A104/9.40

A104/9.41

A104/9.42

A104/9.43

A104/9.44

A104/9.45

A104/9.46

A104/9.47

A104/11.01

A104/11.02

A104/11.03

A104/11.04

A104/12.01

A104/12.02

A104/12.03

A104/12.04

A104/12.05

A104/13.01

A104/13.02

A104/13.03

A104/13.04

A104/13.05

A104/13.06

A104/13.07

A104/13.08

A104/13.09

A104/14.1

A104/14.2

A104/16.01

A104/16.02

A104/16.03

A104/16.04

A104/16.05

A104/16.06

A104/16.07

A104/16.08

A104/16.09

A104/16.10

A104/16.11

A104/16.12

A104/16.13

A104/16.14

A104/16.15

A104/16.16

A104/16.17

A104/16.18

A104/16.19

A104/16.20

A104/16.21

A104/16.22

A104/17.01

A104/17.02

A104/17.03

A104/17.04

A104/17.05

A104/17.06

A104/17.07

A104/17.08

A104/17.09

A104/17.10

A104/17.11

A104/17.12

A104/17.13

A104/17.14

A104/17.15

Rain gauge

Ditto with 0.75m long stem

C/Forward to next page

B/Forward from previous page

Slump cone, tamping rod and base

Concrete cube mould, 150mm cube

Cube tamping bars

Safety guard for above

50mm distance piece

70mm distance piece

litre jar

Beaker 250ml

plunger and base plate

Set of 12 abrasive charges

Thermometer,  $0^{\circ}$ C to  $+50^{\circ}$ C

Thermometer,  $0^{\circ}$ C to  $+250^{\circ}$ C

or equivalent.

Flat bottomed scoop

Steel garden trowel

Large steel spoon

Heat resistant gloves

C/Forward to next page

200mm nominal diameter

simultaneously about longitudinal axis

Centrifuge complying with BS 598

Recovery still for Dichloromethane

fit the supplied vibratory hammer

Plastic bag 900x450x1000 gauge

Plastic bag 450x300x1000 gauge

Trichloroethylene (205 Litre Drum)

Filter paper 150mm diameter Whatman No. 5 (Boxes of 100)

Filter paper 400mm diameter Whatman No. 5 (Boxes of 100)

Filter paper 100mm diameter Whatman No. 5 (Boxes of 100)

Filter paper 400mm diameter Whatman No. 54 (Boxes of 100)

Gas cylinders (13Kg) with compatible gas burners - filled

Filter paper 270mm diameter with 33 diameter hole at centre Whatman No. 5

17. Consumables

Paraffin wax

Gunny sack

(Boxes of 100)

Dichloromethane

Sodium sulphate

Sand for density test

C/Forward to next page

C/Forward to item 1.05

B/Forward from previous page

Cotton waste

B) Hot Extractor Method BS 598 Part 2

Binder recovery

assembly

ELE

B/Forward from previous page

Steel bottle 600ml capacity with 49mm rubber stopper

Steel bottle 2500ml capacity with 71mm rubber stopper

Steel bottle 7000ml capacity with 71mm rubber stopper

Filter funnel to take 200mm nominal diameter sieves

Volumetric flask 250ml, 500ml, 1000ml and 2000ml capacity

Reagent grade Silica gel, 500g container

14. Bitumen Spray Test (BS 1707)

made detachable handle 1.5m long.

A) Extractor Bottle Method BS 598 Part 2

Electronic top pan balance 4kg capacity, sensitive to 0.1gm

16. Bitumen Extraction Test

Tamping rod and metal measure for above

Los Angeles Abrasion to ASTM standards

13. Aggregate and Chippings

Soaking tank for cubes (capacity 50 No.)

12. Concrete: Cube Compression Testing

rectangular platens, capacity 1560 kN with load spacer

bitumen samples

Maximum and minimum thermometer (BS692)

Portable dial thermometer  $+50^{\circ}$ C to  $+250^{\circ}$ C accurate to  $\pm 3\%$ 

Hotplate 200mm diameter with Simmerstat heat control unit.

11. Concrete: Slump and Cube Manufacture (BS 1881)

Concrete compression machine to BS1610 Grade A with 300 mm gauge,

Electro-mechanical load pacer, 100 mm or equivalent distance piece

Sand equivalent to AASHTO T176 including graduated plastic cylinder, rubber stopper, irrigation tube weighted foot assembly, siphon assembly, 85ml tin box

Aggregate Crushing Value Apparatus, 150 mm nominal diameter, including

(57mm dia.), 100 mm dia wide mouth funnel, stop clock, mechanical shaker and 10

Transverse distribution of spray test bitumen distributor (depot tray test to BS 1707)

Steel tray 20 mm deep x0.1m<sup>2</sup> (for measuring bitumen spray rates) with purpose

Foot pump for pressurising air water assemblies up to a maximum of 700KN/m<sup>2</sup>

Flask funnel for fitting to the 700ml steel bottle with rim of funnel retaining sieve

Bottle roller compact bench mounted unit designed to rotate 2 bottles

Pressure filter complete with cutting tool for making hole in the filter paper

Hot extractor complete with wire gauze container gasket, cork lid and support

Gyratory compactor ELE Servo Pac or equivalent with 1 x 100mm and 1 x 150mm

Two (2) sets of Tamping foot 102mm diameter and 146mm diameter and shanks to

PRD Vibrating hammer compactor complete with 6 moulds, 7 base plates from

Dean and Stark receiver with condenser to suite Trichloroethylene

and fitted with flexible hose approximately 1.2m long and connector

450mm diameter x 150mm deep metal mason's basin

Pocket thermometer + 50°C to +250°C accurate to  $\pm$  3% with 0.1 m stem

5 litre capacity steel storage containers with leak and dust proof lids for storage of

2

1

1

1

2

50

2

6

2

30

10

1

2

2

4

1

2

2

2

50

1

4

1

3

2

2

10

2

2

2

2

2

1

1

2

1

1

2

2

2

2

2

50

500

500

500

20

20

20

10

15

5

200

50

5

45

250

No

No

No

No

No

No

No

No

set

No

No

No

No

Set

No

No

Set

No

No

No

No

No

Set

No.

No

No

No

No

pair

No

set

No

No

No

No

Set

Set

Kg

No

No

No

No

No

No

No

No

No

kg

kg

No

kg

kg

MAINTENANCE OF KIONYO -KANYAKINE - MITUNGUU ROAD

1. FURNITURE

Desk chair (standard)

Table - 6 m<sup>2</sup>

Two Plate electric heater

Desk 2.2x0.9 m with chair and lockup drawers

Stationery cupboard, 1.2 m³, lockable

Steel filing cabinet, 4 drawers, lockable

Steel filing cabinet, 2 drawers, lockable

Bookshelf, 3 shelves 1.2 m long (to hold box files)

Fire extinguisher, 10 litre capacity, CO<sub>2</sub> type

S/NO.

A104/1.01

A104/1.02

A104/1.03

A104/1.04

A104/1.05

A104/1.06

A104/1.07

A104/1.08

A104/1.09

**DESCRIPTION** 

**APPENDIX A** 

**APPENDIX TO BILL ITEM 1.05:** 

PROVIDE AND MAINTAIN FURNITURE AND EQUIPMENT FOR THE ENGINEER'S LABORATORY

**UNIT** 

No

No

No

No

No

No

No

No

No

**QTY** 

2

15

2

2

2

2

2

1

4

**RWC xxx** 

**AMOUNT** 

(KSHS)

**RATE** 

(KSHS)

## APPENDIX B

/NO.				DAME	ARACTISTO
=· •	DESCRIPTION	UNIT	QTY	RATE (KSHS)	AMOUNT (KSHS)
	1. ENGINEER'S MAIN OFFICE AND FURNITURE				
	Executive desk 2.2x0.9 m with six lockup drawers	No	2		
	Desk 2.2x0.9 m with chair and three lockup drawers	No	4		
	Office tables - 2.2x0.9m	No	5		
	Executive Swivel orthopeadic chair adjustable height	No	6		
	Standard office chairs	No	10		
	Typist's desk	No	1		
	Typist's chair	No	1		
	Lockable steel stationery cupboard, 1.2 m³, lockable	No	2		
	Medium size steel filing cabinet, 4 drawers lockable	No	2		
	Medium size steel filing cabinet, 2 lockable drawers	No	2		
	Bookshelf, 1.5 m wide 3 shelves (for box files) sliding glass	No	2		
	door				
	Conference table with 15 chairs	No	1		
	Waste paper basket	No.	10		
	Curtains for office and laboratory - for all windows and doors	Set	2		
	Ordinary 2 hole paper punch	No	5		
	Heavy duty 2 hole paper punch	No	2		
	Computer meeting the following specifications or equivalent:				
	Personal computer with 17" screen full multimedia, 500GB hard disk, 4.0GB RAM, Core i7 processor, complete with all accessories preloaded with latest versions of windows OS, MS Office, Professional and MS Project	No	5		
	AutoCAD Civil 3D 2016 and Licences for above computers	No	1		
	Laptop PC with Intel Core i7-45IOU Processor 15.4" screen, CPU @ 2.6GHz 8GB RAM 1TB 8xDVD+/-RW approved with Microsoft Windows professional	No	4		
	Latest HP (A4) Laser Printer with accessories	No	5		
	Latest HP (A3) Laser Colour Printer with accessories	No	1		
	UPS 600 VA	No	6		
	Wall clocks, battery powered min size 350mm x 350mm	No	6		
	First Aid Kit	No	4		
	Fire Extinguisher	No	4		
	Filing Tray - set of 3no.	set	10		
	Refrigerator minimum capacity 0.2 m <sup>3</sup>	No	1		
		No	3		
	Drinking water dispenser, hot/cold				
	Table - 0.8 m <sup>2</sup> surface area	No	1		
	Cupboard, 0.15 m <sup>3</sup> , lockable	No	1		
	Cupotaiu, 0.13 iii , lockable	110			
	Gas Cylinder (13Kg) with 3 gas burners	No	2		
				DATE	AMOUNT
NO.	Gas Cylinder (13Kg) with 3 gas burners			RATE (KSHS)	AMOUNT (KSHS)
NO.	Gas Cylinder (13Kg) with 3 gas burners  C/Forward	No	2		
NO.	Gas Cylinder (13Kg) with 3 gas burners  C/Forward  DESCRIPTION  B/Forward  A3 Photocopier (approved make), with feeder sorting trays,	No	QTY		
NO.	Gas Cylinder (13Kg) with 3 gas burners  C/Forward  DESCRIPTION  B/Forward  A3 Photocopier (approved make), with feeder sorting trays, scanner and print capability	No	2		
IO.	Gas Cylinder (13Kg) with 3 gas burners  C/Forward  DESCRIPTION  B/Forward  A3 Photocopier (approved make), with feeder sorting trays,	No	QTY		
NO.	Gas Cylinder (13Kg) with 3 gas burners  C/Forward  DESCRIPTION  B/Forward  A3 Photocopier (approved make), with feeder sorting trays, scanner and print capability	No UNIT	2 QTY		
NO.	Gas Cylinder (13Kg) with 3 gas burners  C/Forward  DESCRIPTION  B/Forward  A3 Photocopier (approved make), with feeder sorting trays, scanner and print capability  Reams of A4 phocopying paper  Reams of A3 phocopying paper  Electronic scientific calculator, Casio fx 991ES plus or	No UNIT  No No	2 QTY  1 120		
NO.	Gas Cylinder (13Kg) with 3 gas burners  C/Forward  DESCRIPTION  B/Forward  A3 Photocopier (approved make), with feeder sorting trays, scanner and print capability  Reams of A4 phocopying paper  Reams of A3 phocopying paper  Electronic scientific calculator, Casio fx 991ES plus or equivalent approved	No UNIT  No No No No	2 QTY  1 120 24 6		
NO.	Gas Cylinder (13Kg) with 3 gas burners  C/Forward  DESCRIPTION  B/Forward  A3 Photocopier (approved make), with feeder sorting trays, scanner and print capability  Reams of A4 phocopying paper  Reams of A3 phocopying paper  Electronic scientific calculator, Casio fx 991ES plus or equivalent approved  Stapling machine Ofrex size 50 or similar with 5000 staples	No UNIT  No No No	2 QTY  1 120 24		
NO.	Gas Cylinder (13Kg) with 3 gas burners  C/Forward  DESCRIPTION  B/Forward  A3 Photocopier (approved make), with feeder sorting trays, scanner and print capability  Reams of A4 phocopying paper  Reams of A3 phocopying paper  Electronic scientific calculator, Casio fx 991ES plus or equivalent approved  Stapling machine Ofrex size 50 or similar with 5000 staples  Heavy duty punch and spiral binder, IBICO AG or similar	No UNIT  No No No No	2 QTY  1 120 24 6		
IO.	Gas Cylinder (13Kg) with 3 gas burners  C/Forward  DESCRIPTION  B/Forward  A3 Photocopier (approved make), with feeder sorting trays, scanner and print capability  Reams of A4 phocopying paper  Reams of A3 phocopying paper  Electronic scientific calculator, Casio fx 991ES plus or equivalent approved  Stapling machine Ofrex size 50 or similar with 5000 staples  Heavy duty punch and spiral binder, IBICO AG or similar approved	No  No  No  No  No  No	2 QTY  1 120 24 6 6		
IO.	C/Forward  DESCRIPTION  B/Forward  A3 Photocopier (approved make), with feeder sorting trays, scanner and print capability  Reams of A4 phocopying paper  Reams of A3 phocopying paper  Electronic scientific calculator, Casio fx 991ES plus or equivalent approved  Stapling machine Ofrex size 50 or similar with 5000 staples  Heavy duty punch and spiral binder, IBICO AG or similar approved  Digital Camera, 16.1 Megapixel(min), 1920x1080 full HD movie recording, optical steadyShot, sweep panorama, 2.7"  LCD screen, minimum 5x digital zoom, multimedia card/SD	No  No  No  No  No  No	2 QTY  1 120 24 6 6		
/NO.	C/Forward  DESCRIPTION  B/Forward  A3 Photocopier (approved make), with feeder sorting trays, scanner and print capability  Reams of A4 phocopying paper  Reams of A3 phocopying paper  Electronic scientific calculator, Casio fx 991ES plus or equivalent approved  Stapling machine Ofrex size 50 or similar with 5000 staples  Heavy duty punch and spiral binder, IBICO AG or similar approved  Digital Camera, 16.1 Megapixel(min), 1920x1080 full HD movie recording, optical steadyShot, sweep panorama, 2.7"	No  UNIT  No  No  No  No  No  No	2  QTY  1 120 24 6 6 2		
	C/Forward  DESCRIPTION  B/Forward  A3 Photocopier (approved make), with feeder sorting trays, scanner and print capability  Reams of A4 phocopying paper  Reams of A3 phocopying paper  Electronic scientific calculator, Casio fx 991ES plus or equivalent approved  Stapling machine Ofrex size 50 or similar with 5000 staples  Heavy duty punch and spiral binder, IBICO AG or similar approved  Digital Camera, 16.1 Megapixel(min), 1920x1080 full HD movie recording, optical steadyShot, sweep panorama, 2.7"	No  UNIT  No  No  No  No  No  No	2  QTY  1 120 24 6 6 2		
	Gas Cylinder (13Kg) with 3 gas burners  C/Forward  DESCRIPTION  B/Forward  A3 Photocopier (approved make), with feeder sorting trays, scanner and print capability  Reams of A4 phocopying paper  Reams of A3 phocopying paper  Electronic scientific calculator, Casio fx 991ES plus or equivalent approved  Stapling machine Ofrex size 50 or similar with 5000 staples  Heavy duty punch and spiral binder, IBICO AG or similar approved  Digital Camera, 16.1 Megapixel(min), 1920x1080 full HD movie recording, optical steadyShot, sweep panorama, 2.7"  LCD screen, minimum 5x digital zoom, multimedia card/SD 8GB memory, 12 scene selection modes, all inclusive.  Provision of Mobile Phone for the Supervision Staff with the	No  UNIT  No  No  No  No  No  No  No	2  QTY  1 120 24 6 2 2		
NO.	Gas Cylinder (13Kg) with 3 gas burners  C/Forward  DESCRIPTION  B/Forward  A3 Photocopier (approved make), with feeder sorting trays, scanner and print capability  Reams of A4 phocopying paper  Reams of A3 phocopying paper  Electronic scientific calculator, Casio fx 991ES plus or equivalent approved  Stapling machine Ofrex size 50 or similar with 5000 staples  Heavy duty punch and spiral binder, IBICO AG or similar approved  Digital Camera, 16.1 Megapixel(min), 1920x1080 full HD movie recording, optical steadyShot, sweep panorama, 2.7"  LCD screen, minimum 5x digital zoom, multimedia card/SD 8GB memory, 12 scene selection modes, all inclusive.  Provision of Mobile Phone for the Supervision Staff with the	No  UNIT  No  No  No  No  No  No  No	2  QTY  1 120 24 6 2 2		
NO.	Gas Cylinder (13Kg) with 3 gas burners  C/Forward  DESCRIPTION  B/Forward  A3 Photocopier (approved make), with feeder sorting trays, scanner and print capability  Reams of A4 phocopying paper  Reams of A3 phocopying paper  Electronic scientific calculator, Casio fx 991ES plus or equivalent approved  Stapling machine Ofrex size 50 or similar with 5000 staples  Heavy duty punch and spiral binder, IBICO AG or similar approved  Digital Camera, 16.1 Megapixel(min), 1920x1080 full HD movie recording, optical steadyShot, sweep panorama, 2.7"  LCD screen, minimum 5x digital zoom, multimedia card/SD 8GB memory, 12 scene selection modes, all inclusive.  Provision of Mobile Phone for the Supervision Staff with the	No  UNIT  No  No  No  No  No  No  No	2  QTY  1 120 24 6 2 2		
NO.	Gas Cylinder (13Kg) with 3 gas burners  C/Forward  DESCRIPTION  B/Forward  A3 Photocopier (approved make), with feeder sorting trays, scanner and print capability  Reams of A4 phocopying paper  Reams of A3 phocopying paper  Electronic scientific calculator, Casio fx 991ES plus or equivalent approved  Stapling machine Ofrex size 50 or similar with 5000 staples  Heavy duty punch and spiral binder, IBICO AG or similar approved  Digital Camera, 16.1 Megapixel(min), 1920x1080 full HD movie recording, optical steadyShot, sweep panorama, 2.7"  LCD screen, minimum 5x digital zoom, multimedia card/SD 8GB memory, 12 scene selection modes, all inclusive.  Provision of Mobile Phone for the Supervision Staff with the	No  UNIT  No  No  No  No  No  No  No	2  QTY  1 120 24 6 2 2		
NO.	Gas Cylinder (13Kg) with 3 gas burners  C/Forward  DESCRIPTION  B/Forward  A3 Photocopier (approved make), with feeder sorting trays, scanner and print capability  Reams of A4 phocopying paper  Reams of A3 phocopying paper  Electronic scientific calculator, Casio fx 991ES plus or equivalent approved  Stapling machine Ofrex size 50 or similar with 5000 staples  Heavy duty punch and spiral binder, IBICO AG or similar approved  Digital Camera, 16.1 Megapixel(min), 1920x1080 full HD movie recording, optical steadyShot, sweep panorama, 2.7"  LCD screen, minimum 5x digital zoom, multimedia card/SD 8GB memory, 12 scene selection modes, all inclusive.  Provision of Mobile Phone for the Supervision Staff with the	No  UNIT  No  No  No  No  No  No  No	2  QTY  1 120 24 6 2 2		
	Gas Cylinder (13Kg) with 3 gas burners  C/Forward  DESCRIPTION  B/Forward  A3 Photocopier (approved make), with feeder sorting trays, scanner and print capability  Reams of A4 phocopying paper  Reams of A3 phocopying paper  Electronic scientific calculator, Casio fx 991ES plus or equivalent approved  Stapling machine Ofrex size 50 or similar with 5000 staples  Heavy duty punch and spiral binder, IBICO AG or similar approved  Digital Camera, 16.1 Megapixel(min), 1920x1080 full HD movie recording, optical steadyShot, sweep panorama, 2.7"  LCD screen, minimum 5x digital zoom, multimedia card/SD 8GB memory, 12 scene selection modes, all inclusive.  Provision of Mobile Phone for the Supervision Staff with the	No  UNIT  No  No  No  No  No  No  No	2  QTY  1 120 24 6 2 2		
NO.	Gas Cylinder (13Kg) with 3 gas burners  C/Forward  DESCRIPTION  B/Forward  A3 Photocopier (approved make), with feeder sorting trays, scanner and print capability  Reams of A4 phocopying paper  Reams of A3 phocopying paper  Electronic scientific calculator, Casio fx 991ES plus or equivalent approved  Stapling machine Ofrex size 50 or similar with 5000 staples  Heavy duty punch and spiral binder, IBICO AG or similar approved  Digital Camera, 16.1 Megapixel(min), 1920x1080 full HD movie recording, optical steadyShot, sweep panorama, 2.7"  LCD screen, minimum 5x digital zoom, multimedia card/SD 8GB memory, 12 scene selection modes, all inclusive.  Provision of Mobile Phone for the Supervision Staff with the	No  UNIT  No  No  No  No  No  No  No	2  QTY  1 120 24 6 2 2		

## **APPENDIX C**

	APPENDIX TO BILL ITEM 1.07 ENGINE	EERS'S SU	RVEY EQU	JIPMENT	
ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (KSHS)
	Digital Total Station <u>reading to 1"accuracy</u> (one second) with the following facilities				
	· Inbuilt data logger				
	· Uploading/downloading software				
	· Data transfer cable				
	· Battery (2No)				
1.01	Battery charger	No.	0		
	<ul><li>Tool kit</li><li>Two face keyboard</li><li>User manual</li></ul>				
	It must have the following inbuilt survey programs as a minimum				
	· Survey				
	Staking out				
	<ul><li>Resection/intersection</li><li>Traverse</li></ul>				
	· Cogo				
1.02	The following mandatory total station accessories must be included per Total station instrument				
(a)	1No. Heavy duty telescopic tripod(preferably wooden)	No.	0		
(b)	Telescopic plumbing prism pole complete with a prism and prism holder with target and plumbing bubble (length not less than 2.15m)	No.	0		
(c)	Triple prism holder set, in a casing, comprising triple prisms, prisms holder with target, tribrach and a tribrach adaptor	No.	0		
(d)	· Survey umbrella	No.	1		
(e)	· 1No.Telescopic Tripod	No.	0		
	Engineer's Automatic Level Wild NAK 2 or similar with a tripod and the following specifications				
	· Accuracy of 0.7 mm per 1 km double run				
1.03	· Standard magnification of: 32x	No.	2		
	· Shortest focusing distance of 1.6m				
	· Compensator setting accuracy of 0.3"				
	Total carried forward to next page				
ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (KSHS)
	Brought Forward				
1.04	Hand held GPS with accuracy of 1 Metre	No.	1		
1.05	Set of two way radio communication with a range of 1 kilometer	set.	1		
1.05 1.06	Set of two way radio communication with a range of 1 kilometer  5 M Leveling staff with leveling bubble	set.	1 4		
1.05	Set of two way radio communication with a range of 1 kilometer	set.	1		
1.05 1.06 1.07	Set of two way radio communication with a range of 1 kilometer  5 M Leveling staff with leveling bubble  3 M Ranging Rods	set. No. No.	1 4 10		
1.05 1.06 1.07 1.08	Set of two way radio communication with a range of 1 kilometer  5 M Leveling staff with leveling bubble  3 M Ranging Rods  Scientific Calculators FX 912ms or equivalent	set. No. No. No.	1 4 10 3		
1.05 1.06 1.07 1.08 1.09	Set of two way radio communication with a range of 1 kilometer  5 M Leveling staff with leveling bubble  3 M Ranging Rods  Scientific Calculators FX 912ms or equivalent  50m. Linen Measuring Tape	set. No. No. No. No.	1 4 10 3 5		
1.05 1.06 1.07 1.08 1.09	Set of two way radio communication with a range of 1 kilometer  5 M Leveling staff with leveling bubble  3 M Ranging Rods  Scientific Calculators FX 912ms or equivalent  50m. Linen Measuring Tape  1 M stainless steel straight edge	set. No. No. No. No. No.	1 4 10 3 5		
1.05 1.06 1.07 1.08 1.09 1.1 1.11 1.12 1.13	Set of two way radio communication with a range of 1 kilometer  5 M Leveling staff with leveling bubble  3 M Ranging Rods  Scientific Calculators FX 912ms or equivalent  50m. Linen Measuring Tape  1 M stainless steel straight edge  3 m tape measure  Sledge hammer 2kg weight  Mattock	set. No. No. No. No. No. No. No. No. No. No	1 4 10 3 5 1 10 2 2		
1.05 1.06 1.07 1.08 1.09 1.1 1.11 1.12 1.13	Set of two way radio communication with a range of 1 kilometer  5 M Leveling staff with leveling bubble  3 M Ranging Rods  Scientific Calculators FX 912ms or equivalent  50m. Linen Measuring Tape  1 M stainless steel straight edge  3 m tape measure  Sledge hammer 2kg weight  Mattock  Pangas (16")	set. No. No. No. No. No. No. No. No. No. No	1 4 10 3 5 1 10 2 2 2		
1.05 1.06 1.07 1.08 1.09 1.1 1.11 1.12 1.13	Set of two way radio communication with a range of 1 kilometer  5 M Leveling staff with leveling bubble  3 M Ranging Rods  Scientific Calculators FX 912ms or equivalent  50m. Linen Measuring Tape  1 M stainless steel straight edge  3 m tape measure  Sledge hammer 2kg weight  Mattock	set. No. No. No. No. No. No. No. No. No. No	1 4 10 3 5 1 10 2 2		
1.05 1.06 1.07 1.08 1.09 1.1 1.11 1.12 1.13	Set of two way radio communication with a range of 1 kilometer  5 M Leveling staff with leveling bubble  3 M Ranging Rods  Scientific Calculators FX 912ms or equivalent  50m. Linen Measuring Tape  1 M stainless steel straight edge  3 m tape measure  Sledge hammer 2kg weight  Mattock  Pangas (16")	set. No. No. No. No. No. No. No. No. No. No	1 4 10 3 5 1 10 2 2 2		
1.05 1.06 1.07 1.08 1.09 1.1 1.11 1.12 1.13 1.14 1.15	Set of two way radio communication with a range of 1 kilometer  5 M Leveling staff with leveling bubble  3 M Ranging Rods  Scientific Calculators FX 912ms or equivalent  50m. Linen Measuring Tape  1 M stainless steel straight edge  3 m tape measure  Sledge hammer 2kg weight  Mattock  Pangas (16'')  Marker Pens	set. No. No. No. No. No. No. No. No. No. No	1 4 10 3 5 1 10 2 2 10 20		
1.05 1.06 1.07 1.08 1.09 1.1 1.11 1.12 1.13 1.14 1.15	Set of two way radio communication with a range of 1 kilometer  5 M Leveling staff with leveling bubble  3 M Ranging Rods  Scientific Calculators FX 912ms or equivalent  50m. Linen Measuring Tape  1 M stainless steel straight edge  3 m tape measure  Sledge hammer 2kg weight  Mattock  Pangas (16'')  Marker Pens  Reflector Jackets	set. No. No. No. No. No. No. No. No. No. No	1 4 10 3 5 1 10 2 2 10 20 30		

**DESCRIPTION** 

Provide or rent and maintain Engineer's Representative's office as shown on the drawings or as

instructed by the Engineer for use during the duration of the Contract, ownership to revert to

Provide and maintain Laboratory equipment, reagents and other items as priced in Appendix

'A' to the Bill of Quantities for use by the Engineer's representative for the duration of the

Provide and maintain furniture, tools and other items for the Engineers office as priced in

Provide and maintain survey equipment as priced in Appendix C for the duration of the

Provide with drivers, fuel and maintain One (1) new 4WD fully loaded Station Wagon of minimum diesel engine capacity 2400cc approved by the Engineer for his exclusive use,

EO item 1.07 for total aggregated mileage in excess of 5000 km per vehicle month.

inclusive of the first 5000km per vehicle month. Vehicle to revert to the Contractor at the end

Provide with drivers, fuel and maintain One (1) new 4WD fully loaded double cabin pick-ups of minimum diesel engine capacity 2400cc approved by the Engineer for his exclusive use,

inclusive of the first 5000km per vehicle month. Vehicle to revert to the Contractor at the end

E.O item 1.09 for total aggregated mileage in excess of 5000 km per vehicle per month.

Ditto item 1.09, but one (1) new 4WD standard double cabin pick-ups of minimum diesel

E.O item 1.11 for total aggregated mileage in excess of 5000 km per vehicle per month.

engine capacity 2500cc approved by the Engineer for his exclusive use, inclusive of the first 5000km per vehicle month. Vehicle to revert to the Contractor at the end of the project.

Ditto item 1.09, but One (1) new 4WD single cabin pick-up with fiber glass body of minimum diesel engine capacity 2200cc approved for the exclusive use of the Engineer inclusive of the

Allow a Prime Cost Sum of Kshs. 7,200,000 for the RE's miscellaneous account to be spent in

Allow a Prime Cost Sum of Kshs. 18,000,000.00 for attendance upon the Resident Engineer'

**DESCRIPTION** 

Clear site on road reserve including removal of all growths, bushes, hedges, trees, stumps, grub

up roots, and other deleterious materials and back-fill and compact to 100% MDD(AASHTO

Strip top soil upto 0.2m in thickness along alignment or material sites including removal of all

Provide KShs. 2,000,000 for the removal of structures and obstructions to be paid on dayworks

**DESCRIPTION** 

unsuitable excavation materials and the cost  $\,$  of such shall be included in the rates and prices

Fill in soft material including benching of shoulders and embankments and compaction to 95%

Provide improved sub grade material to a thickness as shall be instructed by the Engineer and

Compaction of top 300mm below formation level in cuts to 100% MDD.(AASHTO T99)

**DESCRIPTION** 

unsuitable excavation materials and the cost of such shall be included in the rates and prices

Provide and place 150mm thick stone pitching as directed by the Engineer including cement

Provide and backfill approved granular material around new box culverts, compact to 100%

**DESCRIPTION** 

unsuitable excavation materials and the cost of such shall be included in the rates and prices

Excavation in soft material for pipe culverts, headwalls, wingwalls, apron, toewalls, and drop

Provide, lay and joint 600mm dia. concrete pipes (precast to BS 5911 Parts 1 & 3) for access

As for item 8.05 but 900mm dia concrete pipes (precast to BS 5911 parts 1 & 3) for cross

As for item 8.05 but 1200mm dia concrete pipes (precast to BS 5911 parts 1 & 3) for cross

Note: No separate payments shall be made for gravel for blinding or hauling to spoil

Excavate for inlet, outfall, mitre and catch water drains in soft material

Provide and place gabion boxes and matresses where directed by the Engineer

Allow for protection of structures pursuant to section 707 of the specifications

**Note:** No separate payments shall be made for gravel for blinding or hauling to spoil

Compaction of 150mm original ground below fills to 95% MDD.(AASHTO T99)

**Note:** No separate payments shall be made for gravel for blinding or hauling to spoil

Extra Over Item 5.01 for compaction of the top 300mm subgrade to 100% MDD

grass and other vegetation, transport to spoil and spread or stock pile for re-use as directed by

Note: No separate payments shall be made for gravel for blinding or hauling to spoil unsuitable excavation materials and the cost of such shall be included in the rates and

first 5000km per vehicle month. Vehicle to revert to the Contractor at the end of the project.

E.O item 1.13 for total aggregated mileage in excess of 5000 km per vehicle per month.

whole or part as directed by the RE against receipts.

E.O. item 1.12 for Contractor's overheads and profits.

E.O. item 1.15 for Contractor's overheads and profits.

E.O. item 1.20 for Contractor's overheads and profits.

Bill No. 1 Total Carried Forward to Grand Summary

T99) with approved material as directed by the Engineer.

Bill No. 4 Total Carried Forward to Grand Summary

MDD (AASHTO T99) in layers not exceeding 150mm

process, water and compact to 100% MDD (AASHTO T99)

Top-soiling prior to planting grass as directed by the Engineer

Provide Rock Fill to swampy areas as directed by Engineer

Bill No. 5 Total Carried Forward to Grand Summary

Provide, place and compact rockfill below and around strucures.

BILL NO. 7: EXCAVATION AND FILLING OF STRUCTURES

Excavate to spoil in soft materials.

As item 7.01 but in hard material.

Excavate for gabions in soft material.

Filter fabric behind gabion boxes and structures.

Allow for river training in soft material

BILL NO. 8. CULVERTS AND DRAINAGE WORKS

As per item 8.01, but for hard material

As per item 8.03, but for hard material

inlets and compact as directed by the Engineer

Allow for river diversion

MDD (AASHTO T99) in layers not exceeding 150mm.

Provide for coffer dams as directed by the Engineer

Bill No. 7 Total Carried Forward to Grand Summary

Provide Filter Fabric to swamp under, over, and around rock fill

Ditto item 5.01 but in hard material

Ditto item 5.04 but in hard material

Grassing as directed by the Engineer

Provide and Install geogrids

Cut to spoil in soft material

**BILL NO. 4: SITE CLEARANCE AND TOP SOIL STRIPPING** 

Allow for lumpsum for Engineer's training

Provide, erect and maintain publicity signs as directed by the Engineer.

Appendix B for the duration of the Contract ownership to revert to the Employer at the end of

Provide or rent and maintain Engineer's Site Laboratory for the duration of the Contract,

**BILL NO. 1. PRELIMINARIES AND GENERAL ITEMS** 

Provide or rent accomodation for Engineer's senior and junior staff

**ITEM** 

1.01

1.02

1.03

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1.05

1.06A

1.06B

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1.21

**ITEM** 

4.01

4.02

4.03

**ITEM** 

5.01

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**ITEM** 

7.01

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7.13

**ITEM** 

8.01

8.02

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8.04

8.05

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8.07

roads

culverts

culverts

grouting

Rockfill to gabions.

prices

the Engineer.

basis

**BILL NO. 5 : EARTHWORKS** 

of the project.

of the project.

(i)Type I - 1 No.

(i)Type II - 3 No.

(iii) Type III - 6 No.

(iv) Type IV - 8 No.

(v) Type V - 10 No.

E.O item 1.01 for contractor's overhead and profit

ownership to revert to the Contractor at the end of the Contract

Contract ownership to revert to the Employer at the end of the Contract.

Contract ownership to revert to the Employer at the end of the Contract.

the Contractor at the end of the Contract

Total

UNIT

Month

Month

Month

Month

Month

%

LS

LS

LS

LS

LS

Veh Month

Km

Veh Month

Km

Veh Month

Km

Veh Month

Km

PC Sum

%

PC Sum

%

No

%

%

UNIT

Ha.

 $m^3$ 

Prov Sum

**UNIT** 

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QTY

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**Total Item** 

1.01

Item

1

1

1

1

1

24

50,000

24

72,000

24

72,000

24

72,000

1

0

1

0

3

1

0

QTY

18.5

30,000

1

QTY

68,750

37,500

13,750

96,250

9,625

9,000

18,750

10,313

45,000

45,000

1,000

100

100

QTY

500

100

200

6,000

2,000

3,000

3,000

2,000

1,000

1

250

500

1

**QTY** 

2,000

200

3,000

200

600

120

60

**RATE** 

**RATE** 

**RATE** 

**RATE** 

**RATE** 

65,000.00

55,000.00

40,000.00

30,000.00

21,000.00

**RWC xxx** 

**AMOUNT** 

1,560,000.00

3,960,000.00

5,760,000.00

5,760,000.00

5,040,000.00

22,080,000.00

22,080,000.00

0.00

0.00

0.00

**AMOUNT** 

**AMOUNT** 

**AMOUNT** 

**AMOUNT** 

	ANCE OF KIONYO -KANYAKINE - MITUNGUU ROAD  Provide and place class 15/20 concrete to beds, surround and haunches	m <sup>3</sup>	786		RWC xxx
]	Provide, place and compact class 25(20) concrete for headwalls, wingwalls, aprons, and toewalls to access and cross pipe culverts including all form work and the provision and	m <sup>3</sup>	314		
	placing of reinforcement as shown in the drawings				
	Provide and place invert block drains complete with two course side slabs on both sides  Construct in concrete class 15(20) side drains scour checks as instructed	m m <sup>3</sup>	3,000		
X 1 / 1	Provide and place precast concrete slabs 600mm x 600mm x 50mm and place over open lined drains in trade centres and markets	No.	3,000		
X 1 4 1	Provide Subsoil filter drains fabric to isolated wet spots inclusive of artesian cloth, and 14/20mm single size aggregates as directed by the Engineer	m	10		
8 14	Remove existing culverts of any diameter either for re-use or to be discarded as directed by the	m	200		
	Engineer				
	Bill No. 8 Total Carried Forward to Grand Summary				-
BILL NO.	9: PASSAGE OF TRAFFIC				
ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	NOTE: Notwithstanding the provision of Section 9 of the Standard Specification, no extra payments shall be due as all costs shall be deemed to be included in the rates inserted herein				
9.01	Construct and maintain diversions in maximum lengths of 5km sections as directed by the	Km	12.00		
9.01	Engineer, including including 150mm wearing course gravel all signage, lighting and barriers	Kili	12.00		
911/	Provide, spread, water and compact gravel as directed by the Engineer for maintenance ahead of works.	m <sup>3</sup>	3,000.00		
	Allow for the passage of traffic through and around the works  Maintainance of existing road including grading, shaping, watering and compaction as directed	LS	1		
9 04 1	by the Engineer	Km	8		
	Bill No. 9 Total Carried Forward to Grand Summary				
	12: NATURAL MATERIAL FOR SUBBASE AND BASE				
ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
l'	<u>Note:</u> No overhaul will be paid for separately under these items as it shall be deemed to have been included in the Contractor's rates				
	Provide gravel sub-base material, haul, spread, compact to at least 100% M.D.D (AASHTO T-180) and shape to level and tolerance.	m <sup>3</sup>	20,250		
	Ditto item 12.01 but for base	m <sup>3</sup>	19,125		
]	Bill No. 12 Total Carried Forward to Grand Summary				0.00
BILL NO.	14 : CEMENT OR LIME TREATED SUBBASE AND BASE				
	Note: No overhaul will be paid for separately under these items as it shall be deemed to	UNIT	QTY	RATE	AMOUNT
	have been included in the Contractor's rates				
14.01	Provide and spread Lime as an improvement agent for Subbase	Tonne	1		
14.02	Provide and spread Lime as an improvement agent for Base	Tonne	1		
14.02			1 1 729 1,205		
14.02 14.03 14.04 14.05	Provide and spread Lime as an improvement agent for Base  Provide and spread Cement as an improvement agent for subbase  Provide and spread Cement as an improvement agent for base  Mix and process natural material with improvement agent for pavement layers as instructed by the Engineer or as specified	Tonne Tonne m³	1 729 1,205 39,375		
14.02 14.03 14.04 14.05	Provide and spread Lime as an improvement agent for Base  Provide and spread Cement as an improvement agent for subbase  Provide and spread Cement as an improvement agent for base  Mix and process natural material with improvement agent for pavement layers as instructed by	Tonne Tonne Tonne	1 729 1,205		
14.02 14.03 14.04 14.05	Provide and spread Lime as an improvement agent for Base  Provide and spread Cement as an improvement agent for subbase  Provide and spread Cement as an improvement agent for base  Mix and process natural material with improvement agent for pavement layers as instructed by the Engineer or as specified	Tonne Tonne m³	1 729 1,205 39,375		
14.02 14.03 14.04 14.05	Provide and spread Lime as an improvement agent for Base  Provide and spread Cement as an improvement agent for subbase  Provide and spread Cement as an improvement agent for base  Mix and process natural material with improvement agent for pavement layers as instructed by the Engineer or as specified	Tonne Tonne m³	1 729 1,205 39,375		
14.02 14.03 14.04 14.05	Provide and spread Lime as an improvement agent for Base  Provide and spread Cement as an improvement agent for subbase  Provide and spread Cement as an improvement agent for base  Mix and process natural material with improvement agent for pavement layers as instructed by the Engineer or as specified	Tonne Tonne m³	1 729 1,205 39,375		
14.02   14.03   14.04   14.05   14.06   1	Provide and spread Lime as an improvement agent for Base  Provide and spread Cement as an improvement agent for subbase  Provide and spread Cement as an improvement agent for base  Mix and process natural material with improvement agent for pavement layers as instructed by the Engineer or as specified	Tonne Tonne m³	1 729 1,205 39,375		0.00
14.02  14.03  14.04  14.05  14.06  BILL NO.	Provide and spread Cement as an improvement agent for subbase  Provide and spread Cement as an improvement agent for subbase  Provide and spread Cement as an improvement agent for base  Mix and process natural material with improvement agent for pavement layers as instructed by the Engineer or as specified  Protection and curing of cement / lime treated base and subbase layers  Bill No. 14 Total Carried Forward to Grand Summary  15: BITUMINOUS SURFACE TREATMENT & SURFACE DRESSING TO SHOULDE	Tonne Tonne m³ m²	1 729 1,205 39,375 200,000	RATE	
14.02  14.03  14.04  14.05  14.06  BILL NO.  ITEM	Provide and spread Lime as an improvement agent for Base  Provide and spread Cement as an improvement agent for subbase  Provide and spread Cement as an improvement agent for base  Mix and process natural material with improvement agent for pavement layers as instructed by the Engineer or as specified  Protection and curing of cement / lime treated base and subbase layers  Bill No. 14 Total Carried Forward to Grand Summary  15: BITUMINOUS SURFACE TREATMENT & SURFACE DRESSING TO SHOULDE  DESCRIPTION	Tonne Tonne m³ m² UNIT	1 729 1,205 39,375 200,000	RATE	AMOUNT
14.02  14.03  14.04  14.05  14.06  ITEM	Provide and spread Cement as an improvement agent for subbase  Provide and spread Cement as an improvement agent for subbase  Provide and spread Cement as an improvement agent for base  Mix and process natural material with improvement agent for pavement layers as instructed by the Engineer or as specified  Protection and curing of cement / lime treated base and subbase layers  Bill No. 14 Total Carried Forward to Grand Summary  15: BITUMINOUS SURFACE TREATMENT & SURFACE DRESSING TO SHOULDE	Tonne Tonne m³ m²	1 729 1,205 39,375 200,000	RATE	
14.02  14.03  14.04  14.05  14.06  ITEM	Provide and spread Lime as an improvement agent for Base  Provide and spread Cement as an improvement agent for subbase  Provide and spread Cement as an improvement agent for base  Mix and process natural material with improvement agent for pavement layers as instructed by the Engineer or as specified  Protection and curing of cement / lime treated base and subbase layers  Bill No. 14 Total Carried Forward to Grand Summary  15: BITUMINOUS SURFACE TREATMENT & SURFACE DRESSING TO SHOULDE  DESCRIPTION  Prepare surface of shoulders, provide, heat and spray MC 30 cutback bitumen prime coat at	Tonne Tonne m³ m² UNIT	1 729 1,205 39,375 200,000	RATE	
14.02  14.03  14.04  14.05  14.06  15.01  15.01	Provide and spread Lime as an improvement agent for Base  Provide and spread Cement as an improvement agent for subbase  Provide and spread Cement as an improvement agent for base  Mix and process natural material with improvement agent for pavement layers as instructed by the Engineer or as specified  Protection and curing of cement / lime treated base and subbase layers  Bill No. 14 Total Carried Forward to Grand Summary  15: BITUMINOUS SURFACE TREATMENT & SURFACE DRESSING TO SHOULDE  DESCRIPTION  Prepare surface of shoulders, provide, heat and spray MC 30 cutback bitumen prime coat at 0.8-1.2 Litres/m2.  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for first seal on the carriageway and shoulders at a rate of 1.0-1.2 Litres/m2.  Provide, transport, lay and roll 14/20 mm pre-coated chippings	Tonne Tonne Tonne m³ m²  UNIT Litres	1 729 1,205 39,375 200,000  QTY 124,800	RATE	
14.02  14.03  14.04  14.05  14.06  15.01  15.02	Provide and spread Lime as an improvement agent for Base  Provide and spread Cement as an improvement agent for subbase  Provide and spread Cement as an improvement agent for base  Mix and process natural material with improvement agent for pavement layers as instructed by the Engineer or as specified  Protection and curing of cement / lime treated base and subbase layers  Bill No. 14 Total Carried Forward to Grand Summary  15: BITUMINOUS SURFACE TREATMENT & SURFACE DRESSING TO SHOULDE  DESCRIPTION  Prepare surface of shoulders, provide, heat and spray MC 30 cutback bitumen prime coat at 0.8-1.2 Litres/m2.  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for first seal on the carriageway and shoulders at a rate of 1.0-1.2 Litres/m2.	Tonne Tonne Tonne m³ m² Litres Litres	1 729 1,205 39,375 200,000  QTY  124,800	RATE	
14.02 14.03 14.04 14.05 14.06  15.01 15.01	Provide and spread Lime as an improvement agent for Base  Provide and spread Cement as an improvement agent for subbase  Provide and spread Cement as an improvement agent for base  Mix and process natural material with improvement agent for pavement layers as instructed by the Engineer or as specified  Protection and curing of cement / lime treated base and subbase layers  Bill No. 14 Total Carried Forward to Grand Summary  15: BITUMINOUS SURFACE TREATMENT & SURFACE DRESSING TO SHOULDE  DESCRIPTION  Prepare surface of shoulders, provide, heat and spray MC 30 cutback bitumen prime coat at 0.8-1.2 Litres/m2.  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for first seal on the carriageway and shoulders at a rate of 1.0-1.2 Litres/m2.  Provide, transport, lay and roll 14/20 mm pre-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run  Provide, transport, lay and roll 14/20 mm pre-coated chippings	Tonne Tonne Tonne m³  m²  Litres  Litres	1 729 1,205 39,375 200,000  QTY  124,800 0	RATE	
14.02  14.03  14.04  14.05  14.06  15.01  15.02  15.03	Provide and spread Lime as an improvement agent for Base  Provide and spread Cement as an improvement agent for subbase  Provide and spread Cement as an improvement agent for base  Mix and process natural material with improvement agent for pavement layers as instructed by the Engineer or as specified  Protection and curing of cement / lime treated base and subbase layers  Bill No. 14 Total Carried Forward to Grand Summary  15: BITUMINOUS SURFACE TREATMENT & SURFACE DRESSING TO SHOULDE  DESCRIPTION  Prepare surface of shoulders, provide, heat and spray MC 30 cutback bitumen prime coat at 0.8-1.2 Litres/m2.  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for first seal on the carriageway and shoulders at a rate of 1.0-1.2 Litres/m2.  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for first seal on the carriageway and shoulder at a rate of 0.8-1.0 Litres/m2.	Tonne Tonne Tonne  Tonne  M³  m²  Litres  Litres	1 729 1,205 39,375 200,000 0 124,800 0	RATE	
14.02 14.03 14.04 14.05 14.06  15.01  15.02  15.03	Provide and spread Lime as an improvement agent for Base Provide and spread Cement as an improvement agent for subbase Provide and spread Cement as an improvement agent for base Mix and process natural material with improvement agent for pavement layers as instructed by the Engineer or as specified Protection and curing of cement / lime treated base and subbase layers  Bill No. 14 Total Carried Forward to Grand Summary  15: BITUMINOUS SURFACE TREATMENT & SURFACE DRESSING TO SHOULDE  DESCRIPTION  Prepare surface of shoulders, provide, heat and spray MC 30 cutback bitumen prime coat at 0.8-1.2 Litres/m2.  Provide, transport, lay and roll 14/20 mm pre-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as seal on the carriageway and shoulder at a rate of 0.8-1.0 Litres/m2.  Provide, transport, lay and roll 14/20 mm pre-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as seal on the carriageway and shoulder at a rate of 0.8-1.0 Litres/m2.  Provide, transport, lay and roll 10/14 mm pre-coated chippings	Tonne Tonne Tonne  Tonne  M³  m²  Litres  Litres  m³	1 729 1,205 39,375 200,000  0 124,800  0 1,708	RATE	
14.02 14.03 14.04 14.05 14.06 15.01 15.02 15.03 15.04	Provide and spread Lime as an improvement agent for Base Provide and spread Cement as an improvement agent for subbase Provide and spread Cement as an improvement agent for base  Mix and process natural material with improvement agent for pavement layers as instructed by the Engineer or as specified  Protection and curing of cement / lime treated base and subbase layers  Bill No. 14 Total Carried Forward to Grand Summary  15: BITUMINOUS SURFACE TREATMENT & SURFACE DRESSING TO SHOULDE  DESCRIPTION  Prepare surface of shoulders, provide, heat and spray MC 30 cutback bitumen prime coat at 0.8-1.2 Litres/m2.  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for first seal on the carriageway and shoulders at a rate of 1.0-1.2 Litres/m2.  Provide, transport, lay and roll 14/20 mm pre-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as seal on the carriageway and shoulder at a rate of 0.8-1.0 Litres/m2.  Provide, transport, lay and roll 10/14 mm pre-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as seal on the carriageway and shoulder at a rate of 0.8-1.0 Litres/m2.  Provide, transport, lay and roll 10/14 mm pre-coated chippings	Tonne Tonne Tonne  Tonne  m³  m²  Litres  Litres  Litres	1 729 1,205 39,375 200,000 0 124,800 0 1,708	RATE	
14.02 14.03 14.04 14.05 14.06 15.01 15.02 15.03 15.04 15.07	Provide and spread Lime as an improvement agent for Base Provide and spread Cement as an improvement agent for subbase Provide and spread Cement as an improvement agent for subbase Provide and spread Cement as an improvement agent for base  Mix and process natural material with improvement agent for pavement layers as instructed by the Engineer or as specified  Protection and curing of cement / lime treated base and subbase layers  Bill No. 14 Total Carried Forward to Grand Summary  15: BITUMINOUS SURFACE TREATMENT & SURFACE DRESSING TO SHOULDE  DESCRIPTION  Prepare surface of shoulders, provide, heat and spray MC 30 cutback bitumen prime coat at 0.8-1.2 Litres/m2.  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for first seal on the carriageway and shoulders at a rate of 1.0-1.2 Litres/m2.  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as seal on the carriageway and shoulder at a rate of 0.8-1.0 Litres/m2.  Provide, transport, lay and roll 10/14 mm pre-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as seal on the carriageway and shoulder at a rate of 0.8-1.0 Litres/m2.  Provide, transport, lay and roll 10/14 mm pre-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as third seal on the carriageway and shoulder at a rate of 0.8-1.0 Litres/m2.  Provide, transport, lay and roll 6/10 mm pre-coated chippings	Tonne Tonne Tonne  Tonne  m³  m²  Litres  Litres  m³  Litres	1 729 1,205 39,375 200,000  QTY  124,800  0  1,708  0  0	RATE	
14.02 14.03 14.04 14.05 14.06 15.01 15.02 15.03 15.04	Provide and spread Lime as an improvement agent for Base Provide and spread Cement as an improvement agent for subbase Provide and spread Cement as an improvement agent for subbase Provide and spread Cement as an improvement agent for base  Mix and process natural material with improvement agent for pavement layers as instructed by the Engineer or as specified  Protection and curing of cement / lime treated base and subbase layers  Bill No. 14 Total Carried Forward to Grand Summary  15: BITUMINOUS SURFACE TREATMENT & SURFACE DRESSING TO SHOULDE  DESCRIPTION  Prepare surface of shoulders, provide, heat and spray MC 30 cutback bitumen prime coat at 0.8-1.2 Litres/m2.  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for first seal on the carriageway and shoulders at a rate of 1.0-1.2 Litres/m2.  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as seal on the carriageway and shoulder at a rate of 0.8-1.0 Litres/m2.  Provide, transport, lay and roll 10/14 mm pre-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as seal on the carriageway and shoulder at a rate of 0.8-1.0 Litres/m2.  Provide, transport, lay and roll 10/14 mm pre-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as third seal on the carriageway and shoulder at a rate of 0.8-1.0 Litres/m2.  Provide, transport, lay and roll 6/10 mm pre-coated chippings	Tonne Tonne Tonne  Tonne  m³  m²  Litres  Litres  m³  Litres	1 729 1,205 39,375 200,000  QTY  124,800  0  1,708  0  0	RATE	
14.02 14.03 14.04 14.05 14.06 15.01 15.02 15.03 15.04 15.06 15.07	Provide and spread Lime as an improvement agent for Base Provide and spread Cement as an improvement agent for subbase Provide and spread Cement as an improvement agent for base Mix and process natural material with improvement agent for pavement layers as instructed by the Engineer or as specified Protection and curing of cement / lime treated base and subbase layers  Bill No. 14 Total Carried Forward to Grand Summary  15: BITUMINOUS SURFACE TREATMENT & SURFACE DRESSING TO SHOULDE  DESCRIPTION  Prepare surface of shoulders, provide, heat and spray MC 30 cutback bitumen prime coat at 0.8-1.2 Litres/m2.  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for first seal on the carriageway and shoulders at a rate of 1.0-1.2 Litres/m2.  Provide, transport, lay and roll 14/20 mm pre-coated chippings Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as seal on the carriageway and shoulder at a rate of 0.8-1.0 Litres/m2.  Provide, transport, lay and roll 10/14 mm pre-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as seal on the carriageway and shoulder at a rate of 0.8-1.0 Litres/m2.  Provide, transport, lay and roll 10/14 mm pre-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as third seal on the carriageway and shoulders at a rate of 0.6-1.0 Litres/m2.  Provide, transport, lay and roll 6/10 mm pre-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as third seal on the carriageway, shoulders and on runbie strips rate of 0.5-0.8 l/m².	Tonne Tonne Tonne m³  m²  Litres  Litres  m³  Litres	1 729 1,205 39,375 200,000  QTY  124,800  0  128,000  0  102,400		AMOUNT  O.00
14.02 14.03 14.04 14.05 14.06 15.01 15.02 15.03 15.04 15.07	Provide and spread Lime as an improvement agent for Base Provide and spread Cement as an improvement agent for subbase Provide and spread Cement as an improvement agent for base Mix and process natural material with improvement agent for pavement layers as instructed by the Engineer or as specified Protection and curing of cement / lime treated base and subbase layers  Bill No. 14 Total Carried Forward to Grand Summary  18: BITUMINOUS SURFACE TREATMENT & SURFACE DRESSING TO SHOULDE  DESCRIPTION  Prepare surface of shoulders, provide, heat and spray MC 30 curback bitumen prime coat at 0.8-1.2 Litres/m2.  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for first seal on the carriageway and shoulders at a rate of 1.0-1.2 Litres/m2.  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as seal on the carriageway and shoulder at a rate of 0.8-1.0 Litres/m2.  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as seal on the carriageway and shoulder at a rate of 0.8-1.0 Litres/m2.  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as seal on the carriageway and shoulder at a rate of 0.8-1.0 Litres/m2.  Provide, transport, lay and roll 10/14 mm pre-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as third seal on the carriageway and shoulders at a rate of 0.8-1.0 Litres/m2.  Provide, transport, lay and roll 16/10 mm pre-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as third seal on the carriageway, shoulders and on runnble strips rate of 0.8-1.0 Litres/m2.	Tonne Tonne Tonne  Tonne  m³  m²  Litres  Litres  m³  Litres	1 729 1,205 39,375 200,000  QTY  124,800  0  1,708  0  0	RATE	AMOUNT
14.02 14.03 14.04 14.05 14.06 15.01 15.02 15.03 15.04 15.07 15.08	Provide and spread Lime as an improvement agent for Base Provide and spread Cement as an improvement agent for subbase Provide and spread Cement as an improvement agent for base Mix and process natural material with improvement agent for pavement layers as instructed by the Engineer or as specified Protection and curing of cement / lime treated base and subbase layers  Bill No. 14 Total Carried Forward to Grand Summary  15: BITUMINOUS SURFACE TREATMENT & SURFACE DRESSING TO SHOULDE  DESCRIPTION  Prepare surface of shoulders, provide, heat and spray MC 30 cutback bitumen prime coat at 0.8-1.2 Litres/m2.  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for first seal on the carriageway and shoulders at a rate of 1.0-1.2 Litres/m2.  Provide, transport, lay and roll 14/20 mm pre-coated chippings Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as seal on the carriageway and shoulder at a rate of 0.8-1.0 Litres/m2.  Provide, transport, lay and roll 10/14 mm pre-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as seal on the carriageway and shoulder at a rate of 0.8-1.0 Litres/m2.  Provide, transport, lay and roll 10/14 mm pre-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as third seal on the carriageway and shoulders at a rate of 0.6-1.0 Litres/m2.  Provide, transport, lay and roll 6/10 mm pre-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as third seal on the carriageway, shoulders and on runbie strips rate of 0.5-0.8 l/m².	Tonne Tonne Tonne m³  m²  Litres  Litres  m³  Litres	1 729 1,205 39,375 200,000  QTY  124,800  0  128,000  0  102,400		AMOUNT  O.00
14.02 14.03 14.04 14.05 14.06 14.06 15.01 15.02 15.03 15.06 15.07 15.08	Provide and spread Cimen as an improvement agent for Base Provide and spread Cement as an improvement agent for subbase Provide and spread Cement as an improvement agent for subbase Provide and spread Cement as an improvement agent for base Mix and process natural material with improvement agent for pavement layers as instructed by the Engineer or as specified Protection and curing of cement / hime treated base and subbase layers  Bill No. 14 Total Carried Forward to Grand Summary  15: BITUMINOUS SURFACE TREATMENT & SURFACE DRESSING TO SHOULDE  DESCRIPTION  Prepare surface of shoulders, provide, heat and spray MC 30 curback bitumen prime coat at 0.8-1.2 Litresim2.  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for first seal on the carriageway and shoulders at a rate of 1.0-1.2 Litresim2.  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as scal on the carriageway and shoulder at a rate of 0.8-1.0 Litresim2.  Provide, transport, lay and roll 10/14 mm pre-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as third scal on the carriageway and shoulder at a rate of 0.8-1.0 Litresim2.  Provide, transport, lay and roll 6/10 mm pre-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as third scal on the carriageway, shoulders and on rumble strips rate of 0.6-1.0 Litresim2.  Provide, transport, lay and roll 6/10 mm pre-coated chippings  Bill No. 15 Total Carried Forward to Grand Summary  16: BITUMINOUS MIXES  DESCRIPTION  Provide and creet Asphalt Concrete Type II on carriageway and bus bays as directed by the Engineer at Bitumen Content of 5.5 - 7.0% by weight of total min.	Tonne Tonne Tonne  Tonne  m³  m²  Litres  Litres  m³  Litres  Litres	QTY  1,205  39,375  200,000  0  128,000  1,708  0  102,400		AMOUNT  O.00
14.02 14.03 14.04 14.05 14.06 14.06 15.01 15.02 15.03 15.04 15.07 15.08	Provide and spread Lime as an improvement agent for Buse  Provide and spread Cement as an improvement agent for subbase  Provide and spread Cement as an improvement agent for base  Mix and process natural material with improvement agent for pavement layers as instructed by the Figincer or as specified  Protection and curing of cement / lime treated base and subbase layers  Bill No. 14 Total Carried Forward to Grand Summary  15: BITUMINOUS SURFACE TREATMENT & SURFACE DRESSING TO SHOULDE  DESCRIPTION  Prepare surface of shoulders, provide, heat and spray MC 30 cutback bitumen prime cout at 0.8-1.2 Litres/m2.  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for first seal on the carriageway and shoulders at a rate of 1.0-1.2 Litres/m2.  Provide, transport, lay and roll 14/20 mm pre-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Finder for as scal on the carriageway and shoulder at a rate of 0.8-1.0 Litres/m2.  Provide, transport, lay and roll 10/14 mm pre-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Finder for as third seal on the carriageway and shoulder at a rate of 0.6-1.0 Litres/m2.  Provide, transport, lay and roll 6/10 mm pre-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as third seal on the carriageway, shoulders and on rumble strips rate of 0.6-1.0 Litres/m2.  Bill No. 15 Total Carried Forward to Grand Summary  16: BITUMINOUS MIXES  DESCRIPTION  Provide and erect Asphalt Concrete Type II on shoulders as directed by the Fagincer at Bitumen Content of 5.5 - 7.0% by weight of total mix.  Bill no content of 5.5 - 7.0% by weight of total mix.	Tonne Tonne Tonne  Tonne  m³  m²  Litres  Litres  m³  Litres	1 729 1,205 39,375 200,000  QTY  124,800  0  128,000  1,708  0  102,400		AMOUNT  O.00
14.02 14.03 14.04 14.05 14.06 14.06 15.01 15.02 15.03 15.06 15.07 15.08	Provide and spread Cimen as an improvement agent for Base Provide and spread Cement as an improvement agent for subbase Provide and spread Cement as an improvement agent for subbase Provide and spread Cement as an improvement agent for base Mix and process natural material with improvement agent for pavement layers as instructed by the Engineer or as specified Protection and curing of cement / hime treated base and subbase layers  Bill No. 14 Total Carried Forward to Grand Summary  15: BITUMINOUS SURFACE TREATMENT & SURFACE DRESSING TO SHOULDE  DESCRIPTION  Prepare surface of shoulders, provide, heat and spray MC 30 curback bitumen prime coat at 0.8-1.2 Litresim2.  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for first seal on the carriageway and shoulders at a rate of 1.0-1.2 Litresim2.  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as scal on the carriageway and shoulder at a rate of 0.8-1.0 Litresim2.  Provide, transport, lay and roll 10/14 mm pre-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as third scal on the carriageway and shoulder at a rate of 0.8-1.0 Litresim2.  Provide, transport, lay and roll 6/10 mm pre-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as third scal on the carriageway, shoulders and on rumble strips rate of 0.6-1.0 Litresim2.  Provide, transport, lay and roll 6/10 mm pre-coated chippings  Bill No. 15 Total Carried Forward to Grand Summary  16: BITUMINOUS MIXES  DESCRIPTION  Provide and creet Asphalt Concrete Type II on carriageway and bus bays as directed by the Engineer at Bitumen Content of 5.5 - 7.0% by weight of total min.	Tonne Tonne Tonne  Tonne  m³  m²  Litres  Litres  m³  Litres  Litres	QTY  1,205  39,375  200,000  0  128,000  1,708  0  102,400		AMOUNT  O.00
14.02 14.03 14.04 14.05 14.06 14.06 15.01 15.02 15.03 15.04 15.06 15.07 15.08	Provide and spread Cement as an improvement agent for Base Provide and spread Cement as an improvement agent for base Mist and process natural material with improvement agent for pavement layers as instructed by the Engineer or as specified Protection and curing of cement / lime (reuted base and subbase layers)  Bill No. 14 Total Curried Forward to Grand Summary  15: BITUMINOUS SURFACE TREATMENT & SURFACE DRESSING TO SHOULDE  DESCRIPTION  Propare surface of shoulders, provide, heat and spray MC. 30 cutback bitamen prime coat at 0.8-1.2 Litres/m2.  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for first seal on the carriageway and shoulders at a rate of 1.0-1.2 Litres/m2.  Provide, transport, lay and roll 14/20 mm pre-coated chippings Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as seal on the carriageway and shoulder at a rate of 0.8-1.0 Litres/m2.  Provide, transport, lay and roll 10/14 mm pre-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as tall 10/14 mm pre-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as third seal on the carriageway and shoulder at a rate of 0.6-1.0 Litres/m2.  Provide, transport, lay and roll 10/14 mm pre-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as third seal on the carriageway and shoulder at a rate of 0.6-1.0 Litres/m2.  Provide, transport, lay and roll 10/14 mm pre-coated chippings  Propare surface of carriageway and shoulders and on runble strips rate of 0.6-1.0 Litres/m2.  Bill No. 15 Total Carried Forward to Grand Summary  16: BITUMINOUS MINES  DESCRIPTION  Provide and creet Asphalt Concrete Type II on carriageway and bus bays as directed by the Engineer at Bitumen Content of 5.5 - 7.0% by weight of tota	Tonne Tonne Tonne  Tonne  m³  m²  Litres  Litres  m³  Litres  Litres	1 1 729 1,205 39,375 200,000 0 128,000 0 0 128,000 0 1,708 0 0 102,400 1,120		AMOUNT  O.00
14.02 14.03 14.04 14.05 14.06 14.06 15.01 15.02 15.03 15.04 15.07 15.08	Provide and spread Lime as an improvement agent for Base Provide and spread Cement as an improvement agent for subbase Provide and spread Cement as an improvement agent for base Mix and process natural material with improvement agent for base Mix and process natural material with improvement agent for pavement layers as instructed by the Engineer or as specified Protection and caring of cement / lime treated base and subbase layers  Bill No. 14 Total Carried Forward to Grand Summary  15: BITUMINOUS SURFACE TREATMENT & SURFACE DRESSING TO SHOULDE  DESCRIPTION  Propose surface of shoulders, provide, heat and spray MC 30 cutback bitumen prime cont at 0.8-1.2 Litroving.  Propose surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for first seal on the carriageway and shoulders at a rate of 1.0-1.2 Litroving.  Provide, transport, lay and roll 14/20 mm pro-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as seal on the carriageway and shoulder at a rate of 0.8-1.0 Litroving.  Provide, transport, lay and roll 10/14 mm pro-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as shird seal on the carriageway and shoulder at a rate of 0.6-1.0 Litroving.  Provide, transport, lay and roll 6/10 mm pre-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as third seal on the carriageway, shoulders and on numble strips rate of 0.6-1.0 Litroving.  Provide and erect Asphalt Concrete Type II on carriageway and bus hays as directed by the Engineer at Brunner Content of 5.5 - 7.0% by weight of total mix.  Provide and erect Asphalt Concrete Type II on carriageway and bus hays as directed by the Engineer at Brunner Content of 5.5 - 7.0% by weight of total mix.	Tonne Tonne Tonne  Tonne  m³  m²  Litres  Litres  m³  Litres  Litres	1 1 729 1,205 39,375 200,000 0 128,000 0 0 128,000 0 1,708 0 0 102,400 1,120		AMOUNT
14.02 14.03 14.04 14.05 14.06 14.06 15.01 15.02 15.03 15.06 15.07 16.01 16.01	Provide and spread Cernent as an improvement agent for Base Provide and spread Cernent as an improvement agent for subtuse Provide and spread Cernent as an improvement agent for base Mix and process natural material with improvement agent for pavement layers as instructed by the Languere or as specified Protection and curing of centent / lime treated base and subbase layers  Bill No. 14 Total Carried Forward to Grand Summary  15: BITUMINOUS SURFACE TREATMENT & SURFACE DRESSING TO SHOULDE  DESCRIPTION  Propare surface of shoulders, provide, heat and spray MC 30 curback bitumen prime cont at 0.8-1.2 Lines/m2.  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for first seal on the carriageway and shoulders at a rate of 1.0-1.2 Litres/m2.  Provide, transport, lay and roll 14/20 run pre-custed chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as seal on the carriageway and shoulder at a rate of 0.8-1.0 Litres/m2.  Provide, transport, lay and roll 10/14 run pre-custed chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as third seal on the carriageway and shoulder at a rate of 0.8-1.0 Litres/m2.  Provide, transport, lay and roll 10/14 run pre-custed chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as third seal on the carriageway and shoulder at a rate of 0.8-1.0 Litres/m2.  Provide, transport, lay and roll 6/10 run pre-custed chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as third seal on the carriageway and shoulders and on runble strips rule of 0.8-1.0 Litres/m2.  Bill No. 15 Total Carried Forward to Grand Summary  16: BITUMINOUS MINES  DESCRIPTION  Bill No. 15 Total Carried Forward to Grand Summary  Bill No. 16 Total Carried Forward to Grand Summary	Tonne Tonne Tonne  Tonne  m³  m²  Litres  Litres  m³  Litres  Litres	1 1 729 1,205 39,375 200,000 0 128,000 0 0 128,000 0 1,708 0 0 102,400 1,120		AMOUNT
14.02 14.03 14.04 14.05 14.06 14.06 15.01 15.02 15.03 15.04 15.07 15.08  BILL NO.  BILL NO.  16.01 16.01	Provide and spread Lime as an improvement agent for Base Provide and spread Cement as an improvement agent for subbase Provide and spread Cement as an improvement agent for base Mix and process natural material with improvement agent for base Mix and process natural material with improvement agent for pavement layers as instructed by the Engineer or as specified Protection and caring of cement / lime treated base and subbase layers  Bill No. 14 Total Carried Forward to Grand Summary  15: BITUMINOUS SURFACE TREATMENT & SURFACE DRESSING TO SHOULDE  DESCRIPTION  Propose surface of shoulders, provide, heat and spray MC 30 cutback bitumen prime cont at 0.8-1.2 Litroving.  Propose surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for first seal on the carriageway and shoulders at a rate of 1.0-1.2 Litroving.  Provide, transport, lay and roll 14/20 mm pro-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as seal on the carriageway and shoulder at a rate of 0.8-1.0 Litroving.  Provide, transport, lay and roll 10/14 mm pro-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as shird seal on the carriageway and shoulder at a rate of 0.6-1.0 Litroving.  Provide, transport, lay and roll 6/10 mm pre-coated chippings  Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as third seal on the carriageway, shoulders and on numble strips rate of 0.6-1.0 Litroving.  Provide and erect Asphalt Concrete Type II on carriageway and bus hays as directed by the Engineer at Brunner Content of 5.5 - 7.0% by weight of total mix.  Provide and erect Asphalt Concrete Type II on carriageway and bus hays as directed by the Engineer at Brunner Content of 5.5 - 7.0% by weight of total mix.	Tonne Tonne Tonne  Tonne  m³  m²  Litres  Litres  m³  Litres  Litres	1 729 1,205 39,375 200,000  QTY  124,800 0  1,708  0  102,400  1,120  250		AMOUNT  AMOUNT  AMOUNT
14.02 14.03 14.04 14.05 14.06 14.06 15.01 15.02 15.03 15.04 15.07 15.08  ITEM  16.01 16.02	Provide and spread Line as an improvement agent for Base Provide and spread Centent as an improvement agent for subbase Provide and spread Centent as an improvement agent for base Mix and process natural material with improvement agent for pavement layers as instructed by the Engineer or a specifical Protection and curing of centent / line treated base and subbase layers  Bill No. 14 Total Carried Forward to Grand Summary  15: BITUMINOUS SURFACE TREATMENT & SURFACE DRESSING TO SHOULDE  DESCRIPTION  Prepare surface of shoulders, provide, heat and spray MC 30 carback bitannen prime cost at 0.8-1.2.1 ides/m2.  Despare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitannen as Binder for first seal on the carriageway and shoulders at a rate of 1.0-1.2 bitroe/m2.  Provide, transport, lay and roll 14/20 mm pre-conted chippings  Propare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitannen as Binder for as seal on the carriageway and shoulder at a rate of 1.0-8-1.0 Lines/m2.  Provide, transport, lay and roll 19/14 mm pre-conted chippings  Propare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitannen as Binder for as that seal on the carriageway and shoulders at a rate of 0.6-1.0 Lines/m2.  Provide, transport, lay and roll 19/14 mm pre-conted chippings  Propare surface of carriageway and shoulders, provide, heat and spray 80/100 straight run bitannen as Binder for as third seal on the carriageway and shoulders at a rate of 0.6-1.0  Lines/m2.  Provide and server. Asphalt Concerte Lype II on curriageway, shoulders and on numble strips rate of 0.5-  8 km²  Bill No. 15 Total Carried Forward to Grand Summary  16: BITUMINOUS MIXES  DESCRIPTION  Provide and erreet. Asphalt Concerte Type II on curriageway and bus buys as directed by the Engineer at Bitument Content of 5.5-7.0% by weight of roul mix.  Provide and erreet Asphalt Concerte Type II on curriageway and bus buys as directed by the Engineer at Bitument Content o	Tonne Tonne Tonne  Tonne  M³  M²  Litres  Litres  M³  Litres  M³  Litres  M³  Litres	1 1 729 1,205 39,375 200,000 0 128,000 0 0 128,000 0 1,708 0 0 102,400 1,120	RATE	AMOUNT
14.02 14.03 14.04 14.05 14.06 14.06 15.01 15.02 15.03 15.04 15.06 16.06 16.06 16.06	Provide and special Lime as an improvement agent for Base Provide and special Cement as an improvement agent for subbase. Provide and special Cement as an improvement agent for base Mix and special Cement as an improvement agent for base Mix and present subtrain material with improvement agent for pavement layers as instructed by the Engineer at as specified.  Production and carring of cement / Irme treated base and subbase layers.  Bill No. 14 Total Carried Forward to Grand Summary  15: BITUMINOUS SURFACE TREATMENT & SURFACE DRESSING TO SHOULDE  DESCRIPTION  Pregate surface of aboutless, provide, heat and spray MC 20 earback bitumen prime creat at 0.8-1.2 Litrosiva2.  Prepart surface of carriageousy and shoulders, provide, heat and spray NO-100 saright run bitumen as Binder for first sool on the carriageousy and shoulders at a rate of 1.0-1.2 Litrosiva2.  Provide, transport, lay and cell 10/14 num pre-conted chippings  Prepare surface of carriageousy and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as seal on the carriageousy and shoulders at a rate of 0.8-1.0 Litrosiva2.  Provide, transport, lay and cell 10/14 num pre-conted chippings  Prepare surface of carriageousy and shoulders, provide, heat and spray 80/100 straight run bitumen as Binder for as their lead on the carriageousy and shoulder at a rate of 0.8-1.0 Litrosiva2.  Provide, transport, lay and cell 10/14 num pre-conted chippings  Prepare surface of carriageousy and shoulders, provide, beat and spray 80/100 straight run bitumen as Binder for as their lead on the carriageousy, shoulders and on tumble strips rate of 0.8-1.0 Litrosiva2.  Provide, transport, lay and cell 10/14 num pre-conted chippings  Provide and creet Asphalt Concrete Type II on carriageousy and bus hays as directed by the Engineer at Bitumen Content of 5.5 - 7.0% by weight of toul mix.  Bill No. 16 Total Carried Forward to Grand Summary  16: BITUMINOUS MIXES  BILL No. 16 Total Carried Forward to Grand Summary  17. CONCRETE WORKS  DESCRIPTION  BRIDGES AN	Tonne Tonne Tonne  Tonne  M³  m²  Litres  Litres  m³  Litres  m³  Litres  m³  Litres  m³  Litres	1 729 1,205 39,375 200,000  QTY  124,800  0  1,708  0  102,400  1,120  250  QTY  QTY	RATE	AMOUNT  AMOUNT  AMOUNT
14.02 14.03 14.04 14.05 14.06 14.06 15.01 15.02 15.03 15.04 15.07 15.08  ITEM  16.00  16.00  16.00	Provide and spread I time as an improvement agent for Base Provide and spread Cereori as an improvement agent for Base Provide and spread Cereori as an improvement agent for Base Whis and spread Cereori as an improvement agent for pavement layers as instructed by the Engineer or as specified Protection and curing of connent? Innet treated base and subbase layers BBINO. 14 Total Carried Forward to Grand Summary  15: BITUMINOUS SURFACE TREATMENT & SURFACE DRESSING TO SHOULDE  DESCRIPTION  Prepare starface of Shoulders, provide, heat and spray MC 10 cushash bitumen prime contact 0.8-1.2 Effecting  Provide, transport, lay and roll 14:20 mm pre-conted chippings  Prepare starface of carriageway and shoulders, provide, heat and spray 80:100 straight run bitumen as Binder for first seal on the carriageway and shoulders at a rate of 1.0-1.2 Litrocing.  Provide, transport, lay and roll 14:20 mm pre-conted chippings  Prepare starface of carriageway and shoulders, provide, heat and spray 80:100 straight run bitumen as Binder for as seal on the carriageway and shoulder at a rate of 0.8-1.0 Litrocing.  Provide, transport, lay and roll 10:14 mm pre-conted chippings  Prepare starface of carriageway and shoulders, provide, heat and spray 80:100 straight run bitumen as Binder for as stard seal on the carriageway and shoulder at a rate of 0.6-1.0  Litrocing.  Provide, transport, lay and roll 10:10 mm pre-conted chippings  Prepare starface of carriageway and shoulders, provide, heat and spray 80:100 straight run bitumens as Binder for as their seal on the carriageway and shoulders and on runtile strips rate of 0.5-  10. Engineer  Provide, transport, lay and roll 10:10 mm pre-conted chippings  Provide, transport, lay and roll 6:10 run pre-conted chippings  Provide and erect Asphalt Concrete Type II on carriageway and bus boys as directed by the Engineer at Bitumen Content of 5.5 - 7.0% by weight of forth mix.  Provide and erect Asphalt Concrete Type II on shoulders as directed by the Engineer at Hitumen Content of 5.5 - 7.0% by wei	Tonne Tonne Tonne  Tonne  M³  M²  Litres  Litres  M³  Litres  M³  Litres  M³  Litres	1 729 1,205 39,375 200,000  QTY  124,800 0  1,708  0  102,400  1,120  250	RATE	AMOUNT  AMOUNT  AMOUNT
14.02 14.03 14.04 14.05 14.06  14.06  15.01 15.01 15.02 15.03 15.06 15.06 16.06 16.06 16.06	Provide and special Line as an improvement agent for Base Provide and special Cornect as an improvement agent for powered to provide and special Cornect as an improvement agent for powered layers as instrusted by the Englance or as specified.  Provide and special Cornect as an improvement agent for powered layers as instrusted by the Englance or as specified.  Provides and special Cornect as an improvement agent for powered layers as instrusted by the Englance or as specified.  Provides and earlier of Symbolism, provide, heat and subbase layers.  DESCRIPTION  Propers cardiace of Cornect power and shoulders, provide, beat and specy 800100 straight can be shouldern as a rate of 1.0-1.2 Linestrate.  Provide, transport, by and roll 1120 mm pre-contail chaptings.  Provide, transport, by and roll 1120 mm pre-contail chaptings.  Provide, transport, lay and roll 1014 mm pre-contail chaptings.  Provide, transport, lay and roll 1014 mm pre-contail chaptings.  Provide, transport, lay and roll 1014 mm pre-contail chaptings.  Provide, transport, lay and roll 1014 mm pre-contail chaptings.  Provide, transport, lay and roll 1014 mm pre-contail chaptings.  Provide, transport, lay and roll 1014 mm pre-contail chaptings.  Provide, transport, lay and roll 1014 mm pre-contail chaptings.  Provide, transport, lay and roll 1014 mm pre-contail chaptings.  Provide, transport, lay and roll 1014 mm pre-contail chaptings.  Provide, transport, lay and roll 1014 mm pre-contail chaptings.  Provide, transport, lay and roll 1014 mm pre-contail chaptings.  Provide, transport, lay and roll 1014 mm pre-contail chaptings.  Provide, transport, lay and roll 1014 mm pre-contail chaptings.  Provide, transport, lay and roll 1014 mm pre-contail chaptings.  Provide, transport, lay and roll 1014 mm pre-contail chaptings.  Provide, transport, lay and roll 1014 mm pre-contail chaptings.  Provide, transport, lay and roll 1014 mm pre-contail chaptings.  Provide, transport, lay and roll 1014 mm pre-contail chaptings.  Bill No. 15 Total Curried Forward to Grand	Tonne Tonne Tonne m³  m²  Litres  Litres  m³  Litres  m³  Litres  m³  Litres  m³  Maria and and and and and and and and and an	1 729 1,205 39,375 200,000  QTY  124,800  0  1,708  0  102,400  1,120  250  QTY  QTY	RATE	AMOUNT  AMOUNT  AMOUNT
14.02 14.03 14.04 14.05 14.06 14.06 15.01 15.02 15.03 15.06 15.06 16.06 16.06 17.01	Provide and spread Line as an improvement agent for Base Provide and spread Cornert as an improvement agent for subsec Provide and spread Cornert as an improvement agent for base Whis and spread Cornert as an improvement agent for base Whis and spread Cornert as an improvement agent for base Whis and spread Cornert as an improvement agent for base Whis and process manual variation with improvement agent for base Provide and corner agent for base BBI No. 14 Total Corride Personal to Grand Summary  15: BITUMINOUS SURFACE TREATMENT & SURFACE DRESSING TO SHOULDE  DESCRIPTION  16: Propage surface of shoulders, provide, best and spray MC 30 cultiseds behavior prime cost at 100-12 Lineston2.  17: Provide and corner agency and shoulders, provide, best and spray SU(10) straight in bitumen as Binder for first seal on the carriage-ray and shoulders as a rate of 1.0-1.2 Lineston2.  17: Provide, transport, lay and roll 14/20 mm pre-conted chippings  17: Provide, transport, lay and roll 16/10 mm pre-conted chippings  18: Provide, transport, lay and roll 16/10 mm pre-conted chippings  19: Provide, transport, lay and roll 16/10 mm pre-conted chippings  19: Provide, transport, lay and roll 16/10 mm pre-conted chippings  19: Provide, transport, lay and roll 16/10 mm pre-conted chippings  19: Provide, transport, lay and roll 16/10 mm pre-conted chippings  19: Provide, transport, lay and roll 16/10 mm pre-conted chippings  19: Provide, transport, lay and roll 16/10 mm pre-conted chippings  19: Provide, transport, lay and roll 16/10 mm pre-conted chippings  19: Provide, transport, lay and roll 16/10 mm pre-conted chippings  19: Provide and corect Asphalt Concrete Type II on centring-way and bus boys as directed by the Engineer at Bitumen Content of 5.5 - 7.0% by weight of total mix.  19: Provide and creef Asphalt Concrete Type II on centring-way and bus boys as directed by the Engineer at Bitumen Content of 5.5 - 7.0% by weight of total mix.  19: Provide, place and comport Close of System Provides and content of the firm of total m	Tonne Tonne Tonne m³  m²  Litres  Litres  m³  Litres  m³  Litres  m³  Litres  m³  Maria and and and and and and and and and an	1 729 1,205 39,375 200,000  QTY  124,800 0 128,000 1,708 0 102,400  QTY  3,360  QTY  10.00	RATE	AMOUNT  AMOUNT  AMOUNT
14.02 14.03 14.04 14.05 14.06 14.06 15.01 15.02 15.03 15.04 15.07 15.08 11.00	Provide and spread Line as an improvement agent for Base Provide and spread Concert on an improvement agent for base Min and pread Concert on an improvement agent for base Min and pread Concert on an improvement agent for base Min and pread Concert on an improvement agent for base Min and pread Concert on an improvement agent for base Min and pread Concert on an improvement agent for base Min and pread Concert of Concert I line reased base and subbase layers.  Bill No. 14 Total Carried Forward to Grand Summary  15: BITTIMINOIS SURPACE TREATMENT & SURFACE DRESSING TO NIOULDE  DESCRIPTION  Program surface of shoulders, provide, but and apray MC 50 cultook bitumen prime cost at 16-12 Linevite.  Program surface of corriageway and aboutders, provide, beat and apray \$0100 straight run bitumen as bitude for line as ead on the carriageway and shoulder at a rate of 10-1.1 Linevite.  Program surface of carriageway and aboutders, provide, beat and apray \$01100 straight run bitumen as bitude for as seal on the carriageway and shoulder at a rate of 00-1.0 Linevite.  Program surface of carriageway and aboutders, provide, but and apray \$01100 straight run bitumen as Bitude for as seal on the carriageway and shoulder at a rate of 00-1.0 Linevite.  Program surface of carriageway and aboutders, provide, but and apray \$01100 straight run bitumen as Bidard for as that sed on the carriageway, shoulders at rate of 00-1.0 Linevite.  Provide, transport, by and rull 10-10 mm pre-contact chippings  Program surface of outriageway and aboutders, provide, but and apray \$01100 straight run bituments and prop \$01100 straight run bituments and prop \$01100 straight run bituments and prop \$01100 straight run bituments of \$0.5 Linevite.  Provide, transport, by and rull 10-10 mm pre-contact chippings  Program surface of outriageway and aboutders as all on runnible straps sate of 0.6-1.0 Linevite.  Bill No. 15 Total Carried Forward to Grand Summary  16: BITUMINOIS MINES  DESCRIPTION  Bill No. 16 Total Carried Forward to Grand Summary  Provide and	Tonne Tonne Tonne  Tonne  m³  m²  CRS  UNIT  Litres  m³  Litres  m³  Litres  m³  M³  Litres  m³  M³  Litres  m³  M³  Litres	1 729 1,205 39,375 200,000  QTY  124,800  0  128,000  1,708  0  102,400  1,120  250  QTY  10.00  110.00	RATE	AMOUNT  AMOUNT  AMOUNT
14.02 14.03 14.04 14.05 14.06 14.06 15.01 15.02 15.03 15.04 15.06 15.06 16.06 16.06 17.01	Provide and aprend Constit as an improvement agent for Base Provide and aprend Constit as an improvement agent for house Min and prend Constit as an improvement agent for house Min and prend Correct as an improvement agent for house Min and prend Correct as an improvement agent for house Min and prend Correct as an improvement agent for house Description and curing of content / line treated base and subbase layers  Provide and agent of content / line treated base and subbase layers  Bill No. 14 Total Corricd Forward to Grand Summary  15: BITUMINOUS SURFACE TREATMENT & SURFACE DRESSING TO SHOULDE  DESCRIPTION  Prepare surface of corriageway and shoulders, provide, heat and apreay MC 30 cathock betarned prime exact at 0.03.1.2 Linearies of Base and or first seat on the corriageway and shoulders as a rate of 10-1-1.2 Linearies.  Prepare surface of carriageway and shoulders, provide, heat and apreay 80-100 straight run bitument as Binder for first seat on the corriageway and shoulders at a rate of 10-1-1.2 Linearies.  Provide, transport, lay and roll 10-14 man pre-conted objiprings  Prepare surface of carriageway and shoulders, provide, heat and apreay 80-100 straight run bitumen as Binder for sor brind seal or the carriageway, and shoulders are not of 0.5-1.0 Linearies.  Provide, transport, lay and roll 10-14 man pre-conted chipprings  Provide, transport, lay and roll dellormen pre-conted chipprings  Provide as a decert Applied Contents 1-5-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-	Tonne Tonne Tonne m³  m²  Litres  Litres  m³  Litres  m³  Litres  m³  Litres  m³  Maria and and and and and and and and and an	11 729 1,205 39,375 200,000 QTY 124,800 0 128,000 1,708 0 102,400 250 QTY 250 250 10.00	RATE	AMOUNT  AMOUNT  AMOUNT

	ANCE OF KIONYO -KANYAKINE - MITUNGUU ROAD Provide & fix in place vertical formwork to achieve class F1 finish	m <sup>2</sup>	180.00		RWC xxx
	As item 17.05 but horizontal As item 17.05 but sloped.	m <sup>2</sup>	120.00 50.00		
	Vertical formwork to achieve class F3 finish  7 Total Carried Forward to Grand Summary	m <sup>2</sup>	120.00		0.00
	20: ROAD FURNITURE				0.00
ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
20.01	Provide Poed Pecerya Poundary posts	No.	176		
	Provide Road Reserve Boundary posts	No.	176		
20.02	Excavate for, provide & place 250 x 125mm precast concrete raised or ramped kerbs haunched in 100mm thick class 15/20 concrete base bedding and mortar joined in support to carriageway, busbays and junctions as directed by the Engineer.				
	a) Straight kerbs b) Kerbs radius 12m - 6m	m m	5,000 1,000		
	c) Ditto but radius 5m - 1m	m	1,000		
	As 20.02 but for flush kerbs 100 x 125mm	m	5,000		
1 70 04 1	Provide and erect permanent road signs where instructed by the Resident Engineer and in accordance with Special Specifications Clause 2004 as follows:  a) warning signs	No.	10		
	b) Priority prohibitory and mandatory signs c) Standard informatory signs	No.	10		
	d) Non standard informator signs area  i) Less than 1.0m <sup>2</sup>	No.	5		
	ii) More than 1.0m <sup>2</sup> but less than 5m <sup>2</sup>	No.	5		
	Provide, deliver, paint and mark the road as specified or as directed by the Engineer, with white reflectionized thermoplastic paint from an approved supplier.	m <sup>2</sup>	3,520		
20.06	As item 20.05 but for yellow reflectionized thermoplastic paint	m <sup>2</sup>	1,760		
/() () /	Provide and erect concrete posts for guardrails complete with spacers (size and interval) as per specifications or as directed by the Engineer	No.	2,000		
1 //11/11%	Provide and erect flex-beam guardrails complete with connections as shown on the drawings or as directed by the Engineer	m	8,000		
20.09	Provide Edge marker posts	No.	50		
20.10	Provide kilometre marker posts as directed by the Engineer	No.	16		
20.13	Construction of speed bumps with Concrete as directed by Engineer	m <sup>3</sup>	20		
	Provide and install cat-eyes as directed by the Engineer	No.	1,600		
	Provide, plant, and nurture tree seedlings for a period of not less than half the construction period of the project or as directed by the Engineer	No.	350		
	Bill No. 20 Total Carried Forward to Grand Summary				0.00
BILL NO.	22: SCHEDULE OF DAYWORKS				
ITEM	DESCRIPTION PLANT	UNIT	QTY	RATE	AMOUNT
	The rates inserted herein are to include all operational and Maintenace costs, fuel, oil, grease, drivers/operators wages, supervision, overheads and profit. Only time actually employed upon the work will be paid for and the rates should include for idle time, travelling				
	time and overtime, In accordance with clause 2202 (a) of the specifications. Note: All items of plant must be priced.				
22.01	Crawler dozers with hydraulic attachmentsto include ripper  a) Up to 135 kw rated flywheel power	hrs	10		
22.02	b) Over 136 kw rated flywheel power  Motor Grader	hrs	4		
	a) Up to 110kw rated flywheel power b) Over 100kw rated flywheel power	hrs hrs	5		
22.03	Vibratory Roller	1			
	a) 6.5 - 8.81 tonne un-ballasted weight b) Over 8.91 tonne un-ballasted weight	hr hr	5		
22.04	Hand propelled vibrating roller 650 - 1300kg	hrs	5		
22.05	Cat 950G wheel loader or equivalent	hrs	5		
	10 Tonne tipper lorry	hrs	5		
	Small dumpers, 750-1000kg rated payload  Dual purpose hydraulic excavator with backhoe/loader and a rated bucket capacity of upto	hrs	5		
1 // UX I	1m3.	hrs	5		
	Articulated wheel loader with 1.5-2.0m³ SAE rated bucket capacity  50mm delivery water numbered motor	hrs	5		
	50mm delivery water pump and motor  Self propelled water tanker 4,500ls min. capacity with pick-up pump	hrs	5		
	Concrete Mixer of 100 - 150litres	hrs	5		
	Concrete poker vibrator	hrs	5		
	LABOUR  The rates inserted herein are to include all costs of labour such as insurance, accomodation,				
	travelling time, over-time, use and maintenance of small tools of trade.Only the actual time engaged upon the work will be paid for.supervision, overheads and Profit.				
22.14	Unskilled Labour	hrs	10		
22.15	Artisans	hrs	10		
	Office attendants and chainmen  Watchmen (all round surveillance)	hrs	10		
	TOTAL CARRIED FORWARD TO THE NEXT PAGE				-
ITEM	TOTAL PROJECT FORWARD	UNIT	QTY	RATE	AMOUNT
	TOTAL BROUGHT FORWARD  MATERIALS				0
	All materials are to comply with the Specification. The rates inserted herein are to include for delivery to the site, storage,				
	handling, overheads and profit  Ordinary Portland Cement	Ton	1		
	Hydrated Lime	Ton	1		
22.20	Mild Steel( any diametre)	Ton	2		
22.21	High Yield Steel ( any diametre)	Ton	1		
22.22	Fine Aggregate for Concrete	m <sup>3</sup>	1		
	Coarse Aggregate for Concrete	m <sup>3</sup>	5		
	Wrot Shuttering Timber	m <sup>2</sup>	5		
	Rough shuttering timber.  Bitumen Emulsion KI-60.	m <sup>2</sup> Litre	5		
	Straight run bitumen Grade 80/100.	Litre	5		
22.28	Kerosene	Litre	5		
22.29	14/20 mm nominal size surface chips.	m <sup>3</sup>	5		
22.30	6/10mm nominal size surface chips	m <sup>3</sup>	5		
	AC Type I Ex-plant	m <sup>3</sup>	5		
	AC Type II Ex-plant	m <sup>3</sup>	5		
	Dense Bitumen Macadam	m <sup>3</sup>	5		
	Bill No. 22 Total Carried Forward to Grand Summary  24: STREET LIGHTING				0.00
ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
24.01	Supply and install galvanized single bracket, boom < 1m, galvanized steel lighting columns till 8m above ground and 1.2m below ground, according to specification andd approved by the Engineer. All columns shall be installed with a triangular lock and	NO.	40		
24.02	Allow the construction of pit for mounting of columns till 8m height, including excavation, filling and compaction concrete and concrete works, form works and all other related works. Dimensions according to attached drawings.	NO.	40		
24.03	Supply and install rail mountied class "MCBs" mounted in column for high pressure sodium lamps.	NO.	40		
24.04	Supply and install street lighting lantern IP66 complete with LED 74W;> 9100lm and control gear as Trilux 9711SG-AB7L/9100-740 10GIS ET or similar as specified.  Supply and install street lighting lantern IP66 complete with high voltage pressure sodium	NO.	0		
24.03	lamp 250W/230V;>32000lm and control gear as Trilux 9721/250 HSE or similar as specified.  Supply and install twin cable with earth rated according to VDE 0298-4, not less than 3 x	NO.	4,000		
24.07	1.5mm2 from MCB mounted in column luminaire.  Supply and install weatherproof feeder pillar units according to IEC 60439-1 Degree of protection IP55, impact proection level K10 in accordance with specification, allowing for the	NO.	3		
	circuitry shown on the drawing.		<u> </u>		

MAINTEN	ANCE OF KIONYO -KANYAKINE - MITUNGUU ROAD		T		RWC xxx
24.08	Supply and install feeder pillar equipment and wiring according to IEC 60439-1 Degree of protection IP55, impact protection level K10 in accordinace with specification, drawing and incorporating 1) meter 2) Cut out 3) Isolator, 4) Mcb's 5) T.P and N	NO.	3		
24.09	Allow for excavation for complete foundation for mounting feeder pillars as shown in the drawings.	NO.	3		
24.10	Allow for concrete foundation base for mounting feeder pillars as shown on the drawings.	NO.	3		
24.11	Allow excavation, laying of 100mm PVC cable duct and warning tape, back filling and clearing reinstatement of all as per specifications for power supply poles.	M	4,000		
24.12	Supply, install and connect 4 core PVC SWA PVC street light cable complete with glands and accessories rated according to VDE 0298-4 for power supply to poles.	М	4,000		
24.13	Supply and install single core earth cable, alongside the above power cable from feeder pillar to each circuit as per the specifications. For the power to supply the poles.	M	4,000		
24.14	Allow 100mm thick concrete cover for cable in PVC duct for road crossing.	M	30		
24.15	Solidly earth every fourth street lighting columns with 1200mm copper earth electrodes complete with all accessories.	NO.	10		
24.16	Allow 25 x 3mm earthing tape and earth pits to feeder pillars including 1200mm earth copper electrodes and other necessary accessories etc. as specified.  Allow for the cable route markers at changes of direction and at intervals of approximately	NO.	3		
24.17	30m (between street lighting columns) Supply and install weatherproof photocell units/control panels, Degree of protection IP55 as	NO.	135		
24.18	specified. Allow for excavation, laying of 100mm PVC Cable duct and warning tape, back filling and	NO.	50		
24.20	clearing reinstatement, all as per the specifications for control cabling.  Supply, install and connect PVC SWA PVC Cable complete with glands and accessories rated	M	50		
24.21	according to VDE 0298-4 for control cabling.  Supply and installation of step-down transformers, 11/0.4 Kv, 25Kva. Allow for all accessories	No.	3		
24.22	including concrete works and earthing.  Allow for construciotn of 2 x 150mm concrete covered cable duct including excavation,	M	300		
24.23	concrete mix, back filling for connection from power source to transformer.  Supply, install and connect PVC SWA PVC Cable complete with glands and accessories rated	M	300		
24.23	according to BS EN/IEC 60228 standards for connection from power source to transformer.  Supply and install single core earth cable, alongside the above power cable as per the				
24.24	specifications.  Allow for construction of 2 x 150mm concrete covered cable duct including excavation,	M M	300		
	concrete mix, backfilling for connection from the transformer to feeder pillar.  Supply, install and connect PVC SWA PVC Cable complete with glands and accessories rated				
24.26	according to VDE 0298-4 for connection from transformer to feeder pillar.  Supply and install single core earth cable, alongside the above power cable as per the	M	300		
24.27	specifications.  Allow for construction of manholes along the duct including excavation, concrete and concrete	M	300		
24.28	works, form work, heavy duty covers and all other related works.	NO.	40		
24.29	Allow for Contractor's overheads and profits as a percentage of all supply and install items  Allow for provisional sum for payment for Power Company for incoming electricity supply to	% LS	2		
24.31	each feeder pillar  Allow for liason with Power Company in connection with works for incoming electricity	LS	2		
24.32	supply including making such power supply applications and submissions that they require  Allow for all working drawings and schematic drawings prior to commencing	LS	2		
24.33	Allow for the testing and commissioning for the entire electrical system to the satisfaction of the Power Company & Engineer, including the provision of the equipment	LS	2		
24.34	Allow for as installed drawings, manuals and details of equipment installed.	LS	2		
24.35	Supply, Install, Test, Commission and set to work the following: An integrated Solar street light system which combines the green-energy parts of Solar panel, LED lamp and the Li-Fe battery into a single unit (all-in-one) as manufactured by 1st beam	NO	0		
	Bill No. 24 Total Carried Forward to Grand Summary		l		0.00
BILL NO	. 25: ENVIRONMENTAL MITIGATION MEASURES & HIV AIDS CAMPAIGN				
BILL NO  ITEM	. 25: ENVIRONMENTAL MITIGATION MEASURES & HIV AIDS CAMPAIGN  DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		UNIT PC sum	<b>QTY</b> 1	RATE	AMOUNT
ITEM	All for a prime cost sum for of KShs 2,000,000 (Two Million) for ESIA study and report,		<b>QTY</b> 1  %	RATE	AMOUNT
25.01 25.02	All for a prime cost sum for of KShs 2,000,000 (Two Million) for ESIA study and report, Compliance Audits and environmental monitoring.  E.O for Item 25.01 for Contractor's Oveheads and Profit	PC sum	1 %	RATE	AMOUNT
25.01	All for a prime cost sum for of KShs 2,000,000 (Two Million) for ESIA study and report, Compliance Audits and environmental monitoring.  E.O for Item 25.01 for Contractor's Oveheads and Profit  Allow for engagement of a HIV/AIDS specialist subcontractor to deal with prevention, awareness activities as per programme to be approved by the Engineer	PC sum	1	RATE	AMOUNT
25.01 25.02	All for a prime cost sum for of KShs 2,000,000 (Two Million) for ESIA study and report, Compliance Audits and environmental monitoring.  E.O for Item 25.01 for Contractor's Oveheads and Profit  Allow for engagement of a HIV/AIDS specialist subcontractor to deal with prevention,	PC sum	1 %	RATE	AMOUNT
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25.01 25.02 25.03 25.04 25.05	All for a prime cost sum for of KShs 2,000,000 (Two Million) for ESIA study and report, Compliance Audits and environmental monitoring.  E.O for Item 25.01 for Contractor's Oveheads and Profit  Allow for engagement of a HIV/AIDS specialist subcontractor to deal with prevention, awareness activities as per programme to be approved by the Engineer  Provide for male and female condoms to workers and staff strategically and socially presented for the duration of the contract  Allow for preparation and submmission of monthly reports on HIV/AIDS awareness and prevention activities. Report to be tabled at site meetings.  Provide, Instal and maintain HIV/AIDS awareness bill boards with approved message and graphics with maximum area 4m² fabricated as per specifications of permanent informatory sign boards  Allow for video shows on HIV/AIDS and COVID-19 related awareness and prevention	PC sum  Item  Months  No.  Months	1 % 24 25,000 24	RATE	AMOUNT
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25.01 25.02 25.03 25.04 25.05 25.06 25.07 25.08  BILL NO 25.11	All for a prime cost sum for of KShs 2,000,000 (Two Million) for ESIA study and report, Compliance Audits and environmental monitoring.  E.O for Item 25.01 for Contractor's Oveheads and Profit  Allow for engagement of a HIV/AIDS specialist subcontractor to deal with prevention, awareness activities as per programme to be approved by the Engineer  Provide for male and female condoms to workers and staff strategically and socially presented for the duration of the contract  Allow for preparation and submmission of monthly reports on HIV/AIDS awareness and prevention activities. Report to be tabled at site meetings.  Provide, Instal and maintain HIV/AIDS awareness bill boards with approved message and graphics with maximum area 4m² fabricated as per specifications of permanent informatory sign boards  Allow for video shows on HIV/AIDS and COVID-19 related awareness and prevention matters every 3 months  Allow for production and distribution of HIV/AIDS awareness material as follows:  a) T-Shirt printed with approved message and graphics  b) Ditto (a) above but caps  c) A1 size weather proved posters  d) A3 size weather proved posters  d) A3 size weather proved posters  d) A3 size weather proved posters  e) 200x150mm stickers with HIV/AIDS awareness/prevention slogan  g) Ball point pens with HIV/AIDS awareness/prevention slogan.  Provide and maintain handwashing points at strategic locations as directed by the Engineer throughout the construction period  Provide and maintainsantizing points at strategic locations as directed by the Engineer throughout the construction period  provide face masks as specified or as shall be directed by the Engineer  throughout the construction period  provide face masks as specified or as shall be directed by the Engineer	PC sum  Item  Months  No.  Months  No.  Quartely  No.  No.  No.  No.  No.  No.  No.  No	1  %  24  25,000  24  5  6  200  200  200  200  200  200  5  5  100		0.00
25.01 25.02 25.03 25.04 25.05 25.06 25.07 25.08  BILL NO ITEM	All for a prime cost sum for of KShs 2,000,000 (Two Million) for ESIA study and report, Compliance Audits and environmental monitoring.  E.O for Item 25.01 for Contractor's Ovcheads and Profit  Allow for engagement of a HIV/AIDS specialist subcontractor to deal with prevention, awareness activities as per programme to be approved by the Engineer  Provide for male and female condoms to workers and staff strategically and socially presented for the duration of the contract  Allow for preparation and submmission of monthly reports on HIV/AIDS awareness and prevention activities. Report to be tabled at site meetings.  Provide, Instal and maintain HIV/AIDS awareness bill boards with approved message and graphics with maximum area 4m² fabricated as per specifications of permanent informatory sign boards  Allow for video shows on HIV/AIDS and COVID-19 related awareness and prevention matters every 3 months  Allow for production and distribution of HIV/AIDS awareness material as follows:  a) T-Shirt printed with approved message and graphics  b) Ditto (a) above but caps  c) A1 size weather proved posters  d) A3 size weather proved posters  d) A3 size weather proved posters  d) A3 size weather proved posters  e) 200x150mm stickers with HIV/AIDS awareness/prevention slogan  f) Key rings with HIV/AIDS awareness/prevention slogan  g) Ball point pens with HIV/AIDS awareness/prevention slogan.  Provide and maintain handwashing points at strategic locations as directed by the Engineer throughout the construction period  Provide and maintain handwashing points at strategic locations as directed by the Engineer throughout the construction period  Provide and maintain handwashing points at strategic locations as directed by the Engineer  throughout the construction period  provide face masks as specified or as shall be directed by the Engineer  Bill No. 25 Total Carried Forward to Grand Summary  26: LAND ACQUISITION, AXLE LOAD CONTROL, AND RELOCATION OF SERVI	PC sum  Item  Months  No.  Months  No.  Quartely  No.  No.  No.  No.  No.  No.  No.  No	1  %  24  25,000  24  5  6  200  200  200  200  200  200  5  5  100		0.00
25.01 25.02 25.03 25.04 25.05 25.06 25.07 25.08  BILL NO ITEM 26.01	All for a prime cost sum for of KShs 2,000,000 (Two Million) for ESIA study and report, Compliance Audits and environmental monitoring.  E.O for Item 25.01 for Contractor's Oveheads and Profit  Allow for engagement of a HIV/AIDS specialist subcontractor to deal with prevention, awareness activities as per programme to be approved by the Engineer  Provide for male and female condoms to workers and staff strategically and socially presented for the duration of the contract  Allow for preparation and subminision of monthly reports on HIV/AIDS awareness and prevention activities. Report to be tabled at site meetings.  Provide, Instal and maintain HIV/AIDS awareness bill boards with approved message and graphics with maximum area 4m² fabricated as per specifications of permanent informatory sign boards  Allow for video shows on HIV/AIDS and COVID-19 related awareness and prevention matters every 3 months  Allow for production and distribution of HIV/AIDS awareness material as follows:  a) T-Shirt printed with approved message and graphics  b) Ditto (a) above but caps  c) All size weather proved posters  d) A3 size weather proved posters  c) 200x150mm stickers with HIV/AIDS awareness/prevention slogan  Provide and maintain handwashing points at strategic locations as directed by the Engineer throughout the construction period  Provide and maintain handwashing points at strategic locations as directed by the Engineer throughout the construction period  provide face masks as specified or as shall be directed by the Engineer  Bill No. 25 Total Carried Forward to Grand Summary  26: LAND ACQUISITION, AXLE LOAD CONTROL, AND RELOCATION OF SERVI  DESCRIPTION  All for a prime cost sum for of KShs 2,000,000 (Two Million) for acquisition of land required for the works, etc. in accordane with Specifications.  E.O for Item 26.01 for Contractor's Oveheads and Profit	PC sum  Item  Months  No.  Months  No.  Ouartely  No.  No.  No.  No.  No.  No.  No.  No	1  %  24  25,000  24  5  6  200  200  200  200  200  5  5  100		0.00
25.01 25.02 25.03 25.04 25.05 25.06 25.07 25.08  BILL NO ITEM 26.01	All for a prime cost sum for of KShs 2,000,000 (Two Million) for ESIA study and report, Compliance Audits and environmental monitoring.  E.O for Item 25.01 for Contractor's Oveheads and Profit  Allow for engagement of a HIV/AIDS specialist subcontractor to deal with prevention, awareness activities as per programme to be approved by the Engineer  Provide for male and female condoms to workers and staff strategically and socially presented for the duration of the contract  Allow for preparation and subminision of monthly reports on HIV/AIDS awareness and prevention activities. Report to be tabled at site meetings.  Provide, Instal and maintain HIV/AIDS awareness bill boards with approved message and graphics with maximum area 4m² fabricated as per specifications of permanent informatory sign boards.  Allow for video shows on HIV/AIDS and COVID-19 related awareness and prevention matters every 3 months  Allow for production and distribution of HIV/AIDS awareness material as follows:  a) T-Shirt printed with approved message and graphics  b) Ditto (a) above but caps  c) All size weather proved posters  d) A3 size weather proved posters  d) A3 size weather proved posters  d) A3 size weather proved posters  e) 200x150mm stickers with HIV/AIDS awareness/prevention slogan  f) Key rings with HIV/AIDS awareness/prevention slogan  g) Ball point pens with HIV/AIDS awareness/prevention slogan  Provide and maintain handwashing points at strategic locations as directed by the Engineer throughout the construction period  Provide and maintainsantizing points at strategic locations as directed by the Engineer throughout the construction period  provide face masks as specified or as shall be directed by the Engineer  DESCRIPTION  All for a prime cost sum for of KShs 2,000,000 (Two Million) for acquisition of land required for the works, etc. in accordane with Specifications.	PC sum  Item  Months  No.  Months  No.  Ouartely  No.  No.  No.  No.  No.  No.  No.  No	1  %  24  25,000  24  5  6  200  200  200  200  200  5  5  100		0.00
25.01 25.02 25.03 25.04 25.05 25.06 25.07 25.08 25.09 25.10 25.11 26.01	All for a prime cost sum for of KShs 2,000,000 (Two Million) for ESIA study and report, Compliance Audits and environmental monitoring.  E.O for Item 25.01 for Contractor's Oveheads and Profit  Allow for engagement of a HIV/AIDS specialist subcontractor to deal with prevention, awareness activities as per programme to be approved by the Engineer  Provide for male and female condoms to workers and staff strategically and socially presented for the duration of the contract  Allow for preparation and submmission of monthly reports on HIV/AIDS awareness and prevention activities. Report to be tabled at site meetings.  Provide, Instal and maintain HIV/AIDS awareness bill boards with approved message and graphics with maximum area 4m² fabricated as per specifications of permanent informatory sign boards  Allow for video shows on HIV/AIDS and COVID-19 related awareness and prevention matters every 3 months  Allow for production and distribution of HIV/AIDS awareness material as follows:  a) T-Shirt printed with approved message and graphics  b) Ditto (a) above but caps  c) A1 size weather proved posters  d) A3 size weather proved posters  e) 200x150mm stickers with HIV/AIDS awareness/prevention slogan  D) Key rings with HIV/AIDS awareness/prevention slogan  g) Ball point pens with HIV/AIDS awareness/prevention slogan  Provide and maintain handwashing points at strategic locations as directed by the Engineer throughout the construction period  Provide and maintainsanitizing points at strategic locations as directed by the Engineer throughout the construction period  Provide and maintain handwashing points at strategic locations as directed by the Engineer throughout the construction period  Provide and maintainsanitizing points at strategic locations as directed by the Engineer throughout the construction period  Provide and maintain success and profit of KShs 2,000,000 (Two Million) for acquisition of land required for the works, etc. in accordanc with Specifications.  E.O for Item 26.01 for Contractor's Oveheads and	PC sum  Item  Months  No.  Months  No.  Quartely  No.  No.  No.  No.  No.  No.  No.  No	1  %  24  25,000  24  5  6  200  200  200  200  200  5  5  100		0.00
25.01 25.02 25.03 25.04 25.05 25.06 25.07 25.08  BILL NO ITEM 26.01 26.02 26.03	All for a prime cost sum for of KShs 2,000,000 (Two Million) for ESIA study and report, Compliance Audits and environmental monitoring.  E.O for Item 25.01 for Contractor's Oveheads and Profit  Allow for engagement of a HIV/AIDS specialist subcontractor to deal with prevention, awareness activities as per programme to be approved by the Engineer  Provide for male and female condoms to workers and staff strategically and socially presented for the duration of the contract  Allow for preparation and subminision of monthly reports on HIV/AIDS awareness and prevention activities. Report to be tabled at site meetings.  Provide, Instal and maintain HIV/AIDS awareness bill boards with approved message and graphics with maximum area 4m² fabricated as per specifications of permanent informatory sign boards.  Allow for video shows on HIV/AIDS and COVID-19 related awareness and prevention matters every 3 months.  Allow for video shows on HIV/AIDS and COVID-19 related awareness material as follows:  a) T-Shirt printed with approved message and graphics  b) Ditto (a) above but caps  c) Al size weather proved posters  d) A3 size weather proved posters  d) A3 size weather proved posters  d) A3 size weather proved posters  e) 200x 150mm stickers with HIV/AIDS awareness/prevention slogan  D Key rings with HIV/AIDS awareness/prevention slogan.  Provide and maintain handwashing points at strategic locations as directed by the Engineer throughout the construction period provide face masks as specified or as shall be directed by the Engineer throughout the construction period provide face masks as specified or as shall be directed by the Engineer throughout the construction period provide face masks as specified or as shall be directed by the Engineer  Bill No. 25 Total Carried Forward to Grand Summary  26: LAND ACQUISITION, AXLE LOAD CONTROL, AND RELOCATION OF SERVI  DESCRIPTION  All for a prime cost sum for of KShs 2,000,000 (Two Million) for relocation of land required for the works, etc. in accordanc with Specifications.  E.O f	PC sum  Item  Months  No.  Months  No.  Months  No.  No.  No.  No.  No.  No.  No.  No	1  %  24  25,000  24  5  6  200  200  200  200  200  200  5  1  %  1  %		0.00
25.01 25.02 25.03 25.04 25.05 25.06 25.07 25.08 25.09 25.10 25.11 26.01 26.02	All for a prime cost sum for of KShs 2,000,000 (Two Million) for ESIA study and report, Compliance Audits and environmental monitoring.  E.O for Item 25.01 for Contractor's Oveheads and Profit  Allow for engagement of a HIV/AIDS specialist subcontractor to deal with prevention, awareness activities as per programme to be approved by the Engineer  Provide for male and female condoms to workers and staff strategically and socially presented for the duration of the contract  Allow for preparation and submanision of monthly reports on HIV/AIDS awareness and prevention activities. Report to be tabled at site meetings.  Provide, Instal and maintain HIV/AIDS awareness bill boards with approved message and graphics with maximum area 4m² fabricated as per specifications of permanent informatory sign boards  Allow for video shows on HIV/AIDS and COVID-19 related awareness and prevention matters every 3 months  Allow for production and distribution of HIV/AIDS awareness material as follows:  a) T-Shirt printed with approved message and graphics  b) Ditto (a) above but caps  c) Al size weather proved posters  e) 200x150mm stickers with HIV/AIDS awareness/prevention slogan  f) Key rings with HIV/AIDS awareness/prevention slogan  f) Key rings with HIV/AIDS awareness/prevention slogan.  Provide and maintain handwashing points at strategic locations as directed by the Engineer throughout the construction period  Provide and maintainsantizing points at strategic locations as directed by the Engineer throughout the construction period  Provide and maintainsantizing points at strategic locations and freeted by the Engineer throughout the construction period  provide face masks as specified or as shall be directed by the Engineer  Bill No. 25 Total Carried Forward to Grand Summary  26: LAND ACQUISITION, AXLE LOAD CONTROL, AND RELOCATION OF SERVI  DESCRIPTION  All for a prime cost sum for of KShs 2,000,000 (Two Million) for acquisition of land required for the works, etc. in accordane with Specifications.  E.O for Item 26.02 for Co	PC sum  Item  Months  No.  Months  No.  No.  No.  No.  No.  No.  No.  No	1  %  24  25,000  24  5  6  200  200  200  200  200  5  5  100		0.00
25.01 25.02 25.03 25.04 25.05 25.06 25.07 25.08  BILL NO ITEM 26.01 26.02 26.03	All for a prime cost sum for of KShs 2,000,000 (Two Million) for ESIA study and report, Compliance Audits and environmental monitoring.  E.O for Item 25.01 for Contractor's Ovcheads and Profit  Allow for engagement of a HIV/AIDS specialist subcontractor to deal with prevention, awareness activities as per programme to be approved by the Fingineer Provide for male and female condoms to workers and staff strategically and socially presented for the duration of the contract  Allow for preparation and subminision of monthly reports on HIV/AIDS awareness and prevention activities. Report to be tabled at site meetings.  Provide, Instal and maintain HIV/AIDS awareness hill boards with approved message and graphics with maximum area 4m² fabricated as per specifications of permanent informatory sign boards  Allow for video shows on HIV/AIDS and COVID-19 related awareness and prevention matters every 3 months  Allow for production and distribution of HIV/AIDS awareness material as follows:  a) T-Shirt printed with approved message and graphics  b) Ditto (a) above but caps  c) All size weather proved posters  e) 200x150mm stickers with HIV/AIDS awareness/prevention slogan  f) Key rings with HIV/AIDS awareness/prevention slogan  g) Ball point pens with HIV/AIDS awareness/prevention slogan  f) Key rings with HIV/AIDS awareness/prevention slogan  f) Key rings with HIV/AIDS awareness/prevention slogan  f) To be the construction period  provide and maintain handwashing points at strategic locations as directed by the Engineer throughout the construction period  provide and maintain sanitizing points at strategic locations and freeted by the Fingineer throughout the construction period  provide face masks as specified or as shall be directed by the Engineer  Bill No. 25 Total Carried Forward to Grand Summary  26: LAND ACQUISITION, AXLE LOAD CONTROL, AND RELOCATION OF SERVI  BESCRIPTION  All for a prime cost sum for of KShs 2,000,000 (Two million) for relocation of services as instructed or directed by the Engineer.  E.O for Ite	PC sum  Item  Months  No.  Months  No.  Months  No.  No.  No.  No.  No.  No.  No.  No	1  %  24  25,000  24  5  6  200  200  200  200  200  200  5  1  %  1  %		0.00

0.00

Bill No. 26 Total Carried Forward to Grand Summary

## GRAND SUMMARY OF BILL OF QUANTITIES

BILL ITEM	DESCRIPTION	AMOUNT (KSHS)
1	Preliminaries and General Items	
4	Site Clearance and Top Soil Stripping	
5	Earth Works	
7	Excavation and Filling of Structures	
8	Culverts and Drainage Works	
9	Passage to Traffic	
12	Natural Gravel Base and Subase	
14	Lime/Cement Improved gravel Subbase and Base	
15	Bituminous Surface Treatment and Surface Dressing	
16	Bituminous Mixes	
17	Concrete Works	
20	Road Furniture	
22	Schedule of Dayworks	
24	Street Lighting	
25	HIV/AIDS, Gender &Social Issues, Local Participation	
26	Land Acquisition, Axle Load Control, And Relocation of Services	
(A)	SUB-TOTAL (1)	
(B)	Add 15% VARIATION OF PRICE of sub total (1)	
(C)	Add 10% CONTIGENCIES of sub total (1)	
(D)	SUB-TOTAL $(2) = (A + B + C)$	
(E)	Add 0.03% Public Procurement Capacity Building Levy of sub-total (2)	
(F)	Add16% VAT of sub-total (2)	
TOTAL OF	BIDSUM 1: (E + F)	

GRAND SUMMARY OF BID SUM 1						
BILL ITEM	DESCRIPTION	AMOUNT (KSHS)				
1	BID SUM 1					
	GRAND TOTAL OF BID SUM 1 + 2 CARRIED FORWARD TO FORM OF BID					