

**PROPOSED COMPLETION OF 2No. BLOCKS EACH OF 32No. BEDSITTER UNITS, 14No. TWO-BEDROOMED UNITS AND 4No. THREE-BEDROOMED UNITS AT EMALI PRISONS TRAINING COLLEGE IN EMALI, MAKUENI COUNTY**

**ELECTRICAL INSTALLATION WORKS**

Item	Description	Qty	Unit	Rate	Amount
	<b><u>BILL NO. 1: TYPICAL BEDSITTER UNIT</u></b>				
1.00	Supply, install, test and commission the following :-				
	<b><u>LIGHTING POINTS</u></b>				
1.01	Lighting points wired in 3X1.5 mm <sup>2</sup> SC CU cables drawn in existing concealed 20mm diameter HG P.V.C conduits for:-				
	a) one way switching	3	No.		
	b) two way switching	1	No.		
	<b><u>SWITCHES</u></b>				
1.02	10Amps, moulded switch plate as CLIPSAL or approved equivalent				
	a) one gang one way	1	No.		
	b) one gang two way	1	No.		
	c) two gang two way	1	No.		
	d) Bell switch as Schneider or other equal and approved equivalent.	1	No.		
	<b><u>LIGHTING FITTINGS</u></b>				
1.03	Lighting fittings complete with energy saving bulbs or tubes as follows:-				
	a) Pendant set comprising of ceiling rose,CG lamp holder and at least 300mm flex cable complete with 22W LED lamp as Philips or approved equivalent	2	No.		
	b) 100W Spherical Screwneck fitting as Thorn or approved equivalent	1	No.		
	c) Electric bell with all accessories as Schneider or other equal and approved equivalent.	1	No.		
2.00	<b><u>SOCKET OUTLETS AND OTHER POWER POINTS</u></b>				
2.01	a) 13 Amps. socket outlet points wired ring comprising of 3x2.5 mm sq. sc PVC Cu cables drawn in existing concealed 25mm HG PVC conduits.	3	No.		
	b) 13 Amps. switched chrome coated Twin socket outlet with neon indicator as CLIPSAL or approved equivalent	3	No.		
<b>SUB TOTAL C/F TO NEXT PAGE</b>					

**1NO. BEDSITTER UNIT CONT'D**

Item	Description	Qty	Unit	Rate	Amount
	<b><i>SUB-TOTAL B/F FROM PREVIOUS PAGE</i></b>				
2.02	a) <b>Cooker point</b> comprising of 3x6mm <sup>2</sup> PVC Copper cables drawn in existing concealed 32mm dia. HG PVC conduits from the CU.	1	No		
	b) Cooker control unit complete with 45 Amps. Switched socket outlet as Crabtree or approved equivalent.	1	No		
	c) Cooker connection unit	1	No.		
2.03	a) <b>Instant water heater point</b> comprising wiring in 3x4.0mm <sup>2</sup> PVC-SC-CU cables in existing concealed PVC 25mm dia. Conduits.	1	No.		
	b) 32 Amps double pole switch with neon indicator as CLIP5AL or approved equivalent for item above.	1	No.		
2.04	a) <b>TV point</b> comprising wiring in CO-AXIAL cable drawn in existing concealed HG PVC conduit concealed PVC conduits	1	No.		
	b) TV outlet plate as Clipsal or approved equivalent	1	No.		
3.00	<b><u>INTERNAL POWER DISTRIBUTION</u></b>				
	<b>Supply, install, test and commission the following :-</b>				
3.01	4 ways SP&N, flush mounted consumer unit complete with 100A integral isolator as ABB or approved equivalent complete with all accessories but excluding MCBs.	1	No.		
3.02	MCB's rated at 500Vac for item 3.01 above as Schneider or approved equivalent as the following:				
	(a) 10A, SP	1	No.		
	(b) 20A, SP	1	No.		
	(c) 32A, SP	1	No.		
	(d) 45A, SP	1	No.		
3.03	3x10 mm <sup>2</sup> SC PVC Cu submains cables drawn in existing 38mm dia. Conduit c/w all necessary installation accessories	20	LM		
<b>A</b>	<b>TOTAL FOR 1NO. BEDSITTER UNIT</b>				
<b>B</b>	<b>TOTAL FOR BILL NO. 1: 32No. BEDSITTER UNITS ( A x 32) C/F TO COLLECTION PAGE</b>				

**BILL NO. 2: TYPICAL 2BEDROOM UNIT**

Item	Description	Qty	Unit	Rate	Amount
1.00	<b>Supply, install, test and commission the following :-</b>				
	<b><u>LIGHTING POINTS</u></b>				
1.01	Lighting points wired in 3X1.5 mm <sup>2</sup> SC CU cables drawn in existing concealed 20mm diameter HG P.V.C conduits for:-				
	a) one way switching	3	No.		
	b) two way switching	3	No.		
	<b><u>SWITCHES</u></b>				
1.02	10Amps, moulded ivory switch plate as CLIPSAL or approved equivalent				
	a) one gang two way	6	No.		
	b) two gang one way	1	No.		
	c) Bell switch as Schneider or other equal or approved equivalent.	1	No.		
	<b><u>LIGHTING FITTINGS</u></b>				
2.03	Lighting fittings complete with energy saving bulbs or tubes as follows:-				
	a) Pendant set comprising of ceiling rose,CG lamp holder and at least 300mm flex cable complete with 22W LED lamp as Philips or approved equivalent	4	No.		
	b) 100W Spherical Screwneck fitting as Thorn or approved equivalent	1	No.		
	c) Electric bell with all accessories as Schneider or other equal and approved equivalent.	1	No.		
2.00	<b><u>SOCKET OUTLETS AND OTHER POWER POINTS</u></b>				
2.01	a) 13 Amps. socket outlet points wired ring comprising of 3x2.5 mm sq. sc PVC Cu cables drawn in existing concealed 25mm HG PVC conduits.	5	No.		
	b) 13 Amps. switched chrome coated Twin socket outlet with neon indicator as CLIPSAL or approved equivalent	5	No.		
2.02	a) <b>Cooker point</b> comprising of 3x6mm <sup>2</sup> PVC Copper cables drawn in existing concealed 32mm dia. HG PVC conduits from the CU.	1	No		
	<b>SUB TOTAL C/F TO NEXT PAGE</b>				

**1No. 2BEDROOMED UNIT CONT'D**

Item	Description	Qty	Unit	Rate	Amount
	<b><i>SUB-TOTAL B/F FROM PREVIOUS PAGE</i></b>				
	b) Cooker control unit complete with 45 Amps. Switched socket outlet as Crabtree or approved equivalent.	1	No		
	c) Cooker connection unit	1	No.		
2.03	a) <b>Instant water heater point</b> comprising wiring in 3x4.0mm <sup>2</sup> PVC-SC-CU cables in existing concealed PVC 25mm dia. Conduits.	1	No.		
	b) 32 Amps double pole switch with neon indicator as CLIPSAL or approved equivalent for item above.	1	No.		
2.04	a) <b>TV point</b> comprising wiring in CO-AXIAL cable drawn in existing concealed HG PVC conduit concealed PVC conduits	1	No.		
	b) TV outlet plate as Clipsal or approved equivalent	1	No.		
3.00	<b><u>INTERNAL POWER DISTRIBUTION</u></b>				
	<b>Supply, install, test and commission the following :-</b>				
3.01	4 ways SP&N, flush mounted consumer unit complete with 100A integral isolator as ABB or approved equivalent complete with all accessories but excluding MCBs.	1	No.		
3.02	MCB's rated at 500Vac for item 3.01 above as Schneider or approved equivalent as the following:				
	(a) 10A, SP	1	No.		
	(b) 20A, SP	1	No.		
	(c) 32A, SP	1	No.		
	(d) 45A, SP	1	No.		
3.03	3x10 mm <sup>2</sup> SC PVC Cu submains cables drawn in existing 38mm dia. Conduit c/w all necessary installation accessories	20	LM		
A	<b>TOTAL FOR 1No. TYPICAL TWO-BEDROOMED UNIT</b>				
B	<b>TOTAL FOR BILL NO. 2: 14No. TWO-BEDROOMED UNITS ( Ax14) C/F TO COLLECTION PAGE</b>				

**BILL No. 3: TYPICAL 3BEDROOM UNIT**

Item	Description	Qty	Unit	Rate	Amount
1.00	<b>Supply, install, test and commission the following :-</b>				
	<b><u>LIGHTING POINTS</u></b>				
1.01	Lighting points wired in 3X1.5 mm <sup>2</sup> SC CU cables drawn in existing concealed 20mm diameter HG P.V.C conduits for:-				
	a) one way switching	3	No.		
	b) two way switching	5	No.		
	<b><u>SWITCHES</u></b>				
1.02	10Amps, moulded ivory switch plate as CLIPSAL or approved equivalent				
	a) one gang one way	2	No.		
	a) one gang two way	6	No.		
	b) two gang two way	2	No.		
	c) Bell switch as Schneider or other equal or approved equivalent.	1	No.		
	<b><u>LIGHTING FITTINGS</u></b>				
2.03	Lighting fittings complete with energy saving bulbs or tubes as follows:-				
	a) Pendant set comprising of ceiling rose,CG lamp holder and at least 300mm flex cable complete with 22W LED lamp as Philips or approved equivalent	5	No.		
	b) 100W Spherical Screwneck fitting as Thorn or approved equivalent	2	No.		
	c) Electric bell with all accessories as Schneider or other equal and approved equivalent.	1	No.		
2.00	<b><u>SOCKET OUTLETS AND OTHER POWER POINTS</u></b>				
2.01	a) 13 Amps. socket outlet points wired ring comprising of 3x2.5 mm sq. sc PVC Cu cables drawn in concealed 25mm HG PVC conduits.	6	No.		
	b) 13 Amps. switched chrome coated Twin socket outlet with neon indicator as CLIPSAL or approved equivalent	6	No.		
2.02	a) <b>Cooker point</b> comprising of 3x6mm <sup>2</sup> PVC Copper cables drawn in concealed 32mm dia. HG PVC conduits from the CU.	1	No		
<b>SUB TOTAL C/F TO NEXT PAGE</b>					

**1No. 3BEDBEDROOMED UNIT CONT'D**

Item	Description	Qty	Unit	Rate	Amount
	<b><i>SUB-TOTAL B/F FROM PREVIOUS PAGE</i></b>				
	b) Cooker control unit complete with 45 Amps. Switched socket outlet as Crabtree or approved equivalent.	1	No		
	c) Cooker connection unit	1	No.		
2.03	a) <b>Instant water heater point</b> comprising wiring in 3x4.0mm <sup>2</sup> PVC-SC-CU cables in concealed PVC 25mm dia. Conduits.	2	No.		
	b) 32 Amps double pole switch with neon indicator as CLIPSAL or approved equivalent for item above.	2	No.		
2.04	a) <b>TV point</b> comprising wiring in CO-AXIAL cable drawn in concealed HG PVC conduit concealed PVC conduits	1	No.		
	b) TV outlet plate as Clipsal or approved equivalent	1	No.		
3.00	<b><u>INTERNAL POWER DISTRIBUTION</u></b>				
	<b>Supply, install, test and commission the following :-</b>				
3.01	4 ways SP&N, flush mounted consumer unit complete with 100A integral isolator as ABB or approved equivalent complete with all accessories but excluding MCBs.	1	No.		
3.02	MCB's rated at 500Vac for item 3.01 above as Schneider or approved equivalent as the following:				
	(a) 10A, SP	1	No.		
	(b) 20A, SP	1	No.		
	(c) 32A, SP	1	No.		
	(d) 45A, SP	1	No.		
3.03	3x10 mm <sup>2</sup> SC PVC Cu submains cables drawn in existing 38mm dia. Conduit c/w all necessary installation accessories	20	LM		
<b>SUB-TOTAL FOR TYPICAL 1No. 3BEDROOMED UNIT</b>					
<b>TOTAL FOR BILL No. 3: 4No. THREE-BEDROOMED UNITS C/F TO COLLECTION PAGE</b>					

**BILL No. 4: COMMON BUILDING SERVICES**

Item	Description	Qty	Unit	Rate (Ksh)	Amount (Kshs)
1.00	<b>Supply, install, test and commission the following :-</b>				
	<b><u>LIGHTING POINTS</u></b>				
1.01	Lighting points wired in 3X1.5 mm <sup>2</sup> SC CU cables drawn in existing concealed 20mm diameter HG P.V.C conduits for:-				
	a) two way switching	56	No.		
	<b><u>SWITCHES</u></b>				
1.02	10Amps, moulded ivory switch plate as CLIPSAL or approved equivalent				
	a) One gang two way	2	No.		
	b) Two gang two way	8	No.		
	c) Intermediate switch	19	No.		
	<b><u>LIGHTING FITTINGS</u></b>				
2.03	Lighting fittings complete with energy saving bulbs or tubes as follows:-				
	a) 40W LED outdoor bulkhead with opal Diffuser,grill and Visor as Massive Cleveland or approved equivalent	8	No.		
	b) 36W LED 1200mm corrosion-proof florescent bulkhead as Thorn or approved equivalent	48	No.		
2.00	<b><u>SOCKET OUTLETS AND OTHER POWER POINTS</u></b>				
2.01	a) 13 Amps. socket outlet points wired ring comprising of 3x2.5 mm sq. sc PVC Cu cables drawn in concealed 25mm HG PVC conduits.	6	No.		
	b) 13 Amps. switched chrome coated Twin socket outlet with neon indicator as CLIPSAL or approved equivalent	6	No.		
2.02	Water Booster Pump wired in 6.0mm <sup>2</sup> 4Core PVC/SWA/PVC armoured cu cables drawn underground c/w with all installation accessories (Approximate distance 30m)	1	No.		
3.03	<b><u>MATV SYSTEM</u></b>				
	a) Masthead amplifier (booster) unit	1	No.		
	b) 8 Way splitter unit as Ellies or equivalent	4	No.		
	c) Combined unit as Ellies or equivalent	2	No.		
<b>SUB TOTAL C/F TO NEXT PAGE</b>					

**COMMON BUILDING SERVICES CONT'D**

Item	Description	Qty	Unit	Rate	Amount
	<b><i>SUB-TOTAL B/F FROM PREVIOUS PAGE</i></b>				
	d) 5A high voltage guard as sollatec	1	No.		
	e) Security lock box made of 16SWG steel sheet with auto lacquer finish for the equipment complete with Yale locks	1	No.		
	f) Adjustable antenna mast	1	No.		
	g) DSTV System complete with all installation accessories	1	No.		
	h) 16 SWG, (300 x 300 x 100) mm galvanised steel draw box	16	No.		
4.00	<b><u>INTERNAL POWER DISTRIBUTION</u></b>				
	<b>Supply, install, test and commission the following :-</b>				
4.01	4 ways SP&N, flush mounted consumer unit complete with 100A integral isolator as ABB or approved equivalent complete with all accessories but excluding MCBs.	1	No.		
4.02	MCB's rated at 500Vac for item 3.01 above as Schneider or approved equivalent as the following:				
	(a) 10A, SP	5	No.		
	(b) 20A, SP	1	No.		
	(c) 32A, SP	1	No.		
4.03	3x10 mm <sup>2</sup> SC PVC Cu submains cables drawn in existing 38mm dia. Conduit c/w all necessary installation accessories	20	LM		
5.00	<b><u>METERBOARD</u></b>				
	Meter board to accomodate 51No. KPLC meters, 1No. Consumer unit, 51No. SPN switch fuses, fabricated from 16 gauge SWG to be semi-recessed in the wall of the stair case, to be painted with one coat of primer paint and two coats of finishing paint of an approved colour and quality, complete with 300A TPN enclosed bus bars and meter viewing window in Perspex to be provided in front of the KWH meters as Schneider or approved equivalent.	2	No.		
5.01	Install inside the meter board, the following: a) 9-way SPN consumer unit for stair case and security lighting as SCHNEIDER or approved equivalent	2	No.		
	<b>SUB TOTAL C/F TO NEXT PAGE</b>				



**COMMON BUILDING SERVICES CONT'D**

Item	Description	Qty	Unit	Rate	Amount
	<b><i>SUB-TOTAL B/F FROM PREVIOUS PAGE</i></b>				
	b) MCB's rated at 500Vac for item 5.01(b) above as Schneider or approved equivalent as the following:				
	(i) 10A, SP	5	No.		
	(ii) 20A, SP	1	No.		
	(iii) 45A, SP	1	No.		
	(iv) Blanking plates	2	No.		
	c) 50A SPN KMBG switch fuse as Crabtree or approved equivalent complete with HRC fuse	62	No.		
	d) 250A TPN MCCB main switch as Crabtree or approved equivalent	2	No.		
	e) 100mm diameter HG PVC conduit encased in concrete surround for KPLC service line	35	M		
	g) 3x10 mm <sup>2</sup> SC PVC copper cables drawn in 38mm dia. Conduits	20	LM		
	h) 100mm diameter HG PVC conduit encased in concrete surround for KPLC service line	35	M		
	i) 3x10 mm <sup>2</sup> SC PVC copper cables drawn in 38mm dia. Conduits	20	LM		
6.00	<b><u>EARTHING</u></b>				
	a) 300 x 300 x 300mm earthing chamber complete with removable cover	2	No.		
	b) Pure copper earth rod (1500mm x 16mm)	2	No.		
	c) Driving head for earth rod	2	No.		
	d) Earth rod coupling	2	No.		
	e) 50mm <sup>2</sup> single core green PVC insulated copper earth lead	30	M		
7.00	<b><u>LIGHTNING PROTECTION</u></b>				
	a) 25x3mm copper tape down conductor supported at intervals of 1M	80	M		
	b) Galvanized steel conduit 32mm diameter at ground floor for item (a) above	4	No.		
	c) Earthing chamber 300x300mm masonry type complete with removable cover	4	No.		
	d) 16mm x 1500mm pure copper earth rod complete with clamp and all the necessary accessories	4	No.		
	e) Air termination (600mm long pure copper with spikes) mounted on brakcet as FURSE	4	No.		
<b>TOTAL FOR BILL No. 4: COMMON BUILDING SERVICES C/F TO COLLECTION PAGE</b>					

**TYPICAL HOUSING BLOCK COLLECTION PAGE**

ITEM	DESCRIPTION	AMOUNT (KSHS)
1.00	Bill No. 1: 32No. Bedsitter Units	
2.00	Bill No. 2: 14No. 2 Bedroom Units	
3.00	Bill No. 3: 4No. 3 bedroomed units	
4.00	Bill No. 4: Common building services	
<b>A</b>	<b>TOTAL ESTIMATE FOR ELECTRICAL WORKS FOR TYPICAL 1No. BLOCK</b>	
<b>B</b>	<b>SUB-TOTAL ESTIMATE FOR ELECTRICAL WORKS FOR 2No. BLOCKS (Ax2)</b>	
5.00	Povisional Sum for Outdoor Lighting	1,200,000
6.00	Povisional Sum for Kenya Power Service Line Connection	2,500,000
7.00	Allow Contingency sum of 6,00,000/-	600,000
	<b>TOTAL FOR ELECTRICAL WORKS FOR 2No. HOUSING BLOCKS CARRIED FORWARD TO MAIN SUMMARY PAGE</b>	

Total Amount in Words (Kenya Shillings).....

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Bidder's Name & Official Stamp .....

P.O. Box.....

Signature.....Date.....

PIN NO.....V.A.T Certificate NO.....

Witness.....Address.....

Signature of Witness.....Date.....