

On the Pricing Mode and Cost Control of Engineering Cost

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Abstract: With the development of the times, construction projects are everywhere in life. In engineering projects, engineering cost is an indispensable and important part, and based on the emergence of various new technologies, the new cost evaluation method is also widely used in the project cost, which brings a positive effect on the project cost control can not be ignored. The mode of project cost pricing and the choice, implementation and evaluation of control mode are the important contents of project cost management, and also important factors to determine the quality of the project.

1. Introduction

In the modern market economy, the project cost management not only affects the ability of the construction enterprise to obtain the profit, but also the improvement of the enterprise's overall project management ability is ten points. In the process of cost management, cost control is the main link, which is the main factor that determines the actual cost level. The foundation of the project cost is the need for the designer to put the design of the project, and then by the construction staff to the overall construction process and related technology analysis, and then the relevant professionals through field visits, in the calculation, observation, evaluation of the basis, and finally come to the most appropriate project cost process. For the content of the project cost, it contains a lot of parts and the areas involved, so in order to ensure the quality of the project and the interests of enterprises, the implementation of the project in all aspects of the cost control work has a great significance [1].

2. Project Cost Concept:

The cost of construction works mainly refers to the sum of the costs invested in the entire life of the construction works. Through the construction behavior will be the project all kinds of expenses for fixed assets, intangible assets, etc. the form of the development, these direct costs, indirect The sum of the cost is the cost of the project. With the social market commercial goods, the scale of the scale, the construction project price is refers to the construction work in the market The total price of the construction project that is easily formed in the course [2]. Table 1 shows the specific manifestations of the cost of the project at different stages of construction.

3. Current Project Cost Pricing Model:

3.1 Fixed-Value Mode

Under the fixed-value mode, the Ministry of State Construction and the local construction department will promulgate the prevailing rules for calculating the amount of works, and the engineering construction units will use the rules to calculate the amount of works, unit price, budget quota and direct fees. On this basis, the construction unit can obtain the budget cost by increasing the material price difference, tax, profit, other direct or indirect fee [2]. After the completion of the project, according to the construction period of the material difference, other cost difference to adjust the budget cost, you can come up with the final accounts of the project. After passing the supervision unit, Party A audit, the final accounts of the project is determined to be the final cost [3].

3.2 Project Inventory Pricing Model

Under the model of project quantity list pricing, the bidding institution shall, on the basis of the national unified project quantity list pricing specification, compile a list of the amount of works that reflects the consumption and measure consumption of the engineering entity and provide it to the bidding participants [4]; It can be seen that in the project quantity list pricing mode, the basis of quotation preparation includes “tender documents, design drawings, construction drawings, construction site conditions, and in accordance with the unified engineering volume calculation rules, sub-item project classification, measurement units.” Compared with the fixed-value model, the quotation results in the project quantity list pricing mode can reflect the actual situation of the project, market changes and construction site conditions [5].

4. Cost Control Key Points in the Decision-Making Phase:

4.1 Pay Attention to the Choice of Construction Site.

From the practice of cost control, the choice of construction site has a direct impact on the cost. In the selection of construction sites, we need to adhere to the following principles: 1 to save land; 3 site geological and geomorphological conditions meet the requirements of the project, avoid the rapids layer, collapse area, landslide zone and fault zone, 4 according to the nature of the project, the site needs to be able to meet the building layout, scale requirements, 5 site should be as close as possible to the transportation lines, saving transportation costs during the construction period, operation period, 6 hydropower, oil and other energy supply sufficient, 7 site environmental capacity standards [6].

4.2 Determine Appropriate Construction Standards.

Construction standards are not only related to the quality of the project, but also directly related to the cost of the project. In determining the construction standards, the standards need to be prepared, evaluated, approved and published in a scientific and reasonable order. Standards cover all aspects of labor registration, supporting works, building standards and craft equipment, and no standard blind angle shall appear [7]. At the same time, the standard should distinguish between different regions, different projects, different sizes, different functions and different levels of difference, give a concrete reference, to prevent too broad and “one size fits all” [8].

4.3 Identify Clear and Reasonable Processes.

Clear and reasonable process is a system guarantee to ensure that the construction process is carried out in an orderly manner, to reduce rework and delays. It can be seen that a clear and reasonable process is important to control the cost of the project. In determining the process process, on the one hand, according to the specific circumstances of the project, the process system, clear, to ensure its guiding role, on the other hand, the process needs to work closely with the design plan, construction plan.

4.4 Key Points of Cost Control in the Engineering Design Phase:

The design scheme is the main reference for engineering advancement, and its importance is self-evident. The design scheme can not only influence the engineering cost from the engineering framework, but also affect the efficiency of the project cost control. During the engineering phase, the design level cannot be considered only from the design level itself, but also in terms of the technical value of the design - economic performance. In general, a design needs to have two or more [9].

5. Key Points of Cost Control during the Construction Phase:

5.1 Organizational Measures to Control Cost.

In order to ensure that the cost scheme and the process design process can be implemented, we

must pay full attention to the construction of the cost control organization. On the one hand, the cost control organization needs to cover measurement, quality inspection, visa, audit, cost deviation analysis and the payment of project funds, etc. , on the other hand, the division of personnel within the cost control organization should be clear, while building a “common but differentiated” responsibility system to ensure that the cost control measures can be implemented [10].

5.2 Technical Measures to Control Cost.

The construction phase should strictly follow the design plan, not to change without authorization, otherwise it may cause the project rework, project demolition and other system impact, improve the actual cost of the project. Therefore, before the formal construction, it is necessary to do a good job of technical bottoming, to ensure that the construction unit and the first-line workers accurately understand the content of the design plan, operating methods [11].

6. Measures to Improve the Efficiency of Project Cost Control:

6.1 Establish a Sense of Control Throughout the Process

In the whole project, the project cost is running through it, so in order to raise the quality and cost of the project scientific rationality, for the whole process of project cost, to establish a sense of control, to maximize the guarantee to be able to implement the control of the various stages of the cost work, therefore, the level of cost management can rise to a new level [12].

6.2 Implementation of the Three-Stage Cost Control Work

(1) Feasibility study phase

When the project is in the feasibility study stage, it will generally need to make some economic and technical decision-making, and the impact of the decision-making in the following two aspects can not be ignored, one is the cost of the project, the other is the later benefit, so it is necessary to control the cost in that stage. In addition, making reasonable investment estimates is the purpose of feasibility study, and whether the accuracy of investment estimates is closely related to the quality level of cost control is closely related, for this reason, enterprises should also pay attention to investment estimation.

(2) Design Phase

In the construction of the project, this stage is very important, whether the post-construction can be carried out normally with the stage has an indispensable relationship. In the design stage, in order to better control the cost, the following aspects should be paid attention to, in the initial design stage to carry out cost control work, can be carried out by breaking down the investment, that is, for the start of the report, in the design manager to prepare it under the premise of it, followed by the following content: first, the principle of design, two is the limit of cost control, and finally to the designer distribution. Design personnel in the design process, in strict accordance with engineering standards and combined with multiple programs to carry out, so as to ensure that the cost of the project does not exceed a reasonable range.

(3) Optimizing the project cost control management model

Optimizing the management mode can improve the effectiveness of the project cost control work, there are many management modes in the project cost control, which need to be adjusted and optimized according to the actual requirements and situation. For example, in the process of optimizing the budget management mechanism, to ensure the integrity and comprehensiveness of data information, the application value of its actual project cost control will be brought into full play. In this process, the way of strengthening the core design is adopted, the project decision-making and project design management mode is precisely designed, the existing factors include the construction environment, construction geology and the surrounding traffic conditions. The optimization of management mode needs to start from all angles of construction, including materials, technology, equipment, personnel, etc., to achieve the overall optimization of the management mode.

6.3 Implementation Phase

At this stage, the cost is often out of control, so it is particularly important to do a good job of cost control. To this end, it can be done in the following ways: first, in the bidding. In the cost control, bidding competition is one of the main ways, through this way, the strength of the bidding unit can be fully presented, so in the bidding management work, to the project volume list bidding model as a basis, so that the bidding work more fair and just, so that the order of the construction market more standardized and orderly. Second, in terms of construction contracts. In the contract, not negligent, and for the contract of the following characteristics to be fully guaranteed: first, integrity, second, legality, third, accuracy. In this way, based on the premise of contract, the cost control standards can be more reasonable.

7. Conclusion

The cost control of the project has an important influence on the engineering efficiency and the quality of the project. In the cost control, it is necessary to start from the whole process of engineering investment decision-making, engineering design, project bidding and engineering construction, and not to ignore or miss any of these links, otherwise it may affect the accuracy, scientificity and feasibility of the project cost. It is important that the project cost control needs to be combined with the actual situation of each specific project, and the cost control scheme should be effectively improved.

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