

Changing Trends in Office Building Design

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Of the three types of buildings most commonly built today, residential, industrial and commercial, it is only the last one, perhaps, where form has little to do with the building programme. Historically, government office buildings have been built as monuments for the builders. It is commonly recognized that the Central Secretariat in New Delhi represents the might of the colonial government, while the Secretariat in Chandigarh embodies the spirit of the newly independent India. Office buildings are required to provide a workplace for people and to be good for that they need to have some functional features built in.

Unfortunately, amongst architects and builders there appears to be a tendency to limit the design of commercial office buildings to the external facade and the circulation system only. The actual office spaces themselves are no more than readily saleable blocks of undistinguished space. The tenants are expected to convert the nondescript space into usable offices and also provide the necessary amenities for their employees. The result is a messy affair in which toilets and pantries often get mixed up and car parking and cafeterias spill out onto the road. Part of the problem lies in the fact that over their life span, 'general pool' office spaces do have many different users/owners, but the other aspect is really our inability to see that office buildings have fairly large service needs in addition to work spaces. To be usable, the work space itself has to be such that it lends itself to subdivision and to provision of basic necessities such as security and access, daylighting, ventilation and view, cooling and heating, electricity and telephone connections. The service spaces may also require all of the above and possibly more. It would be interesting to find out how many of the recently constructed office buildings fail to provide even these elementary necessities.

The situation is now poised for change as the highly skilled white collar worker is able to change jobs with ease, and compares not only the pay packet but also the kind of place that he will work in. Foreign collaborations are also changing the acceptability standards in office environment. The new professional managers both in the private as well as the public sectors are, therefore, now setting up office buildings and complexes with better facilities. They have also realized that buildings can be designed to display not just the wealth but also the company's products, project a chosen image and also be a medium for expressing the social concerns of the company. A number of projects now under construction in Delhi would fall under this category.

But the bulk of our office space is created as speculative construction and neither the owner/builder nor the architect is able to do much with these buildings. In this deplorable situation, most architects concern themselves only with the visible elements of design. The cost of land in cities being what it is, it is difficult for architects to succeed even in this modest objective.

The biggest visual problem is that of space cooling or air-conditioning equipment. Not many building facades have space for the range of air-conditioners and evaporative air-coolers presently available. The few attempts at dealing with this problem have met with partial success only, and the problem exists even in centrally air-conditioned buildings where certain rooms need to be air-conditioned even after the general air-conditioning is turned off. No equipment manufacturer has yet come out with an air-conditioner that looks nice not just from inside but from outside as well.

Although the main reason for windows is to ensure daylight, for various reasons, even when they have large windows, most office buildings are dependent on artificial lighting. In office buildings on tight urban sites the architect rarely gets to choose the building orientation. He is often forced to provide windows facing unfavourable

directions resulting in visual squalor when the users have to install rough - and - ready bamboo sunscreens or solar films. To be sure there are a few examples of efficient externally mounted sunscreen systems that are capable of providing sun control but, by and large, one can say that no commercially available sunscreen system is suitable for Indian conditions. Contrary to the claims of the respective manufacturers, reflective glass and solar films are more useful for cutting out light than they are for cutting out heat. The buildings in three major commercial complexes in Delhi use a building grid in which it is nearly impossible to get daylight in most of the office space. There is, of course, no question of using natural ventilation in any of these buildings.

Perhaps the most talked about aspect of commercial buildings is fire safety. This directly concerns the owners as well as the users. In speculative construction, the responsibility for installing fire safety devices lies with the builder who is, regrettably, not really concerned about it. It is in this situation that the architect's role becomes crucial. Through appropriate design he can ensure the inherent fire safety of a building, a feature which is useful if other fire safety devices have not been installed.

Some of the above problems arise mainly because of changes in the ownership or tenancy of buildings. In the age of information technology, it is necessary for us to build for change, which may require either a subdivision of spaces or combining of several spaces into one. Most speculative buildings in Delhi are built on a module of approximately 40 sq m of saleable area, and corporations who wish to hire or buy larger spaces find it extremely difficult to do so. Subdivision of office units poses even more formidable problems. It is not practical to subdivide a 4m wide space or the small toilet that comes with it.

Breakdowns in the supply of electricity are common in all our cities with the notable exception of Bombay. "This requires that buildings be designed for emergency operation even when power is not available. Lifts and emergency services have to be available all the time. Yet there are few buildings that can meet this requirement. In extreme cases people end up installing inverters with storage batteries or small individual petrol/kerosene generators. There are serious problems of fire safety, environmental pollution and efficiency with all such devices.

At the individual office level problems of services are not easy to resolve. The only solution perhaps is to create a set-up in which we could think in terms of common services: toilets, water supply, standby power, cafeterias and, possibly, common ventilation and air-conditioning. One could go a step further and include other elaborate facilities like conference and presentation room, telephone exchange, data processing facilities, communication equipment, copying and documentation facilities, etc. The efficient and reliable management of such facilities calls for use of computers. With the integration of various activities and services, the office building can be made 'intelligent'. A few such buildings are now either on the drawing board or under construction in Delhi, Pune, Bombay and Bangalore.

When the new office buildings with their emphasis on facilities for workers, the corporate image, information technology and efficiency are completed, we may perhaps have a new standard for office accommodation that the speculative builders might follow,

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Even on this north facing façade, sun screens are needed. The situation is much worse on west and east facing elevation.



The architectural bands designed for air-conditioners could not accommodate air coolers.



There is little chance of getting daylight into these offices.