

APPENDIX 1: BILLS OF QUANTITIES

SECTION 1 : PRELIMINARY AND GENERAL ITEMS

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	TOTAL RATE	AMOUNT N\$
	SECTION 1 : PRELIMINARY AND GENERAL						
1.1	FIXED-CHARGE ITEMS						
1.1.1	Contractual Requirements						
	Contract surety and insurances	Sum					
1.1.2	Establish facilities on the Site						
	a) Facilities for Contractor :						
1.1.2.1	Storage sheds	Sum					
1.1.2.2	Living accommodation (on site)	Sum					
1.1.2.3	Ablution and latrine facilities	Sum					
1.1.2.4	Tools and equipment	Sum					
1.1.2.5	Water supplies, electric power and communications	Sum					
1.1.2.6	Transport of all personnel, plant, equipment and materials to site	Sum					
1.1.2.7	Provision of PPE and HSE equipment to contractor's workmen	Sum					
1.1.3	Other fixed-charge obligations	Sum					
1.1.4	Remove Contractor's Site establishment on completion	Sum					
1.2	TIME-RELATED ITEMS						
1.2.1	Contractual Requirements						
	Contract surety and insurances	Sum					
1.2.2	Operate and maintain facilities on the Site:						
	b) Facilities for Contractor for duration of construction, except where otherwise stated						
1.2.2.1	Storage sheds	Sum					
1.2.2.2	Living accommodation (on site)	Sum					
1.2.2.3	Ablution and latrine facilities	Sum					
1.2.2.4	Tools and equipment	Sum					
1.2.2.5	Water supplies, electric power and communications	Sum					
1.2.2.6	Transport of all personnel, plant, equipment and materials to site during the contract period	Sum					
1.2.2.7	Maintain safe working conditions on site	Sum					
1.3	PERMITS & NOTICES						
1.3.1	Obtain all Work Permits and issue of all notices required	Sum					
1.3.2	Co-ordination with other disciplines	Sum					
1.4	SCAFFOLD, LIFTING & CRANAGE						
1.4.1	Provide scaffold, crantage, lifting and handling of all heavy items of plant and equipment to be installed on Ground Floor or on the roof level plant room area.	Sum					
	TOTAL CARRIED FORWARD						-

SECTION 1 : PRELIMINARY AND GENERAL ITEMS

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	TOTAL RATE	AMOUNT N\$
BROUGHT FORWARD							-
1.5	WORKSHOP DRAWINGS						
1.5.1	Allowance for providing detail design and workshop drawings of the VRV refrigeration pipe system for approval by engineer.	Sum					
1.6	HANDBOOKS, AS-BUILT DRAWINGS & MANUALS						
1.6.1	Provision of O&M manuals and as-built drawings as per the condition of Practical Completion	Sum					
1.6.2	Provision of all HVAC plant performance test data to the engineer	Sum					
1.7	COMMISSION & TEST, TRAINING OF EMPLOYER STAFF						
1.7.1	Testing and certification of all the completed HVAC system installation	Sum					
1.7.2	Handover of the completed system to the employer	Sum					
1.7.3	Training of employer's staff in operation and basic maintenance of the system including training where applicable	Sum					
1.8	GUARANTEE & MAINTENANCE						
1.8.1	Guarantee period of 12 months of the complete SCC HVAC and installation	Sum					
1.8.2	Four maintenance trips at 3 months intervals	Sum					
1.9	CLEARING OF SITE						
1.9.1	Remove all refuse, rubble, spoil & equipment at end of contract	Sum					
1.10	PROTECTION OF EXISTING SERVICES						
	Protection of all existing services in ceiling spaces, service shafts, in roof top plant area	Sum					
1.11	ADDITIONAL ITEMS						
	Items omitted above, required for a safe and functional installation. Please specify	Sum					
TOTAL CARRIED FORWARD TO SUMMARY							-

SECTION 2 : SCC HVAC INSTALLATION

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	TOTAL RATE	AMOUNT N\$
2	SCC HVAC INSTALLATION						
2.1	GROUND FLOOR STUDENT CARE CENTRE						
2.1.1	Allow for working in confined spaces in existing ceiling spaces	Sum					
2.1.2	Supply and installation of VRV cassette ceiling mounted indoor unit complete with hangers and fasteners, decorative ceiling outlet panel, as specified and per Schedule of Equipment: Daikin FXFQ-25B or equivalent	No	8				
2.1.3	Supply and installation of cable trays for refrigeration pipework between condenser unit on roof level and indoor units, cable trays mounted from concrete slab in ceiling space, c/w hangers and fasteners, complete	Sum					
2.1.4	Supply and installation of GMS cable ducts for refrigeration pipework and drain pipes from indoor units, cable ducts mounted on SCC open ceiling structure members to architect's details, c/w hangers and fasteners, complete	Sum					
2.1.5	Supply and installation of refrigeration pipework between condenser unit on roof level and indoor units, c/w BS boxes, fittings, pipe insulation, hangers and fasteners, complete	Sum					
2.1.6	Supply, installation and connection of new drain pipes from new indoor units to the existing drain point, including cutting into existing drain pipes per drawing	Sum					
2.1.7	Supply and installation of indoor unit controllers c/w underplaster wireways, drawboxes, mounted next to light switches, exact position to be determined on site	No	8				
2.1.8	Supply and installation of interconnecting electric cables between indoor and outdoor units	Sum					
2.1.9	Supply and installation of VRV Heat Recovery condenser unit as Daikin VRV IV REYQ10U, c/w mounting stand, brackets and fasteners as specified, complete	Sum					
2.1.10	Supply and install any other items not measured above necessary for the completion of the SCC HVAC installation per drawings and specification.	Sum					
TOTAL CARRIED FORWARD TO SUMMARY							

SECTION 3 : BUILDER'S WORK & ELECTRICAL WORK

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	TOTAL RATE	AMOUNT N\$
3	BUILDER'S WORK & ELECTRICAL WORK						
3.1	BUILDER'S WORK						
3.1.1	Ceiling access hatches: carefully locate and form openings for ceiling access hatches to match existing	No	4				
3.1.2	Supply and install access hatch frames and covers to match existing	No	4				
3.1.3	Form holes through masonry or concrete for drain and refrigeration pipes. Obtain engineer's written approval prior to forming or drilling any holes through reinforced concrete.	Sum					
3.1.4	Prepare the SCC area for working above head height, protect all surfaces and permanent fixtures against damage during the works	Sum					
3.1.5	Supply and installation of additional steel members to the SCC open ceiling, fixed by welding or bolted to the existing structure, to architect's details	Sum					
3.1.6	Chasing and making good plastered masonry for vertical wireways for unit controllers, wireways measured elsewhere	Sum					
3.1.7	Preparation, patching and painting of ceilings, walls, steel members to match existing or surrounding finishes, two final coats over primer coat:						
3.1.7.1	a). Ceilings and ceiling access hatches in acrylic PVA over primer coat	Sum					
3.1.7.2	b). Plastered walls in acrylic PVA over primer coat	Sum					
3.1.7.3	c). Steel members in HG enamel over self etching primer coat	Sum					
3.2	ELECTRICAL WORK						
3.2.1	Supply and installation of new MCCB to match existing in existing HVAC MCC at roof level plant area, for new VRV condenser unit, per specification	Sum					
3.2.2	Supply and installation of unswitched socket outlets or isolators for each indoor unit and BS box, not more than 5 outlets per circuit, c/w wireways, wiring from new 15A SP mcb's in nearest electrical DB on G Floor, complete	Sum					
3.2.5	Supply and installation of labels for new switchgear in distribution boards to match existing	Sum					
TOTAL CARRIED FORWARD TO SUMMARY							

SUMMARY OF PRICES

SECTIONS	AMOUNT (N\$)
SECTION 1 : PRELIMINARY AND GENERAL ITEMS	N\$ _____
SECTION 2 : SCC HVAC INSTALLATION	N\$ _____
SECTION 3 : BUILDER'S WORK & ELECTRICAL WORK	N\$ _____
SUB-TOTAL	N\$ _____
CONTINGENCY 10 %	N\$ _____
PRE TAX SUB-TOTAL	N\$ _____

Pre Tax Sub-Total to be transferred to 'Schedules - Bills of Quantities, page 38 of this bid document