Building Construction

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The major trend in present-day construction continues away from handcrafting at the building site and towards on-site assembly of ever larger, more integrated components manufactured away from the site. Another characteristic of contemporary building, related to the latter trend, is the greater amount of dimensional coordination; that is, buildings are designed and components manufactured in multiples of a standard module, which drastically reduces the amount of cutting and fitting required on the building site. A third trend is the production or redevelopment of such large structural complexes as shopping centres, housing estates, entire campuses, and whole towns or sections of cities.

Building construction in Britain is the product of private companies and public authorities, with many individuals and organisations involved in the construction of a single structure, from the manufacture of necessary components to final assembly. Building projects by both public and private bodies employ a registered architect or civil engineer under the direction of a project manager, or both, to execute the design and to make sure that it complies with public health, fire, and building regulations. The design must at the same time conform to the requirements of the owner. The architect or engineer converts these requirements into a set of drawings and written specifications that usually are sent to interested general contractors for bids. The successful bidder or bidders in turn subcontract plumbing, painting, electrical wiring, structural frame construction and erection, and other jobs to specialist firms. However, it is increasingly common for complete “design and build” tenders to be submitted to clients, the successful contractor being responsible for appointing the professional team to carry out the work.

Contractors ordinarily carry out their work under the observation of an architect and or engineer, who acts as agent of the owner. Minimum construction standards are presently administered and regulated by local authorities. They apply to new building work and to alterations to existing buildings. National building standards are being replaced by European standards.

The major elements of a building include the following: (1) the foundations, which support the building and provide stability; (2) the structure, which supports all the imposed loads and transmits them to the foundations; (3) the exterior walls, which may or may not be part of the primary supporting structure; (4) the interior partitions, which also may or may not be part of the primary structure; (5) the environmental-control systems, including the heating, ventilating, air-conditioning, lighting, and acoustical systems; (6) the vertical transport systems, including lifts, escalators, and stairways; (7) communications, which may include such subsystems as intercommunications, public address, and closed-circuit television, as well as the more usual telephone-wiring systems; and (8) the power, water supply, and waste disposal systems.

Homeowner Building Projects

Building your own home can be one of the most rewarding experiences. However, as with most things in life, if you don’t do the preparation work and research to begin with, you could find that this is an unforgettable experience for all the wrong reasons!

The process of building a house can be broken down into three main categories: Preparation, Building, and Finishing. The following diagram shows some of the considerations in the *preparation* phase.

Research

The first step in any major project is to learn as much as possible about the subject at hand. Building your own home is no exception. Surprisingly large numbers of people seem to think that anyone can design and build the home of their dreams without first spending the time research and plan what is involved.

Designing and constructing an appealing, comfortable, safe, and well-built structure that fits the needs and wants of you and your family is not an easy task. Yet for those who take the time to familiarise themselves with the entire process, the construction of a new home is a memorable and very gratifying experience