

Delay Recovery At Bridge Site Project

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Abstract- Depending on the nature, components and composition of each late project there could be a different solution and accordingly one of the suggested methods or combination of solutions may be selected. In small projects, the method is determined by experienced officials based on their innovative ideas and experiences. In large construction projects, the rate of financial losses is larger and the officials should carefully analyze the situation to determine what solution should be undertaken. Effective usage of the remaining time to completion of the project and use of newer technologies has been the main concern. This paper briefly gives an idea about the equipments and manpower available on site and the method to be adopted for the delay recovery accordingly.

Keywords- Delay, delay recovery, suggested recommendations

I. INTRODUCTION

Delay in construction projects is the most common problem. Considerable number of projects fall behind scheduled time causing damages to almost all involved members. Owners experience losses due to postponed finishing dates and contractors may face liquidated damages. Architects and engineers may face extra challenges due to delays. These days all involved parties need the same thing: an on-time and within-budget project with safety and quality excellence. Additionally, each stakeholder in construction aspires to do a satisfactory job personally and thus, and expects to be rewarded accordingly with more work at a higher margin. This great chance of achieving a better result with a little focus.

The project site discussed in this paper is a ROB (railway over bridge) project at Bhakti Shakti, Akurdi, Pune. The client for this project is PCMC (Pimpri Chinchwad Municipal Corporation), contractor is B G Shirke Construction Technology Pvt Ltd and consultant is STUP consultants.

II. EQUIPMENTS AND METHODS

EQUIPMENTS :

The equipments used on the site are as follows:

- 1) Plants
- 2) Mixers
- 3) Earth moving machinery
- 4) Concrete handling machinery
- 5) Welding, drilling and cutting machinery
- 6) Water handling equipments
- 7) Material handling equipments

METHODS :

Many methods for recovering delay have been suggested by experienced and learned experts in the industry. The delay occurred on this site is due to land acquisition problem. The site is lagging behind by 6 months. Recommendations are as follows:

- 1) Improve planning and control on site as well as off site
- 2) Improving site management and supervision
- 3) Minimize the changes in design to possible extent
- 4) Improve financial support for all activities
- 5) Improve supply chain management of materials
- 6) Improve productivity in terms of equipments and manpower
- 7) Improve human resource management
- 8) Improve communication and coordination with internal and external customers
- 9) Adopt new management techniques, new equipments and materials
- 10) Adopt new approach to contract award

The contractor has its own equipments and manpower on site. These equipments and labourers can be used in two shifts for faster completion of work. Also identical equipments can be rented in case of overlapping in scheduling. This will reduce the cost in buying new equipments. Renting equipments will also increase the costs but in smaller amounts as compared to purchasing equipments. Moreover, no requirement of new skilled persons will be needed as same equipments are being used.

Table no. 1 : Types and Numbers of staff on site

Type of staff / position	No. deployed per day	working
Project manager	1	
Deputy project manager	1	
Highway engineer	1	
Fabrication engineer	1	
Senior engineer	2	
Assistant engineer	1	
Junior engineer	2	
Material engineer	1	
Lab technician	2	
Safety officer	1	
Civil supervisor	4	
Surveyors	1	
CAD operators	1	
Computer operator	2	
Administrative staff	10	
Carpenter	40	
Fitter	41	
Mason	9	
Welder	12	
Male helper	48	
Female helper	11	

Table no 2 : equipments available on site

Name of equipment	Manufacturer	Number of units deployed
<i>Plants</i>		
Aggregate crushing plant		1
Batching plant		1
Wet mix macadam		1
Hot mix plant		1
<i>Mixers</i>		
Transit mixer	Greaves	4
Air compressor	Atlas	1
D G sets	Kirloskar	5
<i>Earth moving machinery</i>		
Loader cum backhoe	L&T	1
Loader	Case	1
Excavator	L&T	3
Sensor paver	Vogele	1
Tandom roller	L&T	1
Pneumatic tyre roller	Hamm	1
Bitumen sprayer	Apollo	1
Soil compactor	L&T	1
Motor grader	Sany	1
Hot air blower gun machine		1
<i>Concrete handling</i>		

<i>machinery</i>		
Concrete pump stationery	Sany	2
Tower crane	GJJ OP5015	2
High frequency poker vibrator	Lever	5
High frequency needle vibrator	Dynapac	4
<i>Welding, drilling and cutting machinery</i>		
Welding machine phase 3	Wrapp	11
Bar bending machine	Spartan	3
Bar cutting machine	Spartan	4
Chipping	Hilti	1
<i>Water handling equipment</i>		
Water pump electrical	Kirloskar	7
Submersible pump	Kirloskar	1
<i>Material handling equipment</i>		
HYDRA F 15	Escort	3

III. RESULTS AND DISCUSSION

The results regarding this project's delay recovery will be observed and recorded after applying recommendations stated above as solutions to the delay. Delay analysis including the causes can be used for selecting the methods for recovering delay. Main focus being on delay recovery, delay analysis can be collected from site officials.

IV. CONCLUSION

The delay on this site can be recovered by using the above recommendations. The project being of public concern cannot be delayed for a long time as it will result in loss of economy, inconvenience to people, delay in providing facility to public. It will directly affect economy of PCMC as delay in time will increase the rate of project, materials and other sources like water, electricity.

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