00		
N285.1	Supply, deliver to site and erect 6mm thick x 1m2 steel tank bottom panels on 18m tower. Rate to include sealing compound, bolts, and nuts, struts, stays and cleats.	nr	16.00		
N285.2	Supply, deliver to site and erect 6mm thick x 1m2 steel tank side panels on 18m tower. Rate to include sealing compound, bolts, and nuts, struts, stays and cleats.	nr	48.00		
N285.3	Supply all materials and erect 2mm thick steel cover to the tank. Rate to include all the necessary fittings.	sum	1.00		
	Class I: Plumbing Works				
I411.1	Supply and joint 100 mm dia. steel pipes including all bends, adoptors and jointing materials for the inlet to the tank. This will include interconnecting pipes between the tank and the rising main with all the necessary fittings as per the drawing.	m	30.00		
I411.2	Supply and joint 150 mm dia. steel pipes including all bends, adoptors and jointing materials for the Outlet to the tank.	m	18.00		
I411.3	Supply and joint 75mm dia. steel pipes including all bends, adoptors and jointing materials for the overflow and washout to the tank.	m	18.00		
I411.4	Supply and joint including all jointing materials 100 mm dia. Sluice valve for inlet.	nr	1.00		
I411.5	Supply and joint including all jointing materials 150 mm Sluice valve for Outlet.	nr	1.00		
I411.6	Supply and joint including all jointing materials 75mm dia. Sluice valve for Washout.	nr	1.00		
	Class V: Painting				
V811	Supply and apply two coats of black bituminous paint to the inside of the tank.	m2	88.00		
V111.1	Supply and apply two coats of silver aluminium paint to the outside of the tank	m2	88.00		
V111.2	Supply and apply two coats of silver aluminium paint to the tank tower, platform, pipes and cage ladder.	sum	1.00		
	Testing				
N285.4	Supply and apply recommended disinfectant and test the tank	sum	1.00		
BILL TOTAL CARRIED TO SUMMARY					

BAMBA – SHIRANGO DISPENSARY WATER SUPPLY PROJECT

BILL No. 8: 100 m³ Tank

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	CLASS D: DEMOLITION AND SITE CLEARANCE				
D1	General clearance	m2	76.00		
E	<u>EARTHWORKS</u>				
E3	EXCAVATION FOR FOR FOUNDATIONS				
E410	Excavate 200mm top soil and dispose	m2	71.00		
E325	In Normal material max depth 5 m	m3	32.00		
E33	Excavation of Rock	m ³	6.40		
E6	FILLING AND COMPACTION				
E617	Hardcore material approved by Engineer	m ³	32.00		
E615	50mm stone dust blinding	m ³	4.00		
E611	Make up levels around structures	m ³	6.00		
F	<u>IN-SITU CONCRETE</u>				
F3	DESIGNED MIX FOR ORDINARY STRUCTURAL CONCRETE FOR CLASS B EXPOSURE USING ORDINARY PORTLAND CEMENT				
F323	<u>Provide Blinding Concrete Grade: 15</u> 20 mm aggregate	m3	10.00		
F333	<u>Provide Concrete Grade: 25</u> 20 mm aggregate	m3	25.00		
F7	PLACE MASS CONCRETE				
F712	<u>Place Mass Concrete Blinding</u> Thickness 50 - 100 mm	m3	10.00		
F8	PLACE REINFORCED CONCRETE				
F824	<u>Floor and Roof slabs</u> Thickness: 100 - 150 mm	m3	25.00		
G	<u>CONCRETE ANCILLARIES</u>				
G142	<u>Dimensions as per details on drawings.</u> <u>Formwork: Rough Finish and Fair finish as appropriate; Plane Vertical.</u> External sides of slabs and Column	m ²	50.00		
G5	<u>REINFORCEMENT</u>				
G522	<u>High yield steel bars to SSRN 126 or 127</u> Diameter: 8mm	kg	360.00		
G523	Diameter: 10mm	kg	1,700.00		
G524	Diameter: 12mm	kg	250.00		
G525	Diameter: 16mm	kg	110.00		
G6	<u>JOINTS</u>				
G641	<u>Formed surface joint with bondex filler at tank bottom</u> Width or depth: not exceeding 0.5 m.	m2	15.00		
TOTAL CARRIED TO COLLECTION PAGE					

BILL No. 8: 100 m³

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
G8	CONCRETE ACCESSORIES				
	Finishing of top surfaces				
G812	Steel towel finish	m2	130.00		
I	PIPE & PIPE FITTINGS - PROVIDE AND INSTALL				
	Drain uPVC Pipes				
I112	Class D, 90 mm dia	m	80.00		
	Fittings to Welded Steel pipes-GI Pipes				
	Bends				
I411.1	75mm dia GI long radius 90o bends	nr	1.00		
I411.2	75 mm dia GI radius 45o bends	nr	1.00		
I411.3	75 mm dia GI 90o bends	nr	2.00		
I411.4	50 mm dia GI long radius 90 degrees bends	nr	1.00		
	Tees				
I411.5	75/50 mm dia GI reducing tee	nr	1.00		
	Tapers				
I411.7	75/50 mm dia GI taper	nr	1.00		
	Adaptors and couplings				
I411.8	75 mm GI adaptors	nr	2.00		
I411.9	75 mm dia PVC adaptor	nr	1.00		
I411.10	50 mm diameter GI adaptor	nr	1.00		
	Pipe pieces and bellmouths				
I411.10	50 mm GI pipe length 1.7 m	nr	1.00		
I411.11	50 mm dia GI bellmouth	nr	1.00		
I411.12	75 mm GI with puddle flange length 0.525 m	nr	1.00		
I411.13	75 mm GI with puddle flangelength 1.9 m	nr	1.00		
I411.14	75 mm GI pipe length 0.45 m with end bevelled	nr	1.00		
I411.16	75 mm GI pipe length 2.6 m	nr	1.00		
I411.17	75 mm GI pipe length 1.7 m	nr	1.00		
I411.18	75 mm GI length 0.525 m with puddle flange at 260 mm from one end	nr	1.00		
I411.19	75 mm GI pipe length 2.278 m with puddle flange at 75 mm from one end	nr	1.00		
I411.20	75 mm GI pipe length 1.7 m	nr	1.00		
I411.21	75 mm GI pipe length 1.1 m with end bevelled	nr	1.00		
I411.22	75 mm blind flange with 50 mm opening at centre for socket	nr	1.00		
	Valves, Penstocks, Hydrants, Meters				
	Gate valves				
I411.23	75 mm dia. double flanged gate valve with spindle and T-key	nr	1.00		
I411.24	50 mm dia. double flanged gate valve	nr	1.00		
I411.25	75 mm dia Woltman bulk water meter	nr	1.00		
I411.26	100mm Ball Valve	nr	1.00		
I411.27	DN 75/OD 90 mm Flexible Coupling	nr	1.00		
TOTAL CARRIED TO COLLECTION PAGE					

BILL No. 8: 100 m³

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
K	PIPEWORK - MANHOLES AND PIPEWORK ANCILLARIES				
K131.2 3	Gate valve chamber, size 900 x 900 mm internal dimensions, depth n.e. 1.5m <u>Concrete Class 15/20 in Stools and Thrust Blocks</u>	nr	3.00		
L713.1	Nominal bore n.e 100 mm; volume 0.1 m ³	nr	5.00		
N	MISCELLANEOUS METALWORK				
	Rate to include supply and fixing and inclusive of foundations where applicable.				
N231.1	Galvanised mild steel internal ladders with stringers returned to form handrails	m	3.00		
N231.2	Galvanised mild steel external ladders with stringers returned to form handrails	m	3.00		
N9.1	Lockable mild steel sheet metal covers for access manholes as per details on Drg.	nr	1.00		
N9.2	Step irons.	nr	11.00		
U	<u>BRICKWORK, BLOCKWORK & MASONRY</u>				
	<u>Dense concrete blockwork</u>				
U341	200mm Thickness composite construction in vertical curved walls	m ²	50.00		
U342	400mm Thickness composite construction in vertical curved walls <u>Blockwork ancillaries</u>	m ²	46.00		
U491	Joint reinforcement using 10mm thick 1:2 cement sand mortar with 10mm dia bars at the center in every course	m	2,040.00		
	Nominal masonry plaster	m ²	87.00		
V	<u>PAINTING</u>				
	Bituminous paint on masonry to grove formed from cement sand mortar at the bottom of the wall	m ²	4.00		
W	<u>WATERPROOFING</u>				
	<u>W1 Damp proofing</u>				
W154	20mm cement rendering on wall with approved water proofing additive	m ²	172.83		
X	MISCELLANEOUS WORK				
X9.1	Provide and fix vent pipes <u>Anti - termite treatment</u>	nr	3.00		
X9.2	Supply and application of Termidor 25EC pesticide treatment for the control of termites to the soil beneath the foundations, executed by a Pesticides Control Products Board licenced professional pest control operator, with a ten year guarantee to surfaces of excavations	m ²	71.00		
TOTAL CARRIED TO COLLECTION PAGE					

BILL No. 8: 100 m³

ITEM No.	ITEM DESCRIPTION	UNI T	QUANTIT Y	RATE (Kshs)	AMOUNT (Kshs)
COLLECTION PAGE					
1	BROUGHT FORWARD FROM PAGE 1				
2	BROUGHT FORWARD FROM PAGE 2				
3	BROUGHT FORWARD FROM PAGE 3				
TOTAL CARRIED TO SUMMARY SHEET					

**BAMBA- SHIRANGO DISPENSARY WATER SUPPLY
PROJECT IN KILIFI BILL NO. 9 - REHABILITATION**

WORKS

ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT
X	MISCELLANEOUS WORK <i>(Contractor to assess the below works in order to provide quotation)</i> Solar				-
X8.1	Repair of solar panels at the Mlungu Wa Mawe Bamba pump station To include replacement of 18.5 KW RSI	nr	2.00		-
X8.2	Include all electrical Installations and fittings works	set	1.00		
	Tanks 50M³ Kwa Mwalimu and Mdoina Tanks Rehabilitation				
	Provide for the repair of the existing masonry tank at Kwa Mwalimu and Mdoina <i>(Contractor to assess the tanks in order to provide quotation)</i>				
X9. 2	To include Hacking and plastering and rendering with cement sand mix 1:2 - 25mm thick. Rate shall be inclusive of pudlo cement and bondex sealant at the botton edge to render the entire tank water tight	m ²	190		
TOTAL CARRIED TO BILL SUMMARY					

BAMBA- SHIRANGO DISPENSARY WATER SUPPLY PROJECT IN KILIFI

SCHEDULE OF DAY WORKS

ITEM	DESCRIPTI ON	UNI T	QTY	RATE (KShs)	AMOUN T (KShs)
1.1	<u>LABOUR</u> The rates inserted hereafter should include all such costs as insurance, travel time, overtime expenses, accommodation, use and maintenance of small tools of trade, Contractors overheads and profit. Only time engaged upon work instructed by the Engineer under this Bill will be paid for.				
1.1.1	Unskilled labour	hr		100	-
1.1.2	Foreman	hr		200	-
1.1.3	Driver	hr		200	-
1.1.4	Mason	hr		200	-
1.1.5	Carpenter	hr		200	-
1.1.6	Plumber	hr		200	-
1.1.7	Electrician	hr		200	-
1.1.8	Plant Operator	hr		200	-
1.1.9	Supervisor	hr		500	-
1.1.10	Pipe layer	hr		200	-
1.1.11	Painter	hr		200	-
1.1.12	Concretor	hr		200	-
1.1.13	Technician	hr		300	-
1.1.14	Watchman	hr		100	-
SCHEDULE OF DAY WORKS					-

SCHEDULE OF DAY

ITEM	DESCRIPTI ON	UNI T	QTY	RATE (KShs)	AMOUN T (KShs)
1.2	<u>MATERIALS</u> Materials shall comply with the relevant Technical Specifications and shall be subject to the approval of the Resident Engineer. The rate to include for delivery, storage, handling, Contractor's overheads and Profits, etc.				
1.2.1	Building sand	ton	2,500		-
1.2.2	Ordinary Portland cement in 50 kg bags	No.	750		-
1.2.4	Coarse aggregate	ton	2,500		-
1.2.5	150mm Blockwork	m ²	1,000		-
1.2.6	200mm Blockwork	m ²	1,250		-
1.2.7	Reinforcement fabric mesh.A241	m ²	1,500		-
1.2.8	Reinforcement steel.	ton	150,000		-
1.2.9	Concrete Class 25	m ³	18,000		-
1.2.10	Imported Granualr Fill	m ³	600		-
1.2.11	Hardcore	m ³	2,500		-
1.2.12	Lubricants	L	500		-
1.2.14	Emulsion Paint	m ²	400		-
1.2.15	Gloss Paint	m ²	400		-
1.2.16	Wrought Finish Formwork	m ²	600		-
1.2.17	Smooth Finish Formwork	m ²	600		-
SCHEDULE OF DAY WORKS					-

SCHEDULE OF DAY

ITEM	DESCRIPTI ON	UNI T	QTY	RATE (KShs)	AMOUN T (KShs)
1.3	<u>EQUIPMENT</u>				
	Rates to include for all operation and maintenance of equipment, cost of fueling and lubrication, Contractor's overheads and Profits, etc.				
1.3.1	Excavator	hr.	5,000		-
1.3.2	Dozer 70Kw	hr.	4,000		-
1.3.3	Mobile generator 15 kVA	hr.	500		-
1.3.5	4 WD Pickup 1 tonne	hr.	1,000		-
1.3.6	Concrete mixer type 5/3.5	hr.	100		-
1.3.7	Concrete dumper 0.5 cu.m.	hr.	500		-
1.3.8	Concrete vibrator poker type N.D. 50 mm	hr.	100		-
1.3.9	Dewatering pump 50mm dia suction end	hr.	300		-
1.3.11	Tipper Truck 7 tonne	hr.	2,000		-
1.3.13	Oxy-acetylene cutting and welding set including oxygen and acetylene gases.	hr.	800		-
1.3.14	Electrical welding set including electrodes	hr.	800		-
SCHEDULE OF DAY WORKS					-

SCHEDULE OF DAY

ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	SUMMARY SHEET Page 1: Labour Page 2: Materials Page 3: Equipment				- - -
SCHEDULE OF DAY WORKS					-