

Approximate Estimate and Planning of Old Tehsil Building Kalyan

Prof. Dipali P. Patil¹, Prof. Prajakta Chavan², Roshan H. Bhagat³, Rohan S. Vaidya³,
Atul D. Tawre³, Sujit S. Pawar³

¹Assistant professor, Department of Civil Engineering, Dilkap Research of Engineering and Management Studies.

²Student, Department of Civil Engineering, Dilkap Research of Engineering and Management Studies.

Abstract – The term of approximate estimate and planning is an important task in the management of construction project. An approximate estimate is the probable cost of a work and is prepared before construction is taken up. Early stage of planning and estimate plays an important role in the success of any construction project. Owners, contractor and donors are in need of reliable conscientious information about the cost in the early stages of the project, where very limited drawing and details are available during this stage. The purpose of this project is to remove slum near kalyan tehsil office and give proper planning of govt. offices as well as the cost of the construction will be economical. Which will gives the better phase to the future.

Keywords: approximate estimate, planning, construction cost.

1. INTRODUCTION

Estimate: before taking up any work for its execution, the owner or builder should have a thorough knowledge about the volume of work that can be completed within the limits of his funds or the probable cost that may be required to complete the proposed work. It is necessary to prepare the probable cost or estimate for proposed work from its plan and specification otherwise it may so happen that the work has to stopped before its completion due to the shortage of funds or of materials but an estimate is never the actual cost of the work

1.1 Types of estimate

1.2 Approximate estimate

Approximate estimate is preliminary or rough estimate. This is made to find out an approximate cost in a short time and thus enable to responsible authority concerned to consider the financial aspect of the scheme for according sanction to the same. This estimate is prepared after preliminary investigation, preliminary surveying and where required sub-soil investigation and tests to determine the safe bearing capacity may be conducted. Approximate estimate for main projects as for buildings, services like sanitary, water supply, drainage, electric work, boundary wall, roads is any cost of land, are made separately. At the end a general cost of abstract of cost is drawn. Provision of contingency @ 5% to 10% is

added with the abstract which is total approximate cost of the project. By the very name of approximate estimate is importance should not be neglected. Because is there is bulk difference between the approximate estimate and the cost construction of a project this may misguide the intention to undertake a project. Incase the approximate estimated cost be too high, the project may be lift without preparing its detailed estimate. On the other hand, if the approximate estimated cost be too low then the project is taken in hand to prepare detailed survey, investigations, design, preparation of detailed drawings, detailed estimates etc. But when it is found that the actual estimated cost is much higher than the approximate estimate then the project may be cancelled due to lack of fund. So the entire labour, time expenses become useless. Government or public Bodies or even private Owners used to know the approximate estimated cost of the intended project for approval to undertake detailed investigations, to prepare detailed drawings, design and detailed estimates etc.

1.3 Detailed estimate

In this, the estimate is divided in to sub-heads and quantities of various items are calculated individually. In the end of detailed quantities, an abstract cost giving quantities of all items and rate of each items according rates are sanctioned. In case rates which are not given in sanctioned of schedule of rates, proper estimation shall be attached. Detailed specification & report should also be attached with the estimate. Technical sanction is given on the detailed estimate.

2. PRINCIPLE OF PLANNING

2.1 Planning of building

Planning is the process of thinking about the activities required to achieve a desired goal. A layout plan of construction site is proper graphical representation of buildings in development project, parking area, and other part of structure of a development project. A site plan is group of construction drawings, structural drawings which use builder or contractor improvements to a property.

2.2 Principle of planning

Aspect:

Aspect means the peculiarity of the arrangement of doors and windows in the external walls of a building which permits the occupants to enjoy the gifts of nature via sun, breeze, outside scenery etc.

Prospect:

Prospect is the term used to highlight the architectural treatment given to a building so as to make it aesthetically pleasing from outside and arranging external doors and windows in such a manner that the occupants are able to enjoy the desired outside views from certain rooms.

Privacy:

Privacy is considered to be one of the most important principles of planning in all buildings especially in residential buildings. Privacy may be one part to another part of the same building or it may be the privacy of all parts of the building from neighboring buildings, public streets or bye ways etc.

Furniture requirement:

The furniture requirements of a room or an important depend upon the functions required to be performed there in. The furniture requirements in house will be different from that of a class room in a school or an operation theatre in a nursing home/hospital

Roominess

Roominess is to get maximum benefits from the minimum dimension of a room. A square room appears smaller than rectangular room of same area. Due to importance to the arrangement of furniture following factors effecting roominess are

1. Size of room
2. Shape
3. Furniture used
4. Position of doors and windows

Grouping

We know that each lodging during possesses an explicit operate and there is some inter-relationship of sequence in between them. Grouping consists in composing numerous rooms within the layout arrange of the building in such a way that each one the rooms are square measure placed in correct co-relation to their functions and in proximity with each other. The essential aim of grouping of the flat is to take care of the sequence of their operate in line with their inter-relationship with least interference.

Circulation

Circulation suggest that internal through faces or access providing during a area or between rooms on

similar floor. Passage, halls and lobbies perform the operate of circulation on the same floor. Such provisions are square measure termed as horizontal circulation. On the opposite hand, stairs, lifts, ramps etc., that serves the aim of providing suggest that of access of access between totally different floors get lined below the class of the term vertical circulation.

Sanitation

The term sanitation covers not solely hygienic convenience like privet, urinals, bath rooms, wash basins etc., however conjointly correct p and adequate lightning ventilation and facilities for general cleanup of the building. From healthful concerns, all elements of the building ought to be aired and lighted. The lighting of the inside of the building is also done by natural lighting, assisted natural lighting or by artificial lighting.

Flexibility

Flexibility suggest that planning bounds rooms needed for designing for specific purpose in such a way that they will be used for overlapping functions as and once desired.

Elegance

Elegance is that the term accustomed specific the result made by the elevation and general layout of the building. It is necessary that its elevation should be evolved that it should be aesthetically pleasing and its layout ought to slot well in regard to the positioning and its surrounding.

Economy

Economy is one among the vital issue that is needed to be unbroken visible whereas involving any theme. Each unit of the engineered up space could be a operate of value and in and of itself the designer must check that the building planned b him are often completed among the funds obtainable for the project. Many other times it becomes necessary to hold out range of alteration within the plans to stay promonposal among the limitation of funds. Out number of alteration in the plans to keep the proposal within the limitation of funds

- 1 To find out the Approximate estimate of kalyan tehsil building.
- 2 Planning of tehsil building.
- 3 Proper arrangement of offices.
- 4 Proper parking areas for offices.

Table -1: Data Collection

Tehsil area and other area.			
Sr.no	Description	Source	Data
A	Revenue department	Kalyan	Area

1	Talathi office katemanevali	Tehsil	31.32 sq.m
2	Hotel	Tehsil	15.00 sq.m
3	Talathi office	Tehsil	120.70 sq.m
4	Treasury Office	Tehsil	32.00 Sq.M
5	Record room	Tehsil	280.00 sq.m
6	Apar tehsil office	Tehsil	21.60 sq.m
7	Tehsil office	Tehsil	264.35sqm
8	Setu Kendra	Tehsil office	86.75 sq.m
9	City survey office	Tehsil office	24.00 sq.m
10	Toilet	Tehsil office	13.81 sq.m
		Total	889.03 sq.m
B	Police department	Kalyan	
1	Wireless room	Tehsil office	105.00 sq.m
2	Mahatma phule station	Tehsil office	428.80 sq.m
3	Jamadar room	Tehsil office	42.60 sq.m
4	Office	Tehsil office	46.80 sq.m
5	Crime branch	Tehsil office	178.27 sq.m
6	Toilet	Tehsil office	23.31 sq.m
7	Security office	Tehsil office	130.70 sq.m
		Total	955.48 sq.m
C	P.W.D OFFICE		
1	Guest room A	Tehsil office	227.37 sq.m
2	Guest room B	Tehsil office	56.16 sq.m
3	Godown	Tehsil office	83.82 sq.m
		Total	367.35 sq.m

Total area : A+B+C=2211.86 sq.m

3. RESULTS

3.1 Estimation of building

Plinth area of ground floor: 1236.30 sq.m

Plinth area of 1st floor : 1630.29 sq.m

Plinth area 2nd floor : 1335.72 sq.m

Total area = 4202.31sq.m

- **Commercial area factor : $1.2 \times 4202.31 = 5042.772$**

- **TOTAL AREA : 5042.772**

- Construction cost : PLINTH AREA \times PLINTH AREA RATE
 $5042.772 \times 16000 = \text{Rs.}80684352/-$

- Cost of electrification : 8% of construction cost
 $8/100 \times 10663 = \text{Rs.} 6454748.16/-$

- Cost of water supply and sanitation : 7% of construction cost
 $7/100 \times 80684352 = \text{Rs.} 5647904.64/-$

- Cost of approach road & boundary wall : 3% of construction cost
 $3/100 \times 80684352 = \text{Rs.}2420530.56/-$

- Cost of architectural : 3% of construction cost
 $3/100 \times 80684352 = \text{Rs.}2420530.56/-$

- Add development charges : Total area $\times 100$
 $5042.772 \times 100 = \text{Rs.}504277.2/-$

- Add scrutiny fees 5 rs/sq.m on building cost
 $5 \times 5042.772 = \text{Rs.}25213.86/-$

- Add Rcc consultant & Architectural charges : 3% construction cost
 $3/100 \times 8068435 = \text{Rs.}2420530.56$

- **Total cost of building = Rs.9549808.54/-**

- Contingencies = 5% on total cost of building
 $5/100 \times 9549808.54 = \text{Rs.}4774904.377/-$

- Work charge establishment 1.5% total cost of building $1.5/100 \times 95498087.54 =$
Rs.1432471.313/-
 - Contractor profit 10 total cost of building :
 $10/100 \times 95498087.54 =$
Rs.9549808.754-
 - **Total cost structure** **Rs. 111255271.984/-**
-
- Gst 5% total cost structure Rs. 556263.5992/-

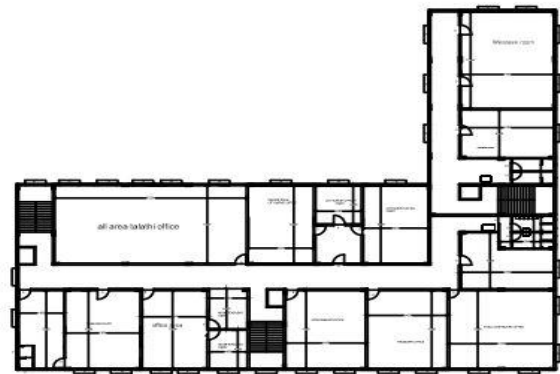
- **Total** **Rs.116818035.5832/-**

$$FSI = \frac{BUILT\ UP\ AREA}{PLOT\ AREA}$$

$$= \frac{5042.772}{3388.04}$$

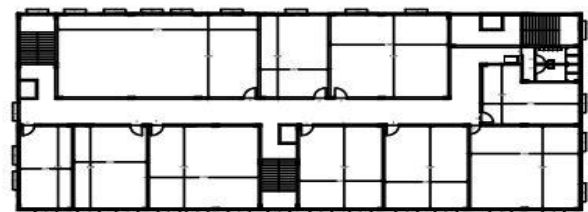
$$= 1.5$$

NOTE: Consider 1.2 commercial area factor.



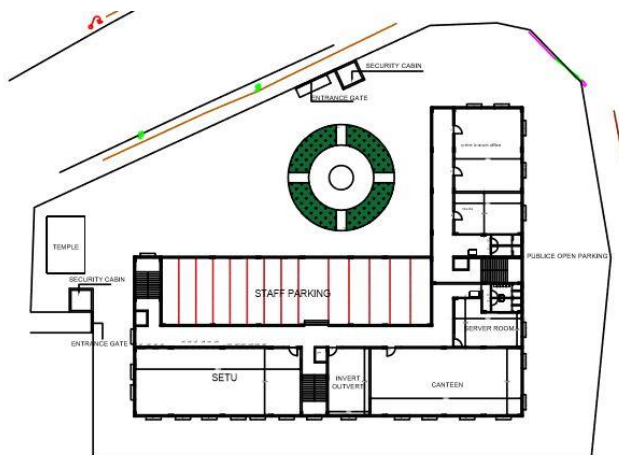
1ST FLOOR PLAN
1630.29 SQ.MT

Fig no. 2 First floor plan.



2ND FLOOR PLAN
1335.72 SQ.MT

Fig no. 3 Second floor plan.



GROUND FLOOR PLAN
1236.30 SQ.MT

Fig no-1 Ground floor plan.

4. CONCLUSION

Functional requirement are to be taken into account for efficient planning of tehsil building and other offices. The time spent for this purpose is really worthwhile from the point of view of the correct approach to planning and approximate estimate of old tehsil building kalyan. Planning of all offices have been done as per the by-laws. Proper parking are not available for the public and office staff. Proper management of land . We properly provided proper parking areas for offices as well as public.

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