

**MOMBASA WATER SUPPLY AND ASANITATION COMPANY**

**CHAMUNYU- MWAMULAI WATER PROJECT**

ITEM	DESCRIPTION	UNIT	QTY	RATE (KE)	AMOUNT( KE)
1	<b>PRELIMINARIES AND GENERAL</b>				
2	<b>CONTRACTUAL REQUIREMENTS</b>				
3	Allow for provision of Performance Security in accordance with Clause ..... of Section ..... of the General Conditions.Bidding Document Volume.....	Item	1		
4	Allow for provision of Insurance of Works and Contractor's Equipment in accordance with Clause of Section of the General Conditions, Bidding Document Volume.....	Item	1		
5	Allow for provision of Third Party Insurance (including Employer's Property) all in accordance with Clause ..... of Section..... of the General Conditions, Bidding Document Volume.....	Item	1		
6	Allow for provision of Insurance against Accident to Workmen in accordance with Clause of Section .....of the General Conditions, Bidding Document Volume.....	Item	1		
7	<b>SPECIAL REQUIREMENTS</b>				
8	Contractor's Camp and Storage Yard: Allow for HIRING of the Contractor's Camp(s), Offices, Storage Yard and other facilities including mobilization, demobilization and movement of the works site 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. The Employer has no available land to offer for Contractor's Camp, storage of materials and preparation of concrete etc. Identification and procurement of suitable area of land for Contractor's Camp whether rented or purchased is the responsibility of the Contractor. Details of proposed camp / stores, location of land where the Contractor will establish his camp(s) to be submitted with the Bid.	Item	1		

9	PAGE No. 1 TOTAL CARRIED FORWARD TO BILL COLLECTION SHEET					
ITEM No.	DESCRIPTION	UNIT	QTY	RATE (KE)	AMOUNT (KE)	
10	Test Running of the Scheme: Allow for Test Running all the Project Components for a period of 4 weeks upon completion and official commissioning of the Works. Test Running to be carried out in close liaison with the Water Services Provider's Staff. Contractor to allow for 'on job' training of Operation and Maintenance Staff, Tools, etc, and ensure that the operations are carried out full time on a 24 hour basis, all in accordance with	Item	1			
11	Allow for provision of As-Built Drawings in accordance with Clause 147 - General and Particular Specifications of Bidding Document Volume II	Item	1			
15	<b>Other Costs</b>					
16	Allow a P.C. Sum of Kshs. 200,000 for Payments demanded by other Authorities for relocation of existing services (water pipelines, sewer liners power cable telcom cables etc), Road crossings, etc., including any statutory levies to relevant Authorities. Liaison with the relevant Authorities shall be the responsibility of the Contractor for the timely execution of the Works.	pc	1			
17	Add .....% for profit, administration, attendance upon, overheads, etc. for Item 3.35 above.	5%	1			
18	Allow a P.C. Sum of Kshs. 150,000 for Inspection and Witness Testing of Pipes, Fittings and Equipment at manufacturer's premises by the Employer, Engineer and their representatives.	pc	1			
19	Add .....% for profit, administration, attendance upon, overheads, etc. for Items above.	5%	1			

20	<b>PAGE No. 2 TOTAL CARRIED FORWARD TO BILL COLLECTION SHEET</b>			
21	<b>SPECIFIC CONDITIONS</b>			
22	Allow for all specific works related to working along active pipelines and within sites of other active installations e.g storage tanks, etc. and maintaining continuity of water supply including protection of supports etc. of existing pipelines during construction activity.	Item	1	
23	Allow for excavation for and identification of extent/limits of existing pipelines including excavation, alignment, levels and other as-built details at pipeline interconnection points. Include for backfilling of excavated areas and production of ACAD drawings showing details of pipelines. These Works to be carried out prior to commencement of pipeline works.	Item	1	
24	<b>ENVIRONMENTAL, SOCIAL, HEALTH AND SAFETY REQUIREMENTS</b>			
25	Allow a P.C Sum of Kshs 100,000 for Quarterly Environmental Audit of the Contractor's ESMP by a registered NEMA Lead Expert.	Item	1	
26	Allow a P.C Sum of Ksh 100,000 for Carrying out a Training program including stakeholder engagement and consultation for HIV/AIDS awareness, Sexually Transmitted Infections (STI), Sexually Transmitted Diseases (STD), Gender Based Violence (GBV) and Sexual Exploitation and Abuse (SEA).	Item	1	
27	Allow a P.C Sum of Ksh 1,00,000 for Training of Employer / Engineer's and Contractor's Staff on Environmental, Social, Health and Safety issues	Item	1	
28	Add..... % for profit administration, attendance upon, overhads, etc, for items 5.1 to 5.3 above	5%	5	
29	<b>PAGE No. 3 TOTAL CARRIED FORWARD TO BILL COLLECTION SHEET</b>			

ITEM	DESCRIPTION	UNIT	QTY	RATE (KE)	AMOUNT( KE)
30	The Contractor's rates shall be deemed to include for any measures necessary to deal with these conditions, provision of access road to work site, liaison with relevant authorities and local residents, payment of any required statutory charges, etc. The Contractor will be required to submit Method Statement for execution of works under these specific conditions for approval prior to execution of the works. These include but are not limited to the following: i. No blasting will be permitted in these areas ii. The Contactor to maintain uninterrupted continuity of water supply in existing pipelines iii. Pedestrian and vehicular Access to individual shops / plots to be maintained at all times iv. Safety hoarding, lighting, bands, warning signs, etc. to be maintained at all times. v. Keeping trenches free of excessive groundwater, seepage or water from any source				
31	Cost relating to the above mentioned specific conditions	Item	1		
32	Liaison, facilitation with local residents and relevant authorities and payment for access, accidental damage, temporary access to working spaces during execution of the Works, etc.	Item	1		
33	<b><u>CLASS D: DEMOLITION AND SITE CLEARANCE</u></b>				
34	General site clearance along the pipeline allignment	ha	0.05		
35	<b>PAGE No. 4 TOTAL CARRIED FORWARD TO BILL COLLECTION SHEET</b>				
36	<b><u>PIPES, FITTINGS AND VALVES</u></b>				
37	<b><u>CLASS I: PIPE WORK - PIPES</u></b>				
38	<b><u>Supply, Transport to site and store in secure place.</u></b> <b><u>Include supply of jointing materials, bolts, nuts, gas kets etc as applicable</u></b>				
39	<b>High Density Polyethylene Pipes (HDPE) - PN 20</b>				
40	DN 110mm Nominal bore not in trenches	LM	300		
41	DN 90mm Nominal bore not in trenches	LM	300		
42	DN 63mm Nominal bore not in trenches	LM	300		
43	DN 40mm Nominal bore not in trenches	LM	800		
44	DN 50mm Nominal bore not in trenches	LM	500		
45	DN 32mm Nominal bore not in trenches	LM	500		

46	<b>Road Crossing</b>				
47	<b><u>Ferrous Plain Ended Pipes sleeves</u></b>				
48	DN 150mm 12 m long Steel pipes not in trenches as road crossing sleeve to be agreed with the project engineer.	Nr	3		
49	<b>PAGE No. 5 TOTAL CARRIED FORWARD TO BILL COLLECTION SHEET</b>				
50	<b><u>Transport from Site Store, Lay and Joint Pipes in Trench,</u></b> <b><u>include for Excavation, Preparation of Surfaces, Disposal of Excavated Material, Shoring Sides of Excavation</u></b>				
51	<b>High Density Polyethylene Pipes (HDPE) - PN 20 with butt fusion (seamless) jointing</b>				
52	DN 110 mm Nominal bore in trenches Depth not exceeding 1.5m	LM	300		
53	DN 90mm Nominal bore in trenches Depth not exceeding 1.5m In clay soil	LM	300		
54	DN 63mm Nominal bore in trenches Depth not exceeding 1.5m in clay soil	LM	300		
55	DN 50mm Nominal bore in trenches Depth not exceeding 1.5m in clay soil	LM	800		
56	DN 40mm Nominal bore in trenches Depth not exceeding 1.5m in clay soil	LM	500		
57	DN 32mm Nominal bore in trenches Depth not exceeding 1.5m in clay soil	LM	500		
58	DN 150mm 12 m long Steel pipes in trenches as road crossing sleeve to be agreed with the project engineer. Depth not exceeding 1.5m in clay soil	Nr	3		
59	<b>HDPE Couplings &amp; Adaptors</b>				
60	<b>HDPE Adaptors</b>				
61	DN 110mm HDPE Male Adaptor PN 20 not in trenches	Nr	3		
62	DN 90mm HDPE Male Adaptor PN 20 not in trenches	Nr	3		
63	DN 63mm HDPE Male Adaptor PN 20 not in trenches	Nr	3		
64	DN 40mm HDPE Male Adaptor PN 20 not in trenches	Nr	3		

65	<b>PAGE No. 6 TOTAL CARRIED FORWARD TO BILL COLLECTION SHEET</b>				
66	<b><u>Stepped Flexible Couplings</u></b>				
67	DN 110 X 90mm HDPE Reducing Coupling PN20 not in trenches	Nr	2		
68	DN 63 X 40mm HDPE Reducing Coupling PN20 not in trenches	Nr	2		
69	DN 90 X 63 mm HDPE Reducing Coupling PN20 not in trenches	Nr	2		
70	DN 40 X 32 mm HDPE Reducing Coupling PN20 not in trenches	Nr	2		
71	<b>Junction and Branches</b>				
72	Saddle clamp HDPE PN DN16 90X63MM	Nr	2		
73	Saddle clamp HDPE PN DN16 63X63MM	Nr	2		
74	Saddle clamp HDPE PN DN16 40X32MM	Nr	5		

75	Saddle clamp HDPE PN DN16 63X32MM	Nr	2		
76	Saddle clamp HDPE PN DN16 90X32MM	Nr	3		
77	Saddle clamp HDPE PN DN16 110X63MM	Nr	2		
78	DN 500 x 110mm Fabricated Saddle Clamp PN20 not in trenches	Nr	2		
79	<b><u>One end Flanged steel pipes pieces &amp; the other end threaded</u></b>				
80	DN 110steel Pipe piece 100mm long not in trenches PN 16	Nr	2		
81	<b><u>VJ Coupling DN 110</u></b>				
82	VJ Coupling DN 110	Nr	2		
83	DN75 steel Pipe piece 500mm long, not in trenches PN 16	Nr	1		
84	<b>Straight couplings</b>				
85	DN 110 GI Socket not in trenches	Nr	2		
86	Provide 150,000 for assorted materials such as thread seals, Boss white, Hemp thread, Garscket and bolts and nuts.	Item	1		
87	<b>PAGE No. 7 TOTAL CARRIED FORWARD TO BILL COLLECTION SHEET</b>				
88	<b>New Connection Fittings</b>				
89	<b>Gate Valves (Pegglar)</b>				
90	1"	Nr	50		
91	½"	Nr	300		
92	1½"	Nr	10		
93	2"	Nr	10		
94	<b>GI Sockets</b>				
95	1½"	Nr	20		
96	¾"	Nr	30		
97	2"	Nr	5		
98	½"	Nr	50		
99	1"	Nr	20		
100	<b>GI Plug</b>				
101	1½"	Nr	14		
102	1"	Nr	20		
103	2"	Nr	5		
104	½"	Nr	10		
105	<b>GI Nipple</b>				
106	1½"	Nr	14		
107	3"	Nr	4		
108	1"	Nr	30		
109	½"	Nr	50		
110	<b>GI Reducing Bush</b>				
111	¾" x ½"	Nr	50		
112	3" GI Barrel Nipple	Nr	4		
113	½" GI Elbow	Nr	50		

114	<b>PAGE No. 8 TOTAL CARRIED FORWARD TO BILL COLLECTION SHEET</b>				
115	<b><u>CLASS J: PIPEWORK - FITTINGS AND VALVES - PN16</u></b>				
116	<b><u>Transport from Site, Store, Lay and Joint Pipes in Trench, include for Excavation, Preparation of Surfaces,</u></b>				
	<b><u>Disposal of Excavated Material, Shoring Sides of</u></b>				
117	<b>HDPE Couplings &amp; Adaptors</b>				
118	DN 110mm HDPE Male Adaptor PN 20 in trenches	Nr	10		
119	DN 90mm HDPE Male Adaptor PN 20 in trenches	Nr	11		
120	DN 63mm HDPE Male Adaptor PN 20 in trenches	Nr	3		
121	DN 110 mm HDPE COUPLING PN 20 in trenches	Nr	4		
122	DN 90 mm HDPE COUPLING PN 20 in trenches	Nr	8		
123	DN 63 mm HDPE COUPLING PN 20 in trenches	Nr	5		
124	DN 50 mm HDPE COUPLING PN 20 in trenches	Nr	3		
125	<b>PAGE No. 9 TOTAL CARRIED FORWARD TO BILL COLLECTION SHEET</b>				
126	<b>Consumer Water Meters and Stop Cocks</b>				
127	<b>Consumer Water Meters</b>				
	<i><u>Note: All Water Meters to conform with ISO 4061-1:2005, BS 5728-</u></i>				
128	<i><u>1997 and KS OMIL R 49:2006 Specifications for Domestic Water Meters or approved equivalent.</u></i>				
129	15mm dia Consumer Plastic Water Meters, Piston Type, PSM Elser Kent or approved equivalent. The Meters to include inbuilt Meter Strainers & Non-Return Mechanism. Rate to include for Supply of Meters Liner (2Nr for each Meter). All Meters to be engraved with word	Nr	500		
130	DN110 Flanged bulk Water Meters. The Meters to include inbuilt Meter Strainers & Non-Return Mechanism. Meters to be engraved with word "MOWASSCO" or as directed by the Engineer	Item	1		
131	<b>PAGE No. 10 TOTAL CARRIED FORWARD TO BILL COLLECTION SHEET</b>				
132	Provide 150,000 for assorted materials such as thread seals, Boss white, Hemp thread, Garscket and bolts and nuts.	Item	1		



133	<b>All Flanged Strainer</b>				
134	DN 110 Tee type strainer in chambers			1	
135	<b>Ferrous Flange Adaptor</b>				
136	DN 110 mm flange adaptors	Nr		4	
137	<b>Ferrous Saddle clamps for offtake point</b>				
138	DN 525 X 110 Flanged saddle clamp PN 25 in trenches	Nr		1	
139	<b>PAGE No. 11 TOTAL CARRIED FORWARD TO BILL COLLECTION SHEET</b>				

140	<b>CLASS K: PIPE WORK - CHAMBERS AND PIPE WORK ANCILLARIES</b>				
141	Chambers ducts, culverts, crossings, thrust, anchor blocks, reinstatement and other pipework ancillaries Note:- Items for Work in this class shall include:- Excavation, preparation of surfaces, disposals of surplus excavated material, shoring sides of excavation, backfilling and removal of redundant services.				
142	-concrete` t, Reinforcement, from works, joints and Finishes, - Tips for disposals of excavated material of debris to be identifies by the Contractor in liaison with the Local Authorities				
143	<b>IN SITU MASONRY CHAMBERS</b> Provide all materials and construct Mansonry walling WO Valve Chambers, internal dimensions 1200mm x Include for supply and fixing of removable precast concrete covers, step irons, compacted granular fill, rendering of exposed blockwork etc. Depth n.e 1.5m.				
144		Nr	1		
145	Dito but 1000mmX1000mm masonry chamber	Nr	3		
146	<b>Crossings</b>				
147	Allow for crossing existng strutures and reinstating these after construction of the water main is complete.	LM	20		
148	<b>PAGE No. 12- TOTAL CARRIED FORWARD TO BILL COLLECTION SHEET</b>				
149	<b>Reinstatement</b> Breaking up, Temporary and Permanent Reinstatement of CONCRETE BLOCK PAVED Roads/ Footpath including				
150	flush kerbs all according to Engineers approval, pipe bore n.e 300mm	LM	60		
151	<b>Other Pipework Ancillaries</b>				
152	valve chambers. All in accordance with drawings and specifications.i	Nr	38		
153	<b>PAGE TOTAL No. 13 ; CARRIED FORWARD TO BILL COLLECTION SHEET</b>				

**MWAMULAI**

ITEM	DESCRIPTION	UNIT	QTY	RATE (KE)	AMOUNT( KE)
154	<b><u>CLASS A: GENERAL ITEM</u></b>				
155	<b>Testing of works</b>				
156	Testing and Commissioning of the Pipeline including provision of all equipment, materials and works necessary for testing such as but not limited to Thrust Bloks, Anchor Blocks, Provision, Transportation and use and disposal of Water, Pipe Fittings, etc. Nominal bore 300mm	LM	2,800		
157	Disinfection of Pipeline ; Flushing with clear water, filling with water containing 0.05g/l Calcium Hypochlorite, left for 24 hours. This includes supply of necessary Equipment, Materials, Chemicals and Water, Measurement of Residual Chlorine, all as specified and safe disposal of disinfecting water to Engineer's approval	LM	2,800		
158	<b>PAGE No. 14 TOTAL CARRIED FORWARD TO BILL COLLECTION SHEET</b>				
159	<b>Method Related Charges</b>				
160	The Pipeline will be laid along narrow urban roads with existing active services both on the surface (electricity, etc) and buried (existing community water pipelines, fiber optic cables, etc.) and with limited working space for mechanical excavation equipment.				

161	<p>The Contractor's rates shall be deemed to include any measures necessary to deal with these conditions,</p> <p>provision of access road to work site, liaison with relevant authorities and local residents, payment of any required to submit Method Statement for execution of required statutory charges, etc. The Contractor will be works under these specific conditions for approval prior to execution of the works. These include but are not limited to the following:</p> <p>i. No blasting will be permitted in these areas of water supply in existing pipelines</p> <p>iii. Pedestrian and vehicular Access to individual shops / plots to be maintained at all times</p> <p>iv. Safety hoarding, lighting, bands, warning signs, etc. to be maintained at all times.</p> <p>v. Keeping trenches free of excessive groundwater, seepage or water from any source</p>				
162	Cost relating to the above mentioned specific conditions	Item	1		
163	Liaison, facilitation with local residents and relevant authorities and payment for access, accidental damage, temporary access to working spaces during execution of the Works etc	Item	1		
164	<b>CLASS D: DEMOLITION AND SITE CLEARANCE</b>				
165	General site clearance along the pipeline alignment	ha	0.05		
166	<b>Tree Cutting (Provisional)</b>				
167	Cut down trees, grub up roots and cart away to tips				
168	Girth: 0.5 m - 1.0 m	Nr	2		
169	Girth: 1.0 m - 2 m	Nr	2		
170	Girth 2.0 m - 3 m	Nr	1		
171	<b>PAGE TOTAL No 15 CARRIED FORWARD TO BILL COLLECTION SHEET</b>				
172	<b><u>PIPES, FITTINGS AND VALVES</u></b>				
173	<b><u>CLASS I: PIPE WORK - PIPES</u></b>				
174	<b><u>Supply, Transport to site and store in secure place. Include supply of jointing materials, bolts, nuts, gaskets etc as applicable</u></b>				
175	<b>High Density Polyethylene Pipes (HDPE) - PN 20</b>				
176	DN 110 mm Nominal bore not in trenches	LM	500		
177	DN 90 mm Nominal bore not in trenches	LM	500		
178	DN 63 mm Nominal bore not in trenches	LM	500		
179	DN 50 mm Nominal bore not in trenches	LM	300		
180	DN 40 mm Nominal bore not in trenches	LM	400		
181	DN 32 mm PIPE PN 20 not in trenches	LM	600		

182 Road Crossing

183 Ferrous Plain Ended Pipes

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184	DN 150mm 12 m long Steel pipes not in trenches as road crossing sleeve to be agreed with the project engineer.	Nr	3		
185	<b>PAGE TOTAL No. 16 CARRIED FORWARD TO BILL COLLECTION SHEET</b>				
186	<u>Transport from Site Store, Lay and Joint Pipes in Trench, include for Excavation, Preparation of Surfaces,</u> <u>Disposal of Excavated Material, Shoring Sides of Excavation Trenches, Backfilling and Final Reinstatement</u>				
187	<b>High Density Polyethylene Pipes (HDPE) - PN 20 with</b>				
188	DN 110 mm Nominal bore in trenches Depth not exceeding	LM	500		
189	DN 90 mm Nominal bore in trenches Depth not exceeding	LM	500		
190	DN 63 mm Nominal bore in trenches Depth not exceeding	LM	500		
191	DN 50 mm Nominal bore in trenches Depth not exceeding	LM	300		
192	DN 40 mm Nominal bore in trenches Depth not exceeding	LM	400		
193	DN 32mm PIPE PN 20 in trenches Depth not exceeding 1.5m deep in clay soil	LM	600		
194	<b>Road Crossing</b>				
195	<b><u>Ferrous Plain Ended Pipes</u></b>				
196	DN 200mm 12 m long Steel pipes in trenches as road crossing sleeve to be agreed with the project engineer. Depth not exceeding 1.5m in clay soil	Nr	3		
197	<b><u>CLASS J: PIPEWORK - FITTINGS AND VALVES - PN16</u></b>				
198	<b><u>Supply, Transport to site and store in secure place. Include supply of jointing materials, bolts, nuts, gaskets etc as applicable</u></b>				
199	<b>HDPE Couplings &amp; Adaptors</b>				
200	DN 110mm HDPE Male Adaptor PN 20 not in trenches	Nr	5		
201	DN 90mm HDPE Male Adaptor PN 20 not in trenches	Nr	5		
202	DN 63mm HDPE Male Adaptor PN 20 not in trenches	Nr	3		
203	<b>PAGE No. 17-TOTAL CARRIED FORWARD TO BILL COLLECTION SHEET</b>				

<b>204</b>	<b><u>Tees and Crosses</u></b>				
<b>205</b>	DN 90 mm X 90mm HDPE Tee PN 20 not in trenches	Nr	2		
<b>206</b>	DN 32mm X 20 mmGI Tee not in trenches	Nr	20		
<b>207</b>	<b><u>Stepped Flexible Couplings</u></b>				
<b>208</b>	DN 110 X 90 mm HDPE Reducing Coupling PN20 not in trenches	Nr	1		
<b>209</b>	DN 90 X 63 mm HDPE Reducing Coupling PN20 not in	Nr	2		

210	DN 63 X 50 mm HDPE Reducing Coupling PN20 not in trenches	Nr	2		
211	DN 50 X 40 mm HDPE Reducing Coupling PN20 not in trenches	Nr	2		
212	DN 40 X 32mm HDPE Reducing Coupling PN20 not in trenches	Nr	2		
213	<b>Junction and Branches</b>				
214	DN 90 x 32mm HDPE Saddle Clamp PN20 not in trenches	Nr	2		
215	DN 63 x 32mm HDPE Saddle Clamp PN20 not in trenches	Nr	3		
216	DN 50 x 32 mm HDPE Saddle Clamp PN20 not in trenches	Nr	7		
217	DN 40 x 32mm HDPE Saddle Clamp PN20 not in trenches	Nr	2		
218	DN 110 x 50mm HDPE Saddle Clamp PN20 not in trenches	Nr	2		
219	DN 40 x 32 mm HDPE Saddle Clamp PN20 not in trenches	Nr	6		
220	<b>PAGE No. 18 TOTAL CARRIED FORWARD TO BILL COLLECTION SHEET</b>				
221	One end Flanged steel pipes pieces & the other end threaded				
222	DN 110 steel Pipe piece 500mm long not in trenches PN 16 Double end Flanged spigot pipes pieces	Nr	16		
223	<b>Straight couplings</b>				
224	DN 100 GI Socket not in trenches	Nr	14		
225	<b>Valves and Penstocks</b>				
226	<b>Air Valves</b>				
227	<b>Single Orifice Air Valve</b>				
228	DN 50 Plastic	Nr	5		
229	<b>Flanged Water Meters</b>				
230	DN 100 Cold Water meter smart enabled ( itron or equivalent) not in chambers	Nr	1		
231	<b>PAGE No. 19 - TOTAL CARRIED FORWARD TO BILL COLLECTION SHEET</b>				
232	<b>All Flanged Strainer</b>				
233	DN 100 Tee type strainer not in chambers	Nr	1		
234	<b>Ferrous Flange Adaptor</b>				
235	DN 100 mm flange adaptors not in chambers	Nr	4		
236	<b>Ferrous Saddle clamps for offtake point</b>				
237	DN 525 X 100 Flanged saddle clamp PN 25 not in trenches	Nr	1		
238	<b>New Connection Fittings</b>				
239	<b>Gate Valves (Pegglar)</b>				



240	1"		Nr	10		
241	½"		Nr	300		
242	1½"		Nr	5		
243	2"		Nr	5		
244		<b>GI Sockets</b>				

245	1½"	Nr	5		
246	½"	Nr	50		
247	¾"	Nr	50		
248	1"	Nr	26		
249	<b>GI Plug</b>				
250	1½"	Nr	5		
251	1"	Nr	10		
252	2"	Nr	5		
253	½"	Nr	50		
254	<b>GI Nipple</b>				
255	1½"	Nr	10		
256	1"	Nr	30		
257	<b>PAGE No. 20 TOTAL CARRIED FORWARD TO BILL COLLECTION SHEET</b>				
258	½"	Nr	50		
259	4"	Nr	1		
260	<b>GI Reducing Bush</b>				
261	¾" × ½"	Nr	50		
262	½" GI Elbow	Nr	50		
263	<b>CLASS J: PIPEWORK - FITTINGS AND VALVES - PN16</b>				
264	<b><u>Transport from Site, Store, Lay and Joint Pipes in Trench, include for Excavation, Preparation of Surfaces, Disposal of Excavated Material, Shoring Sides of Excavation Trenches, Backfilling and Final Reinstatement</u></b>				
265	HDPE Couplings & Adaptors				
266	DN 110mm HDPE Male Adaptor PN 20 in trenches	Nr	10		
267	DN 90mm HDPE Male Adaptor PN 20 in trenches	Nr	11		
268	DN 63mm HDPE Male Adaptor PN 20 in trenches	Nr	3		
269	DN 110mm HDPE Male Adaptor PN 20 in trenches	Nr	4		
270	DN 90mm HDPE Male Adaptor PN 20 in trenches	Nr	8		
271	DN 63mm HDPE Male Adaptor PN 20 in trenches	Nr	5		
272	DN 50mm HDPE Male Adaptor PN 20 in trenches	Nr	3		
273	<b>PAGE No. 21 TOTAL CARRIED FORWARD TO BILL COLLECTION SHEET</b>				
274	<b>Consumer Water Meters and Stop Cocks</b>				
275	<b>Consumer Water Meters</b>				
276	<i>Note: All Water Meters to conform with ISO 4061-1:2005, BS 5728-7:1997 and KS OMIL R 49:2006 Specifications for Domestic Water Meters or approved equivalent.</i>				

277	<p>15mm dia Consumer Plastic Water Meters, Piston Type, PSM Elser Kent or approved equivalent. The Meters to include inbuilt Meter Strainers &amp; Non-Return Mechanism.</p> <p>Rate to Meter). All Meters to be engraved with word include for Supply of Meters Liner (2Nr for each Meters)</p>	Nr	400		
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278	DN110 Flanged bulk Water Meters. The Meters to include inbuilt Meter Strainers & Non-Return Mechanism. Meters to be engraved with word "MOWASSCO" or as directed by the Engineer	Nr	1		
279	<b>PAGE No. 22 TOTAL CARRIED FORWARD TO BILL COLLECTION SHEET</b>				
280	Provide 300,000 for assorted materials such as thread seals, Boss white, Hemp thread, Garscket and bolts and	Item	1		
281	<b>All Flanged Strainer</b>				-
282	DN 110 Tee type strainer in chambers	Nr	1		
283	<b>Ferrous Flange Adaptor</b>				
284	DN 110 mm flange adaptors in chambers	Nr	4		
285	<b>Ferrous Saddle clamps for offtake point</b>				
286	DN 525 X 110 Flanged saddle clamp PN 25 in trenches	Nr	1		
287	<b>PAGE No. 23 TOTAL CARRIED FORWARD TO BILL COLLECTION SHEET</b>				
288	<b><u>CLASS K: PIPE WORK - CHAMBERS AND PIPE WORK ANCILLARIES</u></b>				
289	Chambers ducts, culverts, crossings, thrust, anchor blocks, reinstatement and other pipework ancillaries Note:- Items for Work in this class shall include:- Excavation, preparation of surfaces, disposals of surplus exvacated material, shoring sides of excavation, backfilling and removal of redundant services.				
290	<b>Note:-</b> Items for Work in this class shall include: -Concrete, Reinforcement, Fromwork,joints and Finishes.				
291	-Tips for disposals of excavated material of debris to be identified by the Contractor in liaison with the Local				
292	<b>IN SITU MASONRY CHAMBERS</b> Provide all materials and construct Mansonry walling WO Valve Chambers, internal dimensions 1200mm x 1200mm. Include for supply and fixing of removable precast concrete covers, step irons, compacted granular fill, rendering of exposed blockwork etc. Depth n.e 1.5m.				
293	Dito 1000X 1000mm Chamber for Tee Juction and Valve	Nr	2		
294	<b>Crossings</b>				
295	Allow for existing foot bridge, and reinstating these after construction of the water main is complete	LM	10		

296	<b><u>Reinstatement</u></b> Breaking up, Temporary and Permanent Reinstatement of CONCRETE BLOCK PAVED Roads/ Footpath including sub-base, base and sand bed layers, raised				
297	kerbs and flush kerbs all according to Engineers approval, pipe bore n.e 300mm	LM	40		
298	<b>Other Pipework Ancillaries</b>				

	Supply and fix marker posts along water Main Route, Road Crossings, change of direction, Air valves, Washouts and valve chambers. All in accordance with drawings and specifications.	Nr	38		
300	<b>PAGE No. 24.TOTAL CARRIED FORWARD TO BILL COLLECTION SHEET</b>				
301	<b><u>CLASS L: PIPEWORK - SUPPORTS AND PROTECTION, ANCILLARIES TO LAYING AND EXCAVATION</u></b>				
302	<b>Extra over excavation and backfilling for excavation in Rock. Rate to include carting away and disposal. (Provisional) Rock. Rate to include carting away and disposal. (Provisional)</b>				
303	<b>In Pipe Trenches and Chambers</b>				
304	<b>Surrounds</b>				
305	<b>Selected Excavated Granular Fill (Provisional)</b>				
306	Provide, place and compact selected excavated granular fill material in bed and surround to pipes as specified and where directed by the Engineer.				
307	To pipes	LM	1,900		
308	<b>Trenchless Road Crossings</b> Provide all equipment and materials, excavate below road surface in common material (soil/murram) using trenchless technique (e.g. pipe jacking, horizontal drilling, e.t.c.) The rate includes all preparatory works, any requisite shoring, strutting, installation of pipe and pipe casing and necessary grouting and reinstatement. pipe nominal bore n.e 110mm.				
309	All works to be executed in close liaison with relevant road authorities and rates to include facillitation of the same. <b>The Bidder to submit Method Statement with Bid for execution of these Works.</b>	LM	20		
310	<b>PAGE No. 25 TOTAL CARRIED FORWARD TO BILL COLLECTION SHEET</b>				