



NAIROBI CITY COUNTY GOVERNMENT

DEPARTMENT OF HOUSING AND URBAN RENEWAL

SECOND KENYA INFORMAL SETTLEMENTS IMPROVEMENT PROJECT (KISIP 2)

RFB No: KE-NAIROBI COUNTY-377334-CW-RFB

CONSTRUCTION OF ROADS/FOOTPATHS, STORM WATER DRAINAGE SYSTEMS, PUBLIC STREET LIGHTING AND SEWER INFRASTRUCTURE WORKS IN SELECTED INFORMAL SETTLEMENTS OF HURUMA FIRE VICTIMS - 2, MATHARE FIRE VICTIMS, MATOPENI, PUMWANI MAJENGO AND SPRING VALLEY ALL WITHIN NAIROBI CITY COUNTY.

VOLUME 3 OF 3: BILL OF QUANTITIES
AUGUST, 2024





INFRASTRUCTURE WORKS IN SELECTED INFORMAL SETTLEMENTS OF HURUMA FIRE VICTIMS - 2, MATHARE FIRE VICTIMS, MATOPENI, PUMWANI MAJENGO AND SPRING VALLEY ALL WITHIN NAIROBI CITY COUNTY.				
	PREAMBLE TO BILL OF QUANTITIES			
BILL OF QUANTITIES				

CONSTRUCTION OF ROADS/FOOTPATHS, STORM WATER DRAINAGE SYSTEMS, PUBLIC STREET LIGHTING AND SEWER

	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.

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

	PREAMBLE TO THE BILLS OF QUANTITIES				
10.0	Provisional Sums included and so designated in the Bill of Quantities shall be expended in whole or in part at the direction and discretion of the Engineer in accordance with Clause 13 of the Conditions of Contract.				
11.0	The method of measurement of completed work for payment shall be in accordance with Standard Specification for Road and Bridge Construction of the Ministry of Transport and Communications, 1986.				
12.0	"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 corrected by the Employer for any arithmetic errors in computation or summation as follows:				
	(a) where there is a discrepancy between amounts in figures and in words, the amount in words will govern; and				
(b) where there is a discrepancy between the unit rate and the total amount derived from the multiplication unit price and the quantity, the unit rate as quoted will govern, unless in the opinion of the Employer, the obviously gross misplacement of the decimal point in the unit price, in which event the total amount as question govern and the unit rate will be corrected.					
15.0	(a) Hard material, in this Contract, shall be defined as the material which, in the opinion of the Engineer, require blasting, or the use of metal wedges and sledge hammers, or the use of compressed air drilling for their removal, and which cannot be extracted by ripping with a dozer tractor of at least 300 kilowatt powers with a single, rearmounted, hydraulic ripper. Boulders of more than 0.2m ³ occurring in soft material shall be classified as hard material				
	(b) Soft material shall be all material other than hard material.				
16.0	The Contractor shall be entitled to payments due in respect of: -				
	i)Equipment employed on Daywork basis on the rental rates entered by him in the "schedule of Dayworks: Plant"				
	ii)That Labour (ordinary) employed on daywork basis at the rates entered by him in the "Schedule of Daywork: Labour"				
	iii) Materials used on daywork at the rates entered by him in the "Schedule of Dayworks: Materials".				
	For Civil Works, the Bills of Quantities have been drawn up in accordance with Civil Engineering Standard Methods of Measurement (CESMM4) (fourth edition 2012) of the Institution of Civil Engineers, London which shall form part of this Contract.				
	Laying' - shall cover all work necessary for placing an object or material to true line and level specified in a drawing or as directed by the Project Manager				
	Jointing' - shall mean process of fixing specified material, pipes, fittings and specials together using appropriate tools, material, labour and machinery. It should cover for all work necessary to provide matching of opposite parts in size, shape and position indicated and clamps, seatings and holders to hold firmly.				

2 of 196

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

PREAMBLE TO THE BILLS OF QUANTITIES Existing Services: The Contractor's attention is specifically drawn to the Specifications										
	concerning existing services and installations. The contractor shall be deemed to have									
	included in his rates and prices for complying with the requirements of the									
	Specifications.	es una prices for con	ipijing with the req	anoments of the						
Testing' - shall mean provision of all materials, apparatus, labour, machinery, charges for the media or chemical to used and transport, repair of object to be tested if required, re-testing, excavation of any part for visual inspection, erection of any type ail unfit the object has been certified as having passed the required test satisfactorily. 'Install' - shall include for all work requirements stipulated for "laying and jointing"										
17.0			•	Il have the following						
17.0	Cints of Medsurer	Henr and Hoorevian	ons used herein sha	ii nave the following	meanings,					
		Unit	Abbreviation	Unit	Abbreviation					
		Cubic meter	m ³	Millimeter	mm					
		Hectare	ha	Month	mth					
Hour hr Number No.										
		Kilogram	kg	Provisional sum	P.S.					
			km	Square meter	m ²					
			km L.S.	Square meter Square millimeter	m ² mm ²					

Vehicle

Week

veh

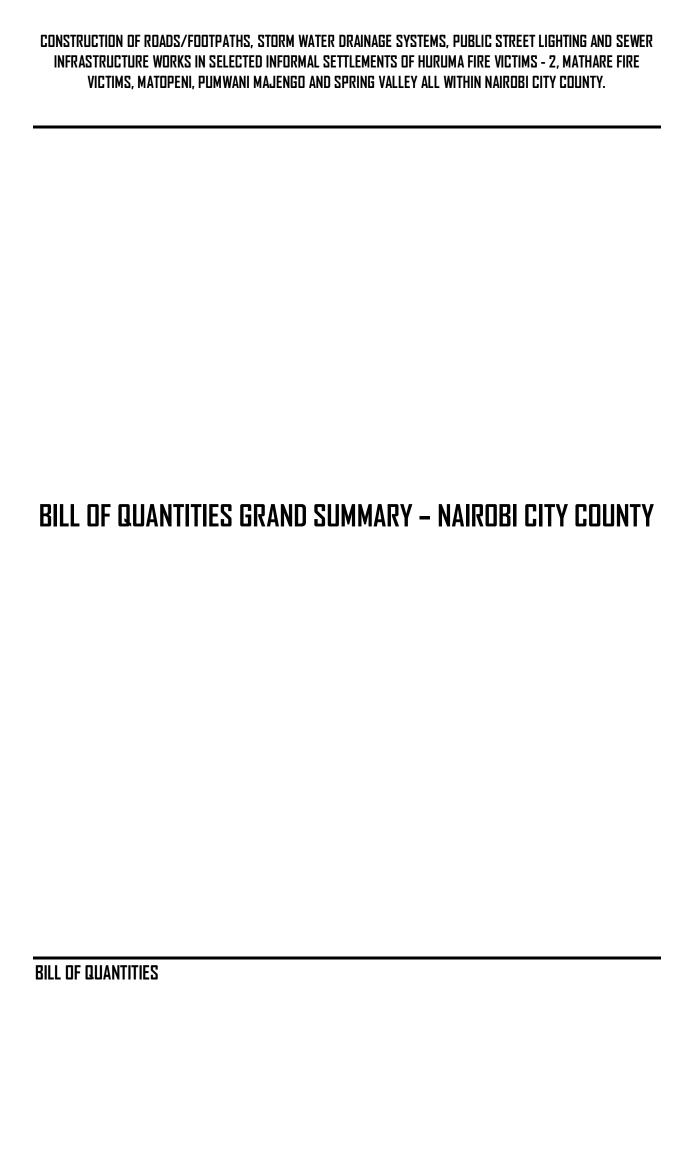
wk

Meter

Metric ton

(1,000kg)

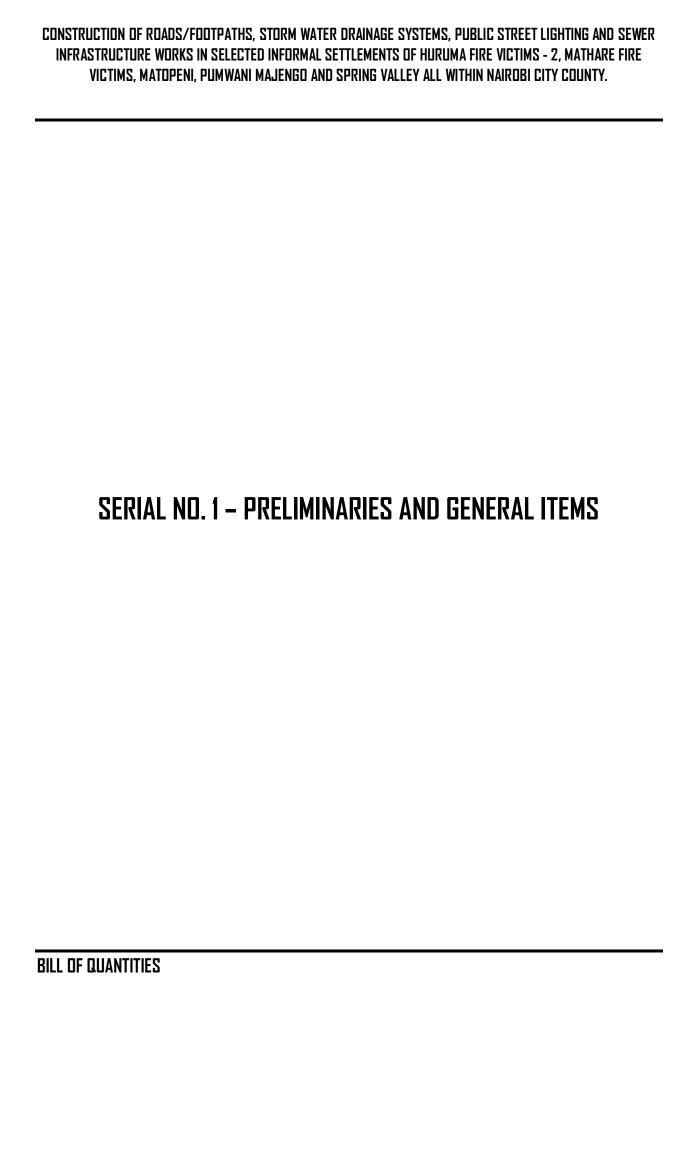
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REPUBLIC OF KENYA NAIROBI CITY COUNTY GOVERNMENT COUNTY DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT KENYA INFORMAL SETTLEMENT IMPROVEMENT PROJECT, PHASE 2 PROPOSED CONSTRUCTION OF ROADS FOR NAIROBI CITY COUNTY SETTLEMENTS

BILLS OF QUANTITIES GRAND SUMMARY

SERIAL No.	ITEM DESCRIPTION	AMOUNT (KES)
1	Preliminary & General Items	
	Road Works	
2	Mathare Fire Victims (MFV) - Road Works	
3	Huruma Fire Victims (HFV) - Road Works	
4	Matopeni (MTPN) - Road Works	
5	Pumwani Majengo (PMMJ) - Road Works	
6	Spring Valley (PMMJ) - Road Works	
	Street Lighting Works	
7	Nairobi City County Settlements Street Lighting	
	Sewerage Works	
8	Huruma Sewer Connection Works	
9	Dayworks	
10	Environmental and Social Safeguards	
Α	SUB -TOTAL 1	
В	Add the sum of 6.5% of sub-total 1 (A) for Contingencies	
С	GRAND TOTAL (A+B)	



TEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	CONTRACTUAL REQUIREMENTS				
1.01	Perfomance Securities and Insurances				
1.01	Provision of Performance Security in accordance with GCC Clause 52.1 (FIDIC 1999)	L Sum	1		
1.02	Provision of Insurance of Works, Plant and Materials in accordance with GCC Clause 13.1 (a)	L Sum	1		
1.03	Provision of Insurance of Contractor's Equipment in accordance with GCC Clause 13.1 (b)	L Sum	1		
1.04	Provision of Third Party Insurance in accordance with GCC Clause 13.1 (c)	L Sum	1		
1.05	Provision of Insurance of Contractor's Personnel in accordance GCC Clause 13.1 (d)	L Sum	1		
	Dispute Adjudication/Avoidance Board				
1.06	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	PC Sum	1	1,000,000.00	1,000,000.00
1.07	Add Contractor's profits and overheads on Item 1.06	%	1,000,000.00		
	SPECIFIED REQUIREMENTS				
	Offices for the Engineer's staff				
1.08	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.	PC Sum	1	3,000,000.00	3,000,000.00
1.09	Add Contractor's profits and overheads on Item 1.08	%	3,000,000.00		
	Services for the Engineer's staff				
	Employer's Conterpart Staff Costs				
1.10	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.	PC Sum	1	2,000,000.00	2,000,000.00
1.11	Add Contractor's profits and overheads on Item 1.10	%	2,000,000.00		
	Equipment for use by the Engineer's Staff				
1.12	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.	PC Sum	1	1,440,000.00	1,440,000.00
1.13	Add Contractor's profits and overheads on Item 1.12	%	1,440,000.00		
	Testing of Materials				
1.14	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	Add Contractor's profits and overheads on Item 1.14	%	2,000,000.00		

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

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
1.16	Capacity building for Employer's Staff 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
1.17	Add Contractor's profits and overheads on Item 1.16	%	2,000,000.00		
	Project Sign Boards				
1.18	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.	Nr.	10		
	Progress Reports and Photographs, "As Built" Drawings and O&M				
1.19	Manuals 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		
1.20	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 feailities and services				
1.30	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. PROVISIONAL SUMS Supplementary Charges	L Sum	1		
1.40	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	3,500,000.00	3,500,000.00
1.41	Add Contractor's profits and overheads on Item A417	%	3,500,000.00	10%	350,000.00
	Other Provisional Sums				
1.42	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		

6 of 195

ATE (KSHS)	AMOUNT (KSHS)					
ATE (KSHS)	AMOUNT (KSHS)					
	Amount					
BILL 1 TOTAL CARRIED TO SUMMARY						

CONSTRUCTION OF ROADS/FOOTPATHS, STORM WATER DRAINAGE SYSTEMS, PUBLIC STREET LIGHTING AND SEWER INFRASTRUCTURE WORKS IN SELECTED INFORMAL SETTLEMENTS OF HURUMA FIRE VICTIMS - 2, MATHARE FIRE VICTIMS, MATOPENI, PUMWANI MAJENGO AND SPRING VALLEY ALL WITHIN NAIROBI CITY COUNTY.
SERIAL No. 2 – MATHARE FIRE VICTIMS SETTLEMENT SUMMARY PAGE

BILL OF QUANTITIES

11 of 234

REPUBLIC OF KENYA

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

BILLS OF QUANTITIES MATHARE FIRE VICTIM SUMMARY

SERIAL No.	ITEM DESCRIPTION	AMOUNT (KES)
	Road Works	
2.1	MFV RD01	
2.2	MFV RD02	
2.3	MFV RD03	
2.4	MFV FT01	
2.5	MFV FT02	
2.6	MFV FT03	
2.7	MFV FT04	
A	SUB -TOTAL -1 CARRIED TO GRAND SUMMARY PAGE	

INFRASTRUCTURE WORKS IN SELECTED INFORMAL SETTLEMENTS OF HURUMA FIRE VICTIMS - 2, MATHARE FIRE VICTIMS, MATOPENI, PUMWANI MAJENGO AND SPRING VALLEY ALL WITHIN NAIROBI CITY COUNTY.					
SERIAL No. 2.1 - MFV SETTLEMENT ROAD RD - 01					
BILL OF QUANTITIES					

CONSTRUCTION OF ROADS/FOOTPATHS, STORM WATER DRAINAGE SYSTEMS, PUBLIC STREET LIGHTING AND SEWER

			, PHASE 2		
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-RD 01		
			80mm HD P.B		
			150 Stone Base		
			125 Gravel		
			300 Sub Grade		
	MFV RD01- 0.149KM AND STORM WATER DRAIN (0.168KM)		(0.149km)		
	MF V RD01- 0.145KW AND STORM WATER DRAIN (0.106KW)				
BILL NO.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Nairobi County- Mathare Fire Victims (MFV) 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.	m ²	894.00		
	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	179.00		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet structures including back filling.	m	9		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

	KENYA INFORMAL SETTLEMENT IMPROVEMENT		·		
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-RD 01		
			80mm HD P.B		
			150 Stone Base		
			125 Gravel 300 Sub Grade		
			(0.149km)		
	MFV RD01- 0.149KM AND STORM WATER DRAIN (0.168KM)		(0.149KIII)		
BILL NO.5	EARTHWORKS				
DIEE TOIL	Nairobi County- Mathare Fire Victims (MFV) Informal Settlement				
	·				
	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.				
	ng.				
	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	m ³	6.00		
	watering and rolling; all in accordance to specification	111	0.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	1.00		
	Spoil in Soft Material				
5.03	Cut to spoil in soft material	m³	310.00		
	Spoil in Hard Material				
5.04		m³	31.00		
	Excavate, stock pile for reuse and spoil surplus hard material	III	31.00		
	Compaction of Existing Ground				
5.05	Compaction of formation ground in accordance with the specification	m³	148.00		
5.06	C				
3.00	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m³	296.00		
5.07					
3.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m³	89.00		
5.80					
3.00	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m³	89.00		
	Topsoil				
5.90	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be				
	50mm; all in accordance with the specifications	m ²	75.00		
	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	m ²	75.00		
	tending, watering and cutting until the grass is firm established or for 6 months	'''	/3.00		
	C, G G G				
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				
	TOTAL FOR DILL S CARRIED TO GRAND SUMMART FACE				

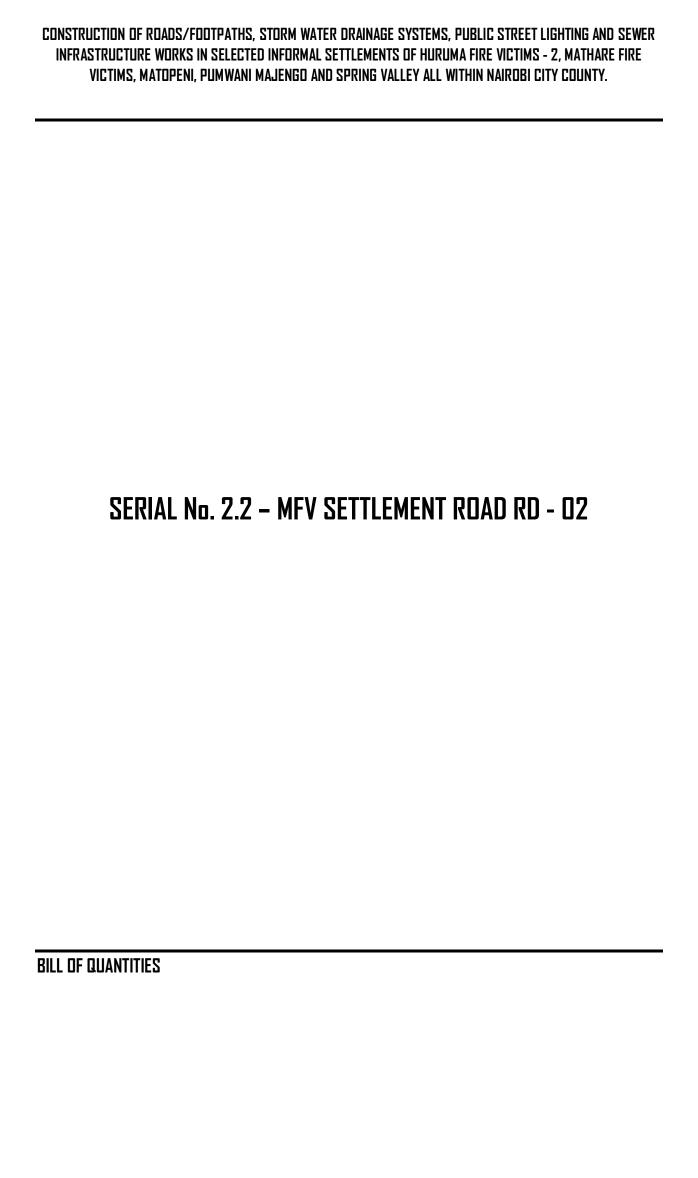
ITEM	KENYA INFORMAL SETTLEMENT IMPROVEMENT ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
IIEWI	HEM DESCRIPTION	UNII	MFV-RD 01	KATE (KSHS)	AMOUNT (KSHS)
			80mm HD P.B 150 Stone Base		
			125 Gravel		
			300 Sub Grade		
			(0.149km)		
	MFV RD01- 0.149KM AND STORM WATER DRAIN (0.168KM)		(0,11,51,111)		
BILL NO.8	CULVERTS AND DRAINAGE				
	Nairobi County- Mathare Fire Victims (MFV) 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	m ³	316		
	accordance with the Specification and in conformity with the RE instructions	""	310		
8.02					
	Extra over Item 8.01 for excavation in hard material	m ³	106		
	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	m ³	4		
	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	2		
	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	127		
	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	7		
	Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains				
8.09	Providing and placing the concrete; all in accordance with the Specification and in	m³	57		
	conformity with the RE instructions		37		
	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				
	Rectangular Covered Concrete Drain (Road Drain)				
8.11(a)	Provide all materials and construct 500mm(Bottom width) wide (internal				
	dimension) rectangualr concrete drains 150mm thick walls and bottom	m ³	77		
	base, average height of 0.8m, class 25/20, including slotted top cover of 200mm	m	''		
	thick.				
	Rectangular Covered Concrete Drain Part (Independent Drain)				
8.11(b)	Provide all materials and construct 1000mm (Bottom width) wide (internal				
	dimension) rectangualr concrete drains 150mm thick walls and bottom	m ³	222		
	base, average height of 0.8m, class 25/20, including slotted top cover of 200mm	m m	233		
	thick.				
8.11 - c	Steel reinforcement for concrete covered drains as specified in the drawings.	Tonne	21		
8.12	Demolition of existing concrete structures	m ³	50		
8.13					
0.13	Provide 250mm PVC pipes at 50m intervals for service ducts	m	10		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

YETTI A	VIII DESCRIPTION	X YA YATE	OXY A NUMBER OF	D. TET (TYCETO)	A DECEMBER OF OTHER
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-RD 01		
			80mm HD P.B		
			150 Stone Base		
			125 Gravel		
			300 Sub Grade		
			(0.149km)		
	MFV RD01- 0.149KM AND STORM WATER DRAIN (0.168KM)				
BILL NO.9	PASSAGE OF TRAFFIC				
	Nairobi County- Mathare Fire Victims (MFV) 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,	,	0.15		
	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	m ³	56.00		
0.02		_			
9.03	Maintenance the passage of traffic	Lump	1.00		
	D 11 01 1D 1	Sum			
2.24	Provide Signs and Barriers				
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic	177	0.15		
	lights, etc., along deviations constructed: all inaccordance with Specification and	Km	0.15		
	in conformity with the RE instructions				
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				
	TOTAL TOR BILL) CHARLES TO GREEN SCHALLER THISE				
	NATURAL MATERIAL CAMPAGE AND DATE				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Nairobi County- Mathare Fire Victims (MFV) Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base				
12.01	Provide, lay and compact subbase in 125mm thick natural gravel material in				
	carriageway, bus bays, footpaths, shoulders and junctions from the designated	m ³	145.28		
	quarries listed in the Special Specification in accordance with the Specification	""	143.20		
	and in conformity with the RE instructions				
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	m³	145.28		
	vibrating roller (min 8 passes)				
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-RD 01		
			80mm HD P.B		
			150 Stone Base		
			125 Gravel		
			300 Sub Grade		
			(0.149km)		
	MFV RD01- 0.149KM AND STORM WATER DRAIN (0.168KM)				
BILL NO.13A	CONCRETE PAVING BLOCK SURFACE TREATMENT				
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 directed by the Engineer	m ²	1,162.20		
	Concrete block paving including all cuttings				
13.02A	Provide and lay approved 80mm thick Heavy duty pre-cast concrete paving blocks with minimum strength of 45N/mm 2 to BS 6717 Part 1 of 1986 to road Carriageway, Junctions etc. and as directed by the Engineer	m ²	1,162.20		
	TOTAL FOR BILL 13A CARRIED TO GRAND SUMMARY PAGE				

	KENYA INFORMAL SETTLEMENT IMPROVEMENT				
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-RD 01		
			80mm HD P.B		
			150 Stone Base		
			125 Gravel		
			300 Sub Grade		
			(0.149km)		
	MFV RD01- 0.149KM AND STORM WATER DRAIN (0.168KM)		,		
DILL NO 20	DOAD EUDWITTIDE				
BILL NO.20	ROAD FURNITURE				
	Nairobi County- Mathare Fire Victims (MFV) Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	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		
	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				
	750mm size	No.	1		
20.02B	1000 mm size	No.	1		
	Mandatory 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	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	m ²	30		
20.07	As Item 2007 but 250mm wide				
	a) White paint	m ²	30		
	, <u> </u>				
20.00	Speed reduction bituminous bumps at junctions				
20.09	Provision, transport and placing of materials in accordance with the Specification	No	1		
	and in conformity with the RE instructions				
20.10	Rumble Strips on Pavement				
20.10	Provision, transport and placing of materials in accordance with the Specification	No.	3		
	and in conformity with the 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	164		
	Kerbs 125 mm x 250 mm radius 1m - 5m	m	7		
20.11C	Channel blocks 125mm x 100mm	m	313		
	Т				
	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 Londs	No.	10		
	with the Specification, minimum height 1.5m -Open Fields or Wet Lands				
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE		L		<u> </u>

		_		1	
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-RD 01		
			80mm HD P.B		
			150 Stone Base		
			125 Gravel		
			300 Sub Grade		
	MFV RD01- 0.149KM AND STORM WATER DRAIN (0.168KM)		(0.149km)		
	MIFV KD01- 0.149KM AND STORM WATER DRAIN (0.106KM)				
	GRAND SUMMARY TOTAL QUANTITIES				
	GREED SOMETHING TO THE QUIEVITIES				
	Nairobi County- Mathare Fire Victims (MFV) 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 Blocks and Surface Treatment				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				



ITEM	ITEM DESCRIPTION MFV RD02- 0.057KM	UNIT	QUANTITY MFV-RD 02 80mm HD P.B 150 Stone Base 100 Gravel Subbase 300 Sub Grade (0.057km)	RATE (KSHS)	AMOUNT (KSHS)
BILL N0.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Nairobi County- Mathare Fire Victims 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.	m ²	285.00		
	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	57.00		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet structures including back filling.	m	3		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-RD 02		
			80mm HD P.B		
			150 Stone Base		
			100 Gravel Subbase		
			300 Sub Grade		
			(0.057km)		
	MFV RD02- 0.057KM				
	EARTHWORKS				
	Nairobi County- Mathare Fire Victims Informal Settlement	LINIT	OHANTETEN	DATE (ZCHC)	AMOUNT (ZCHC)
ITEM	DESCRIPTION NOTE: All costs and charges connected with haulage are to be included within the	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
1	unit rates entered by tenderers against the items described in this Bill of Quantities.				
I	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				
I					
I	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 and				
	rolling; all in accordance to specification	m^3	20.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	10.00		
	Spoil in Soft Material				
5.02	Cut to spoil in soft material	m³	30.00		
	Spoil in Hard Material				
5.04		m³	3.00		
	Excavate, stock pile for reuse and spoil surplus hard material	III	3.00		
	Compaction of Existing Ground				
5.05	Compaction of formation ground in accordance with the specification	m^3	59.85		
		111	37.03		
1	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m^3	119.70		
5.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m³	35.91		
	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m³	35.91		
	<u>Topsoil</u>				
5.09	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m²	28.50		
	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, watering and cutting until the grass is firm established or for 6 months	m²	28.50		
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

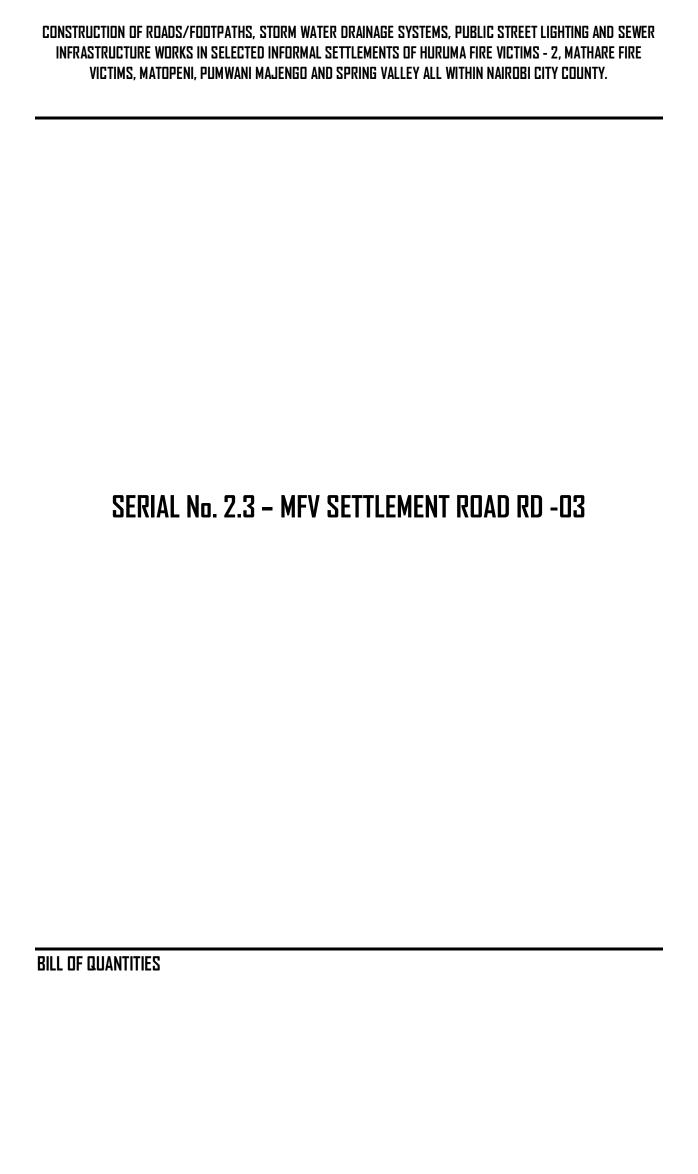
MFV-RD02 - 0.057 kM MFV RD02 - 0.057 kM CULVERTS AND DRAINAGE Nairobi County. Mathare Fire Victims Informal Settlement DESCRIPTION NITH Execute for Culvers and Subsoil Drains in Soft Material Execute for Culvers and Subsoil Drains in Soft Material Execute for Culvers and Subsoil Drains in Soft Material Execute for Culvers and Subsoil Drains in Soft Material Execute for Culvers and Subsoil Drains in Soft Material Execute for Culvers and Subsoil Drains in Soft Material Execute for Index Control to any depth, composition of the invest of executation, backfilling with executed materials or removing executed material to spoil; in accordance with the Specification and in conformity with the RE instructions 8.02 Extra over Item 8.01 for executation in land material Execute for Index, Outfall, Mitres and Culcthwater Drains in soft material Execute for Index, Outfall, Mitres and Culcthwater Drains in soft material Extra over Item 8.03 for executation in hard material Selected backfill material Selected backfill material Providing, backfilling to any depth, composition of the invest of executation and in conformity with the Internations of the RE In-situ culvers Provide for in-situ culvers all in accordance with the Specification and in conformity with the Internations 3.06 a) 600 mm diameter (for use at minor junctions only) 3.07 b) 900 mm diameter Concrete Class 1579 to Beds, Surrounds and Blinding for Covered Drains 8.09 Providing and placing the concrete; all in accordance with the Specification and in conformity with the Emeratical in a Conformity with the Emeratical in accordance with the Specification and in conformity with the Emeratical including for moved class F2 all in accordance with the Specification and in conformity with the Emeratical including for Covered Drains Rectangular Covered Concrete Drain (Road Drain) Providing and placing the concrete; eliminate as specified in the drawings. Ball (a) Seel reinforcement for concrete covered drains as specified in the drawings. Ball	ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
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MICHARDO2-0.057KM CULVERTS AND DRAINAGE Nairobi County- Mathare Fire Victims Informal Settlement DESCRIPTION RATE (KSINS) Exercate for Culverts and Subsoil Drains in Soft Material Exercate for Index, Outfall, Mitre and Catchwater Drains in soft material Exercate for Index, Outfall, Mitre and Catchwater Drains in soft material Exercate for Index, Outfall, Mitre and Catchwater Drains in soft material Exercate for Index, Outfall, Mitre and Catchwater Drains in soft material Exercate for Index, Outfall, Mitre and Catchwater Drains in soft material Exercate for Index, Outfall, Mitre and Catchwater Drains in soft material Exercate for Index, Outfall, Mitre and Catchwater Drains in soft material Exercate for Index, Outfall, Mitre and Catchwater Drains in Soft material Exercate for Index, Outfall, Mitre and Catchwater Drains in Soft material Exercate for Index, Outfall, Mitre and Catchwater Drains in Soft material Exercate for Index, Outfall, Mitre and Catchwater Drains in Soft material Exercate for Index, Outfall, Mitre and Catchwater Drains in Soft material Exercate for Index, Outfall, Mitre and Catchwater Drains in Soft material Exercate for Index, Outfall, Mitre and Catchwater Drains in Soft material Exercate for Index, Outfall, Mitre and Catchwater Drains in Soft material Exercate for Index, Outfall, Mitre and Catchwater Drains in Soft material Exercate for Index, Outfall, Mitre and Catchwater Drains in Soft material Exercate for Index, Outfall, Mitre and Catchwater Drains in Soft material Exercate for Index, Outfall, Mitre and Catchwater Drains in Soft material Exercate for Index, Outfall, Mitre and Catchwater Drains in Soft material Exercate for Index, Outfall, Mitre and Catchwater Drains in Soft material to any object in an exercitate in Catchwater Index, Outfall in Exercate Index, Outfall In				150 Stone Base		
MILLANDERS AND DRAINAGE National Country - Mathare Fire Victims Informal Settlement Execute for Culvers and Suboil Drains in Soft Material Exercise for Culvers and Suboil Drains in Soft Material Exercise for Culvers and Suboil Drains in Soft Material Exercise for Culvers and Suboil Drains in Soft Material Exercise for Culvers and Suboil Drains in Soft Material Exercise for Livers and Suboil Drains in Soft Material Exercise for Livers and Suboil Drains in Soft Material Exercise for Livers and Suboil Drains in Soft Material Exercise for Livers and Suboil Drains in Soft Material Exercise for Livers and Suboil Drains in Soft Material Exercise for Livers and Suboil Drains in Soft Material Exercise for Livers and Suboil Drains in Soft Material Exercise for Livers for Livers and Suboil Drains in Soft material Exercise for Livers for Livers and Suboil Drains in Soft material Exercise for Livers for Livers and Suboil Drains in Soft material Exercise for Livers for Livers and Suboil Drains in Soft material Exercise for Livers for Li				100 Gravel Subbase		
HILL NO.8 CULVERIS AND DRAINAGE Nairobi County- Mathare Fire Victims Informal Settlement Exercate for Culverts and Suboil Drains in Soft Material 8.01 Exercate for Culverts and Suboil Drains in Soft Material 8.02 Extra over Imma Bol for exercation in soft material to spicit in accordance with the Specification and in conformity with the interest of executation in soft material to any depth, compaction of the invert of executation, buckfilling with executation and in conformity with the RE instructions 8.03 Extra over Imm 8.01 for executation in hard material 8.03 Exercate for Inlet, Outfall, Mitre and Catchwater Drains in soft material 8.04 Extra over Imm 8.01 for executation in Soft material to any depth, compaction of the invert of executation, buckfilling with executation and in conformity with the RE's instructions 8.04 Extra over Imm 8.03 for executation in hard material 8.05 Selected backfill material 8.06 Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE 8.06 In-Situ culverts Provide for in-situ culvert all in accordance with the Specification and in conformity with the RE' instructions 8.07 One multiple of the Selection of the Selectio		MEV DD02 0 057VM		300 Sub Grade		
BILL No.8 CULVERIS AND DRAINAGE				(0.057km)		
No.8 Nirobi County - Mathure Fire Victims Informal Settlement DESCRIPTION UNIT QUANTITY RATE (KSHS) AMOUNT (KSHS)		MFV RD02- 0.057KM				
No.8 Nirobi County - Mathure Fire Victims Informal Settlement DESCRIPTION UNIT QUANTITY RATE (KSHS) AMOUNT (KSHS)	DILI					
Natrobi County- Mathare Fire Victims Informal Settlement Post SERIPTION UNIT QUANTITY RATE (KSHS) AMOUNT (KSHS)		CULVERTS AND DRAINAGE				
Exercate for Culverts and Subsoil Drains in Soft Material	110.0	Nairobi County- Mathare Fire Victims Informal Settlement				
Excavate for Culverts and Subsoil Drains in Soft Material	ITEM	·	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
backfilling with exeavated materials or removing exeavated material to spoil; in accordance with the Specification and in conformity with the RE instructions 8.02 Extra over Item 8.01 for exeavation in hard material 8.03 Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material 8.04 Extra over Item 8.01 for exeavation in hard material 8.05 backfilling with exeavated materials or removing exeavated material to spoil; in accordance with the Specification and in conformity with the RE's instructions 8.04 Extra over Item 8.03 for exeavation in hard material 8.05 Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE 8.06 Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE 8.07 Institu culverts 8.08 Provide for in-situ culvert all in accordance with the Specification and in conformity with the RE instructions 8.09 a) 600 mm diameter (for use at minor junctions only) 8.07 b) 900 mm diameter (for use at minor junctions only) 8.09 Providing and placing the concrete; all in accordance with the Specification and in material in accordance with the Specification and in material in accordance with the Specification and in conformity with the RE instructions 8.10 Concrete Class 15/20 to Beds. Surrounds and Blinding for Covered Drains 8.10 Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions 8.11 (a) Stellar in the Specification and in conformity with the RE instructions 8.11 (a) Stellar in the Specification and in conformity with the RE instructions 8.11 (a) Frovide all materials including formover et and construct 500mm (Bottom width) wide (internal diamension) rectangual concerted drains 150mm thick walls and bottom base, average height of 0.8m, class 25/20, including slotted top cover of 100mm thick. 8.11 (a) Stellar informover the concrete covered drains as		Excavate for Culverts and Subsoil Drains in Soft Material			, ,	` /
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Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material Excavation in soft material to any depth, compaction of the invert of excavation, backfilling with excavated material to spoil; in accordance with the Specification and in conformity with the RE's instructions 8.04 Extra over Item 8.03 for excavation in hard material 8.05 Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE 1 Institu 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) 8.07 b) 900 mm diameter Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions 8.10 Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions 8.11 (a) General Covered Department and formwork class F2 all in accordance with the Specification and in conformity with the RE instructions 8.11 (a) Gray beadwalls, trash racks, aprons other drainage structures Provide all materials including formorw class F2 all in accordance with the Specification and in conformity with the RE instructions Rectangular Covered Concrete Drain (Road Drain) Provide all materials including formwork et and construct 500mm(Bottom width) wide (internal dimension) rectangular concrete drains 150mm thick walls and bottom base, average height of 0.8m, class 25/20, including slotted top cover of 100mm thick. 8.11 (a) Steel reinforcement for concrete covered drains as specified in the drawings. Tonne 3 Provide 250mm PVC pipes at 50m intervals for service duets Tonne 3 Provide 250mm PVC pipes at 50m intervals for service duets	8.02	Extra over Item 8.01 for excavation in hard material	m³	23		
Exeavation in soft material to any depth, compaction of the invert of excavation, backfilling with excavated materials or removing excavated material to spoil; in accordance with the Specification and in conformity with the RE's instructions 8.04 Extra over Item 8.03 for excavation in hard material 8.05 Selected backfill material Providing, backfilling to any depth all in accordance with the Standard Specifications 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 8.06 a) 600 mm diameter (for use at minor junctions only) m 23 8.07 b) 900 mm diameter Concrete Class 15/20 to Beds. Surrounds and Blinding for Covered Drains Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions 8.10 Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions 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 Rectangular Covered Concrete Drain (Road Drain) 8.11 (a) Given a materials including formwork et and construct 500mm (Bottom width) wide (internal dimension) rectangular concrete drains 150mm thick walls and bottom base, average height of 0.8m, class 25/20, including slotted top cover of 100mm thick. 8.11 (a) Fovide 250mm PVC pipes at 50m intervals for service ducts m 20						
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accordance with the Specification and in conformity with the RE's instructions 8.04 Extra over Item 8.03 for excavation in hard material 8.05 Selected backfill material 8.06 Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE 1n-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) 8.07 b) 900 mm diameter Concrete Class 15/20 to Beds. Surrounds and Blinding for Covered Drains 8.09 Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions 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 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 8.11 (a) Provide all materials including formwork et 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. 8.11 (a) Provide 250mm PVC pipes at 50m intervals for service ducts m 20	6.03		m ³	20		
8.04 Extra over Item 8.03 for excavation in hard material 8.05 Providing, backfill material 8.06 Providing, backfilling to any depth all in accordance with the Standard Specifications 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 8.06 a) 600 mm diameter (for use at minor junctions only) 8.07 b) 900 mm diameter Concrete Class 15/20 to Beds. Surrounds and Blinding for Covered Drains 8.09 Providing and placing the concrete; all in accordance with the Specification and in 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 Rectangular Covered Concrete Drain (Road Drain) Provide all materials including formwork et and construct 500mm(Bottom width) wide (internal dimension) rectangual concrete drains 150mm thick walls and bottom base, average height of 0.8m, class 25/20, including slotted top cover of 100mm thick. 8.11 c) Steel reinforcement for concrete covered drains as specified in the drawings. Tonne 3 8.12 Provide 250mm PVC pipes at 50m intervals for service ducts m 20			111	20		
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8.11 - (b) Steel reinforcement for concrete covered drains as specified in the drawings. 8.12 Provide 250mm PVC pipes at 50m intervals for service ducts m 20	8.11 (a)		m ³	30		
8.12 Provide 250mm PVC pipes at 50m intervals for service ducts m 20		base, average height of 0.8m, class 25/20, including slotted top cover of 100mm thick.				
8.12 Provide 250mm PVC pipes at 50m intervals for service ducts m 20	8.11 - (b)	Steel reinforcement for concrete covered drains, as specified in the drawings	Tonne	3		
Trovide 250mm 1 ve pipes at 50m intervals for service ducts						
TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE	0.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	20		
		TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

ITEM	MEV DD02 -0.057VM	UNIT	MFV-RD 02 80mm HD P.B 150 Stone Base 100 Gravel Subbase 300 Sub Grade (0.057km)	RATE (KSHS)	AMOUNT (KSHS)
	MFV RD02- 0.057KM				
BILL NO.9	PASSAGE OF TRAFFIC				
	Nairobi County- Mathare Fire Victims Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
9.01	Construction of Deviations in maximum lengths of 2 km sections 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		
9.02	Gravel Wearing Course 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	22.00		
9.03	Maintenance the passage of traffic	Lump Sum	1.00		
	Provide Signs and Barriers				
	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights, etc., along deviations constructed: all inaccordance with Specification and in conformity with the RE instructions	Km	0.06		
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Natural Gravel Subbase and Base				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Provide, lay and compact subbase in 125mm 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	m³	46.17		
	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	46.17		
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY MFV-RD 02 80mm HD P.B 150 Stone Base 100 Gravel Subbase 300 Sub Grade (0.057km)	RATE (KSHS)	AMOUNT (KSHS)
	MFV RD02- 0.057KM		(0.037KIII)		
BILL NO.13	CONCRETE PAVING BLOCK SURFACE TREATMENT				
	Nairobi County- Mathare Fire Victims 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				
13.01	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 directed by the Engineer	m ²	308.00		
	Concrete block paving including all cuttings				
13.02	Provide and lay approved 80mm thick Heavy duty pre-cast concrete paving blocks with minimum strength of 45N/mm 2 to BS 6717 Part 1 of 1986 to road footpaths etc. and as directed by the Engineer	m ²	308.00		
	TOTAL FOR BILL 13 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY MFV-RD 02	RATE (KSHS)	AMOUNT (KSHS)
			80mm HD P.B		
			150 Stone Base		
			100 Gravel Subbase		
			300 Sub Grade		
	MFV RD02- 0.057KM		(0.057km)		
BILL NO.20	ROAD FURNITURE				
	Nairobi County- Mathare Fire Victims 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	No.	1		
	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 with	No.	1		
	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		
		INO.	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				
20.07A	a) White paint	m ²	12		
	Speed reduction bituminous bumps at junctions				
20.09	Provision, transport and placing of materials in accordance with the Specification and in	No	1		
	conformity with the RE instructions		•		
20.10	Rumble Strips on Pavement				
20.10	Provision, transport and placing of materials in accordance with the Specification and in	No	1		
	conformity with the 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	63		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	3		
20.11C	Channel blocks 125mm x 100mm		120		
	Chainer Glocks 1251iiii & 100liiiii	m	120		
	Trees				
20.12	Planting of approved indigenous types of trees where instructed, in accordance with the	No	10		
20.12		No.	10		

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY MFV-RD 02 80mm HD P.B 150 Stone Base 100 Gravel Subbase 300 Sub Grade (0.057km)	RATE (KSHS)	AMOUNT (KSHS)
	MFV RD02- 0.057KM				
	GRAND SUMMARY TOTAL QUANTITIES				
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 Blocks and Surface Treatment				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				



ITEM	ITEM DESCRIPTION Mathare Fire Victim ROAD 03 (MFV-RD 03) - 0.042KM	UNIT	QUANTITY MFV-RD 03 80mm HD P.B 150 Stone Base 125 Gravel Subbase 300 Sub Grade (0.042km)	RATE (KSHS)	AMOUNT (KSHS)
BILL No.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
ITEM	Nairobi County- Mathare Fire Victim Informal Settlement DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
III	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.	CIVII	QUANTIT	MILE (KOHS)	AMOUNT (MSHS)
	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.	m ²	273.00		
	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	55.00		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet structures including back filling.	m	3		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY MFV-RD 03 80mm HD P.B 150 Stone Base 125 Gravel Subbase 300 Sub Grade	RATE (KSHS)	AMOUNT (KSHS)
	Mathare Fire Victim ROAD 03 (MFV-RD 03) - 0.042KM		(0.042km)		
	Wiathare Fire Victini ROAD 03 (MFV-RD 03) - 0.042RW				
DILL NO 5	EARTHWORKS				
ITEM	Nairobi County- Mathare Fire Victim Informal Settlement 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.	Civil	QOMITT	KIIL (KSIIS)	THOUSE (ROTE)
	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).				
5.01	Fill in Soft Material Excavating the material, transportation and filling in embankment, including watering and rolling; all in accordance to specification	m³	15.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	7.50		
	Spoil in Soft Material				
5.03	Cut to spoil in soft material	m³	65.00		
	Spoil in Hard Material				
5.04	Excavate, stock pile for reuse and spoil surplus hard material	m³	6.50		
	Compaction of Existing Ground				
5.05	Compaction of formation ground in accordance with the specification	m³	44.10		
	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m³	88.20		
	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m³	26.46		
	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m³	26.46		
5.09	Topsoil Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m²	21.00		
	<u>Grassing</u>				
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, watering and cutting until the grass is firm established or for 6 months	m²	21.00		
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

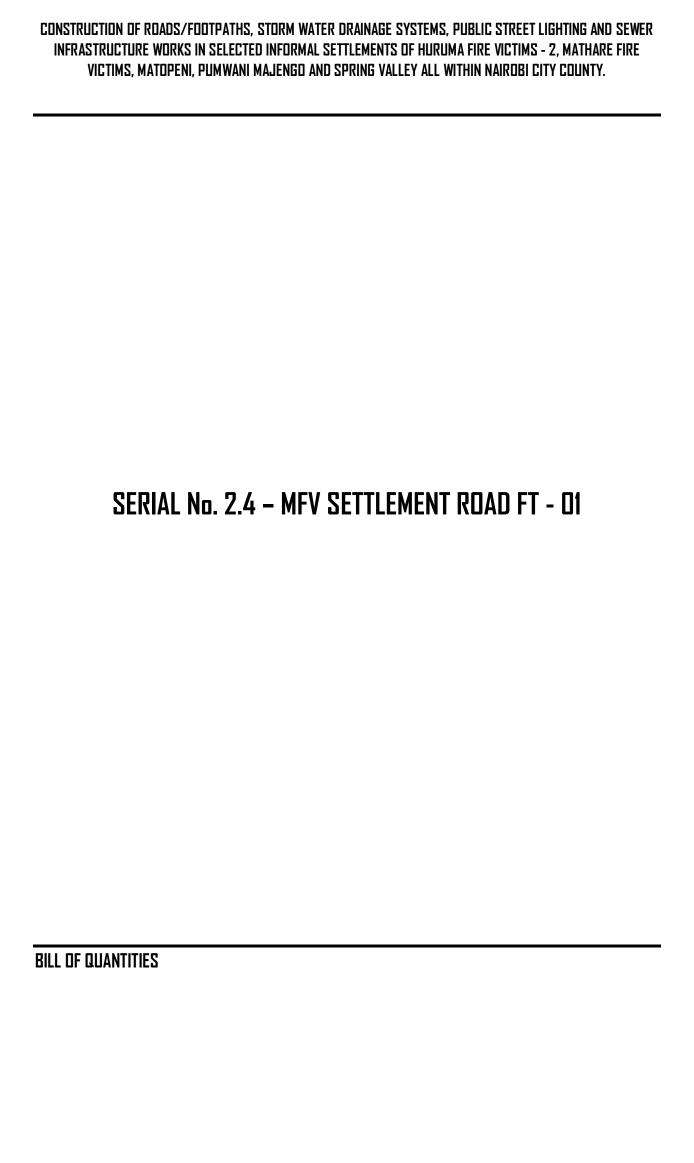
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-RD 03		
			80mm HD P.B		
			150 Stone Base		
			125 Gravel Subbase		
			300 Sub Grade		
,	MALE TO AN A DOAD OF ARTHUR DD OOL OF ANYTHIN		(0.042km)		
	Mathare Fire Victim ROAD 03 (MFV-RD 03) - 0.042KM				
BILL NO.8	CULVERTS AND DRAINAGE				
	Nairobi County- Mathare Fire Victim Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
_	Excavate for Culverts and Subsoil Drains in Soft Material				
1	Excavation in soft material to any depth, compaction of the invert of excavation, backfilling with excavated materials or removing excavated material to spoil; in accordance with the Specification and in conformity with the RE instructions	m³	49		
8.02	Extra over Item 8.01 for excavation in hard material	m³	17		
]	Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material				
1	Excavation in soft material to any depth, compaction of the invert of excavation, backfilling with excavated materials or removing excavated material to spoil; in accordance with the Specification and in conformity with the RE's instructions	m³	1		
8.04	Extra over Item 8.03 for excavation in hard material	m^3	1		
5	Selected backfill material				
	Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE	m³	20		
]	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	12		
8.07	b) 900 mm diameter	m	14		
9	Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains				
	Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions	m³	19		
<u> </u>	Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures				
	Providing and placing the concrete, reinforcement and formwork class F2 all in accordance with the Specification and in conformity with the RE instructions	m³	5		
]	Rectangular Covered Concrete Drain (Road Drain)				
1	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 150mm thick.	m^3	22		
8.11 - (b)	Steel reinforcement for concrete covered drains as specified in the drawings.	Tonne	2		
0.10		m	20		
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	111			
	Provide 250mm PVC pipes at 50m intervals for service ducts TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE		20		

ITEM	ITEM DESCRIPTION	LINIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
1112111	TIEW DESCRIPTION	UNII		KATE (KSHS)	AMOUNT (KSHS)
			MFV-RD 03		
			80mm HD P.B		
			150 Stone Base		
			125 Gravel Subbase		
			300 Sub Grade		
			(0.042km)		
	Mathare Fire Victim ROAD 03 (MFV-RD 03) - 0.042KM				
DILI					
BILL	PASSAGE OF TRAFFIC				
NO.9					
TOTAL C	Nairobi County- Mathare Fire Victim Informal Settlement	TINITE	OVI A NUMERON I	DATE (KONO)	A MOLINITE (IZOLIC)
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
0.01	Construction of Deviations in maximum lengths of 2 km sections				
9.01	All the operations connected with the initial construction of temporary deviations,	,	0.04		
	appropriate width, to allow passage of traffic during the Works; all in accordance	km	0.04		
	with the Specification				
0.00	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide,		4600		
	150mm thick, where directed by the RE and in accordance with the Specification	m ³	16.00		
		Luman			
9.03	Maintenance the passage of traffic	Lump Sum	1.00		
	Provide Signs and Barriers	Sum			
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights,				
,,,,,	etc., along deviations constructed: all inaccordance with Specification and in	Km	0.04		
	conformity with the RE instructions				
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				
DILI					
BILL	NATURAL MATERIAL SUBBASE AND BASE				
NO.12	N. L.C. A. M. J. P. W. A. L.C. A.				
ITEM	Nairobi County- Mathare Fire Victim Informal Settlement	IINIT	OLIANITITY	DATE (IZCHE)	AMOUNT (ZCIIC)
ITEM	DESCRIPTION Natural Gravel Subbase and Base	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Dase				
12.01	Provide, lay and compact subbase in 125mm thick natural gravel material in				
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	44.10		
12.02	conformity with the RE instructions				
12.02	Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm		44.15		
) plus 50mm blinding layer of quarry dust. This Includes 12 tonne vibrating roller	m ³	44.10		
	(min 8 passes)				
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION Mathare Fire Victim ROAD 03 (MFV-RD 03) - 0.042KM	UNIT	QUANTITY MFV-RD 03 80mm HD P.B 150 Stone Base 125 Gravel Subbase 300 Sub Grade (0.042km)	RATE (KSHS)	AMOUNT (KSHS)
BILL NO.13	CONCRETE PAVING BLOCK SURFACE TREATMENT				
	Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material				
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				
13.01	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 directed by the Engineer	m^2	404.00		
	Concrete block paving including all cuttings				
13.02	Provide and lay approved 80mm thick Heavy duty pre-cast concrete paving blocks with minimum strength of 45N/mm 2 to BS 6717 Part 1 of 1986 to road Carriageway etc. and as directed by the Engineer	m^2	303.00		
13.03	Provide and lay approved 60mm thick medium duty pre-cast Coloured concrete paving blocks with minimum strength of 35N/mm 2 to BS 6717 Part 1 of 1986 to road footpaths etc. and as directed by the Engineer	m ²	152.00		
	TOTAL FOR BILL 13 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	IINIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	TIEW DESCRIPTION	UNII	MFV-RD 03	KATE (KSHS)	AMOUNT (KSHS)
			80mm HD P.B		
			150 Stone Base		
			125 Gravel Subbase		
			300 Sub Grade (0.042km)		
	Mathare Fire Victim ROAD 03 (MFV-RD 03) - 0.042KM		(0.042KIII)		
BILL	ROAD FURNITURE				
NO.20					
ITEM	Nairobi County- Mathare Fire Victim Informal Settlement DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			Q	()	
	Warning Signs				
20.01	Excavation for, providing and erecting warning signs size 750mm including backfill	NI-	1		
	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				
20.024	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			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		
20.05C	Equal or more than 2 sq.m but less than 5 sq.m	No.	1		
20.06	• • • • • • • • • • • • • • • • • • • •	140.	1		
20.00	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	m ²	9		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m^2	9		
	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	NT.	1		
	in conformity with the RE instructions	No	1		
	Company to Works				
20.11	Concrete Kerbs Provision, transport, handling, mixing and placing all materials in accordance with				
20.11	Specification and in conformity with the RE instructions				
20.11A	Kerbs 125 mm x 250 mm straight	m	42		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	3		
20.11C	Channel blocks 125mm x 100mm	m	84		
	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.	10		
	Specification, minimum neight 1.5111 -Open 1 leius of wet Lalius				
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-RD 03		, , ,
			80mm HD P.B		
			150 Stone Base		
			125 Gravel Subbase		
			300 Sub Grade (0.042km)		
	Mathare Fire Victim ROAD 03 (MFV-RD 03) - 0.042KM		(0.042Kiii)		
	GRAND SUMMARY TOTAL QUANTITIES				
	National Country Made on Fire Windley Information of				
ITEM	Nairobi County- Mathare Fire Victim Informal Settlement 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 Blocks and Surface Treatment				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				



ITEM	ITEM DESCRIPTION	UNIT	QUANTITY MFV-FP 01	RATE (KSHS)	AMOUNT (KSHS)
			WIF V-F1 UI		
			60mm Paving Blocks		
			300 Gravel Subbase		
			(0.039km)		
	MATHARE FIRE VICTIMS (MFV FT01)-0.039KM		(0.037kiii)		
BILL N0.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Nairobi County- Mathare Fire Victims 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.	m ²	78.00		
	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	16.00		
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				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
1112141	TIEW DESCRIPTION	OIVII	MFV-FP 01	KATE (KSHS)	AMOUNT (KSHS)
			1/11 7-11 01		
			60mm Paving Blocks		
			300 Gravel Subbase		
			(0.039km)		
	MATHARE FIRE VICTIMS (MFV FT01)-0.039KM		(0.037KIII)		
	, , ,				
BILL N0.5	EARTHWORKS				
	Nairobi County- Mathare Fire Victims Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and sharges connected with hardess one 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		4.00		
	rolling; all in accordance to specification	m³	1.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m^3	0.10		
	Spoil in Soft Material				
5.03	Cut to spoil in soft material	m^{3}	19.00		
	Spoil in Hard Material				
5.04	Excavate, stock pile for reuse and spoil surplus hard material	m^3	1.90		
	Compaction of Existing Ground				
5.05	Compaction of formation ground in accordance with the specification				
		m^3	40.95		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO	m^3	81.90		
	T99)	III	01.70		
5.07	Entre coon item 5 07 for compaction of ten 200 mm in 511- to 1000/ MDD (A ACUTO				
	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m^3	24.57		
7.00					
5.08	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO	m^{3}	81.90		
	T99) Topsoil				
5.09	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all		10.50		
	in accordance with the specifications	m ²	19.50		
	Grassing				
5.10	Planting of sprigs of approved indegineous grass types; to embankments, cuttings or		10.50		
	where directed by the RE in accordance with the Specification, including tending,	m^2	19.50		
	watering and cutting until the grass is firm established or for 6 months				
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

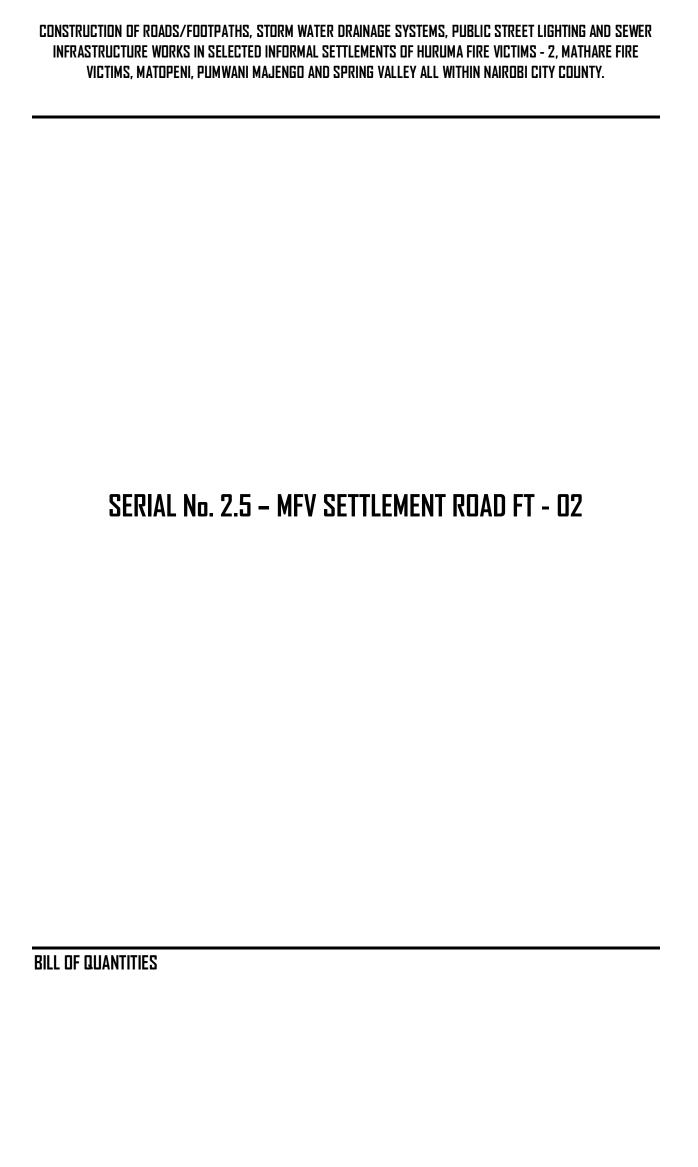
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
1112141	THEM DESCRIPTION	UNII	MFV-FP 01	KATE (KSHS)	AWOUNT (KSHS)
			1411 V 11 U1		
			60mm Paving Blocks		
			300 Gravel Subbase	-	
			(0.039km)	-	
	MATHARE FIRE VICTIMS (MFV FT01)-0.039KM		(0.037Kiii)		
BILL NO.8	CULVERTS AND DRAINAGE				
TODA 4	Nairobi County- Mathare Fire Victims Informal Settlement	TINITE	OTI A NUMERON /	DATE (IZCHE)	AMOUNT (ZCHC)
ITEM	DESCRIPTION Excavate for Culverts and Subsoil Drains in Soft Material	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
8.01	Excavation in soft material to any depth, compaction of the invert of excavation,				
0.01	backfilling with excavated materials or removing excavated material to spoil; in	m^3	42		
	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	m ³	1		
8.04	accordance with the Specification and in conformity with the RE's instructions				
0.04	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	17		
	<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	8		
8.07	b) 900 mm diameter	m	0		
	Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains				
8.09	Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions	m³	9		
	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	m^3	3		
	Rectangular Covered Concrete Drain (Road Drain)				
8.11(a)					
	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,	m^3	20		
	class 25/20, including slotted top cover of 150mm thick.				
8.11 - (b)	Steel reinforcement for concrete covered drains as specified in the drawings.	Tonne	2		
8.12					
	Provide 250mm PVC pipes at 50m intervals for service ducts	m	8		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				
	TOTAL TOTAL TO GRAND SOMETIME TROP				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
112	112112 22001111 11011	01,11	MFV-FP 01	10112 (110110)	
			60mm Paving Blocks		
			300 Gravel Subbase		
			(0.039km)		
	MATHARE FIRE VICTIMS (MFV FT01)-0.039KM		(0.037Kiii)		
BILL	PASSAGE OF TRAFFIC				
NO.9					
	Nairobi County- Mathare Fire Victims 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	km	0.00		
	Specification				
0.02	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide,	m^3	0.00		
	150mm thick, where directed by the RE and in accordance with the Specification	III	0.00		
9.03		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 conformity	Km	0.04		
	with the RE instructions				
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				
BILL	NATURAL MATERIAL SUBBASE AND BASE				
NO.12					
	Nairobi County- Mathare Fire Victims 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 300mm 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	m^3	28.08		
	instructions				
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				_

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY MFV-FP 01 60mm Paving Blocks 300 Gravel Subbase	RATE (KSHS)	AMOUNT (KSHS)
			(0.039km)		
	MATHARE FIRE VICTIMS (MFV FT01)-0.039KM				
BILL NO.13	CONCRETE PAVING BLOCK SURFACE TREATMENT				
	Nairobi County- Mathare Fire Victims 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				
13.01	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 directed by the Engineer	m ²	65.00		
	Coloured Concrete block paving including all cuttings				
13.02	Provide and lay approved 60mm thick medium duty pre-cast Coloured concrete paving blocks with minimum strength of 35N/mm 2 to BS 6717 Part 1 of 1986 to road footpaths etc. and as directed by the Engineer	m ²	65.00		
	TOTAL FOR BILL 13 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-FP 01	· · · · · · · · · · · · · · · · · · ·	
			60mm Paving Blocks 300 Gravel Subbase		
	MATHADE FIDE VICTIMS (MEV PEAL) A MOVEM		(0.039km)		
	MATHARE FIRE VICTIMS (MFV FT01)-0.039KM				
BILL NO.20	ROAD FURNITURE				
ITEM	Nairobi County- Mathare Fire Victims Informal Settlement DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
1112111	Warning Signs	OTIT	QUINTITI	Terre (Herre)	THITOUTH (HSHS)
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.	2		
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.	0		
20.02B	1000 mm size	No.	0		
	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.	0		
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.	0		
20.04B	600x600mm	No.	0		
20.05	Non Standard Informatory Signs	110.	, , , , , , , , , , , , , , , , , , ,		
	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.	0		
20.05B	Equal or more than 1 sq.m but less than 2 sq.m	No.	0		
20.05C	Equal or more than 2 sq.m but less than 5 sq.m	No.	0		
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	4		
20.06B	Yellow paint	m²	4		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m ²	0		
	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			
20.10	Rumble Strips on Pavement Provision, transport and placing of materials in accordance with the Specification and in	3	_		
	conformity with the RE instructions	No	0		
	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	43		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	10		
20.11C	Channel blocks 125mm x 100mm	m	82		
	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				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY MFV-FP 01 60mm Paving Blocks 300 Gravel Subbase (0.039km)	RATE (KSHS)	AMOUNT (KSHS)
	MATHARE FIRE VICTIMS (MFV FT01)-0.039KM				
	GRAND SUMMARY TOTAL QUANTITIES				
ITEM	Nairobi County- Mathare Fire Victims Informal Settlement DESCRIPTION				AMOUNT (KSHS)
4	Site Clearance and Top Soil Stripping				(22222)
5	Earthworks				
8	Culverts and Drainage Works				
9	Passage of Traffic				
12	Natural Material Subbase and Base				
13	Concrete Paving Blocks and Surface Treatment				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				



ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-FP 02		
			60mm Paving Blocks		
			300 Gravel Subbase		
			(0.039km)		
	MATHARE FIRE VICTIMS (MFV FT02)-0.039KM				
BILL	SITE CLEARANCE AND TOPSOIL STRIPPING				
N0.04					
	Nairobi County- Mathare Fire Victims 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	m^2	78.00		
	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 average	m^3	16.00		
	depth 200mm.				
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet		2		
	structures including back filling.	m	2		
	- •				
	TOTAL FOR BILL A CARRIED TO CRAND SHMMARY BACE				
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-FP 02		
			60mm Paving Blocks	-	
			300 Gravel Subbase	_	
			(0.039km)		
	MATHARE FIRE VICTIMS (MFV FT02)-0.039KM		(oroconia)		
BILL NO.5	EARTHWORKS				
	Nairobi County- Mathare Fire Victims Informal Settlement				
ITEM	DESCRIPTION NOTE All 1 de la	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				
5.01	rolling; all in accordance to specification	m^3	1.00		
	Fill in Hard Material				
5.02					
	As Item 5.01 but in hard material	m ³	0.10		
	Spoil in Soft Material				
5.03	Cut to spoil in soft material	m^3	19.00		
	Spoil in Hard Material				
5.04		m³	1.90		
	Excavate, stock pile for reuse and spoil surplus hard material	111	1.50		
7.07	Compaction of Existing Ground				
5.05	Compaction of formation ground in accordance with the specification	m³	40.95		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO	m^3	81.90		
5.07	T99)				
2.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m³	24.57		
5.08	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO	m^3	81.90		
	T99)				
5.09	Topsoil Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all				
5.09	in accordance with the specifications	m ²	19.50		
	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, watering and	m ²	19.50		
	cutting until the grass is firm established or for 6 months	111	17.50		
	salar die grass is in in complished of for o months				
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE		-		

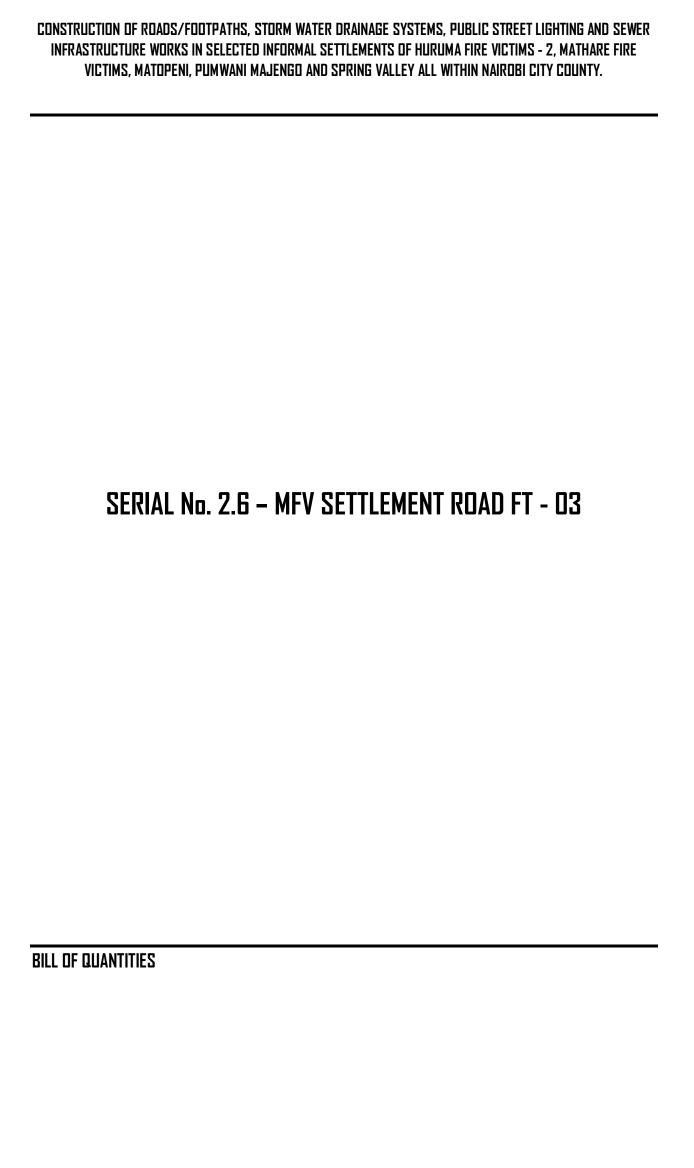
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-FP 02	ì	, ,
			60mm Paving Blocks		
			300 Gravel Subbase		
			(0.0201)		
	MATHARE FIRE VICTIMS (MFV FT02)-0.039KM		(0.039km)		
BILL	CHI VEDES AND DDAINAGE				
NO.8	CULVERTS AND DRAINAGE				
	Nairobi County- Mathare Fire Victims Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
8.01	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	42		
	accordance with the Specification and in conformity with the RE instructions	111	72		
8.02	· · ·	3	1.4		
	Extra over Item 8.01 for excavation in hard material	m³	14		
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,	3	10		
	backfilling with excavated materials or removing excavated material to spoil; in accordance with the Specification and in conformity with the RE's instructions	m³	10		
8.04			10		
	Extra over Item 8.03 for excavation in hard material	m³	10		
	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	17		
	<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	12		
8.07	b) 900 mm diameter	m	0		
	Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains				
8.09	Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions	m³	9		
	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	3		
	Rectangular Covered Concrete Drain (Road Drain)				
8.11(a)					
	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,	m^3	20		
	class 25/20, including slotted top cover of 150mm thick.				
8.11 - (b)	Steel reinforcement for concrete covered drains as specified in the drawings.	Tonne	2		
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	4		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-FP 02	_	
			60mm Paving Blocks	-	
			300 Gravel Subbase		
			(0.039km)	-	
	MATHARE FIRE VICTIMS (MFV FT02)-0.039KM		(0.005)Kiii)		
BILL NO.9	PASSAGE OF TRAFFIC				
	Nairobi County- Mathare Fire Victims Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Construction of Deviations in maximum language of 2 line sections				
9.01	Construction of Deviations in maximum lengths of 2 km sections All the operations connected with the initial construction of temporary deviations,				
7.01	appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification	km	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	0.00		
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 conformity with the RE instructions	Km	0.04		
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				
BILL	NATURAL MATERIAL SUBBASE AND BASE				
NO.12					
ITEM	Nairobi County- Mathare Fire Victims Informal Settlement DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
1115141	DESCRIPTION	01111	QUANTITI	Tarre (Rolls)	iniooni (Rollo)
12.01	Provide, lay and compact subbase in 300mm 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	m³	29.00		
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DECODITION	TINITE	OH ANTERS	DATE (IZCIIC)	AMOUNT (IZCITE)
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-FP 02		
			60mm Paving Blocks		
			300 Gravel Subbase		
			(0.039km)		
	MATHARE FIRE VICTIMS (MFV FT02)-0.039KM				
BILL	CONCRETE DAVING DI OCK CHDEA CE TREATMENT				
NO.13	CONCRETE PAVING BLOCK SURFACE TREATMENT				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	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				
	NOTE: No overhaul will be paid for these items as it shall be deemed to have been				
	included in the Contractor's rates.				
	and the contractor of rates.				
	Jointing Sand				
13.01	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 directed by	m^2	65.00		
	the Engineer				
	Coloured Concrete block paving including all cuttings				
13.02	Provide and lay approved 60mm thick medium duty pre-cast Coloured Concrete Paving				
	blocks with minimum strength of 35N/mm 2 to BS 6717 Part 1 of 1986 to road footpaths	2	(5.00		
	etc. and as directed by the Engineer	m^2	65.00		
	end and an entered by the Drighteer				
	TOTAL FOR BILL 13 CARRIED TO GRAND SUMMARY PAGE				

			MFV-FP 02	RATE (KSHS)	AMOUNT (KSHS)
			60mm Paving Blocks 300 Gravel Subbase		
			(0.039km)		
BILI	IATHARE FIRE VICTIMS (MFV FT02)-0.039KM				
NO.20	OAD FURNITURE				
ITEM Na	airobi County- Mathare Fire Victims Informal Settlement DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
20.01 Ex	Varning Signs xcavation for, providing and erecting warning signs size 750mm including backfill and oncrete 15/20 to bases all in accordance with the Specification and in conformity with the E instructions	No.	2		ì
	riority Signs				
15.	excavating for, providing and erecting priority signs including back filling and concrete 5/20 to bases; all in accordance with the Specification and in conformity with the RE estructions				
20.02A 75	50mm size	No.	0		
20.02B 10	000 mm size	No.	0		
20.03 Ex 15. ins	Andatory Signs Excavating for, providing and erecting prohibitory signs including backfilling and concrete 5/20 to bases; all in accordance with the Specification and in conformity with the RE estructions 1000mm size	No.	0		
Ex	tandard 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 50	00x600mm	No.	0		
20.04B 60	00x600mm	No.	0		
	on Standard Informatory Signs				
con	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				
	ess than 1 sq.m	No.	0		
	qual or more than 1 sq.m but less than 2 sq.m	No.	0		
	Equal or more than 2 sq.m but less than 5 sq.m	No.	0		
Pro and	oad Marking painting reparing 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 structions				
20.064	hite paint	m²	4		
20.06B Ye	ellow paint	m²	4		
	s Item 2007 but 250mm wide				
20.07A a)	White paint	m²	0		
20.09 Pro	peed reduction bituminous bumps at junctions rovision, transport and placing of materials in accordance with the Specification and in onformity with the RE instructions umble Strips on Pavement	No			
20.10 Pro	rovision, transport and placing of materials in accordance with the Specification and in onformity with the RE instructions	No	0		
20.11 Pro Sp	oncrete Kerbs rovision, transport, handling, mixing and placing all materials in accordance with pecification and in conformity with the RE instructions				
20.11A Ke	erbs 125 mm x 250 mm straight	m	39		
20.11B Ke	erbs 125 mm x 250 mm radius 1m - 5m	m	10		
20.11C Ch	hannel blocks 125mm x 100mm	m	78		
20.12 Pla	rees lanting of approved indigenous types of trees where instructed, in accordance with the pecification, minimum height 1.5m -Open Fields or Wet Lands	No.	5		
TC	OTAL OF BILL 20 CARRIED TO SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY MFV-FP 02	RATE (KSHS)	AMOUNT (KSHS)
			IVIF V-F1 UZ	-	
			60mm Paving Blocks		
			300 Gravel Subbase	-	
			(0.039km)		
	MATHARE FIRE VICTIMS (MFV FT02)-0.039KM				
	GRAND SUMMARY TOTAL QUANTITIES				
	GRAND SUMMART TOTAL QUARTITIES				
	Nairobi County- Mathare Fire Victims 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				
13	Concrete Paving Blocks and Surface Treatment				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				



ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-FP 03		
			60mm Paving Blocks		
			100 Gravel Subbase		
			(0.041km)		
	MATHARE FIRE VICTIMS (MFV FT03)-0.041KM		(0.041Kiii)		
BILL	SITE CLEARANCE AND TOPSOIL STRIPPING				
N0.04					
Y	Nairobi County- Mathare Fire Victims Informal Settlement	INIT	OLI A NITETTA		
ITEM	DESCRIPTION NOTE: All and a later of the lat	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.	m ²	82.00		
	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	17.00		
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				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
		00.00	MFV-FP 03	()	(22.20)
			60mm Paving Blocks		
			100 Gravel Subbase		
			(0.041km)		
	MATHARE FIRE VICTIMS (MFV FT03)-0.041KM				
BILL N0.5	EARTHWORKS				
	Nairobi County- Mathare Fire Victims 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).				
5.01	Fill in Soft Material Excavating the material, transportation and filling in embankment, including watering and	m^3	28.00		
	rolling; all in accordance to specification		20.00		
5.02	Fill in Hard Material				
3.02	As Item 5.01 but in hard material	m³	2.80		
5.02	Spoil in Soft Material				
5.03	Cut to spoil in soft material	m^3	10.50		
	Spoil in Hard Material				
5.04	Excavate, stock pile for reuse and spoil surplus hard material Compaction of Existing Ground	m³	10.50		
5.05	Compaction of formation ground in accordance with the specification	m³	43.05		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m³	86.10		
5.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m³	25.83		
5.08	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m³	86.10		
5.09	Topsoil Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m²	20.50		
5.10	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, watering and cutting until the grass is firm established or for 6 months	m²	20.50		
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

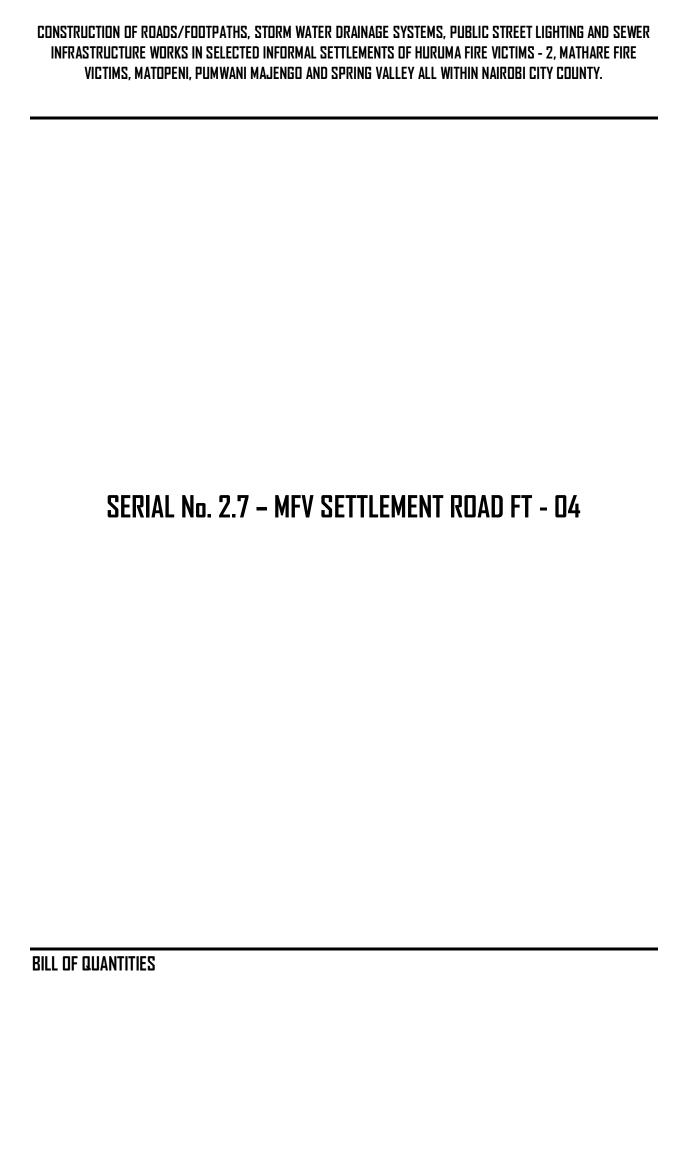
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-FP 03		
			60mm Paving Blocks		
			100 Gravel Subbase		
	MATHARE FIRE VICTIMS (MFV FT03)-0.041KM		(0.041km)		
	WATHARE FIRE VICTIMS (MFV F103)-0.041RM				
BILL					
NO.8	CULVERTS AND DRAINAGE				
1,010	Nairobi County- Mathare Fire Victims 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	m^3	43		
	accordance with the Specification and in conformity with the RE instructions				
8.02	Extra over Item 8.01 for excavation in hard material	m^3	15		
	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	m^3	1		
	accordance with the Specification and in conformity with the RE's instructions				
8.04	Extra over Item 8.03 for excavation in hard material	m^3	1		
	Selected backfill material				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications and	2	10		
	in conformity with the instructions of the RE	m³	18		
	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	8		
8.07	b) 900 mm diameter	m	0		
	Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains				
8.09	Providing and placing the concrete; all in accordance with the Specification and in	2	0		
	conformity with the RE instructions	m³	9		
	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	3		
	Rectangular Covered Concrete Drain (Road Drain)				
8.11(a)					
- ()	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,	m^3	21		
	class 25/20, including slotted top cover of 150mm thick.				
8.11 - (b)	Steel reinforcement for concrete covered drains as specified in the drawings.	Tonne	2		
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	5		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	IINIT	OHANTITY	DATE (IZCHE)	AMOUNT (IZCIIC)
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-FP 03		
			60mm Paving Blocks		
			100 Gravel Subbase		
			100 Graver Subbase		
			(0.041km)		
	MATHARE FIRE VICTIMS (MFV FT03)-0.041KM		(oto 11km)		
BILL	DAGGACE OF TRAFFIC				
NO.9	PASSAGE OF TRAFFIC				
	Nairobi County- Mathare Fire Victims 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	km	0.00		
	Specification				
9.02	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide,	m ³	0.00		
	150mm thick, where directed by the RE and in accordance with the Specification				
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, etc.,	17	0.04		
	along deviations constructed: all inaccordance with Specification and in conformity with the RE instructions	Km	0.04		
	the RE instructions				
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				
	TOTAL FOR BILL / CARRIED TO GRAND SUMMART TAGE				
BILL					
NO.12	NATURAL MATERIAL SUBBASE AND BASE				
1,0,12	Nairobi County- Mathare Fire Victims Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base			`	· /
12.01	Provide, lay and compact subbase in 100mm thick natural gravel material in carriageway,				
	bus bays, footpaths, shoulders and junctions from the designated quarries listed in the	m^3	8.00		
	Special Specification in accordance with the Specification and in conformity with the RE	111	0.00		
	instructions				
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-FP 03		
			(O Di DII		
			60mm Paving Blocks 100 Gravel Subbase		
			100 Graver Subbase		
			(0.041km)		
	MATHARE FIRE VICTIMS (MFV FT03)-0.041KM				
BILL NO.13	CONCRETE PAVING BLOCK SURFACE TREATMENT				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	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				
	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				
13.01	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 directed by the Engineer	m ²	68.00		
	Coloured Concrete block paving including all cuttings				
13.02	Provide and lay approved 60mm thick medium duty pre-cast Coloured Concrete paving blocks with minimum strength of 35N/mm 2 to BS 6717 Part 1 of 1986 to road footpaths etc. and as directed by the Engineer	m ²	68.00		
	TOTAL FOR BILL 13 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-FP 03		
			60mm Paving Blocks 100 Gravel Subbase		
			(0.041km)		
	MATHARE FIRE VICTIMS (MFV FT03)-0.041KM		(0.041KIII)		
BILL NO.20	ROAD FURNITURE				
110.20	Nairobi County- Mathare Fire Victims Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
20.01	Warning Signs Excavation for, providing and erecting warning signs size 750mm including backfill and				
20.01	concrete 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions	No.	2		
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.	0		
20.02B	1000 mm size	No.	0		
20.03	Mandatory Signs Excavating for, providing and erecting prohibitory signs including backfilling and concrete				
20.03	15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions 1000mm size	No.	0		
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.	0		
20.04B	600x600mm	No.	0		
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.	0		
20.05B	Equal or more than 1 sq.m but less than 2 sq.m	No.	0		
20.05C	Equal or more than 2 sq.m but less than 5 sq.m	No.	0		
20.06		NO.	0		
20.00	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	5		
20.06B	Yellow paint	m²	5		
20.05					
20.07 20.07A	As Item 2007 but 250mm wide a) White paint	m ²	0		
20.0711		111	0		
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	No			
20.10	Rumble Strips on Pavement				
20.10	Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions	No	0		
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	41		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	10		
20.11C					
	Channel blocks 125mm x 100mm	m	82		
20.12	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		
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				
	The state of the s				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY MFV-FP 03 60mm Paving Blocks 100 Gravel Subbase	RATE (KSHS)	AMOUNT (KSHS)
			100 Gravei Subbase		
	MATHADE EIDE VICTIMO (MEV ETO) O O 11/2M		(0.041km)		
	MATHARE FIRE VICTIMS (MFV FT03)-0.041KM				
	GRAND SUMMARY TOTAL QUANTITIES				
	Nairobi County- Mathare Fire Victims 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				
13	Concrete Paving Blocks and Surface Treatment				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				



ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-FP 04		
			60mm Paving Blocks		
			300 Gravel Subbase	-	
			(0.043km)		
	MATHARE FIRE VICTIMS (MFV FT04)-0.043KM		(0.042 Kill)		
BILL N0.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Nairobi County- Mathare Fire Victims 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 namage.				
	Site Clearance				
4.01	Clearing existing road of all trees, vegetation, debris and rubbish of any nature; including				
4.01	the grubbing of stumps and roots and the disposal from the area of all spoil materials	m ²	86.00		
	resulting from clearing and grubbing all in accordance with the specifications.	III	80.00		
	resulting from clearing and grubbing an 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 average	m³	18.00		
	depth 200mm.				
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet	m	2		
	structures including back filling.	111			
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-FP 04	1	ì
			60mm Paving Blocks		
			300 Gravel Subbase		
			(0.042)	-	
	MATHARE FIRE VICTIMS (MFV FT04)-0.043KM		(0.043km)		
	MATERIAL FIELD (MT V 1104) OUNDEN				
BILL N0.5	EARTHWORKS				
ITEM	Nairobi County- Mathare Fire Victims Informal Settlement	TINITE	OT A NUTRITINA	DATE (VOIIC)	AMOUNT (KSHS)
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSBS)
	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	25.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	25.00		
	Spoil in Soft Material				
5.03		2	22.00		
	Cut to spoil in soft material	m³	33.00		
	Spoil in Hard Material				
5.04		m³	23.10		
	Excavate, stock pile for reuse and spoil surplus hard material Compaction of Existing Ground				
5.05	Compaction of Existing Ground Compaction of formation ground in accordance with the specification				
3.03	compaction of formation ground in accordance with the specimention	m³	45.15		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m³	90.30		
5.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m³	27.09		
5.08	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m³	90.30		
	Topsoil				
5.09	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m²	21.50		
5.10	Grassing			1	
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, watering and cutting until the grass is firm established or for 6 months	m²	21.50		
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

ITEM	CONSTRUCTION OF INFRASTRUCTURE IMPROVEMENT WORKS IN SELECTED				AMOUNT (ZCHC)
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY MEY ED 04	KATE (KSHS)	AMOUNT (KSHS)
			MFV-FP 04	+	
			60mm Paving Blocks		
			300 Gravel Subbase	1	
			(0.043km)		
	MATHARE FIRE VICTIMS (MFV FT04)-0.043KM				
BILL					
NO.8	CULVERTS AND DRAINAGE				
	Nairobi County- Mathare Fire Victims 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,				
0.01	backfilling with excavated materials or removing excavated material to spoil; in	m³	50		
	accordance with the Specification and in conformity with the RE instructions				
8.02	Extra over Item 8.01 for excavation in hard material	m³	17		
	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	10		
	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	10		
	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	18		
	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	12		
8.07	b) 900 mm diameter	m	0		
	Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains				
8.09	Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions	m³	9		
	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	3		
	Rectangular Covered Concrete Drain (Road Drain)				
8.11(a)					
0.11(u)	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,	m ³	22		
	class 25/20, including slotted top cover of 150mm thick.				
8.11 - (b)	Steel reinforcement for concrete covered drains as specified in the drawings.	Tonne	2		
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	5		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				
	TOTAL FOR DIEL O CARRIED TO GRAND SUMMART TAGE				

	CONSTRUCTION OF INFRASTRUCTURE IMPROVEMENT WORKS IN SELECTED				
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-FP 04		
			60mm Paving Blocks		
			300 Gravel Subbase		
			(0.043km)	-	
	MATHARE FIRE VICTIMS (MFV FT04)-0.043KM		(0.045KIII)		
BILL					
NO.9	PASSAGE OF TRAFFIC				
	Nairobi County- Mathare Fire Victims 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	km	0.00		
	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	0.00		
	Tronini tinek, where directed by the RE and in accordance with the Specification				
9.03	Maintenance the passage 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 conformity with	Km	0.04		
	the RE instructions				
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				
BILL	NATURAL MATERIAL SUBBASE AND BASE				
NO.12					
	Nairobi County- Mathare Fire Victims 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 100mm 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	m³	8.00		
	instructions				
	India de do do				
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				

BILL NO.13 TTEM NOTE: No haulage will haulage shall be included NOTE: No overhaul will included in the Contract Jointing Sand 13.01 Supply, lay and approprise	TIMS (MFV FT04)-0.043KM BLOCK SURFACE TREATMENT		MFV-FP 04 60mm Paving Blocks 300 Gravel Subbase		
BILL NO.13 ITEM NOTE: No haulage will haulage shall be included NOTE: No overhaul will included in the Contract Jointing Sand 13.01 Supply, lay and approprise	· · · · · · · · · · · · · · · · · · ·				
BILL NO.13 ITEM NOTE: No haulage will haulage shall be included NOTE: No overhaul will included in the Contract Jointing Sand 13.01 Supply, lay and approprise	· · · · · · · · · · · · · · · · · · ·				
BILL NO.13 ITEM NOTE: No haulage will haulage shall be included NOTE: No overhaul will included in the Contract Jointing Sand 13.01 Supply, lay and approprise	· · · · · · · · · · · · · · · · · · ·		300 Gravei Subbase		
BILL NO.13 ITEM NOTE: No haulage will haulage shall be included NOTE: No overhaul will included in the Contract Jointing Sand 13.01 Supply, lay and approprise	· · · · · · · · · · · · · · · · · · ·				
BILL NO.13 ITEM NOTE: No haulage will haulage shall be included NOTE: No overhaul will included in the Contract Jointing Sand 13.01 Supply, lay and approprise	· · · · · · · · · · · · · · · · · · ·		(0.043km)		
NO.13 CONCRETE PAVING ITEM NOTE: No haulage will haulage shall be include NOTE: No overhaul wil included in the Contrac Jointing Sand 13.01 Supply, lay and appropria	BLOCK SURFACE TREATMENT				
NOTE: No haulage will haulage shall be include NOTE: No overhaul wil included in the Contrac Jointing Sand 13.01 Supply, lay and appropria					
NOTE: No overhaul will included in the Contract Jointing Sand 13.01 Supply, lay and appropria	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
NOTE: No overhaul will included in the Contract Jointing Sand 13.01 Supply, lay and appropria	be paid for aggregates, bitumen or the premix. The cost for				
included in the Contrac Jointing Sand 13.01 Supply, lay and appropria	ed in the rates. Rates to be inclusive of fines				
Jointing Sand 13.01 Supply, lay and approprise	ll be paid for these items as it shall be deemed to have been				
13.01 Supply, lay and appropria					
FF5,5FFF					
1	ately spread jointing sand 10-20mm thick to Concrete paving				
blocks to the road and ju the Engineer	unctions all in accordance with the specifications or as directed by	m ²	71.00		
Coloured Concrete bloc	ck paving including all cuttings				
13.02 Provide and lay approved	d 60mm thick medium duty pre-cast Coloured Concrete paving				
blocks with minimum stre	ength of 35N/mm 2 to BS 6717 Part 1 of 1986 to road footpaths	m ²	71.00		
etc. and as directed by the	e Engineer	1			
TOTAL FOR BILL 13	CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-FP 04		
			60mm Paving Blocks 300 Gravel Subbase		
	MATHARE FIRE VICTIMS (MFV FT04)-0.043KM		(0.043km)		
BILL					
NO.20	ROAD FURNITURE				
	Nairobi County- Mathare Fire Victims 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.	2		
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 20.02B	750mm size 1000 mm size	No.	0		
	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.	0		
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.	0		
20.04B	600x600mm	No.	0		
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.	0		
20.05B	Equal or more than 1 sq.m but less than 2 sq.m	No.	0		
20.05C	Equal or more than 2 sq.m but less than 5 sq.m	No.	0		
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	m ²	5		
20.06B	Yellow paint	m²	5		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m²	0		
	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			
20.10	Rumble Strips on Pavement Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions	No	0		
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	43		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	11		
20.11C	Channel blocks 125mm x 100mm	m	86		
	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		

Page 56 of 196

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-FP 04	1	
			60mm Paving Blocks	-	
			300 Gravel Subbase	1	
			boo Graver Subsuse		
			(0.043km)		
	MATHARE FIRE VICTIMS (MFV FT04)-0.043KM				
	GRAND SUMMARY TOTAL QUANTITIES Nairobi County- Mathare Fire Victims 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				
13	Concrete Paving Blocks and Surface Treatment				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				

CONSTRUCTION OF ROADS/FOOTPATHS, STORM WATER DRAINAGE SYSTEMS, PUBLIC STREET LIGHTING AND SEWER INFRASTRUCTURE WORKS IN SELECTED INFORMAL SETTLEMENTS OF HURUMA FIRE VICTIMS - 2, MATHARE FIRE VICTIMS, MATOPENI, PUMWANI MAJENGO AND SPRING VALLEY ALL WITHIN NAIROBI CITY COUNTY.
SERIAL No.3.0- HURUMA FIRE VICTIMS SETTLEMENT SUMMARY PAGE

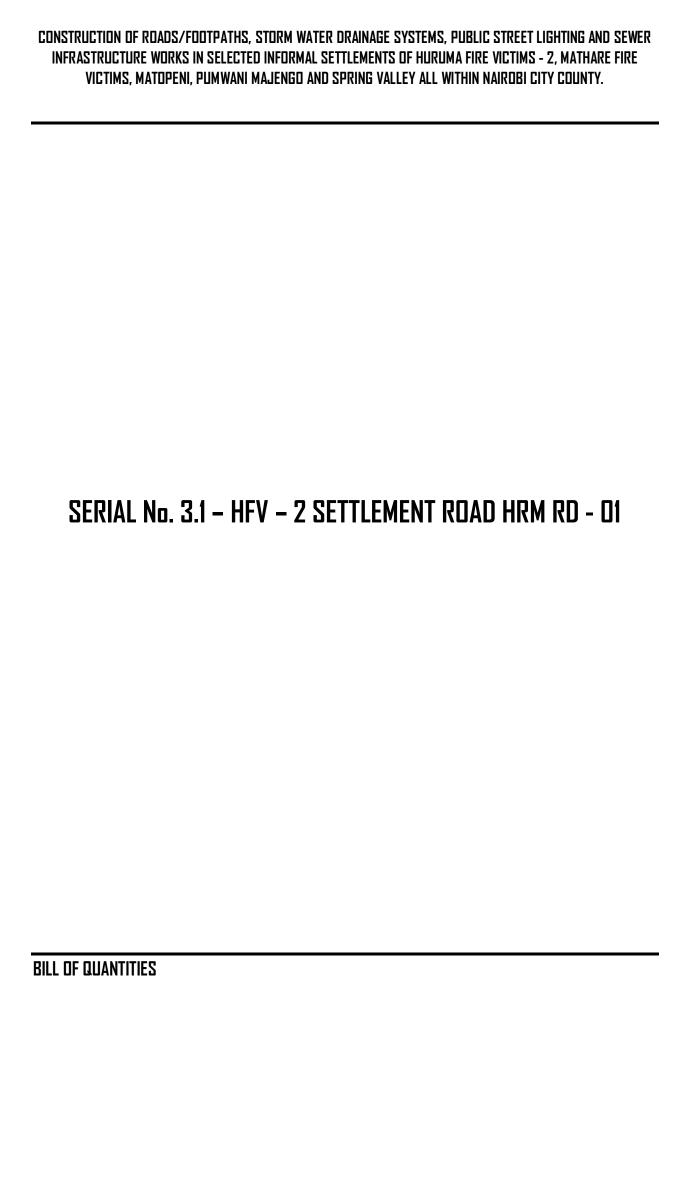
BILL OF QUANTITIES

69 of 234

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

BILLS OF QUANTITIES HURUMA FIRE VICTIM SUMMARY

SERIAL No.	ITEM DESCRIPTION	AMOUNT (KES)
	Road Works	
3.1	HRM RD01	
3.2	HRM RD02	
3.3	HRM RD03	
3.4	HRM RD04	
3.5	HRM RD06	
3.6	HRM RD07	
A	SUB -TOTAL -1 CARRIED TO GRAND SUMMARY PAGE	



ITEM	ITEM DESCRIPTION	UNIT	QUANTITY HRM-RD 01 50 A.C 150 Stone Base 150 Gravel Subbase 300 Sub Grade (0.207km)	RATE (KSHS)	AMOUNT (KSHS)
	HURUMA (HRM RD01- 0.207KM		(0.207KIII)		
BILL N0.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Nairobi County- Huruma (HRM) Informal Settlement				
ITEM	DESCRIPTION NOTE: All costs and charges connected with haulage are to be included within the unit	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	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.	m ²	1,449.00		
	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	290.00		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet structures including back filling.	m	14		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			HRM-RD 01		
			50 A.C		
			150 Stone Base		
			150 Gravel		
			Subbase 300 Sub Grade		
	HITDUMA (HDM DD04 A AGRICA)		(0.207km)		
	HURUMA (HRM RD01- 0.207KM				
BILL N0.5	EARTHWORKS				
	Nairobi County- Huruma (HRM) 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	35.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	24.50		
	Spoil in Soft Material				
5.03	Cut to spoil in soft material	m³	725.00		
5.04	Spoil in Hard Material				
5.04		m³	72.50		
	Excavate, stock pile for reuse and spoil surplus hard material				
5.05	Compaction of Existing Ground Compaction of formation ground in accordance with the specification				
3.03	Compaction of formation ground in accordance with the specification	m³	217.35		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m³	434.70		
5.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m³	130.41		
5.08	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m³	130.41		
	Topsoil				
5.09	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m ²	103.50		
	-				
·	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, watering and cutting until the grass is firm established or for 6 months	m ²	103.50		
	TOTAL FOR BULL & CARRIED TO CRAND CUROS BY BURLOR				
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

**************************************	CONSTRUCTION OF INFRASTRUCTURE IMPROVEMENT WORKS IN SELECTED INFOR				AND THE OWNER OF THE OWNER
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			HRM-RD 01 50 A.C	-	
			150 Stone Base		
			150 Gravel		
			Subbase		
			300 Sub Grade		
			(0.207km)		
	HURUMA (HRM RD01- 0.207KM		(**************************************		
BILL NO.8	CULVERTS AND DRAINAGE				
110.8	Nairobi County- Huruma (HRM) 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 accordance with the Specification and in conformity with the RE instructions	m³	203		
8.02	Extra over Item 8.01 for excavation in hard material	m³	68		
	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 accordance with the Specification and in conformity with the RE's instructions	m³	50		
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 and in conformity with the instructions of the RE	m³	81		
	In-situ culverts				
0.06	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	54		
8.07	b) 900 mm diameter	m	14		
	Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains				
8.09	Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions	m³	57		
	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	13		
	Rectangular Covered Concrete Drain (Road Drain)				
8.11(a)	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 150mm thick.	m ³	106		
8.11 - (b)	Steel reinforcement for concrete covered drains as specified in the drawings.	Tonne	8		
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	42		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.9	PASSAGE OF TRAFFIC				
Impa.	Nairobi County- Huruma (HRM) Informal Settlement	LINITE	OHA NITHTEN	DATE (ZOUC)	A MOUNT (EZOTEO)
ITEM	DESCRIPTION Construction of Deviations in maximum lengths of 2 km sections	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
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	78.00		
9.03	Maintenance the passage of traffic	Lump Sum	1.00		
	Provide Signs and Barriers				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY HRM-RD 01 50 A.C 150 Stone Base 150 Gravel Subbase 300 Sub Grade	RATE (KSHS)	AMOUNT (KSHS)
	HURUMA (HRM RD01- 0.207KM		(0.207km)		
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights, etc., along deviations constructed: all inaccordance with Specification and in conformity with the RE instructions	Km	0.21		
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				

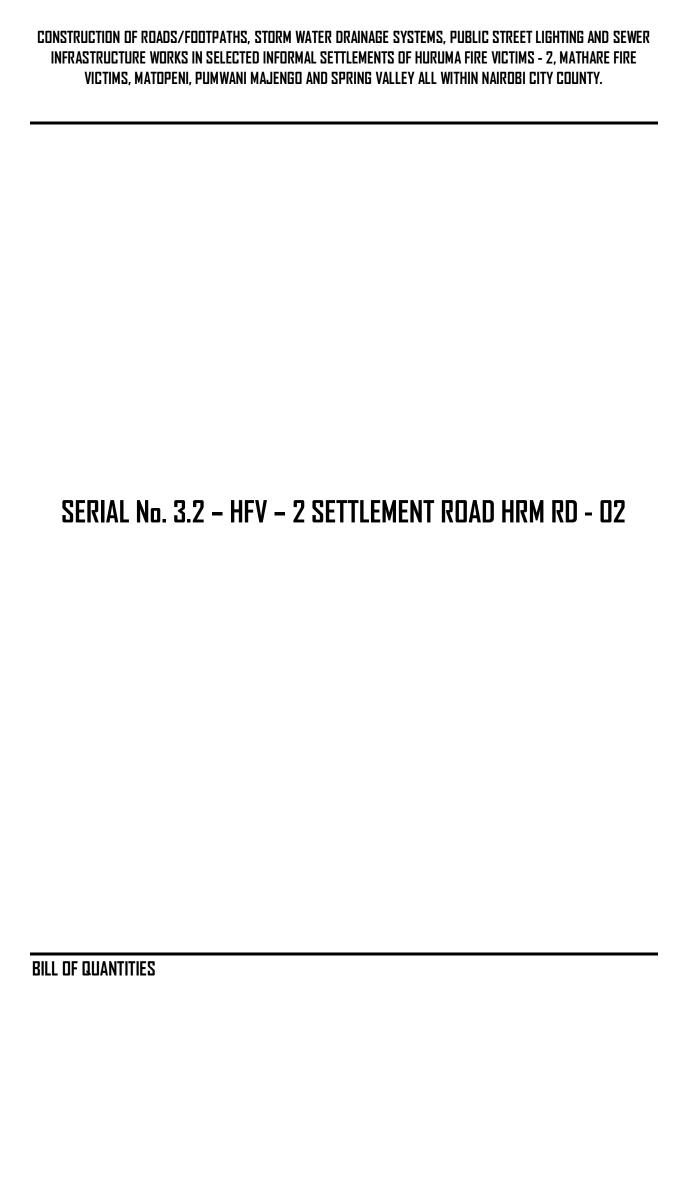
ITEM	ITEM DESCRIPTION HURUMA (HRM RD01- 0.207KM		QUANTITY HRM-RD 01 50 A.C 150 Stone Base 150 Gravel Subbase 300 Sub Grade (0.207km)	RATE (KSHS)	AMOUNT (KSHS)
BILL					
NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Nairobi County- Huruma (HRM) Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (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	m³	202.00		
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	202.00		
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.13	CONCRETE PAVING BLOCK SURFACE TREATMENT				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Excavation in soft material to any depth, compaction of the invert of excavation, backfilling with excavated materials or removing excavated material to spoil; in accordance with the Specification and in conformity with the RE instructions 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				
13.01	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 directed by the Engineer	m ²	342.00		
	Coloured Concrete block paving including all cuttings				
13.02	Provide and lay approved 60mm thick medium duty pre-cast Coloured Concrete paving blocks with minimum strength of 35N/mm 2 to BS 6717 Part 1 of 1986 to road footpaths etc. and as directed by the Engineer	m ²	342.00		
	TOTAL FOR BILL 13 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			HRM-RD 01		
			50 A.C		
			150 Stone Base		
			150 Gravel		
			Subbase		
			300 Sub Grade		
			(0.207km)		
	HURUMA (HRM RD01- 0.207KM				
BILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
	Nairobi County- Huruma (HRM) Informal Settlement				
	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	1242.0		
15.01B	K1-60 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	1242.0		
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.16	BITUMINOUS MIXES				
	Nairobi County- Huruma (HRM) 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	69.0		
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			HRM-RD 01	, , ,	,
			50 A.C 150 Stone Base	1 1	
			150 Gravel		
			Subbase		
			300 Sub Grade		
			(0.207km)		
	HURUMA (HRM RD01- 0.207KM				
BILL NO.20	ROAD FURNITURE				
110120	Nairobi County- Huruma (HRM) Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
20.01	Warning Signs				
20.01	Excavation for, providing and erecting warning signs size 750mm including backfill and	N.T.			
	concrete 15/20 to bases all in accordance with the Specification and in conformity with the RE	No.	1		
20.02	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 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 concrete				
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	No.	1		
	instructions 1000mm size	110.	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	m ²	42		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m ²	42		
	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				
20.10	Provision, transport and placing of materials in accordance with the Specification and in	No	5		
	conformity with the RE instructions	<u> </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	228		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	10		
		1			
20.11B 20.11C	Channel blocks 125mm x 100mm	m	455		
		m	455		
20.11C	Trees				
		m No.	10		
20.11C	Trees Planting of approved indigenous types of trees where instructed, in accordance with the				

Page 65 of 197

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			HRM-RD 01		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade	1	
			(0.207km)	1	
	HURUMA (HRM RD01- 0.207KM				
	GRAND SUMMARY TOTAL QUANTITIES				
	Nairobi County- Huruma (HRM) 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				
13	Concrete Paving Blocks and Surface Treatment				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				



ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			HRM-RD 02		
			50mm A.C		
			150 Stone Base		
			150 Gravel		
			Subbase		
			300 Sub Grade		
			(0.202km)		
	HURUMA (HRM RD02- 0.202KM				
BILL No.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Nairobi County- Huruma (HRM) 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;				
1.01	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	m ²	1,010.00		
	specifications.				
	openion.				
	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	202.00		
	average depth 200mm.		202.00		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet				
1.05	structures including back filling.	m	11		
	out ming.				
	TOTAL TOD DAY A GARDEN TO OR AND GRAND TO TO				
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

	VERNA DES COMPENSAV	*******	O.V. I. N. IMPERIOR	D. mp. grava	AND THE GLOSTIC
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			HRM-RD 02		
			50mm A.C		
			150 Stone Base		
			150 Gravel		
			Subbase		
			300 Sub Grade		
			(0.202km)		
	HURUMA (HRM RD02- 0.202KM		(0.2021)		
BILL N0.5	EARTHWORKS				
	Nairobi County- Huruma (HRM) 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)				
	TI				
	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	36.00		
	and rolling; all in accordance to specification	m	36.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	3.60		
	Spoil in Soft Material				
5.03	Cut to spoil in soft material	m³	469.00		
	Spoil in Hard Material				
5.04	Excavate, stock pile for reuse and spoil surplus hard material	m³	46.90		
	Compaction of Existing Ground				
5.05	Compaction of formation ground in accordance with the specification	m³	212.10		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD	2	424.20		
	(AASHTO T99)	m³	424.20		
5.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO	m³	127.26		
	T99)				
5.08	Provide, lay and compact 300mm improved sub grade material to 100% MDD	m³	127.26		
	(AASHTO T99)				
	<u>Topsoil</u>				
5.09	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be	m ²	101.00		
	50mm; all in accordance with the specifications				
	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,	m ²	101.00		
	watering and cutting until the grass is firm established or for 6 months				
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

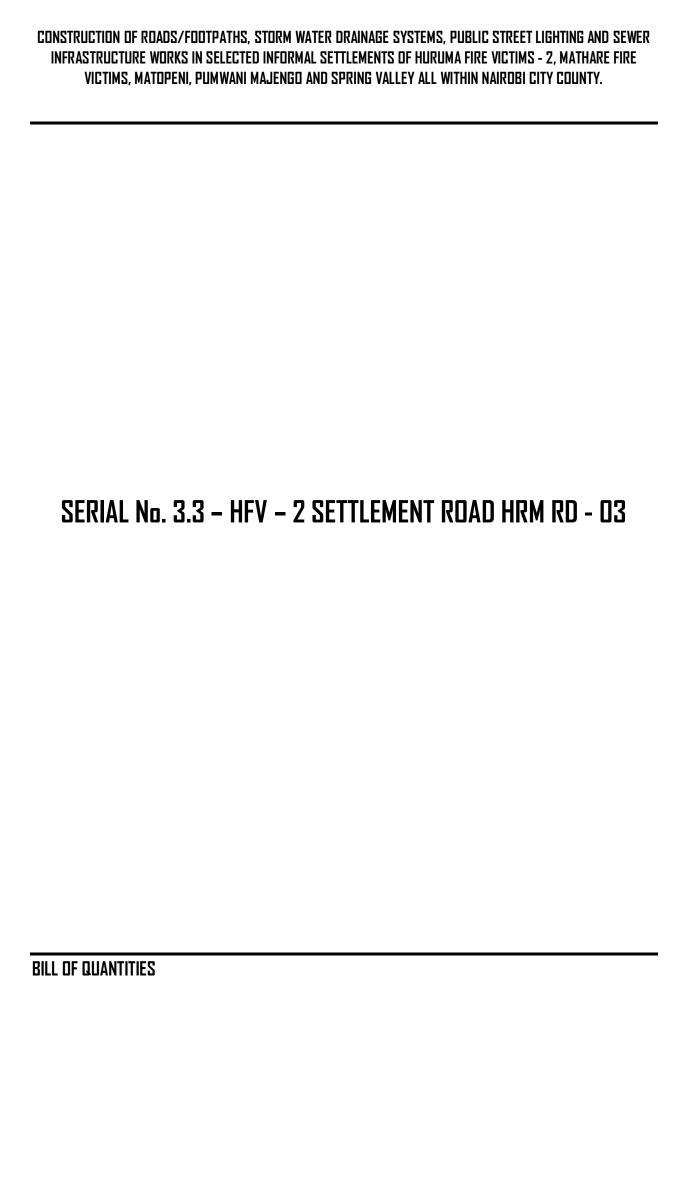
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			HRM-RD 02		
			50mm A.C		
			150 Stone Base		
			150 Gravel		
			Subbase		
			300 Sub Grade		
			(0.202km)		
	HURUMA (HRM RD02- 0.202KM				
BILL NO.8	CULVERTS AND DRAINAGE				
	Nairobi County- Huruma (HRM) Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
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	105		
	accordance with the Specification and in conformity with the RE instructions	m³	195		
8.02	Extra over Item 8.01 for excavation in hard material	m³	65		
0.02	Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material	III"	03		
8.03	Excavation in soft material to any depth, compaction of the invert of excavation,				
0.03	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				
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				
0.02	and in conformity with the instructions of the RE	m³	78		
	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	54		
8.07	b) 900 mm diameter	m	7		
	Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains				
8.09	Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions	m³	53		
	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				
8.10	accordance with the Specification and in conformity with the RE instructions	m³	12		
	Rectangular Covered Concrete Drain (Road Drain)				
8.11(a)					
- ()	Provide all materials and construct 500mm(Bottom width) wide (internal dimension)				
	rectangualr concrete drains 150mm thick walls and bottom base, average height of	m ³	104		
	0.8m, class 25/20, including slotted top cover of 150mm thick.				
8.11 - (b)	Steel reinforcement for concrete covered drains as specified in the drawings.	Tonne	9		
8.12	Provide 250mm DVC nines at 50m intervals for service duets	,m	41		
	Provide 250mm PVC pipes at 50m intervals for service ducts	m	41		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

			I	I	
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			HRM-RD 02		
			50mm A.C		
			150 Stone Base		
			150 Gravel		
			Subbase		
			300 Sub Grade		
			(0.202km)		
	HURUMA (HRM RD02- 0.202KM				
BILL	PASSAGE OF TRAFFIC				
NO.9					
	Nairobi County- Huruma (HRM) 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,	,	0.10		
	appropriate width, to allow passage of traffic during the Works; all in accordance with	km	0.10		
	the Specification				
0.00	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide,	m³	76.00		
9.03	150mm thick, where directed by the RE and in accordance with the Specification				
9.03	Maintenance the passage of traffic	Lump Sum	1.00		
	Provide Signs and Barriers	Sum			
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights,				
9.04	etc., along deviations constructed: all inaccordance with Specification and in	Km	0.20		
	conformity with the RE instructions	10111	0.20		
	volitorinity with the red instructions				
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				
BILL	NATURAL MATERIAL SUBBASE AND BASE				
NO.12	N. I.C. (H. GIDNOTE IC. (I				
ITEM	Nairobi County- Huruma (HRM) Informal Settlement DESCRIPTION	UNIT	QUANTITY	DATE (KEHE)	AMOUNT (ZCHC)
HEM		UNII	QUANTITY	KATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base				
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				
	quarries listed in the Special Specification in accordance with the Specification and in	m³	167.00		
	conformity with the RE instructions				
12.02	Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm				
1) plus 50mm blinding layer of quarry dust. This Includes 12 tonne vibrating roller	m³	167.00		
	(min 8 passes)		107.00		
	(\ '1 /				
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			HRM-RD 02		
			50mm A.C		
			150 Stone Base		
			150 Gravel		
			Subbase		
			300 Sub Grade		
			(0.202km)		
	HURUMA (HRM RD02- 0.202KM				
BILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
	Nairobi County- Huruma (HRM) 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	1334.0		
15.01B	$K1-60$ cationic emulsion tack coat on primed treated base at nominal rate of $0.4-1.0$ ltr/m^2 to base course on on carriageway, bus bays, footpaths, shoulders and junctions	ltr	1334.0		
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.16	BITUMINOUS MIXES				
	Nairobi County- Huruma (HRM) 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	57.0		
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			HRM-RD 02		
			50mm A.C	4	
			150 Stone Base		
			150 Gravel		
			Subbase		
			300 Sub Grade		
	HURUMA (HRM RD02- 0.202KM		(0.202km)		
BILL					
NO.20	ROAD FURNITURE				
FEEN	Nairobi County- Huruma (HRM) Informal Settlement	UNIT	OLIA NITETTY	DATE (IZCHE)	AMOUNT (ZCHC)
ITEM	DESCRIPTION Warning Signs	UNII	QUANTITY	KATE (KSHS)	AMOUNT (KSHS)
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	No.	1		
20.02	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 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				
20.05.4	with the RE instructions	N.T.			
20.05A 20.05B	Less than 1 sq.m	No.	1		
	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	m ²	41		
20.07	As Itam 2007 but 250mm wide				
	As Item 2007 but 250mm wide		41		
20.07A	a) White paint	m ²	41		
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	No	2		
20.10	Rumble Strips on Pavement Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions	No	5		
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	222		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	10		
20.11C	Channel blocks 125mm x 100mm	m	444		
	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.	10		

VIDEO 5	WELL DESCRIPTION	* 13 1 Y TO	LOVE A SUMMER	D. C.	A CONTRACTOR (CONTRACTOR)
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			HRM-RD 02	-	
			50mm A.C 150 Stone Base		
			150 Stone Base		
			150 Gravel		
			Subbase		
			300 Sub Grade		
	THIDDIMA (HDM DD02 & 2021/M		(0.202km)		
	HURUMA (HRM RD02- 0.202KM				
	GRAND SUMMARY TOTAL QUANTITIES				
	GRAND SUMMART TOTAL QUANTITIES				
	Nairobi County- Huruma (HRM) 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				
13	Concrete Paving Blocks and Surface Treatment				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				



*****	VEED A DESCRIPTION	* 13 177	lovi i vimemi	D. TEL GIGING	AND THE CHARLES
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			HRM-RD 03		
			50 A.C		
			150 Stone Base		
			150 Gravel		
			Subbase		
			300 Sub Grade		
			Sub Grade		
			(0.147km)		
	HURUMA (HRM RD03- 0.147KM				
BILL	SITE CLEARANCE AND TOPSOIL STRIPPING				
N0.04					
	Nairobi County- Huruma (HRM) Informal Settlement	******	O.V. A.V. STORMAN	D. C.	A DATE OF THE STATE OF THE STAT
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	m ²	725.00		
	spoil materials resulting from clearing and grubbing all in accordance with the	m ²	735.00		
	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	m³	147.00		
4.02	instructions average depth 200mm.				
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and	m	8		
	outlet structures including back filling.				
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

ITEM.	ITEM DESCRIPTION	LINUT	OHANTER	DATE (KOHO)	AMOUNT (ZOZO)
ITEM	TIEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			HRM-RD 03		
			50 A.C		
			150 Stone Base		
			150 Gravel		
			Subbase		
			300 Sub Grade		
			300 Sub Grade		
			(0.147km)		
	HURUMA (HRM RD03- 0.147KM		(0.147 Kill)		
BILL N0.5	EARTHWORKS				
TOTAL F	Nairobi County- Huruma (HRM) Informal Settlement	TINITE	OT A NUMBER	DATE (KOHO)	AMOUNT (KOHO)
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.				
	chered against an item, for an costs and charges associated with nathage.				
	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	46.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	4.60		
		111-	4.00		
5.03	Spoil in Soft Material				
3.03	Cut to spoil in soft material	m³	374.00		
	Spoil in Hard Material				
5.04	Excavate, stock pile for reuse and spoil surplus hard material	m³	37.40		
	Compaction of Existing Ground				
5.05	Compaction of formation ground in accordance with the specification	m³	154.35		
		111	154.55		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD	m³	308.70		
5.07	(AASHTO T99) Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD				
3.07	(AASHTO T99)	m³	92.61		
5.08	Provide, lay and compact 300mm improved sub grade material to 100% MDD				
	(AASHTO T99)	m³	92.61		
	Topsoil				
5.09	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be	m ²	73.50		
	50mm; all in accordance with the specifications	m ²	/5.50		
	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,	m ²	73.50		
	including tending, watering and cutting until the grass is firm established or for 6	111-	/3.30		
	months				
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				
			1	1	

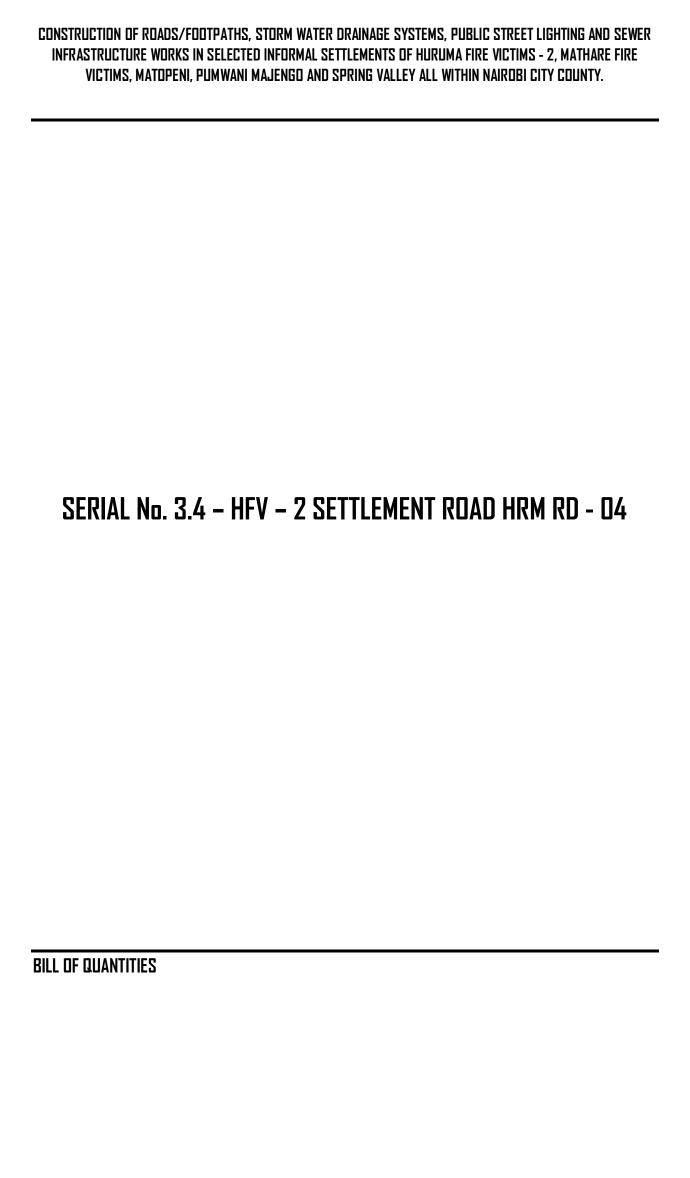
		UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
ITEM	ITEM DESCRIPTION	01111	HRM-RD 03	10112 (115115)	11.1001(11.010)
			50 A.C		
			150 Stone Base		
			150 Gravel		
			Subbase 300 Sub Grade		
			Sub Grade		
			(0.147km)		
	HURUMA (HRM RD03- 0.147KM				
BILL NO.8	CULVERTS AND DRAINAGE				
110.0	Nairobi County- Huruma (HRM) 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	141		
	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		
	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	3		
	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	1		
	Selected backfill material				
8.05	Providing, backfilling to any depth all in accordance with the Standard	m³	57		
	Specifications 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				
8.06	a) 600 mm diameter (for use at minor junctions only)		36		
	a) 600 mm diameter (for use at minor junctions only)	m	36		
8.07	b) 900 mm diameter	m	7		
	Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains				
8.09	Providing and placing the concrete; all in accordance with the Specification and	2	37		
	in conformity with the RE instructions	m³	3/		
	Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures				
8.10				1	
	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		
	Rectangular Covered Concrete Drain (Road Drain)				
8.11(a)	Described all sectorials and asserted 500m. (D. 11. 11.11.11.11.11.11.11.11.11.11.11.1				
	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 150mm	m ³	76		
	thick.				
8.11 - (b)	Steel reinforcement for concrete covered drains as specified in the drawings.	Tonne	7		
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	30		
	1 Tovide 230mm F v C pipes at 30m intervals for service ducts	ın	30		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			HRM-RD 03		
			50 A.C		
			150 Stone Base		
			150 Gravel		
			Subbase		
			300 Sub Grade		
			(0.147km)		
	HURUMA (HRM RD03- 0.147KM		(0.147Kiii)		
BILL	PASSAGE OF TRAFFIC				
NO.9	PASSAGE OF TRAFFIC				
	Nairobi County- Huruma (HRM) Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
0.01	Construction of Deviations in maximum lengths of 2 km sections				
9.01	All the operations connected with the initial construction of temporary	١,	0.15		
	deviations, appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification	km	0.15		
	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m				
7.02	wide, 150mm thick, where directed by the RE and in accordance with the	m ³	56.00		
	Specification				
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, etc., along deviations constructed: all inaccordance with Specification and	Km	0.15		
	in conformity with the RE instructions				
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				
DILI					
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
110.12	Nairobi County- Huruma (HRM) Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base			()	(12)
12.01	Provide, lay and compact subbase in 150mm thick natural gravel material in				
	carriageway, bus bays, footpaths, shoulders and junctions from the designated	m ³	122.00		
	quarries listed in the Special Specification in accordance with the Specification	""	122.00		
	and in conformity with the RE instructions				
12.02	Provide,place and compact 150mm Thick handpacked hardcore in one layer	l .			
	(150mm) plus 50mm blinding layer of quarry dust. This Includes 12 tonne	m ³	122.00		
	vibrating roller (min 8 passes)		-		
	TOTAL EOD BILL 12 CADDIED TO COAND SUMMADY DACE				
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
II EWI	HEM DESCRIPTION	UNII	HRM-RD 03	KATE (KSHS)	AMOUNI (KSHS)
			50 A.C		
			150 Stone Base		
			150 Gravel		
			Subbase		
			300 Sub Grade		
			(0.147km)		
	HURUMA (HRM RD03- 0.147KM		(0.147 km)		
BILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
	Nairobi County- Huruma (HRM) 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	882.0		
15.01B	K1-60 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	882.0		
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.16	BITUMINOUS MIXES				
	Nairobi County- Huruma (HRM) 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	43.0		
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY HRM-RD 03 50 A.C 150 Stone Base	RATE (KSHS)	AMOUNT (KSHS)
			150 Stone Base 150 Gravel Subbase 300 Sub Grade		
			(0.1471)		
	HURUMA (HRM RD03- 0.147KM		(0.147km)		
BILL	ROAD FURNITURE				
NO.20	Nairobi County- Huruma (HRM) Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
20.01	Warning Signs Excavation for, providing and erecting warning signs size 750mm including				
20.01	backfill and concrete 15/20 to bases all in accordance with the Specification and	No.	1		
	in 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 20.02B	750mm size 1000 mm size	No.	1		
20.02В	Mandatory Signs	No.	1		
20.03	Excavating for, providing and erecting prohibitory signs including backfilling				
i	and concrete 15/20 to bases; all in accordance with the Specification and in	No.	1		
20.04	conformity with the RE instructions 1000mm size Standard Informatory Signs				
	Excavating for, providing and erecting information signs including backfilling				
i	and concrete 15/20 to bases; all in accordance with the Specification and in				
20.04A	conformity with the RE instructions 500x600mm	No.	1		
20.04A 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				
i	Preparing road surface, supplying approved road marking paint, 100mm wide				
i	marking out and painting, all in accordance with the Specification and in conformity with the RE instructions				
20.06A	White paint	m ²	30		
20.07	As Item 2007 but 250mm wide				
	a) White paint	m ²	30		
	Speed reduction bituminous bumps at junctions				
20.09	Provision, transport and placing of materials in accordance with the	No	1		
	Specification and in conformity with the RE instructions	110	1		
20.10	Rumble Strips on Pavement Provision, transport and placing of materials in accordance with the				
20.10	Specification and in conformity with the 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	162		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	7		
20.11C	Channel blocks 125mm x 100mm	m	323		
	T				
	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.	10		

ITEM	ITEM DESCRIPTION HURUMA (HRM RD03- 0.147KM	UNIT	QUANTITY HRM-RD 03 50 A.C 150 Stone Base 150 Gravel Subbase 300 Sub Grade (0.147km)	RATE (KSHS)	AMOUNT (KSHS)
	HURUMA (HRM RD03- 0.14/RM				
	GRAND SUMMARY TOTAL QUANTITIES				
	Nairobi County- Huruma (HRM) 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				
13	Concrete Paving Blocks and Surface Treatment				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				



ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			HRM-RD 04	`	` ´
			50 A.C	-	
			150 Stone Base	1	
			150 Gravel Subbase		
			300 Sub Grade		
			(0.052km)		
	HURUMA (HRM RD04- 0.052KM		(0100 = 11111)		
BILL N0.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Nairobi County- Huruma (HRM) Informal Settlement				
	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.				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	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	416.00		
	materials resulting from clearing and grubbing all in accordance with the specifications.	111	410.00		
	D. Lett. 11				
4.02	Removal of Topsoil				
4.02	Stripping vegetable soil from the roadway, and disposal to approved stockpile areas	3	94.00		
	all in accordance with the Specification and in conformity with the RE instructions	m³	84.00		
4.02	average depth 200mm.				
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet	m	5		
	structures including back filling.				
	TOTAL FOR BULL A CARPIER TO CRAND CHAMARY BY D. CO.				
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			HRM-RD 04	(120110)	(10110)
			50 A.C	-	
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade	1	
			(0.052km)		
	HURUMA (HRM RD04- 0.052KM		(0.032KIII)		
BILL NO.5	EARTHWORKS				
ITEM	Nairobi County- Huruma (HRM) Informal Settlement DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
TIENI	NOTE: All costs and charges connected with haulage are to be included within	UNII	QUANTITI	KATE (KSHS)	AMOUNT (KSHS)
	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.				
	Ö				
	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	m³	55.00		
	watering and rolling; all in accordance to specification	m ²	33.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	5.50		
	Spoil in Soft Material				
5.03	Cut to spoil in soft material	m³	38.00		
	Spoil in Hard Material				
5.04	Excavate, stock pile for reuse and spoil surplus hard material	m³	3.80		
	Compaction of Existing Ground				
5.05	Compaction of formation ground in accordance with the specification	m³	54.60		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m³	109.20		
5.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m³	32.76		
5.08	Provide, lay and compact 300mm improved sub grade material to 100% MDD	m³	32.76		
	(AASHTO T99) Topsoil				
5.09	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be				
3.09	50mm; all in accordance with the specifications	m ²	26.00		
	Grassing				
5.10	Planting of sprigs of approved indegineous grass types; to embankments, cuttings or				
5.10	where directed by the RE in accordance with the Specification, including tending,	m ²	26.00		
	watering and cutting until the grass is firm established or for 6 months				
	g g				
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			HRM-RD 04	i ` ´	
			50 A.C		
			150 Stone Base	1	
			150 Gravel Subbase	1	
			300 Sub Grade	1	
			(0.052km)		
	HURUMA (HRM RD04- 0.052KM		(0.052Kiii)		
	increase (man ray) vivezana				
BILL NO.8	CULVERTS AND DRAINAGE				
	Nairobi County- Huruma (HRM) 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	65		
	accordance with the Specification and in conformity with the RE instructions				
8.02	Extra over Item 8.01 for excavation in hard material	m³	22		
	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 20			
	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	10		
	Selected backfill material				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications	m ³	26		
	and in conformity with the instructions of the RE	***	20		
	<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	24		
8.07	b) 900 mm diameter	m	14		
	Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains				
8.09	Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions	m³	28		
	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				
0.10	accordance with the Specification and in conformity with the RE instructions	m ³	7		
	Rectangular Covered Concrete Drain (Road Drain)				
8.11(a)	Provide all materials and construct 500mm(Bottom width) wide (internal dimension)				
	rectangualr concrete drains 150mm thick walls and bottom base, average height of	m ³	27		
	0.8m, class 25/20, including slotted top cover of 150mm thick.				
8.11(b)	Steel reinforcement for concrete covered drains as specified in the drawings.	Tonne	2		
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	20		
0.12	2 - C pipes at 5 on intervals for service data.				
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE			1	

ITEM	CONSTRUCTION OF INFRASTRUCTURE IMPROVEMENT WORKS IN SELECTE ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
IIEWI	TIEW DESCRIPTION	UNII	HRM-RD 04	KATE (KSHS)	AMOUNT (KSHS)
			50 A.C	+	
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade		
	HURUMA (HRM RD04- 0.052KM		(0.052km)		
	HURUMA (HRM KD04- 0.052KM				
BILL NO.9	PASSAGE OF TRAFFIC				
1100	Nairobi County- Huruma (HRM) 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,				
7.01	appropriate width, to allow passage of traffic during the Works; all in accordance	km	0.05		
	with the Specification	Kill	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	20.00		
9.03	Maintenance the passage of traffic	Lump	1.00		
	Provide Signs and Barriers	Sum	1.00		
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				
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
110.12	Nairobi County- Huruma (HRM) Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base				
	ivaturai Gravei Subbase anu Dase				
12.01	Provide, lay and compact subbase in 150mm thick natural gravel material in				
	carriageway, bus bays, footpaths, shoulders and junctions from the designated	m ³	71.00		
	quarries listed in the Special Specification in accordance with the Specification and	""	71.00		
42.02	in conformity with the RE instructions				
12.02	Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm	3	65.00		
) plus 50mm blinding layer of quarry dust. This Includes 12 tonne vibrating roller (min 8 passes)	m ³	05.00		
	(min o passes)				
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.13	CONCRETE PAVING BLOCK SURFACE TREATMENT				
ITEM	DESCRIPTION	UNIT	QUANTITY	DATE (IZOHO)	AMOUNT (ECHO)
	Provide for in-situ culvert all in accordance with the Specification and in			RATE (KSHS)	AMOUNT (KSHS)
	Provide for in-situ culvert all in accordance with the Specification and in conformity with the RE instructions				
	·				
	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				
13.01	Supply, lay and appropriately spread jointing sand 10-20mm thick to Concrete		•	1	l
13.01	paving blocks to the road and junctions all in accordance with the specifications or	m ²	188.00		
13.01	paving blocks to the road and junctions all in accordance with the specifications or as directed by the Engineer	m ²	188.00		
	paving blocks to the road and junctions all in accordance with the specifications or as directed by the Engineer Coloured Concrete block paving including all cuttings	m ²	188.00		
13.01	paving blocks to the road and junctions all in accordance with the specifications or as directed by the Engineer Coloured Concrete block paving including all cuttings Provide and lay approved 60mm thick medium duty pre-cast Coloured Concrete				
	paving blocks to the road and junctions all in accordance with the specifications or as directed by the Engineer Coloured Concrete block paving including all cuttings Provide and lay approved 60mm thick medium duty pre-cast Coloured Concrete paving blocks with minimum strength of 35N/mm 2 to BS 6717 Part 1 of 1986 to	m ²	188.00		
	paving blocks to the road and junctions all in accordance with the specifications or as directed by the Engineer Coloured Concrete block paving including all cuttings Provide and lay approved 60mm thick medium duty pre-cast Coloured Concrete				

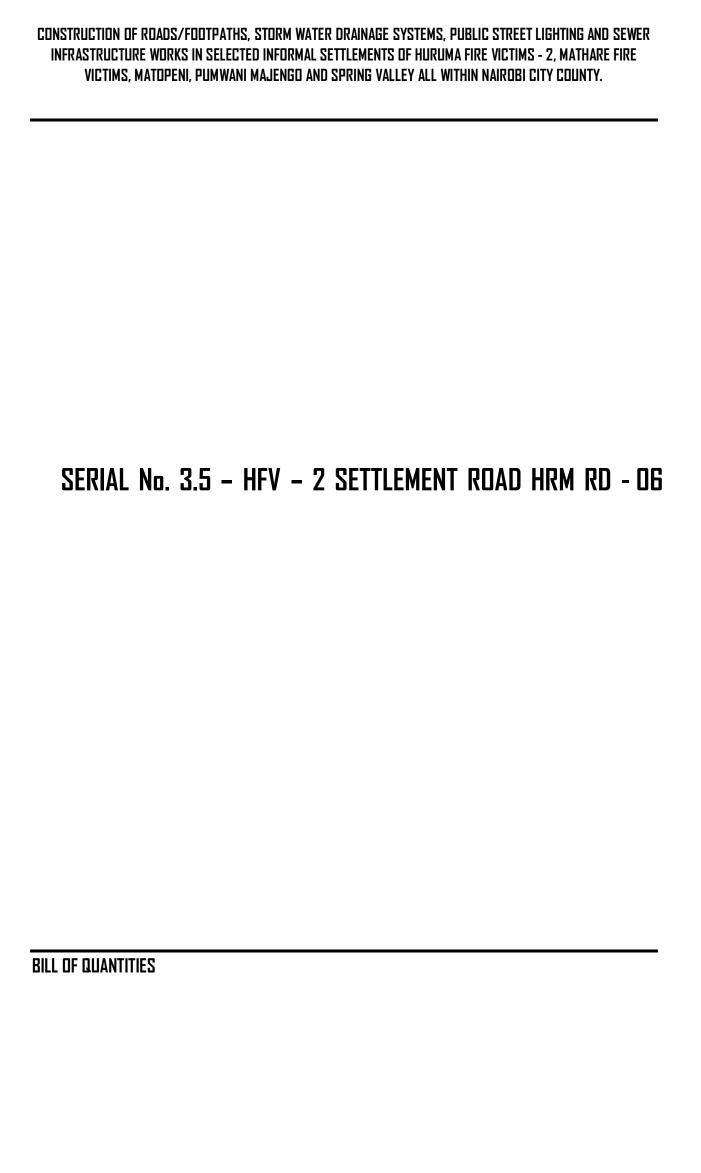
Page 84 of 196

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			HRM-RD 04		
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade		
			(0.052km)		
	HURUMA (HRM RD04- 0.052KM				
BILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
	Nairobi County- Huruma (HRM) Informal Settlement				
				n i mn ararra	4.1.504.34m (3.444.6)
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	406.0		
15.01B	K1-60 cationic emulsion tack coat on primed treated base at nominal rate of 0.4 - 1.0				
	ltr/m ² to base course on on carriageway, bus bays, footpaths, shoulders and junctions	ltr	406.0		
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.16	BITUMINOUS MIXES				
	Nairobi County- Huruma (HRM) Informal Settlement				
ITEM	DESCRIPTION	UNIT	OUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: No haulage will be paid for aggregates, bitumen or the premix. The cost for	UNII	QUANTITI	KATE (KSHS)	AMOUNI (KSRS)
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	19.0		
	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.				
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			HRM-RD 04	(" " ")	
			50 A.C		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade		
			(0.052km)		
	HURUMA (HRM RD04- 0.052KM				
BILL	ROAD FURNITURE				
NO.20	Nairobi County- Huruma (HRM) Informal Settlement				
	Turious Source Figure and Circuit Hard Hard Section Circuit				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
20.01	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				
20.024	with the RE instructions	NT	1		
20.02A	750mm size	No.	1		
20.02B	1000 mm size	No.	1		
20.02	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		
20.04	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				
20.04.	with the RE instructions	ļ.,			
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				
20.05.4	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				
20.064	with the RE instructions	-	11		
20.06A	White paint	m ²	11		
20.07	A T. 20071 (250 '1	-			
20.07	As Item 2007 but 250mm wide		11		
20.07A	a) White paint	m ²	11		
	Sucad advetion hituminays hymne at inneticus				
20.00	Speed reduction bituminous bumps at junctions Provision transport and placing of materials in accordance with the Specification				
20.09	Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions	No	1		
	7				
20.10	Rumble Strips on Pavement Provision transport and placing of materials in accordance with the Specification				
20.10	Provision, transport and placing of materials in accordance with the Specification	No	1		
	and in conformity with the RE instructions				
	Congreta Vorbs	-			
20.11	Concrete Kerbs Provision transport handling miving and placing all materials in accordance with				
20.11	Provision, transport, handling, mixing and placing all materials in accordance with				
20.114	Specification and in conformity with the RE instructions Kerbs 125 mm x 250 mm straight	-	57		
20.11A		m	57		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	3		
20.11C	Channel blocks 125mm x 100mm	m	114		
	Т				
	Trees				
20.12	Planting of approved indigenous types of trees where instructed, in accordance with	No.	10		
	the Specification, minimum height 1.5m -Open Fields or Wet Lands				
	TOTAL OF BULL 40 CARPIED TO CUTTO TO THE	1	1		
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE		1	1	

Page 86 of 196

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY HRM-RD 04 50 A.C 150 Stone Base 150 Gravel Subbase 300 Sub Grade (0.052km)	RATE (KSHS)	AMOUNT (KSHS)
	HURUMA (HRM RD04- 0.052KM				
	GRAND SUMMARY TOTAL QUANTITIES				
	Nairobi County- Huruma (HRM) 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				
13	Concrete Paving Blocks and Surface Treatment				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				



ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			HRM-RD 06	(" ")	
			50mm A.C		
			150mm Stone		
			Base		
			150mm Gravel		
			300 Sub Grade		
			(0.181km)		
	HURUMA (HRM RD06- 0.181KM				
BILL N0.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Nairobi County- Huruma (HRM) 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	2	4.530.00		
	spoil materials resulting from clearing and grubbing all in accordance with the	m ²	1,539.00		
	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	308.00		
	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	15		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				
	The state of the s				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY HRM-RD 06	RATE (KSHS)	AMOUNT (KSHS)
			50mm A.C		
			150mm Stone		
			Base		
			150mm Gravel		
			300 Sub Grade		
			(0.181km)		
	HURUMA (HRM RD06- 0.181KM				
BILL N0.5	EARTHWORKS				
	Nairobi County- Huruma (HRM) 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.			ASSE Gravel B Gravel B Grade B Grade B Grade Grade	
	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	3	67.00		
	watering and rolling; all in accordance to specification	m³	67.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	6.70		
	Spoil in Soft Material				
5.03	Cut to spoil in soft material	m³	565.00		
	Spoil in Hard Material				
5.04	Excavate, stock pile for reuse and spoil surplus hard material	m³	56.50		
	Compaction of Existing Ground				
5.05	Compaction of formation ground in accordance with the specification	m³	190.05		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m³	380.10		
5.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m³	114.03		
5.08	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m³	114.03		
	Topsoil				
5.09	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m ²	90.50		
	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,	m ²	90.50		
	watering and cutting until the grass is firm established or for 6 months				
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

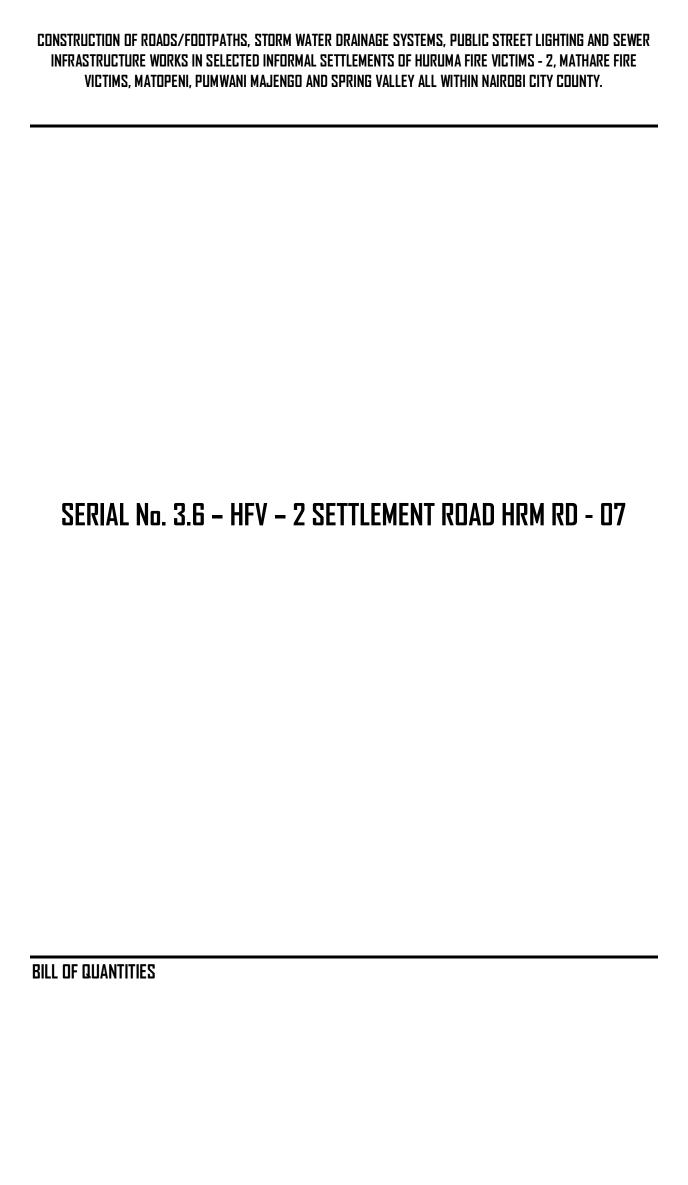
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			HRM-RD 06		
			50mm A.C		
			150mm Stone		
			Base		
			150mm Gravel		
			300 Sub Grade		
	HURUMA (HRM RD06- 0.181KM		(0.181km)		
BILL					
NO.8	CULVERTS AND DRAINAGE				
	Nairobi County- Huruma (HRM) Informal Settlement				
ITEM	DESCRIPTION	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		
0.00	accordance with the Specification and in conformity with the RE instructions				
8.02	Extra over Item 8.01 for excavation in hard material	m^3	67		
	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	4		
	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	2		
	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	80		
	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	78		
8.07	b) 900 mm diameter	m	14		
	Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains				
8.09					
8.09	Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions	m³	71		
	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	18		
	Rectangular Covered Concrete Drain (Road Drain)				
8.11(a)					
()	Provide all materials and construct 500mm(Bottom width) wide (internal	١,			
	dimension) rectangualr concrete drains 150mm thick walls and bottom base, average	m ³	93		
	height of 0.8m, class 25/20, including slotted top cover of 150mm thick.				
8.11(b)	Steel reinforcement for concrete covered drains as specified in the drawings.	Tonne	8		
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				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			HRM-RD 06		
			50mm A.C		
			150mm Stone		
			Base		
			150mm Gravel		
			300 Sub Grade		
	HURUMA (HRM RD06- 0.181KM		(0.181km)		
BILL					
NO.9	PASSAGE OF TRAFFIC				
TTEM	Nairobi County- Huruma (HRM) Informal Settlement DESCRIPTION	LINITE	OU ANTERW	DATE (KEHE)	AMOUNT (ZCHC)
ITEM	Construction of Deviations in maximum lengths of 2 km sections	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
9.01	All the operations connected with the initial construction of temporary deviations,				
7.01	appropriate width, to allow passage of traffic during the Works; all in accordance	km	0.18		
	with the Specification	KIII	0.16		
	Gravel Wearing Course				
9.02					
7.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide,	m³	68.00		
	150mm thick, where directed by the RE and in accordance with the Specification				
9.03	Maintenance the passage of traffic	Lump	1.00		
		Sum			
0.04	Provide Signs and Barriers	-			
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic	V	0.10		
	lights, etc., along deviations constructed: all inaccordance with Specification and in conformity with the RE instructions	Km	0.18		
	comorning with the RE instructions				
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				
DILI					
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
NO.12	Nairobi County- Huruma (HRM) Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base		· Committee	(22222)	(22020)
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	143.00		
	quarries listed in the Special Specification in accordance with the Specification and		115.00		
	in conformity with the RE instructions				
12.02	Provide, place and compact 150mm Thick handpacked hardcore in one layer	,	1.42.00		
	(150mm) plus 50mm blinding layer of quarry dust. This Includes 12 tonne	m³	143.00		
	vibrating roller (min 8 passes)				
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				
	of the second se				
D					
BILL NO.13A	CONCRETE PAVING BLOCK SURFACE TREATMENT				
NO.13A	Nairohi County Huruma (HRM) Informal Sattlement				
ITEM	Nairobi County- Huruma (HRM) Informal Settlement DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
1115171	NOTE: No overhaul will be paid for these items as it shall be deemed to have	0.111	20.1.1111	Tarre (Rons)	iooni (Rollo)
	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	m ²	598.00		
	as directed by the Engineer				
	Coloured Concrete block paving including all cuttings				
13.02A	Provide and lay approved 60mm thick medium duty pre-cast Coloured Concrete				
	paving blocks with minimum strength of 35N/mm 2 to BS 6717 Part 1 of 1986 to	m ²	598.00		
	road footpaths etc. and as directed by the Engineer				
	TOTAL FOR BILL 13 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			HRM-RD 06	ĺ í	, ,
			50mm A.C		
			150mm Stone		
			Base		
			150mm Gravel		
			300 Sub Grade		
			(0.181km)		
	HURUMA (HRM RD06- 0.181KM				
BILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
	Nairobi County- Huruma (HRM) 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	ltr	1412.0		
15.01D	base course on carriageway, bus bays, footpaths, shoulders and junctions				
15.01B	K1-60 cationic emulsion tack coat on primed treated base at nominal rate of 0.4	1.	1412.0		
	1.0 ltr/m² to base course on on carriageway, bus bays, footpaths, shoulders and	ltr	1412.0		
	junctions				
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				
BILL	BITUMINOUS MIXES				
NO.16					
	Nairobi County- Huruma (HRM) 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	M^3	65.0		
	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				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY HRM-RD 06	RATE (KSHS)	AMOUNT (KSHS)
			50mm A.C 150mm Stone Base 150mm Gravel 300 Sub Grade		
	HURUMA (HRM RD06- 0.181KM		(0.181km)		
BILL					
NO.20	ROAD FURNITURE Nairobi County- Huruma (HRM) Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	W. J. C.				
20.01	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	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		
20.03	Mandatory 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	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				
20.06A	with the RE instructions White paint	m ²	37		
	·				
20.07 20.07A	As Item 2007 but 250mm wide a) White paint	m²	37		
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	No	1		
20.10	Rumble Strips on Pavement Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions	No	4		
20.11	Concrete Kerbs 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	m	199		
20.11A 20.11B	Kerbs 125 mm x 250 mm straight Kerbs 125 mm x 250 mm radius 1m - 5m	m m	9		
20.11B	Channel blocks 125mm x 100mm	m	398		
20.12	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.	10		
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				1

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY HRM-RD 06 50mm A.C 150mm Stone Base 150mm Gravel 300 Sub Grade	AMOUNT (KSHS)
			(0.181km)	
	HURUMA (HRM RD06- 0.181KM			
	GRAND SUMMARY TOTAL QUANTITIES			
	Nairobi County- Huruma (HRM) 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 Blocks Surface Treatment			
15	Bituminous Surface Treatments			
16	Bituminous Mixes			
20	Road Furniture			
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE			



ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	112.112.112.11	0.112	HRM-RD 07	TETTE (HSHS)	11.110 01(1 (110110)
			50mm A.C		
			150mm Stone		
			Base		
			150mm Gravel		
			300 Sub Grade		
			(0.129km)		
	HURUMA (HRM RD07- 0.129KM		(0.127KIII)		
	HOROME (HENT ROOT WILLDEN)				
BILL N0.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Nairobi County- Huruma (HRM) 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	m ²	1,097.00		
	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	220.00		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet		11		
	structures including back filling.	m	11		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY HRM-RD 07	RATE (KSHS)	AMOUNT (KSHS)
			50mm A.C		
			150mm Stone		
			Base		
			150mm Gravel		
			300 Sub Grade		
			(0.129km)		
	HURUMA (HRM RD07- 0.129KM				
BILL N0.5	EARTHWORKS				
	Nairobi County- Huruma (HRM) Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
III	NOTE: All costs and charges connected with haulage are to be included within	01111	QUARTITI	KATE (KSHS)	AMOUNT (KSHS)
	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				
3.01	watering and rolling; all in accordance to specification	m³	67.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	6.70		
	Spoil in Soft Material				
5.03	Cut to spoil in soft material	m³	565.00		
	Spoil in Hard Material				
5.04	Excavate, stock pile for reuse and spoil surplus hard material	m³	56.50		
	Compaction of Existing Ground				
5.05	Compaction of formation ground in accordance with the specification	m³	135.45		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD				
2.00	(AASHTO T99)	m³	270.90		
5.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD	2	01.27		
	(AASHTO T99)	m³	81.27		
5.08	Provide, lay and compact 300mm improved sub grade material to 100% MDD	m³	81.27		
	(AASHTO T99)	m	81.27		
	Topsoil				
5.09	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m ²	64.50		
	Grassing				
5.10	Planting of sprigs of approved indegineous grass types; to embankments, cuttings or				
3.10	where directed by the RE in accordance with the Specification, including tending,	m ²	64.50		
	watering and cutting until the grass is firm established or for 6 months				
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			HRM-RD 07		()
			50mm A.C		
			150mm Stone		
			Base		
			150mm Gravel		
			300 Sub Grade		
			(0.129km)		
	HURUMA (HRM RD07- 0.129KM		,		
BILL	CULVERTS AND DRAINAGE				
NO.8					
ITEM	Nairobi County- Huruma (HRM) Informal Settlement DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
1112141	Excavate for Culverts and Subsoil Drains in Soft Material	01111	QUANTITI	KATE (KSHS)	AMOUNT (KSHS)
8.01	Excavation in soft material to any depth, compaction of the invert of excavation,				
0.01	backfilling with excavated materials or removing excavated material to spoil; in	m³	144		
	accordance with the Specification and in conformity with the RE instructions	""	144		
8.02					
0.02	Extra over Item 8.01 for excavation in hard material	m³	48		
	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	3		
	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	1		
	Selected backfill material				
8.05	Providing, backfilling to any depth all in accordance with the Standard	m³	58		
	Specifications and in conformity with the instructions of the RE	111-	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	54		
8.07	b) 900 mm diameter	m	14		
	Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains				
8.09	Providing and placing the concrete; all in accordance with the Specification and in	,			
	conformity with the RE instructions	m³	52		
	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	12		
	accordance with the Specification and in conformity with the RE instructions	m ³	13		
	Rectangular Covered Concrete Drain (Road Drain)				
8.11(a)	Describe III materials and construct 500ms (D. (1) 11 (C. (1)				
	Provide all materials and construct 500mm(Bottom width) wide (internal dimension) rectangualr concrete drains 150mm thick walls and bottom base, average	m ³	66		
	height of 0.8m, class 25/20, including slotted top cover of 150mm thick.	m	00		
	neight of 0.8m, class 23/20, including slotted top cover of 130mm thick.				
8.11(b)	Steel reinforcement for concrete covered drains as specified in the drawings.	Tonne	6		
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	20		
	TOTAL FOR BILL O CARRIER TO CRAND SHAMARY BASE		-		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

ITEM DESCRIPTION AA (HRM RD07- 0.129KM GE OF TRAFFIC County- Huruma (HRM) Informal Settlement	UNIT	QUANTITY HRM-RD 07 50mm A.C 150mm Stone Base 150mm Gravel 300 Sub Grade (0.129km) QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
GE OF TRAFFIC County- Huruma (HRM) Informal Settlement DESCRIPTION ction of Deviations in maximum lengths of 2 km sections perations connected with the initial construction of temporary deviations, ate width, to allow passage of traffic during the Works; all in accordance Specification Wearing Course		50mm A.C 150mm Stone Base 150mm Gravel 300 Sub Grade (0.129km)	RATE (KSHS)	AMOUNT (KSHS)
GE OF TRAFFIC County- Huruma (HRM) Informal Settlement DESCRIPTION ction of Deviations in maximum lengths of 2 km sections perations connected with the initial construction of temporary deviations, ate width, to allow passage of traffic during the Works; all in accordance Specification Wearing Course		150mm Stone Base 150mm Gravel 300 Sub Grade (0.129km) QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
GE OF TRAFFIC County- Huruma (HRM) Informal Settlement DESCRIPTION ction of Deviations in maximum lengths of 2 km sections perations connected with the initial construction of temporary deviations, ate width, to allow passage of traffic during the Works; all in accordance Specification Wearing Course		Base 150mm Gravel 300 Sub Grade (0.129km)	RATE (KSHS)	AMOUNT (KSHS)
GE OF TRAFFIC County- Huruma (HRM) Informal Settlement DESCRIPTION ction of Deviations in maximum lengths of 2 km sections perations connected with the initial construction of temporary deviations, ate width, to allow passage of traffic during the Works; all in accordance Specification Wearing Course		150mm Gravel 300 Sub Grade (0.129km)	RATE (KSHS)	AMOUNT (KSHS)
GE OF TRAFFIC County- Huruma (HRM) Informal Settlement DESCRIPTION ction of Deviations in maximum lengths of 2 km sections perations connected with the initial construction of temporary deviations, ate width, to allow passage of traffic during the Works; all in accordance Specification Wearing Course		300 Sub Grade (0.129km) QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
GE OF TRAFFIC County- Huruma (HRM) Informal Settlement DESCRIPTION ction of Deviations in maximum lengths of 2 km sections perations connected with the initial construction of temporary deviations, ate width, to allow passage of traffic during the Works; all in accordance Specification Wearing Course		(0.129km) QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
GE OF TRAFFIC County- Huruma (HRM) Informal Settlement DESCRIPTION ction of Deviations in maximum lengths of 2 km sections perations connected with the initial construction of temporary deviations, ate width, to allow passage of traffic during the Works; all in accordance Specification Wearing Course		QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
County- Huruma (HRM) Informal Settlement DESCRIPTION ction of Deviations in maximum lengths of 2 km sections perations connected with the initial construction of temporary deviations, ate width, to allow passage of traffic during the Works; all in accordance Specification Wearing Course			RATE (KSHS)	AMOUNT (KSHS)
DESCRIPTION ction of Deviations in maximum lengths of 2 km sections perations connected with the initial construction of temporary deviations, ate width, to allow passage of traffic during the Works; all in accordance Specification Wearing Course			RATE (KSHS)	AMOUNT (KSHS)
ction of Deviations in maximum lengths of 2 km sections perations connected with the initial construction of temporary deviations, ate width, to allow passage of traffic during the Works; all in accordance Specification Wearing Course			RATE (KSHS)	AMOUNT (KSHS)
perations connected with the initial construction of temporary deviations, ate width, to allow passage of traffic during the Works; all in accordance Specification Wearing Course	km	0.12		
ate width, to allow passage of traffic during the Works; all in accordance Specification Wearing Course	km	0.12		
Specification Wearing Course	km	0.13		
	1	0.13		
n laying and compacting of gravel wearing course to deviations. 5m wide				
thick, where directed by the RE and in accordance with the Specification	m³	49.00		
nance the passage of traffic	Lump Sum	1.00		
Signs and Barriers				
n, erection and maintenance of temporary signs, barriers, lights, traffic c., along deviations constructed: all inaccordance with Specification and in ity with the RE instructions	Km	0.13		
FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				
AL MATERIAL SUBBASE AND BASE				
County- Huruma (HRM) Informal Settlement				
DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
Gravel Subbase and Base	01111	QUARTITI	mile (mons)	AMOUNT (KSHS)
Grave Subbase and Dase	1			
lay and compact subbase in 150mm thick natural gravel material in	m³	186.00		
way, bus bays, footpaths, shoulders and junctions from the designated listed in the Special Specification in accordance with the Specification and rmity with the RE instructions	m³	186.00		
listed in the Special Specification in accordance with the Specification and				
	y, bus bays, footpaths, shoulders and junctions from the designated ted in the Special Specification in accordance with the Specification and ity with the RE instructions are and compact 150mm Thick handpacked hardcore in one layer plus 50mm blinding layer of quarry dust. This Includes 12 tonne	y, bus bays, footpaths, shoulders and junctions from the designated ted in the Special Specification in accordance with the Specification and ity with the RE instructions ace and compact 150mm Thick handpacked hardcore in one layer plus 50mm blinding layer of quarry dust. This Includes 12 tonne m³ oller (min 8 passes)	y, bus bays, footpaths, shoulders and junctions from the designated ted in the Special Specification in accordance with the Specification and ity with the RE instructions are and compact 150mm Thick handpacked hardcore in one layer plus 50mm blinding layer of quarry dust. This Includes 12 tonne m³ 186.00	y, bus bays, footpaths, shoulders and junctions from the designated ted in the Special Specification in accordance with the Specification and ity with the RE instructions ace and compact 150mm Thick handpacked hardcore in one layer plus 50mm blinding layer of quarry dust. This Includes 12 tonne m³ 186.00 bller (min 8 passes)

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			HRM-RD 07		(2222)
			50mm A.C		
			150mm Stone		
			Base		
			150mm Gravel		
			300 Sub Grade		
			(0.129km)		
	HURUMA (HRM RD07- 0.129KM				
BILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
	Nairobi County- Huruma (HRM) 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/m ² to base course on carriageway, bus bays, footpaths, shoulders and junctions	ltr	697.0		
15.01B	K1-60 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	697.0		
	junctions				
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.16	BITUMINOUS MIXES				
	Nairobi County- Huruma (HRM) 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	M^3	32.0		
	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				
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY HRM-RD 07	RATE (KSHS)	AMOUNT (KSHS)
			50mm A.C 150mm Stone Base 150mm Gravel 300 Sub Grade		
	HURUMA (HRM RD07- 0.129KM		(0.129km)		
BILL					
NO.20	ROAD FURNITURE Nairobi County- Huruma (HRM) Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
20.01	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	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		
20.03	Mandatory 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	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	m ²	26		
20.07 20.07A	As Item 2007 but 250mm wide a) White paint	m ²	26		
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	No	1		
20.10	Rumble Strips on Pavement Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions	No	3		
20.11	Concrete Kerbs 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	m	142		
20.11A	Kerbs 125 mm x 250 mm radius 1m - 5m	m	6		
20.11C	Channel blocks 125mm x 100mm	m	284		
20.12	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.	10		
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY HRM-RD 07 50mm A.C 150mm Stone Base 150mm Gravel 300 Sub Grade (0.129km)	AMOUNT (KSHS)
	HURUMA (HRM RD07- 0.129KM			
	GRAND SUMMARY TOTAL QUANTITIES			
	N. L. C H (HDM) I. C I C. (4)			
ITEM	Nairobi County- Huruma (HRM) Informal Settlement DESCRIPTION			AMOUNT (KSHS)
4	Site Clearance and Top Soil Stripping			AMOUNT (KSHS)
	Earthworks			
5				
9	Culverts and Drainage Works			
12	Passage of Traffic Natural Material Subbase and Base			
13A	Concrete Paving Blocks Surface Treatment			
15	Bituminous Surface Treatments			
16	Bituminous Mixes			
20	Road Furniture			
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE			

CONSTRUCTION OF ROADS/FOOTPATHS, STORM WATER DRAINAGE SYSTEMS, PUBLIC STREET LIGHTING AND SEWER INFRASTRUCTURE WORKS IN SELECTED INFORMAL SETTLEMENTS OF HURUMA FIRE VICTIMS - 2, MATHARE FIRE VICTIMS, MATOPENI, PUMWANI MAJENGO AND SPRING VALLEY ALL WITHIN NAIROBI CITY COUNTY.

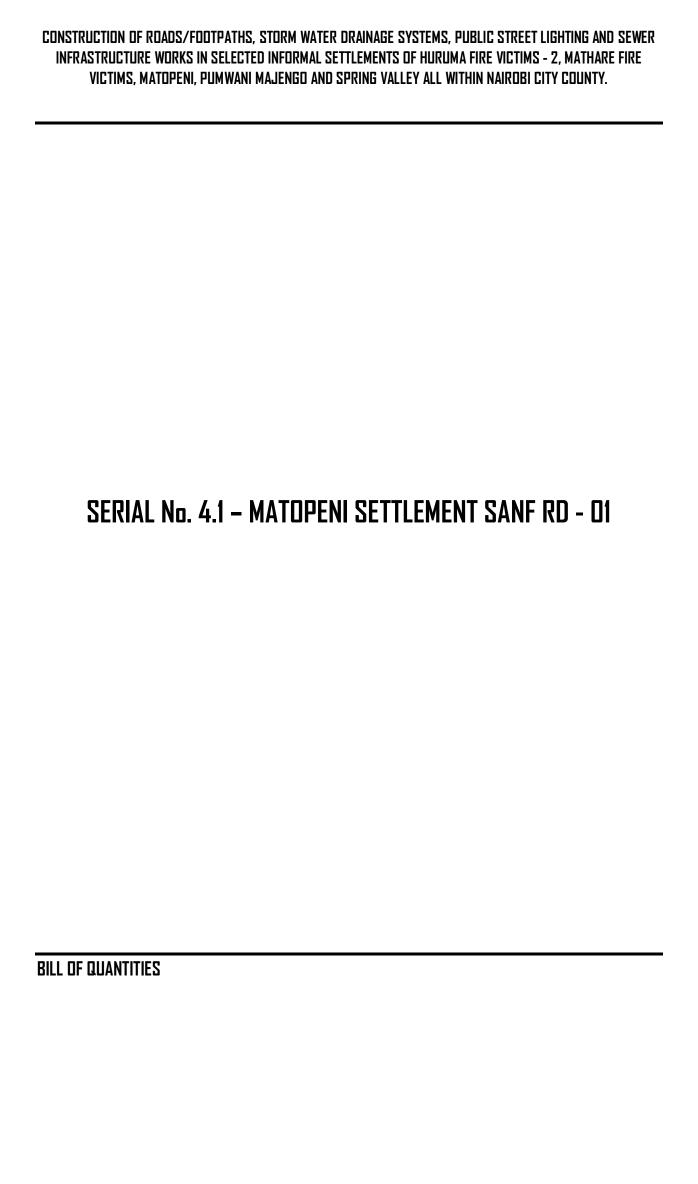
SERIAL No. 4.0 - MATOPENI SETTLEMENT SUMMARY PAGE

BILL OF QUANTITIES

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

BILLS OF QUANTITIES MATOPENI SETTLEMENT SUMMARY

SERIAL No.	ITEM DESCRIPTION	AMOUNT (KES)
	Road Works	
4.1	A1-SANFORD RD01	
4.2	SANFORD-BOSTON RD01A	
4.3	PORTFOLIO-MAIN RD02	
4.4	PORTFOLIO-KASYOKA RD02A	
4.5	PORTFOLIO-SOKONI RD03	
Α	SUB -TOTAL -1 CARRIED TO GRAND SUMMARY PAGE	



ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			SANF-RD 01		
			50mm A.C		
			150mm Stone		
			Base		
			125mm Gravel		
			300mm Sub		
			Grade Material		
			(0.561km)		
	SANFORD (SANF RD01- 0.561KM) AND STORM WATER DRAINS 1 &2 (0.569KM)				
BILL N0.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Nairobi County - Matopeni 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.	m ²	3,086.00		
	Removal of Topsoil				
4.02	Stripping vegetable soil from the roadway, and disposal to approved stockpile areas all				
2	in accordance with the Specification and in conformity with the RE instructions average depth 200mm.	m³	618.00		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet structures including back filling.	m	31		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	TIMIT	OUANTITY	RATE (KSHS)	AMOUNT (KSHS)
TIENI	IT EN DESCRIPTION	UNII	-	KATE (KSHS)	AMOUNT (KSHS)
			SANF-RD 01		
			50mm A.C		
			150mm Stone		
			Base		
			125mm Gravel 300mm Sub		
			Grade Material (0.561km)		
	SANFORD (SANF RD01- 0.561KM) AND STORM WATER DRAINS 1 &2		(0.501KIII)		
	(0.569KM)				
	(0.00)12.1)				
BILL NO.5	EARTHWORKS				
	Nairobi County - Matopeni 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	371.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	37.10		
3.02	Fill in Expansive Clay Areas		37.110		
5.03	As per Item 5.01 but in expansive clay areas to replace unsuitable material removed up				
	to a maximum depth of 1.0m	m³	2,962.08		
	Spoil in Soft Material				
5.04	Cut to spoil in soft material	m³	258.00		
	Spoil in Hard Material				
5.05	Excavate, stock pile for reuse and spoil surplus hard material	m³	25.80		
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	3,702.60		
	Compaction of Existing Ground				
5.07	Compaction of formation ground in accordance with the specification	m³	347.12		
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO	m³	235.62		
	T99)		233.02		
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO	m³	235.62		
5.10	T99)				
5.10	Provide, lay and compact 300mm improved sub grade material to 100% MDD	m³	1,295.91		
	(AASHTO T99) Topsoil				
5.11	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm;				
ا11.5	all in accordance with the specifications	m ²	280.50		
	an in accordance with the specifications Grassing				
5.12	Planting of sprigs of approved indegineous grass types; to embankments, cuttings or				
5.12	where directed by the RE in accordance with the Specification, including tending,	m ²	280.50		
	watering and cutting until the grass is firm established or for 6 months	""	200.50		
	and the glass is the established of tot y molitile				
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

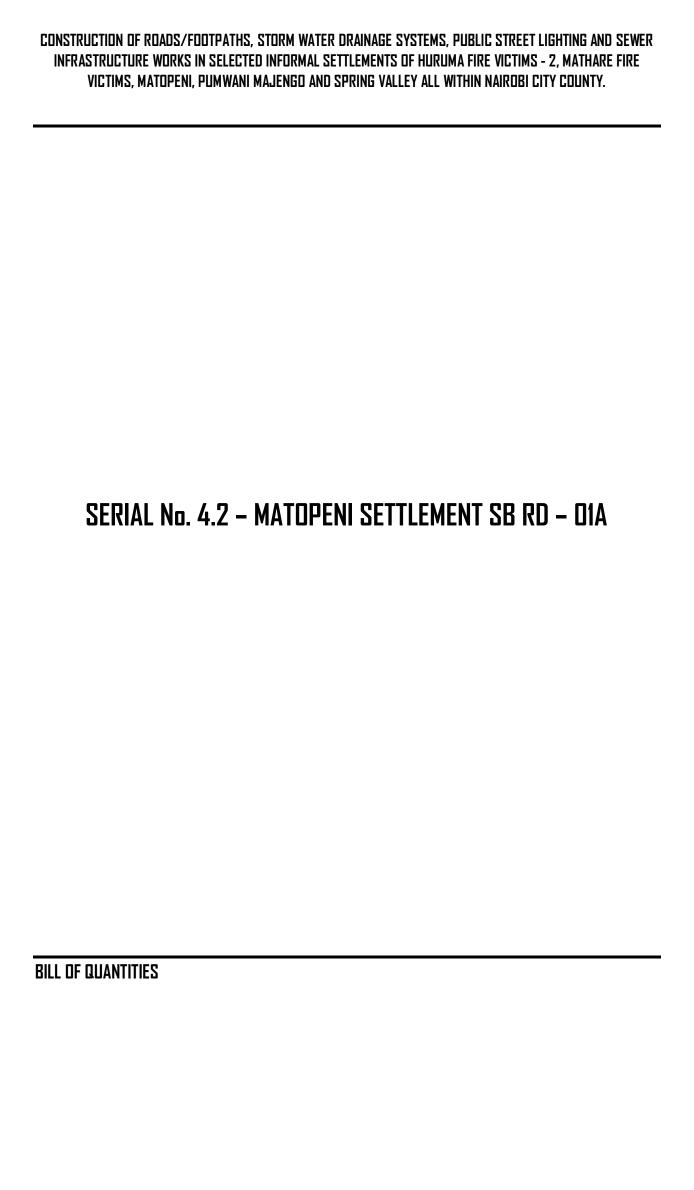
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
IIENI	TIEM DESCRIPTION	ONII	SANF-RD 01	KATE (KSHS)	AMOUNI (KSHS)
			50mm A.C		
			150mm Stone		
			Base 125mm Gravel		
			300mm Sub		
			Grade Material		
	SANFORD (SANF RD01- 0.561KM) AND STORM WATER DRAINS 1 &2		(0.561km)		
	(0.569KM)				
BILL NO.8	CULVERTS AND DRAINAGE				
	Nairobi County - Matopeni 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	1,569		
0.02	accordance with the Specification and in conformity with the RE instructions				
8.02	Extra over Item 8.01 for excavation in hard material	m³	523		
	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	40		
	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				
0.05	and in conformity with the instructions of the RE	m³	628		
	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	225		
8.07	b) 900 mm diameter	m	35		
	Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains				
8.09	Providing and placing the concrete; all in accordance with the Specification and in				
	conformity with the RE instructions	m³	231		
	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	40		
	accordance with the Specification and in conformity with the RE instructions	m³	49		
	Rectangular Covered Concrete Drain (Road Drain)				
8.11(a)					
J (u)	Provide all materials and construct 500mm(Bottom width) wide (internal dimension)	m ³	287		
	rectangualr concrete drains 150mm thick walls and bottom base, average height of 0.8m, class 25/20, including slotted top cover of 200mm thick.	m	20/		
8.11(b)	Rectangular Covered Concrete Drain Part (Independent Drain)				
0.11(0)	Provide all materials and construct 1000mm (Bottom width) wide (internal dimension)	3	202		
	rectangualr concrete drains 150mm thick walls and bottom base, average height of 0.8m,	m ³	323		
	class 25/20, including slotted top cover of 200mm thick.				
8.11-c	Steel reinforcement for concrete covered drains as specified in the drawings.	Tonne	41		
	Circular Deep Underground Concrete Drain (Independent Drain)				
8.11(d)	Provide all materials and construct 900mm Diameter PCC rings concrete drains with				
	access manhole chambers of 150mm surround of class 20/20, bed, suuround blinding	m ³	453		
	including reinforcement mesh.				
8.11(d)	900 mm diameter	m	350		
8.12					
0.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	50		

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
112.01	112.112.12.11	0.111	SANF-RD 01	KITE (KSHS)	AMOUNT (KSH5)
			50mm A.C		
			150mm Stone		
			Base		
			125mm Gravel		
			300mm Sub		
			Grade Material		
			(0.561km)		
	SANFORD (SANF RD01- 0.561KM) AND STORM WATER DRAINS 1 &2				
	(0.569KM)				
BILL					
NO.9	PASSAGE OF TRAFFIC				
110.9	Nairobi County - Matopeni Informal Settlement				
	Name of County Printopen Information Section Co.				
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	0.56		
	the Specification				
9.02	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide,	m³	211.00		
	150mm thick, where directed by the RE and in accordance with the Specification				
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,		0.54		
	etc., along deviations constructed: all inaccordance with Specification and in conformity with the RE instructions	Km	0.56		
	with the RE instructions				
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				
	TOTAL FOR SILE YOUR MEETING OUT THE THIRD				
BILL	NATURAL MATERIAL SUBBASE AND BASE				
NO.12					
ITEM	Nairobi County - Matopeni Informal Settlement DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
HEN	Natural Gravel Subbase and Base	UNII	QUANTITI	KATE (KSHS)	AMOUNT (KSHS)
	Indicated Supplies and Dasc				
12.01	Provide, lay and compact subbase in 125mm thick natural gravel material in				
	carriageway, bus bays, footpaths, shoulders and junctions from the designated quarries	3	405.00		
	listed in the Special Specification in accordance with the Specification and in	m³	405.00		
	conformity with the RE instructions				
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	m³	463.00		
	passes)				
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY SANF-RD 01 50mm A.C 150mm Stone Base 125mm Gravel 300mm Sub Grade Material	RATE (KSHS)	AMOUNT (KSHS)
	SANFORD (SANF RD01- 0.561KM) AND STORM WATER DRAINS 1 &2 (0.569KM)		(0.561km)		
BILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
	Nairobi County - Matopeni Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
15.01 15.01A	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	3703.0		
15.01B	$K1$ - 60 cationic emulsion tack coat on primed treated base at nominal rate of 0.4 - 1.0 ltr/m^2 to base course on on carriageway, bus bays, footpaths, shoulders and junctions	ltr	3703.0		
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.16	BITUMINOUS MIXES				
	Nairobi County - Matopeni 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	148.0		
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			SANF-RD 01]	, , ,
			50mm A.C		
			150mm Stone		
			Base 125mm Gravel		
			300mm Sub		
			Grade Material		
			(0.561km)		
	SANFORD (SANF RD01- 0.561KM) AND STORM WATER DRAINS 1 &2 (0.569KM)				
BILL NO.20	ROAD FURNITURE				
NO.20	Nairobi County - Matopeni Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Warning Signs			Ì	, ,
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	No.	1		
20.02	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 with	No.	1		
20.04	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		-		
20.05	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	m ²	113		
20.06B	Yellow paint	m ²	85		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m ²	113		
,					
20.00	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	3		
	Rumble Strips on Pavement				
20.10	Provision, transport and placing of materials in accordance with the Specification and in				
	conformity with the RE instructions	No	14		
	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				
20.11A	Kerbs 125 mm x 250 mm straight	m	589		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	28		
20.11C	Channel blocks 125mm x 100mm		1,178		
20.110	Chainer Olocks 123Hilli x 100Hilli	m	1,1/8		
	Trees				
	Planting of approved indigenous types of trees where instructed, in accordance with the		20		
20.12		Nο	1 20		
20.12	Specification, minimum height 1.5m -Open Fields or Wet Lands	No.	20		

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY SANF-RD 01 50mm A.C 150mm Stone Base 125mm Gravel	RATE (KSHS)	AMOUNT (KSHS)
			300mm Sub Grade Material		
			(0.561km)		
	SANFORD (SANF RD01- 0.561KM) AND STORM WATER DRAINS 1 &2 (0.569KM)				
	CD AND CHAMA DV TOTAL OVANTURES				
	GRAND SUMMARY TOTAL QUANTITIES				
	Nairobi County - Matopeni 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				
13	Concrete Paving Blocks and Surface Treatment				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				



ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			CD DD 014		
			SB-RD 01A 50 A.C		
			150 Stone Base		
			125 Gravel		
			300 Sub Grade		
			Material		
			(0.139km)		
	SANFORD BOSTON (SANF RD01A- 0.139KM)		,		
BILL N0.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Nairobi County - Matopeni 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				
1.01	the grubbing of stumps and roots and the disposal from the area of all spoil materials	m ²	973.00		
	resulting from clearing and grubbing all in accordance with the specifications.	111	773.00		
	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	m³	195.00		
	depth 200mm.				
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet	m	10		
	structures including back filling.	111	10		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

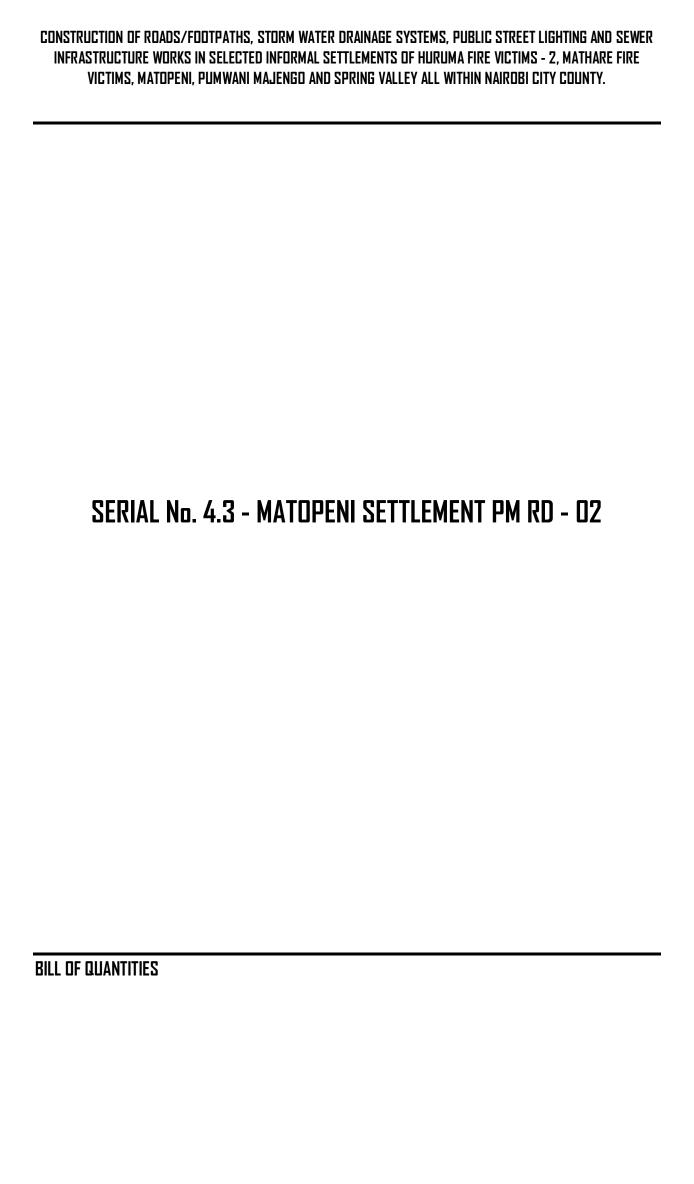
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			SB-RD 01A		
			50 A.C		
			150 Stone Base		
			125 Gravel 300 Sub Grade		
			Material		
			(0.139km)		
	SANFORD BOSTON (SANF RD01A- 0.139KM)				
BILL N0.5	EARTHWORKS				
	Nairobi County - Matopeni Informal Settlement				
ITEM	DESCRIPTION	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).				
5.01	Fill in Soft Material Excavating the material, transportation and filling in embankment, including watering and				
5.01	rolling; all in accordance to specification	m³	88.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	8.80		
	Fill in Expansive Clay Areas				
5.03	As per Item 5.01 but in expansive clay areas to replace unsuitable material removed up	m³	856.24		
	to a maximum depth of 1.0m	111	830.24		
5.04	Spoil in Soft Material		(2.00		
3.04	Cut to spoil in soft material	m³	62.00		
5.05	Spoil in Hard Material	,	6.20		
	Excavate, stock pile for reuse and spoil surplus hard material	m³	6.20		
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	1,070.30		
	Compaction of Existing Ground		-		
5.07	Compaction of formation ground in accordance with the specification	m³	109.46		
5.08		111	107.40		
	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m³	58.38		
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m³	17.51		
5.10	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99) $$	m³	321.09		
	Topsoil				
5.11	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications $\frac{1}{2}$	m²	69.50		
	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	m ²	69.50		
	manning and cutting and the grass is first established of for 0 months				
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
1115.01	TIEM DESCRIPTION	01111	QUANTITI	KATE (KSHS)	AMOUNT (KSHS)
			SB-RD 01A		
			50 A.C		
			150 Stone Base		
			125 Gravel 300 Sub Grade		
			Material		
			(0.139km)		
	SANFORD BOSTON (SANF RD01A- 0.139KM)				
BILL					
NO.8	CULVERTS AND DRAINAGE				
VPP-2.4	Nairobi County - Matopeni Informal Settlement	*******	OV. A NUMBER OF	D. TED GLOVE	A DATE OF THE OWNER.
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Excavate for Culverts, Lined drains 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	291		
0.02	accordance with the Specification and in conformity with the RE instructions				
8.02	Extra over Item 8.01 for excavation in hard material	m³	97		
	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	30		
8.04	accordance with the Specification and in conformity with the RE's instructions				
0.07	Extra over Item 8.03 for excavation in hard material	m³	10		
	Selected backfill material				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications and	m³	117		
	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				
8.06	a) 600 mm diameter (for use at minor junctions only)	m	60		
8.07	b) 900 mm diameter	m	14		
	Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains	111	14		
8.09	Providing and placing the concrete; all in accordance with the Specification and in				
0.07	conformity with the RE instructions	m³	57		
	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	,	1.4		
	accordance with the Specification and in conformity with the RE instructions	m³	14		
	Rectangular Covered Concrete Drain (Road Drain)				
8.11(a)	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,	m ³	72		
	class 25/20, including slotted top cover of 200mm thick.				
8.11(b)	Steel reinforcement for concrete covered drains as specified in the drawings.	Tonne	6		
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	20		
	TOTAL FOR BULL & CARBUER TO CRAND CHAMARY BACE				
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				
DIL					
BILL NO.9	PASSAGE OF TRAFFIC				
110.5	Nairobi County - Matopeni 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	km	0.14		
	Specification	KIII	0.14		
	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide,		52.00		
	150mm thick, where directed by the RE and in accordance with the Specification	m³	53.00		
9.03	Maintenance the nessage of traffic	Lump	1.00		
	Maintenance the passage of traffic	Sum	1.00		
	Provide Signs and Barriers		-		
0.04					i
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights, etc.,	Km	0.14		
9.04		Km	0.14		
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights, etc., along deviations constructed: all inaccordance with Specification and in conformity with	Km	0.14		

				I	
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			SB-RD 01A		
			50 A.C		
			150 Stone Base 125 Gravel		
			300 Sub Grade		
			Material		
			(0.139km)		
	SANFORD BOSTON (SANF RD01A- 0.139KM)				
BILL	NATURAL MATERIAL SUBBASE AND BASE				
NO.12					
ITEM	Nairobi County - Matopeni Informal Settlement DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base) /	` ′
1201					
12.01	Provide, lay and compact subbase in 125mm 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	m³	139.00		
	instructions				
12.02	Provide, place and compact 150mm Thick handpacked hardcore in one layer (150mm)		150.00		
	plus 50mm blinding layer of quarry dust. This Includes 12 tonne vibrating roller (min 8 passes)	m ³	150.00		
	pusses)				
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				
BILL					
NO.13A	CONCRETE PAVING BLOCK SURFACE TREATMENT				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Vomp v				
	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 States.				
	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 directed by the Engineer	m ²	230.00		
	Cloured Concrete block paving including all cuttings				
13.02A	Provide and lay approved 60mm thick medium duty pre-cast Coloured Concrete paving				
	blocks with minimum strength of 35N/mm 2 to BS 6717 Part 1 of 1986 to road footpaths	m ²	230.00		
	etc. and as directed by the Engineer				
	TOTAL FOR BILL 13 CARRIED TO GRAND SUMMARY PAGE				
BILL	DITHIMINOUS SUDEACE THE ATMENTS AND SUBEACE PRESSING				
NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
ITEM	Nairobi County - Matopeni Informal Settlement DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
15.01	Prime Coat and Tack coat	UNII	QUANTITI	KATE (KSHS)	AMOUNT (KSHS)
15.01A	MC 30 prime coat on Cement treated material at nominal rate of 0.8 - 1.2 ltr/m² to base	ltr	834.0		
	course on carriageway, bus bays, footpaths, shoulders and junctions	ıtr	034.0		
15.01B	K1-60 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	834.0		
	norm to base course on on carriageway, bus bays, tootpatis, shoulders and junctions				
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				
BILL					
NO.16	BITUMINOUS MIXES				
	Nairobi County - Matopeni Informal Settlement				
ITEM	DESCRIPTION TO THE PAGE OF THE	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	M^3	43.0		
	of the Standard Specification for Road and Bridge Construction for Type II, 0/14mm	141	.5.0		
	wearing course .The coarse aggregate class for the asphalt concrete shall be Class C. 80/100 penetration grade bitumen for the asphalt concrete.				
	200 Penedation grade ordiner for the aspirant concrete.				
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			SB-RD 01A		
			50 A.C		
			150 Stone Base		
			125 Gravel		
			300 Sub Grade Material		
			(0.139km)		
	SANFORD BOSTON (SANF RD01A- 0.139KM)		(0.139Kiii)		
BILL NO.20	ROAD FURNITURE				
110.20	Nairobi County - Matopeni 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				
	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	m ²	28		
20.06B	Yellow paint	m²	21		
20.07	As Item 2007 but 250mm wide	2	20		
20.07A	a) White paint	m ²	28		
	Speed reduction bituminous bumps at junctions			1	
20.09	Provision, transport and placing of materials in accordance with the Specification and in				
20.07	Conformity with the RE instructions Rumble Strips on Pavement	No	1		
20.10	Provision, transport and placing of materials in accordance with the Specification and in conformity with the 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	153		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	7		
20.11C	Channel blocks 125mm x 100mm	m	306		
	Trees Planting of approved indigenous types of trees where instructed, in accordance with the	No.	15		
20.12	Specification, minimum height 1.5m -Open Fields or Wet Lands	110.	-		

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			SB-RD 01A]	
			50 A.C		
			150 Stone Base		
			125 Gravel	-	
			300 Sub Grade Material		
			(0.139km)	+	
	SANFORD BOSTON (SANF RD01A- 0.139KM)		(0.1398111)		
	(3.1.1.2.1.1.2.1.1.2.1.1.2.1.1.2.1.1.2.1.1.2.1.1.2.1.1.2.1.1.2.1.1.2.1.1.2.1.1.2.1.1.2.1.1.2.1.1.2.1.1.2.1.1.2.1.1.2.1.				
	GRAND SUMMARY TOTAL QUANTITIES				
	National Computer Made and Information Continued				
ITEM	Nairobi County - Matopeni Informal Settlement DESCRIPTION				AMOUNT (KSHS)
4	Site Clearance and Top Soil Stripping				TESTO CITT (MOTIO)
5	Earthworks				
8	Culverts and Drainage Works				
9	Passage of Traffic				
12	Natural Material Subbase and Base				
13	Concrete Paving Blocks and Surface Treatment				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				



ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
112.01	TIEW DESCRIPTION	01111	PM-RD 02	KITE (KSHS)	AMOUNT (RSHS)
			50 A.C		
			150 Stone Base		
			130 Stolle Base		
			125 Gravel		
			300 Sub Grade		
			(0.297km)		
	PORTFOLIO MAIN (0.297KM)				
BILL	SITE CLEARANCE AND TOPSOIL STRIPPING				
N0.04					
	Nairobi County - Matopeni 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	m ²	2,079.00		
	resulting from clearing and grubbing all in accordance with the specifications.				
4.02	Removal of Topsoil				
4.02	Stripping vegetable soil from the roadway, and disposal to approved stockpile areas all in	١,	41600		
	accordance with the Specification and in conformity with the RE instructions average depth	m ³	416.00		
4.02	200mm.				
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet	m	21		
	structures including back filling.				
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			PM-RD 02	` ′	` ′
			50 A.C		
			150 Stone Base		
			125 Gravel		
			300 Sub Grade		
	PORTFOLIO MAIN (0.297KM)		(0.297km)		
	TORTI ODIO MINI (0.27 RM)				
BILL N0.5	EARTHWORKS				
	Nairobi County - Matopeni 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	186.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	18.60		
	Fill in Expansive Clay Areas				
5.03	As per Item 5.01 but in expansive clay areas to replace unsuitable material removed up to a maximum depth of 1.0m	m³	1,829.52		
	Spoil in Soft Material				
5.04	Cut to spoil in soft material	m³	15.00		
	Spoil in Hard Material				
5.05	Excavate, stock pile for reuse and spoil surplus hard material	m³	1.50		
5.06	Spoil in Expansive Clay Areas				
5.064	As Item 5.04 but for excavation in expansive clay areas to remove unsuitable materials	,	2 206 00		
5.06A	up to a maximum depth of 1.0 m	m³	2,286.90		
5.07	Compaction of Existing Ground Compaction of formation ground in accordance with the specification	3	222.90		
		m³	233.89		
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m³	124.74		
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m³	37.42		
5.10	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m³	686.07		
	Topsoil				
5.11	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m²	148.50		
	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	m²	148.50		
	cutting until the grass is firm established or for 6 months				
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

TITEM PORTFOLIO MAIN (0.297KM) PORTFOLIO M	ITEM	ITEM DECORPTION	* Y * Y * Y * T	OVI A NUMBER I	DATE (VOUC)	AMOUNT (ECHO)
FORTFOLIO MAIN (0.297KM) FORTFOLIO MAIN (0.2	HEN	ITEM DESCRIPTION	UNII	QUANTITY	KATE (KSHS)	AMOUNT (KSHS)
Formal Port						
PORTFOLIO MAIN (0.297KM)						
BILL No.8 CUVERTS AND DRAINAGE CUVERTS AND DESCRIPTION CUNT C				150 Stone Base		
BILL No.8 CUVERTS AND DRAINAGE CUVERTS AND DESCRIPTION CUNT C				125 Gravel		
PORTFOLIO MAIN (0.297KM) PORTFOLIO MAIN (0.2						
BILL NO.8 CULVERIS AND DRAINAGE						
No.8 CULVERTS AND DRAINGE Nairobi County - Matopeni Informal Settlement DESCRIPTION UNIT QUANTITY RATE (KSHS) AMOUNT (KSHS)		PORTFOLIO MAIN (0.297KM)				
No.8 CULVERTS AND DRAINGE Nairobi County - Matopeni Informal Settlement DESCRIPTION UNIT QUANTITY RATE (KSHS) AMOUNT (KSHS)						
Excavate for Culverts and Subsoil Draiss in Soft Material		CULVERTS AND DRAINAGE				
Excavation in soft material to any depth, compaction of the invert of excavation, backfilling with excavated materials or removing excavated material to spoil; in accordance with the Specification and in conformity with the RE instructions m² 106						
Exewation in soft material to any depth, compaction of the invert of excavation, backfilling with excavated materials or removing exeavated material to spoil; in accordance with the Specification and in conformity with the RE instructions 8.02 Extra over Item 8.01 for excavation in hard material 8.03 Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material 8.04 Extra over Item 8.01 for excavation in hard material in spoil; in accordance with the Specification and in conformity with the RE's instructions 8.04 Extra over Item 8.03 for excavation in hard material to spoil; in accordance with the Specification and in conformity with the RE's instructions 8.05 Selected backfill material 8.05 Providing, backfilling to any depth all in accordance with the Specifications and in conformity with the instructions of the RE Instructurers 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 120 8.07 b) 900 mm diameter Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions Rectangular Covered Concrete Drain (Road Drain) 8.11(a) Provide all materials and construct 500mm(Bottom width) wide (internal dimension) rectangular concrete drains 150mm thick walls and bottom base, average height of 0.8m, class 25/20, including slotted top cover of 200mm thick. 8.11(b) Steel reinforcement for concrete covered drains as specified in the drawings. Tonne 11 Provide 250mm PVC pipes at 50m intervals for service ducts m 20 Extra over Item 8.01 for exeavation in hard material m³ 106	ITEM		UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
with excavated materials or removing excavated material to spoil; in accordance with the Specification and in conformity with the RE instructions 8.02 Extra over Item 8.01 for excavation in hard material 8.03 Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material 8.04 Excavate donaterials or removing excavated material to spoil; in accordance with the Specification and in conformity with the REF instructions 8.04 Extra over Item 8.03 for excavation in hard material to spoil; in accordance with the Specification and in conformity with the instructions of the RE 8.05 Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE 10 In-situ culverts 11 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) 8.07 b) 900 mm diameter 120 concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains 8.09 Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions 8.10 excrete Class 20/20 headwalls, trash racks, aprons other drainage structures 8.11 excavation and in conformity with the RE instructions 8.11(a) Provide all materials and construct 500mm(Bottom width) wide (internal dimension) rectangular concrete drains 150mm thick walls and bottom base, average height of 0.8m, class 25/20, including slotted top cover of 200mm thick. 8.11(b) Steel reinforcement for concrete covered drains as specified in the drawings. 10 Tonne 11 Provide 250mm PVC pipes at 50m intervals for service ducts 11 Provide 250mm PVC pipes at 50m intervals for service ducts 12 Provide 250mm PVC pipes at 50m intervals for service ducts 13 Provide 250mm PVC pipes at 50m intervals for service ducts						
Specification and in conformity with the RE instructions Extra over Item 8.01 for excavation in hard material Excavate for Indet, 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 accordance with the Specification and in conformity with the RE's instructions 8.04 Extra over Item 8.03 for excavation in hard material 8.05 Providing, backfilling to any depth all in accordance with the Standard Specifications 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 8.06 a) 600 mm diameter (for use at minor junctions only) m 120 8.07 b) 900 mm diameter Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains 8.09 Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions 8.10 Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions 8.11 Provide In Instructions 8.11 Provide Instructions 8.12 Provide all materials and construct 500mm(Bottom width) wide (internal dimension) rectanguals concrete drains 150mm thick walls and bottom base, average height of 0.8m, class 25/20, including slotted top cover of 200mm thick. 8.11 Provide 250mm PVC pipes at 50m intervals for service ducts 8.12 Provide 250mm PVC pipes at 50m intervals for service ducts 8.13 Provide 250mm PVC pipes at 50m intervals for service ducts 8.14 Provide 250mm PVC pipes at 50m intervals for service ducts 8.15 Provide 250mm PVC pipes at 50m intervals for service ducts 8.16 Provide 250mm PVC pipes at 50m intervals for service ducts	8.01					
Extra over Item 8.01 for excavation in hard material 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 accordance with the Specification and in conformity with the RE's instructions 8.04 Extra over Item 8.03 for excavation in hard material 8.05 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 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 120 8.07 b) 900 mm diameter Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains 8.09 Providing and placing the concrete, all in accordance with the Specification and in conformity with the RE instructions Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures 8.10 Rectangular Covered Concrete Drain (Road Drain) 8.11(a) Provide and materials and construct 500mm (Bottom width) wide (internal dimension) rectangular concrete drains 150mm thick walls and bottom base, average height of 0.8m, class 25/20, including slotted top cover of 200mm thick. 8.11(b) Steel reinforcement for concrete drains as specified in the drawings. Tonne 11 8.12 Provide 250mm PVC pipes at 50m intervals for service ducts m 20			m ³	317		
Extra over Item 8.01 for exeavation in hard material 8.03 Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material 8.04 Extra over Item 8.01 for excavation of the invert of excavation, backfilling with excavated materials or removing excavated material to spoil; in accordance with the Specification and in conformity with the RE's instructions 8.04 Extra over Item 8.03 for excavation in hard material 8.05 Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE 1		Specification and in conformity with the RE instructions				
Excavation in soft material to any depth, compaction of the invert of excavation, backfilling with excavated materials or removing excavated material to spoil; in accordance with the Specification and in conformity with the REs instructions 8.04 Extra over Item 8.03 for excavation in hard material 8.05 Providing, backfilling to any depth all in accordance with the Standard Specifications 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 8.06 a) 600 mm diameter (for use at minor junctions only) 8.07 b) 900 mm diameter Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures Providing and placing the concrete, reinforcement and formwork class F2 all in accordance with the Specification and in conformity with the RE instructions Rectangular Concrete Drain (Road Drain) 8.11(a) Provide all materials and construct 500mm(Bottom width) wide (internal dimension) retained and construct drains as specified in the drawings. 8.10 Provide 250mm PVC pipes at 50m intervals for service ducts m 20	8.02	Extra over Item 8.01 for excavation in hard material	m³	106		
with excavated materials or removing excavated material to spoil; in accordance with the Specification and in conformity with the RE's instructions 8.04 Extra over Item 8.03 for excavation in hard material 8.05 Providing, backfill material 8.06 In-situ culverts Provide for in-situ culvert all in accordance with the Standard Specifications 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 8.06 a) 600 mm diameter (for use at minor junctions only) 8.07 b) 900 mm diameter Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains 8.09 Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures 8.10 Providing and placing the concrete, einforcement and formwork class F2 all in accordance with the Specification and in conformity with the RE instructions Rectangular Covered Concrete Drain (Road Drain) 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 200mm thick. 8.11(a) Steel reinforcement for concrete covered drains as specified in the drawings. Tonne 11 8.12 Provide 250mm PVC pipes at 50m intervals for service ducts m 20		Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material				
Specification and in conformity with the RE's instructions 8.04 Extra over Item 8.03 for excavation in hard material 8.05 Providing, backfilling to any depth all in accordance with the Standard Specifications 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 8.06 a) 600 mm diameter (for use at minor junctions only) m 120 8.07 b) 900 mm diameter Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains 8.09 Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions 8.10 Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions Providing and placing the concrete, reinforcement and formwork class F2 all in accordance with the Specification and in conformity with the RE instructions Rectangular Covered Concrete Drain (Road Drain) 8.11(a) Provide all materials and construct 500mm(Bottom width) wide (internal dimension) relaxable concrete drains 150mm thick walls and bottom base, average height of 0.8m, class 25/20, including slotted top cover of 200mm thick. 8.11(b) Steel reinforcement for concrete covered drains as specified in the drawings. 8.12 Provide 250mm PVC pipes at 50m intervals for service ducts m 20	8.03					
8.04 Extra over Item 8.03 for excavation in hard material 8.05 Providing and placing the concrete, reinforcement and formwork class F2 all in accordance with the Specifications and in conformity with and in accordance with the Specification and in conformity with the RE instructions 8.07 Provided and placing the concrete and in conformity with the RE instructions 8.09 Providing and placing the concrete, reinforcement and formwork class F2 all in accordance with the Specification and in conformity with the RE instructions 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 8.10 Provide all materials and construct 500mm(Bottom width) wide (internal dimension) rectangual concrete drains 150mm thick walls and bottom base, average height of 0.8m, class 25/20, including slotted top cover of 200mm thick. 8.11(a) Provide 250mm PVC pipes at 50m intervals for service ducts 8.11(b) Steel reinforcement for concrete covered drains as specified in the drawings. 8.12 Provide 250mm PVC pipes at 50m intervals for service ducts 8.12 Provide 250mm PVC pipes at 50m intervals for service ducts 8.13 Provide 250mm PVC pipes at 50m intervals for service ducts 8.14 Provide 250mm PVC pipes at 50m intervals for service ducts			m³	7		
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 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 120 8.07 b) 900 mm diameter Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains Providing and placing the concrete; all in accordance with the Specification and in 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 Specific		Specification and in conformity with the RE's instructions				
8.05 Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE 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 120 8.07 b) 900 mm diameter Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains Providing and placing the concrete; all in accordance with the Specification and in 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 Rectangular Covered Concrete Drain (Road Drain) 8.11(a) Provide all materials and construct 500mm (Bottom width) wide (internal dimension) rectangular concrete drains 150mm thick walls and bottom base, average height of 0.8m, class 25/20, including slotted top cover of 200mm thick. 8.11(b) Steel reinforcement for concrete covered drains as specified in the drawings. Tonne 11 8.12 Provide 250mm PVC pipes at 50m intervals for service ducts m 20	8.04	Extra over Item 8.03 for excavation in hard material	m³	3		
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 8.06 a) 600 mm diameter (for use at minor junctions only) m 120 8.07 b) 900 mm diameter Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures Providing and placing the concrete, reinforcement and formwork class F2 all in accordance with the Specification and in conformity with the RE instructions Rectangular Covered Concrete Drain (Road Drain) 8.11(a) Provide all materials and construct 500mm(Bottom width) wide (internal dimension) rectangular concrete drains 150mm thick walls and bottom base, average height of 0.8m, class 25/20, including slotted top cover of 200mm thick. 8.11(b) Steel reinforcement for concrete covered drains as specified in the drawings. Tonne 11 8.12 Provide 250mm PVC pipes at 50m intervals for service ducts m 20						
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 120 8.07 b) 900 mm diameter Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains 8.09 Providing and placing the concrete; all in accordance with the Specification and in 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 Rectangular Covered Concrete Drain (Road Drain) 8.11(a) Provide all materials and construct 500mm (Bottom width) wide (internal dimension) rectangular concrete drains 150mm thick walls and bottom base, average height of 0.8m, class 25/20, including slotted top cover of 200mm thick. Steel reinforcement for concrete overed drains as specified in the drawings. Tonne 11 Provide 250mm PVC pipes at 50m intervals for service ducts m 20	8.05		m³	127		
the RE instructions 8.06 a) 600 mm diameter (for use at minor junctions only) m 120 8.07 b) 900 mm diameter m 14 Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains 8.09 Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions m ³ 106 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 Rectangular Covered Concrete Drain (Road Drain) 8.11(a) 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 200mm thick. 8.11(b) Steel reinforcement for concrete covered drains as specified in the drawings. Tonne 11 8.12 Provide 250mm PVC pipes at 50m intervals for service ducts m 20						
a) 600 mm diameter (for use at minor junctions only) 8.07 b) 900 mm diameter Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains 8.09 Providing and placing the concrete; all in accordance with the Specification and in 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 Rectangular Covered Concrete Drain (Road Drain) 8.11(a) Provide all materials and construct 500mm(Bottom width) wide (internal dimension) rectangular concrete drains 150mm thick walls and bottom base, average height of 0.8m, class 25/20, including slotted top cover of 200mm thick. 8.11(b) Steel reinforcement for concrete covered drains as specified in the drawings. Tonne 11 Provide 250mm PVC pipes at 50m intervals for service ducts m 20						
Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains	8.06	a) 600 mm diameter (for use at minor junctions only)	m	120		
8.09 Providing and placing the concrete; all in accordance with the Specification and in 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 Rectangular Covered Concrete Drain (Road Drain) 8.11(a) Provide all materials and construct 500mm(Bottom width) wide (internal dimension) rectangular concrete drains 150mm thick walls and bottom base, average height of 0.8m, class 25/20, including slotted top cover of 200mm thick. 8.11(b) Steel reinforcement for concrete covered drains as specified in the drawings. Tonne 11 Provide 250mm PVC pipes at 50m intervals for service ducts m 20	8.07	b) 900 mm diameter	m	14		
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 Rectangular Covered Concrete Drain (Road Drain) 8.11(a) Provide all materials and construct 500mm(Bottom width) wide (internal dimension) rectangular concrete drains 150mm thick walls and bottom base, average height of 0.8m, class 25/20, including slotted top cover of 200mm thick. 8.11(b) Steel reinforcement for concrete covered drains as specified in the drawings. Tonne 11 8.12 Provide 250mm PVC pipes at 50m intervals for service ducts m 20		Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains				
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 Rectangular Covered Concrete Drain (Road Drain) 8.11(a) Provide all materials and construct 500mm(Bottom width) wide (internal dimension) rectangular concrete drains 150mm thick walls and bottom base, average height of 0.8m, class 25/20, including slotted top cover of 200mm thick. 8.11(b) Steel reinforcement for concrete covered drains as specified in the drawings. Tonne 8.12 Provide 250mm PVC pipes at 50m intervals for service ducts m 20	8.09		m³	106		
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 Rectangular Covered Concrete Drain (Road Drain) 8.11(a) Provide all materials and construct 500mm(Bottom width) wide (internal dimension) rectangular concrete drains 150mm thick walls and bottom base, average height of 0.8m, class 25/20, including slotted top cover of 200mm thick. 8.11(b) Steel reinforcement for concrete covered drains as specified in the drawings. Tonne 8.12 Provide 250mm PVC pipes at 50m intervals for service ducts m 20		Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures				
Rectangular Covered Concrete Drain (Road Drain)	8.10	Providing and placing the concrete, reinforcement and formwork class F2 all in accordance	m³	26		
8.11(a) 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 200mm thick. 8.11(b) Steel reinforcement for concrete covered drains as specified in the drawings. Tonne 11 8.12 Provide 250mm PVC pipes at 50m intervals for service ducts m 20		· · · · · · · · · · · · · · · · · · ·				
rectangualr concrete drains 150mm thick walls and bottom base, average height of 0.8m, class 25/20, including slotted top cover of 200mm thick. 8.11(b) Steel reinforcement for concrete covered drains as specified in the drawings. Tonne 11 8.12 Provide 250mm PVC pipes at 50m intervals for service ducts m 20	0.11(-)					
8.12 Provide 250mm PVC pipes at 50m intervals for service ducts m 20	8.11(a)	rectangualr concrete drains 150mm thick walls and bottom base, average height of 0.8m,	m ³	152		
Provide 250mm PVC pipes at 50m intervals for service ducts m 20	8.11(b)	Steel reinforcement for concrete covered drains as specified in the drawings.	Tonne	11		
TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE	8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	20		
TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE						
		TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

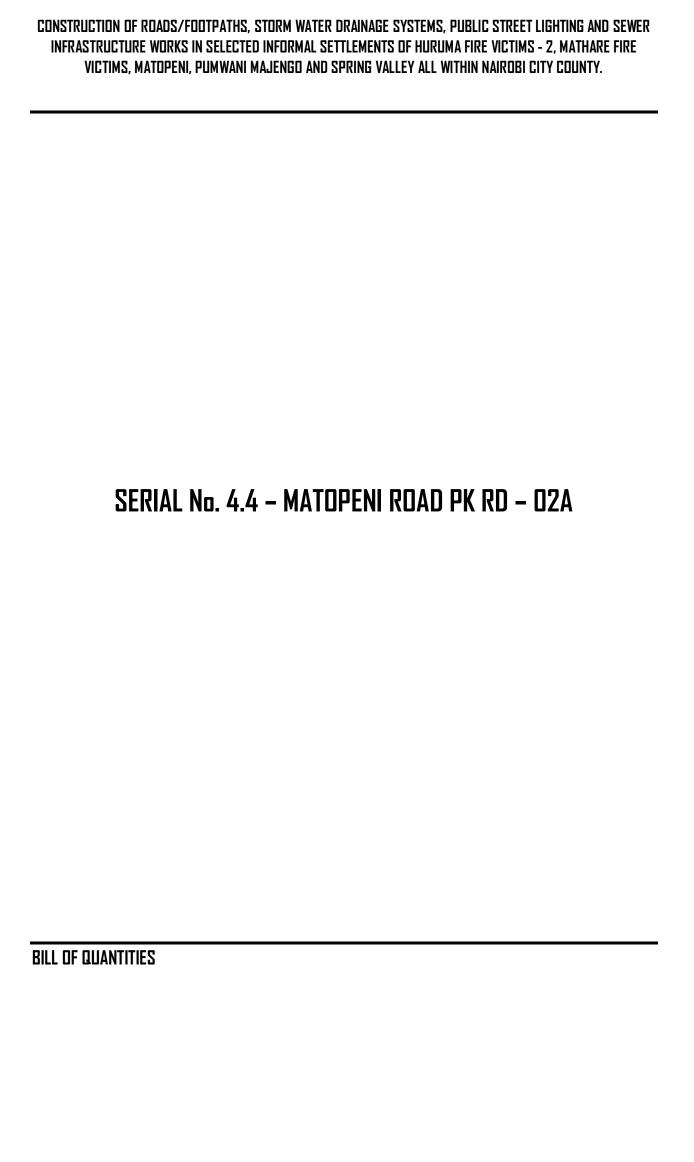
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (ZCHC)
HEN	HEM DESCRIPTION	UNII		KATE (KSHS)	AMOUNT (KSHS)
			PM-RD 02 50 A.C		
			150 Stone Base		
			130 Stone Base		
			125 Gravel		
			300 Sub Grade		
			(0.297km)		
	PORTFOLIO MAIN (0.297KM)				
BILL					
NO.9	PASSAGE OF TRAFFIC				
110.5	Nairobi County - Matopeni 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	km	0.30		
	Specification				
0.02	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide, 150mm	m³	112.00		
	thick, where directed by the RE and in accordance with the Specification		112.00		
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, etc.,		0.20		
	along deviations constructed: all inaccordance with Specification and in conformity with	Km	0.30		
	the RE instructions				
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				
	TOTAL FOR BILL Y CARRIED TO GREED SCHOOL TAGE				
BILL	NATURAL MATERIAL SUBBASE AND BASE				
NO.12					
	Nairobi County - Matopeni Informal Settlement				
ITEM	DESCRIPTION Natural Gravel Subbase and Base	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Naturai Gravei Subbase and base				
12.01	Provide, lay and compact subbase in 125mm thick natural gravel material in carriageway,				
	bus bays, footpaths, shoulders and junctions from the designated quarries listed in the	١,	267.00		
	Special Specification in accordance with the Specification and in conformity with the RE	m³	267.00		
	instructions				
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	320.00		

	TOTAL FOR BILL 12 CARRIED TO CRAND CUMMARY BY BACE				
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				
BILL					
NO.13	CONCRETE PAVING BLOCK SURFACE TREATMENT				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
				()	(12210)
	NOTE: No overhaul will be paid for these items as it shall be deemed to have been				
	included in the Contractor's rates.				
12.01	Jointing Sand Symply lay and appropriately approad in inting sand 10 20 years think to Consents review				
13.01	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 directed by	m ²	491.00		
	the Engineer	m	491.00		
	Coloured Concrete block paving including all cuttings				
13.02	Provide and lay approved 60mm thick medium duty pre-cast Coloured concrete paving				
	blocks with minimum strength of 35N/mm 2 to BS 6717 Part 1 of 1986 to road footpaths	m ²	491.00		
	etc. and as directed by the Engineer	ı	157.00		
	TOTAL FOR BILL 13 CARRIED TO GRAND SUMMARY PAGE				
	TOTAL FOR BILL IS CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			PM-RD 02		
			50 A.C		
			150 Stone Base		
			125 Gravel		
			300 Sub Grade		
			(0.297km)		
	PORTFOLIO MAIN (0.297KM)		(0.2571111)		
BILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
	Nairobi County - Matopeni Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
15.01	Prime Coat and Tack coat			ì	•
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	2139.0		
15.01B	K1-60 cationic emulsion tack coat on primed treated base at nominal rate of 0.4 - 1.0 ltr/m ²	1,	2120.0		
	to base course on on carriageway, bus bays, footpaths, shoulders and junctions	ltr	2139.0		
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.16	BITUMINOUS MIXES				
	Nairobi County - Matopeni 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	92.0		
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	PM-RD 02 50 A.C 150 Stone Base 125 Gravel 300 Sub Grade (0.297km)	RATE (KSHS)	AMOUNT (KSHS)
BILL	PORTFOLIO MAIN (0.297KM)				
NO.20	ROAD FURNITURE				
ITEM	Nairobi County - Matopeni Informal Settlement DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
TILIVI	Warning Signs	CIVII	QUANTITI	KATE (KSHS)	AMOUNT (KSHS)
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				
20.02A	instructions 750mm size	N ₀	1		
20.02B		No.			
20.02B	1000 mm size	No.	1		
20.03	Mandatory 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	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		
	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	m ²	60		
20.06B	Yellow paint	m ²	45		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m ²	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 Rumble Strips on Pavement	No	2		
20.10	Provision, transport and placing of materials in accordance with the Specification and in conformity with the 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				
20.11A	Kerbs 125 mm x 250 mm straight	m	327		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	15		
20.11C	Channel blocks 125mm x 100mm	m	624		
20.12	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.	10		
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			PM-RD 02	(" ")	(" , " ,
			50 A.C		
			150 Stone Base		
			125 Gravel		
			300 Sub Grade		
	DODITION VO. MAINY (A ANEVANO		(0.297km)		
	PORTFOLIO MAIN (0.297KM)				
	GRAND SUMMARY TOTAL QUANTITIES				
	GRAND SUMMARY TOTAL QUANTITIES				
	Nairobi County - Matopeni Informal Settlement				
ITEM	DESCRIPTION				AMOUNT (KSHS)
4	Site Clearance and Top Soil Stripping				,
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 Blocks and Surface Treatment				
15	Bituminous Surface Treatments				
13	Ditumnous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				



	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			PK-RD 02A		
			50mm A.C		
ITEM			150mm Stone		
			Base		
			125 Gravel		
			300mm Sub		
			Grade		
	DODITEOLIO VACVOVA (0.502VM)		(0.350km)		
	PORTFOLIO KASYOKA (0.503KM)				
BILL					
NO.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
110.04	Nairobi County - Matopeni Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the	0.112	QUILITIE	Terre (Herre)	TENTO CIVIT (TESTES)
	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				
4.01	the grubbing of stumps and roots and the disposal from the area of all spoil materials	m ²	1,925.00		
	resulting from clearing and grubbing all in accordance with the specifications.	""	-,		
	Removal of Topsoil				
	Stripping vegetable soil from the roadway, and disposal to approved stockpile areas all in				
4.02	accordance with the Specification and in conformity with the RE instructions average depth	m³	385.00		
	200mm.				
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet		20		
4.03	structures including back filling.	m	20		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				
	TOTAL FOR DILL 4 CARRIED TO GRAND SUMMART TAGE				

	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			PK-RD 02A		
			50mm A.C		
ITEM			150mm Stone		
			Base		
			125 Gravel 300mm Sub		
			Grade		
			(0.350km)		
	PORTFOLIO KASYOKA (0.503KM)				
BILL N0.5	EARTHWORKS				
	Nairobi County - Matopeni Informal Settlement				
ITEM	DESCRIPTION NOTE: All the least of the least	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 and				
5.01	rolling; all in accordance to specification	m ³	104.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	10.40		
	Fill in Expansive Clay Areas				
5.03	As per Item 5.01 but in expansive clay areas to replace unsuitable material removed up to a maximum depth of 1.0m	m³	1,848.00		
	Spoil in Soft Material				
5.04	Cut to spoil in soft material	m³	31.00		
3.04	*	III	31.00		
	Spoil in Hard Material				
5.05	Excavate, stock pile for reuse and spoil surplus hard material	m³	3.10		
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	2,310.00		
	Compaction of Existing Ground				
5.07	Compaction of formation ground in accordance with the specification	m³	157.50		
5.07		ш	137.30		
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m³	189.00		
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m³	94.50		
5.10	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m³	635.25		
	Topsoil				
5.11	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m²	175.00		
	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	175.00		
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

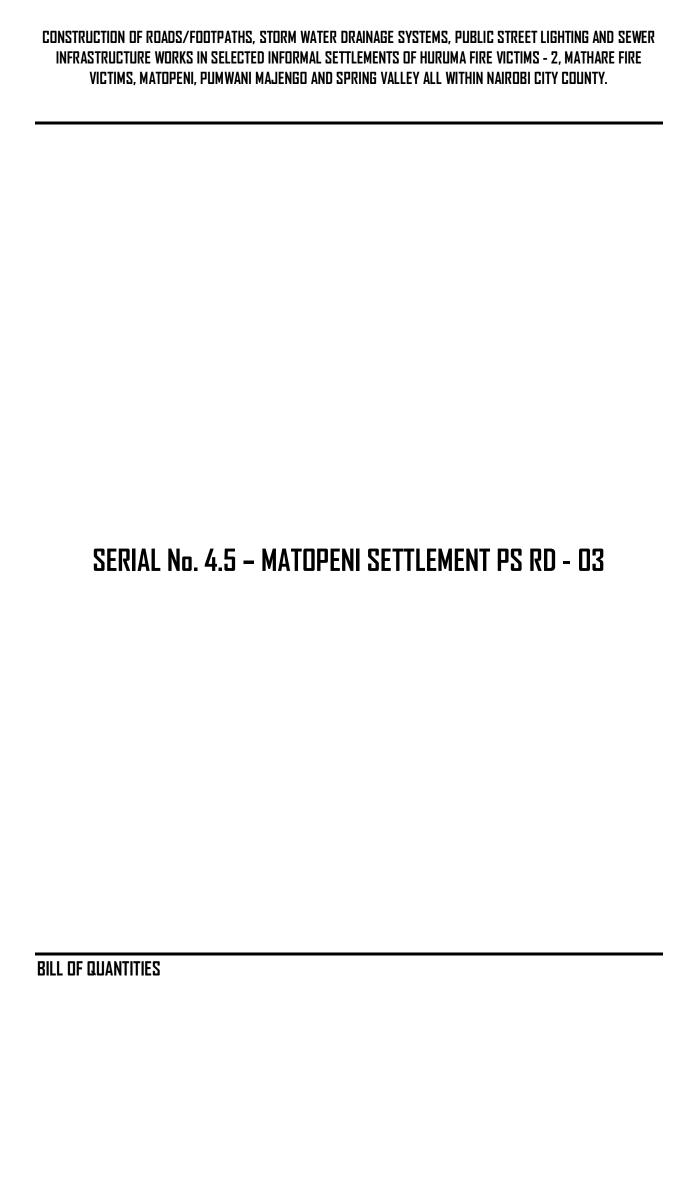
	ITEM DESCRIPTION	UNIT	QUANTITY PK-RD 02A	RATE (KSHS)	AMOUNT (KSHS)
			50mm A.C		
ITEM			150mm Stone		
TILLIVI			Base		
			125 Gravel		
			300mm Sub		
			Grade		
			(0.350km)		
	PORTFOLIO KASYOKA (0.503KM)				
BILL					
NO.8	CULVERTS AND DRAINAGE				
110.0	Nairobi County - Matopeni Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Excavate for Culverts and Subsoil Drains in Soft Material			, ,	`
	Excavation in soft material to any depth, compaction of the invert of excavation, backfilling				
8.01	with excavated materials or removing excavated material to spoil; in accordance with the	m³	531		
	Specification and in conformity with the RE instructions				
0.02	E-to and the Soft Comment is in the description	3	177		
8.02	Extra over Item 8.01 for excavation in hard material	m³	177		
	Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material				
	Excavation in soft material to any depth, compaction of the invert of excavation, backfilling				
8.03	with excavated materials or removing excavated material to spoil; in accordance with the	m³	11		
	Specification and in conformity with the RE's instructions				
8.04	Extra over Item 8.03 for excavation in hard material	m³	4		
0.07			ļ ,		
8.05	Selected backfill material Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE In-situ culverts	m³	213		
	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	204		
8.07	b) 900 mm diameter	m	14		
	Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains				
	Providing and placing the concrete; all in accordance with the Specification and in				
8.09	conformity with the RE instructions	m³	175		
	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	42		
0.11()	Rectangular Covered Concrete Drain (Road Drain)				
8.11(a)	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,	m ³	258		
	class 25/20, including slotted top cover of 200mm thick.				
8.11(b)	Steel reinforcement for concrete covered drains as specified in the drawings.	Tonne	23		
0.12	P		71		
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	71		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				
BILL	PASSAGE OF TRAFFIC				
NO.9					
ITEM	Nairobi County - Matopeni Informal Settlement DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
1 1 15 17 1	Construction of Deviations in maximum lengths of 2 km sections	UNII	QUANTITI	KATE (KSHS)	AMOUNT (KSHS)
	All the operations connected with the initial construction of temporary deviations,				
9.01	appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification	km	0.35		
	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	132.00		
9.03	Maintenance the passage of traffic	Lump Sum	1.00		
	Provide Signs and Barriers	Juin			
	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights, etc.,				
9.04	along deviations constructed: all inaccordance with Specification and in conformity with the RE instructions	Km	0.35		
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				

	ITEM DESCRIPTION	UNIT	QUANTITY PK PD 024	RATE (KSHS)	AMOUNT (KSHS)
			PK-RD 02A 50mm A.C		
TTEN 4			150mm Stone		
ITEM			Base		
			125 Gravel		
			300mm Sub		
			Grade		
			(0.350km)		
	PORTFOLIO KASYOKA (0.503KM)				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Nairobi County - Matopeni Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base				
12.01	Provide, lay and compact subbase in 125mm 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	m³	289.00		
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	347.00		
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
	Nairobi County - Matopeni Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
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				
15.01A	course on carriageway, bus bays, footpaths, shoulders and junctions	ltr	2503.0		
15.01B	to late of carriageway, our bays, non-pained treated base at nominal rate of 0.4 - 1.0 ltr/m ² to base course on on carriageway, bus bays, footpaths, shoulders and junctions	ltr	2503.0		
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				
DIL					
BILL NO.16	BITUMINOUS MIXES				
*****	Nairobi County - Matopeni Informal Settlement		OV. 17	n.mn	
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		1		
	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		1		
16.01	shall be within and approximately parallel to the grading envelopes given in table 16B-1 of	M ³	99.0		
10.01	the Standard Specification for Road and Bridge Construction for Type II, 0/14mm wearing	IVI	79.0		
	course .The coarse aggregate class for the asphalt concrete shall be Class C. 80/100		1		
	penetration grade bitumen for the asphalt concrete.				

	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			PK-RD 02A	-	
			50mm A.C	1	
ITEM			150mm Stone		
HEN			Base		
			125 Gravel		
			300mm Sub		
			Grade		
			(0.350km)		
	PORTFOLIO KASYOKA (0.503KM)				
BILL NO.20	ROAD FURNITURE				
110.20	Nairobi County - Matopeni Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	W C.				
	Warning Signs Excavation for, providing and erecting warning signs size 750mm including backfill and				
20.01		NI.	,		
20.01	concrete 15/20 to bases all in accordance with the Specification and in conformity with the RE instructions	No.	1		
20.02	Priority Signs				
20.02	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				
	instructions				
20.024					
20.02A	750mm size	No.	1		
20.02B	1000 mm size	No.	1		
	Mandatory Signs				
	Excavating for, providing and erecting prohibitory signs including backfilling and concrete				
20.03	15/20 to bases; all in accordance with the Specification and in conformity with the RE	No.	1		
	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				
20.03	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		1	70		
20.06A	White paint	m ²	70		
20.06B	Yellow paint	m ²	42		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m ²	70		
	Speed reduction bituminous bumps at junctions Description transport and always of materials in accordance with the Specification and in	-			
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				
	Provision, transport and placing of materials in accordance with the Specification and in				
20.10	conformity with the RE instructions	No	8		
	Concrete Kerbs	1			
20.11	Provision, transport, handling, mixing and placing all materials in accordance with				
20.11	Specification and in conformity with the RE instructions				
20.11A	Kerbs 125 mm x 250 mm straight	m	385		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	18		
		- "			
20.11C	Channel blocks 125mm x 100mm	m	770		
	Trees				
20.12	Planting of approved indigenous types of trees where instructed, in accordance with the	No.	10		
20.12	Specification, minimum height 1.5m -Open Fields or Wet Lands	1			
	TOTAL OF BILL 20 CARRIED TO SUMMARY BACE				
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				

Page 127 of 196

ITEM	ITEM DESCRIPTION PORTFOLIO KASYOKA (0.503KM)	UNIT	PK-RD 02A 50mm A.C 150mm Stone Base 125 Gravel 300mm Sub Grade (0.350km)	RATE (KSHS)	AMOUNT (KSHS)
	TORTOLIO RISTORA (0.505RA)				
	GRAND SUMMARY TOTAL QUANTITIES				
	Nairobi County - Matopeni 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				
13	Concrete Paving Blocks and Surface Treatment				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				



ITEM	TTEM DESCRIPTION	LINIT	OUANTITY	DATE (KCHC)	AMOUNT (IZCHE)
HEM	ITEM DESCRIPTION	UNII	-	RATE (KSHS)	AMOUNT (KSHS)
			PS-RD 03		
			50mm A.C	-	
			150mm Stone		
			Base	-	
			125mm Gravel 300mm Sub		
			Grade		
			(0.470km)		
	PORTFOLIO SOKONI (0.470KM)		(0.470Kiii)		
	(0.11010)				
BILL N0.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
110.04	Nairobi County - Matopeni 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.	m ²	2,820.00		
	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	564.00		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and				
	outlet structures including back filling.	m	24		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			PS-RD 03	i î	Ì í
			50mm A.C		
			150mm Stone		
			Base		
			125mm Gravel	-	
			300mm Sub		
			Grade (0.470km)		
	PORTFOLIO SOKONI (0.470KM)		(0.470Kiii)		
	TORTI OLIO BOROTTI (U.470RM)				
BILL NO.5	EARTHWORKS				
	Nairobi County - Matopeni Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
112.01	DESCRIPTION	CIVII	QUALITIE	ReffE (RSHS)	AMOUNT (RSHS)
	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)				
	1 1 , , ,				
	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	m ³	132.00		
	watering and rolling; all in accordance to specification	III-	132.00		
	Fill in Hard Material				
5.02	·				
5.02	As Item 5.01 but in hard material	m³	13.20		
	Fill in Expansive Clay Areas				
5.03	As per Item 5.01 but in expansive clay areas to replace unsuitable material				
5.05	removed up to a maximum depth of 1.0m	m³	2,481.60		
	Spoil in Soft Material				
5.04					
3.04	Cut to spoil in soft material	m³	2,450.40		
	Spoil in Hard Material				
5.05	Excavate, stock pile for reuse and spoil surplus hard material	m ³	245.04		
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					
5.5071	up to a maximum depth of 1.0 m	m ³	3,102.00		
	Compaction of Existing Ground				
5.07	Compaction of formation ground in accordance with the specification	,3	217.25		
	1	m³	317.25		
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD	3	160.20		
	(AASHTO T99)	m ³	169.20		
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD				
2.07	(AASHTO T99)	m ³	50.76		
5.10	Provide, lay and compact 300mm improved sub grade material to 100% MDD				
	(AASHTO T99)	m ³	930.60		
	Topsoil				
5.11	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be				
	50mm; all in accordance with the specifications	m ²	235.00		
	Grassing				
5.12					
3.14	Planting of sprigs of approved indegineous grass types; to embankments, cuttings				
	or where directed by the RE in accordance with the Specification, including	m ²	235.00		
	tending, watering and cutting until the grass is firm established or for 6 months				
	TOTAL FOR BILL 5 CARRIED TO CRAND CHARLES AND A				
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION PORTFOLIO SOKONI (0.470KM)	UNIT	QUANTITY PS-RD 03 50mm A.C 150mm Stone Base 125mm Gravel 300mm Sub Grade (0.470km)	RATE (KSHS)	AMOUNT (KSHS)
	TOKET OFFICE SOLICITY (STATES)				
BILL NO.8	CULVERTS AND DRAINAGE				
ITEM	Nairobi County - Matopeni Informal Settlement DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
HEN	DESCRIPTION	UNII	QUANTITI	KATE (KSHS)	AMOUNT (KSHS)
8.01	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 accordance with the Specification and in conformity with the RE instructions	m³	442		
8.02	Extra over Item 8.01 for excavation in hard material	m³	148		
	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 accordance with the Specification and in conformity with the RE's instructions	m³	100		
8.04	Extra over Item 8.03 for excavation in hard material	m³	40		
8.05	Selected backfill material Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE	m³	177		
0.06	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	114		
8.07	b) 900 mm diameter	m	14		
	Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains				
8.09	Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions	m³	113		
	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 Rectangular Covered Concrete Drain (Road Drain)	m³	25		
8.11(a)	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 200mm thick.	m ³	241		
8.11(b)	Steel reinforcement for concrete covered drains as specified in the drawings.	Tonne	21		
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	20		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.9	PASSAGE OF TRAFFIC				
	Nairobi County - Matopeni Informal Settlement				
ITEM	DESCRIPTION Construction of Deviations in maximum lengths of 2 km sections	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
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	0.47		
9.02	Gravel Wearing Course 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	177.00		
9.03	Maintenance the passage of traffic	Lump Sum	1.00		
0.04	Provide Signs and Barriers Description and resistances of temporary signs harriers lights traffic				
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights, etc., along deviations constructed: all inaccordance with Specification and in conformity with the RE instructions	Km	0.47		
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY PS-RD 03 50mm A.C 150mm Stone Base 125mm Gravel 300mm Sub Grade	RATE (KSHS)	AMOUNT (KSHS)
	PORTFOLIO SOKONI (0.470KM)		(0.470km)		
	Total obligation (William)				
BILL	NATURAL MATERIAL SUBBASE AND BASE				
NO.12					
ITEM	Nairobi County - Matopeni Informal Settlement DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
HEN	Natural Gravel Subbase and Base	UNII	QUANTITI	KATE (KSHS)	AMOUNT (KSHS)
	Trattial Graver 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	m³	356.00		
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	427.00		
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMART FAGE				
BILL					
NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
	Nairobi County - Matopeni 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	3102.0		
15.01B	K1-60 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	3102.0		
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				
BILL	DITUMNOUS MIVES				
NO.16	BITUMINOUS MIXES				
	Nairobi County - Matopeni 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 Provide, Lay and spread evenly 50mm thick Asphalt Concrete Type II covering				
16.01					
16.01	the carriageway and the shoulders. The grading of the mixture of coarse and fine	1			
16.01	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	133.0		
16.01	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	133.0		
16.01	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	M ³	133.0		

PS-RD 03 S0mm A.C 150mm Stone Base 125mm Gravel 300mm Sub Grade (0.470km)	ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
Some Stock					(3 3)	(3 3)
PORTFOLIO SOKONI (0.470KM) PORTFOLIO SOKONI (0.470KM)						
PORTFOLIO SONON (0.470KM)						
PORTFOLIO SOKONI (0.470KM)						
BILL NO.20 ROAD FURNITURE Nariohi Country - Matopeni Informal Settlement DEXCRIPTION UNIT QUANTITY RATE (KSHS) AMOUN Machine Sign DEXCRIPTION Warning Sign DEXCRIPTION UNIT QUANTITY RATE (KSHS) AMOUN Machine Sign DEXCRIPTION Warning Sign DEXCRIPTION UNIT QUANTITY RATE (KSHS) AMOUN AMOUNT All machine sign of executing warning signs size 750mm including and in conformity with the RE instructions in conformity with the RE instructions of in conformity with the RE instructions 20.02 Priority Sign Excavating for, providing and erecting priority signs including back filling and concrete 15/20 to base; all in accordance with the Specification and in conformity with the RE instructions 20.024 Secondary of the RE instructions 20.03 Excavating for, providing and erecting prohibitory signs including backfilling and concrete 15/20 to base; all in accordance with the Specification and in conformity with the RE instructions 100 min size 20.04 Secondary with the RE instructions 100 min size 20.04 Secondary with the RE instructions in the Specification and in conformity with the RE instructions in the Specification and in conformity with the RE instructions 20.04 Secondary with the RE instructions 20.05 Non Standard Informatory Signs Examine Signs Secondary with the RE instructions No. 1 20.05 Non Standard Informatory Signs Equal or more than 1 sq. m but less than 2 sq. m No. 1 Equal or more than 1 sq. m but less than 5 sq. m No. 1 20.06 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 20.06 Non Standard Informatory Signs Equal or more than 1 sq. m but less than 5 sq. m No. 1 20.07 A Stene 2007 but 250mm wide 20.08 Previous transport and placing of materials in accordance with the Specification and in conformity with the RE instructions 20.09 Previous transport and placing of materials in accordance with the Specification and in conformity w						
BILL NO.20 Narioli County - Marapesi Informal Settlement Warnine Signs Execution for, providing and erecting warning signs size 750mm including and concrete 1570 to base all in accordance with the Specification and in conformity with the RE instructions Priority Signs Executing for, providing and erecting priority signs including back filling and concrete 1570 to bases, all in accordance with the Specification and in conformity with the RE instructions Priority Signs Executing for, providing and erecting priority signs including backfilling and concrete 1570 to bases, all in accordance with the Specification and in conformity with the RE instructions 1000 mm size 1000 mm						
No. 20 Narioti County - Matopeni Informata Settlement DESCRIPTION UNIT QUANTITY RATE (KSHS) AMOUN		PORTFOLIO SOKONI (0.470KM)		(0.470km)		
Natrobi County - Matepeni Informal Settlement DESCRIPTION UNIT QUANTITY RATE (KSHS) AMOUN Marning Signs DESCRIPTION UNIT QUANTITY RATE (KSHS) AMOUN Amount	BILL					
Marning Signs		Nairobi County - Matopeni Informal Settlement				
Excavation for, providing and creeting warning signs size 750mm including backfill and concrete 1520 to bases all na ecordance with the Specification and in conformity with the RE instructions	ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
backfill and concrete 15/20 to bases all in accordance with the Specification and in conformity with the Einstructions 20.02 Priority Sizes Exervating 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 20.021 1000 mm size No. 1 Mandarty Signs Exervating 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 20.021 Standard Informatory Signs Exervating for, providing and erecting information signs including backfilling and concrete 15/20 to base; all in accordance with the Specification and in conformity with the RE instructions 1000mm size 20.044 South South Signs 10 South Signs						
Executaing for, providing and erecting priority signs including back filling and concrete 15/20 to bases; all in accordance with the Specification and in sonformity with the RE instructions 20.03 20.03 20.03 20.03 20.03 20.03 20.04 Mandator Signs 20.03 20.04 Standard Informators Signs Executaing 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 Executaing 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 20.04B 300.6600mm No. 1 20.05 Executaing 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 Executaing 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 but less than 2 sq.m No. 1 20.05B Equal or more than 1 sq.m but less than 5 sq.m No. 1 20.06C 20.06C Equal or more than 1 sq.m but less than 5 sq.m No. 1 20.07C Equal or more than 1 sq.m but less than 5 sq.m No. 1 20.07C Equal or more than 1 sq.m but less than 5 sq.m No. 1 20.07C 20.07A As Item 2007 but 250mm wide 20.07A 20.08C 20.09C 2		backfill and concrete 15/20 to bases all in accordance with the Specification and	No.	1		
concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions 20.028 1000 mm size No. 1 20.028 Excavating for, providing and erecting prohibitory signs including backfilling and conformity with the RE instructions 1000mm size 20.04 Standard Informatory Signs Excavating for, providing and erecting information signs including backfilling and conformity with the RE instructions 1000mm size 20.044 Standard Informatory Signs Excavating for, providing and erecting information signs including backfilling and conformity with the RE instructions 20.048 Standard Informatory Signs Excavating for, providing and erecting information signs including backfilling and conformity with the RE instructions 20.048 No. 1 20.049 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 20.05 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 20.05 Less than 1 sq.m but less than 2 sq.m No. 1 20.05 Equal or more than 1 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 20.06 White paint 20.06 Vellow paint 20.07 As Item 2007 but 250mm wide 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 Specification and in conformity with the RE instructions 20.11 Provision, transport and placing of materials in accordance with Specification and in conformity with the RE instructions 20						
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20.02A 750mm size						
20.02B 1000 mm size No. 1	20.02A	-	No.	1		
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conformity with the RE instructions 1000mm size 20.04 Mandard Informatory Signs Exeavating 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 20.04B 600x600mm No. 1 20.04B 600x600mm No. 1 20.05C Non Standard Informatory Signs Exeavating 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 Praying 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 94 20.07A as Item 2007 but 250mm wide a) White paint m² 94 Speed reduction bituminous bumps at junctions 20.07 As Item 2007 but 250mm wide a) White paint m² 94 Speed reduction bituminous bumps at junctions Rumble Strips on Pavement Concrete Kerbs Concrete Kerbs Concrete Kerbs Concrete Kerbs Provision, transport, and placing of materials in accordance with Specification and in conformity with the RE instructions Mo 11 Reference Section of materials in accordance with Specification and in conformity with the RE instructions Rumble Strips on Pavement Concrete Kerbs Concrete Kerbs Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions Mo 20.11 Reference Section of materials in accordance with Specification and in conformity with the RE instructions Concrete Kerbs Provision, transport and placing of materials in accordance with Specification and in conformity with the RE instructions Concrete Kerbs Concrete Kerbs Provision, transport and placing of materials in accordance with Spec	20.03	Excavating for, providing and erecting prohibitory signs including backfilling and				
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		
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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 20.06C 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 20.06A White paint m² 94 20.06B Yellow paint m² 57 20.07 As Item 2007 but 250mm wide 20.07A a) White paint m² 94 20.07A a) White paint m² 94 20.07A a) White paint m² 94 20.07A 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 Concrete Kerbs 20.11 Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions Chance the Kerbs 20.11A Kerbs 125 mm x 250 mm straight m 24 20.11B Kerbs 125 mm x 250 mm straight m 24 20.11C Channel blocks 125mm x 100mm m 1,034 Planting of approved indigenous types of trees where instructed, in accordance	20.04B	600x600mm	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 20.05B 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 20.06C 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 20.06A White paint m² 94 20.07A As Item 2007 but 250mm wide marking paint, 100mm wide marking out and painting, all in accordance with the Specification and in conformity with the RE instructions m² 94 20.07A a) White paint m² 94 20.07A a) White paint m² 94 20.07A a) White paint m² 94 20.07B 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 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 20.11A Kerbs 125 mm x 250 mm straight Kerbs 125 mm x 250 mm radius Im - 5m 20.11B Kerbs 125 mm x 250 mm radius Im - 5m 20.11C Channel blocks 125mm x 100mm Iress Planting of approved indigenous types of trees where instructed, in accordance	20.05	Non Standard Informatory Signs				
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Less than 1 sq.m						
Equal or more than 1 sq.m but less than 2 sq.m No. 1	20.05A		No	1		
Equal or more than 1 sq.m but less than 2 sq.m 20.05C Equal or more than 2 sq.m but less than 5 sq.m 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 20.07A Sa Item 2007 but 250mm wide 20.07A a) White paint 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 RE instructions Concrete Kerbs 20.11A Kerbs 125 mm x 250 mm straight Mr. 517 Channel blocks 125mm x 100mm m 1,034 Trees Planting of approved indigenous types of trees where instructed, in accordance	20.05D	Less than 1 sq.m	INU.	1		
Equal or more than 2 sq.m but less than 5 sq.m 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 94 20.06B Yellow paint m² 57 20.07 As Item 2007 but 250mm wide 20.07A a) White paint m² 94 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 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 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 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 and placing of materials in accordance with		Equal or more than 1 sq.m but less than 2 sq.m	No.	1		
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20.07A a) White paint m² 94 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 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 517 20.11B Kerbs 125 mm x 250 mm radius 1m - 5m m 24 20.11C Channel blocks 125mm x 100mm m 1,034 Trees Planting of approved indigenous types of trees where instructed, in accordance	20.06B	Yellow paint	m²	57		
20.07A a) White paint m² 94 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 Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions No. 11 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 20.111 From the strip of t	20.07	A o Itam 2007 but 250mm wide				
Speed reduction bituminous bumps at junctions	20.074		,	0.4		
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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 RE instructions No. 11		Speed reduction bituminous humps at junctions				
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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 517 20.11B Kerbs 125 mm x 250 mm radius 1m - 5m m 24 20.11C Channel blocks 125mm x 100mm m 1,034 Trees Planting of approved indigenous types of trees where instructed, in accordance No. 20		·				
Specification and in conformity with the RE instructions	20.11					
20.11A Kerbs 125 mm x 250 mm straight m 517	20.11					
20.11B Kerbs 125 mm x 250 mm radius 1m - 5m m 24	20.11A	•	m	517		
20.11C Channel blocks 125mm x 100mm m 1,034 Trees Planting of approved indigenous types of trees where instructed, in accordance No. 20.	20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	24		
Trees Planting of approved indigenous types of trees where instructed, in accordance Planting of approved indigenous types of trees where instructed, in accordance	20.11C					
Planting of approved indigenous types of trees where instructed, in accordance	20.110	Channel blocks 125mm x 100mm	m	1,034		
Planting of approved indigenous types of trees where instructed, in accordance		Trees				
with the Specification, minimum height 1.5m -Open Fields or Wet Lands		Planting of approved indigenous types of trees where instructed, in accordance	No.	20		
		with the Specification, minimum height 1.5m -Open Fields or Wet Lands				
TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE		TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY PS-RD 03 50mm A.C 150mm Stone Base 125mm Gravel 300mm Sub Grade (0.470km)	RATE (KSHS)	AMOUNT (KSHS)
	PORTFOLIO SOKONI (0.470KM)				
	GRAND SUMMARY TOTAL QUANTITIES				
	Communication (communication)				
	Nairobi County - Matopeni 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				
13	Concrete Paving Blocks and Surface Treatment				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				

CONSTRUCTION OF ROADS/FOOTPATHS, STORM WATER DRAINAGE SYSTEMS, PUBLIC STREET LIGHTING AND SEWER
INFRASTRUCTURE WORKS IN SELECTED INFORMAL SETTLEMENTS OF HURUMA FIRE VICTIMS - 2, MATHARE FIRE
VICTIMS MATRIPENI PIIMWANI MAJENGO AND SPRING VALLEY ALL WITHIN NAIRORI CITY COUNTY

SERIAL No. 5.0 - PUMWANI MAJENGO SETTLEMENT SUMMARY PAGE

BILL OF QUANTITIES

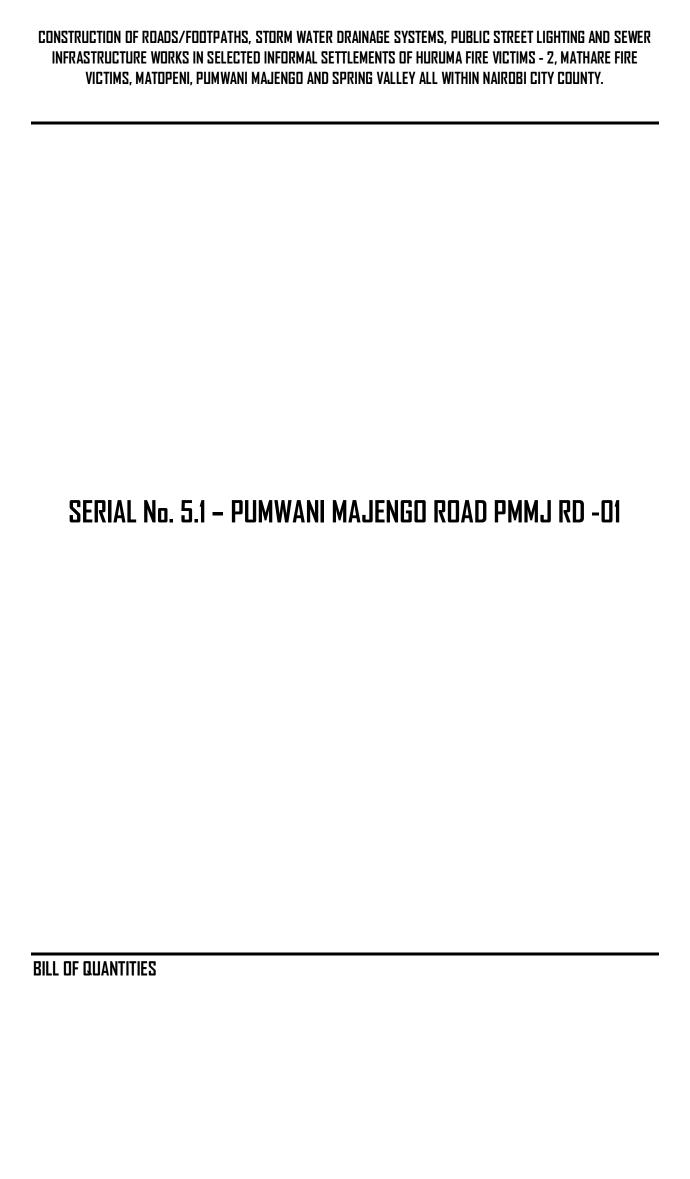
COUNTY GOVERNMENT OF NAIROBI COUNTY DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT KENYA INFORMAL SETTLEMENT IMPROVEMENT PROJECT, PHASE 2

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

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

BILLS OF QUANTITIES PUMWANI MAJENGO SUMMARY

SERIAL No.	ITEM DESCRIPTION	AMOUNT (KES)
	Road Works	
5.1	PMMJ RD01	
5.2	PMMJ RD02	
5.3	PMMJ RD03	
5.4	PMMJ RD05	
A	SUB -TOTAL -1 CARRIED TO GRAND SUMMARY PAGE	



ITEM	PUMWANI (PMMJ RD01 0.262KM)	UNIT	QUANTITY MP-RD 01 50mm AC 150 Stone Base 150 Gravel 300 Sub Grade (0.262km)	RATE (KSHS)	AMOUNT (KSHS)
BILL N0.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Nairobi County - Pumwani Informal Settlement				
ITEM	DESCRIPTION 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.	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	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.	m ²	1,572.00		
	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	315.00		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet structures including back filling.	m	16		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MP-RD 01		
			50mm AC 150 Stone Base		
			150 Gravel		
			300 Sub Grade		
			(0.262km)		
	PUMWANI (PMMJ RD01 0.262KM)				
BILL N0.5	EARTHWORKS				
	Nairobi County - Pumwani 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	85.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	9.00		
	Spoil in Soft Material				
5.03	Cut to spoil in soft material	m³	937.00		
	Spoil in Hard Material				
5.04	Encounts at all all for any and an il any last band an etail.	m³	93.70		
	Excavate, stock pile for reuse and spoil surplus hard material Compaction of Existing Ground				
5.05	Compaction of Existing Ground Compaction of formation ground in accordance with the specification				
		m³	275.10		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m³	550.20		
5.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m³	165.06		
5.08	Provide, lay and compact 300mm improved sub grade material to 100% MDD	_			
	(AASHTO T99)	m³	550.20		
	Topsoil				
5.09	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm;		121.00		
	all in accordance with the specifications	m²	131.00		
	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	131.00		
	watering and cutting until the grass is firm established or for 6 months				
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MP-RD 01		
			50mm AC		
			150 Stone Base		
			150 Gravel		
			300 Sub Grade		
			(0.262km)		
	PUMWANI (PMMJ RD01 0.262KM)				
BILL					
NO.8	CULVERTS AND DRAINAGE				
	Nairobi County - Pumwani 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	282		
	accordance with the Specification and in conformity with the RE instructions				
8.02	Extra over Item 8.01 for excavation in hard material	m³	94		
	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	6		
	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	2		
	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	113		
	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	108		
8.07	b) 900 mm diameter	m	14		
	Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains				
8.09	Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions	m³	96		
	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	24		
	Rectangular Covered Concrete Drain (Road Drain)				
8.11(a)	Provide all materials and construct 500mm(Bottom width) wide (internal dimension)	-			
6.11(a)	rectangualr concrete drains 150mm thick walls and bottom base, average height of 0.8m, class 25/20, including slotted top cover of 200mm thick.	m ³	135		
8.11(b)	Steel reinforcement for concrete covered drains as specified in the drawings.	Tonne	10		
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	20		
	110 rac 250 mm 1 10 pipes at 50 m intervals for service ducts		20		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				
	TOTAL FOR BILL & CARRIED TO GRAND SUMMARY PAGE				

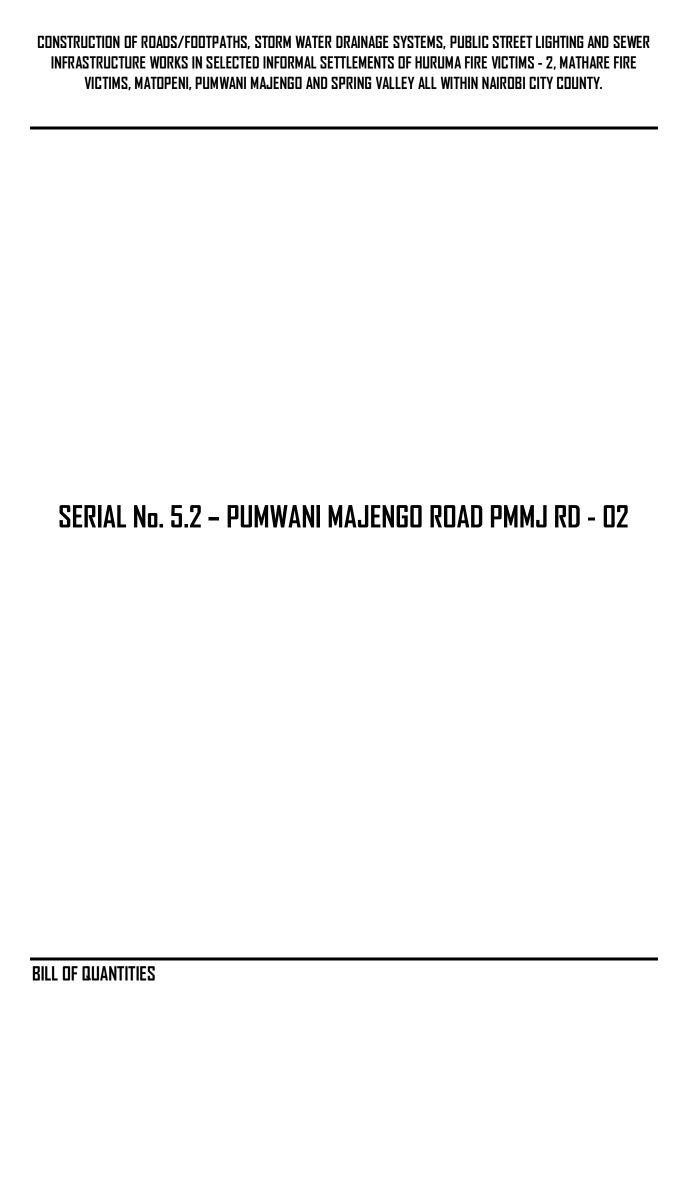
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	7-20-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2		MP-RD 01	(" ")	()
			50mm AC		
			150 Stone Base		
			150 Gravel		
			300 Sub Grade		
			(0.262km)		
	PUMWANI (PMMJ RD01 0.262KM)		(0.202)		
BILL NO.9	PASSAGE OF TRAFFIC				
	Nairobi County - Pumwani 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 Gravel Wearing Course	km	0.26		
9.02					
7.02	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	99.00		
9.03	M. C. C. C.	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 conformity with the RE instructions	Km	0.26		
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
TODA	Nairobi County - Pumwani Informal Settlement	TINITE	OLI A NITHENNI	DATE (EGIC)	AMOUNT (EGHC)
ITEM	DESCRIPTION Natural Gravel Subbase and Base	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Ivaturar Graver Suddase 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 Special Specification and in conformity with the RE instructions	m³	281.00		
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	281.00		
	pusses				
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.13	'				
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
NO.13	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE CONCRETE PAVING BLOCK SURFACE TREATMENT	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
NO.13	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE CONCRETE PAVING BLOCK SURFACE TREATMENT DESCRIPTION NOTE: No overhaul will be paid for these items as it shall be deemed to have been	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
NO.13	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE CONCRETE PAVING BLOCK SURFACE TREATMENT DESCRIPTION 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 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 directed by the Engineer	UNIT m ²	QUANTITY 393.00	RATE (KSHS)	AMOUNT (KSHS)
NO.13 ITEM	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE CONCRETE PAVING BLOCK SURFACE TREATMENT DESCRIPTION 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 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 directed by the Engineer Coloured Concrete block paving including all cuttings	m ²		RATE (KSHS)	AMOUNT (KSHS)
NO.13 ITEM	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE CONCRETE PAVING BLOCK SURFACE TREATMENT DESCRIPTION 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 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 directed by the Engineer	m ²		RATE (KSHS)	AMOUNT (KSHS)

Page 139 of 196

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MP-RD 01		
			50mm AC		
			150 Stone Base		
			150 Gravel		
			300 Sub Grade		
			(0.262km)		
	PUMWANI (PMMJ RD01 0.262KM)				
BILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
	Nairobi County - Pumwani 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	1887.0		
15.01B	K1-60 cationic emulsion tack coat on primed treated base at nominal rate of 0.4 - 1.0 ltr/m ² to base course on on carriageway, bus bays, footpaths, shoulders and junctions	ltr	1887.0		
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.16	BITUMINOUS MIXES				
	Nairobi County - Pumwani Informal Settlement				
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	84.0		
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION		QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
1112.01		UNIT		- (Rolls)	AMOUNT (RSHS)
			MP-RD 01 50mm AC 150 Stone Base		
			150 Gravel		
			300 Sub Grade		
			(0.262km)		
	PUMWANI (PMMJ RD01 0.262KM)				
BILL	ROAD FURNITURE				
NO.20	N. ' L' C d. D' L. f L C. ttl t				
ITEM	Nairobi County - Pumwani Informal Settlement DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
HEN	Warning Signs	UNII	QUANTITY	KATE (KSHS)	AMOUNI (KSHS)
20.01	Excavation for, providing and erecting warning signs size 750mm including backfill and				
20.01	concrete 15/20 to bases all in accordance with the Specification and in conformity with	No.	1		
	the RE instructions	INO.	1		
20.02	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				
	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				
20.00	concrete 15/20 to bases; all in accordance with the Specification and in conformity with	No.	1		
	the RE instructions 1000mm size	1,0.			
20.04	Standard Informatory Signs				
20.0.	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		
	300x000iiiii	INO.	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	1,0.	•		
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	m ²	53		
20.06B	Yellow paint	m ²	32		
20.002	1 toto ii puint				
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m²	53		
/			55		
	Speed reduction bituminous bumps at junctions				
20.09	Provision, transport and placing of materials in accordance with the Specification and in	NT.	2		
	conformity with the RE instructions	No	2		
	Rumble Strips on Pavement				
20.10	Provision, transport and placing of materials in accordance with the Specification and in	NT.	,		
	conformity with the RE instructions	No	6		
	G V 1				
20.11	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		262		
20.11A 20.11B	Kerbs 125 mm x 250 mm straight Kerbs 125 mm x 250 mm radius 1m - 5m	m	13		
20.11B 20.11C	Channel blocks 125mm x 100mm	m	524		
20.11C	Chainer Olocas 123Hilli x 100Hilli	m	324		
	Trees				
20.12	Planting of approved indigenous types of trees where instructed, in accordance with the	No.	10		
	Specification, minimum height 1.5m -Open Fields or Wet Lands				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
1113141	TIEM DESCRIPTION	ONI	MP-RD 01	KATE (KSHS)	AMOUNT (KSHS)
			50mm AC	1	
			150 Stone Base		
			150 Gravel		
			300 Sub Grade		
			(0.262km)		
	PUMWANI (PMMJ RD01 0.262KM)				
	GRAND SUMMARY TOTAL QUANTITIES				
	GRAND SUMMART TOTAL QUANTITIES				
	Nairobi County - Pumwani 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				
13	Concrete Paving Blocks and Surface Treatment				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				



ITEM	ITEM DESCRIPTION	UNIT	QUANTITY MP-RD 02 60mm MD PB 150 Stone Base 150 Gravel Subbase 300 Sub Grade (0.173km)	RATE (KSHS)	AMOUNT (KSHS)
	PUMWANI (PMMJ RD02 0.173KM)				
BILL N0.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
TODA 5	Nairobi County - Pumwani Informal Settlement	LINITE	OHANDERY	DATE (IZCIES)	AMOUNT (ZCHC)
ITEM	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.	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	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.	m ²	1,557.00		
	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	312.00		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet structures including back filling.	m	9		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

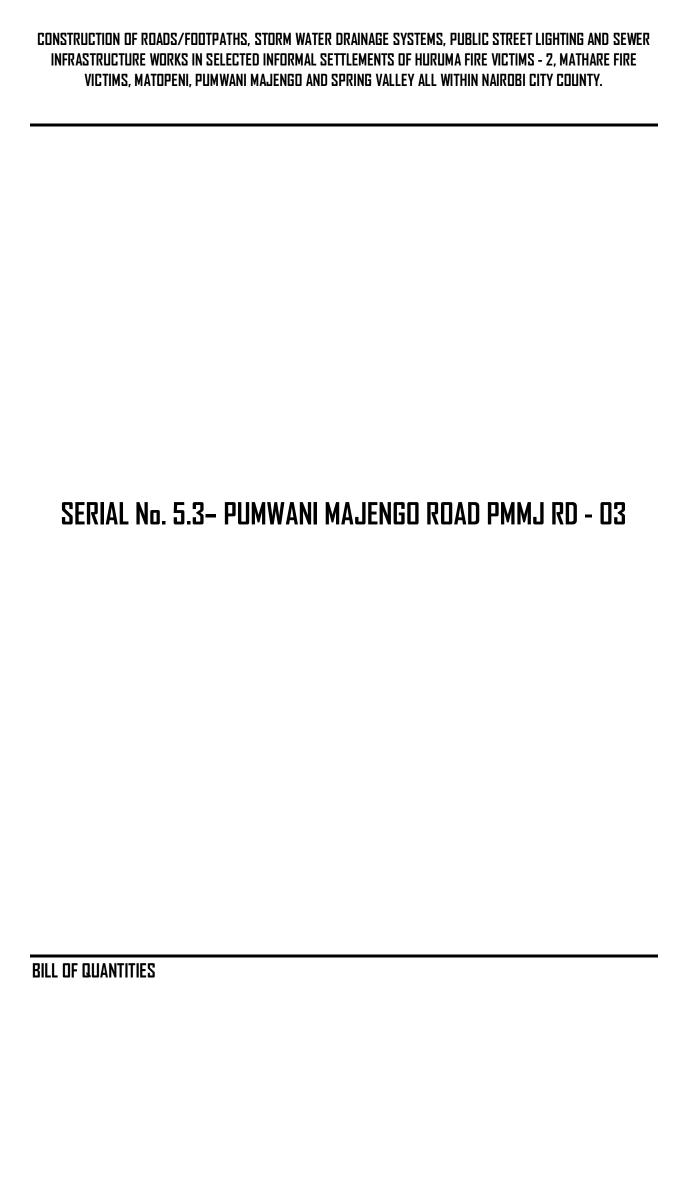
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MP-RD 02		
			60mm MD PB		
			150 Stone Base		
			150 Gravel Subbase		
			300 Sub Grade		
			(0.173km)		
	PUMWANI (PMMJ RD02 0.173KM)				
BILL N0.5	EARTHWORKS				
	Nairobi County - Pumwani Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: All costs and charges connected with haulage are to be included within the unit rates			ì	ì
	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				
3.01	excavating the material, transportation and filling in embankment, including watering and rolling; all in accordance to specification	m ³	56.00		
	<u> </u>				
5.02	Fill in Hard Material				
3.02	As Item 5.01 but in hard material	m³	6.00		
	Spoil in Soft Material				
5.03	Cut to spoil in soft material	m ³	570.50		
	Spoil in Hard Material				
5.04	Excavate, stock pile for reuse and spoil surplus hard material	m³	57.05		
	Compaction of Existing Ground		57.05		
5.05	Compaction of formation ground in accordance with the specification	2	222.55		
	1	m³	233.55		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m³	467.10		
5.07					
3.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m³	140.13		
5.08	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m³	3,062.10		
			3,002.10		
5.00	Topsoil				
5.09	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in	m ²	86.50		
	accordance with the specifications Grassing				
5.10	Planting of sprigs of approved indegineous grass types; to embankments, cuttings or where directed by				
5.10	the RE in accordance with the Specification, including tending, watering and cutting until the grass is	m ²	86.50		
	firm established or for 6 months	""	60.50		
	and controlled of for a months				
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

MP-RD 02 60mm MD PB 150 Stone Base 150 Gravel Subbase 300 Sub Grade (0.173km)	AMOUNT (KSHS)
PUMWANI (PMMJ RD02 0.173KM) CULVERTS AND DRAINAGE Save the standard specification and in conformity with the RE's instructions Excavation in soft material to any depth, compaction of the invert of excavation, backfilling with excavated material to any depth, compaction of the invert of excavation, backfilling with excavated material to any depth, compaction of the invert of excavation, backfilling with excavated materials or removing excavated material to spoil; in accordance with the Specification and in conformity with the RE instructions Excavation in soft material to any depth, compaction of the invert of excavation, backfilling with excavated material to apply the excavated material to spoil; in accordance with the Specification and in conformity with the RE instructions Excavation in soft material to any depth, compaction of the invert of excavation, backfilling with excavated material to any depth, compaction of the invert of excavation, backfilling with excavated material to any depth, compaction of the invert of excavation, backfilling with excavated materials or removing excavated material to spoil; in accordance with the Specification and in conformity with the RE's instructions 8.04	(SHS) AMOUNT (KSHS)
PUMWANI (PMMJ RD02 0.173KM) CULVERTS AND DRAINAGE	(SHS) AMOUNT (KSHS)
PUMWANI (PMMJ RD02 0.173KM)	(SHS) AMOUNT (KSHS)
No.8 CULVERIS AND DRAINAGE Nairobi County - Pumwani Informal Settlement DESCRIPTION Exeavate 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 accordance with the Specification and in conformity with the RE instructions 8.02 Extra over Item 8.01 for excavation in hard material Excavate for Inlet, Outfall, Mitre and Catchwater 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 accordance with the Specification and in conformity with the RE's instructions 8.04 Extra over Item 8.03 for excavation in hard material 8.05 Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE 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 72 8.07 b) 900 mm diameter NATE (K QUANTITY QUANTITY RATE (K QUANTITY QUANTITY RATE (K QUANTITY QUANTITY RATE (K QUANTITY QUANTITY QUANTITY PRATE (K QUANTITY ATTERITY QUANTITY PRATE (K QUANTITY ATTERITY QUANTITY PRATE (K PRATE	(SHS) AMOUNT (KSHS)
No.8 CULVERIS AND DRAINAGE Nairobi County - Pumwani Informal Settlement DESCRIPTION Exeavate 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 accordance with the Specification and in conformity with the RE instructions 8.02 Extra over Item 8.01 for excavation in hard material Excavate for Inlet, Outfall, Mitre and Catchwater 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 accordance with the Specification and in conformity with the RE's instructions 8.04 Extra over Item 8.03 for excavation in hard material 8.05 Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE 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 72 8.07 b) 900 mm diameter NATE (K QUANTITY QUANTITY RATE (K QUANTITY QUANTITY RATE (K QUANTITY QUANTITY RATE (K QUANTITY QUANTITY QUANTITY PRATE (K QUANTITY ATTERITY QUANTITY PRATE (K QUANTITY ATTERITY QUANTITY PRATE (K PRATE	AMOUNT (KSHS)
Second content of the content of t	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 accordance with the Specification and in conformity with the RE instructions 8.02 Extra over Item 8.01 for excavation in hard material 8.03 Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material 8.04 Excavated materials or removing excavated material to spoil; in accordance with the Specification and in conformity with the RE's instructions 8.04 Extra over Item 8.03 for excavation in hard material 8.05 Excavation in soft material 8.06 Selected backfill material 8.07 Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE In-situ culverts 8.06 a) 600 mm diameter (for use at minor junctions only) m 72 8.07 b) 900 mm diameter m 14	AMOUNT (KSHS)
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 accordance with the Specification and in conformity with the RE instructions 8.02 Extra over Item 8.01 for excavation in hard material 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 accordance with the Specification and in conformity with the RE's instructions 8.04 Extra over Item 8.03 for excavation in hard material 8.05 Selected backfill material 8.06 Providing, backfilling to any depth all in accordance with the Standard Specifications 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 8.06 a) 600 mm diameter (for use at minor junctions only) m 72 8.07 b) 900 mm diameter 8.08 minimum in soft material to spoil; in accordance with the Standard Specification and in conformity with the RE instructions m 72 8.09 minimum in the material to spoil; in accordance with the RE instructions m 72 8.09 minimum in the material to spoil; in accordance with the Standard Specification and in conformity with the RE instructions of the RE instructions m 72 8.00 minimum in the material to spoil; in accordance with the Specification and in conformity with the RE instructions of the RE instructions	
Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material Excavate for Inlet, Outfall, Mitre and Catchwater 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 accordance with the Specification and in conformity with the RE's instructions 8.04 Extra over Item 8.03 for excavation in hard material 8.05 Providing, backfilling to any depth all in accordance with the Standard Specifications 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 8.06 a) 600 mm diameter (for use at minor junctions only) m 72 8.07 b) 900 mm diameter	
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 accordance with the Specification and in conformity with the RE's instructions 8.04 Extra over Item 8.03 for excavation in hard material 8.05 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 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 72 8.07 b) 900 mm diameter m 14	
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 accordance with the Specification and in conformity with the RE's instructions 8.04 Extra over Item 8.03 for excavation in hard material 8.05 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 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 72 8.07 b) 900 mm diameter m 14	
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 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 72 8.07 b) 900 mm diameter m 14	
8.05 Providing, backfilling to any depth all in accordance with the Standard Specifications 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 8.06 a) 600 mm diameter (for use at minor junctions only) m 72 8.07 b) 900 mm diameter m 14	
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 8.06 a) 600 mm diameter (for use at minor junctions only) m 72 8.07 b) 900 mm diameter m 14	
instructions	
8.06 a) 600 mm diameter (for use at minor junctions only) m 72 8.07 b) 900 mm diameter m 14	
0) 700 limi dianetti	
Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains	
8.09 Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions m ³ 67	
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 17	
Rectangular Covered Concrete Drain (Road Drain)	
8.11(a) 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 200mm thick.	
8.11(b) Steel reinforcement for concrete covered drains as specified in the drawings. Tonne 8	
8.12 Provide 250mm PVC pipes at 50m intervals for service ducts m 21	
TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE	
BILL NO.9 PASSAGE OF TRAFFIC	
Nairobi County - Pumwani Informal Settlement	
ITEM DESCRIPTION UNIT QUANTITY RATE (K	KSHS) AMOUNT (KSHS)
Construction of Deviations in maximum lengths of 2 km sections 9.01	
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 65.00	
9.03 Maintenance the passage of traffic Lump Sum 1.00	
Provide Signs and Barriers	
Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights, etc., along deviations constructed: all inaccordance with Specification and in conformity with the RE instructions Km 0.17	
TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE	

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
1115111	TIEM DESCRIPTION	0.111	MP-RD 02	(KSHS)	Linouri (Rons)
			60mm MD PB		
			150 Stone Base	1	
			150 Gravel Subbase	1	
			300 Sub Grade]	
			(0.173km)		
	PUMWANI (PMMJ RD02 0.173KM)				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
NO.12	Nairobi County - Pumwani 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,				
12.01	footpaths, shoulders and junctions from the designated quarries listed in the Special Specification in	m ³	221.00		
	accordance with the Specification and in conformity with the RE instructions				
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	221.00		
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				
BILL	CONCRETE PAVING BLOCK SURFACE TREATMENT				
NO.13A		TINITE	OT A NUMBER OF	DATE (MOHO)	AMOUNT (VOICE)
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	m ²	173.00		
	road and junctions all in accordance with the specifications or as directed by the Engineer				
13.02A	Concrete block paving including all cuttings Provide and lay approved 60mm thick medium duty pre-cast concrete paving blocks with minimum				
13.02A	strength of 35N/mm 2 to BS 6717 Part 1 of 1986 to road footpaths etc. and as directed by the Engineer	,	172.00		
		m ²	173.00		
	TOTAL FOR BILL 13 CARRIED TO GRAND SUMMARY PAGE				
	TOTAL FOR BILL IS CARRIED TO GRAND SUMMART TAGE				
DILL					
BILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
110.13	Nairobi County - Pumwani 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/m ² to base course on carriageway, bus bays, footpaths, shoulders and junctions	ltr	1350.0		
15.01B	K1-80 cationic emulsion tack coat on primed treated base at nominal rate of 0.4 - 1.0 ltr/m² to base	.	1250.0		
	course on on carriageway, bus bays, footpaths, shoulders and junctions	ltr	1350.0		
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				
BILL					
NO.16	BITUMINOUS MIXES				
	Nairobi County - Pumwani 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				
16.01	included in the rates. Rates to be inclusive of fines				
10.01	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	١.,			
	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	M ³	58.0		
	asphalt concrete shall be Class C. 80/100 penetration grade bitumen for the asphalt concrete.				
	propriete controls shall be chass c. 60, 100 penetration grade oftunen for the aspital conference.				
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE				
	TOTAL FOR BILL IN CARRIED TO GRAND SUMINARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	AMOUNT (KSHS)	
1121	The Base and The State and The	0	MP-RD 02	RATE (KSHS)	11.1001(1 (110115)
			60mm MD PB 150 Stone Base 150 Gravel Subbase 300 Sub Grade (0.173km)		
BILL	PUMWANI (PMMJ RD02 0.173KM)				
NO.20	ROAD FURNITURE				
TEEM	Nairobi County - Pumwani Informal Settlement DESCRIPTION	LINITE	OLI A NITHTY	DATE (VOHE)	AMOUNT (IZOHO)
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
20.01	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	No.	1		
20.02	Priority Signs				
20.02A	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		
20.02B	1000 mm size	No.	1		
20.03	Mandatory Signs				
20.03	Exeavating 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	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	35		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m ²	35		
	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	1		
20.10	Rumble Strips on Pavement Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions	No	4		
	Concrete Kerbs				
20.11	Provision, transport, handling, mixing and placing all materials in accordance with Specification and in				
20.11A	conformity with the RE instructions Kerbs 125 mm x 250 mm straight	m	190		
20.11B	Kerbs 125 mm x 250 mm straight Kerbs 125 mm x 250 mm radius 1m - 5m	m m	9		
20.11C	Channel blocks 125 mm x 100mm	m	363		
20.12	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.	10		
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY MP-RD 02 60mm MD PB 150 Stone Base 150 Gravel Subbase 300 Sub Grade (0.173km)	RATE (KSHS)	AMOUNT (KSHS)
	PUMWANI (PMMJ RD02 0.173KM)		(0.175kiii)		
	GRAND SUMMARY TOTAL QUANTITIES				
	Nairobi County - Pumwani 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 Blocks and Surface Treatment				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				



ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			PMJ-RD 03		
			60mm MD PB		
			150 Stone Base		
			150 Gravel		
			300 Sub Grade		
			(0.156km)		
	PUMWANI (PMMJ RD03 0.156KM)				
DIT I					
BILL N0.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
110.04	Nairobi County - Pumwani Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
1112141	NOTE: All costs and charges connected with haulage are to be included within the unit rates	UNII	QUANTITI	KATE (KSHS)	AMOUNT (KSHS)
	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	m ²	1,404.00		
	clearing and grubbing all in accordance with the specifications.				
	D 1 07 11				
4.02	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	m³	281.00		
	200mm.	III	281.00		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet structures				
1.05	including back filling.	m	8		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

Y00717	CONSTRUCTION OF INFRASTRUCTURE IMPROVEMENT WORKS IN SELECTED INFORM				
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			PMJ-RD 03		
			60mm MD PB		
			150 Stone Base		
			150 Gravel		
			300 Sub Grade		
			(0.156km)		
	PUMWANI (PMMJ RD03 0.156KM)		(3, 3, 7		
DILL NO.5	EARTHWORKS				
DILL NU.5					
ITEM	Nairobi County - Pumwani Informal Settlement DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
TIENI	NOTE: All costs and charges connected with haulage are to be included within the unit rates	UNII	QUANTITI	KATE (KSHS)	AMOUNT (KSHS)
	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;	m³	42.00		
	all in accordance to specification		12.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	5.00		
	Spoil in Soft Material				
5.03	Cut to spoil in soft material	m³	446.54		
	Spoil in Hard Material				
5.04	Excavate, stock pile for reuse and spoil surplus hard material	m³	44.65		
	Compaction of Existing Ground				
5.05	Compaction of formation ground in accordance with the specification	m³	218.79		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m³	437.58		
5.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m³	131.27		
5.08	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m³	437.58		
	Topsoil				
5.09	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in		70.00		
	accordance with the specifications	m ²	78.00		
	Grassing				
5.10	Planting of sprigs of approved indegineous grass types; to embankments, cuttings or where directed	1			
	by the RE in accordance with the Specification, including tending, watering and cutting until the	m ²	78.00		
	grass is firm established or for 6 months				
	TOTAL FOR DAY A CARPIER TO CRANE STATE OF				
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
HEW		ONII	PMJ-RD 03 60mm MD PB 150 Stone Base		AMOUNI (KSHS)
			150 Gravel 300 Sub Grade (0.156km)		
	PUMWANI (PMMJ RD03 0.156KM)		(0,000,000)		
BILL					
NO.8	CULVERTS AND DRAINAGE				
ITEM	Nairobi County - Pumwani Informal Settlement DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
HEN	Excavate for Culverts and Subsoil Drains in Soft Material	UNII	QUANTITI	KATE (KSHS)	AMOUNT (KSHS)
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 accordance with the Specification and in conformity with the RE instructions	m³	156		
8.02	Extra over Item 8.01 for excavation in hard material	m³	52		
8.03	Excavate for Inlet, Outfall, Mitre and Catchwater 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 accordance with the Specification and in conformity with the RE's instructions	m³	40		
8.04	Extra over Item 8.03 for excavation in hard material	m³	2		
8.05	Selected backfill material Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE	m³	63		
	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	42		
8.07	b) 900 mm diameter	m	14		
8.09	Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions	m³	46		
8.10	Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures Providing and placing the concrete, reinforcement and formwork class F2 all in accordance with	m³	11		
	the Specification and in conformity with the RE instructions Rectangular Covered Concrete Drain (Road Drain)				
8.11(a)	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 200mm thick.	m ³	80		
8.11(b)	Steel reinforcement for concrete covered drains as specified in the drawings.	Tonne	7		
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	19		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.9	PASSAGE OF TRAFFIC				
ITEM	Nairobi County - Pumwani Informal Settlement	LIMIT	OHANTITY	DATE (EQUE)	AMOUNT (IZERE)
ITEM	DESCRIPTION Construction of Deviations in maximum lengths of 2 km sections	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
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 Gravel Wearing Course	km	0.08		
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	59.00		
9.03	Maintenance the passage of traffic	Lump Sum	1.00		
0.01	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 conformity with the RE instructions	Km	0.16		
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				

Page 151 of 195

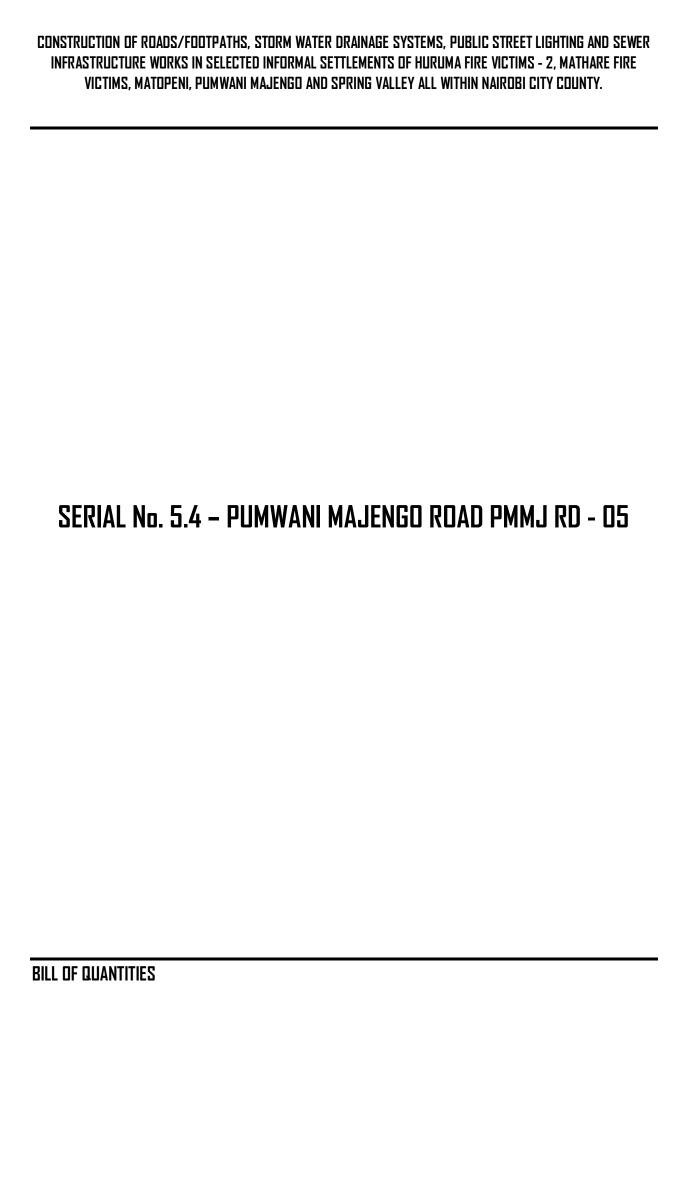
PUNNANI (PMNJ ROB3 0.156KM) ATURAL SUBBASE AND BASE Nation Country - Punnwani Informal Settlement DEX CRIPTION UNIT QUANTITY RATE (RSHS) AMOUNT (RSHS)	ITEM	ITEM DESCRIPTION	UNIT	PMJ-RD 03 60mm MD PB 150 Stone Base 150 Gravel 300 Sub Grade (0.156km)	RATE (KSHS)	AMOUNT (KSHS)
Nativity County - Pursons in Informal Settlement DESCRIPTION UNIT QUANTITY RATE (RSIIS) AMOUNT (RSIIS)		PUMWANI (PMMJ RD03 0.156KM)				
Nariobi County - Ponwani Informal Settlement DECRIPTION UNTITY RATE (KSIIS) AMOUNT (KSIIS)		NATURAL MATERIAL SUBBASE AND BASE				
Startar Gravel Subbase and Base Provide, lay and compact subbase in 150mm thick natural gravel material in earningeway, bus bays, footpaths, shoulders and junctions from the designated quarters listed in the Special Specification in a concommence with the Specification and in conforming with the RR interticens Provide, place and compact 150mm Thick handpacked hardcore in one layor (150mm) place 50mm binding layer of quarry data. This includes 12 tomore whenting profiler (min 8 passes) Provide, place and compact 150mm Thick handpacked hardcore in one layor (150mm) place 50mm binding layer of quarry data. This includes 12 tomore whenting profiler (min 8 passes) Provide, place and compact 150mm Thick handpacked hardcore in one layor (150mm) place 50mm binding layer of quarry data. This includes 12 tomore whenting profiler (min 8 passes) Provide and place of quarry data. Place of Provided in the Contractor's rate. Provide and place of place o	110.12	Nairobi County - Pumwani Informal Settlement				
Provide, lay and compact subbase in 150mm thick natural gravel material in earriageway, bus bays, footpaths, shoulders and junctions from the designated quarries listed in the Special Specification and in conductive with the Specification and in conformative with the Ris instructions Provide, place and compact 150mm Thick Innefpasckol native vibrating roller (min 8 passes) m² 219.00	ITEM	•	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
Goografus, shoulders and junctions from the designated quarties listed in the Special Special space of concentration and accordance with the Specification and in confirming with the Ris instructions 12.02		Natural Gravel Subbase and Base				
Provide-place and compact 1-Orman Intek handspacked narkore in one layer (19thum) plats 9thum hilding layer of quary disks. This Includes 12 tonew lorbrating police (min's passes) TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE BILL. NO.13 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 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 directed by the Engineer Concrete holes hawking including all cuttings Concrete holes hawking including all cuttings Provided and junctions all in accordance with the specifications or as directed by the Engineer TOTAL FOR BILL 13 CARRIED TO GRAND SUMMARY PAGE BILL. NO.15 BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING Nairobi County - Pumwani Informal Settlement DESCRIPTION UNIT QUANTITY RATE (KSHS) AMOUNT (KSHS) TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE BILL. NO.16 Ki-80 cationic considerant hack coat on primed treated hase at nominal rate of 0.4 - 1.0 ltr/m² to base course on carriageway, bus bays, footpaths, shoulders and junctions TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE BILL. NO.16 BITUMINOUS MIXES TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE BILL. NO.16 NOTE: No haulage will be paid for suggregates, bitumen or the premix. The cost for haulage shall be included in the rates. Rates to be inclusive of fines DESCRIPTION DESCRIPTION UNIT QUANTITY RATE (KSHS) AMOUNT (KSHS) TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE BILL. NO.16 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 DESCRIPTION DESCRIPTION WINT QUANTITY RATE (KSHS) AMOUNT (KSHS) TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE BILL. NO.16 NOTE: No haulage will be paid for aggregates, bitumen or the premix. The cost for haulage shall be included in the rates. Rates t	12.01	footpaths, shoulders and junctions from the designated quarries listed in the Special Specification	m³	219.00		
BILL SUPPLY STATE (SSHS) BILL SUPPLY STATE	12.02		m³	219.00		
ITEM DESCRIPTION UNIT QUANTITY RATE (KSIIS) AMOUNT (KSIIS)		TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				
DESCRIPTION UNIT QUANTITY RATE (KSIIS) AMOUNT (KSHS)		CONCRETE PAVING BLOCK SURFACE TREATMENT				
in the Contractor's rates. Jointing Sand 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 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 footpaths etc. and as directed by the Engineer TOTAL FOR BILL 13 CARRIED TO GRAND SUMMARY PAGE BILL NO.15 BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING Nairobi County - Pumwani Informal Settlement DESCRIPTION DESCRIPTION WINT QUANTITY RATE (KSHS) AMOUNT (KSHS) 15.010 K1-80 catonic emulsion tack coat on primed treated base at nominal rate of 0.8 - 1.2 ltr/m² to base course on carriageway, bus bays, footpaths, shoulders and junctions K1-80 catonic 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 TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE BILL NO.16 BITUMINOUS MIXES Nairobi County - Pumwani Informal Settlement TEM DESCRIPTION DESCRIPTION UNIT QUANTITY RATE (KSHS) AMOUNT (KSHS) Litr 1311.0 CONTROL POR BILL 15 CARRIED TO GRAND SUMMARY PAGE BILL NO.16 Nairobi County - Pumwani Informal Settlement DESCRIPTION DESCRIPTION VINIT QUANTITY RATE (KSHS) AMOUNT (KSHS) TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE BILL NO.16 Provide, Lay and spread evenly 50mm thick Asphalt Concrete Type II covering the carriageway and spread evenly 50mm thick Asphalt Concrete Type II covering the carriageway and spread evenly 50mm thick Asphalt Concrete Type II covering the carriageway and spread evenly 50mm thick Asphalt Concrete Type II covering the carriageway and spread evenly 50mm thick Asphalt Concrete Type II covering the carriageway and spread evenly 50mm thick Asphalt Concrete Type II covering the carriageway and approximately parallel to the grading envelopes give		DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
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 directed by the Engineer Concrete block paving including all cuttings Provide and lay approved 60mm thick Medium Duty pre-east concrete paving blocks with minimum strength of 35N/mm 2 to BS 6717 Part 1 of 1986 to road footpaths etc. and as directed by the Engineer TOTAL FOR BILL 13 CARRIED TO GRAND SUMMARY PAGE BILL NO.15 BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING Nairobi County - Pumwani Informal Settlement DESCRIPTION UNIT OUNTITY RATE (KSIIS) AMOUNT (KSHS) 15.01A Course oat 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 K1-80 cationic emulsion tack coat on primed treated base at nominal rate of 0.4 - 1.0 ltr/m² to base course on orarriageway, bus bays, footpaths, shoulders and junctions TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE BILL NO.16 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 Airobi County - Pumwani Informal Settlement DESCRIPTION NOTE: No haulage will be paid for aggregates, bitumen or the premix. The cost for haulage shall 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 168-1 of the Standard Specification for Road and Bridge Construction for Type II, Ol-4mm wearing course. The coarse aggregate class for the asphalt concrete shall be Class C. 80/100 penetration grade bitumen for the asphalt Output Description of the asphalt concrete shall be Class C. 80/100 penetration grade bitumen for the asphalt Output Description of the shall be class of the mixture of coarse and fine aggregate class for the asphalt concrete shall be Class C. 80/100 penetration grade bitumen for the asphalt Output Description of t						
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 directed by the Engineer Concrete block naving including all cuttings		Jointing Sand				
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 footpaths etc. and as directed by the Engineer 234.00	13.01		m ²	234.00		
BILL No.15 BILL Solution of County - Pumwani Informal Settlement TEM DESCRIPTION DISTRICT ORGAND SUMMARY PAGE TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE BILL Nairobi County - Pumwani Informal Settlement TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE BILL Nairobi County - Pumwani Informal Settlement TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE BILL Nairobi County - Pumwani Informal Settlement TEM DESCRIPTION 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 Provide, Lay and spread evenly 50mm thick Asphalt Concrete Type II covering the carriageway and the shoulders. 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.	13.02	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 footpaths etc. and as directed	m ²	234.00		
No.15 Nairobi County - Pumwani Informal Settlement ITEM DESCRIPTION IS.01 MC 30 prime coat and Tack coat Itr 1311.0 IS.01B K1-80 catinic emulsion tack coat on primed treated base at nominal rate of 0.8 - 1.2 ltr/m² to base course on carriageway, bus bays, footpaths, shoulders and junctions TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE BILL NO.16 BITUMINOUS MIXES Nairobi County - Pumwani Informal Settlement TIEM DESCRIPTION DESCRIPTION UNIT QUANTITY RATE (KSHS) AMOUNT (KSHS) Itr 1311.0 Itr 1311.0 Itr 1311.0 UNIT QUANTITY RATE (KSHS) AMOUNT (KSHS) VIII (VIII) UNIT QUANTITY RATE (KSHS) AMOUNT (KSHS) TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE Itr 1311.0 BIUMINOUS MIXES Nairobi County - Pumwani Informal Settlement TIEM DESCRIPTION ONTE: 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 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.		TOTAL FOR BILL 13 CARRIED TO GRAND SUMMARY PAGE				
Nairobi County - Pumwani Informal Settlement DESCRIPTION UNIT QUANTITY RATE (KSHS) AMOUNT (KSHS)		BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
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 KI-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 TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE BILL NO.16 BILL NO.16 Nairobi County - Pumwani Informal Settlement TIEM DESCRIPTION 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 be included in the rates. Rates to be inclusive of fines 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. M³ 52.0		Nairobi County - Pumwani Informal Settlement				
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 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 TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE BILL BITUMINOUS MIXES Nairobi County - Pumwani Informal Settlement ITEM DESCRIPTION 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 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. Itr 1311.0 1311.0 1311.0 1311.0 1311.0 1311.0 1311.0			UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
Solution 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 Itr 1311.0		MC 30 prime coat on Cement treated material at nominal rate of 0.8 - 1.2 ltr/m² to base course on	ltr	1311.0		
BILL NO.16 BITUMINOUS MIXES Nairobi County - Pumwani Informal Settlement ITEM 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 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 M 52.0	15.01B	K1-80 cationic emulsion tack coat on primed treated base at nominal rate of 0.4 - 1.0 ltr/m² to base	ltr	1311.0		
No.16 Nairobi County - Pumwani Informal Settlement		TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				
Nairobi County - Pumwani Informal Settlement DESCRIPTION UNIT QUANTITY RATE (KSHS) AMOUNT (KSHS)		BITUMINOUS MIXES				
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.						
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.	ITEM		UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
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. M3 52.0	16.00					
TOTAL FOR BILL 16 CARRIED TO CRAND SUMMARY PACE	16.01	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	M ³	52.0		
		TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE				

Page 152 of 195

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
IIE.VI	TIEW DESCRIPTION	Civil	PMJ-RD 03 60mm MD PB 150 Stone Base	KATE (KSHS)	AMOUNT (KSHS)
			150 Gravel 300 Sub Grade (0.156km)		
	PUMWANI (PMMJ RD03 0.156KM)		(orreorm)		
BILL NO.20	ROAD FURNITURE				
110.20	Nairobi County - Pumwani Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
20.01	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	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		
20.03	Mandatory 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	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				
20.06A	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	m ²	32		
20.0071	white paint	III	32		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m ²	32		
	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	1		
	Rumble Strips on Pavement				
20.10	Provision, transport and placing of materials in accordance with the Specification and in conformity with the 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	172		
20.11B 20.11C	Kerbs 125 mm x 250 mm radius 1m - 5m	m	8		
20.11C	Channel blocks 125mm x 100mm	m	328		
20.12	Trees Planting of approved indigenous types of trees where instructed, in accordance with the	No.	10		
	Specification, minimum height 1.5m -Open Fields or Wet Lands				
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				

Page 153 of 195

ITEM	ITEM DESCRIPTION	UNIT	PMJ-RD 03 60mm MD PB 150 Stone Base 150 Gravel 300 Sub Grade	RATE (KSHS)	AMOUNT (KSHS)
	PUMWANI (PMMJ RD03 0.156KM)		(0.156km)		
	GRAND SUMMARY TOTAL QUANTITIES				
ITEM	Nairobi County - Pumwani Informal Settlement DESCRIPTION				AMOUNT (KSHS)
4	Site Clearance and Top Soil Stripping				AMOUNT (KSHS)
5	Earthworks				
8	Culverts and Drainage Works				
9	Passage of Traffic				
12	Natural Material Subbase and Base				
13	Concrete Paving Blocks and Surface Treatment				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				



ITEM	ITEM DESCRIPTION	UNIT	OUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			PM-RD 05		(22313)
			60mm MD PB		
			150 Stone Base	1	
			150 Gravel		
			300 Sub Grade		
			(0.230km)	1	
	PUMWANI (PMMJ RD05 0.230KM)				
BILL N0.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Nairobi County - Pumwani 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.	m ²	1,150.00		
	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	230.00		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet structures including back filling.	m	12		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	PM-RD 05 60mm MD PB 150 Stone Base 150 Gravel 300 Sub Grade (0.230km)	RATE (KSHS)	AMOUNT (KSHS)
	PUMWANI (PMMJ RD05 0.230KM)		(0120 ontil)		
BILL NO.5	EARTHWORKS				
	Nairobi County - Pumwani 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	68.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	6.80		
	Spoil in Soft Material				
5.03	Cut to spoil in soft material	m^3	872.00		
	Spoil in Hard Material				
5.04	Excavate, stock pile for reuse and spoil surplus hard material	m³	87.20		
	Compaction of Existing Ground				
5.05	Compaction of formation ground in accordance with the specification	m³	189.75		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m³	345.00		
5.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m³	138.00		
5.08	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m³	345.00		
	Topsoil				
5.09	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m ²	115.00		
	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, watering and cutting until the grass is firm established or for 6 months	m²	115.00		
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

PUMWANI (PMMI RDBS 0.230KM) Solution S	ITEM	ITEM DESCRIPTION	UNIT	QUANTITY PM-RD 05	RATE (KSHS)	AMOUNT (KSHS)
PUMWANI (PMM RD05 0.200KN)				60mm MD PB 150 Stone Base 150 Gravel 300 Sub Grade		
Nariotic County - Pursons and Informal Settlement UNIT QUANTITY RATE (KSHS) AMOUNT (KSF Execute for Culverts and Subsoil Drains in Soft Material Executation in soft material to any depth, compaction of the invert of execution, backfilling with executed material to spot, in accordance with the Specification and in conformity with the RE instructions Extra over Item 80 If the		PUMWANI (PMMJ RD05 0.230KM)				
Execute for Culverts and Subsoil Drains in Soft Material Executation in soft material to any depth, compaction of the invert of executation backfilling with executed material to spot, in accordance with the Specification and in conformity with the RE instructions Extra over Item 801 for executation in hard material Executation for Index Outfall, Mitre and Catchwater Drains in soft material						
Exerate for Cuberts and Subsoil Drains is Soft Material Sol. Exeration is soft material to any depth, compaction of the invert of excavation, backfilling with exerated materials or removing exeavated material to spoil; in accordance with the Specification and in conformity with the RE instructions Exeration in Soft material to any depth, compaction of the invert of exeavation, backfilling with exeavated materials or removing exeavated material to spoil; in accordance with the Specification and in conformity with the RE instructions m² 84		·				
Executation in soft material to any depth, compaction of the invert of excavation, backfilling with exeavated materials or removing exeavated material to spoil, in accordance with the Specification and in conformity with the RE instructions Extra over Item 8.01 for exeavation in hard material	ITEM		UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
Exercate for Inlet, Outfall, Mitre and Catchwater 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 accordance with the Specification and in conformity with the RE instructions	m³			
Excavation in soft material to any depth, compaction of the invert of excavation, backfilling with excavated materials or removing excavated material to spoil; in accordance with the Specification and in conformity with the RE's instructions 8.04 Extra over Irem 8.05 for excavation in hard material 8.05 Providing, backfilling to any depth all in accordance with the Standard Specification and in conformity with the instructions of the RE 8.10 Heattu 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) 8.07 poly mm diameter Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains 8.09 Providing and placing the concrete, all in accordance with the Specification and in conformity with the RE instructions 8.10 Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains 8.10 Concrete Class 20/20 headwalls, trash racks, apross other drainage, stractures 8.10 Providing and placing the concrete, reinforcement and formover kelass Peral in accordance with the Specification and in conformity with the RE instructions 8.11(a) Provide all materials and construct 500mm(Bottom width) wide (internal dimension) rectinguals concrete drains 150mm thick walls and bottom base, average height of 0.8m, class 25/20, including slotted top cover of meaning provide all materials and construct 500mm(Bottom width) wide (internal dimension) rectinguals concrete drains 150mm thick walls and bottom base, average height of 0.8m, class 25/20, including slotted top cover of meaning provide all materials and construct 500mm(Bottom width) wide (internal dimension) rectinguals concrete drains 150mm thick walls and bottom base, average height of 0.8m, class 25/20, including slotted top cover of meaning provide all materials and construct 500mm thick walls and bottom base, average height of 0.8m, class 25/20, including slotted top cover of meaning provide all materials and construct 500mm t	8.02	Extra over Item 8.01 for excavation in hard material	m³	84		
excavation, backfilling with excavated materials or removing excavated material to spoil; in accordance with the Specification and in conformity with the RE's instructions 8.04 8.05 8.06 8.07 8.08 8.08 8.09 Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE 100 100 100 100 100 100 100 1		Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material				
Selected backfill material Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE	8.03	excavation, backfilling with excavated materials or removing excavated material to spoil; in accordance with the Specification and in conformity with	m³	5		
8.05 Specifications and in conformity with the instructions of the RE Institu culverts Provide for in-siru culvert all in accordance with the Specification and in conformity with the RE instructions of the RE Institu culverts Provide for in-siru culvert all in accordance with the Specification and in conformity with the RE instructions m	8.04		m³	2		
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 96 m 14 m 1	8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE	m³	100		
8.06 a) 600 mm diameter (for use at minor junctions only) m 14 m 14 m 14 m 14 m 15 m 14 m 14 m 15 m 15		Provide for in-situ culvert all in accordance with the Specification and in				
8.07 b) 900 mm diameter Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains 8.09 Providing and placing the concrete; all in accordance with the Specification and in 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 Rectangular Covered Concrete Drain (Road Drain) 8.11(a) Rectangular Covered Concrete Drain (Road Drain) Provide all materials and construct 500mm(Bottom width) wide (internal dimension) rectangular concrete drains 150mm thick walls and bottom base, average height of 0.8m, class 25/20, including slotted top cover of 200mm thick. 8.11(b) Steel reinforcement for concrete covered drains as specified in the drawings. Tonne 11 Total FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE BILL NO.9 PASSAGE OF TRAFFIC Nairobi County - Pumwani Informal Settlement DESCRIPTION Construction of Deviations in maximum lengths of 2 km sections 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 Gravel Wearing Course 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 Provide Signs and Barriers Provide Signs and Barriers Provide Signs and Barriers Provide Signs and maintenance of temporary signs, barriers, lights, traffic lights, etc., along deviations constructed: all inaccordance with Specification and in conformity with the RE instructions	8.06		m	96		
8.09 Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions 8.10 Concrete Class 20/20 headwalls, trash racks, aprons other drainage. Structures 8.11 Providing and placing the concrete, reinforcement and formwork class F2 all in accordance with the Specification and in conformity with the RE instructions 8.11(a) Provide all materials and construct 500mm(Bottom width) wide (internal dimension) rectangular concrete drains 150mm thick walls and bottom base, average height of 0.8m, class 25/20, including slotted top cover of 200mm thick. 8.11(b) Steel reinforcement for concrete covered drains as specified in the drawings. 8.12 Provide 250mm PVC pipes at 50m intervals for service ducts TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE BILL NO.9 PASSAGE OF TRAFFIC Nairobi County - Pumwani Informal Settlement TEM DESCRIPTION Vairobi County - Pumwani Informal Settlement DESCRIPTION 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 Gravel Wearing Course 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 Provide Signs and Barriers Provide Signs and Barriers Provision, recretion and maintenance of temporary signs, barriers, lights, traffic lights, etc., along deviations constructed: all inaccordance with Specification and in conformity with the RE instructions Provision, recretion and maintenance of temporary signs, barriers, lights, traffic lights, etc., along deviations constructed: all inaccordance with Specification and in conformity with the RE instructions Provision, recretion and maintenance of temporary signs, barriers, lights, traffic lights, etc., along deviations constructed: all inaccordance with Specification Recreased to the passage of traffic provision, recretion and maintenance of	8.07		m	14		
Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions m² 86		Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains				
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 8.11(a) Provide all materials and construct 500mm(Bottom width) wide (internal dimension) rectangual reconcrete drains 150mm thick walls and bottom base, average height of 0.8m, class 25/20, including slotted top cover of 200mm thick. 8.11(b) Steel reinforcement for concrete covered drains as specified in the drawings. Tonne 11 8.12 Provide 250mm PVC pipes at 50m intervals for service ducts m 28 TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE BILL NO.9 PASSAGE OF TRAFFIC Nairobi County - Pumwani Informal Settlement TEM DESCRIPTION UNIT QUANTITY RATE (KSHS) AMOUNT (KSI on accordance with 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 Gravel Wearing Course 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 Gravel Wearing Course Provide Signs and Barriers Provide Signs and maintenance of temporary signs, barriers, lights, traffic lights, etc., along deviations constructed: all inaccordance with Specification and in conformity with the RE instructions	8.09	Providing and placing the concrete; all in accordance with the Specification	m³	86		
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 Rectangular Covered Concrete Drain (Road Drain) 8.11(a) Provide all materials and construct 500mm (Bottom width) wide (internal dimension) rectangual concrete drains 150mm thick walls and bottom base, average height of 0.8m, class 25/20, including slotted top cover of 200mm thick. 8.11(b) Steel reinforcement for concrete covered drains as specified in the drawings. 8.112 Provide 250mm PVC pipes at 50m intervals for service ducts TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE BILL NO.9 PASSAGE OF TRAFFIC Nairobi County - Pumwani Informal Settlement TEM DESCRIPTION Construction of Deviations in maximum lengths of 2 km sections 4. 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 Gravel Wearing Course 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 9.03 Maintenance the passage of traffic Provide Signs and Barriers Provision, crection and maintenance of temporary signs, barriers, lights, traffic lights, etc., along deviations constructed: all inaccordance with Specification and in conformity with the RE instructions		Concrete Class 20/20 headwalls, trash racks, aprons other drainage				
8.11(a) 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 200mm thick. 8.11(b) Steel reinforcement for concrete covered drains as specified in the drawings. Tonne 11 8.12 Provide 250mm PVC pipes at 50m intervals for service ducts m 28 TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE BILL NO.9 PASSAGE OF TRAFFIC Nairobi County - Pumwani Informal Settlement TEM DESCRIPTION UNIT QUANTITY RATE (KSHS) AMOUNT (KSI Construction of Deviations in maximum lengths of 2 km sections 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 Gravel Wearing Course 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 Maintenance the passage of traffic Provide Signs and Barriers Provision, rection and maintenance of temporary signs, barriers, lights, traffic lights, etc., along deviations constructed: all inaccordance with Specification and in conformity with the RE instructions	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	21		
dimension) rectangualr concrete drains 150mm thick walls and bottom base, average height of 0.8m, class 25/20, including slotted top cover of 200mm thick. 8.11(b) Steel reinforcement for concrete covered drains as specified in the drawings. 8.12 Provide 250mm PVC pipes at 50m intervals for service duets m 28 TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE BILL NO.9 PASSAGE OF TRAFFIC Nairobi County - Pumwani Informal Settlement ITEM DESCRIPTION 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 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 9.03 Maintenance the passage of traffic Provide Signs and Barriers 9.04 Provision, rection and maintenance of temporary signs, barriers, lights, traffic lights, etc., along deviations constructed: all inaccordance with Specification and in conformity with the RE instructions Specification Course Course	9.11(a)					
BILL Provide 250mm PVC pipes at 50m intervals for service ducts m 28	6.11(a)	dimension) rectangualr concrete drains 150mm thick walls and bottom base, average height of 0.8m, class 25/20, including slotted top cover of	m ³	118		
TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE BILL NO.9 PASSAGE OF TRAFFIC Nairobi County - Pumwani Informal Settlement ITEM DESCRIPTION UNIT QUANTITY RATE (KSHS) AMOUNT (KSI Construction of Deviations in maximum lengths of 2 km sections 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 Gravel Wearing Course 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 Maintenance the passage of traffic 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 conformity with the RE instructions Km 0.23 Km 0.23 Km 0.23	8.11(b)	Steel reinforcement for concrete covered drains as specified in the drawings.	Tonne	11		
BILL NO.9 PASSAGE OF TRAFFIC Nairobi County - Pumwani Informal Settlement ITEM DESCRIPTION Construction of Deviations in maximum lengths of 2 km sections 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 Gravel Wearing Course 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 Maintenance the passage of traffic Provide Signs and Barriers Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights, etc., along deviations constructed: all inaccordance with Specification and in conformity with the RE instructions Rm 0.23 R7.00 Maintenance the passage of traffic Lump Sum 1.00 Construction of Deviations in maximum lengths of 2 km sections m 0.23 R7.00 R7.	8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	28		
No.9 PASSAGE OF TRAFFIC Nairobi County - Pumwani Informal Settlement DESCRIPTION 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 Gravel Wearing Course 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 9.03 Maintenance the passage of traffic 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 conformity with the RE instructions Nairobi County - Pumwani Informal Settlement UNIT QUANTITY RATE (KSHS) AMOUNT (KSE MOUNT (KSE		TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				
Nairobi County - Pumwani Informal Settlement DESCRIPTION UNIT QUANTITY RATE (KSHS) AMOUNT (KSE Construction of Deviations in maximum lengths of 2 km sections		PASSAGE OF TRAFFIC				
Construction of Deviations in maximum lengths of 2 km sections		Nairobi County - Pumwani Informal Settlement				
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 Gravel Wearing Course	ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
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 9.03 Maintenance the passage of traffic 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 conformity with the RE instructions 9.02 Representation of the passage of traffic lights, etc., along deviations constructed: all inaccordance with Specification and in conformity with the RE instructions	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		
9.03 Maintenance the passage of traffic 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 conformity with the RE instructions 1.00 Km 0.23	9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m	m³	87.00		
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 conformity with the RE instructions O.23	9.03			1.00		
9.04 Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights, etc., along deviations constructed: all inaccordance with Specification and in conformity with the RE instructions			Sum			
	9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights, etc., along deviations constructed: all inaccordance with Specification	Km	0.23		
		TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				

Page 158 of 196

	UNII	PM-RD 05 60mm MD PB 150 Stone Base	RATE (KSHS)	AMOUNT (KSHS)
		150 Gravel 300 Sub Grade (0.230km)		
H (PMMJ RD05 0.230KM)		(0120 ontil)		
L MATERIAL SUBBASE AND BASE				
ounty - Pumwani Informal Settlement				
DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
ravel Subbase and Base				
y and compact subbase in 150mm thick natural gravel material in y, bus bays, footpaths, shoulders and junctions from the designated ted in the Special Specification in accordance with the Specification formity with the RE instructions	m³	190.00		
ce and compact 150mm Thick handpacked hardcore in one layer blus 50mm blinding layer of quarry dust. This Includes 12 tonne oller (min 8 passes)	m³	190.00		
OR BILL 12 CARRIED TO GRAND SUMMARY PAGE				
TE PAVING BLOCK SURFACE TREATMENT				
DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
overhaul will be paid for these items as it shall be deemed to included in the Contractor's rates.				
and				
and appropriately spread jointing sand 10-20mm thick to Concrete eks to the road and junctions all in accordance with the ons or as directed by the Engineer	m ²	1,265.00		
block paving including all cuttings I lay approved 60mm thick medium duty pre-cast concrete paving a minimum strength of 35N/mm 2 to BS 6717 Part 1 of 1986 to the stc. and as directed by the Engineer	m ²	1,265.00		
OR BILL 13 CARRIED TO GRAND SUMMARY PAGE				
loc d la m ths	k paving including all cuttings y approved 60mm thick medium duty pre-cast concrete paving inimum strength of 35N/mm 2 to BS 6717 Part 1 of 1986 to etc. and as directed by the Engineer	the paving including all cuttings y approved 60mm thick medium duty pre-cast concrete paving inimum strength of 35N/mm 2 to BS 6717 Part 1 of 1986 to etc. and as directed by the Engineer m ²	the paving including all cuttings y approved 60mm thick medium duty pre-cast concrete paving inimum strength of 35N/mm 2 to BS 6717 Part 1 of 1986 to etc. and as directed by the Engineer to the strength of	the paving including all cuttings y approved 60mm thick medium duty pre-cast concrete paving inimum strength of 35N/mm 2 to BS 6717 Part 1 of 1986 to etc. and as directed by the Engineer to the experiment of t

ITEM	ITEM DESCRIPTION	UNIT	PM-RD 05 60mm MD PB 150 Stone Base 150 Gravel	RATE (KSHS)	AMOUNT (KSHS)
			300 Sub Grade (0.230km)		
	PUMWANI (PMMJ RD05 0.230KM)		(0.230km)		
BILL	ROAD FURNITURE				
NO.20					
TEEN	Nairobi County - Pumwani Informal Settlement	TINITE	OLI A NITETTA	DATE (KOHO)	AMOUNT (EGHO)
ITEM	DESCRIPTION Warning Signs	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
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				
20.02A	conformity with the RE instructions 750mm size	No.	1		
20.02B	1000 mm size	No.	1		
	Mandatory Signs	1101	•		
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	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	m ²	46		
20.05	L V. 20071 - 250 - 11				
20.07 20.07A	As Item 2007 but 250mm wide				
20.07A	a) White paint	m ²	46		
	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	No	2		
20.10	Provision, transport and placing of materials in accordance with the Specification and in conformity with the 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				
20.11A	Kerbs 125 mm x 250 mm straight	m	253		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	12		
20.11C	Channel blocks 125mm x 100mm	m	483		
	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.	10		
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY PM-RD 05 60mm MD PB 150 Stone Base 150 Gravel 300 Sub Grade (0.230km)	RATE (KSHS)	AMOUNT (KSHS)
	PUMWANI (PMMJ RD05 0.230KM)				
	GRAND SUMMARY TOTAL QUANTITIES				
	Nairobi County - Pumwani 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				
13	Concrete Paving Blocks and Surface Treatment				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				

CONSTRUCTION OF ROADS/FOOTPATHS, STORM WATER DRAINAGE SYSTEMS, PUBLIC STREET LIGHTING AND SEWEF
INFRASTRUCTURE WORKS IN SELECTED INFORMAL SETTLEMENTS OF HURUMA FIRE VICTIMS - 2, MATHARE FIRE
VICTIMS MATOPENI PIIMWANI MAJENGO AND SPRING VALLEY ALL WITHIN NAIRORI CITY COLINTY

SERIAL No. 6.0 - SPRING VALLEY SETTLEMENT SUMMARY PAGE

BILL OF QUANTITIES

COUNTY GOVERNMENT OF NAIROBI

COUNTY DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

KENYA INFORMAL SETTLEMENT IMPROVEMENT PROJECT, PHASE 2

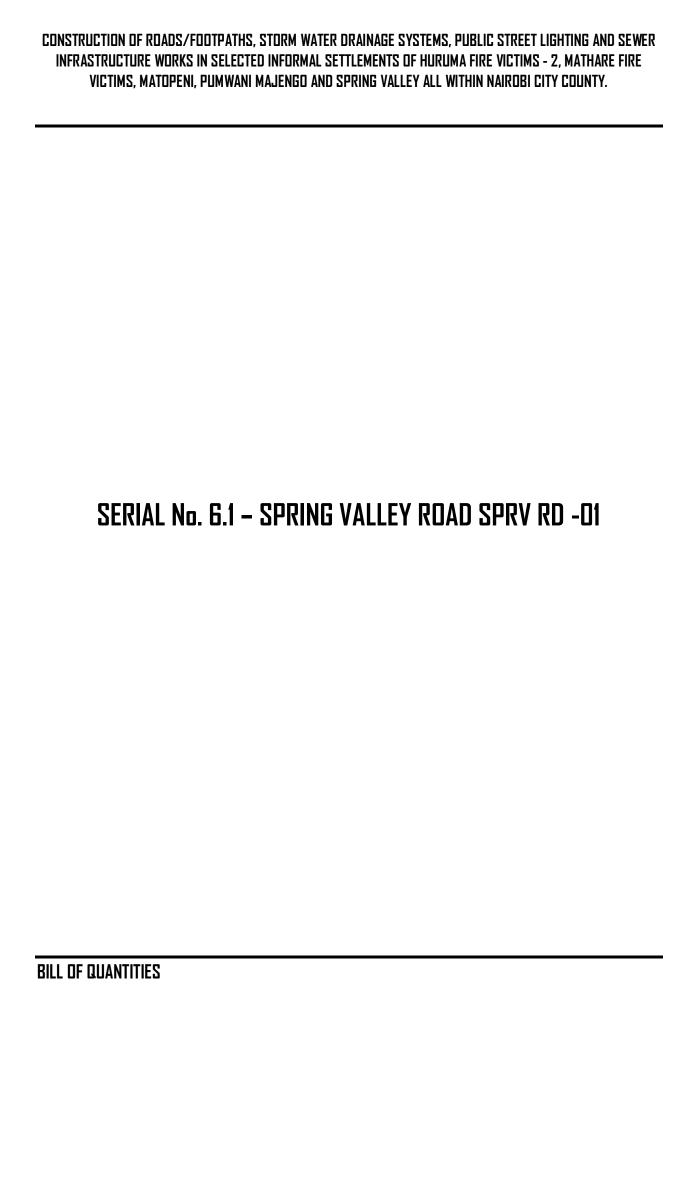
CONSTRUCTION OF INFRASTRUCTURE IMPROVEMENT WORKS IN SELECTED INFORMAL SETTLEMENTS IN NAIROBI

COUNTY

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

BILLS OF QUANTITIES SPRING VALLEY SUMMARY

SERIAL No.	ITEM DESCRIPTION	AMOUNT (KES)
	Road Works	
6.1	SPRV RD001	
6.2	SPRV RD001A	
6.3	SPRV RD002	
6.4	SPRV RD003	
A	SUB -TOTAL -1 CARRIED TO GRAND SUMMARY PAGE	



	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			S-RD 01		
			50mm A.C		
			150mm Stone Base		
			125mm Gravel		
			300mm Sub Grade		
			(0.273km)		
	SPRING VALLEY (SPRV RD01 0.273KM)				
BILL N0.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Nairobi County - Spring Valley 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	m ²	2.184.00		
	spoil materials resulting from clearing and grubbing all in accordance with the	m	2,184.00		
	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	m³	437.00		
	instructions average depth 200mm.				
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and	m	22		
	outlet structures including back filling.	111	22		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			S-RD 01 50mm A.C 150mm Stone Base		
				125mm Gravel	
			300mm Sub Grade		
			(0.273km)		AMOUNT (KSHS)
	SPRING VALLEY (SPRV RD01 0.273KM)				
BILL N0.5	EARTHWORKS				
	Nairobi County - Spring Valley 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	196.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	19.60		
5.02	Fill in Expansive Clay Areas		15.00		
5.03	As per Item 5.01 but in expansive clay areas to replace unsuitable material				
5.05	removed up to a maximum depth of 1.0m	m³	1,681.68		
	Spoil in Soft Material				
5.04	Cut to spoil in soft material	m³	200.00		
5.04	Spoil in Hard Material	111	200.00		
5.05	Excavate, stock pile for reuse and spoil surplus hard material	m³	20.00		
5.06	Spoil in Expansive Clay Areas	111	20.00		
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	2,402.40		
	Compaction of Existing Ground				
5.07	Compaction of formation ground in accordance with the specification	m³	214.99		
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD				
5.00	(AASHTO T99)	m³	98.28		
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD	m³	29.48		
5.10	(AASHTO T99) Provide, lay and compact 300mm improved sub grade material to 100% MDD				
5.10	(AASHTO T99)	m³	630.63		
	<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	136.50		
	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,		126.50		
	including tending, watering and cutting until the grass is firm established or for	m²	136.50		
	6 months				

Page 164 of 196

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			S-RD 01		
			50mm A.C		
			150mm Stone Base		
			125mm Gravel		
			300mm Sub Grade		
			(0.273km)		
	SPRING VALLEY (SPRV RD01 0.273KM)				
BILL NO.7	Excavation for Structures				
	Nairobi County - Spring Valley 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.				
	2 NO. Single Cell 5.0 x 2.5M				
7.01	Excavate in soft material for Box Culvert	m³	100.00		
7.02	Extra Over Item above for excavations in hard material	m³	140.00		
7.03	Provide, place and compact selected fill material below/behind strucures as directed by the Engineer.	m³	80.00		
7.04	Prepare ground as necessary, provide all materials and construct 200mm thick stone pitching as directed by the Engineer including for grouting and carting away any excess material to spoil as directed by the Engineer.	m²	20.00		
	TOTAL FOR BILL 7 CARRIED TO GRAND SUMMARY PAGE				

SPRING VALLEY (SPRV RD01 0.273KM) SPRING VALLEY (SPRV RD01 0.273KM)	ITEM	ITEM DESCRIPTION	UNIT	QUANTITY S-RD 01	RATE (KSHS)	AMOUNT (KSHS)
SPRING VALLEY (SPRV RD01 0.273KM) SPRING VALLEY (SPRV RD01 0.273KM) ULVERTS AND DRAINAGE Nairobi County- Spring Valley Informal Settlement DESCRIPTION NOTE DESCRIPTION Exercate for Culverts and Suboil Drains in Soft Material Exercate for Culverts and Suboil Drains in Soft Material Exercate for Culverts and Suboil Drains in Soft Material Exercate for Culverts and Suboil Drains in Soft Material Exercate for Include on the Soft Soft Soft Material Exercate for Include on the Soft Soft Soft Soft Soft Soft Soft Soft					1	
SPRING VALLEY (SPRV RDDI 0.273KM) BILL NO.8 SPRING VALLEY (SPRV RDDI 0.273KM) CULVERIS AND DRAINAGE Nairobi County - Spring Valley Informal Settlement DESCRIPTION Execute for Culverts and Subsoil Drains in Soft Material Execution in soft material to any depth, compaction of the invert of execution, backfilling with executated materials or removing executated material to spoil, in accordance with the Specification and in conformity with the RE instructions Execution in soft material to any depth, compaction of the invert of executation, backfilling with executated materials or removing executated material to spoil, in accordance with the Specification and in conformity with the RE instructions Execution, backfilling with executated materials or removing executated material to spoil; in accordance with the Specification and in conformity with the RE's instructions 3.04 Execution in soft material to any depth, compaction of the invert of executation, backfilling with executated materials or removing executated material to spoil; in accordance with the Specification and in conformity with the RE's instructions 3.05 Execution in soft material to any depth all in accordance with the Standard Specifications and in conformity with the mistructions of the RE In-situ culverts Provide for in-situ culvert all in accordance with the Specification and in conformity with the RE instructions 3.06 3.06 and on middle dimension of the instructions of the RE In-situ culverts Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions 3.09 Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions 3.10 Rectangular Covered Concrete Drain Restrictions Concrete Class 15/20 to Beds. Surrounds and Binding for Covered Drains 8.11(a) Provide all materials and construct 500mm(Bottom width) wide (internal dimension) rectangular concrete datasis 150mm thick walls and bottom base, awerage height of					1	
SPRING VALLEY (SPRV RD01 0.273KM) BILL NO.8 Nairobi County - Spring Valley Informal Settlement Exercate for Culvers and Subsoil Drains in Soft Material Exercate for Culvers and Subsoil Drains in Soft Material Exercate for Culvers and Subsoil Drains in Soft Material Exercation in soft material to any depth, compaction of the invert of exercation, backfilling with exercated materials or removing exercated material to spoil, in accordance with the Specification and in conformity with the RE instructions 8.02 Extra over Item 8.01 for execavation in hard material 8.03 Exercate for Inlet. Outfall. Mitre and Catchwater Drains in soft material 8.04 Exercation in soft material to any depth, compaction of the invert of exercation, backfilling with exercated materials or removing exercated material to spoil, in accordance with the Specification and in conformity with the RE instructions 8.04 Extra over Item 8.03 for exercation in hard material 8.05 Solected backfill material 8.06 Solected backfill material Provide for in-situ culvert all in accordance with the Specification and in conformity with the RE instructions of the RE 1.03 1.04 1.05				125mm Gravel	1	
SPRING VALLEY (SPRY RDDI 0.273KM)				300mm Sub Grade	1	
No.8 Nairobi County - Spring Valley Informal Settlement No.8 Nairobi County - Spring Valley Informal Settlement UNIT QUANTITY RATE (KSHS) AMOU				(0.273km)		
No.8 Nairobi County - Spring Valley Informal Settlement DESCRIPTION UNIT QUANTITY RATE (KSHS) AMOU		SPRING VALLEY (SPRV RD01 0.273KM)				
Nairobi County - Spring Valley, Informal Settlement DESCRITION UNIT QUANTITY RATE (KSHS) AMOU Excavation in soft material to apoil; in accordance with the Specification and in conformity with the RE instructions Excavation in soft material to spoil; in accordance with the Specification and in conformity with the RE instructions Excavation in soft material to spoil; in accordance with the Specification and in conformity with the RE instructions Excavation in soft material to apoil; in accordance with the Specification and in conformity with the RE's instructions Excavation in soft material to apoil; in accordance with the Specification and in conformity with the RE's instructions Selected backfill material to spoil; in accordance with the Specification and in conformity with the RE's instructions Selected backfill material Providing, backfilling to any depth, all in accordance with the Standard Specifications and in conformity with the instructions of the RE Institu culverts Provide for institu 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 114		CULVERTS AND DRAINAGE				
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Solution Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures	8.09	Providing and placing the concrete; all in accordance with the Specification and	m ³	522		
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thick. 8.11-c Steel reinforcement for concrete covered drains as specified in the drawings. Tonne 26 8.12 Demolition of existing concrete structures (Provisional) m ³ 45		, .	m ³	249		
8.11-c Steel reinforcement for concrete covered drains as specified in the drawings. Tonne 26 8.12 Demolition of existing concrete structures (Provisional) m ³ 45						
P 13	8.11-c		Tonne	26		
9.12	8.12	Demolition of existing concrete structures (Provisional)	m ³	45		
To the 250 min 1 to pipes at 50 m metrals for service duets	8.13	Provide 250mm PVC nines at 50m intervals for service ducts		44		
		1 rovide 250/mm 1 ve pipes at 50/m met vais for service ducts	111	77		
TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE		TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
		01,122	S-RD 01		AMOUNT (ROHS)
			50mm A.C		
			150mm Stone Base	_	
			125mm Gravel	_	
			300mm Sub Grade	_	
	ORDING WALLEY CORNAINS		(0.273km)		
BILL	SPRING VALLEY (SPRV RD01 0.273KM)				
NO.9	PASSAGE OF TRAFFIC				
	Nairobi County - Spring Valley 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	km	0.27		
	in accordance 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	m³	103.00		
	Specification				
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, etc., along deviations constructed: all inaccordance with Specification	Km	0.27		
	and in conformity with the RE instructions				
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				
BILL	NATURAL MATERIAL CURRACE AND DACE				
NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Nairobi County - Spring Valley Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base				
12.01	Provide, lay and compact subbase in 125mm thick natural gravel material in				
	carriageway, bus bays, footpaths, shoulders and junctions from the designated	m³	263.00		
	quarries listed in the Special Specification in accordance with the Specification	III	203.00		
	and in conformity with the RE instructions				
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	m³	316.00		
	vibrating roller (min 8 passes)				
	violating roller (limit o passes)				
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				
	JANUARY OF THE PROPERTY OF THE				
BILL					
NO.13	CONCRETE PAVING BLOCK SURFACE TREATMENT				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
		01,11	QUILITIE	((22222)
	NOTE: No overhaul will be paid for these items as it shall be deemed to				
	have been included in the Contractor's rates.				
	nave been included in the Contractor 5 rates.				
	Jointing Sand				
13.01	Supply, lay and appropriately spread jointing sand 10-20mm thick to Concrete	1			
13.01	paving blocks to the road and junctions all in accordance with the	m ²	410.00		
		ın	410.00		
	specifications or as directed by the Engineer				
	Coloured Concrete block paving including all cuttings				
13.02	Provide and lay approved 60mm thick medium duty pre-cast Coloured				
	concrete paving blocks with minimum strength of 35N/mm 2 to BS 6717 Part 1	m ²	410.00		
	of 1986 to road footpaths etc. and as directed by the Engineer				
	TOTAL FOR BILL 13 CARRIED TO GRAND SUMMARY PAGE				
	TIVIALEOR BILL IS CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
I I EAVI	TIEM DESCRIPTION	Civil		KATE (KSHS)	AMOUNI (KSHS)
			S-RD 01		
			50mm A.C		
			150mm Stone Base		
			125mm Gravel		
			300mm Sub Grade		
	CREATIVE VILLE FOR CREATIVE CR		(0.273km)		
BILL	SPRING VALLEY (SPRV RD01 0.273KM)				
NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
TTEM	Nairobi County - Spring Valley Informal Settlement DESCRIPTION	LINIT	OLIANTITY	DATE (ZCHC)	AMOUNT (IZCHE)
ITEM		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	1966.0		
15.01B	K1-60 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	1966.0		
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				
BILL	BITUMINOUS MIXES				
NO.16	Nairobi County - Spring Valley Informal Settlement				
	V 1 2 V				
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	M^3	84.0		
	Bridge Construction for Type II, 0/14mm wearing course .The coarse aggregate		04.0		
	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				
BILL					
NO.17	Concrete Works				
******	Nairobi County - Spring Valley Informal Settlement		O.V. I. SUMMERS	D. F. STOTTO	AND AND THE STATE OF THE STATE
ITEM	DESCRIPTION OF A STRUCTURE OF A STRU	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	2 No. Single Cell 5.0 x 2.5 Box Culvert				
	Concrete Works;				
17.01	Provide, Place and compact blinding concrete class C15/20 of 50mm thick to foundations for box culverts bottom slab and wingwalls including formwork in	M^3	20.0		
17.02	accordance with the specifications. Provide, place and compact concrete class C25/20 to box culverts bottom slabs,				
17.02	walls, top slabs and wingwalls all in accordance with the drawings and	M^3	140.0		
	specifications.	IVI	110.0		
	Formwork;				
17.03	Provide, erect and dismantle formwork to provide class F1 finish to culverts	m ²	160.0		
	bottom slabs and wingwall bases	ın	100.0		
17.04	Provide, erect and dismantle formwork to provide class F2 finish to vertical sides of culverts walls and wingwalls	m ²	310.0		
17.05	As above but class F3 finish to soffit to culverts top slabs	m ²	70.0		
17.06	•	III	70.0		
17.00	E.O item for forming 25x25mm fillets at corners of culverts top slabs and bottom slabs	m	28.0		
	Reinforcement;				
17.07	Provide, cut, bend and fix Round ribbed high tensile steel bars to BS EN 10080-				
17.07	2005.	Tonne	75.0		
	TOTAL FOR BILL 17 CARRIED TO GRAND SUMMARY PAGE				
	TOTAL FOR BILL IT CARRIED TO GRAND SUMMART TAGE				

Page 168 of 196

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY S-RD 01 50mm A.C 150mm Stone Base 125mm Gravel 300mm Sub Grade (0.273km)	RATE (KSHS)	AMOUNT (KSHS)
BILL	SPRING VALLEY (SPRV RD01 0.273KM)				
NO.20	ROAD FURNITURE				
ITEM	Nairobi County - Spring Valley Informal Settlement DESCRIPTION	UNIT	QUANTITY	DATE (KEHE)	AMOUNT (KSHS)
HEN	Warning Signs	UNII	QUANTITY	KATE (KSHS)	AMOUNT (KSHS)
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 20.02B	750mm size	No.	1		
20.02B	1000 mm size Mandatory Signs	No.	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 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	m ²	55		
20.06B	Yellow paint	m²	28		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m ²	55		
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	No	2		
20.10	Rumble Strips on Pavement Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions	No	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	300		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	14		
20.11C	Channel blocks 125mm x 100mm	m	601		
	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.	10		
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				

Page 169 of 196

ITEM	ITEM DESCRIPTION UNIT	QUANTITY S-RD 01 50mm A.C	RATE (KSHS)	AMOUNT (KSHS)	
			150mm Stone Base		
		125mm Gravel			
			300mm Sub Grade		
			(0.273km)		
	SPRING VALLEY (SPRV RD01 0.273KM)				
	GRAND SUMMARY TOTAL QUANTITIES				
	Nairobi County - Spring Valley Informal Settlement				AMOUNT (ZOHO)
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 Blocks and Surface Treatment				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
17	Concrete Works				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				



ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			S-RD 01A		
			50mm A.C		
			150 Stone Base		
			125mm Gravel		
			Subbase		
			300mm Sub Grade		
			(0.320km)		
	SPRING VALLEY (SPRV RD01A 0.320KM)				
BILL N0.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Nairobi County - Spring Valley 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	m ²	1,600.00		
	spoil materials resulting from clearing and grubbing all in accordance with the	111	1,000.00		
	specifications.				
	Removal of Topsoil				
4.02	Stripping vegetable soil from the roadway, and disposal to approved stockpile				
4.02	areas all in accordance with the Specification and in conformity with the RE	m³	320.00		
	instructions average depth 200mm.	111	320.00		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and				
55	outlet structures including back filling.	m	16		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			C DD 014		
			S-RD 01A 50mm A.C		
			150 Stone Base		
			125mm Gravel		
			Subbase		
			300mm Sub Grade		
			(0.320km)		
	SPRING VALLEY (SPRV RD01A 0.320KM)				
BILL NO.5	EARTHWORKS				
ITEM	Nairobi County - Spring Valley Informal Settlement	LINIT	OLI A NITETTA	DATE (VCHC)	AMOUNT (VCHC)
HEN	DESCRIPTION NOTE: All costs and charges connected with haulage are to be included	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	o o				
	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.				
	career on against an item, for an costs and charges associated with nathage.				
	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	52.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	5.20		
5.02		III	3.20		
5.02	Fill in Expansive Clay Areas				
5.03	As per Item 5.01 but in expansive clay areas to replace unsuitable material	m³	1,971.20		
	removed up to a maximum depth of 1.0m				
5.04	Spoil in Soft Material				
3.04	Cut to spoil in soft material	m³	158.00		
	Spoil in Hard Material				
5.05	Excavate, stock pile for reuse and spoil surplus hard material	m³	15.80		
5.06	Spoil in Expansive Clay Areas				
	As Item 5.04 but for excavation in expansive clay areas to remove unsuitable materials				
5.06A		3	2.016.00		
	up to a maximum depth of 1.0 m	m³	2,816.00		
5.07	Compaction of Existing Ground Compaction of formation ground in accordance with the anaistication				
5.07	Compaction of formation ground in accordance with the specification	m³	252.00		
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m³	124.80		
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m³	37.44		
5.10	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m³	739.20		
	Topsoil				
5.11	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be	n-?	160.00		
	50mm; all in accordance with the specifications	m ²	160.00		
	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,	m ²	160.00		
	including tending, watering and cutting until the grass is firm established or for 6		100.00		
	months				
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

			S-RD 01A				
			-	15 12 300n	50mm A.C 150 Stone Base 125mm Gravel Subbase 300mm Sub Grade (0.320km)		
BILL	SPRING VALLEY (SPRV RD01A 0.320KM)						
NO.8	CULVERTS AND DRAINAGE						
ITEM	Nairobi County - Spring Valley Informal Settlement DESCRIPTION	UNIT	QUANTITY	DATE (VCUS)	AMOUNT (VEHS)		
II ENI	Excavate for Culverts and Subsoil Drains in Soft Material	UNII	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)		
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 accordance with the Specification and in conformity with the RE instructions	m³	343				
8.02	Extra over Item 8.01 for excavation in hard material	m³	115				
	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 accordance with the Specification and in conformity with the RE's instructions	m³	7				
8.04	Extra over Item 8.03 for excavation in hard material	m³	3				
8.05	Selected backfill material Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE In-situ culverts	m³	137				
	Provide for in-situ culvert all in accordance with the Specification and in						
9.06	conformity with the RE instructions		122				
8.06 8.07	a) 600 mm diameter (for use at minor junctions only) b) 900 mm diameter	m m	132 14				
	Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains		1.				
8.09	Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures	m³	116				
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	28				
	Rectangular Covered Concrete Drain (Road Drain)						
8.11(a)	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 200mm thick.	m ³	164				
8.11(b)	Steel reinforcement for concrete covered drains as specified in the drawings.	Tonne	12				
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	52				
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE						
BILL NO.9	PASSAGE OF TRAFFIC						
	Nairobi County - Spring Valley Informal Settlement						
ITEM	DESCRIPTION Construction of Deviations in maximum lengths of 2 km sections	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)		
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	0.32				
9.02	Gravel Wearing Course 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	120.00				
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 conformity with the RE instructions	Km	0.32				
			1		1		

Page 173 of 196

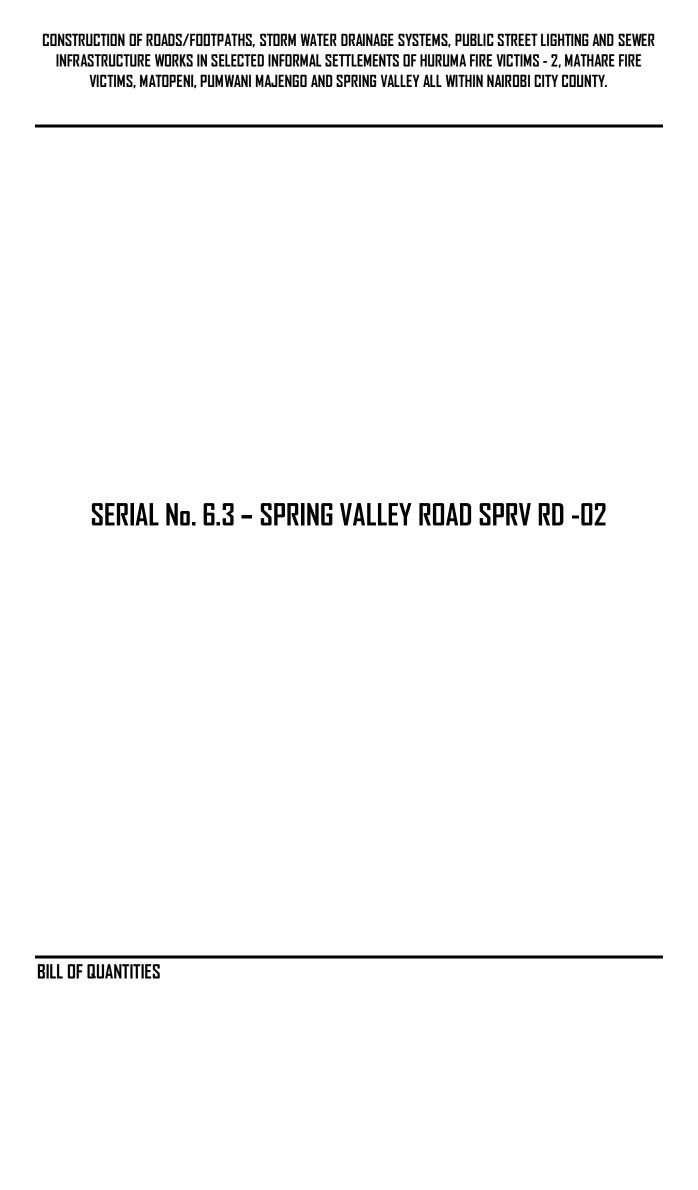
ITEM	CONSTRUCTION OF INFRASTRUCTURE IMPROVEMENT WORK ITEM DESCRIPTION		QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
1112.4		Civil	S-RD 01A 50mm A.C 150 Stone Base 125mm Gravel	KATE (KSHS)	AMOUNT (KSHS)
			Subbase 300mm Sub Grade (0.320km)		
	SPRING VALLEY (SPRV RD01A 0.320KM)		(ole 201111)		
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
110.12	Nairobi County - Spring Valley Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base				
12.01	Provide, lay and compact subbase in 125mm 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	m³	308.00		
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	370.00		
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.13A	CONCRETE PAVING BLOCK SURFACE TREATMENT				
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.				
13.01	Jointing Sand 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 directed by the Engineer	m ²	528.00		
13.02	Coloured Concrete block paving including all cuttings Provide and lay approved 60mm thick medium duty pre-cast Coloured concrete paving blocks with minimum strength of 35N/mm 2 to BS 6717 Part 1 of 1986 to road footpaths etc. and as directed by the Engineer	m ²	528.00		
	TOTAL FOR BILL 13 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
ITEM	Nairobi County - Spring Valley Informal Settlement 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	2496.0		
15.01B	K1-60 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	2496.0		
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.16	BITUMINOUS MIXES Nairabi County Spring Valley Informal Softlement				
ITEM	Nairobi County - Spring Valley Informal Settlement 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	99.0		
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE				

Page 174 of 196

ITEM	ITEM DESCRIPTION	HNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
HEM	TIEM DESCRIPTION	UNII	QUANTITY	KATE (KSHS)	AMOUNT (KSHS)
			S-RD 01A		
			50mm A.C		
			150 Stone Base		
			125mm Gravel		
			Subbase		
			300mm Sub Grade		
	CRRING VALLEY (CRRV DR01 & 0.220VM)		(0.320km)		
BILL	SPRING VALLEY (SPRV RD01A 0.320KM)				
NO.20	ROAD FURNITURE				
	Nairobi County - Spring Valley Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
20.01	Warning Signs				
20.01	Excavation for, providing and erecting warning signs size 750mm including	No.	1		
	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	3.7			
	and concrete 15/20 to bases; all in accordance with the Specification and in	No.	1		
20.04	conformity with the RE instructions 1000mm size 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				
20.06A	conformity with the RE instructions White paint	m ²	64		
20.06A	Yellow paint	m ²	32		
	·				
20.07 20.07A	As Item 2007 but 250mm wide				
20.07A	a) White paint	m ²	64		
	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				
20.10	Provision, transport and placing of materials in accordance with the	No	7		
	Specification and in conformity with the RE instructions	110	,		
	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	352		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	16		
20.11C	Channel blocks 125mm x 100mm	m	704		
	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.	10		
					i

Page 175 of 196

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			S-RD 01A		
			50mm A.C		
			150 Stone Base		
			125mm Gravel		
			Subbase		
			300mm Sub Grade		
	CDDING VALLEY (CDDV DD01 A 0 220VM)		(0.320km)		
	SPRING VALLEY (SPRV RD01A 0.320KM)				
	GRAND SUMMARY TOTAL QUANTITIES				
	GREED SCHMIRT TOTAL QUARTITLES				
	Nairobi County - Spring Valley 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 Blocks and Surface Treatment				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				



ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			S-RD 02		
			50mm A.C		
			150 Stone Base		
			125 Gravel Subbase		
			300mm Sub Grade		
			(0.334km)		
	SPRING VALLEY (SPRV RD02 0.334KM)				
BILL	SITE CLEARANCE AND TOPSOIL STRIPPING				
N0.04					
TOTAL T	Nairobi County - Spring Valley Informal Settlement		OV. I SUMMER!	DATE (ZOHO)	AMOUNT (EGHO)
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.				
	costs and charges associated with nadiage.				
	Site Clearance				
4.01	Clearing existing road of all trees, vegetation, debris and rubbish of any nature; including	,	2 220 00		
	the grubbing of stumps and roots and the disposal from the area of all spoil materials	m ²	2,338.00		
	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 average	m ³	468.00		
4.02	depth 200mm.				
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet	m	24		
	structures including back filling.				
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

ITEM	CONSTRUCTION OF INFRASTRUCTURE IMPROVEMENT WORKS IN SELE				AMOUNT (EGHO)
HEN	ITEM DESCRIPTION	UNII	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			S-RD 02	-	
			50mm A.C	-	
			150 Stone Base	-	
			125 Gravel Subbase	-	
			300mm Sub Grade		
	SPRING VALLEY (SPRV RD02 0.334KM)		(0.334km)		
BILL NO.	5 EARTHWORKS				
	Nairobi County - Spring Valley Informal Settlement			D. I TOTAL	LILOUNIE GIGING
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	5.75		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	1.00		
			1100		
5.03	Fill in Expansive Clay Areas As per Item 5.01 but in expansive clay areas to replace unsuitable material removed up				
3.03	to a maximum depth of 1.0m	m³	2,351.36		
	Spoil in Soft Material				
5.04					
3.04	Cut to spoil in soft material	m³	2,593.58		
	Spoil in Hard Material				
5.05	Excavate, stock pile for reuse and spoil surplus hard material	m³	778.07		
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	2,939.20		
	Compaction of Existing Ground		<u> </u>		
5.07	Compaction of Existing Ground Compaction of formation ground in accordance with the specification	m³	263.03		
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO	111	203.03		
3.08	T99)	m³	140.28		
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m³	42.08		
5.10	Provide, lay and compact 300mm improved sub grade material to 100% MDD	m³	771.54		
	(AASHTO T99)				
	Topsoil			-	
5.11	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m²	167.00		
	Grassing				
5.12	Planting of sprigs of approved indegineous grass types; to embankments, cuttings or			1	
	where directed by the RE in accordance with the Specification, including tending,	m ²	167.00		
	watering and cutting until the grass is firm established or for 6 months			1	
				 	
	TOTAL FOR DILLS CARRIED TO CRAND CHAMADY BACE				
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)				
		-					S-RD 02	(,	
			50mm A.C	1					
			150 Stone Base						
			125 Gravel Subbase						
			300mm Sub Grade						
	SPRING VALLEY (SPRV RD02 0.334KM)		(0.334km)						
BILL	SI KING VALLET (SI KV KD02 0.354KM)								
NO.8	CULVERTS AND DRAINAGE								
110.0	Nairobi County - Spring Valley Informal Settlement								
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)				
IIEWI	Excavate for Culverts and Subsoil Drains in Soft Material	UNII	QUANTITI	KATE (KSHS)	AMOUNT (KSHS)				
8.01	Excavation in soft material to any depth, compaction of the invert of excavation,								
0.01	backfilling with excavated materials or removing excavated material to spoil; in	m³	319						
	accordance with the Specification and in conformity with the RE instructions	1111	319						
8.02									
8.02	Extra over Item 8.01 for excavation in hard material	m³	107						
	Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material								
0.02	Exercise for finely outling fairle and carefrance Brains in sore materials								
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	F-4 It 9.02 C 4 . 1 1 11	3	2						
	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 and	m³	128						
	in conformity with the instructions of the RE								
	<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	84						
8.07									
0.07	b) 900 mm diameter	m	14						
	Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains								
8.09	Providing and placing the concrete; all in accordance with the Specification and in	,	0.5						
	conformity with the RE instructions	m³	85						
	·								
	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	,	10						
	accordance with the Specification and in conformity with the RE instructions	m³	19						
	Rectangular Covered Concrete Drain (Road Drain)								
8.11(a)									
	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,	m ³	171						
	class 25/20, including slotted top cover of 200mm thick.								
0.11(1)		т	12						
8.11(b)	Steel reinforcement for concrete covered drains as specified in the drawings.	Tonne	13						
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	54						
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE								
D.T.									
BILL	PASSAGE OF TRAFFIC								
NO.9	N' 1'C 4 C ' VIII I C 10 W								
ITEM	Nairobi County - Spring Valley Informal Settlement DESCRIPTION	LINITE	OHANTITY	DATE (Rene)	AMOUNT (KSHS)				
ITEM		UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)				
0.01	Construction of Deviations in maximum lengths of 2 km sections All the operations connected with the initial construction of temporary deviations,								
9.01	appropriate width, to allow passage of traffic during the Works; all in accordance with	1	0.33						
		km	0.33						
	the Specification								
9.02	Gravel Wearing Course Description leving and compacting of gravel wearing course to deviations 5m wide								
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	126.00						
9.03	130mm unek, where directed by the KE and in accordance with the specification	Lume							
9.03	Maintenance the passage of traffic	Lump Sum	1.00						
	Provide Signs and Barriers	Julii							
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights,								
2.U 4	etc., along deviations constructed: all inaccordance with Specification and in conformity	Km	0.33						
	less., along deviations constructed, an inaccordance with specification and in comorning	12111	1 0.33	I	l				
	with the RE instructions								
	with the RE instructions								
	with the RE instructions TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE								

Page 179 of 196

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
IIEM	TIEM DESCRIPTION	UNII		KATE (KSHS)	AMOUNT (KSHS)
			S-RD 02		
			50mm A.C		
			150 Stone Base		
			125 Gravel Subbase		
				+	
			300mm Sub Grade		
			(0.334km)		
DII I	SPRING VALLEY (SPRV RD02 0.334KM)				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Nairobi County - Spring Valley Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Natural Gravel Subbase and Base				
12.01	Provide, lay and compact subbase in 100mm thick natural gravel material in carriageway,				
	bus bays, footpaths, shoulders and junctions from the designated quarries listed in the	3	322.00		
	Special Specification in accordance with the Specification and in conformity with the RE	m ³	322.00		
	instructions				
12.02	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	m³	386.00		
		III	360.00		
	passes)				
	TOTAL FOR BILL 14 CARRIED TO CRAND CUMMARY BY BACK				
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				
BILL	CONCRETE PAVING BLOCK SURFACE TREATMENT				
NO.13A		LINITE	OLI A NITETTY	DATE (KOHO)	AMOUNT (ZOIO)
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE N				
	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				
13.01	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 directed	m ²	552.00		
	by the Engineer		352.00		
	Coloured Concrete block paving including all cuttings				
12.02					
13.02	Provide and lay approved 60mm thick medium duty pre-cast Coloured concrete paving				
	blocks with minimum strength of 35N/mm 2 to BS 6717 Part 1 of 1986 to road	m ²	552.00		
	footpaths etc. and as directed by the Engineer				
	TOTAL FOR BILL 13 CARRIED TO GRAND SUMMARY PAGE				
DILI	TOTAL TORDILL IS CHARALD TO SIGNAS SOMEWART TROP				
BILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
NO.15	Nairobi County - Spring Valley Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
15.01	Prime Coat and Tack coat	UIVII	QUANTITI	KATE (KSHS)	AMOUNT (KSHS)
15.01A	MC 30 prime coat on Cement treated material at nominal rate of 0.8 - 1.2 ltr/m² to base	ltr	2606.0		
15.015	course on carriageway, bus bays, footpaths, shoulders and junctions	-			
15.01B	K1-60 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	2606.0		
	tarin to base course on on carriageway, bus bays, rootpatis, shoulders and junctions				
	TOTAL FOR BULL AS CARRIED TO CRAND CURVANING CO.				
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				
BILL	DITUMINALIC MIVES				
NO.16	BITUMINOUS MIXES				
	Nairobi County - Spring Valley 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	n				
	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	3	120.0		
	of the Standard Specification for Road and Bridge Construction for Type II, 0/14mm	M^3	120.0		
	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 BULL 14 CARRIED TO CRAND CURAL BY BACE				
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE				

Page 180 of 196

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	DATE (VCHC)	AMOUNT (KSHS)
HEN	ITEM DESCRIPTION	UNII		RATE (KSHS)	AMOUNT (KSHS)
			S-RD 02		
			50mm A.C		
			150 Stone Base		
			125 Gravel Subbase		
			300mm Sub Grade		
			(0.334km)		
	SPRING VALLEY (SPRV RD02 0.334KM)				
BILL	ROAD FURNITURE				
NO.20					
TEENA	Nairobi County - Spring Valley Informal Settlement	LINIT	OHANTITY	DATE (IZCHO)	AMOUNT (IZCHE)
ITEM	DESCRIPTION Warning Signs	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
20.01					
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	No.	1		
	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					
20.020	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	No.	1		
	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		
	SOUNDOUBLE	110.	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		No.	1		
	Less than 1 sq.m				
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	m ²	67		
20.00M	wine pain	111-	0/		
20.07	As Item 2007 but 250mm wide				
20.07A	White paint	m²	67		
	-				
20.06B	Yellow paint	m ²	34		
	Speed reduction bituminous bumps at junctions				
20.09	Provision, transport and placing of materials in accordance with the Specification and in	NT.			
	conformity with the RE instructions	No	2		
	Rumble Strips on Pavement				
20.10	Provision, transport and placing of materials in accordance with the Specification and in				
	conformity with the RE instructions	No	8		
20.11	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		2.7		
20.11A	Kerbs 125 mm x 250 mm straight	m	367		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	17		
20.11C	Channel blocks 125mm x 100mm	m	735		
	Trees				
20.12	Planting of approved indigenous types of trees where instructed, in accordance with the	No.	10		
	Specification, minimum height 1.5m -Open Fields or Wet Lands		1		
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			S-RD 02		
			50mm A.C		
			150 Stone Base		
			125 Gravel Subbase	_	
			300mm Sub Grade (0.334km)	-	
	SPRING VALLEY (SPRV RD02 0.334KM)		(0.554KIII)		
	GRAND SUMMARY TOTAL QUANTITIES				
	Nairobi County - Spring Valley 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 Blocks and Surface Treatment				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				



ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	
			S-RD 03	-	
			50mm A.C	-	
			150 Stone Base		AMOUNT (KSHS)
			125mm Gravel		, ,
			300mm Sub		
			Grade		
			(0.250km)		
	SPRING VALLEY (SPRV RD03 0.250)				
BILL N0.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Nairobi County - Spring Valley 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.	m ²	1,750.00		
	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	350.00		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet structures including back filling.	m	18		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

S-RD 03 50mm A.C 150 Stone Ba: 125mm Grav 300mm Sub Grade (0.250km) SPRING VALLEY (SPRV RD03 0.250) BILL N0.5 EARTHWORKS Nairobi County - Spring Valley Informal Settlement ITEM DESCRIPTION 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.	el	AMOUNT (KSHS)
Somm A.C	el	AMOUNT (KSHS)
SPRING VALLEY (SPRV RD03 0.250) SPRI	el	AMOUNT (KSHS)
125mm Grav 300mm Sub Grade (0.250km) SPRING VALLEY (SPRV RD03 0.250)	el	ASIOUAT (KSIIS)
BILL N0.5 EARTHWORKS Nairobi County - Spring Valley Informal Settlement ITEM DESCRIPTION NOTE: All costs and charges connected with haulage are to be included within the		
BILL N0.5 EARTHWORKS Nairobi County - Spring Valley Informal Settlement UNIT QUANTITY		
SPRING VALLEY (SPRV RD03 0.250) BILL N0.5 EARTHWORKS Nairobi County - Spring Valley Informal Settlement ITEM DESCRIPTION UNIT QUANTITY NOTE: All costs and charges connected with haulage are to be included within the		
BILL N0.5 EARTHWORKS Nairobi County - Spring Valley Informal Settlement ITEM DESCRIPTION UNIT QUANTITY NOTE: All costs and charges connected with haulage are to be included within the		
Nairobi County - Spring Valley Informal Settlement ITEM DESCRIPTION UNIT QUANTITY NOTE: All costs and charges connected with haulage are to be included within the		
Nairobi County - Spring Valley Informal Settlement ITEM DESCRIPTION UNIT QUANTITY NOTE: All costs and charges connected with haulage are to be included within the		
Nairobi County - Spring Valley Informal Settlement ITEM DESCRIPTION UNIT QUANTITY NOTE: All costs and charges connected with haulage are to be included within the		
ITEM DESCRIPTION UNIT QUANTITY NOTE: All costs and charges connected with haulage are to be included within the		
NOTE: All costs and charges connected with haulage are to be included within the		
	RATE (KSHS)	AMOUNT (KSHS)
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 52.00		
Fill in Hard Material		
5.02 As Item 5.01 but in hard material m ³ 5.20		
Fill in Expansive Clay Areas		
5.03 As per Item 5.01 but in expansive clay areas to replace unsuitable material removed up to m ³ 1,760.00		
a maximum depth of 1.0m		
Spoil in Soft Material		
5.04 Cut to spoil in soft material m ³ 158.00		
Spoil in Hard Material		
5.05 Excavate, stock pile for reuse and spoil surplus hard material m ³ 15.80		
5.06 Spoil in Expansive Clay Areas		
5.06 Spoil in Expansive Clay Areas As Item 5.04 but for excavation in expansive clay areas to remove unsuitable materials		
5.06 Spoil in Expansive Clay Areas As Item 5.04 but for excavation in expansive clay areas to remove unsuitable materials up to a maximum depth of 1.0 m m³ 2,200.00		
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 m ³ 2,200.00 Compaction of Existing Ground		
5.06 Spoil in Expansive Clay Areas As Item 5.04 but for excavation in expansive clay areas to remove unsuitable materials up to a maximum depth of 1.0 m m³ 2,200.00		
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 2,200.00 Compaction of Existing Ground 5.07 Compaction of formation ground in accordance with the specification m³ 196.88 5.08 Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)		
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 2,200.00 Compaction of Existing Ground 5.07 Compaction of formation ground in accordance with the specification m³ 196.88 5.08 Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99) 5.09 Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99) m³ 31.50		
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 2,200.00 Compaction of Existing Ground 5.07 Compaction of formation ground in accordance with the specification m³ 196.88 5.08 Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99) 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 improved sub grade material to 100% MDD (AASHTO T99) 577.50		
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 Compaction of Existing Ground 5.07 Compaction of formation ground in accordance with the specification 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) Topsoil S.10 Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99) Topsoil		
Spoil in Expansive Clay Areas As Item 5.04 but for excavation in expansive clay areas to remove unsuitable materials up to a maximum depth of 1.0 m m³ 2,200.00		
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 m ³ 2,200.00 Compaction of Existing Ground 5.07 Compaction of formation ground in accordance with the specification m ³ 196.88 5.08 Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99) 5.09 Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99) m ³ 31.50 5.10 Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99) Topsoil Topsoil Topsoil Topsoil Topsoil Topsoil Topsoil Topsoil		
Spoil in Expansive Clay Areas As Item 5.04 but for excavation in expansive clay areas to remove unsuitable materials		
Solition Spoil in Expansive Clay Areas		
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 m ³ 2,200.00 Compaction of Existing Ground 5.07 Compaction of formation ground in accordance with the specification m ³ 196.88 5.08 Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99) 5.09 Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99) m ³ 31.50 5.10 Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99) Topsoil 5.11 Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications Grassing Flanting of sprigs of approved indegineous grass types; to embankments, cuttings or where		
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 2,200.00 Compaction of Existing Ground 5.07 Compaction of formation ground in accordance with the specification m³ 196.88 5.08 Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO 1799) 5.09 Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO 1799) 5.10 Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO 1799) Topsoil 5.11 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, watering and 125.00		

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	
			C DD 02		
			S-RD 03	-	
			50mm A.C		AMOUNT (ZCHC)
			150 Stone Base		AMOUNT (KSHS)
			125mm Gravel		
			300mm Sub		
			Grade		
	CDDING VALLEY (CDDV DD02 0 250)		(0.250km)		
BILL	SPRING VALLEY (SPRV RD03 0.250)				
NO.8	CULVERTS AND DRAINAGE				
TEEN	Nairobi County - Spring Valley Informal Settlement		0.1.1.2	D. C.	
ITEM	DESCRIPTION Excavate for Culverts and Subsoil Drains in Soft Material	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
8.01	Excavation in soft material to any depth, compaction of the invert of excavation, backfilling				
0.01	with excavated materials or removing excavated material to spoil; in accordance with the		246		
		m ³	346		
0.02	Specification and in conformity with the RE instructions				
8.02	Extra over Item 8.01 for excavation in hard material	m³	116		
	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 accordance with the	m³	7		
	Specification and in conformity with the RE's instructions				
8.04	Extra over Item 8.03 for excavation in hard material	m ³	3		
	Selected backfill material				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications and	,3	139		
	in conformity with the instructions of the RE	m³	139		
	In-situ culverts				
	Provide for in-situ culvert all in accordance with the Specification and in conformity with				
	the RE instructions				
8.06			122		
0.00	a) 600 mm diameter (for use at minor junctions only)	m	132		
8.07	b) 900 mm diameter	m	21		
0.07	/	III	21		
	Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains				
8.09	Providing and placing the concrete; all in accordance with the Specification and in	m ³	120		
	conformity with the RE instructions	***	120		
	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	m³	29		
	with the Specification and in conformity with the RE instructions		27		
	Rectangular Covered Concrete Drain (Road Drain)				
8.11(a)	P :1 11 (:1 1 (:500 (P) (:11) :1 (: 11 : :)				
	Provide all materials and construct 500mm(Bottom width) wide (internal dimension)	3	164		
	rectangualr concrete drains 150mm thick walls and bottom base, average height of 0.8m,	m ³	164		
	class 25/20, including slotted top cover of 200mm thick.				
8.11(b)	Steel reinforcement for concrete covered drains as specified in the drawings.	Tonne	12		
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	52		
	1 tovide 250mm 1 ve pipes at 50m met vals for service daets		32		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				
BILL					
NO.9	PASSAGE OF TRAFFIC				
	Nairobi County - Spring Valley Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Construction of Deviations in maximum lengths of 2 km sections				
9.01					
7.01	All the operations connected with the initial construction of temporary deviations,		1 0.25	i .	I
7.01	appropriate width, to allow passage of traffic during the Works; all in accordance with the	km	0.25		
J.01		km	0.25		
7.01	appropriate width, to allow passage of traffic during the Works; all in accordance with the	km	0.25		
9.02	appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification Gravel Wearing Course	km			
	appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification Gravel Wearing Course Provision, laying and compacting of gravel wearing course to deviations, 5m wide,	km m³	94.00		
9.02	appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification Gravel Wearing Course	m³			
	appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification Gravel Wearing Course Provision, laying and compacting of gravel wearing course to deviations, 5m wide,	m³ Lump			
9.02	appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification Gravel Wearing Course 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 Maintenance the passage of traffic	m³	94.00		
9.02	appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification Gravel Wearing Course 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 Maintenance the passage of traffic Provide Signs and Barriers	m³ Lump	94.00		
9.02	appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification Gravel Wearing Course 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 Maintenance the passage of traffic Provide Signs and Barriers Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights, etc.,	m³ Lump Sum	94.00		
9.02	appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification Gravel Wearing Course 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 Maintenance the passage of traffic Provide Signs and Barriers Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights, etc., along deviations constructed: all inaccordance with Specification and in conformity with	m³ Lump	94.00		
9.02	appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification Gravel Wearing Course 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 Maintenance the passage of traffic Provide Signs and Barriers Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights, etc.,	m³ Lump Sum	94.00		
9.02	appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification Gravel Wearing Course 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 Maintenance the passage of traffic Provide Signs and Barriers Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights, etc., along deviations constructed: all inaccordance with Specification and in conformity with the RE instructions	m³ Lump Sum	94.00		
9.02	appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification Gravel Wearing Course 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 Maintenance the passage of traffic Provide Signs and Barriers Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights, etc., along deviations constructed: all inaccordance with Specification and in conformity with	m³ Lump Sum	94.00		

ITEM	ITEM DESCRIPTION SPRING VALLEY (SPRV RD03 0.250)	UNIT	QUANTITY S-RD 03 50mm A.C 150 Stone Base 125mm Gravel 300mm Sub Grade (0.250km)	RATE (KSHS)	AMOUNT (KSHS)
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
110.12	Nairobi County - Spring Valley Informal Settlement				
	, , , , , , , , , , , , , , , , , , , ,				
	Natural Gravel Subbase and Base				
12.01	Provide, lay and compact subbase in 125mm 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	m³	241.00		
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	289.00		
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.13	CONCRETE PAVING BLOCK SURFACE TREATMENT				
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				
13.01	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 directed by the Engineer	m ²	413.00		
	Coloured Concrete block paving including all cuttings				
13.02	Provide and lay approved 60mm thick medium duty pre-cast Coloured Concrete paving blocks with minimum strength of 35N/mm 2 to BS 6717 Part 1 of 1986 to road footpaths etc. and as directed by the Engineer	m ²	413.00		
	TOTAL FOR BILL 13 CARRIED TO GRAND SUMMARY PAGE	_			

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	
			S-RD 03		
			50mm A.C		
			150 Stone Base		AMOUNT (KSHS)
			125mm Gravel		
			300mm Sub		
			Grade		
			(0.250km)		
	SPRING VALLEY (SPRV RD03 0.250)				
BILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
	Nairobi County - Spring Valley 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	1950.0		
15.01B	K1-60 cationic emulsion tack coat on primed treated base at nominal rate of 0.4 - 1.0 ltr/m ²		1050.0		
	to base course on on carriageway, bus bays, footpaths, shoulders and junctions	ltr	1950.0		
	TOTAL FOR BILL 15 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.16	BITUMINOUS MIXES				
	Nairobi County - Spring Valley 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	84.0		
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE				

ITEM	ITEM DESCRIPTION	IPTION UNIT		RATE (KSHS)	
			QUANTITY		
			S-RD 03		
			50mm A.C		
			150 Stone Base		AMOUNT (KSHS)
			125mm Gravel		
			300mm Sub		
			Grade (0.250km)		
	SPRING VALLEY (SPRV RD03 0.250)		(0.250km)		
BILL	ROAD FURNITURE				
NO.20					
ITEM	Nairobi County - Spring Valley Informal Settlement DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
11 2.11	Warning Signs	CIVII	QUARTITI	KATE (KSHS)	AMOUNT (KSHS)
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	No.	1		
	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 with the RE	No.	1		
20.04	instructions 1000mm size				
20.04	Standard Informatory Signs Evaporation for model in a management of the standard in the stand				
	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.	•		
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				
20.06A	White paint	m ²	50		
20.06B	Yellow paint	m ²	25		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m ²	50		
20.09	Speed reduction bituminous bumps at junctions Provision transport and placing of materials in accordance with the Specification and in				
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				
20.10	Provision, transport and placing of materials in accordance with the Specification and in	N.			
	conformity with the RE instructions	No	6		
	Concrete Kerbs				
20.11					
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	250		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	13		
20.11C	Channel blocks 125mm x 100mm	m	500		
	Trees				
	Planting of approved indigenous types of trees where instructed, in accordance with the	No.	10		
20.12					1
20.12	Specification, minimum height 1.5m -Open Fields or Wet Lands	INO.	10		
20.12		No.	10		

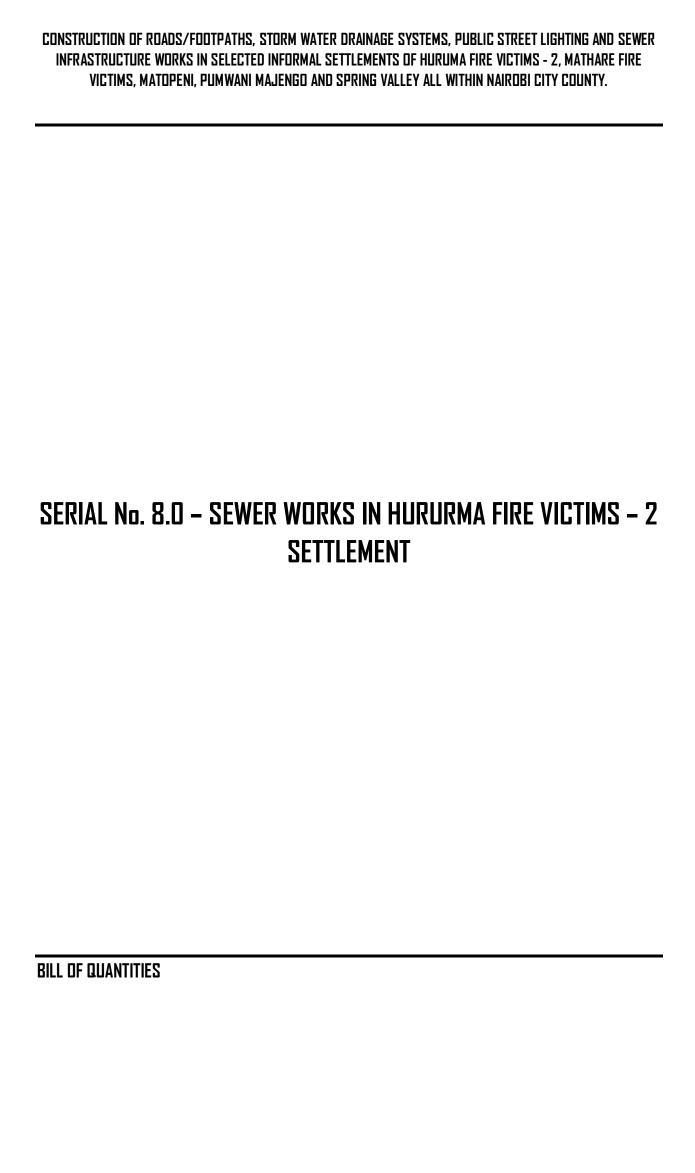
ITEM	ITEM DESCRIPTION	UNIT	S-RD 03 50mm A.C 150 Stone Base	RATE (KSHS)	AMOUNT (KSHS)
			300mm Sub Grade (0.250km)		
	SPRING VALLEY (SPRV RD03 0.250)		(0.230KIII)		
	·				
	GRAND SUMMARY TOTAL QUANTITIES				
	Nairobi County - Spring Valley Informal Settlement				
ITEM	DESCRIPTION				AMOUNT (KSHS)
4	Site Clearance and Top Soil Stripping				
5	Earthworks				
8	Culverts and Drainage Works				
9	Passage of Traffic				
12	Natural Material Subbase and Base				
13	Concrete Paving Blocks and Surface Treatment				
15	Bituminous Surface Treatments				
16	Bituminous Mixes				
20	Road Furniture				
	SUB TOTAL-1 CARRIED TO SUMMARY PAGE				

INFRASTRUCTURE WORKS IN SELECTED INFORMAL SETTLEMENTS OF HURUMA FIRE VICTIMS - 2, MATHARE FIRE VICTIMS, MATOPENI, PUMWANI MAJENGO AND SPRING VALLEY ALL WITHIN NAIROBI CITY COUNTY.
SERIAL No. 7.0 – SOLAR STREET LIGHTING
BILL OF QUANTITIES
DIEC DI MONITIEU

CONSTRUCTION OF ROADS/FOOTPATHS, STORM WATER DRAINAGE SYSTEMS, PUBLIC STREET LIGHTING AND SEWER

	COUNTY GOVERNMENT OF NAIROBI	COUNT	Y KISIP - 2		
	INFORMAL SETTLEMENTS – ALL S				
YOUNG A	PROPOSED SUPPLY, INSTALLATION, TESTING & COMMISSION AND ADDRESS OF THE PROPOSED SUPPLY ADDRESS OF THE PROPOSED SUPPLY ADDRESS OF THE PROPOSED SUPPLY AND ADDRESS OF THE PROPOSED SUPPLY ADDRESS				
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	(KSHS)	AMOUNT (KSHS)
STREET I	LIGHTING SUPPLY, INSTALLATION AND COMMISIONING:				
1.0	INTERGRATED SOLAR PV STREET LIGHT				
	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.	338.0		
2.0	10m High Tapering Concrete Column				
	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.	338.0		
3.0	Galvanized Universal Clamps, Antivandal Etc				
	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.	338.0		
4.0	Single Arm with Bracket				
	1200mm Arm with bracket with 0 degrees tilt angle manufactured from Class C Galvanised steel pipe	No.	338.0		
5.0	<u>CIVIL WORKS</u>				
	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.	338.0		
6.0	OTHER GENERAL ITEMS				
	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	7.0		
	Total carried to forward Grand Summary Page				

COUNTY GOVERNMENT OF NAIROBI COUNTY KISIP - 2 INFORMAL SETTLEMENTS – ALL SETTLEMENTS					
	GRAND SUMMARY PAGE				
ITEM	DESCRIPTION		AMOUNT (KSH)		
1.0	Solar street lighting installation for ALL settlements within Nairobi County.				
	GRAND TOTAL CARRIED FORWARD TO FORM OF TENDER				



	BH I NO 2. SEWED WODES (1995 I	Sowar I :	0)		
	BILL NO. 2: SEWER WORKS (1005m Long STITEM DESCRIPTION	Sewer Lin	e) 		AMOUN
ITEM	HEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	(KSHS)
	HURUMA SEWER WORKS (1140 M)				
	NB: (To be done by a specialist contractor/Subcontractor) Provide, Install, Test and Commission the following to the satisfaction of project sanitation engineer:				
1.00	GENERAL				
	All materials to be supplied and installed under this Bill have been specified to comply				
1.01	with relevant Standards. However, the supplier may offer materials complying with other approved standards to the satisfaction of the Engineer.				
	The rates for providing materials shall include importation, procurement and other costs,				
1.02	insurance for all risks and replacement free of charge of all faulty and damaged materials				
	due to whatever cause. Cost of handling, storing and transporting materials both on the way and on site shall be				
1.03	included in the rates.				
1.04	Pipes, specials and fittings shall be provided complete with all jointing materials. Working width for the installation of sewers will be as per the specifications or three				
1.05	times the diameter of pipe for large diameter pipes.				
1.06	Unless otherwise stated flexible jointed pipes shall be used throughout.				
2.00	EXCAVATION OF SEWER TRENCH - MAINS				
	Excavate in normal soil below ground level or road formation levels whichever is lower, to the required Invert levels including timbering for the trenches and dewatering during construction; include for fittings, all crossings, bedding, etc. complete as specified and shown on the drawings for the following sewer lines for:-				
2.01	300mm N.I.D Precast Concrete sewer pipes excavation depth not exceeding 1.5m	m ³	174		
2.02	300mm N.I.D Precast Concrete sewer pipes excavation depth 1.5m - 2.5m	m ³	1,403		
2.03	300mm N.I.D Precast Concrete sewer pipes excavation depth 2.5m - 3.5m	m ³	373		
2.04	300mm N.I.D Precast Concrete sewer pipes excavation depth exceeding 3.5m	m ³	369		
2.05	Extra over Item Nos. 2.01-2.04 for excavation in rock material to the required Invert levels for the sewer line	m ³	1,485		
3.00	PIPE LAYING AND JOINTING - MAINS				
	ProvidePrecast Concrete sewer pipes as per provided sections for NID 300mm all complying with ISO Standards as per the specifications, including for the jointing materials, handle, lay, joint in place and perform the hydraulic test for the Precast Concrete sewers lines, including for fittings and then backfill and compact up to the required level and cart away surplus materials to be used on site or dumped away as				
1.01	specified and shown on the drawings for the sewer lines:-	3	1.027		
3.01	Backfiling with approved soil material Under bed blinding and bed for Type "A" and Type "B" section for bed and surround with	m ³	1,937		
3.02	concrete of concrete class 15/20	m ³	201		
3.03	300mm NID Precast Concrete Sewer pipes Provide for jointing and connection to the existing manholes for existing network at the	m	1,005		
3.04	end of each sewer network	m	150		
4.00	EXCAVATION OF MANHOLES				
	Excavate in all classes of soil below ground level or road formation levels, whichever is lower, including timbering for the manhole walls including 50mm blinding and 250mm base foundation below invert level, dewatering during construction for 1050mm. N.I.D. manholes, backfill and compact after completion of works upto new road formation levels or 0.5m above ground level whichever applies, cart away surplus material to be used on site or haul away as specified and shown on the drawing nos, and directed by the Engineer for the following sewer lines:-				
1.01	Distributed and any distribute	3	0		
4.01 4.02	Ditto but depth not exceeding 1.5m Ditto but depth exceeding 1.5m and not exceeding 2.5m	m ³	65		
1.03	Ditto but depth exceeding 2.5m and not exceeding 2.5m	m m ³	16		
1.04	Ditto but depth exceeding 3.5m	m ³	17		
1.05	Extra over Item Nos. 4.01 to 4.04 for excavation in hard rock material to the required	m3	72		
	Invert levels for manholes along sewer line				
5.00	CONSTRUCTION OF MANHOLES Provide pre-cast manhole (of rings size 1050mm NID) for manholes of depth not				
5.01	exceeding and all the necessary materials, install in place as shown on the drawings and	Nr.	4		
5.02	directed by the engineer. Ditto but depth exceeding 1.5m to 2.5m	Nr.	28		
5.03	Ditto but depth exceeding 2.5m to 3.5m	Nr.	5		
5.04	Ditto but depth exceeding 3.5m	Nr.	4		
5.05	Provide all materials and mix concrete class 25/20 for manhole foundation (blinding and slab) and benching including cutting and smoothing the channels.	m ³	29		
5.06	Provide all materials and mix concrete class 25/20 for manhole surround to the rings with	m ³	181		
5.07	reinforcement as in the drawings for all culverts Rendering the benching top surface and channels.	Nr	41		
	Supply and fit in place heavy duty triangular GRP material manhole covers and step-irons				
5.08	using cement mortar and other materials provided by the supplier.	Nr.	41		
	Supply all materials and cast in situ concrete class 20/20 manhole top slab covers for	Nr.	41		
5.09	1050mm. N.I.D. including the required reinforcement as shown on the drawings				
		Nr.	133		
6.00	1050mm. N.I.D. including the required reinforcement as shown on the drawings SEWER FIITINGS Supply, installation and testing the OD 160mm, L=18m Waste Pipes and 1m square masomy inspection chamber for individual plot connections. Rate to include for the	Nr.	133		
6.00 7.00 7.10	1050mm. N.I.D. including the required reinforcement as shown on the drawings SEWER FIITINGS Supply, installation and testing the OD 160mm, L=18m Waste Pipes and 1m square masonry inspection chamber for individual plot connections. Rate to include for the couplings, acces plug etc	Lump	133		
6.00 7.00	1050mm. N.I.D. including the required reinforcement as shown on the drawings SEWER FIITINGS Supply, installation and testing the OD 160mm, L=18m Waste Pipes and 1m square masonry inspection chamber for individual plot connections. Rate to include for the couplings,acces plug etc OTHER COSTS				

Page 191 of 195

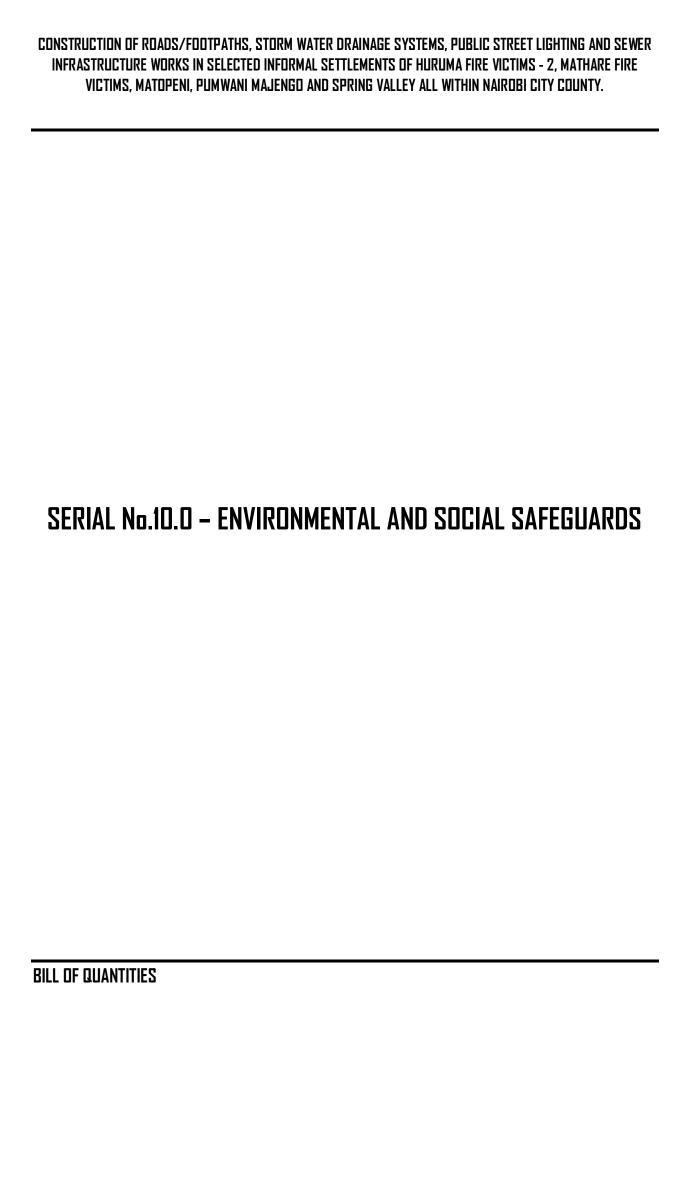
CONSTRUCTION OF ROADS/FOOTPATHS, STORM WATER DRAINAGE SYSTEMS, PUBLIC STREET LIGHTING AND SEWER INFRASTRUCTURE WORKS IN SELECTED INFORMAL SETTLEMENTS OF HURUMA FIRE VICTIMS - 2, MATHARE FIRE VICTIMS, MATOPENI, PUMWANI MAJENGO AND SPRING VALLEY ALL WITHIN NAIROBI CITY COUNTY.
SERIAL No. 9.0 – DAYWORKS
BILL OF QUANTITIES

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS
ILL No.2	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:				
	a) 651 kg - 1.3 t un-ballasted weight	hr	10		
22.10	Vibrating Plate Compactor:				
	a) 114 - 200 kg operating weight.	hr	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:		10		
	a) 23.0 - 40.0 t max working load	hr	10		
22.13	Cranes - Excavator Cranes Tracked:				
	a) 20.0 - 28.0t max working load	hr	10		
	,				

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
ILL No.2	2: DAYWORKS (PROVISIONAL SUM)				
	Plant Continued				
	Tant Continucu				
22.14	Small Dumpers:				
	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		

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
ILL No.2	2: 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	111	10		
22.23	(a) up to 7.5t gross vehicle weight	hr.	10		
	(b) 7.6-12.0t gross vehicle weight	hr.	10		
22.26	Lorries -Tipper:	111.	10		
22.20		1	10		
	a) up to 11.0t gross vehicle wt	hr	10		
22.27	b) 11.1 - 17.0t gross vehicle wt	hr	10		
22.27	Van, Pick-up or Similar Utility Vehicle:		10		
	a) up to 1.0t carrying capacity	hr	10		
22.28	Water or Fuel Tanker - Self Propelled:				
	a) 3500 - 4550 litre capacity	hr	10		
	b) 4551 - 7000 litre capacity	hr	10		
	(c) 7001-12000 litre capacity	hr.	10		
22.29	Pressure Bitumen Distributor:				
	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		10		
22.30	capacity	hr.	10		
22.37	Road marking machine	hr.	10		
22.38	Electric generator	111.	10		
22.30	(a)100KVA	hr.	10		
	(b) 125 KVA	hr.	10		
22.20					
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		
	<u>Labour</u>				
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)	hr.	10		
22.59	Blaster (Certified)	hr.	10		
22.60	Office attendants	hr.	10		
44.00	Office attendants	111.	10		+

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
BILL No.2	2: 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) K1-60 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		
TOTAL P	AGE 4 OF 4 TO COLLECTION				



ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
BILL NO.28	ENVIRONMENTAL & SOCIAL SAFEGUARDS				
	NAIROBI COUNTY				
28.01	Allow for a provisional sum for obtaining necessary licences and approvals except for the ESIA for the project a. ESIA for borrow pits/material sites, campsites, Batchment plants etc				
	and decomissioning certificate	Lump Sum	3		
	b. Water abstraction licenses/approvals	Lump Sum	2		
	c. OSHA work place regsitration	Lump Sum	3		
	d. Others (where applicable): Effluent Discharge Licernce, Excessive Noise and Vibration, Bulk Petroleum Storage/Handling, NCA Registration, Raw Materials Haulange permits etc.	Lump Sum	3		
28.02	Allow a provisonal sum for creating awareness on E&S risks among the communities and workers				
	a. Awareness on environmental and social risks to communities before				
	works commencement and during works	PC Sum	5	75,000.00	375,000.00
	b. HIV/Aids Awareness and prevention measures	PC Sum	5	75,000.00	375,000.00
	c. Gender: Gender Based Violenece (GBV), Sexual Exploitation,	DC C	_	50,000,00	250 000 00
	Abuse and Harrassment(SEAH) d. Climate Resilience and disaster management	PC Sum PC Sum	5 5	50,000.00 50,000.00	250,000.00 250,000.00
	e. Operation and maintenance : Solid waste management	PC Sum	5	50,000.00	250,000.00
	E.O. item 28.02(a) to 28.02(e) for the contractor's overheads and		<u> </u>	30,000.00	230,000.00
	profit.	%	1,500,000.00		
28.03	Allow for a provisional sum to undertake stakeholder engagment activities				
	a. Community meetings (with SEC and GRCs)	PC Sum	5	75,000.00	375,000.00
	b. Facilitate SECs and GRCs where necessary to deliver on their mandates	PC Sum	5	100,000.00	500,000.00
	c. Meetings with County- CPCTs and other stakeholders	PC Sum	10	200,000.00	2,000,000.00
	d.E.O. item 28.03(a) to 28.03(c) for the contractor's overheads and profit.		2,875,000.00	200,000.00	2,000,000.00
28.04	Allow for the implementation of actions in the ESMP				
	a Allow for the proporation and quarterly reviews of site apositic ESMD	Itam	_		
	a. Allow for the preparation and quarterly reviews of site-specific ESMP b. Traffic management- awareness, traffic marshalls, signage,	Item	5		
	diversions etc.	Item	5		
	c. Occupational health and safety - Inudction, training/awareness, First Aiders, Fire Marshals, safety committees, supervisors, Safety Officers access rumps etc.	Item	10		
	d. Capcity building and support of the project Management and HS Officer to implement and Report Climate Mainstreaming actions	Item	5		
	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	5		
	h. Disposal of construction waste	Item	5		
28.05	Provide for rehabilation and restoration of disturbed environments				
	a. Rehabilitation of material sites	item	3		
	b. Revegetation of cleared areas	item	3		
	c. Restoration of impacted community assets	item	3		
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	500,000.00
	b. Submission of the report and approval by NEMA	PC Sum	1	100,000.00	100,000.00
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	E.O. item 28.06(a) to 28.06(b) for the contractor's overheads and profit.	%	600,000.00		