PROPOSED CONSTRUCTION OF A SCIENCE LABORATORY BLOCK - PHASE 1

AT

EMEREOKE 2
COMMUNITY IN EASTERN OBOLO L.G.A
AKWA IBOM STATE

BILLS OF QUANTITIES

CLIENT:

BOPANE HCDT

45 AHOADA ST.

RUMUIBEKWE HOUSING ESTATE
OFF ABA ROAD, PH

RIVERS STATE

RC: AK 18989

CONSULTANT

MBINTEX KONSULT

5 MBAJA AVE. OKOROMBOKHO

Eastern Obolo, Akwa Ibom state

PREPARED BY:
M.N NTEGWUNG, MNIQS, RQS, JP

NIGERIAN INSTITUTE OF QUANTITY SURVEYORS
The Professional Construction Cost Managers

BILL NO. 1: PRELIMINARIES				
COST CNTRE	COMPONENTS	TIME RELATED CHARGES	FIXED CHARGES	TOTAL CHARGES
	BILL NO.1 PRELIMINARIES Part A: Project Particulars **Name of the Project: Construction of Science Laboratory** **Nature of project:** The project involves; construcion of a Science laboratory Building, Site works/Infrastructures etc, from foundation to finishes and Hand over.**This phase focuses on foundation up to and including roofing.** **Location of project:** Emereoke 2 **Duration of the Project:** 6 months **Client:** Bopane HCDT **Name of Contractor** **Drawings;** Architechural and Mechanical Services Bills of Quantities: In accordance with BESMM4R **Form of Contract:** The Nigerian Construction Industry			
1.1B	Part B: Pricing Schedule			
1.1.1	**EMPLOYER'S REQUIREMENT**			
1.1.2.06	**Control and Protection**			
	Multi-service gang- BOPANE Project Unit-12	Wks		550,000.00
	Project Monitoring by other approved bodies	Wks		
1.1.2.07	**Design, Approvals and permit**			
2	Processing Fees:			
	(a) Site Plan and Analysis (SPAR)		Item	
	(b) EIA Report		Item	
3	Others:			
	Local Authority Approval/ Logistics			250,000.00
	Stakeholder engagement Logistics			700,000.00
4	Commissioning Logistics			
	EMPLOYER'S REQUIREMENT TO COLLECTION			**1,500,000.00**

1.1.2	**MAIN CONTRACTOR'S COST ITEM**			
1.1.2.1	**Management and Staff**			
1.1.2.1.1	Project Specific Management and Staff		Item	
1.1.2.2	**Site Establishment**			
1.1.2.2.1	Site accommodation		Item	
1.1.2.2.2	Temporary works in connection with site establishment	2	Nr	
1.1.2.2.3	Furniture and Equipment		Item	
1.1.2.2.5	**Consumables and services**; Stationaries, Computer ink catridges,Courier charges, postage,tea, coffee, First aid consumables,stationeries etc.	Wks		
1.1.2.2.6	Bought- in services			
1.1.2.2.7	Sundries; Main contractor's signboards, safety and information notice boards, fire points, Employer's composite signboards.		Item	
1.1.2.03	**Temporary Services**			
1.1.2.3.1	Temporary Water Supply		Item	
1.1.2.3.2	Temporary gas Supply	Wks		
1.1.2.3.3	Temporary electricity Supply		Item	
1.1.2.04	Security of Site			
1.1.2.4.1	Security Staff; securitty guards and Watchmen for 6months	2	Nr	
1.1.2.4.3	Hoarding, Fences and Gate		M	
	PAGE 2 MAIN CONTRACTOR COST ITEM TO COLLECTION			

1.1.2.05	**Safety and Environmental Protection**			
1.1.2.05.1	Community Relation and Engagement		Item	
1.1.2.5.1	Safety Programme; Notices and information to neighbours; Community relations Safety audits, Staff safety training, ,Personal Protective equipment (PPE) for workers and multi-service gang, Fire points, Temporary fire alarms, Fire estinguishers, Nurse, Traffic Marshals, etc.		Item	
1.1.2.5.2	Barriers and safety scaffolding; guardrails and edge protection, temporary Staircase balustrades,etc.		Item	
1.1.2.06	**Control and Protection**			
1	Survey, Inspections and Monitoring		Item	
2	Setting Out		Item	
3	Samples		Item	
1.1.2.08	**Temporary Works**			
1	Access Scaffolding, Type---; Bringing to site, erecting and initial safety checks and including desmantling and removing from site		Nr	
1.1.2.09	**Site Records**			
1	Site Records; photography, Works Records.		Item	
1.1.2.10	**Completion and Post- completion Requirements**			
1	Testing and Commissioning plan		Item	
2	Handover		Item	
3	Post- completion Services	Wks		
	PAGE 3 TO COLLECTION			

1.1.2.11		**Cleaning**			
	1	Site Tidy	Wks		
1.1.2.13		**Sites Services**			
	1	Temporary Works		Item/Nr/M/ M2/M3	
	2	Multi-service gang- Contract Administrator Project Architect Project Quantity Surveyor Project Engineer	Wks		
1.1.2.15		**Transportation/Haulage** Allow a provisional sum for transortation materials.		Item	
		PAGE 4 TO COLLECTION			
		COLLECTION: **PAGE 2** **PAGE 3** **PAGE 4**			
		MAIN CONTRACTOR COST ITEM TO COLLECTION **EMPLOYERS COST ITEM**			
		PRELIMINARIES CARRIED TO MAIN SUMMARY			

BILL NO.2; SCIENCE LABORATORY BLOCK - PHASE 1

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	SUBSTRUCTURE (ALL PROVISIONAL)				
1.5	**EXCAVATING AND FILLING**				
1.5.4.1.1	Site clearance; clearing site vegetation and other growth and dispose offsite 80m away	750	M^2		
	Site Preparation				
1.5.5.2.1	Remove top soil, average 150mm depth, stored on site	640	M^2		
1.5.10.1.2	Retained excavated topsoil on site to temporary spoil heaps 80m distance	96	M^3		
	Excavation and filling				
1.5.6.2.1	Excavation from strip level, foundation excavation not exceeding 2m deep strip foundation.	176	M^3		
1.5.6.2.1	Ditto; pits for column bases, over 1m but not exceeding 2m deep.	19	M^3		
1.5.8.1.1.1	Disposal, ground water, depth 150mm below strip level		Item		
1.5.8.1.1.1	Ditto; excavated material offsite 50m away	53.8	M^3		
1.5.11.1.1.1	Filling obtained from excavated material; final thickness of filling exceeding 500mm deep, 520mm thick backfill to trench excavaton and treated with antitermite.	141	M^3		
1.5.12.1.1.1	Imported filling with Laterite, blinding bed, over 50mm but not exceeding 500mm deep,150mm thick to ground floor, compacted in layers 150mm depth, with antitermite.	328	M^3		
1.5.12.1.1.1	Imported filling with hardcore, blinding bed, over100mm but not exceeding 500mm deep,120mm thick, level to falls, to ground floor.	132	M^3		
1.5.11.1.1.1	Filling obtained from excavated material not exceeding 500mm deep, 150mm thick to external perimeter of trench	47	M^3		
1.5.16.1.1.1	Damp proof mainbrane, not exceeding 500mm wide,500 guage, horizontal, polythene sheeting laying on blinding hardcore filling to receive concrete	603	M^2		
1.11	**INSITU CONCRETE WORK**				
1.11.2.1.2.2	Plain insitu concrete grade 20mm(1:4:8) /M7.5 aggregate, horizontal work ≤ 300mm thick, in blinding, poured on or against earth;Column base.	0.73	M^3		
	Reinforced Insitu Concrete (1:2:4-20mm aggregate M15)				
1.11.2.1.2.1	Reinforced insitu concrete , grade 20mm aggregate, horizontal work ≤ 300mm thick,in column bases	2.92	M^3		
1.11.5.1.1.1	Ditto; vertical work ≤ 300mm thick,column in structures,reinforced =5%	0.49	M^3		
1.11.5.1.1.1	Ditto; Horizontal work ≤ 300mm thick, in Plinth beam in structures,reinforced =5%	2.5	M^3		
	Page 1 To collection:				

	Plain Insitu Concrete (1:3:6-20mm aggregate)				
1.11.2.1.2.1	Plain insitu concrete, grade 20mm aggregate, horizontal work ≤ 300mm thick,in trench, in structures, poured on or against blinding.	29	M^3		
1.11.2.1.2.1	Ditto; Horizontal work poured on or against hardcore.	90.5	M^3		
	Ditto, Horizontal work, ≤ 300mm thick in Step and ramp.	2	M^3		
	Formwork to insitu concrete				
1.11.14.1.1.	Plain formwork to Edges of horizontal work ≤ 500mm high, 150mm wide	94	M		
1.11.21.1.1.	Ditto; Sides of attached columns, regular, rectangular in shape.	29	M2		
	Reinforcement				
1.11.34.1.1.	High yield steel bars,12mm diameter, straight bars 12m long; 336m Columns.	0.13	T		
1.11.34.1.1.	High yield steel bars,12mm diameter, straight bars 12m long; 672m in Columns base.	0.2	T		
1.11.33.1.1.	High yield bars, 8mm diameter links/ stirrups in Columns	0.07	T		
1.11.34.1.1.	High yield steel bars,12mm diameter, straight bars 12m long; 688m in Plinth beam.	0.42	T		
1.11.33.1.1.	High yield bars, 10mm diameter links/ stirrups in Columns and Plinth beam	0.20	T		
1.11.37.2.2	Mesh, Weight, 2.22kg/m2, fabric reinforcement A142; minimum side and end laps; 150mm	603	M^2		
1.14	**MASONRY**				
	Brick/Block Walling in foundation				
1.14.1.2.2.1	Walls, overall thickness 150mm thick battered on both sides in Common /stretcher bond, cement mortar (1:3)	331	M^2		
1.11.1.1.3	Plain insitu concrete (1:10), mass concrete in filling voids.		M^3		
	Allow for a defined Provisional Sum to cover other works not measured in the Substructure.	1	Item		
	FINISHES				
1.28.7.2.1	Finish to Walls, Cement and Sand (1:4) rendering 12mm thick, exceeding 600mm wide Externally	61	M^2		
	Wall Tiles:				
1.28.7.2.1	Finish to Walls; 250mm x 400mm x 8mm Glazed Ceramic tiles laid on Walls, exceeding 600mm wide to approved pattern on cement and sand bed (measured separately); finished with straight butt joints and flush with pointing coloured cement grout .	61	M^2		
	Cement Backing; 5mm Cement Binder paste	61	M^2		
	Protection				
	Protect all works in this section		sum		
	Page 2 to collection:				
	Colllections:				
	Page 1….				
	Page 2….				
	SUBSTRUCTURE CARRIED TO SUMMARY				

	SUPERSTRUCTURE				
	CONCRETE WORK; FRAMES AND WALLS				
	Ground Floor fo Roof Level.(1:2:4				
1.11.5.1.1.1	Vibrated reinforced insitu concrete, grade 20mm aggregate, filled into formwork and well packed around reinforcement (developing 21KN/sq.mm working strength at 28 days), Vertical work;columns, ≤ 300mm thick,in structures, reinforce=5%	1.42	M^3		
1.11.2.1.2.1	Ditto; horizontal work in Lintels and roof Beams.	9.00	M^3		
	Concrete facia-Parapet wall at roof beam				
	Concrete facia-Parapet wall- Architrave made of Cement and Sand mortar 1:4mix, filled hollow with concrete work as required.	121	m		
	Form Work to Insitu Concrete:				
1.11.21.1.0.(	Plain formwork to sides of columns, 30 in numbers, regular, rectangular in shape.	37.8	M^2		
1.11.18.1.0.(	Ditto; Sides and soffits of lintels, regular, rectangular in shape.	49	M^2		
1.11.18.1.0.(	Ditto; to sides of roof beams, regular, rectangular in shape.	49	M^2		
	Reinforcement in Superstructure.				
	High Yield Bars to BS 4449				
1.11.34.1.1.	High yield steel bars,10-12mm diameter, straight bars 12m long; 169m in Columns	0.19	T		
1.11.33.1.1.	High yield bars, 8mm diameter links, stirrups in Columns.	0.11	T		
1.11.34.1.1.	High yield steel bars,10-12mm diameter, straight bars 12m long; 180m in Lintels	0.58	T		
1.11.34.1.1.	High yield steel bars,12mm diameter, straight bars 12m long; 65m in Beams.	0.80	T		
1.11.33.1.1.	High yield bars, 8mm diameter links, stirrups in Lintels and Beams.	0.42	T		
	CONCRETE WORK: CARRIED TO SUMMARY				
	SUPERSTRUCTURE CONT'D.				
	Brick/Block Walling in Superstructure				
1.14.1.2.2.1	EXTERNAL & INTERNAL WALL Walls, overall thickness 150mm thick battered on both sides in Common /stretcher bond, cement mortar (1:3) externally	319	M^2		
	Ditto; Internally	375	M^2		
	EXTERNAL AND INTERNAL WALLS: CARRIED TO SUMMARY				-

	ROOF CONSTRUCTION				
1.16	CARPENTARY **Sawn hardwood treated timber size:**				
1.16.1.1.1.1	Structural Timbers, 50mm x 100mm Rafters and associated timbers fixed with 150mm size nails at 1200 centres and specially treated with solignum.	745	M		
1.16.1.2.1.1	Ditto; 50mm x 75mm purlins fixed at 900mm centres	1140	M		
1.16.1.3.1.1	Ditto;75mm x 100mm wall plates	210	M		
1.16.1.4.1.1	Ditto; Roof and floor joists 50mm x 100mm Tie beams	600	M		
1.16.1.5.1.1	Ditto; 50mm x 100mm Strutting, fixed at 1200mm centres	1096	M		
1.16.1.7.1.1	Ditto;50mm x 50mm Partition and wall members.	1326	M		
	Sundries				
1.16.6.1.6.1	12mm diameter mild steel holding down bolt 45mm long with hexagonal nuts and washers including forming pockets in blockwork and grouting mortar, and boring 100mm hardwood.	60	Nr		
	CARPENTRY WORK CARRIED TO COLLECTION				
1.17	SHEET ROOF COVERING **0.50mm gauge darked-Coloured Corrugated Longspan aluminium roofing sheet of high Quality, fixed with single lap covering 150mm end laps to sawn hardwood purlins (measured separately) at approximately 850mm centres with 80mm long drive screw nails with plastic caps and washers.**				
1.17.1.2.1.1	Covering > 500mm wide,sloping at 30° underlays on purlins.	792	M^2		
1.17.4.1.3.7	Boundary work, at the ridge fixed with nails and special washers 600mm girth, Ridges sloping	117	M		
1.17.4.1.5.7	Ditto; Valleys sloping	18	M		
1.17.5.1.9.1	Flashings,Eaves 150mm girth linning to openings.	124	M		
	ROOF COVERING CARRIED TO SUMMARY				
	COLLECTIONS:				
	CARPENTARY SHEET ROOF COVERING				
	ROOF CONSTRUCTION TO SUMMARY				

	MAIN SUMMARY				
	FACILITATING WORKS SUBSTRUCTURE SUPERSTRUCTURE- a) concrete work b) Walls c) Roof Construction &Covering				
	TOTAL				
	SUB-TOTAL				
	PROVISIONAL SUMS DEFINED PROVISIONAL SUM WORKS TO BE CARRIED OUT BY STATUTORY UNDERTAKERS				
	SUB-TOTAL				
	MAIN CONTRACTOR'S FIXED PRICE DIRECTOR'S ADJUSTMENT(+/-) SUB TOTAL DAY WORKS (PROVISIONAL)				
	TOTAL TENDER PRICE(EXCLUSIVE OF VAT)				
	ADD VAT				
	CARRIED TO GENERAL SUMMARY				

GENERAL SUMMARY					
ITEM	**DESCRIPTION**	**QTY**	**UNIT**	**AMOUNT**	**TOTAL**
1	**BILL NO. 1: PRELIMINARIES**	1	Nr	-	-
2	**BILL NO.2: MAIN BUILDING**	1	Nr	-	-
	TOTAL				**-**
	ADD PROFIT AND OVERHEAD	20%			**-**
	TOTAL2				**-**
	ADD VAT				-
	GRAND TOTAL				**-**