

BILL NR. 1: PRELIMINARIES

A Site and scope of works

The Contractor is advised to visit and inspect the site and to make himself thorough and completely informed as to the conditions of the site in its present state, the nature of the ground and full extent and character of the works to be executed, means of access and storage space the conditions affecting the supply of labour and the availability and supply of water. No claim for extra payment above the Contract Sum will be paid to the Contractor for want of knowledge of any conditions affecting the execution of the works.

B Bills of Quantities

The pricing, moneying out and totaling of these Bills of Quantities is to be in INK throughout and is to be in Nigerian currency.

C Drawings

All drawings, tracings, photo prints, etc., are the sole property of the project
i Consultants and should be returned to him upon completion of the works.

The Contractor shall check the whole of the dimensions on site and if any discrepancy is found between the drawings and the condition on site, he shall notify the Project Consultants immediately and request for instructions. The Contractor shall provide everything necessary for the proper execution of the works according to true intent and meaning of the drawings, whether the same may or not be particularly shown on the drawings, profiled that the same is reasonably to be inferred there from figured dimensions are to be followed in preference to scaled dimensions. The Contractor shall allow here for mounting two complete sets of the Project Consultant's drawings on suitable rigid panels and keeping them and replacing faded sets on the site
ii throughout the duration of the Contract.

The Contractor is to give adequate notice in writing to the Project Consultants
iii with regard to instructions, detailed drawings, etc.

Before any work is commenced by Sub-Contractor or Specialists, dimensions shall be checked on the site and agreed with the Sub-Contractor or Specialist irrespective of the comparable dimensions shown on the drawings. The
iv Contractor shall be responsible for the accuracy of the dimensions.

The dimensions specified for pipes and tubes shall refer to the internal or
v external dimensions as designated in the British Standard Specification.

The thickness specified for filling, hard-core and pitching shall refer to finished
vi thickness after consolidation.

to collection

BGN K

A Licenses / Approvals

The contractor shall make all arrangement for the issue any licences, permits etc required for the execution of the Works as far as the supply of labour and materials are concern and to obtain necessary permits and complete and lodge all forms which may be required and he is deemed to have made due allowance therefore in his tender.

B Survey beacons, bench marks, etc.

Survey beacons, bench marks, etc., on or around the site shall not be disturbed unless permission has first been obtained from the Survey Department.

C Setting out

The contractor shall accurately set out the works and include for providing all pegs, templates, instruments and labour necessary for so doing and as required by the Project consultants for checking the works. The Project Consultants shall be allowed the free use of the instruments and labour.

100,000

D Excavations

The Contractor shall not commence excavation until the permission of the Project Consultants is obtained, after being satisfied as to the correctness of the setting out.

E Temporary sheds

Allow for providing a suitable weather -proof office on the site for the site agent and foreman Incharge and other site staff and include providing i necessary furniture and lighting and clear all away on completion.

1,300,000

Allow for providing temporary hut for watchman complete with lighting and ii necessary furniture and clear away on completion.

Allow for providing adequate accommodation for the Project Consultants including all necessary furniture, fridge, lighting and air conditioning and clear iii away on completion as may be instructed by the Project consultants.

Allow for providing and maintaining all necessary temporary buildings for storage and protection of goods and materials on site and other works that may be brought or executed on site, including tools and materials of Sub-Contractor and remove on completion. Sheds for the storage of cement are to iv have floors raised from ground.

No rooms in the building with doors or finished shall be used as workshops, messrooms, storage spaces or for any other purpose except where prior v permission is obtained from the Project Consultants.

F Temporary works

The Contractor shall ensure that all temporary electrical, water and other installations are executed in accordance with the requirement of the Authorities concerned.

* 1,400,000

To collection

Ans

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- A Temporary fencing and Access roads**
- i The contractor shall provide for necessary access roads, crossovers gang-ways, gates entrance as shall be directed by the consultants and the likes as required, maintain and clear away and make good on completion.
- ii Allow for adequate temporary security fencing to the perimeter of the site, maintain and clear away and make good on completion. 800,000
- B Temporary storm water drainage**
Allow for ensuring that the whole of the site is kept free from the risk of storm water flooding and providing such temporary ditches, gullies and the like as may be necessary and for subsequently backfilling such excavations and making good. Any damaged arising from non-compliance with this clause is to be made good at the Contractor's own expense.
- C Telephones**
Allow for provision, installation, maintenance and removal of telephone for use on site by Contractor, Sub-Contractor, Project Consultants and for the cost of calls made by the Project Consultants (Deviation from standard Method of Measurement)
- D Electricity**
Allow for providing all temporary lighting and power for works including that for use by Sub-Contractors and Specialists, paying all fees and charges and providing all necessary temporary mains and clearing away and making good on completion. 300,000
- E Water**
- i Allow for providing all water required for the works including that for Sub-Contractors. The water is to be clean fresh water. 500,000
- ii Allow for executing all necessary plumbing and paying all fees and charges incurred in connection and supply to the water for building purposes and the removal of all temporary plumbing on completion.
- F** The Contractor shall make all necessary application and pay all charges for permanent water supply to ensure that connection are effected in good time so as not to delay the completion of works. 250,000
- G Access for workmen**
The Contractor shall at all times give access to workmen employed by the Employer or by Local or other Authorities or any other parties with proper, sufficient, and if required, special scaffolding, hoist and ladders and provide them with water and lighting, etc. 200,000
- To collection
- 2,050,000

One

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A Welfare and Safety

NGN K

Allow for providing adequate toilet accommodation and keeping same in a clean and sanitary condition to the satisfaction of the Health Authorities and clearing away latrine and soil wherever necessary and thoroughly disinfecting i and making good all works disturbed.

250,000

Allow for providing sheds and workshops for use of the workmen on the site and maintaining and subsequently dismantling and carting away on and allow for completion providing and maintaining welfare and safety measures and amenities of a suitable standard approved by the Project Consultants or ii required by the Authorities.

200,000

iii Allow for refreshment for the site meetings

300,000

B First Aid Box

The Contractor is to provide on site a First Aid Box or Cupboard prominently marked with the words FIRST AID for the purpose of treating any of his employees injured on site The content of this box are to comply in all respects with the Factories Ordinance The Contractor is to ensure that there is adequate stocks in the First Aid Box which is to be produced and opened for inspection for the Project Consultants on request.

70,000

B Watching and Lighting

Allow for providing all necessary guards, day and night watchmen and lighting for the protection of the works and safety of the public.

350,000

C Hoarding and Barriers

Allow for providing all fans, gantries, hoarding, guard rails, barriers, or any other form of special protection to all sides of the buildings and site as necessary to protect adjoining property, persons, vehicles and the like from injury.

D Ordering of materials

Upon receipt of the order to commence the works, the Contractor shall immediately place orders for all the required materials and will be held i responsible for any delays occurring due to the late placing of such orders.

The Contractor shall, if so requested by the Project Consultants, make available to them all documents in connection with the ordering of materials ii for works, showing agreed delivery dates, sources of supply and the like.

iii If upon receiving quotations for any materials required for the works it appears that delivery by the dates quoted will delay the works, the Contractor shall inform the Project Consultants of this fact before placing orders.

To collection

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A Materials found on site

Any sand, laterite, aggregates, or other building materials discovered on the site shall be the property of the Employer and shall not be used in the construction of the works without the prior written consent of the Project Consultants. The market price of the materials so used shall be allowed to the Employer by the Contractor and the contract sum adjusted accordingly. Precious articles or antiquities found on the site shall be the property of the Employer and shall be handed over to the Project Consultants.

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B Imported materials

Where materials are to be supplied from outside Nigeria the cost of such materials C.I.F. Apapa Docks together with landing charges, duty and other Government taxes will be set against the Prime Cost or Provisional Sum included in the Bills of Quantities. The Contractor will be required to collect and clear the materials from Apapa Dock, handle, load and transport them to the site and will be responsible for any loss or damage to the materials after they are landed; an item for this is included in the Bills of Quantities after the relevant Prime Cost Sums.

C Scaffolding and Plant

Allow for providing all scaffolding, hoists, tackles and other plants, profiles, templates, cantering and equipment generally required for the proper, safe and efficient execution of the works including sub-contract works and providing all labour and things required by the Project Consultants for testing and measuring the works and for weighting, measuring or testing the efficiency of any works. portion of the

1,500,000

The Contractor is particularly to note that scaffolding, staging and like is to be provided both for the execution of his own works and that of Sub-Contractor employed under this contract, including that required solely for the execution ii of work by Sub-Contractors.

Allow for providing all gangways, walkways, planking, decking, temporary platform, etc., necessary to construct and afford access to or between all iii parts of the works.

D Records

Allow for keeping such books, accounts and documents and records as are necessary to show the increases in costs or the reductions obtained under clause 31 of the Conditions of Contract and furnishing such books, account documents and records to the Project Consultants or other person authorised to receive them at monthly intervals or as requested throughout the duration i of the contract.

In the event of adjustments arising under clause 31 of the Condition of Contract, the Contractor shall submit monthly, fully priced out and totaled, statements showing the total adjustments claimed, together with separate ii sheet relating individually to the various Sub-Contractors.

Allow for the consultants office equipment & facilities on site ; for example E Laptops, printers, stationaries and other consumables.

To collection

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1,500,000

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A Test and Samples

Allow for carrying out tests of any materials, either before or after use in the works and for providing samples of all materials and specimens of colours for approvals as required by the project Consultants before use or application in the works.

100,000

B Covering up works

No work shall be covered up until it has been examined and approved by the Project Consultants.

The Contractor must give at least seven clear days notice to the Project Consultants before covering up any of the works in foundations and drains in proper order that measurement may be taken of the works as executed and in the event of the Contractor failing to provide such notice, he is to uncover as required at his own expense, to allow the measurements to be taken and ii afterwards to reinstate.

All reinforcement shall be inspected by the Project Consultants before pouring of concrete. In the case of works executed against provisional quantities in the Bills of Quantities (and therefore subject to re-measurement) the Contractor shall notify the Project Consultants before proceeding to cover up works.

C Opening up

The Contractor shall, at the request of the Project Consultants open up for inspection any work covered and should the Contractor refuse or fail to comply with such request the Project Consultants may employ other workmen to open up same. If the said work has been covered in contravention of the Project Consultant's instructions and if on being opened up it be found not in accordance with the drawings or instructions of the Project Consultants, the expense of opening up and covering up again, whether done by the Contractor or other workmen, shall be borne by, or recoverable from the Contractor or may be deducted as aforesaid. If the work has been found in accordance with the said drawings, etc., then the expense aforesaid shall be borne by the Employer and be added to the contract sum.

D Protection of the works

Allow for covering up and protecting from injury from weather or from any cause, all new works, also for supplying all temporary doors, protection for the whole of the works executed whether by the contractor or Special tradesmen or Sub-Contractors and any damage caused must be made good by the Contractor at his own expense. During inclement weather the Contractor shall suspend such parts of the works for such time as the Project Consultants may decide and shall protect from injury all works done in the course of erection.

250,000

350,000

To collection

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A Time and Progress

The works shall be proceeded with in such sections and sequences as will affect completion of all works within the time for completion or as directed by i the Project Consultants.

Immediately upon or before signing the contract, the Contractor shall in collaboration with the sub-Contractors submit to the Project Consultants for acceptance programme and progress charts to cover all activities on the site, ii he shall record progress thereon throughout the execution of the works.

The Contractor shall arrange for his representatives to attend site meetings as and when reasonably required by Project Consultants and shall provide iii seating and other necessary facilities for such meetings.

The Contractor's attention is drawn to his responsibility for the coordination and programming of Sub-Contractor's works. The Contractor is expected to arrange suitable programme with his Sub-Contractors and to check regularly that such programmes are adhered to. Where delays arise in connection with sub-contract works the Contractor will be expected to have been aware of such at an early stage and to have taken the appropriate action defined in the sub-contract document by the giving of such notices as may be required in preparation for the determination of same Determination shall not be effected without prior consent of the Project Consultants but requests for extension of the contract period on the grounds of delay by Sub-Contractor will not be iv considered unless the Contractor can establish requirements.

B Delays

The Contractor will be deemed to have made allowance for all delays caused by difficulty in obtaining labour and materials or by suspension of the part or the whole of the works due to adverse weather conditions.

C Overtime and Completion

The whole of the works are to be completed by the time stated in the Contract and no extra will be allowed in respect of overtime paid to achieve this. i

In the event of the work falling behind programme for reasons other than those which would entitle the Contractor extension of time under the Conditions of Contract, then the Contractor shall, if so instructed by the Project Consultants, arrange, at no extra cost, double shift working on the site ii until such times as progress on site is in accordance with the programme.

If overtime is specifically ordered in writing by the Project Consultants in respect of extra works, the net extra cost, over and above normal daily rates iii will be paid to the Contractor.

To collection

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~~20,000~~

~~20,000~~

Out

A Dismissal by request

The Contractor shall, on the written request of the Project Consultants or his representative on site, immediately dismiss from the works any person employed by him thereon who may, in the opinion of the Project Consultants, be incompetent or misconduct himself and such person shall not again be employed on the works without the written permission of the Project Consultants.

B Existing installation

Allow for protecting and maintaining all pipes, ducts and cables met in excavations, for keeping all ditches, gullies and channels clear and unobstructed and for making good any damaged caused to public or private roads, paths, kerbs and drains and paying all costs and charges incurred.

C Prevention of Nuisance

Allow for taking all necessary precautions with regard to the order and method of execution of the work to avoid causing disturbance or nuisance to the user and occupiers of existing buildings and premises adjacent to the works and for complying with any directions of the Project Consultants in this respect.

D Prime Cost Sums

The following in connection with prime cost sums are in addition to the Contractor's obligations described elsewhere (for example, provision of scaffolding, etc.).

Receipt vouchers for all articles for which prime cost sums are included in the Bills of Quantities must be produced at the final settlement of accounts and the final certificate will not be issued until such receipts have been produced.

The Contractor shall allow for checking Nominated Suppliers invoices and quotations, etc., before placing orders in respect of prime cost items and shall be solely responsible for ensuring that all materials so ordered are sufficient and correct in quantity and contained due allowance for waste, etc.

The Contractor shall allow for checking all materials supplied by Nominated Suppliers at the time of receipt on site, unpacking, re-packing and taking all necessary actions in respect of insurance claims and the re-ordering of broken or damaged articles.

Where the Contractor is required to "Fix Only" materials supplied by Nominated Suppliers or others, the rates inserted in the Bills of Quantities are to allow for taking delivery, unloading on site, handling, checking, stacking, storing and protecting until required, assembling as necessary and getting into position for fixing.



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Where the term 'Attendance' or 'Attend upon' is used in the Bills of Quantities in connection with Nominated Sub-Contractor's work, or work executed by others, the Contractor shall allow for the use of standing scaffolding, canteens, sanitary accommodation, office accommodation, space for plant and materials and for providing light and water and clearing away rubbish and for taking delivery of all materials when received on the site, unloading, handling, stacking or storing until required and hoisting into position. The Contractor shall allow for affording the arranging that Builder's Work is carried out, as far as possible to suit the convenience of the Sub-Contractors. The Contractor shall obtain from the Sub-Contractors their requirements for recesses, chases, holes and the like so that these may be formed correctly as the work proceeds. No extra charge will be allowed for cutting chases, holes etc., out of proper sequence.

A Provisional Sums

The term "Provisional Sum" in the Bills of Quantities indicates a sum of money allowed to cover the cost of a portion of the works, the extent or nature of which is not known at the time of preparing the contract documents, or which cannot be determined accurately until the works are executed.

Provisional Sums are entirely at the disposal of the Project Consultants and may be deducted in whole or in part if not required.

Work executed against Provisional Sums shall be measured and valued in accordance with Clause II of the Conditions of Contract with the exception that the cost of materials falling within the scope of Prime Cost items elsewhere in the Bills of Quantities will be offset against those Prime Cost items, omission of Prime Cost or Provisional Sums.

The Employer reserves the right to omit any Prime Cost or Provisional Sums from the contract and no claim for loss of profit arising from such omissions will be entertained.

B Advertisements

The Contractor shall not display, or permit the display of any advertisement within the boundaries of the site or upon any temporary fencing, hoarding, plant, etc., save upon the written instructions of the Project Consultants.

C Site board

Provide and erect a site board showing the title of the contract, names and addresses of the Project Consultants, Contractor, Nominated Suppliers and Sub-Contractors and such other information as may be required by the Project Consultants, who shall approve the design layout and colours of the board. Lettering shall be "cut-out" plywood or plastic of an approved thickness, and shall be 100mm high for the main title, and 50mm or 38mm high elsewhere. The whole board shall be maintained in good condition, repainted as necessary and removed when no longer required.

To collection

Prelm_9

50,000

50,000

One

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A Exterminate and prevent pests

NGN K

Allow for effectively destroying all vermin, insects and pests to the whole area of the site and taking all preventive measures to maintain the site in clean and sanitary condition to the satisfaction of the Project Consultants.

B Clearing rubbish

Allow for cleaning always all shavings, cutting and other rubbish as it accumulate from time to time during the progress of the works and at completion, including that of Sub-Contractors and Special tradesmen and the disposal of all materials condemned by the Project Consultants or his representative.

200,000

C Cleaning on completion

Allow for cleaning down the whole of the premises including cleaning glass both sides and cleaning off all floors, paving, metalwork, finishing and fittings touching up generally and removing all stains, dirt and surplus materials and rubbish and leaving the works and site in a clean and tidy condition and ready for immediate use, with all damage to property, roads, paths, drains, etc., made good to the satisfaction of the Project Consultants.

600,000

D Defects after completion

Allow for inspecting the works at the end of the Defects Liability Period and making good all defects in accordance with clause 15 of the Conditions of Contract. Allow also for inspecting and making good such defects as may be of urgent nature during the Defects Liability Period.

E Advance payment/Performance bond

Allow for providing an Advance payment/Performance bond obtainable from an approved Bank or Insurance Company.

To collection

800,000

0.00

Proposed CEFTER Postgraduate center for Benue state University, Makurdi

Collection

	<u>Amount (N)</u>
Prelm - 1	—
Prelm - 2	1,400,000
Prelm - 3	2,050,000
Prelm - 4	1,170,000
Prelm - 5	1,500,000
Prelm - 6	350,000
Prelm - 7	20,000
Prelm - 8	—
Prelm - 9	50,000
Prelm - 10	800,000
	<hr/>
	7,340,000

Preliminaries
Carried to General Summary

One

GENERAL SUMMARY

		Amount	(N)
<u>BILL NR.1:</u>			
1	PRELIMINARIES & GENERAL CLAUSES	N	7,340,000 ✓
<u>BILL NR. 2:</u>			
2	MAIN BUILDING	N	161,463,875 ✓
<u>BILL NR. 3:</u>			
3	EXTERNAL WORKS	N	6,000,000 ✓
	SUB-TOTAL - A	N	174,803,875 ✓
4	ADD VAT @ 5%	N	8,740,193.75 ✓
	SUB-TOTAL - B	N	183,544,068.75 ✓
<u>ADD</u>			
5	GENERAL CONTINGENCIES	N	15,000,000 ✓
	Allow a Contingency sum of N15,000,000.00 to be expended as directed by the Project Consultant.		
	TOTAL TENDER COST OF CONSTRUCTION	N	198,544,068.75 ✓

Amf

BILL NR. 2

ELEMENT NO.1: SUBSTRUCTURE

INFORMATION (All Provisional)

Nature and location of the work

The work in this section comprises:

Excavations, trenches, pits and the likes,
concrete work,
earth filling and all other ancillary works
associated with
strip/pad foundation up to and including
ground floor slab

Site Preparation

- A Clear site of all shrub, bushes, undergrowth, small trees exceeding 600mm girth, large stones, rubbish, debris and remove from site

item

100,000

D20: EXCAVATION AND FILLING

Excavating topsoil; for preservation

- B average 150mm deep

1,435

m2

80

114,800

Excavation and Earthwork

Trenches, width exceeding 300mm

- C maximum depth not exceeding 1500mm commencing surface 150mm below existing ground level

643.

m3

900

578,700

Pits; for isolated concrete foundation

- D maximum depth not exceeding 1500mm commencing surface 150mm below existing ground level

377

m3

1,000

377,000

Surface treatment

- E Level and compact bottom of excavations

1423

m2

50

71,150

- F 'Dieldrex 20' or other approved anti- termite treatment to surfaces of excavation and earth filling

1,894

m2

100

189,400

Disposal of excavated material

- G Off site

467

m3

200

93,400

To Collection
Substructure Cont'd

N 1,524,450

Excavated material arising from excavations

Filling to excavation:

A	Average thickness exceeding, 0.25m	552	m3	250	138,000
<u>Filling to Excavation</u>					
B	Selected excavated laterite material obtained from off-site borrow pits, depositing in 150mm layers maximum thickness.	532	m ³	2,800	1,489,600
<u>Hardcore to be obtained off-site</u>					
C	Rock hardcore filling; 200mm thick well rammed and consolidated; including blinding top with fine sand not exceeding 50mm thick	1624	m2	1,200	1,948,800

E10: MIXING/CASTING/CURING/IN-SITU CONCRETE

Plain in-situ concrete: mix 1:10-20mm aggregate; blinding bed
Isolated foundations; bases and strip foundations

D	Not exceeding 50mm thick; poured on earth surfaces	14	m3	10,000	140,000
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Reinforced in-situ concrete: BS 5328 designed mix C20.
20mm aggregate, minimum cement content 310kg/m3; vibrated
Isolated foundations; poured against faces of excavations

E	Generally, 150 - 300mm thick	87	m3	26,000	2,262,000
<u>Isolated foundations; bases</u>					
F	Generally ; 250 - 500mm thick	94	m3	26,000	2,444,000
<u>Beds</u>					
G	ground slabs/steps; thickness 150 - 450mm thick	196	m3	26,000	5,096,000
<u>Ground beams</u>					
H	Generally	47	m3	26,000	1,222,000
<u>Columns</u>					

J Generally 16 m3 26,000 416,000

To Collection
Substructure Cont'd

N 15,156,400

E20: FORMWORK FOR IN-SITU CONCRETE

Sawn formwork to:

A Sides of column bases; 250-500mm high	618	m	400	247,200
B Sides of isolated columns	382	m	1,200	458,400
C Sides of ground beams; 600mm high	398	m	800	318,400
D Edge of bed; 150mm high	297	m	450	133,650

E30: REINFORCEMENTS

High yield deformed bars to BS 4449 in
column bases and
columns (provisional)

E Y10mm	3,746	kg	260	973,960
F Y12mm	2,221	kg	260	577,460
G Y16mm	702	kg	260	182,520
H Y20mm	249	kg	260	64,740
J Y25mm	709	kg	260	184,340

Reinforcement: Fabric mesh to B.S.8110

Fabric

L Type A193; weight 3.02 kg/m2; measured nett with minimum minimum 300mm lap at joints	1,503	m2	1,100	1,653,300
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BLOCK Work

Sandcrete hollow blockwork bedded and
jointed in cement
sand (1:4) mortar

Walls: filled solid with in-situ concrete grade 15				
M 230mm thick; stretcher bond	614	m2	3,800	2,333,200

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Damp Proof Course

N 500mm guage 'Visqueen' polyethene sheet laid with welted joints on blinded hardcore as damp proof membrane

1503 m2 450 676,350

To Collection

N 7,803,520

Substructure Cont'd

COLLECTIONS

Page 1

1,524,450

Page 2

15,156,400

Page 3

7,803,520

Page 4

ELEMENT No. 1: SUBSTRUCTURE:
Total Carried to Summary

N 24,484,370

ELEMENT NO.2: FRAME

INFORMATION

Nature and location of the work

The work in this section comprises:
Reinforced concrete columns, beams and associated works

E10: INSITU CONCRETE

E10: MIXING/CASTING/CURING/IN-SITU CONCRETE

Reinforced in-situ concrete; BS 5328

designed mix C20.

20mm aggregate, minimum cement content 310kg/m3; vibrated

Beams

A generally

182 m3 26,000 4,732,000

Columns

B generally	65	m3	26000	1,690,000
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E20: FORMWORK FOR IN-SITU CONCRETE

Sawn formwork to:

C Beams; generally Columns;	1,770	m	1800	3,186,000
D regular shaped; Square on plan	1,195	m	1,800	2,151,000

E30: REINFORCEMENTS

High yield deformed bars to BS 4449 in
columns and beams (provisional)

Straight and bent

E Y10mm diameter	9,198	kg	260	2,391,480
F Y12mm diameter	1,968	kg	260	511,680
G Y16 mm diameter	13,701	kg	260	3,562,260

To Collection

Frame Cont'd

A Y20mm diameter	4,489	kg	260	1,167,140
B Y25mm diameter	12,680	kg	260	3,296,800

To Collection
Collections

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Page6

N 4,463,940

18,224,420

4,463,940

ELEMENT NO.2: FRAME:
Total Carried to Summary

N 22,688,360

ELEMENT NO.3: UPPER
FLOORS

Am

INFORMATION

Nature and location of the work

The work in this section comprises:

Reinforced concrete suspended floor slabs
and
associated works

E10: INSITU CONCRETE

E10: MIXING/CASTING/CURING/IN-SITU CONCRETE

Reinforced in-situ concrete; BS 5328
designed mix C20, 20mm aggregate,
minimum cement content 310kg/m3; vibrated

Slabs; suspended floor

A thickness; 150mm thick

320

m3

26,000

8,320,000

E20: FORMWORK FOR IN-SITU CONCRETE

Sawn formwork to:

Horizontal soffit of suspended slab;

B regular shaped, rectangular

2,125

m2

2000

4,230,000

Edges of suspended slab; plain vertical

C height; not exceeding 250mm

276

m

600

165,600

E30: REINFORCEMENTS

High yield deformed bars to BS 4449, in
suspended floor (provisional)

Straight and bent

D Y10mm diameter, in suspended floor slabs

1,422

kg

260

369,720

E Y12mm diameter ditto

18686

kg

260

4,858,360

ELEMENT NO.3: UPPER FLOORS

Chap

Total Carried to Summary

N 17,963,680

ELEMENT NO.4: STAIRCASES

E10: INSITU CONCRETE

INFORMATION

Nature and location of the work

The work in this section comprises:

Reinforced concrete staircases and associated works

E10: INSITU CONCRETE

E10: MIXING/CASTING/CURING/IN-SITU CONCRETE

Reinforced in-situ concrete: BS 5328 designed mix C20, 20mm aggregate, minimum cement content 310kg/m³; vibrated

Landing

A generally

3

m3

26,000

78,000

Slopping soffit of stairs

B generally

6

m3

26,000

156,000

Steps

C generally

5

m3

26,000

130,000

half landing beams

D generally

1

m3

26,000

26,000

E20: FORMWORK FOR IN-SITU CONCRETE

Sawn formwork to:

Horizontal soffit of landing:

E slab; thickness not exceeding 200mm, floor to soffit 1.50m - 3.00m

19

m2

950

18,050

Slopping soffit of stairs

Alm

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F slope exceeding 15 degrees	40	m2	1000	40,000
Sides and soffit of half landing beams;				
G regular shaped, rectangular	36	m	500	18,000

To Collection

N 466,050

Chel

Staircases cont'd

Edges of slopping stairs

A	height not exceeding 250mm	66	m	500	33,000
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Steps, edges of risers, plain vertical,

B	average height 150mm	120	m	500	60,000
---	----------------------	-----	---	-----	--------

E30: REINFORCEMENT FOR IN-SITU CONCRETE

High yield deformed bars to BS 4449, in staircases

Straight and bent

10-12mm diameter

C	in landing, steps, beams and waist	2,049	kg	260	532,740
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L30: HANDRAILS AND BALUSTRADES

Provisional sum

Allow a provisional sum of N 1,000,000.00 for fabrication and installation of staircase railings as specified by the Architect

D	as specified by the Architect		sum		1,000,000.00
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SURFACE FINISHES

M10:
SAND, CEMENT/CONCRETE/SCREEDS/TOPPING

Mortar, cement and sand (1:4) beds and backings

25mm thick on concrete base

E	landing	19	m ²	800	15,200
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25mm thick on concrete base

F	Threads; width 300mm	110	m	300	33,000
---	----------------------	-----	---	-----	--------

15mm thick on concrete base

G	Risers; height 150mm	120	m	150	18,000
---	----------------------	-----	---	-----	--------

(Duo)

To collection

Staircases cont'd

N 1,691,940

M40: STONE/CONCRETE/QUARRY/CERAMIC
TILING/MOSAIC

300 x 300 x 8mm thick vitrified ceramic floor
tiles on cement and sand mortar(1:4)
screeded bed ; level and to falls

Landing

A	pattern floor, level or to falls only not exceeding 15 degrees from horizontal	19	m2	3000	57,000
	staircase treads				
B	300mm wide	110	m	1000	110,000
	staircase risers				
C	150mm high	120	m	800	96,000

M20: PLASTERED/RENDERED

Mortar, cement and sand (1:4); steel
trowelled

15mm work to walls on concrete base or
blockwork Horizontal soffit of landing;

D	regular shaped, rectangular, height to soffit 1.50 -3.00mm	19	m2	750	14,250
	Slopping soffit of stairs				
E	slope exceeding 15 degrees	40	m2	750	30,000
	Raking strings of staircase				
F	width not exceeding 250mm	66	m	200	13,200

M60: PAINTING/CLEAR FINISHINGS

Mist coat, two full coats of 'BERGER'
emulsion paint to:

Cement rendered general surfaces

Horizontal soffit of landing,

Due

Proposed CEFTER Postgraduate center for Benue state University, Makurdi

regular shaped, rectangular, height to soffit 1.50 .				
G 3.00m	19	m2	700	13,300

To Collection

Staircases cont'd

N 338,750

Slopping soffit of stairs

A slope exceeding 15 degrees	40	m2	500	20,000
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Raking strings of staircase

B width not exceeding 250mm	66	m	150	9,900
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To Collection

N 29,900

Collections

Page8

466,050

Page9

1,691,940

Page10

333,750

Page11

29,900

ELEMENT NO.4: STAIRCASES:

Total Carried to Summary

N 2,521,640

ELEMENT NO.5: INTERNAL AND EXTERNAL WALLS

INFORMATION

Nature and location of the work

The work in this section comprises:

The erection of hollow sandcrete block walls, reinforced concrete lintels

E10: INSITU CONCRETE

E10: MIXING/CASTING/CURING/IN-SITU CONCRETE

One

Proposed CEFTER Postgraduate center for Benue state University, Makurdi

Reinforced in-situ concrete: BS 5328
designed mix C20, 20mm aggregate,
minimum cement content 310kg/m3; vibrated

Lintel;

A generally	13	m3	26,000	338,000
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E20: FORMWORK FOR IN-SITU CONCRETE

Sawn formwork to:

Lintel; sides and soffit

B size; 230 x 230mm regular shaped rectangle	3,443	m	1000	3,443,000
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E30: REINFORCEMENTS

High yield deformed bars to BS 4449 in
lintels (provisional)

Straight and bent

C 12mm diameter	1,650	kg	260	429,000
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Links and stir ups

D 10mm diameter	1,025	kg	260	266,500
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To Collection

N 4,476,500

External and Internal walls Cont'd

MASONRY

F10: BLOCKWALLING

Sandcrete hollow blockwork bedded and
pointed in cement and sand (1:4) mortar

Walls;

A 230mm thick; stretcher bond; regular	1,880	m2	3,300	6,204,000
B 150mm thick; stretcher bond; regular	52	m2	2,500	130,000

To Collection

N 6,334,000

Ans

COLLECTIONS

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ELEMENT NO. 5: INTERNAL AND
EXTERNAL WALLS:
Total Carried to Summary

4,476,500
6,334,000

N 10,810,500

ELEMENT NO.6: ROOF
STRUCTURE AND COVERING

INFORMATION

Nature and location of the work

The work in this section comprises:
Steel trusses and roof covering and
associated works

STRUCTURAL/CARCSSING METAL
TIMBER

G10: STRUCTURAL STEEL FRAMING

Fabricated steel work grade 43: BS 4 and BS
4838

Welded fabrication, block bolted site
connections to BS 449

Prime Cost item

Allow Prime Cost sum of N 7,000,000.00 (Eight million naira) only for the supply, fabrication and installation of steel trusses as specified by the Engineer's design and specifications, by a nominated subcontractor.

item

7,000,000

Add: Main contractors' profit and
B attendance

7.50%

525,000

CLADDING/COVERING

H72: ALUMINIUM STRIP/SHEET
COVERINGS/FLASHINGS

Roof Covering

Proposed CEFTER Postgraduate center for Benue state University, Makurdi

0.55mm thermal lacquered curved colour coated profile,
longspan aluminium roofing sheet with double side lap
fixed to Zed purlins with hooks, bolts and protective washers in accordance with manufacture's instruction

C	Covering; slope not exceeding 45 degrees	2198	m2	2800	6,154,400
D	Ridge capping; 600mm girth	66	m	1,900	125,400
E	Hip capping; 600mm girth	27	m	1,900	51,300
F	Valley piece; 600mm girth	48	m	1,900	91,200
G	Mild steel fascia; 300mm wide screwed to Zed purlins	146	m	1,350	197,100
H	Eaves angle 150mm wide; screwed to Zed purlins	146	m	450	65,700
J	Wall capping; 450mm girth	102	m	2000	204,000
	<u>Flat roof</u>				

K Paralon NT4 or equal approved waterproofing on cement and sand screeded bed as specified

28 m2 3000 84,000

ELEMENT NO. 6: ROOF AND ROOF COVERING:

Total Carried to Summary

N 14,498,100

ELEMENT NO. 7: DOORS AND WINDOWS

DOORS

L20: DOORS/SHUTTERS/HATCHES

Powder coated aluminium swing doors;
factory glazed;
5mm thick tinted glass; complete with accessories; fix to concrete or blockwork.

A Double leaf door size 1800 x 2700mm high overall. (D1)

21 nr 270,000 5,670,000

Proposed CEFTER Postgraduate center for Benue state University, Makurdi

B	Ditto, door size 1200 x 2100mm high overall (D2)	14	nr	180,000	2,520,000
C	Hinged door size 900 x 2100mm high (D5)	4	nr	100,000	400,000

Imported laminated panel doors

Prime decorative Exterior quality: solid cored, laminated panel doors: boxing out for ironmongery; spray polished finish fixed to steel frames.

D	Single leaf; size 900 x 2100mm high (D3 & D4)	72	nr	50,000	3,600,000
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WINDOWS

Aluminium windows: powder coated, medium gauge profile, tinted, factory glazed matching aluminium subframes, insect screen, neoprene gasket, corner joint and ironmongery; fix to block/concrete work with screws

E	Projected with fixed light panes; o/a size 2775 x 6150mm (W1)	1	nr	600,000	600,000
F	Ditto; overall size 2775 x 2100mm high (W2)	1	nr	180,000	180,000
G	Ditto; overall size 2775 x 1500mm high (W3)	20	nr	90,000	1,800,000
H	Sliding; overall size 2775 x 1500mm high (W4)	18	nr	90,000	1,620,000
J	Projected with fixed light panes; o/a size 1800 x 1500mm (W5)	10	nr	70,000	700,000
K	Sliding; overall size 600 x 600mm (W6)	8	nr	8,000	64,000
L	Ditto, overall size 1500 x 1500mm (W7)	17	nr	30,000	510,000
M	Ditto, overall size 1275 x 1500mm (W8)	16	nr	28,000	448,000
N	Ditto, overall size 1200 x 1500mm (W9)	2	nr	28,000	56,000
P	Projected; overall size 2775 x 600mm (W10)	4	nr	22,000	88,000
Q	Ditto; overall size 1850 x 600mm (W11)	4	nr	15,000	60,000
R	Fixed light; size 1200 x 600mm (W12)	20	nr	10,000	200,000

Proposed CEFTER Postgraduate center for Benue state University, Makurdi

S	Projected; size 1000 x 600mm (W13)	2	nr	8000	16,000
T	Ditto; size 600 x 600mm (W14)	10	nr	8000	80,000
U	Projected with fixed light; size 300 x1500mm (W15)	6	nr	10,000	60,000
	To collection				18,672,000

Steel door drames

Supply and fix Pressed steel door frames:

A	Opening size 900 x 2100mm overall	72	nr	15,000	1,080,000
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Ironmongery

B	Supply and fix cylindrical mortice lockset wit a pair of furniture handles	72	nr	2000	144,000
	To collection				N 1,224,000

COLLECTIONS

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ELEMENT NO. 7: DOORS AND WINDOWS

Total Carried to Summary

N 19,896,000

ELEMENT NO.8: MECHANICAL INSTALLATIONS

PRIME COST SUM

Allow a Prime Cost Sum of N 3,000,000.00 (Three million naira)only for complete execution of Mechanical and Plumbing installations by a Specialist Subcontractor in accordance with the Mechanical Engineer's details

A		sum	3,000,000
B	Add: Main contractor's Profit & Attendance	7.50%	225,000

ELEMENT NO. 8: MECHANICAL
INSTALLATIONS:
Carried to Summary

N

ELEMENT NO.9: ELECTRICAL
INSTALLATIONS

PRIME COST SUM

- A Allow a Prime Cost Sum of N 6,000,000.00 (Six million naira) only for the complete execution of electrical installations by a Specialist Subcontractor in accordance with Electrical Engineer's details

item

6,000,000

- B Add: Main contractor's Profit & Attendance

7.50%

450,000

ELEMENT NO.9: ELECTRICAL
INSTALLATIONS:
carried to summary

N

6,450,000

ELEMENT NO. 10: FITTINGS
AND FIXTURES

Prime Cost Sum Item

- A Allow a provisional sum of N 10,000,000.00 (Ten million naira) only for complete execution of laboratory fittings and fixtures in accordance with the Engineer's details, by a nominated subcontractor

sum

10,000,000

Add

- B Main contractors' profit and attendance

7.50%

750,000

ELEMENT NO. 10: FITTINGS AND
FIXTURES
Carried to Summary

N 10,750,000

ELEMENT NO.11: WALL
FINISHES

INFORMATION

Nature and location of the work

The work in this section comprises:

Wall finishings with and including other associated works but excluding painting which is measured in a separate Element

EXTERNAL WORK

Cement and sand mortar (1:4); rough finish.

15mm thick work to walls on concrete or blockwork

A	width exceeding 300mm	870	m2	700	609,000
B	Fascia cornices	423	m2	700	296,100
C	width not exceeding 300mm	779	m	250	194,750

INTERNAL WORK

Cement and sand mortar (1:4); steel trowelled.

15mm thick work to walls on concrete or blockwork

E	width exceeding 300mm	3,505	m2	700	2,453,500
F	width not exceeding 300mm	311	m	250	77,750

WALL TILING

Glazed ceramic tiles to BS. 6431, glazed, 2 joints symmetrical layout, fixing with adhesive or cement mortar, grouting with matching cement grout

200 x 300 x 6mm thick units to walls on cement and sand floated backing

G	patterned, width exceeding 300mm	412	m2	2500	1,030,000
H	patterned, width not exceeding 300mm	72	m	750	54,000

ELEMENT NO.11: WALL FINISHES:
Total carried to summary

N 4,715,100

One

ELEMENT NO.12: FLOOR

FINISHES

INFORMATION

Nature and location of the work

The work in this section comprises: Floor finishings with and including other associated works

M40: STONE/CONCRETE/QUARRY/CERAMIC TILING/MOSAIC

Vitrified ceramic tiles to BS. 6431, glazed, 3 joints symmetrical layout, bedded in cement mortar (1:3) including pointing with matching cement

300 x 300 x 8mm thick units to floors on cement and sand screeded backings; level to falls only not exceeding 15 degrees from horizontal

A	patterned, over 300mm wide including narrow width	2,384	m2	3500	8,344,000 ✓
B	skirtings; 400 x 75mm high	905	m	1,400	1,267,000 ✓

Unglazed ceramic tiles to BS. 6431, glazed, 3 joints symmetrical layout, bedded in cement mortar (1:3) including pointing with matching cement

300 x 300 x 8mm thick units to floors on cement and sand screeded backings; level to falls only not exceeding 15 degrees from horizontal

C	patterned, over 300mm wide including narrow width	118	m2	2,800	330,400 ✓
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Cement and sand (1:4) screeded bed

40mm thick work to floors; level to falls only not exceeding 15 degrees from horizontal

D	width exceeding 300mm	2,502	m2	1000	2,502,000 ✓
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15mm thick work to walls on concrete base or blockwork

E width not exceeding 300mm wide

905

m

300

271,500

ELEMENT NO.12: FLOOR FINISHES:
Total Carried to Summary

N

12,714,900

ELEMENT NO.13: CEILING FINISHES

INFORMATION

Nature and location of the work

The work in this section comprises:

Ceiling finishings with and including other associated works but excluding painting which is measured in a separate Element

SURFACE FINISHES

K10: LININGS/SHEATING/DRY PARTITIONING

K30: SUSPENDED CEILINGS

Ceilings; internally

'Armstrong' or other approved mineral fibre: fissured panels
600 x 600 x 12mm thick in aluminium grids:
suspended with steel wires

A Ceilings

1375

m2

3200

4,400,000

Cement and sand (1:4) rendering

15mm thick, work to suspended soffits

B width exceeding 300mm

1065

m2

1,000

1,065,000

Ceilings; externally

0.55mm thick aluminium sheets as before described screwed to steel angle tie beams at eaves in accordance with Architect's specifications; 600 mm girth

C

146

m

2000

292,000

ELEMENT NO.13: CEILING FINISHES:
Total Carried to Summary

N

5,757,000

Ans

**ELEMENT NO. 14: PAINTING
AND DECORATIONS**

INFORMATION

Nature and location of the work

The work in this section comprises:

- (i) Painting and decorations on new works
- (ii) Paint to be obtained from portland paint

SURFACE FINISHES

M60: PAINTING/CLEAR FINISHINGS

Internal work

Mist coat, two full coats of 'BERGER'
emulsion paint to:

Cement rendered general surfaces

A	girth exceeding 300mm , wall	3,505	m2	700	2,453,500
B	isolated surfaces, girth not exceeding 230mm, reveals and the likes	311	m	175	54,425
C	Soffits of suspended bedt, girth exceeding 300mm	1065	m2	700	745,500

External work

Mist coat, two full coats of 'BERGER'
texcote paint to:

Cement rendered general surfaces

D	girth exceeding 300mm , wall	870	m2	1000	870,000
E	Fascia cornices; girth 600mm	710	m2	1000	710,000
F	isolated surfaces, girth not exceeding 230mm, reveals and the likes	779	m	200	155,800

**ELEMENT NO. 14: PAINTING AND
DECORATIONS:**

Total Carried to Summary

N 4,989,225

MAIN BUILDING

Ans

SUMMARY

	Amount (N)
1 ELEMENT NO.1: SUBSTRUCTURE	24,484,320
2 ELEMENT NO.2: FRAME	22,688,360
3 ELEMENT NO.3: UPPER FLOORS	17,963,680
4 ELEMENT NO.4: STAIRCASES	2,521,640
5 ELEMENT NO. 5: INTERNAL AND EXTERNAL WALLS	10,810,500
6 ELEMENT NO. 6: ROOF STRUCTURE AND COVERING	14,498,100
7 ELEMENT NO. 7: DOORS AND WINDOWS	19,896,000
8 ELEMENT NO. 8: MECHANICAL INSTALLATIONS	3,225,000
9 ELEMENT NO. 9: ELECTRICAL INSTALLATIONS	6,450,000
10 ELEMENT NO. 10: FITTINGS AND FIXTURES	10,750,000
11 ELEMENT NO.11: WALL FINISHES	4,715,100
11 ELEMENT NO. 12: FLOOR FINISHES	12,714,900
12 ELEMENT NO. 13: CEILING FINISHES	5,757,000
13 ELEMENT NO. 14: PAINTING AND DECORATIONS	4,989,225
<u>MAIN BUILDING:</u>	
<u>Total Carried to General Summary</u>	N 161,463,875

Ans

BILL NR. 3

EXTERNAL WORKS

All Provisional

SOIL AND WASTE WATER DRAINAGE

- A Allow a provisional sum of **N2,000,000.00** for complete execution of waste drainage works; Comprising of Septic tanks, Manholes and Inspection Chambers including all associated works to be expended in accordance with the Engineers details.

sum

2,000,000 ✓

HARD AND SOFT LANDSCAPING

- B Allow a provisional sum of **N 4,000,000.00** for hard and soft landscaping, including storm water drains and walkways as would be specified by the Engineer's details

sum

4,000,000 ✓

EXTERNAL WORKS:

Carried to General Summary

6,000,000

N

Amel