

# Design and build a construction construction essay



**ASSIGN  
BUSTER**

IProject Introductions2IIProject Scope2IIIIProject Delivery

Systems2IVEstimations31Budget Cost Estimations32Time Estimations53

Project Network74Critical Task85 Work Breakdown structure96 Mile

Stone10VProject Risks11VIEvent Promotions12VII Recommendations12VIII

Conclusions12IXReference13

## **Project Introduction**

Our project is the Design and build a construction of a single user guard house at empty land in fishery port road for the future usage. This document is discuss about the project, design and functional components, Project delivery system, Project schedule, and create the summary , cast evaluation, work break down structure, project risks and other discussion and recommendation for the project.

## **Project Scope**

For the project have approved from necessary authorities, It is build for a developer's empty land for future usage. The size of building is 100 sq. m. fully computerized and air conditioned. Very soon there going to construct a single user warehouse building. Design & Build project , which involves designing the house scheduling and figuring out what are the materials needed, ordering or purchasing the materials, and putting together the various parts. Some of these tasks depend on the others, some must be scheduled, some take labour, etc

## **Project Delivery systems**

The original project was arranged to be a design & build with project manager at risk. Through conversations with involved parties, the project

has morphed in to a more traditional Design bid build delivery. The original delivery method was chosen to allow the project to begin development prior to completion on time and satisfy the wants from the owner in the time desired created a scenario that would be best fit by the design build with project manager at risk delivery method.

## **Estimations**

The project estimation like Budget cost estimations ( Finance Estimations), Time estimation, for the whole project and also work estimation such as project network and work breakdown structure.

## **Budget Cost Estimations**

Total cost Estimation for our project is \$ 37, 874. 00, Its based on this assumption and calculation from the software . We assume for the contractor each and every stage. The fallowing components are consider for cost estimations:

## **Components:**

Pre Constructions  
Barricade the Site  
Cleaning and Cable  
detections  
Foundations  
General Excavations  
Footings  
Ground Beams  
Super  
Structure  
Columns  
Beam & Roof Slab  
Brick Work  
Finishing works  
Wooden  
Works  
Plastering Works  
Flooring Works  
M&E Works  
Painting Works  
Hand  
Over  
Rectifications works

## **Fig 1 : Budget Report**

### **Fig 1. 1 Cash Flow Report**

### **Fig 1. 2: Earned Value Report**

#### **Time Estimation**

Try to start the project as soon as possible. Our estimated starting date is Second week of January 2013, ( 14/ 01/2013 ) And Completed on March 2013, ( 22/3/13 ) total 50 Days of project. The details of following deliverable stages are listed below:

#### **Deliverable stages:**

Pre construction - 3 Days ( 14/1/13 - 16/1/13 ) Foundations - 12 Days ( 17/1/13 - 1/2/13 ) Super Structure - 14 Days ( 4/2/13 - 21/2/13 ) Finishing work - 18 Days ( 22/2/13 - 19/3/13 ) Hand Over - 3 Days ( 20/3/13 - 22/3/13 ) Total Days - 50 Days ( 14/1/13 - 22/3/13 )

### **Fig 2: Project schedule ( For Time Estimations )**

### **Fig 3: Project schedule on Gantt chart ( For Time Estimations )**

### **Fig 4: Resource Usage report**

#### **Project Networks**

Our project start with the pre construction and going to foundations , super structure, finishing works and hand over. Each activity have sub or minor activity. Pre construction - Barricade the Site , Cleaning & Cable detections Foundations - General Excavations, Footings & Ground beams Super Structure - Columns, Beams & Roof slab & Brick Works Finishing

Work – Wooden work, Plastering , Flooring, M&E and Painting  
Hand Over –  
Inspection & Rectification works and Hand over

## **Fig 5: Project Network Diagram**

### **Critical Task**

## **Fig 6 : Critical Task Chart**

## **Fig 7: Critical Task Report**

## **Work Breakdown structure ( WBS)**

## **Fig 8: Work Breakdown Structure**

## **Fig 9: Resource work Summary Report**

### **Mile Stone**

## **Mile stone = Deliverable of stages in the Projects**

### **Pre Construction :**

Completion of Pre construction is the first deliverable stage of our project.

Just stop this stage and review all the process its sub activity . We achieve this mile stone on 16 Jan 2013

### **Foundation :**

Completion of Pre construction is the second deliverable stage of our project.

Just stop this stage and review all the process its sub activity . We achieve this mile stone on 1 Feb 2013.

### **Super Structure :**

Completion of Pre construction is the third deliverable stage of our project.

Just stop this stage and review all the process its sub activity . We achieve this mile stone on 21 Feb 2013.

## **Finishing Works :**

Completion of Pre construction is the fourth deliverable stage of our project.

Just stop this stage and review all the process its sub activity . We achieve

this mile stone on 19 Mar 2013.

## **Hand Over :**

Completion of Pre construction is the fifth and last deliverable stage of our

project. Just stop this stage and review all the process its sub activity . We

achieve this mile stone on 22 Mar 2013.

## **Project Risks**

Our project facing some the risk related cost, time, quality, environmental

and safety. We discuss about the fallowing risks stated below: Tight project

scheduleDesign variousVariations by the clientUnsuitable construction

program planningOccurrence of disputePrice inflation of construction

materialsExcessive approval procedure in administrative

authoritiesIncomplete approval and other documentIncomplete or inaccurate

cost estimateInadequate program schedulingHigh performance or quality

expectationsVariations of construction programLow management

competency of subcontractorsUnavailability of sufficient amount of skilled

labourLack of coordination between project participantsInsufficient site

information ( soil test and survey report )Serious noise pollution caused by

constructionGeneral safety accident occurrence

## **Event promotion**

Event promotions is encourage the total manpower of the project It is

general safety champions award for the worker and supervisor, who work

with in the safety regulations for the maintain the safe working environment for the whole period of the project. The event conducted on 22nd March, 2013 at the site assembly area.

## **Recommendation**

**Project Schedule :** To complete the project within time must be start the project on the date 14/1/2013. Maintain the target time to complete each task. If not able to complete the then using the feeder buffer period to complete the task within the time. **Critical Task :** Our project have a lot of critical task have to do. When start the critical task concentrate the project in full awareness. Task are try to crush if not able to crush then maintain the time and do not reduce the manpower and machineries. **Budget :** When order any type of rental machineries , try to complete the work in most priority basics. Must be plan the work schedule for the machineries and keep monitoring for ensure complete the task within time and budget limits. Try to avoid unnecessary overtime payment for the workers and supervisor due to fallow up schedule. **Risks:** Identify the all the type of the risk when carry out our project, then try to eliminate the impacts of risks. If not possible to reduce the impacts the arrange all the precaution methods to protect the project delay.

## **Conclusions**

Finally we are in the finishing stage of this document, we discuss about the project , schedule , budget, risks , other construction related and non construction related matters to carry out the project to getting a successful completions. We work out from the MS project software getting Gantt chart, cost estimations , critical task, network diagram, mile stone, project

summary to complete the project. Also we give some of the recommendations on project schedule, critical task, budget and risks of the project to improve the productivity of project manager on their project.