

Discussion on construction management of construction project under new situation

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Abstract: Construction project involves very complex content, construction project construction work in the process of the most important and the most critical work is construction management. Only when the construction management work is implemented, the quality of construction can be guaranteed enough, and only in this way, the development of construction enterprises can be upgraded. Under the new situation, all walks of life have been rapid development, the social market competition is increasingly fierce, the construction industry has gradually improved the requirements of construction management, hoping to ensure the quality of construction. Based on this, this paper expounds the current situation and existing problems of construction management of construction projects under the new situation, and puts forward suggestions to improve the problems, hoping to promote the quality, efficiency and standardization of construction management work and lay a solid foundation for the sustainable development of the construction industry.

1. Introduction

The continuous development of our country's economy has also led to the development of the construction industry. At present, the market competition is becoming more and more fierce, and the market competition of construction enterprises is even more so. If the construction enterprises want to gain a firm foothold in the fierce market competition and seek better development, they must focus on the control of construction costs and the improvement of project quality. In the quality control system of construction engineering, construction quality management is the most basic and the most important component. Only when the construction management work is implemented, the quality of construction engineering can reach or even exceed expectations. In order to ensure that the quality of construction projects is consistent with relevant regulations, construction enterprises need to take effective means to manage the entire process of construction. Only when the construction management measures are well implemented in each link, can the cost control of the whole construction process be achieved, and the construction enterprises can reduce unnecessary cost expenditure. It can be seen that under the new situation, construction enterprises must pay attention to construction management, and carry out corresponding measures to protect the construction quality of construction projects.

2. Components of construction management of construction projects

2.1 Security Elements

Safe construction is a very key element for the construction management of construction projects. In the process of carrying out construction projects, the foundation must be locked to ensure the construction quality and improve the construction efficiency. Only in this way can the probability of safety hazards and safety accidents be controlled to the minimum and the construction enterprises be prevented from suffering heavy losses. Among the elements of construction management, safety is the top priority. Since construction work is mostly carried out in the open air and involves a large number of construction personnel, the personnel have a very large mobility. Only when

management personnel pay attention to and value safety and implement the safety of safe construction environment everywhere can they have adequate protection[1].

2.2 Quality elements

For any type of product, its value is reflected by the quality, only when the quality reaches a higher level can it arouse the attention of the public and produce the desire to buy, which is also the case for construction projects. The final quality of construction is closely related to the application of engineering construction. Because of this, in the process of construction work, the construction side should strengthen the implementation of quality management, and achieve the improvement of construction quality through the formulation of a series of measures. As a construction manager, we should pay enough attention to construction management, strictly follow the established construction plan to carry out all aspects of the work, but also in combination with the actual selection of machinery and equipment and raw materials suitable for construction standards. Finally, in order to ensure the quality, we must ensure that all construction personnel have rich experience and comprehensive quality.

2.3 Cost factors

In the field of construction, the link between cost and economic benefit is particularly close, only by strictly controlling the construction cost, the economic benefit of the project can be improved. The construction cost involves a very rich content. The management personnel should implement the cost budget in the process of the project cost management, and provide certain economic support for the follow-up construction work. Based on this, cost management is also a major factor in the construction management of construction projects, which must strengthen the management of various expenditures and the formulation of budget plans.

3. The significance of carrying out construction management of construction projects

3.1 Reduce construction risks

Risk management is an important part of construction management. Risk management can minimize the adverse impact of uncertain factors on construction projects. The implementation of risk management can also help construction enterprises to comprehensively check and accurately control the planning, execution and information feedback of engineering projects to a large extent, so as to detect and eliminate the existing risks and hidden dangers in time. Only in this way can blind and arbitrary decision-making be controlled.

3.2 Improve building construction efficiency

Construction management can help construction enterprises to better manage human resources, but also to achieve effective communication and exchange of various professional construction personnel, enhance the coordination of construction, which is of great significance for the improvement of construction efficiency, but also can effectively ensure the completion of construction work within the specified period. As shown in Figure 2, the coordinates of three nodes E, F and G are known as (x_e, y_e) , (x_f, y_f) and (x_g, y_g) . And the distance from them to the unknown node M is d_e , d_f and d_g , respectively. Set the coordinate of unknown node M to (x, y) , then from (2), (x, y) can be calculated and obtained.

3.3 Reduce construction costs

To reduce construction costs, we should actively carry out construction management work. By further optimizing the allocation of various resources, we can more scientifically coordinate and arrange various tasks, thereby making resource utilization and organizational structure more reasonable. This approach helps to steadily advance construction while minimizing unnecessary resource waste and cost expenditures, thereby achieving a reduction in construction costs.

4. Influencing factors and problems existing in construction project management

4.1 Influencing Factors

4.1.1 Influence of construction materials factors

One of the most basic links in the process of construction engineering is building materials, it can be said that the quality of the project depends on the quality of building materials to a large extent. In this regard, in the early stage of the construction work, we must carefully, scientifically and in combination with the actual purchase of building materials, and we must also pay enough attention to the use of materials. Before purchasing materials, relevant personnel should go to the market to carry out a comprehensive investigation, understand the market price, select materials that meet the engineering requirements and effectively control the cost in this area. At the same time, it is necessary to repeatedly inspect the various materials used in the construction to make it consistent with national standards and norms. At present, some of the problems in project management are caused by building materials factors, and even serious safety and quality accidents will occur. In this regard, we must pay attention to the impact of this aspect and choose building materials reasonably.

4.1.2 Influence of mechanical equipment factors

The reasonable selection of mechanical equipment during construction projects has many advantages, which can not only control labor costs to a minimum, but also promote the qualitative improvement of construction efficiency[2]. However, in the process of actual construction work, the coordination and management of mechanical equipment often have problems, and due to the differences in the technical level and professional ability of the operators, the progress and final quality of the construction will be affected to a certain extent.

4.1.3 Impact of environmental factors

Environmental factors can greatly affect construction management work. First, natural environmental factors and adverse weather will directly affect the construction work. In case of rainstorm, the construction cannot be carried out. Secondly, human environmental factors. If the construction process causes damage to the surrounding environment, such as improper treatment of wastewater and waste, it will lead to serious environmental pollution, which not only has a negative impact on the environment but also damages the reputation of the construction unit. Therefore, in construction management, it is necessary to fully consider and respond to the impact of these environmental factors.

4.2 Problems existing in construction site management

4.2.1 Non-standard construction management

In the process of construction work, most of the staff responsible for construction management do not have enough management awareness, nor can they improve the management system. The actual construction does not match the construction process from time to time, and even some managers have changed the construction period, and so on. These problems are mainly due to the insufficient standardization of construction management. In addition, in the process of construction management, the organizational ability of managers is relatively insufficient, and many construction personnel cannot form a joint force. Some managers cannot give scientific guidance to construction operations due to their lack of experience and fail to understand and master the construction technology, which is also the root cause of violations. Once the above problems appear, it will inevitably bring serious negative impact on the construction quality and efficiency.

4.2.2 Lack of supervision of construction quality in construction

At present, it is very common for managers to fail to implement effective supervision in the process of construction management work, and this problem also leads to the interference of multiple factors in the construction, the construction progress can not be promoted as scheduled,

and the quality of the construction naturally cannot be fully guaranteed. In addition, most of the construction personnel do not have high comprehensive quality and professional ability. In order to save the cost of manpower, most of the construction units will choose to recruit some migrant workers to be responsible for the construction work. They not only lack professional ability, but also cannot master and effectively use the new construction technology, which also makes the role of construction technology unable to give full play to. At the same time, in the process of construction, laws and regulations are not perfect, and quality monitoring is not strictly implemented. If you do not closely supervise the construction of materials, equipment, personnel operations, etc., it is impossible to effectively judge the quality of materials, whether the equipment is compliant and whether the operation is standardized, which will also bury serious security risks to the construction.

4.2.3 Safety management is not in place

From this aspect, it is mainly reflected in the construction management and supervision related staff do not pay enough attention to construction safety, because of the existence of this problem, so the construction site safety work has little effect. Although the current construction of construction safety more and more attention, but still can not completely eliminate safety accidents. At the root of it, mainly because the construction personnel do not have a strong sense of safety, but also failed to restrict their own behavior with the principle of safety first in actual operation, and even some construction personnel do not wear safety hats when entering the construction site operation, etc. These problems are still because the safety management stays on the surface and fails to be transformed into actual action. This will not only affect the efficiency of construction management, but also lead to a large gap between the quality of construction and the expectation.

5. Effective measures to improve the level of engineering construction management under the new situation

With the continuous development of our construction industry, if we still follow the traditional way to carry out construction management work, it is obvious that the current needs of construction management cannot be met. Therefore, we must innovate the way of construction management. In recent years, the improvement of the market economic system in our country has been continuously improved. As a construction enterprise, to occupy a favorable position in the market and achieve the goal of sustainable development, it is necessary to actively explore a new means of construction management under the new situation. The following author combined with personal experience for how to improve the level of engineering construction management published some humble opinions.

5.1 Innovate the construction management concept and improve the management personnel's attention

As the managers of construction enterprises, we should innovate the construction management under the new situation, in addition to the appropriate increase of the investment in this area, but also focus on the introduction and training of professional management personnel. Not only that, but also pay attention to the promotion of employees' innovative consciousness, fully link the strategic goal of their own development with innovative construction management, lock the foundation for market demand, and lock the core for management innovation, continuous innovation in construction management. However, the innovation of construction management is not a work that can be completed in a short time, so managers need to constantly summarize, constantly practice and constantly improve. Only when they have sufficient awareness of the importance of construction management can they really attach importance to this work and ensure the implementation of construction management[3].

5.2 Do quality planning before construction to lay a solid foundation for quality control

First, the corresponding quality management objectives should be formulated according to the actual characteristics of the construction project and the relevant provisions in the signed contract.

The construction unit shall formulate the quality management objectives in accordance with the construction period and the detailed rules in the contract, and on this basis, formulate the quality management measures and establish the corresponding institutions of quality management. The institutions shall be fully responsible for all matters related to quality management, construct the corresponding system, and determine the quality responsibility and the authority of management. Secondly, in the early stage of the construction work, the joint review of drawings must be implemented, not only that, but also the sub-objectives of quality management must be formulated. For the construction, the joint review of drawings is particularly critical. In the early stage of the construction, design, construction, investment and other parties should participate in the joint review, and comprehensively and carefully review the construction design drawings to ensure that all designs can be agreed with the quality specifications and quality requirements, and the technical disclosure work is implemented. The construction unit should understand the intention of the design, supervise the operation of the construction personnel, ensure that all its operations can follow the design drawings, and avoid random changes to the design drawings to cause serious quality accidents. Thirdly, the construction organization plan should be formulated. Before the construction starts, the construction unit should assign professional personnel to the site to investigate and understand the conditions, environment and geology of the construction site. Then, according to the actual situation, the organization plan is formulated to provide help for the subsequent control of construction quality. In the process of formulating the organization plan, it is necessary to clarify the key points and difficulties of the construction of each process, lock the focus of quality control, envision and consider all factors that may affect quality management in advance, and formulate preventive measures.

5.3 Strengthen the quality control in construction to truly achieve multi-pronged

First, the quality management system should be constructed and continuously optimized. The improvement of the quality management system is inseparable from the joint efforts of all personnel, and for construction personnel, the first thing to do is to perform their responsibilities and implement the responsible construction tasks. Second, if the construction link wants to be standardized, the environmental and geological conditions of the project should be fully investigated in the preparation link, and the characteristics of the project should be considered as the basis for the preparation of the construction organization design scheme. The quality control in the construction process is mainly to control the quality of materials, equipment and processes. From the perspective of material quality control, relevant personnel should fully implement material procurement, quality testing, reinspection and other work. From the perspective of equipment quality control, it is necessary to select the corresponding mechanical equipment according to the construction characteristics and construction needs to ensure that its performance can meet the requirements of construction, check its specifications, models, etc., before the equipment enters the field, and check its qualification certificate to ensure that its role can really play. From the perspective of quality control of construction process, it is mainly to strictly control the fluctuation of process quality, so that it is within a reasonable limit. Third, the successful completion of the construction project is inseparable from the efforts of the construction personnel, which can be said to a large extent determines the quality of construction. In this regard, the construction personnel must be managed scientifically. In addition to the construction of a high-quality, professional and qualified construction team, a mobilization meeting should be held before the personnel enter the field to enhance their safety awareness and let them pay attention to the importance of construction management, so that they can cooperate with the work of managers. In order to mobilize the enthusiasm of construction personnel and make their operation more standardized, it is necessary to formulate reward and punishment measures, reward the construction personnel with excellent performance, and punish the construction personnel who damage the interests of the construction party due to personal mistakes, through this way to encourage the construction personnel to devote themselves to the construction.

5.4 Pay attention to eliminate quality hidden dangers in construction to ensure the safety of construction projects

In the process of construction work, it is necessary to investigate the hidden dangers of the project one by one according to the construction progress and completion. The construction party should establish a quality hidden danger investigation team. During and after each construction process, members of the team need to investigate hidden dangers. For example, in the process of masonry construction, the team should fully inspect the fullness of mortar and the strength of mortar, in addition to strictly review the scientific and suitability of the method used by the construction personnel in the process of masonry, only in this way, the bearing capacity of building gas can meet the requirements, and the stability of the building structure can be adequately guaranteed. Finally, the hidden danger investigation team needs to investigate the hidden danger of concrete and waterproof construction to avoid the direct impact of these factors on the quality of construction.

5.5 Strengthen the quality control of completion acceptance

At this time, relevant personnel should follow the design drawings to accept the quality of the project, in addition to testing the bearing capacity of the foundation, but also to check whether it meets the design requirements, if found inconsistent then the construction unit should be remedied, to be perfectly solved after the acceptance work can continue. For the quality acceptance work of concealed works, the construction application form can be issued to the construction party first, and it is required to fill in the form after completing the construction and then submit it. After that, the construction site should be inspected in an all-round way, and only after the acceptance is qualified and the quality standards are agreed can the relevant personnel sign the approval, and the acceptance work can be ended. It should be noted that in the process of carrying out the acceptance work, relevant personnel must be careful and careful, and it is strictly prohibited to deliver the project that does not meet the requirements[4]. In addition, relevant personnel also need to summarize the quality problems existing in the construction, hold a meeting to discuss preventive measures together, and lay a good foundation for the next step of construction.

6. Conclusion

In the new situation, the construction management work should also be updated with The Times, in addition to the implementation of various management measures, but also should be combined with the existing shortcomings and continuous improvement. Only when the quality of construction management is optimized can the construction work be better promoted, the quality of the project can be improved qualitatively, and the development of the construction industry can be upgraded to a higher level.

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