



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

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.

PREAMBLE TO BILL OF QUANTITIES

BILL OF QUANTITIES

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

<u>PREAMBLE TO THE BILLS OF QUANTITIES</u>	
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

<u>PREAMBLE TO THE BILLS OF QUANTITIES</u>	
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 of the unit price and the quantity, the unit rate as quoted will govern, unless in the opinion of the Employer, there is an obviously gross misplacement of the decimal point in the unit price, in which event the total amount as quoted will 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, rear-mounted, 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.

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

<u>PREAMBLE TO THE BILLS OF QUANTITIES</u>																																					
	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.																																				
	Testing’ - shall mean provision of all materials, apparatus, labour, machinery, charges for the media or chemical to be 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	Units of Measurement and Abbreviations used herein shall have the following meanings;																																				
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">Unit</th> <th style="width: 25%;">Abbreviation</th> <th style="width: 25%;">Unit</th> <th style="width: 25%;">Abbreviation</th> </tr> </thead> <tbody> <tr> <td>Cubic meter</td> <td>m³</td> <td>Millimeter</td> <td>mm</td> </tr> <tr> <td>Hectare</td> <td>ha</td> <td>Month</td> <td>mth</td> </tr> <tr> <td>Hour</td> <td>hr</td> <td>Number</td> <td>No.</td> </tr> <tr> <td>Kilogram</td> <td>kg</td> <td>Provisional sum</td> <td>P.S.</td> </tr> <tr> <td>Kilometre</td> <td>km</td> <td>Square meter</td> <td>m²</td> </tr> <tr> <td>Lump sum</td> <td>L.S.</td> <td>Square millimeter</td> <td>mm²</td> </tr> <tr> <td>Meter</td> <td>m</td> <td>Vehicle</td> <td>veh</td> </tr> <tr> <td>Metric ton (1,000kg)</td> <td>t</td> <td>Week</td> <td>wk</td> </tr> </tbody> </table>	Unit	Abbreviation	Unit	Abbreviation	Cubic meter	m ³	Millimeter	mm	Hectare	ha	Month	mth	Hour	hr	Number	No.	Kilogram	kg	Provisional sum	P.S.	Kilometre	km	Square meter	m ²	Lump sum	L.S.	Square millimeter	mm ²	Meter	m	Vehicle	veh	Metric ton (1,000kg)	t	Week	wk
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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.

BILL OF QUANTITIES GRAND SUMMARY – NAIROBI CITY COUNTY

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 GRAND SUMMARY

SERIAL No.	ITEM DESCRIPTION	AMOUNT (KES)
1	Preliminary & General Items	
	<u>Road Works</u>	
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	
	<u>Street Lighting Works</u>	
7	Nairobi City County Settlements Street Lighting	
	<u>Sewerage Works</u>	
8	Huruma Sewer Connection Works	
9	Dayworks	
10	Environmental and Social Safeguards	
A	SUB -TOTAL 1	
B	Add the sum of 6.5% of sub-total 1 (A) for Contingencies	
C	GRAND TOTAL (A+B)	

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. 1 – PRELIMINARIES AND GENERAL ITEMS

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

BILL No.1: PRELIMINARIES AND GENERAL					
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
<u>CONTRACTUAL REQUIREMENTS</u>					
<u>Performance Securities and Insurances</u>					
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		
<u>Dispute Adjudication/Avoidance Board</u>					
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		
<u>SPECIFIED REQUIREMENTS</u>					
<u>Offices for the Engineer's staff</u>					
1.08	Prime Cost Sum for leasing offices for Engineer's supervision staff, including provision of furniture, equipment and consumables for entire duration 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		
<u>Services for the Engineer's staff</u>					
<u>Employer's Conterpart Staff Costs</u>					
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		
<u>Equipment for use by the Engineer's Staff</u>					
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		
<u>Testing of Materials</u>					
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		
TOTAL PAGE 1 OF 2 TO COLLECTION					

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

BILL No.1: PRELIMINARIES AND GENERAL					
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	<u>Capacity building for Employer's Staff</u>				
1.16	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		
	<u>Project Sign Boards</u>				
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		
	<u>Progress Reports and Photographs, "As Built" Drawings and O&M Manuals</u>				
1.19	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		
	<u>METHOD-RELATED CHARGES</u>				
	<u>Contractor's Camp, Offices, and other facilities and services</u>				
1.30	Mobilisation, operation and maintenance 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 Temporary Works.	L Sum	1		
	<u>PROVISIONAL SUMS</u>				
	<u>Supplementary Charges</u>				
1.40	Provisional Sum for payments demanded by the Authorities for relocation / diversion 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
	<u>Other Provisional Sums</u>				
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		
TOTAL PAGE 2 OF 2 TO COLLECTION					

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

BILL No.1: PRELIMINARIES AND GENERAL					
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	BILL No.1: PRELIMINARIES AND GENERAL				
S/NO	Page Particulars				Amount
1	Page 1 of 2 Totals				
2	Page 2 of 2 Totals				
BILL 1 TOTAL CARRIED TO SUMMARY					

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

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	

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. 2.1 – MFV SETTLEMENT ROAD RD - 01

BILL OF QUANTITIES

COUNTY GOVERNMENT OF NAIROBI
COUNTY DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
KENYA INFORMAL SETTLEMENT IMPROVEMENT PROJECT, 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 (0.149km)		
	MFV RD01- 0.149KM AND STORM WATER DRAIN (0.168KM)				
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.	m ³	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				

COUNTY GOVERNMENT OF NAIROBI
COUNTY DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
KENYA INFORMAL SETTLEMENT IMPROVEMENT PROJECT, 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 (0.149km)		
	MFV RD01- 0.149KM AND STORM WATER DRAIN (0.168KM)				
BILL N0.5	EARTHWORKS				
	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.				
	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).				
	<u>Fill in Soft Material</u>				
5.01	Excavating the material, transportation and filling in embankment, including watering and rolling; all in accordance to specification	m ³	6.00		
	<u>Fill in Hard Material</u>				
5.02	As Item 5.01 but in hard material	m ³	1.00		
	<u>Spoil in Soft Material</u>				
5.03	Cut to spoil in soft material	m ³	310.00		
	<u>Spoil in Hard Material</u>				
5.04	Excavate, stock pile for reuse and spoil surplus hard material	m ³	31.00		
	<u>Compaction of Existing Ground</u>				
5.05	Compaction of formation ground in accordance with the specification	m ³	148.00		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m ³	296.00		
5.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m ³	89.00		
5.80	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m ³	89.00		
	<u>Topsoil</u>				
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		
	<u>Grassing</u>				
5.10	Planting of sprigs of approved indigenous 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	75.00		
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

COUNTY GOVERNMENT OF NAIROBI
COUNTY DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
KENYA INFORMAL SETTLEMENT IMPROVEMENT PROJECT, 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 (0.149km)		
	MFV RD01- 0.149KM AND STORM WATER DRAIN (0.168KM)				
BILL NO.8	CULVERTS AND DRAINAGE				
	Nairobi County- Mathare Fire Victims (MFV) Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	<u>Excavate for Culverts and Subsoil Drains in Soft Material</u>				
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	m ³	316		
8.02	Extra over Item 8.01 for excavation in hard material	m ³	106		
	<u>Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material</u>				
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	m ³	4		
8.04	Extra over Item 8.03 for excavation in hard material	m ³	2		
	<u>Selected backfill material</u>				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE	m ³	127		
	<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	36		
8.07	b) 900 mm diameter	m	7		
	<u>Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains</u>				
8.09	Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions	m ³	57		
	<u>Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures</u>				
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	9		
	<u>Rectangular Covered Concrete Drain (Road Drain)</u>				
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.	m ³	77		
	<u>Rectangular Covered Concrete Drain Part (Independent Drain)</u>				
8.11(b)	Provide all materials and construct 1000mm (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.	m ³	233		
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	Provide 250mm PVC pipes at 50m intervals for service ducts	m	10		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

COUNTY GOVERNMENT OF NAIROBI
COUNTY DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
KENYA INFORMAL SETTLEMENT IMPROVEMENT PROJECT, 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 (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)
	<u>Construction of Deviations in maximum lengths of 2 km sections</u>				
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	0.15		
	<u>Gravel Wearing Course</u>				
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		
	<u>Maintenance the passage of traffic</u>				
	<u>Provide Signs and Barriers</u>				
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights, etc., along deviations constructed: all in accordance with Specification and in conformity with the RE instructions	Km	0.15		
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Nairobi County- Mathare Fire Victims (MFV) Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	<u>Natural Gravel Subbase and Base</u>				
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	m ³	145.28		
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)	m ³	145.28		
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				

COUNTY GOVERNMENT OF NAIROBI
COUNTY DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
KENYA INFORMAL SETTLEMENT IMPROVEMENT PROJECT, 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 (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.				
	<u>Jointing Sand</u>				
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		
	<u>Concrete block paving including all cuttings</u>				
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				

COUNTY GOVERNMENT OF NAIROBI
COUNTY DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
KENYA INFORMAL SETTLEMENT IMPROVEMENT PROJECT, 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 (0.149km)		
	MFV RD01- 0.149KM AND STORM WATER DRAIN (0.168KM)				
BILL NO.20	ROAD FURNITURE				
	Nairobi County- Mathare Fire Victims (MFV) Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	<u>Warning Signs</u>				
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	<u>Priority Signs</u>				
	Excavating for, providing and erecting priority signs including back filling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions				
20.02A	750mm size	No.	1		
20.02B	1000 mm size	No.	1		
	<u>Mandatory Signs</u>				
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	<u>Standard Informatory Signs</u>				
	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	<u>Non Standard Informatory Signs</u>				
	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	<u>Road Marking painting</u>				
	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				
20.07A	a) White paint	m ²	30		
	<u>Speed reduction bituminous bumps at junctions</u>				
20.09	Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions	No	1		
	<u>Rumble Strips on Pavement</u>				
20.10	Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions	No.	3		
	<u>Concrete Kerbs</u>				
20.11	Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions				
20.11A	Kerbs 125 mm x 250 mm straight	m	164		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	7		
20.11C	Channel blocks 125mm x 100mm	m	313		
	<u>Trees</u>				
20.12	Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands	No.	10		
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				

COUNTY GOVERNMENT OF NAIROBI
COUNTY DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
KENYA INFORMAL SETTLEMENT IMPROVEMENT PROJECT, 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		
			(0.149km)		
	MFV RD01- 0.149KM AND STORM WATER DRAIN (0.168KM)				
	GRAND SUMMARY TOTAL QUANTITIES				
	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				

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. 2.2 – MFV SETTLEMENT ROAD RD - 02

BILL OF QUANTITIES

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				
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.	m ³	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				
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).				
	<u>Fill in Soft Material</u>				
5.01	Excavating the material, transportation and filling in embankment, including watering and rolling; all in accordance to specification	m ³	20.00		
	<u>Fill in Hard Material</u>				
5.02	As Item 5.01 but in hard material	m ³	10.00		
	<u>Spoil in Soft Material</u>				
5.03	Cut to spoil in soft material	m ³	30.00		
	<u>Spoil in Hard Material</u>				
5.04	Excavate, stock pile for reuse and spoil surplus hard material	m ³	3.00		
	<u>Compaction of Existing Ground</u>				
5.05	Compaction of formation ground in accordance with the specification	m ³	59.85		
5.06	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)	m ³	35.91		
5.08	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m ³	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	m ²	28.50		
	<u>Grassing</u>				
5.10	Planting of sprigs of approved indigeneous 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	28.50		
	TOTAL FOR BILL 5 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				
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, backfilling with excavated materials or removing excavated material to spoil; in accordance with the Specification and in conformity with the RE instructions	m ³	68		
8.02	Extra over Item 8.01 for excavation in hard material	m ³	23		
	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	m ³	20		
8.04	Extra over Item 8.03 for excavation in hard material	m ³	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	m ³	27		
	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	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	27		
	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	7		
	Rectangular Covered Concrete Drain (Road Drain)				
8.11 (a)	Provide all materials including formwork etc 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.	m ³	30		
8.11 - (b)	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		
	TOTAL FOR BILL 8 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				
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 Specification	km	0.06		
	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide, 150mm thick, where directed by the RE and in accordance with the Specification	m ³	22.00		
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 in accordance 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)
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	m ³	46.17		
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)	m ³	46.17		
	TOTAL FOR BILL 12 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				
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	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				
BILL NO.20	ROAD FURNITURE				
	Nairobi County- Mathare Fire Victims Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	<u>Warning Signs</u>				
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	<u>Priority Signs</u>				
	Excavating for, providing and erecting priority signs including back filling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions				
20.02A	750mm size	No.	1		
20.02B	1000 mm size	No.	1		
	<u>Mandatory Signs</u>				
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	<u>Standard Informatory Signs</u>				
	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	<u>Non Standard Informatory Signs</u>				
	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	<u>Road Marking painting</u>				
	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	12		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m ²	12		
	<u>Speed reduction bituminous bumps at junctions</u>				
20.09	Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions	No	1		
	<u>Rumble Strips on Pavement</u>				
20.10	Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions	No	1		
	<u>Concrete Kerbs</u>				
20.11	Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions				
20.11A	Kerbs 125 mm x 250 mm straight	m	63		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	3		
20.11C	Channel blocks 125mm x 100mm	m	120		
	<u>Trees</u>				
20.12	Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m - Open Fields or Wet Lands	No.	10		
	TOTAL OF BILL 20 CARRIED TO 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				
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					

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. 2.3 – MFV SETTLEMENT ROAD RD -03

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

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				
BILL N0.04	SITE CLEARANCE AND TOPSOIL STRIPPING				
	Nairobi County- Mathare Fire Victim 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	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.	m ³	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				

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

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				
BILL N0.5	EARTHWORKS				
	Nairobi County- Mathare Fire Victim 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).				
	<u>Fill in Soft Material</u>				
5.01	Excavating the material, transportation and filling in embankment, including watering and rolling; all in accordance to specification	m ³	15.00		
	<u>Fill in Hard Material</u>				
5.02	As Item 5.01 but in hard material	m ³	7.50		
	<u>Spoil in Soft Material</u>				
5.03	Cut to spoil in soft material	m ³	65.00		
	<u>Spoil in Hard Material</u>				
5.04	Excavate, stock pile for reuse and spoil surplus hard material	m ³	6.50		
	<u>Compaction of Existing Ground</u>				
5.05	Compaction of formation ground in accordance with the specification	m ³	44.10		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m ³	88.20		
5.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m ³	26.46		
5.08	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m ³	26.46		
	<u>Topsoil</u>				
5.09	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m ²	21.00		
	<u>Grassing</u>				
5.10	Planting of sprigs of approved indigenous 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	21.00		
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

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

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				
BILL NO.8	CULVERTS AND DRAINAGE				
	Nairobi County- Mathare Fire Victim Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	<u>Excavate for Culverts and Subsoil Drains in Soft Material</u>				
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	m ³	49		
8.02	Extra over Item 8.01 for excavation in hard material	m ³	17		
	<u>Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material</u>				
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	m ³	1		
8.04	Extra over Item 8.03 for excavation in hard material	m ³	1		
	<u>Selected backfill material</u>				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE	m ³	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	12		
8.07	b) 900 mm diameter	m	14		
	<u>Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains</u>				
8.09	Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions	m ³	19		
	<u>Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures</u>				
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	5		
	<u>Rectangular Covered Concrete Drain (Road Drain)</u>				
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 150mm thick.	m ³	22		
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		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

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

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				
BILL NO.9	PASSAGE OF TRAFFIC				
	Nairobi County- Mathare Fire Victim Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Construction of Deviations in maximum lengths of 2 km sections				
9.01	All the operations connected with the initial construction of temporary deviations, appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification	km	0.04		
	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide, 150mm thick, where directed by the RE and in accordance with the Specification	m ³	16.00		
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 in accordance with Specification and in conformity with the RE instructions	Km	0.04		
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Nairobi County- Mathare Fire Victim 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	m ³	44.10		
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)	m ³	44.10		
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				

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

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				
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				

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

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				
BILL NO.20	ROAD FURNITURE				
	Nairobi County- Mathare Fire Victim Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	<u>Warning Signs</u>				
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	<u>Priority Signs</u>				
	Excavating for, providing and erecting priority signs including back filling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions				
20.02A	750mm size	No.	1		
20.02B	1000 mm size	No.	1		
	<u>Mandatory Signs</u>				
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	<u>Standard Informatory Signs</u>				
	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	<u>Non Standard Informatory Signs</u>				
	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	<u>Road Marking painting</u>				
	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		
	<u>Speed reduction bituminous bumps at junctions</u>				
20.09	Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions	No	1		
	<u>Rumble Strips on Pavement</u>				
20.10	Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions	No	1		
	<u>Concrete Kerbs</u>				
20.11	Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions				
20.11A	Kerbs 125 mm x 250 mm straight	m	42		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	3		
20.11C	Channel blocks 125mm x 100mm	m	84		
	<u>Trees</u>				
20.12	Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands	No.	10		
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				

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

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				
	GRAND SUMMARY TOTAL QUANTITIES				
	Nairobi County- Mathare Fire Victim 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. 2.4 – MFV SETTLEMENT ROAD FT - 01

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

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-FP 01		
			60mm Paving Blocks		
			300 Gravel Subbase		
			(0.039km)		
	MATHARE FIRE VICTIMS (MFV FT01)-0.039KM				
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.				
	<u>Site Clearance</u>				
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		
	<u>Removal of Topsoil</u>				
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.	m ³	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				

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

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-FP 01		
			60mm Paving Blocks		
			300 Gravel Subbase		
			(0.039km)		
	MATHARE FIRE VICTIMS (MFV FT01)-0.039KM				
BILL NO.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).				
	<u>Fill in Soft Material</u>				
5.01	Excavating the material, transportation and filling in embankment, including watering and rolling; all in accordance to specification	m ³	1.00		
	<u>Fill in Hard Material</u>				
5.02	As Item 5.01 but in hard material	m ³	0.10		
	<u>Spoil in Soft Material</u>				
5.03	Cut to spoil in soft material	m ³	19.00		
	<u>Spoil in Hard Material</u>				
5.04	Excavate, stock pile for reuse and spoil surplus hard material	m ³	1.90		
	<u>Compaction of Existing Ground</u>				
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 T99)	m ³	81.90		
5.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m ³	24.57		
5.08	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m ³	81.90		
	<u>Topsoil</u>				
5.09	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m ²	19.50		
	<u>Grassing</u>				
5.10	Planting of sprigs of approved indigenous 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	19.50		
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

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

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-FP 01		
			60mm Paving Blocks		
			300 Gravel Subbase		
			(0.039km)		
	MATHARE FIRE VICTIMS (MFV FT01)-0.039KM				
BILL NO.8	CULVERTS AND DRAINAGE				
	Nairobi County- Mathare Fire Victims Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	<u>Excavate for Culverts and Subsoil Drains in Soft Material</u>				
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	m ³	42		
8.02	Extra over Item 8.01 for excavation in hard material	m ³	14		
	<u>Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material</u>				
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	m ³	1		
8.04	Extra over Item 8.03 for excavation in hard material	m ³	1		
	<u>Selected backfill material</u>				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE	m ³	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		
	<u>Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains</u>				
8.09	Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions	m ³	9		
	<u>Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures</u>				
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		
	<u>Rectangular Covered Concrete Drain (Road Drain)</u>				
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 150mm thick.	m ³	20		
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					

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

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-FP 01		
			60mm Paving Blocks		
			300 Gravel Subbase		
			(0.039km)		
	MATHARE FIRE VICTIMS (MFV FT01)-0.039KM				
BILL NO.9	PASSAGE OF TRAFFIC				
	Nairobi County- Mathare Fire Victims Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	<u>Construction of Deviations in maximum lengths of 2 km sections</u>				
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	0.00		
	<u>Gravel Wearing Course</u>				
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	0.00		
9.03	<u>Maintenance the passage of traffic</u>	Lump Sum	1.00		
	<u>Provide Signs and Barriers</u>				
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights, etc., along deviations constructed: all in accordance with Specification and in conformity with the RE instructions	Km	0.04		
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Nairobi County- Mathare Fire Victims Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	<u>Natural Gravel Subbase and Base</u>				
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	m ³	28.08		
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				

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

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-FP 01		
			60mm Paving Blocks		
			300 Gravel Subbase		
			(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				

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

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-FP 01		
			60mm Paving Blocks		
			300 Gravel Subbase		
			(0.039km)		
	MATHARE FIRE VICTIMS (MFV FT01)-0.039KM				
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	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				
	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	4		
20.06B	Yellow paint	m ²	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			
	Rumble Strips on Pavement	3			
20.10	Provision, transport and placing of materials in accordance with the Specification and in 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				

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

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MFV-FP 01		
			60mm Paving Blocks		
			300 Gravel Subbase		
			(0.039km)		
	MATHARE FIRE VICTIMS (MFV FT01)-0.039KM				
	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. 2.5 – MFV SETTLEMENT ROAD FT - 02

BILL OF QUANTITIES

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 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.	m ³	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)
			MFV-FP 02		
			60mm Paving Blocks		
			300 Gravel Subbase		
			(0.039km)		
	MATHARE FIRE VICTIMS (MFV FT02)-0.039KM				
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).				
	<u>Fill in Soft Material</u>				
5.01	Excavating the material, transportation and filling in embankment, including watering and rolling; all in accordance to specification	m ³	1.00		
	<u>Fill in Hard Material</u>				
5.02	As Item 5.01 but in hard material	m ³	0.10		
	<u>Spoil in Soft Material</u>				
5.03	Cut to spoil in soft material	m ³	19.00		
	<u>Spoil in Hard Material</u>				
5.04	Excavate, stock pile for reuse and spoil surplus hard material	m ³	1.90		
	<u>Compaction of Existing Ground</u>				
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 T99)	m ³	81.90		
5.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m ³	24.57		
5.08	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m ³	81.90		
	<u>Topsoil</u>				
5.09	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m ²	19.50		
	<u>Grassing</u>				
5.10	Planting of sprigs of approved indigenous 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	19.50		
	TOTAL FOR BILL 5 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					
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, backfilling with excavated materials or removing excavated material to spoil; in accordance with the Specification and in conformity with the RE instructions	m ³	42		
8.02	Extra over Item 8.01 for excavation in hard material	m ³	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 accordance with the Specification and in conformity with the RE's instructions	m ³	10		
8.04	Extra over Item 8.03 for excavation in hard material	m ³	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	m ³	17		
	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	m ³	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) rectangular 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	20		
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				
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 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	m ³	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 in accordance with Specification and in conformity with the RE instructions	Km	0.04		
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Nairobi County- Mathare Fire Victims Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
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	m ³	29.00		
	TOTAL FOR BILL 12 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				
BILL NO.13	CONCRETE PAVING BLOCK SURFACE TREATMENT				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	<p>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</p> <p>NOTE: No overhaul will be paid for these items as it shall be deemed to have been included in the Contractor's rates.</p>				
	<u>Jointing Sand</u>				
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		
	<u>Coloured Concrete block paving including all cuttings</u>				
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 02		
			60mm Paving Blocks		
			300 Gravel Subbase		
			(0.039km)		
MATHARE FIRE VICTIMS (MFV FT02)-0.039KM					
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	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				
	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	4		
20.06B	Yellow paint	m ²	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			
	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		
	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	39		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	10		
20.11C	Channel blocks 125mm x 100mm	m	78		
	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					

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

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				
	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. 2.6 – MFV SETTLEMENT ROAD FT - 03

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

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				
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	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.	m ³	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				

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

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				
BILL N0.5	EARTHWORKS				
	Nairobi County- Mathare Fire Victims Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	<p>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.</p> <p>Material used for earthworks (fill below bottom sub-grade) shall be minimum soil class S2 quality and be compacted to 95% MDD (AASHTO T99)</p> <p>The upper 300mm of subgrade shall be compacted to 100% MDD (AASHTO T99) while the rest shall be compacted to 95% MDD (AASHTO T99).</p> <p>Fill in Soft Material</p>				
5.01	Excavating the material, transportation and filling in embankment, including watering and rolling; all in accordance to specification	m ³	28.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m ³	2.80		
	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	m ³	10.50		
	Compaction of Existing Ground				
5.05	Compaction of formation ground in accordance with the specification	m ³	43.05		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m ³	86.10		
5.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m ³	25.83		
5.08	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m ³	86.10		
	Topsoil				
5.09	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m ²	20.50		
	Grassing				
5.10	Planting of sprigs of approved indigenous 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	20.50		
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

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

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				
BILL NO.8	CULVERTS AND DRAINAGE				
	Nairobi County- Mathare Fire Victims Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	<u>Excavate for Culverts and Subsoil Drains in Soft Material</u>				
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	m ³	43		
8.02	Extra over Item 8.01 for excavation in hard material	m ³	15		
	<u>Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material</u>				
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	m ³	1		
8.04	Extra over Item 8.03 for excavation in hard material	m ³	1		
	<u>Selected backfill material</u>				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE	m ³	18		
	<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		
	<u>Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains</u>				
8.09	Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions	m ³	9		
	<u>Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures</u>				
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		
	<u>Rectangular Covered Concrete Drain (Road Drain)</u>				
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 150mm thick.	m ³	21		
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				

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

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					
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 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	m ³	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 in accordance with Specification and in conformity with the RE instructions	Km	0.04		
TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE					
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
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 Special Specification in accordance with the Specification and in conformity with the RE instructions	m ³	8.00		
TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE					

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

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				
BILL NO.13	CONCRETE PAVING BLOCK SURFACE TREATMENT				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	<p>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</p> <p>NOTE: No overhaul will be paid for these items as it shall be deemed to have been included in the Contractor's rates.</p>				
	<u>Jointing Sand</u>				
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		
	<u>Coloured Concrete block paving including all cuttings</u>				
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				

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

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				
BILL NO.20	ROAD FURNITURE				
	Nairobi County- Mathare Fire Victims Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	<u>Warning Signs</u>				
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	<u>Priority Signs</u>				
	Excavating for, providing and erecting priority signs including back filling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions				
20.02A	750mm size	No.	0		
20.02B	1000 mm size	No.	0		
	<u>Mandatory Signs</u>				
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	<u>Standard Informatory Signs</u>				
	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	<u>Non Standard Informatory Signs</u>				
	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	<u>Road Marking painting</u>				
	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	m ²	5		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m ²	0		
	<u>Speed reduction bituminous bumps at junctions</u>				
20.09	Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions	No			
	<u>Rumble Strips on Pavement</u>				
20.10	Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions	No	0		
	<u>Concrete Kerbs</u>				
20.11	Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions				
20.11A	Kerbs 125 mm x 250 mm straight	m	41		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	10		
20.11C	Channel blocks 125mm x 100mm	m	82		
	<u>Trees</u>				
20.12	Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands	No.	5		
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				

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

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				
	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. 2.7 – MFV SETTLEMENT ROAD FT - 04

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

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				
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	86.00		
	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.	m ³	18.00		
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				

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

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				
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).				
	Fill in Soft Material				
5.01	Excavating the material, transportation and filling in embankment, including watering and rolling; all in accordance to specification	m ³	25.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m ³	25.00		
	Spoil in Soft Material				
5.03	Cut to spoil in soft material	m ³	33.00		
	Spoil in Hard Material				
5.04	Excavate, stock pile for reuse and spoil surplus hard material	m ³	23.10		
	Compaction of Existing Ground				
5.05	Compaction of formation ground in accordance with the specification	m ³	45.15		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m ³	90.30		
5.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m ³	27.09		
5.08	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m ³	90.30		
	Topsoil				
5.09	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m ²	21.50		
	Grassing				
5.10	Planting of sprigs of approved indigenous 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	21.50		
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

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

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				
BILL NO.8	CULVERTS AND DRAINAGE				
	Nairobi County- Mathare Fire Victims Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	<u>Excavate for Culverts and Subsoil Drains in Soft Material</u>				
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	m ³	50		
8.02	Extra over Item 8.01 for excavation in hard material	m ³	17		
	<u>Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material</u>				
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	m ³	10		
8.04	Extra over Item 8.03 for excavation in hard material	m ³	10		
	<u>Selected backfill material</u>				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE	m ³	18		
	<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		
	<u>Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains</u>				
8.09	Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions	m ³	9		
	<u>Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures</u>				
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		
	<u>Rectangular Covered Concrete Drain (Road Drain)</u>				
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 150mm thick.	m ³	22		
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				

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

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				
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 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 in accordance with Specification and in conformity with the RE instructions	Km	0.04		
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	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 Special Specification in accordance with the Specification and in conformity with the RE instructions	m³	8.00		
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				

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

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				
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	71.00		
	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	71.00		
TOTAL FOR BILL 13 CARRIED TO GRAND SUMMARY PAGE					

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

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				
BILL NO.20	ROAD FURNITURE				
	Nairobi County- Mathare Fire Victims Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	<u>Warning Signs</u>				
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	<u>Priority Signs</u>				
	Excavating for, providing and erecting priority signs including back filling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions				
20.02A	750mm size	No.	0		
20.02B	1000 mm size	No.	0		
	<u>Mandatory Signs</u>				
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	<u>Standard Informatory Signs</u>				
	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	<u>Non Standard Informatory Signs</u>				
	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	<u>Road Marking painting</u>				
	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	m ²	5		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m ²	0		
	<u>Speed reduction bituminous bumps at junctions</u>				
20.09	Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions	No			
	<u>Rumble Strips on Pavement</u>				
20.10	Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions	No	0		
	<u>Concrete Kerbs</u>				
20.11	Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions				
20.11A	Kerbs 125 mm x 250 mm straight	m	43		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	11		
20.11C	Channel blocks 125mm x 100mm	m	86		
	<u>Trees</u>				
20.12	Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands	No.	5		
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				

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

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				
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

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	

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. 3.1 – HFV – 2 SETTLEMENT ROAD HRM RD - 01

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

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 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.				
	<u>Site Clearance</u>				
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		
	<u>Removal of Topsoil</u>				
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.	m ³	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				

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

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 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	m ³	35.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m ³	24.50		
	Spoil in Soft Material				
5.03	Cut to spoil in soft material	m ³	725.00		
	Spoil in Hard Material				
5.04	Excavate, stock pile for reuse and spoil surplus hard material	m ³	72.50		
	Compaction of Existing Ground				
5.05	Compaction of formation ground in accordance with the specification	m ³	217.35		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m ³	434.70		
5.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m ³	130.41		
5.08	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m ³	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 indigeneous 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 BILL 5 CARRIED TO GRAND SUMMARY PAGE				

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

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				
	Nairobi County- Huruma (HRM) Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	<u>Excavate for Culverts and Subsoil Drains in Soft Material</u>				
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	m ³	203		
8.02	Extra over Item 8.01 for excavation in hard material	m ³	68		
	<u>Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material</u>				
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	m ³	50		
8.04	Extra over Item 8.03 for excavation in hard material	m ³	2		
	<u>Selected backfill material</u>				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE	m ³	81		
	<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	54		
8.07	b) 900 mm diameter	m	14		
	<u>Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains</u>				
8.09	Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions	m ³	57		
	<u>Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures</u>				
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	13		
	<u>Rectangular Covered Concrete Drain (Road Drain)</u>				
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 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				
	Nairobi County- Huruma (HRM) Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	<u>Construction of Deviations in maximum lengths of 2 km sections</u>				
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		
	<u>Gravel Wearing Course</u>				
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	78.00		
9.03	<u>Maintenance the passage of traffic</u>	Lump Sum	1.00		
	<u>Provide Signs and Barriers</u>				

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

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)				
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights, etc., along deviations constructed: all in accordance with Specification and in conformity with the RE instructions	Km	0.21		
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				

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

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)		
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	m ³	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)	m ³	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				

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

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/m ² 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/m ² 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				

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

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.20	ROAD FURNITURE				
	Nairobi County- Huruma (HRM) 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	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 conformity with the RE instructions	No	5		
	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		
20.11C	Channel blocks 125mm x 100mm	m	455		
	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					

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

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)				
	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				

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. 3.2 – HFV – 2 SETTLEMENT ROAD HRM RD - 02

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

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 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 specifications.	m ²	1,010.00		
	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.	m ³	202.00		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet structures including back filling.	m	11		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

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

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.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).				
	<u>Fill in Soft Material</u>				
5.01	Excavating the material, transportation and filling in embankment, including watering and rolling; all in accordance to specification	m ³	36.00		
	<u>Fill in Hard Material</u>				
5.02	As Item 5.01 but in hard material	m ³	3.60		
	<u>Spoil in Soft Material</u>				
5.03	Cut to spoil in soft material	m ³	469.00		
	<u>Spoil in Hard Material</u>				
5.04	Excavate, stock pile for reuse and spoil surplus hard material	m ³	46.90		
	<u>Compaction of Existing Ground</u>				
5.05	Compaction of formation ground in accordance with the specification	m ³	212.10		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m ³	424.20		
5.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m ³	127.26		
5.08	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m ³	127.26		
	<u>Topsoil</u>				
5.09	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m ²	101.00		
	<u>Grassing</u>				
5.10	Planting of sprigs of approved indigenous 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	101.00		
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

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

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)
	<u>Excavate for Culverts and Subsoil Drains in Soft Material</u>				
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	195		
8.02	Extra over Item 8.01 for excavation in hard material	m³	65		
	<u>Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material</u>				
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	5		
8.04	Extra over Item 8.03 for excavation in hard material	m³	2		
	<u>Selected backfill material</u>				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE	m³	78		
	<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	54		
8.07	b) 900 mm diameter	m	7		
	<u>Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains</u>				
8.09	Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions	m³	53		
	<u>Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures</u>				
8.10	Providing and placing the concrete, reinforcement and formwork class F2 all in accordance with the Specification and in conformity with the RE instructions	m³	12		
	<u>Rectangular Covered Concrete Drain (Road Drain)</u>				
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 150mm thick.	m³	104		
8.11 - (b)	Steel reinforcement for concrete covered drains as specified in the drawings.	Tonne	9		
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	41		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

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

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.9	PASSAGE OF TRAFFIC				
	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, appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification	km	0.10		
	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide, 150mm thick, where directed by the RE and in accordance with the Specification	m³	76.00		
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 in accordance with Specification and in conformity with the RE instructions	Km	0.20		
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				
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	167.00		
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	167.00		
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				

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

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/m ² 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				

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

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			HRM-RD 02		
			50mm A.C		
			150 Stone Base		
			150 Gravel Subbase		
	HURUMA (HRM RD02- 0.202KM)				
BILL NO.20	ROAD FURNITURE				
	Nairobi County- Huruma (HRM) Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Warning Signs				
20.01	Excavating 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	41		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m ²	41		
	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 conformity with the RE instructions	No	5		
	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		
TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE					

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

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)				
	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				

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. 3.3 – HFV – 2 SETTLEMENT ROAD HRM RD - 03

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

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)				
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 specifications.	m ²	735.00		
	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.	m ³	147.00		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet structures including back filling.	m	8		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

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

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)				
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).				
	<u>Fill in Soft Material</u>				
5.01	Excavating the material, transportation and filling in embankment, including watering and rolling; all in accordance to specification	m ³	46.00		
	<u>Fill in Hard Material</u>				
5.02	As Item 5.01 but in hard material	m ³	4.60		
	<u>Spoil in Soft Material</u>				
5.03	Cut to spoil in soft material	m ³	374.00		
	<u>Spoil in Hard Material</u>				
5.04	Excavate, stock pile for reuse and spoil surplus hard material	m ³	37.40		
	<u>Compaction of Existing Ground</u>				
5.05	Compaction of formation ground in accordance with the specification	m ³	154.35		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m ³	308.70		
5.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m ³	92.61		
5.08	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m ³	92.61		
	<u>Topsoil</u>				
5.09	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m ²	73.50		
	<u>Grassing</u>				
5.10	Planting of sprigs of approved indigenous 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	73.50		
TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE					

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

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)				
BILL NO.8	CULVERTS AND DRAINAGE				
	Nairobi County- Huruma (HRM) Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	<u>Excavate for Culverts and Subsoil Drains in Soft Material</u>				
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	m ³	141		
8.02	Extra over Item 8.01 for excavation in hard material	m ³	47		
	<u>Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material</u>				
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	m ³	3		
8.04	Extra over Item 8.03 for excavation in hard material	m ³	1		
	<u>Selected backfill material</u>				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE	m ³	57		
	<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	36		
8.07	b) 900 mm diameter	m	7		
	<u>Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains</u>				
8.09	Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions	m ³	37		
	<u>Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures</u>				
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	9		
	<u>Rectangular Covered Concrete Drain (Road Drain)</u>				
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 150mm thick.	m ³	76		
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		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

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

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)				
BILL NO.9	PASSAGE OF TRAFFIC				
	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, 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 wide, 150mm thick, where directed by the RE and in accordance with the Specification	m³	56.00		
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 in accordance with Specification and in conformity with the RE instructions	Km	0.15		
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				
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	122.00		
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	122.00		
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				

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

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)				
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	882.0		
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	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				

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

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)				
BILL NO.20	ROAD FURNITURE				
	Nairobi County- Huruma (HRM) Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	<u>Warning Signs</u>				
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	<u>Priority Signs</u>				
	Excavating for, providing and erecting priority signs including back filling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions				
20.02A	750mm size	No.	1		
20.02B	1000 mm size	No.	1		
	<u>Mandatory Signs</u>				
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	<u>Standard Informatory Signs</u>				
	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	<u>Non Standard Informatory Signs</u>				
	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	<u>Road Marking painting</u>				
	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				
20.07A	a) White paint	m ²	30		
	<u>Speed reduction bituminous bumps at junctions</u>				
20.09	Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions	No	1		
	<u>Rumble Strips on Pavement</u>				
20.10	Provision, transport and placing of materials in accordance with the Specification and in conformity with the RE instructions	No	3		
	<u>Concrete Kerbs</u>				
20.11	Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions				
20.11A	Kerbs 125 mm x 250 mm straight	m	162		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	7		
20.11C	Channel blocks 125mm x 100mm	m	323		
	<u>Trees</u>				
20.12	Planting of approved indigenous types of trees where instructed, in accordance with the Specification, minimum height 1.5m -Open Fields or Wet Lands	No.	10		
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				

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

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)				
	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				

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. 3.4 - HFV - 2 SETTLEMENT ROAD HRM RD - 04

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

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 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 materials resulting from clearing and grubbing all in accordance with the specifications.	m ²	416.00		
	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.	m ³	84.00		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet structures including back filling.	m	5		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

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

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.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	m ³	55.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m ³	5.50		
	Spoil in Soft Material				
5.03	Cut to spoil in soft material	m ³	38.00		
	Spoil in Hard Material				
5.04	Excavate, stock pile for reuse and spoil surplus hard material	m ³	3.80		
	Compaction of Existing Ground				
5.05	Compaction of formation ground in accordance with the specification	m ³	54.60		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m ³	109.20		
5.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m ³	32.76		
5.08	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m ³	32.76		
	Topsoil				
5.09	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m ²	26.00		
	Grassing				
5.10	Planting of sprigs of approved indigenous 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	26.00		
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

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

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.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 accordance with the Specification and in conformity with the RE instructions	m ³	65		
8.02	Extra over Item 8.01 for excavation in hard material	m ³	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 accordance with the Specification and in conformity with the RE's instructions	m ³	20		
8.04	Extra over Item 8.03 for excavation in hard material	m ³	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	m ³	26		
	In-situ culverts				
	Provide for in-situ culvert all in accordance with the Specification and in conformity with the RE instructions				
8.06	a) 600 mm diameter (for use at minor junctions only)	m	24		
8.07	b) 900 mm diameter	m	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	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 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) rectangular 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	27		
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		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

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

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.9	PASSAGE OF TRAFFIC				
	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, appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification	km	0.05		
	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	20.00		
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 in accordance with Specification and in conformity with the RE instructions	Km	0.05		
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				
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	m ³	71.00		
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)	m ³	65.00		
	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)
	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 paving blocks to the road and junctions all in accordance with the specifications or as directed by the Engineer	m ²	188.00		
	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	188.00		
	TOTAL FOR BILL 13 CARRIED TO GRAND SUMMARY PAGE				

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

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				
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	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	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	19.0		
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE				

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

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.20	ROAD FURNITURE				
	Nairobi County- Huruma (HRM) 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	11		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m ²	11		
	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	1		
	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	57		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	3		
20.11C	Channel blocks 125mm x 100mm	m	114		
	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				

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

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)				
	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				

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. 3.5 – HFV – 2 SETTLEMENT ROAD HRM RD - 06

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

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 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; 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	1,539.00		
	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.	m ³	308.00		
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				

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

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 N0.5	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).				
	<u>Fill in Soft Material</u>				
5.01	Excavating the material, transportation and filling in embankment, including watering and rolling; all in accordance to specification	m³	67.00		
	<u>Fill in Hard Material</u>				
5.02	As Item 5.01 but in hard material	m³	6.70		
	<u>Spoil in Soft Material</u>				
5.03	Cut to spoil in soft material	m³	565.00		
	<u>Spoil in Hard Material</u>				
5.04	Excavate, stock pile for reuse and spoil surplus hard material	m³	56.50		
	<u>Compaction of Existing Ground</u>				
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		
	<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	90.50		
	<u>Grassing</u>				
5.10	Planting of sprigs of approved indigenous 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	90.50		
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

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

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 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 accordance with the Specification and in conformity with the RE instructions	m ³	200		
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 accordance with the Specification and in conformity with the RE's instructions	m ³	4		
8.04	Extra over Item 8.03 for excavation in hard material	m ³	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	m ³	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	Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions	m ³	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	m ³	18		
	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 150mm thick.	m ³	93		
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		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

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

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 NO.9	PASSAGE OF TRAFFIC				
	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, appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification	km	0.18		
	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	68.00		
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 in accordance with Specification and in conformity with the RE instructions	Km	0.18		
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				
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	143.00		
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	143.00		
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.13A	CONCRETE PAVING BLOCK SURFACE TREATMENT				
	Nairobi County- Huruma (HRM) Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	NOTE: No overhaul will be paid for these items as it shall be deemed to have been included in the Contractor's rates.				
	Jointing Sand				
13.01A	Supply, lay and appropriately spread jointing sand 10-20mm thick to Concrete paving blocks to the road and junctions all in accordance with the specifications or as directed by the Engineer	m²	598.00		
	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 road footpaths etc. and as directed by the Engineer	m²	598.00		
	TOTAL FOR BILL 13 CARRIED TO GRAND SUMMARY PAGE				

COUNTY GOVERNMENT OF NAIROBI
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KENYA INFORMAL SETTLEMENT IMPROVEMENT PROJECT, PHASE 2
CONSTRUCTION OF INFRASTRUCTURE IMPROVEMENT WORKS IN SELECTED INFORMAL SETTLEMENTS IN NAIROBI COUNTY

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 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	1412.0		
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	1412.0		
	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	65.0		
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE				

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

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 NO.20	ROAD FURNITURE				
	Nairobi County- Huruma (HRM) 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		
	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		
	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		
	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		
	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	37		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m ²	37		
	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	4		
	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	199		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	9		
20.11C	Channel blocks 125mm x 100mm	m	398		
	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				

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

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)				
	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				

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. 3.6 - HFV - 2 SETTLEMENT ROAD HRM RD - 07

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

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 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; 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	1,097.00		
	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.	m ³	220.00		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet structures including back filling.	m	11		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

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

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 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).				
	<u>Fill in Soft Material</u>				
5.01	Excavating the material, transportation and filling in embankment, including watering and rolling; all in accordance to specification	m ³	67.00		
	<u>Fill in Hard Material</u>				
5.02	As Item 5.01 but in hard material	m ³	6.70		
	<u>Spoil in Soft Material</u>				
5.03	Cut to spoil in soft material	m ³	565.00		
	<u>Spoil in Hard Material</u>				
5.04	Excavate, stock pile for reuse and spoil surplus hard material	m ³	56.50		
	<u>Compaction of Existing Ground</u>				
5.05	Compaction of formation ground in accordance with the specification	m ³	135.45		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m ³	270.90		
5.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m ³	81.27		
5.08	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m ³	81.27		
	<u>Topsoil</u>				
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		
	<u>Grassing</u>				
5.10	Planting of sprigs of approved indigenous 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	64.50		
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

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

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 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 accordance with the Specification and in conformity with the RE instructions	m³	144		
8.02	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 accordance with the Specification and in conformity with the RE's instructions	m³	3		
8.04	Extra over Item 8.03 for excavation in hard material	m³	1		
	Selected backfill material				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE	m³	58		
	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 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) rectangular concrete drains 150mm thick walls and bottom base,average height of 0.8m, class 25/20, including slotted top cover of 150mm thick.	m³	66		
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 8 CARRIED TO GRAND SUMMARY PAGE				

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

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 NO.9	PASSAGE OF TRAFFIC				
	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, appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification	km	0.13		
	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide, 150mm thick, where directed by the RE and in accordance with the Specification	m³	49.00		
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 in accordance with Specification and in conformity with the RE instructions	Km	0.13		
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				
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	186.00		
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	186.00		
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				

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

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 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/m ² to base course on on carriageway, bus bays, footpaths, shoulders and junctions	ltr	697.0		
	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	32.0		
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE				

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

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 NO.20	ROAD FURNITURE				
	Nairobi County- Huruma (HRM) 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		
	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		
	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		
	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		
	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	As Item 2007 but 250mm wide				
20.07A	a) White paint	m ²	26		
	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	142		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	6		
20.11C	Channel blocks 125mm x 100mm	m	284		
	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				

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

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)				
	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				

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	
A	SUB -TOTAL -1 CARRIED TO GRAND 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. 4.1 – MATOPENI SETTLEMENT SANF RD - 01

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

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 in accordance with the Specification and in conformity with the RE instructions average depth 200mm.	m ³	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				

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

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 N0.5	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		
	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	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 T99)	m³	235.62		
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m³	235.62		
5.10	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m²	1,295.91		
	Topsoil				
5.11	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m²	280.50		
	Grassing				
5.12	Planting of sprigs of approved indigeneous 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	280.50		
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

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

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.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 accordance with the Specification and in conformity with the RE instructions	m³	1,569		
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 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	40		
	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	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 accordance with the Specification and in conformity with the RE instructions	m³	49		
	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.	m³	287		
	Rectangular Covered Concrete Drain Part (Independent Drain)				
8.11(b)	Provide all materials and construct 1000mm (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.	m³	323		
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, surround blinding including reinforcement mesh.	m³	453		
8.11(d)	900 mm diameter	m	350		
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	50		
TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE					

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

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.9	PASSAGE OF TRAFFIC				
	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 Specification	km	0.56		
	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide, 150mm thick, where directed by the RE and in accordance with the Specification	m³	211.00		
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 in accordance with Specification and in conformity with the RE instructions	Km	0.56		
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				
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	405.00		
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	463.00		
	TOTAL FOR BILL 12 CARRIED TO GRAND SUMMARY PAGE				

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

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.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/m ² 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				

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

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				
	Nairobi County - Matopeni Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Warning Signs				
20.01	Excavating 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	m²	113		
20.06B	Yellow paint	m²	85		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m²	113		
	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 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	m	1,178		
	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.	20		
TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE					

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

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)				
	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				

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. 4.2 – MATOPENI SETTLEMENT SB RD – 01A

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

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 N0.04	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	973.00		
	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.	m ³	195.00		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet structures including back filling.	m	10		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

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

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).				
	Fill in Soft Material				
5.01	Excavating the material, transportation and filling in embankment, including watering and rolling; all in accordance to specification	m ³	88.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m ³	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 to a maximum depth of 1.0m	m ³	856.24		
	Spoil in Soft Material				
5.04	Cut to spoil in soft material	m ³	62.00		
	Spoil in Hard Material				
5.05	Excavate, stock pile for reuse and spoil surplus hard material	m ³	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	m ³	1,070.30		
	Compaction of Existing Ground				
5.07	Compaction of formation ground in accordance with the specification	m ³	109.46		
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m ³	58.38		
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m ³	17.51		
5.10	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m ³	321.09		
	Topsoil				
5.11	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m ²	69.50		
	Grassing				
5.12	Planting of sprigs of approved indigeneous 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		
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

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

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 NO.8	CULVERTS AND DRAINAGE				
	Nairobi County - Matopeni Informal Settlement				
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 accordance with the Specification and in conformity with the RE instructions	m³	291		
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 accordance with the Specification and in conformity with the RE's instructions	m³	30		
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	117		
	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				
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	14		
	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.	m³	72		
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 8 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.9	PASSAGE OF TRAFFIC				
	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 Specification	km	0.14		
	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	53.00		
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 in accordance with Specification and in conformity with the RE instructions	Km	0.14		
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				

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

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 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	m ³	139.00		
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)	m ³	150.00		
	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.				
	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		
	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 road footpaths etc. and as directed by the Engineer	m ²	230.00		
	TOTAL FOR BILL 13 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				
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	834.0		
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	834.0		
	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	43.0		
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE				

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

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 NO.20	ROAD FURNITURE				
	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		
	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 concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions 1000mm size	No.	1		
	Standard Informatory Signs				
20.04	Excavating for, providing and erecting information signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions				
20.04A	500x600mm	No.	1		
20.04B	600x600mm	No.	1		
	Non Standard Informatory Signs				
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		
	Road Marking painting				
20.06	Preparing road surface, supplying approved road marking paint, 100mm wide marking out and painting, all in accordance with the Specification and in conformity with the RE instructions				
20.06A	White paint	m ²	28		
20.06B	Yellow paint	m ²	21		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m ²	28		
	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	153		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	7		
20.11C	Channel blocks 125mm x 100mm	m	306		
	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.	15		
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				

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

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)				
	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				

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. 4.3 - MATOPENI SETTLEMENT PM RD - 02

BILL OF QUANTITIES

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)				
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	2,079.00		
	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.	m ³	416.00		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet structures including back filling.	m	21		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

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

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)				
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	m ³	186.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m ³	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	m ³	1,829.52		
	Spoil in Soft Material				
5.04	Cut to spoil in soft material	m ³	15.00		
	Spoil in Hard Material				
5.05	Excavate, stock pile for reuse and spoil surplus hard material	m ³	1.50		
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	m ³	2,286.90		
	Compaction of Existing Ground				
5.07	Compaction of formation ground in accordance with the specification	m ³	233.89		
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m ³	124.74		
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m ³	37.42		
5.10	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m ³	686.07		
	Topsoil				
5.11	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m ²	148.50		
	Grassing				
5.12	Planting of sprigs of approved indigenous 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	148.50		
	TOTAL FOR BILL 5 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)				
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 accordance with the Specification and in conformity with the RE instructions	m ³	317		
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 accordance with the Specification and in conformity with the RE's instructions	m ³	7		
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 in conformity with the instructions of the RE	m ³	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	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	m ³	26		
	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.	m ³	152		
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		
	TOTAL FOR BILL 8 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)				
BILL NO.9	PASSAGE OF TRAFFIC				
	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 Specification	km	0.30		
	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	112.00		
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 in accordance with Specification and in conformity with the RE instructions	Km	0.30		
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				
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	m ³	267.00		
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)	m ³	320.00		
	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	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 etc. and as directed by the Engineer	m ²	491.00		
	TOTAL FOR BILL 13 CARRIED TO GRAND SUMMARY PAGE				

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

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)					
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/m ² 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 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					

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

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)					
BILL NO.20	ROAD FURNITURE				
Nairobi County - Matopeni Informal Settlement					
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
Warning Signs					
20.01	Excavating 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		
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 concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions 1000mm size	No.	1		
Standard Informatory Signs					
20.04	Excavating for, providing and erecting information signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions				
20.04A	500x600mm	No.	1		
20.04B	600x600mm	No.	1		
Non Standard Informatory Signs					
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		
Road Marking painting					
20.06	Preparing road surface, supplying approved road marking paint, 100mm wide marking out and painting, all in accordance with the Specification and in conformity with the RE instructions				
20.06A	White paint	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	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.	7		
Concrete Kerbs					
20.11	Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions				
20.11A	Kerbs 125 mm x 250 mm straight	m	327		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	15		
20.11C	Channel blocks 125mm x 100mm	m	624		
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					

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

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)				
	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				

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. 4.4 – MATOPENI ROAD PK RD – 02A

BILL OF QUANTITIES

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			PK-RD 02A		
			50mm A.C		
			150mm Stone Base		
			125 Gravel		
			300mm Sub Grade (0.350km)		
PORTFOLIO KASYOKA (0.503KM)					
BILL NO.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	1,925.00		
	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.	m ³	385.00		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet structures including back filling.	m	20		
TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE					

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			PK-RD 02A		
			50mm A.C		
			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	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	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		
	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		
5.08	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 indigenous 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					

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

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			PK-RD 02A		
			50mm A.C		
			150mm Stone Base		
			125 Gravel		
			300mm Sub Grade (0.350km)		
PORTFOLIO KASYOKA (0.503KM)					
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 accordance with the Specification and in conformity with the RE instructions	m³	531		
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					
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	11		
8.04	Extra over Item 8.03 for excavation in hard material	m³	4		
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	213		
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	204		
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	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		
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.	m³	258		
8.11(b)	Steel reinforcement for concrete covered drains as specified in the drawings.	Tonne	23		
8.12	Provide 250mm PVC pipes at 50m intervals for service ducts	m	71		
TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE					
BILL NO.9	PASSAGE OF TRAFFIC				
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 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					
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights, etc., along deviations constructed: all in accordance with Specification and in conformity with the RE instructions	Km	0.35		
TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE					

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

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			PK-RD 02A		
			50mm A.C		
			150mm Stone 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				
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	2503.0		
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	2503.0		
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.	M³	99.0		
TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE					

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

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			PK-RD 02A		
			50mm A.C		
			150mm Stone Base		
			125 Gravel		
			300mm Sub Grade (0.350km)		
	PORTFOLIO KASYOKA (0.503KM)				
BILL NO.20	ROAD FURNITURE				
	Nairobi County - Matopeni Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Warning Signs				
20.01	Excavating 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	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				
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 conformity with the RE instructions	No	8		
	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	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 Specification, minimum height 1.5m -Open Fields or Wet Lands	No.	10		
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				

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

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			PK-RD 02A		
			50mm A.C		
			150mm Stone Base		
			125 Gravel		
			300mm Sub Grade (0.350km)		
PORTFOLIO KASYOKA (0.503KM)					
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					

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. 4.5 – MATOPENI SETTLEMENT PS RD - 03

BILL OF QUANTITIES

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			PS-RD 03		
			50mm A.C		
			150mm Stone Base		
			125mm Gravel		
			300mm Sub Grade (0.470km)		
	PORTFOLIO SOKONI (0.470KM)				
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	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.	m ³	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				

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

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			PS-RD 03 50mm A.C 150mm Stone Base 125mm Gravel 300mm Sub Grade (0.470km)		
	PORTFOLIO SOKONI (0.470KM)				
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	m ³	132.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m ³	13.20		
	Fill in Expansive Clay Areas				
5.03	As per Item 5.01 but in expansive clay areas to replace unsuitable material removed up to a maximum depth of 1.0m	m ³	2,481.60		
	Spoil in Soft Material				
5.04	Cut to spoil in soft material	m ³	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				
	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	3,102.00		
	Compaction of Existing Ground				
5.07	Compaction of formation ground in accordance with the specification	m ³	317.25		
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m ³	169.20		
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (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	Planting of sprigs of approved indigenous 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	235.00		
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

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

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			PS-RD 03 50mm A.C 150mm Stone Base 125mm Gravel 300mm Sub Grade (0.470km)		
	PORTFOLIO SOKONI (0.470KM)				
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 accordance with the Specification and in conformity with the RE instructions	m ³	442		
8.02	Extra over Item 8.01 for excavation in hard material	m ³	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	m ³	100		
8.04	Extra over Item 8.03 for excavation in hard material	m ³	40		
	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	m ³	177		
	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	m ³	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	m ³	25		
	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.	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	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Construction of Deviations in maximum lengths of 2 km sections				
9.01	All the operations connected with the initial construction of temporary deviations, appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification	km	0.47		
	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	177.00		
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 in accordance with Specification and in conformity with the RE instructions	Km	0.47		
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				

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

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			PS-RD 03 50mm A.C 150mm Stone Base 125mm Gravel 300mm Sub Grade (0.470km)		
PORTFOLIO SOKONI (0.470KM)					
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 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	m ³	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)	m ³	427.00		
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				
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	3102.0		
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	3102.0		
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	133.0		
TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE					

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

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			PS-RD 03 50mm A.C 150mm Stone Base 125mm Gravel 300mm Sub Grade (0.470km)		
PORTFOLIO SOKONI (0.470KM)					
BILL NO.20	ROAD FURNITURE				
Nairobi County - Matopeni Informal Settlement					
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
Warning Signs					
20.01	Excavating 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		
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 concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions 1000mm size	No.	1		
Standard Informatory Signs					
20.04	Excavating for, providing and erecting information signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions				
20.04A	500x600mm	No.	1		
20.04B	600x600mm	No.	1		
Non Standard Informatory Signs					
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		
Road Marking painting					
20.06	Preparing road surface, supplying approved road marking paint, 100mm wide marking out and painting, all in accordance with the Specification and in conformity with the RE instructions				
20.06A	White paint	m ²	94		
20.06B	Yellow paint	m ²	57		
As Item 2007 but 250mm wide					
20.07A	a) White paint	m ²	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	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.	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	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					
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.	20		
TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE					

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

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			PS-RD 03		
			50mm A.C		
			150mm Stone Base		
			125mm Gravel		
			300mm Sub Grade (0.470km)		
PORTFOLIO SOKONI (0.470KM)					
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					

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. 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	

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. 5.1 – PUMWANI MAJENGO ROAD PMMJ RD -01

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

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 N0.04	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	1,572.00		
	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.	m ³	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				

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

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MP-RD 01		
			50mm AC		
			150 Stone Base		
			150 Gravel		
	PUMWANI (PMMJ RD01 0.262KM)				
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	m ³	85.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m ³	9.00		
	Spoil in Soft Material				
5.03	Cut to spoil in soft material	m ³	937.00		
	Spoil in Hard Material				
5.04	Excavate, stock pile for reuse and spoil surplus hard material	m ³	93.70		
	Compaction of Existing Ground				
5.05	Compaction of formation ground in accordance with the specification	m ³	275.10		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m ³	550.20		
5.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m ³	165.06		
5.08	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m ³	550.20		
	Topsoil				
5.09	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m ²	131.00		
	Grassing				
5.10	Planting of sprigs of approved indigenous 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	131.00		
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

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

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)
	<u>Excavate for Culverts and Subsoil Drains in Soft Material</u>				
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	m ³	282		
8.02	Extra over Item 8.01 for excavation in hard material	m ³	94		
	<u>Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material</u>				
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	m ³	6		
8.04	Extra over Item 8.03 for excavation in hard material	m ³	2		
	<u>Selected backfill material</u>				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE	m ³	113		
	<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	108		
8.07	b) 900 mm diameter	m	14		
	<u>Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains</u>				
8.09	Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions	m ³	96		
	<u>Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures</u>				
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	24		
	<u>Rectangular Covered Concrete Drain (Road Drain)</u>				
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.	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		
	TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE				

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

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.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	km	0.26		
	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	99.00		
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 in accordance 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				
	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, 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	m ³	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)	m ³	281.00		
	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	393.00		
	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	393.00		
	TOTAL FOR BILL 13 CARRIED TO GRAND SUMMARY PAGE				

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

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/m ² 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				

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

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.20	ROAD FURNITURE				
	Nairobi County - Pumwani Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Warning Signs				
20.01	Excavating 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	53		
20.06B	Yellow paint	m ²	32		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m ²	53		
	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 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	262		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	13		
20.11C	Channel blocks 125mm x 100mm	m	524		
	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					

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

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)				
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 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. 5.2 – PUMWANI MAJENGO ROAD PMMJ RD - 02

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

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 N0.04	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	1,557.00		
	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.	m ³	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				

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

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 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	56.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m³	6.00		
	Spoil in Soft Material				
5.03	Cut to spoil in soft material	m³	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				
5.05	Compaction of formation ground in accordance with the specification	m³	233.55		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m³	467.10		
5.07	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		
	Topsoil				
5.09	Topsailing prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m²	86.50		
	Grassing				
5.10	Planting of sprigs of approved indigenous 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	86.50		
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

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

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 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 accordance with the Specification and in conformity with the RE instructions	m³	190		
8.02	Extra over Item 8.01 for excavation in hard material	m³	64		
	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	40		
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	76		
	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		
	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	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	m³	17		
	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.	m³	89		
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 (KSHS)	AMOUNT (KSHS)
	Construction of Deviations in maximum lengths of 2 km sections				
9.01	All the operations connected with the initial construction of temporary deviations, appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification	km	0.17		
	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	65.00		
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 in accordance with Specification and in conformity with the RE instructions	Km	0.17		
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				

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

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 NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	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, 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	221.00		
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	221.00		
	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.				
	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	m²	173.00		
	Concrete block paving including all cuttings				
13.02A	Provide and lay approved 60mm thick medium duty pre-cast concrete paving blocks with minimum strength of 35N/mm 2 to BS 6717 Part 1 of 1986 to road footpaths etc. and as directed by the Engineer	m²	173.00		
	TOTAL FOR BILL 13 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
	Nairobi County - Pumwani Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	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	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 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 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.	M³	58.0		
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE				

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

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 NO.20	ROAD FURNITURE				
	Nairobi County - Pumwani 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		
	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		
	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		
	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		
	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	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		
	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.	4		
	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	190		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	9		
20.11C	Channel blocks 125mm x 100mm	m	363		
	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				

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

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			MP-RD 02		
			60mm MD PB		
			150 Stone Base		
			300 Sub Grade (0.173km)		
PUMWANI (PMMJ RD02 0.173KM)					
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					

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. 5.3- PUMWANI MAJENGO ROAD PMMJ RD - 03

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

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)				
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	1,404.00		
	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.	m ³	281.00		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet structures including back filling.	m	8		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

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

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)				
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	m ³	42.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m ³	5.00		
	Spoil in Soft Material				
5.03	Cut to spoil in soft material	m ³	446.54		
	Spoil in Hard Material				
5.04	Excavate, stock pile for reuse and spoil surplus hard material	m ³	44.65		
	Compaction of Existing Ground				
5.05	Compaction of formation ground in accordance with the specification	m ³	218.79		
5.06	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m ³	437.58		
5.07	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m ³	131.27		
5.08	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m ³	437.58		
	Topsoil				
5.09	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m ²	78.00		
	Grassing				
5.10	Planting of sprigs of approved indigenous 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	78.00		
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

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

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)				
BILL NO.8	CULVERTS AND DRAINAGE				
	Nairobi County - Pumwani Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	<u>Excavate for Culverts and Subsoil Drains in Soft Material</u>				
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	m ³	156		
8.02	Extra over Item 8.01 for excavation in hard material	m ³	52		
	<u>Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material</u>				
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	m ³	40		
8.04	Extra over Item 8.03 for excavation in hard material	m ³	2		
	<u>Selected backfill material</u>				
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE	m ³	63		
	<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	42		
8.07	b) 900 mm diameter	m	14		
	<u>Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains</u>				
8.09	Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions	m ³	46		
	<u>Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures</u>				
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	11		
	<u>Rectangular Covered Concrete Drain (Road Drain)</u>				
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.	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				
	Nairobi County - Pumwani Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	<u>Construction of Deviations in maximum lengths of 2 km sections</u>				
9.01	All the operations connected with the initial construction of temporary deviations, appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification	km	0.08		
	<u>Gravel Wearing Course</u>				
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	59.00		
9.03	<u>Maintenance the passage of traffic</u>	Lump Sum	1.00		
	<u>Provide Signs and Barriers</u>				
9.04	Provision, erection and maintenance of temporary signs, barriers, lights, traffic lights, etc., along deviations constructed: all in accordance with Specification and in conformity with the RE instructions	Km	0.16		
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				

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

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)				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Nairobi County - Pumwani Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	<u>Natural Gravel Subbase and Base</u>				
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	m ³	219.00		
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)	m ³	219.00		
	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.				
	<u>Jointing Sand</u>				
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	234.00		
	<u>Concrete block paving including all cuttings</u>				
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 by the Engineer	m ²	234.00		
	TOTAL FOR BILL 13 CARRIED TO GRAND SUMMARY PAGE				
BILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
	Nairobi County - Pumwani Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
15.01	<u>Prime Coat and Tack coat</u>				
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	1311.0		
15.01B	K1-80 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	1311.0		
	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 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	52.0		
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE				

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

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)				
BILL NO.20	ROAD FURNITURE				
	Nairobi County - Pumwani Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Warning Signs				
20.01	Excavating 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	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	Kerbs 125 mm x 250 mm radius 1m - 5m	m	8		
20.11C	Channel blocks 125mm x 100mm	m	328		
	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				

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

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)				
	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 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. 5.4 – PUMWANI MAJENGO ROAD PMMJ RD - 05

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

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			PM-RD 05		
			60mm MD PB		
			150 Stone Base		
			150 Gravel		
			300 Sub Grade (0.230km)		
	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.	m ³	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				

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

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			PM-RD 05 60mm MD PB 150 Stone Base 150 Gravel 300 Sub Grade (0.230km)		
	PUMWANI (PMMJ RD05 0.230KM)				
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).				
	<u>Fill in Soft Material</u>				
5.01	Excavating the material, transportation and filling in embankment, including watering and rolling; all in accordance to specification	m³	68.00		
	<u>Fill in Hard Material</u>				
5.02	As Item 5.01 but in hard material	m³	6.80		
	<u>Spoil in Soft Material</u>				
5.03	Cut to spoil in soft material	m³	872.00		
	<u>Spoil in Hard Material</u>				
5.04	Excavate, stock pile for reuse and spoil surplus hard material	m³	87.20		
	<u>Compaction of Existing Ground</u>				
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		
	<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	115.00		
	<u>Grassing</u>				
5.10	Planting of sprigs of approved indigenous 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				

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

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			PM-RD 05 60mm MD PB 150 Stone Base 150 Gravel 300 Sub Grade (0.230km)		
	PUMWANI (PMMJ RD05 0.230KM)				
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 accordance with the Specification and in conformity with the RE instructions	m³	250		
8.02	Extra over Item 8.01 for excavation in hard material	m³	84		
	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	5		
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	100		
	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	96		
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	86		
	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	21		
	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.	m³	118		
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				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Construction of Deviations in maximum lengths of 2 km sections				
9.01	All the operations connected with the initial construction of temporary deviations, appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification	km	0.23		
	Gravel Wearing Course				
9.02	Provision, laying and compacting of gravel wearing course to deviations, 5m wide, 150mm thick, where directed by the RE and in accordance with the Specification	m³	87.00		
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 in accordance with Specification and in conformity with the RE instructions	Km	0.23		
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				

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

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			PM-RD 05 60mm MD PB 150 Stone Base 150 Gravel 300 Sub Grade (0.230km)		
	PUMWANI (PMMJ RD05 0.230KM)				
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
	Nairobi County - Pumwani Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	<u>Natural Gravel Subbase and Base</u>				
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	m ³	190.00		
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)	m ³	190.00		
	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.				
	<u>Jointing Sand</u>				
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	1,265.00		
	<u>Concrete block paving including all cuttings</u>				
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 by the Engineer	m ²	1,265.00		
	TOTAL FOR BILL 13 CARRIED TO GRAND SUMMARY PAGE				

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

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			PM-RD 05 60mm MD PB 150 Stone Base 150 Gravel 300 Sub Grade (0.230km)		
	PUMWANI (PMMJ RD05 0.230KM)				
BILL NO.20	ROAD FURNITURE				
	Nairobi County - Pumwani 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	m²	46		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m²	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	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	5		
	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	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					

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

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			PM-RD 05		
			60mm MD PB		
			150 Stone Base		
			150 Gravel		
			300 Sub Grade		
			(0.230km)		
	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 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. 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	

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. 6.1 – SPRING VALLEY ROAD SPRV RD -01

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

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 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	2,184.00		
	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.	m ³	437.00		
4.03	Excavate and remove existing pipes and culverts of any size and the inlet and outlet structures including back filling.	m	22		
	TOTAL FOR BILL 4 CARRIED TO GRAND SUMMARY PAGE				

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

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.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	m ³	196.00		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m ³	19.60		
	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	m ³	1,681.68		
	Spoil in Soft Material				
5.04	Cut to spoil in soft material	m ³	200.00		
	Spoil in Hard Material				
5.05	Excavate, stock pile for reuse and spoil surplus hard material	m ³	20.00		
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	2,402.40		
	Compaction of Existing Ground				
5.07	Compaction of formation ground in accordance with the specification	m ³	214.99		
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m ³	98.28		
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m ³	29.48		
5.10	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m ³	630.63		
	Topsoil				
5.11	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m ²	136.50		
	Grassing				
5.12	Planting of sprigs of approved indigenous 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	136.50		
TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE					

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

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.				
	<u>2 NO. Single Cell 5.0 x 2.5M</u>				
7.01	Excavate in soft material for Box Culvert	m ³	100.00		
7.02	Extra Over Item above for excavations in hard material	m ³	140.00		
7.03	Provide, place and compact selected fill material below/behind structures as directed by the Engineer.	m ³	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.	m ²	20.00		
TOTAL FOR BILL 7 CARRIED TO GRAND SUMMARY PAGE					

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

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.8	CULVERTS AND DRAINAGE				
Nairobi County - Spring Valley Informal Settlement					
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
<u>Excavate for Culverts and Subsoil Drains in Soft Material</u>					
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	m ³	299		
8.02	Extra over Item 8.01 for excavation in hard material	m ³	100		
<u>Excavate for Inlet, Outfall, Mitre and Catchwater Drains in soft material</u>					
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	m ³	6		
8.04	Extra over Item 8.03 for excavation in hard material	m ³	2		
<u>Selected backfill material</u>					
8.05	Providing, backfilling to any depth all in accordance with the Standard Specifications and in conformity with the instructions of the RE	m ³	120		
<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	114		
8.07	b) 900 mm diameter	m	21		
<u>Concrete Class 15/20 to Beds, Surrounds and Blinding for Covered Drains</u>					
8.09	Providing and placing the concrete; all in accordance with the Specification and in conformity with the RE instructions	m ³	522		
<u>Concrete Class 20/20 headwalls, trash racks, aprons other drainage structures</u>					
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	26		
<u>Rectangular Covered Concrete Drain (Road Drain)</u>					
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.	m ³	140		
<u>Rectangular Covered Concrete Drain Part (Independent Drain)</u>					
8.11(b)	Provide all materials and construct 1000mm (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.	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		
8.13	Provide 250mm PVC pipes at 50m intervals for service ducts	m	44		
TOTAL FOR BILL 8 CARRIED TO GRAND SUMMARY PAGE					

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

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.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 in accordance with the Specification	km	0.27		
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	103.00		
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 in accordance with Specification and in conformity with the RE instructions	Km	0.27		
TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE					
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 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	m ³	263.00		
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)	m ³	316.00		
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	410.00		
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	410.00		
TOTAL FOR BILL 13 CARRIED TO GRAND SUMMARY PAGE					

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

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.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/m ² 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/m ² 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 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					
BILL NO.17	Concrete Works				
Nairobi County - Spring Valley Informal Settlement					
ITEM	DESCRIPTION	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 accordance with the specifications.	M ³	20.0		
17.02	Provide, place and compact concrete class C25/20 to box culverts bottom slabs, walls, top slabs and wingwalls all in accordance with the drawings and specifications.	M ³	140.0		
Formwork;					
17.03	Provide, erect and dismantle formwork to provide class F1 finish to culverts bottom slabs and wingwall bases	m ²	160.0		
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	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 10080-2005.	Tonne	75.0		
TOTAL FOR BILL 17 CARRIED TO GRAND SUMMARY PAGE					

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

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.20	ROAD FURNITURE				
Nairobi County - Spring Valley 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		
	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		
	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		
	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		
	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	m ²	28		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m ²	55		
	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 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					

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

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)					
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				
17	Concrete Works				
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. 6.2 – SPRING VALLEY ROAD SPRV RD -01A

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

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 spoil materials resulting from clearing and grubbing all in accordance with the specifications.	m ²	1,600.00		
	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.	m ³	320.00		
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				

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

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 NO.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	m ³	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 a maximum depth of 1.0m	m ³	1,971.20		
	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				
	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	2,816.00		
	Compaction of Existing Ground				
5.07	Compaction of formation ground in accordance with the specification	m ³	252.00		
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m ³	124.80		
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m ³	37.44		
5.10	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m ³	739.20		
	Topsoil				
5.11	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m ²	160.00		
	Grassing				
5.12	Planting of sprigs of approved indigenous 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	160.00		
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

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

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 NO.8	CULVERTS AND DRAINAGE				
	Nairobi County - Spring Valley 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	m ³	343		
8.02	Extra over Item 8.01 for excavation in hard material	m ³	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	m ³	7		
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 in conformity with the instructions of the RE	m ³	137		
	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	132		
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	116		
	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	28		
	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.	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	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Construction of Deviations in maximum lengths of 2 km sections				
9.01	All the operations connected with the initial construction of temporary deviations, appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification	km	0.32		
	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	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 in accordance with Specification and in conformity with the RE instructions	Km	0.32		
	TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE				

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

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 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 quarries listed in the Special Specification in accordance with the Specification and in conformity with the RE instructions	m ³	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)	m ³	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.				
	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	528.00		
	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	528.00		
	TOTAL FOR BILL 13 CARRIED TO GRAND SUMMARY PAGE				
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/m ² 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/m ² 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				
	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	99.0		
	TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE				

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

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 NO.20	ROAD FURNITURE				
	Nairobi County - Spring Valley 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	64		
20.06B	Yellow paint	m ²	32		
20.07	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 Specification and in conformity with the RE instructions	No	7		
	Concrete Kerbs				
20.11	Provision, transport, handling, mixing and placing all materials in accordance with Specification and in conformity with the RE instructions				
20.11A	Kerbs 125 mm x 250 mm straight	m	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		
	TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE				

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

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)				
	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				

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. 6.3 – SPRING VALLEY ROAD SPRV RD -02

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

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 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	2,338.00		
	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.	m ³	468.00		
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				

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

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 NO.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	m ³	5.75		
	Fill in Hard Material				
5.02	As Item 5.01 but in hard material	m ³	1.00		
	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	m ³	2,351.36		
	Spoil in Soft Material				
5.04	Cut to spoil in soft material	m ³	2,593.58		
	Spoil in Hard Material				
5.05	Excavate, stock pile for reuse and spoil surplus hard material	m ³	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	m ³	2,939.20		
	Compaction of Existing Ground				
5.07	Compaction of formation ground in accordance with the specification	m ³	263.03		
5.08	Compaction of the 300mm below formation level in cutting to 100% MDD (AASHTO T99)	m ³	140.28		
5.09	Extra over item 5.07 for compaction of top 300mm in fills to 100% MDD (AASHTO T99)	m ³	42.08		
5.10	Provide, lay and compact 300mm improved sub grade material to 100% MDD (AASHTO T99)	m ³	771.54		
	Topsoil				
5.11	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m ²	167.00		
	Grassing				
5.12	Planting of sprigs of approved indigenous 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	167.00		
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

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

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 NO.8	CULVERTS AND DRAINAGE				
Nairobi County - Spring Valley 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	m ³	319		
8.02	Extra over Item 8.01 for excavation in hard material	m ³	107		
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	m ³	7		
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 in conformity with the instructions of the RE	m ³	128		
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	84		
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	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 accordance with the Specification and in conformity with the RE instructions	m ³	19		
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.	m ³	171		
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					
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	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	0.33		
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	126.00		
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 in accordance with Specification and in conformity with the RE instructions	Km	0.33		
TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE					

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

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 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 Special Specification in accordance with the Specification and in conformity with the RE instructions	m ³	322.00		
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)	m ³	386.00		
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.					
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	552.00		
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	552.00		
TOTAL FOR BILL 13 CARRIED TO GRAND SUMMARY PAGE					
BILL NO.15	BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING				
Nairobi County - Spring Valley Informal Settlement					
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
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	2606.0		
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	2606.0		
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)
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	120.0		
TOTAL FOR BILL 16 CARRIED TO GRAND SUMMARY PAGE					

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

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 NO.20	ROAD FURNITURE				
Nairobi County - Spring Valley 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		
	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 concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions 1000mm size	No.	1		
	Standard Informatory Signs				
20.04	Excavating for, providing and erecting information signs including backfilling and concrete 15/20 to bases; all in accordance with the Specification and in conformity with the RE instructions				
20.04A	500x600mm	No.	1		
20.04B	600x600mm	No.	1		
	Non Standard Informatory Signs				
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		
	Road Marking painting				
20.06	Preparing road surface, supplying approved road marking paint, 100mm wide marking out and painting, all in accordance with the Specification and in conformity with the RE instructions				
20.06A	White paint	m ²	67		
20.07	As Item 2007 but 250mm wide				
20.07A	White paint	m ²	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 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		
	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	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 Specification, minimum height 1.5m -Open Fields or Wet Lands	No.	10		
TOTAL OF BILL 20 CARRIED TO SUMMARY PAGE					

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

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)				
	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-I 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. 6.4 – SPRING VALLEY ROAD SPRV RD -03

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

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			S-RD 03		
			50mm A.C		
			150 Stone Base		
			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.	m ³	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				

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

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			S-RD 03 50mm A.C 150 Stone Base 125mm Gravel 300mm Sub Grade (0.250km)		
	SPRING VALLEY (SPRV RD03 0.250)				
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	m ³	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 a maximum depth of 1.0m	m ³	1,760.00		
	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				
	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)	m ³	105.00		
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)	m ³	577.50		
	Topsoil				
5.11	Topsoiling prior to grassing; minimum compacted thickness of top soil shall be 50mm; all in accordance with the specifications	m ²	125.00		
	Grassing				
5.12	Planting of sprigs of approved indigenous 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	125.00		
	TOTAL FOR BILL 5 CARRIED TO GRAND SUMMARY PAGE				

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

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			S-RD 03		
			50mm A.C		
			150 Stone Base		
			125mm Gravel		
			300mm Sub Grade (0.250km)		
SPRING VALLEY (SPRV RD03 0.250)					
BILL NO.8	CULVERTS AND DRAINAGE				
Nairobi County - Spring Valley 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	346		
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 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		
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	139		
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	132		
8.07	b) 900 mm diameter	m	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 conformity with the RE instructions	m³	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 with the Specification and in conformity with the RE instructions	m³	29		
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.	m³	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	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
Construction of Deviations in maximum lengths of 2 km sections					
9.01	All the operations connected with the initial construction of temporary deviations, appropriate width, to allow passage of traffic during the Works; all in accordance with the Specification	km	0.25		
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	94.00		
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 in accordance with Specification and in conformity with the RE instructions	Km	0.25		
TOTAL FOR BILL 9 CARRIED TO GRAND SUMMARY PAGE					

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

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			S-RD 03		
			50mm A.C		
			150 Stone Base		
			125mm Gravel		
			300mm Sub Grade (0.250km)		
SPRING VALLEY (SPRV RD03 0.250)					
BILL NO.12	NATURAL MATERIAL SUBBASE AND BASE				
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	m ³	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)	m ³	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					

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

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			S-RD 03		
			50mm A.C		
			150 Stone Base		
			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/m ² 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 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				

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

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			S-RD 03		
			50mm A.C		
			150 Stone Base		
			125mm Gravel		
			300mm Sub Grade (0.250km)		
	SPRING VALLEY (SPRV RD03 0.250)				
BILL NO.20	ROAD FURNITURE				
	Nairobi County - Spring Valley Informal Settlement				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	Warning Signs				
20.01	Excavating 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	50		
20.06B	Yellow paint	m ²	25		
20.07	As Item 2007 but 250mm wide				
20.07A	a) White paint	m ²	50		
	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 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	250		
20.11B	Kerbs 125 mm x 250 mm radius 1m - 5m	m	13		
20.11C	Channel blocks 125mm x 100mm	m	500		
	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				

COUNTY GOVERNMENT OF NAIROBI
COUNTY DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
KENYA INFORMAL SETTLEMENT IMPROVEMENT PROJECT, PHASE 2
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ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
			S-RD 03		
			50mm A.C		
			150 Stone Base		
			125mm Gravel		
			300mm Sub Grade (0.250km)		
	SPRING VALLEY (SPRV RD03 0.250)				
	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				

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. 7.0 – SOLAR STREET LIGHTING

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 CITY COUNTY

COUNTY GOVERNMENT OF NAIROBI COUNTY KISIP - 2					
INFORMAL SETTLEMENTS – ALL SETTLEMENTS					
PROPOSED SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF SOLAR PV STREET LIGHTS					
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
<u>STREET LIGHTING SUPPLY, INSTALLATION AND COMMISSIONING:</u>					
1.0	<u>INTERGRATED SOLAR PV STREET LIGHT</u>				
	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	<u>10m High Tapering Concrete Column</u>				
	10m round-section 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	<u>Galvanized Universal Clamps, Antivandal Etc</u>				
	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	<u>Single Arm with Bracket</u>				
	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	<u>OTHER GENERAL ITEMS</u>				
	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 DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
KENYA INFORMAL SETTLEMENT IMPROVEMENT PROJECT, PHASE 2
CONSTRUCTION OF INFRASTRUCTURE IMPROVEMENT WORKS IN SELECTED INFORMAL SETTLEMENTS IN NAIROBI CITY COUNTY

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					

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. 8.0 – SEWER WORKS IN HURURMA FIRE VICTIMS – 2
SETTLEMENT**

BILL OF QUANTITIES

BILL NO. 2: SEWER WORKS (1005m Long Sewer Line)					
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (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				
1.01	All materials to be supplied and installed under this Bill have been specified to comply with relevant Standards. However, the supplier may offer materials complying with other approved standards to the satisfaction of the Engineer.				
1.02	The rates for providing materials shall include importation, procurement and other costs, insurance for all risks and replacement free of charge of all faulty and damaged materials due to whatever cause.				
1.03	Cost of handling, storing and transporting materials both on the way and on site shall be included in the rates.				
1.04	Pipes, specials and fittings shall be provided complete with all jointing materials.				
1.05	Working width for the installation of sewers will be as per the specifications or three 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				
	Provide Precast 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 specified and shown on the drawings for the sewer lines:-				
3.01	Backfilling with approved soil material	m ³	1,937		
3.02	Under bed blinding and bed for Type "A" and Type "B" section for bed and surround with concrete of concrete class 15/20	m ³	201		
3.03	300mm NID Precast Concrete Sewer pipes	m	1,005		
3.04	Provide for jointing and connection to the existing manholes for existing network at the 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:-				
4.01	Ditto but depth not exceeding 1.5m	m ³	9		
4.02	Ditto but depth exceeding 1.5m and not exceeding 2.5m	m ³	65		
4.03	Ditto but depth exceeding 2.5m and not exceeding 3.5m	m ³	16		
4.04	Ditto but depth exceeding 3.5m	m ³	17		
4.05	Extra over Item Nos. 4.01 to 4.04 for excavation in hard rock material to the required Invert levels for manholes along sewer line	m ³	72		
5.00	CONSTRUCTION OF MANHOLES				
5.01	Provide pre-cast manhole (of rings size 1050mm NID) for manholes of depth not exceeding and all the necessary materials, install in place as shown on the drawings and directed by the engineer.	Nr.	4		
5.02	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 reinforcement as in the drawings for all culverts	m ³	181		
5.07	Rendering the benching top surface and channels.	Nr.	41		
5.08	Supply and fit in place heavy duty triangular GRP material manhole covers and step-irons using cement mortar and other materials provided by the supplier.	Nr.	41		
5.09	Supply all materials and cast in situ concrete class 20/20 manhole top slab covers for 1050mm. N.I.D. including the required reinforcement as shown on the drawings	Nr.	41		
6.00	SEWER FITTINGS				
	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, access plug etc	Nr.	133		
7.00	OTHER COSTS				
7.10	Allow for testing of the sewer networks	Lump Sum	1		
7.11	Allow for diversions and temporary works	Lump Sum	1		
Sub-Total for Huruma Sewer Works 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. 9.0 – DAYWORKS

BILL OF QUANTITIES

COUNTY GOVERNMENT OF NAIROBI
COUNTY DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
KENYA INFORMAL SETTLEMENT IMPROVEMENT PROJECT, PHASE 2
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ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
BILL No.22: DAYWORKS (PROVISIONAL SUM)					
	Plant				
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 - 7.4m ³ /min	hr	10		
	b) 7.5 - 9.7m ³ /min	hr	10		
	(c) 9.8-25.5m ³ /min	hr.	10		
22.12	Cranes - Mobile Rubber Tyred Rough Terrain Type:				
	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		
TOTAL PAGE 1 OF 4 TO COLLECTION					

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
BILL No.22: DAYWORKS (PROVISIONAL SUM)					
	Plant Continued				
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		
	Loaders				
	<i>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</i>				
22.19	Wheeled Loaders - 4 wheel drive, articulated:				
	a) 50 - 70 kW rated flywheel power	hr	10		
	b) 2.01 - 3.40m ³ SAE rated capacity	hr	10		
22.20	Crawler Loader:				
	a) 0.80 - 1.30m ³ SAE rated capacity	hr	10		
	b) 1.31 - 1.90m ³ SAE rated capacity	hr	10		
TOTAL PAGE 2 OF 4 TO COLLECTION					

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
BILL No.22: DAYWORKS (PROVISIONAL SUM)					
22.21	Concrete mixers (wet capacity)				
	(a) up to 100 litres	hr.	10		
	(b) 101-200 litres	hr.	10		
	(c) 201-300 litres	hr.	10		
22.22	Transit Mixer 4.5 m3/hour	hr.	10		
22.23	Concrete pump of 4.5 and 30m3 capacity	hr.	10		
22.24	Concrete Vibrator (poker type):	hr	10		
22.25	Lorries - Flatbed				
	(a) up to 7.5t gross vehicle weight	hr.	10		
	(b) 7.6-12.0t gross vehicle weight	hr.	10		
22.26	Lorries -Tipper:				
	a) up to 11.0t gross vehicle wt	hr	10		
	b) 11.1 - 17.0t gross vehicle wt	hr	10		
22.27	Van, Pick-up or Similar Utility Vehicle:				
	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 capacity	hr.	10		
22.37	Road marking machine	hr.	10		
22.38	Electric generator				
	(a)100KVA	hr.	10		
	(b) 125 KVA	hr.	10		
22.39	Crusher Plant	hr.	10		
22.40	Pulvimixer	hr.	10		
22.41	Oxy-acetylene cutting and welding set including oxygen and acetylene gases.	hr.	10		
22.42	Electrical welding set including electrodes	hr.	10		
	Labour				
22.50	Unskilled Labour	hr	10		
22.51	Skilled Labour	hr	10		
22.52	Artisan	hr	10		
22.53	Plant Operator	hr	10		
22.54	Driver	hr	10		
22.55	Foreman	hr	10		
22.56	Site Surveyor	hr	10		
22.57	Chainman	hr	10		
22.58	Watchman (all round surveillance)	hr.	10		
22.59	Blaster (Certified)	hr.	10		
22.60	Office attendants	hr.	10		
TOTAL PAGE 3 OF 4 TO COLLECTION					

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 CITY COUNTY

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ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
BILL No.22: DAYWORKS (PROVISIONAL SUM)					
	Materials				
22.80	Ordinary Portland Cement	t	1		
22.81	Hydrated Lime	t	1		
22.82	Mild steel				
	a) up to and including 16mm dia.	t	1		
	b) over 16mm dia.	t	1		
22.83	High tensile steel				
	a) up to and including 16mm dia.	t	1		
	b) over 16mm dia.	t	1		
22.84	Aggregate for concrete				
	a) fine	t	10		
	b) coarse	t	10		
22.85	Concrete:				
	a) Class 15/20	m3	10		
	b) Class 20/20	m3	10		
	c) Class 25/20	m3	10		
22.86	d) Class 30/20	m3	10		
22.87	Formwork				
	a) F1	m2	10		
	b) F2	m2	10		
	c) F3	m2	10		
22.88	150mm Blockwork	m2	100		
22.89	200mm Blockwork	m2	100		
22.90	Bitumen and emulsions				
	a) 80/100 penetration grade bitumen	litre	1000		
	b) MC 3000 cut-back bitumen	litre	1000		
	a) MC 70 cut-back bitumen	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 PAGE 4 OF 4 TO COLLECTION					

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.10.0 – ENVIRONMENTAL AND SOCIAL SAFEGUARDS

BILL OF QUANTITIES

KENYA INFORMAL SETTLEMENT IMPROVEMENT PROJECT, PHASE 2
CONSTRUCTION OF INFRASTRUCTURE IMPROVEMENT WORKS IN SELECTED INFORMAL SETTLEMENTS IN NAIROBI CITY COUNTY

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 decommissioning certificate	Lump Sum	3		
	b. Water abstraction licenses/approvals	Lump Sum	2		
	c. OSHA work place registration	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 Violence (GBV), Sexual Exploitation, Abuse and Harrassment(SEAH)	PC Sum	5	50,000.00	250,000.00
	d. Climate Resilience and disaster management	PC Sum	5	50,000.00	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 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		
28.04	Allow for the implementation of actions in the ESMP				
	a. Allow for the preparation and quarterly reviews of site-specific ESMP	Item	5		
	b. Traffic management- awareness, traffic marshalls, signage, 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 rehabilitation 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
	E.O. item 28.06(a) to 28.06(b) for the contractor's overheads and profit.	%	600,000.00		
	TOTAL FOR BILL 28 CARRIED TO GRAND SUMMARY PAGE				