REGIONAL SUBSTATION BUILDING MAINTENANCE

EMPANGENI ZONE - KZN

ITEM	DESCRIPTION	UNIT	RATE
	SECTION 1		
	DAYWORK RATES		
1	The Contractor shall, when requested by Eskom, make available the detailed breakdown of each priced item	Item	
2	The work will be undertaken in phases to allow for the smooth running of Eskom daily activities and operations.	Item	
3	The Contractor must make all necessary precautions to prevent damage to existing features and the private property of Eskom employees. Failure to comply with the above will lead to damages being recovered from the Contractor	Item	
4	Eskom will not pay contractors to provide quotes, this shall form part of the service	Item	
	Contract Document / Bill		
5	Contractor is urged to make careful reference to this document for its full intent and meaning. It should be noted that descriptions in the Bills of Quantities generally appear in brief, but whether specific reference to the Model Preambles and the "Supplementary Preambles" is made or not, they shall be deemed to apply fully to and augment the descriptions of the relevant items. No alterations, erasure, omission or addition shall be made to the text and conditions of these Bills of Quantities and should any such alteration, amendment, note or addition be made, the same will not be recognised, but the reading of the Bills of Quantities as prepared by Properties will be adhered to.	Item	

Completion Date

6 Contractor will be given a specific period of time to complete a certain task/job (in writing). Failure to reach an agreement shall lead to application of penalties which will be as follows:

R 0 - R 1000-00 = 30%

R 1000-01 - R 5000-00 = 20%

R 5000-01 - R 15 000 = 10%

Above R 15 000-00 = 5%

The above percentages will be deducted from the Project Total value as shown above per day

Occupational Health & Safety Act No 85 of 1993

7 By the submission of a tender, any Tenderer will, if awarded the contract to which this tender document relates, be deemed to be the mandatory as envisaged by Section 37 (2) of the Act. As a mandatory the successful Tenderer will be deemed to be the "Principal Contractor" and an Employer in his/her/their own right with duties as prescribed in the Act accordingly will be deemed to have agreed to be solely responsible for ensuring that in connection with the service to which this tender document relates, all work will be performed and machinery and plant used in accordance with the Act. Should the Contractor, for whatever reason be unable to perform as required by the Act, No subcontracting will be permitted unless approved by the PM prior.

Safety Helmets and Protective Clothing

8 1/1/82 The Contractor shall take all necessary steps to ensure that all workmen employed on the Works comply with regulations regarding the wearing of safety helmets and other PPE required for the execution of the work.
The Contractor shall provide and keep on site an adequate supply of clean safety helmets and protective clothing for the use of all Employer's agents and all authorised visitors.
Notice boards shall be erected warning all workmen and visitors to wear safety helmets on or about the Works

The Contractor undertakes to inform the Employer accordingly.

The Contractor (mandatory) will be required to:-

1. provide the Employer with a health and safety programme and plan specifically related to the Works and ensure that the programme and plan are implemented and maintained, with the programme being subject to audit, at least once a month, by the Employer;

2. exercise discretion and if deemed relevant (by the Contractor) appoint Safety Officer (in writing) to assist in the control of all safety related aspects, and to give input into the health and safety plan;

3. appoint (in writing) a full time competent supervisor (as defined in the Regulation in terms of the Act) to supervise the project;

4. provide the Employer and any sub-contractors by the Contractor and/or nominated sub-contractors with a programme of construction for the Works as well as a method statement with the necessary details and procedures for execution as when required;

5. provide the Employer both before commencing and during construction work with a copy of a risk assessment performed by a competent person who has been appointed in writing by the Contractor, and the risk assessment must form part of the health and safety plan;

6. ensure that every employee or person (including visitors) who enters the site of the Works undergoes health and safety induction training pertaining to hazards identified on the site of the Works and upon such training having been successfully completed, the Contractors must issue written confirmation by a competent person to the trained employees or persons who shall be further instructed to carry such confirmation with them at all times whilst on the site of the Works;

7. issue, on loan, the necessary personal protective equipment to visitors to the site of the Works which is demarcated

8. provide employees with a suitable vehicle to transport staff to site, no staff will be transported on the rear of any vehicle
No tools should be in the same vehicle as employees

Contractors attention is drawn to the attached - Policy on the handling and disposal of asbestos and asbestos containing waste in terms of Section 20 of the Environment Conservation Act 1989 (Act 73 of 1989)

The Contractor must ensure;

9 The use of construction equipment and mobile plant will be restricted for the use of only trained and authorized operators and will be supervised by a competent person appointed in writing.
Are regularly maintained and in good working order.
Inspected daily prior to use by a competent and authorized persons.
All construction vehicles shall comply with the requirements of the Provincial Administration Road Ordinance and those stipulated in the Road Traffic Act. No transportation of employees at the back of the bakkie. Suitable provision of transportation should be provided fitted with SABS approved safety belts.
All mobile plant shall conform to the Occupational, Health and Safety Act (85 of 1993).
The construction site is arranged and managed, to ensure that as far as is reasonably possible and practicable, all pedestrians and vehicles can move and work in a safe environment without risk to personnel or equipment on the construction site.

Protection of Persons and Property

10 The Contractor shall adopt all safety measures in compliance with all the statues, regulations, etc., and shall take all measures to protect all property and to secure the safety and freedom from injury of all persons.

The Contractor shall in addition take all necessary steps to prevent nuisance from dust and the like and shall use every endeavour to minimise noise emanating from the Contract Works. The Contractor is referred to the various forms that require his attention prior to commencing work on site - All forms duly completed and signed must be forwarded to the COW/PC/PM

Contractor's Responsibility

11 The PM/PC/COW and the other professional consultants shall not be responsible for any act or omission on the part of the Contractor, which may result in any patent or latent defects, in materials or workmaship, breach or neglect of any local regulations. The Contractor shall at all times be responsible for any such neglect, deviation or wrong act, whether the same is discovered before or after the final certificate, or any other Certificate, has been approved

In order to maintain the integrity of the site during construction, it shall be necessary to implement security measures applicable to Contractors employees. It is expected of the Contractors Site Supervisors to exercise control over their staff and maintain order.

Site Instructions and Records

12 The Contractor shall supply and have available at the site of the works at all times, the following books:-

1. Site Instruction Book

Receiving and recording instructions in a suitable A4 size triplicate book kept on site. Instructions issued shall be recorded and signed by the COW/PC or PM

Only site instructions issued in such a book shall be recognised

Setting out of the Contract Works

13 The site shall not be used by the Contractor for any purpose other than that of carrying out the Contract works. The Contractor shall set out the Contract Works and shall be held solely responsible and liable for the correct centre lines, levels and gradients.

Site Cleanliness

14 The Contractor shall clear away all dirt, rubbish and superfluous material as they accumulate and leave the whole of the site clean and tidy on completion to the satisfaction of the COW, PC or PM on daily basis. Material to be dumped to the registered dumping site and issue the certificate that shows dumped quantities

Programme

15 The Contractor will be required to submit an outline programme of work to completion of the contract if required

	Dayworks Labour costs (for work during normal working hours Monday to Friday 07:00am - 16:00pm)			
16	Skilled (Painter, Bricklayer, Plaster, Carpenter, Locksmith, Welder, Tiler, etc	Hrs		
17	Semi-skilled	Hrs		
18	Unskilled	Hrs		
	Dayworks Labour costs (for work after normal working hours , weekends and public holiday).			
	Overflowing of normal working up to 18:00pm will be claasified as normal			
19	Skilled (Painter, Bricklayer, Plaster, Carpenter, Locksmith, Welder, Tiler, etc	Hrs		
20	Semi-skilled	Hrs		
21	Unskilled	Hrs		
	Materials			
22	All material taken out during any alterations or any replacement which deemed to be usable or has certain value as per Clerk of Works or Project Coordinator or Project Manager discretion shall be set aside and be stored in a described storage area/warehouse/room/yard. If the Contractor decides or instructed to take the material away by Eskom "Properties" Representative, 15 - 25% Salvage Value shall be deducted from the project value	%		
	Tax invoice of external work **0 - R10 000 , 10%** **10 001- 50 000 - 7%** **50 001 - 100 000 - 5%** **100 001 - 3%**			

23	Percentage mark up of material over and above the price of new materials delivered to site (Max of 5% will be allowed). This will only apply to the material which is not part of the contract Regular tests will be conducted on materials to check if the quality meets an Eskom, SABS and Manufacturer Standard. If the Contractor is found using counterfeited material, s/he will be required to replace or re-apply the material at his/her own expense. The Contractor shall furnish samples of materials and specimens of finishes as may be called for by the COW/PC/PM The COW/PC/PM may reject any workmanship not corresponding with approved samples. Approved samples are to be kept on site until the completion of the Works and thereafter removed if not required in the finished work The standard of workmanship and the quality of materials to be utilised throughout this Contract shall be the best of their respective kinds and shall comply in all respects with the latest South African Burea of Standard Specifications, Codes of Practice, co-ordinating Specifications and Standard methods or where not available, with the latest relevant British Standards	%		
	Transport			
24	Transport will be paid from the contractor's declared offices in the tender stage as per their utility bill / lease agreement for property used as offices / workshops. A maximum of 2 return trips per week will be allowed. No trip shall be paid if the Contractor failed to complete a job/task/order which could have been finished in a particular period of time due to his/her own fault (E.g. Failure to make proper arrangement with "Properties" or the "Client" to access the site, failure to obtain all the necessary information about the job that needs to be done, lack of labour force, improper/poor job planning, communication failure between the Contractor and Properties/Client, etc) Contractors cannot claim time spent travelling as part of their labour cost, this needs to be factored into their rate	km		

	PRELIMINARIES AND GENERAL			
	Note:			
	Site Establishment, Temporary Accomodation, Travelling, etc			
	Site establishment, temporary accomodation (living out), daily travelling out to site, toll fees, transportation of plant and disestablishment of site will be deemed to be Preliminary and General items (The Contractor is not allowed to charge both "P & G" and "Transport/travelling" at the same time)			
25	Maximum 6% on the net value of work if it exceeds R50 000.00	%		
26	Maximum 8% on the net value of work if it does not exceeds R50 000.00	%		
	Water			
27	The Contractor shall provide all water at the site for the Works at his own expense and shall pay all charges levied by the owners of or controllers of any water supply and from which he may reach his requirements where necessary	Item		
	Electricity and Lighting			
28	The Contractor shall provide any artificial lighting which may be necessary or required for the proper execution of any portion of the Works, and provide electric power for any purpose required in connection with the Works, including for all electric light and power required by all Sub-Contractors where necessary	Item		

	SECTION 2			
	BILL No 1			
	ALTERATIONS			
	TEMPORARY BARRIERS, SCREENS, ETC			
1	Allow for strutting as necessary, any portion of the work to ensure the stability of the premises and to ensure, and adjoining premises, with suitable and substantial timber and other materials for so doing and remove			
2	Allow for making good in all trades to existing work where damaged or disturbed through alterations with all necessary new materials to match existing and leave complete and perfect in every respect.			
3	Give all notices to the Municipality and / or other Authorities and pay all fees legally payable and include for the removal or alteration or disconnection of electrical wires or cables, telephone wires and poles which may be encountered on the site			
	REMOVAL OF EXISTING WORK			
	Breaking up and removing reinforced/mass concrete including cutting off and removing reinforcement			
4	Stairs and landings	m2		
5	not exceeding 100mm Thick slabs	m2		
6	Exceeding 100mm and not exceeding 250mm Thick slabs	m2		
7	Exceeding 250mm and not exceeding 300mm Thick slabs	m2		
8	Exceeding 300mm and not exceeding 350mm Thick slabs	m2		
9	Exceeding 350mm and not exceeding 400mm Thick slabs	m2		
10	Beams	m3		
11	Columns	m3		

	Breaking down and removing brickwork etc			
12	Mass Brickwork	m3		
13	Half brick wall	m2		
14	One brick wall	m2		
15	280mm Hollow wall	m2		
	Take down and remove doors, windows, roofs, floors, ceilings, partitions, etc , and make good			
16	Timber single door and frame 810 x 2032mm high	No		
17	Timber double door and frame 1600 x 2100mm high	No		
18	Timber single door and steel frame 810 x 2032mm high	No		
19	Timber double door and steel frame 1600 x 2100mm high	No		
20	Glazed timber window not exceeding 2.5m2.	m2		
21	Glazed timber window exceeding 2,5m2	No		
22	Glazed steel window not exceeding 2,5m2.	m2		
23	Glazed steel window exceeding 2,5m2	No		
	Taking out and removing doors, windows, etc including thresholds, sills, etc (building up openings elsewhere)			
	Taking out doors, windows, etc including thresholds, sills, etc and handing to employer (building up openings elsewhere)			
	Taking out doors, windows, etc including thresholds, sills, etc and setting aside for re-use (re fixing and building up openings elsewhere)			
	Taking out and removing doors, windows, etc including thresholds, sills, etc and building up openings in brick walls including making good cement plaster on both sides (making good paint work elsewhere)			

	Taking out and removing doors, windows, etc including thresholds, sills, etc and building up openings in brick walls including making good face brickwork on one side and cement plaster on other side (making good paint work elsewhere)			
24	Timber single door and frame 813 x 2032mm high	No		
25	Timber double door and frame 1500 x 2100mm high	No		
26	Timber single door and steel frame 813 x 2032mm high	No		
27	Timber double door and steel frame 1500 x 2100mm high	No		
28	Glazed timber window not exceeding 2.5m2	No		
29	Glazed timber window exceeding 2,5m2	No		
30	Glazed steel window not exceeding 2,5m2	No		
31	Glazed steel window exceeding 2,5m2	No		
	Taking down and removing roofs, floors, panelling, ceilings, partitions, etc			
32	Corrugated iron roof covering and timber purlins	m2		
33	Concrete roof tiles covering and timber purlins/branderings including plastic underfelt	m2		
34	Asbestos roof covers or cladding including steel/timber purlins or branderings (Specialist Contractor - to fully comply with asbestos removal regulations)	m2		
35	Timber or fibre cement fascias,barge boards, eaves coverings, etc including all necessary trimming of roof timbers	m		
36	Drywall partitioning exceeding 2,6m high including doors, ironmongery, glazed borrowed lights, etc. Doors should be carefully removed and set aside for re-use	m		
37	Gypsum plasterboard ceilings including cornices, timber brandering, etc	m2		
38	Suspended ceilings including suspension grid, hangers, etc	m2		
39	Sisalation 410 housing grade glass fibre reinforced aluminium foil bonded insulation	m		

	Taking up and removing vinyl floor coverings, carpeting, etc			
40	Vinyl tile floor covering including preparing screed for new vinyl floor covering	m2		
41	Vinyl sheet floor covering with welded joints including preparing screed for new vinyl floor covering	m2		
42	Vinyl skirtings from brickwork	m		
43	Full carpet floor covering including preparing screed for new carpeting	m2		
	Taking out and removing sundry joinery work			
44	Timber skirtings from brickwork	m		
45	Timber cornices from brickwork	m		
46	Timber sills from brickwork	m		
	Taking out and removing joinery fittings etc			
	Taking out and removing joinery fittings etc, setting aside for re-use and later refixing in new position			
47	Built-in wall wooden cupboards not exceeding 2,6m high	m		
48	Built-in wall wooden cupboards exceeding 2,6m high	m		
49	Built-in floor wooden cupboard	No		
50	Timber sink cupboard including disconnecting waste pipe (new trap and connecting to new waste pipe elsewhere)	No		
51	Wall shelves and pigeon holes not exceeding 2,6m high	m		
52	Wall shelves and pigeon holes exceeding 2,6m high	m		
53	Timber counter not exceeding 1,5m high	No		
	Refixing of existing doors, windows, etc (removal and setting aside elsewhere)			
54	Setting up and building in timber/steel door frame in brickwork, rehanging single/double door on new 100mm brass hinges.	No		
55	Setting up timber/steel window in brickwork.	m2		

	Hacking up/off and removing granolithic, screeds, plaster, etc from concrete or brickwork and preparing surfaces for new screeds, plaster, etc			
56	50mm Granolithic from floors, treads and risers	m2		
57	25mm Screed from floors	m2		
58	Internal plaster from walls and columns	m2		
59	Internal plaster from ceilings and beams	m2		
60	External plaster from walls, columns and beams	m2		
	Hacking up/off and removing ceramic tile floor and wall finishes including removing mortar bed or backing and preparing concrete or brick surfaces for new screed, plaster or tile finishes			
61	Tiles to floors	m2		
62	Tiles to treads and risers of stairs	m2		
63	Tiles to walls	m2		
64	Tile skirting	m		
	Taking out and removing ironmongery			
65	Mortice lock and striking plate from timber door and steel frame	No		
66	Chromium plated towel rail not exceeding 1000mm long	No		
67	Chromium plated toilet paper holder	No		
68	Chromium plated hat and coat hook	No		
	Taking out/off and removing sundry metalwork			
69	Steel pipe handrail from walls including making good plaster finish	m		
70	Steel balustrade not exceeding 1,2m high high from concrete stairs including making good granolithic finish to kerb	m		
71	Steel wire mesh burglar proofing with framing bolted to brickwork and making good face brickwork	No		

	Carefully Take out and remove piping, sanitary fittings, etc and set aside for r-euse, including disconnecting piping from fittings and making good floor and wall finishes (making good tiling and paintwork elsewhere)			
72	Galvanised steel piping including fittings and brackets	m		
73	Cast iron piping including fittings and brackets	m		
74	Copper piping including fittings and brackets	m		
75	Stainless steel sink and drainer on timber cupboard 1200 x 600 x 900mm high	No		
76	Stainless steel wash hand basin	No		
77	Vitreous china wash hand basin	No		
78	Vitreous china WC pan with cistern	No		
79	Vitreous china wall hung urinal with flush valve	No		
80	Stainless steel urinal including breaking up and removing concrete urinal step	m2		
81	Porcelain urinal including breaking up and removing concrete urinal step	No		
	Taking out and removing glass , mirrors , putty etc.			
82	Glass from steel windows including cleaning out rebates and preparing for new glass	m2		
83	Glass from timber windows with beads including cleaning out rebates and preparing for new glass	m2		
84	Mirror from wall including making good wall tiling	No		
85	Old putty from steel/timber window including applying new putty.	m		
	Removal of vertical and horizontal denim/metal blinds and setting aside for re-use or elsewhere stated			
86	Vertical/horizontal blind complete with aluminium track	m		

	BUILDING UP OPENINGS			
	Sundries			
87	Cutting toothings and bonding new brickwork to existing	m2		
	Face bricks pointed with recessed horizontal and vertical joints			
88	Extra over brickwork for face brickwork in patches	m2		
89	Brick-on-edge header course sill set sloping and slightly projecting	m		
90	Cutting toothings and bonding new face brickwork to existing	m		
	Brickwork in NFP bricks in class II mortar in building up openings			
91	Half brick walls	m2		
92	One brick walls	m2		
93	280mm Hollow walls of two half brick skins including wire ties	m2		
	Face bricks pointed with flush horizontal and vertical joints			
94	Extra over brickwork for face brickwork in patches	m2		
95	Brick-on-edge header course sill set sloping and slightly projecting	m		
	Refixing of existing partition doors, windows, etc (removal and setting aside elsewhere)			
96	Setting up and building in timber door in spacewall/Drywall partiton, rehanging single/double door on new 100mm brass hinges and replacing lock with two lever mortice lock where necessary	No		
	MAKING GOOD OF FINISHES ETC			
97	Making good brickwork at end of half brick wall	m		
98	Making good brickwork to face of wall where half brick cross wall removed	m		
99	Making good face brickwork at end of one brick wall	m		
100	Making good face brickwork to face of wall where one brick cross wall removed	m		
	Making good internal cement plaster			
101	Floors in patches	m2		

102	Floors where partitions removed	m		
103	Walls in patches	m2		
	Making good screed and floor covering			
104	Floors where half brick walls removed	m		
105	Floors where one brick walls removed	m		
	Making good "Rhino" gypsum plasterboard ceilings and brandering			
106	Ceilings in patches	m2		
	OPENINGS THROUGH EXISTING WALLS ETC			
	Breaking out for and forming plain openings through brick walls including necessary precast concrete lintels and making good plaster on both sides and into reveals and with concrete thresholds with steel trowelled finish (making good paintwork elsewhere)			
107	Opening 900 x 2100mm high through half brick wall	No		
108	Opening 900 x 2100mm high through one brick wall	No		
	Breaking out for and forming openings through brick walls for new doors and frames including necessary precast concrete lintels and making good plaster on both sides and into reveals and with concrete thresholds with steel trowelled finish (new doors and frames and making good paintwork elsewhere)			
109	Opening for door with timber frame 900 x 2100mm high overall through half brick wall	No		
110	Ditto but 1600 x 2100mm high	No		
111	Opening for door with timber frame 900 x 2100mm high overall through one brick wall	No		
112	Ditto but 1600 x 2100mm high	No		

113	Opening for door with steel frame 900 x 2100mm high overall through half brick wall	No		
114	Ditto but 1600 x 2100mm high	No		
115	Opening for door with steel frame 900 x 2100mm high overall through one brick wall	No		
116	Ditto but 1600 x 2100mm high	No		
	Breaking out for and forming openings through brick walls for new windows including necessary precast concrete lintels and making good plaster on both sides and into reveals and with sloping sill on outside and flat sill on inside (new windows and making good paintwork elsewhere)			
117	Opening for window through half brick wall not exceeding 2,5m2	m2		
118	Opening for window through half brick wall exceeding 2,5m2	m2		
119	Opening for window through one brick wall not exceeding 2,5m2	m2		
120	Opening for window through one brick wall exceeding 2,5m2	m2		
121	Opening for window through 280mm hollow wall of two half	m2		
	brick skins including building 50mm cavity solid with brickwork in NFP bricks in class II mortar not exceeding 2,5m2			
122	Opening for window through 280mm hollow wall of two half	m2		

	BILL N0 2			
	EARTHWORKS (PROVISIONAL)			
	SUPPLEMENTARY PREAMBLES			
	Nature of ground			
	Use "assumed to be" if no trial holes, soils investigations, etc have been carried out - discuss with engineer. Use "Trial holes indicate that" where the ground has been investigated by means of trial holes			
	Nature of ground			
	A soils investigation has been carried out on site by the engineer and the report is annexed to these bills of quantities. Descriptions of excavations shall be deemed to include all ground conditions classifiable as "earth" described in the above report and where conditions of a more difficult character are indicated these are separately measured			
	Carting away of excavated material			
	Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site			
	DEMOLITIONS ETC			
	Breaking up and removing			
1	Concrete surface beds, paving, etc not exceeding 0,2m thick	m2		
2	Reinforced concrete surface beds, paving, etc not exceeding 0,2m thick	m2		
3	Brick paving with mortar joints not exceeding 0,085m thick	m2		
4	Concrete kerbs not exceeding 1,0m length	m		
	Taking down and removing			
5	Diamond mesh fence high with steel posts and droppers not exceeding 2,5m high	m		
6	Concrete pallisade fence with posts and droppers not exceeding 2,5m high	m		
7	Concrete solid panel fence with posts and droppers not exceeding 2,5m high	m		
8	Steel palisade fence with posts and droppers not exceeding 2,5m high	m		
9	Security fence with 45 degree barbed wire overhang overall with posts and droppera not wxceeding 2,5m high	m		

10	One brick boundary or yard wall not exceeding 2,5m high	m		
11	Half brick boundary or yard wall not exceeding 1,5m high	m		
	SITE CLEARANCE ETC			
	Site clearance			
12	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth	m2		
13	Stripping average 100mm thick layer of top soil and stockpiling on site	m2		
	REMOVAL OF TREES ETC			
	Where the value is of significance, the removal of hedges etc shall be given separately in meters or in number			
	Taking out and removing, grubbing up roots and filling in holes			
14	Tree stump exceeding 200mm and not exceeding 500mm girth	No		
15	Tree stump exceeding 500mm and not exceeding 1000mm girth	No		
	Cutting down and removing, grubbing up roots and filling in holes			
16	Hedge not exceeding 1000mm high	m		
17	Hedge exceeding 1000mm and not exceeding 2000mm high	m		
	EXCAVATION, FILLING, ETC OTHER THAN BULK			
	Open face excavation in earth over sloping site			
18	Open face excavation	m3		

	Excavation in earth not exceeding 2m deep			
19	Reduced levels under floors	m3		
20	Trenches	m3		
21	Holes	m3		
22	Trenches and holes for thickening under surface beds etc	m3		
	Extra over bulk excavation in earth for excavation in			
23	Soft rock	m3		
24	Hard rock	m3		
	Extra over trench and hole excavations in earth for breaking up and removing			
25	Brickwork	m3		
26	Unreinforced concrete	m3		
27	Reinforced concrete	m3		
	Extra over all excavations for carting away			
28	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor (contractor to provide proof of acceptance by the land owner)	m3		
	Risk of collapse of excavations			
29	Sides of trench and hole excavations not exceeding 1,5m deep	m2		
30	Sides of trench and hole excavations exceeding 1,5m deep	m2		
	Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 95% Mod AASHTO density			
31	Under floors, steps, pavings, etc	m3		
	Earth filling supplied by the contractor compacted to 95% Mod AASHTO density			
32	G2 Under Floors	m2		
33	G5 Under Floors	m2		
34	Backfilling behind retaining walls	m3		
35	Backfilling to trenches, holes, etc	m3		

36	Crusher run the surface	m3		
	Coarse river sand filling supplied by the contractor			
37	Umgeni Sand under floors etc	m3		
38	Behind retaining walls	m3		
39	In floor ducts	m3		
	Hardcore filling			
40	Under floors etc	m3		
	Stone filling of 19mm broken stone			
41	Under floors etc	m3		
42	Behind retaining walls	m3		
43	In flower boxes	m3		
	Stone filling of 25-27mm stone			
44	Substations	m3		
	Compaction surfaces			
45	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% MOD AASHTO density	m2		
	Prescribed density tests on filling			
46	"Modified AASHTO Density" test	No		
47	"Natural California Bearing Ratio" test	No		
48	"Road Indicator" test	No		
49	"Field Density" test including "Optimum Moisture Content" (four readings per test)	kg		

	SOIL POISONING (complete with certificate)			
50	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming	m2		
51	Under paving	m2		
	GRASSING			
	Grassing of roots in rows			
52	"Kikuyu" grass over site	m2		
	Grassing of sods			
53	"Kikuyu" grass over site	m2		
	GABIONS AND INTERLOCKING BLOCK RETAINING STRUCTURES			
	Gabions of galvanised wire boxes laced together and filled with broken stone			
	"Loffelstein" precast concrete interlocking planter blocks finished smooth on exposed surfaces			
	Precast concrete interlocking planter blocks finished smooth on exposed surfaces			
	"Loffelstein" planter blocks are available in various sizes and in "standard" and "heavy duty" in each size. Type is dependent mainly of wall and soil conditions			
54	Retaining structure with stepped face and curves as required to suit slopes of 500 x 450 x 170mm high type L300 interlocking planter blocks laid horizontal bed joints to a certain degree slope including backfilling with earth obtained from the excavations and filling the blocks with garden soil lightly tamped as the work proceeds	m2		
	joints to a certain degree slope including backfilling with earth obtained from excavations and filling the blocks with garden soil lightly tamped as the work proceeds			

	"Terraforce" precast concrete interlocking planter blocks			
55	Retaining structure with stepped face and curves as required to suit slopes interlocking planter blocks laid with horizontal bed joints to a certain degree slope including backfilling with earth obtained from the excavations and filling the blocks with garden soil lightly tamped as the work proceeds	m2		
56	Retaining structure with stepped face and curves as required to suit slopes interlocking planter blocks laid with horizontal bed joints to a certain degree slope including backfilling with earth obtained from the excavations and filling the blocks with garden soil lightly tamped as the work proceeds	m2		

	BILL No 3			
	CONCRETE, FORMWORK AND REINFORCEMENT			
	SUPPLEMENTARY PREAMBLES			
	Cost of tests			
	The costs of making, storing and testing of concrete test cubes as required under clause 7 "Tests" of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the architect. The testing shall be undertaken by an independent firm or institution nominated by the contractor to the approval of the architect. (Test cubes are measured separately)			
	Formwork			
	Description of formwork shall be deemed to include use and waste only (except where described as "left in" or "permanent"), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use			
	The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself.			
	Formworks to soffits of solid etc shall be deemed to be slabs not exceeding 250mm thick unless otherwise described			
	Formwork to sides of bases, pile caps, ground beams, etc will only be measured where it is prescribed by the engineer for design reasons. Formwork necessitated by irregularity or collapse of excavated faces will not be measured and the cost thereof shall be deemed to be included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in "Earthworks"			
	UNREINFORCED CONCRETE			
	20MPa concrete			
1	Strip footings		m3	
3	Bases		m3	
4	Surface blinding under surface beds		m3	
5	Surface blinding under footings and bases		m3	

6	Ramps	m3		
8	Steps, urinal steps, cupboard platforms, etc	m3		
	REINFORCED CONCRETE			
	25MPa concrete			
9	Strip footings	m3		
10	Surface beds	m3		
11	Bases	m3		
12	Slabs including beams and inverted beams	m3		
	Finishing top surfaces of concrete smooth with a wood float			
	Concrete Sundries			
13	Surface beds, slabs, etc	m2		
	Finishing top surfaces of concrete smooth with a steel trowel			
14	Surface beds, slabs, etc	m2		
	Finishing top surfaces of concrete smooth with a power float			
15	Surface beds, slabs, etc	m2		
16	Surface beds, slabs, etc to falls	m2		
	ROUGH FORMWORK (DEGREE OF ACCURACY III)			
	Rough formwork to sides			
17	Edges exceeding 300mm high	m2		
18	Beams	m2		
19	Walls	m2		
	MOVEMENT JOINTS ETC			
	Slip joints between horizontal concrete and brick surfaces including cement mortar bed			
20	Exceeding 300mm wide	m2		

21	Not exceeding 300mm wide	m		
	Expansion joints with 10mm softboard between vertical and horizontal surfaces			
22	Joints exceeding 300mm high	m2		
23	Joints not exceeding 300mm high	m		
	Saw cut joints			
24	5mm x 30mm Saw cut joints in top of concrete	m		
	REINFORCEMENT			
	REINFORCEMENT (PROVISIONAL)			
25	Type Ref 100 fabric reinforcement in concrete surface beds, slabs, etc	m2		
26	Type Ref 193 fabric reinforcement in concrete surface beds, slabs, etc	m2		
27	Type Ref 245 fabric reinforcement in concrete surface beds, slabs, etc	m2		

	BILL No 4			
	PRECAST CONCRETE			
	SUPPLEMENTARY PREAMBLES			
	Sizes:			
	Blocks, sills, etc measured linear shall be made in suitable lengths. Large size setting out drawings shall be prepared where necessary and submitted to the architect for approval before moulds are made			
	General:			
	Where kerbstones, blocks, etc are laid in ground descriptions shall be deemed to include necessary excavation, filling in and ramming			
	PRECAST CONCRETE			
	User note:			
	The following precast concrete paving descriptions are only to be used when paving slabs etc are purpose made to detailed specifications and other than those available ex stock			
	Slab paving of 500 x 500 x 50mm precast concrete slabs with pattened finish laid on 50mm thick river sand bed including preparation of ground or filling			
1	Paving laid with butt joints	m2		
2	Paving laid with butt joints to falls	m2		
	Kerbing			
3	Kerbing slabs	m		
	Fencing			
4	Concrete palisade fencing - 2.4m high	m		
5	Cement concrete wall - 1.8m high			

	Note: Invoices for fencing and gates to be supplied			
	Steel Palisade			
6	50 x 50 angle iron strapping, 40 x 40 x 3 mm angle iron pales with 100 x55 IPE posts at 2.4m height. All hot dipped galvanized	No		
7	1200 x 2400mm High steel palisade single pedestrian gate to match existing	No		
8	4m Double gate to match exising.	No		
9	5m Double gate to match existing	No		
10	6m Double gate to match existing	No		
11	4m Sliding gate to match exising.	No		
12	5m Sliding gate to match exising.	No		
13	6m Sliding gate to match exising.	No		
	Diamond razor barbed wire fencing including two coats aluminium paint on metal stays, framing, etc.			
14	2.4m High diamond razor fencing formed of I-section or Y-section standards with wooden poles	m		
15	2.4m High diamond razor fencing formed of I-section or Y-section standards with galvanised poles	m		
16	2.4mm High diamond razor fencing formed of I-section with flat wrap razor wire (50mm) with galvanised poles	m		
	Diamond Mesh Wire			
17	Farm style gate - 3m x 1.2m high	No		
	Clear View Fencing			
18	Clearvu fencing	m		

	Louver Door			
	38 x 38 x 3 mm Square tubing for framework with 3 mm plates louver inserts 18 mm round bar and 5 mm plate locking mechanism, Insect and rodent proof steel mesh on inside of complete door. All hot dipped galvanized.			
	Note: Invoices to be supplied			
19	Single Door	No		
20	Double Door	No		
21	Vent	No		
22	Installation of anti device - stay	No		
23	Installation of anticlimb flat wrap.	No		
	"Winblok" modular precast concrete window surrounds etc finished smooth on exposed surfaces including bedding, jointing and pointing			
24	Window surrounds are to be built into brick walls and pointed all round on both sides with 10 x 10mm square recessed joints	m		
25	Prices are to include for building in as single units or combinations in patterns of two or more window units and for bedding solid all round in mortar and pointing	m		
	Note: Aluminium infill windows, glazing and pointing with sealing compound are measured elsewhere			
26	590 x 590 x 260mm Type WA 260 window surround	No		
27	590 x 590 x 260mm Type WA Q260 quadrant window surround	No		
28	515 x 515 x 40mm Type WAP flush panel fixed in surround with silicone sealant adhesive	No		

BILL No 5

MASONRY

SUPPLEMENTARY PREAMBLES

BRICKWORK

Sizes in descriptions

Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick

Hollow walls etc

Descriptions of hollow walls shall be deemed to include leaving every fifth perpend of the bottom course of the external skin open as a weep hole.

Walls in two skins described as "bagged and sealed" shall be deemed to include having the outer face of the inner skin bagged with 1:6 cement and sand mixture and sealed with two coats "Brixeal" bitumen emulsion waterproofing coating.

User note:

The above preamble generally applies for works in hot and humid coastal areas

Face bricks

Bricks shall be ordered timeously to obtain uniformity in size and colour

Pointing

Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc

BLOCKWORK

Concrete masonry units

Blocks are to be either solid or hollow modular dense concrete masonry units having a compressive strength of 7 MPa

	Wall ties for blockwork			
	Wall ties shall be polypropylene "Permaties" complying with BS 76377. Ties for hollow walls shall be of sufficient length to allow not less than 75mm of each end to be built into the blockwork. Ties are to be spaced at intervals of not more than 1m in the horizontal direction and not more than 400mm staggered in the vertical direction except at openings, vertical joints or ends of walls where they are to be placed vertically above each other			
	Blockwork			
	Blockwork shall comply with SABS 0145 "Concrete Masonry Construction"			
	Surfaces to be plastered shall have joints raked out to a depth of at least 10mm to provide a key. Cavities of hollow walls shall be kept free of mortar droppings or other undesirable matter. Every second perpend of the bottom course of the external skin of hollow walls shall be left open as a weep hole			
	FOUNDATIONS (PROVISIONAL)			
	Brickwork of NFX bricks (14 MPa nominal compressive strength) in class I mortar			
1	Half brick walls	m2		
2	One brick walls	m2		
3	280mm Hollow walls of two half brick skins (including wire ties)	m2		
	SUPERSTRUCTURE			
	Brickwork of NFP bricks in class II mortar			
4	Half brick walls	m2		
5	Half brick walls in beamfilling	m2		
6	One brick walls	m2		
7	One brick walls in beamfilling	m2		
8	280mm Hollow walls of two half brick skins (no wire ties)	m2		

	BRICKWORK SUNDRIES			
9	Cutting toothings and bonding new brickwork to existing	m2		
10	Closing 50mm cavity of hollow wall vertically with brickwork half brick wide	m		
	Fair face to brickwork in horizontal stretcher bond pointed with flush horizontal and vertical joints			
11	Extra for fair face	m2		
12	Half brick walls pointed on both sides	m2		
	Bagging of 1:3 cement and sand mixture			
13	On brick walls, piers, etc.	m2		
	Brickwork reinforcement			
14	75mm Wide reinforcement built in horizontally	m		
15	150mm Wide reinforcement built in horizontally	m		
	Turning pieces			
16	100mm wide turning piece to lintels, etc	m		
	P504 prestressed fabricated lintels			
17	110 x 75mm Lintels in lengths not exceeding 3m	m		
18	114 x 90mm Lintels in lengths not exceeding 3m	m		
	Air bricks etc			
19	229 x 76mm Clay vermin proof air brick	No		
20	229 x 152mm Clay vermin proof air brick	No		
21	230 x 160mm Cement air brick	No		
22	233 x 175mm Foam plastic air vent	No		
23	262 x 185mm Fibrous plaster air vent	No		
	Steel bar reinforcement			
24	8mm Diameter mild steel bars built in horizontally including epoxy coating and drilling approximately 200mm deep	No		
25	10mm Diameter mild steel bars built in horizontally including epoxy coating and drilling approximately 200mm deep	No		

	FACE BRICKWORK			
	Face bricks pointed with flush horizontal and vertical joints			
26	Extra over brickwork for face brickwork	m2		
27	Extra over brickwork for face brickwork in foundation (Provisional)	m2		
28	Extra over brickwork for face brickwork for brick on edge header course lintel	m2		
	Brick-on-edge header course copings, sills, etc of Satin Red face bricks or to match the existing pointed with flush joints on all exposed faces			
29	Sill set sloping and slightly projecting	m		
30	Coping on top of one brick wall	m		
31	110mm wide sill set level and slightly projecting	m		
32	110mm wide sill set sloping and slightly projecting	m		
	BLOCKWORK			
	Blockwork in class II mortar			
33	140mm Walls	m2		
34	190mm Walls	m2		
	NUTEC-CEMENT/FIBRE-CEMENT WINDOW SILLS			
	Natural grey sills in single lengths bedded in class I mortar including metal fixing lugs etc			
35	10x 114mm Wide sills set flat and slightly projecting	m		

	PAVING			
	Paving of 220mm paving bricks with butt joints on 25mm thick river sand bed with sand and cement mixture swept into joints and hosed down including preparation of ground or filling			
	Paving of 220mm paving bricks with open joints on 25mm thick river sand bed with sand and cement mixture swept into joints, hosed down and pointed with slightly keyed joints including preparation of ground or filling			
	Paving of 500 x 500 x 50mm thick precast concrete paving blocks with butt joints on 25mm thick river sand bed with sand swept into joints including preparation of ground or filling			
36	Paving in stretcher bond	m2		
	Paving of 220mm paving bricks			
37	Paving in stretcher bond on 25mm thick mortar bed	m2		
	75mm Thick double zig-zag (shape S-A) interlocking precast concrete paving blocks complying with SABS 1058 laid with butt joints on 25mm thick river sand bed with sand swept into joints including preparation of ground or filling			
	Light grey "Grinaker G-blocks" interlocking precast concrete (35 MPa) paving blocks laid with butt joints on 25mm thick river sand bed with sand swept into joints including preparation of ground or filling			
	220 interlocking precast concrete paving blocks laid with butt joints on 25mm thick river sand bed with sand swept into joints including preparation of ground or filling			
38	Paving of 85mm thick blocks including edge blocks	m2		

	BILL No 6			
	WATERPROOFING			
	SUPPLEMENTARY PREAMBLES			
	Waterproofing			
	Waterproofing of roofs, basements, etc shall be laid under a ten year guarantee. Waterproofing to roofs shall be laid to even falls to outlets etc with necessary ridges, hips and valleys. Descriptions of sheet or membrane waterproofing shall be deemed to include additional labour to turn-ups and turn-downs			
	DAMP-PROOFING OF WALLS AND FLOORS			
	One layer of 375 micron "Consol Plastics Brikgrip DPC" embossed damp proof course			
1	DPC in walls	m2		
	One layer of 250 micron "Consol Plastics Gunplas USB Green" waterproof sheeting sealed at laps with "Gunplas Pressure Sensitive Tape"			
2	Under surface beds	m2		
3	Vertically between walls	m2		
4	Under window sills	m2		
	WATERPROOFING TO ROOFS, BASEMENTS, ETC			
	Five coat "Acrylastic" fibre reinforced heavy duty maintenance free acrylic waterproofing			
	Three layers type 60 roofing felt sealed with hot bitumen compound			
	"Bondglass" flexible reinforced waterproofing			
	One layer "Bituthene 3000" waterproofing			

	4mm "Derbigum SP" waterproofing			
	4mm "Derbigum SP" fully bonded waterproofing			
	4mm "Derbigum SP" waterproofing covered with type 40 bituminous fibreglass felt loose laid protection layer with coarse building sand blinding			
5	On flat floors	m2		
6	On sloping floors	m2		
7	On balcony floors	m2		
8	On shower floors	m2		
9	On walls	m2		
	Two layers "Trinico" mastic asphalt waterproofing			
	Two layers mastic asphalt waterproofing			
	Two layers mastic asphalt trafficable waterproofing with coarse building sand or fine stone chips evenly spread and well rolled in			
10	On flat roofs including "Kraftex" grade 22 paper underlayer with 30mm laps	m2		
	PROTECTIVE ROOFING PAINT			
	Two coats "Silvakote" bituminous aluminium paint			
	Two coats bituminous aluminium paint			
	Two coats "Plycol Colortop" heavy duty acrylic emulsion paint			
	Two coats heavy duty acrylic emulsion paint			
11	On waterproofing to roofs	m2		
12	On waterproofing to box gutters	m2		

	JOINT SEALANTS ETC			
	Two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc			
	Silicone sealing compound including backing cord, bond breaker, primer, etc			
13	6 x 10mm In saw cut joints in floors	m		
14	10mm x 25mm In expansion joints in Verticle or horizontal joints including raking out expansion joint filler as necessary	m		
15	In joints between steel windows and wall	m		
16	In joints between concrete slab and wall	m		

	BILL No 7			
	ROOF COVERINGS ETC			
	TILES			
	The fixing recommendations of the manufacturer of the tiles used for the specific region and/or situation are to be incorporated as supplementary preambles			
	Roman concrete/terra cotta tiles laid on an underlay micron plastic sheeting with 75mm lapped and sealed joints and nailed through underlay with non-corrosive tile nails and/or fixed with suitable non-corrosive clips as required nailed through underlay to sawn softwood battens			
	"Double Roman" concrete tiles nailed with non-corrosive tile nails to sawn softwood battens.			
1	Roof covering with pitch not exceeding 25 degrees	m2		
2	Side cladding to gables etc	m2		
3	Soffit cladding to overhangs etc.	m2		
4	Extra on roof covering for double course at eaves including sawn softwood tilting fillet.	m		
5	Ridge tiles to match roofing tiles bedded and pointed in 1:3 cement mortar tinted to match tile colour	m		
6	Circular cutting	m		
7	Hip tiles to match roofing tiles bedded and pointed in 1:3 cement mortar tinted to match tile colour	m		
8	Verge capping tiles to match roofing tiles fixed with non-corrosive fixing accessories	m		
9	Purpose made tile to end of ridge bedded and pointed in 1:3 cement mortar tinted to match tile colour	No		
10	Purpose made tile to 3-way intersection of ridge with hips bedded and pointed in 1:3 cement mortar tinted to match tile colour	No		

	PROFILED METAL SHEETING AND ACCESSORIES			
	Supplementary preambles in connection with fixing of sheeting and accessories and laps are to be inserted when the Model Preambles for Trades (or other preambles not covering the fixing of sheeting and accessories and laps) are used			
	When the pitch of troughed roof covering is less than 5 degrees or if dustproofing is required then the description of roof coverings "with side laps sealed" is to be used			
	Where roof coverings are fixed on top of rigid board insulation to purlins etc descriptions of roof coverings are to include therefore			
	Note that sheeting is also available in corten steel, stainless steel, copper and aluminium			
	"Big Six" Fibre Cement sheeting fixed to timber steel purlings or rails			
11	Roof covering with pitch not exceeding 25 degrees	m2		
	0.8mm "IBR" galvanised sheet steel fixed to timber/steel purlins or rails			
12	Roof covering with pitch not exceeding 25 degrees	m2		
13	Side cladding	m2		
14	Soffit cladding.	m2		
15	Ridge capping 300mm girth	m		
16	Side wall flashing 300mm girth	m		
17	Head wall flashing 300mm girth	m		
18	Apex flashing	m		
19	Gable trim	m		
20	Apron flashing	m		

	ROOF AND WALL INSULATION			
	"Sisalation 420" heavy industrial grade aluminium foil based insulation			
21	Insulation laid taut over purlins and fixed concurrent with roof covering including galvanised steel straining wires	m2		
	"Structaboard" aluminium foil faced polyisocyanurate foam core rigid board insulation			
	"Structaboard" aluminium foil faced polyisocyanurate foam core rigid board insulation with clear lacquer finish on one side and white lacquer finish on other side			
22	Insulation laid in 1200mm widths with longitudinal flap joints laid over purlins and fixed concurrent with roof covering including holes through boards etc	m2		
	SHEET METAL FLASHINGS, LININGS, COPINGS, ETC			
	Galvanised sheet iron			
	Galvanised sheet iron with finish on one side			
	0,6mm "Saftal" aluminium sheet			
23	Flashings	m2		
24	Stepped cover flashings	m2		
25	Soakers	m2		
26	Linings to valleys with riveted and soldered joints	m2		
27	Circular cutting	m		
28	Apron flashing	m		
29	Cover flashing	m		
30	Coping attached with suitable clips at 500mm centres along both edges, riveted to coping and plugged to brickwork or concrete	m		

BILL No 8

CARPENTRY AND JOINERY

SUPPLEMENTARY PREAMBLES

Particle board:

Particle board shall comply with the following specifications:

a) SABS 1300 Particle board: exterior and flooring type

b) SABS 1301 Particle board: interior type

Joinery:

Descriptions of frames shall be deemed to include frames, transomes, mullions, rails, etc

Descriptions of hardwood joinery shall be deemed to include pelleting of bolt holes

Fixing

Items described as "nailed" shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete

Decorative laminate finish:

Laminate finish shall be glued under pressure. Edge strips shall be butt jointed at junctions with adjacent similar finish

ROOFS ETC

Plate nailed timber roof truss construction

The following is applicable in respect of roof trusses:

Trusses are at maximum 750mm centres

Roof covering is nailed/screwed on purlins/battens. Ceilings are 6mm sheeting (with skimming) on 38 x 38mm brandering The references given in the descriptions are to the respective types of trusses detailed on the architect's drawings numbered annexed to these bills of quantities/accompanying these bills of quantities for tender purposes

	The dimensions in the descriptions of the trusses are nominal and actual measurements are to be obtained from the architect and/or the site before design or fabrication commences			
	Sawn softwood			
1	38 x 114mm Wall plates	m		
2	38 x 114mm Sprockets	m		
3	38 x 38mm Battens for tile roof covering or branderings for ceilings	m		
4	50 x 76mm Battens for metal sheet roof covering	m		
	Sundries			
5	Two coats creosote on sawn timbers	m2		
	EAVES, VERGES, ETC			
	"Everite FC77" pressed fibre-cement			
	"Everite Flexit" pressed nutec-cement			
6	Eaves soffit covering	m2		
7	Cover strips	m		
8	12 x 225mm Fascias and barge boards including galvanised steel H-profile jointing strips	m		
	SKIRTINGS			
	Wrought softwood			
	Wrought meranti			
9	19 x 76mm Skirting including quadrant	m		
	DOORS ETC			

	Wrought meranti doors hung to steel/timber frames			
10	40mm Framed stable door	No		
11	40mm Framed single door	No		
12	40mm Framed double door	No		
	40mm hollow core flush doors with masonite finish			
13	40mm Door 813 x 2032mm high	No		
14	40mm Double door 1206 x 2032mm high	No		
	40mm hollow core flush doors with commercial veneer			
15	40mm Door 813 x 2032mm high	No		
16	40mm Double door 1206 x 2032mm high	No		
	40mm semi-solid flush doors with masonite finish			
17	40mm Door 813 x 2032mm high	No		
18	40mm Double door 1206 x 2032mm high	No		
	40mm semi-solid flush doors with commercial veneer			
19	40mm Door 813 x 2032mm high	No		
20	40mm Double door 1206 x 2032mm high	No		
	STEEL/TIMBER WINDOWS			
21	Wrought meranti windows	m2		
22	Standard residential steel windows	m2		
	STEEL/TIMBER FRAMES ETC			
	Wrought meranti			
23	76 x 76mm Rebated frames plugged	m		
24	76 x 102mm Rebated frames plugged	m		

	1,2mm Rebated frames suitable for half brick walls			
25	Frame for door 813 x 2032mm high	No		
26	Frame for double door 1206 x 2032mm high	No		
	1,2mm Rebated frames suitable for one brick walls			
27	Frame for door 813 x 2032mm high	No		
28	Frame for double door 1206 x 2032mm high	No		
	1,2mm Double rebated frames suitable for 280mm hollow walls			
29	Frame for door 813 x 2032mm high	No		
30	Frame for double door 1206 x 2032mm high	No		

	BILL No 9			
	CEILINGS, PARTITIONS AND ACCESS FLOORING			
	SUPPLEMENTARY PREAMBLES			
	Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete			
	Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as "bolted" the bolts have been given elsewhere			
	CEILINGS ETC			
	Wrought meranti			
1	75mm Cornices nailed	m		
	Insulation			
2	Insulation closely fitted and laid on top of brandering between roof timbers etc	m2		
	NAILED UP CEILINGS			
	6.4mm Gypsum plasterboard with cover strips over joints.			
3	Ceilings including 38 x 38mm sawn softwood brandering at 350mm centres	m2		
4	Ditto set sloping	m2		
5	Ceilings nailed to existing sawn softwood brandering.	m2		
6	Ditto set sloping	m2		
7	Extra over ceiling for 900 x 900 mm trap door	No		

	SUSPENDED CEILINGS			
	Proprietary suspended ceilings			
	Note:			
	Electrical light fittings, diffusers, panels, etc generally are "lay in" units of the same dimensions as the suspension grid described and allowance must be made accordingly for their support inclusive of any flexibility insetting out that may be required (ceiling panels have not been deducted and pricing is to take cognisance thereof)			
	User note:			
	a) The above note to be included in the bills of quantities after confirmation of the basic design of the ceilings, lighting, air conditioning, etc			
	Pre-painted 600 x 600 x 6mm chamfered and grooved acoustic panels on concealed tee suspension system including main and cross tees, necessary hangers, grids, etc			
9	Ceilings suspended not exceeding 1m below concrete soffits	m2		
10	Ceilings suspended exceeding 1m and not exceeding 2m below concrete soffits	m2		
11	Sloping ceilings suspended not exceeding 1m below concrete soffits	m2		
12	Sloping ceilings suspended exceeding 1m and not exceeding 2m below concrete soffits	m2		
	"Shadowline" cornices to suspended ceilings			
13	Pre-painted cornices plugged	m		

	BILL No 10			
	FLOOR COVERINGS			
	300 x 300 x 2.5 mm semi-flexible vinyl tiles			
1	On floors	m2		
2	Circular cutting	m		
3	On treads and risers of stepped floors	m2		
4	On treads and risers of stairs	m2		
	500 x 500mm Bitumen backed carpet tiles - Colour "Boron"			
5	On floors	m2		
	500 x 500mm carpet tiles			
6	On floors	m2		
	Tufted carpeting including felt underlay etc			
7	On floors	m2		
	Epoxy floor covering			
8	On floors	m2		
	SKIRTINGS, NOSINGS, ETC			
9	75 mm vinyl skirtings	m		

	BILL No 11			
	PLASTERING			
	SCREEDS			
	Cement plaster screeds steel trowelled on concrete			
1	25mm Thick on floors and landings	m2		
	Self leveling cement			
2	On floors	m2		
	INTERNAL PLASTER			
	12mm cement plaster on brickwork			
3	On walls	m2		
4	On narrow widths	m2		
	EXTERNAL PLASTER			
	15mm cement plaster on brickwork			
5	On walls	m2		
6	On narrow widths	m2		
	Sundry			
7	Chip existing plastered walls or screeded floors for new tiles or plaster(em)	m2		
8	Apply Key Coat bonding agent to wall or floors	m2		

	BILL No 12			
	TILING			
	Descriptions			
	Unless described as "fixed with adhesive to plaster (plaster elsewhere)" descriptions of tiling on brick or concrete walls, columns, etc shall be deemed to include 1:4 cement plaster backing and descriptions of tiling on concrete floors etc shall be deemed to include 1:3 plaster bedding			
	WALL TILING			
	200 x 250mm Tiles to match existing substation			
1	On walls	m2		
2	On narrow widths	m2		
	150 x 150 x 5mm tiles on brickwork **Tiles to match existing substation**			
3	On walls	m2		
4	On narrow widths	m2		
	EDGE TRIMS			
	Edge trims			
5	7mm hard extruded plastic tile edge trim sealed behind tiles with adhesive at horizontal or vertical corners.	m		
6	6mm Sure trip aluminium straight edge strim.	m		
	FLOOR TILING			
	330mx330mm x 8mm ST100 Ceramic floor tiles on 25mm bedding on concrete and flush pointed with tinted waterproof jointing compound			
7	On floors and landings	m2		
8	Skirting 75mm high of (cut-tile 300 x 75 mm skirting tiles.	m		
	Mosaic floor tiles on 25mm bedding on concrete and flush pointed with tinted waterproof jointing compound			
9	On floors and landings	m2		

	BILL No 13			
	IRONMONGERY			
	HINGES, BOLTS, ETC			
1	100 x 75mm Brass but hinge	No		
2	100 x 75mm Steel hinge	No		
3	100 x 75mm Aluminium hinges	No		
	LOCKS			
	The following locks are to be suitable for master and grand master key operation			
4	Indicator bolts	No		
5	Two lever upright mortice lockset	No		
6	Three lever upright mortice lockset	No		
	DOOR CLOSERS			
	Door closers			
7	"Overhead door closers	No		
	LETTERS, NAMEPLATES, ETC			
8	60mm brass barrel bolt with keep fixed to metal	No		
9	75mm brass barrel bolt with keep fixed to metal	No		
10	100mm brass barrel bolt with keep fixed to metal	No		
11	150 x 150 x 3mm anodised aluminium plate with male or female symbol	No		

12	150 x 150 x 3mm anodised aluminium plate with Paraplegic symbol	No		
13	32mm Type 9 back grab rail 800mm long plugged	No		
14	32mm Type 8 side grab rail 900mm girth plugged	No		
	SUNDRIES			
15	38mm Diameter rubber door stop	No		
16	Window stays	No		

	BILL NO. 14			
	PLUMBING AND DRAINAGE			
	RAINWATER DISPOSAL			
	"Watertite" or other equally approved PVC gutters, etc.			
1	100 x 75mm Eaves gutters	m		
2	Extra over eaves gutter for stopped end	No		
3	Extra over eaves gutter for angle	No		
4	Extra over eaves gutter for outlet for 75 x 75mm pipe	No		
5	75 x 75mm Rainwater pipes	m		
6	75mm diameter Rainwater pipes	m		
7	Extra over rainwater pipe for shoe	No		
8	Extra over rainwater pipe for bends	No		
9	Extra over rainwater pipe for eaves or plinth offset 600mm projection	No		
	"Watertite" or other equally approved aluminium gutters, etc.			
10	4500 Litre Heavy Duty Vertical 'Jo Jo ' or other approved Chemical tank	No		

	SANITARY FITTINGS ETC			
	Vitreous China/Ceramic Fireclay fittings including assembling and fixing in position, expanding bolts and mortice in brick or concrete walls, connecting up to waste and water supplies complete and sealed around			
11	90 Degree outlet with heavy duty flap seat and complete with matching 9 litre cistern complete with lid, fitments, and flushpipe elbow.	No		
12	90 Degree outlet wash downpan with heavy duty flap seat and complete with matching 9 litre cistern complete with lid, fitments, and purpose made CP side flush lever.	No		
13	White wall mounted bowl urinal with back inlet including 38mm CP domical grating, spreader with 20mm diameter thread and 2 no. hanger brackets	No		
14	White wash hand basin with two tapholes complete with 301-32 CP brass waste and 309-32 anti-theft plug on brackets fixed to tiled wall	No		
	Stainless Steel Fittings			
	Stainless steel for urinals, basins, sinks, wash troughs, institutional equipment, etc. shall be type 304			
15	Stainless steel double bowl sink size 1200 x 535mm fitted on to cupboard (cupboard elsewhere) including Cobra 115 star pillar tap (1 no. hot and 1 no. cold) wih flanged backnut s-041 swivel outlet	No		
16	Stainless model 'HRT' 1.5m long half round wash trough with splash back	No		

	BILL No 15			
	GLAZING			
	GLAZING TO STEEL/WOOD WITH PUTTY			
	4 mm Clear float glass			
1	Panes not exceeding 0,1 m2	m2		
2	Panes exceeding 0,1m2 and not exceeding 0,5m2	m2		
3	Panes exceeding 0,5m2 and not exceeding 2m2	m2		
	4 mm Patterned/Obscure glass			
4	Panes not exceeding 0,1 m2	m2		
5	Panes exceeding 0,1m2 and not exceeding 0,5m2	m2		
6	Panes exceeding 0,5m2 and not exceeding 2m2	m2		
	TOPS, SHELVES, DOORS, MIRRORS, ETC			
	6mm Silvered float glass copper backed mirrors with 10 mm bevelled and polished edges holed for and fixed with chromium plated dome capped mirror screws with rubber buffers to plugs in brickwork or concrete			
7	Mirror 450 x 600 mm high with 40mm screws	No		
8	Mirror 700 x 500 mm high with 40mm screws	No		

BILL No 16

PAINTWORK

SUPPLEMENTARY PREAMBLES

Note:

All paintwork in this contract shall, unless otherwise described, be executed using"Plascon or Dulux" range of products or approved equal

Tax invoice of paint to be supplied with invoice for payment to confirm paint quality

Eskom Standard Colours:

* Hudson E14-2 - Office & Rooms Internal Wall

* Gruyere A11-2 - Office & Rooms External Walls

* White Acrylic - Office & Rooms Window Frames

* Mayan Stone E14-4 - Office, Rooms, Kitchen and Ablutions Door Frame Internal / External

* Sumbrero E14-5 - Office, Rooms, Kitchen & Ablutions

* White Enamel / Gloss - Kitchen / Ablutions Internal / External Walls, Window Frames & Ceiling

* Terracotta - Fascia Boards / Downpipes / Gutters

* Workshops: - SIKA Floor 156ZA, Primer 261ZA, HBC Epoxy, 66ZA Sealer Coat

* TSC: - Prostruct 639 Primer & Prostruct 623 Hi Build

SANS Specifications:

Alkali-resistant plaster primer: SANS 1416

Matt or eggshell decorative paint for interior works: SANS 515

High gloss enamel paint: SANS 630 Grade I

Oil gloss enamel paint: SANS 631

Primers for wood for external work: SANS 678 Type I

Primers for wood for internal work: SANS 678 Type II

Zinc chromate primers for steel: SANS 679 Type I

Undercoats for paints (except emulsion paint): SANS 681 Type I

Aluminium paint: SANS 682 Grade II

Roof paints: SANS 683 Type B (Oil based)

Roof paints: SANS 940 (Emulsion based)

Structural steel paint: SANS 684 Type B

Wash primer (metal etch): SANS 723

Varnish for interior use: SANS 887 Type I

Emulsion paints: SANS 1227 (Textured: Internal/External)

Emulsion paints: SANS 1586 (Gloss, Semi Gloss, Matt: Internal/External)

Calcium plumbate primer: SANS 912

Road marking paint: SANS 5731 Part I

PREPARATORY WORK TO EXISTING WORK

Previously painted plastered surfaces

Surfaces shall be thoroughly washed down and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and cracks shall be opened, filled with a suitable filler and finished smooth

Wall surfaces to be cleaned down using sugar soap.

Previously painted metal surfaces

Surfaces shall be thoroughly rubbed and cleaned down. Blistered or peeling paint shall be completely removed down to bare metal

Previously painted wood surfaces

Surfaces shall be thoroughly cleaned down. Blistered or peeling paint shall be completely removed and cracks and crevices shall be primed, filled with suitable filler and finished smooth

	SUBSTATION COLOUR PAINT			
	External - Fired Earth, Hurricane			
	Internal - Fired Earth - White			
	PAINTWORK ETC TO NEW WORK			
	PAINTWORK ETC TO PREVIOUSLY PAINTED WORK			
	One filler coat			
1	On internal walls	m2		
2	On external walls	m2		
3	On ceilings and beams	m2		
4	On partitions	m2		
5	On fascias and barge boards	m2		
6	On floated plaster	m2		
7	On textured plaster	m2		
8	On smooth concrete	m2		
9	On rough concrete	m2		
10	On bagged brickwork or concrete	m2		
11	On fair faced brickwork	m2		
12	On plaster board	m2		
13	On fibre cement	m2		
	One coat interior quality Acrylic PVA emulsion paint			
14	On internal walls	m2		
15	On external walls	m2		
16	On ceilings and beams	m2		
17	On partitions	m2		
18	On fascias and barge boards	m2		
19	On power floated floors	m2		

	Two coats interior quality Acrylic PVA emulsion paint			
20	On internal walls	m2		
21	On external walls	m2		
22	On ceilings and beams	m2		
23	On partitions	m2		
24	On fascias and barge boards	m2		
25	On power floated floors	m2		
	ON SLATE			
	ON BRICKS OR QUARRY TILES			
	Two coats wax polish :			
26	On floors	m2		
27	On sills, thresholds, etc	m2		
28	On flush pointed faced walls	m2		
29	On recessed pointed faced walls	m2		
	ON METAL			
	One coat calcium plumbate primer:			
30	On doors	m2		
31	On door frames etc	m2		
32	On strongroom doors and frames	m2		
33	On roller shutter boxes	m2		
34	On windows	m2		
35	On columns and beams	m2		
36	On members of lattice columns and beams	m2		
37	On members of roof trusses	m2		
38	On corrugated iron roof sheeting (measured on flat)	m2		
39	On profile troughed/ribbed roof sheeting (measured on flat)	m2		

40	On rails, bars, pipes etc	m2		
41	On rails, bars, pipes, etc not exceeding 300 mm girth	m		
42	On windows with burglar bars	m2		
43	On gates, grilles, burglar screens, balustrades, etc (both sides measured over the full flat area)	m2		
44	On eaves gutters	m2		
45	On eaves gutters not exceeding 300 mm girth	m		
	One undercoat alkyd enamel paint on galvanised steel:			
46	On doors	m2		
47	On door frames etc	m2		
48	On strongroom doors and frames	m2		
49	On roller shutter boxes	m2		
50	On windows	m2		
51	On columns and beams	m2		
52	On members of lattice columns and beams	m2		
53	On members of roof trusses	m2		
54	On corrugated iron roof sheeting (measured on flat)	m2		
55	On profile troughed/ribbed roof sheeting (measured on flat)	m2		
56	On rails, bars, pipes etc	m2		
57	On rails, bars, pipes, etc not exceeding 300 mm girth	m		
58	On windows with burglar bars	m2		
59	On gates, grilles, burglar screens, balustrades, etc (both sides measured over the full flat area)	m2		
60	On eaves gutters	m2		
61	On eaves gutters not exceeding 300 mm girth	m		

	Two coats alkyd enamel paint on galvanised steel:			
62	On doors	m2		
63	On door frames etc	m2		
64	On strongroom doors and frames	m2		
65	On roller shutter boxes	m2		
66	On windows	m2		
67	On columns and beams	m2		
68	On members of lattice columns and beams	m2		
69	On members of roof trusses	m2		
70	On corrugated iron roof sheeting (measured on flat)	m2		
71	On profile troughed/ribbed roof sheeting (measured on flat)	m2		
72	On rails, bars, pipes etc	m2		
73	On rails, bars, pipes, etc not exceeding 300 mm girth	m		
74	On windows with burglar bars	m2		
75	On gates, grilles, burglar screens, balustrades, etc (both sides measured over the full flat area)	m2		
76	On eaves gutters	m2		
77	On eaves gutters not exceeding 300 mm girth	m		
	ON WOOD			
	Two coats wood primer			
78	On backs of frames, linings, etc not exceeding 300mm wide	m2		
	One coat wood primer :			
79	On doors	m2		
80	On door frames etc	m2		
81	On timber fascias and barge boards	m2		
82	On skirtings, rails, etc not exceeding 300 mm girth	m		
83	On sprockets ends rafters	m2		

84	On exposed battens	m2		
85	On doors	m2		
86	On door frames etc	m2		
	INTERNAL			
87	On boarded panelling	m2		
88	On boarded ceilings	m2		
89	On doors	m2		
90	On windows, sash doors and fanlights	m2		
91	On louvered windows and doors	m2		
92	On door frames etc	m2		
93	On open slatted shelves, seats (both sides measured over the full flat area)	m2		
94	On skirtings, rails, etc not exceeding 300 mm girth	m		
	EXTERNAL			
95	On eaves ceilings	m2		
96	On doors	m2		
97	On windows, sash doors and fanlights	m2		
98	On door frames etc	m2		
99	On rails, bars, pipes etc	m2		
	Two coats polyurethane velvet enamel paint:			
100	On doors	m2		
101	On door frames etc	m2		
102	On timber fascias and barge boards	m2		
103	On skirtings, rails, etc not exceeding 300 mm girth	m		
104	On sprockets ends rafters	m2		
105	On exposed battens	m2		

106	On doors	m2		
107	On door frames etc	m2		
	INTERNAL			
108	On boarded panelling	m2		
109	On boarded ceilings	m2		
110	On doors	m2		
111	On windows, sash doors and fanlights	m2		
112	On louvered windows and doors	m2		
113	On door frames etc	m2		
114	On open slatted shelves, seats (both sides measured over the full flat area)	m2		
115	On skirtings, rails, etc not exceeding 300 mm girth	m		
	EXTERNAL			
116	On eaves ceilings	m2		
117	On doors	m2		
118	On windows, sash doors and fanlights	m2		
119	On door frames etc	m2		
120	On rails, bars, pipes etc	m2		
	Two coats carbolineum or creosote			
121	On exposed battens, sprockets ends rafter ends	m2		
	ON ROOF			
	Clean down, and apply one coat bonding liquid:			
122	On fibre cement roof sheeting (no abrasive method of cleaning)	m2		
123	On tiled roof	m2		

	Apply two finishing coats or equal and approved roof paint:			
124	On fibre cement roof sheeting (no abrasive method of cleaning)	m2		
125	On tiled roof	m2		
	Prepare, and clean down with a solvent based cleaner and apply one coat galvo grip:			
126	On new galvanised roof sheeting	m2		
	Apply two finishing coats or equal and approved roof paint:			
127	On new galvanised roof sheeting	m2		
	Clean down, and apply one coat Galvo Grip :			
128	On previously painted galvanised roof sheeting	m2		
	Apply two finishing coats or equal and approved roof paint:			
129	On previously painted galvanised roof sheeting	m2		
	Prepare, and apply one coat galvo grip :			
130	On galvanised palisade fencing (measured flat)	m2		
	Apply two finishing coats gloss enamel paint :			
131	On galvanised palisade fencing (measured flat)	m2		
	Sundries			
132	Clean and seal all joints with bitumastic sealer not exceeding 400mm girth.	No		
	100mm Road marking paint on concrete / tarmacadam			
133	Line 100mm wide	m		
134	Line 250mm wide	m		
135	Line 500mm wide	m		
136	Zebra crossing	m		

137	Standard "Stop" sign	No		
138	Standard traffice arrow / yield sign	No		
	Epoxy pant on:			
139	Control rooms	m2		
	ROADWORKS			
1	Cut to fill	m3		
2	Cut to spoil	m3		
3	Import G5 material to make uo for shortage of fill.	m3		
	Extra over above item to include			
4	Boulder excavation Class A	m3		
5	Boulder excavation Class B	m3		
6	Intermediate excavation	m3		
7	Hard excavation	m3		
8	Rip and re-compact in-situ material to 93% mod AASHTO density	m3		
9	Rip existing 150mm base layer and prepare the layer for cement stabilization	m3		
10	Obtain G5 material from sources to construct subbase layer compacted to 95% mod AASHTO density.	m3		
11	Import material from commercial sources to construct a C3 base layer.	m3		
12	Obtain G2 material from sources to construct base layer compacted to 95% mod AASHTO density.	m3		
13	Process material to construct a stabilised C3 crushed stone base compacted to 97% mod AASHTO density.	m3		

	Bituminious Premix Road Surfacing:		
	Prime coat		
14	MC-30 cutback bitumen	m2	
	Curing coat		
15	60% cationic emulsion	m2	
	Tack coat		
16	30% stable-grade emulsion	m2	
	Asphalt		
	40mm thick:		
17	Continuously graded bitumen 60/70 penetration grade	m2	