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**DEPARTMENT:** PETROLEUM ENGINEERING

**MATRIC NO:** 18/ENG007/001

**COURSE:** ENG 284 `

## **ASSIGNMENT**

Consulted as a student consulting engineer in the renovation of the Alfa Belgore Hall and I'm required to,

- (I) outline the scope of work in detail in order of occurrence
- (II) Prepare a gant chart
- (III) List all the human resources needed and constitute the project team stating who the lead consultant is.

### Outline the Scope of Work in Detail Order of Occurrence

1. **Scope verification:** Contractors shall field verify locations, sizes and quantities of work required for the project.
2. **Tools, Materials, and Equipment:** Contractors will supply all tools, materials and equipment required to perform the scope of work, unless
3. **Building Permit & inspections:** Contractors and Subcontractors shall be responsible for all building permit, buildings inspection, fees licensing and pertaining to the law.
4. **Relocating from the building:** I.e. packing out appliances and materials from the building this will be carried out by Laborers, an electrician is

also required to remove the electrical appliances including the AC,S, FANS, LIGHT, SPEAKERS, and other electrical appliances, a glazer to remove all the aluminum doors and windows a carpenter is also called in the case where there is a wooden door, after clearing everything in the building The carpenters are called upon again to remove the ceilings and the zinc. And then a temporary fence is now made around the site

5. **Demolition of the building:** This process will depend on the new projected plan, if the building is to be totally or partially broken-down. The part of the building which is no more in the new plan will be brought down by brick layers lead by the Civil Engineer.
6. **Implementation of the new plan:** This may include the expansion of the hall, addition of more windows and doors, flooring & tiling, repainting and addition of new apartment to the project etc. The work will be carried out by the brick layers lead by the construction engineer. The electrical engineers will be called to direct the wiring of the newly made structure.
7. **Clean-up.** Contractor is responsible for daily cleanup of all areas where work is performed and disposal of debris to university provided dumpster.

### Prepare the project Gant Chart

Construction schedule	JANUARY	FEBUARY	MARCH	APRIL	MAY	JUNE
Marketing research						
Facility						
Overall architecture						
Project planning						
Testing						
Project warp-up						

List all the human resource needed and constitute the project team starting who lead consultant is

1. The civil engineers: They perform duties like designing, planning, maintain and improve the physical environment of the hall.
2. Structural engineers: They are involve in the design, assess and inspect structures to ensure that they are efficient and stable.
3. The electrical engineers: Their duties involves the designing of the

wiring of the hall and they also test electrical devices

4. The consultant: only one consultant is needed for the construction of such

Scale, the lead consultant will therefore be the architect who develop the blueprint and building plan for the construction and all the other work in relation to the consultant

#### REASON WHY SITE LOCATION IS SECURE

1. For safety reasons
2. For security reasons
3. For privacy reasons

Develop a BEME for the project by lump sum projectors including 10% of the total estimated cost (Tec) as miscellaneous, 15% tech as consultancy fee, 5% Tec for site preparation and clearing after completion, 12% of Tec for transport cost. 20% Tec as profit

**Estimation and Evaluation:** Prior to the preparation of the Bill, the project is broken down into Miscellaneous, Building Rehabilitation & Construction, finishing and Furnishing, and the Total cost estimated for the project was ₦ 30,000,000

Item	Item Description	Rate %	Amount ₦	Amount (Kobo)
1.	Miscellaneous	10	3,000,000	00

2.	Consultant Fee:	15	4,500,000	00
3.	Site Preparation	5	1,500,000	00
4.	Transport cost	12	3,600,000	00
5.	Income	20	6,000,000	00
6	Materials needed For the construction	25	7,500,000	00
7.	Maintenance	13	3,900,000	00
8.	<b>TOTAL</b>		<b>30,000,000</b>	<b>00</b>

Payment  
Schedule

S/N	ITEM PAID FOR	RATE	COST	DATE
1	Mobilization	30%	9,000,000	March 25th
2	Payment for 50% completion of the project	30%	9,000,000	April 17 <sup>th</sup>
3	Payment for final completion of project	40%	12,000,000	May 17 <sup>th</sup>

## Definitions

Bill of Engineering Measurement and Evaluation (BEME): is a tool used before, during and post-construction to assess and value the cost of construction works.

Deficit Liability Period: is a period of time following practical completion during which a contractor remains liable under the building contract for dealing with any defects which become apparent.

Lead Consultant: is the consultant that directs the work of the consultant team and is the main point of contact for communication between the client and the consultant team.

Project Life Cycle: is the sequence of phases that a project goes through from its initiation to its closure.

Environmental Impact Assessment (EIA): is the assessment of the environmental consequences of a plan, policy, program, or actual projects prior to the decision to move forward with the proposed action.