

Preamble to Bill of Quantities

1. These Bills of Quantities form part of the Contract Documents and are to be read in conjunction with the Conditions of Contract, Specifications and Drawings.
2. The rates quoted for the quantities shall include the costs of mobilization, demobilization, insurance, ESHS compliance and any other expenditure that is not indicated in the Bill of Quantities.
3. For items where lump sums are to be quoted, the Contractor is required to note all the small items that make up the major item.
4. The quantities set forth in the Bills of Quantities represent the character of the work to be carried out. There is no guarantee to the Contractor that he will be required to carry out the exact quantities of work indicated under any one particular item or group of items in the Bills of Quantities, though on the Contract as a whole the quantities are intended to represent the overall value of the work to be carried out.
5. The prices and rates inserted in the Bill of Quantities will be used for valuing the work executed and the Engineer will measure the whole of the works executed in accordance with the Contract.
6. The prices and rates inserted in the Bills of quantities are to be the full inclusive costs of the works described under the items, complete in place and in accordance with the Specifications and Drawings, including setting out of the works, including costs and expenses which may be required in and for the construction of the works described, together with any temporary works and installations which may be necessary and all general risks, liabilities and obligations set forth or implied in the Documents on which the Contract is based.
7. The brief description of the items given in the Bills of Quantities are purely for the purpose of identification and in no way modify or supersede the detailed descriptions given in the Conditions of Contract, Specifications or Drawings.
8. No alteration shall be made to the Bills of Quantities and no extra item shall be inserted. The Tenderer shall satisfy himself that the Contract Sum arrived at by pricing the quantities and items given is sufficient compensation for constructing and maintaining the whole of the works in accordance with the Contract Documents.
9. During construction the unit rate established for an item in one Bill of Quantities may be used as a basis for establishing a unit rate for similar work in another Bill of Quantities which contains no unit rate for the said item.
10. Quantities for site clearance, stripping and spreading shall be based on the horizontal projection of the area cleared or stripped.
11. The volume of fill will be measured net to the finished levels as shown in the drawings or as amended by the Engineer.
12. All rates and sums in the Bill of Quantities shall be in Kenya Shillings and Cents.
13. Explanation of abbreviations used in the Bills of Quantities is as follows:-

L.S	-	Lump Sum
No.	-	Number
Mm	-	Millimetre
M/m	-	Linear Metre
M2/m2	-	Sqaure Metre
M3/m3	-	Cubic Metre
Ha	-	Hectare
GS	-	Galvanized Steel.

14. The rates for provision of concrete shall include the cost of formwork and casting where necessary.
15. Before carrying out any implementation of works, the Contractor together with appointed Project Supervisor shall discuss on the bill of quantities and identify all the works stated in the bill of quantities and get satisfied that the description of the works corresponds to the actual ground conditions. The original ground levels shall then be taken jointly by the Surveyor from the Contractor and Project Supervisor/Surveyor and recorded. No work shall start on any site before original ground levels are recorded and controls set.

PROJECT NAME:PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT		
CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03		
BILLS OF QUANTITIES		
BILLS SUMMARY		
BILL NO.	ITEM DESCRIPTION	AMOUNT (KES)
1	PRELIMINARY AND GENERAL ITEMS	
2	INTAKE WORKS	
3	RAW WATER MAINS	
4	WATER TREATMENT PLANT	
5	WTP - TENDEN RISING MAIN	
6	TRANSMISSION AND DISTRIBUTION MAINS	
7	STORAGE TANKS	
	SUB-TOTAL 1	
	ADD 10% CONTIGENCY	
	SUB TOTAL 2	
	0.03% Public Procurement Capacity Building Levy (in line with Legal Notice No. 206 of 6th November 2023)	
	ADD 16% FOR VAT	
	TOTAL (INCLUSIVE OF TAXES AND LEVIES)	

PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT					
CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03					
BILL 1					
PRELIMINARY AND GENERAL ITEMS					
No.	ITEM DESCRIPTION	UNIT	Quantity	RATE (Kshs)	AMOUNT (Kshs)
CLASS A: GENERAL ITEMS					
A1 Contractual requirements					
A110	Performance security in accordance with Clause 4.2.1- (10% of contract sum)	Sum	1	10%	
A120.1	Insurance of the Works, Plant and Materials against loss or damage in accordance with clause 18.2	Sum	1	1,500,000.00	1,500,000.00
A120.2	Insurance of Contractor's Equipment against loss or damage-in accordance with clause 18.3	Sum	1	750,000.00	750,000.00
A130	Third Party Insurance in accordance with clause 18.3.2	Sum	1	750,000.00	750,000.00
A139	Provision of Workman's compensation in accordance with clause 6.24.1	sum	1	750,000.00	750,000.00
A2 Specified requirements					
A21	Accommodation for Engineer's staff				
A211.1	Establishment of Engineer's site office as per the drawings to include parking space and access road. The office revert to the employer/client at the end of the contract.	Sum	1	6,000,000.00	6,000,000.00
A211.2	Provide furniture and equipment to the engineer's office as per the engineer's instructions. Furniture to revert to the client at the end of the contract	Sum	1	4,000,000.00	4,000,000.00
A211.3	General maintenance of Engineer's Site office and services	Month	24	215,517.24	5,172,413.79
A211.4	Allow for the provision of Engineer's Office consumables during the contract period.	Month	24	60,344.83	1,448,275.86
A211.5	Maintain Furniture/equipment for Engineer's office during the contract period.	Month	24	43,103.45	1,034,482.76
A211.6	Provide Electricity to the Engineer's Office	Sum	1	172,413.79	172,413.79
A211.7	Provide and maintain Security to the Engineer's Office	Month	24	21,551.72	517,241.38
A211.8	Allow for Contractor's overhead and profits for item A211.2-A211.7	%			-
A212	Make arrangement for Laboratory testing as and when required. The Contractor to make available for independent testing of works sample by the Engineer. The Contractor may be required to witness the testing.	Sum	1	431,034.48	431,034.48
A22 Services for the Engineer's Staff					
A221.1	Provide 2 No new 4WD double cabine Transport vehicles as follows: all diesel engines and capacity not less than 2800cc each, for the exclusive use by the Engineer, inclusive of the first 4,000km per vehicle month. Year of manufacture not earlier than 2016 The vehicles are to revert to the Client at the end of the Project. The vehicles are subject to approval by the Engineer.	Sum	2	10,000,000.00	20,000,000.00
A221.2	Allow for a provisional sum to maintain, insure, fuel, lubricate, and service of the transport vehicles as per item A221-1 for the contract period.	Month	24	250,000.00	6,000,000.00
A221.3	Allow for a provisional sum for final repairs of the vehicles before they revert to the client	P-Sum	1	517,241.38	517,241.38
A221.4	Allow for contractor's overhead and profits for item A221.1 - A221.3	%			-
A22 Services for the Engineer's Staff					
A222.1	Provide with warranty Engineer's staff mobile phone handsets (minimum quality Nokia E72 or similar approved) for the duration of the Contract.	Nr.	8	43,103.45	344,827.59
A222.2	Allow a provisional sum for Engineer's staff mobile phone airtime charges over the duration of the Contract	P-Sum	1	1,000,000.00	1,000,000.00
A222.3	Provide camera for use by the engineers's staff of 12.1 megapixels with expandable memory. Camera to revert back to the client at the end of the contract period.	Nr.	2	25,862.07	51,724.14
A222.4	Allow for contractor's overhead and profit for item A222.1-222.3	%			-
A23 Equipment for use by Engineer's staff					
A231.2	Provide Laptop Computers in the number and quality as per the clients instructions	Nr.	5	120,000.00	600,000.00
A231.3	Ditto but for Desktop Computers	Nr.	2	65,000.00	130,000.00
A231.4	Provide and maintain UPS of 1000 VA.	Nr	4	30,172.41	120,689.66
A231.5	Maintenance of internet, telephone and electricity services in the Engineer's office for the duration of the contract.	Month	24	25,862.07	620,689.66

No.	ITEM DESCRIPTION	UNIT	Quantity	RATE (Kshs)	AMOUNT (Kshs)
A233.1	Provide full set of Surveying equipment for the <u>exclusive</u> use of Engineer and Engineer's staff for the duration of construction. The equipment shall be maintained in good operation and shall be replaced if found defective or misleading in service. (the equipment shall be full set of Total Station, Auto level, and GPS complete with download software and process). Equipment shall revert to the Client.	Sum	1	1,293,103.45	1,293,103.45
A233.2	Allow for Contractor's overhead and profit for items A233.1	%			-
A26	<u>Testing of the works</u>				
A260.1	Allow for inspection of electrical and Mechanical Component manufacturing confirmation by the Employer and Engineer. Rate to cover for a total of 3 Client and Engineer persons in terms of Transport, accommodation and allowances.	P-Sum	1	862,068.97	862,068.97
A260.2	Allow for inspection of pipe manufacturing confirmation by the Employer and Engineer. Rate to cover for a total of 3 Client and Engineer persons in terms of Transport, accommodation and allowances.	P-Sum	1	862,068.97	862,068.97
A260.3	Allow for Contractor's overhead and profit for items A260.1 & A260.2	%			-
A27	<u>Temporary Works</u>				
A271	Traffic diversion during road crossing works	Sum	1	646,551.72	646,551.72
A272	Traffic regulation; establishment, operation and removal	Sum	1	1,293,103.45	1,293,103.45
A273	Provide and establish project publicity sign boards (location as directed on site)	Nr	8	215,517.24	1,724,137.93
A3	<u>Method Related Charges</u>				
A31	<u>Accommodation and buildings</u>				
A311.1	Allow for setting up of contractor's camps, offices, facilities e.t.c and provision of all plant and equipment that will be required during the entire contract period to site including demolition after completion of works.				
A42	<u>Provisional sums</u>				
A420.1	Provision for payment required by Authorities for pipeline crossings	Sum	1		
A420.2	Telephone and internet company charges for telephone supply to the sites	Sum	1		
A420.3	Provision of laboratory apparatus on behalf of the Employer for the Water Treatment Works Laboratory	Sum	1		
A420.4	Allow a sum for the Engineer's miscellaneous accounts to be spent in whole or part as instructed by the Engineer and to be reimbursed against receipts	PC-sum	1		
A420.5	Allow for contractor's overhead and profit for Items A420.1 to A420.4	%			
A420.6	Allow a sum for reimbursement to the contractor for payment of the Resident Engineer's staff overtime and allowances in accordance with the specification.	PC-sum	1	2,000,000.00	2,000,000.00
A420.7	Allow a Provisional sum for payment as demanded by Authorities for the permanent diversion of existing services.	PC-sum	1	500,000.00	500,000.00
A420.8	Allow a provisional sum for accommodation of Engineer's staff	PC-sum	1	4,000,000.00	4,000,000.00
A420.9	Allow for a provisional sum for attendance upon engineer's staff	PC-sum	1	7,000,000.00	7,000,000.00
A420.10	Allow for a provisional sum for site allowances for the Engineer's staff seconded by the client	PC-sum	1	2,500,000.00	2,500,000.00
A420.11	Allow PC sum of 800,000 to cover costs of site meetings	Month	24	30,000.00	720,000.00
A420.12	Allow PC for obtaining permit from WRMA for intake works	P.C sum	1	862,068.97	862,068.97
A420.14	Allow provisional sum for Test Running of the Scheme by the Contractor for 30 days by providing chemicals, staff etc	P.C sum	1	1,500,000.00	1,500,000.00
A420.15	Allow provisional sum for training costs for Employers staff seconded to the Project (2nr.Technical staff and 3nr Procurement staff)	P.C sum	5	250,000.00	1,250,000.00
A420.16	Allow a Provisional Sum to carry out Cadastral Survey by Licenced Surveyor, including obtaining approval by Director of Surveys and issuance of Title Deeds.	P.C sum	1	862,068.97	862,068.97
A420.17	Allow a provisional sum for Costs of Inspector of Works and staff seconded by the Employer during the execution of the Project	P.C sum	1	775,862.07	775,862.07

No.	ITEM DESCRIPTION	UNIT	Quantity	RATE (Kshs)	AMOUNT (Kshs)
A420.18	Allow a provisional sum of say Kshs 10 Million in the Bills of Quantities for Survey and Design of Mowlem junction-Endebess line	P.C sum	1		
A420.19	Allow for contractor's overhead and profit for Items A420.6 to A420.18	%			
				Carried to Summary	

PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT					
CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03					
BILL 2					
MOSONGO INTAKE WORKS					
No.	ITEM DESCRIPTION	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
	DEMOLITION AND SITE CLEARANCE				
2.1	General site clearance General site clearance for works, included accessories work of roads: ramp of terrain and contained reinforced concrete walls as per Clauses: 201, 304, 401, 402, 403,404, 405, 406, 407 and 409	ha	0.02		
	EARTHWORKS				
2.2	Excavation for foundations or trench Topsoil Strip top soil,depth not exceeding 0.3m for site as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	43.41		
2.3	Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 0.5-1m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	71.35		
2.4	Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 1-2m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	0.00		
2.5	Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 2-5m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	0.00		
2.6	Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 2-5m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	3.00		
2.7					
2.8	Excavation for foundations or trench Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Material other than topsoil,rock,or artificial hard material as per clause 303	m ³	71.35		
2.9					
2.10	Excavation for foundations Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Rock as per clause 303	m ³	0.20		
2.11	Excavation for foundations Filling Structures Filling by methods specified and to depths as shown in the drawings with the following materials Selected excavated granular material other than topsoil, rock or artificial hard material to tank base and compacted to 98% MOD AASHTO as per clause 304	m ³	6.09		

PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT					
CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03					
BILL 2					
MOSONGO INTAKE WORKS					
No.	ITEM DESCRIPTION	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
2.12	IN-SITU CONCRETE Provision and placing Mass Concrete Blinding or filling Provision and Placing blinding or filling concrete grade C8/10 as per clauses: 401, 402, 403, 404 and 405	m ³	2.72		
2.13	IN-SITU CONCRETE Provision and Placing Reinforced Concrete Bases, Footings, Ground Slabs, Walls and Beams or Columns Provision and placing reinforced concrete C40/20 as per clauses: 401, 402, 403,404, 405, 406, 407 and 409	m ³	54.53		
2.14	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Horizontal Plane fair finish horizontal formwork of the following width Width: 0.4-1.22 m as per clauses: 501, 502, 503 and 504	m ²	5.60		
2.15	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Horizontal Plane fair finish horizontal formwork of the following width Width exceeding 1.22 m as per clauses: 501, 502, 503 and 504	m ²	35.00		
2.16	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Vertical Plane fair finish vertical formwork of the following width Width exceeding 1.22 m as per clauses: 501, 502, 503 and 504	m ²	86.00		
2.17	CONCRETE ANCILLARIES Reinforcement Deformed High Yield Steel High yield square twisted or ribbed bars to BS4449 and of the following sizes Nominal size, 6-20mm as per clause 758	kg	5,400.00		
2.18	CONCRETE ANCILLARIES Joints Plastic waterstops of PVC to BS 903 of the following width as per clause 416 Width 150 - 300mm	m	14.20		
2.19	CONCRETE ANCILLARIES Concrete Accessories Finishing of top surfaces Finishing of top surfaces by the following methods Class U3 steel trowel finish as per clause 410	m ²	18.25		
2.20	CONCRETE ANCILLARIES Concrete Accessories Inserts Pipe inserts projecting from one face of the concrete and of the following sizes, excluding supply of pipe. 200 mm ND as per clause 702	nr	2.00		
2.21	CONCRETE ANCILLARIES Concrete Accessories Inserts Pipe inserts projecting from two faces of the concrete and of the following sizes, excluding supply of pipe 200 mm ND as per clause 702	nr	2.00		
2.22	Supply and installation of: Manual coarse screen 50 mm According to the instructions of the supervisor engineer as per clause 1520	No.	1.00		
2.23	Supply and installation of: Manual coarse screen 10 mm According to the instructions of the supervisor engineer as per clause 1521	No.	1.00		

PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT					
CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03					
BILL 2					
MOSONGO INTAKE WORKS					
No.	ITEM DESCRIPTION	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
2.24	Supply and installation of: Stainless steel pipes ND 250 mm. According to the instructions of the supervisor engineer as per clause 1516	m	2.00		
2.25	Supply and installation of: Flat body gate valve ND 250 mm. According to the instructions of the supervisor engineer as per clause 1513	No.	2.00		
2.26	Supply and installation of: Double air valve ND 80 According to the instructions of the supervisor engineer as per clause 703	No.	1.00		
2.27	Supply and installation of: Stainless steel stop-log group for intake According to the instructions of the supervisor engineer as per clause 1539	No.	1.00		
2.28	Supply and installation of: Accessories and miscellaneous. According to the instructions of the supervisor engineer as per clause 1517	kg	325.00		
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LAKE VICTORIA NORTH WATER WORKS DEVELOPMENT AGENCY					
PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT					
CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03					
BILL 3					
MOSONGO RAW WATER GRAVITY MAIN					
ITEM	DESCRIPTION	UNIT	QTY	RATE (Kshs)	Amount (Kshs) ©
No.					
3.1	BUSH CLEARANCE				
3.1.1	Trees of girth 500mm-1m locally disposed (Provisional)	Nr	50		
3.1.2	Trees of girth 1m-2m locally disposed (Provisional)	Nr	50		
3.1.3	Trees of girth 2m-3m locally disposed (Provisional)	Nr	50		
3.1.4	Stumps of diameter: 500mm-1m locally disposed (Provisional)	Nr	200		
3.2	TRENCH EXCAVATION				
3.3.1	Excavate trench in common material (The rate to include for joint holes,trimming sides and preparing trench bottom, backfill with selected fill material and compact. Surplus to be removed as directed by the Engineer: depth of excavation n.e. 1m	m ²	17,554		
3.3	PIPEWORKS				
	<i>a) Supply,transport to site,store ready for installation including jointing materials, bolts, gaskets packing jointing glue etc., as applicable.Lay and joint the pipeline, include for Pressure Testing as specified and to BS 3600</i>				
	<i>b) All pipe fittings and valve diameters indicated are normal diameters . See Drawings for relevant outside diameter.</i>				
	PN 10 - PN25 OD 225mm HDPE pipe	m	13,932		
3.3.1	Disinfection of Pipe lines: flushing with clear water, filling with water containing 0.05 g/l calcium hypochlorite, left for 24 hours. This includes supply of all necessary equipment, materials, chemicals and water, measurement of residual chlorine, all as specified.	m	13,932		
3.4	FITTINGS				
3.4.1	Sluice valve 225mm with associated fittings	Nr.	2		
3.4.2	Airvalve and fittings	Nr	16		
3.4.3	Washout Valve and fittings	Nr	5		
3.5	VALVE CHAMBER				
3.5.1	Provide all materials and construct Valve chamber internal dimensions 800mm x 800 mm x 800mm deep Complete with steel covers gauge 16, lock and key. Rate to include supply and installation of all fittings , painting and making goods of works use dressed stones of approved Quality measuring 150mm x 200mm x 300mm	Nr	18		
3.6	MARKER POSTS				
3.6.1	Supply and fix marker posts for water main route, road crossings, change of direction, air valves, washouts, fire hydrants and valve chambers. All in accordance with drawings and Specifications. "MAJI" marker posts –AV, WO,	Nr	157		
3.7	DEMOLITION OF STRUCTURES (LOCAL DISPOSAL)				
3.7.1	Masonry construction volume ne 50m ³ (Provisional)	Nr	1		
3.7.2	Masonry construction volume 50-100m ³ (Provisional)	Nr	1		
3.7.3	Metal construction volume ne 50m ³ (Provisional)	Nr	1		
3.7.4	Metal construction volume 50-100m ³ (Provisional)	Nr	1		
3.7.5	Brickwork construction volume ne 50m ³ (Provisional)	Nr	1		
3.7.6	Concrete construction volume ne 50m ³ (Provisional)	Nr	1		
3.7.7	Timber construction volume ne 50m ³ (Provisional)	Nr	1		
3.7.8	Mud and pole construction volume ne 50m ³ (Provisional)	Nr	1		
3.7.9	Mud and pole construction volume 50-100m ³ (Provisional)	Nr	1		

3.8	CLEARANCE OF PIPELINE WAYLEAVES, DISPOSAL LOCAL				
3.8.1	Nominal bore not 100-355mm pipeline only (Provisional)	m	714		
3.9	CROSSINGS PIPE				
3.9.3	250MM Epoxy coated steel Pipe with associated fittings (Provisional)	m	5		
3.10	CROSSINGS				
3.10.1	River, stream or canal, width 1-3m pipe nom Bore ne 355mm as per drawing (Provisional)	Nr	1		
3.10.2	River, stream or canal, width 3-10m pipe nom Bore ne 355mm as per drawing (Provisional)	Nr	1		
3.10.3	Hedge crossing pipe nom. Bore n.e 355mm (Provisional)	Nr	1		
3.10.4	Wall crossing pipe nom. Bore n.e 355mm (Provisional)	Nr	1		
3.10.5	Fence crossing pipe nom. Bore n.e 355mm (Provisional)	Nr	1		
3.10.6	Sewer, ditch or drain crossing pipe nom n.e 355mm (Provisional)	Nr	1		
3.10.7	Other underground services pipe nom bore n.e 355mm (Provisional)	Nr	1		
3.11	REINSTATEMENT				
3.11.1	Breaking up, temporary and permanent reinstatement of tarmac roads, pipe nom. Bore n.e 355mm (Provisional)	m	2		
3.11.2	Breaking up, temporary and permanent reinstatement of dirt roads, pipe nom. Bore n.e 355mm (Provisional)	m	2		
3.11.3	Breaking up, temporary and permanent reinstatement of tarmac, concrete or concrete blocks surfaced driveways, pipe nom. Bore n.e 355mm (Provisional)	m	2		
3.11.4	Breaking up, temporary and permanent reinstatement of grassland and lawns pipe nom. Bore n.e 355mm (Provisional)	m	2		
3.11.5	Breaking up, temporary and permanent reinstatement of cultivated lands/garden pipe nom. Bore n.e 355mm (Provisional)	m	2		
3.12	PIPEWORK SUPPORTS & PROTECTION ANCILLARIES TO LAYING & EXCAVATION				
3.13.1	EXTRAS TO EXCAVATION AND BACKFILLING				
3.13.1.1	In pipe trenches excavation of rock class I material (Provisional)	m ³	10		
3.13.1.2	In pipe trenches excavation of rock class II material (Provisional)	m ³	10		
3.13.1.3	In pipe trenches backfilling with class S2 material (Provisional)	m ³	10		
3.13.1.4	In Chamber excavation of rock class I material (Provisional)	m ³	10		
3.13.1.5	In Chamber excavation of rock class II material (Provisional)	m ³	10		
3.13.2	EMBEDMENT/SURROUNDING BACKFILLING				
	Bedding material				
3.13.3.1	In pipe trenches lower bedding in swampy areas with blended imported and screened class S2 material pipe 100-225 mm (Provisional)	m ³	5		
3.13.3.2	In pipe trenches lower bedding in swampy areas with blended imported and screened class S2 material pipe 200-300 mm (Provisional)	m ³	5		
	Surround material				
3.13.3.3	In pipe trenches lower bedding in swampy areas including upper bedding, side filling and initial backfill with blended imported and screened class S2 material pipe 100-200 mm (Provisional)	m ³	3		
3.13.3.4	In pipe trenches lower bedding in swampy areas including upper bedding, side filling and initial backfill with blended imported and screened class S2 material pipe 200-300 mm (Provisional)	m ³	3		
3.13.3	CONCRETE STOOLS AND THRUST BLOCKS CONCRETE CLASS 20				
	To horizontal bends				
3.13.3.1	Volume not exc. 0.1m ³ nom. Bore 100-200mm (Provisional)	Nr	2		
3.13.3.2	Volume not exc. 0.1-0.2m ³ nom. Bore 200-300mm (Provisional)	Nr	2		
3.13.3.3	Volume not exc. 0.2-0.3m ³ nom. Bore 300-400mm (Provisional)	Nr	2		

	To Junctions				
3.13.3.4	Volume not exc. 0.1m ³ nom. Bore 100-200mm (Provisional)	Nr	1		
3.13.3.5	Volume not exc. 0.1-0.2m ³ nom. Bore 200-300mm (Provisional)	Nr	1		
3.13.3.6	Volume not exc. 0.2-0.3m ³ nom. Bore 300-400mm (Provisional)	Nr	1		
	Mass concrete grade C20 20mm aggregates				
	Valve stools				
3.13.3.7	Volume not exc. 0.1m ³ valve nom. Bore 100-200mm (Provisional)	Nr	2		
3.13.3.8	Volume not exc. 0.1-0.2m ³ valve nom. Bore 200-300mm (Provisional)	Nr	2		
3.13.3.9	Volume not exc. 0.1-0.2m ³ valve nom. Bore 300-400mm (Provisional)	Nr	2		
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					

PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT					
CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03					
BILL 4					
MOSONGO INTAKE WORKS					
No.	ITEM DESCRIPTION	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
	DEMOLITION AND SITE CLEARANCE				
4.1	General site clearance General site clearance for works, included accessories work of roads: ramp of terrain and contained reinforced concrete walls as per Clauses: 201, 304, 401, 402, 403,404, 405, 406, 407 and 409	ha	0.02		
4.2	EARTHWORKS Excavation for foundations or trench Topsoil Strip top soil,depth not exceeding 0.3m for site as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	54.26		
4.3	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 0.5-1m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	89.19		
4.4	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 1-2m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	0.00		
4.5	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 2-5m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	0.00		
4.6	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 2-5m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	3.75		
4.7	EARTHWORKS Excavation for foundations or trench Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Material other than topsoil,rock,or artificial hard material as per clause 303	m ³	89.19		
4.8	EARTHWORKS Excavation for foundations Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Rock as per clause 303	m ³	0.25		
4.9	EARTHWORKS Filling Structures Filling by methods specified and to depths as shown in the drawings with the following materials Selected excavated granular material other than topsoil, rock or artificial hard material to tank base and compacted to 98% MOD AASHTO as per clause 304	m ³	7.61		
4.10	IN-SITU CONCRETE Provision and placing Mass Concrete Blinding or filling Provision and Placing blinding or filling concrete grade C8/10 as per clauses: 401, 402, 403, 404 and 405	m ³	3.40		

PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT					
CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03					
BILL 4					
MOSONGO INTAKE WORKS					
No.	ITEM DESCRIPTION	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
4.11	IN-SITU CONCRETE Provision and Placing Reinforced Concrete Bases, Footings, Ground Slabs, Walls and Beams or Columns Provision and placing reinforced concrete C40/20 as per clauses: 401, 402, 403,404, 405, 406, 407 and 409	m ³	68.16		
4.12	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Horizontal Plane fair finish horizontal formwork of the following width Width: 0.4-1.22 m as per clauses: 501, 502, 503 and 504	m ²	7.00		
4.13	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Horizontal Plane fair finish horizontal formwork of the following width Width exceeding 1.22 m as per clauses: 501, 502, 503 and 504	m ²	43.75		
4.14	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Vertical Plane fair finish vertical formwork of the following width Width exceeding 1.22 m as per clauses: 501, 502, 503 and 504	m ²	107.50		
4.15	CONCRETE ANCILLARIES Reinforcement Deformed High Yield Steel High yield square twisted or ribbed bars to BS4449 and of the following sizes Nominal size, 6-20mm as per clause 758	kg	6,750.00		
4.16	CONCRETE ANCILLARIES Joints Plastic waterstops of PVC to BS 903 of the following width as per clause 416 Width 150 - 300mm	m	17.75		
4.17	CONCRETE ANCILLARIES Concrete Accessories Finishing of top surfaces Finishing of top surfaces by the following methods Class U3 steel trowel finish as per clause 410	m ²	22.81		
4.18	CONCRETE ANCILLARIES Concrete Accessories Inserts Pipe inserts projecting from one face of the concrete and of the following sizes, excluding supply of pipe. 200 mm ND as per clause 702	nr	2.00		
4.19	CONCRETE ANCILLARIES Concrete Accessories Inserts Pipe inserts projecting from two faces of the concrete and of the following sizes, excluding supply of pipe 200 mm ND as per clause 702	nr	2.00		
4.20	Supply and installation of: Manual coarse screen 50 mm According to the instructions of the supervisor engineer as per clause 1520	nr	1.00		
4.21	Supply and installation of: Manual coarse screen 10 mm According to the instructions of the supervisor engineer as per clause 1521	nr	1.00		
4.22	Supply and installation of: Stainless steel pipes ND 250 mm. According to the instructions of the supervisor engineer as per clause 1516	m	2.00		
4.23	Supply and installation of: Flat body gate valve ND 250 mm. According to the instructions of the supervisor engineer as per clause 1513	nr	2.00		
4.24	Supply and installation of: Double air valve ND 80 According to the instructions of the supervisor engineer as per clause 703	nr	1.00		

<u>PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT</u>					
<u>CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03</u>					
<u>BILL 4</u>					
<u>MOSONGO INTAKE WORKS</u>					
No.	ITEM DESCRIPTION	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
4.25	Supply and installation of: Stainless steel stop-log group for intake According to the instructions of the supervisor engineer as per clause 1539	nr	1.00		
4.26	Supply and installation of: Accessories and miscellaneous. According to the instructions of the supervisor engineer as per clause 1517	kg	406.25		

LAKE VICTORIA NORTH WATER WORKS DEVELOPMENT AGENCY					
PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT					
CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03					
BILL 5					
CHEPKATIT RAW WATER GRAVITY MAIN					
ITEM	DESCRIPTION	UNIT	QTY	RATE (Kshs)	Amount (Kshs) ©
No.					
5.1	BUSH CLEARANCE				
5.1.1	Trees of girth 500mm-1m locally disposed (Provisional)	Nr	50		
5.1.2	Trees of girth 1m-2m locally disposed (Provisional)	Nr	50		
5.1.3	Trees of girth 2m-3m locally disposed (Provisional)	Nr	50		
5.1.4	Stumps of diameter: 500mm-1m locally disposed (Provisional)	Nr	200		
5.2	TRENCH EXCAVATION				
5.2.1	Excavate trench in common material (The rate to include for joint holes,trimming sides and preparing trench bottom, backfill with selected fill material and compact. Surplus to be removed as directed by the Engineer: depth of excavation n.e. 1m	m ²	900		
5.3	PIPEWORKS				
	<i>a) Supply,transport to site,store ready for installation including jointing materials, bolts, gaskets packing jointing glue etc., as applicable.Lay and joint the pipeline, include for Pressure Testing as specified and to BS 3600</i>				
	<i>b) All pipe fittings and valve diameters indicated are normal diameters . See Drawings for relevant outside diameter.</i>				
	PN 10 OD 280mm HDPE pipe	m	714		
5.3.1	Disinfection of Pipe lines: flushing with clear water, filling with water containing 0.05 g/l calcium hypochlorite, left for 24 hours. This includes supply of all necessary equipment, materials, chemicals and water, measurement of residual chlorine, all as specified.	m	714		
5.4	FITTINGS				
5.4.1	Sluice valve 280mm with associated fittings	Nr.	2		
5.4.2	Airvalve and fittings	Nr	16		
5.4.3	Washout Valve and fittings	Nr	5		
5.5	VALVE CHAMBER				
5.5.1	Provide all materials and construct Valve chamber internal dimensions 800mm x 800 mm x 800mm deep Complete with steel covers gauge 16, lock and key. Rate to include supply and installation of all fittings , painting and making goods of works use dressed stones of approved Quality measuring 150mm x 200mm x 300mm	Nr	18		
5.6	MARKER POSTS				
5.6.1	Supply and fix marker posts for water main route, road crossings, change of direction, air valves, washouts, fire hydrants and valve chambers. All in accordance with drawings and Specifications. "MAJI" marker posts –AV, WO,	Nr	25		
5.7	DEMOLITION OF STRUCTURES (LOCAL DISPOSAL)				
5.7.1	Masonry construction volume ne 50m ³ (Provisional)	Nr	1		
5.7.2	Masonry construction volume 50-100m ³ (Provisional)	Nr	1		
5.7.3	Metal construction volume ne 50m ³ (Provisional)	Nr	1		
5.7.4	Metal construction volume 50-100m ³ (Provisional)	Nr	1		
5.7.5	Brickwork construction volume ne 50m ³ (Provisional)	Nr	1		
5.7.6	Concrete construction volume ne 50m ³ (Provisional)	Nr	1		
5.7.7	Timber construction volume ne 50m ³ (Provisional)	Nr	1		
5.7.8	Mud and pole construction volume ne 50m ³ (Provisional)	Nr	1		
5.7.9	Mud and pole construction volume 50-100m ³ (Provisional)	Nr	1		

5.8	CLEARANCE OF PIPELINE WAYLEAVES, DISPOSAL LOCAL				
5.8.1	Nominal bore not 100-355mm pipeline only (Provisional)	m	714		
5.9	CROSSINGS PIPE				
5.9.1	350MM Epoxy coated Steel Pipe with associated fittings (Provisional)	m	5		
5.9.2	300MM Epoxy Coated Steel Pipe with associated fittings (Provisional)	m	5		
5.9.3	250MM Epoxy coated steel Pipe with associated fittings (Provisional)	m	5		
5.9.4	200MM Class B GI Pipe with associated fittings (Provisional)	m	5		
5.9.5	150MM Class B GI Pipe with associated fittings (Provisional)	m	5		
5.9.6	125MM Class B GI Pipe with associated fittings (Provisional)	m	5		
5.9.7	100MM Class B GI Pipe with associated fittings (Provisional)	m	5		
5.9.8	75MM Class B GI Pipe with associated fittings (Provisional)	m	5		
5.9.9	63MM Class B GI Pipe with associated fittings (Provisional)	m	5		
5.9.10	50MM Class B GI Pipe with associated fittings (Provisional)	m	5		
5.10	CROSSINGS				
5.10.1	River, stream or canal, width 1-3m pipe nom Bore ne 355mm as per drawing (Provisional)	Nr	1		
5.10.2	River, stream or canal, width 3-10m pipe nom Bore ne 355mm as per drawing (Provisional)	Nr	1		
5.10.3	Hedge crossing pipe nom. Bore n.e 355mm (Provisional)	Nr	1		
5.10.4	Wall crossing pipe nom. Bore n.e 355mm (Provisional)	Nr	1		
5.10.5	Fence crossing pipe nom. Bore n.e 355mm (Provisional)	Nr	1		
5.10.6	Sewer, ditch or drain crossing pipe nom n.e 355mm (Provisional)	Nr	1		
5.10.7	Other underground services pipe nom bore n.e 355mm (Provisional)	Nr	1		
5.11	REINSTATEMENT				
5.11.1	Breaking up, temporary and permanent reinstatement of tarmac roads, pipe nom. Bore n.e 355mm (Provisional)	m	2		
5.11.2	Breaking up, temporary and permanent reinstatement of dirt roads, pipe nom. Bore n.e 355mm (Provisional)	m	2		
5.11.3	Breaking up, temporary and permanent reinstatement of tarmac, concrete or concrete blocks surfaced driveways, pipe nom. Bore n.e 355mm (Provisional)	m	2		
5.11.4	Breaking up, temporary and permanent reinstatement of grassland and lawns pipe nom. Bore n.e 355mm (Provisional)	m	2		
5.11.5	Breaking up, temporary and permanent reinstatement of cultivated lands/garden pipe nom. Bore n.e 355mm (Provisional)	m	2		
5.12	PIPEWORK SUPPORTS & PROTECTION ANCILLARIES TO LAYING & EXCAVATION				
5.15.1	EXTRAS TO EXCAVATION AND BACKFILLING				
5.15.1.1	In pipe trenches excavation of rock class I material (Provisional)	m ³	10		
5.15.1.2	In pipe trenches excavation of rock class II material (Provisional)	m ³	10		
5.15.1.3	In pipe trenches backfilling with class S2 material (Provisional)	m ³	10		
5.15.1.4	In Chamber excavation of rock class I material (Provisional)	m ³	10		
5.15.1.5	In Chamber excavation of rock class II material (Provisional)	m ³	10		
5.15.2	EMBEDMENT/SURROUNDING BACKFILLING				
	Bedding material				
5.15.5.1	In pipe trenches lower bedding in swampy areas with blended imported and screened class S2 material pipe 100-200 mm (Provisional)	m ³	5		
5.15.5.2	In pipe trenches lower bedding in swampy areas with blended imported and screened class S2 material pipe 200-300 mm (Provisional)	m ³	5		
	Surround material				

5.15.5.3	In pipe trenches lower bedding in swampy areas including upper bedding, side filling and initial backfill with blended imported and screened class S2 material pipe 100-200 mm (Provisional)	m ³	3		
5.15.5.4	In pipe trenches lower bedding in swampy areas including upper bedding, side filling and initial backfill with blended imported and screened class S2 material pipe 200-300 mm (Provisional)	m ³	3		
5.15.3	CONCRETE STOOLS AND THRUST BLOCKS CONCRETE CLASS 20				
	To horizontal bends				
5.15.5.1	Volume not exc. 0.1m ³ nom. Bore 100-200mm (Provisional)	Nr	2		
5.15.5.2	Volume not exc. 0.1-0.2m ³ nom. Bore 200-300mm (Provisional)	Nr	2		
5.15.5.3	Volume not exc. 0.2-0.3m ³ nom. Bore 300-400mm (Provisional)	Nr	2		
	To Junctions				
5.15.5.4	Volume not exc. 0.1m ³ nom. Bore 100-200mm (Provisional)	Nr	1		
5.15.5.5	Volume not exc. 0.1-0.2m ³ nom. Bore 200-300mm (Provisional)	Nr	1		
5.15.5.6	Volume not exc. 0.2-0.3m ³ nom. Bore 300-400mm (Provisional)	Nr	1		
	Mass concrete grade C20 20mm aggregates				
	Valve stools				
5.15.5.7	Volume not exc. 0.1m ³ valve nom. Bore 100-200mm (Provisional)	Nr	2		
5.15.5.8	Volume not exc. 0.1-0.2m ³ valve nom. Bore 200-300mm (Provisional)	Nr	2		
5.15.5.9	Volume not exc. 0.1-0.2m ³ valve nom. Bore 300-400mm (Provisional)	Nr	2		
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					

MO SUWERWA WATER SUPPLY AND SANITATION PROJECT

CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03

WTP SUMMARY

BILL NO. 6	Amount (kshs)
6.1	
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<u>O SUWERWA WATER SUPPLY AND SANITATION PROJECT</u>	
<u>CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03</u>	
<u>WTP SUMMARY</u>	
BILL NO. 6	Amount (kshs)
6.29	
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6.31	
6.32	
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6.39	
SUB-TOTAL 1	

PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT					
CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03					
BILL No. B: WATER TREATMENT PLANT					
6.1:Site Works of WTP					
CLASS	ITEM DESCRIPTION	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
6.1.1	DEMOLITION AND SITE CLEARANCE General site clearance General site clearance for works, included accessories work of roads: ramp of terrain and contained reinforced concrete walls as per Clauses: 201, 304, 401, 402, 403,404, 405, 406, 407 and 409	ha	1.37		
6.1.2	EARTHWORKS Excavation for foundations or trench Topsoil Strip top soil,depth not exceeding 0.15m for site as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m³	602.91		
6.1.3	EARTHWORKS Excavation for foundations or trench Ordinary Soil General excavation, for road works and parking area, in material other than topsoil, rock or artificial hard material, commencing surface is the stripped ground level Depth 0.25-0,5m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m³	926.67		
6.1.4	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 0.5-1m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m³	408.68		
6.1.5	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 1-2m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m³	600.39		
6.1.6	EARTHWORKS Excavation for foundations or trench Rock General excavation, for road works and parking area, in material other than topsoil, rock or artificial hard material, commencing surface is the stripped ground level Depth 0.25-0,5m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m³	-		
6.1.7	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 0,5-1m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m³	-		
6.1.8			-		

6.1.9	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 1-2m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	-		
6.1.10	EARTHWORKS Excavation for foundations or trench Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Top soil as per clause 303	m ³	602.91		
6.1.11	EARTHWORKS Excavation for foundations or trench Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Material other than topsoil, rock, or artificial hard material as per clause 303	m ³	1,935.74		
6.1.12	EARTHWORKS Excavation for foundations Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Rock as per clause 303	m ³	325.03		
6.1.13	EARTHWORKS Landscaping Turfing for lawns; include filling with excavated topsoil and the preparation of the surfaces as directed by the Engineer	m ²	8,758.00		
6.1.14	PIPEWORK-PIPES Plastic Pipes uPVC Pipes uPVC pressure pipes, to BS 5481, with flexible joints to BS 4346 or BS 6209, 25 mm OD PN6, supply and laying in trench as per clauses: 766, 808 and 1107	m	348.67		
6.1.15	PIPEWORK-PIPES Plastic Pipes uPVC Pipes uPVC pressure pipes, to BS 5481, with flexible joints to BS 4346 or BS 6209, 40 mm OD PN6, supply and laying in trench as per clauses: 766, 808 and 1107	m	139.33		
6.1.16	PIPEWORK-PIPES Steel Pipes Steel pipes, 25mm ND, supply and laying in trench as per clauses: 702, 759 and 808	m	139.33		
6.1.17	PIPEWORK-PIPES Steel Pipes Steel pipes, 150mm ND, supply and laying in trench as per clauses: 702, 759 and 808	m	139.33		
6.1.18			-		
6.1.19	PIPEWORK-PIPES Steel Pipes Steel pipes, 200mm ND, supply and laying in trench as per clauses: 702, 759 and 808	m	247.33		
6.1.20			-		
6.1.21	PIPEWORK-PIPES Steel Pipes Steel pipes, 250mm ND, supply and laying in trench as per clauses: 702, 759 and 808	m	22.00		

6.1.22	PIPEWORK-PIPES Steel Pipes Steel pipes, 300mm ND, supply and laying in trench as per clauses: 702, 759 and 808	m	34.67		
6.1.23	PIPEWORK-PIPES Steel Pipes Steel pipes, 250mm ND, supply and laying in trench as per clauses: 702, 759 and 808	m	11.13		
6.1.26	PIPEWORK-FITTINGS AND VALVES Cast or Spun Iron Pipe Fittings Bends Ductile iron all flanged 45 degree bends, to BS 4772, flanges to BS 4504, all to PN6, cement mortar lined, and of the following sizes 250 mm ND as per clauses: 700 and 722	nr	6.00		
6.1.27	PIPEWORK-FITTINGS AND VALVES Cast or Spun Iron Pipe Fittings Bends Ductile iron all flanged 90 degree bend, to BS 4772, flanges to BS 4504, all to PN6, cement mortar lined, and of the following sizes 200 mm ND as per clauses: 700 and 722	nr	2.00		
6.1.30	PIPEWORK-FITTINGS AND VALVES Cast or Spun Iron Pipe Fittings Bends Ductile iron all flanged 90 degree bend, to BS 4772, flanges to BS 4504, all to PN6, cement mortar lined, and of the following sizes 500 mm ND as per clauses: 700 and 722	nr	4.67		
6.1.31	PIPEWORK-FITTINGS AND VALVES Cast or Spun Iron Pipe Fittings Junctions and Branches Ductile iron all flanged tee to BS 4346, flanges to BS 4504, all to PN6, cement mortar lined, and of the following sizes 200/200 mm ND as per clauses: 700 and 722	nr	2.00		
6.1.45	PIPEWORK - MANHOLES AND PIPEWORK ANCILLARIES Manholes Precast Concrete Manhole Precast concrete manhole complete, include lockable cover slab, all finishes and of the following depths Depth 1.5-2m as per clause 1012	nr	2.00		
6.1.46	PIPEWORK - MANHOLES AND PIPEWORK ANCILLARIES French Drains, Ditches and Trenches Excavation Trapezoidal section ditches, lined with concrete of the following cross section area Area 0.25-0.5 m ² as per clause 1001	m	6.67		
6.1.47	PIPEWORK - MANHOLES AND PIPEWORK ANCILLARIES Other Pipework Ancillaries Marker Posts Marker posts for meters as per clause 745	nr	7.00		
6.1.48	PIPEWORK - MANHOLES AND PIPEWORK ANCILLARIES Other Pipework Ancillaries Marker Posts Pipe markers as per clause 745	nr	6.67		

6.1.49	ROADS AND PAVINGS Sub-Bases Shape road surface by medium grading to camber and crossfall with a motor grader Depth not exceeding 150 mm as per clauses; 1137 and 1138	m ²	2,647.33		
6.1.50	ROADS AND PAVINGS Sub-Bases Provide, transport up to site, spread, shape, stabilise and compact to atleast 95% MDD AASHTO gravel material for flexible sub-base, of the following thickness Depth 150-300 mm as per clauses: 1139, 1142, 1143 and 1144	m ³	794.67		
6.1.51	ROADS AND PAVINGS Surfacing Cibro blocks, placed and rolled; to Engineer's approval	m ²	2,647.33		
6.1.52	MISCELLANEOUS WORKS Fences 100x100mm Concrete post of C25 concrete and wire galvanised wire chain link fence of gauge 10 to BS 1722, with triple row of barbed wire on top, anchored into blockwork dwarf wall as per drawings, height 2.5-3 m	m	366.67		
6.1.53	MISCELLANEOUS WORKS Gates Supply and complete installation of metal field gate to BS 3470 in C25 concrete pad foundations; complete and of the following widths Width 2 m, double leaf	nr	1.00		

PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT**CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03****BILL No. B: WATER TREATMENT PLANT****6.2:Fine Screen WTP**

CLASS	ITEM DESCRIPTION	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
6.2.1	EARTHWORKS Excavation for foundations or trench Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Material other than topsoil,rock,or artificial hard material as per clause 303	m ³	101.07		
6.2.2	EARTHWORKS Excavation for foundations Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Rock as per clause 303	m ³	0.00		
6.2.3	EARTHWORKS Filling Structures Filling by methods specified and to depths as shown in the drawings with the following materials Selected excavated granular material other than topsoil, rock or artificial hard material to tank base and compacted to 98% MOD AASHTO as per clause 304	m ³	7.34		
6.2.4	EARTHWORKS Filling Structures Filling by methods specified and to depths as shown in the drawings with the following materials Excavated rockfill to structure stabilisation as per clause 304	m ³	15.61		
6.2.5	IN-SITU CONCRETE Provision and placing Mass Concrete Blinding or filling Provision and Placing blinding or filling concrete grade C8/10 as per clauses: 401, 402, 403, 404 and 405	m ³	3.87		
6.2.6	IN-SITU CONCRETE Provision and Placing Reinforced Concrete Bases, Footings, Ground Slabs, Walls and Beams or Columns Provision and placing reinforced concrete C40/20 as per clauses: 401, 402, 403,404, 405, 406, 407 and 409	m ³	51.45		
6.2.7	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Horizontal Plane fair finish horizontal formwork of the following width Width: 0.4-1.22 m as per clauses: 501, 502, 503 and 504	m ²	20.29		

6.2.8	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Horizontal Plane fair finish horizontal formwork of the following width Width exceeding 1.22 m as per clauses: 501, 502, 503 and 504	m ²	107.55		
6.2.9	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Vertical Plane fair finish vertical formwork of the following width Width exceeding 1.22 m as per clauses: 501, 502, 503 and 504	m ²	178.61		
6.2.10	CONCRETE ANCILLARIES Reinforcement Deformed High Yield Steel High yield square twisted or ribbed bars to BS4449 and of the following sizes Nominal size, 6-20mm as per clause 758	t	9.69		
6.2.11	CONCRETE ANCILLARIES Joints Plastic waterstops of PVC to BS 903 of the following width as per clause 416 Width 150 - 300mm	m	76.67		
6.2.12	CONCRETE ANCILLARIES Concrete Accessories Finishing of top surfaces Finishing of top surfaces by the following methods Class U3 steel trowel finish as per clause 410	m ²	19.20		
6.2.13	CONCRETE ANCILLARIES Concrete Accessories Inserts Pipe inserts projecting from one face of the concrete and of the following sizes, excluding supply of pipe. 200 mm ND as per clause 702	nr	0.67		
6.2.14	CONCRETE ANCILLARIES Concrete Accessories Inserts Pipe inserts projecting from one face of the concrete and of the following sizes, excluding supply of pipe. 250 mm ND as per clause 702	nr	2.00		
6.2.15	CONCRETE ANCILLARIES Concrete Accessories Inserts Pipe inserts projecting from one face of the concrete and of the following sizes, excluding supply of pipe. 300 mm ND as per clause 702	nr	1.00		
6.2.16	WATER PROOFING Protective Layers Flexible polyethylene sheeting, gauge 1000, or similar approved, laid to the surface of blinding concrete or sand blinded hardcore fill Surfaces inclined at an angle not exceeding 30 degrees to the horizontal as per clause 1156	m ²	23.13		
6.2.17	WATER PROOFING Protective Layers Sand cement screed of 1:3 cement sand mortar, applied to concrete, 25 mm thick, prepared and applied Surfaces of vertical walls, include primice finish inclined at an angle exceeding 30 degrees to the horizontal as per clause 713	m ²	108.67		

6.2.18	<p>WATER PROOFING</p> <p>Protective Layers</p> <p>Sand cement screed of 1:3 cement sand mortar, applied to concrete, 25 mm thick, prepared and applied</p> <p>'External Surfaces of vertical wall as per clause 713</p>	m ²	76.67	

PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT**CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03****BILL No. B: WATER TREATMENT PLANT****6.3:Flocculant Storage WTP**

CLASS	ITEM DESCRIPTION	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
6.3.1	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 1-2m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	7.65		
6.3.2	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 0,5-1m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	0.00		
6.3.3	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 1-2m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	0.00		
6.3.4	EARTHWORKS Excavation for foundations or trench Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Material other than topsoil,rock,or artificial hard material as per clause 303	m ³	25.39		
6.3.5	EARTHWORKS Excavation for foundations Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Rock as per clause 303	m ³	0.00		
6.3.6	EARTHWORKS Filling Structures Filling by methods specified and to depths as shown in the drawings with the following materials Selected excavated granular material other than topsoil, rock or artificial hard material to tank base and compacted to 98% MOD AASHTO as per clause 304	m ³	10.60		

6.3.7	IN-SITU CONCRETE Provision and placing Mass Concrete Blinding or filling Provision and Placing blinding or filling concrete grade C8/10 as per clauses: 401, 402, 403, 404 and 405	m ³	1.25		
6.3.8	IN-SITU CONCRETE Provision and Placing Reinforced Concrete Bases, Footings, Ground Slabs, Walls and Beams or Columns Provision and placing reinforced concrete C40/20 as per clauses: 401, 402, 403,404, 405, 406, 407 and 409	m ³	19.72		
6.3.9	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Horizontal Plane fair finish horizontal formwork of the following width Width: 0.1-0,4 m as per clauses: 501, 502, 503 and 504	m ²	41.18		
6.3.10	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Vertical Plane fair finish vertical formwork of the following width Width: 0.4-1,22 m as per clauses: 501, 502, 503 and 504	m ²	0.00		
6.3.11	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Vertical Plane fair finish vertical formwork of the following width Width exceeding 1.22 m as per clauses: 501, 502, 503 and 504	m ²	29.84		
6.3.12	CONCRETE ANCILLARIES Reinforcement Deformed High Yield Steel High yield square twisted or ribbed bars to BS4449 and of the following sizes Nominal size, 6-20mm as per clause 758	t	2.64		
6.3.13	CONCRETE ANCILLARIES Concrete Accessories Finishing of top surfaces Finishing of top surfaces by the following methods Class U3 Steel float finish as per clause 410	m ²	32.29		
6.3.14	BRICKWORK, BLOCKWORK AND MASONRY Solid burnt clay brickwork Solid burnt clay brickwork to BS 3921, jointed with ordinary 1:4 cement mortar, hoop irons every three courses, and of the following thicknesses 300 mm thick as per clauses: 601, 602, 603, 708, 710 and 715	m ²	160.00		
6.3.15	BRICKWORK, BLOCKWORK AND MASONRY Solid burnt clay brickwork Damp proof course of bitumen impregnated fabric to BS 6398 for the following wall thickness 300 mm thick as per clauses: 601, 602, 603, 708, 710 and 720	m	58.00		
6.3.16	PAINTING High Gloss Masonry External quality weather guard paint, two coats, to the following smooth concrete surfaces; include surface preparation Surfaces of walls inclined at an angle exceeding 60 degrees to the horizontal as per clauses: 1132 and 1134	m ²	195.00		

6.3.17	PAINTING Emulsion Paint Masonry Internal quality vinyl silk paint, two coats, to the following smooth concrete surfaces; include surface preparation Surfaces of walls inclined at an angle exceeding 60 degrees to the horizontal as per clauses: 1132 and 1134	m ²	145.57		
6.3.18	WATER PROOFING Damp Proofing Rendering Surfaces to walls inclined at an angle exceeding 60 degrees to the horizontal in ordinary cement mortar as per clauses: 1113, 1128 and 1129	m ²	195.00		
6.3.19	WATER PROOFING Protective Layers Flexible polyethylene sheeting, gauge 1000, or similar approved, laid to the surface of blinding concrete or sand blinded hardcore fill Surfaces inclined at an angle not exceeding 30 degrees to the horizontal as per clause 1156	m ²	21.00		
6.3.20	WATER PROOFING Protective Layers Sand cement screed of 1:3 cement sand mortar, applied to concrete, 60 mm thick, prepared and applied Surfaces of floors inclined at an angle not exceeding 30 degrees to the horizontal as per clause 713	m ²	21.00		
6.3.21	SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS Doors Supply and installation of exterior doors with one or two steel doors, accompanied by at least three hinges, with mortise lock strike plate with rim and chrome, including the supply and installation of marble threshold Single leaf louvered door with size 900 mm x 2100 mm high filled in with 100 x 2mm thick mild steel louvers welded to frame as per clauses: 755 and 1129	nr	1.00		
6.3.22	MISCELLANEOUS WORKS Supply and installation of, chamber covermade of concrete block Overall size 2600 x 1250 mm high as per clause 715	nr	1.00		
6.3.23	MISCELLANEOUS WORKS Supply and installation of, chamber covermade of concrete block Overall size 2000 x 1250 mm high as per clause 715	nr	1.00		
6.3.24	MISCELLANEOUS WORKS Supply and installation of, chamber covermade of concrete block Overall size 1400 x 1250 mm high as per clause 715	nr	1.00		
6.3.25	SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS Building Finishes Building finishes including, constructing C20 1.0x2.0m entrance ramps to the workshop and stores, 20x100mm high 1:3 cement-sand skirting, 1500mm high toilet and C20 concrete window cills, 700mm wide C20 concrete splash apron, complete to the specifications and as directed by the Engineer as per clauses: 1113, 1115, 1116, 1121, 1122 and 1123	sum	1.00		

6.3.26	SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS Building Finishes Supply and lay glazed ceramic tiling for the chemical mixing tanks as per clauses: 1121, 1122 and 1123	m2	55.75		

PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT**CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03****BILL No. B: WATER TREATMENT PLANT****6.4: Clari Flocculator WTP**

CLASS	ITEM DESCRIPTION	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
6.4.1	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 0.5-1m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	525.28		
6.4.2	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 1-2m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	518.73		
6.4.3	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 2-5m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	736.17		
6.4.4	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 0.5-1m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	1.00		
6.4.5	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 1-2m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	0.00		
6.4.6	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 2-5m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	0.00		

6.4.7	EARTHWORKS Excavation for foundations or trench Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Material other than topsoil, rock, or artificial hard material as per clause 303	m ³	1,780.18		
6.4.8	EARTHWORKS Excavation for foundations Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Rock as per clause 303	m ³	0.00		
6.4.9	EARTHWORKS Filling Structures Filling by methods specified and to depths as shown in the drawings with the following materials Selected excavated granular material other than topsoil, rock or artificial hard material to tank base and compacted to 98% MOD AASHTO as per clause 304	m ³	0.00		
6.4.10	EARTHWORKS Filling Structures Filling by methods specified and to depths as shown in the drawings with the following materials Excavated rockfill to structure stabilisation as per clause 304		106.34		
6.4.11			0.00		
6.4.12	IN-SITU CONCRETE Provision and placing Mass Concrete Blinding or filling Provision and Placing blinding or filling concrete grade C8/10 as per clauses: 401, 402, 403, 404 and 405	m ³	34.24		
6.4.13	IN-SITU CONCRETE Provision and Placing Reinforced Concrete Bases, Footings, Ground Slabs, Walls and Beams or Columns Provision and placing reinforced concrete C40/20 as per clauses: 401, 402, 403, 404, 405, 406, 407 and 409	m ³	398.09		
6.4.14	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Horizontal Plane fair finish horizontal formwork of the following width Width: 0.1-0.4 m as per clauses: 501, 502, 503 and 504	m ²	55.80		
6.4.15	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Horizontal Plane fair finish horizontal formwork of the following width Width: 0.4-1.22 m as per clauses: 501, 502, 503 and 504	m ²	37.86		
6.4.16	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Vertical Plane fair finish vertical formwork of the following width Width: 0.1-0.4 m as per clauses: 501, 502, 503 and 504	m ²	0.00		

6.4.17	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Vertical Plane fair finish vertical formwork of the following width Width: 0.4-1,22 m as per clauses: 501, 502, 503 and 504	m ²	210.72		
6.4.18	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Vertical Plane fair finish vertical formwork of the following width Width exceeding 1.22 m as per clauses: 501, 502, 503 and 504	m ²	1,851.06		
6.4.19	CONCRETE ANCILLARIES Reinforcement Deformed High Yield Steel High yield square twisted or ribbed bars to BS4449 and of the following sizes Nominal size, 6-20mm as per clause 758	t	70.08		
6.4.20	CONCRETE ANCILLARIES Joints Plastic waterstops of PVC to BS 903 of the following width as per clause 416 Width 150 - 300mm	m	386.95		
6.4.21	CONCRETE ANCILLARIES Concrete Accessories Finishing of top surfaces Finishing of top surfaces by the following methods Class U3 steel trowel finish as per clause 410	m ²	515.15		
6.4.22	CONCRETE ANCILLARIES Concrete Accessories Inserts Pipe inserts projecting from one face of the concrete and of the following sizes, excluding supply of pipe. 200 mm ND as per clause 702	nr	1.00		
6.4.23	CONCRETE ANCILLARIES Concrete Accessories Inserts Pipe inserts projecting from one face of the concrete and of the following sizes, excluding supply of pipe. 250 mm ND as per clause 702	nr	1.00		
6.4.24	CONCRETE ANCILLARIES Concrete Accessories Inserts Pipe inserts projecting from one face of the concrete and of the following sizes, excluding supply of pipe. 300 mm ND as per clause 702	nr	1.00		
6.4.25	CONCRETE ANCILLARIES Concrete Accessories Inserts Pipe inserts projecting from two faces of the concrete and of the following sizes, excluding supply of pipe 350 mm ND as per clause 702	nr	2.00		

PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT**CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03****BILL No. B: WATER TREATMENT PLANT****6.5: Filters WTP**

CLASS	ITEM DESCRIPTION	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
6.5.1	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 0.5-1m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	302.17		
6.5.2	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 1-2m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	302.17		
6.5.3	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 2-5m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	594.81		
6.5.4	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 0.5-1m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	0.00		
6.5.5	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 1-2m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	0.00		
6.5.6	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 2-5m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	0.00		

6.5.7	EARTHWORKS Excavation for foundations or trench Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Top soil as per clause 303	m ³	1199.15		
6.5.8	EARTHWORKS Excavation for foundations Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Rock as per clause 303	m ³	375.70		
6.5.9	EARTHWORKS Filling Structures Filling by methods specified and to depths as shown in the drawings with the following materials Selected excavated granular material other than topsoil, rock or artificial hard material to tank base and compacted to 98% MOD AASHTO as per clause 304	m ³	119.70		
6.5.10	IN-SITU CONCRETE Provision and placing Mass Concrete Blinding or filling Provision and Placing blinding or filling concrete grade C8/10 as per clauses: 401, 402, 403, 404 and 405	m ³	31.36		
6.5.11	IN-SITU CONCRETE Provision and Placing Reinforced Concrete Bases, Footings, Ground Slabs, Walls and Beams or Columns Provision and placing reinforced concrete C40/20 as per clauses: 401, 402, 403,404, 405, 406, 407 and 409	m ³	590.16		
6.5.12	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Horizontal Plane fair finish horizontal formwork of the following width Width: 0.1-0,4 m as per clauses: 501, 502, 503 and 504	m ²	0.00		
6.5.13	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Vertical Plane fair finish vertical formwork of the following width Width: 0.1-0.4 m as per clauses: 501, 502, 503 and 504	m ²	390.84		
6.5.14	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Vertical Plane fair finish vertical formwork of the following width Width: 0.4-1,22 m as per clauses: 501, 502, 503 and 504	m ²	217.90		
6.5.15	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Vertical Plane fair finish vertical formwork of the following width Width exceeding 1.22 m as per clauses: 501, 502, 503 and 504	m ²	943.48		
6.5.16	CONCRETE ANCILLARIES Reinforcement Deformed High Yield Steel High yield square twisted or ribbed bars to BS4449 and of the following sizes Nominal size, 6-20mm as per clause 758	t	111.57		

6.5.17	CONCRETE ANCILLARIES Joints Plastic waterstops of PVC to BS 903 of the following width as per clause 416 Width 150 - 300mm	m	734.64		
6.5.18	CONCRETE ANCILLARIES Concrete Accessories Finishing of top surfaces Finishing of top surfaces by the following methods Class U3 steel trowel finish as per clause 410	m ²	696.91		
6.5.19	CONCRETE ANCILLARIES Concrete Accessories Inserts Pipe inserts projecting from one face of the concrete and of the following sizes, excluding supply of pipe. 400 mm ND as per clause 702	nr	10.00		
6.5.20	CONCRETE ANCILLARIES Concrete Accessories Inserts Pipe inserts projecting from one face of the concrete and of the following sizes, excluding supply of pipe. 500 mm ND as per clause 702	nr	1.00		
6.5.21	CONCRETE ANCILLARIES Concrete Accessories Inserts Pipe inserts projecting from one face of the concrete and of the following sizes, excluding supply of pipe. 600 mm ND as per clause 702	nr	8.04		
6.5.22	WATER PROOFING Protective Layers Flexible polyethylene sheeting, gauge 1000, or similar approved, laid to the surface of blinding concrete or sand blinded hardcore fill Surfaces inclined at an angle not exceeding 30 degrees to the horizontal as per clause 1156	m ²	144.18		
6.5.23	WATER PROOFING Protective Layers Sand cement screed of 1:3 cement sand mortar, applied to concrete, 25 mm thick, prepared and applied Surfaces of vertical walls, include primice finish inclined at an angle exceeding 30 degrees to the horizontal as per clause 713	m ²	601.38		
6.5.24	WATER PROOFING Protective Layers	m ²	523.82		
6.5.25	SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS Doors Supply and installation of internal steel doors with single or double doors up to 2 meters in width, for access to the premises, consisting of chassis and counter frame at tubular steel galvanized panels, simple galvanized sheet steel thickness 10 / 10 mm with lock and handle and also horizontal chrome handle for antipanic Single leaf door overall size 900 x 2100mm high with 200 steel pvo as per clauses: 755 and 721	nr	1.00		
6.5.26	MISCELLANEOUS WORK Manhole Cover Manhole cover of following sizes. 800 mm x 800 as per clause 743	nr	8.00		

PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT**CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03****BILL No. B: WATER TREATMENT PLANT****6.6: Disinfection WTP**

CLASS	ITEM DESCRIPTION	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
6.6.1	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 0.5-1m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	313.36		
6.6.2	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 1-2m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	626.72		
6.6.3	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 2-5m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	1,566.80		
6.6.4	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 0.5-1m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	0.00		
6.6.5	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 1-2m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	0.00		
6.6.6	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 2-5m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	0.00		

6.6.7	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations in rock, commencing surface is the exposed surface of the rock Depth 5-7.5m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	0.00		
6.6.8	EARTHWORKS Excavation for foundations or trench Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Material other than topsoil, rock, or artificial hard material as per clause 303	m ³	2,506.87		
6.6.9	EARTHWORKS Excavation for foundations Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Rock as per clause 303	m ³	0.00		
6.6.10	EARTHWORKS Filling Structures Filling by methods specified and to depths as shown in the drawings with the following materials Selected excavated granular material other than topsoil, rock or artificial hard material to tank base and compacted to 98% MOD AASHTO as per clause 304	m ³	0.00		
6.6.11	IN-SITU CONCRETE Provision and placing Mass Concrete Blinding or filling Provision and Placing blinding or filling concrete grade C8/10 as per clauses: 401, 402, 403, 404 and 405	m ³	36.28		
6.6.12	IN-SITU CONCRETE Provision and Placing Reinforced Concrete Bases, Footings, Ground Slabs, Walls and Beams or Columns Provision and placing reinforced concrete C40/20 as per clauses: 401, 402, 403, 404, 405, 406, 407 and 409	m ³	394.21		
6.6.13	CONCRETE ANCILLARIES Reinforcement Deformed High Yield Steel High yield square twisted or ribbed bars to BS4449 and of the following sizes Nominal size, 6-20mm as per clause 758	t	63.61		
6.6.14	CONCRETE ANCILLARIES Joints Plastic waterstops of PVC to BS 903 of the following width as per clause 416 Width 150 - 300mm	m	230.08		
6.6.15	CONCRETE ANCILLARIES Concrete Accessories Inserts Pipe inserts projecting from one face of the concrete and of the following sizes, excluding supply of pipe. 300 mm ND as per clause 702	nr	2.00		
6.6.16	CONCRETE ANCILLARIES Concrete Accessories Inserts Pipe inserts projecting from two faces of the concrete and of the following sizes, excluding supply of pipe 300 mm ND as per clause 702	nr	2.00		

PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT**CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03****BILL No. B: WATER TREATMENT PLANT****6.7: Ipo Storage WTP**

CLASS	ITEM DESCRIPTION	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
6.7.1	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 0.5-1m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	17.83		
6.7.2	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 1-2m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	7.68		
6.7.3	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 0,5-1m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	0.00		
6.7.4	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 1-2m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	0.00		
6.7.5	EARTHWORKS Excavation for foundations or trench Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Material other than topsoil,rock,or artificial hard material as per clause 303	m ³	25.51		
6.7.6	EARTHWORKS Excavation for foundations Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Rock as per clause 303	m ³	0.00		

6.7.7	EARTHWORKS Filling Structures Filling by methods specified and to depths as shown in the drawings with the following materials Selected excavated granular material other than topsoil, rock or artificial hard material to tank base and compacted to 98% MOD AASHTO as per clause 304	m ³	10.65		
6.7.8	IN-SITU CONCRETE Provision and placing Mass Concrete Blinding or filling Provision and Placing blinding or filling concrete grade C8/10 as per clauses: 401, 402, 403, 404 and 405	m ³	1.26		
6.7.9	IN-SITU CONCRETE Provision and Placing Reinforced Concrete Bases, Footings, Ground Slabs, Walls and Beams or Columns Provision and placing reinforced concrete C40/20 as per clauses: 401, 402, 403,404, 405, 406, 407 and 409	m ³	19.82		
6.7.10	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Horizontal Plane fair finish horizontal formwork of the following width Width: 0.1-0,4 m as per clauses: 501, 502, 503 and 504	m ²	41.39		
6.7.11	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Vertical Plane fair finish vertical formwork of the following width Width: 0.4-1,22 m as per clauses: 501, 502, 503 and 504	m ²	0.00		
6.7.12	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Vertical Plane fair finish vertical formwork of the following width Width exceeding 1.22 m as per clauses: 501, 502, 503 and 504	m ²	29.99		
6.7.13	CONCRETE ANCILLARIES Reinforcement Deformed High Yield Steel High yield square twisted or ribbed bars to BS4449 and of the following sizes Nominal size, 6-20mm as per clause 758	t	2.65		
6.7.14	CONCRETE ANCILLARIES Concrete Accessories	m ²	32.45		
6.7.15	BRICKWORK, BLOCKWORK AND MASONRY Solid burnt clay brickwork Solid burnt clay brickwork to BS 3921, jointed with ordinary 1:4 cement mortar, hoop irons every three courses, and of the following thicknesses 300 mm thick as per clauses: 601, 602, 603, 708, 710 and 715	m ²	160.80		
6.7.16	BRICKWORK, BLOCKWORK AND MASONRY Solid burnt clay brickwork Damp proof course of bitumen impregnated fabric to BS 6398 for the following wall thickness 300 mm thick as per clauses: 601, 602, 603, 708, 710 and 720	m	58.29		
6.7.17	PAINTING	m ²	195.98		
6.7.18	PAINTING Emulsion Paint	m ²	146.30		
6.7.19	WATER PROOFING Damp Proofing	m ²	195.98		
6.7.20	WATER PROOFING Protective Layers	m ²	21.11		

6.7.21	<p>WATER PROOFING</p> <p>Protective Layers</p> <p>Sand cement screed of 1:3 cement sand mortar, applied to concrete, 60 mm thick, prepared and applied</p> <p>Surfaces of floors inclined at an angle not exceeding 30 degrees to the horizontal as per clause 713</p>	m ²	21.11		
6.7.22	<p>SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</p> <p>Doors</p> <p>Supply and installation of exterior doors with one or two steel doors, accompanied by at least three hinges, with mortise lock strike plate with rim and chrome, including the supply and installation of marble threshold</p> <p>Single leaf louvered door with size 900 mm x 2100 mm high filled in with 100 x 2mm thick mild steel louvers welded to frame as per clauses: 755 and 1129</p>	nr	1.00		
6.7.23	<p>MISCELLANEOUS WORKS</p> <p>Supply and installation of, chamber covermade of concrete block</p> <p>Overall size 2600 x 1250 mm high as per clause 715</p>	nr	1.00		
6.7.24	<p>MISCELLANEOUS WORKS</p> <p>Supply and installation of, chamber covermade of concrete block</p> <p>Overall size 2000 x 1250 mm high as per clause 715</p>	nr	1.00		
6.7.25	<p>MISCELLANEOUS WORKS</p> <p>Supply and installation of, chamber covermade of concrete block</p> <p>Overall size 1400 x 1250 mm high as per clause 715</p>	nr	1.00		
6.7.26	<p>SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</p> <p>Building Finishes</p> <p>Building finishes including, constructing C20 1.0x2.0m entrance ramps to the workshop and stores, 20x100mm high 1:3 cement-sand skirting, 1500mm high toilet and C20 concrete window cills, 700mm wide C20 concrete splash apron, complete to the specifications and as directed by the Engineer as per clauses: 1113, 1115, 1116, 1121, 1122 and 1123</p>	sum	1.00		
6.7.27	<p>SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</p> <p>Building Finishes</p> <p>Supply and lay glazed ceramic tiling for the chemical mixing tanks as per clauses: 1121, 1122 and 1123</p>	m ²	56.03		

PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT**CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03****BILL No. B: WATER TREATMENT PLANT****6.8: Sludge drying bed WTP**

CLASS	ITEM DESCRIPTION	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
6.8.1	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 0.5-1m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	141.926		
6.8.2	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 1-2m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	283.852		
6.8.3	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 0,5-1m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	0		
6.8.4	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 1-2m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	0		
6.8.5	EARTHWORKS Excavation for foundations or trench Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Top soil as per clause 303	m ³	425.778		
6.8.6	EARTHWORKS Excavation for foundations Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Rock as per clause 303	m ³	0		

6.8.7	EARTHWORKS Filling Structures Filling by methods specified and to depths as shown in the drawings with the following materials Selected excavated granular material other than topsoil, rock or artificial hard material to tank base and compacted to 98% MOD AASHTO as per clause 304	m ³	0		
6.8.8	IN-SITU CONCRETE Provision and placing Mass Concrete Blinding or filling Provision and Placing blinding or filling concrete grade C8/10 as per clauses: 401, 402, 403, 404 and 405	m ³	16.5825		
6.8.9	IN-SITU CONCRETE Provision and Placing Reinforced Concrete Bases, Footings, Ground Slabs, Walls and Beams or Columns Provision and placing reinforced concrete C40/20 as per clauses: 401, 402, 403,404, 405, 406, 407 and 409	m ³	126.637		
6.8.10	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Vertical Plane fair finish vertical formwork of the following width Width: 0.4-1,22 m as per clauses: 501, 502, 503 and 504	m ²	436.592		
6.8.11	CONCRETE ANCILLARIES Reinforcement Deformed High Yield Steel High yield square twisted or ribbed bars to BS4449 and of the following sizes Nominal size, 6-20mm as per clause 758	t	20.4082		
6.8.12	CONCRETE ANCILLARIES Joints Plastic waterstops of PVC to BS 903 of the following width as per clause 416 Width 150 - 300mm	m	313.707		
6.8.13	CONCRETE ANCILLARIES Concrete Accessories Finishing of top surfaces Finishing of top surfaces by the following methods Class U3 steel trowel finish as per clause 410	m ²	141.926		
6.8.14	CONCRETE ANCILLARIES Concrete Accessories Inserts Pipe inserts projecting from one face of the concrete and of the following sizes, excluding supply of pipe. 150 mm ND as per clause 702	nr	7		
6.8.15	CONCRETE ANCILLARIES Concrete Accessories Inserts Pipe inserts projecting from one face of the concrete and of the following sizes, excluding supply of pipe. 200 mm ND as per clause 702	nr	7		
6.8.16	MISCELLANEOUS WORK Open Grid Flooring Mild steel open grid flooring to BS 4592, galvanized to BS 729, complete with galvanized frames and supports, fixed onto a reinforced concrete structure, and of the following widths Width not exceeding 6.0m as per clauses: 1114 and 1126	m ²	15.008		

PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT**CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03****BILL No. B: WATER TREATMENT PLANT****6.9:Pond WTP**

CLASS	ITEM DESCRIPTION	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
6.9.1	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 0.5-1m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	198.98		
6.9.2	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 1-2m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	198.98		
6.9.3	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 0,5-1m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³			
6.9.4	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 1-2m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³			
6.9.5	EARTHWORKS Excavation for foundations or trench Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Top soil as per clause 303	m ³	397.97		
6.9.6	EARTHWORKS Filling Ancillaries Filling Filling to Structures by methods specified and to depths as shown in the drawings with the following materials Imported clay and include sand blinding on top as per clauses: 303 and 304	m ³	107.20		

6.9.7	IN-SITU CONCRETE Provision and placing Mass Concrete Blinding or filling Provision and Placing blinding or filling concrete grade C8/10 as per clauses: 401, 402, 403, 404 and 405	m ³	0.54		
6.9.8	IN-SITU CONCRETE Provision and Placing Reinforced Concrete Bases, Footings, Ground Slabs, Walls and Beams or Columns Provision and placing reinforced concrete C40/20 as per clauses: 401, 402, 403,404, 405, 406, 407 and 409	m ³	3.28		
6.9.9	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Horizontal Plane fair finish horizontal formwork of the following width Width: 0.4-1.22 m as per clauses: 501, 502, 503 and 504	m ²	3.08		
6.9.10	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Vertical Plane fair finish vertical formwork of the following width Width exceeding 1.22 m as per clauses: 501, 502, 503 and 504	m ²	8.84		
6.9.11	CONCRETE ANCILLARIES Reinforcement Deformed High Yield Steel High yield square twisted or ribbed bars to BS4449 and of the following sizes Nominal size, 6-20mm as per clause 758	t	0.46		
6.9.12	CONCRETE ANCILLARIES Concrete Accessories Inserts Pipe inserts projecting from one face of the concrete and of the following sizes, excluding supply of pipe. 400 mm ND as per clause 702	nr	1.00		
6.9.13	Supply of eight wooden baffle plates with dimensions 2100 x 200 mm and 25mm thick, including complete supply and installation of stainless steel 50 x 25 x 30mm thick u channel slots and supports, rubber seals, stainless steel lifting handles (2 no.), galvanised rawl bolts, and all accessories, as shown on the drawings and of the following sizes 2100 x 1600 mm (W x H)	nr	1.00		

PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT**CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03****BILL No. B: WATER TREATMENT PLANT****6.10:Power House WTP**

CLASS	ITEM DESCRIPTION	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
6.10.1	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 0.5-1m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	143.57		
6.10.2	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 1-2m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	124.27		
6.10.3	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 2-5m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	70.35		
6.10.4	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 0.5-1m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	0.00		
6.10.5	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 1-2m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	0.00		
6.10.6	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 2-5m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	0.00		

6.10.7	EARTHWORKS Excavation for foundations or trench Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Material other than topsoil, rock, or artificial hard material as per clause 303	m ³	338.20		
6.10.8	EARTHWORKS Excavation for foundations Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Rock as per clause 303	m ³	0.00		
6.10.9	EARTHWORKS Filling Structures Filling by methods specified and to depths as shown in the drawings with the following materials Selected excavated granular material other than topsoil, rock or artificial hard material to tank base and compacted to 98% MOD AASHTO as per clause 304	m ³	120.52		
6.10.10	EARTHWORKS Filling Ancillaries Filling Filling to Structures by methods specified and to depths as shown in the drawings with the following materials Imported rock of size and grading; include sand blinding on top as per clauses: 303 and 304	m ³	22.24		
6.10.11	IN-SITU CONCRETE Provision and placing Mass Concrete Blinding or filling Provision and Placing blinding or filling concrete grade C8/10 as per clauses: 401, 402, 403, 404 and 405	m ³	10.06		
6.10.12	IN-SITU CONCRETE Provision and Placing Reinforced Concrete Bases, Footings, Ground Slabs, Walls and Beams or Columns Provision and placing reinforced concrete C40/20 as per clauses: 401, 402, 403, 404, 405, 406, 407 and 409	m ³	172.56		
6.10.13	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Horizontal Plane fair finish horizontal formwork of the following width Width exceeding 1.22 m as per clauses: 501, 502, 503 and 504	m ²	0.00		
6.10.14	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Vertical Plane fair finish vertical formwork of the following width Width exceeding 1.22 m as per clauses: 501, 502, 503 and 504	m ²	426.23		
6.10.15	CONCRETE ANCILLARIES Reinforcement Deformed High Yield Steel High yield square twisted or ribbed bars to BS4449 and of the following sizes Nominal size, 6-20mm as per clause 758	t	12.15		
6.10.16	CONCRETE ANCILLARIES Concrete Accessories Finishing of top surfaces Finishing of top surfaces by the following methods Class U3 Steel float finish as per clause 410	m ²	120.45		

6.10.17	BRICKWORK, BLOCKWORK AND MASONRY Solid burnt clay brickwork Solid burnt clay brickwork to BS 3921, jointed with ordinary 1:4 cement mortar, hoop irons every three courses, and of the following thicknesses 300 mm thick as per clauses: 601, 602, 603, 708, 710 and 715	m ²	80.94		
6.10.18	BRICKWORK, BLOCKWORK AND MASONRY Solid burnt clay brickwork Damp proof course of bitumen impregnated fabric to BS 6398 for the following wall thickness 300 mm thick as per clauses: 601, 602, 603, 708, 710 and 720	m	16.88		
6.10.19	PAINTING High Gloss Masonry External quality weather guard paint, two coats, to the following smooth concrete surfaces; include surface preparation Surfaces of walls inclined at an angle exceeding 60 degrees to the horizontal as per clauses: 1132 and 1134	m ²	227.00		
6.10.20	PAINTING Emulsion Paint Masonry Internal quality vinyl silk paint, two coats, to the following smooth concrete surfaces; include surface preparation Surfaces of walls inclined at an angle exceeding 60 degrees to the horizontal as per clauses: 1132 and 1134	m ²	227.00		
6.10.21	WATER PROOFING Damp Proofing Rendering Surfaces to walls inclined at an angle exceeding 60 degrees to the horizontal in ordinary cement mortar as per clauses: 1113, 1128 and 1129	m ²	209.71		
6.10.22	WATER PROOFING Protective Layers Flexible polyethylene sheeting, gauge 1000, or similar approved, laid to the surface of blinding concrete or sand blinded hardcore fill Surfaces inclined at an angle not exceeding 30 degrees to the horizontal as per clause 1156	m ²	120.45		
6.10.23	WATER PROOFING Protective Layers Sand cement screed of 1:3 cement sand mortar, applied to concrete, 60 mm thick, prepared and applied Surfaces of floors inclined at an angle not exceeding 30 degrees to the horizontal as per clause 713	m ²	120.45		
6.10.24	SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS	nr	1.00		
6.10.25	MISCELLANEOUS WORKS Supply and installation of, chamber covermade of concrete block Overall size 1400 x 1250 mm high as per clause 715	nr	1.00		
6.10.26	SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS Plumbing and Drainage Supply and lay ND 125mm CI drainage pipework as per clause 1007	m	12.06		

6.10.27	SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS Plumbing and Drainage Supply and install gulley traps complete with concrete chambers as per clauses: 1015 and 1013	nr	1.00		
6.10.28	SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS Building Finishes Building finishes including, constructing 20x100mm high 1:3 cement-sand skirting, 1500mm high toilet wall ceramic tiling, kitchen worktops 1400x450mm with tiled finish, C20 concrete window cills, 700mm wide C20 concrete splash apron; complete for whole house, to the specifications and as directed by the Engineer as per clauses: 1113, 1115, 1116, 1121, 1122 and 1123	sum	1.00		
6.10.29	MISCELLANEOUS WORK Gratings Supply and installation of 30 mm high grating for walking with galvanized steel angle 50x70x6 mm with fixing support to reinforced concrete to complete installation. Fixed to both reinforced concrete structure and steel members as per clauses: 1114 and 1126	m ²	16.08		
6.10.30	MISCELLANEOUS WORK Pebbles Supply and lay of pebbles of 40 -50 mm sizes to fill on grating as per clause 305	m ²	4.69		
6.10.31	Allow provisional sum for pumps as per the engineer's instructions	sum	1.00		

PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT**CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03****BILL No. B: WATER TREATMENT PLANT****6.11:Guard House WTP**

CLASS	ITEM DESCRIPTION	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
6.11.1	EARTHWORKS Excavation for foundations or trench Topsoil Strip top soil,depth not exceeding 0.3m for site as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	1.87		
6.11.2	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 0.5-1m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	5.63		
6.11.3	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 0.5-1m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³			
6.11.4	EARTHWORKS Excavation for foundations or trench Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Material other than topsoil,rock,or artificial hard material as per clause 303	m ³	7.50		
6.11.5	EARTHWORKS Excavation for foundations Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Rock as per clause 303	m ³			
6.11.6	EARTHWORKS Filling Structures Filling by methods specified and to depths as shown in the drawings with the following materials Selected excavated granular material other than topsoil, rock or artificial hard material to tank base and compacted to 98% MOD AASHTO as per clause 304	m ³	1.26		

6.11.7	EARTHWORKS Filling Ancillaries Filling Filling to Structures by methods specified and to depths as shown in the drawings with the following materials Imported rock of size and grading; include sand blinding on top as per clauses: 303 and 304	m ³	0.63		
6.11.8	IN-SITU CONCRETE Provision and placing Mass Concrete Blinding or filling Provision and Placing blinding or filling concrete grade C8/10 as per clauses: 401, 402, 403, 404 and 405	m ³	0.22		
6.11.9	IN-SITU CONCRETE Provision and Placing Reinforced Concrete Bases, Footings, Ground Slabs, Walls and Beams or Columns Provision and placing reinforced concrete C40/20 as per clauses: 401, 402, 403,404, 405, 406, 407 and 409	m ³	4.09		
6.11.10	CONCRETE ANCILLARIES Reinforcement Deformed High Yield Steel High yield square twisted or ribbed bars to BS4449 and of the following sizes Nominal size, 6-20mm as per clause 758	t	0.51		
6.11.11	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Vertical Plane fair finish vertical formwork of the following width Width: 0.1-0.4 m as per clauses: 501, 502, 503 and 504	m ²	28.25		
6.11.12	Roof covering Place 6mm Bituminous felt onto the concrete roof as specified and directed by the engineer as per clause 1157	m ²	6.03		
6.11.13	BRICKWORK, BLOCKWORK AND MASONRY Solid burnt clay brickwork Solid burnt clay brickwork to BS 3921, jointed with ordinary 1:4 cement mortar, hoop irons every three courses, and of the following thicknesses 300 mm thick as per clauses: 601, 602, 603, 708, 710 and 715	m ²	12.55		
6.11.14	BRICKWORK, BLOCKWORK AND MASONRY Solid burnt clay brickwork Damp proof course of bitumen impregnated fabric to BS 6398 for the following wall thickness 300 mm thick as per clauses: 601, 602, 603, 708, 710 and 720	m	12.06		
6.11.15	PAINTING High Gloss Masonry External quality weather guard paint, two coats, to the following smooth concrete surfaces; include surface preparation Surfaces of walls inclined at an angle exceeding 60 degrees to the horizontal as per clauses: 1132 and 1134	m ²	27.90		

6.11.16	<p>PAINTING High Gloss Timber Surfaces External quality weather guard paint, two coats, to the following smooth concrete surfaces; include surface preparation 'Upper surfaces of facial board inclined at an angle not exceeding 30 degrees to the horizontal as per clauses: 1132 and 1134</p>	m ²	27.90		
6.11.17	<p>PAINTING Emulsion Paint Masonry Internal quality vinyl silk paint, two coats, to the following smooth concrete surfaces; include surface preparation Surfaces of walls inclined at an angle exceeding 60 degrees to the horizontal as per clauses: 1132 and 1134</p>	m ²	27.87		
6.11.18	<p>PAINTING Emulsion Paint Masonry Internal quality vinyl silk paint, two coats, to the following smooth concrete surfaces; include surface preparation Surfaces of walls inclined at an angle not exceeding 30 degrees to the horizontal as per clauses: 1132 and 1134</p>	m ²	23.85		
6.11.19	<p>WATER PROOFING Protective Layers Sand cement screed of 1:3 cement sand mortar, applied to concrete, 60 mm thick, prepared and applied 'Surfaces of floors inclined at an angle not exceeding 30 degrees to the horizontal as per clause 713</p>	m ²	3.42		
6.11.20	<p>SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS Doors Supply and installation of exterior doors with one or two steel doors, accompanied by at least three hinges, with mortise lock strike plate with rim and chrome, including the supply and installation of marble threshold Single leaf louvered door with size 900 mm x 2100 mm high filled in with 100 x 2mm thick mild steel louvers welded to frame as per clauses: 755 and 1129</p>	nr	1.00		

6.11.21	<p>SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</p> <p>Windows</p> <p>Supply and installation of windows with crystals, performed with different profiles depending on the size and location, comprising: frames made by steel with open joints, mm of section 45 (for fixed frames) and 52 mm (for opening swinging doors), complete with sills 45 mm with lateral development of the flaps - 2 cm, internal thickness 12/10 of internal flaps, interior and exterior trims - for covering the cables - safety crystals 3 +3, or ventilation grid - fixed aluminum type - hinges and locking devices of movement with a hammer handle or lever. including the formation of protective grates and network against the birds, which comprises the production of the lintel and shoulders, to be carried in reinforced concrete, including the respective reinforcing iron and the formworks, all anchored to the walls of buildings</p> <p>400 x 600mm high comprising 200mm pvo complete with 4mm thick clear glass panes and burglar proofing as per clauses: 755 and 1129</p>	nr	2.00		

PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT

CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03

BILL No. B: WATER TREATMENT PLANT

6.12: Admin WTP

CLASS	ITEM DESCRIPTION	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
6.12.1	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 0.5-1m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	73.25		
6.12.2	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 1-2m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	30.18		
6.12.3	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 2-5m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	103.43		
6.12.4	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 0.5-1m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	0.00		
6.12.5	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 1-2m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	0.00		
6.12.6	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 2-5m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	0.00		

6.12.7	EARTHWORKS Excavation for foundations or trench Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Material other than topsoil, rock, or artificial hard material as per clause 303	m ³	206.87		
6.12.8	EARTHWORKS Excavation for foundations Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Rock as per clause 303	m ³	0.00		
6.12.9	EARTHWORKS Filling Structures Filling by methods specified and to depths as shown in the drawings with the following materials Selected excavated granular material other than topsoil, rock or artificial hard material to tank base and compacted to 98% MOD AASHTO as per clause 304	m ³	59.98		
6.12.10	EARTHWORKS Filling Ancillaries Filling Filling to Structures by methods specified and to depths as shown in the drawings with the following materials Imported rock of size and grading; include sand blinding on top as per clauses: 303 and 304	m ³	13.33		
6.12.11	IN-SITU CONCRETE Provision and placing Mass Concrete Blinding or filling Provision and Placing blinding or filling concrete grade C8/10 as per clauses: 401, 402, 403, 404 and 405	m ³	2.86		
6.12.12	IN-SITU CONCRETE Provision and Placing Reinforced Concrete Bases, Footings, Ground Slabs, Walls and Beams or Columns Provision and placing reinforced concrete C40/20 as per clauses: 401, 402, 403, 404, 405, 406, 407 and 409	m ³	55.02		
6.12.13	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Horizontal Plane fair finish horizontal formwork of the following width Width exceeding 1.22 m as per clauses: 501, 502, 503 and 504	m ²	0.00		
6.12.14	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Vertical Plane fair finish vertical formwork of the following width Width exceeding 1.22 m as per clauses: 501, 502, 503 and 504	m ²	212.09		
6.12.15	CONCRETE ANCILLARIES Reinforcement Deformed High Yield Steel High yield square twisted or ribbed bars to BS4449 and of the following sizes Nominal size, 6-20mm as per clause 758	t	11.19		

6.12.16	<p>CONCRETE ANCILLARIES</p> <p>Concrete Accessories</p> <p>Finishing of top surfaces</p> <p>Finishing of top surfaces by the following methods</p> <p>Class U3 Steel float finish as per clause 410</p>	m ²	143.65		
6.12.17	<p>BRICKWORK, BLOCKWORK AND MASONRY</p> <p>Solid burnt clay brickwork</p> <p>Solid burnt clay brickwork to BS 3921, jointed with ordinary 1:4 cement mortar, hoop irons every three courses, and of the following thicknesses</p> <p>300 mm thick as per clauses: 601, 602, 603, 708, 710 and 715</p>	m ²	123.35		
6.12.18	<p>BRICKWORK, BLOCKWORK AND MASONRY</p> <p>Solid burnt clay brickwork</p> <p>Damp proof course of bitumen impregnated fabric to BS 6398 for the following wall thickness</p> <p>300 mm thick as per clauses: 601, 602, 603, 708, 710 and 720</p>	m	240.20		
6.12.19	<p>PAINTING</p> <p>High Gloss</p> <p>Masonry</p> <p>External quality weather guard paint, two coats, to the following smooth concrete surfaces; include surface preparation</p> <p>Surfaces of walls inclined at an angle exceeding 60 degrees to the horizontal as per clauses: 1132 and 1134</p>	m ²	182.71		
6.12.20	<p>PAINTING</p> <p>High Gloss</p> <p>Masonry</p> <p>External quality weather guard paint, two coats, to the following smooth concrete surfaces; include surface preparation</p> <p>Surfaces of walls inclined at an angle exceeding 60 degrees to the horizontal as per clauses: 1132 and 1134</p>	m ²	128.64		
6.12.21	<p>WATER PROOFING</p> <p>Damp Proofing</p> <p>Rendering</p> <p>Surfaces to walls inclined at an angle exceeding 60 degrees to the horizontal in ordinary cement mortar as per clauses: 1113, 1128 and 1129</p>	m ²	300.16		
6.12.22	<p>WATER PROOFING</p> <p>Protective Layers</p> <p>Flexible polyethylene sheeting, gauge 1000, or similar approved, laid to the surface of blinding concrete or sand blinded hardcore fill</p> <p>Surfaces inclined at an angle not exceeding 30 degrees to the horizontal as per clause 1156</p>	m ²	71.82		
6.12.23	<p>WATER PROOFING</p> <p>Protective Layers</p> <p>Sand cement screed of 1:3 cement sand mortar, applied to concrete, 60 mm thick, prepared and applied</p> <p>Surfaces of floors inclined at an angle not exceeding 30 degrees to the horizontal as per clause 713</p>	m ²	71.82		

6.12.24	<p>SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</p> <p>Doors</p> <p>Supply and installation of doors single and double doors, built with wooden inner frame hive, boundaries in wood edges on both sides made of poplar plywood - 4 mm thick - more the veneered , accompanied by at least three hinges, with mortise lock (chromated boundaries), coated with paints with two components, which comprises the realization of the lintel and of any shoulders, to be carried in reinforced concrete, including the respective reinforcing iron and the formworks, all anchored to the walls of buildings</p> <p>Single leaf door overall size 800mm x 2100mm (W x H including 200mm wood pvo) as per clauses: 755 and 721</p>	nr	3.00		
6.12.25	<p>SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</p> <p>Doors</p> <p>Supply and installation of doors single and double doors, built with wooden inner frame hive, boundaries in wood edges on both sides made of poplar plywood - 4 mm thick - more the veneered , accompanied by at least three hinges, with mortise lock (chromated boundaries), coated with paints with two components, which comprises the realization of the lintel and of any shoulders, to be carried in reinforced concrete, including the respective reinforcing iron and the formworks, all anchored to the walls of buildings</p> <p>Single leaf door overall size 1000mm x 2100mm (W x H including 200mm wood pvo) as per clauses: 755 and 721</p>	nr	2.00		
6.12.26	<p>SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</p> <p>Doors</p> <p>Supply and installation of exterior doors with one or two steel doors, accompanied by at least three hinges, with mortise lock strike plate with rim and chrome, including the supply and installation of marble threshold</p> <p>Single leaf louvered door with size 900 mm x 2100 mm high filled in with 100 x 2mm thick mild steel louvers welded to frame as per clauses: 755 and 1129</p>	nr	0.00		

6.12.27	<p>SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</p> <p>Doors</p> <p>Supply and installation of external doors over 2.0 meters in width, with closure of the manual type (as book), for passage of machinery in general, consist of: modular aluminum elements, sliding on the upper and lower galvanized steel guides, with folding doors that open to "four or more modules (panels) that is in function on the width of the door . the modules will be divided into sections that can be of type: closed with infill panel sandwich double sheet of aluminum with soundproof internal lining , grille of ventilation with fixed type aluminum with unbreakable glass 3 +3. They must be complete: internal and external trims, appropriately sized hinges, locks and handles. Including the construction of lintel and shoulders , to be carried reinforced concrete, including the respective reinforcing iron and the formworks, all anchored to the walls of buildings</p> <p>Four leaf louvered door overall size 2100 x 2000mm high filled in with 100 x 2mm thick mild steel louvers welded to frame (4000 mm x 3000 mm) as per clauses: 755 and 1129</p>	nr	1.00		
6.12.28	<p>SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</p> <p>Doors</p> <p>Supply and installation of external doors over 2.0 meters in width, with closure of the manual type (as book), for passage of machinery in general, consist of: modular aluminum elements, sliding on the upper and lower galvanized steel guides, with folding doors that open to "four or more modules (panels) that is in function on the width of the door . the modules will be divided into sections that can be of type: closed with infill panel sandwich double sheet of aluminum with soundproof internal lining , grille of ventilation with fixed type aluminum with unbreakable glass 3 +3. They must be complete: internal and external trims, appropriately sized hinges, locks and handles. Including the construction of lintel and shoulders , to be carried reinforced concrete, including the respective reinforcing iron and the formworks, all anchored to the walls of buildings</p> <p>Four leaf louvered door overall size 2100 x 2000mm high filled in with 100 x 2mm thick mild steel louvers welded to frame (4000 mm x 3000 mm) as per clauses: 755 and 1129</p>	nr	0.67		

6.12.29	<p>SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</p> <p>Windows</p> <p>Supply and installation of windows with crystals, performed with different profiles depending on the size and location, comprising: frames made by steel with open joints, mm of section 45 (for fixed frames) and 52 mm (for opening swinging doors), complete with sills 45 mm with lateral development of the flaps - 2 cm, internal thickness 12/10 of internal flaps, interior and exterior trims - for covering the cables - safety crystals 3 +3, or ventilation grid - fixed aluminum type - hinges and locking devices of movement with a hammer handle or lever. including the formation of protective grates and network against the birds, which comprises the production of the lintel and shoulders, to be carried in reinforced concrete, including the respective reinforcing iron and the formworks, all anchored to the walls of buildings</p> <p>400 x 600mm high comprising 200mm pvo complete with 4mm thick clear glass panes and burglar proofing as per clauses: 755 and 1129</p>	nr	3.00		
6.12.30	<p>SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</p> <p>Windows</p> <p>Supply and installation of windows with crystals, performed with different profiles depending on the size and location, comprising: frames made by steel with open joints, mm of section 45 (for fixed frames) and 52 mm (for opening swinging doors), complete with sills 45 mm with lateral development of the flaps - 2 cm, internal thickness 12/10 of internal flaps, interior and exterior trims - for covering the cables - safety crystals 3 +3, or ventilation grid - fixed aluminum type - hinges and locking devices of movement with a hammer handle or lever. including the formation of protective grates and network against the birds, which comprises the production of the lintel and shoulders, to be carried in reinforced concrete, including the respective reinforcing iron and the formworks, all anchored to the walls of buildings</p> <p>1000 x 1200mm high comprising 200mm permanent louvered vent complete with 4mm thick clear glass panes, and burglar proofing as per clauses: 755 and 1129</p>	nr	5.00		
6.12.31	<p>SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</p> <p>Plumbing and Drainage</p> <p>Supply, lay and fix OD 65mm uPVC PN 6 drainage pipework and fittings complete with from all house outlets to gully traps include all traps and fittings to make connection functional as per clauses: 766 and 1013</p>	sum	0.67		
6.12.32	<p>SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</p> <p>Plumbing and Drainage</p> <p>Supply and lay ND 80mm CI drainage pipework as per clause 1007</p>	m	5.36		
6.12.33	<p>SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</p> <p>Plumbing and Drainage</p> <p>Supply and lay ND 100mm CI drainage pipework as per clause 1007</p>	m	5.36		

6.12.34	SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS Plumbing and Drainage Supply and lay ND 150mm CI drainage pipework as per clause 1007	nr	10.00		
6.12.35	SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS Plumbing and Drainage Supply and install gulley traps complete with concrete chambers as per clauses: 1015 and 1013	nr	2.00		
6.12.36	MISCELLANEOUS WORKS Plumbing and Drainage Supply and lay ND 125mm CI drainage pipework as per clause 1007	nr	4.00		
6.12.37	SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS Plumbing and Drainage Supply and Install Vitreous China WC bowl with P outlet 9 litre cistern with valve fittings and seat and cover, complete with valve cistern fittings, including outlet and inlet valves, internal overflow, connecting fitments from cistern to bowl and all accessories to make functional as per clause 1112	nr	2.00		
6.12.38	SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS Plumbing and Drainage Supply and install wash hand basin in Vitreous China approximately 560 x 405mm with one tap hole and chain-stay hole, complete with chromium plated pillar tap, Chrome plated chain waste, plastic bottle trap, pedestal and all accessories as per clause 1112	nr	2.00		
6.12.39	SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS Plumbing and Drainage Excavate and construct standard manholes in 200mm thick blockwork, depth not exceeding 1.0m, bonded in CM (1:5) and rendered internally with C.M (1:4), concrete benching, complete with and including CI frame and cover, and interconnecting OD 110mm pvc drain pipes to house as per clauses: 1001, 1011 and 1012	nr	2.00		
6.12.40	MISCELLANEOUS WORKS Plumbing and Drainage Excavate and Construct Septic Tank of effective capacity 5m3 in blockwork and reinforced concrete, rendered smooth inside complete with inlet and outlet manholes benching, heavy duty cast iron manhole covers as per clauses: 301, 401, 601, 602, 603, 708, 710, 715, 758 and 743	nr	1.00		
6.12.41	MISCELLANEOUS WORKS Plumbing and Drainage Excavate and Construct 1500mm top/bottom diameter x 2.0m deep soak pit including filling with hardcore, covering with 2 layers of gauge 1000 polyethylene sheet complete including connecting to septic tank with OD 110mm pvc drain pipes as per clauses: 301, 401, 758, 766, 808, 1107 and 1156	nr	1.00		

6.12.42	<p>SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</p> <p>Building Finishes</p> <p>Building finishes including, constructing 20x100mm high 1:3 cement-sand skirting, 1500mm high toilet wall ceramic tiling, kitchen worktops 1400x450mm with tiled finish, C20 concrete window cills, 700mm wide C20 concrete splash apron; complete for whole house, to the specifications and as directed by the Engineer as per clauses: 1113, 1115, 1116, 1121, 1122 and 1123</p>	sum	1.00		

PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT**CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03****BILL No. B: WATER TREATMENT PLANT****6.13: Staff House WTP**

CLASS	ITEM DESCRIPTION	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
6.13.1	EARTHWORKS Excavation for foundations or trench Topsoil Strip top soil,depth not exceeding 0.3m for site as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	22.89		
6.13.2	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 1-2m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	57.76		
6.13.3	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 1-2m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³			
6.13.4	EARTHWORKS Excavation for foundations or trench Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Material other than topsoil,rock,or artificial hard material as per clause 303	m ³	80.65		
6.13.5	EARTHWORKS Excavation for foundations Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Rock as per clause 303	m ³			
6.13.6	EARTHWORKS Filling Structures Filling by methods specified and to depths as shown in the drawings with the following materials Selected excavated granular material other than topsoil, rock or artificial hard material to tank base and compacted to 98% MOD AASHTO as per clause 304	m ³	46.99		

6.13.7	EARTHWORKS Filling Ancillaries Filling Filling to Structures by methods specified and to depths as shown in the drawings with the following materials Imported rock of size and grading; include sand blinding on top as per clauses: 303 and 304	m ³	22.95		
6.13.8	IN-SITU CONCRETE Provision and placing Mass Concrete Blinding or filling Provision and Placing blinding or filling concrete grade C8/10 as per clauses: 401, 402, 403, 404 and 405	m ³	1.73		
6.13.9	WATER PROOFING Protective Layers Flexible polyethylene sheeting, gauge 1000, or similar approved, laid to the surface of blinding concrete or sand blinded hardcore fill Surfaces inclined at an angle not exceeding 30 degrees to the horizontal as per clause 1156	m ²	68.94		
6.13.10	BRICKWORK, BLOCKWORK AND MASONRY Solid burnt clay brickwork Damp proof course of bitumen impregnated fabric to BS 6398 for the following wall thickness 300 mm thick as per clauses: 601, 602, 603, 708, 710 and 720	m	85.09		
6.13.11	BRICKWORK, BLOCKWORK AND MASONRY Solid burnt clay brickwork Solid burnt clay brickwork to BS 3921, jointed with ordinary 1:4 cement mortar, hoop irons every three courses, and of the following thicknesses 300 mm thick as per clauses: 601, 602, 603, 708, 710 and 715	m ²	179.29		
6.13.12	IN-SITU CONCRETE Provision and placing Mass Concrete Blinding or filling Provision and Placing blinding or filling concrete grade C8/10 as per clauses: 401, 402, 403, 404 and 405	m ³	1.73		
6.13.13	IN-SITU CONCRETE Provision and Placing Reinforced Concrete Bases, Footings, Ground Slabs, Walls and Beams or Columns Provision and placing reinforced concrete C40/20 as per clauses: 401, 402, 403,404, 405, 406, 407 and 409	m ³	27.94		
6.13.14	CONCRETE ANCILLARIES Reinforcement Deformed High Yield Steel High yield square twisted or ribbed bars to BS4449 and of the following sizes Nominal size, 6-20mm as per clause 758	t	3.10		
6.13.15	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Vertical Plane fair finish vertical formwork of the following width Width: 0.4-1,22 m as per clauses: 501, 502, 503 and 504	m ²	77.65		

6.13.16	<p>PAINTING High Gloss Masonry External quality weather guard paint, two coats, to the following smooth concrete surfaces; include surface preparation Surfaces of walls inclined at an angle exceeding 60 degrees to the horizontal as per clauses: 1132 and 1134</p>	m ²	141.18		
6.13.17	<p>PAINTING High Gloss Timber Surfaces External quality weather guard paint, two coats, to the following smooth concrete surfaces; include surface preparation 'Upper surfaces of facial board inclined at an angle not exceeding 30 degrees to the horizontal as per clauses: 1132 and 1134</p>	m ²	187.79		
6.13.18	<p>PAINTING Emulsion Paint Masonry Internal quality vinyl silk paint, two coats, to the following smooth concrete surfaces; include surface preparation Surfaces of walls inclined at an angle not exceeding 30 degrees to the horizontal as per clauses: 1132 and 1134</p>	m ²	151.31		
6.13.19	<p>PAINTING Emulsion Paint Masonry Internal quality vinyl silk paint, two coats, to the following smooth concrete surfaces; include surface preparation Surfaces of walls inclined at an angle exceeding 60 degrees to the horizontal as per clauses: 1132 and 1134</p>	m ²	965.47		
6.13.20	<p>WATER PROOFING Protective Layers Sand cement screed of 1:3 cement sand mortar, applied to concrete, 60 mm thick, prepared and applied 'Surfaces of floors inclined at an angle not exceeding 30 degrees to the horizontal as per clause 713</p>	m ²	110.62		
6.13.21	<p>SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS Doors Supply and fix 1200mm x 2400mm, steel casement double swing door hinged to 135 x 45 x 1.5 mm door frames,painted in three coats of blue gloss paint and with all iron mongary as directed by the engineer as per clauses: 755 and 721</p>	nr			
6.13.22	<p>SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS Doors Supply and fix 900mm x 2400mm, solid pannel timber door hinged to 135x45x1.5mm steel door frames, complete l, painted in three coats of blue gloss paint and with all iron mongary as directed by the engineer as per clauses: 755 and 721</p>	nr			

6.13.23	<p>SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</p> <p>Doors</p> <p>Supply and fix 900mm x 2400mm ,1.5mm pressed steel door shutters hinged to 135 x 45 x 1.5 steel door frames completer with all locking arrangements and as directed by the engineer as per clauses: 755 and 721</p>	nr	1.34		
6.13.24	<p>SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</p> <p>Doors</p> <p>Supply and fix 800mm x 2400mm, solid pannel timber door hinged to 135x45x1.5mm steel door frames, complete and painted in three coats of blue gloss paint and with all iron mongary as directed by the engineer as per clauses: 755 and 721</p>	nr	3.00		
6.13.25	<p>SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</p> <p>Doors</p> <p>Supply and fix 700mm x 2400mm, solid pannel timber door hinged to 135x45x1.5mm steel door frames, complete and painted in three coats of blue gloss paint and with all iron mongary as directed by the engineer as per clauses: 755 and 721</p>	nr	3.00		
6.13.26	<p>SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</p> <p>Windows</p> <p>Supply and fix 1500mm x 1500mm Steel casement window burglar proofed with R12 at 150c/c in both directions, anchored to the wall, painted in three coats of blue gloss paint as per clauses: 755 and 1129</p>	nr	5.00		
6.13.27	<p>SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</p> <p>Windows</p> <p>Supply and fix 600mm x 900mm Steel casement window burglar proofed with R12 at 150c/c in both directions, anchored to the wall, painted in three coats of blue gloss paint as per clauses: 755 and 1129</p>	nr	3.00		

PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT**CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03****BILL No. B: WATER TREATMENT PLANT****6.14-WTP Ecosan Toilet**

CLASS	ITEM DESCRIPTION	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
6.14.1	EARTHWORKS Excavation for foundations or trench Topsoil Strip top soil,depth not exceeding 0.3m for site as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	3.10		
6.14.2	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 0.5-1m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	7.15		
6.14.3	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 0.5-1m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	1.00		
6.14.4	EARTHWORKS Excavation for foundations or trench Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Material other than topsoil,rock,or artificial hard material as per clause 303	m ³	10.06		
6.14.5	EARTHWORKS Excavation for foundations Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Rock as per clause 303	m ³	1.00		
6.14.6	EARTHWORKS Filling Structures Filling by methods specified and to depths as shown in the drawings with the following materials Selected excavated granular material other than topsoil, rock or artificial hard material to tank base and compacted to 98% MOD AASHTO as per clause 304	m ³	3.47		

6.14.7	EARTHWORKS Filling Structures Filling by methods specified and to depths as shown in the drawings with the following materials Excavated rockfill to structure stabilisation as per clause 304	m ³	1.54		
6.14.8	EARTHWORKS Filling General filling - Shoreline Filling to to stabilise shoreline by methods specified and to depths as shown in the drawings with the following materials Excavated rockfill for shoreline stabilisation as per clause 304	m ³	0.51		
6.14.9	EARTHWORKS Filling Ancillaries Filling Filling to Structures by methods specified and to depths as shown in the drawings with the following materials Imported rock of size and grading; include sand blinding on top as per clauses: 303 and 304	m ³	5.25		
6.14.10	IN-SITU CONCRETE Provision and placing Mass Concrete Blinding or filling Provision and Placing blinding or filling concrete grade C8/10 as per clauses: 401, 402, 403, 404 and 405	m ³	1.00		
6.14.11	IN-SITU CONCRETE Provision and Placing Reinforced Concrete Bases, Footings, Ground Slabs, Walls and Beams or Columns Provision and placing reinforced concrete C40/20 as per clauses: 401, 402, 403,404, 405, 406, 407 and 409	m ³	11.80		
6.14.12	CONCRETE ANCILLARIES Formwork-Fair Finish Fair Finish Plane Vertical Plane fair finish vertical formwork of the following width Width: 0.1-0.4 m as per clauses: 501, 502, 503 and 504	m ²	22.54		
6.14.13	CONCRETE ANCILLARIES Reinforcement Deformed High Yield Steel High yield square twisted or ribbed bars to BS4449 and of the following sizes Nominal size. 6-20mm as per clause 758	t	1.68		
6.14.14	BRICKWORK, BLOCKWORK AND MASONRY Solid burnt clay brickwork Solid burnt clay brickwork to BS 3921, jointed with ordinary 1:4 cement mortar, hoop irons every three courses, and of the following thicknesses 300 mm thick as per clauses: 601, 602, 603, 708, 710 and 715	m ²	15.00		
6.14.15	WATER PROOFING Protective Layers Flexible polyethylene sheeting, gauge 1000, or similar approved, laid to the surface of blinding concrete or sand blinded hardcore fill Surfaces inclined at an angle not exceeding 30 degrees to the horizontal as per clause 1156	m ²	10.29		

6.14.16	BRICKWORK, BLOCKWORK AND MASONRY Solid burnt clay brickwork Damp proof course of bitumen impregnated fabric to BS 6398 for the following wall thickness 300 mm thick as per clauses: 601, 602, 603, 708, 710 and 720	m	10.50		
6.14.17	WATER PROOFING Damp Proofing Rendering Surfaces to walls inclined at an angle exceeding 60 degrees to the horizontal in ordinary cement mortar as per clauses: 1113, 1128 and 1129	m ²	63.80		
6.14.18	WATER PROOFING Protective Layers Sand cement screed of 1:3 cement sand mortar, applied to concrete, 60 mm thick, prepared and applied Surfaces of floors inclined at an angle not exceeding 30 degrees to the horizontal as per clause 713	m ²	15.54		
6.14.19	PAINTING High Gloss Timber Surfaces External quality weather guard paint, two coats, to the following smooth concrete surfaces; include surface preparation Upper surfaces of facial board inclined at an angle not exceeding 30 degrees to the horizontal as per clauses: 1132 and 1134	m ²	10.60		
6.14.20	Smooth concrete surfaces inclined at an angle not exceeding 30 degrees to the horizontal; include surface preparation as specified and directed by the engineer as per clause 410	m ²	3.54		
6.14.21	SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS Doors Supply and installation of internal steel doors with single or double doors up to 2 meters in width, for access to the premises, consisting of chassis and counter frame at tubular steel galvanized panels, simple galvanized sheet steel thickness 10 / 10 mm with lock and handle and also horizontal chrome handle for antipanic Single leaf door overall size 900 x 2100mm high with 200 steel pvo as per clauses: 755 and 721	nr	3.00		
6.14.22	Supply and install HDPE Eco-squatting urine diverting pan as specified and directed by the engineer as per clause 751	nr	6.00		
6.14.23	Provide and fix urine diversion consisting of: (Seal joints with PVC cement) for 1-1/4" PVC Pipes as specified and directed by the engineer as per clause 766	m	8.00		
6.14.24	Provide and fix urine diversion consisting of: (Seal joints with PVC cement) for 1-1/4" PVC Bends as specified and directed by the engineer as per clause 766	nr	1.00		
6.14.25	Provide and fix urine diversion consisting of: (Seal joints with PVC cement) for 1-1/4" PVC Tees as specified and directed by the engineer as per clause 766	nr	6.00		
6.14.26	Provide and fix urine diversion consisting of: (Seal joints with PVC cement) for 1-1/4" Plugs as specified and directed by the engineer as per clause 766	nr	6.00		
6.14.27	Provide and fix 100mm PVC vent pipe complete with rain stoppers and fly trap as specified and directed by the engineer as per clause 766	m	3.00		

6.14.28	Supply and fix Water tight 450 x 500 inspection vault complete with locking system as specified and directed by the engineer as per clause 743	nr	3.00		
6.14.29	Supply and install a urine collecting tank of capacity 100 litres complete with an outlet tap and an overflow connected to the soak pit as specified and directed by the engineer as per clause 757	nr	1.00		
6.14.30	Supply and Install an ash container/bucket with a scooper as specified and directed by the engineer as per clause 757	nr	3.00		

PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT**CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03****BILL No. B: WATER TREATMENT PLANT****6.15-WTP Flow Meter PITS**

CLASS	ITEM DESCRIPTION	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
6.15.1	EARTHWORKS Excavation for foundations or trench Topsoil Strip top soil,depth not exceeding 0.15m for site as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	6.08		
6.15.2	EARTHWORKS Excavation for foundations or trench Ordinary Soil General excavation, for road works and parking area, in material other than topsoil, rock or artificial hard material, commencing surface is the stripped ground level Depth 0.25-0,5m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	10.13		
6.15.3	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 0.5-1m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	20.25		
6.15.4	EARTHWORKS Excavation for foundations or trench Ordinary Soil Excavation for foundations or trench in material other than topsoil, rock or artificial hard material, commencing surface is the formation level Depth 1-2m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	20.25		
6.15.5	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 0,5-1m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	6.08		

6.15.6	EARTHWORKS Excavation for foundations or trench Rock Excavation for foundations or trench in rock, commencing surface is the exposed surface of the rock Depth 1-2m as per Clauses: 301, 303, 315, 1001, 1002 and 1004	m ³	10.13		
6.15.7	EARTHWORKS Excavation for foundations or trench Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Top soil as per clause 303	m ³	6.08		
6.15.8	EARTHWORKS Excavation for foundations or trench Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Material other than topsoil, rock, or artificial hard material as per clause 303	m ³	50.63		
6.15.9	EARTHWORKS Excavation for foundations Disposal of Excavated Material Disposal of excavated material to sites as specified and as directed by the Engineer Rock as per clause 303	m ³	16.20		
6.15.10	EARTHWORKS Landscaping Turbing for lawns; include filling with excavated topsoil and the preparation of the surfaces as directed by the Engineer	m ²	15.75		
6.15.11	IN-SITU CONCRETE Provision and placing Mass Concrete Blinding or filling Provision and Placing blinding or filling concrete grade C8/10 as per clauses: 401, 402, 403, 404 and 405	m ³	5.40		
6.15.12	IN-SITU CONCRETE Provision and Placing Reinforced Concrete Bases, Footings, Ground Slabs, Walls and Beams or Columns Provision and placing reinforced concrete C40/20 as per clauses: 401, 402, 403, 404, 405, 406, 407 and 409	m ³	19.73		
6.15.13	CONCRETE ANCILLARIES Reinforcement Deformed High Yield Steel High yield square twisted or ribbed bars to BS4449 and of the following sizes Nominal size, 6-20mm as per clause 758	t	16.77		

6.15.14	<p>CONCRETE ANCILLARIES</p> <p>Concrete Accessories</p> <p>Inserts</p> <p>Pipe inserts projecting from two faces of the concrete and of the following sizes, excluding supply of pipe 300 mm ND as per clause 702</p>	nr	4.00		
6.15.15	<p>CONCRETE ANCILLARIES</p> <p>Concrete Accessories</p> <p>Inserts</p> <p>Pipe inserts projecting from two faces of the concrete and of the following sizes, excluding supply of pipe 400 mm ND as per clause 702</p>	nr	2.00		
6.15.16	<p>MISCELLANEOUS WORK</p> <p>Manhole Cover</p> <p>Manhole cover of following sizes.</p> <p>800 mm x 800 as per clause 743</p>	nr	6.00		

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BILL No. B: WATER TREATMENT PLANT

6.17- Flocculant

ITEM NO	MECHANICAL WORKS TO BE DONE	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
6.17.1	Supply and installation of: Submersible vertical mixer According to the instructions of the supervisor engineer as per clause 1523	No.	2.00		
6.17.2	Supply and installation of: Metering pump for reagents. According to the instructions of the supervisor engineer as per clause 1524	No.	4.00		
6.17.3	Supply and installation of: UPVC for pressure pipes ND 40 mm. According to the instructions of the supervisor engineer as per clause 1516	m	33.90		
6.17.4	Supply and installation of: Ball valves Ø 1 1/2". According to the instructions of the supervisor engineer as per clause 1519 - No. 3+2+2	No.	10.00		
6.17.5	Supply and installation of: Accessories and miscellaneous. According to the instructions of the supervisor engineer as per clause 1517	kg	270.00		

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BILL No. B: WATER TREATMENT PLANT

6.18-Claryflocculateur

ART. COD.	MECHANICAL WORKS TO BE DONE	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
6.18.1	Supply and installation of: Stainless steel sluice gate. According to the instructions of the supervisor engineer as per clause 1512	m ²	3.85		
6.18.2	Supply and installation of: Accessories and miscellaneous. According to the instructions of the supervisor engineer as per clause 1517	kg	13,000.00		
6.18.3	Supply and installation of: Stainless steel weir gate. According to the instructions of the supervisor engineer as per clause 1518	kg	126.36		

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BILL No. B: WATER TREATMENT PLANT

6.20- Disinfection

ART. COD.	MECHANICAL WORKS TO BE DONE	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
6.20.1	Supply and installation of: Flat body gate valve ND 300 mm. According to the instructions of the supervisor engineer as per clause 1513	No.	4.00		
6.20.2	Supply and installation of: UPVC for pressure pipes ND 25 mm. According to the instructions of the supervisor engineer as per clause 1516	m	10.00		
6.20.3	Supply and installation of: Galvanized steel pipes ND 160 mm. According to the instructions of the supervisor engineer as per clause 1516	m	25.00		
6.20.4	Supply and installation of: Stainless steel pipes ND 250 mm. According to the instructions of the supervisor engineer as per clause 1516	m	20.00		
6.20.5	Supply and installation of: Accessories and miscellaneous. According to the instructions of the supervisor engineer as per clause 1517	kg	1,500.00		

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CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03

BILL No. B: WATER TREATMENT PLANT

6.24-Flow water meter

ART. COD.	MECHANICAL WORKS TO BE DONE	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
6.24.1	Supply and installation of: Flat body gate valve ND 250 mm. According to the instructions of the supervisor engineer as per clause 1513	No.	2.00		
6.24.2	Supply and installation of: Plunger flow control valve ND 250 mm. According to the instructions of the supervisor engineer as per clause 1531	No.	1.00		
6.24.3	Supply and installation of: Water flow meter. According to the instructions of the supervisor engineer as per clause 1532	No.	1.00		
6.24.4	Supply and installation of: Flat body gate valve ND 250 mm. According to the instructions of the supervisor engineer as per clause 1513	No.	2.00		
6.24.5	Supply and installation of: Plunger flow control valve ND 200 mm. According to the instructions of the supervisor engineer as per clause 1531	No.	1.00		
6.24.6	Supply and installation of: Water flow meter. According to the instructions of the supervisor engineer as per clause 1534	No.	1.00		
6.24.7	Supply and installation of: Flat body gate valve ND 250 mm. According to the instructions of the supervisor engineer as per clause 1513	No.	2.00		
6.24.8	Supply and installation of: Plunger flow control valve ND 250 mm. According to the instructions of the supervisor engineer as per clause 1531	No.	1.00		
6.24.9	Supply and installation of: Water flow meter. According to the instructions of the supervisor engineer as per clause 1533	No.	1.00		

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CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03

BILL No. B: WATER TREATMENT PLANT

6.27-ElectricalHse

No.	ITEM	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
6.27.1	2 gang 2 way Metallic, 5A SP, as Crabtree or equivalent	pcs	2		
6.27.2	13A Metallic Socket Outlets , as Crabtree or equivalent	pcs	2		
6.27.3	15A 4 Pin Metallic Socket outlet , as Crabtree or equivalent	pcs	2		
6.27.4	5 ft LED Tubelight Fittings , as ABB or equivalent	pcs	4		
6.27.5	LED Security Light fittings (50W) complete with mounting brackets & bolts as ABB or approved equivalent, dustproof, rainproof	pcs	4		
6.27.6	Dome Covers	pcs	8		
6.27.7	185 mm ² PVC 4C SWA cable Manufactured by East African Cables or apprved equivalent complete with cable lugs and accessories	mts	45		
6.27.8	Provide for excavation of underground cable trench, backfilling and installing of cable markers every 10m	mts	45		
6.27.9	16 mm ² PVC 4C SWA cable Manufactured by East African Cables or apprved equivalent	pcs	80		
6.27.10	4 mm ² PVC 3C SWA cable Manufactured by East African Cables or apprved equivalent	pcs	30		
6.27.11	6.0mm ² PVC earth wire single core Manufactured by East African Cables or apprved equivalent	mts	20		
6.27.12	32mm Cable Glands c/w hoods	pcs	4		
6.27.13	10-Way, 3 phase Distribution Board, 200A as Crabtree or approved equivalent	pcs	1		
6.27.14	63A MCB 3P As crabtree, ABB or approved equivalent	pcs	2		
6.27.15	30A MCB 3P As crabtree, ABB or approved equivalent	pcs	2		
6.27.16	16A MCB 3P As crabtree, ABB or approved equivalent	pcs	2		
6.27.17	6A MCB 3P As crabtree, ABB or approved equivalent	pcs	2		
6.27.18	1500mm long by 12mm diameter copper earth rod complete with driving stud and spike for earthing c/w copper clamping device	pcs	6		
6.27.19	3/4" Galvanized Conduit	Length	1		
6.27.20	20" x 20" manhole c/w cover	pkts	1		
6.27.21	Cable glands 25mm	pcs	10		

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BILL No. B: WATER TREATMENT PLANT

6.28-Staff hsewiring

No.	ITEM	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
6.28.1	1.5mm ² twin/earth cable East African Cable in 20mm HG PVC conduit	mts	300		
6.28.2	1.5mm ² Single Sheathed Red East African Cable in 20mm HG PVC conduit	mts	300		
6.28.3	1.5mm ² Single Sheathed Black East African Cable in 20mm HG PVC conduit	mts	300		
6.28.4	2.5mm ² earth wire East African Cable in 20mm	mts	200		
6.28.5	2.5mm ² twin/earth cable East African Cable in 20mm HG PVC conduit	mts	200		
6.28.6	6 mm ² PVC 3C SWA cable Manufactured by East African Cables or apprved equivalent	mts	57		
6.28.7	Provide for excavation of underground cable trench, backfilling and installing of cable markers every 10m	mts	36		
6.28.8	6.0mm ² PVC earth wire East African Cable in 20mm HG PVC conduit	mts	60		
6.28.9	8 Ways Consumer Control Unit, Crabtree or approved equivalent	Pcs	2		
6.28.10	18W LED Light bulb , as ABB or equivalent	Pcs	14		
6.28.11	External light: Eterna T4 fluourescent Tube 20W Flourescent Lamp	Pcs	6		
6.28.12	Straight Battern Lampholder	Pcs	12		
6.28.13	5W LED Strip Light Fitting, 2 ft	Pcs	2		
6.28.14	Cordgrip Lampholder, 1.5mm ² , PVC sheathed	Pcs	20		
6.28.15	Ceiling Rose	Pcs	12		
6.28.16	0.75mm ² 2 Core Flexible Cord	mts	20		
6.28.17	1 Gang 1 Way Switch (Ivory) as Crabtree or approved equivalent	Pcs	4		
6.28.18	2 Gang 1 Way Switch (Ivory) as Crabtree or approved equivalent	Pcs	4		
6.28.19	1 Gang 2 Way Switch (Ivory) as Crabtree or approved equivalent	Pcs	4		
6.28.20	13A Socket Outlet (Ivory) as Crabtree or approved equivalent	Pcs	4		
6.28.21	13A Double Socket Outlet (Ivory) as Crabtree or approved equivalent	Pcs	2		
6.28.22	Ball Fitting (Austria Type) c/w 5W LED Bulb	Pcs	2		
6.28.23	3/4" Male Bushes	Pcs	16		
6.28.24	3/4" Dome Covers	Pcs	16		
6.28.25	Deep Ivory Box	Pcs	20		
6.28.26	Shallow Pattress	Pcs	18		
6.28.27	2" Wiring Clips	Pcs	8		
6.28.28	2½" Wiring Clips	Pcs	10		
6.28.29	1" Wiring Nails	Kg	2		
6.28.30	1" x No.8 Woodscrews	Pkt	2		

6.28.31	Insulation Tape	Pcs	8		
6.28.32	450mmx450mmx600mm concrete inspection earth	Pcs	2		
6.28.33	3/8" x 9" Bolt c/w Nut	Pcs	2		
6.28.34	D-Iron	Pcs	2		
6.28.35	Shackle Insulator	Pcs	2		
6.28.36	1500mm long by 12mm diameter copper earth rod complete with driving stud and spike for earthing c/w copper clamping device	Pcs	8		

PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT**CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03****BILL No. B: WATER TREATMENT PLANT****6.29-Admin Workshop lab**

No.	ITEM	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
6.29.1	1.5mm ² twin/earth cable East African Cable in 20mm HG PVC conduit	mts	200		
6.29.2	1.5mm ² Single Sheathed Red East African Cable in 20mm HG PVC conduit	mts	200		
6.29.3	1.5mm ² Single Sheathed Black East African Cable in 20mm HG PVC conduit	mts	200		
6.29.4	2.5mm ² earth wire East African Cable in 20mm	mts	200		
6.29.5	2.5mm ² twin/earth cable East African Cable in 20mm HG PVC conduit	mts	200		
6.29.6	2.5 mm ² 4C, SWA, PVC Insulated cable	mts	100		
6.29.7	4 mm ² 4C, SWA, PVC Insulated cable East African Cable in 20mm HG PVC conduit	mts	100		
6.29.8	6 mm ² 4C, SWA, PVC Insulated cable	mts	100		
6.29.9	6.0mm ² earth wire East African Cable in 20mm HG PVC conduit	mts	94		
6.29.10	70 mm ² PVC 3C SWA Building main supply cable cable Manufactured by East African Cables or approved equivalent	mts	94		
6.29.11	Provide for excavation of underground cable trench, backfilling and installing of cable markers every 10m	mts	60		
6.29.12	Supply & Install 16 mm ² 4C, SWA, PVC Insulated cable c/w termination accessories	mts	100		
6.29.13	Supply & Install 35mm ² 4C, SWA, PVC Insulated cable on overhead cable tray system	mts	100		
6.29.14	12- Way Consumer Control Unit c/w 12 MCBs as Crabtree or approved equivalent	Pcs	1		
6.29.15	20A Isolator C/w 11kW DOL Starter as Crabtree, ABB or approved equivalent	Pcs	2		
6.29.16	32A Isolator c/w 22 kW Star/Delta Starter as ABB,	Pcs	2		
6.29.17	Supply & Install 150mm cable tray system c/w bends and support structures as TEE OFF feeds to the various motor motor starter circuits	mts	200		
6.29.18	Office light: 3x12W LED tubes luminaire with clear attachment EQUIVALENT TO PHILLIPS UK.	Pcs	10		
6.29.19	External light security: water / dust proof fitting with LED T4 tube of 20W	Pcs	6		
6.29.20	Toilet light: E27 Energy Saving LED 12W Bulb Light Lamp AC 110/220V DC 12V	Pcs	4		
6.29.21	Ceiling Rose	Pcs	4		
6.29.22	1 Gang 1 Way Switch (Ivory)	Pcs	1		
6.29.23	2 Gang 1 Way Switch (Ivory)	Pcs	2		

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CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03

BILL No. B: WATER TREATMENT PLANT

6.30-Guardhouse

No.	ITEM	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
6.30.1	1.5mm ² twin/earth cable East African Cable in 20mm HG PVC conduit	mts	20		
6.30.2	1.5mm ² Single Sheathed Red East African Cable in 20mm HG PVC conduit	mts	20		
6.30.3	1.5mm ² Single Sheathed Black East African Cable in 20mm HG PVC conduit	mts	20		
6.30.4	2.5mm ² earth wire East African Cable in 20mm	mts	10		
6.30.5	2.5mm ² twin/earth cable East African Cable in 20mm HG PVC conduit	mts	10		
6.30.6	6.0mm ² PVC earth wire East African Cable in 20mm HG PVC conduit	mts	4		
6.30.7	1.5 mm ² PVC 3C SWA Building main supply cable cable Manufactured by East African Cables or approved equivalent	mts	72		
6.30.8	Provide for excavation of underground cable trench, backfilling and installing of cable markers every 10m	mts	72		
6.30.9	splitter Switch	Pcs	1		
6.30.10	5W LED Batten Light fitting c/w bulb	Pcs	1		
6.30.11	External light: Eterna T4 fluourescent Tube 20W Fluourescent Lamp , 2 FT Long	Pcs	2		
6.30.12	Straight Battern Lampholder	Pcs	5		
6.30.13	Cordgrip Lampholder	Pcs	5		
6.30.14	Ceiling Rose	Pcs	1		
6.30.15	2 Gang 1 Way Switch (Ivory)	Pcs	1		
6.30.16	13A Socket Outlet (Ivory)	Pcs	1		
6.30.17	3/4" Male Bushes	Pcs	4		
6.30.18	3/4" Dome Covers	Pcs	4		
6.30.19	Deep Ivory Box	Pcs	2		
6.30.20	Shallow Pattress	Pcs	1		
6.30.21	2" Wiring Clips	Pcs	8		
6.30.22	2½" Wiring Clips	Pcs	10		
6.30.23	1" Wiring Nails	Kg	2		
6.30.24	1" x No.8 Woodscrews	Pkt	1		
6.30.25	Insulation Tape	Pcs	1		
6.30.26	450mmx450mmx600mm concrete inspection earth	Pcs	1		
6.30.27	3/8" x 9" Bolt c/w Nut	Pcs	2		
6.30.28	D-Iron	Pcs	1		
6.30.29	Shackle Insulator	Pcs	1		
6.30.30	1500mm long by 12mm diameter copper earth rod	Pcs	2		

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PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT					
CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03					
BILL No. B:WATER TREATMENT PLANT					
6.31-LV MCC					
No.	ITEM	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
6.31.1	Supply & Install one free standing 150kW, 415, 50Hz Low Voltage switchboard cubicle, Form 1 design to IEC 61439 comprising partially Type-Tested Assembly (TTA) to IP55 (Dustproof), comprising suitable high quality proprietary switchgear. Physical dimensions not to exceed 1800mm high. Perspex glass screen to shield away bursars from direct contact when panel door is opened. The LV cubicle to be provided with suitable metering facilities for current, voltage, frequency, KW, KVA, KVAR, etc., outgoers, incomers and 70KVAR Automatic Power Factor correction device to maintain the power factor at not less than 0.95 lagging	Set	1		
6.31.2	Supply & Install one free standing 60kW, 415, 50Hz Low Voltage switchboard cubicle, Form 1 design to IEC 61439 comprising partially Type-Tested Assembly (TTA) to IP55 (Dustproof), comprising suitable high quality proprietary switchgear. Physical dimensions not to exceed 1800mm high. Perspex glass screen to shield away bursars from direct contact when panel door is opened. The LV cubicle to be provided with suitable metering facilities for current, voltage, frequency, KW, KVA, KVAR, etc., outgoers, incomers as detailed in the Electrical Report for Kaptega WTP	Set	1		

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CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03					
BILL No. B:WATER TREATMENT PLANT					
6.32-ChemAlumina					
No.	ITEM	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
6.32.1	1.5mm ² twin/ earth cable	mts	30		
6.32.2	1.5mm ² Single Sheathed Red	mts	30		
6.32.3	1.5mm ² Single Sheathed Black	mts	30		
6.32.4	4.0mm ² earth wire	mts	32		
6.32.5	2.5 mm ² PVC 3C SWA Building main supply cable cable Manufactured by East African Cables or approved equivalent	mts	32		
6.32.6	Provide for excavation of underground cable trench, backfilling and installing of cable markers every 10m	mts	4		
6.32.7	splitter Switch	Pcs	1		
6.32.8	LED Batten Light fitting c/ w bulb	Pcs	8		
6.32.9	Straight Battern Lampholder	Pcs	8		
6.32.10	Ceiling Rose	Pcs	2		
6.32.11	2 Gang 1 Way Switch (Ivory)	Pcs	1		
6.32.12	13A Socket Outlet (Ivory)	Pcs	1		
6.32.13	3/4" Male Bushes	Pcs	4		
6.32.14	3/4" Dome Covers	Pcs	4		
6.32.15	Deep Ivory Box	Pcs	2		
6.32.16	4- Way Consumer Control Unit c/w 4 MCBs as Crabtree or approved equivalent	Pcs	1		
6.32.17	Shallow Pattress	Pcs	1		
6.32.18	2" Wiring Clips	Pcs	8		
6.32.19	2½" Wiring Clips	Pcs	10		
6.32.20	1" Wiring Nails	Kg	2		
6.32.21	1" x No.8 Woodscrews	Pkt	1		
6.32.22	Insulation Tape	Pcs	1		
6.32.23	Manhole Cover	Pcs	1		
6.32.24	3/8" x 9" Bolt c/w Nut	Pcs	2		
6.32.25	D-Iron	Pcs	1		
6.32.26	Shackle Insulator	Pcs	1		
6.32.27	5' Copper Earth Electrode	Pcs	2		

PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT					
CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03					
BILL No. B: WATER TREATMENT PLANT					
6.33-ChemChloro					
No.	ITEM	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
6.33.1	1.5mm ² twin/ earth cable	mts	30		
6.33.2	1.5mm ² Single Sheathed Red	mts	30		
6.33.3	1.5mm ² Single Sheathed Black	mts	30		
6.33.4	4.0mm ² earth wire	mts	4		
6.33.5	10 mm ² PVC 3C SWA Building main supply cable cable Manufactured by East African Cables or approved equivalent	mts	27		
6.33.6	Provide for excavation of underground cable trench, backfilling and installing of cable markers every 10m	mts	27		
6.33.7	splitter Switch	Pcs	1		
6.33.8	LED Batten Light fitting c/ w bulb	Pcs	8		
6.33.9	Straight Battern Lampholder	Pcs	8		
6.33.10	Ceiling Rose	Pcs	2		
6.33.11	2 Gang 1 Way Switch (Ivory)	Pcs	1		
6.33.12	13A Socket Outlet (Ivory)	Pcs	1		
6.33.13	4- Way Consumer Control Unit c/w 4 MCBs as Crabtree or approved equivalent	Pcs	1		
6.33.14	3/4" Male Bushes	Pcs	4		
6.33.15	3/4" Dome Covers	Pcs	4		
6.33.16	Deep Ivory Box	Pcs	2		
6.33.17	Shallow Pattress	Pcs	1		
6.33.18	2" Wiring Clips	Pcs	8		
6.33.19	2½" Wiring Clips	Pcs	10		
6.33.20	1" Wiring Nails	Kg	2		
6.33.21	1" x No.8 Woodscrews	Pkt	1		
6.33.22	Insulation Tape	Pcs	1		
6.33.23	Manhole Cover	Pcs	1		
6.33.24	3/8" x 9" Bolt c/w Nut	Pcs	2		
6.33.25	D-Iron	Pcs	1		
6.33.26	Shackle Insulator	Pcs	1		
6.33.27	5' Copper Earth Electrode	Pcs	2		

PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT

CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03

BILL No. B: WATER TREATMENT PLANT

6.34: Septic

No.	ITEM	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
6.34.1	1.5mm ² twin/ earth cable	mts	100		
6.34.2	4.0mm ² earth wire	mts	4		
6.34.3	1.5 mm ² PVC 3C SWA Building main supply cable cable Manufactured by East African Cables or approved equivalent	mts	50		
6.34.4	Provide for excavation of underground cable	mts	50		
6.34.5	splitter Switch	Pcs	1		
6.34.6	LED Batten Light fitting c/w bulb	Pcs	10		
6.34.7	2 Gang 1 Way Switch (Ivory)	Pcs	1		
6.34.8	3 Gang 1 Way Switch (Ivory)	Pcs	1		
6.34.9	4- Way Consumer Control Unit c/w 4 MCBs as Crabtree or approved equivalent	Pcs	1		
6.34.10	3/4" Male Bushes	Pcs	4		
6.34.11	3/4" Dome Covers	Pcs	4		
6.34.12	Deep Ivory Box	Pcs	3		
6.34.13	Shallow Pattress	Pcs	1		
6.34.14	2" Wiring Clips	Pcs	8		
6.34.15	2½" Wiring Clips	Pcs	10		
6.34.16	1" Wiring Nails	Kg	2		
6.34.17	1" x No.8 Woodscrews	Pkt	1		
6.34.18	Insulation Tape	Pcs	1		
6.34.19	Manhole Cover	Pcs	1		
6.34.20	3/8" x 9" Bolt c/w Nut	Pcs	2		
6.34.21	D-Iron	Pcs	1		
6.34.22	Shackle Insulator	Pcs	1		
6.34.23	5' Copper Earth Electrode	Pcs	2		

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CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03					
BILL No. B: WATER TREATMENT PLANT					
6.35-Electrician Toolbox-KA					
No.	ITEM	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
6.35.1	Metallic Tool Box	Pcs	1		
6.35.2	1½ Padlock (for tool box locking)	Pcs	1		
6.35.3	Safety Padlock (For Lockout/Tag-out)	Pcs	1		
6.35.4	15" Flat Screw Driver	Pcs	1		
6.35.5	8" Grip Pliers	Pcs	1		
6.35.6	6" Try Square	Pcs	1		
6.35.7	Junior Hacksaw Frame	Pcs	1		
6.35.8	15 Screw Spanner	Pcs	1		
6.35.9	No. 14 Pipe Wrench	Pcs	1		
6.35.10	2 lb. Ball Pein Hammer	Pcs	1		
6.35.11	½ lb. Ball Pein Hammer	Pcs	1		
6.35.12	Stripping Knife	Pcs	1		
6.35.13	3m Tape Measure	Pcs	1		
6.35.14	No. 14 Rawl Plug Holder	Pcs	1		
6.35.15	6" Spirit Level	Pcs	1		
6.35.16	Screw Drivers (Set) - 6 pieces	Set	1		
6.35.17	Side Cutter	Pcs	1		
6.35.18	8" Insulated Pliers	Pcs	1		
6.35.19	10" Cold Chisel	Pcs	1		
6.35.20	8" Cold Chisel	Pcs	1		
6.35.21	Plumb Bob	Pcs	1		
6.35.22	¾ Stock & Die	Pcs	1		
6.35.23	Long Nose Pliers	Pcs	1		
6.35.24	Phase Tester	Pcs	1		
6.35.25	A Set of Screw Drivers (4" to 10" Star)	Set	1		
6.35.26	Rizmu srew driver	Pcs	1		
6.35.27	Digital Multi-tester (with fused Test Leads)	Pcs	1		
6.35.28	A Set of Ring Spanners (No. 6-22)	Pcs	1		
6.35.29	Safety Helmet	Set	3		
6.35.30	A Set of Screw Drivers (4" to 10" Flat)	Pcs	1		
6.35.31	12m long Aluminium Ladder (Load Capacity 80Kg)	Set	1		
6.35.32	Aluminium Step Ladder (Load Capacity 80Kg)	Pcs	1		

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CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03					
BILL No. B:WATER TREATMENT PLANT					
6.36-PlumberToolbox-KA					
No.	ITEM	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
6.36.1	Pipe wrench (No. 8/10/14/18/24)	Set	1		
6.36.2	Diestock	Set	1		
6.36.3	Tape Measure (5m)	Pcs	1		
6.36.4	Spirit Level	Pcs	1		
6.36.5	A Set of Screw Drivers (4" to 10" Flat)	Set	1		
6.36.6	A Set of Screw Drivers (4" to 10" Star)	Set	1		
6.36.7	Hacksaw Frame	Pcs	1		
6.36.8	PPR Machine	Pcs	1		
6.36.9	Sink Plunger	Pcs	1		
6.36.10	Plastic Tube cutter	Pcs	1		
6.36.11	Pipe reamer	Pcs	1		
6.36.12	Metallic Tool Box	Pcs	1		
6.36.13	1½ Padlock (for tool box locking)	Pcs	1		
6.36.14	Hammer Drill	Pcs	1		
6.36.15	Jig Saw	Set	1		
6.36.16	Portable pipe stand/Pipe Vice	Pcs	1		
6.36.17	Sump Pump	Pcs	1		
6.36.18	Cordless Drilling Machine	Pcs	1		
6.36.19	General Purpose Metallic Working Bench	Pcs	1		
6.36.20	Pump Pressure Testing Assembly	Set	1		
6.36.21	General Purpose Bench Mounted Vice	Pcs	1		
6.36.22	Teflon tape	Pcs	5		
6.36.23	Plumber Putty	Kg	1		
6.36.24	Pipe Gasket Material	Sheet	1		

PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT					
CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03					
BILL No. B: WATER TREATMENT PLANT					
6.37-LV MCC Backwash Kapt					
No.	ITEM	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
6.37.1	Supply & Install one free standing 60kW, 415, 50Hz Low Voltage switchboard cubicle, Form 1 design to IEC 61439 comprising partially Type-Tested Assembly (TTA) to IP65 (Splashproof), comprising suitable high quality proprietary switchgear. Physical dimensions not to exceed 1800mm high. Perspex glass screen to shield away bursars from direct contact when panel door is opened. The LV cubicle to be provided with 125A main MCCB, suitable metering facilities for current, voltage, frequency, KW, KVA, KVAR, etc., outgoers, incomers and 25KVAR Automatic Power Factor correction device to maintain the power factor at not less than 0.95 lagging	Set	1		
6.37.2	4 mm ² 4C, SWA, PVC Insulated cable East African Cable as motor supply cables from MCC and terminate onto motor terminals using steel cable glands. The cable to be installed in free air on perforated cable trays.	LM	100		

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CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03					
BILL No. B: WATER TREATMENT PLANT					
6.38-Filter House					
No.	ITEM	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)
6.38.1	1.5mm ² twin/earth cable East African Cable in 20mm HG PVC conduit	mts	200		
6.38.2	1.5mm ² Single Sheathed Red East African Cable in 20mm HG PVC conduit	mts	200		
6.38.3	1.5mm ² Single Sheathed Black East African Cable in 20mm HG PVC conduit	mts	200		
6.38.4	2.5mm ² earth wire East African Cable in 20mm	mts	200		
6.38.5	2.5mm ² twin/earth cable East African Cable in 20mm HG PVC conduit	mts	200		
6.38.6	2.5 mm ² 4C, SWA, PVC Insulated cable	mts	100		
6.38.7	4 mm ² 4C, SWA, PVC Insulated cable East African Cable in 20mm HG PVC conduit	mts	100		
6.38.8	6 mm ² 4C, SWA, PVC Insulated cable	mts	100		
6.38.9	6.0mm ² earth wire East African Cable in 20mm HG PVC conduit	mts	60		
6.38.10	25 mm ² PVC 3C SWA Building main supply cable cable Manufactured by East African Cables or approved equivalent	mts	48		
6.38.11	Provide for excavation of underground cable trench, backfilling and installing of cable markers every 10m	mts	48		
6.38.12	4- Way Consumer Control Unit c/w 4 MCBs as Crabtree or approved equivalent	Pcs	1		
6.38.13	Office light: 3x12W LED tubes luminaire with clear attachment EQUIVALENT TO PHILLIPS UK.	Pcs	10		
6.38.14	External light security: water / dust proof fitting with LED T4 tube of 20W	Pcs	6		
6.38.15	1 Gang 1 Way Switch (Ivory)	Pcs	1		
6.38.16	1 Gang 2 Way Switch (Ivory)	Pcs	2		
6.38.17	2 Gang 1 Way Switch (Ivory)	Pcs	2		
6.38.18	3 Gang 1 Way Switch (Ivory)	Pcs	1		
6.38.19	Emergency Stop Buttons, Reset type Mushroom head	Pcs	4		
6.38.20	13A Socket Outlet (Ivory)	Pcs	4		
6.38.21	13A Socket Outlet (metallic)	Pcs	4		
6.38.22	16A IP67 3 Pole +E, 415V Heavy Duty Socket outlet	Pcs	8		
6.38.23	32A IP67 3 Pole +E, 415V Heavy Duty Socket outlet	Pcs	4		
6.38.24	3/4" Male Bushes	Pcs	16		
6.38.25	3/4" Dome Covers	Pcs	16		
6.38.26	Deep Ivory Box	Pcs	20		
6.38.27	Shallow Pattress	Pcs	18		
6.38.28	2" Wiring Clips	Pcs	8		
6.38.29	2½" Wiring Clips	Pcs	10		
6.38.30	1" Wiring Nails	Kg	2		
6.38.31	1" x No.8 Woodscrews	Pkt	2		
6.38.32	Insulation Tape	Pcs	8		

6.38.33	450mmx450mmx600mm concrete inspection earth	Pcs	2		
6.38.34	3/8" x 9" Bolt c/w Nut	Pcs	2		
6.38.35	1500mm long by 12mm diameter copper earth rod complete with driving stud and spike for earthing c/w copper clamping device	Pcs	8		

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CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03						
BILL No. B: WATER TREATMENT PLANT						
6.39-Lightning active						
No.	ITEM	UNIT	Quantity	Rate (Kshs)	Amount (Kshs)	
1	Supply and install PDC E.60 level 4 lightning arrester complete:					
	a) PDC. E60 level 4					
	b) 50 sq mm (min. thickness 2mm) copper tape conductor					
	c) Complete capture system accessories					
	d) Complete ground system as per IEC 623 053 regulations, having ohmic value of less than 10 ohms					
6.39.1	e) lightening counter CDR UNIVERSAL ref.432028 (optional)	set	1			
	Support structure					
6.39.2	14m Mast to structural engineers details or equal to ingesco mast model no 114078 HDG complete with all anchors and supports	set	1			

LAKE VICTORIA NORTH WATER WORKS DEVELOPMENT AGENCY					
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CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03					
BILL 7					
WTP TO TENDEN RISING MAIN					
ITEM	DESCRIPTION	UNIT	QTY	RATE (Kshs)	Amount (Kshs) ©
No.					
5.1	BUSH CLEARANCE				
5.1.1	Trees of girth 500mm-1m locally disposed (Provisional)	Nr	50		
5.1.2	Trees of girth 1m-2m locally disposed (Provisional)	Nr	50		
5.1.3	Trees of girth 2m-3m locally disposed (Provisional)	Nr	50		
5.1.4	Stumps of diameter: 500mm-1m locally disposed (Provisional)	Nr	200		
5.2	TRENCH EXCAVATION				
5.2.1	Excavate trench in common material (The rate to include for joint holes,trimming sides and preparing trench bottom, backfill with selected fill material and compact. Surplus to be removed as directed by the Engineer: depth of excavation n.e. 1m	m ²	8,951		
5.3	PIPEWORKS				
	<i>a) Supply,transport to site,store ready for installation including jointing materials, bolts, gaskets packing jointing glue etc., as applicable.Lay and joint the pipeline, include for Pressure Testing as specified and to BS 3600</i>				
	<i>b) All pipe fittings and valve diameters indicated are normal diameters . See Drawings for relevant outside diameter.</i>				
	PN 10 - PN 25 OD 280mm HDPE pipe	m	7,104		
5.3.1	Disinfection of Pipe lines: flushing with clear water, filling with water containing 0.05 g/l calcium hypochlorite, left for 24 hours. This includes supply of all necessary equipment, materials, chemicals and water, measurement of residual chlorine, all as specified.	m	7,104		
5.4	FITTINGS				
5.4.1	Sluice valve 280mm with associated fittings	Nr.	2		
5.4.2	Airvalve and fittings	Nr	16		
5.4.3	Washout Valve and fittings	Nr	5		
5.5	VALVE CHAMBER				
5.5.1	Provide all materials and construct Valve chamber internal dimensions 800mm x 800 mm x 800mm deep Complete with steel covers gauge 16, lock and key. Rate to include supply and installation of all fittings , painting and making goods of works use dressed stones of approved Quality measuring 150mm x 200mm x 300mm	Nr	18		
5.6	MARKER POSTS				
5.6.1	Supply and fix marker posts for water pipe main route, road crossings, change of direction, air valves, washouts, fire hydrants and valve chambers. All in accordance with drawings and Specifications. "MAJI" marker posts –AV, WO,	Nr	89		
5.7	DEMOLITION OF STRUCTURES (LOCAL DISPOSAL)				
5.7.1	Masonry construction volume ne 50m ³ (Provisional)	Nr	1		
5.7.2	Masonry construction volume 50-100m ³ (Provisional)	Nr	1		
5.7.3	Metal construction volume ne 50m ³ (Provisional)	Nr	1		
5.7.4	Metal construction volume 50-100m ³ (Provisional)	Nr	1		
5.7.5	Brickwork construction volume ne 50m ³ (Provisional)	Nr	1		
5.7.6	Concrete construction volume ne 50m ³ (Provisional)	Nr	1		
5.7.7	Timber construction volume ne 50m ³ (Provisional)	Nr	1		
5.7.8	Mud and pole construction volume ne 50m ³ (Provisional)	Nr	1		
5.7.9	Mud and pole construction volume 50-100m ³ (Provisional)	Nr	1		
5.9	CLEARANCE OF PIPELINE WAYLEAVES, DISPOSAL LOCAL				

5.9.1	Nominal bore not 100-355mm pipeline only (Provisional)	m	714		
5.10	CROSSINGS PIPE				
5.10.1	350MM Epoxy coated Steel Pipe with associated fittings (Provisional)	m	5		
5.10.2	300MM Epoxy Coated Steel Pipe with associated fittings (Provisional)	m	5		
5.10.3	250MM Epoxy coated steel Pipe with associated fittings (Provisional)	m	5		
5.10.4	200MM Class B GI Pipe with associated fittings (Provisional)	m	5		
5.10.5	150MM Class B GI Pipe with associated fittings (Provisional)	m	5		
5.10.6	125MM Class B GI Pipe with associated fittings (Provisional)	m	5		
5.10.7	100MM Class B GI Pipe with associated fittings (Provisional)	m	5		
5.10.8	75MM Class B GI Pipe with associated fittings (Provisional)	m	5		
5.10.9	63MM Class B GI Pipe with associated fittings (Provisional)	m	5		
5.10.10	50MM Class B GI Pipe with associated fittings (Provisional)	m	5		
5.11	CROSSINGS				
5.11.1	River, stream or canal, width 1-3m pipe nom Bore ne 355mm as per drawing (Provisional)	Nr	1		
5.11.2	River, stream or canal, width 3-10m pipe nom Bore ne 355mm as per drawing (Provisional)	Nr	1		
5.11.3	Hedge crossing pipe nom. Bore n.e 355mm (Provisional)	Nr	1		
5.11.4	Wall crossing pipe nom. Bore n.e 355mm (Provisional)	Nr	1		
5.11.5	Fence crossing pipe nom. Bore n.e 355mm (Provisional)	Nr	1		
5.11.6	Sewer, ditch or drain crossing pipe nom n.e 355mm (Provisional)	Nr	1		
5.11.7	Other underground services pipe nom bore n.e 355mm (Provisional)	Nr	1		
5.12	REINSTATEMENT				
5.12.1	Breaking up, temporary and permanent reinstatement of tarmac roads, pipe nom. Bore n.e 355mm (Provisional)	m	2		
5.12.2	Breaking up, temporary and permanent reinstatement of dirt roads, pipe nom. Bore n.e 355mm (Provisional)	m	2		
5.12.3	Breaking up, temporary and permanent reinstatement of tarmac, concrete or concrete blocks surfaced driveways, pipe nom. Bore n.e 355mm (Provisional)	m	2		
5.12.4	Breaking up, temporary and permanent reinstatement of grassland and lawns pipe nom. Bore n.e 355mm (Provisional)	m	2		
5.12.5	Breaking up, temporary and permanent reinstatement of cultivated lands/garden pipe nom. Bore n.e 355mm (Provisional)	m	2		
5.13	PIPEWORK SUPPORTS & PROTECTION ANCILLARIES TO LAYING & EXCAVATION				
5.13.1	EXTRAS TO EXCAVATION AND BACKFILLING				
5.13.1.1	In pipe trenches excavation of rock class I material (Provisional)	m ³	10		
5.13.1.2	In pipe trenches excavation of rock class II material (Provisional)	m ³	10		
5.13.1.3	In pipe trenches backfilling with class S2 material (Provisional)	m ³	10		
5.13.1.4	In Chamber excavation of rock class I material (Provisional)	m ³	10		
5.13.1.5	In Chamber excavation of rock class II material (Provisional)	m ³	10		
5.13.2	EMBEDMENT/SURROUNDING BACKFILLING				
	Bedding material				
5.13.2.1	In pipe trenches lower bedding in swampy areas with blended imported and screened class S2 material pipe 100-200 mm (Provisional)	m ³	5		
5.13.2.2	In pipe trenches lower bedding in swampy areas with blended imported and screened class S2 material pipe 200-300 mm (Provisional)	m ³	5		
	Surround material				
5.13.2.3	In pipe trenches lower bedding in swampy areas including upper bedding, side filling and initial backfill with blended imported and screened class S2 material pipe 100-200 mm (Provisional)	m ³	3		

5.13.2.4	In pipe trenches lower bedding in swampy areas including upper bedding, side filling and initial backfill with blended imported and screened class S2 material pipe 200-300 mm (Provisional)	m ³	3		
5.13.3	CONCRETE STOOLS AND THRUST BLOCKS CONCRETE CLASS 20				
	To horizontal bends				
5.13.3.1	Volume not exc. 0.1m ³ nom. Bore 100-200mm (Provisional)	Nr	2		
5.13.3.2	Volume not exc. 0.1-0.2m ³ nom. Bore 200-300mm (Provisional)	Nr	2		
5.13.3.3	Volume not exc. 0.2-0.3m ³ nom. Bore 300-400mm (Provisional)	Nr	2		
	To Junctions				
5.13.3.4	Volume not exc. 0.1m ³ nom. Bore 100-200mm (Provisional)	Nr	1		
5.13.3.5	Volume not exc. 0.1-0.2m ³ nom. Bore 200-300mm (Provisional)	Nr	1		
5.13.3.6	Volume not exc. 0.2-0.3m ³ nom. Bore 300-400mm (Provisional)	Nr	1		
	Mass concrete grade C20 20mm aggregates				
	Valve stools				
5.13.3.7	Volume not exc. 0.1m ³ valve nom. Bore 100-200mm (Provisional)	Nr	2		
5.13.3.8	Volume not exc. 0.1-0.2m ³ valve nom. Bore 200-300mm (Provisional)	Nr	2		
5.13.3.9	Volume not exc. 0.1-0.2m ³ valve nom. Bore 300-400mm (Provisional)	Nr	2		
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					

LAKE VICTORIA NORTH WATER WORKS DEVELOPMENT AGENCY					
PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT					
CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03					
BILL 8					
TENDEN TANK - KAMENDI TRANSMISSION AND DISTRIBUTION PIPELINES					
ITEM	DESCRIPTION	UNIT	QTY	RATE (Kshs)	Amount (Kshs) ©
No.					
A)	TENDED TANK - KAMENDI TANK TRANSMISSION PIPELINE				
6.1	BUSH CLEARANCE				
6.1.1	Trees of girth 500mm-1m locally disposed (Provisional)	Nr	50		
6.1.2	Trees of girth 1m-2m locally disposed (Provisional)	Nr	50		
6.1.3	Trees of girth 2m-3m locally disposed (Provisional)	Nr	50		
6.1.4	Stumps of diameter: 500mm-1m locally disposed (Provisional)	Nr	200		
6.2	TRENCH EXCAVATION				
6.2.1	Excavate trench in common material (The rate to include for joint holes,trimming sides and preparing trench bottom, backfill with selected fill material and compact. Surplus to be removed as directed by the Engineer: depth of excavation n. 1m	m ²	16,481		
6.3	PIPEWORKS				
	<i>a) Supply,transport to site,store ready for installation including jointing materials, bolts, gaskets packing jointing glue et, as applicablLay and joint the pipeline, include for Pressure Testing as specified and to BS 3600</i>				
	<i>b) All pipe fittings and valve diameters indicated are normal diameters . See Drawings for relevant outside diameter.</i>				
	PN 16 OD 280mm HDPE pipe	m	3,480		
	PN 25 OD 225mm HDPE pipe	m	5,600		
6.3.1	PN 25 OD 160mm HDPE pipe	m	4,000		
6.3.2	Disinfection of Pipe lines: flushing with clear water, filling with water containing 0.05 g/l calcium hypochlorite, left for 24 hours. This includes supply of all necessary equipment, materials, chemicals and water, measurement of residual chlorine, all as specified.	m	13,080		
6.4	FITTINGS				
6.4.1	HDPE Fabricated Tee 280mm x 160mm x280mm	Nr.	3		
6.4.2	HDPE Fabricated Tee 225mm x 225mm x225mm	Nr.	1		
6.4.3	Reducing VJ coupling 280-160mm	Nr.	3		
6.4.4	Sluice valve 280mm with associated fittings	Nr.	2		
6.4.5	Sluice valve 225mm with associated fittings	Nr.	2		
6.4.6	Sluice valve 160mm with associated fittings	Nr.	2		
6.4.7	Airvalve and fittings	Nr	16		
6.4.8	Washout Valve and fittings	Nr	5		
6.5	VALVE CHAMBER				
6.5.1	Provide all materials and construct Valve chamber internal dimensions 800mm x 800 mm x 800mm deep Complete with steel covers gauge 16, lock and key. Rate to include supply and installation of all fittings , painting and making goods of works use dressed stones of approved Quality measuring 150mm x 200mm x 300mm	Nr	22		
6.6	MARKER POSTS				
6.6.1	Supply and fix marker posts for water main route, road crossings, change of direction, air valves, washouts, fire hydrants and valve chambers. All in accordance with drawings and Specifications. "MAJI" marker posts –AV, WO,	Nr	153		
	SUB TOTAL				
B)	OFFTAKE TO NAMBA YATOI DISTRIBUTION LINE				
6.1	BUSH CLEARANCE				
6.1.1	Trees of girth 500mm-1m locally disposed (Provisional)	Nr	50		

6.1.2	Trees of girth 1m-2m locally disposed (Provisional)	Nr	50		
6.1.3	Trees of girth 2m-3m locally disposed (Provisional)	Nr	50		
6.1.4	Stumps of diameter: 500mm-1m locally disposed (Provisional)	Nr	200		
6.2	TRENCH EXCAVATION				
6.2.1	Excavate trench in common material (The rate to include for joint holes,trimming sides and preparing trench bottom, backfill with selected fill material and compact. Surplus to be removed as directed by the Engineer: depth of excavation n. 1m	m ²	4,320		
6.3	PIPEWORKS				
	<i>a) Supply,transport to site,store ready for installation including jointing materials, bolts, gaskets packing jointing glue et, as applicablLay and joint the pipeline, include for Pressure Testing as specified and to BS 3600</i>				
	<i>b) All pipe fittings and valve diameters indicated are normal diameters . See Drawings for relevant outside diameter.</i>				
6.3.1	PN 25 OD 160mm HDPE pipe with compression joints	m	3,000		
6.3.2	Disinfection of Pipe lines: flushing with clear water, filling with water containing 0.05 g/l calcium hypochlorite, left for 24 hours. This includes supply of all necessary equipment, materials, chemicals and water, measurement of residual chlorine, all as specified.	m	3,000		
6.3	FITTINGS				
6.3.1	Sluice valve 160mm with associated fittings	Nr.	2		
6.3.2	Airvalve with associated fittings	Nr	4		
6.3.3	Washout Valve with associated fittings	Nr	1		
6.4	VALVE CHAMBER				
6.4.1	Provide all materials and construct Valve chamber internal dimensions 800mm x 800 mm x 800mm deep Complete with steel covers gauge 16, lock and key. Rate to include supply and installation of all fittings , painting and making goods of works use dressed stones of approved Quality measuring 150mm x 200mm x 300mm	Nr	7		
6.50	MARKER POSTS				
6.5.1	Supply and fix marker posts for water main route, road crossings, change of direction, air valves, washouts, fire hydrants and valve chambers. All in accordance with drawings and Specifications. "MAJI" marker posts –AV, WO,	Nr	37		
	SUB TOTAL				
C)	KIPKAMEN TANK TO KIPTOROR DISTRIBUTION LINE				
6.1	BUSH CLEARANCE				
6.1.1	Trees of girth 500mm-1m locally disposed (Provisional)	Nr	50		
6.1.2	Trees of girth 1m-2m locally disposed (Provisional)	Nr	50		
6.1.3	Trees of girth 2m-3m locally disposed (Provisional)	Nr	50		
6.1.4	Stumps of diameter: 500mm-1m locally disposed (Provisional)	Nr	200		
6.2	TRENCH EXCAVATION				
6.2.1	Excavate trench in common material (The rate to include for joint holes,trimming sides and preparing trench bottom, backfill with selected fill material and compact. Surplus to be removed as directed by the Engineer: depth of excavation n. 1m	m ²	1,200		
6.3	PIPEWORKS				
	<i>a) Supply,transport to site,store ready for installation including jointing materials, bolts, gaskets packing jointing glue et, as applicablLay and joint the pipeline, include for Pressure Testing as specified and to BS 3600</i>				
	<i>b) All pipe fittings and valve diameters indicated are normal diameters . See Drawings for relevant outside diameter.</i>				
6.3.1	PN 16 OD 160mm HDPE pipe	m	3,000		
6.3.2	Disinfection of Pipelines: flushing with clear water, filling with water containing 0.05 g/l calcium hypochlorite, left for 24 hours. This includes the supply of all necessary equipment, materials, chemicals, water, and the measurement of residual chlorine, all as specified.	m	3,000		

6.4	FITTINGS				
6.4.1	Sluice valve 160mm with associated fittings	Nr.	2		
6.4.2	Airvalve with associated fittings	Nr	4		
6.4.3	Washout Valve with associated fittings	Nr	1		
6.4	VALVE CHAMBER				
6.4.1	Provide all materials and construct Valve chamber internal dimensions 800mm x 800 mm x 800mm deep Complete with steel covers gauge 16, lock and key. Rate to include supply and installation of all fittings , painting and making goods of works use dressed stones of approved Quality measuring 150mm x 200mm x 300mm	Nr	7		
6.15	MARKER POSTS				
6.15.1	Supply and fix marker posts for water main route, road crossings, change of direction, air valves, washouts, fire hydrants and valve chambers. All in accordance with drawings and Specifications. "MAJI" marker posts –AV, WO,	Nr	37		
	SUB TOTAL				
D)	KIPKAMEN TANK TO TOP SUWERWA DISTRIBUTION LINE				
6.1	BUSH CLEARANCE				
6.51.2.1	Trees of girth 500mm-1m locally disposed (Provisional)	Nr	50		
6.51.2.2	Trees of girth 1m-2m locally disposed (Provisional)	Nr	50		
6.51.2.3	Trees of girth 2m-3m locally disposed (Provisional)	Nr	50		
6.51.2.4	Stumps of diameter: 500mm-1m locally disposed (Provisional)	Nr	200		
6.16	TRENCH EXCAVATION				
6.16.1	Excavate trench in common material (The rate to include for joint holes,trimming sides and preparing trench bottom, backfill with selected fill material and compact. Surplus to be removed as directed by the Engineer: depth of excavation n. 1m	m ²	1,098		
6.17	PIPEWORKS				
	<i>a) Supply,transport to site,store ready for installation including jointing materials, bolts, gaskets packing jointing glue et, as applicablLay and joint the pipeline, include for Pressure Testing as specified and to BS 3600</i>				
	<i>b) All pipe fittings and valve diameters indicated are normal diameters . See Drawings for relevant outside diameter.</i>				
6.16.1	PN 10 OD 160mm HDPE pipe	m	2,745		
6.16.2	Disinfection of Pipe lines: flushing with clear water, filling with water containing 0.05 g/l calcium hypochlorite, left for 24 hours. This includes supply of all necessary equipment, materials, chemicals and water, measurement of residual chlorine, all as specified.	m	2,745		
6.18	FITTINGS				
6.8.7	Sluice valve 160mm with associated fittings	Nr.	2		
6.8.13	Airvalve with associated fittings	Nr	4		
6.8.14	Washout Valve with associated fittings	Nr	1		
6.19	VALVE CHAMBER				
6.19.1	Provide all materials and construct Valve chamber internal dimensions 800mm x 800 mm x 800mm deep Complete with steel covers gauge 16, lock and key. Rate to include supply and installation of all fittings , painting and making goods of works use dressed stones of approved Quality measuring 150mm x 200mm x 300mm	Nr	7		
6.20	MARKER POSTS				
6.20.1	Supply and fix marker posts for water main route, road crossings, change of direction, air valves, washouts, fire hydrants and valve chambers. All in accordance with drawings and Specifications. "MAJI" marker posts –AV, WO,	Nr	34		
	SUB TOTAL				
E)	BENON TANK TO STATE LODGE DISTRIBUTION LINE				
6.1	BUSH CLEARANCE				

6.51.2.1	Trees of girth 500mm-1m locally disposed (Provisional)	Nr	50		
6.51.2.2	Trees of girth 1m-2m locally disposed (Provisional)	Nr	50		
6.51.2.3	Trees of girth 2m-3m locally disposed (Provisional)	Nr	50		
6.51.2.4	Stumps of diameter: 500mm-1m locally disposed (Provisional)	Nr	200		
6.21	TRENCH EXCAVATION				
6.21.1	Excavate trench in common material (The rate to include for joint holes,trimming sides and preparing trench bottom, backfill with selected fill material and compact. Surplus to be removed as directed by the Engineer: depth of excavation n. 1m	m ²	1,400		
6.22	PIPEWORKS				
	a) Supply,transport to site,store ready for installation including jointing materials, bolts, gaskets packing jointing glue et, as applicablLay and joint the pipeline, include for Pressure Testing as specified and to BS 3600				
	b) All pipe fittings and valve diameters indicated are normal diameters . See Drawings for relevant outside diameter.				
6.22.1	PN 10 OD 225mm HDPE pipe	m	3,500		
6.22.3	Disinfection of Pipe lines: flushing with clear water, filling with water containing 0.05 g/l calcium hypochlorite, left for 24 hours. This includes supply of all necessary equipment, materials, chemicals and water, measurement of residual chlorine, all as specified.	m	3,500		
6.23	FITTINGS				
6.8.7	Sluice valve 225mm with associated fittings	Nr.	2		
6.8.13	Airvalve with associated fittings	Nr	5		
6.8.14	Washout Valve with associated fittings	Nr	1		
6.24	VALVE CHAMBER				
6.24.1	Provide all materials and construct Valve chamber internal dimensions 800mm x 800 mm x 800mm deep Complete with steel covers gauge 16, lock and key. Rate to include supply and installation of all fittings , painting and making goods of works use dressed stones of approved Quality measuring 150mm x 200mm x 300mm	Nr	8		
6.25	MARKER POSTS				
6.25.1	Supply and fix marker posts for water main route, road crossings, change of direction, air valves, washouts, fire hydrants and valve chambers. All in accordance with drawings and Specifications. "MAJI" marker posts –AV, WO,	Nr	43		
	SUB TOTAL				
E)	OFFTAKE TO NAMBA 4 CENTER				
6.1	BUSH CLEARANCE				
6.51.2.1	Trees of girth 500mm-1m locally disposed (Provisional)	Nr	50		
6.51.2.2	Trees of girth 1m-2m locally disposed (Provisional)	Nr	50		
6.51.2.3	Trees of girth 2m-3m locally disposed (Provisional)	Nr	50		
6.51.2.4	Stumps of diameter: 500mm-1m locally disposed (Provisional)	Nr	200		
6.26	TRENCH EXCAVATION				
6.26.1	Excavate trench in common material (The rate to include for joint holes,trimming sides and preparing trench bottom, backfill with selected fill material and compact. Surplus to be removed as directed by the Engineer: depth of excavation n. 1m	m ²	286		
6.27	PIPEWORKS				
	a) Supply,transport to site,store ready for installation including jointing materials, bolts, gaskets packing jointing glue et, as applicablLay and joint the pipeline, include for Pressure Testing as specified and to BS 3600				
	b) All pipe fittings and valve diameters indicated are normal diameters . See Drawings for relevant outside diameter.				
6.26.1	PN 10 OD 90mm HDPE pipe	m	714		
6.26.2	Disinfection of Pipe lines: flushing with clear water, filling with water containing 0.05 g/l calcium hypochlorite, left for 24 hours. This includes supply of all necessary equipment, materials, chemicals and water, measurement of residual chlorine, all as specified.	m	714		

6.28	FITTINGS				
6.8.7	Sluice valve 90mm with associated fittings	Nr.	2		
6.8.13	Airvalve with associated fittings	Nr	1		
6.8.14	Washout Valve with associated fittings	Nr	1		
6.3.1	HDPE Fabricated Tee 225mm x 90mm x225mm	Nr.	1		
6.29	VALVE CHAMBER				
6.29.1	Provide all materials and construct Valve chamber internal dimensions 800mm x 800 mm x 800mm deep Complete with steel covers gauge 16, lock and key. Rate to include supply and installation of all fittings , painting and making goods of works use dressed stones of approved Quality measuring 150mm x 200mm x 300mm	Nr	4		
6.30	MARKER POSTS				
6.30.1	Supply and fix marker posts for water main route, road crossings, change of direction, air valves, washouts, fire hydrants and valve chambers. All in accordance with drawings and Specifications. "MAJI" marker posts –AV, WO,	Nr	11		
	SUB TOTAL				
F)	KIMENDI TANK TO KIPTENDEN DISTRIBUTION LINE				
6.1	BUSH CLEARANCE				
6.51.2.1	Trees of girth 500mm-1m locally disposed (Provisional)	Nr	50		
6.51.2.2	Trees of girth 1m-2m locally disposed (Provisional)	Nr	50		
6.51.2.3	Trees of girth 2m-3m locally disposed (Provisional)	Nr	50		
6.51.2.4	Stumps of diameter: 500mm-1m locally disposed (Provisional)	Nr	200		
6.31	TRENCH EXCAVATION				
6.31.1	Excavate trench in common material (The rate to include for joint holes,trimming sides and preparing trench bottom, backfill with selected fill material and compact. Surplus to be removed as directed by the Engineer: depth of excavation n. 1m	m ²	2,510		
6.32	PIPEWORKS				
	<i>a) Supply,transport to site,store ready for installation including jointing materials, bolts, gaskets packing jointing glue et, as applicablAy and joint the pipeline, include for Pressure Testing as specified and to BS 3600</i>				
	<i>b) All pipe fittings and valve diameters indicated are normal diameters . See Drawings for relevant outside diameter.</i>				
6.32.1	PN 16 OD 110mm HDPE pipe	m	6,275		
6.32.4	Disinfection of Pipe lines: flushing with clear water, filling with water containing 0.05 g/l calcium hypochlorite, left for 24 hours. This includes supply of all necessary equipment, materials, chemicals and water, measurement of residual chlorine, all as specified.	m	6,275		
6.33	FITTINGS				
6.8.7	Sluice valve 110mm with associated fittings	Nr.	2		
6.8.13	Airvalve with associated fittings	Nr	8		
6.8.14	Washout Valve with associated fittings	Nr	1		
6.3.1	HDPE Fabricated Tee 110mm x 110mm x110mm	Nr.	1		
6.34	VALVE CHAMBER				
6.34.1	Provide all materials and construct Valve chamber internal dimensions 800mm x 800 mm x 800mm deep Complete with steel covers gauge 16, lock and key. Rate to include supply and installation of all fittings , painting and making goods of works use dressed stones of approved Quality measuring 150mm x 200mm x 300mm	Nr	11		
6.35	MARKER POSTS				
6.35.1	Supply and fix marker posts for water main route, road crossings, change of direction, air valves, washouts, fire hydrants and valve chambers. All in accordance with drawings and Specifications. "MAJI" marker posts –AV, WO,	Nr	74		
	SUB TOTAL				
G	OFFTAKE TO TUGOIN DISTRIBUTION LINE				
6.1	BUSH CLEARANCE				

6.51.2.1	Trees of girth 500mm-1m locally disposed (Provisional)	Nr	50		
6.51.2.2	Trees of girth 1m-2m locally disposed (Provisional)	Nr	50		
6.51.2.3	Trees of girth 2m-3m locally disposed (Provisional)	Nr	50		
6.51.2.4	Stumps of diameter: 500mm-1m locally disposed (Provisional)	Nr	200		
6.36	TRENCH EXCAVATION				
6.36.1	Excavate trench in common material (The rate to include for joint holes,trimming sides and preparing trench bottom, backfill with selected fill material and compact. Surplus to be removed as directed by the Engineer: depth of excavation n. 1m	m ³	3,013		
6.37	PIPEWORKS				
	a) Supply,transport to site,store ready for installation including jointing materials, bolts, gaskets packing jointing glue et, as applicablLay and joint the pipeline, include for Pressure Testing as specified and to BS 3600				
	b) All pipe fittings and valve diameters indicated are normal diameters . See Drawings for relevant outside diameter.				
6.36.1	PN 16 OD 110mm HDPE pipe	m	7,532		
6.36.2	Disinfection of Pipe lines: flushing with clear water, filling with water containing 0.05 g/l calcium hypochlorite, left for 24 hours. This includes supply of all necessary equipment, materials, chemicals and water, measurement of residual chlorine, all as specified.	m	7,532		
6.38	FITTINGS				
6.8.7	Sluice valve 110mm with associated fittings	Nr.	2		
6.8.13	Airvalve with associated fittings	Nr	10		
6.8.14	Washout Valve with associated fittings	Nr	1		
6.39	VALVE CHAMBER				
6.39.1	Provide all materials and construct Valve chamber internal dimensions 800mm x 800 mm x 800mm deep Complete with steel covers gauge 16, lock and key. Rate to include supply and installation of all fittings , painting and making goods of works use dressed stones of approved Quality measuring 150mm x 200mm x 300mm	Nr	13		
6.40	MARKER POSTS				
6.40.1	Supply and fix marker posts for water main route, road crossings, change of direction, air valves, washouts, fire hydrants and valve chambers. All in accordance with drawings and Specifications. "MAJI" marker posts –AV, WO,	Nr	88		
	SUB TOTAL				
6.51.3	PIPE AND PIPEWORK ANCILLARIES				
6.51.3	DEMOLITION OF STRUCTURES (LOCAL DISPOSAL)				
6.51.6.51	Masonry construction volume ne 50m ³ (Provisional)	Nr	10		
6.51.3.2	Masonry construction volume 50-100m ³ (Provisional)	Nr	10		
6.51.3.3	Metal construction volume ne 50m ³ (Provisional)	Nr	10		
6.51.3.4	Metal construction volume 50-100m ³ (Provisional)	Nr	20		
6.51.3.5	Brickwork construction volume ne 50m ³ (Provisional)	Nr	10		
6.51.3.6	Concrete construction volume ne 50m ³ (Provisional)	Nr	10		
6.51.3.7	Timber construction volume ne 50m ³ (Provisional)	Nr	20		
6.51.3.8	Mud and pole construction volume ne 50m ³ (Provisional)	Nr	10		
6.51.3.9	Mud and pole construction volume 50-100m ³ (Provisional)	Nr	10		
6.51.4	CLEARANCE OF PIPELINE WAYLEAVES, DISPOSAL LOCAL				
6.51.4.1	Nominal bore not ex 100mm pipeline only (Provisional)	m	714		
6.51.4.2	Nominal bore not 100-355mm pipeline only (Provisional)	m	53111		
6.51.8.1	CROSSINGS PIPE				
6.51.8.1.1	350MM Epoxy coated Steel Pipe with associated fittings (Provisional)	m	100		
6.51.8.1.2	300MM Epoxy Coated Steel Pipe with associated fittings (Provisional)	m	100		

6.51.8.1.3	250MM Epoxy coated steel Pipe with associated fittings (Provisional)	m	100		
6.51.8.1.4	200MM Class B GI Pipe with associated fittings (Provisional)	m	100		
6.51.8.1.5	150MM Class B GI Pipe with associated fittings (Provisional)	m	100		
6.51.8.1.6	125MM Class B GI Pipe with associated fittings (Provisional)	m	100		
6.51.8.1.6	100MM Class B GI Pipe with associated fittings (Provisional)	m	100		
6.51.8.1.7	75MM Class B GI Pipe with associated fittings (Provisional)	m	100		
6.51.8.1.8	63MM Class B GI Pipe with associated fittings (Provisional)	m	100		
6.51.8.1.9	50MM Class B GI Pipe with associated fittings (Provisional)	m	100		
6.51.8.2	CROSSINGS				
6.51.8.2.1	River, stream or canal, width 1-3m pipe nom Bore ne 355mm as per drawing (Provisional)	Nr	30		
6.51.8.2.2	River, stream or canal, width 3-10m pipe nom Bore ne 355mm as per drawing (Provisional)	Nr	30		
6.51.8.2.3	Hedge crossing pipe nom. Bore n.e 355mm (Provisional)	Nr	50		
6.51.8.2.4	Wall crossing pipe nom. Bore n.e 355mm (Provisional)	Nr	50		
6.51.8.2.5	Fence crossing pipe nom. Bore n.e 355mm (Provisional)	Nr	50		
6.51.8.2.6	Sewer, ditch or drain crossing pipe nom n.e 355mm (Provisional)	Nr	10		
6.51.8.2.7	Other underground services pipe nom bore n.e 355mm (Provisional)	Nr	10		
6.51.8.3	REINSTATEMENT				
6.51.8.6.5	Breaking up, temporary and permanent reinstatement of tarmac roads, pipe nom. Bore n.e 355mm (Provisional)	m	50		
6.51.8.3.2	Breaking up, temporary and permanent reinstatement of dirt roads, pipe nom. Bore n.e 355mm (Provisional)	m	50		
6.51.8.3.3	Breaking up, temporary and permanent reinstatement of tarmac, concrete or concrete blocks surfaced driveways, pipe nom. Bore n.e 355mm (Provisional)	m	50		
6.51.8.3.4	Breaking up, temporary and permanent reinstatement of grassland and lawns pipe nom. Bore n.e 355mm (Provisional)	m	50		
6.51.8.3.5	Breaking up, temporary and permanent reinstatement of cultivated lands/garden pipe nom. Bore n.e 355mm (Provisional)	m	200		
6.51.9	PIPEWORK SUPPORTS & PROTECTION ANCILLARIES TO LAYING & EXCAVATION				
6.51.9.1	EXTRAS TO EXCAVATION AND BACKFILLING				
6.51.9.1.1	In pipe trenches excavation of rock class I material (Provisional)	m ³	6,000		
6.51.9.1.2	In pipe trenches excavation of rock class II material (Provisional)	m ³	4,000		
6.51.9.1.3	In pipe trenches backfilling with class S2 material (Provisional)	m ³	5,000		
6.51.9.1.4	In Chamber excavation of rock class I material (Provisional)	m ³	30		
6.51.9.1.5	In Chamber excavation of rock class II material (Provisional)	m ³	30		
6.51.9.2	EMBEDMENT/SURROUNDING BACKFILLING				
	Bedding material				
6.51.9.2.1	In pipe trenches lower bedding in swampy areas with blended imported and screened class S2 material pipe 100-200 mm (Provisional)	m ³	200		
6.51.9.2.2	In pipe trenches lower bedding in swampy areas with blended imported and screened class S2 material pipe 200-300 mm (Provisional)	m ³	300		
	Surround material				
6.51.9.2.3	In pipe trenches lower bedding in swampy areas including upper bedding, side filling and initial backfill with blended imported and screened class S2 material pipe 100-200 mm (Provisional)	m ³	30		
6.51.9.2.4	In pipe trenches lower bedding in swampy areas including upper bedding, side filling and initial backfill with blended imported and screened class S2 material pipe 200-300 mm (Provisional)	m ³	30		
6.51.10	CONCRETE STOOLS AND THRUST BLOCKS CONCRETE CLASS 20				
	To horizontal bends				

6.51.10.1	Volume not ex 0.1m3 nom. Bore 100-200mm (Provisional)	Nr	100		
6.51.10.2	Volume not ex 0.1-0.2m3 nom. Bore 200-300mm (Provisional)	Nr	100		
6.51.10.3	Volume not ex 0.2-0.3m3 nom. Bore 300-400mm (Provisional)	Nr	100		
	To Junctions				
6.51.10.4	Volume not ex 0.1m3 nom. Bore 100-200mm (Provisional)	Nr	50		
6.51.10.5	Volume not ex 0.1-0.2m3 nom. Bore 200-300mm (Provisional)	Nr	50		
6.51.10.6	Volume not ex 0.2-0.3m3 nom. Bore 300-400mm (Provisional)	Nr	50		
	Mass concrete grade C20 20mm aggregates				
	Valve stools				
6.51.10.7	Volume not ex 0.1m3 valve nom. Bore 100-200mm (Provisional)	Nr	50		
6.51.10.8	Volume not ex 0.1-0.2m3 valve nom. Bore 200-300mm (Provisional)	Nr	50		
6.51.10.9	Volume not ex 0.1-0.2m3 valve nom. Bore 300-400mm (Provisional)	Nr	50		
	SUB TOTAL				
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					

LAKE VICTORIA NORTH WATER WORKS DEVELOPMENT AGENCY					
PROPOSE MOSONGO CHEBAI TO SUWERWA WATER SUPPLY AND SANITATION PROJECT					
CONTRACT No. LVNWWDA/GK/TRANS-NZOIA/MOSONGO/2024-2026/03					
BILL 9					
STORAGE TANKS (4000 M3 TOTAL CAPACITY)					
No.	ITEM DESCRIPTION	UNIT	CONTRACT QTY	CONTRACT RATE (Kshs)	CONTRACT AMOUNT (Kshs)
CLASS A: GENERAL ITEM					
Includes: General obligations, site services and facilities, Temporary Works, testing of materials and work, Provisional Sums and Prime Cost Items. Items to cover elements of the cost of work which are to be considered as proportional to the quantities of the permanent works					
<u>Testing of the works</u>					
Testing and sterilization test as Specification clauses 812 and 816					
A260	Test reservoir and all pipeworks	Item	1.00		
CLASS E: EARTHWORKS					
Includes: Excavation, dredging, filling, compaction, disposal and landscaping Excludes: Excavation for: ground investigation (included in class B) diaphragm walls and ground anchorages (included in class C) pipes and sewers, manholes, trenches and ditches pipes headings, thrust boring and pipe jacking and pipe jointing (included in classes I, J, K, L and Y) piles (included in classes P and Q) foundations for traffic signs (included in class R) tunnels, shafts, headings and other subterranean cavities (included in class T) foundations for fences and gates (included in class X) Reinstatement following pipe laying (included in class K)					
<u>General excavation (Technical Specification clause 201 - 204 and 814)</u>					
E412	Top soil maximum depth 0.25- 0.5	m ³	103.00		
<u>Excavate in material other than topsoil, rock or artificial hard material</u>					
E323	Maximum depth 0.5- 1m	m ³	206.00		
E324	Depth: 1.0 - 2.0m	m ³	206.00		
E325	Depth: 2.0 - 5.0m	m ³	310.00		
E434	In material class "A" as defined in the technical specifications clause 301 article 2	m ³	62.00		
<u>Filling as per Technical specification clauses 304 and 1009</u>					
E614	Filling to structures	m ³	202.00		
E645.1	250mm approved hard-core fill	m ³	51.00		
E645.2	Approved pumice or gravel 50mm thick on hardcore	m ³	9.00		
CLASS F: IN SITU CONCRETE					
Excludes: In situ concrete for: capping of boreholes (included in class E) diaphragm walls (included in class C) excavation ancillaries (included in class E) granolithic and other applied finishes (included in class G) drainage and pipework (included in classes K and L) piles (included in classes P and Q) roads, pavings and kerbs (included in class R) tunnels and shafts and linings (included in class T) foundations for fences and gates (included in class X)					
<u>Provision of concrete</u>					
<u>Mass concrete class 15/20 as per Technical Specification clause 747</u>					
F611	Blinding layer, 75mm thick under base slab and wall footings	m ³	12.05		
<u>Placing of concrete</u>					
<u>Reinforced Concrete class 30/25 as per Technical Specification clause 747</u>					
F723.1	9.60m Dia x 400mm thick base Slab	m ³	63.37		
F723.2	2mx2mx.4 column Bases	m ³	3.60		
F744	Wall Foundation	m ³	19.76		
F762	22..81m Dia x 250mm thick toe beam	m ³	5.00		
F732	22.58m Dia x 250mm thick roof Slab	m ³	54.00		
F743	5m high walls	m ³	74.00		
F753	Columns	m ³	4.00		
F755	Columns heads	m ³	4.00		
CLASS G: CONCRETE ANCILLARIES					
Includes: Formwork for in situ concrete Reinforcement for in situ concrete Joints in situ concrete Post-tensioned prestressing Accessories for in situ concrete					
<u>Formwork as per Technical Specification clause 5</u>					
<u>Formwork fair finish</u>					
<u>Plane vertical to:</u>					
G243.1	External surface to wall footing	m ²	13.00		
G243.2	External surface to toe beam	m ²	26.00		
G243.3	External wall face upto 150mm below parapet wall	m ²	16.00		
G243.4	External face to base slab	m ²	13.00		
<u>Formwork rough finish</u>					
<u>Plane vertical to:</u>					
G143.1	External wall face down to 150mm below surface of roof parapet wall	m ²	141.00		
G143.2	Internal surface of wall footing	m ²	13.00		
G143.3	Column bases	m ²	16.00		
G143.4	Columns (400mm wide)	m ²	4.00		
G143.5	Column head (475mm deep)	m ²	12.00		
G143.7	Internal faces of walls	m ²	141.00		
G143.8	External and Internal edges of up stand to roof parapet, including boxing out for roof drain pipes	m ²	32.00		
<u>Plane horizontal to:</u>					
G113	Soffit of roof slab	m ²	133.00		
<u>Plane inclined to:</u>					

No.	ITEM DESCRIPTION	UNIT	CONTRACT QTY	CONTRACT RATE (Kshs)	CONTRACT AMOUNT (Kshs)
G114	Column heads	m ²	12.00		
	Extras for concrete and formwork				
	<i>Formwork fair finish</i>				
G172.1	Form opening 800 X 800mm opening for roof access	N	1.00		
G172.2	Form 1000 X 1000 X 600mm deep sump for washout in the floor slab	N	1.00		
G174	Form opening 3150 X 1250mm opening for inlet pipe access	N	1.00		
	Reinforcement				
	<i>Deformed high yield steel as per Technical specification clauses 419 and 420</i>				
G524	Nominal diameter 12mm	Kg	11,234.00		
G525	Ditto but nominal diameter 16mm	Kg	11,234.00		
	JOINTS AND WATER STOPS				
	<i>(Rates to include for all rebates, shuttering, PVC waterstop, resin bonded cork joint sealers and bituminous painting)</i>				
G653.1	PVC waterstop: average width 300-300m	m	80.00		
G653.2	Ditto between column bases and floor slab	m	70.00		
G653.3	Ditto between wall and wall base and excluding PVC water stops	m	80.00		
G652.1	Construction joint between wall and wall base together with 150mm wide eyeleted water stop with central bulb	m	85.00		
G642.1	Construction joint between wall panels. Include for 240mm wide plain rearward water stops	m	38.00		
G642.2	Ditto between adjacent bays of floor slabs	m	38.00		
G642.3	Ditto between bases	m	33.00		
G621.1	6mm thick joint filler on top of walls	m	33.00		
G621.2	30mm wide by 30mm deep trapezoidal false joints with sealer on roof slab	m	30.00		
G642.4	Partial construction joint in roof slab. Include for 140mm wide plain PVC water stops priming of surface and 50mm wide adhesive tape	m	20.00		
	CLASS I: PIPE WORK - PIPES				
	Includes: Provision, laying and jointing of pipes Excavating and backfilling pipe trenches				
	Excludes: Work included in classes J, K, L and Y Piped building services (included in class Z)				
	<i>Drainage</i>				
I512	150 DN uPVC washout pipe	m	50.00		
I511	110mm Dia. uPVC roof drains.	m	40.00		
	CLASS J: PIPE WORK - FITTINGS AND VALVES				
	Includes: Fittings and valves for pipework Excludes: Work included in classes I, K, L and Y Piped building services (included in class Z)				
	<i>Inlet pipe</i>				
J382.1	DN250 Flange adaptor	N	1.00		
J312.1	DN 250 double flanged 90° bend	N	2.00		
J382.2	250 double flanged pipe 4000mm long	N	1.00		
J382.3	250double flanged pipe 1000mm long with puddle flange	N	1.00		
J873	250 flanged float Valve	N	1.00		
J383	250mm dia Straight flexible coupling	N	1.00		
J382.4	250mm all spigot1000mm pipe piece	N	1.00		
J883.1	All flange 250mm sluice valve	N	1.00		
J382.5	250mm all flanged 500mm pipe piece	N	1.00		
	<i>Outlet pipe</i>				
J382.6	250mm all flanged 1000mm pipe piece	N	1.00		
J322	250mm x 80mm all flanged reducing tee	N	1.00		
J883.2	Double flanged 250mm sluice valve	N	1.00		
J382.7	250double flanged pipe 1000mm long with puddle flange	N	1.00		
J312.2	250 Double flanged 90° bend (long radius)	N	1.00		
J372	250 Dia. flanged bell mouth	N	1.00		
J383	250mm dia Straight flexible coupling	N	1.00		
J332	250mm x 250mm all flanged reducing taper	N	2.00		
J382.8	250mm all flanged strainer	N	1.00		
J382.9	250mm all flanged 3000mm pipe piece	N	1.00		
J872	250mm Double flanged Kent Water Meter	N	1.00		
J382.10	250mm all flanged 1000mm pipe piece	N	1.00		
J382.11	250mm all flanged 500mm pipe piece	N	1.00		
J352	DN250 Flange adaptor	N	1.00		
	<i>Scour pipe</i>				
J371	200 Dia. flanged bell mouth	N	1.00		
J311	200 Double flanged 90° bend (long radius)	N	1.00		
J382.12	200mm all flanged 1800mm pipe piece	N	1.00		
J351	DN200 Flange adaptor	N	1.00		
J382.13	200mm flanged spigot 1000mm pipe piece	N	1.00		
J872	Double flanged 200mm sluice valve with cap and key	N	1.00		
J382.14	200mm flanged spigot 2000mm pipe piece	N	1.00		
	<i>Overflow pipe</i>				
J371	200 Dia. flanged bell mouth	N	1.00		
J311	200 Double flanged 90° bend (long radius)	N	3.00		
J382.15	200 double flanged pipe 1200mm long with puddle flange	N	1.00		
J382.16	200mm all flanged 5500mm pipe piece	N	1.00		
J382.17	200mm all flanged 500mm pipe piece	N	1.00		
	<i>Vent pipe</i>				
J382.18	80mm all flanged 500mm pipe piece	N	1.00		
J311	80 Double flanged 90° bend (long radius)	N	4.00		
J382.19	80mm all flanged 6000mm pipe piece	N	1.00		
J382.20	80mm all flanged 1000mm pipe piece	N	1.00		
	<i>Tanks interconnection pipe</i>				
J371	200 Dia. flanged bell mouth	N	2.00		
J311	200 Double flanged 90° bend (long radius)	N	2.00		
J382.21	200 double flanged pipe 1200mm long with puddle flange	N	1.00		

