ENGINEERING IN THE SOCIETY ASSIGNMENT

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QUESTION ONE

SCOPE OF WORK ON ALFA BELGORE:

1) Demolition: The ability to destroy the entire or some parts of a building. Before the construction site of Alfa Belgore was covered completely we could see machines taking down parts of the building

2) Alterations: This the change in a structure. As we are being told the plan for the hall is to add another floor to building which means they are changing the structure.

3) Roof work: The covering of buildings and structures with roofing materials. Before we left school based on the corona virus, I could still see clearly that they were taking down the roof but I am sure they will be done with that soon.

4) Windows and doors: There are already windows and doors in existence and there are going to be new ones created because they are adding a new floor to the building and once the project is complete it will be brand new windows and doors that will be used.

5 )Finishing: Finishes are used in the final part of the construction or manufacturing process, forming the final surface of an element.

6) Mechanical works/ plumbing: MEP is a field of mechanical, electrical and plumbing works of the building. Mechanical (HVAC), electrical (fire alarm, lighting, cabling).

7) Electrical: This is also under the mechanical works but I feel Electrical works are going to do some works that have to be mentioned which are switches and socket outlet, wiring and conduit etc. Without the electrical aspect I would say the construction hasn’t been completed because electricity and power are a means of life.

QUESTION TWO.

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| ALFA BELGORE PROJECT GANT CHART |
| |  |  |  |  | | --- | --- | --- | --- | | DESCRIPTION | START DATE | END DATE | DURATION | | demolition | 7/01/2020 | 14/01/2020 | 7 DAYS | | altrations | 15/01/2020 | 05/02/2020 | 3 WEEKS | | super structure | 6/02/2020 | 20/02/2020 | 2 WEEKS | | roof works | 21/02/2020 | 28/02/2020 | 1 WEEK | | windows and doors | 29/02/2020 | 14/03/2020 | 2 WEEKS | | finishing | 15/03/2020 | 15/04/2020 | 1 MONTH | | mechanical works and plumbing | 16/04/2020 | 30/04/2020 | 2 WEEKS | | electrical works | 31/04/2020 | 06/05/2020 | 6 DAYS | |

QUESTION THREE: LIST ALL THE HUMAN RESOURCES NEEDED.

THESE ARE THE HUMAN RESOURCES NEEDED:

1) ARCHITECT: THE ARCHITECT IS THE LEAD CONSULTANT

2) CIVIL ENGINEER 12) CARPENTERS

3) ELECTRICAL ENGINEER 13) FURNITURE MAKER

4) MECHANICAL ENGINEER 14) P.O.P WORKERS.

5) QUANTITY SURVEYOR

6) BUILDERS

7) PAINTERS

8) BRICKLAYERS

9) ELECTRICIANS

10) PLUMBERS

11) LABORERS

QUESTION FOUR: EXPLAIN WHY THE SITE WAS SECURED

ANS: The site was secured because the site is an existing building surrounded by other existing buildings that have been completed and are being used. And this is a building where students pass every day and in order to ensure that the best of safety measures are applied the first step to take is covering the entire building. To be honest I thought the covering up of the building was just only for covering sake but little did I know that it was a safety measure.

QUESTION SEVEN: DEFINITIONS OF THE FOLLOWING

(1) BEME: BEME is the Bill of Engineering Measurement and evaluation (BEME) also referred to as BILL, is a tool. Used before during and post-construction to assess and value the cost of construction works. This includes the cost of materials, labor, equipment and all/any other resources required for the success of any construction endeavor based on a pre-determined scope and specification.

Objectives of BEME:

1) To facilitate the comparison of rates and prices between bidders

2) To enable the clients to assemble actual tendered rates and prices to prepare for future estimating and budgeting.

(2) PROJECT LIFE CYCLE: A standard project typically has the following four major phases (each with its own agenda of tasks and issues) initiation, planning, implementation, and closure , taken together , these phases represent the path a project takes from the beginning to its end and are generally referred to as the project life cycle.



(3) LEAD CONSULTANT: A 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, except for o signification design issues where the lead designer may become the main point of contact.

ROLES OF A LEAD CONSULTANT

1) Arranging consultant team meetings and planning work stages

2) Preparing programs and progress reports

3) Advising the client on the choice of procurement route.

(4) DEFECT LIABILITY : Defect liability is a period of time following practical completion during which a contractor remaining liable under the building contract for dealing with any defects which become apparent depending on the form of contract you are reading, it may also be referred to as rectification period or defects correction period.

(5) ENVIRONMENT IMPACT ASSESMENT:

Environment Impact Assessment (EIA) is the formal process used to predict the environmental consequences (positive or negative) of a plan, policy, program, or project prior to the decision to move forward with the proposed action.

QUESTION 6

PREPARARE A PAYMENT SCHEDULE FOR THE FOLLOWING

(THE ESTIMATED COST OF THE PROJECT IS N133,488,000)

(A)30% TEC FOR MOBILISATION

SOLUTION

133,488,000 x 30% = N40,046,400

(B)NEXT 30% IS AT 50% COMPLETION OF PROJECT

SOLUTION

133,488,000 x 30% = N40,046,400

(C)FINAL PAYMENT AT 40% TEC AT COMPLETION AND HANDOVER

133,488,000 x 40% = N53,395,200

AND WE ARE EXPECTED TO RETAIN 10% OF THE FUND FOR THE DEFECT LIABILITY PERIOD

133,488,000 x 10% = N13,348,800