

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<b>ELEMENT NO. 4</b>				
	<b>FIRE FIGHTING INSTALLATION</b>				
	<i>Supply, deliver, install, test and commission the following including all materials and jointing to supply pipes, ,supports ,etc</i>				
A	Hobby booster pump for hose reel, comprising of 2NO.pumps,duty and standby, capable of a flow rate of 2.3 l/s against pressure head of 2.3 Bar, complete with flow control switch of a sensitivity of 0.11/s,control panel, pressure switch, pressure tank, ant-vibration hose, etc as necessary for automatic operation or equal approved.	Set	1		
	<b>HOSE REEL</b>				
B	Standard manual swinging type recessed fire hose reel, comprising 35M length of non-kinking reinforced rubber,19mm bore diameter hose wound on a metal reel with a hollow rotating shaft to BS 3169:1981.The shaft shall be permanently connected to the water supply by special pipework. One end of the rubber hose shall be connected to the rotating shaft and the other to the shut-off adjustable type nozzle of 4.8mm or 6.3mm diameter, capable of producing a minimum flow rate of 23 l/min, controlled through a plastic jet nozzle spray to produce a spray of atleast 7M long. The hose shall be complete with control brass gate valve as PEGLER 20mm diameter of rising stem type with a hand wheel head indicating direction of open and close or equal approved	NO	0		
	<b>HOSE REEL PIPEWORK</b>				
	<i>Supply, deliver, install, test and commission galvanized mild steel tubing to BS1387 medium grade with screwed and socketed joints to BS 21 and galvanized cast iron fittings to BS 143 and 1256. Tenderers MUST allow in their pipe work prices for all the couplings, connectors, unions, jointing, etc as required in the normal running lengths of pipe work and also where necessary for pipe fixing clips, holderbats plugs screws and pipe sleeves through structural members.</i>				
C	20mm diameter GMS pipes class B	LM	0		
D	Ditto 25mm	LM	0		
E	Ditto 50mm	LM	6		
F	Ditto but 40mm	LM	6		
G	Ditto 32mm	LM	6		
	<b>Carried forward to Summary</b>				

PROPOSED TWIN WORKSHOP, CLASSROOMS AND OFFICES' BLOCK FOR NEW TTIs IN SUB COUNTIES

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (KSH)
	<b>EXTRA OVER GMS PIPES</b>				
A	20mm diameter bends	NO	0		
B	Ditto 25mm	NO	0		
C	Ditto 50mm	NO	4		
D	50x40mm reducer	NO	1		
E	40x32mm reducer	NO	2		
F	50mm diameter equal tee	NO	2		
G	25x20mm reducing bush	NO	0		
H	Union 20mm diameter	NO	0		
I	Union 25mm diameter	NO	0		
J	Union 50mm diameter	NO	2		
K	Nipple 50mm diameter	NO	4		
L	Nipples 20mm diameter	NO	0		
	<b>BRASS GATE VALVE</b>				
M	20mm diameter approved cast high pressure screw down full-way non-rising stem solid wedge disc gate valve to BS 5154 PN16 for series B rating with hand wheel head and jointing to steel tubing as CRANE model N0 156 or equal to be approved.	NO	0		
N	Ditto but 50mm.	NO	2		
	<b>NON-RETURN</b>				
O	50mm diameter screwed in cap lift type metal disc bronze non-return valve to BS 5154 PN 32 for series B rating as CRANE model N0.D105 or equal to be approved.	NO	2		
	<b>Carried forward to Summary</b>				

PROPOSED TWIN WORKSHOP, CLASSROOMS AND OFFICES' BLOCK FOR NEW TTIs IN SUB COUNTIES

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (KSH)
A	<p>Allow for the sheltering of booster pump set from adverse weather.</p> <p><b>PORTABLE FIRE APPLIANCES.</b></p> <p><i>Supply, deliver, install, connect and set to work, the following, complete with charge and all accessories.</i></p>	Item			
B	<p>9.0 litres water /Co2 fire extinguishers to BS 5423 as manufactured by Mather &amp; Platt, complete with charge, fixing brackets, pictorial instructions,colour code, discharge horn &amp; hose and operating valve or equal.</p>	NO	9		
C	<p>9.0Kg dry chemical powder fire extinguishers to BS 5424 as manufactured by Mather &amp; Platt, complete with charge, fixing brackets, pictorial instructions,colour code,dischare horn &amp; hose and operating valve or equal.</p>	NO	9		
D	<p>4.5 kg portable fire extinguisher as manufactured by Mather &amp; Platt to BS 5045,complete with charge, fixing brackets, pictorial instructions, lour coding, discharge horn &amp; hose plus operating valve.</p> <p><b>PROTECTION PAINTING.</b></p>	NO	9		
E	<p>Allow for painting the pipes with two coats of appropriate shade of FIRE RED after cleaning and smoothing.</p>	ITEM	0		
<b>Carried forward to Summary</b>					

PROPOSED TWIN WORKSHOP, CLASSROOMS AND OFFICES' BLOCK FOR NEW TTIs IN SUB COUNTIES

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (KSH)
1 2 3	<p><b>COLLECTION PAGE</b></p> <p>BALANCE B/F 8 MBS</p> <p>BALANCE B/F 9 MBS</p> <p>BALANCE B/F 10 MBS</p> <p><b>SUB TOTAL</b></p> <p>Allow 10% contingency</p>				
	<p><b>TOTAL FOR ELEMENT NO. 4 FIRE FIGHTING INSTALLATION (MECHANICAL WORKS) CARRIED TO GRAND SUMMARY</b></p>				

PROPOSED TWIN WORKSHOP, CLASSROOMS AND OFFICES' BLOCK FOR NEW TTIs IN SUB COUNTIES

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>EXTERNAL WORKS</b>				
	<b><u>90,000 LITRE CAPACITY SEPTIC TANK FOR 400 PERSONS AND ASSOCIATED SOAKAGE AREA EXCAVATION</u></b>				
	<u>Excavate in pit for septic tank starting from ground level</u>				
A	Depth not exceeding (n.e) 1.5 m	cm	10		
B	Ditto depth not limited to (n.i.t ) 5 m but n.e 2.0m	cm	10		
C	Ditto depth not limited to 2.0 m but n.e 2.5 m	cm	10		
D	Ditto depth not limited to 2.5 m but n.e 3.0 m	cm	10		
E	Ditto depth not limited to 3.0 but n.e 3.5m	cm	124		
F	Ditto but not limited to 3.5 but n.e 4.0 m	cm	259		
G	Trim bottom of excavated surface	Sm	73		
H	Extra over for excavated in rock class 11	cm	228		
	<b>TOTAL CARRIED TO COLLECTION</b>				

PROPOSED TWIN WORKSHOP, CLASSROOMS AND OFFICES' BLOCK FOR NEW TTIs IN SUB COUNTIES

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>SEPTIC TANK cont'd</u></b>				
A	Mix and place 50 mm concrete blinding <u>Vibrated reinforced concrete class 20/20 (mix 1:2:4)</u>	cm	5		
B	Mix and place 200 mm concrete in base slab	cm	15		
C	Ditto but in 250 thick wall	cm	37		
D	Ditto but in 200 mm thick wall	cm	15		
E	Ditto but in 150 mm thick scum baffle wall	cm	5		
F	Ditto but in 200 mm suspended cover slab	cm	14		
	<u>Mild steel reinforcement to B.S 4449</u>				
G	8 mm diameter	Kg	205		
H	10 mm diameter bars	Kg	115		
I	12 mm diameter bars	Kg	3,738		
J	16 mm diameter bars	Kg	3,531		
	<u>High yield square twisted reinforcement steel B.S 4461</u>				
K	10 mm diameter bars	Kg	135		
L	12mm diameter bars	Kg	170		
M	16 mm diameter bars	Kg	401		
	<b>Total carried to collection</b>				

PROPOSED TWIN WORKSHOP, CLASSROOMS AND OFFICES' BLOCK FOR NEW TTIs IN SUB COUNTIES

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
A	<u>BRC mesh reinforcement to B.S 1483</u> <u>Concrete class 15 ( mix 1:3:6 )</u> BRC mesh No. 65/66	Sm	90		
B	<u>Formwork</u> <u>Sawn formwork to :-</u> Interior sides of vertical walls	Sm	166		
C	External sides of vertical walls	Sm	144		
D	Soffit of suspended slab	Sm	61		
E	Sides of suspended slab 150 mm 225 wide	M	44		
F	Ditto sides of entry and exit manhole	Sm	6		
G	Boxing in formwork to form opening in cover slab for 600 x 450 manhole cover and frame 150 mm - 225 wide	M	10		
H	Return fill and ram selected approved materials around external sides of septic tank	Cm	125		
	<u>WATER PROOF CEMENT RENDERING</u>				
I	12 mm thick sulphate resisting cement sand (mix 1:3 ) to base slab	Sm	70		
J	Ditto to sides of vertical walls	Sm	185		
	<b>Total carried to Collection</b>				

PROPOSED TWIN WORKSHOP, CLASSROOMS AND OFFICES' BLOCK FOR NEW TTIs IN SUB COUNTIES

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>FRENCH DRAINS</u></b>				
	<u>Excavate trench for agricultural pipe n.e 200 mm in diameter for french drains to detailed drawing No.(50 ) 5344, back fill after laying of pipes and cart away surplus excavated materials</u>				
A	Depth to invert n.e 1.5 m	cm	200		
B	Ditto depth n.1.t.1.5 m but n.e 2.0	cm	55		
C	Provide and lay 100 mm diameter agricultural pipes in french drains include for all other materials as per drawing No. (50 0 5344	Lm	255		
D	Cultivate within soakage area , provide and spread 100 mm thick layer red soil mixed with manure ( ratio manure: red soil = 1:6 ) plant kikuyu grass maintain till established	Sm	150		
	<b><u>DISTRIBUTION MANHOLES</u></b>				
	<u>Excavate pit for rectangular distribution manhole as per detailed drawing No.(50 ) 5351</u>				
E	Depth n.e 1.5 m	cm	5		
F	Ditto depth n.1t 1.5m but n.e 2.0 m	cm	5		
	Concrete class 15 (mix 1:3:6 )				
G	Mix and place 50 mm thick blinding to manhole	cm	5		
	<u>Vibrated concrete class 20/20</u>				
H	Mix and place 150 mm thick concrete 20 as bases slab	Sm	20		
I	Ditto in 150 mm thick reinforced concrete cover slab	Sm	15		
	<b>Total carried to collection</b>				



PROPOSED TWIN WORKSHOP, CLASSROOMS AND OFFICES' BLOCK FOR NEW TTIs IN SUB COUNTIES

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>Distribution manholes Cont,d</u></b>				
	<b><u>Walling</u></b>				
A	200 mm thick dressed stone	Sm	15		
B	12 mm thick water proof cement rendering to vertical walls and base slab	Sm	15		
	<b><u>SOAKPITS</u></b>				
C	Excavate pit for circular soak pit as per detailed drawing No. (50) 5345, depth not less than 3.0 m n.e 5.0 m	cm	72		
	<b><u>Concrete class 15 ( mix 1:3:6 )</u></b>				
D	Mix and place 50 m thick concrete blinding in strip footing	cm	5		
E	Ditto but 100 mm thick strip footing	cm	5		
	<b><u>Walling</u></b>				
F	150 thick dressed natural stone to detailed 50 (5345 )	cm	12		
G	12 mm thick water proof cement rendering to vertical walls		90		
	<b><u>Vibrated reinforced concrete class 20/20 (mix 1:3:6)</u></b>				
H	Mix and place concrete class 20/20 in 150 mm thick suspended slab	cm	5		
	<b><u>Mild steel reinforcement bars to B.S 4449</u></b>				
I	12 mm diameter round bars	Kg	192		
J	Provide 200 mm diameter stone blocks or hardcore in soak pits	cm	59		
K	Provide and fix 600 x 450 mm medium duty c.1 manhole cover and frame to B.S 497	No	16		
	<b>Total carried to collection</b>				

PROPOSED TWIN WORKSHOP, CLASSROOMS AND OFFICES' BLOCK FOR NEW TTIs IN SUB COUNTIES

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<p><b><u>Collection ( Septic tank )</u></b></p> <p>Brought forward from page .....ST/1</p> <p>Brought forward from page .....ST/2</p> <p>Brought forward from page .....ST/3</p> <p>Brought forward from page .....ST/4</p> <p>Brought forward from page .....ST/5</p> <p><b>SUB -TOTAL</b></p>				
	<p><b>Total for Bill No. 5 External Works (Septic Tank) carried to Grand Summary</b></p>				