




 PRELIMINARY AND GENERAL WORKS					1
ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE KES	AMOUNT KES
	Rates are to include all overheads, taxes and duties.				
1-A	GENERAL ITEMS				
1-A1	CONTRACTUAL REQUIREMENTS				
1-A11	Performance Security	Sum	1		
1-A121	Contractor's all risk insurance (CAR)	Sum	1		
1-A2	SPECIFIED REQUIREMENTS				
1-A24	New equipment for Use by Engineers Staff				
	Provide and maintain Contractor owned RTK survey equipment as specified in the specifications during contract period for exclusive use of the Engineer.				
1-A249.2	Contractor retains ownership of equipment.	month	6		
1-A249.6	Contractor's overheads & profit for items A249.2	%			
1-A25	Attendance upon Contract Administrators				
1-1.A252	Chainmen Provide (1 No.)	month	6		
	<u>By Third Party Inspection (man-made other than pipes)</u>				
1-A264.2	Concrete crush test: 150 mm moulds cubes in sets of 3 samples	nr	1		
1-A264.3	Steel Reinforcement: tensile strength test	nr	1		
	<u>By Third Party Inspection (pipes)</u>				
1-A266.5	Concrete pipes	nr	1		
1-A266.6	HDPE Pipes & Fittings	nr	1		
	Testing of Works				
1-A277	Test Run of Works 2 weeks prior & 2 weeks after substantial completion	Sum	1		
	Signboards				
1-A279	Provide project signboard as detailed in the drawings	nr	1		
1-A28	Temporary Works				
1-A282	Traffic diversions	Sum	1		
1-A282	Traffic regulation (including signages,warning tapes and warning signs); establishment, operation and removal	Sum	1		
1-A287	Provide & maintain 10 m head 100 m3/hr sewer pump for diverting flow from existing trunk sewer line & overpumping to downstream manholes for the entire project duration. Include 100 m temporary diversion piping.	Sum	1		
TOTAL CARRIED FORWARD TO BILL COLLECTION SHEET					

ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE KES	AMOUNT KES
 PRELIMINARY AND GENERAL WORKS					1
1-A381	METHOD RELATED CHARGES The Contractor to allow a lump sum amount to cater for his method related costs including overheads & profits by considering the following site conditions: (i) The sewer lines will be laid in areas with numerous active Existing Services, both on the surface and buried; and along busy Streets/ Roads in Commercial and Residential areas. (ii) The works are to be carried out in congested Built-up areas with limited working space and limited access for Mechanical Equipment. The area is predominantly rocky. (iii) The sewerlines will be constructed mainly along road reserves. Execution of Works in such conditions are deemed to be included in the Contractor's Rates.	Sum	1		
1-A382	<u>Contractor's Camp and Storage Yard:</u> Allow for any costs, overheads and profit for establishment of the Contractor's Camp(s), Offices, Storage Yard and other facilities including mobilization, demobilization and removal on Completion. Include for all equipment, temporary measures, machines, tools, materials, facilities for workers, water and electricity supply etc. all as specified for execution of the Works, for the entire Contract Period	Sum	1		
1-A383	<u>Setting Out of the Works:</u> To be done in accordance with Specifications. The Work will entails establishment of Level Datum, setting out of the Works in accordance with Specifications, staking out of the construction wayleave along all Sewer Line routes, Topographical Survey, preparation of updated Layout Plans (with Contours at 1m interval), submission of plans & sewer profiles and Setting Out of proposed manholes and pipelines	m	1,000		
1-A384	Provisional Sum of KES 300000 for any payments for services by roads authorities, County Government, NEMA etc and any other that have any statutory jurisdiction over the works. Rate to include sourcing road cutting permits and reinstatement to standard, permits to work on road verges and tree cutting permits as may be required.	Sum	1		
1-A385	Allow for desilting of the existing manholes in vicinity of the works and as instructed by the Engineer. Rate to include repair/replacement and realignment of the of damaged/collapsed sections of the manholes and disposal of the solid and liquid wastes to appropriate sites	nr	2		
1-A387	Provide "As Built drawings" in AutoCAD and 5nr A3 hard copies and Operation and maintenance manuals for all plant, and equipment installed or constructed and rehabilitated. Include general layouts, pipeline profiles, chamber plans, sections & reinforcemnt detailing	Sum	1		
TOTAL CARRIED FORWARD TO BILL COLLECTION SHEET					

	PRELIMINARY AND GENERAL WORKS				1
ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE KES	AMOUNT KES
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TOTAL CARRIED TO SUMMARY SHEET					-

ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (KES)
 CONSTRUCTION OF SEWERS LATERALS					2
<p>Rates are to include all overheads, taxes and duties.</p>					
<p>CLASS A - GENERAL ITEMS</p>					
<p>Testing of the Works</p>					
3-A260.2	<p>Carrying out test on sewer line Include provision of all equipment and materials</p>	m	1,000		
<p>CLASS B - SITE INVESTIGATION</p>					
3-B111	<p>1.5 m x 1.5 m Trial pits/holes Depth n.e 4 m</p>	nr	10		
<p>CLASS D - DEMOLITION AND SITE CLEARANCE</p>					
<p>Pipeline and access track</p>					
3-D100	<p>Nom. Bore 200 mm socket & spigot joints Dense bush and thicket, removal from site and disposed</p>	m	1,000		
3-D154	<p>of as directed</p>	m ²	4,000		
<p>CLASS I: PIPEWORK-PIPES, SEWERS & FITTINGS - SUPPLY ONLY</p>					
<p>225 mm HDPE Double-Wall Corrugated socket ended sewer pipes SN 8 to specifications</p>					
3-I1924.n	<p>Nom. Bore 200 mm socket & spigot joints</p>	m	1,000		
<p>CLASS J: PIPEWORK-PIPES, SEWERS & FITTINGS-INSTALL</p>					
<p>Method of Measurement type A in metres</p>					
<p>HDPE Pipes In trenches & piers, beddings & concrete haunches</p>					
<p>The rates entered against the items in this section shall include for stripping top soil, laying aside and subsequently replacing over refilled trench, excavation in trench in all materials including rock, shoring, strutting, shuttering where necessary, refilling and compacting, spreading surplus soil evenly over and alongside pipe trench compacting, lay, jointing, bedding and haunching type "D" as per drawing THIWASCO/SD/7.0 sheets 1 & 2. for the entire length of pipeline to correct depths, line & level.</p>					
<p>Installation of Supplied Pipe Nominal Bore: 200 mm</p>					
3-J1933	<p>In trenches, depth: 1.0 m - 1.5 m</p>	m	200		
3-J1934	<p>In trenches, depth: 1.5 m - 2.0 m</p>	m	660		
3-J1935	<p>In trenches, depth: 2.0 m - 3.0 m</p>	m	130		
3-J1936	<p>In trenches, depth: 3.0 m - 4.0 m</p>	m	10		
<p>CLASS K: PIPEWORK - MANHOLES & SEWER WORK ANCILLARIES</p>					
<p>Manholes & other chambers, in accordance with standard drawings</p>					
<p>The rates entered are to include for: Excavating in all types of soils including rock, manhole base, manhole rings, shuttering where necessary, concrete slabs and covers, step irons or ladder, backfilling and compacting around manholes, and disposing of surplus material</p>					
<p>Precast concrete sewer manholes</p>					
<p>Pipe Nominal Bore: 200</p>					
3-K1577.4	<p>Depth not exceeding 2.0 m</p>	nr	15		
3-K1577.5	<p>Depth 2.0 m - 3.0 m</p>	nr	15		
3-K1577.4	<p>Depth 3.0 m - 4.0 m</p>	nr	2		
3-K1577.5	<p>Depth 4.0 m - 5.0 m</p>	nr	1		
3-K1577.6	<p>Depth 5.0 m - 6.0 m</p>	nr	1		
<p>Precast concrete sewer manholes with drops</p>					
3-K1577.4a	<p>Depth not exceeding 2.0 m</p>	nr	1		
3-K1577.5a	<p>Depth 2.0 m - 3.0 m</p>	nr	1		
3-K1577.4a	<p>Depth 3.0 m - 4.0 m</p>	nr	1		
<p>PAGE TOTAL CARRIED FORWARD TO SECTION COLLECTION SHEET</p>					

ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (KES)
 CONSTRUCTION OF SEWERS LATERALS 2					
3-K621	Crossings <u>Sewer, ditch or drain crossing</u> Allow for microtunneling of under drains. Rate to include for incorporation of any special materials required to cross the drain as per drawings Pipe Nominal Bore: 200	nr	10		
3-K721	Reinstatement <u>Breaking up and temporary reinstatement - unsurfaced road</u> Allow for Crossing of roads. Rate to include for incorporation of any special materials required to cross the road as per drawings Pipe Nominal Bore: 200	m	40		
3-K731	<u>Breaking up and temporary reinstatement - surfaced road</u> Allow for Crossing of roads. Rate to include for incorporation of any special materials required to cross the road as per drawings Pipe Nominal Bore: 200	m	30		
CLASS L: SUPPORTS AND PROTECTION, ANCILLARIES TO LAYING AND EXCAVATION					
Extras to Excavation and Backfilling Trenches (Note: Blasting not allowed for any rock excavation)					
3-L171	<u>Other than in pipe trenches and as directed</u> Excavation of rock	m ³	2,280		
3-L337	<u>Beds: pipe beddings using imported granular material</u> Pipe Nominal Bore: 200	m	600		
3-L447	<u>Haunches: using mass concrete</u> Concrete haunch type D to Pipe of Nominal Bore: 200	m	600		
3-L547	<u>300 mm thick concrete surrounds</u> Pipe Nominal Bore: 200	m	80		
3-X9.1	<u>Customer Connections</u> Provide 15 m long OD 160 HDPE pipes for connection of new & reconnection of existing THIWASCO customers. Rate to include all material required for bends and 0.6 m X 0.6 m X 1.0 m deep Inspection Chambers as per Drawing Number: THIWASCO/SD/7.0 Sheet 1 of 2	nr	40		
PAGE TOTAL CARRIED FORWARD TO SECTION COLLECTION SHEET					

	CONSTRUCTION OF SEWERS LATERALS				2
ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (KES)
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