



COUNTY GOVERNMENT OF KIAMBU

LANDS, HOUSING, PHYSICAL PLANNING, MUNICIPAL, ADMINISTRATION AND URBAN DEVELOPMENT

SECOND KENYA INFORMAL SETTLEMENTS IMPROVEMENT PROJECT (KISIP 2)

CONSTRUCTION OF ROADS/FOOTPATHS & DRAINAGE SYSTEMS, WATER SUPPLY AND PUBLIC LIGHTING INFRASTRUCTURE WORKS IN SELECTED INFORMAL SETTLEMENTS OF UMOJA, AND KIANG'OMBE IN THIKA TOWN, GITAMBAYA/FORT JESUS IN RUIRU TOWN, BOSNIA/RIVERSIDE IN GITHURAI AND MISRI IN LIMURU ALL WITHIN KIAMBU COUNTY.

Val 3 of 3 - BILL OF QUANTITIES





	PREAMBLI	E TO THE Boo	l	

CONSTRUCTION OF INFRASTRUCTURE IMPROVEMENT WORKS IN SELECTED INFORMAL SETTLEMENTS IN KIAMBU COUNTY

	PREAMBLE TO THE BILLS OF QUANTITIES
1.0	The Bill of Quantities shall be read in conjunction with the Instructions to Bidders, General and Particular Conditions of Contract, Technical Specifications and Drawings.
2.0	The brief description of the items in the Bill of Quantities is purely for the purpose of identification, and in no way, modifies or supersedes the detailed descriptions given in the conditions of Contract and Specifications for the full direction and description of work and materials.
3.0	The quantities given in the Bill of Quantities are estimated and provisional and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work ordered and carried out, as measured by the Contractor and verified by the Engineer and valued at the rates and prices bid in the priced Bill of Quantities, where applicable, and otherwise at such rates and prices as the Engineer may fix within the terms of the Contract.
4.0	There is no guarantee to the Contractor that he will be required to carry out all the quantities of work indicated under any one particular item or group of items in the Bill of Quantities.
5.0	The price and rates entered in the Bill of Quantities shall, except insofar as it is otherwise provided under the Contract, include all constructional plant to be used, labour, insurance, supervision, compliance testing, materials, erection, maintenance of works, overheads and profits, taxes and duties together with all general risks, liabilities and obligations set out or implied in the Contract, transport, electricity and telephones, water, use and replenishment of all consumables, including those required under the Contract by the Engineer and his staff.
6.0	A rate or price shall be entered against each item in the priced Bill of Quantities, whether quantities are stated or not. The cost of Items against which the Contractor has failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities.
7.0	Any entry of "nil" or any other price or rate that shall render the Bid unresponsive in accordance with Clause 29 of the instructions to Bidders, unless deemed justifiably covered elsewhere in the Bills of Quantities, may lead to the entire Bid being rejected.
8.0	The whole cost of complying with the provisions of the Contract shall be included in the Items provided in the priced Bill of Quantities, and where no Items are provided, the cost shall be deemed to be distributed among the rates and prices entered for the related Items of Work.
9.0	General directions and descriptions of work and materials are not necessarily repeated or summarized in the Bill of Quantities. References to the relevant sections of the Contract documentation shall be made before entering prices against each item in the priced Bill of Quantities.

Bill of Quantities page1of208

CONSTRUCTION OF INFRASTRUCTURE IMPROVEMENT WORKS IN SELECTED INFORMAL SETTLEMENTS IN KIAMBU COUNTY

			nd in the Bill of Ou	antities shall be expend	led in whole or in part	at the direction			
10.0		included and so designate he Engineer in accordan			ontract.				
11.0		asurement of completed action of the Ministry of T			with Standard Specific	ation for Road			
12.0	"Authorised" "Dire	"Authorised" "Directed" or "Approved" shall mean the authority, direction or approval of the Engineer							
13.0	Unless otherwise stated, all measurements shall be net taken on the finished work carried out in accordance with the details shown on the drawings or instructed, with no allowance for extra cuts or fills, waste or additional thickness necessary to obtain the minimum finished thickness or dimensions required in this contract. Any work performed in excess of the requirements of the plans and Specifications will not be paid for, unless ordered in writing by the Engineer.								
14.0	Errors will be corre	ected by the Employer	for any arithmeti	c errors in computation	n or summation as follows	lows:			
	(a) where there	is a discrepancy betwe	een amounts in	figures and in words,	the amount in words	s will govern; and			
	price and the quant	s a discrepancy between tity, the unit rate as quot	ed will govern, u	nless in the opinion of t	he Employer, there is a	n obviously gross			
	will be corrected.	ne decimal point in the d	mit price, in which	event the total amount	as quoted will govern	and the unit rate			
15.0	will be corrected. (a) Hard material the use of metal we extracted by rippin	l, in this Contract, shall be edges and sledge hamme ng with a dozer tractor of han 0.2m ³ occurring in so	e defined as the ma ers, or the use of o at least 300 kilow	aterial which, in the opin com pressed air drilling att powers with a single	nion of the Engineer, re for their removal, and e, rear-mounted, hydra	equire blasting, or which cannot be			
15.0	will be corrected. (a) Hard material the use of metal we extracted by rippin Boulders of more the	l, in this Contract, shall be edges and sledge hammong with a dozer tractor of	e defined as the ma ers, or the use of o at least 300 kilow ft material shall be	aterial which, in the oping com pressed air drilling att powers with a single e classified as hard mate	nion of the Engineer, re for their removal, and e, rear-mounted, hydra	equire blasting, o which cannot be			
	will be corrected. (a) Hard material the use of metal we extracted by rippin Boulders of more the control of t	l, in this Contract, shall be edges and sledge hamme ng with a dozer tractor of han 0.2m ³ occurring in so	e defined as the ma ers, or the use of o at least 300 kilow ft material shall be than hard materia	aterial which, in the oping com pressed air drilling att powers with a single e classified as hard mate	nion of the Engineer, re for their removal, and e, rear-mounted, hydra	equire blasting, o which cannot be			
	will be corrected. (a) Hard material the use of metal we extracted by rippin Boulders of more the contractor shall be contractor shall be contractor.	l, in this Contract, shall be edges and sledge hamme ng with a dozer tractor of han 0.2m ³ occurring in so shall be all material other	e defined as the ma ers, or the use of o at least 300 kilow ft material shall be than hard material s due in respect o	aterial which, in the oping com pressed air drilling att powers with a single e classified as hard mate al.	nion of the Engineer, refor their removal, and e, rear-mounted, hydra	equire blasting, or which cannot be ulic ripper.			
	will be corrected. (a) Hard material the use of metal we extracted by rippin Boulders of more the contractor shall be a contractor	l, in this Contract, shall be edges and sledge hammeng with a dozer tractor of than 0.2m ³ occurring in so shall be all material other all be entitled to payment	e defined as the maters, or the use of of at least 300 kilow ft material shall be than hard materials due in respect on the rental rates e	esterial which, in the opin com pressed air drilling att powers with a single e classified as hard mate al. f: -	nion of the Engineer, refor their removal, and e, rear-mounted, hydra rial	equire blasting, or which cannot be ulic ripper.			
16.0	will be corrected. (a) Hard material the use of metal we extracted by rippin Boulders of more the contractor shall be a contractor	I, in this Contract, shall be edges and sledge hammed go with a dozer tractor of han 0.2m ³ occurring in so shall be all material other all be entitled to payment byed on Daywork basis of finary) employed on daywon daywork at the rates als."	e defined as the maters, or the use of of at least 300 kilow ft material shall be than hard materials due in respect on the rental rates evork basis at the rentered by him in	esterial which, in the opin from pressed air drilling att powers with a single e classified as hard mate al. fr: - entered by him in the "so ates entered by him in the	nion of the Engineer, refor their removal, and e, rear-mounted, hydra rial chedule of Dayworks: F	equire blasting, or which cannot be ulic ripper.			
16.0	will be corrected. (a) Hard material the use of metal we extracted by rippin Boulders of more the contractor shall be a contractor	I, in this Contract, shall be edges and sledge hammed gwith a dozer tractor of than 0.2m ³ occurring in so shall be all material other all be entitled to payment byed on Daywork basis of the formal of the payment of the payment and Abbreviations upon the payment and payme	e defined as the maters, or the use of of at least 300 kilow ft material shall be than hard materials due in respect on the rental rates evork basis at the rentered by him in sed herein shall has	exterial which, in the opin from pressed air drilling att powers with a single exclassified as hard mate al. fr: - entered by him in the "so ates entered by him in the the "Schedule of	nion of the Engineer, refor their removal, and e, rear-mounted, hydra rial chedule of Dayworks: Fine "Schedule of Dayworks ings;	equire blasting, or which cannot be ulic ripper.			
16.0	will be corrected. (a) Hard material the use of metal we extracted by rippin Boulders of more the contractor shall be a contractor	I, in this Contract, shall be edges and sledge hammed with a dozer tractor of than 0.2m ³ occurring in so shall be all material other all be entitled to payment byed on Daywork basis of that of the edge of the	e defined as the maters, or the use of of at least 300 kilow ft material shall be than hard materials due in respect on the rental rates envork basis at the rentered by him in seed herein shall had Abbreviation	aterial which, in the opin com pressed air drilling att powers with a single e classified as hard mate al. f: - entered by him in the "so ates entered by him in the the "Schedule of ave the following meaning	nion of the Engineer, refor their removal, and e, rear-mounted, hydratrial chedule of Dayworks: Fine "Schedule of Dayworks: Abbreviation	equire blasting, or which cannot be ulic ripper.			
16.0	will be corrected. (a) Hard material the use of metal we extracted by rippin Boulders of more the contractor shall be a contractor	I, in this Contract, shall be edges and sledge hammed gwith a dozer tractor of han 0.2m ³ occurring in so shall be all material other all be entitled to payment byed on Daywork basis or mary) employed on daywon daywork at the rates als". Lent and Abbreviations until the company of the com	e defined as the maters, or the use of of at least 300 kilow ft material shall be than hard materials due in respect on the rental rates every basis at the rentered by him in sed herein shall had Abbreviation m ³	exterial which, in the opin from pressed air drilling att powers with a single exclassified as hard mate al. fr: - entered by him in the "so ates entered by him in the the "Schedule of	nion of the Engineer, refor their removal, and e, rear-mounted, hydra rial chedule of Dayworks: Fine "Schedule of Dayworks ings;	equire blasting, or which cannot be ulic ripper.			
16.0	will be corrected. (a) Hard material the use of metal we extracted by rippin Boulders of more the contractor shall be a contractor	I, in this Contract, shall be edges and sledge hammed with a dozer tractor of than 0.2m ³ occurring in so shall be all material other all be entitled to payment byed on Daywork basis of that of the edge of the	e defined as the maters, or the use of of at least 300 kilow ft material shall be than hard materials due in respect on the rental rates envork basis at the rentered by him in seed herein shall had Abbreviation	aterial which, in the opinition pressed air drilling att powers with a single e classified as hard material. If: - Intered by him in the "sometes entered	nion of the Engineer, refor their removal, and e, rear-mounted, hydradial chedule of Dayworks: Finds; Abbreviation mm	equire blasting, or which cannot be ulic ripper.			
16.0	will be corrected. (a) Hard material the use of metal we extracted by rippin Boulders of more the contractor shall be a contractor	I, in this Contract, shall be edges and sledge hammed gwith a dozer tractor of han 0.2m ³ occurring in so shall be all material other all be entitled to payment byed on Daywork basis of mary) employed on daywon daywork at the rates of als". In and Abbreviations under the cubic meter Hectare	e defined as the maters, or the use of of at least 300 kilow ft material shall be than hard materials due in respect on the rental rates every basis at the rentered by him in seed herein shall had abbreviation m ³ ha	aterial which, in the opinion pressed air drilling att powers with a single classified as hard material. If: - Intered by him in the "so ates entered by him in the "schedule of ave the following meaning Unit Millimeter Month	nion of the Engineer, refor their removal, and e, rear-mounted, hydrawial chedule of Dayworks: Fine "Schedule of Dayworks: Abbreviation mm mth	equire blasting, or which cannot be ulic ripper.			
16.0	will be corrected. (a) Hard material the use of metal we extracted by rippin Boulders of more the contractor shall be a contractor	I, in this Contract, shall be edges and sledge hammed gwith a dozer tractor of than 0.2m ³ occurring in so shall be all material other all be entitled to payment byed on Daywork basis of the following on daywork at the rates als." I would be all material other all be entitled to payment by the contract of the payment by the contract of the contra	e defined as the maters, or the use of of at least 300 kilow ft material shall be than hard materials due in respect on the rental rates every basis at the rentered by him in seed herein shall had been made in the material shall be the material shall b	exterial which, in the opinition pressed air drilling att powers with a single exclassified as hard material. If: - Intered by him in the "so the "Schedule of the following meaning unit Millimeter Month Number	nion of the Engineer, refor their removal, and e, rear-mounted, hydrawrial chedule of Dayworks: Fine "Schedule of Dayworks: Abbreviation mm mth No.	equire blasting, or which cannot be ulic ripper.			
16.0	will be corrected. (a) Hard material the use of metal we extracted by rippin Boulders of more the contractor shall be a contractor	I, in this Contract, shall be edges and sledge hammed by with a dozer tractor of than 0.2m ³ occurring in so shall be all material other all be entitled to payment by by and on Daywork basis of the entitled to payment by also on daywork at the rates also. In and Abbreviations upon the entitled to payment by the ent	e defined as the maters, or the use of of at least 300 kilow ft material shall be than hard materials due in respect on the rental rates every basis at the respect by him in seed herein shall have a horeviation m ³ ha hr kg	aterial which, in the opinion pressed air drilling att powers with a single classified as hard material. If: - Intered by him in the "so ates entered by him in the "so ates entered by him in the "so ates entered by him in the "Schedule of ave the following meaning Unit Millimeter Month Number Provisional sum	nion of the Engineer, refor their removal, and e, rear-mounted, hydrawrial chedule of Dayworks: Find the "Schedule of Dayworks" Abbreviation mm mth No. P.S.	equire blasting, or which cannot be ulic ripper.			
16.0	will be corrected. (a) Hard material the use of metal we extracted by rippin Boulders of more the contractor shall be a contractor	I, in this Contract, shall be edges and sledge hammed and with a dozer tractor of than 0.2m³ occurring in so shall be all material other all be entitled to payment by on Daywork basis or sinary) employed on daywork at the rates als". The track of the contract of the co	e defined as the maters, or the use of of at least 300 kilow ft material shall be than hard materials due in respect on the rental rates every basis at the rentered by him in sed herein shall had been above that had been above the materials at the rentered by him in sed herein shall had been above the herein shall be	aterial which, in the opinicom pressed air drilling att powers with a single e classified as hard material. If: - Intered by him in the "sometimes entered by him in	inion of the Engineer, refor their removal, and e, rear-mounted, hydractial chedule of Dayworks: Find the "Schedule of Dayworks of Daywor	equire blasting, or which cannot be ulic ripper.			

Bill of Quantities page2of208

			_
	GRAND SL	JMMARY	

CONSTRUCTION OF INFRASTRUCTURE IMPROVEMENT WORKS IN SELECTED INFORMAL SETTLEMENTS IN KIAMBU COUNTY

COUNTY GOVERNMENT OF KIAMBU COUNTY DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT KENYA INFORMAL SETTLEMENT IMPROVEMENT PROJECT, PHASE 2 PROPOSED CONSTRUCTION OF ROADS FOR KIAMBU COUNTY SETTLEMENTS

BILLS OF QUANTITIES GRAND SUMMARY

BILL No.	ITEM DESCRIPTION	AMOUNT (KES)
1	Preliminary & General Items	
2	Kiangombe Roads - Thika	
3	Misri Roads - Limuru	
4	Riverside - Githurai	
5	Umoja Roads - Thika	
6	Fort Jesus Roads -Ruiru	
7	Kiambu County Settlement Street Lighting	
8	Dayworks	
9	Environmental and Social Safeguards	
Α	SUB -TOTAL 1	
В	Add the sum of 10% of sub-total 1 for	
В	contingencies	
С	SUB -TOTAL 2 (A+B)	
D	16% VAT	
E	GRAND TOTAL (C+D)	

RUIRU T	OWN, BOSI	NIA/RIVERSI	DE IN GITHI	URAI AND MI	SRI IN LIMURI	J ALL WITHIN	N, GITAMBAYA/FO KIAMBU COUNTY	<u>. </u>
	SERI	AL No.1:	PRELIM	INARIES	AND GEN	ERAL ITEI	ZM	

CONSTRUCTION OF INFRASTRUCTURE IMPROVEMENT WORKS IN SELECTED INFORMAL SETTLEMENTS IN KIAMBU COUNTY

appointment of Dispute Avoidance/Adjudication Board (DAAB) in accordance with GCC/PCC Clause 23 and Clause 24 1.08 Add Contractor's profits and overheads on Item 1.07 % 1,000,000.00 SPECIFIED REQUIREMENTS Offices for the Engineer's staff 1.11 Prime Cost Sum for leasing offices for Engineer's supervision staff, including provision of furniture, equipment and consumables for entire duation of the Contract, in accordance with the General and Special Specifications Clause 132. 1.12 Add Contractor's profits and overheads on Item 1.11 % 2,000,000.00 Services for the Engineer's staff Employer's Conterpart Staff Costs 1.13 Prime Cost Sum for costs of the Employer's counterpart staff assigned to the Project including transport, communication, meeting allowances, etc. as instructed by the Engineer, to rever to Engineer's Staff 1.14 Add Contractor's profits and overheads on Item 1.13 % 2,000,000.00 Equipment for use by the Engineer's Staff 1.15 Prime Cost Sum for provision of Survey Equipment as specified in the Standard and Special Specifications Clause 132, for exclusive use by the Engineer, to revert to Employer at end of the Contract. 1.16 Add Contractor's profits and overheads on Item 1.15 % 1,440,000.00 Testing of Materials	ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
1.01 Provision of Performance Security in accordance with GCC Clause 52.1 L Sum 1		CONTRACTUAL REQUIREMENTS				
(FIDIC 1999) (FIDI		Perfomance Securities and Insurances				
GCC Clause 13.1 (a) Provision of Insurance of Contractor's Equipment in accordance with GCC Clause 13.1 (b) Provision of Third Party Insurance in accordance with GCC Clause 13.1 (c) Provision of Third Party Insurance in accordance with GCC Clause 13.1 (c) Provision of Insurance of Contractor's Personnel in accordance GCC Clause 13.1 (d) Dispute Adjudication/Avoidance Board 1.07 Prime Cost Sum for Employer's contribution towards fees and expenses for appointment of Dispute Avoidance/Adjudication Board (DAAB) in accordance with GCC/PCC Clause 23 and Clause 24 1.08 Add Contractor's profits and overheads on Item 1.07 **SPECIFIED REQUIREMENTS** Offices for the Engineer's staff 1.11 Prime Cost Sum for leasing offices for Engineer's supervision staff, including provision of furniture, equipment and consumables for entire duation of the Contract, in accordance with the General and Special Specifications Clause 132. 1.12 Add Contractor's profits and overheads on Item 1.11 **Services for the Engineer's staff** **Employer's Conterpart Staff Costs** 1.13 Prime Cost Sum for costs of the Employer's counterpart staff assigned to the Project including transport, communication, meeting allowances, etc. as instructed by the Engineer. 1.14 Add Contractor's profits and overheads on Item 1.13 **Equipment for use by the Engineer's Staff** 1.15 Prime Cost Sum for provision of Survey Equipment as specified in the Standard and Special Specifications Clause 132, for exclusive use by the Engineer, to rever to Employer at end of the Contract. 1.16 Add Contractor's profits and overheads on Item 1.15 **Testing of Materials** 1.17 Provisional Sum for testing of materials as instructed by the Engineer in approved independent testing laboratory 1.17 Provisional Sum for testing of materials as instructed by the Engineer in approved independent testing laboratory	1.01	(FIDIC 1999)	L Sum	1		
Clause 13.1 (b) Provision of Third Party Insurance in accordance with GCC Clause 13.1 (c) Provision of Third Party Insurance in accordance With GCC Clause 13.1 (c) Provision of Insurance of Contractor's Personnel in accordance GCC Clause 13.1 (d) Dispute Adjudication/Avoidance Board Prime Cost Sum for Employer's contribution towards fees and expenses for appointment of Dispute Avoidance/Adjudication Board (DAAB) in accordance with GCC/PCC Clause 23 and Clause 24 Add Contractor's profits and overheads on Item 1.07 SPECIFIED REQUIREMENTS Offices for the Engineer's staff Prime Cost Sum for leasing offices for Engineer's supervision staff, including provision of furniture, equipment and consumables for entire duation of the Contract, in accordance with the General and Special Specifications Clause 132. 1.12 Add Contractor's profits and overheads on Item 1.11 Services for the Engineer's staff Employer's Conterpart Staff Costs Prime Cost Sum for costs of the Employer's counterpart staff assigned to the Project including transport, communication, meeting allowances, etc. as instructed by the Engineer. Add Contractor's profits and overheads on Item 1.13 Sequipment for use by the Engineer's Staff Prime Cost Sum for provision of Survey Equipment as specified in the Standard and Special Specifications Clause 132, for exclusive use by the Engineer, to rever to Employer at end of the Contract. Add Contractor's profits and overheads on Item 1.15 Standard and Special Specifications Clause 132, for exclusive use by the Engineer, to rever to Employer at end of the Contract. Add Contractor's profits and overheads on Item 1.15 Standard and Special Specifications Clause 132, for exclusive use by the Engineer, to rever to Employer at end of the Contract. Add Contractor's profits and overheads on Item 1.15 Standard and Special Specifications Clause 132, for exclusive use by the Engineer, to rever to Employer at end of the Contract. Add Contractor's profits and overheads on Item 1.15 Sequipment for use by the Engineer and ot	1.02	GCC Clause 13.1 (a)	L Sum	1		
1.06 Provision of Insurance of Contractor's Personnel in accordance GCC Clause 13.1 (d) Dispute Adjudication/Avoidance Board Prime Cost Sum for Employer's contribution towards fees and expenses for appointment of Dispute Avoidance/Adjudication Board (DAAB) in accordance with GCC/PCC Clause 23 and Clause 24 Add Contractor's profits and overheads on Item 1.07 SPECIFIED REQUIREMENTS Offices for the Engineer's staff Prime Cost Sum for leasing offices for Engineer's supervision staff, including provision of furniture, equipment and consumables for entire duation of the Contract, in accordance with the General and Special Specifications Clause 13.2. 1.12 Add Contractor's profits and overheads on Item 1.11 Services for the Engineer's staff Employer's Conterpart Staff Costs Prime Cost Sum for costs of the Employer's counterpart staff assigned to the Project including transport, communication, meeting allowances, etc. as instructed by the Engineer. Add Contractor's profits and overheads on Item 1.13 ### Quipment for use by the Engineer's Staff Prime Cost Sum for provision of Survey Equipment as specified in the Standard and Special Specifications Clause 132, for exclusive use by the Engineer, to revert to Employer at end of the Contract. Add Contractor's profits and overheads on Item 1.15 **Prime Cost Sum for provision of Survey Equipment as specified in the Standard and Special Specifications Clause 132, for exclusive use by the Engineer, to revert to Employer at end of the Contract. Add Contractor's profits and overheads on Item 1.15 **Prime Cost Sum for provision of Materials as instructed by the Engineer in approved independent testing laboratory Prov Sum 1 2,000,000.00 2	1.04	Clause 13.1 (b)	L Sum	1		
13.1 (d) Dispute Adjudication/Avoidance Board 1.07 Piero Cost Sum for Employer's contribution towards fees and expenses for appointment of Dispute Avoidance/Adjudication Board (DAAB) in accordance with GCC/PCC Clause 23 and Clause 24 1.08 Add Contractor's profits and overheads on Item 1.07 % 1,000,000.00 SPECIFIED REQUIREMENTS Offices for the Engineer's staff 1.11 Prime Cost Sum for leasing offices for Engineer's supervision staff, including provision of furniture, equipment and consumables for entire duation of the Contract, in accordance with the General and Special Specifications Clause 132. 1.12 Add Contractor's profits and overheads on Item 1.11 % 2,000,000.00 Services for the Engineer's staff Employer's Conterpart Staff Costs 1.13 Prime Cost Sum for costs of the Employer's counterpart staff assigned to the Project including transport, communication, meeting allowances, etc. as instructed by the Engineer. 1.14 Add Contractor's profits and overheads on Item 1.13 % 2,000,000.00 Equipment for use by the Engineer's Staff 1.15 Prime Cost Sum for provision of Survey Equipment as specified in the Standard and Special Specifications Clause 132, for exclusive use by the Engineer, to revert to Employer at end of the Contract. 1.16 Add Contractor's profits and overheads on Item 1.15 % 1,440,000.00 Testing of Materials 1.17 Provisional Sum for testing of materials as instructed by the Engineer in approved independent testing laboratory	1.05	Provision of Third Party Insurance in accordance with GCC Clause 13.1 (c)	L Sum	1		
1.07 Prime Cost Sum for Employer's contribution towards fees and expenses for appointment of Dispute Avoidance/Adjudication Board (DAAB) in accordance with GCC/PCC Clause 23 and Clause 24 1.08 Add Contractor's profits and overheads on Item 1.07 SPECIFIED REQUIREMENTS Offices for the Engineer's staff 1.11 Prime Cost Sum for leasing offices for Engineer's supervision staff, including provision of furniture, equipment and consumables for entire duation of the Contract, in accordance with the General and Special Specifications Clause 132. 1.12 Add Contractor's profits and overheads on Item 1.11 Services for the Engineer's staff Employer's Conterpart Staff Costs 1.13 Prime Cost Sum for costs of the Employer's counterpart staff assigned to the Project including transport, communication, meeting allowances, etc. as instructed by the Engineer. 1.14 Add Contractor's profits and overheads on Item 1.13 Sequipment for use by the Engineer's Staff Prime Cost Sum for provision of Surrivey Equipment as specified in the Standard and Special Specifications Clause 132, for exclusive use by the Engineer, to revert to Employer at end of the Contract. Add Contractor's profits and overheads on Item 1.15 Testing of Materials 1.17 Provisional Sum for testing of materials as instructed by the Engineer in approved independent testing laboratory	1.06		L Sum	1		
appointment of Dispute Avoidance/Adjudication Board (DAAB) in accordance with GCC/PCC Clause 23 and Clause 24 1.08 Add Contractor's profits and overheads on Item 1.07 SPECIFIED REQUIREMENTS Offices for the Engineer's staff 1.11 Prime Cost Sum for leasing offices for Engineer's supervision staff, including provision of furniture, equipment and consumables for entire duation of the Contract, in accordance with the General and Special Specifications Clause 132. 1.12 Add Contractor's profits and overheads on Item 1.11 Services for the Engineer's staff Employer's Conterpart Staff Costs 1.13 Prime Cost Sum for costs of the Employer's counterpart staff assigned to the Project including transport, communication, meeting allowances, etc. as instructed by the Engineer. 1.14 Add Contractor's profits and overheads on Item 1.13 Add Contractor's profits and overheads on Item 1.13 Add Contractor's profits and overheads on Item 1.13 Prime Cost Sum for provision of Survey Equipment as specified in the Standard and Special Specifications Clause 132, for exclusive use by the Engineer, to revert to Employer at end of the Contract. Add Contractor's profits and overheads on Item 1.15 Provisional Sum for testing of materials as instructed by the Engineer in approved independent testing laboratory Prov Sum for Prov Sum for testing of materials as instructed by the Engineer in approved independent testing laboratory		Dispute Adjudication/Avoidance Board				
SPECIFIED REQUIREMENTS Offices for the Engineer's staff 1.11 Prime Cost Sum for leasing offices for Engineer's supervision staff, including provision of furniture, equipment and consumables for entire duation of the Contract, in accordance with the General and Special Specifications Clause 132. 1.12 Add Contractor's profits and overheads on Item 1.11 % 2,000,000.00 Services for the Engineer's staff Employer's Conterpart Staff Costs 1.13 Prime Cost Sum for costs of the Employer's counterpart staff assigned to the Project including transport, communication, meeting allowances, etc. as instructed by the Engineer staff over the Engineer's Staff 1.14 Add Contractor's profits and overheads on Item 1.13 % 2,000,000.00 Equipment for use by the Engineer's Staff 1.15 Prime Cost Sum for provision of Survey Equipment as specified in the Standard and Special Specifications Clause 132, for exclusive use by the Engineer, to revert to Employer at end of the Contract. 1.16 Add Contractor's profits and overheads on Item 1.15 % 1,440,000.00 Testing of Materials 1.17 Provisional Sum for testing of materials as instructed by the Engineer in approved independent testing laboratory PC Sum 1 1,440,000.00 2,000,000.00 1,440,000.00 2,000,000.00 2,000,000.00 2,000,000.00 2,000,000.00 2,000,000.00 2,000,000.00 2,000,000.00 2,000,000.00 2,000,000.00 2,000,000.00 2,000,000.00 2,000,000.00 2,000,000.00 2,000,000.00 2,000,000.00 2,000,000.00 2,000,000.00 2,000,000.00	1.07	appointment of Dispute Avoidance/Adjudication Board (DAAB) in accordance	PC Sum	1	1,000,000.00	1,000,000.00
Offices for the Engineer's staff 1.11 Prime Cost Sum for leasing offices for Engineer's supervision staff, including provision of furniture, equipment and consumables for entire duation of the Contract, in accordance with the General and Special Specifications Clause 132. 1.12 Add Contractor's profits and overheads on Item 1.11	1.08	Add Contractor's profits and overheads on Item 1.07	%	1,000,000.00		
Prime Cost Sum for leasing offices for Engineer's supervision staff, including provision of furniture, equipment and consumables for entire duation of the Contract, in accordance with the General and Special Specifications Clause 132. 1.12 Add Contractor's profits and overheads on Item 1.11 % 2,000,000.00 Services for the Engineer's staff Employer's Conterpart Staff Costs 1.13 Prime Cost Sum for costs of the Employer's counterpart staff assigned to the Project including transport, communication, meeting allowances, etc. as instructed by the Engineer. 1.14 Add Contractor's profits and overheads on Item 1.13 % 2,000,000.00 Equipment for use by the Engineer's Staff 1.15 Prime Cost Sum for provision of Survey Equipment as specified in the Standard and Special Specifications Clause 132, for exclusive use by the Engineer, to revert to Employer at end of the Contract. 1.16 Add Contractor's profits and overheads on Item 1.15 % 1,440,000.00 Testing of Materials 1.17 Provisional Sum for testing of materials as instructed by the Engineer in approved independent testing laboratory PC Sum 1 2,000,000.00 2,000,000.00 1 1,440,000.00 1 2,000,000.00 2,000,000.00 2,000,000.00 2,000,000.00 2,000,000.00 2,000,000.00 2,000,000.00 2,000,000.00		SPECIFIED REQUIREMENTS				
provision of furniture, equipment and consumables for entire duation of the Contract, in accordance with the General and Special Specifications Clause 132. 1.12 Add Contractor's profits and overheads on Item 1.11		Offices for the Engineer's staff				
Services for the Engineer's staff Employer's Conterpart Staff Costs 1.13 Prime Cost Sum for costs of the Employer's counterpart staff assigned to the Project including transport, communication, meeting allowances, etc. as instructed by the Engineer. 1.14 Add Contractor's profits and overheads on Item 1.13 % 2,000,000.00 Equipment for use by the Engineer's Staff 1.15 Prime Cost Sum for provision of Survey Equipment as specified in the Standard and Special Specifications Clause 132, for exclusive use by the Engineer, to revert to Employer at end of the Contract. 1.16 Add Contractor's profits and overheads on Item 1.15 % 1,440,000.00 Testing of Materials 1.17 Provisional Sum for testing of materials as instructed by the Engineer in approved independent testing laboratory	1.11	provision of furniture, equipment and consumables for entire duation of the Contract, in accordance with the General and Special Specifications Clause	PC Sum	1	2,000,000.00	2,000,000.00
Employer's Conterpart Staff Costs 1.13 Prime Cost Sum for costs of the Employer's counterpart staff assigned to the Project including transport, communication, meeting allowances, etc. as instructed by the Engineer. 1.14 Add Contractor's profits and overheads on Item 1.13 % 2,000,000.00 Equipment for use by the Engineer's Staff 1.15 Prime Cost Sum for provision of Survey Equipment as specified in the Standard and Special Specifications Clause 132, for exclusive use by the Engineer, to revert to Employer at end of the Contract. 1.16 Add Contractor's profits and overheads on Item 1.15 % 1,440,000.00 Testing of Materials 1.17 Provisional Sum for testing of materials as instructed by the Engineer in approved independent testing laboratory	1.12	Add Contractor's profits and overheads on Item 1.11	%	2,000,000.00		
Prime Cost Sum for costs of the Employer's counterpart staff assigned to the Project including transport, communication, meeting allowances, etc. as instructed by the Engineer. 1.14 Add Contractor's profits and overheads on Item 1.13 % 2,000,000.00 Equipment for use by the Engineer's Staff 1.15 Prime Cost Sum for provision of Survey Equipment as specified in the Standard and Special Specifications Clause 132, for exclusive use by the Engineer, to revert to Employer at end of the Contract. 1.16 Add Contractor's profits and overheads on Item 1.15 % 1,440,000.00 Testing of Materials 1.17 Provisional Sum for testing of materials as instructed by the Engineer in approved independent testing laboratory		Services for the Engineer's staff				
Project including transport, communication, meeting allowances, etc. as instructed by the Engineer. 1.14 Add Contractor's profits and overheads on Item 1.13 % 2,000,000.00 Equipment for use by the Engineer's Staff Prime Cost Sum for provision of Survey Equipment as specified in the Standard and Special Specifications Clause 132, for exclusive use by the Engineer, to revert to Employer at end of the Contract. 1.16 Add Contractor's profits and overheads on Item 1.15 % 1,440,000.00 Testing of Materials 1.17 Provisional Sum for testing of materials as instructed by the Engineer in approved independent testing laboratory Prov Sum 1 2,000,000.00 2,000,000.00		Employer's Conterpart Staff Costs				
Equipment for use by the Engineer's Staff 1.15 Prime Cost Sum for provision of Survey Equipment as specified in the Standard and Special Specifications Clause 132, for exclusive use by the Engineer, to revert to Employer at end of the Contract. 1.16 Add Contractor's profits and overheads on Item 1.15 % 1,440,000.00 Testing of Materials 1.17 Provisional Sum for testing of materials as instructed by the Engineer in approved independent testing laboratory Prov Sum 1 2,000,000.00 2,000,000.00	1.13	Project including transport, communication, meeting allowances, etc. as	PC Sum	1	2,000,000.00	2,000,000.00
Prime Cost Sum for provision of Survey Equipment as specified in the Standard and Special Specifications Clause 132, for exclusive use by the Engineer, to revert to Employer at end of the Contract. 1.16 Add Contractor's profits and overheads on Item 1.15 Testing of Materials 1.17 Provisional Sum for testing of materials as instructed by the Engineer in approved independent testing laboratory PC Sum 1 1,440,000.00 1,440,000.00 1,440,000.00 2,000,000.00 2,000,000.00	1.14	Add Contractor's profits and overheads on Item 1.13	%	2,000,000.00		
Standard and Special Specifications Clause 132, for exclusive use by the Engineer, to revert to Employer at end of the Contract. 1.16 Add Contractor's profits and overheads on Item 1.15 % 1,440,000.00 Testing of Materials 1.17 Provisional Sum for testing of materials as instructed by the Engineer in approved independent testing laboratory Prov Sum 1 2,000,000.00 2,000,000.00		Equipment for use by the Engineer's Staff				
1.16 Add Contractor's profits and overheads on Item 1.15 % 1,440,000.00 Testing of Materials 1.17 Provisional Sum for testing of materials as instructed by the Engineer in approved independent testing laboratory Prov Sum 1 2,000,000.00 2,000,000.00	1.15	Standard and Special Specifications Clause 132, for exclusive use by the	PC Sum	1	1,440,000.00	1,440,000.00
1.17 Provisional Sum for testing of materials as instructed by the Engineer in approved independent testing laboratory Prov Sum 1 2,000,000.00 2,000,000.00	1.16		%	1,440,000.00		
approved independent testing laboratory		Testing of Materials				
1.18 Add Contractor's profits and overheads on Item 1.17 % 2,000,000.00	1.17		Prov Sum	1	2,000,000.00	2,000,000.00
	1.18	Add Contractor's profits and overheads on Item 1.17	%	2,000,000.00		

Bill of Quantities Page 4 of 208

CONSTRUCTION OF INFRASTRUCTURE IMPROVEMENT WORKS IN SELECTED INFORMAL SETTLEMENTS IN KIAMBU COUNTY

ITE: 4	DECODIATION		01144	DATE (KC)	ABAQUET (1/6)
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KShs)	AMOUNT (KShs
	Conseile building for Fundaments Otoff				
4.40	Capacity building for Employer's Staff				
1.19	Prime Cost Sum for capacity building efforts for skills and knowledge transfer to Employer's staff during construction, testing and commissioning of the Works in accordance with the Special Specifications Clause 144.	PC Sum	1	2,000,000.00	2,000,000.00
1.20	Add Contractor's profits and overheads on Item 1.19	%	2,000,000.00		
	Project Sign Boards				
1.21	Provision, erection and maintenance of Project Sign Boards at locations instructed by the Engineer in accordance with the Standard Special Specifications Clause 131 and the Drawings - FINAL WORDING ON THE SIGN BOARD TO BE DECIDED IN CONSULTATION WITH THE EMPLOYER. The rate quoted by the Contractor to include for payment of all statutory charges to the relevant Authority and removal after completion of the Project.	No.	5		
	Progress Reports and Photographs, "As Built" Drawings and O&M Manuals				
1.22	Provision of monthly progress reports and photographs in accordance with the GCC Clause 28 and the Standard and Special Specifications Clause 106, Clause 115 and Clause 130.	L Sum	1		
1.23	Provision of "As Built" Drawings and Operating and Maintenance Manuals in accordance with the GCC Clause 58 and the Standard and Special Specifications Clause 106 and Clause 115.	L Sum	1		
	METHOD-RELATED CHARGES				
	Contractor's Camp, Offices, and other fcailities and services				
1.31	Mobilisation, operation and maintainance of Contractor's camps, offices, laboratories, stores, services and plant, and Temporary Works, for execution of the Works for the entire Contract Period, and demobilisation and necessary reinstatement works upon Completion, all in accordance with the Specifications and General Conditions. The Employer has no available land to offer for the above. Identification and procurement of suitable area of land, whether rented or purchased, is the responsibility of the Contractor. Contractor to provide in his bid cost breakdown for (i) the mobilisation, (ii) the operation and maintenance, (iii) the demobilisation and (iv) the reinstatement works for each of the camps, offices, laboratories, stores, services, plant and Temorary Works.	L Sum	1		
	PROVISIONAL SUMS				
	Supplementary Charges				
1.41	Provisional Sum for payments demanded by the Authorities for relocation / diverson of existing services (water, sewer, power, telecom etc.) in accordance with the General and Special Specifications Clause 121.	Prov Sum	1	2,000,000.00	2,000,000.00
1.42	Add Contractor's profits and overheads on Item 1.41	%	2,000,000.00		
	Other Provisional Sums				
1.43	The Contractor shall describe in detail hereunder other items of works, obligations or things which may be referred to in the Specifications or which he may consider to have been omitted from the Bills of Quantities and for which he desires to enter a separate charge (the charge to be carried direct to the amount column). If no separate charge is made hereunder, the rates in the Bills of Quantities will be held as covering all expenses for all such Works.	L Sum	1		

Bill of Quantities Page 5 of 208

CONSTRUCTION OF INFRASTRUCTURE IMPROVEMENT WORKS IN SELECTED INFORMAL SETTLEMENTS IN KIAMBU COUNTY

	BILL No.1: PRELIMINARIES AND GENERAL		
S/NO	Page Particulars		Amount
1	Page 1 of 2 Totals		
2	Page 2 of 2 Totals		
	BILL 1 TOTAL CARRIED TO SUMMARY		

Bill of Quantities Page 6 of 208

SERIAL No.2	: KIANG'OMBE S	SETTLEMENT - TH	HIKA

NFORMAL SETTLEMENTS BOSNIA/RIVERSI	S OF UMOJA AND KIANG' IDE IN GITHURAI AND MIS	RI IN LIMURU ALL WITHIN K	AMBAYA/FORT JESUS IN RUIRU IAMBU COUNTY.
	KIANG'OM!	BE ROAD 01	

Kiang'ombe-R01 - Thika page7of208

KIA			KYA-RD 01		
KIA			50.4.0		
KIA			50 A.C		
KIA			150 Stone Base		
KIA			150 Gravel Subbase		
KIA			300 Sub Grade Material		
KIA			(0.637km)		
	ANG'OMBE ROAD 01 (KYA-RD 01)-0.637 KM				
DILL NO OA CIT	TE CLEADANCE AND TODGOU CTRIPPING				
	TE CLEARANCE AND TOPSOIL STRIPPING				
Kia	ambu County- Kiang'ombe Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
uni No ado dec	OTE: All costs and charges connected with haulage are to be included within the nit rates entered by tenderers against the items described in this Bill of Quantities. It is separate items for overhaul are included in any section of this Bill and no elditional payment whatsoever will be made for haulage. Tenderers are therefore seemed to have included, in the unit rates entered against an item, for all costs and larges associated with haulage.				
Site	te Clearance				
inc ma	earing existing road of all trees, vegetation, debris and rubbish of any nature; cluding the grubbing of stumps and roots and the disposal from the area of all spoil aterials resulting from clearing and grubbing all in accordance with the ecifications.	m²	4,459.00		
Rei	emoval of Topsoil				
all	ripping vegetable soil from the roadway, and disposal to approved stockpile areas in accordance with the Specification and in conformity with the RE instructions verage depth 200mm.	m³	891.80		
	cavate and remove existing pipes and culverts of any size and the inlet and outlet ructures including back filling.	m	38		
	OTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

Kiang'ombe-R01 - Thika page8of208

		•	•	<u> </u>	_
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			KYA-RD 01		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.637km)		
	KIANG'OMBE ROAD 01 (KYA-RD 01)-0.637 KM		(0000000)		
	, , , , , , , , , , , , , , , , , , ,				
BILL NO.5	EARTHWORKS				
	Kiambu County- Kiang'ombe Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Material used for earthworks (fill below bottom sub-grade) shall be minimum soil				
	class S2 quality and be compacted to 95% MDD (AASHTO T99)				
	The upper 300mm of subgrade shall be compacted to 100% MDD (AASHTO T99)				
	while the rest shall be compacted to 95% MDD (AASHTO T99).				
	Fill in Soft Material				
5.01	Excavating the material, transportation and filling in embankment, including watering				
	and rolling; all in accordance to specification	m³	31.20		
	Pill in the ad Make viel				
5.02	Fill in Hard Material As Item 5.01 but in hard material	m³	3.12		
5.02	Spoil in Soft Material	111	5.12		
5.04	Cut to spoil in soft material	m³	1 427 60		
5.04	Spoil in Hard Material	m	1,427.60		
5.05	Excavate, stock pile for reuse and spoil surplus hard material	m³	142.76		
3.03	Compaction of Existing Ground	111	142.70		
5.07	Compaction of formation ground in accordance with the specification	3	660.05		
	· · · · · · · · · · · · · · · · · · ·	m³	668.85		
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO	m³	1,337.70		
	T99)				
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO	m³	401.31		
	T99)		102.02		
5.10	Provide, lay and compact 300mm sub grade material to 100% MDD (AASHTO T99)	m³	401.31		
	· · · · · · · · · · · · · · · · · · ·		401.31		
	Topsoil				
5.11	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm;	m²	318.50		
	all in accordance with the specifications		310.55		
	Grassing				
5.12	Planting of sprigs of approved indegineous grass types; to embankments, cuttings or				
	where directed by the RE in accordance with the Specification, including tending,	m²	318.50		
	watering and cutting until the grass is firm established or for 6 months	'''	310.50		
	watering and catting artificate grass is firm established of for o months				
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

Kiang'ombe-R01 - Thika page9of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			KYA-RD 01	1	
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
	WAARDE DO AD OF 1994 DD O4) O COT 1994		(0.637km)		
	KIANG'OMBE ROAD 01 (KYA-RD 01)-0.637 KM				
DUI 110 0	CHINEDTO AND DRAINAGE				
BILL NO.8	CULVERTS AND DRAINAGE				
	Kiambu County - Kiang'ombe Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
IILIVI	DESCRIPTION	ONIT	QUANTITI	KATE (KSHS)	ANIOUNI (KSHS)
	Excavate for Culverts and Subsoil Drains in Soft Material				
8.01					
	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	560		
	accordance with the Specification and in conformity with the RE instructions				
8.02	Extra over Item 8.01 for excavation in hard material	m³	280		
	Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material				
8.03					
	Excavation in soft material to any depth, compaction of the invert of excavation,	,			
	backfilling with excavated materials or removing excavated material to spoil; in	m³	917		
	accordance with the Specification and in conformity with the RE's instructions				
8.04	Extra over Item 8.03 for excavation in hard material	m³	229		
	Selected backfill material				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications	m³	560		
	and in conformity with the instructions of the RE	111	360		
	In-situ culverts				
	Provide for in-situ culvert all in accordance with the Specification and in conformity				
	with the RE instructions				
8.06	a) 600 mm diameter (for use at minor junctions only)	m	100		
8.07	b) 900 mm diameter	m	40		
	Concrete Class 15/20 to Beds, Surrounds				
8.09	Providing and placing the concrete; all in accordance with the Specification and in	m³	91		
	conformity with the RE instructions		31		
	Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures				
8.10	Providing and placing the concrete, reinforcement and formwork class F2 all in				
	accordance with the Specification and in conformity with the RE instructions	m³	29		
	Concrete Class 25/20 For Covered Rectangular Drain structure				
8.11	Provide all materials and construct 500mm(Bottom width) wide (internal dimension)				
	rectangualr concrete drains 150mm thick walls and bottom base, average height of				
	0.8m, class 25/20, including slotted top cover of 100mm thick. Include the steel	m ³	257		
	reinforcement and formwork for concrete drain and concrete class 15(20) blinding as				
	specified in the drawings.				
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	127		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

Kiang'ombe-R01 - Thika page10of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			KYA-RD 01		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.637km)		
	KIANG'OMBE ROAD 01 (KYA-RD 01)-0.637 KM				
5111.116.6					
BILL NO.9	PASSAGE OF TRAFFIC				
	Kiambu County - Kiang'ombe Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Construction of Deviations in maximum lengths of 2 km sections				
9.01	All the operations connected with the initial construction of temporary deviations,				
	appropriate width, to allow passage of traffic during the Works; all in accordance with	km	0.32		
	the Specification				
	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide, 150mm thick, where directed by the RE and in accordance with the Specification	m³	238.88		
9.03	Maintenance the passage of traffic	Lump Sum	1.00		
	Provide Signs and Barriers				
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights,				
	etc., along deviations constructed: all inaccordance with Specification and in	Km	0.64		
	conformity with the RE instructions				

Kiang'ombe-R01 - Thika page11of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			KYA-RD 01		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.637km)		
	KIANG'OMBE ROAD 01 (KYA-RD 01)-0.637 KM				
	NATURAL MATERIAL SUBBASE AND BASE				
	Kiambu County - Kiang'ombe Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base				
	Drovide lay and compact subbase in 150mm thick natural gravel material in				
	Provide, lay and compact subbase in 150mm thick natural gravel material in carriageway, bus bays, footpaths, shoulders and junctions from the designated	_			
	and a series and	l m³	677.21		
12 01 1	quarries listed in the Special Specification in accordance with the Specification and in				
12.01	quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14)				
12.01					
12.01	conformity with the RE instructions (Stabilisation paid in Bill 14)	m³	677.21		
12.01	conformity with the RE instructions (Stabilisation paid in Bill 14) Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm	m³	677.21		

Kiang'ombe-R01 - Thika page12of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			KYA-RD 01	1	
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.637km)		
	KIANG'OMBE ROAD 01 (KYA-RD 01)-0.637 KM				
BILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
	Kiambu County - Kiang'ombe Informal Settlement				
	D = 0.00 (D = 0.01)		011441777	DATE (KCHC)	ANACHAIT (VCHC)
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
15.01	Prime Coat and Tack coat				
15.01A					
13.017	MC 30 prime coat on Cement treated material at nominal rate of 0.8 - 1.2 ltr/m² to	ltr	4204.2		
	base course on carriageway, bus bays, footpaths, shoulders and junctions				
15.01B	V4 00 - 11 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1				
	K1-80 cationic emulsion tack coat on primed treated base at nominal rate of 0.4 - 1.0	ltr	4204.2		
	ltr/m² to base course on on carriageway, bus bays, footpaths, shoulders and junctions				
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.16	BITUMINOUS MIXES				
	Kiambu County - Kiang'ombe Informal Settlement				
	DECODINE		OLIANITITY.	DATE (VCUS)	ANACHAT (VCHC)
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
16.00	NOTE: No haulage will be paid for aggregates, bitumen or the premix. The cost for				
10.00	haulage shall be included in the rates. Rates to be inclusive of fines				
16.01					
	Provide, Lay and spread evenly 50mm thick Asphalt Concrete Type II covering the				
	carriageway and the shoulders. The grading of the mixture of coarse and fine				
	aggregates shall be within and approximately parallel to the grading envelopes given	M^3	236.5		
	in table 16B-1 of the Standard Specification for Road and Bridge Construction for	'*'	250.5		
	Type II, 0/14mm wearing course .The coarse aggregate class for the asphalt concrete				
	shall be Class C. 80/100 penetration grade bitumen for the asphalt concrete.				
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE				

Kiang'ombe-R01 - Thika page13of208

AMACOMIE RIGAD 01 (PCA RIG 01) 0.637 KIM BILL NO 20 BANE SAME COUNTY - Kineg ombe Informal Settlement TEM DESERPTION UNT BATE (KSHS) AMOUNT (KSHS) AMOU	ITENA	ITEM DESCRIPTION	LINUT	CHANTITY	DATE (VEUE)	AMOUNT (VCUS)
SILK NO 20 STAND (NYA-RD 01)-0.437 KM SILK NO 20 STAND (ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
Standard Colorans Standard Information signs including backfilling and concerted 1,570 to bases; all in accordance with the Specification and in conformity with the Resident Information signs including backfilling and concerted 1,570 to bases; all in accordance with the Specification and in conformity with the Resident Information signs including backfilling and concerted 1,570 to bases; all in accordance with the Specification and in conformity with the Resident Information signs including backfilling and concerted 1,570 to bases; all in accordance with the Specification and in conformity with the Resident Information signs including backfilling and concerted 1,570 to bases; all in accordance with the Specification and in conformity with the Resident Information signs including backfilling and concerted 1,570 to bases; all in accordance with the Specification and in conformity with the Resident Information signs including backfilling and concerted 1,570 to bases; all in accordance with the Specification and in conformity with the Resident Information signs including backfilling and concerted 1,570 to bases; all in accordance with the Specification and in conformity with the Resident Information signs including backfilling and concerted 1,570 to bases; all in accordance with the Specification and in conformity with the Resident Information signs including backfilling and concerted 1,570 to bases; all in accordance with the Specification and in conformity with the Resident Information signs including backfilling and concerted 1,570 to bases; all in accordance with the Specification and in conformity with the Resident Information signs including backfilling and concerted 1,570 to bases; all in accordance with the Specification and in conformity with the Resident Information signs including backfilling and concerted 1,570 to bases; all in accordance with the Specification and in conformity with the Resident Information signs including backfilling and concerted 1,570 to bases and in accordance with the Specific						
RANKG OMBE ROAD OI (KYA-RD DI)-0.637 KM BILL NO.20 ROAD FURNITURE Kimbu County: Kang'umbe Informal Settlement Warning Signs 20.01 Execution 16, providing and erecting warning signs size 750mm including backfilling and control of 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions 15/20 to bases, all in accordance with the Specification and in conformity with the RE instructions 20.02 20.03 Execution for, providing and erecting pricinity signs including backfilling and control of 15/20 to bases, all in accordance with the Specification and in conformity with the RE instructions 20.03 Execution for, providing and erecting pricinity signs including backfilling and control of 15/20 to bases, all in accordance with the Specification and in conformity with the RE instructions 20.03 Executing for, providing and erecting pricinity signs including backfilling and control to 15/20 to bases, all in accordance with the Specification and in conformity with the RE instructions 20.04 Executing for, providing and erecting information signs including backfilling and control information signs in the signs in signs						
BILL NO.20 ROAD FURNITURE (Nambo Country - Kang'ombe Informal Settlement TEM DESCRIPTION UNIT Warning Signs 20.03 Secretation for, providing and erecting variants signs size 750mm including backfilling and concrete 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions Priority Signs 20.03 Road Furniture Decarating for, providing and erecting priority signs including backfilling and concrete 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions Priority Signs 20.03 Road Road Road Road Road Road Road Road						
NAME COMMER ROAD 01 (KVA-HD 01)-0.637 KVM				150 Gravel Subbase		
RILL NO.20 ROAD FURNITURE (Kimbu Country - Klang ombe informal Settlement DESCRIPTION UNIT QUANTITY RATE (KSHS) AMOUNT (KSHS) Warning Sizes 2.0.01 Scheduler for providing and erecting warning signs size 750mm including backfilling and concrete 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions Provinty Sizes 1.0.02 Provinty Sizes 1.0.03 Provinty Sizes 1.0.04 Provinty Sizes 1.0.04 Provinty Sizes 1.0.04 Provinty Sizes 1.0.04 Provinty Sizes 1.0.05 Provinty Sizes 1				300 Sub Grade Material		
RILL NO.20 ROAD FURNITURE (Kimbu Country - Klang ombe informal Settlement DESCRIPTION UNIT QUANTITY RATE (KSHS) AMOUNT (KSHS) Warning Sizes 2.0.01 Scheduler for providing and erecting warning signs size 750mm including backfilling and concrete 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions Provinty Sizes 1.0.02 Provinty Sizes 1.0.03 Provinty Sizes 1.0.04 Provinty Sizes 1.0.04 Provinty Sizes 1.0.04 Provinty Sizes 1.0.04 Provinty Sizes 1.0.05 Provinty Sizes 1				(0.637km)		
Insert		KIANG'OMBE ROAD 01 (KYA-RD 01)-0.637 KM		,		
Insert						
Manufacisions Manufacision	BILL NO.20					
Warning Signs Excussion for providing and erecting warning signs size 250mm including backfill and concrete 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions Figure 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions Figure 15/20 to bases, all in accordance with the Specification and in conformity with the RE instructions Figure 15/20 to bases, all in accordance with the Specification and in conformity with the RE instructions Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity with the fire instructions Figure 15/20 to bases, all in accordance with the Sp		Kiambu County - Kiang'ombe Informal Settlement				
Warning Signs Excussion for providing and erecting warning signs size 250mm including backfill and concrete 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions Figure 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions Figure 15/20 to bases, all in accordance with the Specification and in conformity with the RE instructions Figure 15/20 to bases, all in accordance with the Specification and in conformity with the RE instructions Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity Figure 15/20 to bases, all in accordance with the Specification and in conformity with the fire instructions Figure 15/20 to bases, all in accordance with the Sp	ITEM	DESCRIPTION	LINIT	OLIANTITY	BATE (KSHS)	AMOUNT (KSHS)
Decovation for providing and erecting warning signs size 5750mm including backfill and concrete 15/210 to bases; all in accordance with the Specification and in conformity with the EI instructions	IILIVI	DESCRIPTION	ONIT	QUANTITY	KATE (KSHS)	ANIOUNI (KSHS)
and concrete 15/20 to bases all in accordance with the Specification and in conformity with the Resemble of the Providing and erecting priority signs including back filling and concrete 15/20 to bases, all in accordance with the Specification and in conformity with the Resemble of the Providing and erecting prohibitory signs including back filling and concrete 15/20 to bases, all in accordance with the Specification and in conformity with the Resemble of the		Warning Signs				
conformity with the RE instructions Excavating for, providing and erecting priority signs including back filling and concrete instructions 20.02A 750ms size No. 1 20.02B 2000 mm size No. 1 20.03B Excavating for, providing and erecting prohibitory signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions 1000mm size No. 1 20.04 Sandard Informatory, Signs Excavating for, providing and erecting prohibitory signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions 1000mm size No. 1 20.04 Sandard Informatory, Signs Excavating for, providing and erecting information signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions No. 1 20.05 No. 1 20.05 No Specification and in conformity with the RE instructions No. 1 20.05 No Specification and in conformity with the RE instructions No. 1 20.05 No Specification and in conformity with the RE instructions No. 1 20.05 No Specification and in conformity with the RE instructions No. 1 20.05 No Specification and in conformity with the RE instructions No. 1 20.05 No Specification and in conformity with the RE instructions No. 1 20.05 No Specification and in conformity with the RE instructions No. 1 20.06 No Specification and in conformity with the RE instructions No. 1 20.07 As Instructions No Specification and in conformity with the RE instructions No. 1 20.08 No Specification and in conformity with the RE instructions No. 1 20.09 Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions No. 15 20.10 Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions No. 15 20.11 Proston, transport and placing of materials in accordance with the Specification and in conformity with the RE ins	20.01	Excavation for, providing and erecting warning signs size 750mm including backfill				
conformity with the RE instructions Excavating for, providing and erecting priority signs including back filling and concrete instructions 20.02A 750ms size No. 1 20.02B 2000 mm size No. 1 20.03B Excavating for, providing and erecting prohibitory signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions 1000mm size No. 1 20.04 Sandard Informatory, Signs Excavating for, providing and erecting prohibitory signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions 1000mm size No. 1 20.04 Sandard Informatory, Signs Excavating for, providing and erecting information signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions No. 1 20.05 No. 1 20.05 No Specification and in conformity with the RE instructions No. 1 20.05 No Specification and in conformity with the RE instructions No. 1 20.05 No Specification and in conformity with the RE instructions No. 1 20.05 No Specification and in conformity with the RE instructions No. 1 20.05 No Specification and in conformity with the RE instructions No. 1 20.05 No Specification and in conformity with the RE instructions No. 1 20.05 No Specification and in conformity with the RE instructions No. 1 20.06 No Specification and in conformity with the RE instructions No. 1 20.07 As Instructions No Specification and in conformity with the RE instructions No. 1 20.08 No Specification and in conformity with the RE instructions No. 1 20.09 Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions No. 15 20.10 Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions No. 15 20.11 Proston, transport and placing of materials in accordance with the Specification and in conformity with the RE ins		and concrete 15/20 to bases all in accordance with the Specification and in	No.	1		
Exercise for providing and erecting priority signs including back filling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the 8E instructions 20.028 100 mm size 20.03 Exercise for providing and erecting prohibitory signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the 8E instructions to the 8E instruction to the 8E instructions to the 8E instructions to the 8E i						
Excavating for, providing and erecting priority signs including back filling and concrete instructions No. 1	20.02	·				
15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions of the Research of the Res						
Instructions 1000 mm size 1000						
20.028 100 mm size Mandatory Signs 20.03 Excavating for, providing and erecting prohibitory signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions 1000mm size 20.04 Standard Informatory Signs Excavating for, providing and erecting information signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions 2000mm size 20.04A SO0600mm No. 1 20.04A SO0600mm No. 1 20.05 No Antandard Informatory Signs Excavating for, providing and erecting information signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions 20.05 No Antandard Informatory Signs Excavating for, providing and erecting information signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions 20.05A less than 1 s.q. No. 1 20.05C Equal or more than 2 s.q. no but less than 2 s.q. No. 1 20.05C Read Marking painting Preparing road surface, supplying approved road marking paint, 1,00mm wide marking out and painting, all in accordance with the Specification and in conformity with the RE instructions 20.06A White paint 20.07 As Item 2007 but 250mm wide 20.09 Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions 20.09 Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions 20.10 Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions 20.11 Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions 20.11 Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions 20.12 Provision, transpo						
20.03 Excavating for, providing and erecting prohibitory signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the KE instructions 1000mm size 20.04 Standard informatory Signs Excavating for, providing and erecting information signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the KE instructions 20.04 Sock600mm No. 1 20.040 Sock600mm No. 1 20.050 Non Standard Informatory Signs Excavating for, providing and erecting information signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the KE instructions No. 1 20.050 Non Standard Informatory Signs Excavating for, providing and erecting information signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the KE instructions No. 1 20.050 Sock Degree of the KE instructions No. 1 20.051 Equal or more than 1 s.g.m but less than 2 s.g.m No. 1 20.052 Sock Degree of the Signs of	20.02A		No	1		
Mandatory sizes 2.0.03 Executing for, providing and erecting prohibitory signs including backfilling and concrete 15/20 to bases, all in accordance with the Specification and in conformity with the RE instructions 100mm size 2.0.04 Standard Informatory Sizes 2.0.05 No Standard Information Sizes 2.0.05 No Standard Informatory Sizes 2.0.05 No Standard Information Sizes 2.0.07 No Standard Information S						
Excavating for, providing and erecting prohibitory signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions 1000mm size	20.020		INU.			
concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions 1000mm size 20.04 Standard Informatory Signs Excavating for, providing and erecting information signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions 20.04 Socotion	20 O2					
with the RE instructions 1000mm size 20.04 Sandard Informatory Signs Excavating for, providing and erecting information signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions No. 1 20.044 S00x6000mm No. 1 20.058 Excavating for, providing and erecting information signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions No. 1 20.058 Excavating for, providing and erecting information signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions 20.058 Equal or more than 1 sq.m but less than 2 sq.m No. 1 20.059 Road Marking painting Preparing road surface, supplying approved road marking paint, 100mm wide marking out and painting, all in accordance with the Specification and in conformity with the RE instructions 20.06A White paint 20.07 As Item 2007 but 250mm wide a) White paint Speed reduction bituminous bumps at junctions Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions Sumble Strips on Pavement Concrete Kerbs Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the drawings and RE instructions Concrete Kerbs Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the drawings and RE instructions Mo. 15 Concrete Kerbs Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the drawings and RE instructions Mo. 15 Concrete Kerbs Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions Mo. 5 Concrete Kerbs Provision, transport, handling, mixing and placing all materials in accordance	20.03		NI.	1		
Standard Informatory Signs Exampting for, providing and erecting information signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions No. 1			INO.	1		
Excavating for, providing and erecting information signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions No. 1 20.048 600x660mm No. 1 20.050x660mm No. 1 Excavating for, providing and erecting information signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions 20.05A Less than 1 sq. m 20.05B Equal or more than 1 sq. m but less than 2 sq. m No. 1 20.05C Read Marking painting Preparing road surface, supplying approved road marking paint, 100mm wide marking out and painting, all in accordance with the Specification and in conformity with the RE instructions 20.05A White paint My the RE instructions 20.07 As Item 2007 but 250mm wide all in conformity with the RE instructions 20.09 Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions 20.09 Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions 20.11 Kerbs 125 mm x 50 mm radius 1m - 5m My 32 20.11 Kerbs 125 mm x 250 mm radius 1m - 5m My 32 20.11 Channel blocks 125mm x 100mm Trees Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m - Open Fields or Wet Lands Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m - Open Fields or Wet Lands	20.04					
concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions 20.04A SO0x600mm	20.04					
with the RE instructions 20.04B						
20.048 500x600mm No. 1						
20.048 No. Standard Informatory Signs Excaving for, providing and erecting information signs including backfilling and concrete. 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions 20.05A Less than 1 sq.m Equal or more than 1 sq.m but less than 2 sq.m No. 1 20.05C Equal or more than 2 sq.m but less than 5 sq.m No. 1 20.05C Road Marking painting Preparing road surface, supplying approved road marking paint, 100mm wide marking out and painting, all in accordance with the Specification and in conformity with the RE instructions 20.06A White paint marking out and painting, all in accordance with the Specification and in conformity with the RE instructions 20.07A as Item 2007 but 250mm wide 20.07A a) White paint marking out and painting of materials in accordance with the Specification and in conformity with the RE instructions 20.09 Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions 20.10 Road Marking with the RE instructions 20.11 Provision, transport and placing of materials in accordance with the Specification and in conformity with the drawings and RE instructions 20.11 Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions 20.12 Concrete Kerbs 20.13 Kerbs 125 mm x 250 mm straight 20.14 Kerbs 125 mm x 250 mm straight 20.15 Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions 20.16 Channel blocks 125mm x 100mm 20.17 Trees 20.18 Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands						
20.05 Non Standard Informatory Signs Excavating for, providing and erecting information signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions Equal or more than 1 sq.m but less than 2 sq.m No. 1 No						
Excavating for, providing and erecting information signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions 20.05B Less than 1 sq.m No.			No.	1		
concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions 20.05A Less than 1 sq.m No. 1 20.05E Equal or more than 1 sq.m but less than 2 sq.m No. 1 20.05C Equal or more than 2 sq.m but less than 5 sq.m No. 1 20.06 Road Marking painting Preparing road surface, supplying approved road marking paint, 100mm wide marking out and painting, all in accordance with the Specification and in conformity with the RE instructions 20.06A White paint m² 127 20.07 As Item 2007 but 250mm wide 20.07A a) White paint m² 127 20.07 As item 2007 but 250mm wide 20.09 Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions 20.09 Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions 20.10 Provision, transport and placing of materials in accordance with the Specification and in conformity with the drawings and RE instructions Concrete Kerbs 20.11 Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the drawings and RE instructions Concrete Kerbs 20.11 Provision, transport, specification and in conformity with the RE instructions Tees 20.12 Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands	20.05					
with the RE instructions Less than 1 sq.m 20.05A Less than 1 sq.m 20.05B Equal or more than 1 sq.m but less than 2 sq.m No. 1 20.06C Road Marking painting Preparing road surface, supplying approved road marking paint, 100mm wide marking out and painting, all in accordance with the Specification and in conformity with the RE instructions White paint 20.07 As Item 2007 but 250mm wide 20.07 a) White paint Speed reduction bituminous bumps at junctions Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions Rumble Strips on Pavement 20.10 Provision, transport, handling, mixing and placing all materials in accordance with specification and in conformity with the drawings and RE instructions Concrete Kerbs 20.11A Kerbs 125 mm x 250 mm radius 1m - 5m m 32 20.11C Channel blocks 125mm x 100mm Trees Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m - Open Fields or Wet Lands						
20.05A Less than 1 sq.m		concrete 15/20 to bases; all in accordance with the Specification and in conformity				
Equal or more than 1 sq.m but less than 2 sq.m Equal or more than 2 sq.m but less than 5 sq.m Roo. 1 Equal or more than 2 sq.m but less than 5 sq.m No. 1 Roo. 1		with the RE instructions				
20.05C Equal or more than 2 sq.m but less than 5 sq.m Road Marking painting Preparing road surface, supplying approved road marking paint, 100mm wide marking out and painting, all in accordance with the Specification and in conformity with the RE instructions 20.06A White paint 20.07 As Item 2007 but 250mm wide 20.07A a) White paint Speed reduction bituminous bumps at junctions Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions Rumble Strips on Pavement 20.10 Provision, transport and placing of materials in accordance with the Specification and in conformity with the drawings and RE instructions Concrete Kerbs Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions Concrete Kerbs Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions Concrete Kerbs Concrete Kerbs Concrete Kerbs Concrete Kerbs Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions Concrete Kerbs Concr	20.05A	Less than 1 sq.m	No.	1		
Road Marking painting Preparing road surface, supplying approved road marking paint, 100mm wide marking out and painting, all in accordance with the Specification and in conformity with the RE instructions 20.06A White paint 20.07 As Item 2007 but 250mm wide a) White paint 20.07A a) White paint Speed reduction bituminous bumps at junctions Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions Rumble Strips on Pavement 20.10 Provision, transport and placing of materials in accordance with the Specification and in conformity with the drawings and RE instructions Concrete Kerbs Provision, transport, handling, mixing and placing all materials in accordance with specification and in conformity with the drawings and RE instructions Concrete Kerbs Provision, transport, handling, mixing and placing all materials in accordance with specification and in conformity with the RE instructions Concrete Kerbs 20.11A Kerbs 125 mm x 250 mm straight Channel blocks 125mm x 100mm Trees Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -0pen Fields or Wet Lands No. 5	20.05B	Equal or more than 1 sq.m but less than 2 sq.m	No.	1		
Preparing road surface, supplying approved road marking paint, 100mm wide marking out and painting, all in accordance with the Specification and in conformity with the RE instructions 20.06A White paint m² 127 20.07 A as Item 2007 but 250mm wide 20.07A a) White paint m² 127 20.08 Speed reduction bituminous bumps at junctions 20.09 Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions Rumble Strips on Pavement. 20.10 Provision, transport and placing of materials in accordance with the Specification and in conformity with the drawings and RE instructions Concrete Kerbs Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions Concrete Kerbs 20.11A Kerbs 125 mm x 250 mm straight m 637 20.11B Kerbs 125 mm x 250 mm straight m 32 20.11C Channel blocks 125mm x 100mm m 1,274 Trees Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -0pen Fields or Wet Lands	20.05C	Equal or more than 2 sq.m but less than 5 sq.m	No.	1		
marking out and painting, all in accordance with the Specification and in conformity with the RE instructions 20.06A White paint m² 127 20.07 As Item 2007 but 250mm wide 20.07A a) White paint m² 127 20.08 Speed reduction bituminous bumps at junctions Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions Rumble Strips on Pavement 20.10 Provision, transport and placing of materials in accordance with the Specification and in conformity with the drawings and RE instructions Concrete Kerbs Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions Concrete Kerbs Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions Concrete Kerbs Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions Concrete Kerbs 125 mm x 250 mm straight Rerbs 125 mm x 250 mm straight Rerbs 125 mm x 250 mm radius 1m - 5m m 32 20.112 Channel blocks 125mm x 100mm Trees Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m - Open Fields or Wet Lands	20.06	Road Marking painting				
with the RE instructions 20.06A White paint		Preparing road surface, supplying approved road marking paint, 100mm wide				
20.07A As Item 2007 but 250mm wide 20.07A a) White paint m² 127 20.07A a) White paint m² 127 20.07A a) White paint m² 127 20.09 Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions Rumble Strips on Pavement 20.10 Provision, transport and placing of materials in accordance with the Specification and in conformity with the drawings and RE instructions Concrete Kerbs 20.11 Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions 20.11A Kerbs 125 mm x 250 mm straight m a 637 20.11B Kerbs 125 mm x 250 mm radius 1m - 5m m 32 20.11C Channel blocks 125mm x 100mm m 1,274 Trees 20.12 Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands		marking out and painting, all in accordance with the Specification and in conformity				
20.07 As Item 2007 but 250mm wide 20.07A a) White paint m² 127 Speed reduction bituminous bumps at junctions 20.09 Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions Rumble Strips on Pavement Provision, transport and placing of materials in accordance with the Specification and in conformity with the drawings and RE instructions Concrete Kerbs 20.11 Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions 20.11A Kerbs 125 mm x 250 mm straight m 637 20.11B Kerbs 125 mm x 250 mm radius 1m - 5m m 32 20.11C Channel blocks 125mm x 100mm m 1,274 Trees 20.12 Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m - Open Fields or Wet Lands		with the RE instructions				
20.07A a) White paint m² 127 Speed reduction bituminous bumps at junctions Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions Rumble Strips on Pavement 20.10 Provision, transport and placing of materials in accordance with the Specification and in conformity with the drawings and RE instructions Concrete Kerbs 20.11 Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions Concrete Kerbs 20.11 Rerbs 125 mm x 250 mm straight m 637 20.11B Kerbs 125 mm x 250 mm radius 1m - 5m m 32 Channel blocks 125 mm x 100mm m 1,274 Trees Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands m No. 5	20.06A	White paint	m²	127		
20.07A a) White paint m² 127 Speed reduction bituminous bumps at junctions Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions Rumble Strips on Pavement 20.10 Provision, transport and placing of materials in accordance with the Specification and in conformity with the drawings and RE instructions Concrete Kerbs 20.11 Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions Concrete Kerbs 20.11 Rerbs 125 mm x 250 mm straight m 637 20.11B Kerbs 125 mm x 250 mm radius 1m - 5m m 32 Channel blocks 125 mm x 100mm m 1,274 Trees Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands m No. 5						
Speed reduction bituminous bumps at junctions 20.09 Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions Rumble Strips on Pavement Provision, transport and placing of materials in accordance with the Specification and in conformity with the drawings and RE instructions Concrete Kerbs 20.11 Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions 20.11A Kerbs 125 mm x 250 mm straight 20.11B Kerbs 125 mm x 250 mm radius 1m - 5m 20.11C Channel blocks 125mm x 100mm Trees Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands	20.07	As Item 2007 but 250mm wide				
20.09 Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions Rumble Strips on Pavement 20.10 Provision, transport and placing of materials in accordance with the Specification and in conformity with the drawings and RE instructions Concrete Kerbs Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions 20.11 Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions 20.11A Kerbs 125 mm x 250 mm straight Kerbs 125 mm x 250 mm radius 1m - 5m Channel blocks 125 mm x 250 mm radius 1m - 5m Trees Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands No. 5	20.07A	a) White paint	m²	127		
20.09 Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions Rumble Strips on Pavement 20.10 Provision, transport and placing of materials in accordance with the Specification and in conformity with the drawings and RE instructions Concrete Kerbs Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions 20.11 Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions 20.11A Kerbs 125 mm x 250 mm straight Kerbs 125 mm x 250 mm radius 1m - 5m Channel blocks 125 mm x 250 mm radius 1m - 5m Trees Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands No. 5						
in conformity with the RE instructions Rumble Strips on Pavement 20.10 Provision, transport and placing of materials in accordance with the Specification and in conformity with the drawings and RE instructions Concrete Kerbs Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions 20.11 Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions 20.11A Kerbs 125 mm x 250 mm straight Erbs 125 mm x 250 mm radius 1m - 5m M 32 20.11C Channel blocks 125mm x 100mm Trees Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m - Open Fields or Wet Lands No. 5		Speed reduction bituminous bumps at junctions				
Rumble Strips on Pavement. 20.10 Provision, transport and placing of materials in accordance with the Specification and in conformity with the drawings and RE instructions Concrete Kerbs 20.11 Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions 20.11A Kerbs 125 mm x 250 mm straight m 637 20.11B Kerbs 125 mm x 250 mm radius 1m - 5m m 32 20.11C Channel blocks 125mm x 100mm m 1,274 Trees Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands	20.09		No	3		
20.10 Provision, transport and placing of materials in accordance with the Specification and in conformity with the drawings and RE instructions Concrete Kerbs 20.11 Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions 20.11A Kerbs 125 mm x 250 mm straight 20.11B Kerbs 125 mm x 250 mm radius 1m - 5m Channel blocks 125mm x 100mm Trees Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands No. 15		in conformity with the RE instructions	100			
in conformity with the drawings and RE instructions Concrete Kerbs 20.11 Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions 20.11A Kerbs 125 mm x 250 mm straight 20.11B Kerbs 125 mm x 250 mm radius 1m - 5m 20.11C Channel blocks 125mm x 100mm Trees Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands No. 15 No. 5		Rumble Strips on Pavement				
in conformity with the drawings and RE instructions Concrete Kerbs 20.11 Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions 20.11A Kerbs 125 mm x 250 mm straight 20.11B Kerbs 125 mm x 250 mm radius 1m - 5m 20.11C Channel blocks 125mm x 100mm Trees Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands No. 15 No. 5	20.10	Provision, transport and placing of materials in accordance with the Specification and				
Concrete Kerbs 20.11 Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions 20.11A Kerbs 125 mm x 250 mm straight m 637 20.11B Kerbs 125 mm x 250 mm radius 1m - 5m m 32 20.11C Channel blocks 125mm x 100mm m 1,274 Trees Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands No. 5		1	No.	15		
20.11 Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions 20.11A Kerbs 125 mm x 250 mm straight m 637 20.11B Kerbs 125 mm x 250 mm radius 1m - 5m m 32 20.11C Channel blocks 125mm x 100mm m 1,274 Trees Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands No. 5		m comorning with the trawings and the motractions				
20.11 Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions 20.11A Kerbs 125 mm x 250 mm straight m 637 20.11B Kerbs 125 mm x 250 mm radius 1m - 5m m 32 20.11C Channel blocks 125mm x 100mm m 1,274 Trees Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands No. 5		Concrete Kerbs				
Specification and in conformity with the RE instructions 20.11A Kerbs 125 mm x 250 mm straight m 637 20.11B Kerbs 125 mm x 250 mm radius 1m - 5m m 32 20.11C Channel blocks 125mm x 100mm m 1,274 Trees Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m - Open Fields or Wet Lands No. 5	20.11					
20.11A Kerbs 125 mm x 250 mm straight m 637 20.11B Kerbs 125 mm x 250 mm radius 1m - 5m m 32 20.11C Channel blocks 125mm x 100mm m 1,274 Trees Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands No. 5	20.11					
20.11B Kerbs 125 mm x 250 mm radius 1m - 5m 20.11C Channel blocks 125mm x 100mm Trees Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands No. 5	20.444	· · · · · · · · · · · · · · · · · · ·		C27		
20.11C Channel blocks 125mm x 100mm m 1,274 Trees Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands No. 5		•				
Trees Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands No. 5						
Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands No. 5	20.11C	Channer blocks 125mm x 100mm	m	1,2/4		
Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands No. 5		Troop				
the Specification, minimum height 1.5m -Open Fields or Wet Lands No. 5		<u> </u>				
the Specification, minimum height 1.5m -Open Fields or Wet Lands No. 5	20.42	Planting of approved indigenous types of trees where instructed, in accordance with	N1 -	_		
	20.12		NO.	5		
TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE						
IOTAL OF BILL 20 CARRIED TO SUMMARY PAGE						
		IOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				

Kiang'ombe-R01 - Thika page14of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			KYA-RD 01		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.637km)		
	KIANG'OMBE ROAD 01 (KYA-RD 01)-0.637 KM				
	GRAND SUMMARY TOTAL QUANTITIES				
	Kiambu County- Kyang'ombe Informal Settlement				
ITEM	DESCRIPTION				AMOUNT (KSHS)
4	Site Clearance and Top Soil Stripping				
5	Earthworks				
8	Culverts and Drainage Works				
9	Passage of Traffic				
12	Natural Material Subbase and Base				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				

D	DSNIA/RIVERSIDE IN	I GITHURAI AND MI	G'OMBE IN THIKA TOV SRI IN LIMURU ALL WI	THIN KIAMBU COUN	T JESUS IN KUIKU TY.
		KIANG'OM	IBE ROAD 02		

Kiang'ombe-R02 - Thika page15of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			KYA-RD 02		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.416km)		
	KIANG'OMBE ROAD 02 (KYA-RD 02)-0.416KM				
BILL NO.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
DILL NO.04	Kiambu County- Kiang'ombe Informal Settlement				
	Rambu County - Riang office informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Site Clearance				
4.01	Clearing existing road of all trees, vegetation, debris and rubbish of any nature;				
	including the grubbing of stumps and roots and the disposal from the area of all spoil	2	2 042 00		
	materials resulting from clearing and grubbing all in accordance with the	m^2	2,912.00		
	specifications.				
	Removal of Topsoil				
4.02	Stripping vegetable soil from the roadway, and disposal to approved stockpile areas				
	all in accordance with the Specification and in conformity with the RE instructions average depth 200mm.	m³	582.40		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet structures including back filling.	m	25		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

Kiang'ombe-R02 - Thika page16of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			KYA-RD 02		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.416km)		
	KIANG'OMBE ROAD 02 (KYA-RD 02)-0.416KM		,		
BILL NO.5	EARTHWORKS				
DILL NU.5	Kiambu County- Kiang'ombe Informal Settlement				
	Riambu County- Riang ombe imormal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Material used for earthworks (fill below bottom sub-grade) shall be minimum soil				
	class S2 quality and be compacted to 95% MDD (AASHTO T99)				
	The upper 300mm of subgrade shall be compacted to 100% MDD (AASHTO T99)				
	while the rest shall be compacted to 95% MDD (AASHTO T99).				
	Fill in Soft Material				
5.01	Excavating the material, transportation and filling in embankment, including watering	3	22.24		
	and rolling; all in accordance to specification	m³	33.21		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	3.32		
	Spoil in Soft Material				
5.04	Cut to spoil in soft material	m³	788.46		
	Spoil in Hard Material				
5.05	Excavate, stock pile for reuse and spoil surplus hard material	m³	78.85		
	Compaction of Existing Ground				
5.07	Compaction of formation ground in accordance with the specification	m³	436.80		
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m³	873.60		
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m³	262.08		
5.10	Provide, lay and compact 300mm sub grade material to 100% MDD (AASHTO T99)	m³	262.08		
	<u>Topsoil</u>				
5.11	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m²	208.00		
	Grassing				
5.12					
	Planting of sprigs of approved indegineous grass types; to embankments, cuttings or	m2	300.00		
	where directed by the RE in accordance with the Specification, including tending,	m²	208.00		
	watering and cutting until the grass is firm established or for 6 months				
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

Kiang'ombe-R02 - Thika page17of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			KYA-RD 02		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.416km)		
	KIANG'OMBE ROAD 02 (KYA-RD 02)-0.416KM		(0.410kiii)		
	INANG CIVIDE NOAD 02 (NIA-ND 02)-0.410NW				
BILL NO.8	CULVERTS AND DRAINAGE				
	Kiambu County - Kiang'ombe Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
				((1222)
	Excavate for Culverts and Subsoil Drains in Soft Material				
8.01	Function in soft material to accordantly assessed in a City of a Country				
	Excavation in soft material to any depth, compaction of the invert of excavation,	,			
	backfilling with excavated materials or removing excavated material to spoil; in	m³	560		
	accordance with the Specification and in conformity with the RE instructions				
8.02	Extra over Item 8.01 for excavation in hard material	m³	280		
	Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material				
8.03	Excavation in soft material to any depth, compaction of the invert of excavation,				
		m³	599		
	backfilling with excavated materials or removing excavated material to spoil; in	""	599		
	accordance with the Specification and in conformity with the RE's instructions				
8.04	Extra over Item 8.03 for excavation in hard material	m³	150		
	Selected backfill material				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications	m³	560		
	and in conformity with the instructions of the RE		300		
	In-situ culverts				
	Provide for in-situ culvert all in accordance with the Specification and in conformity				
	with the RE instructions				
8.06	a) 600 mm diameter (for use at minor junctions only)	m	100		
8.07	b) 900 mm diameter	m	40		
0.00	Concrete Class 15/20 to Beds, Surrounds				
8.09	Providing and placing the concrete; all in accordance with the Specification and in	m³	91		
	conformity with the RE instructions				
8.10	Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures				
8.10	Providing and placing the concrete, reinforcement and formwork class F2 all in	m³	29		
	accordance with the Specification and in conformity with the RE instructions	'''	29		
	Concrete Class 25/20 For Covered Rectangular Drain structure				
8.11	Provide all materials and construct 500mm(Bottom width) wide (internal dimension)				
0.11	rectangualr concrete drains 150mm thick walls and bottom base, average height of				
	0.8m, class 25/20, including slotted top cover of 100mm thick. Include the steel	m ³	157		
	reinforcement and formwork for concrete drain and concrete class 15(20) blinding as	'''	15,		
	specified in the drawings.				
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	83		
U.12					
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

Kiang'ombe-R02 - Thika page18of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			KYA-RD 02		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.416km)		
	KIANG'OMBE ROAD 02 (KYA-RD 02)-0.416KM				
BILL NO.9	PASSAGE OF TRAFFIC				
	Kiambu County - Kiang'ombe Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Construction of Deviations in maximum lengths of 2 km sections				
9.01	All the operations connected with the initial construction of temporary deviations,				
	appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification	km	0.21		
	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide, 150mm thick, where directed by the RE and in accordance with the Specification	m³	156.00		
9.03	Maintenance the passage of traffic	Lump Sum	1.00		
	Provide Signs and Barriers				
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights,				
	etc., along deviations constructed: all inaccordance with Specification and in	Km	0.42		
	etc., along deviations constructed. an inaccordance with specification and in				
	conformity with the RE instructions				

Kiang'ombe-R02 - Thika page19of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			KYA-RD 02		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.416km)		
	KIANG'OMBE ROAD 02 (KYA-RD 02)-0.416KM				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Kiambu County - Kiang'ombe Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Natural Count Calebase and Base				
	Natural Gravel Subbase and Base				
12.01					
	Provide, lay and compact subbase in 150mm thick natural gravel material in				
	carriageway, bus bays, footpaths, shoulders and junctions from the designated	m³	442.26		
	quarries listed in the Special Specification in accordance with the Specification and in				
	conformity with the RE instructions (Stabilisation paid in Bill 14)				
12.02	Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm				
) plus 50mm blinding layer of quarry dust. This Includes 12 tonne vibrating roller (min	m³	442.26		
	8 passes)				
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				

Kiang'ombe-R02 - Thika page20of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			KYA-RD 02		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.416km)		
	KIANG'OMBE ROAD 02 (KYA-RD 02)-0.416KM				
BILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
	Kiambu County - Kiang'ombe Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
45.04	Drives Cook and Took cook				
15.01	Prime Coat and Tack coat				
15.01A	MC 30 prime coat on Cement treated material at nominal rate of 0.8 - 1.2 ltr/m² to	ltr	2745.6		
	base course on carriageway, bus bays, footpaths, shoulders and junctions	''	2/45.0		
15.01B					
13.015	K1-80 cationic emulsion tack coat on primed treated base at nominal rate of 0.4 - 1.0	ltr	2745.6		
	ltr/m ² to base course on on carriageway, bus bays, footpaths, shoulders and junctions	101	2743.0		
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.16	BITUMINOUS MIXES				
	Kiambu County - Kiang'ombe Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
11 2.11		0	QOARTITI	INATE (NOTIO)	AWOON (KONS)
16.00	NOTE: No haulage will be paid for aggregates, bitumen or the premix. The cost for				
	haulage shall be included in the rates. Rates to be inclusive of fines				
16.01	Dravida Law and spread awards Forem thick Asphalt Congrete Type II covering the				
	Provide, Lay and spread evenly 50mm thick Asphalt Concrete Type II covering the carriageway and the shoulders. The grading of the mixture of coarse and fine				
	aggregates shall be within and approximately parallel to the grading envelopes given in table 16B. 1 of the Standard Specification for Board and Bridge Construction for	M^3	154.4		
	in table 16B-1 of the Standard Specification for Road and Bridge Construction for Type II, 0/14mm wearing course .The coarse aggregate class for the asphalt concrete				
	shall be Class C. 80/100 penetration grade bitumen for the asphalt concrete.				
	Shan be class c. 60/ 100 penetration grade bitumen for the aspiralit concrete.				
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE	1			

Kiang'ombe-R02 - Thika page21of208

		· · · · · · · · · · · · · · · · · · ·		DATE (1/01/0)	4.4.6.1.1.7 (1/6.1.6.)
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			KYA-RD 02		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
	KIANG'OMBE ROAD 02 (KYA-RD 02)-0.416KM		(0.416km)		
	RIANG GIVIDE ROAD 02 (RTA-RD 02)-0.410RIVI				
BILL NO.20	ROAD FURNITURE				
	Kiambu County - Kiang'ombe Informal Settlement				
ITENA	DESCRIPTION	LINUT	CHANTITY	DATE (VCUC)	AMOUNT (VCHS)
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Warning Signs				
20.01	Excavation for, providing and erecting warning signs size 750mm including backfill				
	and concrete 15/20 to bases all in accordance with the Specification and in	No.	1		
	conformity with the RE instructions		_		
20.02	·				
20.02	Priority Signs				
	Excavating for, providing and erecting priority signs including back filling and concrete				
	15/20 to bases; all in accordance with the Specification and in conformity with the RE				
	instructions				
20.02A	750mm size	No.	1		
20.02A 20.02B	1000 mm size	No.	1		
20.028		INO.	1		
	Mandatory Signs				
20.03	Excavating for, providing and erecting prohibitory signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity	No.	1		
	with the RE instructions 1000mm size				
20.04	Standard Informatory Signs				
	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity				
	with the RE instructions				
20.04A	500x600mm	No.	1		
20.04B	600x600mm	No.	1		
20.05	Non Standard Informatory Signs				
	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity				
	with the RE instructions				
20.054		N1 -	_		
20.05A	Less than 1 sq.m	No.	1		
20.05B	Equal or more than 1 sq.m but less than 2 sq.m	No.	1		
20.05C	Equal or more than 2 sq.m but less than 5 sq.m	No.	1		
20.06	Road Marking painting				
	Preparing road surface, supplying approved road marking paint, 100mm wide				
	marking out and painting, all in accordance with the Specification and in conformity				
	with the RE instructions				
20.06A		m²	83		
20.06A	White paint	111	0.5		
22.27					
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m²	83		
	Speed reduction bituminous bumps at junctions				
20.09	Provision, transport and placing of materials in accordance with the Specification and		_		
	in conformity with the RE instructions	No	2		
	Rumble Strips on Pavement				
20.40	· · · · · · · · · · · · · · · · · · ·				
20.10	Provision, transport and placing of materials in accordance with the Specification and	No.	9		
	in conformity with the drawings and RE instructions				
	Concrete Kerbs				
20.11	Provision, transport, handling, mixing and placing all materials in accordance with				
	Specification and in conformity with the RE instructions				
20.11A	Kerbs 125 mm x 250 mm straight	m	416		
20.11A	Kerbs 125 mm x 250 mm radius 1m - 5m	m	21		
20.11C	Channel blocks 125mm x 100mm	m	832		
	_				
	<u>Trees</u>				
	 Planting of approved indigenous types of trees where instructed, in accordance with				
20.12	the Specification, minimum height 1.5m -Open Fields or Wet Lands	No.	5		
	The Specification, minimum neight 1.5m -Open Fields of Wet Lands				
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE		1		
	1. C. A. D. D. D. D. D. G.	<u> </u>	I.	<u> </u>	L

Kiang'ombe-R02 - Thika page22of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			KYA-RD 02		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.416km)		
	KIANG'OMBE ROAD 02 (KYA-RD 02)-0.416KM				
	GRAND SUMMARY TOTAL QUANTITIES				
	GRAND SOMMARY TO THE QUARTITIES				
	Kiambu County- Kyang'ombe Informal Settlement				
ITEM	DESCRIPTION				AMOUNT (KSHS)
4	Site Clearance and Top Soil Stripping				
5	Earthworks				
8	Culverts and Drainage Works				
9	Passage of Traffic				
12	Natural Material Subbase and Base				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				

SNIA/RIVERSIDE IN	GITHURAI AND MIS	SRI IN LIMURU ALL W	ITHIN KIAMBU COUI	RT JESUS IN RUIRU NTY.
	KIANG'OM	BE ROAD 03		

Kiang'ombe-R03 - Thika page23of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			KYA-RD 03		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.512km)		
	KIANG'OMBE ROAD 03 (KYA-RD 03)-0.512 KM				
31LL NO.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Kiambu County- Kiang'ombe Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	charges associated with hadinge.				
	Site Clearance				
4.01	Clearing existing road of all trees, vegetation, debris and rubbish of any nature;				
	including the grubbing of stumps and roots and the disposal from the area of all spoil	2	2.504.00		
	materials resulting from clearing and grubbing all in accordance with the	m^2	3,584.00		
	specifications.				
4.02	Removal of Topsoil				
4.02	Stripping vegetable soil from the roadway, and disposal to approved stockpile areas	3	746.00		
	all in accordance with the Specification and in conformity with the RE instructions	m³	716.80		
4.02	average depth 200mm.				
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet	m	31		
	structures including back filling.				
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

Kiang'ombe-R03 - Thika page24of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			KYA-RD 03	1	
			50 A.C	1	
			150 Stone Base	1	
			150 Gravel Subbase	1	
			300 Sub Grade Material	1	
			(0.512km)	1	
	KIANG'OMBE ROAD 03 (KYA-RD 03)-0.512 KM		(0.512kiii)		
BILL NO.5	EARTHWORKS				
	Kiambu County- Kiang'ombe Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	,				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Material used for earthworks (fill below bottom sub-grade) shall be minimum soil				
	class S2 quality and be compacted to 95% MDD (AASHTO T99)				
	The upper 300mm of subgrade shall be compacted to 100% MDD (AASHTO T99)				
	while the rest shall be compacted to 95% MDD (AASHTO T99).				
	Fill in Soft Material				
5.01	Excavating the material, transportation and filling in embankment, including watering	3	462.26		
	and rolling; all in accordance to specification	m³	163.36		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	16.34		
	Spoil in Soft Material				
5.04	Cut to spoil in soft material	m³	488.31		
	Spoil in Hard Material				
5.05	Excavate, stock pile for reuse and spoil surplus hard material	m³	48.83		
	Compaction of Existing Ground				
5.07	Compaction of formation ground in accordance with the specification	m³	537.60		
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m³	1,075.20		
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m³	322.56		
5.10	Provide, lay and compact 300mm sub grade material to 100% MDD (AASHTO T99)	m³	322.56		
	Topsoil				
5.11	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm;	m²	256.00		
	all in accordance with the specifications	'''	230.00		
	Grassing				
5.12	Planting of sprigs of approved indegineous grass types; to embankments, cuttings or				
	where directed by the RE in accordance with the Specification, including tending,	m²	256.00		
	watering and cutting until the grass is firm established or for 6 months				
	g and carting and the grade to this cardinated of for a finding				
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				<u> </u>

Kiang'ombe-R03 - Thika page25of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			KYA-RD 03		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.512km)		
	KIANG'OMBE ROAD 03 (KYA-RD 03)-0.512 KM		(0:512km)		
	NAME OF SECTIONS OF THE CONTRACT OF THE CONTRA				
BILL NO.8	CULVERTS AND DRAINAGE				
	Kiambu County - Kiang'ombe Informal Settlement				
	, , , , , , , , , , , , , , , , , , , ,				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
				,,	
	Excavate for Culverts and Subsoil Drains in Soft Material				
8.01					
	Excavation in soft material to any depth, compaction of the invert of excavation,	2	500		
	backfilling with excavated materials or removing excavated material to spoil; in	m³	600		
	accordance with the Specification and in conformity with the RE instructions				
8.02	Extra over Item 8.01 for excavation in hard material	m³	300		
	Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material				
8.03	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	737		
	accordance with the Specification and in conformity with the RE's instructions	'''	/3/		
8.04	Extra over Item 8.03 for excavation in hard material	m³	184		
	Selected backfill material				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications	m³	600		
	and in conformity with the instructions of the RE				
	In-situ culverts				
	Provide for in-situ culvert all in accordance with the Specification and in conformity				
9.06	with the RE instructions a) 600 mm diameter (for use at minor junctions only)		110		
8.06 8.07		m	110 40		
0.07	b) 900 mm diameter Concrete Class 15/20 to Beds, Surrounds	m	40		
8.09	Providing and placing the concrete; all in accordance with the Specification and in				
0.03	conformity with the RE instructions	m³	97		
	Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures				
8.10	·				
	Providing and placing the concrete, reinforcement and formwork class F2 all in	m³	31		
	accordance with the Specification and in conformity with the RE instructions				
	Concrete Class 25/20 For Covered Rectangular Drain structure				
8.11	Provide all materials and construct 500mm(Bottom width) wide (internal dimension)				
	rectangualr concrete drains 150mm thick walls and bottom base, average height of				
	0.8m, class 25/20, including slotted top cover of 100mm thick. Include the steel	m^3	197		
	reinforcement and formwork for concrete drain and concrete class 15(20) blinding as				
	specified in the drawings.				
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	102		
<u> </u>	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

Kiang'ombe-R03 - Thika page26of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			KYA-RD 03		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.512km)		
	KIANG'OMBE ROAD 03 (KYA-RD 03)-0.512 KM				
BILL NO.9	PASSAGE OF TRAFFIC				
	Kiambu County - Kiang'ombe Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Construction of Deviations in maximum lengths of 2 km sections				
9.01	All the operations connected with the initial construction of temporary deviations,				
	appropriate width, to allow passage of traffic during the Works; all in accordance with	km	0.26		
	the Specification				
	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide, 150mm thick, where directed by the RE and in accordance with the Specification	m³	192.00		
9.03	Naintanana the nassage of traffic	Lump	1.00		
	Maintenance the passage of traffic	Sum	1.00		
	Provide Signs and Barriers				
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights,				
	etc., along deviations constructed: all inaccordance with Specification and in	Km	0.51		
	conformity with the RE instructions				
	TOTAL FOR BULL O CARRIED TO CRAND SUMMARY RACE				
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				ļ

Kiang'ombe-R03 - Thika page27of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
I I LIVI	TI LIVI DESCRIPTION	ONIT	-	KATE (KSHS)	ANIOUNI (KSH3)
			KYA-RD 03		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.512km)		
	KIANG'OMBE ROAD 03 (KYA-RD 03)-0.512 KM				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Kiambu County - Kiang'ombe Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base				
12.01	Provide, lay and compact subbase in 150mm thick natural gravel material in				
	carriageway, bus bays, footpaths, shoulders and junctions from the designated	_			
	quarries listed in the Special Specification in accordance with the Specification and in	m³	544.32		
	conformity with the RE instructions (Stabilisation paid in Bill 14)				
12.02	Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm				
) plus 50mm blinding layer of quarry dust. This Includes 12 tonne vibrating roller (min	m³	544.32		
	8 passes)				
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				

Kiang'ombe-R03 - Thika page28of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			KYA-RD 03		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.512km)		
	KIANG'OMBE ROAD 03 (KYA-RD 03)-0.512 KM				
BILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
	Kiambu County - Kiang'ombe Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
15.01	Prime Coat and Tack coat				
15.01A	MC 30 prime coat on Cement treated material at nominal rate of 0.8 - 1.2 ltr/m² to		2270.2		
	base course on carriageway, bus bays, footpaths, shoulders and junctions	ltr	3379.2		
1 F O 1 B					
15.01B	K1-80 cationic emulsion tack coat on primed treated base at nominal rate of 0.4 - 1.0	ltr	3379.2		
	ltr/m² to base course on on carriageway, bus bays, footpaths, shoulders and junctions	l itr	33/9.2		
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.16	BITUMINOUS MIXES				
	Kiambu County - Kiang'ombe Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
				(110110)	(1000)
16.00	NOTE: No haulage will be paid for aggregates, bitumen or the premix. The cost for				
	haulage shall be included in the rates. Rates to be inclusive of fines				
16.01	Broyida Lay and spread evenly 50mm thick Asphalt Constate Type II sovering the				
	Provide, Lay and spread evenly 50mm thick Asphalt Concrete Type II covering the carriageway and the shoulders. The grading of the mixture of coarse and fine				
	aggregates shall be within and approximately parallel to the grading envelopes given				
	in table 16B-1 of the Standard Specification for Road and Bridge Construction for	M ³	190.1		
	Type II, 0/14mm wearing course .The coarse aggregate class for the asphalt concrete				
	shall be Class C. 80/100 penetration grade bitumen for the asphalt concrete.				
	shall be slass c. bo, 100 penetration grade bitamen for the aspiral concrete.				
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE				

Kiang'ombe-R03 - Thika page29of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			KYA-RD 03		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.512km)		
	KIANG'OMBE ROAD 03 (KYA-RD 03)-0.512 KM		(0.312kiii)		
BILL NO.20	ROAD FURNITURE				
	Kiambu County - Kiang'ombe Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Warning Signs				
20.01	Excavation for, providing and erecting warning signs size 750mm including backfill				
20.01	and concrete 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions	No.	1		
20.02	Priority Signs				
	Excavating for, providing and erecting priority signs including back filling and concrete				
	15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions				
20.02A	750mm size	No.	1		
20.02A 20.02B	1000 mm size	No.	1		
23.020	Mandatory Signs	110.	-		
20.03	Excavating for, providing and erecting prohibitory signs including backfilling and				
20.03	concrete 15/20 to bases; all in accordance with the Specification and in conformity	No.	1		
	with the RE instructions 1000mm size	10.] -		
20.04	Standard Informatory Signs				
20.04	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity				
	with the RE instructions				
20.04A	500x600mm	No.	1		
20.04B	600x600mm	No.	1		
20.05	Non Standard Informatory Signs		_		
	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity				
	with the RE instructions				
20.05A	Less than 1 sq.m	No.	1		
20.05B	Equal or more than 1 sq.m but less than 2 sq.m	No.	1		
20.05C	Equal or more than 2 sq.m but less than 5 sq.m	No.	1		
20.06	Road Marking painting				
	Preparing road surface, supplying approved road marking paint, 100mm wide				
	marking out and painting, all in accordance with the Specification and in conformity				
	with the RE instructions				
20.06A	White paint	m²	102		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m²	102		
	Speed reduction bituminous bumps at junctions				
20.09	Provision, transport and placing of materials in accordance with the Specification and	No	3		
	in conformity with the RE instructions		-		
20.15	Rumble Strips on Pavement				
20.10	Provision, transport and placing of materials in accordance with the Specification and	No.	12		
	in conformity with the drawings and RE instructions				
	Concrete Kerbs				
20.11	Provision, transport, handling, mixing and placing all materials in accordance with				
	Specification and in conformity with the RE instructions				
	Kerbs 125 mm x 250 mm straight	m	512	_	
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	26		
20.11C	Channel blocks 125mm x 100mm	m	1,024		
	<u>Trees</u>				
20.12	Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands	No.	5		
	The Specification, minimum neight 1.5m -Open richas of Wet Lands				
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				

Kiang'ombe-R03 - Thika page30of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			KYA-RD 03		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.512km)		
	KIANG'OMBE ROAD 03 (KYA-RD 03)-0.512 KM				
	GRAND SUMMARY TOTAL QUANTITIES				
	Kiambu County- Kyang'ombe Informal Settlement				
ITEM	DESCRIPTION				AMOUNT (KSHS)
4	Site Clearance and Top Soil Stripping				/ (nems)
5	Earthworks				
8	Culverts and Drainage Works				
9	Passage of Traffic				
12	Natural Material Subbase and Base				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
20					

	KIANG'ON	MBE ROAD 04	

Kiang'ombe-R04 - Thika page31of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			KYA-RD 04		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.207km)		
	KIANG'OMBE ROAD 04 (KYA-RD 04)-0.207 KM				
DILL NO 04	CITE CLEADANCE AND TORSON CTRIPDING				
BILL NO.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Kiambu County- Kiang'ombe Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Site Clearance				
4.01	Clearing existing road of all trees, vegetation, debris and rubbish of any nature;				
	including the grubbing of stumps and roots and the disposal from the area of all spoil	m^2	1,449.00		
	materials resulting from clearing and grubbing all in accordance with the	""	1,443.00		
	specifications.				
	Removal of Topsoil				
4.02	Stripping vegetable soil from the roadway, and disposal to approved stockpile areas				
	all in accordance with the Specification and in conformity with the RE instructions	m³	289.80		
	average depth 200mm.				
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet	m	12		
	structures including back filling.	111	12		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				
	TOTAL FOR BILL 4 CARRIED TO GRAND SUIVINIART PAGE				

Kiang'ombe-R04 - Thika page32of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			KYA-RD 04		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.207km)		
	KIANG'OMBE ROAD 04 (KYA-RD 04)-0.207 KM				
BILL NO.5	EARTHWORKS				
	Kiambu County- Kiang'ombe Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Material used for earthworks (fill below bottom sub-grade) shall be minimum soil				
	class S2 quality and be compacted to 95% MDD (AASHTO T99)				
	The upper 300mm of subgrade shall be compacted to 100% MDD (AASHTO T99)				
	while the rest shall be compacted to 95% MDD (AASHTO T99).				
	Fill in Soft Material				
5.01	Excavating the material, transportation and filling in embankment, including watering and rolling; all in accordance to specification	m³	5.54		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	0.55		
	Spoil in Soft Material				
5.04	Cut to spoil in soft material	m³	465.73		
	Spoil in Hard Material				
5.05	Excavate, stock pile for reuse and spoil surplus hard material	m³	46.57		
	Compaction of Existing Ground				
5.07	Compaction of formation ground in accordance with the specification	m³	217.35		
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m³	434.70		
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m³	130.41		
5.10	Provide, lay and compact 300mm sub grade material to 100% MDD (AASHTO T99)	m³	130.41		
	Topsoil				
5.11	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m²	103.50		
	Grassing				
5.12	Planting of sprigs of approved indegineous grass types; to embankments, cuttings or where directed by the RE in accordance with the Specification, including tending, watering and cutting until the grass is firm established or for 6 months	m²	103.50		
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

Kiang'ombe-R04 - Thika page33of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			KYA-RD 04		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material	•	
			(0.207km)		
	KIANG'OMBE ROAD 04 (KYA-RD 04)-0.207 KM		(0.207 Kill)		
BILL NO.8	CULVERTS AND DRAINAGE				
	Kiambu County - Kiang'ombe Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
I I LIVI	DESCRIPTION .	ONIT	QUANTITI	KATE (KSTIS)	ANIOONI (KSIIS)
	Excavate for Culverts and Subsoil Drains in Soft Material				
8.01	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	480		
	accordance with the Specification and in conformity with the RE instructions	'''	400		
	accordance with the specification and in comornity with the KE instructions				
8.02	Extra over Item 8.01 for excavation in hard material	m³	240		
	Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material				
8.03	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	298		
	accordance with the Specification and in conformity with the RE's instructions	'''	250		
	accordance with the specification and in comormity with the RE's instructions				
8.04	Extra over Item 8.03 for excavation in hard material	m³	75		
	Selected backfill material				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications	m³	480		
	and in conformity with the instructions of the RE	I	460		
	In-situ culverts				
	Provide for in-situ culvert all in accordance with the Specification and in conformity				
	with the RE instructions				
8.06	a) 600 mm diameter (for use at minor junctions only)	m	80		
8.07	b) 900 mm diameter	m	40		
	Concrete Class 15/20 to Beds, Surrounds				
8.09	Providing and placing the concrete; all in accordance with the Specification and in	3	00		
	conformity with the RE instructions	m³	80		
	Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures				
8.10					
	Providing and placing the concrete, reinforcement and formwork class F2 all in	m³	26		
	accordance with the Specification and in conformity with the RE instructions				
	Concrete Class 25/20 For Covered Rectangular Drain structure				
8.11	Provide all materials and construct 500mm(Bottom width) wide (internal dimension)				
	rectangualr concrete drains 150mm thick walls and bottom base, average height of				
	0.8m, class 25/20, including slotted top cover of 100mm thick. Include the steel	m^3	75		
	reinforcement and formwork for concrete drain and concrete class 15(20) blinding as	'''			
	specified in the drawings.				
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	41		
			'-		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

Kiang'ombe-R04 - Thika page34of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			KYA-RD 04		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.207km)		
	KIANG'OMBE ROAD 04 (KYA-RD 04)-0.207 KM				
BILL NO.9	PASSAGE OF TRAFFIC				
	Kiambu County - Kiang'ombe Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Construction of Deviations in maximum lengths of 2 km sections				
9.01	All the operations connected with the initial construction of temporary deviations,				
	appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification	km	0.10		
	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide, 150mm thick, where directed by the RE and in accordance with the Specification	m³	77.63		
9.03	Maintenance the passage of traffic	Lump Sum	1.00		
	Provide Signs and Barriers				
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights,				
	etc., along deviations constructed: all inaccordance with Specification and in	Km	0.21		
	conformity with the RE instructions				

Kiang'ombe-R04 - Thika page35of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			KYA-RD 04		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.207km)		
	KIANG'OMBE ROAD 04 (KYA-RD 04)-0.207 KM				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Kiambu County - Kiang'ombe Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base				
12.01	Provide, lay and compact subbase in 150mm thick natural gravel material in carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14)	m³	220.07		
12.02	Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm) plus 50mm blinding layer of quarry dust. This Includes 12 tonne vibrating roller (min 8 passes)	m³	220.07		
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				

Kiang'ombe-R04 - Thika page36of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			KYA-RD 04		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.207km)		
	KIANG'OMBE ROAD 04 (KYA-RD 04)-0.207 KM				
RIII NO 15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
DILL NO.13	Kiambu County - Kiang'ombe Informal Settlement				
	Riding County - Riding office informal Sectionicity				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
15.01	Prime Coat and Tack coat				
15.01A	MC 30 prime coat on Cement treated material at nominal rate of 0.8 - 1.2 ltr/m² to base course on carriageway, bus bays, footpaths, shoulders and junctions	ltr	1366.2		
15.01B	K1-80 cationic emulsion tack coat on primed treated base at nominal rate of 0.4 - 1.0				
	ltr/m² to base course on on carriageway, bus bays, footpaths, shoulders and junctions	ltr	1366.2		
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.16	BITUMINOUS MIXES				
	Kiambu County - Kiang'ombe Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
16.00	NOTE: No haulage will be paid for aggregates, bitumen or the premix. The cost for haulage shall be included in the rates. Rates to be inclusive of fines				
16.01	Provide, Lay and spread evenly 50mm thick Asphalt Concrete Type II covering the				
	carriageway and the shoulders. The grading of the mixture of coarse and fine				
	aggregates shall be within and approximately parallel to the grading envelopes given	2			
	in table 16B-1 of the Standard Specification for Road and Bridge Construction for	M ³	76.8		
	Type II, 0/14mm wearing course .The coarse aggregate class for the asphalt concrete				
	shall be Class C. 80/100 penetration grade bitumen for the asphalt concrete.				
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE				

Kiang'ombe-R04 - Thika page37of208

ITEN A	ITEM DECORPTION	LINIT	OLI A NITITY	DATE (VCUS)	ANACHINIT (VCHC)
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			KYA-RD 04		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
	KIANG'OMBE ROAD 04 (KYA-RD 04)-0.207 KM		(0.207km)		
	KIANG GIVIDE ROAD OF (KIA-ND OF)-0.207 KW				
BILL NO.20	ROAD FURNITURE				
	Kiambu County - Kiang'ombe Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Warning Signs				
20.01	Excavation for, providing and erecting warning signs size 750mm including backfill and concrete 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions	No.	1		
20.02	Priority Signs				
	Excavating for, providing and erecting priority signs including back filling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions				
20.02A	750mm size	No.	1		
20.02A 20.02B	1000 mm size	No.	1		
20.020	Mandatory Signs	110.	1		
20.03	Excavating for, providing and erecting prohibitory signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions 1000mm size	No.	1		
20.04	Standard Informatory Signs				
20.04	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions				
20.04A	500x600mm	No.	1		
	600x600mm		1		
	Non Standard Informatory Signs	No.	1		
20.03	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions				
20 OF A		No	1		
20.05A	Less than 1 sq.m	No.	1		
20.05B	Equal or more than 1 sq.m but less than 2 sq.m	No.	1		
20.05C	Equal or more than 2 sq.m but less than 5 sq.m	No.	1		
20.06	Road Marking painting Preparing road surface, supplying approved road marking paint, 100mm wide marking out and painting, all in accordance with the Specification and in conformity with the RE instructions				
20.06A	White paint	m²	41		
22.27					
	As Item 2007 but 250mm wide	2	44		
20.07A	a) White paint	m²	41		
20.09	Speed reduction bituminous bumps at junctions Provision, transport and placing of materials in accordance with the Specification and	No	1		
	in conformity with the RE instructions <u>Rumble Strips on Pavement</u>		_		
20.10	Provision, transport and placing of materials in accordance with the Specification and in conformity with the drawings and RE instructions	No.	4		
20.11	Concrete Kerbs Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions				
	Kerbs 125 mm x 250 mm straight	m	207		
	Kerbs 125 mm x 250 mm radius 1m - 5m	m	10		
20.11C	Channel blocks 125mm x 100mm	m	414		
	<u>Trees</u>				
20.12	Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands	No.	5		
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				

Kiang'ombe-R04 - Thika page38of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			KYA-RD 04		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.207km)		
	KIANG'OMBE ROAD 04 (KYA-RD 04)-0.207 KM				
	GRAND SUMMARY TOTAL QUANTITIES				
	Kiamaha, Casarta, Kasaralamaha lafamasi Cattlemant				
ITENA	Kiambu County- Kyang'ombe Informal Settlement				ADAOLINIT (KCLIC)
ITEM	DESCRIPTION				AMOUNT (KSHS)
4	Site Clearance and Top Soil Stripping				
5	Earthworks				
8	Culverts and Drainage Works				
9	Passage of Traffic				
12	Natural Material Subbase and Base				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				

BOSI	SNIA/RIVERSIDE IN GITHURAI AND MISRI IN LIMURU ALL WITHIN KIAMBU COUNTY.
	SERIAL No.3 - MISRI SETTLEMENT - LIMURU

	MODIO	14D 04	
	MISRI RO	JAV UI	

Misri-R01 - Limuru page39of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 01	1	
			50 A.C	1	
			150 Stone Base	1	
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.456km)		
	MISRI ROAD 01 (MSR-RD 01)-0.456KM				
BILL NO.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
DILL NO.04	Kiambu County- Misri Informal Settlement				
	Indiniba county initiatinal sectionicity				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Site Clearance				
4.01	Clearing existing road of all trees, vegetation, debris and rubbish of any nature;				
	including the grubbing of stumps and roots and the disposal from the area of all spoil	2	2.726.00		
	materials resulting from clearing and grubbing all in accordance with the	m^2	2,736.00		
	specifications.				
	Removal of Topsoil				
4.02	Stripping vegetable soil from the roadway, and disposal to approved stockpile areas				
	all in accordance with the Specification and in conformity with the RE instructions average depth 200mm.	m³	547.20		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet structures including back filling.	m	27		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

Misri-R01 - Limuru page40of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 01		, ,
			50 A.C	1	
			150 Stone Base	1	
			150 Gravel Subbase	1	
			300 Sub Grade Material	-	
			(0.456km)	1	
	MISRI ROAD 01 (MSR-RD 01)-0.456KM		(0.430kiii)		
BILL NO.5	EARTHWORKS				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Material used for earthworks (fill below bottom sub-grade) shall be minimum soil				
	class S2 quality and be compacted to 95% MDD (AASHTO T99)				
	The upper 300mm of subgrade shall be compacted to 100% MDD (AASHTO T99)				
	while the rest shall be compacted to 95% MDD (AASHTO T99).				
5.04	Fill in Soft Material				
5.01	Excavating the material, transportation and filling in embankment, including watering	m³	198.04		
	and rolling; all in accordance to specification				
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	19.80		
F 02	Spoil in Soft Material	3	2.474.20		
5.03	Cut to spoil in soft material	m³	3,474.39		
Γ 04	Spoil in Hard Material	m 3	247.44		
5.04	Excavate, stock pile for reuse and spoil surplus hard material Compaction of Existing Ground	m³	347.44		
5.05	Compaction of Existing Ground Compaction of formation ground in accordance with the specification	3	470.00		
	<u> </u>	m³	478.80		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO	m³	957.60		
F 07	T99)				
5.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO	m³	287.28		
F 00	T99)				
5.08	Provide, lay and compact 300mm sub grade material to 100% MDD (AASHTO T99)	m³	287.28		
	Topsoil				
5.09	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm;				
5.09	all in accordance with the specifications	m²	228.00		
	Grassing				
5.10					
3.10	Planting of sprigs of approved indegineous grass types; to embankments, cuttings or	_			
	where directed by the RE in accordance with the Specification, including tending,	m²	228.00		
	watering and cutting until the grass is firm established or for 6 months				
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				
	· ·				

Misri-R01 - Limuru page41of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 01	-	
			50 A.C	1	
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material	1	
			(0.456km)		
	MISRI ROAD 01 (MSR-RD 01)-0.456KM		, ,		
BILL NO.7	EXCAVATION AND FILLING FOR STRUCTURES				
	Kiambu County- Misri Informal Settlement				
			_		
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Excavation				
	Erosion Protection and Slope Protection				
	Excavate for Gabions in Soft Material				
7.01					
	Excavation in soft material to any depth, compaction of the surfaces to receive the	3	45.00		
	gabions, backfilling with the excavated material or hauling to spoil excavated material	m³	45.00		
	all in accordance with the Specification and in conformity with the RE Instructions				
7.02	Extra over Item 708 in hard material	m³	11.25		
	Gabion Mesh (Commercial galvanized wires-2 x 1 x 1m basket)				
7.30	Providing and fixing the mesh including diaphragms; all in accordance with the				
	Specification and in conformity with the RE instructions, include for french drains	No	450.00		
	specification and in comorning with the KE instructions, include for french drains				
	Rockfill to Gabions				
7.40	Providing, and placing the rock; in accordance with the secification and in conformity	. 2	2.662.00		
	with the RE's instruction	m³	3,600.00		
7.50	200mm thick dry stone pitching	m ²	182		
7.60					
7.00	Extra over Item 7.05 for grouting to stone pitching	m ²	182		
	TOTAL FOR BILL 7 CARRIED GRAND SUMMARY PAGE				

Misri-R01 - Limuru page42of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 01	1	
			50 A.C	1	
			150 Stone Base	1	
			150 Gravel Subbase	1	
			300 Sub Grade Material	1	
			(0.456km)	1	
	MISRI ROAD 01 (MSR-RD 01)-0.456KM		(22.22.23.7)		
BILL NO.8	CULVERTS AND DRAINAGE				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Excavate for Culverts and Subsoil Drains in Soft Material				
8.01	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	680		
	accordance with the Specification and in conformity with the RE instructions				
8.02	Extra over Item 8.01 for excavation in hard material	m³	340		
8.02	Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material	111	340		
8.03	Excavate for filler, Outrail, white and Catchwater Drails in soft material				
8.03	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	657		
	accordance with the Specification and in conformity with the RE's instructions				
8.04	Extra over Item 8.03 for excavation in hard material	m³	164		
	Selected backfill material				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications	3	600		
	and in conformity with the instructions of the RE	m³	680		
	In-situ culverts				
	Provide for in-situ culvert all in accordance with the Specification and in conformity				
	with the RE instructions				
8.06	a) 600 mm diameter (for use at minor junctions only)	m	100		
8.07	b) 900 mm diameter	m	70		
0.00	Concrete Class 15/20 to Beds, Surrounds				
8.09	Providing and placing the concrete; all in accordance with the Specification and in	m³	118		
	conformity with the RE instructions				
8.10	Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures				
0.10	Providing and placing the concrete, reinforcement and formwork class F2 all in	m³	38		
	accordance with the Specification and in conformity with the RE instructions	'''	36		
	Concrete Class 25/20 For Covered Rectangular Drain structure				
8.11	Provide all materials and construct 500mm(Bottom width) wide (internal dimension)				
	rectangualr concrete drains 150mm thick walls and bottom base, average height of				
	0.8m, class 25/20, including slotted top cover of 100mm thick. Include the steel	m ³	183		
	reinforcement and formwork for concrete drain and concrete class 15(20) blinding as				
	specified in the drawings.				
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	91		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

Misri-R01 - Limuru page43of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 01		
			50 A.C	1	
			150 Stone Base	1	
			150 Gravel Subbase		
			300 Sub Grade Material	1	
			(0.456km)	1	
	MISRI ROAD 01 (MSR-RD 01)-0.456KM		,		
BILL NO.9	PASSAGE OF TRAFFIC				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Construction of Deviations in maximum lengths of 2 km sections				
9.01	All the operations connected with the initial construction of temporary deviations,				
	appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification	km	0.23		
	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide, 150mm thick, where directed by the RE and in accordance with the Specification	m³	171.00		
9.03	Maintenance the passage of traffic	Lump Sum	1.00		
	Provide Signs and Barriers				
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights,				
	etc., along deviations constructed: all inaccordance with Specification and in	Km	0.46		
	conformity with the RE instructions				

Misri-R01 - Limuru page44of208

	I	· · · · · · · · · · · · · · · · · · ·			
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 01		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase]	
			300 Sub Grade Material]	
			(0.456km)	1	
	MISRI ROAD 01 (MSR-RD 01)-0.456KM				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base				
12.01	Provide, lay and compact subbase in 150mm thick natural gravel material in				
	carriageway, bus bays, footpaths, shoulders and junctions from the designated				
	quarries listed in the Special Specification in accordance with the Specification and in	m³	507.87		
	conformity with the RE instructions (Stabilisation paid in Bill 14)				
12.02	Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm				
) plus 50mm blinding layer of quarry dust. This Includes 12 tonne vibrating roller (min	m³	507.87		
	8 passes)				
	,				
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				

Misri-R01 - Limuru page45of208

	1	1	_	1	T
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 01]	
			50 A.C]	
			150 Stone Base]	
			150 Gravel Subbase	1	
			300 Sub Grade Material	1	
			(0.456km)	1	
	MISRI ROAD 01 (MSR-RD 01)-0.456KM				
BILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
15.01	Prime Coat and Tack coat				
15.01A	MC 30 prime coat on Cement treated material at nominal rate of 0.8 - 1.2 ltr/m² to				
	base course on carriageway, bus bays, footpaths, shoulders and junctions	ltr	3009.6		
	and source on carriage may, and superincy on caracito and junctions				
15.01B	K1-80 cationic emulsion tack coat on primed treated base at nominal rate of 0.4 - 1.0				
	ltr/m² to base course on on carriageway, bus bays, footpaths, shoulders and junctions	ltr	3009.6		
	TOTAL FOR BUIL 45 CARRIED TO CRAND SUMMAARY DAGS				
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				

Misri-R01 - Limuru page46of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 01		
			50 A.C]	
			150 Stone Base		
			150 Gravel Subbase]	
			300 Sub Grade Material		
			(0.456km)		
	MISRI ROAD 01 (MSR-RD 01)-0.456KM				
BILL NO.16	BITUMINOUS MIXES				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
16.00	NOTE: No haulage will be paid for aggregates, bitumen or the premix. The cost for				
10.00	haulage shall be included in the rates. Rates to be inclusive of fines				
16.01	Provide, Lay and spread evenly 50mm thick Asphalt Concrete Type II covering the				
	carriageway and the shoulders. The grading of the mixture of coarse and fine				
	laggregates shall be within and approximately parallel to the grading envelopes given	3	460.0		
	in table 16B-1 of the Standard Specification for Road and Bridge Construction for	M ³	169.3		
	Type II, 0/14mm wearing course .The coarse aggregate class for the asphalt concrete				
	shall be Class C. 80/100 penetration grade bitumen for the asphalt concrete.				
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE				

Misri-R01 - Limuru page47of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 01	-	, and control (notice)
			50 A.C	†	
			150 Stone Base	1	
			150 Gravel Subbase	1	
			300 Sub Grade Material	1	
			(0.456km)	1	
	MISRI ROAD 01 (MSR-RD 01)-0.456KM		,		
BILL NO.20	ROAD FURNITURE				
	Kiambu County- Misri Informal Settlement				
.==	D-500010-1011			D 4 = 5 (1/01/01)	
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Warning Signs				
20.01	Excavation for, providing and erecting warning signs size 750mm including backfill				
	and concrete 15/20 to bases all in accordance with the Specification and in	No.	1		
	conformity with the RE instructions				
20.02	Priority Signs				
	Excavating for, providing and erecting priority signs including back filling and concrete				
	15/20 to bases; all in accordance with the Specification and in conformity with the RE				
	instructions				
20.02A	750mm size	No.	1		
20.02B	1000 mm size	No.	1		
22.22	Mandatory Signs				
20.03	Excavating for, providing and erecting prohibitory signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity	No.	1		
22.24	with the RE instructions 1000mm size				
20.04	Standard Informatory Signs				
	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions				
20.044	500x600mm	No	1		
20.04A 20.04B	600x600mm	No.	1 1		
20.046	Non Standard Informatory Signs	NO.	1		
20.03	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity				
20.054	with the RE instructions		4		
20.05A	Less than 1 sq.m	No.	1		
20.05B 20.05C	Equal or more than 1 sq.m but less than 2 sq.m	No.	1 1		
20.05C	Equal or more than 2 sq.m but less than 5 sq.m Road Marking painting	No.	1		
20.00	Preparing road surface, supplying approved road marking paint, 100mm wide				
	marking out and painting, all in accordance with the Specification and in conformity				
	with the RE instructions				
20.06A	White paint	m²	91		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m²	91		
	Speed reduction bituminous bumps at junctions				
20.09	Provision, transport and placing of materials in accordance with the Specification and	No	2		
	in conformity with the RE instructions	.,,	_		
	Rumble Strips on Pavement				
20.10	Provision, transport and placing of materials in accordance with the Specification and	No.	10		
	in conformity with the drawings and RE instructions		-		
	Compared Works				
20.44	Concrete Kerbs				
20.11	Provision, transport, handling, mixing and placing all materials in accordance with				
20.11A	Specification and in conformity with the RE instructions Kerbs 125 mm x 250 mm straight		502		
20.11A 20.11B	Kerbs 125 mm x 250 mm straight Kerbs 125 mm x 250 mm radius 1m - 5m	m m	23		
20.11B 20.11C	Channel blocks 125mm x 100mm	m	1,003		
20.110	Charmer blocks 125mm x 100mm	111	1,003		
	Trees				
20.12	Planting of approved indigenous types of trees where instructed, in accordance with	No.	5		
	the Specification, minimum height 1.5m -Open Fields or Wet Lands				
	TOTAL CARRIED TO SUMMARY PAGE				
			•		

Misri-R01 - Limuru page48of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 01	, ,	
			50 A.C	1	
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.456km)		
	MISRI ROAD 01 (MSR-RD 01)-0.456KM				
	GRAND SUMMARY TOTAL QUANTITIES				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION				AMOUNT (KSHS)
4	Site Clearance and Top Soil Stripping				
5	Earthworks				
7	Excavation and Filling for Structures				
8	Culverts and Drainage Works				
9	Passage of Traffic				
12	Natural Material Subbase and Base				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				

	MISRI ROA	.n n7	
	אווטואו ואטר	אט טצ	

Misri-R02 - Limuru page49of208

SILL NO.04 SITE CLEARAN Kiambu Coun	D2 (MSR-RD 02)-0.563KM ICE AND TOPSOIL STRIPPING ty- Misri Informal Settlement DESCRIPTION	UNIT	MSR-RD 02 50 A.C 150 Stone Base 150 Gravel Subbase 300 Sub Grade Material (0.563km)		
SILL NO.04 SITE CLEARAN Kiambu Coun	ICE AND TOPSOIL STRIPPING ty- Misri Informal Settlement DESCRIPTION	UNIT	150 Stone Base 150 Gravel Subbase 300 Sub Grade Material (0.563km)		
SILL NO.04 SITE CLEARAN Kiambu Coun	ICE AND TOPSOIL STRIPPING ty- Misri Informal Settlement DESCRIPTION	UNIT	150 Gravel Subbase 300 Sub Grade Material (0.563km)		
SILL NO.04 SITE CLEARAN Kiambu Coun	ICE AND TOPSOIL STRIPPING ty- Misri Informal Settlement DESCRIPTION	UNIT	300 Sub Grade Material (0.563km)		
SILL NO.04 SITE CLEARAN Kiambu Coun	ICE AND TOPSOIL STRIPPING ty- Misri Informal Settlement DESCRIPTION	UNIT	(0.563km)		
SILL NO.04 SITE CLEARAN Kiambu Coun	ICE AND TOPSOIL STRIPPING ty- Misri Informal Settlement DESCRIPTION	UNIT			
SILL NO.04 SITE CLEARAN Kiambu Coun	ICE AND TOPSOIL STRIPPING ty- Misri Informal Settlement DESCRIPTION	UNIT			
Kiambu Coun	ty- Misri Informal Settlement DESCRIPTION	UNIT			
Kiambu Coun	ty- Misri Informal Settlement DESCRIPTION	UNIT			
ITEM	DESCRIPTION	UNIT			
		UNIT	011441		1
		UNIT			<u> </u>
NOTE: All cost			QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
No separate in additional pay deemed to ha	ts and charges connected with haulage are to be included within the ered by tenderers against the items described in this Bill of Quantities. tems for overhaul are included in any section of this Bill and no yment whatsoever will be made for haulage. Tenderers are therefore are included, in the unit rates entered against an item, for all costs and iated with haulage.				
Site Clearance					
4.01 Clearing existing including the	ing road of all trees, vegetation, debris and rubbish of any nature; grubbing of stumps and roots and the disposal from the area of all spoil alting from clearing and grubbing all in accordance with the	m²	2,815.00		
Removal of To	opsoil				
	etable soil from the roadway, and disposal to approved stockpile areas nce with the Specification and in conformity with the RE instructions a 200mm.	m³	563.00		
4.03 Excavate and	remove existing pipes and culverts of any size and the inlet and outlet luding back filling.	m	28		
	LL 4 CARRIED TO GRAND SUMMARY PAGE				

Misri-R02 - Limuru page50of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 02		
			50 A.C	1	
			150 Stone Base	1	
			150 Gravel Subbase	1	
			300 Sub Grade Material	1	
			(0.563km)	1	
	MISRI ROAD 02 (MSR-RD 02)-0.563KM		(0.565kiii)		
	IVIISKI KOAD UZ (IVISK-KD UZ)-U.505KIVI				
BILL NO.5	EARTHWORKS				
5.22	Kiambu County- Misri Informal Settlement				
	,,,,				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
				, /	
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Material used for earthworks (fill below bottom sub-grade) shall be minimum soil				
	class S2 quality and be compacted to 95% MDD (AASHTO T99)				
	The upper 300mm of subgrade shall be compacted to 100% MDD (AASHTO T99)				
	while the rest shall be compacted to 95% MDD (AASHTO T99).				
	Fill in Soft Material				
5.01	Excavating the material, transportation and filling in embankment, including watering				
0.02	and rolling; all in accordance to specification	m³	23.76		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	2.38		
3.02	Spoil in Soft Material	'''	2.50		
5.03	Cut to spoil in soft material	m³	1,362.59		
3.03	Spoil in Hard Material		1,302.33		
5.04	Excavate, stock pile for reuse and spoil surplus hard material	m³	136.26		
3.01	Compaction of Existing Ground		150.20		
5.05	Compaction of formation ground in accordance with the specification	m³	591.15		
	· · · · · · · · · · · · · · · · · · ·	""	391.13		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m³	1,182.30		
F 07	,				
5.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO	m³	354.69		
Г 00	T99)				
5.80	Provide, lay and compact 300mm sub grade material to 100% MDD (AASHTO T99)	m³	354.69		
	Tanasil				
Г 00	Topsoil Topsoiling prior to greening, minimum composited thickness of top soil shall be FOrest.				
5.90	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm;	m²	281.50		
	all in accordance with the specifications				
F 40	Grassing				
5.10	Planting of sprigs of approved indegineous grass types; to embankments, cuttings or				
	where directed by the RE in accordance with the Specification, including tending,	m²	281.50		
	watering and cutting until the grass is firm established or for 6 months				
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE]			I

Misri-R02 - Limuru page51of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 02		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.563km)		
	MISRI ROAD 02 (MSR-RD 02)-0.563KM				
BILL NO.8	CULVERTS AND DRAINAGE				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	OHANITITY	DATE (VCHC)	AMOUNT (VCHC)
IIEIVI	DESCRIPTION	UNII	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Excavate for Culverts and Subsoil Drains in Soft Material				
8.01					
	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	640		
	accordance with the Specification and in conformity with the RE instructions				
8.02	Extra over Item 8.01 for excavation in hard material	m³	320		
	Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material				
8.03	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	811		
		m	011		
	accordance with the Specification and in conformity with the RE's instructions				
8.04	Extra over Item 8.03 for excavation in hard material	m³	203		
	Selected backfill material				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE	m³	640		
	In-situ culverts				
	Provide for in-situ culvert all in accordance with the Specification and in conformity				
	with the RE instructions				
8.06	a) 600 mm diameter (for use at minor junctions only)	m	100		
8.07	b) 900 mm diameter	m	60		
	Concrete Class 15/20 to Beds, Surrounds				
8.09	Providing and placing the concrete; all in accordance with the Specification and in	m³	109		
	conformity with the RE instructions				
0.10	Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures				
8.10	Providing and placing the concrete, reinforcement and formwork class F2 all in	3	25		
	accordance with the Specification and in conformity with the RE instructions	m³	35		
	Concrete Class 25/20 For Covered Rectangular Drain structure				
8.11	Provide all materials and construct 500mm(Bottom width) wide (internal dimension)				
0.11	rectangualr concrete drains 150mm thick walls and bottom base, average height of				
	0.8m, class 25/20, including slotted top cover of 100mm thick. Include the steel	m ³	231		
	reinforcement and formwork for concrete drain and concrete class 15(20) blinding as	'''	251		
	specified in the drawings.				
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	113		
	The second secon				
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				
	•				

Misri-R02 - Limuru page52of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 02 50 A.C		
			150 Stone Base	1	
			150 Gravel Subbase		
			300 Sub Grade Material	1	
			(0.563km)	1	
	MISRI ROAD 02 (MSR-RD 02)-0.563KM				
BILL NO.9	PASSAGE OF TRAFFIC				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Construction of Deviations in maximum lengths of 2 km sections				
9.01	All the operations connected with the initial construction of temporary deviations,				
	appropriate width, to allow passage of traffic during the Works; all in accordance	km	0.28		
	with the Specification				
	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide,				
	150mm thick, where directed by the RE and in accordance with the Specification	m³	211.13		
9.03	Maintenance the passage of traffic	Lump	1.00		
	· · · · ·	Sum	1.00		
	Provide Signs and Barriers				
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights,		0.55		
	etc., along deviations constructed: all inaccordance with Specification and in	Km	0.56		
	conformity with the RE instructions				

Misri-R02 - Limuru page53of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 02		
			50 A.C	1	
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.563km)		
	MISRI ROAD 02 (MSR-RD 02)-0.563KM				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base				
12.01					
12.01	Provide, lay and compact subbase in 150mm thick natural gravel material in				
	carriageway, bus bays, footpaths, shoulders and junctions from the designated	m³	627.04		
	quarries listed in the Special Specification in accordance with the Specification and in	m³	627.04		
		m³	627.04		
12.02	quarries listed in the Special Specification in accordance with the Specification and in	m³	627.04		
12.02	quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14)	m³ m³	627.04		
12.02	quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14) Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm				
12.02	quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14) Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm) plus 50mm blinding layer of quarry dust. This Includes 12 tonne vibrating roller				

Misri-R02 - Limuru page54of208

,					
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 02		
			50 A.C	1	
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material]	
			(0.563km)		
	MISRI ROAD 02 (MSR-RD 02)-0.563KM				
BILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
15.01	Prime Coat and Tack coat				
15.01A	MC 30 prime coat on Cement treated material at nominal rate of 0.8 - 1.2 ltr/m² to				
	base course on carriageway, bus bays, footpaths, shoulders and junctions	ltr	3715.8		
15.01B	K1-80 cationic emulsion tack coat on primed treated base at nominal rate of 0.4 - 1.0				
	ltr/m² to base course on on carriageway, bus bays, footpaths, shoulders and	ltr	3715.8		
	junctions				
	TOTAL FOR BUIL AS CARRIED TO CRAND SUMMAARY PAGE				
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				
			1	1	1

Misri-R02 - Limuru page55of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 02		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.563km)		
	MISRI ROAD 02 (MSR-RD 02)-0.563KM				
	BITUMINOUS MIXES				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	OLIANITITY	DATE (VELIE)	ANACHINIT (VCHC)
IICIVI	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
16.00	NOTE: No haulage will be paid for aggregates, bitumen or the premix. The cost for				
10.00	haulage shall be included in the rates. Rates to be inclusive of fines				
16.01	Dravide Lay and spread evenly Form thick Asphalt Congrete Type II sovering the				
	Provide, Lay and spread evenly 50mm thick Asphalt Concrete Type II covering the carriageway and the shoulders. The grading of the mixture of coarse and fine				
	aggregates shall be within and approximately parallel to the grading envelopes given				
	in table 16B-1 of the Standard Specification for Road and Bridge Construction for	M^3	209.0		
	Type II, 0/14mm wearing course .The coarse aggregate class for the asphalt concrete				
	shall be Class C. 80/100 penetration grade bitumen for the asphalt concrete.				
	, ,				

Misri-R02 - Limuru page56of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY MSR-RD 02 50 A.C 150 Stone Base 150 Gravel Subbase 300 Sub Grade Material (0.563km)	RATE (KSHS)	AMOUNT (KSHS)
	MISRI ROAD 02 (MSR-RD 02)-0.563KM				
BILL NO.20	ROAD FURNITURE Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Warning Signs				
20.01	Excavation for, providing and erecting warning signs size 750mm including backfill and concrete 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions	No.	1		
20.02	Priority Signs				
20.024	Excavating for, providing and erecting priority signs including back filling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions		1		
20.02A 20.02B	750mm size 1000 mm size	No. No.	1 1		
	Mandatory Signs		_		
20.03	Excavating for, providing and erecting prohibitory signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions 1000mm size	No.	1		
20.04	Standard Informatory Signs Excavating for, providing and erecting information signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions				
20.04A	500x600mm	No.	1		
20.04B	600x600mm	No.	1		
20.05	Non Standard Informatory Signs Excavating for, providing and erecting information signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions				
20.05A	Less than 1 sq.m	No.	1		
20.05B	Equal or more than 1 sq.m but less than 2 sq.m	No.	1		
20.05C 20.06	Equal or more than 2 sq.m but less than 5 sq.m Road Marking painting	No.	1		
	Preparing road surface, supplying approved road marking paint, 100mm wide marking out and painting, all in accordance with the Specification and in conformity with the RE instructions				
20.06A	White paint	m²	113		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m²	113		
20.09	Speed reduction bituminous bumps at junctions Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions Rumble Strips on Pavement	No	3		
20.10	Provision, transport and placing of materials in accordance with the Specification and in conformity with the drawings and RE instructions	No.	13		
20.11	Concrete Kerbs Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions				
20.11A	Kerbs 125 mm x 250 mm straight	m	563		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	28		
20.11C	Channel blocks 125mm x 100mm	m	1,126		
	Trees				
20.12	Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands	No.	5		
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				
	1	<u> </u>	<u>I</u>	<u> </u>	<u> </u>

Misri-R02 - Limuru page57of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 02 50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.563km)		
	MISRI ROAD 02 (MSR-RD 02)-0.563KM				
	CDAND SUBSESSED TOTAL QUANTITIES				
	GRAND SUMMARY TOTAL QUANTITIES				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION				AMOUNT (KSHS)
4	Site Clearance and Top Soil Stripping				
5	Earthworks				
8	Culverts and Drainage Works				
9	Passage of Traffic				
12	Natural Material Subbase and Base				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				

	MISRI ROAD 04	•	

Misri-R04 - Limuru page58of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 04		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.030km)		
	MISRI ROAD 04 (MSR-RD 04)-0.030KM				
BILL NO.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the unit rates entered by tenderers against the items described in this Bill of Quantities. No separate items for overhaul are included in any section of this Bill and no additional payment whatsoever will be made for haulage. Tenderers are therefore deemed to have included, in the unit rates entered against an item, for all costs and charges associated with haulage.				
	Site Clearance				
4.01	Clearing existing road of all trees, vegetation, debris and rubbish of any nature; including the grubbing of stumps and roots and the disposal from the area of all spoil materials resulting from clearing and grubbing all in accordance with the specifications.	m²	150.00		
	Removal of Topsoil				
4.02	Stripping vegetable soil from the roadway, and disposal to approved stockpile areas all in accordance with the Specification and in conformity with the RE instructions average depth 200mm.	m³	30.00		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet structures including back filling.	m	2		
	Structures metading such ming.				

Misri-R04 - Limuru page59of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 04	1	
			50 A.C	1	
			150 Stone Base	1	
			150 Gravel Subbase	1	
			300 Sub Grade Material	1	
			(0.030km)	1	
	MISRI ROAD 04 (MSR-RD 04)-0.030KM		(0.030km)		
BILL NO.5	EARTHWORKS				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
				,	,
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Material used for earthworks (fill below bottom sub-grade) shall be minimum soil				
	class S2 quality and be compacted to 95% MDD (AASHTO T99)				
	The upper 300mm of subgrade shall be compacted to 100% MDD (AASHTO T99)				
	while the rest shall be compacted to 95% MDD (AASHTO T99).				
	Fill in Soft Material				
5.01	Excavating the material, transportation and filling in embankment, including watering	m³	1.95		
	and rolling; all in accordance to specification	111	1.95		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	0.20		
	Spoil in Soft Material				
5.03	Cut to spoil in soft material	m³	59.31		
	Spoil in Hard Material				
5.04	Excavate, stock pile for reuse and spoil surplus hard material	m³	5.93		
	Compaction of Existing Ground				
5.05	Compaction of formation ground in accordance with the specification	m³	31.50		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m³	63.00		
5.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m³	18.90		
5.80	Provide, lay and compact 300mm sub grade material to 100% MDD (AASHTO T99)	m³	18.90		
	<u>Topsoil</u>				
5.90	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm;	m²	15.00		
	all in accordance with the specifications	'''	13.00		
	Grassing				
5.10	Planting of sprigs of approved indegineous grass types; to embankments, cuttings or				
	where directed by the RE in accordance with the Specification, including tending,	m²	15.00		
	watering and cutting until the grass is firm established or for 6 months				
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				1

Misri-R04 - Limuru page60of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 04	1	
			50 A.C	1	
			150 Stone Base	1	
			150 Gravel Subbase	†	
			300 Sub Grade Material	1	
			(0.030km)	1	
	MISRI ROAD 04 (MSR-RD 04)-0.030KM		, ,		
BILL NO.8	CULVERTS AND DRAINAGE				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
IICIVI	DESCRIPTION	ONT	QUANTITY	KATE (KSHS)	AIVIOONT (K3H3)
	Excavate for Culverts and Subsoil Drains in Soft Material				
8.01					
	Excavation in soft material to any depth, compaction of the invert of excavation,	3	160		
	backfilling with excavated materials or removing excavated material to spoil; in	m³	160		
	accordance with the Specification and in conformity with the RE instructions				
8.02	Extra over Item 8.01 for excavation in hard material	m³	80		
	Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material				
8.03	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	43		
	accordance with the Specification and in conformity with the RE's instructions				
8.04	Extra over Item 8.03 for excavation in hard material	m³	11		
0.04	Selected backfill material				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications				
	and in conformity with the instructions of the RE	m³	160		
	In-situ culverts				
	Provide for in-situ culvert all in accordance with the Specification and in conformity				
	with the RE instructions				
	a) 600 mm diameter (for use at minor junctions only)	m	20		
8.07	b) 900 mm diameter	m	20		
	Concrete Class 15/20 to Beds, Surrounds				
8.09	Providing and placing the concrete; all in accordance with the Specification and in	m³	29		
	conformity with the RE instructions Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures				
8.10					
0.10	Providing and placing the concrete, reinforcement and formwork class F2 all in	m³	9		
	accordance with the Specification and in conformity with the RE instructions	'''			
	Concrete Class 25/20 For Covered Rectangular Drain structure				
8.11	Provide all materials and construct 500mm(Bottom width) wide (internal dimension)				
0.11	rectangualr concrete drains 150mm thick walls and bottom base, average height of				
	0.8m, class 25/20, including slotted top cover of 100mm thick. Include the steel	m ³	9		
	reinforcement and formwork for concrete drain and concrete class 15(20) blinding as	'''			
	specified in the drawings.				
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	6		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

Misri-R04 - Limuru page61of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 04	(1011)	(
			50 A.C	1	
			150 Stone Base	1	
			150 Gravel Subbase	-	
			300 Sub Grade Material		
			(0.030km)		
	MISRI ROAD 04 (MSR-RD 04)-0.030KM				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	No. of Co. of China and David				
	Natural Gravel Subbase and Base				
12.01					
	Provide, lay and compact subbase in 150mm thick natural gravel material in				
	carriageway, bus bays, footpaths, shoulders and junctions from the designated	m³	33.41		
	quarries listed in the Special Specification in accordance with the Specification and in				
	conformity with the RE instructions (Stabilisation paid in Bill 14)				
12.02	Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm				
) plus 50mm blinding layer of quarry dust. This Includes 12 tonne vibrating roller (min	m³	33.41		
	8 passes)	'''	33.41		
	o passes)				
	TOTAL FOR BULL 42 CARRIED TO CRAND SUMMAARY RACE				
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				

Misri-R04 - Limuru page62of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 04		
			50 A.C]	
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.030km)		
	MISRI ROAD 04 (MSR-RD 04)-0.030KM				
BILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
15.01	Prime Coat and Tack coat				
15.01A	MC 30 prime coat on Cement treated material at nominal rate of 0.8 - 1.2 ltr/m² to base course on carriageway, bus bays, footpaths, shoulders and junctions	ltr	198.0		
15.01B	K1-80 cationic emulsion tack coat on primed treated base at nominal rate of 0.4 - 1.0 ltr/m² to base course on on carriageway, bus bays, footpaths, shoulders and junctions	ltr	198.0		
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				

Misri-R04 - Limuru page63of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 04	1	
			50 A.C]	
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.030km)		
	MISRI ROAD 04 (MSR-RD 04)-0.030KM				
BILL NO.16	BITUMINOUS MIXES				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: No haulage will be paid for aggregates, bitumen or the premix. The cost for				
16.00	haulage shall be included in the rates. Rates to be inclusive of fines				
16.01	Drawida Law and arread avantu Forest thick Asphalt Consents Type II covering the				
	Provide, Lay and spread evenly 50mm thick Asphalt Concrete Type II covering the carriageway and the shoulders. The grading of the mixture of coarse and fine				
	aggregates shall be within and approximately parallel to the grading envelopes given				
	in table 16B-1 of the Standard Specification for Road and Bridge Construction for	M^3	11.1		
	Type II, 0/14mm wearing course .The coarse aggregate class for the asphalt concrete				
	shall be Class C. 80/100 penetration grade bitumen for the asphalt concrete.				
	shall be Class C. 80/100 penetration grade bitumen for the asphalt concrete.				

Misri-R04 - Limuru page64of208

ITEM	ITEM DESCRIPTION	UNIT	CHANTITY	DATE (VCUE)	AMOUNT (VCUC)
IIEIVI	ITEM DESCRIPTION	UNII	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 04		
			50 A.C]	
			150 Stone Base	1	
				1	
			150 Gravel Subbase	4	
			300 Sub Grade Material		
			(0.030km)		
	MISRI ROAD 04 (MSR-RD 04)-0.030KM				
BILL NO.20	ROAD FURNITURE				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Warning Signs				
20.01	Excavation for, providing and erecting warning signs size 750mm including backfill				
	and concrete 15/20 to bases all in accordance with the Specification and in	No.	1		
	conformity with the RE instructions				
20.02	Priority Signs				
	Excavating for, providing and erecting priority signs including back filling and concrete				
	15/20 to bases; all in accordance with the Specification and in conformity with the RE	1			
.	instructions				
20.02A	750mm size	No.	1		
20.02B	1000 mm size	No.	1		
	Mandatory Signs				
20.03	Excavating for, providing and erecting prohibitory signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity	No.	1		
	with the RE instructions 1000mm size	110.	1		
20.04					
20.04	Standard Informatory Signs				
	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity				
	with the RE instructions				
20.04A	500x600mm	No.	1		
20.04B	600x600mm	No.	1		
20.05	Non Standard Informatory Signs	110.	1		
20.03					
	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity				
	with the RE instructions				
20.05A	Less than 1 sq.m	No.	1		
20.05B	Equal or more than 1 sq.m but less than 2 sq.m	No.	1		
20.05C	Equal or more than 2 sq.m but less than 5 sq.m	No.	1		
20.06	Road Marking painting				
20.00	Preparing road surface, supplying approved road marking paint, 100mm wide				
	marking out and painting, all in accordance with the Specification and in conformity				
	with the RE instructions				
20.06A	White paint	m²	6		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m²	6		
	Concrete Kerbs				
20.11	Provision, transport, handling, mixing and placing all materials in accordance with				
20.11					
20.444	Specification and in conformity with the RE instructions		20		
20.11A	Kerbs 125 mm x 250 mm straight	m	30		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	2		
20.11C	Channel blocks 125mm x 100mm	m	60		
	Trees				
	Planting of approved indigenous types of trees where instructed, in accordance with				
20.12	the Specification, minimum height 1.5m -Open Fields or Wet Lands	No.	5		
	The Specification, minimum height 1.5m -Open Fields of Wet Lands				
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE	 	 	†	

Misri-R04 - Limuru page65of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 04		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.030km)		
	MISRI ROAD 04 (MSR-RD 04)-0.030KM				
	GRAND SUMMARY TOTAL QUANTITIES				
	Wanta Carata Bela da Garata Carata carat				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION				AMOUNT (KSHS)
4	Site Clearance and Top Soil Stripping				
5	Earthworks				
8	Culverts and Drainage Works				
12	Natural Material Subbase and Base				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				

	RAI AND MISRI IN LIMURU AL	L WITHIN KIAWIDO GOO	
	MISRI ROAD 05		

Misri-R05 - Limuru page66of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 05		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.032km)		
	MISRI ROAD 05 (MSR-RD 05)-0.032KM				
BILL NO.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the unit rates entered by tenderers against the items described in this Bill of Quantities. No separate items for overhaul are included in any section of this Bill and no additional payment whatsoever will be made for haulage. Tenderers are therefore deemed to have included, in the unit rates entered against an item, for all costs and charges associated with haulage.				
	Site Clearance				
4.01	Clearing existing road of all trees, vegetation, debris and rubbish of any nature; including the grubbing of stumps and roots and the disposal from the area of all spoil materials resulting from clearing and grubbing all in accordance with the specifications.	m²	160.00		
	Removal of Topsoil				
4.02	Stripping vegetable soil from the roadway, and disposal to approved stockpile areas all in accordance with the Specification and in conformity with the RE instructions average depth 200mm.	m³	32.00		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet structures including back filling.	m	2		

Misri-R05 - Limuru page67of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 05	1	
			50 A.C	1	
			150 Stone Base	1	
			150 Gravel Subbase	1	
			300 Sub Grade Material	1	
			(0.032km)	†	
	MISRI ROAD 05 (MSR-RD 05)-0.032KM		(0.002)		
BILL NO.5	EARTHWORKS				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and showers converted with bouless are to be included within the				
	NOTE: All costs and charges connected with haulage are to be included within the unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Material used for earthworks (fill below bottom sub-grade) shall be minimum soil				
	class S2 quality and be compacted to 95% MDD (AASHTO T99)				
	The upper 300mm of subgrade shall be compacted to 100% MDD (AASHTO T99)				
	while the rest shall be compacted to 95% MDD (AASHTO T99).				
	Fill in Soft Material				
5.01	Excavating the material, transportation and filling in embankment, including watering	3			
	and rolling; all in accordance to specification	m³	1.06		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	0.11		
	Spoil in Soft Material				
5.03	Cut to spoil in soft material	m³	71.08		
	Spoil in Hard Material				
5.04	Excavate, stock pile for reuse and spoil surplus hard material	m³	7.11		
	Compaction of Existing Ground				
5.05	Compaction of formation ground in accordance with the specification	m³	33.60		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO	3	67.20		
	T99)	m³	67.20		
5.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO	m³	20.16		
	T99)	111-	20.16		
5.80	Provide, lay and compact 300mm sub grade material to 100% MDD (AASHTO T99)	m³	20.16		
	Trovide, lay and compact 300mm sab grade material to 100% MDD (AASITTO 133)	'''	20.10		
	<u>Topsoil</u>				
5.90	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm;	m²	16.00		
	all in accordance with the specifications				
- 40	Grassing				
5.10	Planting of sprigs of approved indegineous grass types; to embankments, cuttings or				
	where directed by the RE in accordance with the Specification, including tending,	m²	16.00		
	watering and cutting until the grass is firm established or for 6 months				
		Ī	I	I	

Misri-R05 - Limuru page68of208

BILL NO.8 CK ITEM E 8.01 E b	MISRI ROAD 05 (MSR-RD 05)-0.032KM CULVERTS AND DRAINAGE Kiambu County- Misri Informal Settlement DESCRIPTION Excavate for Culverts and Subsoil Drains in Soft Material Excavation in soft material to any depth, compaction of the invert of excavation, backfilling with excavated materials or removing excavated material to spoil; in	UNIT	QUANTITY MSR-RD 05 50 A.C 150 Stone Base 150 Gravel Subbase 300 Sub Grade Material (0.032km) QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
BILL NO.8 CK ITEM E 8.01 E b	CULVERTS AND DRAINAGE Kiambu County- Misri Informal Settlement DESCRIPTION Excavate for Culverts and Subsoil Drains in Soft Material Excavation in soft material to any depth, compaction of the invert of excavation,	UNIT	50 A.C 150 Stone Base 150 Gravel Subbase 300 Sub Grade Material (0.032km)	RATE (KSHS)	
BILL NO.8 CK ITEM E 8.01 E b	CULVERTS AND DRAINAGE Kiambu County- Misri Informal Settlement DESCRIPTION Excavate for Culverts and Subsoil Drains in Soft Material Excavation in soft material to any depth, compaction of the invert of excavation,	UNIT	150 Stone Base 150 Gravel Subbase 300 Sub Grade Material (0.032km)	RATE (KSHS)	
BILL NO.8 CK ITEM E 8.01 E b	CULVERTS AND DRAINAGE Kiambu County- Misri Informal Settlement DESCRIPTION Excavate for Culverts and Subsoil Drains in Soft Material Excavation in soft material to any depth, compaction of the invert of excavation,	UNIT	150 Gravel Subbase 300 Sub Grade Material (0.032km)	RATE (KSHS)	
BILL NO.8 CK ITEM E 8.01 E b	CULVERTS AND DRAINAGE Kiambu County- Misri Informal Settlement DESCRIPTION Excavate for Culverts and Subsoil Drains in Soft Material Excavation in soft material to any depth, compaction of the invert of excavation,	UNIT	300 Sub Grade Material (0.032km)	RATE (KSHS)	
BILL NO.8 CK ITEM E 8.01 E b	CULVERTS AND DRAINAGE Kiambu County- Misri Informal Settlement DESCRIPTION Excavate for Culverts and Subsoil Drains in Soft Material Excavation in soft material to any depth, compaction of the invert of excavation,	UNIT	(0.032km)	RATE (KSHS)	
BILL NO.8 CK ITEM E 8.01 E b	CULVERTS AND DRAINAGE Kiambu County- Misri Informal Settlement DESCRIPTION Excavate for Culverts and Subsoil Drains in Soft Material Excavation in soft material to any depth, compaction of the invert of excavation,	UNIT		RATE (KSHS)	
BILL NO.8 CK ITEM E 8.01 E b	CULVERTS AND DRAINAGE Kiambu County- Misri Informal Settlement DESCRIPTION Excavate for Culverts and Subsoil Drains in Soft Material Excavation in soft material to any depth, compaction of the invert of excavation,	UNIT	QUANTITY	RATE (KSHS)	
ITEM E	DESCRIPTION Excavate for Culverts and Subsoil Drains in Soft Material Excavation in soft material to any depth, compaction of the invert of excavation,	UNIT	QUANTITY	RATE (KSHS)	
ITEM	DESCRIPTION Excavate for Culverts and Subsoil Drains in Soft Material Excavation in soft material to any depth, compaction of the invert of excavation,	UNIT	QUANTITY	RATE (KSHS)	
ITEM	DESCRIPTION Excavate for Culverts and Subsoil Drains in Soft Material Excavation in soft material to any depth, compaction of the invert of excavation,	UNIT	QUANTITY	RATE (KSHS)	
8.01 E	DESCRIPTION Excavate for Culverts and Subsoil Drains in Soft Material Excavation in soft material to any depth, compaction of the invert of excavation,	UNIT	QUANTITY	RATE (KSHS)	A.A.O.I.I.I.T. (1/5/15)
8.01 E	Excavate for Culverts and Subsoil Drains in Soft Material Excavation in soft material to any depth, compaction of the invert of excavation,	UNIT	QUANTITY	RATE (KSHS)	A B 4 O L IN TO 1 (1/0 · · · · · · · · · · · · · · · · · · ·
8.01 E	Excavate for Culverts and Subsoil Drains in Soft Material Excavation in soft material to any depth, compaction of the invert of excavation,	UNIT	QUANTITY	RATE (KSHS)	A B 4 C L L C
8.01 E	Excavation in soft material to any depth, compaction of the invert of excavation,				AMOUNT (KSHS)
8.01 E	Excavation in soft material to any depth, compaction of the invert of excavation,				
b					
b					
	nackining with excavated materials of removing excavated material to sholl, in	m³	160		
٦	accordance with the Specification and in conformity with the RE instructions		100		
	Extra over Item 8.01 for excavation in hard material	m³	80		
	Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material				
8.03 E	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	46		
	accordance with the Specification and in conformity with the RE's instructions				
		_			
	Extra over Item 8.03 for excavation in hard material	m³	12		
	Selected backfill material				
	Providing, backfilling to any depth all in accordance with the Standard Specifications	m³	160		
	and in conformity with the instructions of the RE				
	In-situ culverts				
	Provide for in-situ culvert all in accordance with the Specification and in conformity				
	with the RE instructions				
	a) 600 mm diameter (for use at minor junctions only)	m	20		
	b) 900 mm diameter	m	20		
	Concrete Class 15/20 to Beds, Surrounds				
	Providing and placing the concrete; all in accordance with the Specification and in	m³	29		
	conformity with the RE instructions				
	Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures				
8.10 P	Providing and placing the concrete, reinforcement and formwork class F2 all in	m³	0		
а	accordance with the Specification and in conformity with the RE instructions	m ^s	9		
	Concrete Class 25/20 For Covered Rectangular Drain structure				
	Provide all materials and construct 500mm(Bottom width) wide (internal dimension)				
	rectangualr concrete drains 150mm thick walls and bottom base, average height of				
	0.8m, class 25/20, including slotted top cover of 100mm thick. Include the steel	m ³	10		
	reinforcement and formwork for concrete drain and concrete class 15(20) blinding as	""			
	specified in the drawings.				
	Provide 250mm PVC pipes at 50m intervals for service ducts	m	6		
0.12	1 Tovide 250mm T ve pipes at 50m intervals for service ducts	111			
- -	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE		+	-	+

Misri-R05 - Limuru page69of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 05		
			50 A.C	1	
			150 Stone Base]	
			150 Gravel Subbase]	
			300 Sub Grade Material		
			(0.032km)		
	MISRI ROAD 05 (MSR-RD 05)-0.032KM				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base				
12.01	Provide, lay and compact subbase in 150mm thick natural gravel material in carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14)	m³	35.64		
12.02	Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm) plus 50mm blinding layer of quarry dust. This Includes 12 tonne vibrating roller (min 8 passes)	m³	35.64		
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				

Misri-R05 - Limuru page70of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 05		
			50 A.C]	
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.032km)		
	MISRI ROAD 05 (MSR-RD 05)-0.032KM				
BILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
15.01	Prime Coat and Tack coat				
15.01A	MC 30 prime coat on Cement treated material at nominal rate of 0.8 - 1.2 ltr/m² to base course on carriageway, bus bays, footpaths, shoulders and junctions	ltr	211.2		
15.01B	K1-80 cationic emulsion tack coat on primed treated base at nominal rate of 0.4 - 1.0 ltr/m² to base course on on carriageway, bus bays, footpaths, shoulders and junctions	ltr	211.2		
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				

Misri-R05 - Limuru page71of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 05	1	
			50 A.C	1	
			150 Stone Base		
			150 Gravel Subbase]	
			300 Sub Grade Material		
			(0.032km)]	
	MISRI ROAD 05 (MSR-RD 05)-0.032KM				
BILL NO.16	BITUMINOUS MIXES				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
46.00	NOTE: No haulage will be paid for aggregates, bitumen or the premix. The cost for				
16.00	haulage shall be included in the rates. Rates to be inclusive of fines				
16.01	Danida I ayanda ayanda Soona thiah Arabak Cayanta Tura II ayani a tha				
	Provide, Lay and spread evenly 50mm thick Asphalt Concrete Type II covering the				
	carriageway and the shoulders. The grading of the mixture of coarse and fine aggregates shall be within and approximately parallel to the grading envelopes given				
	in table 16B-1 of the Standard Specification for Road and Bridge Construction for	M^3	11.9		
	Type II, 0/14mm wearing course .The coarse aggregate class for the asphalt concrete				
	Type 11, 0, 1411111 wearing course the course aggregate class for the asphalt concrete				
	shall be Class C. 80/100 penetration grade bitumen for the asphalt concrete			1	
	shall be Class C. 80/100 penetration grade bitumen for the asphalt concrete.				

Misri-R05 - Limuru page72of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 05	-	
			50 A.C		
				-	
			150 Stone Base	1	
			150 Gravel Subbase		
			300 Sub Grade Material	1	
			(0.032km)	†	
	MISRI ROAD 05 (MSR-RD 05)-0.032KM		(0.032kiii)		
	INISKI KOAD 03 (INISK-RD 03)-0.032KIVI				
BILL NO 20	ROAD FURNITURE				
DILL NO.20					
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	OHANTITY	DATE (VCUS)	ANACHNIT (VCHC)
HEIVI	DESCRIPTION	UNII	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	w t et				
20.04	Warning Signs				
20.01	Excavation for, providing and erecting warning signs size 750mm including backfill				
	and concrete 15/20 to bases all in accordance with the Specification and in	No.	1		
	conformity with the RE instructions				
20.02	Priority Signs				
	Excavating for, providing and erecting priority signs including back filling and concrete				
	15/20 to bases; all in accordance with the Specification and in conformity with the RE				
00.00	instructions		_		
20.02A	750mm size	No.	1		
20.02B	1000 mm size	No.	1		
	Mandatory Signs				
20.03	Excavating for, providing and erecting prohibitory signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity	No.	1		
	with the RE instructions 1000mm size		_		
20.04					
20.04	Standard Informatory Signs				
	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity				
	with the RE instructions				
20.04A	500x600mm	No.	1		
20.04B	600x600mm	No.	1		
20.05	Non Standard Informatory Signs		_		
20.03	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity				
	with the RE instructions				
20.05A	Less than 1 sq.m	No.	1		
20.05B	Equal or more than 1 sq.m but less than 2 sq.m	No.	1		
20.05C	Equal or more than 2 sq.m but less than 5 sq.m	No.	1		
20.06	Road Marking painting				
	Preparing road surface, supplying approved road marking paint, 100mm wide				
	marking out and painting, all in accordance with the Specification and in conformity				
	with the RE instructions				
20.064		,			
20.06A	White paint	m²	6		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m²	6		
	Concrete Kerbs				
20.11	Provision, transport, handling, mixing and placing all materials in accordance with				
	Specification and in conformity with the RE instructions				
20.11A	Kerbs 125 mm x 250 mm straight	m	32		
20.11A 20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m		2		
		m 			
20.11C	Channel blocks 125mm x 100mm	m	64		
	<u>Trees</u>				
	Planting of approved indigenous types of trees where instructed in accordance with				
20.12	Planting of approved indigenous types of trees where instructed, in accordance with	No.	5		
	the Specification, minimum height 1.5m -Open Fields or Wet Lands				
				1	1

Misri-R05 - Limuru page73of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
IILIVI	TIEIVI DESCRIPTION	OWN		KATE (KSHS)	AIVIOUVI (KSH3)
			MSR-RD 05	-	
			50 A.C	-	
			150 Stone Base 150 Gravel Subbase	1	
				-	
			300 Sub Grade Material	1	
			(0.032km)		
	MISRI ROAD 05 (MSR-RD 05)-0.032KM				
	GRAND SUMMARY TOTAL QUANTITIES				
	Visualiu County - Nijari Informati Cottlement				
ITENA	Kiambu County- Misri Informal Settlement				ADAOLINIT (VCLIC)
ITEM	DESCRIPTION				AMOUNT (KSHS)
4	Site Clearance and Top Soil Stripping				
5	Earthworks				
8	Culverts and Drainage Works				
12	Natural Material Subbase and Base				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				

ECTED INFO	RMAL SETTI BOSNI	_EMENTS OF U A/RIVERSIDE I	umoja and Ki In Githurai an	ANG'OMBE IN T ID MISRI IN LIMU	THIKA TOWN, GI IRU ALL WITHIN	TAMBAYA/FORT	IFRASTRUCTURE W TJESUS IN RUIRU TO TY.
		Bill No.	.4 - MISRI	ROAD OG			

Misri-R06 - Limuru page74of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 06		
			50 A.C	1	
			150 Stone Base	1	
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.044km)		
	MISRI ROAD 06 (MSR-RD 06)-0.044KM				
ILL N0.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the unit rates entered by tenderers against the items described in this Bill of Quantities. No separate items for overhaul are included in any section of this Bill and no additional payment whatsoever will be made for haulage. Tenderers are therefore deemed to have included, in the unit rates entered against an item, for all costs and charges associated with haulage.				
	Site Clearance				
4.01	Clearing existing road of all trees, vegetation, debris and rubbish of any nature; including the grubbing of stumps and roots and the disposal from the area of all spoil materials resulting from clearing and grubbing all in accordance with the specifications.	m²	220.00		
	Removal of Topsoil				
4.02	Stripping vegetable soil from the roadway, and disposal to approved stockpile areas all in accordance with the Specification and in conformity with the RE instructions average depth 200mm.	m³	44.00		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet	m	2		

Misri-R06 - Limuru page75of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 06	-	
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase	1	
			300 Sub Grade Material	1	
			(0.044km)	1	
	MISRI ROAD 06 (MSR-RD 06)-0.044KM		(0.044kiii)		
BILL NO.5	EARTHWORKS				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Material used for earthworks (fill below bottom sub-grade) shall be minimum soil				
	class S2 quality and be compacted to 95% MDD (AASHTO T99)				
	The upper 300mm of subgrade shall be compacted to 100% MDD (AASHTO T99)				
	while the rest shall be compacted to 95% MDD (AASHTO T99).				
	Fill in Soft Material				
5.01	Excavating the material, transportation and filling in embankment, including watering				
0.02	and rolling; all in accordance to specification	m³	1.76		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	0.18		
3.02	Spoil in Soft Material	'''	0.10		
5.03	Cut to spoil in soft material	m³	120.32		
	Spoil in Hard Material				
5.04	Excavate, stock pile for reuse and spoil surplus hard material	m³	12.03		
	Compaction of Existing Ground				
5.05	Compaction of formation ground in accordance with the specification	m³	46.20		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO	2			
	T99)	m³	92.40		
5.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO	2			
	T99)	m³	27.72		
5.80	Describe less and account 200 and only to the describe A 100% MADD (AASUTO TOO)	3	27.72		
	Provide, lay and compact 300mm sub grade material to 100% MDD (AASHTO T99)	m³	27.72		
	Topsoil				
5.90	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm;	m²	22.00		
	all in accordance with the specifications	'''	22.00		
	Grassing				
5.10	Planting of sprigs of approved indegineous grass types; to embankments, cuttings or				
	where directed by the RE in accordance with the Specification, including tending,	m²	22.00		
	watering and cutting until the grass is firm established or for 6 months				
	G. C. C. C. G. C.				
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

Misri-R06 - Limuru page76of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	TEM SESSION TON	0.1	MSR-RD 06	- 10112 (110113)	7.10.00101 (1.01.10)
			50 A.C	-	
			150 Stone Base	+	
			150 Gravel Subbase	-	
			300 Sub Grade Material	1	
				-	
	MAISPI POAD OS (MASP DD OS) O GAAVAA		(0.044km)		
	MISRI ROAD 06 (MSR-RD 06)-0.044KM				
BILL NO.8	CULVERTS AND DRAINAGE				
DILL NO.8	Kiambu County- Misri Informal Settlement				
	Kiamba County- Wish imornial Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
		0	Qorarii.	10112 (110110)	/ (none)
	Excavate for Culverts and Subsoil Drains in Soft Material				
8.01					
	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	176		
	accordance with the Specification and in conformity with the RE instructions				
8.02	Extra over Item 8.01 for excavation in hard material	m³	88		
	Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material				
8.03	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	63		
		""	05		
	accordance with the Specification and in conformity with the RE's instructions				
8.04	Extra over Item 8.03 for excavation in hard material	m³	16		
	Selected backfill material				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications	m³	176		
	and in conformity with the instructions of the RE		-/-0		
	In-situ culverts				
	Provide for in-situ culvert all in accordance with the Specification and in conformity				
	with the RE instructions				
8.06	a) 600 mm diameter (for use at minor junctions only)	m	24		
8.07	b) 900 mm diameter	m	20		
0.00	Concrete Class 15/20 to Beds, Surrounds				
8.09	Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions	m³	31		
	Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures				
8.10	Concrete Class 20/20 Headwalls, trash racks, aprons other dramage structures				
0.10	Providing and placing the concrete, reinforcement and formwork class F2 all in	m³	10		
	accordance with the Specification and in conformity with the RE instructions	'''	10		
	Concrete Class 25/20 For Covered Rectangular Drain structure				
8.11	Provide all materials and construct 500mm(Bottom width) wide (internal dimension)				
0.11	rectangualr concrete drains 150mm thick walls and bottom base, average height of				
	0.8m, class 25/20, including slotted top cover of 100mm thick. Include the steel	m ³	14		
	reinforcement and formwork for concrete drain and concrete class 15(20) blinding as				
	specified in the drawings.				
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	9		
J.11	Programme to proceed and the second days				
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

Misri-R06 - Limuru page77of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 06		
			50 A.C		
			150 Stone Base	1	
			150 Gravel Subbase		
			300 Sub Grade Material	1	
			(0.044km)	1	
	MISRI ROAD 06 (MSR-RD 06)-0.044KM				
	NATURAL MATERIAL SUBBASE AND BASE				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base				
12.01	Provide, lay and compact subbase in 150mm thick natural gravel material in carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14)	m³	46.78		
12.02	Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm) plus 50mm blinding layer of quarry dust. This Includes 12 tonne vibrating roller (min 8 passes)	m³	49.01		
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				

Misri-R06 - Limuru page78of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 06	-	
			50 A.C]	
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.044km)		
	MISRI ROAD 06 (MSR-RD 06)-0.044KM				
BILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
	Kiambu County- Misri Informal Settlement				
ITENA	DESCRIPTION	LINUT	CHANTITY	DATE (KCHC)	ARACHINIT (KCHC)
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
15.01	Prime Coat and Tack coat				
15.01A	MC 30 prime coat on Cement treated material at nominal rate of 0.8 - 1.2 ltr/m² to base course on carriageway, bus bays, footpaths, shoulders and junctions	ltr	290.4		
15.01B	K1-80 cationic emulsion tack coat on primed treated base at nominal rate of 0.4 - 1.0 ltr/m² to base course on on carriageway, bus bays, footpaths, shoulders and junctions	ltr	290.4		
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				

Misri-R06 - Limuru page79of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 06		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.044km)		
	MISRI ROAD 06 (MSR-RD 06)-0.044KM				
BILL NO.16	BITUMINOUS MIXES				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
4.5.00	NOTE: No haulage will be paid for aggregates, bitumen or the premix. The cost for				
16.00	haulage shall be included in the rates. Rates to be inclusive of fines				
16.01					
	Provide, Lay and spread evenly 50mm thick Asphalt Concrete Type II covering the				
	carriageway and the shoulders. The grading of the mixture of coarse and fine				
	aggregates shall be within and approximately parallel to the grading envelopes given	M^3	16.3		
	in table 16B-1 of the Standard Specification for Road and Bridge Construction for Type II, 0/14mm wearing course .The coarse aggregate class for the asphalt concrete				
	shall be Class C 90/100 penetration grade bitumen for the apphalt concrete	1			
	shall be Class C. 80/100 penetration grade bitumen for the asphalt concrete.				

Misri-R06 - Limuru page80of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
IILLIVI	THE DESCRIPTION	01411		- 10112 (10113)	AWOUNT (KSHS)
			MSR-RD 06	4	
			50 A.C	4	
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.044km)	1	
	MISRI ROAD 06 (MSR-RD 06)-0.044KM		,		
BILL NO.20	ROAD FURNITURE				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Warning Signs				
20.01	Excavation for, providing and erecting warning signs size 750mm including backfill				
	and concrete 15/20 to bases all in accordance with the Specification and in	No.	1		
	conformity with the RE instructions				
20.02	Priority Signs				
	Excavating for, providing and erecting priority signs including back filling and concrete				
	15/20 to bases; all in accordance with the Specification and in conformity with the RE				
	i i i i i i i i i i i i i i i i i i i				
20.02A	instructions 750mm size	N/-	4		
		No.	1		
20.02B	1000 mm size	No.	1		
	Mandatory Signs				
20.03	Excavating for, providing and erecting prohibitory signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity	No.	1		
	with the RE instructions 1000mm size				
20.04	Standard Informatory Signs				
	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity				
	with the RE instructions				
20.04A	500x600mm	No.	1		
20.04B	600x600mm	No.	1		
20.05	Non Standard Informatory Signs		_		
20.00	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity				
	with the RE instructions				
20.05A		No	1		
	Less than 1 sq.m	No.	1		
20.05B	Equal or more than 1 sq.m but less than 2 sq.m	No.	1		
20.05C	Equal or more than 2 sq.m but less than 5 sq.m	No.	1		
20.06	Road Marking painting				
	Preparing road surface, supplying approved road marking paint, 100mm wide				
	marking out and painting, all in accordance with the Specification and in conformity				
	with the RE instructions				
20.06A	White paint	m²	9		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m²	9		
	Concrete Kerbs				
20.11	Provision, transport, handling, mixing and placing all materials in accordance with				
	Specification and in conformity with the RE instructions				
20.11A	Kerbs 125 mm x 250 mm straight	m	44		
20.11R	Kerbs 125 mm x 250 mm radius 1m - 5m	m	2		
20.11D	Channel blocks 125mm x 100mm	m	88		
20.110	Chainer blocks 125mm x 100mm	111	J 30		
	Troos				
	Trees				
20.42	Planting of approved indigenous types of trees where instructed, in accordance with		_		
20.12	the Specification, minimum height 1.5m -Open Fields or Wet Lands	No.	5		
	, , , , , , , , , , , , , , , , , , , ,				
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE	<u></u>			

Misri-R06 - Limuru page81of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 06	-	
			50 A.C]	
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.044km)		
	MISRI ROAD 06 (MSR-RD 06)-0.044KM				
	CDAND CURARARDY TOTAL QUANTITIES				
	GRAND SUMMARY TOTAL QUANTITIES				
	Viewshy, County, Bilipii Informal Cattlemant				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION				AMOUNT (KSHS)
4	Site Clearance and Top Soil Stripping				
5	Earthworks				
8	Culverts and Drainage Works				
12	Natural Material Subbase and Base				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				

	MISRI ROAD	07	

Misri-R07 - Limuru page82of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 07		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.036km)		
	MISRI ROAD 07 (MSR-RD 07)-0.036KM				
BILL NO.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Kiambu County- Misri Informal Settlement				
	Namba County- Wish Mornal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the unit rates entered by tenderers against the items described in this Bill of Quantities. No separate items for overhaul are included in any section of this Bill and no additional payment whatsoever will be made for haulage. Tenderers are therefore deemed to have included, in the unit rates entered against an item, for all costs and charges associated with haulage.				
	Site Clearance				
	Clearing existing road of all trees, vegetation, debris and rubbish of any nature; including the grubbing of stumps and roots and the disposal from the area of all spoil materials resulting from clearing and grubbing all in accordance with the specifications.	m²	180.00		
	Removal of Topsoil				
	Stripping vegetable soil from the roadway, and disposal to approved stockpile areas all in accordance with the Specification and in conformity with the RE instructions average depth 200mm.	m³	36.00		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet structures including back filling.	m	2		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

Misri-R07 - Limuru page83of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 07		
			50 A.C	1	
			150 Stone Base	1	
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.036km)		
	MISRI ROAD 07 (MSR-RD 07)-0.036KM		(0.030kiii)		
	INISKI KOAD 07 (INISK-KD 07)-0.030KINI				
BILL NO.5	EARTHWORKS				
	Kiambu County- Misri Informal Settlement				
	,				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			,	, ,	, ,
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Material used for earthworks (fill below bottom sub-grade) shall be minimum soil				
	class S2 quality and be compacted to 95% MDD (AASHTO T99)				
	The upper 300mm of subgrade shall be compacted to 100% MDD (AASHTO T99)				
	while the rest shall be compacted to 95% MDD (AASHTO T99).				
	Fill in Soft Material				
5.01	Excavating the material, transportation and filling in embankment, including watering				
3.01	and rolling; all in accordance to specification	m³	0.13		
	<u> </u>				
г 02	Fill in Hard Material	m³	0.01		
5.02	As Item 5.01 but in hard material	m	0.01		
F 02	Spoil in Soft Material Cut to spoil in soft material	m³	00.62		
5.03	Cut to spoil in soft material	m	98.63		
Г 04	Spoil in Hard Material	m³	0.96		
5.04	Excavate, stock pile for reuse and spoil surplus hard material	m	9.86		
5.05	Compaction of Existing Ground Compaction of formation ground in accordance with the specification	2	27.00		
	· · · · · · · · · · · · · · · · · · ·	m³	37.80		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO	m³	75.60		
	T99)				
5.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO	m³	22.68		
	T99)				
5.80	Provide, lay and compact 300mm sub grade material to 100% MDD (AASHTO T99)	m³	22.68		
	<u>Topsoil</u>				
5.90	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm;	m²	18.00		
	all in accordance with the specifications				
F 10	Grassing				
5.10	Planting of sprigs of approved indegineous grass types; to embankments, cuttings or				
	where directed by the RE in accordance with the Specification, including tending,	m²	18.00		
	watering and cutting until the grass is firm established or for 6 months				
	Grand				
		1			1

Misri-R07 - Limuru page84of208

	1		T	l	1
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 07		
			50 A.C		
			150 Stone Base		
		150 Gravel Subbase			
			300 Sub Grade Material		
			(0.036km)		
	MISRI ROAD 07 (MSR-RD 07)-0.036KM				
BILL NO.8	CULVERTS AND DRAINAGE				
	Kiambu County- Misri Informal Settlement				
				(
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Frequency for Cultivaria and Cubesti Dustins in Coft Masterial				
0.01	Excavate for Culverts and Subsoil Drains in Soft Material				
8.01	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	176		
	accordance with the Specification and in conformity with the RE instructions				
8.02	Extra over Item 8.01 for excavation in hard material	m³	88		
0.02	Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material	111	00		
8.03					
0.03	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	52		
	accordance with the Specification and in conformity with the RE's instructions				
8.04	Extra over Item 8.03 for excavation in hard material	m³	13		
	Selected backfill material				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications				
	and in conformity with the instructions of the RE	m³	176		
	In-situ culverts				
	Provide for in-situ culvert all in accordance with the Specification and in conformity				
	with the RE instructions				
8.06	a) 600 mm diameter (for use at minor junctions only)	m	24		
8.07	b) 900 mm diameter	m	20		
	Concrete Class 15/20 to Beds, Surrounds				
8.09	Providing and placing the concrete; all in accordance with the Specification and in	m³	31		
	conformity with the RE instructions		31		
	Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures				
8.10	Providing and placing the concrete, reinforcement and formwork class F2 all in				
	accordance with the Specification and in conformity with the RE instructions	m³	10		
	· · · · · · · · · · · · · · · · · · ·				
	Concrete Class 25/20 For Covered Rectangular Drain structure				
8.11	Provide all materials and construct 500mm(Bottom width) wide (internal dimension)				
	rectangualr concrete drains 150mm thick walls and bottom base, average height of				
	0.8m, class 25/20, including slotted top cover of 100mm thick. Include the steel	m ³	11		
	reinforcement and formwork for concrete drain and concrete class 15(20) blinding as				
	specified in the drawings.				
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	7		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

Misri-R07 - Limuru page85of208

	·		T	l <i>t</i>	
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 07		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase	1	
			300 Sub Grade Material		
			(0.036km)		
	MISRI ROAD 07 (MSR-RD 07)-0.036KM				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base				
12.01	Provide, lay and compact subbase in 150mm thick natural gravel material in				
	carriageway, bus bays, footpaths, shoulders and junctions from the designated	2			
	quarries listed in the Special Specification in accordance with the Specification and in	m³	38.27		
	conformity with the RE instructions (Stabilisation paid in Bill 14)				
42.02	, , , , ,				
12.02	Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm				
) plus 50mm blinding layer of quarry dust. This Includes 12 tonne vibrating roller (min	m³	40.10		
	8 passes)				
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				

Misri-R07 - Limuru page86of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 07	- 13112 (113113)	
			50 A.C	+	
			150 Stone Base	1	
				-	
			150 Gravel Subbase	4	
			300 Sub Grade Material	1	
			(0.036km)		
	MISRI ROAD 07 (MSR-RD 07)-0.036KM				
BILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
15.01	Prime Coat and Tack coat				
	Prime Coat and Tack Coat				
15.01A	MC 30 prime coat on Cement treated material at nominal rate of 0.8 - 1.2 ltr/m² to	 Itr	237.6		
	base course on carriageway, bus bays, footpaths, shoulders and junctions	'''	237.0		
15.01B					
	K1-80 cationic emulsion tack coat on primed treated base at nominal rate of 0.4 - 1.0	ltr	237.6		
	ltr/m² to base course on on carriageway, bus bays, footpaths, shoulders and junctions				
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				

Misri-R07 - Limuru page87of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 07		
			50 A.C	1	
			150 Stone Base]	
			150 Gravel Subbase		
			300 Sub Grade Material	1	
			(0.036km)	1	
	MISRI ROAD 07 (MSR-RD 07)-0.036KM				
BILL NO.16	BITUMINOUS MIXES				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: No haulage will be paid for aggregates, bitumen or the premix. The cost for				
16.00	haulage shall be included in the rates. Rates to be inclusive of fines				
16.01					
	Provide, Lay and spread evenly 50mm thick Asphalt Concrete Type II covering the				
	carriageway and the shoulders. The grading of the mixture of coarse and fine				
	aggregates shall be within and approximately parallel to the grading envelopes given in table 16B-1 of the Standard Specification for Road and Bridge Construction for	M^3	13.4		
	Type II, 0/14mm wearing course .The coarse aggregate class for the asphalt concrete				
	shall be Class C. 80/100 penetration grade bitumen for the asphalt concrete.				
				I	1
	shall be class c. bo/ 100 penetration grade bitamen for the aspiral concrete.				

Misri-R07 - Limuru page88of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)	
			MSR-RD 07	(33333)		
			50 A.C	1		
			150 Stone Base			
			150 Gravel Subbase			
			300 Sub Grade Material			
			(0.036km)			
	MISRI ROAD 07 (MSR-RD 07)-0.036KM		(00000000)			
BILL NO.20	ROAD FURNITURE					
	Kiambu County- Misri Informal Settlement					
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)	
			QOTALLIT	(1.01.0)	(nemo)	
	Warning Signs					
20.01	Excavation for, providing and erecting warning signs size 750mm including backfill					
	and concrete 15/20 to bases all in accordance with the Specification and in	No.	1			
	conformity with the RE instructions					
20.02	Priority Signs					
20.02						
	Excavating for, providing and erecting priority signs including back filling and concrete	l				
	15/20 to bases; all in accordance with the Specification and in conformity with the RE					
	instructions					
20.02A	750mm size	No.	1			
20.02B	1000 mm size	No.	1			
	Mandatory Signs					
20.03	Excavating for, providing and erecting prohibitory signs including backfilling and					
	concrete 15/20 to bases; all in accordance with the Specification and in conformity	No.	1			
	with the RE instructions 1000mm size					
20.04	Standard Informatory Signs					
20.04	Excavating for, providing and erecting information signs including backfilling and					
	concrete 15/20 to bases; all in accordance with the Specification and in conformity					
	with the RE instructions		_			
20.04A	500x600mm	No.	1			
20.04B	600x600mm	No.	1			
20.05	Non Standard Informatory Signs					
	Excavating for, providing and erecting information signs including backfilling and					
	concrete 15/20 to bases; all in accordance with the Specification and in conformity					
	with the RE instructions					
20.05A	Less than 1 sq.m	No.	1			
20.05B	Equal or more than 1 sq.m but less than 2 sq.m	No.	1			
20.05C	Equal or more than 2 sq.m but less than 5 sq.m	No.	1			
20.06	Road Marking painting	- '				
	Preparing road surface, supplying approved road marking paint, 100mm wide					
	marking out and painting, all in accordance with the Specification and in conformity					
	with the RE instructions					
20.064		2	7			
20.06A	White paint	m²	7			
20.07	As Itom 2007 but 250mm wide					
20.07	As Item 2007 but 250mm wide		_			
20.07A	a) White paint	m²	7			
	Concrete Kerbs					
20.11	Provision, transport, handling, mixing and placing all materials in accordance with					
	Specification and in conformity with the RE instructions					
20.11A	Kerbs 125 mm x 250 mm straight	m	36			
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	2			
20.11C	Channel blocks 125mm x 100mm	m	72			
	Trees					
20.12	Planting of approved indigenous types of trees where instructed, in accordance with	No.	5			
20.12	the Specification, minimum height 1.5m -Open Fields or Wet Lands	I NO.]			
					i	

Misri-R07 - Limuru page89of208

					1
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MSR-RD 07		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.036km)		
	MISRI ROAD 07 (MSR-RD 07)-0.036KM				
	GRAND SUMMARY TOTAL QUANTITIES				
	Kiambu County- Misri Informal Settlement				
ITEM	DESCRIPTION				AMOUNT (KSHS)
4	Site Clearance and Top Soil Stripping				
5	Earthworks				
8	Culverts and Drainage Works				
12	Natural Material Subbase and Base				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				

SERIAL No.4 - RIVERSIDE SETTLEMENT - GITHURAI

		MISRI IN LIMURU ALL		
	RIVERSID	E ROAD O1		

Riverside-R01 - Githurai page90of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RVRS-RD 01	1	
			50 A.C	1	
			150 Stone Base	1	
			150 Gravel Subbase		
			300 Improved Sub Grade		
			(1.206km)		
	RIVERSIDE ROAD 01 (RVRS-RD 01)-1.206KM				
BILL NO 04	SITE CLEARANCE AND TOPSOIL STRIPPING				
DILL INU.U4	Kiambu County- Riverside Informal Settlement				
	Riambu County- Riverside informat Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Site Clearance				
4.01	Clearing existing road of all trees, vegetation, debris and rubbish of any nature;				
	including the grubbing of stumps and roots and the disposal from the area of all spoil	m ²	7,236.00		
	materials resulting from clearing and grubbing all in accordance with the	111	7,230.00		
	specifications.				
	Removal of Topsoil				
4.02	Stripping vegetable soil from the roadway, and disposal to approved stockpile areas				
	all in accordance with the Specification and in conformity with the RE instructions	m³	1,447.20		
4.03	average depth 200mm.				
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet structures including back filling.	m	72		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				
	TOTAL FOR DILL & CARRIED TO GRAND SOMMARY FAGE			1	

Riverside-R01 - Githurai page91of208

.===	I		lou a a remove	D 1 = 5 (1/01/01)	1 44 4 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RVRS-RD 01		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Improved Sub Grade		
			(1.206km)		
	RIVERSIDE ROAD 01 (RVRS-RD 01)-1.206KM		,		
	,				
BILL NO.5	EARTHWORKS				
	Kiambu County- Riverside Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All sects and showers comparted with hardens are to be included within the				
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Material used for earthworks (fill below bottom sub-grade) shall be minimum soil				
	class S2 quality and be compacted to 95% MDD (AASHTO T99)				
	The upper 300mm of subgrade shall be compacted to 100% MDD (AASHTO T99)				
	while the rest shall be compacted to 95% MDD (AASHTO T99).				
	Fill in Soft Material				
5.01	Excavating the material, transportation and filling in embankment, including watering				
	and rolling; all in accordance to specification and road prism.	m³	70.19		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	7.02		
	Fill in Expansive Clay Areas				
5.03	Everyate from harrow, transport over any distance and fill in the embankment soft				
	Excavate from borrow, transport over any distance and fill in the embankment soft	3	2 522 60		
	material, including watering and compaction but in expansive clay areas to replace	m³	2,532.60		
	unsuitable material removed up to a maximum depth of 0.3m				
5.03(a)	Excavate from borrow, transport over any distance and fill in hard material, including				
	watering and compaction but in expansive clay areas to replace unsuitable material	m³	3,376.80		
	removed up to a maximum depth of 0.4m				
	Spoil in Soft Material				
5.04	Cut to spoil in soft material	m³	2,863.97		
	Spoil in Hard Material		,		
5.05	Excavate, stock pile for reuse and spoil surplus hard material	m³	286.40		
5.06	Spoil in Expansive Clay Areas				
	As Item 5.04 but for excavation in expansive clay areas to remove unsuitable				
	materials				
5.06A	up to a maximum depth of 1.0 m	m³	8,442.00		
2.30,1	Compaction of Existing Ground		5,		
5.07	Compaction of formation ground in accordance with the specification	m³	189.95		
	<u> </u>	1111	103.33		
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO	m³	379.89		
	T99)		-		
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO	m³	113.97		
	T99)		,		
5.10	Provide, lay and compact 300mm improved sub grade material to 100% MDD	m³	2,532.60		
	(AASHTO T99)	'''	2,332.00		
	<u>Topsoil</u>				
5.11	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm;	m²	602.00		
	all in accordance with the specifications	l m-	603.00		
	Grassing				
5.12	-				
	Planting of sprigs of approved indegineous grass types; to embankments, cuttings or		500.00		
	where directed by the RE in accordance with the Specification, including tending,	m²	603.00		
	watering and cutting until the grass is firm established or for 6 months				
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				
			1	<u> </u>	<u> </u>

Riverside-R01 - Githurai page92of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RVRS-RD 01		
			50 A.C	1	
			150 Stone Base	1	
			150 Gravel Subbase	1	
			300 Improved Sub Grade	1	
			(1.206km)	1	
	RIVERSIDE ROAD 01 (RVRS-RD 01)-1.206KM		(1.200km)		
BILL NO.8	CULVERTS AND DRAINAGE				
	Kiambu County- Riverside Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
IIEIVI	DESCRIPTION	ONII	QUANTITI	KATE (KSHS)	ANIOUNI (KSH3)
	Excavate for Culverts and Subsoil Drains in Soft Material				
8.01	Executation in soft material to any depth, compaction of the invert of executation				
	Excavation in soft material to any depth, compaction of the invert of excavation, backfilling with excavated materials or removing excavated material to spoil; in	m³	840		
		m	840		
	accordance with the Specification and in conformity with the RE instructions				
8.02	Extra over Item 8.01 for excavation in hard material	m³	420		
	Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material				
8.03	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	1,737		
	accordance with the Specification and in conformity with the RE's instructions	'''	1,737		
8.04	Extra over Item 8.03 for excavation in hard material	m³	434		
	Selected backfill material				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE	m³	840		
	<u>In-situ culverts</u>				
	Provide for in-situ culvert all in accordance with the Specification and in conformity				
	with the RE instructions				
8.06	a) 600 mm diameter (for use at minor junctions only)	m	150		
8.07	b) 900 mm diameter	m	60		
	Concrete Class 15/20 to Beds, Surrounds				
8.09	Providing and placing the concrete; all in accordance with the Specification and in	m³	137		
	conformity with the RE instructions	'''	157		
	Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures				
8.10	Draviding and placing the concrete rainforcement and formwork class E2 all in				
	Providing and placing the concrete, reinforcement and formwork class F2 all in	m³	44		
	accordance with the Specification and in conformity with the RE instructions				
	Concrete Class 25/20 For Covered Rectangular Drain structure				
8.11	Provide all materials and construct 500mm(Bottom width) wide (internal dimension)				
	rectangualr concrete drains 150mm thick walls and bottom base, average height of				
	0.8m, class 25/20, including slotted top cover of 100mm thick. Include the steel	m^3	498		
	reinforcement and formwork for concrete drain and concrete class 15(20) blinding as				
	specified in the drawings.				
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	241		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE	1			

Riverside-R01 - Githurai page93of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RVRS-RD 01		
			50 A.C	1	
			150 Stone Base]	
			150 Gravel Subbase]	
			300 Improved Sub Grade]	
			(1.206km)]	
	RIVERSIDE ROAD 01 (RVRS-RD 01)-1.206KM				
BILL NO.9	PASSAGE OF TRAFFIC				
	Kiambu County- Riverside Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Construction of Deviations in maximum lengths of 2 km sections				
9.01	All the operations connected with the initial construction of temporary deviations,				
5.01	appropriate width, to allow passage of traffic during the Works; all in accordance with	km	0.60		
	the Specification	KIII	0.00		
	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide,				
	150mm thick, where directed by the RE and in accordance with the Specification	m³	452.25		
9.03	Nacintanana the passage of twaffin	Lump	1.00		
	Maintenance the passage of traffic	Sum	1.00		
	Provide Signs and Barriers				
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights,				
	etc., along deviations constructed: all inaccordance with Specification and in	Km	1.21		
	conformity with the RE instructions				
		ı	1	I	1

Riverside-R01 - Githurai page94of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RVRS-RD 01		
			50 A.C]	
			150 Stone Base		
			150 Gravel Subbase		
			300 Improved Sub Grade		
			(1.206km)		
	RIVERSIDE ROAD 01 (RVRS-RD 01)-1.206KM				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Kiambu County- Riverside Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base				
12.01					
12.01	Provide, lay and compact subbase in 150mm thick natural gravel material in				
12.01	Provide, lay and compact subbase in 150mm thick natural gravel material in carriageway, bus bays, footpaths, shoulders and junctions from the designated	m³	1,282.13		
12.01	Provide, lay and compact subbase in 150mm thick natural gravel material in carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in	m³	1,282.13		
12.01	Provide, lay and compact subbase in 150mm thick natural gravel material in carriageway, bus bays, footpaths, shoulders and junctions from the designated	m³	1,282.13		
12.01	Provide, lay and compact subbase in 150mm thick natural gravel material in carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in	m³	1,282.13		
	Provide, lay and compact subbase in 150mm thick natural gravel material in carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14)		1,282.13		
	Provide, lay and compact subbase in 150mm thick natural gravel material in carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14) Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm		·		
	Provide, lay and compact subbase in 150mm thick natural gravel material in carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14) Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm) plus 50mm blinding layer of quarry dust. This Includes 12 tonne vibrating roller (min		·		

Riverside-R01 - Githurai page95of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RVRS-RD 01		
			50 A.C	1	
			150 Stone Base	1	
			150 Gravel Subbase	1	
			300 Improved Sub Grade	1	
			(1.206km)	1	
	RIVERSIDE ROAD 01 (RVRS-RD 01)-1.206KM				
BILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
	Kiambu County- Riverside Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
45.04	Drive Cook and Took and				
15.01	Prime Coat and Tack coat				
15.01A	MC 30 prime coat on Cement treated material at nominal rate of 0.8 - 1.2 ltr/m² to	ltr	7959.6		
	base course on carriageway, bus bays, footpaths, shoulders and junctions	101	7939.0		
15.01B					
15.015	K1-80 cationic emulsion tack coat on primed treated base at nominal rate of 0.4 - 1.0	ltr	7959.6		
	ltr/m² to base course on on carriageway, bus bays, footpaths, shoulders and junctions		, 555.5		
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.16	BITUMINOUS MIXES				
	Kiambu County- Riverside Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: No haulage will be paid for aggregates, bitumen or the premix. The cost for				
16.00	haulage shall be included in the rates. Rates to be inclusive of fines				
16.01					
16.01	Provide, Lay and spread evenly 50mm thick Asphalt Concrete Type II covering the				
	carriageway and the shoulders. The grading of the mixture of coarse and fine				
	aggregates shall be within and approximately parallel to the grading envelopes given	M^3	447.7		
	in table 16B-1 of the Standard Specification for Road and Bridge Construction for	IVI	44/./		
	Type II, 0/14mm wearing course .The coarse aggregate class for the asphalt concrete				
	shall be Class C. 80/100 penetration grade bitumen for the asphalt concrete.				
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE				

Riverside-R01 - Githurai page96of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
11 2141	TEM DESCRIPTION	0.4.1	-		AWOON (KSHS)
			RVRS-RD 01	4	
			50 A.C	1	
			150 Stone Base		
			150 Gravel Subbase		
			300 Improved Sub Grade	1	
			(1.206km)	†	
	RIVERSIDE ROAD 01 (RVRS-RD 01)-1.206KM		(IIII)		
BILL NO.20	ROAD FURNITURE				
	Kiambu County- Riverside Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Warning Signs				
20.01	Excavation for, providing and erecting warning signs size 750mm including backfill				
	and concrete 15/20 to bases all in accordance with the Specification and in	No.	1		
	conformity with the RE instructions				
20.02	Priority Signs				
20.02	- · · · ·				
	Excavating for, providing and erecting priority signs including back filling and concrete	1			
	15/20 to bases; all in accordance with the Specification and in conformity with the RE				
	instructions				
20.02A	750mm size	No.	1		
20.02B	1000 mm size	No.	1		
	Mandatory Signs	1	_		
20.02					
20.03	Excavating for, providing and erecting prohibitory signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity	No.	1		
	with the RE instructions 1000mm size				
20.04	Standard Informatory Signs				
	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity				
	with the RE instructions				
20.04A	500x600mm	No.	1		
20.04B	600x600mm	No.	1		
20.05	Non Standard Informatory Signs				
	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity				
	with the RE instructions				
20.05A	Less than 1 sq.m	No.	1		
20.05B	Equal or more than 1 sq.m but less than 2 sq.m	No.	1		
20.05C	Equal or more than 2 sq.m but less than 5 sq.m	No.	1		
20.06	Road Marking painting				
	Preparing road surface, supplying approved road marking paint, 100mm wide				
	marking out and painting, all in accordance with the Specification and in conformity				
	with the RE instructions				
20.06A	White paint	m²	241		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m²	241		
_0.0//('''			
	Spand reduction hituminates humans at iterations				
	Speed reduction bituminous bumps at junctions				
20.09	Provision, transport and placing of materials in accordance with the Specification and	No	6		
	in conformity with the RE instructions	110			
	Rumble Strips on Pavement				
20.10	Provision, transport and placing of materials in accordance with the Specification and				
	in conformity with the drawings and RE instructions	No.	29		
	- Comorning with the drawings and the modifications				
	Concrete Kerbs				
	Concrete Kerbs				
20.11	Provision, transport, handling, mixing and placing all materials in accordance with				
	Specification and in conformity with the RE instructions				
20.11A	Kerbs 125 mm x 250 mm straight	m	1,206		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	60		
	Channel blocks 125mm x 100mm	m	2,412		
_0.110		1	2,112		
	Trace				
	Trees				
	Planting of approved indigenous types of trees where instructed, in accordance with				
20.12	1	No.	5		
	the Specification, minimum height 1.5m -Open Fields or Wet Lands				
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE			+	+
	TOTAL OF DILL 20 CARRIED TO SOFWINIART FAGE	1	<u>I</u>	ļ	

Riverside-R01 - Githurai page97of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RVRS-RD 01		
			50 A.C]	
			150 Stone Base]	
			150 Gravel Subbase		
			300 Improved Sub Grade		
			(1.206km)		
	RIVERSIDE ROAD 01 (RVRS-RD 01)-1.206KM				
	GRAND SUMMARY TOTAL QUANTITIES				
	Kiambu County- Riverside Informal Settlement				
ITEM	DESCRIPTION				AMOUNT (KSHS)
4	Site Clearance and Top Soil Stripping				
5	Earthworks				
8	Culverts and Drainage Works				
9	Passage of Traffic				
12	Natural Material Subbase and Base				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				

				_
RI	VERSIDE RO	IAD 02		

Riverside-R02 - Githurai page98of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RVRS-RD 02		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.169km)		
	RIVERSIDE ROAD 02 (RVRS-RD 02) - 0.169KM				
BILL N0.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Kiambu County- Riverside Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Cita Channana				
4.01	Site Clearance				
4.01	Clearing existing road of all trees, vegetation, debris and rubbish of any nature;				
	including the grubbing of stumps and roots and the disposal from the area of all spoil	m^2	845.00		
	materials resulting from clearing and grubbing all in accordance with the				
	specifications.				
	Removal of Topsoil				
4.02	Stripping vegetable soil from the roadway, and disposal to approved stockpile areas				
-	all in accordance with the Specification and in conformity with the RE instructions	m³	169.00		
	average depth 200mm.				
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet		10		
	structures including back filling.	m	10		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

Riverside-R02 - Githurai page99of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
 -	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2				
			RVRS-RD 02		
			50 A.C		
		150 Stone Base 150 Gravel Subbase			
			300 Sub Grade Material		
			(0.169km)		
	RIVERSIDE ROAD 02 (RVRS-RD 02) - 0.169KM		1		
	INVERSIBLE NOAD OZ (NVNS ND OZ) - 0.105NN				
BILL NO.5	EARTHWORKS				
	Kiambu County- Riverside Informal Settlement				
	Namba County - Niverside informatisettlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
				((33232)
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	•				
	Material used for earthworks (fill below bottom sub-grade) shall be minimum soil				
	class S2 quality and be compacted to 95% MDD (AASHTO T99)				
	The upper 300mm of subgrade shall be compacted to 100% MDD (AASHTO T99)				
	while the rest shall be compacted to 95% MDD (AASHTO T99).				
	·				
	Fill in Soft Material				
5.01	Excavating the material, transportation and filling in embankment, including watering				
	and rolling; all in accordance to specification	m³	5.69		
	· ·				
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	0.57		
	Fill in Expansive Clay Areas				
F 02	Till III Expansive Clay Areas				
5.03	Excavate from borrow, transport over any distance and fill in the embankment soft				
	material, including watering and compaction but in expansive clay areas to replace	m³	354.90		
		'''	334.90		
	unsuitable material removed up to a maximum depth of 0.3m				
F 02/a)	Everyote from however, transport ever any distance and fill in hard material, including				
5.03(a)	Excavate from borrow, transport over any distance and fill in hard material, including				
	watering and compaction but in expansive clay areas to replace unsuitable material	m³	473.20		
	removed up to a maximum depth of 0.4m				
	Spoil in Soft Material				
5.04	Cut to spoil in soft material	m³	425.40		
5.04	·	'''	425.40		
	Spoil in Hard Material	_			
5.05	Excavate, stock pile for reuse and spoil surplus hard material	m³	42.54		
5.06	Spoil in Expansive Clay Areas				
	As Item 5.04 but for excavation in expansive clay areas to remove unsuitable				
F 65:	materials	-	4 400		
5.06A	up to a maximum depth of 1.0 m	m³	1,183.00		
	Compaction of Existing Ground				
5.07	Compaction of formation ground in accordance with the specification	m³	35.49		
	<u> </u>	'''	33.73		
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO	m³	70.98		
	T99)	'''	70.36		
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO				
2.33		m³	21.29		
	T99)				
5.10	Provide, lay and compact 300mm improved sub grade material to 100% MDD	m³	354.90		
	(AASHTO T99)	'''	334.30		
	Topsoil				
5.11	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm;				
3.11		m²	84.50		
	all in accordance with the specifications				
	Grassing				
5.12					
	Planting of sprigs of approved indegineous grass types; to embankments, cuttings or				
	where directed by the RE in accordance with the Specification, including tending,	m²	84.50		
	watering and cutting until the grass is firm established or for 6 months				
	IMATELLIS AND CALTINE AND THE STASS IS INTHESTABLISHED OF TO BE THOUSEN				_
	watering and cutting until the grass is firm established or for 6 months				
	watering and cutting until the grass is firm established or for 6 months				

Riverside-R02 - Githurai page100of208

		1	1		
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RVRS-RD 02		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.169km)		
	RIVERSIDE ROAD 02 (RVRS-RD 02) - 0.169KM				
	, , ,				
BILL NO.8	CULVERTS AND DRAINAGE				
	Kiambu County- Riverside Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Excavate for Culverts and Subsoil Drains in Soft Material				
8.01	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	224		
	accordance with the Specification and in conformity with the RE instructions	'''	224		
	accordance with the specification and in comornity with the KE instructions				
8.02	Extra over Item 8.01 for excavation in hard material	m³	112		
	Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material				
8.03	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	243		
	accordance with the Specification and in conformity with the RE's instructions	'''	2-13		
	Extra over Item 8.03 for excavation in hard material	m³	61		
	Selected backfill material				
	Providing, backfilling to any depth all in accordance with the Standard Specifications	m³	224		
	and in conformity with the instructions of the RE				
	In-situ culverts				
	Provide for in-situ culvert all in accordance with the Specification and in conformity				
	with the RE instructions				
	a) 600 mm diameter (for use at minor junctions only)	m	36		
	b) 900 mm diameter	m	20		
	Concrete Class 15/20 to Beds, Surrounds				
8.09	Providing and placing the concrete; all in accordance with the Specification and in	m³	38		
	conformity with the RE instructions				
	Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures				
8.10	Providing and placing the concrete, reinforcement and formwork class F2 all in	,			
	accordance with the Specification and in conformity with the RE instructions	m³	12		
	Concrete Class 25/20 For Covered Rectangular Drain structure				
	Provide all materials and construct 500mm(Bottom width) wide (internal dimension)				
	rectangualr concrete drains 150mm thick walls and bottom base, average height of	3	60		
	0.8m, class 25/20, including slotted top cover of 100mm thick. Include the steel	m ³	68		
	reinforcement and formwork for concrete drain and concrete class 15(20) blinding as				
	specified in the drawings.		2.4		
0 47	Provide 250mm PVC pipes at 50m intervals for service ducts	l m	34		I
8.12					

Riverside-R02 - Githurai page101of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RVRS-RD 02		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.169km)		
	RIVERSIDE ROAD 02 (RVRS-RD 02) - 0.169KM				
BILL NO.9	PASSAGE OF TRAFFIC				
	Kiambu County- Riverside Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Construction of Deviations in maximum lengths of 2 km sections				
9.01	All the operations connected with the initial construction of temporary deviations,				
	appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification	km	0.08		
	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide, 150mm thick, where directed by the RE and in accordance with the Specification	m³	63.38		
9.03	Maintenance the passage of traffic	Lump Sum	1.00		
	Provide Signs and Barriers				
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights,				
	etc., along deviations constructed: all inaccordance with Specification and in	Km	0.17		
	conformity with the RE instructions				

Riverside-R02 - Githurai page102of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RVRS-RD 02		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.169km)		
	RIVERSIDE ROAD 02 (RVRS-RD 02) - 0.169KM				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Kiambu County- Riverside Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base				
12.01	Provide, lay and compact subbase in 150mm thick natural gravel material in				
	carriageway, bus bays, footpaths, shoulders and junctions from the designated				
	quarries listed in the Special Specification in accordance with the Specification and in	m³	179.67		
	conformity with the RE instructions (Stabilisation paid in Bill 14)				
12.02					
12.02	Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm	3	170.67		
) plus 50mm blinding layer of quarry dust. This Includes 12 tonne vibrating roller (min	m³	179.67		
	8 passes)				
<u> </u>					
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				

Riverside-R02 - Githurai page103of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RVRS-RD 02	1	
			50 A.C	1	
			150 Stone Base	1	
			150 Gravel Subbase	1	
			300 Sub Grade Material]	
			(0.169km)	1	
	RIVERSIDE ROAD 02 (RVRS-RD 02) - 0.169KM				
BILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
	Kiambu County- Riverside Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
45.04					
15.01	Prime Coat and Tack coat				
15.01A	MC 30 prime coat on Cement treated material at nominal rate of 0.8 - 1.2 ltr/m² to	l+	1115 4		
	base course on carriageway, bus bays, footpaths, shoulders and junctions	ltr	1115.4		
15.01B					
13.016	K1-80 cationic emulsion tack coat on primed treated base at nominal rate of 0.4 - 1.0	ltr	1115.4		
	ltr/m² to base course on on carriageway, bus bays, footpaths, shoulders and junctions	""	1113.4		
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				
BILL NO 16	BITUMINOUS MIXES				
DILL NO.10	Kiambu County- Riverside Informal Settlement				
	Riambu County - Riverside informat Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
16.00	NOTE: No haulage will be paid for aggregates, bitumen or the premix. The cost for haulage shall be included in the rates. Rates to be inclusive of fines				
16.01	Dravida Lay and spread evenly 50mm thick Asphalt Concrete Type II covering the				
	Provide, Lay and spread evenly 50mm thick Asphalt Concrete Type II covering the carriageway and the shoulders. The grading of the mixture of coarse and fine				
	aggregates shall be within and approximately parallel to the grading envelopes given				
	in table 16B-1 of the Standard Specification for Road and Bridge Construction for	M^3	62.7		
	Type II, 0/14mm wearing course .The coarse aggregate class for the asphalt concrete				
	shall be Class C. 80/100 penetration grade bitumen for the asphalt concrete.				
	Shan be class c. 60/100 penetration grade bitumen for the aspiral concrete.				
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE	1			

Riverside-R02 - Githurai page104of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
11 -141	TEM DESCRIPTION	0.4	`	KATE (KSHS)	AMOON (KSHS)
			RVRS-RD 02		
			50 A.C		
			150 Stone Base		1
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.169km)		
	RIVERSIDE ROAD 02 (RVRS-RD 02) - 0.169KM		(0.1698111)		
	NIVERSIDE NOAD 02 (NVN3-ND 02) - 0.109NWI				
BILL NO.20	ROAD FURNITURE				
	Kiambu County- Riverside Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Warning Signs				
20.01	Excavation for, providing and erecting warning signs size 750mm including backfill				
20.01	and concrete 15/20 to bases all in accordance with the Specification and in	No.	1		
20.02	conformity with the RE instructions Priority Signs				
20.02	Excavating for, providing and erecting priority signs including back filling and concrete				
	15/20 to bases; all in accordance with the Specification and in conformity with the RE	1			
	instructions				
20.02A	750mm size	No.	1		
20.02B	1000 mm size	No.	1		
20.02	Mandatory Signs Executing for providing and procting prohibitory signs including backfilling and				
20.03	Excavating for, providing and erecting prohibitory signs including backfilling and	N _O	1		
	concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions 1000mm size	No.	1		
20.04	Standard Informatory Signs				
	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity				
	with the RE instructions				
20.04A	500x600mm	No.	1		
20.04B	600x600mm	No.	1		
20.05	Non Standard Informatory Signs				
	Excavating for, providing and erecting information signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions				
20.05A	Less than 1 sq.m	No.	1		
20.05B	Equal or more than 1 sq.m but less than 2 sq.m	No.	1		
20.05C	Equal or more than 2 sq.m but less than 5 sq.m	No.	1		
20.06	Road Marking painting				
	Preparing road surface, supplying approved road marking paint, 100mm wide marking out and painting, all in accordance with the Specification and in conformity with the RE instructions				
20.06A	White paint	m²	34		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m²	34		
	Speed reduction bituminous bumps at junctions				
20.09	Provision, transport and placing of materials in accordance with the Specification and	_			
_3.55	in conformity with the RE instructions	No	1		
20.10	Rumble Strips on Pavement Provision, transport and placing of materials in accordance with the Specification and				
	in conformity with the drawings and RE instructions	No.	3		
	Concrete Kerbs				
20.11	Provision, transport, handling, mixing and placing all materials in accordance with				
	Specification and in conformity with the RE instructions				
	Kerbs 125 mm x 250 mm straight	m	169		
	Kerbs 125 mm x 250 mm radius 1m - 5m	m	8		
20.11C	Channel blocks 125mm x 100mm	m	338		
	Trees				
20.12	Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands	No.	5		
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				

Riverside-R02 - Githurai page105of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RVRS-RD 02	1	
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.169km)		
	RIVERSIDE ROAD 02 (RVRS-RD 02) - 0.169KM				
	GRAND SUMMARY TOTAL QUANTITIES				
	Kiambu County- Riverside Informal Settlement				
ITEM	DESCRIPTION				AMOUNT (KSHS)
4	Site Clearance and Top Soil Stripping				
5	Earthworks				
8	Culverts and Drainage Works				
9	Passage of Traffic				
12	Natural Material Subbase and Base				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				

-	THURAI AND MISRI IN LIN		
	RIVERSIDE RO	JAD 03	

Riverside-R03 - Githurai page106of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RVRS-RD 03		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.224km)		
	RIVERSIDE ROAD 03 (RVRS-RD 03) - 0.224KM				
BILL NO.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
DILL NO.04	Kiambu County- Riverside Informal Settlement				
	Riamba County- Riverside informat Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Site Clearance				
4.01	Clearing existing road of all trees, vegetation, debris and rubbish of any nature;				
	including the grubbing of stumps and roots and the disposal from the area of all spoil	m^2	1 120 00		
	materials resulting from clearing and grubbing all in accordance with the	m	1,120.00		
	specifications.				
	Removal of Topsoil				
4.02	Stripping vegetable soil from the roadway, and disposal to approved stockpile areas				
	all in accordance with the Specification and in conformity with the RE instructions average depth 200mm.	m³	224.00		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet		12		
	structures including back filling.	m	13		

Riverside-R03 - Githurai page107of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RVRS-RD 03		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.224km)		
	RIVERSIDE ROAD 03 (RVRS-RD 03) - 0.224KM				
BILL NO.5	EARTHWORKS				
	Kiambu County- Riverside Informal Settlement				
ITENA	DESCRIPTION	LINUT	CHANTITY	DATE (VCUC)	ANACHINIT (VCHC)
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Material used for earthworks (fill below bottom sub-grade) shall be minimum soil				
	class S2 quality and be compacted to 95% MDD (AASHTO T99)				
	The upper 300mm of subgrade shall be compacted to 100% MDD (AASHTO T99)				
	while the rest shall be compacted to 95% MDD (AASHTO T99).				
F 01	Fill in Soft Material				
5.01	Excavating the material, transportation and filling in embankment, including watering and rolling; all in accordance to specification	m³	131.52		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	13.15		
	Fill in Expansive Clay Areas				
5.03	Excavate from borrow, transport over any distance and fill in the embankment soft				
	material, including watering and compaction but in expansive clay areas to replace	m³	470.40		
	unsuitable material removed up to a maximum depth of 0.3m				
5.03(a)	Excavate from borrow, transport over any distance and fill in hard material, including				
3.03(a)	watering and compaction but in expansive clay areas to replace unsuitable material	m³	627.20		
	removed up to a maximum depth of 0.4m	'''	027.20		
	·				
5.04	Spoil in Soft Material Cut to spoil in soft material	m³	352.70		
5.04	Spoil in Hard Material	111	332.70		
5.05	Excavate, stock pile for reuse and spoil surplus hard material	m³	35.27		
5.06	Spoil in Expansive Clay Areas	- '''	33.27		
5.00	As Item 5.04 but for excavation in expansive clay areas to remove unsuitable				
	materials				
5.06A	up to a maximum depth of 1.0 m	m³	1,568.00		
	Compaction of Existing Ground				
5.07	Compaction of formation ground in accordance with the specification	m³	47.04		
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO	,	04.55		
	T99)	m³	94.08		
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO		20.22		
	т99)	m³	28.22		
5.10	Provide, lay and compact 300mm improved sub grade material to 100% MDD	2	470.40		
	(AASHTO T99)	m³	470.40		
	<u>Topsoil</u>				
5.11	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm;	m²	112.00		
	all in accordance with the specifications		112.00		
	Grassing				
5.12	Planting of spring of approved indegineous grass types to embarkments, suttings of				
	Planting of sprigs of approved indegineous grass types; to embankments, cuttings or	m-2	112.00		
	where directed by the RE in accordance with the Specification, including tending,	m²	112.00		
	watering and cutting until the grass is firm established or for 6 months				
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

Riverside-R03 - Githurai page108of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RVRS-RD 03		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.224km)		
	RIVERSIDE ROAD 03 (RVRS-RD 03) - 0.224KM		(0.224KIII)		
	RIVERSIDE ROAD 05 (RVR5-RD 05) - 0.224KIVI				
BILL NO.8	CULVERTS AND DRAINAGE				
5.111.110.10	Kiambu County- Riverside Informal Settlement				
	Indinibu county inverside informatioetticine				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Excavate for Culverts and Subsoil Drains in Soft Material				
8.01	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	272		
	accordance with the Specification and in conformity with the RE instructions				
	accordance with the specification and in comornity with the KE instructions				
8.02	Extra over Item 8.01 for excavation in hard material	m³	136		
	Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material				
8.03	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	323		
	accordance with the Specification and in conformity with the RE's instructions	'''	323		
	accordance with the specification and in comornity with the KE's instructions				
8.04	Extra over Item 8.03 for excavation in hard material	m³	81		
	Selected backfill material				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications	m³	272		
	and in conformity with the instructions of the RE		2,2		
	In-situ culverts				
	Provide for in-situ culvert all in accordance with the Specification and in conformity				
	with the RE instructions				
8.06	a) 600 mm diameter (for use at minor junctions only)	m	48		
8.07	b) 900 mm diameter	m	20		
	Concrete Class 15/20 to Beds, Surrounds				
8.09	Providing and placing the concrete; all in accordance with the Specification and in	m ³	44		
	conformity with the RE instructions				
	Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures				
8.10	Providing and placing the concrete, reinforcement and formwork class F2 all in				
	accordance with the Specification and in conformity with the RE instructions	m³	14		
0 1 1	Concrete Class 25/20 For Covered Rectangular Drain structure Provide all materials and construct F00mm/Pattern width) wide (internal dimension)				
8.11	Provide all materials and construct 500mm(Bottom width) wide (internal dimension)				
	rectangualr concrete drains 150mm thick walls and bottom base, average height of	3	00		
	0.8m, class 25/20, including slotted top cover of 100mm thick. Include the steel	m ³	90		
	reinforcement and formwork for concrete drain and concrete class 15(20) blinding as				
0.13	specified in the drawings.		4.5		
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	45		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

Riverside-R03 - Githurai page109of208

	ITEM DESCRIPTION		QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RVRS-RD 03		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
	RIVERSIDE ROAD 03 (RVRS-RD 03) - 0.224KM		(0.224km)		
BILL NO.9	PASSAGE OF TRAFFIC				
	Kiambu County- Riverside Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Construction of Deviations in maximum lengths of 2 km sections				
9.01	All the operations connected with the initial construction of temporary deviations,				
	appropriate width, to allow passage of traffic during the Works; all in accordance with	km	0.11		
	the Specification				
0.02	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide, 150mm thick, where directed by the RE and in accordance with the Specification	m³	84.00		
9.03	Maintenance the passage of traffic	Lump Sum	1.00		
	Provide Signs and Barriers				
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights,				
	etc., along deviations constructed: all inaccordance with Specification and in	Km	0.22		
	conformity with the RE instructions				
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				

Riverside-R03 - Githurai page110of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RVRS-RD 03	` '	
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material	1	
			(0.224km)		
	RIVERSIDE ROAD 03 (RVRS-RD 03) - 0.224KM		(0.224811)		
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Kiambu County- Riverside Informal Settlement				
	,				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	2200 11011	UNII	QUANTITY	KATE (KSHS)	AIVIOUNT (KSHS)
		ONII	QUANTITY	KATE (KSHS)	AIVIOUNT (KSH3)
	Natural Gravel Subbase and Base	UNIT	QUANTITY	RATE (KSHS)	ANIOUNT (KSHS)
		ONT	QUANTITY	KATE (KSHS)	ANIOUNT (KSHS)
12.01	Natural Gravel Subbase and Base	ONIT	QUANTITY	KATE (KSHS)	ANIOUNT (KSHS)
12.01	Natural Gravel Subbase and Base Provide, lay and compact subbase in 150mm thick natural gravel material in			RATE (KSHS)	ANIOUNT (KSHS)
12.01	Natural Gravel Subbase and Base Provide, lay and compact subbase in 150mm thick natural gravel material in carriageway, bus bays, footpaths, shoulders and junctions from the designated	m ³	238.14	RATE (KSHS)	ANIOUNT (KSHS)
12.01	Natural Gravel Subbase and Base Provide, lay and compact subbase in 150mm thick natural gravel material in carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in			RATE (KSHS)	ANIOUNT (KSHS)
	Natural Gravel Subbase and Base Provide, lay and compact subbase in 150mm thick natural gravel material in carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14)			RATE (KSHS)	ANIOUNT (KSHS)
12.01	Natural Gravel Subbase and Base Provide, lay and compact subbase in 150mm thick natural gravel material in carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14) Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm	m³	238.14	RATE (KSHS)	ANIOUNT (KSHS)
	Provide, lay and compact subbase in 150mm thick natural gravel material in carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14) Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm) plus 50mm blinding layer of quarry dust. This Includes 12 tonne vibrating roller (min	m³		RATE (KSHS)	ANIOUNT (KSHS)
	Natural Gravel Subbase and Base Provide, lay and compact subbase in 150mm thick natural gravel material in carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14) Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm	m³	238.14	RATE (KSHS)	ANIOUNT (KSHS)
	Provide, lay and compact subbase in 150mm thick natural gravel material in carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14) Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm) plus 50mm blinding layer of quarry dust. This Includes 12 tonne vibrating roller (min	m³	238.14	RATE (KSHS)	ANIOUNT (KSHS)

Riverside-R03 - Githurai page111of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RVRS-RD 03	1	
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.224km)		
	RIVERSIDE ROAD 03 (RVRS-RD 03) - 0.224KM				
BILL NO.15					
	Kiambu County- Riverside Informal Settlement				
	DECORPTION		CHANTITY	DATE (VCUC)	ANACHINIT (VCHC)
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
15.01	Prime Coat and Tack coat				
15.01A					
15.017	MC 30 prime coat on Cement treated material at nominal rate of 0.8 - 1.2 ltr/m² to	ltr	1478.4		
	base course on carriageway, bus bays, footpaths, shoulders and junctions	""			
15.01B	V4 00 - Vi - V - V - V - V - V - V - V - V -				
	K1-80 cationic emulsion tack coat on primed treated base at nominal rate of 0.4 - 1.0	ltr	1478.4		
	ltr/m² to base course on on carriageway, bus bays, footpaths, shoulders and junctions				
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.16	BITUMINOUS MIXES				
	Kiambu County- Riverside Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
16.00	NOTE: No haulage will be paid for aggregates, bitumen or the premix. The cost for haulage shall be included in the rates. Rates to be inclusive of fines				, ,
16.01					
	Provide, Lay and spread evenly 50mm thick Asphalt Concrete Type II covering the				
	carriageway and the shoulders. The grading of the mixture of coarse and fine				
	aggregates shall be within and approximately parallel to the grading envelopes given in table 16B. 1 of the Standard Specification for Board and Bridge Construction for	M^3	83.2		
	in table 16B-1 of the Standard Specification for Road and Bridge Construction for				
	Type II, 0/14mm wearing course .The coarse aggregate class for the asphalt concrete				
	shall be Class C. 80/100 penetration grade bitumen for the asphalt concrete.				
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE	1			

Riverside-R03 - Githurai page112of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
11 5141	TIEM DESCRIPTION	0	·	KATE (KSHS)	AWOON (RSH5)
			RVRS-RD 03		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.224km)		
	RIVERSIDE ROAD 03 (RVRS-RD 03) - 0.224KM		(0.224kiii)		
	ROAD FURNITURE				
	Kiambu County- Riverside Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Warning Signs				
20.01	Excavation for, providing and erecting warning signs size 750mm including backfill and concrete 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions	No.	1		
20.02	Priority Signs Excavating for, providing and erecting priority signs including back filling and concrete				
	15/20 to bases; all in accordance with the Specification and in conformity with the RE	1			
	instructions				
20.02A	750mm size	No.	1		
20.02B	1000 mm size	No.	1		
20.03	Mandatory Signs Excavating for, providing and erecting prohibitory signs including backfilling and				
20.03	concrete 15/20 to bases; all in accordance with the Specification and in conformity	No.	1		
	with the RE instructions 1000mm size				
20.04	Standard Informatory Signs				
	Excavating for, providing and erecting information signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity				
	with the RE instructions				
20.04A	500x600mm	No.	1		
20.04B	600x600mm	No.	1		
20.05	Non Standard Informatory Signs				
	Excavating for, providing and erecting information signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity				
	with the RE instructions				
20.05A	Less than 1 sq.m	No.	1		
20.05B	Equal or more than 1 sq.m but less than 2 sq.m	No.	1		
20.05C	Equal or more than 2 sq.m but less than 5 sq.m	No.	1		
20.06	Road Marking painting				
	Preparing road surface, supplying approved road marking paint, 100mm wide marking out and painting, all in accordance with the Specification and in conformity with the RE instructions				
20.06A	White paint	m²	45		
20.07	As there 2007 but 250 are wide				
	As Item 2007 but 250mm wide	m²	ΛE		
20.07A	a) White paint	m-	45		
	Speed reduction bituminous bumps at junctions				
	Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions	No	1		
20.10	Rumble Strips on Pavement Provision, transport and placing of materials in accordance with the Specification and in conformity with the drawings and RE instructions	No.	5		
	·				
20.11	Concrete Kerbs Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions				
	Kerbs 125 mm x 250 mm straight	m	224		
	Kerbs 125 mm x 250 mm radius 1m - 5m	m	11		
20.11C	Channel blocks 125mm x 100mm	m	448		
	<u>Trees</u>				
2012	Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands	No.	5		
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				

Riverside-R03 - Githurai page113of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RVRS-RD 03		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.224km)		
	RIVERSIDE ROAD 03 (RVRS-RD 03) - 0.224KM				
	GRAND SUMMARY TOTAL QUANTITIES				
	GRAND SOMMART TOTAL QUANTITIES				
	Kiambu County- Riverside Informal Settlement				
ITEM	DESCRIPTION				AMOUNT (KSHS)
4	Site Clearance and Top Soil Stripping				
5	Earthworks				
8	Culverts and Drainage Works				
9	Passage of Traffic				
12	Natural Material Subbase and Base				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				

SERIAL No.5- UMOJA SETTLEMENT - THIKA	

WINTERSIDE IN SITE	TOTAL TARD IMIGRATIVE EINT	URU ALL WITHIN KIAME	
	UMOJA ROAD	01	

Umoja - R01 page114of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 01		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.160km)		
	UMOJA ROAD 01 (UMJ-RD 01) - 0.160KM				
BILL NO.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the unit rates entered by tenderers against the items described in this Bill of Quantities. No separate items for overhaul are included in any section of this Bill and no additional payment whatsoever will be made for haulage. Tenderers are therefore deemed to have included, in the unit rates entered against an item, for all costs and charges associated with haulage.				
	Site Clearance				
4.01	Clearing existing road of all trees, vegetation, debris and rubbish of any nature; including the grubbing of stumps and roots and the disposal from the area of all spoil materials resulting from clearing and grubbing all in accordance with the specifications.	m²	1,120.00		
	Removal of Topsoil				
4.02	Stripping vegetable soil from the roadway, and disposal to approved stockpile areas all in accordance with the Specification and in conformity with the RE instructions average depth 200mm.	m³	224.00		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet structures including back filling.	m	10		

Umoja - R01 page115of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 01		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.160km)		
	UMOJA ROAD 01 (UMJ-RD 01) - 0.160KM		(0.100km)		
	·				
NO 5	FARTINACRYC				
BILL NO.5	EARTHWORKS Kiambu County- Umoja Informal Settlement				
	Namba County- Omoja imormai Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	•				
	Material used for earthworks (fill below bottom sub-grade) shall be minimum soil				
	class S2 quality and be compacted to 95% MDD (AASHTO T99)				
	The upper 300mm of subgrade shall be compacted to 100% MDD (AASHTO T99)				
	while the rest shall be compacted to 95% MDD (AASHTO T99).				
	Fill in Soft Material				
5.01	Excavating the material, transportation and filling in embankment, including watering	3	0.00		
	and rolling; all in accordance to specification	m³	0.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	0.00		
	Spoil in Soft Material				
5.04	Cut to spoil in soft material	m³	220.50		
	Spoil in Hard Material				
5.05	Excavate, stock pile for reuse and spoil surplus hard material	m³	22.05		
	Compaction of Existing Ground				
5.07	Compaction of formation ground in accordance with the specification	m³	168.00		
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO	m³	336.00		
	T99)				
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m³	100.80		
5.10	Provide, lay and compact 300mm sub grade material to 100% MDD (AASHTO T99)	m³	100.80		
		""	100.00		
	Topsoil				
5.11	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m²	80.00		
	Grassing				
5.12	Dianting of anying of annual diadacian and a sure a sure and a sure a sure and a sure a sure and a sure a sure and a sure				
	Planting of sprigs of approved indegineous grass types; to embankments, cuttings or	m= 2	90.00		
	where directed by the RE in accordance with the Specification, including tending,	m²	80.00		
	watering and cutting until the grass is firm established or for 6 months				
			1		1

Umoja - R01 page116of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 01		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.160km)		
	UMOJA ROAD 01 (UMJ-RD 01) - 0.160KM		(0.160km)		
	OWOJA KOAD OI (OWIJ-KD OI) - 0.100KW				
BILL NO.8	CULVERTS AND DRAINAGE				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Excavate for Culverts and Subsoil Drains in Soft Material				
8.01	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	200		
	accordance with the Specification and in conformity with the RE instructions	'''	200		
	accordance with the specification and in comormity with the KE instructions				
8.02	Extra over Item 8.01 for excavation in hard material	m³	100		
	Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material				
8.03	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	230		
	accordance with the Specification and in conformity with the RE's instructions				
8.04	Extra over Item 8.03 for excavation in hard material	m³	58		
	Selected backfill material				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications	m³	200		
	and in conformity with the instructions of the RE				
	In-situ culverts				
	Provide for in-situ culvert all in accordance with the Specification and in conformity				
0.00	with the RE instructions		20		
8.06	a) 600 mm diameter (for use at minor junctions only)	m	30		
8.07	b) 900 mm diameter	m	20		
0.00	Concrete Class 15/20 to Beds, Surrounds				
8.09	Providing and placing the concrete; all in accordance with the Specification and in	m³	35		
	conformity with the RE instructions				
8.10	Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures				
8.10	Providing and placing the concrete, reinforcement and formwork class F2 all in	m³	11		
	accordance with the Specification and in conformity with the RE instructions	'''	11		
	Concrete Class 25/20 For Covered Rectangular Drain structure				
8.11	Provide all materials and construct 500mm(Bottom width) wide (internal dimension)				
0.11	rectangualr concrete drains 150mm thick walls and bottom base, average height of				
	0.8m, class 25/20, including slotted top cover of 100mm thick. Include the steel	m ³	72		
	reinforcement and formwork for concrete drain and concrete class 15(20) blinding as	'''	/2		
	specified in the drawings.				
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	32		
0.12			32		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

Umoja - R01 page117of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 01		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.160km)		
	UMOJA ROAD 01 (UMJ-RD 01) - 0.160KM				
BILL NO.9	PASSAGE OF TRAFFIC				
	Kiambu County- Umoja Informal Settlement				
				(
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Construction of Devictions in maximum lengths of 2 km costions				
9.01	Construction of Deviations in maximum lengths of 2 km sections				
9.01	All the operations connected with the initial construction of temporary deviations,	lena	0.00		
	appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification	km	0.08		
	Gravel Wearing Course				
9.02					
3.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide,	m³	60.00		
	150mm thick, where directed by the RE and in accordance with the Specification		00.00		
9.03		Lump			
	Maintenance the passage of traffic	Sum	1.00		
	Provide Signs and Barriers				
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights,				
	etc., along deviations constructed: all inaccordance with Specification and in	Km	0.16		
	conformity with the RE instructions				
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				

Umoja - R01 page118of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 01		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.160km)		
	UMOJA ROAD 01 (UMJ-RD 01) - 0.160KM				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Kiambu County- Umoja Informal Settlement				
				()	
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base				
	Natural Graver Subbase and base	1			
12.01					
12.01	Provide, lay and compact subbase in 150mm thick natural gravel material in				
12.01	carriageway, bus bays, footpaths, shoulders and junctions from the designated	m³	184.80		
12.01	carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in	m³	184.80		
12.01	carriageway, bus bays, footpaths, shoulders and junctions from the designated	m³	184.80		
12.01	carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in	m³	184.80		
	carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14)	m³ m³	184.80		
	carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14) Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm				
	carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14) Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm) plus jointing and 50mm blinding layer of quarry dust. This Includes 12 tonne				

Umoja - R01 page119of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 01	1	
			60mm C.P.B.	1	
			150 Stone Base]	
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.160km)		
	UMOJA ROAD 01 (UMJ-RD 01) - 0.160KM				
BILL NO.13A	CONCRETE PAVING BLOCK SURFACE TREATMENT				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: No overhaul will be paid for these items as it shall be deemed to have been				
	included in the Contractor's rates.				
	Jointing Sand				
13.01A	Supply, lay and appropriately spread jointing sand 10-20mm thick to Concrete paving				
	blocks to the road and junctions all in accordance with the specifications or as	m ²	1040.0		
	directed by the Engineer				
	Concrete block paving including all cuttings				
13.02A	Provide and lay approved 60mm thick medium duty pre-cast concrete paving blocks				
	with minimum strength of 35N/mm 2 to BS 6717 Part 1 of 1986 to road and	m^2	1040.0		
	junctions				
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				

Umoja - R01 page120of208

ITEN A	ITEM DESCRIPTION		CHANTITY	DATE (VCUC)	ANACHAIT (VCHC)
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 01		
			60mm C.P.B.		
			150 Stone Base	1	
			150 Gravel Subbase		
			300 Sub Grade Material		
	UMOJA ROAD 01 (UMJ-RD 01) - 0.160KM		(0.160km)		
	CINOSA ROAD OT (CINS-RD OT) - 0.100 KW				
BILL NO.20	ROAD FURNITURE				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Warning Signs				
20.01	Excavation for, providing and erecting warning signs size 750mm including backfill and concrete 15/20 to bases all in accordance with the Specification and in	No.	1		
20.02	conformity with the RE instructions Priority Signs				
	Excavating for, providing and erecting priority signs including back filling and concrete				
	15/20 to bases; all in accordance with the Specification and in conformity with the RE				
	instructions				
20.02A	750mm size	No.	1		
20.02A	1000 mm size	No.	1		
	Mandatory Signs	1.5.	-		
20.03	Excavating for, providing and erecting prohibitory signs including backfilling and				
20.03	concrete 15/20 to bases; all in accordance with the Specification and in conformity	No.	1		
	with the RE instructions 1000mm size	110.			
20.04	Standard Informatory Signs				
20.04	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity				
	with the RE instructions				
20.044		NI-	1		
20.04A	500x600mm	No.	1		
20.04B	600x600mm	No.	1		
20.05	Non Standard Informatory Signs				
	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity				
	with the RE instructions				
20.05A	Less than 1 sq.m	No.	1		
20.05B	Equal or more than 1 sq.m but less than 2 sq.m	No.	1		
20.05C	Equal or more than 2 sq.m but less than 5 sq.m	No.	1		
20.06	Road Marking painting				
	Preparing road surface, supplying approved road marking paint, 100mm wide marking out and painting, all in accordance with the Specification and in conformity with the RE instructions				
20.06A	White paint	m²	32		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m²	32		
	Speed reduction bituminous bumps at junctions				
20.09	Provision, transport and placing of materials in accordance with the Specification and	No	1		
	in conformity with the RE instructions				
	Rumble Strips on Pavement				
20.10	Provision, transport and placing of materials in accordance with the Specification and in conformity with the drawings and RE instructions	No.	3		
	Concrete Kerbs				
20.11	Provision, transport, handling, mixing and placing all materials in accordance with				
	Specification and in conformity with the RE instructions				
20.11A	Kerbs 125 mm x 250 mm straight	m	160		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	8		
20.11C	Channel blocks 125mm x 100mm	m	320		
	Troos				
	<u>Trees</u>				
20.42	Planting of approved indigenous types of trees where instructed, in accordance with	N -	_		
20.12	the Specification, minimum height 1.5m -Open Fields or Wet Lands	No.	5		
	TOTAL OF BILL 20 CARRIED TO SUMMARRY BACE		1		
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE		<u> </u>		

Umoja - R01 page121of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 01		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.160km)		
	UMOJA ROAD 01 (UMJ-RD 01) - 0.160KM				
	GRAND SUMMARY TOTAL QUANTITIES				
	Kiambu County- Umoja Informal Settlement				
ITENA					
ITEM	DESCRIPTION				AMOUNT (KSHS)
4	Site Clearance and Top Soil Stripping				
5	Earthworks				
8	Culverts and Drainage Works				
9	Passage of Traffic				
12	Natural Material Subbase and Base				
13	CONCRETE PAVING BLOCK SURFACE TREATMENT				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				

11141	N 14 NNAN N9		
ШΜ	UJA KUAD UZ		
	UM	UMOJA ROAD OZ	UMOJA ROAD OZ

Umoja - R02 page122of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 02		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.132km)		
	UMOJA ROAD 02 (UMJ-RD 02) - 0.100KM				
BILL NO.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Site Clearance				
4.01	Clearing existing road of all trees, vegetation, debris and rubbish of any nature;				
	including the grubbing of stumps and roots and the disposal from the area of all spoil	2	024.00		
	materials resulting from clearing and grubbing all in accordance with the	m^2	924.00		
	specifications.				
	Removal of Topsoil				
4.02	Stripping vegetable soil from the roadway, and disposal to approved stockpile areas				
	all in accordance with the Specification and in conformity with the RE instructions	m³	184.80		
	average depth 200mm.				
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet	m	8		
	structures including back filling.	m	٥		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				1

Umoja - R02 page123of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 02		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.132km)		
	UMOJA ROAD 02 (UMJ-RD 02) - 0.100KM		,		
BILL NO.5	EARTHWORKS				
5122 110.5	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and sharges connected with boulege are to be included within the				
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Material used for earthworks (fill below bottom sub-grade) shall be minimum soil				
	class S2 quality and be compacted to 95% MDD (AASHTO T99)				
	The upper 300mm of subgrade shall be compacted to 100% MDD (AASHTO T99)				
	while the rest shall be compacted to 95% MDD (AASHTO T99).				
	Fill in Soft Material				
5.01	Excavating the material, transportation and filling in embankment, including watering	_			
	and rolling; all in accordance to specification	m³	1.03		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	0.10		
	Spoil in Soft Material				
5.04	Cut to spoil in soft material	m³	158.62		
	Spoil in Hard Material				
5.05	Excavate, stock pile for reuse and spoil surplus hard material	m³	15.86		
	Compaction of Existing Ground				
5.07	Compaction of formation ground in accordance with the specification	m³	138.60		
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO				
5.00	T99)	m³	277.20		
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO				
3.03	T99)	m³	83.16		
5.10		2	00.45		
	Provide, lay and compact 300mm sub grade material to 100% MDD (AASHTO T99)	m³	83.16		
	<u>Topsoil</u>				
5.11	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm;	m²	66.00		
	all in accordance with the specifications	111	00.00		
	Grassing				
5.12	Planting of spring of approved indegineous grass types: to embankments, suttings or				
	Planting of sprigs of approved indegineous grass types; to embankments, cuttings or	m ²	66.00		
	where directed by the RE in accordance with the Specification, including tending,	m²	66.00		
	watering and cutting until the grass is firm established or for 6 months				
			1		1

Umoja - R02 page124of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 02		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.132km)		
	UMOJA ROAD 02 (UMJ-RD 02) - 0.100KM				
BILL NO.8	CULVERTS AND DRAINAGE				
DILL NO.8	Kiambu County- Umoja Informal Settlement				
	Klambu County- Omoja informai Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			Qorurri.	10112 (110110)	, and the transfer of the tran
	Excavate for Culverts and Subsoil Drains in Soft Material				
8.01					
	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	160		
	accordance with the Specification and in conformity with the RE instructions				
8.02	Extra over Item 8.01 for excavation in hard material	m³	80		
	Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material				
8.03					
	Excavation in soft material to any depth, compaction of the invert of excavation,	2	100		
	backfilling with excavated materials or removing excavated material to spoil; in	m³	190		
	accordance with the Specification and in conformity with the RE's instructions				
8.04	Extra over Item 8.03 for excavation in hard material	m³	48		
	Selected backfill material				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications	m³	160		
	and in conformity with the instructions of the RE	111	100		
	<u>In-situ culverts</u>				
	Provide for in-situ culvert all in accordance with the Specification and in conformity				
	with the RE instructions				
8.06	a) 600 mm diameter (for use at minor junctions only)	m	20		
8.07	b) 900 mm diameter	m	20		
	Concrete Class 15/20 to Beds, Surrounds				
8.09	Providing and placing the concrete; all in accordance with the Specification and in	m³	29		
	conformity with the RE instructions	'''	25		
	Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures				
8.10	Providing and placing the concrete, reinforcement and formwork class F2 all in				
	accordance with the Specification and in conformity with the RE instructions	m³	9		
	· · · · · · · · · · · · · · · · · · ·				
	Concrete Class 25/20 For Covered Rectangular Drain structure				
8.11	Provide all materials and construct 500mm(Bottom width) wide (internal dimension)				
	rectangualr concrete drains 150mm thick walls and bottom base, average height of				
	0.8m, class 25/20, including slotted top cover of 100mm thick. Include the steel	m ³	59		
	reinforcement and formwork for concrete drain and concrete class 15(20) blinding as				
	specified in the drawings.				
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	26		
0.12	·				

Umoja - R02 page125of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 02 60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase 300 Sub Grade Material		
			(0.132km)		
	UMOJA ROAD 02 (UMJ-RD 02) - 0.100KM				
DILL NO 0	DASCACE OF TRAFFIC				
BILL NO.9	PASSAGE OF TRAFFIC				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
				, ,	
	Construction of Deviations in maximum lengths of 2 km sections				
9.01	All the operations connected with the initial construction of temporary deviations,				
	appropriate width, to allow passage of traffic during the Works; all in accordance with	km	0.07		
	the Specification				
	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide,				
	150mm thick, where directed by the RE and in accordance with the Specification	m³	49.50		
9.03		Lumn			
9.03	Maintenance the passage of traffic	Lump Sum	1.00		
	Provide Signs and Barriers	Juin			
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights,				
	etc., along deviations constructed: all inaccordance with Specification and in	Km	0.13		
	conformity with the RE instructions				
	·				
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				

Umoja - R02 page126of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 02		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.132km)		
	UMOJA ROAD 02 (UMJ-RD 02) - 0.100KM				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base				
12.01					
	Provide, lay and compact subbase in 150mm thick natural gravel material in carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14)	m³	152.46		
12.02	Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm) plus 50mm blinding layer of quarry dust. This Includes 12 tonne vibrating roller (min 8 passes)	m³	152.46		
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				

Umoja - R02 page127of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 02		
			60mm C.P.B.		
			150 Stone Base 150 Gravel Subbase		
			300 Sub Grade Material		
			(0.132km)		
	UMOJA ROAD 02 (UMJ-RD 02) - 0.100KM				
BILL NO.13A	CONCRETE PAVING BLOCK SURFACE TREATMENT				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: No overhaul will be paid for these items as it shall be deemed to have been				
	included in the Contractor's rates.				
	Jointing Sand				
13.01A	Jointing Sand Supply, lay and appropriately spread and Compact jointing sand 10-20mm thick to				
13.01A		m ²	858.0		
13.01A	Supply, lay and appropriately spread and Compact jointing sand 10-20mm thick to	m ²	858.0		
13.01A	Supply, lay and appropriately spread and Compact jointing sand 10-20mm thick to Concrete paving blocks to the road and junctions all in accordance with the	m ²	858.0		
13.01A 13.02A	Supply, lay and appropriately spread and Compact jointing sand 10-20mm thick to Concrete paving blocks to the road and junctions all in accordance with the specifications or as directed by the Engineer		858.0		
	Supply, lay and appropriately spread and Compact jointing sand 10-20mm thick to Concrete paving blocks to the road and junctions all in accordance with the specifications or as directed by the Engineer Concrete block paving including all cuttings	m ²	858.0 858.0		
	Supply, lay and appropriately spread and Compact jointing sand 10-20mm thick to Concrete paving blocks to the road and junctions all in accordance with the specifications or as directed by the Engineer Concrete block paving including all cuttings Provide and lay approved 60mm thick medium duty pre-cast concrete paving blocks				
	Supply, lay and appropriately spread and Compact jointing sand 10-20mm thick to Concrete paving blocks to the road and junctions all in accordance with the specifications or as directed by the Engineer Concrete block paving including all cuttings Provide and lay approved 60mm thick medium duty pre-cast concrete paving blocks with minimum strength of 35N/mm 2 to BS 6717 Part 1 of 1986 to road and				

Umoja - R02 page128of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 02		
			60mm C.P.B.		
			150 Stone Base 150 Gravel Subbase		
			300 Sub Grade Material		
	UMOJA ROAD 02 (UMJ-RD 02) - 0.100KM		(0.132km)		
	CINOSA NOAD CE (CINS ND CE) CIECUM				
BILL NO.20	ROAD FURNITURE				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Warning Signs				
20.01	Excavation for, providing and erecting warning signs size 750mm including backfill and concrete 15/20 to bases all in accordance with the Specification and in	No.	1		
20.02	conformity with the RE instructions				
20.02	Priority Signs				
	Excavating for, providing and erecting priority signs including back filling and concrete				
	15/20 to bases; all in accordance with the Specification and in conformity with the RE				
	instructions				
20.02A	750mm size	No.	1		
20.02B	1000 mm size	No.	1		
	Mandatory Signs				
20.03	Excavating for, providing and erecting prohibitory signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity	No.	1		
	with the RE instructions 1000mm size				
20.04	Standard Informatory Signs				
	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity				
	with the RE instructions				
20.04A	500x600mm	No.	1		
20.04B	600x600mm	No.	1		
20.05	Non Standard Informatory Signs				
	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions				
20.05A	Less than 1 sq.m	No.	1		
20.05B	Equal or more than 1 sq.m but less than 2 sq.m	No.	1		
20.05C	Equal or more than 2 sq.m but less than 5 sq.m	No.	1		
20.06	Road Marking painting				
	Preparing road surface, supplying approved road marking paint, 100mm wide				
	marking out and painting, all in accordance with the Specification and in conformity				
	with the RE instructions				
20.06A	White paint	m²	26		
20.007.					
20.07	As Item 2007 but 250mm wide				
	a) White paint	m²	26		
20.07A	ay write paint		20		
	Speed reduction bituminous bumps at junctions				
20.09	Provision, transport and placing of materials in accordance with the Specification and				
20.03	in conformity with the RE instructions	No	1		
	Rumble Strips on Pavement				
20.10	Provision, transport and placing of materials in accordance with the Specification and				
20.10		No.	2		
	in conformity with the drawings and RE instructions				
	Concrete Kerbs				
20.11	Provision, transport, handling, mixing and placing all materials in accordance with				
20.11	Specification and in conformity with the RE instructions				
20 11 4	·		122		
	Kerbs 125 mm x 250 mm straight Kerbs 125 mm x 250 mm radius 1m - 5m	m	132 7		
	Channel blocks 125mm x 100mm	m	,		
20.11C	Charmer blocks 123Hill x 100Hilli	m	264		
	<u>Trees</u>				
	TI CCS				
20.12	Planting of approved indigenous types of trees where instructed, in accordance with	No			
20.12	the Specification, minimum height 1.5m -Open Fields or Wet Lands	No.	5		
		-			
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				

Umoja - R02 page129of208

					· · · · · · · · · · · · · · · · · · ·
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 02		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.132km)		
	UMOJA ROAD 02 (UMJ-RD 02) - 0.100KM				
	GRAND SUMMARY TOTAL QUANTITIES				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION				AMOUNT (KSHS)
4	Site Clearance and Top Soil Stripping				
5	Earthworks				
8	Culverts and Drainage Works				
9	Passage of Traffic				
12	Natural Material Subbase and Base				
15	Bituminous Surface Treatments				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				

Umoja - R03 page130of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 03		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.110km)		
	UMOJA ROAD 03 (UMJ-RD 03) - 0.110KM				
BILL NO.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and showers compated with hardens are to be included within the				
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities. No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and charges associated with haulage.				
	charges associated with hadiage.				
	Site Clearance				
4.01	Clearing existing road of all trees, vegetation, debris and rubbish of any nature;				
	including the grubbing of stumps and roots and the disposal from the area of all spoil	2			
	materials resulting from clearing and grubbing all in accordance with the	m ²	770.00		
	specifications.				
4.00	Removal of Topsoil				
4.02	Stripping vegetable soil from the roadway, and disposal to approved stockpile areas	. 2	45.00		
	all in accordance with the Specification and in conformity with the RE instructions	m³	154.00		
4.03	average depth 200mm.				
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet	m	7		
	structures including back filling.				

Umoja - R03 page131of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS
			UMJ-RD 03		
			60mm C.P.B.	1	
			150 Stone Base	1	
			150 Gravel Subbase	1	
			300 Sub Grade Material	1	
			(0.110km)	1	
	UMOJA ROAD 03 (UMJ-RD 03) - 0.110KM		(O.IIOKIII)		
BILL NO.5	EARTHWORKS				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Material used for earthworks (fill below bottom sub-grade) shall be minimum soil				
	class S2 quality and be compacted to 95% MDD (AASHTO T99)				
	The upper 300mm of subgrade shall be compacted to 100% MDD (AASHTO T99)				
	while the rest shall be compacted to 95% MDD (AASHTO T99).				
	Fill in Soft Material				
5.01	Excavating the material, transportation and filling in embankment, including watering and rolling; all in accordance to specification	m³	1.44		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	0.14		
	Spoil in Soft Material				
5.04	Cut to spoil in soft material	m³	176.72		
	Spoil in Hard Material				
5.05	Excavate, stock pile for reuse and spoil surplus hard material	m³	17.67		
	Compaction of Existing Ground				
5.07	Compaction of formation ground in accordance with the specification	m³	115.50		
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m³	231.00		
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m³	69.30		
5.10	Provide, lay and compact 300mm sub grade material to 100% MDD (AASHTO T99)	m³	69.30		
	<u>Topsoil</u>				
5.11	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m²	55.00		
	Grassing				
5.12	Planting of sprigs of approved indegineous grass types; to embankments, cuttings or				
	where directed by the RE in accordance with the Specification, including tending, watering and cutting until the grass is firm established or for 6 months	m²	55.00		
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

Umoja - R03 page132of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
112141	TIEN DESCRIPTION			INATE (NOTIO)	AMOUNT (RSHS)
			UMJ-RD 03		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.110km)		
	UMOJA ROAD 03 (UMJ-RD 03) - 0.110KM				
BILL NO.8	CULVERTS AND DRAINAGE				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	OHANTITY	RATE (KSHS)	AMOUNT (KSHS)
HEIVI	DESCRIPTION	UNII	QUANTITY	KATE (KSHS)	AMOUNT (KSHS)
	Excavate for Culverts and Subsoil Drains in Soft Material				
8.01					
	Excavation in soft material to any depth, compaction of the invert of excavation,	_			
	backfilling with excavated materials or removing excavated material to spoil; in	m³	160		
	accordance with the Specification and in conformity with the RE instructions				
8.02	Extra over Item 8.01 for excavation in hard material	m³	80		
	Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material				
8.03					
	Excavation in soft material to any depth, compaction of the invert of excavation,	3	450		
	backfilling with excavated materials or removing excavated material to spoil; in	m³	158		
	accordance with the Specification and in conformity with the RE's instructions				
8.04	Extra over Item 8.03 for excavation in hard material	m³	40		
	Selected backfill material				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications	m³	160		
	and in conformity with the instructions of the RE	l m-	160		
	<u>In-situ culverts</u>				
	Provide for in-situ culvert all in accordance with the Specification and in conformity				
	with the RE instructions				
8.06	a) 600 mm diameter (for use at minor junctions only)	m	20		
8.07	b) 900 mm diameter	m	20		
	Concrete Class 15/20 to Beds, Surrounds				
8.09	Providing and placing the concrete; all in accordance with the Specification and in	m³	29		
	conformity with the RE instructions	'''	23		
	Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures				
8.10	Providing and placing the concrete, reinforcement and formwork class F2 all in				
	accordance with the Specification and in conformity with the RE instructions	m³	9		
	Concrete Class 25/20 For Covered Rectangular Drain structure				
8.11	Provide all materials and construct 500mm(Bottom width) wide (internal dimension)				
	rectangualr concrete drains 150mm thick walls and bottom base, average height of	,			
	0.8m, class 25/20, including slotted top cover of 100mm thick. Include the steel	m ³	50		
	reinforcement and formwork for concrete drain and concrete class 15(20) blinding as				
	specified in the drawings.				
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	22		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

Umoja - R03 page133of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 03		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.110km)		
	UMOJA ROAD 03 (UMJ-RD 03) - 0.110KM				
BILL NO.9	PASSAGE OF TRAFFIC				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Construction of Deviations in maximum lengths of 2 km sections				
9.01	All the operations connected with the initial construction of temporary deviations,				
	appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification	km	0.06		
	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide, 150mm thick, where directed by the RE and in accordance with the Specification	m³	41.25		
9.03	Maintenance the passage of traffic	Lump Sum	1.00		
	Provide Signs and Barriers				
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights,				
	etc., along deviations constructed: all inaccordance with Specification and in	Km	0.11		
	conformity with the RE instructions				
			I	l	1

Umoja - R03 page134of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 03		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.110km)		
	UMOJA ROAD 03 (UMJ-RD 03) - 0.110KM				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base				
12.01	Provide, lay and compact subbase in 150mm thick natural gravel material in carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14)	m³	127.05		
	Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm				
12.02) plus 50mm blinding layer of quarry dust. This Includes 12 tonne vibrating roller (min 8 passes)	m³	127.05		

Umoja - R03 page135of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 03		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.110km)		
	UMOJA ROAD 03 (UMJ-RD 03) - 0.110KM				
BILL NO.13A	CONCRETE PAVING BLOCK SURFACE TREATMENT				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: No overhaul will be paid for these items as it shall be deemed to have been				
	included in the Contractor's rates.				
	included in the Contractor 5 rates.				
	Jointing Sand				
13.01A					
13.01A	Jointing Sand	m ²	715.0		
13.01A	Jointing Sand Supply, lay and appropriately spread and Compact jointing sand 10-20mm thick to	m ²	715.0		
13.01A	Jointing Sand Supply, lay and appropriately spread and Compact jointing sand 10-20mm thick to Concrete paving blocks to the road and junctions all in accordance with the	m ²	715.0		
13.01A 13.02A	Jointing Sand Supply, lay and appropriately spread and Compact jointing sand 10-20mm thick to Concrete paving blocks to the road and junctions all in accordance with the specifications or as directed by the Engineer		715.0		
	Jointing Sand Supply, lay and appropriately spread and Compact jointing sand 10-20mm thick to Concrete paving blocks to the road and junctions all in accordance with the specifications or as directed by the Engineer Concrete block paving including all cuttings	m ²	715.0 715.0		
	Jointing Sand Supply, lay and appropriately spread and Compact jointing sand 10-20mm thick to Concrete paving blocks to the road and junctions all in accordance with the specifications or as directed by the Engineer Concrete block paving including all cuttings Provide and lay approved 60mm thick medium duty pre-cast concrete paving blocks				
	Jointing Sand Supply, lay and appropriately spread and Compact jointing sand 10-20mm thick to Concrete paving blocks to the road and junctions all in accordance with the specifications or as directed by the Engineer Concrete block paving including all cuttings Provide and lay approved 60mm thick medium duty pre-cast concrete paving blocks with minimum strength of 35N/mm 2 to BS 6717 Part 1 of 1986 to road and				

Umoja - R03 page136of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
11 2141	TEM DESCRIPTION	0	·	KATE (KSTIS)	AMOUNT (KSHS)
			UMJ-RD 03		
			60mm C.P.B.	_	
			150 Stone Base		
			150 Gravel Subbase]	
			300 Sub Grade Material	1	
				1	
	LINACIA DOAD 02 (LINAL DD 02) O 110VNA		(0.110km)		
	UMOJA ROAD 03 (UMJ-RD 03) - 0.110KM				
BILL NO.20	ROAD FURNITURE				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Warning Signs				
20.01	Excavation for, providing and erecting warning signs size 750mm including backfill				
20.01	and concrete 15/20 to bases all in accordance with the Specification and in	No.	1		
	· ·	I NO.	1		
	conformity with the RE instructions				
20.02	Priority Signs				
	Excavating for, providing and erecting priority signs including back filling and concrete				
	15/20 to bases; all in accordance with the Specification and in conformity with the RE				
	instructions				
20.02A	750mm size	No	1		
		No.	1		
20.02B	1000 mm size	No.	1		
	Mandatory Signs				
20.03	Excavating for, providing and erecting prohibitory signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity	No.	1		
	with the RE instructions 1000mm size				
20.04					
20.04	Standard Informatory Signs				
	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity				
	with the RE instructions				
20.04A	500x600mm	No.	1		
20.04B	600x600mm	No.	1		
20.05	Non Standard Informatory Signs	140.	+		
20.03					
	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity				
	with the RE instructions				
20.05A	Less than 1 sq.m	No.	1		
20.05B	Equal or more than 1 sq.m but less than 2 sq.m	No.	1		
20.05C	Equal or more than 2 sq.m but less than 5 sq.m	No.	1		
20.06	Road Marking painting	110.	<u> </u>		
20.06					
	Preparing road surface, supplying approved road marking paint, 100mm wide				
	marking out and painting, all in accordance with the Specification and in conformity				
	with the RE instructions				
20.06A	White paint	m²	22		
20.07	As Item 2007 but 250mm wide				
20.07A		m²	22		
20.07A	a) White paint	111			
	Speed reduction bituminous bumps at junctions				
20.09	Provision, transport and placing of materials in accordance with the Specification and	No	1		
	in conformity with the RE instructions	100	1		
	Rumble Strips on Pavement				
20.10	Provision, transport and placing of materials in accordance with the Specification and				
20.10	in conformity with the drawings and RE instructions	No.	2		
	in comornity with the drawings and it instructions				
	Company to Works				
	Concrete Kerbs				
20.11	Provision, transport, handling, mixing and placing all materials in accordance with				
	Specification and in conformity with the RE instructions				
20.11A	Kerbs 125 mm x 250 mm straight	m	110		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	6		
20.11C	Channel blocks 125mm x 100mm	m	220		
20.110	C. C. M. C. D. C.	111	220		
	Trace				
	Trees				
	Planting of approved indigenous types of trees where instructed, in accordance with				
20.12	the Specification, minimum height 1.5m -Open Fields or Wet Lands	No.	5		
	the Specification, minimum height 1.3m -Open rields of wet Lands				
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				
					!

Umoja - R03 page137of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 03		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.110km)		
	UMOJA ROAD 03 (UMJ-RD 03) - 0.110KM				
	GRAND SUMMARY TOTAL QUANTITIES				
	GRAND SOMMARY TOTAL QUANTITIES				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION				AMOUNT (KSHS)
4	Site Clearance and Top Soil Stripping				
5	Earthworks				
8	Culverts and Drainage Works				
9	Passage of Traffic				
12	Natural Material Subbase and Base				
15	Bituminous Surface Treatments				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				

	UMOJA ROA	AD 04	

Umoja - R04 page138of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 04		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.075km)		
	UMOJA ROAD 04 (UMJ-RD 04) - 0.075KM				
BILL NO.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the unit rates entered by tenderers against the items described in this Bill of Quantities. No separate items for overhaul are included in any section of this Bill and no additional payment whatsoever will be made for haulage. Tenderers are therefore deemed to have included, in the unit rates entered against an item, for all costs and charges associated with haulage.				
	Site Clearance				
4.01	Clearing existing road of all trees, vegetation, debris and rubbish of any nature; including the grubbing of stumps and roots and the disposal from the area of all spoil materials resulting from clearing and grubbing all in accordance with the specifications.	m²	525.00		
	Removal of Topsoil				
4.02	Stripping vegetable soil from the roadway, and disposal to approved stockpile areas all in accordance with the Specification and in conformity with the RE instructions average depth 200mm.	m³	105.00		
	Excavate and remove existing pipes and culverts of any size and the inlet and outlet				

Umoja - R04 page139of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 04	1	
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.075km)		
	UMOJA ROAD 04 (UMJ-RD 04) - 0.075KM				
BILL NO.5	EARTHWORKS				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE All and a label of the lab				
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and charges associated with haulage.				
	-				
	Material used for earthworks (fill below bottom sub-grade) shall be minimum soil				
	class S2 quality and be compacted to 95% MDD (AASHTO T99) The upper 300mm of subgrade shall be compacted to 100% MDD (AASHTO T99)				
	while the rest shall be compacted to 95% MDD (AASHTO 199).				
	Fill in Soft Material				
5.01	Excavating the material, transportation and filling in embankment, including watering				
3.01	and rolling; all in accordance to specification	m³	1.44		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	0.14		
	Spoil in Soft Material				
5.04	Cut to spoil in soft material	m³	176.72		
	Spoil in Hard Material	_			
5.05	Excavate, stock pile for reuse and spoil surplus hard material	m³	17.67		
	Compaction of Existing Ground				
5.07	Compaction of formation ground in accordance with the specification	m³	78.75		
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m³	157.50		
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m³	47.25		
5.10	Provide, lay and compact 300mm sub grade material to 100% MDD (AASHTO T99)	m³	47.25		
	Topsoil				
5.11	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm;	?	27.50		
	all in accordance with the specifications	m²	37.50		
	Grassing				
5.12	Planting of sprigs of approved indegineous grass types; to embankments, cuttings or				
	where directed by the RE in accordance with the Specification, including tending,	m²	37.50		
	watering and cutting until the grass is firm established or for 6 months	'''	37.30		
	watering and cataing and the grass is firm established of for o months				
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

Umoja - R04 page140of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 04	1	
			60mm C.P.B.	1	
			150 Stone Base	1	
			150 Gravel Subbase	-	
			300 Sub Grade Material	1	
				-	
	UNACUA DO AD AA (UNAU DD AA). A ATEKAA		(0.075km)		
	UMOJA ROAD 04 (UMJ-RD 04) - 0.075KM				
BILL NO.8	CULVERTS AND DRAINAGE				
DILL IVOIO	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Excavate for Culverts and Subsoil Drains in Soft Material				
8.01	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	160		
	accordance with the Specification and in conformity with the RE instructions				
0.02	<u> </u>	3	00		
8.02	Extra over Item 8.01 for excavation in hard material	m³	80		
8.03	Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material				
8.03	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	108		
	accordance with the Specification and in conformity with the RE's instructions				
8.04	Extra over Item 8.03 for excavation in hard material	m³	27		
	Selected backfill material				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications	,			
	and in conformity with the instructions of the RE	m³	160		
	In-situ culverts				
	Provide for in-situ culvert all in accordance with the Specification and in conformity				
	with the RE instructions				
8.06	a) 600 mm diameter (for use at minor junctions only)	m	20		
8.07	b) 900 mm diameter	m	20		
	Concrete Class 15/20 to Beds, Surrounds				
8.09	Providing and placing the concrete; all in accordance with the Specification and in	m³	29		
	conformity with the RE instructions	111	29		
	Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures				
8.10	Providing and placing the concrete, reinforcement and formwork class F2 all in				
	accordance with the Specification and in conformity with the RE instructions	m³	9		
	<u> </u>				
	Concrete Class 25/20 For Covered Rectangular Drain structure				
8.11	Provide all materials and construct 500mm(Bottom width) wide (internal dimension)				
	rectangualr concrete drains 150mm thick walls and bottom base, average height of	2			
	0.8m, class 25/20, including slotted top cover of 100mm thick. Include the steel	m ³	34		
	reinforcement and formwork for concrete drain and concrete class 15(20) blinding as				
	specified in the drawings.				
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	15		
	TOTAL FOR BULL & CARRIED TO COLAND CURAMARY DAGS				<u> </u>
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				1

Umoja - R04 page141of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 04	1	
			60mm C.P.B.	1	
			150 Stone Base	1	
			150 Gravel Subbase]	
			300 Sub Grade Material		
			(0.075km)	1	
	UMOJA ROAD 04 (UMJ-RD 04) - 0.075KM				
BILL NO.9	PASSAGE OF TRAFFIC				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Construction of Deviations in maximum lengths of 2 km sections				
9.01	All the operations connected with the initial construction of temporary deviations,				
	appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification	km	0.04		
	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide, 150mm thick, where directed by the RE and in accordance with the Specification	m³	28.13		
9.03	Maintenance the passage of traffic	Lump Sum	1.00		
	Provide Signs and Barriers				
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights,				
	etc., along deviations constructed: all inaccordance with Specification and in	Km	0.08		
	conformity with the RE instructions				
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				
	TOTAL TOTALLE SCANNED TO GRAND SOMMANT FAGE			1	

Umoja - R04 page142of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 04	(1011)	(
			60mm C.P.B.	1	
			150 Stone Base	1	
			150 Gravel Subbase	1	
			300 Sub Grade Material	1	
			(0.075km)	1	
	UMOJA ROAD 04 (UMJ-RD 04) - 0.075KM		(0.07 5km)		
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Kiambu County- Umoja Informal Settlement				
	· · ·				
ITENA					
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
I I EIVI	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
II EIVI	DESCRIPTION Natural Gravel Subbase and Base	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
		UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
12.01	Natural Gravel Subbase and Base	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base Provide, lay and compact subbase in 150mm thick natural gravel material in			RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base Provide, lay and compact subbase in 150mm thick natural gravel material in carriageway, bus bays, footpaths, shoulders and junctions from the designated	M3 m3	QUANTITY 86.63	RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base Provide, lay and compact subbase in 150mm thick natural gravel material in carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in			RATE (KSHS)	AMOUNT (KSHS)
12.01	Natural Gravel Subbase and Base Provide, lay and compact subbase in 150mm thick natural gravel material in carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14)			RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base Provide, lay and compact subbase in 150mm thick natural gravel material in carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14) Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm	m³	86.63	RATE (KSHS)	AMOUNT (KSHS)
12.01	Provide, lay and compact subbase in 150mm thick natural gravel material in carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14) Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm) plus 50mm blinding layer of quarry dust. This Includes 12 tonne vibrating roller (min	m³		RATE (KSHS)	AMOUNT (KSHS)
12.01	Natural Gravel Subbase and Base Provide, lay and compact subbase in 150mm thick natural gravel material in carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14) Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm	m³	86.63	RATE (KSHS)	AMOUNT (KSHS)
12.01	Provide, lay and compact subbase in 150mm thick natural gravel material in carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14) Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm) plus 50mm blinding layer of quarry dust. This Includes 12 tonne vibrating roller (min	m³	86.63	RATE (KSHS)	AMOUNT (KSHS)

Umoja - R04 page143of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 04		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.075km)		
	UMOJA ROAD 04 (UMJ-RD 04) - 0.075KM				
BILL NO.13A	CONCRETE PAVING BLOCK SURFACE TREATMENT				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: No overhaul will be paid for these items as it shall be deemed to have been			, ,	, ,
	included in the Contractor's rates.				
	Jointing Sand				
13.01A	Supply, lay and appropriately spread and Compact jointing sand 10-20mm thick to				
13.01/					
13.017	Concrete paving blocks to the road and junctions all in accordance with the	m ²	487.5		
13.017	Concrete paving blocks to the road and junctions all in accordance with the specifications or as directed by the Engineer	m ²	487.5		
13.017		m²	487.5		
13.02A	specifications or as directed by the Engineer		487.5		
	specifications or as directed by the Engineer Concrete block paving including all cuttings	m ²	487.5		
	specifications or as directed by the Engineer Concrete block paving including all cuttings Provide and lay approved 60mm thick medium duty pre-cast concrete paving blocks				

Umoja - R04 page144of208

ITCAA		1	T		·
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 04		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.075km)		
	UMOJA ROAD 04 (UMJ-RD 04) - 0.075KM				
	ROAD FURNITURE				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
r	Warning Signs				
	Excavation for, providing and erecting warning signs size 750mm including backfill				
	and concrete 15/20 to bases all in accordance with the Specification and in	No.	1		
	•	100.	1 -		
	conformity with the RE instructions				
	<u>Priority Signs</u>				
	Excavating for, providing and erecting priority signs including back filling and concrete				
	15/20 to bases; all in accordance with the Specification and in conformity with the RE				
	instructions				
	750mm size	No.	1		
	1000 mm size	No.	1		
	Mandatory Signs				
	Excavating for, providing and erecting prohibitory signs including backfilling and				
ſ	concrete 15/20 to bases; all in accordance with the Specification and in conformity	No.	1		
	with the RE instructions 1000mm size				
	Standard Informatory Signs				
	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity				
,	with the RE instructions				
20.04A	500x600mm	No.	1		
20.04B	600x600mm	No.	1		
20.05	Non Standard Informatory Signs				
	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity				
	•				
	with the RE instructions				
20.05A	Less than 1 sq.m	No.	1		
20.05B	Equal or more than 1 sq.m but less than 2 sq.m	No.	1		
20.05C	Equal or more than 2 sq.m but less than 5 sq.m	No.	1		
20.06	Road Marking painting				
	Preparing road surface, supplying approved road marking paint, 100mm wide				
	marking out and painting, all in accordance with the Specification and in conformity				
	with the RE instructions				
20.06A	White paint	m²	15		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m²	15		
,	Speed reduction bituminous bumps at junctions				
	Provision, transport and placing of materials in accordance with the Specification and				
		No	0		
	in conformity with the RE instructions				
	Rumble Strips on Pavement				
	Provision, transport and placing of materials in accordance with the Specification and	No.	1		
<u> </u>	in conformity with the drawings and RE instructions	.,	•		
i	Concrete Kerbs				
	Provision, transport, handling, mixing and placing all materials in accordance with				
	Specification and in conformity with the RE instructions				
	Kerbs 125 mm x 250 mm straight	m	75		
		m			
	Kerbs 125 mm x 250 mm radius 1m - 5m	m	4		
20.11C	Channel blocks 125mm x 100mm	m	150		
	Trees				
	Newton of annual delivers of the second seco				
1	Planting of approved indigenous types of trees where instructed, in accordance with	No.	5		
20.12 I		I INO.			_
20.12 I	the Specification, minimum height 1.5m -Open Fields or Wet Lands	INO.			
20.12 I	the Specification, minimum height 1.5m -Open Fields or Wet Lands	NO.	<u> </u>		
20.12	the Specification, minimum height 1.5m -Open Fields or Wet Lands TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE	NO.			

Umoja - R04 page145of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 04		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.075km)		
	UMOJA ROAD 04 (UMJ-RD 04) - 0.075KM				
	GRAND SUMMARY TOTAL QUANTITIES				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION				AMOUNT (KSHS)
4	Site Clearance and Top Soil Stripping				
5	Earthworks				
8	Culverts and Drainage Works				
9	Passage of Traffic				
12	Natural Material Subbase and Base				
15	Bituminous Surface Treatments				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				

		LIMURU ALL WITHIN	
	UMOJA R	0AD 0 5	

Umoja - R05 page146of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 05		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.050km)		
	UMOJA ROAD 05 (UMJ-RD 05) - 0.050KM				
BILL N0.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Charges associated with hadiage.				
	Site Clearance				
4.01	Clearing existing road of all trees, vegetation, debris and rubbish of any nature;				
	including the grubbing of stumps and roots and the disposal from the area of all spoil	2			
	materials resulting from clearing and grubbing all in accordance with the	m^2	350.00		
	specifications.				
	Removal of Topsoil				
4.02	Stripping vegetable soil from the roadway, and disposal to approved stockpile areas	_			
	all in accordance with the Specification and in conformity with the RE instructions	m³	70.00		
	average depth 200mm.				
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet	m	3		
	structures including back filling.				
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

Umoja - R05 page147of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 05		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
	UMOJA ROAD 05 (UMJ-RD 05) - 0.050KM		(0.050km)		
BILL NO.5	EARTHWORKS				
DIEE	Kiambu County- Umoja Informal Settlement				
	Namba County - Omoja miorinai occioencii				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Material used for earthworks (fill below bottom sub-grade) shall be minimum soil				
	class S2 quality and be compacted to 95% MDD (AASHTO T99)				
	The upper 300mm of subgrade shall be compacted to 100% MDD (AASHTO T99)				
	while the rest shall be compacted to 95% MDD (AASHTO T99).				
	Fill in Soft Material				
5.01	Excavating the material, transportation and filling in embankment, including watering and rolling; all in accordance to specification	m³	1.44		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	0.14		
	Spoil in Soft Material				
5.04	Cut to spoil in soft material	m³	176.72		
	Spoil in Hard Material				
5.05	Excavate, stock pile for reuse and spoil surplus hard material	m³	17.67		
	Compaction of Existing Ground				
5.07	Compaction of formation ground in accordance with the specification	m³	52.50		
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m³	105.00		
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m³	31.50		
5.10	Provide, lay and compact 300mm sub grade material to 100% MDD (AASHTO T99)	m³	31.50		
	<u>Topsoil</u>				
5.11	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m²	25.00		
	Grassing				
5.12	Planting of sprigs of approved indegineous grass types; to embankments, cuttings or				
	where directed by the RE in accordance with the Specification, including tending, watering and cutting until the grass is firm established or for 6 months	m²	25.00		
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

Umoja - R05 page148of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 05	-	
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
	LINACIA DOAD OF (LINAL DD OF) A OFOKNA		(0.050km)		
	UMOJA ROAD 05 (UMJ-RD 05) - 0.050KM				
BILL NO.8	CULVERTS AND DRAINAGE				
	Kiambu County- Umoja Informal Settlement				
	,,				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Excavate for Culverts and Subsoil Drains in Soft Material				
8.01	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	160		
	accordance with the Specification and in conformity with the RE instructions	'''			
	·				
8.02	Extra over Item 8.01 for excavation in hard material	m³	80		
0.00	Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material				
8.03	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	72		
	accordance with the Specification and in conformity with the RE's instructions				
8.04	Extra over Item 8.03 for excavation in hard material	m³	18		
	Selected backfill material				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications	3	160		
	and in conformity with the instructions of the RE	m³	160		
	In-situ culverts				
	Provide for in-situ culvert all in accordance with the Specification and in conformity				
	with the RE instructions				
8.06	a) 600 mm diameter (for use at minor junctions only)	m	20		
8.07	b) 900 mm diameter	m	20		
	Concrete Class 15/20 to Beds, Surrounds				
8.09	Providing and placing the concrete; all in accordance with the Specification and in	m³	29		
	conformity with the RE instructions	'''	23		
	Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures				
8.10	Providing and placing the concrete, reinforcement and formwork class F2 all in				
	accordance with the Specification and in conformity with the RE instructions	m³	9		
	· · · · · · · · · · · · · · · · · · ·				
0.11	Concrete Class 25/20 For Covered Rectangular Drain structure				
8.11	Provide all materials and construct 500mm(Bottom width) wide (internal dimension)				
	rectangualr concrete drains 150mm thick walls and bottom base, average height of	3	22		
	0.8m, class 25/20, including slotted top cover of 100mm thick. Include the steel	m ³	23		
	reinforcement and formwork for concrete drain and concrete class 15(20) blinding as				
	specified in the drawings.				
	D 11 050 D10 1 150 11 1 1		4.4		
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	10		

Umoja - R05 page149of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 05		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.050km)		
	UMOJA ROAD 05 (UMJ-RD 05) - 0.050KM				
BILL NO.9	PASSAGE OF TRAFFIC				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Construction of Deviations in maximum lengths of 2 km sections				
9.01	All the operations connected with the initial construction of temporary deviations,		0.00		
	appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification	km	0.03		
	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide, 150mm thick, where directed by the RE and in accordance with the Specification	m³	18.75		
9.03	Maintenance the passage of traffic	Lump Sum	1.00		
	Provide Signs and Barriers				
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights,				
	etc., along deviations constructed: all inaccordance with Specification and in	Km	0.05		
	conformity with the RE instructions				

Umoja - R05 page150of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 05		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.050km)		
	UMOJA ROAD 05 (UMJ-RD 05) - 0.050KM				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	No. of Co. of China and Book				
	Natural Gravel Subbase and Base				
12.01					
12.01	Provide, lay and compact subbase in 150mm thick natural gravel material in				
l	la mila accordante la contraction de la contract				
	carriageway, bus bays, footpaths, shoulders and junctions from the designated	m ³	57 75		
	quarries listed in the Special Specification in accordance with the Specification and in	m³	57.75		
		m³	57.75		
12.02	quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14)	m³	57.75		
12.02	quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14) Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm	m³ m³	57.75 57.75		
12.02	quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14) Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm) plus 50mm blinding layer of quarry dust. This Includes 12 tonne vibrating roller (min				
12.02	quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14) Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm				

Umoja - R05 page151of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 05		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.050km)		
	UMOJA ROAD 05 (UMJ-RD 05) - 0.050KM				
BILL NO.13A	CONCRETE PAVING BLOCK SURFACE TREATMENT				
	Kiambu County- Umoja Informal Settlement				
				()	
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: No overhaul will be paid for these items as it shall be deemed to have been				
	included in the Contractor's rates.	I			
	Jointing Sand				
13.01A	Supply, lay and appropriately spread and Compact jointing sand 10-20mm thick to				
13.01A	Supply, lay and appropriately spread and Compact jointing sand 10-20mm thick to Concrete paving blocks to the road and junctions all in accordance with the	m ²	325.0		
13.01A	Supply, lay and appropriately spread and Compact jointing sand 10-20mm thick to Concrete paving blocks to the road and junctions all in accordance with the specifications or as directed by the Engineer	m ²	325.0		
13.01A	Supply, lay and appropriately spread and Compact jointing sand 10-20mm thick to Concrete paving blocks to the road and junctions all in accordance with the specifications or as directed by the Engineer Concrete block paving including all cuttings	m ²	325.0		
13.01A 13.02A	Supply, lay and appropriately spread and Compact jointing sand 10-20mm thick to Concrete paving blocks to the road and junctions all in accordance with the specifications or as directed by the Engineer		325.0		
	Supply, lay and appropriately spread and Compact jointing sand 10-20mm thick to Concrete paving blocks to the road and junctions all in accordance with the specifications or as directed by the Engineer Concrete block paving including all cuttings	m ²	325.0 325.0		
	Supply, lay and appropriately spread and Compact jointing sand 10-20mm thick to Concrete paving blocks to the road and junctions all in accordance with the specifications or as directed by the Engineer Concrete block paving including all cuttings Provide and lay approved 60mm thick medium duty pre-cast concrete paving blocks				
	Supply, lay and appropriately spread and Compact jointing sand 10-20mm thick to Concrete paving blocks to the road and junctions all in accordance with the specifications or as directed by the Engineer Concrete block paving including all cuttings Provide and lay approved 60mm thick medium duty pre-cast concrete paving blocks with minimum strength of 35N/mm 2 to BS 6717 Part 1 of 1986 to road and				

Umoja - R05 page152of208

ITEN#	ITEM DESCRIPTION	LINIT	OLIANITITY	DATE (VCUE)	ANACHINIT (VCHC)
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 05		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase]	
			300 Sub Grade Material	1	
			(0.050km)	1	
	UMOJA ROAD 05 (UMJ-RD 05) - 0.050KM		(0.030kiii)		
BILL NO.20	ROAD FURNITURE				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Warning Signs				
20.01	Excavation for, providing and erecting warning signs size 750mm including backfill				
	and concrete 15/20 to bases all in accordance with the Specification and in	No.	1		
	conformity with the RE instructions				
20.02	Priority Signs				
	Excavating for, providing and erecting priority signs including back filling and concrete				
	15/20 to bases; all in accordance with the Specification and in conformity with the RE				
	instructions				
20.02A	750mm size	No	1		
		No.	1		
20.02B	1000 mm size	No.	1		
	Mandatory Signs				
20.03	Excavating for, providing and erecting prohibitory signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity	No.	1		
	with the RE instructions 1000mm size				
20.04	Standard Informatory Signs				
	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity				
	with the RE instructions				
20.04A	500x600mm	No.	1		
			1		
20.04B	600x600mm	No.	1		
20.05	Non Standard Informatory Signs				
	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity				
	with the RE instructions				
20.05A	Less than 1 sq.m	No.	1		
20.05B	Equal or more than 1 sq.m but less than 2 sq.m	No.	1		
20.05C	Equal or more than 2 sq.m but less than 5 sq.m	No.	1		
20.030	Road Marking painting	140.	1		
20.00					
	Preparing road surface, supplying approved road marking paint, 100mm wide				
	marking out and painting, all in accordance with the Specification and in conformity				
	with the RE instructions				
20.06A	White paint	m²	10		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m²	10		
2.2	v verges e				
	Speed reduction bituminous bumps at junctions				
20.00					
20.09	Provision, transport and placing of materials in accordance with the Specification and	No	0		
	in conformity with the RE instructions				
	Rumble Strips on Pavement				
20.10	Provision, transport and placing of materials in accordance with the Specification and	No.	0		
	in conformity with the drawings and RE instructions	110.	U		
	Concrete Kerbs				
20.11	Provision, transport, handling, mixing and placing all materials in accordance with				
-	Specification and in conformity with the RE instructions				
20.11A	Kerbs 125 mm x 250 mm straight	m	50		
		m			
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	3		
20.11C	Channel blocks 125mm x 100mm	m	100		
	<u>Trees</u>				
	Planting of approved indigenous types of trees where instructed, in accordance with				
20.12		No.	5		
	the Specification, minimum height 1.5m -Open Fields or Wet Lands				
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE	 	+		
	TOTAL OF DILL 20 CARRIED TO SUIVINART PAGE	<u> </u>	1	[<u> </u>

Umoja - R05 page153of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 05		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.050km)		
	UMOJA ROAD 05 (UMJ-RD 05) - 0.050KM				
	GRAND SUMMARY TOTAL QUANTITIES				
	GRAND SOMMARY TO THE QUARTITIES				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION				AMOUNT (KSHS)
4	Site Clearance and Top Soil Stripping				
5	Earthworks				
8	Culverts and Drainage Works				
9	Passage of Traffic				
12	Natural Material Subbase and Base				
15	Bituminous Surface Treatments				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				

	HURAI AND MISRI IN	ENVOICE WITTIN	
	UMOJA RO	AD 0 6	

Umoja - R06 page154of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 06		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.126km)		
	UMOJA ROAD 06 (UMJ-RD 06) - 0.126KM				
BILL NO.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
DILL NO.04	Kiambu County- Umoja Informal Settlement				
	Klamba county- Omoja mormai Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the unit rates entered by tenderers against the items described in this Bill of Quantities. No separate items for overhaul are included in any section of this Bill and no additional payment whatsoever will be made for haulage. Tenderers are therefore deemed to have included, in the unit rates entered against an item, for all costs and charges associated with haulage.				
	Site Clearance				
4.01	Clearing existing road of all trees, vegetation, debris and rubbish of any nature; including the grubbing of stumps and roots and the disposal from the area of all spoil materials resulting from clearing and grubbing all in accordance with the specifications.	m²	882.00		
	Removal of Topsoil				
4.02	Stripping vegetable soil from the roadway, and disposal to approved stockpile areas all in accordance with the Specification and in conformity with the RE instructions average depth 200mm.	m³	176.40		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet	m	8		

Umoja - R06 page155of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 06		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.126km)		
	UMOJA ROAD 06 (UMJ-RD 06) - 0.126KM		(0:22:)		
BILL NO.5	EARTHWORKS				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS
IICIVI	DESCRIPTION	ONIT	QUANTITY	KATE (KSHS)	AIVIOUIVI (K3H3
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Material used for earthworks (fill below bottom sub-grade) shall be minimum soil				
	class S2 quality and be compacted to 95% MDD (AASHTO T99)				
	The upper 300mm of subgrade shall be compacted to 100% MDD (AASHTO T99)				
	while the rest shall be compacted to 95% MDD (AASHTO T99).				
	Fill in Soft Material				
5.01	Excavating the material, transportation and filling in embankment, including watering				
	and rolling; all in accordance to specification	m³	1.44		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	0.14		
3.02	Spoil in Soft Material		0.14		
5.04	Cut to spoil in soft material	m³	176.72		
3.0 1	Spoil in Hard Material		170.72		
5.05	Excavate, stock pile for reuse and spoil surplus hard material	m³	17.67		
	Compaction of Existing Ground				
5.07	Compaction of formation ground in accordance with the specification	m³	132.30		
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO				
3.00	T99)	m³	264.60		
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO				
	T99)	m³	79.38		
5.10		2			
	Provide, lay and compact 300mm sub grade material to 100% MDD (AASHTO T99)	m³	79.38		
	<u>Topsoil</u>				
5.11	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm;	m²	63.00		
	all in accordance with the specifications	111	65.00		
	Grassing				
5.12	Planting of sprigs of approved indegineous grass types; to embankments, cuttings or				
	where directed by the RE in accordance with the Specification, including tending,	m²	63.00		
	watering and cutting until the grass is firm established or for 6 months	'''			
	Trace				
		l			

Umoja - R06 page156of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 06		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.126km)		
	UMOJA ROAD 06 (UMJ-RD 06) - 0.126KM		(0.120kiii)		
	01/103A ROAD 00 (01/13-RD 00) - 0.120RW				
BILL NO.8	CULVERTS AND DRAINAGE				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
				, ,	• •
	Excavate for Culverts and Subsoil Drains in Soft Material				
8.01	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	160		
	accordance with the Specification and in conformity with the RE instructions				
	<u> </u>				
8.02	Extra over Item 8.01 for excavation in hard material	m³	80		
	Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material				
8.03	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	181		
	accordance with the Specification and in conformity with the RE's instructions				
8.04	Extra over Item 8.03 for excavation in hard material	m³	45		
8.04	Selected backfill material	m	45		
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications				
8.03	and in conformity with the instructions of the RE	m³	160		
	In-situ culverts				
	Provide for in-situ culvert all in accordance with the Specification and in conformity				
	with the RE instructions				
8.06	a) 600 mm diameter (for use at minor junctions only)	m	20		
8.07	b) 900 mm diameter	m	20		
0.07	Concrete Class 15/20 to Beds, Surrounds				
8.09	Providing and placing the concrete; all in accordance with the Specification and in	_			
	conformity with the RE instructions	m³	29		
	Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures				
8.10					
	Providing and placing the concrete, reinforcement and formwork class F2 all in	m³	9		
	accordance with the Specification and in conformity with the RE instructions				
	Concrete Class 25/20 For Covered Rectangular Drain structure				
8.11	Provide all materials and construct 500mm(Bottom width) wide (internal dimension)				
	rectangualr concrete drains 150mm thick walls and bottom base, average height of				
	0.8m, class 25/20, including slotted top cover of 100mm thick. Include the steel	m ³	57		
	reinforcement and formwork for concrete drain and concrete class 15(20) blinding as				
	specified in the drawings.				
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	25		
0.12					

Umoja - R06 page157of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 06		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material]	
			(0.126km)		
	UMOJA ROAD 06 (UMJ-RD 06) - 0.126KM				
BILL NO.9	PASSAGE OF TRAFFIC				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
IILIVI	DESCRIPTION	ONT	QUANTITI	KATE (KSHS)	ANIOUNI (KSIIS)
	Construction of Deviations in maximum lengths of 2 km sections				
9.01	All the operations connected with the initial construction of temporary deviations,				
	appropriate width, to allow passage of traffic during the Works; all in accordance	km	0.06		
	with the Specification				
	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide,				
	150mm thick, where directed by the RE and in accordance with the Specification	m³	47.25		
9.03	Maintenance the passage of traffic	Lump	1.00		
	Describe Circus and Describes	Sum			
	Provide Signs and Barriers				
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights,	1/100	0.43		
	etc., along deviations constructed: all inaccordance with Specification and in	Km	0.13		
	conformity with the RE instructions				

Umoja - R06 page158of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 06		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.126km)		
	UMOJA ROAD 06 (UMJ-RD 06) - 0.126KM				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Kiambu County- Umoja Informal Settlement				
ITEM	DECORPTION		OLIANITITY	DATE (VCUS)	ANACHINIT (VCHC)
HEIVI	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base				
	- Tatala Grave, Supplied and Dusc				
12.01					
12.01	Provide, lay and compact subbase in 150mm thick natural gravel material in				
12.01	carriageway, bus bays, footpaths, shoulders and junctions from the designated	m³	140.33		
12.01	carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in	m³	140.33		
12.01	carriageway, bus bays, footpaths, shoulders and junctions from the designated	m³	140.33		
12.01	carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in	m³	140.33		
	carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14)	m³	140.33		
	carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14) Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm				
	carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14) Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm) plus 50mm blinding layer of quarry dust. This Includes 12 tonne vibrating roller				

Umoja - R06 page159of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 06		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.126km)		
	UMOJA ROAD 06 (UMJ-RD 06) - 0.126KM				
BILL NO.13A	CONCRETE PAVING BLOCK SURFACE TREATMENT				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: No overhaul will be paid for these items as it shall be deemed to have been				
	included in the Contractor's rates.				
	Jointing Sand				
13.01A	Supply, lay and appropriately spread and Compact jointing sand 10-20mm thick to				
	Concrete paving blocks to the road and junctions all in accordance with the	m ²	819.0		
	specifications or as directed by the Engineer				
	specifications or as directed by the Engineer Concrete block paving including all cuttings				
13.02A					
13.02A	Concrete block paving including all cuttings	m ²	819.0		
13.02A	Concrete block paving including all cuttings Provide and lay approved 60mm thick medium duty pre-cast concrete paving blocks	m ²	819.0		

Umoja - R06 page160of208

ITENA	ITEM DESCRIPTION	LINIT	CHANTITY	DATE (VCUC)	ANACHINIT (VCHC)
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 06		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
	UNAGUA DOAD OS (UNAU DD OS), O 425UA		(0.126km)		
	UMOJA ROAD 06 (UMJ-RD 06) - 0.126KM				
BILL NO.20	ROAD FURNITURE				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Warning Signs				
20.01	Excavation for, providing and erecting warning signs size 750mm including backfill				
20.01		N.	1		
	and concrete 15/20 to bases all in accordance with the Specification and in	No.	1		
	conformity with the RE instructions				
20.02	Priority Signs				
	Excavating for, providing and erecting priority signs including back filling and concrete				
	15/20 to bases; all in accordance with the Specification and in conformity with the RE				
	instructions				
20.02A	750mm size	No.	1		
20.02B	1000 mm size	No.	1		
	Mandatory Signs				
20.03	Excavating for, providing and erecting prohibitory signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity	No.	1		
	with the RE instructions 1000mm size				
20.04	Standard Informatory Signs				
	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity				
	with the RE instructions				
20.04A	500x600mm	No.	1		
20.04B	600x600mm	No.	1		
20.05	Non Standard Informatory Signs				
	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity				
	with the RE instructions				
20.05A	Less than 1 sq.m	No.	1		
20.05A 20.05B	•	-			
	Equal or more than 1 sq.m but less than 2 sq.m	No.	1		
20.05C	Equal or more than 2 sq.m but less than 5 sq.m	No.	1		
20.06	Road Marking painting				
	Preparing road surface, supplying approved road marking paint, 100mm wide				
	marking out and painting, all in accordance with the Specification and in conformity				
	with the RE instructions				
20.06A	White paint	m²	25		
	·				
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m²	25		
	· · · · · · · · · · · · · · · · · · ·	<u> </u>			
	Speed reduction bituminous bumps at junctions				
20.00					
20.09	Provision, transport and placing of materials in accordance with the Specification and	No	1		
	in conformity with the RE instructions				
	Rumble Strips on Pavement				
20.10	Provision, transport and placing of materials in accordance with the Specification and	N -	2		
	in conformity with the drawings and RE instructions	No.	2		
	Concrete Kerbs				
20.11	Provision, transport, handling, mixing and placing all materials in accordance with				
ZU.11					
20.4	Specification and in conformity with the RE instructions		1		
20.11A	Kerbs 125 mm x 250 mm straight	m	126		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	6		
20.11C	Channel blocks 125mm x 100mm	m	252		
	<u>Trees</u>				
20.12	Planting of approved indigenous types of trees where instructed, in accordance with	No.	5		
20.12	the Specification, minimum height 1.5m -Open Fields or Wet Lands	10.			

Umoja - R06 page161of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			UMJ-RD 06		
			60mm C.P.B.		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.126km)		
	UMOJA ROAD 06 (UMJ-RD 06) - 0.126KM				
	CDAND CURANA DV TOTAL CUANITITIES				
	GRAND SUMMARY TOTAL QUANTITIES				
	Kiambu County- Umoja Informal Settlement				
ITEM	DESCRIPTION				AMOUNT (KSHS)
4	Site Clearance and Top Soil Stripping				
5	Earthworks				
8	Culverts and Drainage Works				
9	Passage of Traffic				
12	Natural Material Subbase and Base				
15	Bituminous Surface Treatments				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				

SERIAL No.6 - FORT JESUS SETTLEMENT - RUIRU	I

	CONTROL WIN	SRI IN LIMURU ALL W	TITIII KIAWIDO COO	<u> </u>
	FORT JES	SUS ROAD O1A		

Fort Jesus - R01A- Ruiru page162of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 01A		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.640km)		
	FORT JESUS ROAD 01 (RRU-RD 01A)-0.640KM				
BILL NO.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			Qoranna	NATE (NSTIS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Site Clearance				
4.01	Clearing existing road of all trees, vegetation, debris and rubbish of any nature;				
	including the grubbing of stumps and roots and the disposal from the area of all spoil	m ²	3,200.00		
	materials resulting from clearing and grubbing all in accordance with the	m	3,200.00		
	specifications.				
	Removal of Topsoil				
4.02	Stripping vegetable soil from the roadway, and disposal to approved stockpile areas				
	all in accordance with the Specification and in conformity with the RE instructions	m³	672.00		
	average depth 200mm.				
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet	m	38		
	structures including back filling.				
	TOTAL FOR BULL 4 CARRIED TO CRAND SUBMANARRY BACE				
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

Fort Jesus - R01A- Ruiru page163of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 01A	10112 (110110)	
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.640km)		
	FORT JESUS ROAD 01 (RRU-RD 01A)-0.640KM		, ,		
	, con occording to the control of th				
BILL NO.5	EARTHWORKS				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Material used for earthworks (fill below bottom sub-grade) shall be minimum soil				
	class S2 quality and be compacted to 95% MDD (AASHTO T99)				
	The upper 300mm of subgrade shall be compacted to 100% MDD (AASHTO T99)				
	while the rest shall be compacted to 95% MDD (AASHTO 199).				
	Fill in Soft Material				
Г 01					
5.01	Excavating the material, transportation and filling in embankment, including watering and rolling; all in accordance to specification	m³	486.29		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	48.63		
	Fill in Expansive Clay Areas		10.00		
5.03	THE TRANSPORT OF THE TR				
5.05	Excavate from borrow, transport over any distance and fill in the embankment soft				
	material, including watering and compaction but in expansive clay areas to replace	m³	1,344.00		
	unsuitable material removed up to a maximum depth of 0.3m				
F 02/-)	Francis from house, transport and distance and fill in head we to it is about a				
5.03(a)	Excavate from borrow, transport over any distance and fill in hard material, including	,	4 700 00		
	watering and compaction but in expansive clay areas to replace unsuitable material	m³	1,792.00		
	removed up to a maximum depth of 0.4m				
	Spoil in Soft Material				
5.04	Cut to spoil in soft material	m³	1,831.29		
	Spoil in Hard Material				
5.05	Excavate, stock pile for reuse and spoil surplus hard material	m³	183.13		
5.06	Spoil in Expansive Clay Areas		100.10		
3.00	As Item 5.04 but for excavation in expansive clay areas to remove unsuitable				
	, ,				
F 0C 4	materials	2	4 400 00		
5.06A	up to a maximum depth of 1.0 m	m³	4,480.00		
	Compaction of Existing Ground				
5.07	Compaction of formation ground in accordance with the specification	m³	100.80		
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO		204.22		
-	T99)	m³	201.60		
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO				
5.55	T99)	m³	60.48		
5.10	Provide, lay and compact 300mm improved sub grade material to 100% MDD				
5.10		m³	1,411.20		
	(AASHTO T99)				
F 44	Topsoil				
5.11	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm;	m²	320.00		
	all in accordance with the specifications				
	Grassing				
5.12	Planting of sprigs of approved indegineous grass types; to embankments, cuttings or				
		-m ²	220.00		
	where directed by the RE in accordance with the Specification, including tending,	m²	320.00		
	watering and cutting until the grass is firm established or for 6 months				

Fort Jesus - R01A- Ruiru page164of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 01A		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.640km)		
	FORT JESUS ROAD 01 (RRU-RD 01A)-0.640KM				
BILL NO.8	CULVERTS AND DRAINAGE				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Excavate for Culverts and Subsoil Drains in Soft Material				
8.01					
	Excavation in soft material to any depth, compaction of the invert of excavation, backfilling with excavated materials or removing excavated material to spoil; in	m³	90		
	accordance with the Specification and in conformity with the RE instructions	1111 90			
	<u> </u>				
8.02	Extra over Item 8.01 for excavation in hard material	m³	30		
	Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material				
8.03	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	13		
	accordance with the Specification and in conformity with the RE's instructions				
8.04	Extra over Item 8.03 for excavation in hard material	m³	5		
	Selected backfill material				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications	3	26		
	and in conformity with the instructions of the RE	m³	36		
	In-situ culverts				
	Provide for in-situ culvert all in accordance with the Specification and in conformity				
	with the RE instructions				
8.06	a) 600 mm diameter (for use at minor junctions only)	m	107		
8.07	b) 900 mm diameter	m	20		
	Concrete Class 15/20 to Beds, Surrounds				
8.09	Providing and placing the concrete; all in accordance with the Specification and in	m³	85		
	conformity with the RE instructions				
	Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures				
8.10	Providing and placing the concrete, reinforcement and formwork class F2 all in				
	accordance with the Specification and in conformity with the RE instructions	m³	15		
0 1 1	Concrete Class 25/20 For Covered Rectangular Drain structure Provide all materials and construct F00mm/Pottom width) wide (internal dimension)				
8.11	Provide all materials and construct 500mm(Bottom width) wide (internal dimension) rectangualr concrete drains 150mm thick walls and bottom base, average height of				
	0.8m, class 25/20, including slotted top cover of 100mm thick. Include the steel	m ³	230		
	reinforcement and formwork for concrete drain and concrete class 15(20) blinding as		250		
	specified in the drawings.				
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	20		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

Fort Jesus - R01A- Ruiru page165of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 01A		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.640km)		
	FORT JESUS ROAD 01 (RRU-RD 01A)-0.640KM				
BILL NO.9	PASSAGE OF TRAFFIC				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Construction of Deviations in maximum lengths of 2 km sections				
9.01	All the operations connected with the initial construction of temporary deviations,				
	appropriate width, to allow passage of traffic during the Works; all in accordance with	km	0.32		
	the Specification				
	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide, 150mm thick, where directed by the RE and in accordance with the Specification	m³	240.00		
9.03	· · · · · · · · · · · · · · · · · · ·	Lumn			
9.03	Maintenance the passage of traffic	Lump Sum	1.00		
	Provide Signs and Barriers				
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights,				
	etc., along deviations constructed: all inaccordance with Specification and in	Km	0.64		
	conformity with the RE instructions				
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				

Fort Jesus - R01A- Ruiru page166of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 01A		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.640km)		
	FORT JESUS ROAD 01 (RRU-RD 01A)-0.640KM				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
				(10110)	/ (none)
	Natural Gravel Subbase and Base				
12.01	Duranida lawand assensat subbase in 150mm think natural available				
12.01	Provide, lay and compact subbase in 150mm thick natural gravel material in carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14)	m³	680.40		
12.02	Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm) plus 50mm blinding layer of quarry dust. This Includes 12 tonne vibrating roller (min 8 passes)	m³	680.40		

Fort Jesus - R01A- Ruiru page167of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 01A		
			50 A.C]	
			150 Stone Base		
			150 Gravel Subbase]	
			300 Sub Grade Material		
			(0.640km)		
	FORT JESUS ROAD 01 (RRU-RD 01A)-0.640KM				
BILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
45.01					
15.01 15.01A	Prime Coat and Tack coat				
15.U1A	MC 30 prime coat on Cement treated material at nominal rate of 0.8 - 1.2 ltr/m² to	ltr	4224.0		
	base course on carriageway, bus bays, footpaths, shoulders and junctions	'''	4224.0		
15.01B	K1-80 cationic emulsion tack coat on primed treated base at nominal rate of 0.4 - 1.0				
	ltr/m² to base course on on carriageway, bus bays, footpaths, shoulders and junctions	I Itr	4224.0		
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.16	BITUMINOUS MIXES				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			4	,,	
16.00	NOTE: No haulage will be paid for aggregates, bitumen or the premix. The cost for haulage shall be included in the rates. Rates to be inclusive of fines				
16.01					
16.01	Provide, Lay and spread evenly 50mm thick Asphalt Concrete Type II covering the				
	carriageway and the shoulders. The grading of the mixture of coarse and fine				
	aggregates shall be within and approximately parallel to the grading envelopes given	M^3	237.6		
	in table 16B-1 of the Standard Specification for Road and Bridge Construction for				
	Type II, 0/14mm wearing course .The coarse aggregate class for the asphalt concrete shall be Class C. 80/100 penetration grade bitumen for the asphalt concrete.				
	Shan be stade of 200 period attorner for the administration concrete.				
	TOTAL FOR BULL 16 CARRIED TO CRAND SUBMANARY RACE				
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE	1		1	

Fort Jesus - R01A- Ruiru page168of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
				(,	
			RRU-RD 01A		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.640km)		
	FORT JESUS ROAD 01 (RRU-RD 01A)-0.640KM		(0.040KIII)		
BILL NO.20	ROAD FURNITURE				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Warning Signs				
20.01	Excavation for, providing and erecting warning signs size 750mm including backfill and concrete 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions	No.	1		
20.02	Priority Signs				
	Excavating for, providing and erecting priority signs including back filling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions				
20.02A	750mm size	No.	1		
20.02B	1000 mm size	No.	1		
	Mandatory Signs				
20.03	Excavating for, providing and erecting prohibitory signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions 1000mm size	No.	1		
20.04	Standard Informatory Signs				
20.01	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity				
	with the RE instructions				
20.04A	500x600mm	No.	1		
20.04B	600x600mm	No.	1		
20.05	Non Standard Informatory Signs				
	Excavating for, providing and erecting information signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions				
20.05A	Less than 1 sq.m	No.	1		
20.05B	Equal or more than 1 sq.m but less than 2 sq.m	No.	1		
20.05C	Equal or more than 2 sq.m but less than 5 sq.m	No.	1		
20.06	Road Marking painting				
	Preparing road surface, supplying approved road marking paint, 100mm wide marking out and painting, all in accordance with the Specification and in conformity with the RE instructions				
20.06A	White paint	m²	128		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m²	128		
	a) White paint		120		
20.09	Speed reduction bituminous bumps at junctions Provision, transport and placing of materials in accordance with the Specification and				
20.03	in conformity with the RE instructions Rumble Strips on Pavement	No.	3		
20.10	Provision, transport and placing of materials in accordance with the Specification and in conformity with the drawings and RE instructions	No.	15		
	<u>Concrete Kerbs</u>				
20.11	Provision, transport, handling, mixing and placing all materials in accordance with				
	Specification and in conformity with the RE instructions				
20.11A	Kerbs 125 mm x 250 mm straight	m	704		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	32		
20.11C	Channel blocks 125mm x 100mm	m	1,408		
	<u>Trees</u>				
20.12	Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands	No.	5		

Fort Jesus - R01A- Ruiru page169of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 01A		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.640km)		
	FORT JESUS ROAD 01 (RRU-RD 01A)-0.640KM				
	GRAND SUMMARY TOTAL QUANTITIES				
	Viewby County Fort losse Informal Cottlement				
ITEM	Kiambu County- Fort Jesus Informal Settlement DESCRIPTION	+			AMOUNT (KSHS)
	-				AIVIOUNT (K3H3)
4	Site Clearance and Top Soil Stripping				
5	Earthworks				
8	Culverts and Drainage Works				
9	Passage of Traffic				
12	Natural Material Subbase and Base				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				

			<u>—</u>
	FORT JESU	S ROAD O1B	

Fort Jesus - R01B- Ruiru page170of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 01B		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.225km)		
	FORT JESUS ROAD 01B (RRU-RD 01B)-0.225KM				
BILL NO.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the unit rates entered by tenderers against the items described in this Bill of Quantities. No separate items for overhaul are included in any section of this Bill and no additional payment whatsoever will be made for haulage. Tenderers are therefore deemed to have included, in the unit rates entered against an item, for all costs and charges associated with haulage.				
	Site Clearance				
4.01	Clearing existing road of all trees, vegetation, debris and rubbish of any nature; including the grubbing of stumps and roots and the disposal from the area of all spoil materials resulting from clearing and grubbing all in accordance with the specifications.	m²	1,125.00		
	Removal of Topsoil				
4.02	Stripping vegetable soil from the roadway, and disposal to approved stockpile areas all in accordance with the Specification and in conformity with the RE instructions average depth 200mm.	m³	236.25		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet structures including back filling.	m	14		

Fort Jesus - R01B- Ruiru page171of208

	1			RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 01B		
			50 A.C		
l					
,			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.225km)		
			(0.223811)		
	FORT JESUS ROAD 01B (RRU-RD 01B)-0.225KM				
BILL NO.5	EARTHWORKS				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Material used for earthworks (fill below bottom sub-grade) shall be minimum soil				
	class S2 quality and be compacted to 95% MDD (AASHTO T99)				
	The upper 300mm of subgrade shall be compacted to 100% MDD (AASHTO T99)				
	while the rest shall be compacted to 95% MDD (AASHTO T99).				
	Fill in Soft Material				
	Excavating the material, transportation and filling in embankment, including watering	m³	486.29		
	and rolling; all in accordance to specification	""	480.29		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	48.63		
	Fill in Expansive Clay Areas				
5.03					
3.03	Excavate from borrow, transport over any distance and fill in the embankment soft				
	material, including watering and compaction but in expansive clay areas to replace	m³	472.50		
	unsuitable material removed up to a maximum depth of 0.3m				
· ·	·				
5.03(a)	Excavate from borrow, transport over any distance and fill in hard material, including	_			
	watering and compaction but in expansive clay areas to replace unsuitable material	m³	630.00		
	removed up to a maximum depth of 0.4m				
	Spoil in Soft Material				
5.04	Cut to spoil in soft material	m³	307.17		
	Spoil in Hard Material	111	307.17		
	Excavate, stock pile for reuse and spoil surplus hard material	m³	30.72		
	Spoil in Expansive Clay Areas		00.72		
	As Item 5.04 but for excavation in expansive clay areas to remove unsuitable				
	materials				
5.06A	up to a maximum depth of 1.0 m	m³	1,575.00		
	Compaction of Existing Ground		,		
		,	25.11		
	Compaction of formation ground in accordance with the specification	m³	35.44		
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m³	70.88		
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO	_			
	T99)	m³	21.26		
5.10	Provide, lay and compact 300mm improved sub grade material to 100% MDD	3	406.43		
	(AASHTO T99)	m³	496.13		
	Topsoil				
5.11	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm;				
J.11		m²	112.50		
	all in accordance with the specifications				
	Grassing				
	Planting of sprigs of approved indegineous grass types; to embankments, cuttings or				
5.12	retaining of solids of approved indepineous dract types, to embankments, clittings of	I			I
5.12		_			
5.12	where directed by the RE in accordance with the Specification, including tending,	m²	112.50		
5.12		m²	112.50		
5.12	where directed by the RE in accordance with the Specification, including tending,	m²	112.50		

Fort Jesus - R01B- Ruiru page172of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 01B		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.225km)		
	FORT JESUS ROAD 01B (RRU-RD 01B)-0.225KM		(0.223811)		
	TONT JESOS NOAD CED (NNC-ND CED)-C.225NW				
BILL NO.8	CULVERTS AND DRAINAGE				
	Kiambu County- Fort Jesus Informal Settlement				
	Total County Tota				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
112101				KATE (KSTIS)	ANIOUNI (KSHS)
	Excavate for Culverts and Subsoil Drains in Soft Material				
8.01					
	Excavation in soft material to any depth, compaction of the invert of excavation,	,	40		
	backfilling with excavated materials or removing excavated material to spoil; in	m³	40		
	accordance with the Specification and in conformity with the RE instructions				
8.02	Extra over Item 8.01 for excavation in hard material	m³	14		
	Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material				
8.03	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	5		
	accordance with the Specification and in conformity with the RE's instructions	'''			
	accordance with the specification and in comornity with the KE's instructions				
8.04	Extra over Item 8.03 for excavation in hard material	m³	2		
	Selected backfill material				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications	m³	16		
	and in conformity with the instructions of the RE				
	In-situ culverts				
	Provide for in-situ culvert all in accordance with the Specification and in conformity				
8.06	with the RE instructions		E7		
8.07	a) 600 mm diameter (for use at minor junctions only)	m	57		
6.07	b) 900 mm diameter	m	20		
9.00	Concrete Class 15/20 to Beds, Surrounds Draviding and placing the concrete all in accordance with the Specification and in				
8.09	Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions	m³	38		
	Comornity with the RE histractions				
	Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures				
8.10	Draviding and placing the concepts weinfareness to add for warrant and for war				
	Providing and placing the concrete, reinforcement and formwork class F2 all in	m³	7		
	accordance with the Specification and in conformity with the RE instructions				
	Concrete Class 25/20 For Covered Rectangular Drain structure				
8.11	Provide all materials and construct 500mm(Bottom width) wide (internal dimension)				
	rectangualr concrete drains 150mm thick walls and bottom base, average height of				
	0.8m, class 25/20, including slotted top cover of 100mm thick. Include the steel	m ³	60		
	reinforcement and formwork for concrete drain and concrete class 15(20) blinding as				
	specified in the drawings.				
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	20		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

Fort Jesus - R01B- Ruiru page173of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 01B		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.225km)		
	FORT JESUS ROAD 01B (RRU-RD 01B)-0.225KM				
BILL NO.9	PASSAGE OF TRAFFIC				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
0.04	Construction of Deviations in maximum lengths of 2 km sections				
9.01	All the operations connected with the initial construction of temporary deviations,	Luca	0.11		
	appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification	km	0.11		
	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide, 150mm thick, where directed by the RE and in accordance with the Specification	m³	84.38		
9.03	Maintenance the passage of traffic	Lump Sum	1.00		
	Provide Signs and Barriers				
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights,				
	etc., along deviations constructed: all inaccordance with Specification and in	Km	0.23		
	conformity with the RE instructions				
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				

Fort Jesus - R01B- Ruiru page174of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 01B		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.225km)		
	FORT JESUS ROAD 01B (RRU-RD 01B)-0.225KM				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base				
12.01	Provide, lay and compact subbase in 150mm thick natural gravel material in carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14)	m³	239.20		
12.02	Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm) plus 50mm blinding layer of quarry dust. This Includes 12 tonne vibrating roller (min 8 passes)	m³	239.20		
		I			

Fort Jesus - R01B- Ruiru page175of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 01B		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.225km)		
	FORT JESUS ROAD 01B (RRU-RD 01B)-0.225KM				
3ILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
15.01	Prime Coat and Tack coat				
15.01A	MC 30 prime coat on Cement treated material at nominal rate of 0.8 - 1.2 ltr/m² to				
	base course on carriageway, bus bays, footpaths, shoulders and junctions	ltr	1485.0		
15.01B					
	K1-80 cationic emulsion tack coat on primed treated base at nominal rate of 0.4 - 1.0 ltr/m² to base course on on carriageway, bus bays, footpaths, shoulders and junctions	ltr	1485.0		
	to base course on on carriageway, bus bays, rootpatris, shoulders and junctions				
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				
	TOTAL FOR BILL 13 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.16	BITUMINOUS MIXES				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
16.00	NOTE: No haulage will be paid for aggregates, bitumen or the premix. The cost for				
10.00	haulage shall be included in the rates. Rates to be inclusive of fines				
16.01	Provide, Lay and spread evenly 50mm thick Asphalt Concrete Type II covering the				
	carriageway and the shoulders. The grading of the mixture of coarse and fine				
	aggregates shall be within and approximately parallel to the grading envelopes given	2			
	in table 16B-1 of the Standard Specification for Road and Bridge Construction for	M ³	83.5		
	Type II, 0/14mm wearing course .The coarse aggregate class for the asphalt concrete				
	shall be Class C. 80/100 penetration grade bitumen for the asphalt concrete.				
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE				

Fort Jesus - R01B- Ruiru page176of208

BILL NO.20 R K ITEM 20.01 E a c 20.02 P ir 1 ir 20.02A 7	FORT JESUS ROAD 01B (RRU-RD 01B)-0.225KM ROAD FURNITURE Kiambu County- Fort Jesus Informal Settlement DESCRIPTION Warning Signs Excavation for, providing and erecting warning signs size 750mm including backfill and concrete 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions Priority Signs Excavating for, providing and erecting priority signs including back filling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions	UNIT No.	RRU-RD 01B 50 A.C 150 Stone Base 150 Gravel Subbase 300 Sub Grade Material (0.225km) QUANTITY	RATE (KSHS) RATE (KSHS)	AMOUNT (KSHS) AMOUNT (KSHS)
BILL NO.20 R K ITEM 20.01 E a c 20.02 P ir 1 ir 20.02A 7	ROAD FURNITURE Kiambu County- Fort Jesus Informal Settlement DESCRIPTION Warning Signs Excavation for, providing and erecting warning signs size 750mm including backfill and concrete 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions Priority Signs Excavating for, providing and erecting priority signs including back filling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE		50 A.C 150 Stone Base 150 Gravel Subbase 300 Sub Grade Material (0.225km) QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
BILL NO.20 R K ITEM 20.01 E a c 20.02 P ir 1 ir 20.02A 7	ROAD FURNITURE Kiambu County- Fort Jesus Informal Settlement DESCRIPTION Warning Signs Excavation for, providing and erecting warning signs size 750mm including backfill and concrete 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions Priority Signs Excavating for, providing and erecting priority signs including back filling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE		150 Stone Base 150 Gravel Subbase 300 Sub Grade Material (0.225km) QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
BILL NO.20 R K ITEM 20.01 E a c 20.02 P ir 1 ir 20.02A 7	ROAD FURNITURE Kiambu County- Fort Jesus Informal Settlement DESCRIPTION Warning Signs Excavation for, providing and erecting warning signs size 750mm including backfill and concrete 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions Priority Signs Excavating for, providing and erecting priority signs including back filling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE		150 Gravel Subbase 300 Sub Grade Material (0.225km) QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
BILL NO.20 R K ITEM 20.01 E a c 20.02 P ir 1 ir 20.02A 7	ROAD FURNITURE Kiambu County- Fort Jesus Informal Settlement DESCRIPTION Warning Signs Excavation for, providing and erecting warning signs size 750mm including backfill and concrete 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions Priority Signs Excavating for, providing and erecting priority signs including back filling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE		150 Gravel Subbase 300 Sub Grade Material (0.225km) QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
BILL NO.20 R K ITEM 20.01 E a c 20.02 P ir 1 ir 20.02A 7	ROAD FURNITURE Kiambu County- Fort Jesus Informal Settlement DESCRIPTION Warning Signs Excavation for, providing and erecting warning signs size 750mm including backfill and concrete 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions Priority Signs Excavating for, providing and erecting priority signs including back filling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE		300 Sub Grade Material (0.225km) QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
BILL NO.20 R K ITEM 20.01 E a c 20.02 P ir 1 ir 20.02A 7	ROAD FURNITURE Kiambu County- Fort Jesus Informal Settlement DESCRIPTION Warning Signs Excavation for, providing and erecting warning signs size 750mm including backfill and concrete 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions Priority Signs Excavating for, providing and erecting priority signs including back filling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE		(0.225km) QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
BILL NO.20 R K ITEM 20.01 E a c 20.02 P ir 1 ir 20.02A 7	ROAD FURNITURE Kiambu County- Fort Jesus Informal Settlement DESCRIPTION Warning Signs Excavation for, providing and erecting warning signs size 750mm including backfill and concrete 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions Priority Signs Excavating for, providing and erecting priority signs including back filling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE		QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
BILL NO.20 R K ITEM 20.01 E a c 20.02 P ir 1 ir 20.02A 7	ROAD FURNITURE Kiambu County- Fort Jesus Informal Settlement DESCRIPTION Warning Signs Excavation for, providing and erecting warning signs size 750mm including backfill and concrete 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions Priority Signs Excavating for, providing and erecting priority signs including back filling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE			RATE (KSHS)	AMOUNT (KSHS)
20.01 E a c c 20.02 P E 1 ir 20.02A 7	DESCRIPTION Warning Signs Excavation for, providing and erecting warning signs size 750mm including backfill and concrete 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions Priority Signs Excavating for, providing and erecting priority signs including back filling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE			RATE (KSHS)	AMOUNT (KSHS)
20.01 E a c c 20.02 P E 1 ir 20.02A 7	Warning Signs Excavation for, providing and erecting warning signs size 750mm including backfill and concrete 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions Priority Signs Excavating for, providing and erecting priority signs including back filling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE			RATE (KSHS)	AMOUNT (KSHS)
20.01 E a c c 20.02 P E 1 ir 20.02A 7	Warning Signs Excavation for, providing and erecting warning signs size 750mm including backfill and concrete 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions Priority Signs Excavating for, providing and erecting priority signs including back filling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE			RATE (KSHS)	AMOUNT (KSHS)
20.01 E a c c c 20.02 P E 1 ir 20.02A 7	Excavation for, providing and erecting warning signs size 750mm including backfill and concrete 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions Priority Signs Excavating for, providing and erecting priority signs including back filling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE	No.	1		
20.01 E a c c c 20.02 P E 1 ir 20.02A 7	Excavation for, providing and erecting warning signs size 750mm including backfill and concrete 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions Priority Signs Excavating for, providing and erecting priority signs including back filling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE	No.	1		
20.02 P E 1 ir 20.02A 7	and concrete 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions Priority Signs Excavating for, providing and erecting priority signs including back filling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE	No.	1		
E 1 ir 20.02A 7	Excavating for, providing and erecting priority signs including back filling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE				
20.02A 7	15/20 to bases; all in accordance with the Specification and in conformity with the RE				
20.02A 7	instructions				
	750mm size	No	1		
	1000 mm size	No. No.	1		
l n	Mandatory Signs	140.			
20.03 E	Excavating for, providing and erecting prohibitory signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity	No.	1		
	with the RE instructions 1000mm size				
	Standard Informatory Signs				
c	Excavating for, providing and erecting information signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions				
	500x600mm	No.	1		
	600x600mm	No.	1		
	Non Standard Informatory Signs		_		
	Excavating for, providing and erecting information signs including backfilling and				
c	concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions				
20.05A L	Less than 1 sq.m	No.	1		
20.05B E	Equal or more than 1 sq.m but less than 2 sq.m	No.	1		
20.05C	Equal or more than 2 sq.m but less than 5 sq.m	No.	1		
20.06 R	Road Marking painting				
m	Preparing road surface, supplying approved road marking paint, 100mm wide marking out and painting, all in accordance with the Specification and in conformity with the RE instructions				
	White paint	m²	45		
20.07	A. H				
	As Item 2007 but 250mm wide		45		
20.07A a	a) White paint	m²	45		
c	Speed reduction bituminous bumps at junctions				
20.09 P	Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions	No.	1		
20.10 P	Rumble Strips on Pavement Provision, transport and placing of materials in accordance with the Specification and in conformity with the drawings and RE instructions	No.	5		
	Concrete Kerbs				
	Provision, transport, handling, mixing and placing all materials in accordance with				
	Specification and in conformity with the RE instructions				
20.11A K	Kerbs 125 mm x 250 mm straight	m	248		
	Kerbs 125 mm x 250 mm radius 1m - 5m	m	11		
20.11C C	Channel blocks 125mm x 100mm	m	495		
<u></u>	Trees				
20 12 T	Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands	No.	5		
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				<u> </u>

Fort Jesus - R01B- Ruiru page177of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	DATE (VCUS)	AMOUNT (VCUC)
I I EIVI	TIEW DESCRIPTION	UNIT		RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 01B		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.225km)		
	FORT JESUS ROAD 01B (RRU-RD 01B)-0.225KM				
	GRAND SUMMARY TOTAL QUANTITIES				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION				AMOUNT (KSHS)
4	Site Clearance and Top Soil Stripping				
5	Earthworks				
8	Culverts and Drainage Works				
9	Passage of Traffic				
12	Natural Material Subbase and Base				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				

	FORT JESI	JS ROAD 03	

Fort Jesus - R03- Ruiru page178of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 03		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.060km)		
	FORT JESUS ROAD 03 (RRU-RD 03)-0.60KM	T50 Gravel Subbase 300 Sub Grade Material (0.060km) D 03 (RRU-RD 03)-0.60KM AND TOPSOIL STRIPPING Fort Jesus Informal Settlement DESCRIPTION UNIT QUANTITY RATE (KSHS) AMOUNT (KSH: and charges connected with haulage are to be included within the and by tenderers against the items described in this Bill of Quantities. and for overhaul are included in any section of this Bill and no ent whatsoever will be made for haulage. Tenderers are therefore included, in the unit rates entered against an item, for all costs and			
BILL N0.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	charges associated with haulage.				
	City Classes				
4.01	Site Clearance				
4.01					
		m^2	300.00		
	specifications.				
	specifications.				
	Removal of Topsoil				
4.02	Stripping vegetable soil from the roadway, and disposal to approved stockpile areas				
	all in accordance with the Specification and in conformity with the RE instructions	m³	60.00		
	average depth 200mm.				
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet				
	structures including back filling.	m	4		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

Fort Jesus - R03- Ruiru page179of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 03		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.060km)		
	FORT JESUS ROAD 03 (RRU-RD 03)-0.60KM		(Grossian)		
	FORT JESUS ROAD US (RRO-RD US)-U.OURIVI				
BILL NO.5	EARTHWORKS				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	· ·				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Material used for earthworks (fill below bottom sub-grade) shall be minimum soil				
	class S2 quality and be compacted to 95% MDD (AASHTO T99) The upper 300mm of subgrade shall be compacted to 100% MDD (AASHTO T99)				
	while the rest shall be compacted to 95% MDD (AASHTO 199).				
	Fill in Soft Material				
5.01	Excavating the material, transportation and filling in embankment, including watering		4=		
	and rolling; all in accordance to specification	m ³	17.22		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	1.72		
	Fill in Expansive Clay Areas				
5.03	<u></u>				
5.05	Excavate from borrow, transport over any distance and fill in the embankment soft				
	material, including watering and compaction but in expansive clay areas to replace	m³	126.00		
		'''	120.00		
	unsuitable material removed up to a maximum depth of 0.3m				
5.03(a)	Everyste from horrow, transport over any distance and fill in hard material, including				
2.35(4)	Excavate from borrow, transport over any distance and fill in hard material, including	_			
	watering and compaction but in expansive clay areas to replace unsuitable material	m³	168.00		
	removed up to a maximum depth of 0.4m				
	Spoil in Soft Material				
F 04		3	420.00		
5.04	Cut to spoil in soft material	m³	420.00		
	Spoil in Hard Material				
5.05	Excavate, stock pile for reuse and spoil surplus hard material	m³	42.00		
5.06	Spoil in Expansive Clay Areas				
5.00					
	As Item 5.04 but for excavation in expansive clay areas to remove unsuitable				
	materials				
5.06A	up to a maximum depth of 1.0 m	m³	126.00		
	Compaction of Existing Ground				
5.07	Compaction of formation ground in accordance with the specification	m³	12.60		
		'''	12.00		
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO	m³	25.20		
	T99)				
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO	m³	7 56		
	Т99)	'm-	7.56		
5.10	Provide, lay and compact 300mm improved sub grade material to 100% MDD	_			
		m³	126.00		
	(AASHTO T99)				
	<u>Topsoil</u>				
5.11	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm;	2	20.00		
	all in accordance with the specifications	m²	30.00		
	Grassing				
F 42	<u>Grassing</u>				
5.12	Planting of sprigs of approved indegineous grass types; to embankments, cuttings or				
		m²	20.00		
	where directed by the RE in accordance with the Specification, including tending,	'm-	30.00		
	l a la company de la compa				
	watering and cutting until the grass is firm established or for 6 months				
	watering and cutting until the grass is firm established or for 6 months				

Fort Jesus - R03- Ruiru page180of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 03		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.060km)		
	FORT JESUS ROAD 03 (RRU-RD 03)-0.60KM		(O.OOOKIII)		
BILL NO.8	CULVERTS AND DRAINAGE				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Excavate for Culverts and Subsoil Drains in Soft Material				
8.01					
0.02	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	21		
	accordance with the Specification and in conformity with the RE instructions				
8.02	Extra over Item 8.01 for excavation in hard material	m³	7		
	Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material				
8.03	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	2		
	accordance with the Specification and in conformity with the RE's instructions	'''			
0.04		•			
8.04	Extra over Item 8.03 for excavation in hard material	m³	1		
	Selected backfill material				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE	m³	9		
	In-situ culverts				
	Provide for in-situ culvert all in accordance with the Specification and in conformity				
	with the RE instructions				
8.06	a) 600 mm diameter (for use at minor junctions only)	m	15		
8.07	b) 900 mm diameter	m	10		
	Concrete Class 15/20 to Beds, Surrounds				
8.09	Providing and placing the concrete; all in accordance with the Specification and in	m³	20		
	conformity with the RE instructions		20		
	Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures				
8.10	Providing and placing the concrete, reinforcement and formwork class F2 all in	2			
	accordance with the Specification and in conformity with the RE instructions	m³	104		
	Concrete Class 25/20 For Covered Rectangular Drain structure				
8.11	Provide all materials and construct 500mm(Bottom width) wide (internal dimension)				
	rectangualr concrete drains 150mm thick walls and bottom base, average height of				
	0.8m, class 25/20, including slotted top cover of 100mm thick. Include the steel	m ³	24		
	reinforcement and formwork for concrete drain and concrete class 15(20) blinding as	'''			
	specified in the drawings.				
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	10		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

Fort Jesus - R03- Ruiru page181of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 03		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.060km)		
	FORT JESUS ROAD 03 (RRU-RD 03)-0.60KM		,		
BILL NO.9	PASSAGE OF TRAFFIC				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Construction of Deviations in maximum lengths of 2 km sections				
9.01	All the operations connected with the initial construction of temporary deviations,				
	appropriate width, to allow passage of traffic during the Works; all in accordance	km	0.03		
	with the Specification				
	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide,	_			
	150mm thick, where directed by the RE and in accordance with the Specification	m³	22.50		
	,				
9.03	Maintenance the passage of traffic	Lump	1.00		
	Duevide Signs and Bornions	Sum			
0.04	Provide Signs and Barriers Drawinian graphian and maintenance of temporary signs, harriers, lights, traffic lights				
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights,	l/:	0.00		
	etc., along deviations constructed: all inaccordance with Specification and in	Km	0.06		
	conformity with the RE instructions				
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				
	TOTAL FOR DILL & CARRIED TO GRAND SOLVINIART FAGE	I			

Fort Jesus - R03- Ruiru page182of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 03		
			50 A.C	1	
			150 Stone Base		
			150 Gravel Subbase	1	
			300 Sub Grade Material		
			(0.060km)		
	FORT JESUS ROAD 03 (RRU-RD 03)-0.60KM				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
				,	
	Natural Gravel Subbase and Base				
12.01	Provide, lay and compact subbase in 150mm thick natural gravel material in				
	carriageway, bus bays, footpaths, shoulders and junctions from the designated				
		m³	63.79		
	Iquarries listed in the Special Specification in accordance with the Specification and in				
	quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14)				
12.02					
12.02	conformity with the RE instructions (Stabilisation paid in Bill 14)	m³	63.79		
12.02	conformity with the RE instructions (Stabilisation paid in Bill 14) Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm	m³	63.79		

Fort Jesus - R03- Ruiru page183of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 03		
			50 A.C		
			150 Stone Base	1	
			150 Gravel Subbase	1	
			300 Sub Grade Material		
			(0.060km)	1	
	FORT JESUS ROAD 03 (RRU-RD 03)-0.60KM				
BILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
JILL 140.13	Kiambu County- Fort Jesus Informal Settlement				
	Riambu County- Fort Jesus Informat Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
15.01	Prime Coat and Tack coat				
15.01A	MC 30 prime coat on Cement treated material at nominal rate of 0.8 - 1.2 ltr/m² to base course on carriageway, bus bays, footpaths, shoulders and junctions	ltr	396.0		
15.01B	K1-80 cationic emulsion tack coat on primed treated base at nominal rate of 0.4 - 1.0 ltr/m² to base course on on carriageway, bus bays, footpaths, shoulders and junctions	ltr	396.0		
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.16	BITUMINOUS MIXES				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
16.00	NOTE: No haulage will be paid for aggregates, bitumen or the premix. The cost for haulage shall be included in the rates. Rates to be inclusive of fines				
16.01	Provide, Lay and spread evenly 50mm thick Asphalt Concrete Type II covering the carriageway and the shoulders. The grading of the mixture of coarse and fine aggregates shall be within and approximately parallel to the grading envelopes given in table 16B-1 of the Standard Specification for Road and Bridge Construction for Type II, 0/14mm wearing course .The coarse aggregate class for the asphalt concrete shall be Class C. 80/100 penetration grade bitumen for the asphalt concrete.	M ³	22.3		
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE				

Fort Jesus - R03- Ruiru page184of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			,	(,	,
			150 Stone Base		
		RRU-RD 03 50 A.C 150 Store Base 150 Gravel Subbase 300 Sub Grade Material (0.060km) 1 Image: Common signs including backfilling and concrete specification and in conformity Image: Common signs including backfilling and with the Specification and in conformity Image: Common signs including backfilling and with the Specification and in conformity Image: Common signs including backfilling and with the Specification and in conformity Image: Common signs including backfilling and with the Specification and in conformity Image: Common signs including backfilling and with the Specification and in conformity Image: Common signs including backfilling and with the Specification and in conformity Image: Common signs including backfilling and with the Specification and in conformity Image: Common signs including backfilling and with the Specification and in conformity Image: Common signs including backfilling and with the Specification and in conformity Image: Common signs including backfilling and with the Specification and in conformity Image: Common signs including backfilling and with the Specification and in conformity Image: Common signs including backfilling and with the Specification and in conformity Image: Common signs including backfilling and with the Specification and in conformity Image: Common signs including backfilling and with the Specification and in conformity Image: Common signs including backfilling and with the Specification and in conformity Image: Common signs including backfilling and signs including backfilling and and incommon signs inc			
			300 Sub Grade Material		
	FORT JESUS ROAD 03 (RRU-RD 03)-0.60KM		(U.U6UKM)		
	FORT JESUS ROAD US (RRO-RD US)-U.BURIVI				
ILL NO.20	ROAD FURNITURE				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Warning Signs				
20.01	Excavation for, providing and erecting warning signs size 750mm including backfill				
	and concrete 15/20 to bases all in accordance with the Specification and in	No.	1		
	conformity with the RE instructions				
20.02	Priority Signs				
	Excavating for, providing and erecting priority signs including back filling and concrete				
	15/20 to bases; all in accordance with the Specification and in conformity with the RE				
	instructions				
20.024		No	1		
	750mm size				
20.02B	1000 mm size	No.	1		
	Mandatory Signs				
20.03	Excavating for, providing and erecting prohibitory signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity	No.	1		
	with the RE instructions 1000mm size				
20.04	Standard Informatory Signs				
	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity				
	with the RE instructions				
20.044	500x600mm	No	1		
	600x600mm	NO.	1		
20.05	Non Standard Informatory Signs				
	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity				
	with the RE instructions				
20.05A	Less than 1 sq.m	No.	1		
20.05B	Equal or more than 1 sq.m but less than 2 sq.m	No.	1		
	· · · · · · · · · · · · · · · · · · ·				
	Equal or more than 2 sq.m but less than 5 sq.m	NO.	1		
20.06	Road Marking painting				
	Preparing road surface, supplying approved road marking paint, 100mm wide				
	marking out and painting, all in accordance with the Specification and in conformity				
	with the RE instructions	_			
20.06A	White paint	m²	12		
20.07	As Item 2007 but 250mm wide				
	a) White paint	m²	12		
20.077	dy writte paint		12		
	Speed reduction bituminous bumps at junctions				
20.09	Provision, transport and placing of materials in accordance with the Specification and				
_5.55	in conformity with the RE instructions	No	0		
	·				
20.40	Rumble Strips on Pavement				
20.10	Provision, transport and placing of materials in accordance with the Specification and	No.	1		
	in conformity with the drawings and RE instructions				
	Concrete Kerbs				
20.11	Concrete Kerbs				
20.11	Provision, transport, handling, mixing and placing all materials in accordance with				
	Specification and in conformity with the RE instructions				
20.11A	Kerbs 125 mm x 250 mm straight	m	66		
TEM FO Kia Kia	Kerbs 125 mm x 250 mm radius 1m - 5m	m	3		
20.11C	Channel blocks 125mm x 100mm	m	132		
	Trans				
	<u>Trees</u>				
20 12	Planting of approved indigenous types of trees where instructed, in accordance with	NIC			
20.12	the Specification, minimum height 1.5m -Open Fields or Wet Lands	No.	5		
	· · · · · · · · · · · · · · · · · · ·				
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				

Fort Jesus - R03- Ruiru page185of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 03		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.060km)		
	FORT JESUS ROAD 03 (RRU-RD 03)-0.60KM				
	GRAND SUMMARY TOTAL QUANTITIES				
	TOTAL FOR BUIL 45 CARRIED TO CRAND SUBMANARY RACE				
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE				
ITEM	DESCRIPTION				AMOUNT (KSHS)
4	Site Clearance and Top Soil Stripping				
5	Earthworks				
8	Culverts and Drainage Works				
9	Passage of Traffic				
12	Natural Material Subbase and Base				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				

			ALL WITHIN KIAMBI	_
	FORT JESI	JS ROAD 04		

Fort Jesus - R04- Ruiru page186of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 04		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.605km)		
	FORT JESUS ROAD 04 (RRU-RD 04)-0.605KM				
BILL NO.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the unit rates entered by tenderers against the items described in this Bill of Quantities. No separate items for overhaul are included in any section of this Bill and no additional payment whatsoever will be made for haulage. Tenderers are therefore deemed to have included, in the unit rates entered against an item, for all costs and charges associated with haulage.				
	Site Clearance				
4.01	Clearing existing road of all trees, vegetation, debris and rubbish of any nature; including the grubbing of stumps and roots and the disposal from the area of all spoil materials resulting from clearing and grubbing all in accordance with the specifications.	m²	3,025.00		
	Removal of Topsoil				
4.02	Stripping vegetable soil from the roadway, and disposal to approved stockpile areas all in accordance with the Specification and in conformity with the RE instructions average depth 200mm.	m³	605.00		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet structures including back filling.	m	36		
	TOTAL FOR BULL A CARRIED TO CRAND SUMMARRY RACE				
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				1

Fort Jesus - R04- Ruiru page187of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
11 5141	TEM PESCAI TION	0.4	`	KATE (KSTIS)	AWOON (NSNS)
			RRU-RD 04		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase	1	
			300 Sub Grade Material	1	
			(0.605km)		
	FORT JESUS ROAD 04 (RRU-RD 04)-0.605KM				
	·				
DIII NO 5	FARTUM/ORI/C				
BILL NO.5	EARTHWORKS				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
				, , ,	
	NOTE All costs and shows a consisted with bouless and to be included within the				
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Material used for earthworks (fill below bottom sub-grade) shall be minimum soil				
	class S2 quality and be compacted to 95% MDD (AASHTO T99)				
	The upper 300mm of subgrade shall be compacted to 100% MDD (AASHTO T99)				
	1				
	while the rest shall be compacted to 95% MDD (AASHTO T99).				
	Fill in Soft Material				
5.01	Excavating the material, transportation and filling in embankment, including watering				
	and rolling; all in accordance to specification	m³	9.38		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	0.94		
3.02			0.54		
	Fill in Expansive Clay Areas				
5.03	Everyote from horrow, transport over any distance and fill in the embankment seft				
	Excavate from borrow, transport over any distance and fill in the embankment soft	_			
	material, including watering and compaction but in expansive clay areas to replace	m³	1,270.50		
	unsuitable material removed up to a maximum depth of 0.3m				
5.03(a)	Excavate from borrow, transport over any distance and fill in hard material, including				
	watering and compaction but in expansive clay areas to replace unsuitable material	m³	1,694.00		
	removed up to a maximum depth of 0.4m				
	Spoil in Soft Material				
5.04	Cut to spoil in soft material	m³	4,235.00		
	Spoil in Hard Material		,		
		2			
5.05	Excavate, stock pile for reuse and spoil surplus hard material	m³	211.75		
5.06	Spoil in Expansive Clay Areas				
	As Item 5.04 but for excavation in expansive clay areas to remove unsuitable				
	materials				
		,	4.000.00		
5.06A	up to a maximum depth of 1.0 m	m³	1,270.50		
	Compaction of Existing Ground				
F 07	Composition of formation ground in accordance with the amorification	m³	95.29		
5.07	Tempaction of formation ground in accordance with the specification	. 111] 33.23		
	Compaction of formation ground in accordance with the specification				Ī
5.07	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO		190 58		
	, ,	m³	190.58		
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m³			
	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99) Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO		190.58 57.17		
5.08 5.09	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99) Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m³			
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99) Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99) Provide, lay and compact 300mm improved sub grade material to 100% MDD	m³ m³	57.17		
5.08 5.09	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99) Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m³			
5.08 5.09	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99) Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99) Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m³ m³	57.17		
5.08 5.09 5.10	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99) Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99) Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99) Topsoil	m³ m³ m³	57.17		
5.08 5.09	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99) Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99) Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99) Topsoil Topsoil Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm;	m³ m³ m³	57.17		
5.08 5.09 5.10	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99) Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99) Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99) Topsoil Topsoil Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m³ m³ m³	57.17 1,270.50		
5.08 5.09 5.10	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99) Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99) Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99) Topsoil Topsoil Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm;	m³ m³ m³	57.17 1,270.50		
5.08 5.09 5.10	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99) Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99) Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99) Topsoil Topsoil Topsoilor or to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications Grassing	m³ m³ m³	57.17 1,270.50		
5.08 5.09 5.10 5.11	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99) Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99) Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99) Topsoil Topsoil Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications Grassing Planting of sprigs of approved indegineous grass types; to embankments, cuttings or	m³ m³ m³	57.17 1,270.50 302.50		
5.08 5.09 5.10 5.11	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99) Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99) Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99) Topsoil Topsoil Topsoilor or to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications Grassing	m³ m³ m³	57.17 1,270.50		
5.08 5.09 5.10 5.11	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99) Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99) Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99) Topsoil Topsoil Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications Grassing Planting of sprigs of approved indegineous grass types; to embankments, cuttings or where directed by the RE in accordance with the Specification, including tending,	m³ m³ m³	57.17 1,270.50 302.50		
5.08 5.09 5.10 5.11	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99) Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99) Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99) Topsoil Topsoil Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications Grassing Planting of sprigs of approved indegineous grass types; to embankments, cuttings or	m³ m³ m³	57.17 1,270.50 302.50		
5.08 5.09 5.10 5.11	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99) Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99) Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99) Topsoil Topsoil Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications Grassing Planting of sprigs of approved indegineous grass types; to embankments, cuttings or where directed by the RE in accordance with the Specification, including tending,	m³ m³ m³	57.17 1,270.50 302.50		

Fort Jesus - R04- Ruiru page188of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 04		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.605km)		
	FORT JESUS ROAD 04 (RRU-RD 04)-0.605KM		(Groothin)		
BILL NO.8	CULVERTS AND DRAINAGE				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
I I LIVI	DESCRIPTION		QOARTITI	KATE (KSHS)	AMOUNT (KSHS)
	Excavate for Culverts and Subsoil Drains in Soft Material				
8.01	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	86		
	accordance with the Specification and in conformity with the RE instructions	'''			
0.00	· · · · · · · · · · · · · · · · · · ·				
8.02	Extra over Item 8.01 for excavation in hard material	m³	29		
0.02	Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material				
8.03	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	13		
	accordance with the Specification and in conformity with the RE's instructions				
8.04	Extra over Item 8.03 for excavation in hard material	m³	5		
	Selected backfill material				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications	3	25		
	and in conformity with the instructions of the RE	m³	35		
	In-situ culverts				
	Provide for in-situ culvert all in accordance with the Specification and in conformity				
	with the RE instructions				
8.06	a) 600 mm diameter (for use at minor junctions only)	m	73		
8.07	b) 900 mm diameter	m	20		
	Concrete Class 15/20 to Beds, Surrounds				
8.09	Providing and placing the concrete; all in accordance with the Specification and in	m³	81		
	conformity with the RE instructions		-		
0.10	Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures				
8.10	Providing and placing the concrete, reinforcement and formwork class F2 all in	m³	14		
	accordance with the Specification and in conformity with the RE instructions	'''	14		
	Concrete Class 25/20 For Covered Rectangular Drain structure				
8.11	Provide all materials and construct 500mm(Bottom width) wide (internal dimension)				
	rectangualr concrete drains 150mm thick walls and bottom base, average height of				
	0.8m, class 25/20, including slotted top cover of 100mm thick. Include the steel	m ³	252		
	reinforcement and formwork for concrete drain and concrete class 15(20) blinding as				
	specified in the drawings.				
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	20		
<u> </u>	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

Fort Jesus - R04- Ruiru page189of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 04		
			50 A.C		
			150 Stone Base	1	
			150 Gravel Subbase	1	
			300 Sub Grade Material]	
			(0.605km)	1	
	FORT JESUS ROAD 04 (RRU-RD 04)-0.605KM				
BILL NO.9	PASSAGE OF TRAFFIC				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Construction of Deviations in maximum lengths of 2 km sections				
9.01	All the operations connected with the initial construction of temporary deviations,				
	appropriate width, to allow passage of traffic during the Works; all in accordance with	km	0.30		
	the Specification				
	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide,				
	150mm thick, where directed by the RE and in accordance with the Specification	m³	226.88		
0.00	, , , , , , , , , , , , , , , , , , , ,				
9.03	Maintenance the passage of traffic	Lump	1.00		
	Provide Signs and Barriers	Sum			
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights,				
3.04	etc., along deviations constructed: all inaccordance with Specification and in	Km	0.61		
	conformity with the RE instructions	18111	0.01		
	Comorning with the NE manactions				
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				

Fort Jesus - R04- Ruiru page190of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 04		
			50 A.C	1	
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.605km)		
	FORT JESUS ROAD 04 (RRU-RD 04)-0.605KM				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base				
12.01	Provide, lay and compact subbase in 150mm thick natural gravel material in				
	carriageway, bus bays, footpaths, shoulders and junctions from the designated				
	quarries listed in the Special Specification in accordance with the Specification and in	m³	857.59		
	conformity with the RE instructions (Stabilisation paid in Bill 14)				
12.02	Dravida place and compact 150mm Thick handneshed hardeers in an alayer (150mm				
12.02	Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm	m³	642.10		
) plus 50mm blinding layer of quarry dust. This Includes 12 tonne vibrating roller (min	l m-	643.19		
	8 passes)				
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				
	TOTAL FOR BILL IL CARRIED TO GRAND SOMMART FAGE				1
BILL NO.13A	CONCRETE PAVING BLOCK SURFACE TREATMENT				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: No overhaul will be paid for these items as it shall be deemed to have been				
	included in the Contractor's rates.				
	Jointing Sand				
13.01A	Supply, lay and appropriately spread and Compact jointing sand 10-20mm thick to				
	Concrete paving blocks to the road and junctions all in accordance with the	m ²	952.9		
	specifications or as directed by the Engineer				
	Concrete block paving including all cuttings				
13.02A	Provide and lay approved 60mm thick medium duty pre-cast concrete paving blocks				
13.02A	with minimum strength of 35N/mm 2 to BS 6717 Part 1 of 1986 to footpaths and as	m ²	952.9		
13.02A		m ²	952.9		
13.02A	with minimum strength of 35N/mm 2 to BS 6717 Part 1 of 1986 to footpaths and as	m²	952.9		

Fort Jesus - R04- Ruiru page191of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 04	1	
			50 A.C	1	
			150 Stone Base	1	
			150 Gravel Subbase	1	
			300 Sub Grade Material	1	
			(0.605km)	1	
	FORT JESUS ROAD 04 (RRU-RD 04)-0.605KM				
BILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	DATE (VCHC)	AMOUNT (KSHS)
IIEIVI	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AWOUNT (KSHS)
15.01	Prime Coat and Tack coat				
15.01A					
	MC 30 prime coat on Cement treated material at nominal rate of 0.8 - 1.2 ltr/m² to	ltr	3993.0		
	base course on carriageway, bus bays, footpaths, shoulders and junctions				
15.01B	K1-80 cationic emulsion tack coat on primed treated base at nominal rate of 0.4 - 1.0				
	ltr/m² to base course on on carriageway, bus bays, footpaths, shoulders and junctions	ltr	3993.0		
	to base course on on earnage way, bas says, rootpatris, shoulders and janetions				
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.16	BITUMINOUS MIXES				
	Kiambu County- Fort Jesus Informal Settlement				
				D 4 = 5 (1/01/0)	
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
16.00	NOTE: No haulage will be paid for aggregates, bitumen or the premix. The cost for				
16.00	haulage shall be included in the rates. Rates to be inclusive of fines				
16.01					
	Provide, Lay and spread evenly 50mm thick Asphalt Concrete Type II covering the				
	carriageway and the shoulders. The grading of the mixture of coarse and fine				
	aggregates shall be within and approximately parallel to the grading envelopes given	M^3	224.6		
	in table 16B-1 of the Standard Specification for Road and Bridge Construction for				
	Type II, 0/14mm wearing course .The coarse aggregate class for the asphalt concrete				
	shall be Class C. 80/100 penetration grade bitumen for the asphalt concrete.				
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE				

Fort Jesus - R04- Ruiru page192of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
IIEIVI	TI EWI DESCRIPTION	UNIT	•	KATE (KSHS)	AIVIOUNT (KSH3)
			RRU-RD 04	-	
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.605km)		
	FORT IESUS BOAD OA (BRILL BD OA) O COEKNA		(0.605km)		
	FORT JESUS ROAD 04 (RRU-RD 04)-0.605KM				
BILL NO 20	ROAD FURNITURE				
BILL NO.20	Kiambu County- Fort Jesus Informal Settlement				
	Riamba County- Tort Jesus imormal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
11 2141			Q 07.11111	KATE (KSHS)	ANIOONI (KSHS)
	Warning Signs				
20.01	Excavation for, providing and erecting warning signs size 750mm including backfill				
20.01	and concrete 15/20 to bases all in accordance with the Specification and in	No.	1		
	conformity with the RE instructions	100.	1		
20.02	Priority Signs				
20.02	Excavating for, providing and erecting priority signs including back filling and concrete				
		I			
	15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions				
20.024		AI -	4		
20.02A	750mm size	No.	1		
20.02B	1000 mm size	No.	1		
	Mandatory Signs				
20.03	Excavating for, providing and erecting prohibitory signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity	No.	1		
	with the RE instructions 1000mm size				
20.04	Standard Informatory Signs				
	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity				
	with the RE instructions				
20.04A	500x600mm	No.	1		
20.04B	600x600mm	No.	1		
20.05	Non Standard Informatory Signs				
	Excavating for, providing and erecting information signs including backfilling and				
	concrete 15/20 to bases; all in accordance with the Specification and in conformity				
	with the RE instructions				
20.05A	Less than 1 sq.m	No.	1		
20.05B	Equal or more than 1 sq.m but less than 2 sq.m	No.	1		
20.05C	Equal or more than 2 sq.m but less than 5 sq.m	No.	1		
20.06	Road Marking painting	INO.	1		
20.06	Preparing road surface, supplying approved road marking paint, 100mm wide				
	marking out and painting, all in accordance with the Specification and in conformity with the RE instructions				
20.06A	White paint	m²	121		
20.00A		1111	121		
20.07	As Home 2007 but 250mm wide				
	As Item 2007 but 250mm wide		424		
20.07A	a) White paint	m²	121		
	Speed reduction bituminous bumps at junctions				
20.09	Provision, transport and placing of materials in accordance with the Specification and	No	3		
	in conformity with the RE instructions				
	Rumble Strips on Pavement				
20.10	Provision, transport and placing of materials in accordance with the Specification and	N ₀	14		
	in conformity with the drawings and RE instructions	No	14		
	Concrete Kerbs				
20.11	Provision, transport, handling, mixing and placing all materials in accordance with				
	Specification and in conformity with the RE instructions				
20.11A	Kerbs 125 mm x 250 mm straight	m	666		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	30		
	Channel blocks 125mm x 100mm	m	1,331		
		1	_,		
	Trees				
20.12	Planting of approved indigenous types of trees where instructed, in accordance with	No.	5		
20.12	the Specification, minimum height 1.5m - Open Fields or Wet Lands	100.			
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				

Fort Jesus - R04- Ruiru page193of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 04		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade Material		
			(0.605km)		
	FORT JESUS ROAD 04 (RRU-RD 04)-0.605KM				
	CDAND CHAMAADY TOTAL CHANITITIES				
	GRAND SUMMARY TOTAL QUANTITIES				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION				AMOUNT (KSHS)
4	Site Clearance and Top Soil Stripping				, ,
5	Earthworks				
8	Culverts and Drainage Works				
9	Passage of Traffic				
12	Natural Material Subbase and Base				
13A	CONCRETE PAVING BLOCK SURFACE TREATMENT				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				

	FORT JES	SUS ROAD OS	i	

WORKS IN

Fort Jesus - R05- Ruiru page194of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 05		
			50 A.C]	
			150 Stone Base	1	
			150 Gravel Subbase	1	
			300 Sub Grade]	
			(0.300km)	1	
	FORT JESUS ROAD 05 (RRU-RD 05)-0.300KM				
BILL NO.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
JIEE 140.04	Kiambu County- Fort Jesus Informal Settlement				
1754	DESCRIPTION.		OHANITITY.	DATE (VOLIS)	
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Site Clearance				
4.01	Clearing existing road of all trees, vegetation, debris and rubbish of any nature;				
	including the grubbing of stumps and roots and the disposal from the area of all spoil	2			
	materials resulting from clearing and grubbing all in accordance with the	m^2	1,500.00		
	specifications.				
	Removal of Topsoil				
4.02	Stripping vegetable soil from the roadway, and disposal to approved stockpile areas				
	all in accordance with the Specification and in conformity with the RE instructions	m³	300.00		
	average depth 200mm.	•••	333.33		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet		10		
	structures including back filling.	m	18		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE			1	1

Fort Jesus - R05- Ruiru page195of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 05	(,	(1.0.10)
				-	
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade		
			(0.300km)	1	
	FORT JESUS ROAD 05 (RRU-RD 05)-0.300KM		,		
BILL NO.5	EARTHWORKS				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
				, ,	, ,
	NOTE: All costs and charges connected with haulage are to be included within the				
	unit rates entered by tenderers against the items described in this Bill of Quantities.				
	No separate items for overhaul are included in any section of this Bill and no				
	additional payment whatsoever will be made for haulage. Tenderers are therefore				
	deemed to have included, in the unit rates entered against an item, for all costs and				
	charges associated with haulage.				
	Material used for earthworks (fill below bottom sub-grade) shall be minimum soil				
	· · · · · · · · · · · · · · · · · · ·				
	class S2 quality and be compacted to 95% MDD (AASHTO T99)				
	The upper 300mm of subgrade shall be compacted to 100% MDD (AASHTO T99)				
	while the rest shall be compacted to 95% MDD (AASHTO T99).				
	Fill in Soft Material				
5.01	Excavating the material, transportation and filling in embankment, including watering				
	and rolling; all in accordance to specification	m³	9.38		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	0.94		
5.02		111	0.94		
	Fill in Expansive Clay Areas				
5.03	Excavate from borrow, transport over any distance and fill in the embankment soft				
	material, including watering and compaction but in expansive clay areas to replace	m³	630.00		
	unsuitable material removed up to a maximum depth of 0.3m				
	unsuitable material removed up to a maximum depth of 0.5m				
5.03(a)	Excavate from borrow, transport over any distance and fill in hard material, including				
	watering and compaction but in expansive clay areas to replace unsuitable material	m³	840.00		
	removed up to a maximum depth of 0.4m	'''	0.000		
	· · · · · · · · · · · · · · · · · · ·				
	Spoil in Soft Material				
5.04	Cut to spoil in soft material	m³	2,100.00		
	Spoil in Hard Material				
5.05	Excavate, stock pile for reuse and spoil surplus hard material	m³	105.00		
5.06	Spoil in Expansive Clay Areas				
	As Item 5.04 but for excavation in expansive clay areas to remove unsuitable				
	materials				
5.06A	up to a maximum depth of 1.0 m	m³	630.00		
3.50/1	Compaction of Existing Ground	- '''	000.00		
E 07	· · · · · · · · · · · · · · · · · · ·				
5.07	Compaction of formation ground in accordance with the specification	m³	47.25		
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO	m³	94.50		
	Т99)	'''	34.30		
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO	2	20.25		
	Т99)	m³	28.35		
5.10	Provide, lay and compact 300mm improved sub grade material to 100% MDD	_			
- 	(AASHTO T99)	m³	630.00		
	Topsoil				
5.11	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm;				
3.11		m²	150.00		
	all in accordance with the specifications				
	Grassing				
5.12	Planting of sprigs of approved indegineous grass types; to embankments, cuttings or				
	where directed by the RE in accordance with the Specification, including tending,	m²	150.00		
	watering and cutting until the grass is firm established or for 6 months	'''	150.00		
	watering and cutting until the grass is fifth established of 101 o months				
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE	1	1		

Fort Jesus - R05- Ruiru page196of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 05	1	
			50 A.C	1	
			150 Stone Base	1	
			150 Gravel Subbase	- -	
			300 Sub Grade		
			(0.300km)	1	
	FORT JESUS ROAD 05 (RRU-RD 05)-0.300KM		(Giodaini)		
BILL NO.8	CULVERTS AND DRAINAGE				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Excavate for Culverts and Subsoil Drains in Soft Material				
8.01	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	49		
	accordance with the Specification and in conformity with the RE instructions				
8.02	Extra over Item 8.01 for excavation in hard material	m³	47		
8.02		m ^s	17		
8.03	Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material				
8.03	Excavation in soft material to any depth, compaction of the invert of excavation,				
	backfilling with excavated materials or removing excavated material to spoil; in	m³	7		
	accordance with the Specification and in conformity with the RE's instructions				
8.04	Extra over Item 8.03 for excavation in hard material	m³	3		
	Selected backfill material				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications	m³	20		
	and in conformity with the instructions of the RE	TH-	20		
	In-situ culverts				
	Provide for in-situ culvert all in accordance with the Specification and in conformity				
	with the RE instructions				
8.06	a) 600 mm diameter (for use at minor junctions only)	m	36		
8.07	b) 900 mm diameter	m	20		
0.00	Concrete Class 15/20 to Beds, Surrounds				
8.09	Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions	m³	46		
	Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures				
8.10					
0.20	Providing and placing the concrete, reinforcement and formwork class F2 all in	m³	8		
	accordance with the Specification and in conformity with the RE instructions				
	Concrete Class 25/20 For Covered Rectangular Drain structure				
8.11	Provide all materials and construct 500mm(Bottom width) wide (internal dimension)				
	rectangualr concrete drains 150mm thick walls and bottom base, average height of				
	0.8m, class 25/20, including slotted top cover of 100mm thick. Include the steel	m ³	115		
	reinforcement and formwork for concrete drain and concrete class 15(20) blinding as				
0.43	specified in the drawings.		20		
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	20		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

Fort Jesus - R05- Ruiru page197of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 05		
			50 A.C	1	
			150 Stone Base	1	
			150 Gravel Subbase	1	
			300 Sub Grade	1	
			(0.300km)	1	
	FORT JESUS ROAD 05 (RRU-RD 05)-0.300KM		(Ciccomin)		
-					
BILL NO.9	PASSAGE OF TRAFFIC				
	Kiambu County- Fort Jesus Informal Settlement				
	, , , , , , , , , , , , , , , , , , , ,				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Construction of Deviations in maximum lengths of 2 km sections				
9.01	All the operations connected with the initial construction of temporary deviations,				
	appropriate width, to allow passage of traffic during the Works; all in accordance	km	0.15		
	with the Specification				
	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide,				
	150mm thick, where directed by the RE and in accordance with the Specification	m³	112.50		
9.03	Maintenance the passage of traffic	Lump	1.00		
	Dura side Cierra and Berniana	Sum			
0.04	Provide Signs and Barriers Provide Signs and Barriers Provide Signs and Barriers Provide Signs and Barriers Provide Signs and Barriers				
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights,	Vm	0.30		
	etc., along deviations constructed: all inaccordance with Specification and in conformity with the RE instructions	Km	0.30		
	Comornity with the RE instructions				
	1	1	1	I	i
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				

Fort Jesus - R05- Ruiru page198of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 05	1	
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade		
			(0.300km)		
	FORT JESUS ROAD 05 (RRU-RD 05)-0.300KM				
	NATURAL MATERIAL SUBBASE AND BASE				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base				
12.01					
12.01	Provide, lay and compact subbase in 150mm thick natural gravel material in				
	carriageway, bus bays, footpaths, shoulders and junctions from the designated	m³	318.94		
	quarries listed in the Special Specification in accordance with the Specification and in	m³	318.94		
	quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14)	m³	318.94		
12.02	quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14) Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm				
	quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14) Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm) plus 50mm blinding layer of quarry dust. This Includes 12 tonne vibrating roller	m³ m³	318.94		
	quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions (Stabilisation paid in Bill 14) Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm				

Fort Jesus - R05- Ruiru page199of208

		I			AMOUNT (KSHS)
		RRU-RD 05		1	
			50 A.C	1	
			150 Stone Base	1	
			150 Gravel Subbase	1	
			300 Sub Grade		
			(0.300km)	1	
	FORT JESUS ROAD 05 (RRU-RD 05)-0.300KM				
RIII NO 15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
		J	Q		(none)
15.01	Prime Coat and Tack coat				
	MC 30 prime coat on Cement treated material at nominal rate of 0.8 - 1.2 ltr/m² to base course on carriageway, bus bays, footpaths, shoulders and junctions	ltr	1980.0		
15.01B	K1-80 cationic emulsion tack coat on primed treated base at nominal rate of 0.4 - 1.0				
	Itr/m² to base course on on carriageway, bus bays, footpaths, shoulders and junctions	ltr	1980.0		
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				
DIII NO 46					
	BITUMINOUS MIXES Kiambu County- Fort Jesus Informal Settlement				
				D - TT (1/01/0)	
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
16.00	NOTE: No haulage will be paid for aggregates, bitumen or the premix. The cost for				
10.00	haulage shall be included in the rates. Rates to be inclusive of fines				
16.01	Provide, Lay and spread evenly 50mm thick Asphalt Concrete Type II covering the				
	carriageway and the shoulders. The grading of the mixture of coarse and fine				
	aggregates shall be within and approximately parallel to the grading envelopes given				
	in table 16B-1 of the Standard Specification for Road and Bridge Construction for	M^3	111.4		
	Type II, 0/14mm wearing course .The coarse aggregate class for the asphalt concrete				
	shall be Class C. 80/100 penetration grade bitumen for the asphalt concrete.				
i i					

Fort Jesus - R05- Ruiru page200of208

	T		1	I <i>(</i>	
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 05		
			50 A.C		
			150 Stone Base	1	
			150 Gravel Subbase	-	
			300 Sub Grade		
				-	
	FORT ISSUE BOAR OF (PRIL PRIOR) A 200KM		(0.300km)		
	FORT JESUS ROAD 05 (RRU-RD 05)-0.300KM				
DILL NO 20	DOAD FURNITURE				
	ROAD FURNITURE				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Warning Signs				
20.01	Excavation for, providing and erecting warning signs size 750mm including backfill and concrete 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions	No.	1		
20.02	Priority Signs				
	Excavating for, providing and erecting priority signs including back filling and concrete				
	15/20 to bases; all in accordance with the Specification and in conformity with the RE				
	instructions				
20.02A	750mm size	No.	1		
	1000 mm size	No.	1		
	Mandatory Signs	INU.			
	Excavating for, providing and erecting prohibitory signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions 1000mm size	No.	1		
20.04	Standard Informatory Signs				
20.04	Excavating for, providing and erecting information signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity				
	with the RE instructions				
20.04A	500x600mm	No.	1		
20.04B	600x600mm	No.	1		
	Non Standard Informatory Signs		_		
	Excavating for, providing and erecting information signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions				
20.05A	Less than 1 sq.m	No.	1		
20.05B	Equal or more than 1 sq.m but less than 2 sq.m	No.	1		
20.05C	Equal or more than 2 sq.m but less than 5 sq.m	No.	1		
20.06	Road Marking painting	INO.	1		
20.06	Preparing road surface, supplying approved road marking paint, 100mm wide marking out and painting, all in accordance with the Specification and in conformity with the RE instructions				
20.06A	White paint	m²	60		
_					
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m²	60		
	Speed reduction bituminous bumps at junctions				
20.09	Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions	No	2		
20.10	Rumble Strips on Pavement Provision, transport and placing of materials in accordance with the Specification and in conformity with the drawings and RE instructions	No	7		
20.11	Concrete Kerbs Provision, transport, handling, mixing and placing all materials in accordance with				
	Specification and in conformity with the RE instructions				
	Kerbs 125 mm x 250 mm straight	m	330		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	15		
20.11C	Channel blocks 125mm x 100mm	m	660		
	<u>Trees</u>				
70.17	Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m - Open Fields or Wet Lands	No.	5		
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				

Fort Jesus - R05- Ruiru page201of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			RRU-RD 05		(,
			50 A.C 150 Stone Base 150 Gravel Subbase 300 Sub Grade		
				1	
]	
]	
			(0.300km)		
	FORT JESUS ROAD 05 (RRU-RD 05)-0.300KM				
	GRAND SUMMARY TOTAL QUANTITIES				
	Kiambu County- Fort Jesus Informal Settlement				
ITEM	DESCRIPTION				AMOUNT (KSHS)
4	Site Clearance and Top Soil Stripping				
5	Earthworks				
8	Culverts and Drainage Works				
9	Passage of Traffic				
12	Natural Material Subbase and Base				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				

			_
- K	SERIAL No.7 - S Ioja, Misri, Riv	G T JESUS SETTLEME	STN

	KIANG'OMBE, UMOJA, MISRI, RIVERSIDE & FORT JESUS SETTLEMENTS	S - THIKA	IIMIIRII IIIIA & DIIII	RII MIINICIDALITV	
	PROPOSED SUPPLY, INSTALLATION, TESTING & COMMISSI				
ITEM	ITEM DESCRIPTION		QUANTITY		AMOUNT (KSHS)
			,	, ,	,
	STREET LIGHTING SUPPLY, INSTALLATION AND COMMISIONING:				
1.0	An integrated solar street light fitting with 42Ah, 12.8V LiFePO4 Battery type; 18V 65W, Mono-Crystalline Solar Panel. The luminaire to be of LED type 150W Solar 3030 LED 144PCS 3000K-6500K LED Lamp, 160lm/W; complete with mounting accessories as AllTop Light or approved equivalent.	No	395		
2.0	10m round-setion tapering concrete column to KS 1933 standard complete with all accessories to meet 8m mounting height requirements as shown in the drawings and in the Technical Specifications.	No	395		
3.0	Galvanised column universal clamps, anti-vandal, anti-theft, and anti-climbing features and all accessories to meet 8m mounting height requirements as shown in the drawings and in the Technical Specifications.	No	395		
4.0	1200mm bracket with 0 degrees tilt angle manufactured from Class C galvanised steel pipe	No	395		
	CIVIL WORKS:				
5.0	Allow for excavation of pit for mounting of columns at 1500mm depth below the finished surface complete with concrete backfill and compact to natural ground level, as shown in the drawings.	No	395		
	OTHER GENERAL ITEMS:				
6.0	Allow for all costs in connection with testing and commissioning of entire PV system including making arrangements for testing of materials, goods etc, as stipulated in the Specification, obtaining test reports and submitting same to the Employer's Representative	Item	1.0		
	Total carried forward to Collection Page				

Bill of Quantities page202of208

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	GRAND SUMMARY PAGE				
ITEM	DESCRIPTION				AMOUNT (KSHs)
1.0	Solar street lighting installation for Kiang'ombe, Umoja, Misri, Riverside and Fort Jesus Settlement within Kiambu County.				
	GRAND TOTAL CARRIED FORWARD TO FORM OF TENDER				

Bill of Quantities page203of208

BOSNIA/RIVERSIDE IN	V CITTOTO II 7 IVD WIE	THE EIMORG FILE W		Y
SERIAL No	1.8 - DAYWOR	KS – KIAMBU	COUNTY	

CONSTRUCTION OF INFRASTRUCTURE IMPROVEMENT WORKS IN SELECTED INFORMAL SETTLEMENTS IN KIAMBU COUNTY

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS
L No.22:	DAYWORKS (PROVISIONAL SUM)				
	<u>Plant</u>				
22.01	Crawler Dozers with Dozer and Hydraulic Ripper Attachments:				
	a) 100 - 135 kW rated flywheel power	hr	10		
	b) 136 - 185 kW rated flywheel power	hr	10		
	c) 186-250 kw rated flywheel power	hr.	10		
22.02	Motorized rubber tyred single engine scrapers				
	a) up to 16m3 heaped capacity	hr.	10		
	b) 17 - 26m3 heaped capacity	hr.	10		
22.03	Motorized rubber tyred twin engine scrapers				
	a) up to 16m3 heaped capacity	hr.	10		
	b) 17 - 26m3 heaped capacity	hr.	10		
22.04	Motor graders complete with Hydraulic Ripper				
	or scarifier				
	a) 80-110 kw rated flywheel power	hr.	10		
	b) 111-120 kw rated flywheel power	hr.	10		
	c) 121-160 kw rated flywheel power	hr.	10		
22.05	Rollers - Towed Vibratory Including Tractor:				
	a) 6.5 - 8.8 t unballasted wt.	hr	10		
	b) 8.9 - 11.7 t unballasted wt.	hr	10		
22.06	Rollers - Road Deadweight (steel three wheel):				
	a) 6.1 - 8.5 t unballasted wt.	hr	10		
22.07	Rollers - Rubber Tyred Self-Propelled:				
	a) up to 1.0 t per wheel	hr	10		
22.08	Rollers - Vibratory Single Roll Rubber Tyred:				
	a) 8.3 - 10.5 t unballasted wt.	hr	10		
22.09	Rollers - Vibratory Pedestrian Operated Twin Roller:				
22.00	a) 651 kg - 1.3 t un-ballasted weight	hr	10		
22.10	Vibrating Plate Compactor:		10		
22.10	a) 114 - 200 kg operating weight.	hr	10		
22.11	, , , , , , , , , , , , , , , , , , , ,	- '''	10		
22.11	Compressors - Rated by Normal Delivery of Free Air per min at 7 kg per cm ² Complete with all Tools, Hoses, Steel etc.				
	a) 6.0 - 7.4m³/min	hr	10		
	b) 7.5 - 9.7m³/min	hr	10		
	(c) 9.8-25.5m3/min	hr.	10		
22.12	Cranes - Mobile Rubber Tyred Rough Terrain Type:	111.	10		
22.12	a) 23.0 - 40.0 t max working load	hr	10		
22.13	Cranes - Excavator Cranes Tracked:	- '''	10		
22.13		h.,	40		
00.44	a) 20.0 - 28.0t max working load	hr	10		
22.14	Small Dumpers:		40		
	a) 751kg - 1.2t maker's rated payload	hr	10		
22.15	Excavator - hydraulic crawler or wheel mounted, full circle slew (back actor):				
	a) 14.0-17.0t nominal wt of machine	hr	10		
22.16	Excavators - hydraulic wheeled dual purpose (backhoe/loader):				
	a) 14.0-17.0t nominal wt of machine	hr	10		
22.17	Pumps (inclusive of all hoses):				
	a) 50 - 76mm delivery	hr	10		
	(b) 77-101mm delivery	hr.	10		
22.18	Tractors - Rubber Tyred Including Trailer:				
	a) 50 - 70 kW rated flywheel power	hr	10		
	<u>Loaders</u>				
	The basis of loader classification is the society of Automotive Engineers of America				
	(SAE) rated capacity of the bucket. The classification is based on the largest general				
	purpose bucket by the manufacturer or the bucket size adopted by the Contractor				
	whichever is lesser				
22.19	Wheeled Loaders - 4 wheel drive, articulated:				
	a) 50 - 70 kW rated flywheel power	hr	10		
	b) 2.01 - 3.40m³ SAE rated capacity	hr	10		
22.20	Crawler Loader:				
	a) 0.80 - 1.30m³ SAE rated capacity	hr	10		
	b) 1.31 - 1.90m³ SAE rated capacity	hr	10		

Bill of Quantities page204of208

CONSTRUCTION OF INFRASTRUCTURE IMPROVEMENT WORKS IN SELECTED INFORMAL SETTLEMENTS IN KIAMBU COUNTY

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
ILL No.22	: DAYWORKS (PROVISIONAL SUM)			•	
22.21	Concrete mixers (wet capacity)				
	(a) up to 100 litres	hr.	10		
	(b) 101-200 litres	hr.	10		
	(c) 201-300 litres	hr.	10		
22.22	Transit Mixer 4.5 m3/hour	hr.	10		
22.23	Concrete pump of 4.5 and 30m3 capacity	hr.	10		
22.24	Concrete Vibrator (poker type):	hr	10		
22.25	Lorries - Flatbed				
	(a) up to 7.5t gross vehicle weight	hr.	10		
	(b) 7.6-12.0t gross vehicle weight	hr.	10		
22.26	Lorries -Tipper:				
	a) up to 11.0t gross vehicle wt	hr	10		
	b) 11.1 - 17.0t gross vehicle wt	hr	10		
22.27	Van, Pick-up or Similar Utility Vehicle:	""	10		
22.21	a) up to 1.0t carrying capacity	hr	10		
22.28	Water or Fuel Tanker - Self Propelled:	- '''	IU		
22.20	<u>'</u>	h.	10		
	a) 3500 - 4550 litre capacity	hr	10		
	b) 4551 - 7000 litre capacity	hr			
00.00	(c) 7001-12000 litre capacity	hr.	10		
22.29	Pressure Bitumen Distributor:		40		
	a) 3500 - 4550 litre capacity	hr	10		
	(b) 4551-9000 litre capacity	hr.	10		
22.30	Hot mix plant - 60 tonnes per hour	hr.	10		
22.31	Wet mix plant - 60 tonnes per hour	hr.	10		
22.32	Hydrostatic paver & finisher with sensor control	hr.	10		
22.33	Batching and mixing plant 15-20 m' capacity	hr.	10		
22.34	Chip spreader	hr.	10		
22.35	Mechanical Broom	hr	10		
22.36	Bitumen Hands Sprayer of 200 litres carrying capacity	hr.	10		
22.37	Road marking machine	hr.	10		
22.38	Electric generator				
	(a)100KVA	hr.	10		
	(b) 125 KVA	hr.	10		
22.39	Crusher Plant	hr.	10		
22.40	Pulvimixer	hr.	10		
22.41	Oxy-acetylene cutting and welding set including oxygen and acetylene gases.	hr.	10		
22.42	Electrical welding set including electrodes	hr.	10		
	Labour				
22.50	Unskilled Labour	hr	10		
22.51	Skilled Labour	hr	10		
22.52	Artisan	hr	10		
22.53	Plant Operator	hr	10		
22.54	Driver	hr	10		
22.55	Foreman	hr	10		
22.56	Site Surveyor	hr	10		
22.57	Chainman	hr	10		
22.58	Watchman (all round surveillance)		10		
22.50	Blaster (Certified)	hr.	10		
22.59	Office attendants	hr.	10		
22.00	GE 2 OF 3 TO COLLECTION	hr.	10		

Bill of Quantities page205of208

CONSTRUCTION OF INFRASTRUCTURE IMPROVEMENT WORKS IN SELECTED INFORMAL SETTLEMENTS IN KIAMBU COUNTY

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
LL No.22	: DAYWORKS (PROVISIONAL SUM)				
	Materials				
22.80	Ordinary Portland Cement	t	1		
22.81	Hydrated Lime	t	1		
22.82	Mild steel				
	a) up to and including 16mm dia.	t	1		
	b) over 16mm dia.	t	1		
22.83	High tensile steel				
	a) up to and including 16mm dia.	t	1		
	b) over 16mm dia.	t	1		
22.84	Aggregate for concrete				
	a) fine	t	10		
	b) coarse	t	10		
22.85	Concrete:				
	a) Class 15/20	m3	10		
	b) Class 20/20	m3	10		
	c) Class 25/20	m3	10		
22.86	d) Class 30/20	m3	10		
22.87	Formwork				
	a) F1	m2	10		
	b) F2	m2	10		
	c) F3	m2	10		
22.88	150mm Blockwork	m2	100		
22.89	200mm Blockwork	m2	100		
22.90	Bitumen and emulsions				
	a) 80/100 penetration grade bitumen	litre	1000		
	b) MC 3000 cut-back bitumen	litre	1000		
	a) MC 70 cut-back biumen	litre	1000		
	d) K1-70 bitumen emulsion	litre	1000		
22.91	Chippings				
	a) nominal size 6/10	m3	10		
	a) nominal size 10/14	m3	10		
22.92	Gabion Size 2.0 x 1.0 x 1.0m	m2	100		
22.93	Rock fill to gabions	m3	10		
22.94	Imported Fill (marrum)	m3	100		
22.95	Imported fill (Hardcore)	m3	100		

Bill of Quantities page206of208

CONSTRUCTION OF INFRASTRUCTURE IMPROVEMENT WORKS IN SELECTED INFORMAL SETTLEMENTS IN KIAMBU COUNTY

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)				
ILL No.22: DAYWORKS (PROVISIONAL SUM)									
BILL 22 COLLECTION									
S/NO	Page Particulars				Amount (Kes)				
1	Page 1 of 3 Totals								
2	Page 2 of 3 Totals								
3	Page 2 of 3 Totals								

Bill of Quantities page207of208

_	В	SOSNIA/RIVE	ERSIDE IN GITH	IURAI AND MIS	RI IN LIMURU AI	LL WITHIN KIAMB	YA/FORT JESUS IN R U COUNTY.	_
	SERIAL	No.9 -	ENVIRONI	MENTAL AI	ND SOCIAL	SAFEGUARI	DS – KIAMBU I	COUNT

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
LL NO.28	ENVIRONMENTAL & SOCIAL SAFEGUARDS				
	Allow for a provisional sum for obtaining necessary licences and approvals except for the				
28.01	ESIA for the project				
	a. ESIA for borrow pits/material sites, campsites, Batchment plants etc and decomissioning	_	_		
	certificate	Lump Sum	6		
	b. Water abstraction licenses/approvals	Lump Sum	6		
	c. OSHA work place regsitration	Lump Sum	6		
	d. Others (where applicable): Effluent Discharge Licernce, Excessive Noise and Vibration, Bulk Petroleum Storage/Handling, NCA Registration, Raw Materials Haulange permits etc.	Lump Sum	6		
	Summer of the su	201116 00111			
28 02	Allow a provisonal sum for creating awareness on E&S risks among the communities and workers				
20.02	a. Awareness on environmental and social risks to communities before works				
	commencement and during works	PC Sum	6	75,000.00	450,000.0
	b. HIV/Aids Awareness and prevention measures	PC Sum	6	75,000.00	450,000.0
	c. Gender : Gender Based Violenece (GBV), Sexual Exploitation, Abuse and	1 6 34111	- O	73,000.00	+30,000.0
	Harrassment(SEAH)	PC Sum	6	50,000.00	300,000.0
	d. Climate Resilience and disaster management	PC Sum	6	50,000.00	300,000.0
	e. Operation and maintenance : Solid waste management	PC Sum	6	50,000.00	300,000.0
	E.O. item 28.02(a) to 28.02(e) for the contractor's overheads and profit.	%	1,800,000.00	30,000.00	300,000.
28.03	Allow for a provisional sum to undertake stakeholder engagment activities				
	a. Community meetings (with SEC and GRCs)	PC Sum	6	75,000.00	450,000.0
	b. Facilitate SECs and GRCs where necessary to deliver on their mandates	PC Sum	6	100,000.00	600,000.0
	c. Meetings with County- CPCTs and other stakeholders	PC Sum	6	200,000.00	1,200,000.
	d.O. item 28.03(a) to 28.03(c) for the contractor's overheads and profit.	%	2,250,000.00		
28.04	Allow for the implementation of actions in the ESMP				
	a. Allow for the preparation and quarterly reviews of site-specific ESMP	Item	6		
	b. Traffic management- awareness, traffic marshalls, signage, diversions etc.	Item	6		
	c. Occupational health and safety - Inudction, training/awareness, First Aiders, Fire Marshals,				
	safety committees, supervisors, Safety Officers access rumps etc.	Item	12		
	d. Capcity building and support of the project Management and HS Officer to implement and				
	Report Climate Mainstreaming actions	Item	6		
	e. Provision of personal protective equipments	Item	250		
	f. Dust/noise and excessive vibrations control	Item	13		
	g. Facilities e.g. toilets and bathrooms, drinking water etc.	Item	6		
	h. Disposal of construction waste	Item	6		
28 UE	Provide for rehabilation and restoration of disturbed environments				
20.03	a. Rehabilitation of material sites	item	6		
	b. Revegetation of cleared areas	item	6		
	c. Restoration of impacted community assets	item	6		
28.06	Allow for a provisional sum for the project closure Environmental audit and sybmission to NEMA				
	a. Project closure Environmental audit	PC Sum	1	500,000.00	500,000.
	b. Submission of the report and approval by NEMA	PC Sum	1	100,000.00	100,000.
	E.O. item 28.06(a) to 28.06(b) for the contractor's overheads and profit.	%	600,000.00	100,000.00	100,000.
		70	230,000.00		
	TOTAL FOR BILL 28 CARRIED TO GRAND SUMMARY PAGE				