

**PROPOSED SCHOOL OF NURSING AND PHYSICAL SCIENCES MERU UNIVERSITY  
ELECTRICAL INSTALLATIONS AND ASSOCIATED SERVICES  
ELECTRICAL INSTALLATIONS WORKS – BILLS OF QUANTITIES**

**BILL NO. 3 – FIRST TO THIRD FLOOR**

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT	
					KShs.	Cts.
	<b>Total B/F from Page K20</b>					-
	h) Cable lugs for the cable above, complete with crimping	40	No.			
3.2	100x50mm white stove enameled trunking, single-compartment, complete with cover, screws etc for the sub mains cables above - Provisional	150	m			
3.21	Outlet for CCTV/ security alarm/ fire alarm points comprising box, concealed in PVC conduit, draw wire and square blanking cover.	240	No.			
3.22a)	Outlet for electric door locks comprising wiring in 3x2.5mm <sup>2</sup> SC-PVC-CU cables, box, concealed conduit links and all accessories including card reader.	2	No			
	b) Heavy-duty micro switches for the above	2	No			
3.23	Twin 13A socket outlets complete with wiring in 6x2.5mm <sup>2</sup> PVC-SC-CU cables inside concealed conduits for raw power. The socket outlets to be MK, Crabtree or any other approved equivalent	20	No.			
3.24	Dia. 32mm H.G PVC conduits buried in floor slab	50	m			
3.25a)	300 x 50mm 3-compartment angle trunking to details shown, in 14-gauge galvanized steel sheet with cream powder coating finish to approved colour, complete with cover, screws, and all accessories.	600	m			
	b) 300 x 50mm, factory-made corner-bends and end covers for the above trunking, in same material and colour finish.	250	No.			
	c) Carry out bonding throughout the entire length of the above trunking in 6mm <sup>2</sup> green PVC insulated copper cable.	1	Item			
	d) Dia. 32mm H.G PVC conduits buried in floor slab (Provisional)	250	m			
3.26a)	Punched outlet plates on the trunking for twin socket outlets.	440	No			
	b) Punched outlet plates on the trunking for twin Data/voice outlets.	120	No			-
						-
						-
						-
<b>Total C/F to Page K22</b>						-

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ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT	
					KShs.	Cts.
	<b>Total B/F from Page K21</b>					-
3.27a)	Twin 13A standard <b>white</b> socket outlet as MK or Crabtree or any other approved equivalent, complete with ring wiring in 6x2.5mm <sup>2</sup> PVC-SC-CU cables inside trunking for <b>raw power</b>	300	No.			-
b)	Twin data/telephone faceplates in trunking complete with box draw-wire and square blanking cover for RJ45 terminations	120	No			-
c)	Twin 13A <b>non standard red socket outlets</b> , as MK or Crabtree or any other approved equivalent, with safety shutters on both live and neutral and with neon light for computer power supply, complete with wiring in 3x2.5mm <sup>2</sup> PVC-SC-CU cables and fused unbreakable 13A 3-pin non standard top plugs inside the trunking.	120	No.			-
d)	Supply and install 5mm high permanent red trafollyte labels marked "UPS ONLY" for clean line power sockets.	120	No.			-
e)	Power Floorbox complete with 4 No. twin normal socket outlets wiring in 6x2.5mm <sup>2</sup> PVC-SC-PVC cables, 4 No. twin nonstandard socket outlets for computer points with neon lights wiring in ring 6x2.5mm <sup>2</sup> PVC-SC-PVC cables and 4 No. telephone/data outlet plates	22	No.			-
3.28	450 x 450 x 200 mm 14 gauge galvanized compartment telephone draw box complete with 3- cover, screws etc.	12	No			-
3.29	Outlet point for water heater/ hand drier/ extract fans/ staircase Pressurization comprising 20mm diameter conduit, wiring in 3 x 4.0 mm <sup>2</sup> SC-PVC-CU cables and all accessories including 20A DP switch with neon light as MK or Crabtree or any other approved equivalent.	28	No			-
3.3	Outlet for twin 15A industrial sockets comprising 20mm diameter conduit, wiring in 3 x 4.0 mm <sup>2</sup> SC-PVC-CU cables and all accessories including top plug	2	No.			-
3.31	Outlet for Indoor air conditioning unit comprising box concealed, HG PVC conduit, wiring in 3x4mm <sup>2</sup> SC-PVC-CU cables and all accessories including 20A DP switch with neon light.	15	No			-
3.32	30A voltage switch for air-conditioning unit as Sollateck type AVS 30, wired to the A/C unit above	15	No			-
3.33	Outlet for television co-axial cable comprising concealed HG PVC conduit square PVC box draw wire and TV outlet plate as MK range or any approved equivalent	8	No			-
3.34	Outlet for 63A SPN Local Isolator, comprising box concealed, HG PVC conduit, wiring in 5x10mm <sup>2</sup> SC-PVC-CU cables and all accessories including 63A SPN Isolator, as MK or Crabtree or approved approved equivalent	0	No			-
<b>Total for Bill No. 3: First to third Floor C/F to Collection Page</b>						-

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**BILL NO. 4: LIGHTNING PROTECTION**

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT	
					KShs.	Cts.
	<b>Note: All lightning protection products to be FURSE – Alternative makes will NOT be accepted.</b>					
	<b>4 Air Termination</b>					
4.01	15mm diameter multiple point copper air terminal as Furse Cat. No. RA 600.	7	No.			
4.02	Copper air terminal base as Furse Cat. No. SD 105.	7	No.			
4.03	Copper junction clamps for tape.	12	No.			
4.04	25 x 3mm turned copper tape as Furse Cat. No. TC 230.	150	m.			
4.05	Copper ridge saddle as Furse Cat. No. CD 115.	30	No			
4.06	D.C. tape clip as Furse Cat. No.CP 210.	30	No			
4.07	Copper rod-to-tape coupling.	20	No.			
	<b>4.1 Down Conductors</b>					
4.11	25 x 3mm turned copper tape as Furse Cat. No. TC 230.	20	m.			
4.12	D.C. tape clip as Furse Cat. No. CP 210.	10	No			
		0				
4.13	Oblong test/junction clamp as Furse Cat. No. CN 105.	4	No.			
4.14	Diameter 38mm HG PVC conduits for the down conductors above.	20	m.			
	<b>4.2 Earth Termination</b>					
4.21	15mm diameter, 1200mm long solid copper earth rod as Furse Cat. No. RC 020, complete with driving stud and spike.	2	No.			
4.22	Earth rod-to-tape clamp type A.	2	No.			-
4.23	Concrete inspection earth pit Cat. No. PT 005 with 5 hole earth bar as Furse Cat. No. PT 006.	2	No.			-
4.24	1500mm x 1500mm copper earth mat made from 25mm x 3mm copper tape at 300mm spacing, buried at permanent moisture level and complete with all clamps, welding joints and 6m long 25mm x 3mm insulated copper tape clamped to the down conductors.	2	No.			-
	<b>4.3 Bonding</b>					
4.31	Bonding and clamping to all metal work including water pipes, gas pipes, hand-rails, air-conditioning units, window frames, cladding, metal roof etc. and the main earth for the building.	1	Item			-
<b>Total for Bill No.4 –Lightning Protection C/F to Collection Page</b>						-