

Cost Saving Measures & Cost controls for Affordable Housing Projects



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For affordable housing projects, construction costs form a large factor in making projects unviable, since the profit margins are squeezed for the developers cost of the construction costs. A control on construction costs is crucial for any housing project to stay affordable.

While affordable housing consider area, price and affordability of the buyer, the key idea as per understanding should deal with the minimum size (volume) of the habitable units, provision of basic amenities, cost of the house. The key would be to focus efforts towards steps for reduction in project costs and schedule overruns.

-Disruptive innovation in terms of technological solutions, which reduces costs

of construction significantly despite rising costs of inputs as construction costs form a significant portion of the selling price of affordable housing units, the savings in construction can benefit immensely.

-Standardisation will move the construction industry to an industrial process. The result of standardisation is improved quality, lower component cost and better training process for workers.

-Set up to facilitate adoption of modern, innovative and green technologies & building material for faster and quality construction of houses. Also facilitate preparation and adoption of layout designs and building plans suitable for main streaming and up scaling deployment of modern construction technologies and material in place of conventional construction.

Affordable Housing Project work on the following aspects:

i) Design & Planning

ii) Innovative technologies & materials

iii) Green buildings using natural resources.

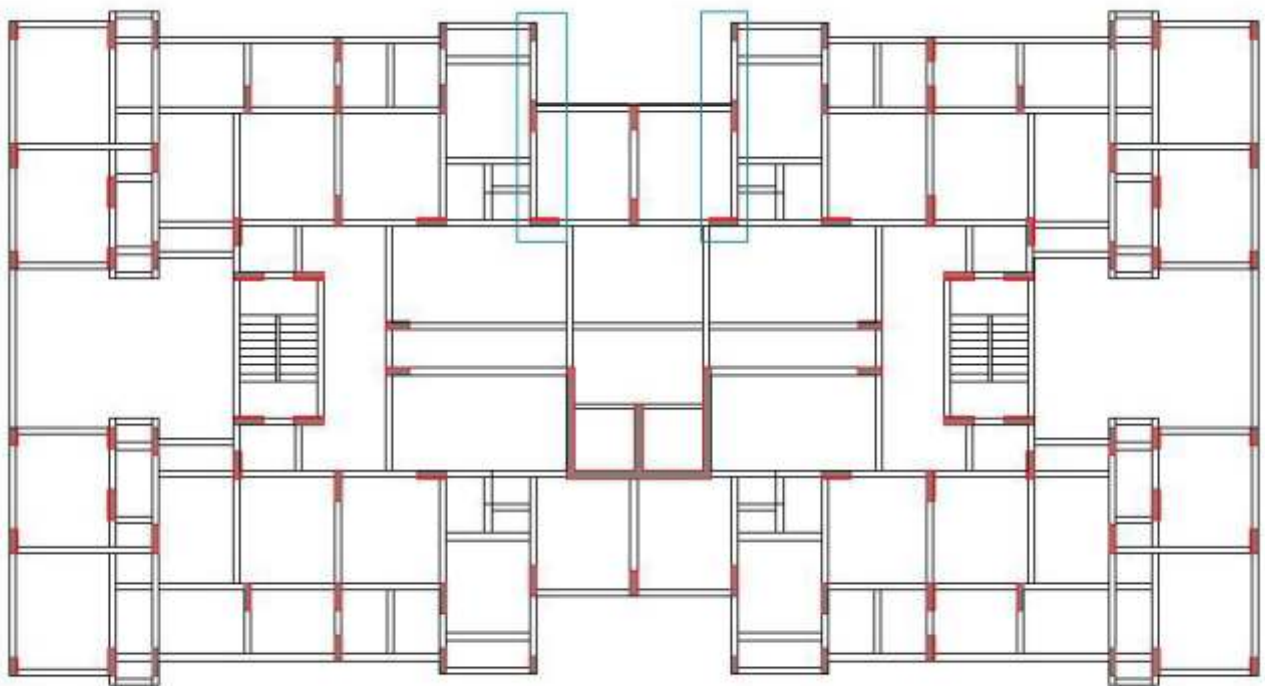
I) A well designed housing project can bring down considerable capital as well as maintenance cost. A simple design (grid planning) is key to cost effective housing. A simple rectangular plot has a higher usability as compared to a irregular plot. A design



should make maximum use of the natural topography of the plot. Taller the building higher is the per square feet cost of construction as well as the per floor time consumption. Complicated design elements such as domes and arches, cantilevers can add up unnecessary costs and are also difficult to maintain in the long term. The layout should be planned in

minimum passage areas & maximum usable/ habitable space and Optimised Design minimum building perimeter to floor area space and maximum common walls.

In today's time, amenities like swimming pool, gymnasiums etc. have become very common. However, apart from initial cost these amenities are very expensive



■ COLUMN POSITION

■ GRID

■ CANTILEVER

such a way that it minimizes the requirement of pipelines, ducts and wirings. Efficient Planning with

to maintain. Hence, affordable housing project should stick to bare minimum amenities.



ii) Introduction of best practice solution and new low cost construction and pre-fabricated techniques in affordable housing projects. Effective construction techniques can lead to a considerable reduction in construction time and cost. Aluminium form technique is one of the popular technologies used..

This technology uses custom made aluminium formworks to cast the components of the building. The technique can bring down construction time by 50 per cent with highly accurate output and reduce labour resource requirements.

Another important technology is the prefabrication of building

components where walls, slabs, beams and columns are fabricated in a factory and assemble together at the site. Like aluminium form work, prefabrication technology has also proved to be highly time effective. Although pre-fabricated techniques can be expensive but it saves labour cost and helps in saving construction time as compared to conventional methods. The technology also reduces the requirement of a considerable work space at the site.

One of the most effective solutions in reducing the cost of materials is maximizing the use of locally available material. Alternative construction materials, which are



made from cheap recycle material can bring an effective price reduction include. Some of the materials which can provide similar strength but at lower costs such as Autoclaved Aerated Concrete, recycled steel, Ferro cement etc.

iii) Another effective means of saving costs is adoption of energy efficient design and technique. It has been proven that projects with good green building rating save up to 35 per cent energy, providing the lifetime affordable quotient to the customers.

The success of affordable housing projects depends a lot on the financial discipline and stringent adherence to construction schedules. The developer should have detailed estimation/ budgeting with robust financial plan, much before he begins the development. During the execution stage, the developer needs to maintain a proper stock record, book of

accounts and follow strict adherence to the payment schedules whether payable or receivables. The affordable housing project has high sensitivity towards time delays. Even slightest disturbance in time frame can have a considerable rippling effect on the project budget. Time delays in schedule results in the increased cost of borrowing. Borrowing gets affected as the period for which the loan is taken gets extended and the interest charge paid on the same is substantial.

This exerts a multiplying effect on the costs ultimately rendering the project unaffordable. Lack of financial discipline can put the entire project schedule and project quality in jeopardy.

Making an affordable housing project needs a bit more than the usual level of planning and execution techniques. Affordable housing is a science in itself, which combines the concepts of



Architectural Design & Engineering, Management Tools/ Systems & Processes, Financial Planning & Economics. Furthermore, the focus is not just the present cost of developing the project but also lower lifetime maintenance cost. The cost of maintaining the home, depends upon the design and quality of the construction which is imperative for sustainable affordability. Apart from maintenance, the project should also have low living cost. However, notwithstanding the challenges, affordable housing

developers can easily manage to generate good profits by employing best practices and techniques. It should be noted that there is a thin line between the definitions of truly affordable homes and low cost homes which are built with inferior quality with no consideration for legal compliances. An affordable house is the one which makes optimum usage of the available resources and offers a value proposition which combines affordable price as well as affordable cost of living.



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