

Consequences of Fast Track Construction: A Conceptual Framework

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Abstract: Fast changing environmental factors force the players in construction industry to opt for fast track mode. Fast-track building construction is construction industry jargon for a project delivery strategy to start construction before the design is complete. The purpose is to shorten the time to completion. Fast track construction has therefore found wider acceptability. The present conceptual paper has tried to discuss the definitional aspect of the fast track construction, process of fast track construction, advantages and disadvantages of fast track construction and the implications of fast track projects.

Key words: *Conceptual, Conventional, Fast track, Advantage, Disadvantage, Construction*

I. INTRODUCTION

In case of a 'conventional' construction venture, the design has a tendency to be finished before a cost is looked for from contractual workers. This restricts the customer's risk, as the cost can be settled, and critical varieties to the extension or nature of the works ought not to be vital. In any case, this can imply that the venture is generally slow to finish. On the other hand the priority may shift from money to time, and the client need the accomplishment of the projects as soon as possible. This may be the situation for instance where there is a settled due date, (for example, the beginning of a school term), where the customer's income is dependent on pay created by the finished venture, where there are dangers of critical cost changes (on long tasks), where the undertaking is financed by obligation, or for crisis works. Such projects are usually be completed on a Fast track mode. Fast-track construction can be comprehended as a scheduling system that can be utilized to lessen the general length of activities by covering assignments that on a customary contract would not be started until the point when the past undertaking was finished. The best efficient is frequently accomplished by covering the design and construction stages. Fast-track construction is normally suited to standard building composes with dreary components and straight-forward construction forms and is most usually connected with management contracting and construction administration types of reaching.



FIG.1 FAST TRACK CONSTRUCTION

It requires co-ordination, flexibility and cooperation. The project group ought to be knowledgeable about the strategy with the goal that they can conceive how the undertaking will create and foresee dangers. Fast track site has been exemplified in the fig.1.

II. BACKGROUND

The fast track process has been defined as "a method of construction by which actual construction is commenced prior to the completion of all design, planning, bidding and subcontracting stages in order to alleviate the effects of inflation." [1] Despite the fact that this general definition is precise, it informs small concerning the points of interest of the procedure. Previous researches states that under the fast track approach the proprietor plots for the planner the general criteria for the venture. The architect at that point gets ready, essential plan records, schematics, warming, ventilation and aerating and cooling, electrical, and primer basic illustrations. From these deficient illustrations, the chose contractual worker (or the offering temporary workers) appraises the cost of development and afterward continues toward firm negotiations or bidding. The

agreement with the general contractual worker would then be able to take any number of structures, including a single amount or ensured greatest cost plan, a cost-in addition to course of action, or a staged blend of the two. [2-3] One issue with the definition is whether fast track construction requires the utilization of a construction manager (CM) and the disposal of the general contractual worker. The dominant part reflected in the standard writing shows that most optimized plan of project development strategies can be used through either a general contractual worker, CM, or both. Some of the people opines that in the business, in any case, that fast track construction should not use general contractor but rather requires the utilization of a CM. [2]

Researches in fast track construction included multiple aspects like Moazzami [4], in his paper, identified particular legal risks and challenges in fast-track projects through a literature review. Pawar et al. [5] in his study emphasizes the identification and assessment of various risks in case of fast track projects. This paper by Kwakye [6], discusses the nature of Fast-Track construction in which design and construction functions are overlapped. The benefits and economic analysis of fast track construction are also discussed briefly. The final section of the report -gives general observations of the techniques and suggests the type of organisations best suited for adopting Fast-Track construction. Van Der Linden [7] in his paper present an approach to project management and plant construction using Fast-Track construction methods. The intention is to analyse why projects using Fast-Tracking slip behind schedule and overrun cost estimates. Finally, it examines what key steps are needed to complete a project using Fast Tracking on time and within budget. Subramani, Sruthi, & Kavitha, [8] discussed the causes of cost overrun in construction.

III. PROCESS ANALYSIS

In fast track construction, the contractor is chosen from the get-go in the process - some time before the plans and determinations are finished, and at times before the outline has even started. The contractor helps with outline advancement and presents a value proposition before the illustrations are finished. For the most part, the contractor gives an ensured greatest cost, including the contractor's expense, and maybe a few contingencies and allowances.

Construction begins a long time before the construction illustrations are done. The architect concentrate first on the site work, and establishment. While the contractor is moving soil, and developing the establishment, the architect get ready illustrations for whatever is left of the venture. A portion of the plan may even be design build.

As construction advances, the architect battle to keep in front of the temporary worker. In most of the cases if the things goes as per plan, the fast tracked task will finish in significantly less time than the conventional venture. The primary favorable position of fast track construction is time. The task begins a long time before the fruition of the outline and may even complete not long after the last illustration is discharged. Fat track construction is best suited option when the time is the major concern. In the 1970's when inflation was very high, fast tracking maintained a strategic distance from a portion of the cost increments.

Fast tracking additionally permits the contractor an early chance to give configuration information and esteem building. The connection between the gatherings ought to be less angry since the temporary worker is generally not bound to a settled single amount cost.

In any case, fast tracking isn't shabby and has extensive dangers. New drawings keeps coming consistently. There might be coordination issues between drawings, or with existing development. The contractor isn't generally ready to develop precisely what is appeared on the drawings because of field or existing conditions. At the point when the contractor rolls out improvements, the progressions should be promptly conveyed to and facilitated with the architect. Fig.2 represents a generalized process under fast track construction project.

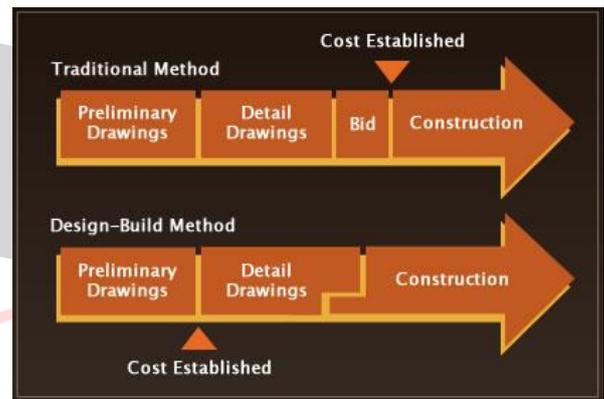


Fig.2 Fast Track Construction Process

IV. ADVANTAGES/ DISADVANTAGES

A) Advantages

The major advantages to fast track project delivery is to save money by getting the building into revenue-producing mode as quickly as possible. Other advantages are mentioned below.

i) Catching up the backlog

In the event of a long recession era, there might be something of a backlog of working to do. Amid the lean years, numerous undertakings might be put on hold, once the lean time frame is over proprietors may search for contractors that can finish the projects on urgent basis.

ii) Leaping quickly into emerging markets

Few major features of the 21st century are the Disruptive technology and the processes. When something new needs to be addressed, it turns into a race to see who can create it first and get the biggest share of the market early. Offices are required rapidly to have the capacity to make that jump.

iii) Reduce construction costs

One of the major cost involved in the construction is that being paid to the construction labor. It can reduced by a significant amount in case of early completion of construction. As construction costs keep on rising, one can anticipate that more endeavors will reign in construction spending.

iv) Savings through advance purchase

Purchasing materials ahead of time might have the capacity to pick up costs reserve funds, particularly on materials where the cost is rising day by day. This may give a help to

architects as well as the designers who currently know precisely what they need to work with and can plan on account of those particular materials.

v) Closer collaboration

Correspondence and cooperation are urgent for accomplishment in a fast track project and this is really leeway. With the packed time span and limitations, all colleagues should know precisely what is to be conveyed in light of the fact that everybody is in agreement consistently. Rather than sitting tight for one a player in the project grouping to complete or work without learning of whatever is left of the venture, fast track project conveyance powers everybody to share data always.

Another reward of this communitarian culture is that the contractor is for the most part one of the first to be employed, furnishing everyone concerned with the open door for early contribution to the plan procedure and an opportunity to do some value engineering. At the point when professionals from various exchanges get together, it can make a situation for imaginatively realistic plan.

B) Disadvantages

There are some disadvantages to doing things fast. The disadvantages of the fast track are mentioned below.

i) Quality issues

Basically, when a Construction project is assembled as fast as could be expected under the circumstances, quality can endure. More blunders and exclusions can, and most likely will, happen. A construction project is to a great degree complex with numerous moving parts. On the off chance that even one escapes put, numerous more can come tumbling down.

ii) Planning issues

The speed required for a fast track project leaves a great part of the arranging stage behind. The time amongst design and construction is short, so mistakes and oversights are not gotten as they would be in a closer audit. Adding to this is the trouble in staying steady over the project when parts are finished out of succession or when in excess of one individual is in control.

iii) Unrealistic client expectations

The most serious issue might be customer, who may not understand the flow of construction and expects the investment funds of fast track project conveyance to be ensured. The proprietor trusts all reports are exact and finish, notwithstanding when delivered under time limitations.

V. IMPLICATIONS OF FAST TRACKING

The last cost of the project is indeterminate when construction starts since configuration isn't finished. With the customary design– bid– manufacture process, an entire arrangement of construction records and particulars portrays what the developer consents to assemble and fills in as the core of the agreement. On Fast-Track projects, the plan, construction archives and determinations are deficient, so setting the last cost presents issues. To manage this troublesomely, proprietors commonly utilize a cost-reimbursable contract with the developer. The agreement may incorporate a cost gauge with no certification or there might be a Guaranteed Maximum Price (GMP). Be that as

it may, even with a GMP, there can be contention over the extent of work secured by the GMP since the outline was inadequate when the agreement was executed.

There is additionally a risk that work built in an early period of the venture may not suit later design choices. For example, if the building shape changes after the foundations are worked, there is expanded cost and postponement to adjust the finished foundations. Or on the other hand a thing of gear that is chosen late in the process may require depletes or water and power associations that were not foreseen right off the bat in the undertaking. Besides, the elucidation of the design brief from the contractual worker may contrast from the proprietor which can bring about an irreconcilable circumstance.

In the event that time isn't pivotal, proprietors may adopt a judicious strategy to complete design and get a settled singular amount cost before beginning development. Nonetheless, if there is motivation to speed extend conveyance, Fast-Track can be utilized with any task conveyance technique, for example, CM at Risk and Agency CM, design– fabricate, crossing over and coordinated undertaking conveyance. Indeed, even the customary design– bid– manufacture process can utilize Fast-Track ideas by offering separate general development contracts for phases of the work.

VI. CONCLUSION

Fast track management has got wider acceptability primarily due to time saving approach. Moreover some other benefits like Catching up the backlog, Leaping quickly into emerging markets, Reduce construction costs, Savings through advance purchase, Closer collaboration are also significant. On one side where we find advantages we also find some disadvantages like that of quality issues, planning issues, unrealistic client expectations associated with fast track construction that are probably the reasons for fast track construction not becoming the automatic choice for constructing any type of projects. One of the implications as per our review of the fast track project is an additional risk in various domain.

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