

## **Your Buildings and their Engineering Needs**

**By Umesh Dhargalkar**

The majority of people in Mumbai live in cooperative housing societies. From the engineering perspective, the Society building is a civil engineering structure, which needs regular maintenance like any other engineering product. However, quite often it is observed that while members spend huge amounts on the interiors of their apartments, they show little love or respect towards the building as a whole. Though a building cannot complain against its neglect in words, it does express its anguish in form of cracks, leaks, sags, deformations etc. On the first issue of this column, it would be appropriate to start by understanding the needs of our buildings.

The common needs of a residential building can be summed up as follows:

### **A) Assessment:**

Thorough assessment of the building by a competent civil/ structural engineer is necessary before going for repair/ rehabilitation. Assessment may be for

1. Structural audit (every 3 or 5 years)
2. Repair/ rehabilitation or seismic retrofitting (making your building safe for earthquakes) of the structure
3. Checking the feasibility of the proposed extensions to building or alterations within apartments
4. Deciding whether to repair your building or to go for reconstruction

A visual health assessment is often called a "condition survey". In some cases, non-destructive testing of the structure may also be necessary.

### **B) Basic Maintenance:**

Timely attendance to the following can prevent further deterioration and save a lot of money for you in the long run.

1. Early treatment of cracks in plaster and seepage through terrace, water tanks and toilets
2. Regular painting (every 5 to 7 years)
3. Fixing leaks through the plumbing pipes or replacing them

### **C) Repair/ Rehabilitation/ Seismic Retrofitting:**

Your consultant can guide you for the restoration of your building through a systematic process, which may broadly cover the following:

1. Inspecting the building and suggesting a scheme of restoration
2. Estimation of the cost of work
3. Providing methodology and specifications
4. Tendering and selection of contractor
5. Supervision and certification of work

### **D) Enhancements:**

Enhancing the general appearance and functional utility of your building would not only improve your quality of life but can also increase the market value of your property. Consider the following:

1. Renovation of the entrance lobby, recreational areas, terrace, compound wall
2. Constructing a Society office, security cabin, common toilet or car parks
3. Increasing headroom at the entrance
4. Eliminating water logging in monsoon

5. Enhancing the capacity of water tanks
6. Installing a water recycling system or rainwater harvesting system
7. Constructing revenue generating structures such as cellular cabins or hoardings

The health of your building is only as good as you maintain it. Regular maintenance and timely repair can go a long way in enhancing the useful life of your building. When such works are taken up and carried out in a systematic manner, the money spent on them should be regarded as a wise investment than an expense.

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