

Analysis on Highway Project Construction Enterprises Profit Way

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Abstract. With the further improve of highway project cost management system, the contract price and the determine of construction drawing budget cost of highway project is clearly visible, which largely reduces disputes of the engineering settlement. But due to the inappropriate application of bidding skills, which makes the not reasonable low bid situation occurs from time to time, so as to make the profit space compression too large of the construction enterprises in the construction implementation, finally bring risk hidden trouble to the construction units to achieve the desired benefits. This paper presents the main profit way of highway construction enterprise, through the cost control and reasonable project claim to seek maximum benefits of construction.

Keywords: Highway project, Construction Enterprises, Benefit, cost control, Profit.

1. Introduction

The characteristics of highway engineering construction is the construction supply is greater than the social demand, so by determining the reasonable bidding strategy to obtain engineering contracting rights are crucial for the highway construction enterprise. This led directly to the construction enterprises in the bidding process, according to the bidder unified provide engineering quantity list to reduce bidding by using various bidding skills, and then through the change or claim after winning the bid in the process of construction to cost increases, coupled with the construction unit to require of quantity, schedule, safety and environmental protection increasingly high, which makes the construction enterprise profit reduces year by year. To break the predicament, realize the profit, construction enterprises should also do two aspects, namely, by the control of construction cost and change and claim to realize the ultimate profit.

2. Strictly control the construction cost of highway engineering

To increase profits, highway construction enterprise should be from the bidding, construction subcontracting management and direct cost aspects to strengthen the cost control of the construction phase.

2.1. Control of the tender offer

In the construction preparation stage should first carefully study the tender documents, check list range, list covers of content and calculation method of engineering quantity list, especially the item of measures project, from which to find project profit and loss balance and critical point to formulate the reasonable bidding strategy. In the bill of quantities mode, with special attention to the following two points:

(1) For the bidder provides the wrong or missing items in the engineering quantity list, the construction enterprises should raise objections to tender within the time limit of specified in the tender document, if the bidder agree to amend the engineering quantity, according to the list amount of revised to quotation, if not agreed to modify, bidding enterprises can adopt the unbalanced bidding skills, under the premise of ensuring the total bid price unchanged, on the comprehensive unit price of part of the project to adjustment, the adjustment principle is: high prices expected part of late quantity increased, low prices expected part of late quantity reduced.

(2) For the bidder provides list scope and the content are not perfect in engineering quantity list, construction enterprises can presented in bidding answering will; A will, by the bidder to further determined the scope and content of list, if the problem can not be resolved in the bidding period, should be to the quoted price in the bidding documents firstly, then indicate the engineering comprehensive unit price of there is a problem for the provisional estimate. To determine the final comprehensive unit price for this part of the project, after winning the bid shall select the unit price contract as far as possible in signing contract to ensure construction enterprise according to the actual project characteristic as the basis, to confirm the comprehensive unit price, when the situation of drawings and description of engineering quantity list project characteristics do not match in the actual project.

2.2 Control quality of subcontractors

In the construction process, the comprehensive quality and technology level of professional teams for cost control of highway construction general contract unit has a great influence. Therefore should be the whole process management to specialty subcontractors from prequalification, bidding price, the signing of the contract, center payment and final settlement. Firstly, through comprehensive evaluation to choose a team of qualification documents complete, the higher management level, strong technical force, construction experience relatively rich. To qualification review unqualified team should be resolutely refused to use. Secondly, we should regulate the subcontracting management, subcontract cost effective control. When involving multiple sub units, should pay attention to the coordination and management of all subcontractors and strengthen communication. It should also be through long-term observation, the establishment a number of subcontractors of long-term cooperation to ensure that the subcontractors adequate reserve resources.

2.3. Control of construction direct cost

The cost control target of construction phase is mainly realized through controlling the direct costs of construction and installation. Direct costs of construction and installation include labor costs, material costs, construction machines use fees, measures fee, therefore in the construction stage and the key of cost control is to ensure that these a few direct costs don't overspend. For the control of the direct costs, including the following points:

(1) Control labor costs: The construction enterprise project department can be based on quota in the provisions of the labor costs as the standard in determining team artificial unit, taking into account the night construction, high altitude operation, artificial fee adjustment and other specific conditions appropriate to increase the amount. Personnel should carefully examine the monthly artificial amount of labor force, it is difficult to calculate quantities, such as shoulder and slope, cutting engineering division, should be more than two personnel each cost audit, combined with manual and software calculation results, accurate measurement. On the part of sporadic employment can take the scene receiver after confirmation, so as to effectively control the labor cost.

(2) Control materials: The control of material fee should be to make both ends meet as the dominant idea, maximum limit reduces the cost of materials. We should set up the consciousness of saving, through bidding on select material suppliers in the procurement of materials. For bulk materials using centralized batch purchase way, should be paid to reducing purchase custodial fees, select the appropriate means of transport to reduce the transportation cost and material loss in the transport process. Material should be strictly measurement, Party A feeding and purchase materials should strictly differentiate, then register storage. At the same time should pay attention to control the turnover material import and field time to reduce the rental fees, construction material should carry out the limits, and establish a strict responsibility system of assessment and enhance staff material management consciousness through the performance management measures.

(3) Control construction machinery use fee: through the reasonable construction organization and machinery combination, try to reduce the mechanical quantity of affecting of construction consumption to improve the utilization rate of mechanical equipment. For the leasing machinery, should do import and field arrangement, as far as possible with the retreat to avoid improper use cause mechanical equipment idle and reduce machinery rental fee. For its own machinery, should strengthen

the cultivation of professional knowledge of the mechanical operation personnel to control the total expenses of the use of machinery.

(4) Control measures costs: On the basis to guarantee the construction quality, optimizing the construction scheme, using the optimal measures of construction to reduce the construction measures fee as possible. Such as the organization professional and technical personnel visited the construction site to determinate large machinery category and import time and use classes; determine the excavation machinery specifications, slope, soil pile support mode and outbound plan and the draining measures. According to the specific situation formula the construction plan accordingly, and study, comparison and selection, finally choose the optimal solution for the construction before the formula the slope supporting method.

3. Control change, visa and reasonable claim

Construction enterprises should also be timely project alteration and the visa to ensure the economic benefits, and according to the engineering implementation achieve profit through reasonable claims.

3.1 Control of material price difference

In the process of construction, fluctuation of material prices have big effect to cost control under the mode of quantity bill valuation, therefore in the determination of material price difference, should pay attention to the following two points:

(1) When signing a contract, the two sides should be agreed clearly final adjustment material basis for difference in the contract, to make detailed the absence of an agreement in the contract, according to the contract price adjustment principle of the construction project quantity list valuation standard to change.

(2) In determining the material spreads, construction enterprises should first strengthen contract management consciousness, combined with engineering practice, considering engineering environment, the nature, duration and other factors, carefully study the terms of the contract, according to the agreed adjustment of material price difference. Secondly, we should strengthen the material procurement inquiry work, pay attention to the collect price information of all kinds of material. Finally, the construction units should be in accordance with the specification requirements, grasp the material price adjustment opportunities, when prices rise factors should be put forward in a timely and treatment in accordance with the relevant principles.

3.2 The engineering change formalities in time

According to the characteristics of the long-term nature and complexity of highway engineering, the engineering change is difficult to avoid, in general will involve to change of the engineering quantity or content of engineering, leading to the construction cost increases. Construction enterprises in the engineering change process, should pay attention to the following two points:

(1) The construction enterprises should seize the key of engineering change during the construction process, it is an important part of construction enterprises to achieve balance of profit and loss and enhance the profit space of construction. As the original design of retaining wall engineering quantity is 3200 m³, the construction enterprises through a multidisciplinary, without changing the original design requirements and the use function of the premise, put forward gravity retaining wall of project technology more mature, the supervision units, construction units and design research institute decided to agree with this change, and increase the price of the contract 240000 Yuan, so as to guarantee the engineering quality, but also increase the profits of construction enterprises.

(2) The construction enterprises should pay attention to change procedures to ensure that the price of alteration to admit. First of all, in the construction preparation stage, should be fully familiar with the drawings and scale, the possible changes as soon as possible to the supervision engineer. Secondly, the change has happened to the project must be approved by the construction units, supervision units, Design Institute Co signature stamp. The Contractor shall according to the contract and quotation data, according to the change procedure proposed change price, and contact the relevant units to signature

recognition, in order to ensure the change formalities. For verbal changes should be timely obtain written confirmation, without supervision engineer of confirmation in writing, the contractor has the right not to implement engineering change. Finally, change records must be complete and detailed, and shall indicate the reason for change, quantity, specification and size, and the loss and the processing method of change cause, necessary evidence photos or drawings.

3.3. Timely engineering visa

Highway engineering construction involves a wide range will be affected by various uncertain factors and the occurrence of site visa in the implementation process, so the scene visa is an important link to ensure the construction enterprise benefit. Should pay attention to the following two points:

(1) For the actual situation of the construction site is inconsistent with the survey reports issued by department of survey and design and produce the extra workload, construction units should bear the risk and the construction units should be timely visa, and the site actual conditions and the construction scheme of written notice to the construction unit, obtained the consent of the construction unit according to the actual situation to organization construction. As a highway engineering in earthwork construction, found not to conform to the geological condition of construction and geological prospecting report, it is marked two types of soil in geological exploration report, but it is hard shale faced with in actual construction, construction machinery in this case must be corresponding with special crusher can ensure smooth excavation of foundation, leading to the contractor construction difficulty increased and the need to invest in new equipment, using new technology. In this situation, the construction enterprise truthfully report, after the scene visa of supervision units and construction units, on schedule completion of stonework. This part of the visa fees included in the engineering settlement and guarantee the expected cost of construction.

(2) Engineering visa should pay attention to detailed content, indicating the event occurrence time, location, the project site, causes, and attached the formula and related photos, marking the original data and the method of settlement and the settlement price. For unable to the content of the calculation quantities, can only sign artificial man days or mechanical stage class number, the specific amount is determined according to actual circumstances. The construction enterprise shall properly keep visa information to avoid cannot put forward effective evidence in the engineering settlement, such as visa single, work contact list, construction organization plan, the hidden record of the project.

3.4 Reasonable project claim

Technology of highway engineering project is strong, involve the participation of many departments, in the construction process, construction claims occur frequently, from the following two points make the claim processing and response.

(1) The concept of engineering claim should be run through the whole construction process, including from the tender stage carefully study the tender documents to the construction stage carefully study the terms and specification of the contract, construction enterprises should conscientiously fulfill the contract under don't give up any claim chance in each link of construction. As a project, because the construction enterprises in accordance with the contract agreed to the commencement date comes into play, the construction unit does not provide the construction site according to the contract, resulting in the delay in the schedule and field personnel slowdown and mechanical equipment idle of construction enterprises, in the coordination of supervision units, construction units and construction enterprises agree with three connections and one leveling work of site by the construction enterprise, the construction units in addition to this part of the work content according to actual engineering amount of engineering payment, duration and cost of claim on construction enterprises are compensated.

(2) To achieve a reasonable claim, construction enterprises should first pay attention to claim time limit, according to the claims procedure issue timely the notice of claims intention after claim events occurred within 28 days, and within 28 days after the timely issue claim report. If the claim events continue to occur, there should be submit the evidence materials at a certain time, submitted a final report of claim within 28 days after ends on a claim. Secondly, in the calculation of cost claims, should take the individual claim, and avoid total claims, this can make the claim of the contractor to

be resolved one by one, but also conducive to capital turnover of the construction enterprise. Finally, the construction units is the object of claim of construction enterprise, highway supervision engineer is the key of solve the problem of claim, therefore need to correctly handle the relationship between the construction unit and the highway supervision engineer, and strive to resolve the claims disputes friendly to avoid arbitration or litigation

4. Conclusion

To sum up, in the current promotion of bill of quantities valuation model, the highway project financing involves many factors, the highway construction enterprise must start from the whole process of construction of all-round to increase the profit space, under the premise of ensuring quality, schedule and safety objectives, through the control of the construction cost and timely change visa procedures, and a reasonable way to carry on the claim, saving the cost of the project, increase the profitability of the business, to ensure that the highway construction enterprise to obtain better economic benefit through the high quality construction.

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