

# A STUDY: CONTRACTOR RELATED DELAY FACTORS IN CONSTRUCTION

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**Abstract** - Delays are very common in maximum construction projects all over in the world. Some delays may take place in the preconstruction phase which is well-defined as the period start from the primary idea of the construction project to the formal acceptance of the agreement among the owner and the contractor; but some delays may occur in the construction period that is the duration between the real construction works is start and end. Construction Project schedules are usually dynamic and uncertain. A number of controllable and uncontrollable issues can seriously interrupt the project strategy and generate a tendency of delays. These all factors are related to Contractor, Owner, Designer, Consultant, Material, Equipment, Labor, Project and External/Environment. Contractor related factors of delay are considered most important factors. In this paper, I have explained various delay factors related to the contractor.

**Key Words:** Construction, Contractor, Delay, Experience, Obsolete, Planning, Subcontractor

## 1. INTRODUCTION

Delay is a condition when the consultant, contractor, and client together or individually paid for the non-completion of the project within the planned or the specified or approved contract period. Contractor Related Delay Factors type was recognized as one of the groups of causes of schedule delays of construction projects. A number of studies have found that contractor related delay factors cause schedule delays. Contractor related factors includes Ineffective project planning and scheduling, Lack of experience of contractor, Frequent change of subcontractors, Obsolete technology, Inappropriate construction methods, Rework due to errors etc.

## 2. CONTRACTOR RELATED FACTORS

When a construction firm is involved in a big construction project, a contractor is generally appointed for carrying out the construction work. Contractor Related Delay Factors type was recognized as one of the groups of causes of schedule delays of construction projects. Some factors of contractor related delay in construction projects are:

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- I. Ineffective project planning and scheduling,
  - II. Lack of experience of contractor,
  - III. Frequent change of subcontractors,
  - IV. Obsolete technology,
  - V. Inappropriate construction methods,
  - VI. Rework due to errors

These all factors explained below

### I. INEFFECTIVE PROJECT PLANNING AND SCHEDULING

This delay factor consists of Project planning and scheduling which are not capable of performing efficiently or as expected. Inaccurate time and cost estimation of project may be the most serious cause of delay. Construction estimating errors can be very expensive and embarrassing. Normally the contractor do not permit time for certain common problem constantly occur during the construction time such as missing deliveries of supplies, breakdown of equipment, accidents and emergencies and so on. Due to this problem the real time will run out from the planned time. So, the complete project might be facing the delay. Similarly, Mistaken in cost estimate contributes a lot of reason such as using improper units of mistakes in arithmetic. Sometime contractor because of wrong cost estimate, measurement for a second time for that specific work. Finally, due to re-measurement time some of the construction work will influence delay. Hence, the contractor should estimate all the problems in planning and scheduling which may occur during the execution of work and consider extra time to prevent delay.

### II. LACK OF EXPERIENCE OF THE CONTRACTOR

Abd Majid and McCaffer (1998) deliberate the factors of Lack of experience of the contractor as main causes of delays. Battaineh (2002) found the factors of Lack of experience of the contractor as main contributors to causes of delays. Long, et al. (2004) declared the factors of Lack of experience of contractor as key sources to causes of delays in construction project. In the construction trade,

several of projects facing a problem of delay during the construction period. But at that time contractor could not able to resolve the problem instantaneously because of not any experience. During the time in which the contractor discovering the technique to resolve the problem, certain works fully stopped because of this problem. The contractor should have sufficient working capital and higher efficient equipments for work and also capable in resolving problems on site. Before hiring the contractor for the project, background of the contractor should be checked.

### III. FREQUENT CHANGE OF SUBCONTRACTORS

When a construction firm is involved in a big construction project, a contractor is generally appointed for carrying out the construction work. The contractor, however, hardly does whole the work. The work that leftovers is implemented by subcontractors, who are under contract to the contractor, who is generally selected the prime contractor. Subcontractors may appoint their personal subcontractors to do portion of the work that they have contracted to carry out. Subcontractors sign agreements with the contractor that normally integrate the contract among the contractor and the owner. A subcontractor who unsuccessful in finish work on time or whose work is not satisfactory under the contract may be mandatory to pay compensations if the project is late because of these reasons. If the subcontractors changes in the course of the work by the contractors or subcontractor itself due to these problems. Then delay in the project occurs because the new subcontractor have no or say very little knowledge about that project and they start to understand the whole project from beginning which consume time and have chances of mistake. So that changing of subcontractor between the project task should be neglected and if it is necessary than contractor should be arranged regular meetings with the new subcontractor for providing full and correct knowledge of the project.

### IV. OBSOLETE TECHNOLOGY

Structures are constructed from long ago in past but the difference is of technology as early structures were simple and just for the purpose of housing. With the time, innovatory modifications have seemed in construction also and it is all because of the technology that can be well-defined as real use of your knowledge. In the starting, houses were prepared from stones and mud, but in modern time, we build buildings using several kinds of materials such as stone, glass, concrete, timber, metals, etc.

Construction business contains a wide variety of constructions fit for all classes of people. Domestic construction, heavy or civil constructions, industrial construction, commercial construction are some examples that are now showing master pieces of construction technologies. For each of these needs different technical treatments. For domestic construction, simple technological ways are generally chosen and commonly available materials are normally used. These are generally low cost projects and as well short-term. In commercial construction, the basic concern is infrastructure that is responsible for strength, workability and life of project. These are commonly launched by government organizations. These projects necessitate newest construction technologies, tools, and materials. Latest techniques of doing construction work are more effective than older techniques. Hence the use of old technique will slow down the speed of work in construction projects. For reducing such type of delay, latest technology equipments and materials should be preferred for work.

### V. INAPPROPRIATE CONSTRUCTION METHODS

Construction is the process of build structure to real property. So many individual activities perform in single construction project. Every activity have many different type of methods or techniques for executing the work. As efficiency codes have arisen into result in current years, new construction methods and technologies have developed. Construction Management sectors are on the cutting edge of the modern approaches of construction proposed to improve performance, efficiency and lessen construction waste. Sometimes contractor chooses the inadequate method for performing any task in construction which not right and not suited for that work. This may normally happen due to lack of experience or misunderstandings of contractors. In this situation, this factor contributes to cause of delay as well as loss of money. For reducing these delays, proper study of the project should be done by the contractor before selecting any method and check suitability of method for that particular work from old projects.

### VI. REWORK DUE TO ERRORS

Rework is well-defined as work measures that have to be finished more than one time. A researcher described rework as the “unnecessary process of repeating a work activity that was wrongly carried out the first time”. One more definition which highlights the essence of rework is “effort that is made to follow to the original requirements by

correction at least one more time due to non-conformance with desires." Rework is not usually defined to contain missing possibility of work modifications and change orders carried by end owners, which are not essentially considered non-conformance. Rather alterations such as these instead stem from a desire to change due to financial plan limitations or other unrelated situations. In a large complex surroundings that contains multiple stages of jobs, dealers and installers, and where lots of activities take place at the same time, the possibility for omissions, mistakes and poor management practices frequently cause neglect that can lead to failures in quality, which must then be reworked. Rework may cause time overrun and cost overrun if it is done frequently. So it should be avoided during construction. For this every step of work should be check by inspector engineer.

### 3. CONCLUSIONS

At present, the construction industry is the second biggest industry in India. Study and knowledge of factors cause schedule delay in construction projects are very essential because they cause losses to the leading organizations and also affect the economics of the construction trade. Basic knowledge of project schedule delay for the duration of the whole project can save money and time. Contractors should take proper care in the project planning and scheduling. Experienced contractor should be hire in the construction projects for timely completion of project.

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