

BILL NO 2: DISTRIBUTION BOARDS		SARS BROOKLYN DATA CENTRE					
DESCRIPTION		WP REF	UNIT	QTY	SUPPLY RATE	INSTALL RATE	TOTAL
POWER DISTRIBUTION BOARDS							
Low voltage distribution boards complete with all doors, sheet metal frames, sub frames, chassis fixtures, fittings, HDHC copper busbar, legend cards, complete with 30% spare space, and switchgear as per specification and drawings							
BROOKLYN DATA CENTRE - ROOF							
SHEET METAL DISTRIBUTION BOARDS							
2.1	CHILLER MANUAL CHANGEOVER PANEL	1	LOT	1			
BROOKLYN DATA CENTRE							
PRISMA DISTRIBUTION BOARDS							
2.2	DB-UPS A	2	LOT	1			
2.3	DB-GEN B	2	LOT	1			
2.4	DB- UPS B <i>EXTENSION</i>	2	LOT	1			
2.5	DB-HVAC/MF	3	LOT	1			
2.6	HVAC - CHANGEOVER PANELS	3	LOT	5			
2.7	PDU - <i>FREE ISSUED</i>	3	LOT	9			
2.8	DB-HVAC/SR-A	5	LOT	1			
2.9	DB-HVAC/SR-B	5	LOT	1			
2.10	HVAC - CHANGEOVER PANELS	5	LOT	5			
2.11	DB-HVAC/NN-A	7	LOT	1			
2.12	DB-HVAC/NN-B	7	LOT	1			
2.13	HVAC - CHANGEOVER PANELS	8	LOT	6			
2.14	HVAC - CHANGEOVER PANELS - <i>FREE ISSUED</i>	8	LOT	9			
2.15	PDU	9	LOT	2			
ADDITIONAL CIRCUIT BREAKERS							
2.16	800A/25kA MAIN SUPPLY ADJUSTABLE ACB - Installed in existing LV Compartment - Including all busbars and tails		EACH	3			
2.17	630A/25kA MAIN SUPPLY ADJUSTABLE ACB - Installed in existing LV Compartment - Including all busbars and tails		EACH	8			
2.18	125A/25kA MAIN SUPPLY ADJUSTABLE MCCB - Installed in existing LV Compartment - Including all busbars and tails		EACH	8			
INFRARED SCAN AND REPORT FOR DB'S							
Infrared & Photographic report of the following Distribution Boards at Project PC date							
2.19	DB-UPS A	2	LOT	1			
2.20	DB-GEN B	2	LOT	1			
2.21	DB- UPS B <i>EXTENSION</i>	2	LOT	1			
2.22	DB-HVAC/MF	3	LOT	1			
2.23	HVAC - CHANGEOVER PANELS	3	LOT	5			
2.24	PDU	3	LOT	9			
2.25	DB-HVAC/SR-A	5	LOT	1			
2.26	DB-HVAC/SR-B	5	LOT	1			
2.27	HVAC - CHANGEOVER PANELS	5	LOT	5			
2.28	DB-HVAC/NN-A	7	LOT	1			
2.29	DB-HVAC/NN-B	7	LOT	1			
2.30	HVAC - CHANGEOVER PANELS	8	LOT	6			
BILL 2 TOTAL TO SUMMARY							

BILL NO 3: LOW VOLTAGE CABLES						
SARS BROOKLYN DATA CENTRE						
	DESCRIPTION	UNIT		SUPPLY RATE	INSTALL RATE	TOTAL
			TOTAL			
	LOW VOLTAGE CABLE FEEDERS					
	TRAILING CABLES					
	Highly conductive bunched stranded plain copper conductors according to SANS Part 1411 Part 1. Cores insulated and bedded with flexible PVC. Orange outer sheath of flexible grade PVC Nitrile with water block (Terminations and earth conductor measured elsewhere)					
3.1	4 sq mm x 3 core	m	500			
3.2	4 sq mm x 5 core	m	500			
	SWA FEEDER CABLES					
	600/1000V Grade PVC/PVC/SWA/PVC Red Stripe Fire Retardant (FR) stranded copper conductor cables (Terminations and earth conductor measured elsewhere)					
	Cable laid in a trench, pulled into sleeve, fixed to cable ladder or duct (including PVC cable ties or 'K' clamps) and as required in the specification.					
	A certain quantity of cabling will be free issued for the contractor to install. The quantity of cabling is listed seperately.					
3.3	6 sq mm x 4 core ECC	m	100			
3.4	50 sq mm x 4 core ECC	m	300			
3.5	70 sq mm x 4 core ECC	m	300			
3.6	70 sq mm x 4 core ECC - <i>FREE ISSUED</i>	m	300			
3.7	95 sq mm x 4 core ECC	m	800			
3.8	95 sq mm x 4 core ECC - <i>FREE ISSUED</i>	m	500			
3.9	150 sq mm x 4 core ECC	m	600			

	DESCRIPTION	UNIT		SUPPLY RATE	INSTALL RATE	TOTAL
	CABLE TERMINATIONS					
	Terminate 600/1000V grade PVC/PVC/SWA/PVC copper conductors ECC cables, including lugs, cable identification markers, drilling, bolting, waterproof shroud and gland					
3.10	6 sq mm x 4 core	EACH		30		
3.11	35 sq mm x 4 core	EACH		20		
3.12	70 sq mm x 4 core	EACH		30		
3.13	95 sq mm x 4 core ECC	EACH		30		
3.14	150 sq mm x 4 core ECC	EACH		12		
	EARTH WIRE					
	Bare stranded copper earth wire installed in cable trench, pulled into sleeves, on cable ladder or duct, including fixings and terminations , including lugs, bolts, nuts, drilling, etc.					
3.15	16 sq MM	m		1000		
3.16	70 sq MM	m		1000		
3.17	95 sq MM	m		1000		
	TEST AND COMMISSIONING					
3.18	Test and commissioning of the complete system, and issue of the necessary test certificates	Sum		1		
	BILL 3 TOTAL TO SUMMARY					

BILL NO 4: CABLE TRENCHES AND SLEEVES					
SARS BROOKLYN DATA CENTRE					
	DESCRIPTION	UNIT	SUPPLY RATE	INSTALL RATE	TOTAL
			TOTAL		
	<p>CABLE TRENCHES</p> <p>EXCAVATIONS</p> <p>Refer to Specifications</p> <p>NATURE OF GROUND:</p> <p>The following is the classification of the materials to be excavated:</p> <p>SOFT GROUND Shall mean all soil, earth gravel, clay and such other materials that can be excavated by hand or mechanical treching equipment excluding jack hammers</p> <p>"SOFT" ROCK (INTERMEDIATE): that can be excavated only by means of jack hammers</p> <p>"HARD" ROCK: Shall mean only such rock formation that can only be removed by means of explosives</p> <p>EXCAVATIONS</p>				
4.1	"SOFT" GROUND	m ³	20		
4.2	"SOFT" ROCK	m ³	20		
4.3	"HARD"ROCK	m ³	5		

	DESCRIPTION	UNIT		SUPPLY RATE	INSTALL RATE	TOTAL
	BACKFILL AND COMPACTION					
4.4	"SOFT" GROUND	m ³	20			
4.5	"SOFT" ROCK	m ³	20			
4.6	"HARD"ROCK	m ³	5			
4.7	Clean, dry sifted through 10mm mesh, bedding soil, selected from the excavations, placed at bottom of cable trenches, and covering cables	m ³	9			
	DANGER TAPE					
4.8	300mm Wide plastic, dangertape, laid in cable trench	m	500			
	CABLE SLEEVES					
4.9	110mm PVC sleeve laid in cable trench	m	50			
4.10	160mm PVC sleeve laid in cable trench	m	50			
	DRAW WIRE					
4.11	3mm diameter galvanised steel draw wire drawn into sleeves	m	100			
	BILL 4 TOTAL TO SUMMARY					

BILL NO 5: WIRING, CONDUITS AND ACCESSORIES.

SARS BROOKLYN DATA CENTRE

	DESCRIPTION	UNIT		SUPPLY RATE	INSTALL RATE	TOTAL
			TOTAL			
	CONDUITS AND ACCESSORIES					
	PVC CONDUIT					
	PVC conduit including fixings, couplings, bushes, locknuts, bends, waste, drawboxes, chasing, drilling for entry points etc. The conduit may be cast into concrete, placed into position for building into brickwork or concrete, surface mounted to brick-work, placed in ceiling void or chased and fixed into brickwork or concrete. Chasing etc. to be made					
5.1	20 mm	m		2500		
5.2	25 mm	m		2500		
	STEEL CONDUIT					
	Bosal type galvanized conduit including fixings, couplings, bushes, locknuts, bends, waste, drawboxes, chasing, drilling for entry points etc. The conduit may be cast into concrete, placed in to position for building into brickwork or concrete, surface mounted to brickwork, placed in ceiling void or chased and fixed into brickwork or concrete. Chasing etc. to be made good by others					
5.3	25 mm	m		1500		
	GALVANIZED/PVC WALL BOXES					
	Boxes may be cast into concrete slab, placed into position for building into brickwork or concrete, surface mounted to brickwork or concrete, mounted in ceiling void or chased and fixed in concrete or brickwork (made good by others)					
5.4	All sizes up to 100x100x100.	EACH		100		
5.5	100 mm x 100 mm Expansion Box	EACH		100		

	DESCRIPTION	UNIT		SUPPLY RATE	INSTALL RATE	TOTAL
	WALL BOX COVERS					
	Ivory blank cover plate installed to wall boxes					
5.6	All sizes up to 100x100x100	EACH		100		
	DOME LIDS					
	Dome lids complete with gasket and screws installed to round boxes (round boxes measured elsewhere)					
5.7	20 mm	EACH		150		
5.8	25 mm	EACH		150		
	CONDUCTORS					
	600/1000V grade PVC insulated stranded copper power conductors drawn into conduit, trunking or power skirting					
5.9	2,5 sq mm	m		11200		
5.10	4 sq mm	m		500		
5.11	6 sq mm	m		500		
5.12	25 sq mm	m		500		
	Green/yellow insulated copper earth wire drawn into conduit, trunking or power skirting					
5.13	2,5 sq mm	m		5600		
5.14	4 sq mm	m		500		
5.15	6 sq mm	m		500		
5.16	16 sq mm	m		500		

	DESCRIPTION	UNIT		SUPPLY RATE	INSTALL RATE	TOTAL
	Surfix cable surface mounted on ceiling, brick wall or concrete including fixings etc.					
5.17	2,5 sq mm x 3 core	m		1000		
5.18	4 sq mm x 3 core	m		500		
5.19	2,5 sq mm x 4 core	m		500		
5.20	4 sq mm x 4 core	m		500		
	Termination for SURFIX cables complete with PVC compression gland and connection lugs					
5.21	2,5 sq mm x 3 core - <i>RATE ONLY</i>	EACH		1		
5.22	4 sq mm x 3 core - <i>RATE ONLY</i>	EACH		1		
5.23	2,5 sq mm x 4 core - <i>RATE ONLY</i>	EACH		1		
5.24	4 sq mm x 4 core - <i>RATE ONLY</i>	EACH		1		
5.25	6 sq mm x 4 core - <i>RATE ONLY</i>	EACH		1		
	SOCKET OUTLETS					
	Switched socket outlets, flush mounted into wall box including cover plate and connections (Wall boxes measured elsewhere)					
	100 x 50 mm					
5.26	16A - Switch socket	EACH		10		
5.27	16A Twin switch socket	EACH		10		
5.28	16A Water Tight Switch socket	EACH		5		
	100 x 100 mm					
5.29	16A - Switch socket	EACH		10		
5.30	16A - Switch socket with Euro socket Combo	EACH		5		
	SOCKET OUTLETS MOUNTED IN TRUNKING					
	Socket outlets installed in trunking, including connections and fixings					
5.31	16A - Switch socket	EACH		10		
5.32	16A Dedicated switched socket (Isolated Earth)	EACH		10		
5.33	13A Flat pin switched socket (Isolated Earth)	EACH		10		
5.34	5A-3pin unswitched socket outlet	EACH		165		

	DESCRIPTION	UNIT		SUPPLY RATE	INSTALL RATE	TOTAL
	INDUSTRIAL SOCKETS					
	Surface mounted industrial type socket outlet including connection and fixings					
5.35	32A 3 PIN STRAIGHT FEMALE SOCKET	EACH		100		
5.36	32A 3 PIN STRAIGHT MALE PLUG	EACH		100		
5.37	32A 5 PIN STRAIGHT FEMALE SOCKET	EACH		100		
5.38	32A 5 PIN STRAIGHT MALE PLUG	EACH		100		
5.39	16A Twin Switch socket in York box	EACH				
5.40	5A - 3pin unswitched socket outlet to fit 50x100 surface type box without knockouts and with cover plate and connection. To be installed on	EACH		180		
	BONDING					
5.41	Allow for bonding hot, cold waste pipes etc., as required by the applicable regulations of the supply authority and Engineers	SUM		1		
	TEST AND COMMISSIONING					
5.42	Test and commissioning of the complete system, and the issue of necessary test certificates	SUM		1		
	BILL 5 TOTAL TO SUMMARY					

BILL NO 6: POWER SKIRTING AND TRUNKING					
SARS BROOKLYN DATA CENTRE					
	DESCRIPTION	UNIT	SUPPLY RATE	INSTALL RATE	TOTAL
			TOTAL		
TRUNKING AND ACCESSORIES					
Black / white powder coated trunking complete with steel covers, splices, fixings, etc.					
Suspended from concrete slab/roof trusses or surface mounted to brickwork/roof trusses/concrete					
When suspended take into account the following:					
1. 2500 mm average length c/w 20 mm conduit (White)					
2. Purpose made unistrut type hanger,					
3. Expansion bolt, nuts, washers, fixings etc.					
Trunking type: O-LINE 8000 or equivalent.					
WHITE POWDER COATED					
6.1	Straight lengths (including covers)	m	265		
6.2	90 deg. Bends (Radius) -	EACH	25		
6.3	90 deg. Tee (Radius) -	EACH	25		
6.4	Crossover (Radius)	EACH	5		
6.5	Distribution outlet (Radius)	EACH	25		
6.6	End Caps	EACH	25		
6.7	Radius Tee 8000x8000x2000	EACH	5		
BLACK POWDER COATED					
6.8	Straight lengths (including covers)	m	265		
6.9	90 deg. Bends (Radius) -	EACH	25		
6.10	90 deg. Tee (Radius) -	EACH	25		
6.11	Crossover (Radius)	EACH	5		
6.12	Distribution outlet (Radius)	EACH	25		
6.13	End Caps	EACH	25		
6.14	Radius Tee 8000x8000x2000	EACH	5		
Trunking type: O-LINE 9000 or equivalent.					
WHITE POWDER COATED					
6.15	Straight lengths (including covers)	m	55		
6.16	90 deg. Bends (Radius)	EACH	3		
6.17	90 deg. Tee (Radius)	EACH	3		
6.18	Crossover (Radius)	EACH	3		
6.19	Distribution outlet (Radius)	EACH	1		
6.20	End Caps	EACH	5		
6.21	Radius Tee 9000x9000x2000	EACH	5		

	DESCRIPTION	UNIT	SUPPLY RATE	INSTALL RATE	TOTAL
	BLACK POWDER COATED				
6.22	Straight lengths (including covers)	m	55		
6.23	90 deg. Bends (Radius)	EACH	5		
6.24	90 deg. Tee (Radius)	EACH	5		
6.25	Crossover (Radius)	EACH	3		
6.26	Distribution outlet (Radius)	EACH	1		
6.27	End Caps	EACH	5		
6.28	Radius Tee 9000x9000x2000	EACH	5		
	Trunking type: O-LINE 2000 or equivalent				
6.29	Straight lengths (including covers)	m	100		
6.30	90 deg. Bends (Radius)	EACH	2		
6.31	90 deg. Tee (Radius)	EACH	2		
6.32	Crossover (Radius)	EACH	2		
6.33	Distribution outlet (Radius)	EACH	2		
6.34	End Caps	EACH	10		
	BONDING				
6.35	Allow for bonding hot, cold waste pipes etc., as required by the applicable regulations of supply authority and Engineers Specification.	SUM	1		
	TEST AND COMMISSIONING				
6.36	Test and commissioning of the complete system, and the necessary test certificates	SUM	1		
	BILL 6 TOTAL TO SUMMARY				

BILL NO 7: CABLE LADDER, TRAYS AND SUPPORTS						
SARS BROOKLYN DATA CENTRE						
	DESCRIPTION	UNIT		SUPPLY RATE	INSTALL RATE	TOTAL
			TOTAL			
	CABLE LADDER					
	Heavy duty galvanised cable ladder, complete with all accessories, splices, fixings, supports, etc.					
	Straight Lengths					
7.1	300mm - <i>FREE ISSUED</i>	m	216			
7.2	300mm	m	270			
	90 Degree Horizontal Bend					
7.3	300mm	EACH	15			
	Dropper/Riser					
7.4	300mm	EACH	2			
	Tee Section					
7.5	300mm	EACH	15			
	Reducers					
7.6	200mm	EACH	5			
	4-Way Crossover					
7.7	200mm	EACH	5			
7.8	300mm	EACH	5			

	DESCRIPTION	UNIT		SUPPLY RATE	INSTALL RATE	TOTAL
	SUPPORTS					
	and trays) suspended from perlins which will include the following:					
	1. 2 x 1100 mm (avg) x M10 galvanized threaded rod					
	2. Hot dipped galvanized unistrut OL-2000 fixings					
7.9	In lengths up to: 400mm	EACH	50			
	Surface mounted, to brickwork or concrete, hot dipped galvanised unistrut in lengths up to 1000mm including fixings etc.					
7.10	Type OL 1000	EACH	5			
	GRIDSPAN					
	Hot dipped galvanized, medium duty welded mesh type cable tray, complete with all accessories splices, fixings, supports, etc. (Equal, similar and approved to the O-Line GS 50 system)					
7.11	300 mm wide straight lengths	m	50			
7.12	300 mm T- section	EACH	5			
7.13	300 mm bend	EACH	5			
7.14	300 mm Vertical bend (Rising/Falling)	EACH	5			
7.15	300 mm Crossover	EACH	5			
BILL 7 TOTAL TO SUMMARY						

BILL NO 8: LIGHT FITTINGS		SARS BROOKLYN DATA CENTRE				
	DESCRIPTION	UNIT		SUPPLY RATE	INSTALL	TOTAL
			TOTAL			
	ALL TENDERERS SHALL REFER TO THE SCHEDULE OF LIGHT FITTINGS FOR COMPREHENSIVE DESCRIPTION OF LIGHT FITTINGS BEFORE PRICING OF THIS SECTION. ONLY SPECIFIED LIGHT FITTINGS SHALL BE OFFERED					
8.1	TYPE A - 1200 x 300 REGENT LUXON LED PANEL LIGHT or Similar -3971 lumens output -Ceiling recessed in custom 1500 x 500 frame -Finished in white -Electronic control gear -DALI Dimmable -4000K -50 000-hour lamp life and 100 000-hour driver life. (5-year warranty) -40W ->80 CRI	EACH	150			
8.2	TYPE B - 1200 x 300 REGENT LUXON LED PANEL LIGHT or Similar -3971 lumens output -Ceiling recessed in custom 1500 x 500 frame -Finished in white -Electronic control gear -DALI Dimmable -4000K -50 000-hour lamp life and 100 000-hour driver life. (5-year warranty) -40W ->80 CRI - WITH EMERGENCY BATTERY BACKUP	EACH	15			
BILL 9 TOTAL TO SUMMARY						

BILL NO 9: RATES

SARS BROOKLYN DATA CENTRE

The Contractor shall complete this Bill using rates and backup percentages which he applied throughout. This Bill will be used for adjustment to the scope of the work for items not measured elsewhere.

	DESCRIPTION	UNIT	QTY	SUPPLY RATE	INSTALL RATE	TOTAL
	<p>Time sheets specifying the time spent daily on the work (with the names of the workers) and the materials employed in dayworks shall be delivered to the Engineer weekly in accordance with the terms on the Conditions of Contract, in order to be considered.</p> <p>Labour: The rates for labour in dayworks (items not measured) are to be applied to the hours worked and they are to include for all cost of labour, overheads, profit levies, taxes, bonuses, leave pay etc.</p>					
9.1	Qualified electrician	hrs	1			
9.2	Assistant electrician (Competent but not qualified)	hrs	1			
9.3	Labourer	hrs	1			
	<p>Materials: on the nett cost and shall be substantiated with invoices</p>					
9.4	Provisional sum for materials in daywork	SUM	1			
9.5	Allow percentage "markup" on item 4 to cover all overheads profit attendance etc.	%				
9.6	Transport of material deliveries. (Transport of labour is regarded as an overhead cost)	km	1			
BILL 9 TOTAL TO SUMMARY						

BILL NO 10: PROVISIONAL SUMS					
SARS BROOKLYN DATA CENTRE					
		UNIT		RATE	TOTAL
			TOTAL		
10.1	RIGGING, LOADING, TRANSPORT AND OFFLOADING OF FREE ISSUED MATERIALS FROM SILVERTON STORES	SUM	1		
10.2	Profit and attendance	%			
10.3	DALI LIGHTING AUTOMATION SYSTEM	SUM	1		
10.4	Profit and attendance	%			
10.5					
10.6					
10.7					
10.8					
BILL 10 TOTAL TO SUMMARY					

SUMMARY OF BILLS			
SARS BROOKLYN DATA CENTRE			
BILL NO	DESCRIPTION		TOTAL
1	PRELIMANARIES AND GENERAL		
2	DISTRIBUTION BOARDS		
3	LOW VOLTAGE CABLES		
4	CABLE TRENCHES AND SLEEVES		
5	WIRING, CONDUIT & ACCESSORIES		
6	POWERSKIRTING AND TRUNKING		
7	CABLE LADDER, TRAYS & SUPPORTS		
8	LIGHT FITTINGS		
9	RATES		
10	PROVISIONAL SUMS		
	<i>SUBTOTAL</i>		
	<i>CONTINGENCY - 10%</i>	10%	
	<i>TOTAL (EX. VAT)</i>		
	<i>VAT</i>	15%	
	GRAND TOTAL (INC. VAT)		

Date :

TENDERER SIGNATURE:

Print Name :