

TENDER BILL OF QUANTITIES

LOT NO. 3

**Proposed Renovation Works and
Fire Escape Staircase at Ushuru
Pension Towers for Kenya
Revenue Authority Staff Pension
Scheme (Mechanical Installations
Works)**

**PROPOSED RENOVATION AND FIRE ESCAPE STAIRSCASE AT USHURU PENSION TOWERS FOR KRA
BILL OF QUANTITIES FOR THE FIREFIGHTING SYSTEM INSTALLATIONS**

BILL NO. 1: PORTABLE FIRE EXTINGUISHERS

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE (KSHS)
1.0	FIRE EXTINGUISHERS & ACCESSORIES			
	Supply, install, test and commission the following:			
1.1	<u>Tower A - New Stairs</u>			
A	5 Kg carbon dioxide gas fire extinguisher complete with pressure gauge, initial charge and mounting brackets.	13	NO.	
B	6 Kg dry powder fire extinguisher complete with pressure gauge, initial charge and mounting brackets.	13	NO.	
C	9 Liter water extinguisher complete with pressure gauge, initial charge and mounting brackets.	13	NO.	
D	Fire Safety Signage, Fire Point signs and Fire Action Plan signs, to Engineer's approval.	13	NO.	
E	9" (225mm) manual operated alarm bell (Gong)	13	NO.	
	Total for carried forward to summary page			

**PROPOSED RENOVATION AND FIRE ESCAPE STAIRSCASE AT USHURU PENSION TOWERS FOR KRA
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BILL NO. 1: PORTABLE FIRE EXTINGUISHERS

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE (KSHS)
1.2	<u>Tower A - Renovation Works</u>			
A	Allow for careful removal of portable fire extinguishers in the 13No. Existing floors and re-installation in appropriate locations according to the British standards and to meet OSHA 2007 requirements.	1	ITEM	
Total for carried forward to summary page				

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BILL NO. 1: PORTABLE FIRE EXTINGUISHERS

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE (KSHS)
1.0	FIRE EXTINGUISHERS & ACCESSORIES			
	Supply, install, test and commission the following:			
1.3	<u>Towers B,C,D&E - New Stairs</u>			
A	5 Kg carbon dioxide gas fire extinguisher complete with pressure gauge, initial charge and mounting brackets.	9	NO.	
B	6 Kg dry powder fire extinguisher complete with pressure gauge, initial charge and mounting brackets.	9	NO.	
C	9 Liter water extinguisher complete with pressure gauge, initial charge and mounting brackets.	9	NO.	
D	Fire Safety Signage, Fire Point signs and Fire Action Plan signs, to Engineer's approval.	9	NO.	
E	9" (225mm) manual operated alarm bell (Gong)	9	NO.	
E	Subtotal for Ino Block			
F	Total for 4 No. Blocks			
	Total for carried forward to summary page			

**PROPOSED RENOVATION AND FIRE ESCAPE STAIRSCASE AT USHURU PENSION TOWERS FOR KRA
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BILL NO. 1: PORTABLE FIRE EXTINGUISHERS				
ITEM NO.	DESCRIPTION	QTY	UNIT	RATE (KSHS)
1.4	<u>Towers B,C,D&E - Renovation Works</u>			
A	Allow for careful removal of portable fire extinguishers in the 9No. Existing floors in 4No. Blocks and re-installation in appropriate locations according to the British standards and to meet OSHA 2007 requirements.	1	ITEM	
Total for carried forward to summary page				

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**PROPOSED RENOVATION AND FIRE ESCAPE STAIRSCASE AT USHURU PENSION TOWERS FOR KRA
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AMOUNT (KSHS)
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AMOUNT (KSHS)
-
-

**PROPOSED RENOVATION AND FIRE ESCAPE STAIRSCASE AT USHURU PENSION TOWERS FOR KRA
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AMOUNT (KSHS)
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**PROPOSED RENOVATION AND FIRE ESCAPE STAIRSCASE AT USHURU PENSION TOWERS FOR KRA
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AMOUNT (KSHS)
-
-

**PROPOSED RENOVATION AND FIRE ESCAPE STAIRSCASE AT USHURU PENSION TOWERS FOR KRA
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**PROPOSED RENOVATION AND FIRE ESCAPE STAIRSCASE AT USHURU PENSION TOWERS FOR KRA
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BILL NO. 2: HOSE REEL SYSTEM

ITEM No.	DESCRIPTION	QTY	UNIT	RATE (Kshs)	AMOUNT (Kshs)
2.0	<u>HOSE REEL SYSTEM</u>				
2.1	<u>Tower A - New Stairs</u> Supply, install, test and commission the following equipment and fitting as described:- Tenderers must allow in pipework prices for all couplings, union, nipples, sockets, connectors, joints etc. in running lengths of pipes and also where necessary for fixing clips, holderbats plugged and screwed.				
A	Hosereel System Pipework				
	i) 25mm diameter pipe GMS Class B to BS 1387	26	LM		-
	ii) 50mm ditto	148	LM		-
B	Elbows				
	i) 25mm elbows malleable iron galvanized.	12	NO.		-
	ii) 50mm ditto.	12	NO.		-
	Tees				
C	50mm diameter malleable iron tee	16	NO.		-
D	Reducers				
	i) 25 x 20mm malleable galvanized iron reducing bush	15	NO.		-
	ii) 50 x 25 mm ditto	15	NO.		-
E	Valves				
	i) 25mm bronze gate valve to BS 5154	15	NO.		-
	ii) 50mm ditto.	4	NO.		-
	iii) 25mm air relief valve screwed as CRANE.	1	NO.		-
	Hosereels				
F	Swinging type hosereel complete with 30m long hose of 20mm diameter, 25mm internal diameter rubber fire hose with nylon spray/jet and shut off nozzle, and mounting brackets conforming to BS 5274	13	NO.		-
	Hosereel Pipework Painting				
G	Wire brush, clean and paint complete installation with one coat of red oxide primer, under coat and gloss coat including banding and colour coding to British standards	1	ITEM		-
H	Hose Reel Pumps Fire Booster pumpset comprising 2 No. pumps (Duty and Standby) complete with a capacity of 9m ³ /hr at 2.2bar as NAFFCO or approved equivalent. Complete with automatic electrical control panel as per specification for the pumps.	1	SET		-
I	Pump Cage Allow for construction of a pump cage of 1.5m x 1.5m x 1.5 (L.W.H). The roof to be iron sheet and the sides to be mesh with lockable door.	Item	Sum		-
	Total for carried forward to summary page				-

**PROPOSED RENOVATION AND FIRE ESCAPE STAIRSCASE AT USHURU PENSION TOWERS FOR KRA
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BILL NO. 2: HOSE REEL SYSTEM

ITEM No.	DESCRIPTION	QTY	UNIT	RATE (Kshs)	AMOUNT (Kshs)
2.2 A	Tower A - Renovation Works Allow for carefull removal of the hose reel pump and handing over to the client.	1	ITEM		-
B	Allow for testing of the existing hose reel piping in the 13No. Floors including wire brush, clean and paint including banding and colour coding to British standards	1	ITEM		-
Total for carried forward to summary page					-

**PROPOSED RENOVATION AND FIRE ESCAPE STAIRSCASE AT USHURU PENSION TOWERS FOR KRA
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BILL NO. 2: HOSE REEL SYSTEM

ITEM No.	DESCRIPTION	QTY	UNIT	RATE (Kshs)	AMOUNT (Kshs)
2.3	Towers B,C,D&E - New Stairs Supply, install, test and commission the following equipment and fitting as described:- Tenderers must allow in pipework prices for all couplings, union, nipples, sockets, connectors, joints etc. in running lengths of pipes and also where necessary for fixing clips, holderbats plugged and screwed.				
A	Hosereel System Pipework				
	i) 25mm diameter pipe GMS Class B to BS 1387	21	LM		-
	ii) 50mm ditto	96	LM		-
B	Elbows				
	i) 25mm elbows malleable iron galvanized.	4	NO.		-
	ii) 50mm ditto.	8	NO.		-
	Tees				
C	50mm diameter malleable iron tee	11	NO.		-
D	Reducers				
	i) 25 x 20mm malleable galvanized iron reducing bush	12	NO.		-
	ii) 50 x 25 mm ditto	12	NO.		-
E	Valves				
	i) 25mm bronze gate valve to BS 5154	12	NO.		-
	ii) 50mm ditto.	2	NO.		-
	iii) 25mm air relief valve screwed as CRANE.	1	NO.		-
	Hosereels				
F	Swinging type hosereel complete with 30m long hose of 20mm diameter, 25mm internal diameter rubber fire hose with nylon spray/jet and shut off nozzle, and mounting brackets conforming to BS 5274	9	NO.		-
	Hosereel Pipework Painting				
G	Wire brush, clean and paint complete installation with one coat of red oxide primer, under coat and gloss coat including banding and colour coding to British standards	1	ITEM		-
H	Subtotal for Ino Block				-
I	Total for 4 No. Blocks				-
J	Hose Reel Pumps - Each shared by 2No. Blocks Fire Booster pumpset comprising 2 No. pumps (Duty and Stundby) complete with a capacity of 9m3/hr at 2.2bar as NAFFCO or approved equivalent. Complete with automatic electrical control panel as per specification for the pumps.	2	SET		-
K	Pump Cage - for item J above Allow for construction of a pump cage of 1.5m x 1.5m x 1.5 (L.W.H). The roof to be iron sheet and the sides to be mesh with lockable door.	2	NO.		-
	Total for carried forward to summary page				-

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BILL NO. 2: HOSE REEL SYSTEM

ITEM No.	DESCRIPTION	QTY	UNIT	RATE (Kshs)	AMOUNT (Kshs)
2.4	Tower A - Renovation Works				
A	Allow for carefull removal of the hose reel pump and handing over to the client.	1	ITEM		-
B	Allow for testing of the existing hose reel piping in the 13No. Floors including wire brush, clean and paint including banding and colour coding to British standards	1	ITEM		-
C	Subtotal for Ino Block				-
D	Total for 4 No. Blocks				-
	Total for carried forward to summary page				-

**PROPOSED RENOVATION AND FIRE ESCAPE STAIRSCASE AT USHURU PENSION TOWERS FOR KRA
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BILL NO. 3: DRY RISER SYSTEM

ITEM No.	DESCRIPTION	QTY	UNIT	RATE (Kshs)	AMOUNT (Kshs)
3.1	DRY RISER - BLOCK A (13No. FLOORS) Supply and install the following fire fighting equipment and fittings as described and shown on the drawings All pipes shall be heavy gauge galvanized mild steel pipes to B.S1387 and fittings to B.S. 1740 (class C) . Price of pipework to include the cost of couplings, connectors, fixing brackets, holderbats, plugs and jointing to fittings etc., together with marking of pipe routes for wall chasing and holes cutting by others all as required in pipework installation.				
A	100mm diameter pipe	64	Lm		-
	BENDS				
C	100mm diameter bend	6	No		-
	TEES				
C	100mm diameter equal tee	15	No		-
	REDUCERS				
D	100 x 65mm diameter reducer	15	No		-
E	Automatic Air Release Valve 50mm diameter automatic air release valve as "Greenfield" to be connected to the top of dry riser pipe.	1	No		-
F	Fire Hose (To be installed if the current are established to be un-usable. No claim for loss of profit if not used.) Flexible hose, dia.65mm x 30mm long with instantaneous coupling on one side and nozzle on the other complete with wall mounting bracket. Unit in duraline-high grade synthetic rubber, resistant to abrasion as type Angus Fire of England and approved to B.S. 6391 Type 3, finished in Red colour.	13	No		-
G	Breeching Inlet Cabinet Lockable standard cabinet with 6mm wired glass and identification sign.	1	No		-
H	Associated Pipework Allow for testing, painting & repairs of the existing piping.	Item	Sum		-
I	Allow for careful removal of existing pipework and handing over to the client.	Item	Sum		-
J	Allow for testing of the existing 13No. fire hose to ascertain the working status.	Item	Sum		-
	Total for Tower A carried forward to summary page				-

**PROPOSED RENOVATION AND FIRE ESCAPE STAIRSCASE AT USHURU PENSION TOWERS FOR KRA
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BILL NO. 3: DRY RISER SYSTEM

ITEM No.	DESCRIPTION	QTY	UNIT	RATE (Kshs)	AMOUNT (Kshs)
3.21	DRY RISER - BLOCKS B-C & D-E (9 No. FLOORS) Supply and install the following fire fighting equipment and fittings as described and shown on the drawings All pipes shall be heavy gauge galvanized mild steel pipes to B.S1387 and fittings to B.S. 1740 (class C) . Price of pipework to include the cost of couplings, connectors, fixing brackets, holderbats, plugs and jointing to fittings etc., together with marking of pipe routes for wall chasing and holes cutting by others all as required in pipework installation.				
A	100mm diameter pipe	42	Lm		-
	BENDS				
C	100mm diameter bend	2	No		-
	TEES				
C	100mm diameter equal tee	9	No		-
	REDUCERS				
D	100 x 65mm diameter reducer	10	No		-
B	Automatic Air Release Valve 50mm diameter automatic air release valve as "Greenfield" to be connected to the top of dry riser pipe.	1	No		-
C	Fire Hose (To be installed if the current are established to be un-usable. No claim for loss of profit if not used.) Flexible hose, dia.65mm x 30mm long with instantaneous coupling on one side and nozzle on the other complete with wall mounting bracket. Unit in duraline-high grade synthetic rubber, resistant to abrasion as type Angus Fire of England and approved to B.S. 6391 Type 3, finished in Red colour.	9	No		-
D	Associated Pipework Careful removal of existing pipework and handing over to the client.	Item	Sum		-
E	Subtotal for Ino Block				-
F	Total for 4 No. Blocks				-
	Total for carried forward to collection page				-

**PROPOSED RENOVATION AND FIRE ESCAPE STAIRSCASE AT USHURU PENSION TOWERS FOR KRA
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BILL NO. 3: DRY RISER SYSTEM

ITEM No.	DESCRIPTION	QTY	UNIT	RATE (Kshs)	AMOUNT (Kshs)
3.22	COMMON PIPING - BLOCKS B-C & D-E Supply and install the following fire fighting equipment and fittings as described and shown on the drawings All pipes shall be heavy gauge galvanized mild steel pipes to B.S1387 and fittings to B.S. 1740 (class C) . Price of pipework to include the cost of couplings, connectors, fixing brackets, holderbats, plugs and jointing to fittings etc., together with marking of pipe routes for wall chasing and holes cutting by others all as required in pipework installation.				
A	150mm diameter pipe	56	Lm		-
	BENDS				
C	150mm diameter bend	12	No		-
	TEES				
C	150mm diameter equal tee	4	No		-
	REDUCERS				
D	150 x 100mm diameter reducer	8	No		-
F	Four Way Fire Brigade Breeching Inlet 4-way Breeching inlet dia 150mm with 4x 65mm dia. Instantaneous male couplings and check valves to conform to B.S. 336, complete with G.I. Chained plugs	2	No		-
G	Breeching Inlet Cabinet Lockable standard cabinet with 6mm wired glass and identification sign.	2	No		-
J	Careful removal of existing pipework and handing over to the client.	Item	Sum		-
	Total for carried forward to collection page				-

**PROPOSED RENOVATION AND FIRE ESCAPE STAIRSCASE AT USHURU PENSION TOWERS FOR KRA
BILL OF QUANTITIES FOR THE FIREFIGHTING SYSTEM INSTALLATIONS**

BILL NO. 4: SPRINKLER SYSTEM

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	<p>AUTOMATIC FIRE SPRINKLER SYSTEM Supply, deliver and install the following sprinkler system as described below and shown on the drawings. All pipework and fittings in this installation to be black steel, class C heavy grade to BS 1387 and fittings to BS 143 to conform to ASTM/ANSI/ASME. Threaded joints shall only be done for pipes of diameter 50mm and smaller. Tenderers must allow in their prices for jointings, couplings, supports, plugging and clamping, reducers, tees, nipples, mortices, pipe sleeves through structural members, etc for proper functioning of the system according to NFPA 13 - 2002 Edition.</p>				
	Pipework-NB Pipes of diameter 50mm or more to use GROVED fittings				
A	25mm ditto	960	LM		
B	32mm ditto	720	LM		
C	40mm ditto	390	LM		
D	50mm ditto	325	LM		
E	65mm ditto	280	LM		
F	75mm ditto	180	LM		
G	100mm ditto	360	LM		
H	150mm ditto	48	LM		
	Extra over tubing for the following:-				
	Bends				
I	25mm diameter bend/elbow	680	No.		
J	32mm diameter bend/elbow	420	No.		
K	40mm diameter bend/elbow	334	No.		
L	50mm diameter bend/elbow	156	No.		
M	65mm diameter bend/elbow	144	No.		
N	75mm diameter bend/elbow	123	No.		
O	100mm diameter bend/elbow	73	No.		
P	150mm diameter bend/elbow	24	No.		
Total Carried to Collection Page					

**PROPOSED RENOVATION AND FIRE ESCAPE STAIRSCASE AT USHURU PENSION TOWERS FOR KRA
BILL OF QUANTITIES FOR THE FIREFIGHTING SYSTEM INSTALLATIONS**

BILL NO. 4: SPRINKLER SYSTEM

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Tees				
A	25mm diameter tee	662	No.		
B	32mm diameter tee	363	No.		
C	40mm diameter tee	334	No.		
D	50mm diameter tee	156	No.		
E	65mm diameter tee	144	No.		
F	75mm diameter tee	123	No.		
G	100mm diameter tee	73	No.		
H	150mm diameter tee	12	No.		
	Reducers				
I	25x15mm diameter reducing bush	600	No.		
J	32x25mm diameter reducing bush	345	No.		
K	40x25mm diameter reducing bush	160	No.		
L	40x32mm diameter reducing bush	160	No.		
M	50x25mm diameter reducing bush	160	No.		
N	50x32mm diameter reducing bush	160	No.		
O	50x40mm diameter reducing bush	120	No.		
P	65x40mm diameter reducing bush	80	No.		
Q	65x50mm diameter reducing bush	80	No.		
R	75x25mm diameter reducing bush	60	No.		
S	75x32mm diameter reducing bush	60	No.		
T	75x40mm diameter reducing bush	60	No.		
A	75x65mm diameter reducing bush	42	No.		
B	100x50mm diameter reducing bush	36	No.		
C	100x75mm diameter reducing bush	42	No.		
D	150x100mm diameter reducing bush	12	No.		
Total Carried to Collection Page					

**PROPOSED RENOVATION AND FIRE ESCAPE STAIRSCASE AT USHURU PENSION TOWERS FOR KRA
BILL OF QUANTITIES FOR THE FIREFIGHTING SYSTEM INSTALLATIONS**

BILL NO. 4: SPRINKLER SYSTEM

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Manifold				
F	150mm diameter manifold to connect pump outlets to 150mm diameter pipe to control valve.	1	No.		
I	150mm diameter approved sluice valve and its associated unions to BS 5154 PN16 for series B rating with wheel head and joints to steel tubing as manufactured by "Crane" (model 156) or an approved equivalent. The gate valve to have tamper proof fitting (Lockable).	2	No.		
J	25mm diameter high pressure gate valve	1	No.		
K	150mm diameter anti-vortex plate (6mm thick) made from brass material.	1	No.		
	Sprinkler Heads (Nozzles)				
L	Supply and install 15mm diameter automatic sprinkler head, pendant convectional pattern with universal deflector and red bulb for 68°C (degrees Celsius) operating temperature as manufactured by Firekil International or equal and approved. The sprinkler heads shall be corrosive resistant type and suitable for fixing in basement parkings.	750	No.		
M	Ditto but sprinkler heads as spare to be handed over to the client after completion of the entire installations, together with a set of sprinkler spanners, all fixed in a cabinet.	12	No.		
	Fire Brigade Inlet Breeching Valve				
N	Four way Fire Department Connection (Fire Brigade Inlet Breeching Valve) complete with drain valve, check valve, chain & caps for inlets and drain valve. All to be housed in a lockable standard cabinet with 6mm wired glass and identification sign.	1	No.		
O	Air release valve	1	No.		
Total Carried to Collection Page					

**PROPOSED RENOVATION AND FIRE ESCAPE STAIRSCASE AT USHURU PENSION TOWERS FOR KRA
BILL OF QUANTITIES FOR THE FIREFIGHTING SYSTEM INSTALLATIONS**

BILL NO. 4: SPRINKLER SYSTEM

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	<p>Sprinkler Pumpset Supply and install packaged sprinkler pumping set manufactured to NFPA standards , comprising of one electric pump, one diesel pump and a Jockey pump. Electric pump to be duty and the other pump standby. Pumps shall be as NAFFCO NPS pumps complete with delivery check valves, delivery stop valves, non-return valves, pressure switch arrangement, etc. and all other accessories.</p> <p>i) Diesel Pump Diesel motor driven pump capable of delivering 37.5L/s (2250L/min) against a pressure of 6.0 bar. Speed shall be 2900rpm. The pump to be complete with Engine, Fuel tank with fuel, controller, maintenance free batteries and the exhaust system comprising riser, flexible connector, bend and industrial silencers. The pump shall be as NAFFCO NPS pumps or approved equivalent.</p> <p>ii) Electric Pumps Electric motor driven pump capable of delivering 37.5L/s (2250L/min) against a pressure of 6.0 bar. Speed shall be 2900rpm. Pump shall be close coupled complete with the panel (Star-delta starter). The pump shall be as NAFFCO NPS pumps or approved equivalent.</p> <p>iii) Jockey pump An automatic jockey pump with a capacity of 3.75L/s (225L/min) at a static pressure of 4.5 bar. The pump to be complete with accessories and connected to the same control panel as for the main sprinkler pumps. The pump shall be as Grundfos CR series or approved equivalent.</p> <p>The pumps and connections to equipment to be mounted on a common pumps baseframe all welded on a common base plate. It should include all necessary sluice valves and non-return valves. The installation to be with alignment facilities and mounting. The pumps should have a flooded suction or to be self-priming. The entire installation to conform to NFPA 13 - 2002 Edition.</p>	1	Set		
B	<p>Sprinkler Pump Control Panel Dual control panel for the above three sprinkler pumps complete with appropriate overload protection, phase failure protection, automatic change over switch, star-delta starter for electric pumps, neon indicators for tripping and resetting plus any other necessary control accessories to operate all the three pumps including fault indication volt-free contact. Control panel to be as SPP or equal and approved.</p> <p>Pressure vessels of suitable combination for pumps operation with butyl rubber membranes pre-charged before installation. The vessels to be as manufactured by VAREM of Italy or an approved equivalent. The vessels shall be complete with pressure gauges, pressure switches for jockey pump and main fire pumps. The pressure vessels to be complete with an array of switches for automation of the pumps and any other necessary accessories.</p>	1	No.		

**PROPOSED RENOVATION AND FIRE ESCAPE STAIRSCASE AT USHURU PENSION TOWERS FOR KRA
BILL OF QUANTITIES FOR THE FIREFIGHTING SYSTEM INSTALLATIONS**

Total Carried to Collection Page				
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BILL NO. 4: SPRINKLER SYSTEM

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Electrical Works				
A	Allow for electrical wiring & control connections between pumps, control panel and local isolator in steel conduit.	1	Item		
	Painting				
B	Paint the sprinkler pipe-work installation with a coat of red oxide primer, undercoat and two gloss coats to NFPA colour code specification.	1	Item		
	Installation Control Valve Station				
D	150mm diameter Installation Control Valve Station comprising swing check sprinkler alarm valve flanged (PN16) fitted with a butterfly isolation valve, 50mm drain valve, 50mm test valve, air release valve, alarm motor stop valve, alarm motor & gong, retard chamber, manual by-pass valve, strainers and all necessary trim, common key padlocks, pressure gauges and pressure switches to enable the valve to operate, etc, for complete installation to NFPA 13 2002 Edition guidelines. Control valve station must be rated for operation pressures up to 12.5 bar and shall be manufactured by "Angus Fire" or an approved equivalent.	1	No.		
F	Allow for setting to work, testing and commissioning and labelling of the entire fire sprinkler system to NFPA guidelines and to the satisfaction of the Engineer.	1	Item		
G	List any other items necessary for complete installation of the entire fire sprinkler system;				

**PROPOSED RENOVATION AND FIRE ESCAPE STAIRSCASE AT USHURU PENSION TOWERS FOR KRA
BILL OF QUANTITIES FOR THE FIREFIGHTING SYSTEM INSTALLATIONS**

Total Carried to Collection Page	
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BILL NO. 4: SPRINKLER SYSTEM

COLLECTION PAGE FOR SPRINKLER INSTALLATION WORKS

Item	Description		Amount (Kshs)
1	Total carried forward from page F-42	
2	Total carried forward from page F-43	
3	Total carried forward from page F-44	
4	Total carried forward from page F-45	
5	Total carried forward from page F-46	
Total Sprinkler Installation Works Carried Forward to Summary Page			

**PROPOSED RENOVATION AND FIRE ESCAPE STAIRCASE AT USHURU PENSION TOWERS FOR
KRA**

BILL OF QUANTITIES FOR THE FIREFIGHTING INSTALLATIONS

BILL NO. 5: STAIRCASE PRESSURIZATION

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE KSh	AMOUNT KSh
5.0	STAIRCASE PRESSURIZATION				
5.1	Tower A				
	Supply, install, test and commission staircase pressurization system to BS 5588 Part 4 :1998 ref 8.				
	DUCTWORK				
A	Galvanized mild steel duct work 0.8mm thick (SWG 22) complete with bends , hangers supports, sleeves, flexible connectors, branch duct take offs, flanges, access doors, test reducers, splitters, turning vanes and accessories all painted both exter	SM	100		-
B	Supply Fans - Set of Two Roof mounted fan as Woods Model 56JM/20/4/6 , extract capacity 6625.8m3/hr and 150 pa static pressure. Power supply: 1.1 kW 1phase, 240v, 50Hz. Complete with all accessories including soft starter, electronic speed regulators, phase failure protection, anti-vibration mountings, air operated non return dampers. Duty and standby or equal and approved.	NO	2		
C	Control Panels A splash proof fan control panel complete with operational switches shall be installed in a room remote from the fan. It shall incorporate isolator, contactors, phase failure relay, overheat safety controls and fuses and pilot lamps to enable operating conditions to be checked. The panel shall be cut of mild steel and anodized after manufacture. It shall include volt free contacts for on-off and audible signal connection to a BMS panel.	No.	1		
D	Fresh air supply grilles	No.	13		
E	Door Pressure sensors	No.	13		
F	Pressure Relieve Damper	No.	1		
G	Smoke Detector	No.	4		
H	Electrical Works Allow for all electrical works including wiring to the fans from the local isolators and connection to the control panel.	Item	1		
Total for carried forward to summary page					-

**PROPOSED RENOVATION AND FIRE ESCAPE STAIRCASE AT USHURU PENSION TOWERS FOR
KRA
BILL OF QUANTITIES FOR THE FIREFIGHTING INSTALLATIONS**

BILL NO. 5: STAIRCASE PRESSURIZATION

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE KSh	AMOUNT KSh
5.2	Tower B,C,D&E				
	Supply, install, test and commission staircase pressurization system to BS 5588 Part 4 :1998 ref 8.				
	DUCTWORK				
A	Galvanized mild steel duct work 0.8mm thick (SWG 22) complete with bends , hangers supports, sleeves, flexible connectors, branch duct take offs, flanges, access doors, test reducers, splitters, turning vanes and accessories all painted both exter	SM	90		-
B	<u>Supply Fans - Set of Two</u> Roof mounted fan as Woods Model 56JM/20/4/6 , extract capacity 6625.8m3/hr and 150 pa static pressure. Power supply: 1.1 kW 1phase, 240v, 50Hz. Complete with all accessories including soft starter, electronic speed regulators, phase failure protection, anti-vibration mountings, air operated non return dampers. Duty and standby or equal and approved.	No.	2		
C	<u>Control Panels</u> A splash proof fan control panel complete with operational switches shall be installed in a room remote from the fan. It shall incorporate isolator, contactors, phase failure relay, overheat safety controls and fuses and pilot lamps to enable operating conditions to be checked. The panel shall be cut of mild steel and anodized after manufacture. It shall include volt free contacts for on-off and audible signal connection to a BMS panel.	No.	1		
D	Fresh air supply grilles	No.	11		
E	Door Pressure sensors	No.	11		
F	Pressure Relieve Damper	No.	1		
G	Smoke Detector	No.	4		
H	<u>Electrical Works</u> Allow for all electrical works including wiring to the fans from the local isolators and connection to the control panel.	Item	1		
	Subtotal for 1no Block				-
	Subtotal for 4no BlockS (B,C,D&E)				-
Total for 4nO. Blocks carried forward to summary page					-

**PROPOSED RENOVATION AND FIRE ESCAPE STAIRSCASE AT USHURU PENSION TOWERS FOR
KRA
BILL OF QUANTITIES FOR THE FIREFIGHTING INSTALLATIONS**

ITEM No.	DESCRIPTION	AMOUNT (Kshs)
	SUMMARY PAGE	
1.00	Portable Fire Extinguishers	
1.1	Tower A - New Stairs	-
1.2	Tower A - Renovation Works	-
1.3	Towers B,C,D&E - New Stairs	-
1.4	Towers B,C,D&E - Renovation Works	-
	Total for Portable Fire Extinguishers	-
2.00	HOSE REEL SYSTEM	
2.1	Tower A - New Stairs	-
2.2	Tower A - Renovation Works	-
2.3	Towers B,C,D&E - New Stairs	-
2.4	Tower A - Renovation Works	-
	Total for Portable Fire Extinguishers	-
3.00	DRY RISER SYSTEM	
3.1	DRY RISER - BLOCK A (13No. FLOORS)	-
3.2	DRY RISER - BLOCKS B-C & D-E (9 No. FLOORS)	-
	Total for Portable Fire Extinguishers	-
4.00	SPRINKLER SYSTEM	
4.0	Total for Sprinkler System	-
5.00	STAIRCASE PRESSURIZATION	
5.1	Tower A	-
5.2	Tower B,C,D&E	-
	Total for Portable Fire Extinguishers	-
G	Allow Contingency Sum	1,500,000.00
H	SUB-TOTAL	
I	ADD 16% VAT	
J	ADD 0.03% OF THE SUBTOTAL FOR CAPACITY BUILDING LEVY (EXCLUSIVE OF VAT)	
	TOTAL FOR FIRE FIGHTING CARRIED TO FORM OF TENDER (INCLUSIVE OF ALL APPLICABLE TAXES)	

Total Amount in words

.....

Tenderer's Name and Stamp

Signature: Date:

PIN No.: VAT No.:

Witness: Address

Signature: Date: