BILL NO. 1: PRELIMINARY AND SUPERVISORY SERVICES

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
1.01	Provide,furnish and maintain rented accommodation for Engineer's senior staff equivalent to:				
	(i) Type I houses	No	1		
	(ii) Type II houses	No	3		
	Provide and maintain rented accommodation for Engineer's junior staff equivalent to:				
	(i) Type III houses	No	4		
	(ii) Type IV houses	No	8		
1.02	Provide, furnish and maintain Engineer's main office as specified in the Contract and period as per the drawings and specifications or as directed by the Engineer.	No	1		
1.03	Allow a sum of Kshs 2,000,000 for material testing to be spent in whole or part as directed by the Engineer against receipts.	PC sum	1	2,000,000.00	2,000,000.00
1.04	E.O. item 1.03 for the Contractors overheads and profit	%			
1.05	Allow a sum of Kshs 2,500,000 for survey equipment to be used by the Engineer's Representative for the entire duration of the Contract. Ownership to revert to the Contractor.	PC sum	1	2,500,000.00	2,500,000.00
1.06	E.O. item 1.05 for the Contractors overheads and profit	%			
1.07	Provide with driver and maintain Four (4), minimum 3.0 - litre 4- wheel drive ,twin- cab pick up Vehicle or similar approved in accordance with clause 138 of the special specifications	Veh. Mth	72		
1.08	E.O. item 1.07 for mileage in excess of 4000	km	24,000.00		
1.09	Allow a Prime Cost sum for the Engineers miscellaneous account to be spent in whole or part as directed by the Engineer against receipts.	PC sum		4,000,000.00	4,000,000.00
1.10	E.O. item 1.09 for the contractors overheads and profits	%			
1.11	Provide, erect and maintain publicity sign boards as directed by the Engineer.	No.	4		
1.12	Allow Prime Cost sum for relocation of services	PC sum	1	5,000,000.00	5,000,000.00
1.13	Include a percentage of item 1.12 for contractor's overheads and profit	%			
1.14	Allow a Prime Cost Sum for training of Employer's Engineers, technicians and other staff as directed by Engineer.	PC sum	1	1,000,000.00	1,000,000.00
1.15	Include a percentage of item 1.14 for contractor's overheads and profit	%			
Total carried forward to next page					

BILL NO. 1: PRELIMINARY AND SUPERVISORY SERVICES

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
	Total brought forward from previous page				
1.16	Provide a prime cost sum for reimbursement to the Contractor for payment of Engineer's support staff and allowance as in accordance with clause 137 of the special specifications	PC sum	1	4,000,000.00	4,000,000.00
1.17	Include a percentage of item 1.16 for Contractor's overheads and profit	%			
1.18	Provide and maintain the Engineer's staff mobile Phones	No.	5		
1.19	Allow a prime cost sum of Kshs 250,000 to the Engineer's staff mobile phone airtime charges	PC sum		250,000.00	250,000.00
1.2	Include a percentage of item 1.19 for contractor's overheads and profit	%			
1.21	Allow for a prime cost sum of Kshs 1,000,000 for Environmental measures as instructed by the Engineer	PC sum		1,000,000.00	1,000,000.00
1.22	Include a percentage of item 1.21 for contractor's overheads and profit	%			
1.23	Provide and maintain one photocopier as per clause 134.2 of the Special Specifications to the approval of the Engineer to revert to his office at the end of the project.	No	1		
1.24	Provide and maintain two personal computers as per clause 134.2 of the Special Specifications to the approval of the Engineer to revert to his office at the end of the project.	No	2		
1.25	Provide and maintain four Laptop computers as per clause 134.2 of the Special Specifications complete with specified printer and software to the approval of the Engineer to revert to his office at the end of the project.	No	4		
Total of Bill No.1 carried forward to Grand Summary page					

BILL NO. 4: SITE CLEARANCE AND TOP SOIL STRIPPING

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
4.01	Clear site on road reserve including removal of trees, hedges, bushes and other vegetation or deleterious organic material, grub up roots and backfilling of holes left by removal of stumps and roots to 100% MDD (AASHTO T99) with pproved material in accordance with the specification.	Ha.	0.5		
4.02	Removal of unsuitable material / top soil to an approved depth and disposal as directed by the Engineer.	m^3	925		
4.03	Cutting of trees of all girth above 300 mm including cutting of trunks, branches, uprooting and removal of all materials and stacking within the ROW and filling depressions/pits by earth etc. and dismantling of structures on roadway including Stone masonry, Plain Concrete ,Reinforced Concrete ,Dismantling of pavement, culverts, Footpaths and medians, fence , bus shelters etc.	Lump sum			
Total of Bill No.4 carried forward to summary page					

BILL NO.5: EARTH WORKS

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
	No separate payment shall be made for the haulage of surplus or unsuitable excavated material and the cost of such haulage shall be included in the rates and/or prices				
5.01	Fill in construction of embankment, benching of shoulders with approved soft material with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to 95% MDD (AASHTO T99) in accordance with the specification.	m^3	480		
5.02	Construction of sub-grade and earthen shoulders with approved material with all lifts & leads, transporting to site, spreading, grading to required slope and compacted to 100% MDD (AASHTO T99).	m^3	1035		
5.03	Compacting original ground supporting sub-grade: Loosening of the ground up to a level of 300 mm below the sub-grade level, watered, graded and compacted in layers to meet requirement for sub-grade construction.	m^3	1500		
5.04	Scarifying to a depth of 150mm, levelling and compacting original ground to 95% MDD (AASHTO.T99)	m^3	520		
5.05	Cut to Spoil in Soft Material	m^3	2355		
5.06	As Item 5.05 but hard material	m^3	235		
Total of Bill No.5 carried forward to summary page					

BILL NO. 7: EXCAVATION AND FILLING FOR STRUCTURES

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
7.01	Excavate in soft material for structure	m^3	450		
7.02	As Item 7.01 but Hard Rock (blasting prohibited)	m^3	450		
7.03	Provide and place hardcore below structures	m^3	45		
7.04	Water proofing paper under slabs and foundations	m^2	70		
7.05	50 mm stone dust blinding to surfaces of hardcore to receive concrete	m^2	70		
Total of Bill No. 7 carried forward to summary page					

BILL NO. 8: CULVERTS AND DRAINAGE WORKS.

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
	No separate payment shall be made for the haulage of surplus or unsuitable excavated material and the cost of such haulage shall be included in the rates and/or prices				
8.01	Excavate in soft material to any depth for pipe culverts, subsoil drains, headwalls, wing walls, aprons, toe walls, and drop inlets, mitre drains, catch water drains, median drains including support of trench sides, backfilling and compacting as specified or as directed by the the Engineer.	m^3	95		
8.02	As Item 8.01 but in Hard Rock	m^3	10		
8.03	Provide, lay and joint 900mm diameter Precast Concrete pipes	m	50		
8.04	Provide, lay and joint 600mm I.D. Reinforced Cement Concrete pipes	m	10		
8.05	Provide and place class 15/20 concrete to beds, surrounds and haunches	m^3	40		
8.06	Provide and place class 25/20 concrete to headwalls, wingwalls, aprons, toe walls, inlets and outlets to pipe culverts including formwork	m^3	5		
8.07	Provide and place 300mm IBD complete with side slabs as per drawings and specifications	m	390		
8.08	Provide place and compact Rock fill below culverts	m^3	10		
Total of Bill No.8 carried forward to summary page					

BILL NO. 9: PASSAGE OF TRAFFIC

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
9.01	Construct temporary deviations as per the specification including drainage, construction of embankment as necessary to formation level using imported material with no extra payment for haulage in accordance with the specifications	km	0.5		
9.02	Provide signs and barriers in accordance with Clause 907 of the Standard Specifications	km	0.5		
9.03	Maintain the passage of traffic	Lump Sum	1		
9.04	Allow for reinstatement of deviations	Lump Sum	1		
Total of Bill No. 9 carried forward to summary					

BILL NO.11: FOOTPATHS

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
11.01	Providing and fixing in the footpath Interlocking concrete pavers unishape (monolithic single layer precast concrete blocks) of any specified colour / size & shape, with approved pattern etc. of 60 mm thick having average crushing strength of 50 N/mm2 on average thickness of 50 mm uniformly graded river sand cushioning with properly compacted with mechanical compactor with required level, grade and camber etc. complete as directed by Engineer.	m^2	1410		
Total of Bill No. 11 carried forward to summary					

BILL NO.12: NATURAL MATERIAL BASE AND SUBBASE

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
	No separate payments shall be made for the overhaul of material and the cost of such haulage shall be included in the rates and or prices				
12.01	Provide, place and compact natural gravel material to carriageway, junctions accesses and bus bays as directed by the Engineer	m^3	850		
12.02	Provide, place and compact natural gravel material to footpaths as directed by the Engineer	m^3	425		
Total of Bill No. 12 carried forward to summary					

BILL NO. 13: GRADED CRUSHED STONE SUBBASE AND BASE

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
13.01	Providing, mixing, spreading and compacting Graded Crushed Stone (GCS) for Base with all leads and lifts complete.	m^3	710		
Total of Bill No. 13 carried forward to summary					

BILL NO. 14: CEMENT AND LIME TREATED MATERIAL

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
14.01	Provision, storage, hauling, transport and spreading cement on graded crushed stone base.	tonne	43		
14.02	Mix in cement in GCS (mix-in-place method)	m^3	675		
14.03	Allow for curing and protection of treated base as specified	m^2	3380		
Total of Bill No. 14 carried forward to summary					
BILL NO. 15: BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING					

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
15.01	Prepare surface of carriageway, shoulders, bus bays accesses and junctions , provide, heat and spray MC-30 bitumen emulsion prime coat at a rate of spray of 1.0 litre per square metre with all leads and lifts complete.	Lts	4040		
15.02	Clean and prepare surfaces, provide and spray K1-60 bitumen emulsion as tack coat to carriageway at a spray rate of 0.5 litres/m2 as directed by the Engineer with all leads and lifts complete..	Lts	4040		
Total of Bill No. 15 carried forward to summary					

BILL NO. 16: BITUMINOUS MIX BASES BINDER COURSES AND WEARING COURSES

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
	Note: No haulage will be paid for bitumen or chippings and this should be included in the rates tendered.				
16.01	Provide, lay and compact Asphalt Concrete(AC) with modified bitumen and 0/14mm aggregates on prepared surface of asphalt base layer with all leads and lifts (excluding tack coat) complete.	m^3	170		
16.02	Provide, lay and compact Dense Bituminous Concrete(DBM) with modified bitumen and 0/30mm aggregates on prepared surface of granular base layer with all leads and lifts (excluding tack coat) complete.	m^3	510		
Total of Bill No. 16 carried forward to summary					

BILL NO. 17: CONCRETE WORKS

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
17.01	Provide, place and compact blinding concrete Class 15 (20) to foundations, rate including form work erection and dismantling.	m^3	8		
17.02	Provide, place and compact concrete class 30 (20) in sub-structure(column bases, strip footings to walls)	m^3	75		
17.03	Provide, place and compact concrete class 30(20) to superstructure columns	m^3	75		
17.04	Provide, place and compact concrete class 30 (20) to superstructure ; deck slabs, ramp slabs, stairs, steps and beams, ground floor slab to toilets	m^3	260		
17.05	Provide, place 50mm of hardened screed to ramp and deck	m^3	45		
17.06	Unformed surface finish class UF1 to top of foundation	m^2	125		
17.07	Unformed surface finish class UF2 to top of deck	m^2	720		
17.08	Class F3 finish to soffit of deck	m^2	720		
17.09	Ditto but side and soffit of beams	m^2	300		
17.10	Vertical formwork to achieve class F2 finish	m^2	500		
17.11	Vertical formwork to achieve class F3 finish	m^2	500		
	REINFORCEMENT				
	Provide, cut, bend and fix as shown on drawing and as specified in the following items of reinforcement.				
17.12	High Yield Strength reinforcement bar to BS 4449, of diameter equal to or less than 16mm	Tonne	23		
17.13	High Yield Strength reinforcement bar to BS 4449, of diameter more than 16mm	Tonne	35		
17.14	Fabric mesh A142 to B.S 4483	m^2	70		
Total of Bill No. 17 carried forward to summary					

BILL NO. 19: STRUCTURAL STEEL

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
	Design, submission of orders, fabrication drawings, details and supply of structural steel works including material bolts,cleats,nuts ,washers ,welding rods and all other fixings and erection requirements, priming, painting ,shear studs to Engineer's approval etc. complete as per drawing and standard specification				
19.01	Provide and install grade S275 steel trussed girder(curved) welded to specifications and formed to achieve a camber of 50mm inclusive of stiffeners ,splice and all other connections				
(i)	Provide and install 300x300x10mm Square Hollow Sections grade S275 steel welded/bolted to specifications inclusive of all connections (as bottom chord)	Tonne	16		
(ii)	Provide and install 250x250x8 Square Hollow Sections grade S275 steel welded/bolted to specifications inclusive of all connections (as top chord)	Tonne	12		
(iii)	Provide and install 150 x150x4 Square Hollow Sections grade S275 steel welded/bolted to specifications inclusive of all connections (As Internal Members)	Tonne	6		
(iv)	Provide and install 150 x150x6 Square Hollow Sections grade S275 steel welded/bolted to specifications inclusive of all connections (As Internal Members)	Tonne	6.5		
19.02	Provide and install 250 x 150x6mm RHS grade S275 steel welded/bolted to specifications inclusive of all connections (As Deck Beams)	Tonne	6		
19.03	Provide and install 120 x 120x10mm Angles grade S275 steel as deck bracings welded/bolted to specifications inclusive of connections	Tonne	6.2		
19.04	Provide and install 6mm grade S275 chequered steel plates as bridge deck formwork welded to specifications inclusive of connections	Tonne	15.6		
19.05	Provide and install 75mmφ x 4mm CHS grade S275 as handrail connected to the trusses welded to specifications inclusive of connections	Tonne	1.25		
19.06	Provide and install 8mm thick mild steel plate as baluster spaced at 3000 mm c/c and as per details	Tonne	1.2		
19.07	Provide and install 50 mm diameter x 3.0 mm thick horizontal and raking hollow mild steel section handrail welded to balusters as per details	m	950		
19.08	(i) Provide and install 75x50x3 RHS grade S275 steel as roof rafters welded/bolted to specifications inclusive of all connections	Tonne	1.4		
19.09	(ii) Provide and install 50 x25x2 RHS grade S275 steel as roof purlins welded/bolted to specifications inclusive of all connections	Tonne	0.97		
19.10	(iii)Provide and install 150 x150x4 Square Hollow Sections grade S275 steel as vertical roof members welded/bolted to specifications inclusive of all connections	Tonne	1.4		
Total of Bill No. 19 carried forward to summary					

BILL NO 20: ROAD FURNITURE					
ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
	Road Marking and Road Signs				
	Road Marking				
20.01	Providing and laying hot applied thermoplastic road marking compound in approved colour and shade(ASTM 9) for road marking on bituminous surface in centre line 100mm,edge line 150mm wide 3.0mm thick using fully automatic extrusion machine and using premelter for melting thermoplastic Material including cleaning the surface of all dirt, dust, and other foreign matter, demarcation at site/ premarking, finishing and managing the traffic control etc. Complete. Marking to be done as per specifications, detailed drawings and as directed.				
	(i) For Lane marking (broken line) with white paint-100mm wide and 200mm wide for bus bays	m^2	105		
	(ii) For Edge lines (continuous line) with white paint-150mm wide	m^2	105		
	Permanent Road Signs				
20.02	Supplying and fixing **cautionary/warning road sign boards** made up with high intensity grade retro-reflective type sheeting (ASTM 9)complete as per drawing and technical specifications.	No.	1		
20.03	Supplying and fixing **regulatory/mandatory road sign boards** made up with high intensity grade retro-reflective type sheeting(ASTM 9) complete as per drawing and Technical specifications.	No.	1		
20.04	Supplying and fixing **informatory road sign boards** made up with high intensity grade retro-reflective type sheeting complete as per drawing and Technical specifications.		1		
	(i) Area less than 1.0 m^2	No.	2		
	(ii) Area more than 1.0 m^2, but less than 2 m^2	No.	2		
	(ii) Area more than 2.0 m^2, but less than 5 m2	No.	2		
20.05	Provide and fix concrete Edge Marker Posts on the outer edge of shoulder as per drawing, specifications and as directed by Engineer.	No.	4		
20.06	Excavate for, provide and place 440 x 250mm precast concrete kerb haunched in 100mm thick class 15/20 concrete base bedding and mortar jointed in support to carriageway, busbays and junctions as directed by the Engineer.				
	(a) Straight kerbs	m	1020		
	(b) Radius kerbs	m	95		
20.07	Provide for the fence between the raised kerbs as shown in the drawings or as directed by the Engineer	m	900		
20.08	Provide, lay and joint 150mm x 50mm precast concrete edging on the walkways	m	490		
20.09	Provide and place 20/20 Bollard size 1.2m * 0.1m * 0.1m embedded to a depth 0.2m where directed by the Engineer	m	15		
20.10	Provide for branding and painting to the Employer's Specification as directed by the Engineer	Prov. Sum	1	1,000,000.00	1,000,000.00
Total of Bill No. 20 carried forward to summary					

BILL NO. 21: MISCELLANEOUS BRIDGE WORKS

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
21.01	Provide and apply "Thioflex 600" or similar approved cold poured polysulphide joint sealant (30mm deep by 25mm wide at movement joints as specified to Engineer's satisfaction and approval.	m	100		
21.02	Reinforced Cement Concrete crash barrier in Grade 30/20 including cost of reinforcement, steel plates and pipes complete as per drawing and Standard Specification for Road and Bridge Construction	m	100		
21.03	Provide and apply 25mm thick "Flexcell" low compression or similar approved joint Filler to movement joints	m	21		
21.04	Drainage Spouts including 100 dia GI pipes complete as per drawing and Standard Specification for Road and Bridge Construction Specification	No.	10		
21.05	Supply and fix bearings complete as per drawings and as per BS:5400 part 9.2, BS 3784:1973 and as directed by Engineer				
	a) Sliding bearing				
	Capacity 700 Kn	No	3		
	Capacity 300 Kn		3		
	b) Fixed bearing				
	Capacity 700 Kn	No	3		
	Capacity 300 Kn		3		
21.06	Provide and apply two coats of water proofing as per manufacture's specification to Engineer's approval	m²	1010		
21.07	Provide and install rubber water bar 250mm deep inclusive of the fixing pegs to engineer's approval	m²	50		
21.08	Provide and lay EPDM water proofing laid to manufactures' specifications to engineers approval to top slab over ramp	m²	70		
21.09	Provide and apply one under coat and at least two coats of Duracoat paint (or equivalent) to Engineer's approval	m²	1250		
21.10	Hardcore Filling compacted in layers of 150mm under beds	m^3	45		
21.11	Provide and install perspex roof cover and/or sky light or similar approved inclusive of associated framing, sealants ,fixing clips and any other accessories incidental to the work	m²	900		
21.12	Chemical anti termite treatment to surface of hardcore, executed by an approved specialist under ten year guarantee	m²	70		
21.13	Natural stone walling to foundation in cement and sand mortar (1:3) to engineer's approval (225mm)	m²	200.00		
Total carried forward to next page					

BILL NO. 21: MISCELLANEOUS BRIDGE WORKS

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
	Total brought forward from previous page				
21.15	200 mm Machine cut stone walling to super-structure in cement and sand mortar (1:3) to engineer's approval	m²	150.00		
21.16	150 mm Machine cut stone walling to super-structure in cement and sand mortar (1:3) to engineer's approval	m²	100.00		
21.17	One layer of 1000 gauge polythene sheet dump-proof membrane with 300mm (measured net-allow for laps)	m²	70.00		
21.18	S.W.G hoop iron ties 30mm wide and 2.5mm thick built into alternate horizontal joints of block work	m	450.00		
21.19	25mm cement and sand (1:3) render to wall plinths	m²	100.00		
21.20	40 mm cement and sand (1:3) render to superstructure walls and beams	m²	1,000.00		
21.21	28mm cement and sand (1:3) render to ceramic tiles	m²	80.00		
21.22	25mm cement and sand (1:3) render to wall plinths	m²	80.00		
21.23	Prepare and apply two coats black bituminous paint on render plinths	m²	100.00		
21.24	300x300mm 24 gauge mild steel box gutters with welded joints and fixing brackets at 900mm centres	m	80.00		
21.25	100mm Diameter down water pipes	m	25.00		
	Supply, assemble and fix purpose made standard section mild steel casement glazed windows complete with permanent vents with mosquito proof gauze and all the necessary iron mongery,fixed to openings including cutting and pinning lugs to concrete or block /stone work surrounding and bedding frame in cement and sand (1:3) mortar. inclusive of paint work				
21.26	Window size as per drawings and specification	No.	10		
21.27	4 mm clear glass sheet as per drawings and specification	m²	20.00		
21.28	Supply and fix semi-solid core flush doors inclusive of associated ironmongery and paint; size as per drawing and specification	No.	14		
21.90	Provide and install 450mm wide gratings to channel comprising of 30x3mm flats weldet eo 50x50x3 EA section at spacing 50mm centre to centre	m	30.00		
21.3	12 mm heavy duty nonslip plain or printed coloured ceramic floor tiles	m²	100.00		
Total of Bill No. 21 carried forward to summary					

BILL NO. 22: DAY WORKS					
ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
	A. PLANT				
	The rates inserted herein are to include all operational and maintenance costs, fuel, oil, grease, drivers, and turn boy's wages supervision, overheads and profit. Only time actually employed upon the work will be measured and the rates shall include for idle time, travelling and overtime, all in accordance with the Specifications. ee Clause 2202 (a).				
	Note: All items of plant must be priced.				
22.01	Crawler Dozer and Hydraulic Ripper				
	a) 100-135 Kw rated flywheel power	Hr	5		
	b) 136-185 Kw rated flywheel power	Hr	5		
22.02	Motorized rubber tyred single engine scrapers				
	a) Up to 16m3 heaped capacity	Hr	5		
22.03	Motorized rubber tyred Twin engine scrapers				
	a) Up to 16m3 heaped capacity	Hr	5		
22.04	Motor Graders				
	a) 80-110 Kw rated flywheel power	Hr	5		
22.05	Rollers Towed vibratory including tractor				
	a) 6.5 -8.8t unballasted wt	Hr	5		
22.06	Road Roller deadweight (Steel Three Wheel)				
	a) 6.5 -8.8t unballasted wt	Hr	5		
22.07	Roller rubber tyred self propelled				
	a) 1.1t -2.0t per wheel	Hr	5		
22.08	Roller Vibratory single roll Rubber tyred				
	8.3-10.5 t unballasred weight	Hr	5		
22.1	Vibrating plate compactor 114-200 kg operating weight	Hr	5		
22.11	Compressor rated by normal delivery of free air per minute complete with all tools				
	a) 6.0-7.4 m3/mm	Hr	5		
	b)7.5-9.7m3/min	Hr	5		
	c) 9.8-25.5m3/min	Hr	5		
22.12	Mobile rubber tyred rough terrain crane 23-40 t max working load	Hr	5		
22.13	Tracked Excavator Cranes				
	a) 20-28t max working load	Hr	5		
	b) 28.1-36.1t max working load	Hr	5		
	c) 36.1-56t max working load	Hr	5		
22.14	Small dumpers 751kg-1.2t max rated payload	Hr	5		
22.15	Excavators hydraulic wheeled dual purpose				
	a)0.6-0.8m3 rated bucket capacity	Hr	5		
	b)0.81-1.0m3 rated bucket capacity	Hr	5		
22.16	Pumps(Inclusive of all hoses)				
	a) 50-76mm delivery	Hr	5		
22.18	Wheeled loaders 4*4 articulated				
	a) 1.5-2.0 m3 SAE rated capacity	Hr	5		
22.2	Concrete mixers (wet capacity)				
	a) up to 100 litres	Hr	5		
	b) 101-200 litres	Hr	5		
22.21	Concrete poker vibrator	Hr	5		
22.22	Lorries -Ordinary				
	a) up to 7.5t gross vehicle weight	Hr	5		
22.23	Lorries Tippers				
	a) up to 11t gross vehicle weight	Hr	5		
	b) 11-17t gross vehicle weight	Hr	5		
22.24	Van, Pickup or similar utility vehicle				
	a) up to 1 t carrying capacity	Hr	5		
22.25	Self propelled water or fuel tanker				
	a) 3500-4550 litre capacity	Hr	5		
22.26	Pressure Bitumen distributor				
	a) 3500-4550 litre capacity	Hr	5		
22.27	Mechanical Broom	Hr	5		
Total forward to next page					

BILL NO. 22: DAY WORKS

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
	Brought forward from previous page				
	B. Labour				
	The rate inserted herein is to include all costs of labour such as insurance, accommodation, travelling time, overtime, use and maintenance of small tools of the trade, and supervision. Only the actual time engaged upon the work will be paid for, all in accordance with the Specifications.				
22.28	Labour				
	a) Unskilled Labour	Hr	15		
	b) Artisan	Hr	10		
	c) Plant Operator	Hr	10		
	d) Driver	Hr	10		
	e)Foreman	Hr	10		
	f) Office attendants and chainmen	Hr	10		
	g) Blaster (Certified)	Hr	10		
	C. Materials				
	All materials are to comply with the requirements of the specifications. The rates inserted are to include for delivery to the site, storage, and handing, etc.				
22.29	Ordinary Portland Cement	Tonne	5		
22.32	Mild Steel				
	a) Upto and including 16mm diameter	Tonne	1		
	b) Over 16mm diameter	Tonne	1		
22.33	High Yield Steel				
	a) Up to and including 16mm diameter	Tonne	1		
	b) Over 16mm diameter	Tonne	1		
22.34	Aggregates for Concrete				
	a) Fine	m3	5		
	b) coarse	m3	5		
22.35	Shuttering Timber				
	a) F1 finish	m2	5		
	b) F2 finish	m2	5		
	c) F3 finish	m2	5		
22.37	Chippings				
	a) Class 3 any size	m3	5		
	b) fine aggregate	m3	5		
22.38	Bitumen and emulsion				
	a) bitumen pen grade 80/100	ltr	50		
	b) bitumen cut-back MC-30	ltr	50		
	c)Bitumen emulsion - K1-60	ltr	50		
22.39	Gabion mesh, size 2.0m x 1.0m x1.0m	m2	25		
22.4	Rock fill to gabions	m3	25		
22.41	Dynamite stick explosives	kg	5		
22.42	Explosive fuse	m	5		
22.43	Detonators	No.	5		
Total of Bill No. 22 carried forward to summary					

BILL NO. 23: WATER AND SEWERAGE CONNECTION

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
23.1	Allow a Provisional Sum for Water connection	Prov Sum		700,000.00	700,000.00
23.2	Allow a Provisional Sum for Sewerage connection	Prov Sum		1,400,000.00	1,400,000.00
Total of Bill No. 23 carried forward to summary					

BILL NO. 24: LANDSCAPING AND ENVIRONMENTAL MITIGATION MEASURES					
ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
	Landscaping				
24.1	Supplying, Stacking and Spreading of good earth and manure at site including royalty and carriage up to 15m	m^3	50		
24.2	Supplying, Stacking and Planting flowering / avenue trees of at least 1m height above the ground level in excavated pits of size 1.2m x 1.2m x 1.2m and after planting, removal and stacking of excavated earth to desired location, filling the pit with soil				
	a) Large and small tree	No.	30		
24.3	Providing, Planting and Developing the plants, shrubs and flower bed on embankment slopes, inside the embankment and as shown on the drawing in excavated pits of size 0.6 x 0.6 x 0.6 and after planting removal and staking of excavated pits / bed with appropriate material				
	a) Medium Shrubs	No.	60		
	b) Small Shrubs	No.	120		
24.4	Grassing				
	(a) Planting of springs of approved indigenous type of grass	m^2	120		
24.5	Providing, Planting and developing the lawn in approved variety grass including excavating the existing soil to maximum depth 30 mm removing and stacking of excavated earth to directed location, dressing the soil in proper slope, mound, filling the excavation	m^2	120		
24.6	Providing and laying crazy stones as per direction of Engineer	m^2	120		
24.7	Transplantation of existing trees of girth above below 300 mm girth as directed by engineer, including uprooting and shifting of the tree and placing in excavated pits of suitable size and after transplanting, removal and stacking of excavated earth	No.	30		
24.8	Maintenance of transplanted trees including watering , including labour, all tools and equipment and maintaining up to defect liability period. as directed by Engineer up to defect liability period.	No.	30		
Total of Bill No. 24 carried forward to summary					

BILL NO. 25: ELECTRICAL AND MECHANICAL INSTALLATIONS

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
25.01	Allow a Provisional Sum for mechanical installations and fitting inclusive of the infra-structure	Prov Sum	1.00	2,000,000.00	2,000,000.00
25.02	Allow a Provisional Sum for electrical installations and fitting inclusive of the infra-structure	Prov Sum	1.00	2,100,000.00	2,100,000.00
Total of Bill No. 25 carried forward to summary					

BILL NO. 26: HIV/AIDS AWARENESS AND EDUCATION

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
26.1	Instituting a HIV/AIDS awareness campaign	month	12		
26.2	Instituting a HIV/AIDS prevention campaign	month	12		
26.3	HIV/AIDS Training				
a)	Allow a Prime Cost Sum for HIV/AIDS Training	PC sum		100,000.00	100,000.00
b)	Contractor's overheads and profits as a percentage of Sub-item 26.3 (a)	(%)			
Total of Bill No. 26 carried forward to summary					

SUMMARY		
ITEM	DESCRIPTION	AMOUNT KES
4.0	Site Clearance	
5.0	Earthworks	
7.0	Excavation and Filling for Structures	
8.0	Culverts and Drainage Works	
9.0	Passage of Traffic	
11.0	Footpaths	
12.0	Natural Material, Subbase and Base	
13.0	Graded Crushed Stone Subbase and Base	
14.0	Cement and Lime Treated Material	
15.0	Bituminous Surface Treatment and Surface Dressing	
16.0	Bituminous Mix Bases Binder Courses and Wearing Courses	
17.0	Concrete Works	
19.0	Structural Steel	
20.0	Road Furniture	
21.0	Miscellaneous Bridge Works	
22.0	Dayworks	
23.0	Water and Sewerage Connection	
24.0	Landscaping and Environmental Mitigation Measures	
25.0	Electrical and Mechanical Installations	
26.0	HIV/AIDS Awareness and Campaign	
	Sub - Total 2 (Sum of Item 1 to Item 26)	
Total carried forward to Grand Summary		

BILL NO. 4: SITE CLEARANCE AND TOP SOIL STRIPPING

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
4.01	Clear site on road reserve including removal of trees, hedges, bushes and other vegetation or deleterious organic material, grub up roots and backfilling of holes left by removal of stumps and roots to 100% MDD (AASHTO T99) with pproved material in accordance with the specificaion.	Ha.	0.7		
4.02	Removal of unsuitable material / top soil to an approved depth and	m^3	1290		
4.03	Cutting of trees of all girth above 300 mm including cutting of trunks, branches, uprooting and removal of all materials and stacking within the ROW and filling depressions/pits by earth etc. and dismantling of structures on roadway including Stone masonry, Plain Concrete ,Reinforced Concrete ,Dismantling of pavement, culverts, Footpaths and medians, fence , bus shelters etc.	Lump sum			
Total of Bill No.4 carried forward to summary page					

BILL NO.5: EARTH WORKS

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
	No separate payment shall be made for the haulage of surplus or unsuitable excavated material and the cost of such haulage shall be included in the rates and/or prices				
5.01	Fill in construction of embankment, benching of shoulders with approved soft material with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to 95% MDD (AASHTO T99) in accordance with the specification.	m^3	295		
5.02	Construction of sub-grade and earthen shoulders with approved material with all lifts & leads, transporting to site, spreading, grading to required slope and compacted to 100% MDD (AASHTO T99).	m^3	610		
5.03	Compacting original ground supporting sub-grade: Loosening of the ground up to a level of 300 mm below the sub-grade level, watered, graded and compacted in layers to meet requirement for sub-grade construction.	m^3	2625		
5.04	Scarifying to a depth of 150mm, levelling and compacting original ground to 95% MDD (AASHTO.T99)	m^3	1315		
5.05	Cut to Spoil in Soft Material	m^3	2320		
5.06	As Item 5.05 but hard material	m^3	240		
Total of Bill No.5 carried forward to summary page					

BILL NO. 7: EXCAVATION AND FILLING FOR STRUCTURES

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
7.01	Excavate in soft material for structure	m^3	500		
7.02	As Item 7.01 but Hard Rock (blasting prohibited)	m^3	2200		
7.03	Provide and place hardcore below structures	m^3	10		
7.04	Water proofing paper under slabs and foundations	m^2	500		
7.05	50 mm stone dust blinding to surfaces of hardcore to receive concrete	m^2	10		
Total of Bill No. 7 carried forward to summary page					

BILL NO. 8: CULVERTS AND DRAINAGE WORKS.

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
	No separate payment shall be made for the haulage of surplus or unsuitable excavated material and the cost of such haulage shall be included in the rates and/or prices				
8.01	Excavate in soft material to any depth for pipe culverts, subsoil drains, headwalls, wing walls, aprons, toe walls, and drop inlets, mitre drains, catch water drains, median drains including support of trench sides, backfilling and compacting as specified or as directed by the the Engineer.	m^3	50		
8.02	As Item 8.01 but in Hard Rock	m^3	5		
8.03	Provide, lay and joint 900mm diameter Precast Concrete pipes	m	30		
8.04	Provide, lay and joint 600mm I.D. Reinforced Cement Concrete pipes	m	10		
8.05	Provide and place class 15/20 concrete to beds, surrounds and haunches	m^3	20		
8.06	Provide and place class 25/20 concrete to headwalls, wingwalls, aprons, toe walls, inlets and outlets to pipe culverts including formwork	m^3	5		
8.07	Provide and place 300mm IBD complete with side slabs as per drawings and specifications	m	200		
8.08	Provide place and compact Rock fill below culverts	m^3	5		
Total of Bill No.8 carried forward to summary page					

BILL NO. 9: PASSAGE OF TRAFFIC

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
9.01	Construct temporary deviations as per the specification including drainage, construction of embankment as necessary to formation level using imported material with no extra payment for haulage in accordance with the specifications	km	0.5		
9.02	Provide signs and barriers in accordance with Clause 907 of the Standard Specifications	km	0.5		
9.03	Maintain the passage of traffic	Lump Sum	1		
9.04	Allow for reinstatement of deviations	Lump Sum	1		
Total of Bill No. 9 carried forward to summary					

BILL NO.11: FOOTPATHS

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
11.01	Providing and fixing in the footpath Interlocking concrete pavers unishape (monolithic single layer precast concrete blocks) of any specified colour / size & shape, with approved pattern etc. of 60 mm thick having average crushing strength of 50 N/mm2 on average thickness of 50 mm uniformly graded river sand cushioning with properly compacted with mechanical compactor with required level, grade and camber etc. complete as directed by Engineer.	m^2	1550		
Total of Bill No. 11 carried forward to summary					

BILL NO.12: NATURAL MATERIAL BASE AND SUBBASE

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
	No separate payments shall be made for the overhaul of material and the cost of such haulage shall be included in the rates and or prices				
12.01	Provide, place and compact natural gravel material to carriageway, junctions accesses and bus bays as directed by the Engineer	m^3	1470		
12.02	Provide, place and compact natural gravel material to footpaths as directed by the Engineer	m^3	470		
Total of Bill No. 12 carried forward to summary					

BILL NO. 13: GRADED CRUSHED STONE SUBBASE AND BASE

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
13.01	Providing, mixing, spreading and compacting Graded Crushed Stone (GCS) for Base with all leads and lifts complete.	m^3	980		
Total of Bill No. 13 carried forward to summary					

BILL NO. 14: CEMENT AND LIME TREATED MATERIAL

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
14.01	Provision, storage, hauling, transport and spreading cement on graded crushed stone base.	tonne	61		
14.02	Mix in cement in GCS (mix-in-place method)	m^3	980		
14.03	Allow for curing and protection of treated base as specified	m^2	4900		
Total of Bill No. 14 carried forward to summary					

BILL NO. 15: BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
15.01	Prepare surface of carriageway, shoulders, bus bays accesses and junctions , provide, heat and spray MC-30 bitumen emulsion prime coat at a rate of spray of 1.0 litre per square metre with all leads and lifts complete.	Lts	5880		
15.02	Clean and prepare surfaces, provide and spray K1-60 bitumen emulsion as tack coat to carriageway at a spray rate of 0.5 litres/m2 as directed by the Engineer with all leads and lifts complete..	Lts	5880		
Total of Bill No. 15 carried forward to summary					

BILL NO. 16: BITUMINOUS MIX BASES BINDER COURSES AND WEARING COURSES

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
	Note: No haulage will be paid for bitumen or chippings and this should be included in the rates tendered.				
16.01	Provide, lay and compact Asphalt Concrete(AC) with modified bitumen and 0/14mm aggregates on prepared surface of asphalt base layer with all leads and lifts (excluding tack coat) complete.	m^3	250		
16.02	Provide, lay and compact Dense Bituminous Concrete(DBM) with modified bitumen and 0/30mm aggregates on prepared surface of granular base layer with all leads and lifts (excluding tack coat) complete.	m^3	740		
Total of Bill No. 16 carried forward to summary					

BILL NO. 17: CONCRETE WORKS

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
17.01	Provide, place and compact blinding concrete Class 15 (20) to foundations, rate including form work erection and dismantling.	m^3	80		
17.02	Provide, place and compact concrete class 30 (20) in sub-structure(column bases, strip footings to walls)	m^3	597		
17.03	Provide, place and compact concrete class 30(20) to superstructure columns	m^3	20		
17.04	Provide, place and compact concrete class 30 (20) to superstructure ; deck slabs, ramp slabs, stairs, steps and beams, ground floor slab to toilets	m^3	240		
17.05	Provide, place 50mm of hardened screed to ramp and deck	m^3	45		
17.06	Unformed surface finish class UF1 to top of foundation	m^2	170		
17.07	Unformed surface finish class UF2 to top of deck	m^2	800		
17.08	Class F3 finish to soffit of deck	m^2	800		
17.09	Ditto but side and soffit of beams	m^2	600		
17.10	Vertical formwork to achieve class F2 finish	m^2	750		
17.11	Vertical formwork to achieve class F3 finish	m^2	750		
	REINFORCEMENT				
	Provide, cut, bend and fix as shown on drawing and as specified in the following items of reinforcement.				
17.12	High Yield Strength reinforcement bar to BS 4449, of diameter equal to or less than 16mm	Tonne	35		
17.13	High Yield Strength reinforcement bar to BS 4449, of diameter more than 16mm	Tonne	50		
17.14	Fabric mesh A142 to B.S 4483	m^2	70		
Total of Bill No. 17 carried forward to summary					

BILL NO. 19: STRUCTURAL STEEL

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
	Design, submission of orders, fabrication drawings, details and supply of structural steel works including material bolts,cleats,nuts ,washers ,welding rods and all other fixings and erection requirements, priming, painting ,shear studs to Engineer's approval etc complete as per drawing and standard specification				
19.01	Provide and install grade S275 steel trussed girder(curved) welded to specifications and formed to achieve a camber of 50mm inclusive of stiffeners ,splice and all other connections				
(i)	Provide and install 300x300x10mm Square Hollow Sections grade S275 steel welded/bolted to specifications inclusive of all connections (as bottom chord)	Tonne	11		
(ii)	Provide and install 250x250x8 Square Hollow Sections grade S275 steel welded/bolted to specifications inclusive of all connections (as top chord)	Tonne	8		
(iii)	Provide and install 150 x150x4 Square Hollow Sections grade S275 steel welded/bolted to specifications inclusive of all connections (As Internal Members)	Tonne	8		
(iv)	Provide and install 150 x150x6 Square Hollow Sections grade S275 steel welded/bolted to specifications inclusive of all connections (As Internal Members)	Tonne	3.1		
19.02	Provide and install 250 x 150x6mm RHS grade S275 steel welded/bolted to specifications inclusive of all connections (As Deck Beams)	Tonne	5.3		
19.03	Provide and install 120 x 120x10mm Angles grade S275 steel as deck bracings welded/bolted to specifications inclusive of connections	Tonne	4.2		
19.04	Provide and install 6mm grade S275 chequered steel plates as bridge deck formwork welded to specifications inclusive of connections	Tonne	10.75		
19.05	Provide and install 75mmϕ x 4mm CHS grade S275 as handrail connected to the trusses welded to specifications inclusive of connections	Tonne	1.3		
19.06	Provide and install 8mm thick mild steel plate as baluster spaced at 3000 mm c/c and as per details	Tonne	1.2		
19.07	Provide and install 50 mm diameter x 3.0 mm thick horizontal and raking hollow mild steel section handrail welded to balusters as per details	m	500		
19.08	(i) Provide and install 75x50x3 RHS grade S275 steel as roof rafters welded/bolted to specifications inclusive of all connections	Tonne	2		
	(ii) Provide and install 50 x25x2 RHS grade S275 steel as roof purlins welded/bolted to specifications inclusive of all connections	Tonne	1.5		
	(iii)Provide and install 150 x150x4 Square Hollow Sections grade S275 steel as vertical roof members welded/bolted to specifications inclusive of all connections	Tonne	2.9		
Total of Bill No. 19 carried forward to summary					

BILL NO 20: ROAD FURNITURE					
ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
	Road Marking and Road Signs				
	Road Marking				
20.01	Providing and laying hot applied thermoplastic road marking compound in approved colour and shade(ASTM 9) for road marking on bituminous surface in centre line 100mm,edge line 150mm wide 3.0mm thick using fully automatic extrusion machine and using premelter for melting thermoplastic Material including cleaning the surface of all dirt, dust, and other foreign matter, demarcation at site/ premarking, finishing and managing the traffic control etc. Complete. Marking to be done as per specifications, detailed drawings and as directed.				
	(i) For Lane marking (broken line) with white paint-100mm wide and 200mm wide for bus bays	m^2	185		
	(ii) For Edge lines (continuous line) with white paint-150mm wide	m^2	150		
	Permanent Road Signs				
20.02	Supplying and fixing **cautionary/warning road sign boards** made up with high intensity grade retro-reflective type sheeting (ASTM 9)complete as per drawing and technical specifications.	No.	1		
20.03	Supplying and fixing **regulatory/mandatory road sign boards** made up with high intensity grade retro-reflective type sheeting(ASTM 9) complete as per drawing and Technical specifications.	No.	1		
20.04	Supplying and fixing **informatory road sign boards** made up with high intensity grade retro-reflective type sheeting complete as per drawing and Technical specifications.		1		
	(i) Area less than 1.0 m^2	No.	2		
	(ii) Area more than 1.0 m^2, but less than 2 m^2	No.	2		
	(ii) Area more than 2.0 m^2, but less than 5 m2	No.	2		
20.05	Provide and fix concrete Edge Marker Posts on the outer edge of shoulder as per drawing, specifications and as directed by Engineer.	No.	4		
20.06	Excavate for, provide and place 440 x 250mm precast concrete kerb haunched in 100mm thick class 15/20 concrete base bedding and mortar jointed in support to carriageway, busbays and junctions as directed by the Engineer.				
	(a) Straight kerbs	m	1500		
	(b) Radius kerbs	m	95		
20.07	Provide for the fence between the raised kerbs as shown in the drawings or as directed by the Engineer	m	900		
20.08	Provide, lay and joint 150mm x 50mm precast concrete edging on the walkways	m	490		
20.09	Provide and place 20/20 Bollard size 1.2m * 0.1m * 0.1m embedded to a depth 0.2m where directed by the Engineer	m	15		
20.10	Provide for branding and painting to the Employer's Specification as directed by the Engineer	Prov Sum	1	1,000,000.00	1,000,000.00
Total of Bill No. 20 carried forward to summary					

BILL NO. 21: MISCELLANEOUS BRIDGE WORKS

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
21.01	Provide and apply "Thioflex 600" or similar approved cold poured polysulphide joint sealant (30mm deep by 25mm wide at movement joints as specified to Engineer's satisfaction and approval.	m	125		
21.02	Reinforced Cement Concrete crash barrier in Grade 30/20 including cost of reinforcement, steel plates and pipes complete as per drawing and Standard Specification for Road and Bridge Construction	m	100		
21.03	Provide and apply 25mm thick "Flexcell" low compression or similar approved joint Filler to movement joints	m	125		
21.04	Drainage Spouts including 100 dia GI pipes complete as per drawing and Standard Specification for Road and Bridge Construction Specification	No.	10		
21.05	Pipe handrail to bridges as per standard specification	m			
21.06	Supply and fix bearings complete as per drawings and as per BS:5400 part 9.2, BS 3784:1973 and as directed by Engineer				
	a) Sliding bearing				
	Capacity 700 Kn	No	3		
	Capacity 300 Kn		3		
	b) Fixed bearing				
	Capacity 700 Kn	No	3		
	Capacity 300 Kn		3		
21.07	Provide and apply two coats of water proofing as per manufucture's specification to Engineer's approval	m²	1010		
21.08	Provide and install rubber water bar 250mm deep inclusive of the fixing pegs to engineer's approval	m²	150		
21.09	Provide and lay EPDM water proofing laid to manufactures' specifications to engineers approval to top slab over ramp	m²	35		
21.10	Provide and apply one under coat and atleast two coats of Duracoat paint (or equivalent) to Engineer's approval	m²	700		
21.11	Hardcore Filling compacted in layers of 150mm under beds	m^3	20		
21.12	Provide and install perspex roof cover and/or sky light or similar approved inclusive of associated framing, sealants ,fixing clips and any other accessories incidental to the work	m²	900		
21.13	Chemical anti termite treatment to surface of hardcore, executed by an approved specialist under ten year guarantee	m²	70		
21.14	Natural stone walling to foundation in cement and sand mortar (1:3) to engineer's approval (225mm)	m²	150.00		
Total carried forward to next page					

BILL NO. 21: MISCELLANEOUS BRIDGE WORKS

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
	Total brought forward from previous page				
21.15	200 mm Machine cut stone walling to super-structure in cement and sand mortar (1:3) to engineer's approval	m²	100.00		
21.16	150 mm Machine cut stone walling to super-structure in cement and sand mortar (1:3) to engineer's approval	m²	75.00		
21.17	One layer of 1000 gauge polythene sheet dump-proof membrane with 300mm (measured net-allow for laps)	m²	35.00		
21.18	S.W.G hoop iron ties 30mm wide and 2.5mm thick built into alternate horizontal joints of block work	m	300.00		
21.19	25mm cement and sand (1:3) render to wall plinths	m²	100.00		
21.20	40 mm cement and sand (1:3) render to superstructure walls and beams	m²	500.00		
21.21	28mm cement and sand (1:3) render to ceramic tiles	m²	40.00		
21.22	25mm cement and sand (1:3) render to wall plinths	m²	40.00		
21.23	Prepare and apply two coats black bituminous paint on render plinths	m²	50.00		
21.24	300x300mm 24 gauge mild steel box gutters with welded joints and fixing brackets at 900mm centres	m	40.00		
21.25	100mm Diameter down water pipes	m	25.00		
	Supply,assemble and fix purpose made standard section mild steel casement glazed windows complete with permanent vents with mosquito proof gauze and all the necessary iron mongery,fixed to openings including cutting and pinning lugs to concrete or block /stone work surrounding and bedding frame in cement and sand (1:3) mortar. inclusive of paint work				
21.26	Window size as per drawings and specification	No.	5		
21.27	4 mm clear glass sheet as per drawings and specification	m	20.00		
21.28	Supply and fix semi-solid core flush doors inclusive of associated ironmongery and paint; size as per drawing and specification	No.	8		
21.90	Provide and install 450mm wide gratings to channel comprising of 30x3mm flats welded eo 50x50x3 EA section at spacing 50mm centre to centre	m	15.00		
21.30	12 mm heavy duty nonslip plain or printed coloured ceramic floor tiles	m²	50.00		
Total of Bill No. 21 carried forward to summary					

BILL NO. 22: DAY WORKS

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
	A. PLANT				
	The rates inserted herein are to include all operational and maintenance costs, fuel, oil, grease, drivers, and turn boy's wages supervision, overheads and profit. Only time actually employed upon the work will be measured and the rates shall include for idle time, travelling and overtime, all in accordance with the Specifications. ee Clause 2202 (a).				
	Note: All items of plant must be priced.				
22.01	Crawler Dozer and Hydraulic Ripper				
	a) 100-135 Kw rated flywheel power	Hr	5		
	b) 136-185 Kw rated flywheel power	Hr	5		
22.02	Motorized rubber tyred single engine scrapers				
	a) Up to 16m3 heaped capacity	Hr	5		
22.03	Motorized rubber tyred Twin engine scrapers				
	a) Up to 16m3 heaped capacity	Hr	5		
22.04	Motor Graders				
	a) 80-110 Kw rated flywheel power	Hr	5		
22.05	Rollers Towed vibratory including tractor				
	a) 6.5 -8.8t unballasted wt	Hr	5		
22.06	Road Roller deadweight (Steel Three Wheel)				
	a) 6.5 -8.8t unballasted wt	Hr	5		
22.07	Roller rubber tyred self propelled				
	a) 1.1t -2.0t per wheel	Hr	5		
22.08	Roller Vibratory single roll Rubber tyred				
	8.3-10.5 t unballasred weight	Hr	5		
22.1	Vibrating plate compactor 114-200 kg operating weight	Hr	5		
22.11	Compressor rated by normal delivery of free air per minute complete with all tools				
	a) 6.0-7.4 m3/mm	Hr	5		
	b)7.5-9.7m3/min	Hr	5		
	c) 9.8-25.5m3/min	Hr	5		
22.12	Mobile rubber tyred rough terrain crane 23-40 t max working load	Hr	5		
22.13	Tracked Excavator Cranes				
	a) 20-28t max working load	Hr	5		
	b) 28.1-36.1t max working load	Hr	5		
	c) 36.1-56t max working load	Hr	5		
22.14	Small dumpers 751kg-1.2t max rated payload	Hr	5		
22.15	Excavators hydraulic wheeled dual purpose				
	a)0.6-0.8m3 rated bucket capacity	Hr	5		
	b)0.81-1.0m3 rated bucket capacity	Hr	5		
22.16	Pumps(Inclusive of all hoses)				
	a) 50-76mm delivery	Hr	5		
22.18	Wheeled loaders 4*4 articulated				
	a) 1.5-2.0 m3 SAE rated capacity	Hr	5		
22.2	Concrete mixers (wet capacity)				
	a) up to 100 litres	Hr	5		
	b) 101-200 litres	Hr	5		
22.21	Concrete poker vibrator	Hr	5		
22.22	Lorries -Ordinary				
	a) up to 7.5t gross vehicle weight	Hr	5		
22.23	Lorries Tippers				
	a) up to 11t gross vehicle weight	Hr	5		
	b) 11-17t gross vehicle weight	Hr	5		
22.24	Van, Pickup or similar utility vehicle				
	a) up to 1 t carrying capacity	Hr	5		
22.25	Self propelled water or fuel tanker				
	a) 3500-4550 litre capacity	Hr	5		
22.26	Pressure Bitumen distributor				
	a) 3500-4550 litre capacity	Hr	5		
22.27	Mechanical Broom	Hr	5		
Total forward to next page					

BILL NO. 22: DAY WORKS

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
	Brought forward from previous page				
	B. Labour				
	The rate inserted herein is to include all costs of labour such as insurance, accommodation, travelling time, overtime, use and maintenance of small tools of the trade, and supervision. Only the actual time engaged upon the work will be paid for, all in accordance with the Specifications.				
22.28	Labour				
	a) Unskilled Labour	Hr	15		
	b) Artisan	Hr	10		
	c) Plant Operator	Hr	10		
	d) Driver	Hr	10		
	e)Foreman	Hr	10		
	f) Office attendants and chainmen	Hr	10		
	g) Blaster (Certified)	Hr	10		
	C. Materials				
	All materials are to comply with the requirements of the specifications. The rates inserted are to include for delivery to the site, storage, and handing, etc.				
22.29	Ordinary Portland Cement	Tonne	5		
22.32	Mild Steel				
	a) Upto and including 16mm diameter	Tonne	1		
	b) Over 16mm diameter	Tonne	1		
22.33	High Yield Steel				
	a) Up to and including 16mm diameter	Tonne	1		
	b) Over 16mm diameter	Tonne	1		
22.34	Aggregates for Concrete				
	a) Fine	m3	5		
	b) coarse	m3	5		
22.35	Shuttering Timber				
	a) F1 finish	m2	5		
	b) F2 finish	m2	5		
	c) F3 finish	m2	5		
22.37	Chippings				
	a) Class 3 any size	m3	5		
	b) fine aggregate	m3	5		
22.38	Bitumen and emulsion				
	a) bitumen pen grade 80/100	ltr	50		
	b) bitumen cut-back MC-30	ltr	50		
	c)Bitumen emulsion - K1-60	ltr	50		
22.39	Gabion mesh, size 2.0m x 1.0m x1.0m	m2	25		
22.4	Rock fill to gabions	m3	25		
22.41	Dynamite stick explosives	kg	5		
22.42	Explosive fuse	m	5		
22.43	Detonators	No.	5		
Total of Bill No. 22 carried forward to summary					

BILL NO. 23: WATER AND SEWERAGE CONNECTION

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
23.1	Allow a Provisional Sum for Water connection	Prov Sum		400,000.00	400,000.00
23.2	Allow a Provisional Sum for Sewerage connection	Prov Sum		4,200,000.00	4,200,000.00
Total of Bill No. 23 carried forward to summary					

BILL NO. 24: LANDSCAPING AND ENVIRONMENTAL MITIGATION MEASURES					
ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
	Landscaping				
24.1	Supplying, Stacking and Spreading of good earth and manure at site including royalty and carriage up to 15m	m^3	50		
24.2	Supplying, Stacking and Planting flowering / avenue trees of at least 1m height above the ground level in excavated pits of size 1.2m x 1.2m x 1.2m and after planting, removal and stacking of excavated earth to desired location, filling the pit with soil				
	a) Large and small tree	No.	30		
24.3	Providing, Planting and Developing the plants, shrubs and flower bed on embankment slopes, inside the embankment and as shown on the drawing in excavated pits of size 0.6 x 0.6 x 0.6 and after planting removal and staking of excavated pits / bed with appropriate material				
	a) Medium Shrubs	No.	60		
	b) Small Shrubs	No.	120		
24.4	Grassing				
	(a) Planting of springs of approved indigenous type of grass	m^2	120		
24.5	Providing, Planting and developing the lawn in approved variety grass including excavating the existing soil to maximum depth 30 mm removing and stacking of excavated earth to directed location, dressing the soil in proper slope, mound, filling the excavation	m^2	120		
24.6	Providing and laying crazy stones as per direction of Engineer	m^2	120		
24.7	Transplantation of existing trees of girth above below 300 mm girth as directed by engineer, including uprooting and shifting of the tree and placing in excavated pits of suitable size and after transplanting, removal and stacking of excavated earth	No.	30		
24.8	Maintenance of transplanted trees including watering , including labour, all tools and equipment and maintaining up to defect liability period. as directed by Engineer up to defect liability period.	No.	30		
Total of Bill No. 24 carried forward to summary					

BILL NO. 25: ELECTRICAL AND MECHANICAL INSTALLATIONS

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
25.01	Allow a Provisional Sum for mechanical installations and fitting inclusive of the infra-structure	Prov Sum	1.00	1,000,000.00	1,000,000.00
25.02	Allow a Provisional Sum for electrical installations and fitting inclusive of the infra-structure	Prov Sum	1.00	1,000,000.00	1,000,000.00
Total of Bill No. 25 carried forward to summary					

BILL NO. 26: HIV/AIDS AWARENESS AND EDUCATION

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
26.1	Instituting a HIV/AIDS awareness campaign	month	12		
26.2	Instituting a HIV/AIDS prevention campaign	month	12		
26.3	HIV/AIDS Training				
a)	Allow a Prime Cost Sum for HIV/AIDS Training	PC sum		100,000.00	100,000.00
b)	Contractor's overheads and profits as a percentage of Sub-item 26.3 (a)	(%)			
Total of Bill No. 26 carried forward to summary					

SUMMARY		
ITEM	DESCRIPTION	AMOUNT KES
4.0	Site Clearance	
5.0	Earthworks	
7.0	Excavation and Filling for Structures	
8.0	Culverts and Drainage Works	
9.0	Passage of Traffic	
11.0	Footpaths	
12.0	Natural Material, Subbase and Base	
13.0	Graded Crushed Stone Subbase and Base	
14.0	Cement and Lime Treated Material	
15.0	Bituminous Surface Treatment and Surface Dressing	
16.0	Bituminous Mix Bases Binder Courses and Wearing Courses	
17.0	Concrete Works	
19.0	Structural Steel	
20.0	Road Furniture	
21.0	Miscellaneous Bridge Works	
22.0	Dayworks	
23.0	Water and Sewerage Connection	
24.0	Landscaping and Environmental Mitigation Measures	
25.0	Electrical and Mechanical Installations	
26.0	HIV/AIDS Awareness and Campaign	
	Sub - Total 2 (Sum of Item 1 to Item 26)	
Total carried forward to Grand Summary		

GRAND SUMMARY		
ITEM	DESCRIPTION	AMOUNT KES
1.0	Preliminary and Supervisory Services	
2.0	Sub - Total 1 brought forward for Weiteithie Footbridge	
3.0	Sub - Total 2 brought forward for Mangu Road Footbridge	
Sub - Total 1 (Sum of Item 1 to Item 26)		
Add 10% of sub-total 1 of bills as Provisional sum for contingencies to be expended in the whole or part as directed by the Engineer.		
Add the sum of 15% of sub-total 1 of bills as Provisional sum for variations of price in accordance with Clause 70 of the Conditions of Contract.		
Sub - Total 2		
Add 16% of Sub-Total 2 for Value Added Tax		
Grand Total carried forward to Form of Bid		