ESTIMATE OF G+1 SCHOOL BUILDING AND BILL OF QUANTITIES (TENDERING)

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ABSTRACT

We need to know the quantities and pricing of various goods required to accomplish the project's goal during the planning and implementation stages. That is, the construction project manager must estimate the project's cost. An "estimate" is the process of calculating the quantities and expenses of various components in connection with a construction project. An estimate is created by first obtaining the quantity of things needed to finish the project, then multiplying that number by the item's unit cost. The aim of the estimate determines the details of the estimate. The purpose of this project is to estimate the cost of the G+1 School building in Deori, Gondia. The center-line method is used to calculate the quantities of various work items. For the most precise estimate, the center-line approach was utilised. The rate analysis for Nagpur division is based on CSR 2018-19, without GST. The GST effect has been applied to the overall cost computed for the entire structure, which is 18%. The center-line approach was utilised to estimate a total of fifty-five quantities that are being employed in the structure.

Keywords: Purpose Of Estimate, Types Of Estimate, Types Of Method, Tendering Process, Measurement Work, Etc.

I.   INTRODUCTION

The processes of calculating or computing the numerous quantities and projected expenditure to be included on a particular task or project are referred to as estimates. There are various types of estimates that are employed. Approximate, Detailed, Quantity, and Supplementary estimate are all terms that can be used to describe an estimate. The approximate estimate is used to determine the approximate cost of a project in a limited amount of time before it begins. The preliminary estimate should give an exact cost of the project, which can vary by up to 10% to 15%.

1.1 Detailed estimate is accompanied by:

● Report
● Specification
● Detailed drawing, showing plans, different elevation or index
● Design data and calculation

A detailed estimate is generated on the basis of the rates used in the estimate for technical sanction, administrative approval, and the execution of a contract with the contractor. Quantity estimation is a way of determining quantities of the things involved, while rate analysis is a method of obtaining unit costs of the goods.

These are different types of method of estimate

● Center line method
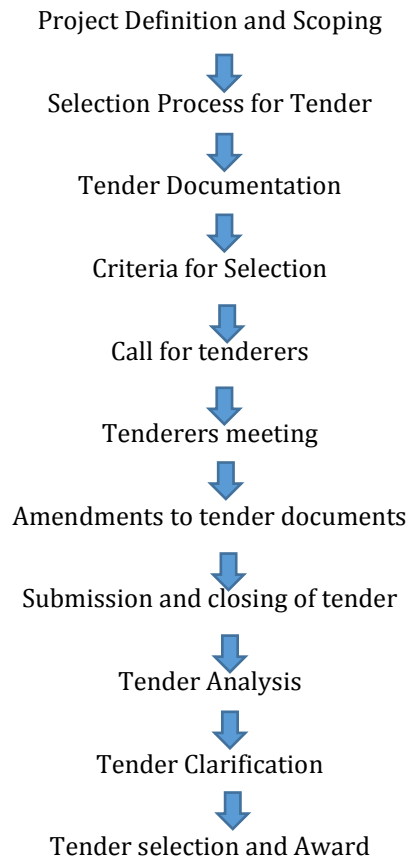● Long wall short wall method
● Crossing method

The centre line approach was used to determine the quantities of various job items.

1.2 Bill of Quantity :(BOQ):

Bills of quantities must be utilised in every phase of the project (pre-contract and post-contract), although the amount of BOQ required varies depending on the contract agreement.

Measurement work refers to the actual work that will be done to finish the project. The work has been measured in several units, and the unit value of the measured work will be determined by multiplying the amount and rates.

The tendering process

Project Definition and Scoping

⬇

Selection Process for Tender

⬇

Tender Documentation

⬇

Criteria for Selection

⬇

Call for tenderers

⬇

Tenderers meeting

⬇

Amendments to tender documents

⬇

Submission and closing of tender

⬇

Tender Analysis

⬇

Tender Clarification

⬇

Tender selection and Award

II. OBJECTIVE

- To estimate the amount of various materials and labour necessary.
- To get an idea of how much the job will cost.
- To get a sense of how long it will take to complete.
- It aids in budgetary planning prior to the start of construction.
- For the purpose of inviting tenders and contract negotiations.
- To justify the investment based on the cost-benefit ratio.
- To value an existing property, you'll need an estimate.

III. PROCEDURE AND METHODOLOGY

Building Layout Preparation Using
AutoCAD:

An architect created, discussed, and approved the proposed building layout. After that, AutoCAD was used to create the layout. The alternative layouts were created and then discussed with the architect to ensure that there were no errors.

Microsoft Excel Cost Estimation Excel is a common spreadsheet that is now commonly used in cost estimation and occasionally for planning purposes.

Method of estimate:

There are three different method of estimate-

- Centre line method
- Long wall and short wall method
- Crossing method

What is Centre line method?

The whole Centre line length of a building's wall is first computed, then the Centre line length is multiplied by the breadth and depth of individual items to acquire the overall quantity at a given moment. The length of the centre line for each part of a building's wall must be calculated independently.

IV. RESULT

G+1 commercial building (school building) estimation was completed successfully. The estimation is carried out by hand. The numbers were estimated using the centre line approach, and a rate analysis was conducted using the CSR 2018-19 omitting GST rates. To arrive at the final amount, the GST percentage (18%) was applied to the entire estimate. The whole cost of estimation was discovered to be Rs. 42238229.00.

V. CONCLUSION

The project's cost estimate was estimated in Microsoft Excel using the Centre Line Method. The CSR 2018-19 rates for Nagpur Division were followed for the Abstract cost, and a total cost of Rs.42238229.00 was estimated.

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