

**BILL OF QUANTITIES FOR UNDERGROUND CABLE TO MOMBASA SGR PORT
ALTERNATIVE SUPPLY**

ITEM NO	ITEM DESCRIPTION	UNIT	QTY	UNIT RATE	AMOUNT
	PRELIMINARIES				
	Programme for Completion of the Works				
A	The works must be completed as early as possible and be carried out in accordance with the Client preferred and approved programme of works prepared by the contractor.				
B	The Contractor shall allow for providing erect publicity, directional, safety, etc sign boards, maintaining and later clearing away on completion a site sign board. The positioning, the size, type of construction and lettering shall be approved by the client's Engineer.	ITEM	1		
	Security of Works				
	The Contractor shall be entirely responsible for the security of all the Works, stores, materials, plant, personnel, etc, both his own and sub-contractors' and must provide all necessary watching, lighting and other precautions as necessary to ensure security against theft, loss or damage and the protection of the public.	ITEM	1		
	Storage of Materials, Tools and Equipment				
D	The Contractor shall provide own storage facilities and where applicable he/she must be given written approval of site/location by individual premises owners/Landlord that is, KPA, KPLC, Kenya Railways(SGR), County Government etc.	ITEM	1		
	Existing Property				
E	The Contractor shall take every precaution to avoid damage to all existing property including roads, cables, drains, water pipes and other services, and he/she will be held responsible for and shall make good all such damage arising from the execution of this contract at his own expense to the satisfaction of the property owner/Client.	ITEM	1		
F	Allow for communication facilitation to supervision team (max.3) both hardware and data.	ITEM	1		
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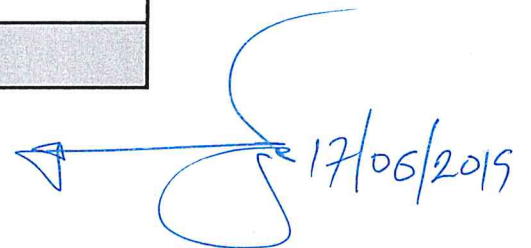
17/06/2019

ITEM NO	ITEM DESCRIPTION	UNIT	QTY	UNIT RATE	AMOUNT
A	Water and Electricity for the Works The Contractor shall provide, at his own risk and cost, all necessary water, electric light and power required for use on the Works.	ITEM	1		
B	National Construction Authority The National Construction Authority Regulations must be adhered to and relevant permits and registration of the project obtained by the contractor, supervision team and labourers be accredited and maintained at all times.	ITEM	1		
C	Upon award of the contract to the contractor, the client shall write an introduction letter to the relevant corporations and premises owners where the cable work will be executed and the Contractor will make his/her own arrangement on obtaining the relevant passes/permits of entry to KPA, KPLC, KENHA, Kenya Railway(SGR Mombasa Port), Kenya Police for his/her staff, vehicles etc, including obtaining other relevant permissions or notification to use there premises during the entire period of the contract.	ITEM	1		
D	Site Access and Safety Contractor shall make advance and adequate arrangement to notify the relevant clients i.e KPA, KPLC, KENHA, Kenya Railways(SGR service Provider at Mombasa Port), Kenya Police, etc of any work that will disrupts/slow down the free from of any traffic or any other activity(s) during the execution of the works. All workmen MUST be provided with safety boots/shoes, branded overall and helmets, safety gloves, masks etc	ITEM	1		
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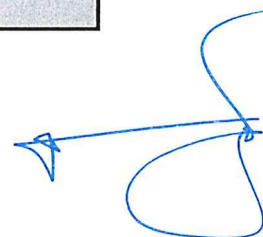
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ITEM NO	ITEM DESCRIPTION	UNIT	QTY	UNIT RATE	AMOUNT
A	Allow for disturbance and reinstatement of an existing 30.0m trapezoidal open storm water drain 2-1:1	ITEM	1		
B	Allow for removal of existing 20.0m gabion boxes along the cable route and cart way the debis.	ITEM	1		
C	Provide two layers of galvanized wire, mesh 60x80 mm, mesh wire size 2.5mm diameter salvedge wire 3.2mm dia. Each 1.0x1.0x1.0m of stone gabion basket for the disturb portion/area.	LM	20		
D	Supply and spread uniformly clean river sand in layers of 150mm thick on the trench bed to receive 11Kv cable and 150mm thick to cover the laid cable measured separately.	SM	675		
E	Backfill the cable trench with selected axcavated materials including watering, consolidation in layers of 150mm thick.	CM	810		
F	Dipose surplus excavated materials to designated damping site.	CM	338		
G	Supply and lay an approved precast concrete Danger Hatari slab inscrebed with "KPLC DANGER HATARI" on it top side at 600mm deep of the backfill from the top.	LM	900		
H	Allow for soil protection againt collapse after backfilling within the way-leave trace of the cable route, by providing natural stone pitching at various areas, bedded and jointed in cement and sand (1:3) mortar as directed by the engineer.	SM	50		
I	Excavate by micro-tunneling across the tarmac road on material for all classes to a depth not exceeding 1.5m deep, to a diameter not exceeding 250mm to receive 200mm diameter PVC ducts measured separately, including carting away the excavated material.	LM	30		
J	Ditto but on reinforced concrete road.	LM	10		
K	Supply and install 200mm diameter heavy duty PVC cable duct (class 41), including 150mm thick concrete (1:3:6) bed and surround to; and allowg for all necessary formwork at the edges extending beyond the road to the manholes.	LM	40		
PAGE TOTAL CARRIED TO SUMMARY PAGE					



 17/06/2015

ITEM NO	ITEM DESCRIPTION	UNIT	QTY	UNIT RATE	AMOUNT
A	Allow for plunking and strutting to sides of excavations to keep excavation free from fallen materials.	ITEM	1		
B	Allow for disposal of water to keep excavations free from all water by bailing, pumping or otherwise.	ITEM	1		
SECTION I - At Kipevu 33/11kv Substation					
C	Clear the site all under growth, small trees and the like, grap up their roots and burn the arising.	SM	75		
D	Excavate hard soil for cable trench of 0.75m wide commencing from ground level but not exceeding 1.5m deep.	CM	113		
E	Extra over excavation in rock	CM	75		
F	Supply and spread uniformly clean river sand in layers of 150mm thick on the trench bed to receive 11Kv cable and 150mm thick to cover the laid cable measured separately.	SM	75		
G	Backfill the cable trench with selected excavated materials and compact in 150mm thick layers.	CM	90		
H	Dipose surplus excavated material by removing from site to deginated damping site by the County Government.	CM	42		
SECTION II- Within Kenya Port Authority (KPA).					
I	Clear the site all under growth, trees and the like, grap up their roots and burn the arising	SM	1395		
J	Uproot tree stumps and cart away to deginated damping site by the County Government.	No	36		
K	Allow for clearing construction waste materials heaped on site to facilitate the excavation of cable trench.	Item	1		
L	Excavate for 0.75m wide cable trench on hard soil commencing from ground level but not exceeding 1.5m deep.	CM	1013		
M	Extra over excavation in rock (coral rock)	CM	675		
PAGE TOTAL CARRIED TO SUMMARY PAGE					


 17/06/2019

ITEM NO	ITEM DESCRIPTION	UNIT	QTY	UNIT RATE	AMOUNT
A	Construct 200mm thick natural stone manholes, size 1500x1500x1800mm deep internal dimensions including 150mm thick reinforced concrete cover with D10 reinforcement bar at 150 centres both ways, lifting handles, excavation, plucking, strutting, formwork, backfilling and carting away surplus excavated soil.	NO	4		
SECTION III - Within Restricted Mombasa SGR Railway Tracks.					
B	Clear the site all under growth, shrubs and the like, grap up their roots and burn the arising	SM	1500		
C	Excavate for cable trench of 0.75m wide commencing from ground level on compacted ground but not exceeding 1.5m deep.	CM	2250		
D	Extra over excavation in rock.	CM	1500		
E	Supply and spread uniformly clean river sand in layers of 150mm thick on the trench bed to receive 11Kv cable and 150mm thick to cover the laid cable measured separately.	SM	1500		
F	Backfill the cable trench with selected excavated material and compacted as instructed by the engineer in layers of 150mm thick.	CM	1800		
G	Dipose surplus excavated material by removing from site to deginated damping site by the County Government.	CM	450		
H	Micro Tunneling under reinforced concrete roads to receive 200mm diameter PVC ducts.	LM	20		
I	Supply and install 200mm diameter heavy duty PVC cable duct (class 41), including 150mm thick concrete (1:3:6) bed and surround to; and allow for all necessary formwork at the edges extending beyond the road to the manholes.	LM	20		
J	Construct 200mm thick natural stone manholes, size 1500x1500x1800mm deep internal dimensions including 150mm thick reinforced concrete cover with D10 reinforcement bar at 150 centres both ways, lifting handles, excavation, plucking, strutting, formwork, backfilling and carting away surplus excavated soil.	NO	2		
PAGE TOTAL CARRIED TO SUMMARY PAGE					

17/06/2019

ITEM NO	ITEM DESCRIPTION	UNIT	QTY	UNIT RATE	AMOUNT
A	Transport average 20Km, approx. 3200 metres of 300mm ² 3-core XLPE Allminium cable from KPLC Mbaraki stores in cable drums of approx.250m each to Section I at Kipevu Hill Top 33/11kv substation, Section II at KPA next to VVIT oil tanks, and Section III at SGR railtrack and provide security for the cable from the time is delivered to work spots/section, during laying and until it is fully commissioned/energized, including loading and off loading by crane and other equipment.	ITEM	1		
B	Lay 300mm ² three 3-core XLPE Allminium cable in the cable trench using an approved method including protection of the cable from kinks, scratches and any damage under the supevision of KPLC engineers.	LM	3200		
C	Supply and lay an approved precast concrete Danger Hatari slab inscribed on it tor surface; "KPLC DANGER HATARI"size; 600x250x50mm, coped at middle, curved head and end to interlock when laid at 600mm deep of the backfill from the top.	LM	3000		
	Ditto but cable route marker posts(size 600x300x5mm).	NO	180		
D	Reinstate to it original state the existing landscaping and ground pitching Chinese Contractor finish) and obtain the approval Kenya Railways from or it representative at the SGR port.	ITEM	1		
G	Allow for making good all the disturbed areas, damaged services, and such along the cable route to be reinstated to it original state approved by the services owners.	ITEM	1		
H	Allow for provision and installation of 300mm diameter precast concrete pipe culvert for crossing existing services and drains where appicable.	LM	20		
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 17/06/2019

ITEM NO	ITEM DESCRIPTION	UNIT	QTY	UNIT RATE	AMOUNT
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SUMMARY PAGE					
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	Carried from Page 7				
	SUB-TOTAL				
	ADD 16% VAT				
	TOTAL				

TOTAL CARRIED TO FORM OF TENDER

Amount in words:.....


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Company Stamp
Signed:

Name:

Address:

Contract Period: Weeks



 17/06/2019

