

IMPROVING SEISMIC CONDITIONS AND EARTHQUICK RESISTANCE OF MULTISTORY RESIDENTIAL BUILDINGS

Abdurakhmanov A

senior lecturer at the Andijan Institute of Economics and Construction.

Ergasheva Yu.Kh

Andijan Institute of Economics and Construction

Abstract: *This article contains seismic zoning of multi-storey residential buildings by region, as well as vibrations that occur on the earth's surface during an earthquake, division into zones according to the level of seismic hazard, aimed at increasing seismic hazard. seismic resistance of buildings.*

Keywords: *Residential buildings, vibration, seismic scale, zones, floors, materials, corrosion resistance, advantages.*

The design of a residential building can have different configurations, and it all depends on the independence of the buildings on the site. To clearly define some terms, it is necessary to know the density of the building itself.



In the practice of urban planning today there are enough terms that correctly describe not only the process of housing construction.

All types and types of urban construction are interconnected and have their own indicators that influence each other.

Before starting construction, pay attention to external factors that determine the types of housing construction. Here are some thoughts:

Angle of incidence of sunlight;

How are the land plots located?

Technical and economic indicators.

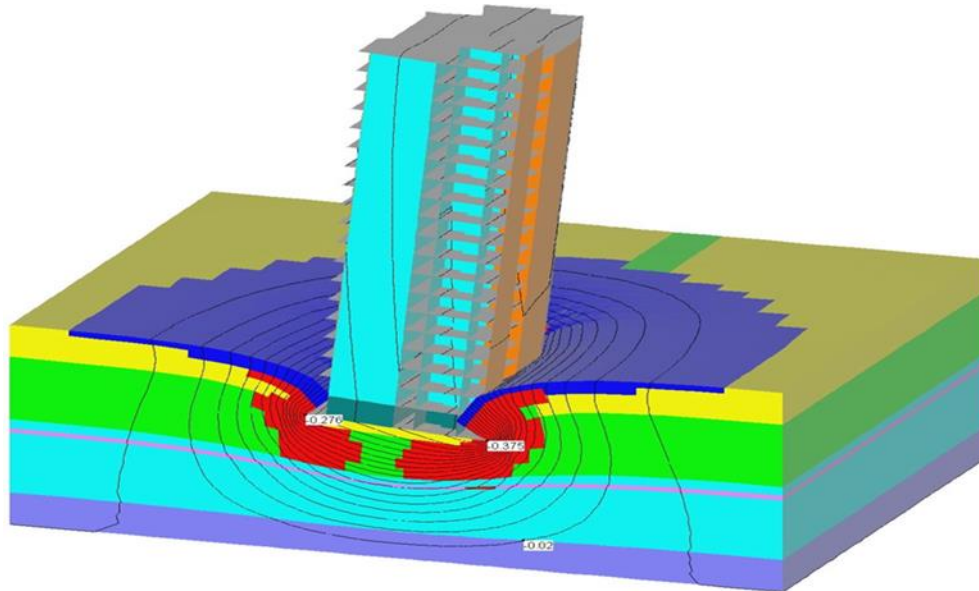
If you pay attention to developing cities and suburbs, you can see the active construction of high-rise residential buildings, private cottages, shopping and business centers. Construction work is carried out throughout Uzbekistan and the region, but the houses being built differ in type and type of construction. All this depends on the needs and capabilities of the developer, the purpose of the property and other important factors.

Types of residential building construction

Construction of brick houses:

The construction of a brick house has long been proven. A warm, beautiful and durable house is reliable and stable, capable of maintaining its properties for many years. The average lifespan of a red brick house is 100-150 years. The material allows the use of various architectural styles, is not afraid of sudden temperature changes and is resistant to any weather conditions. Buildings of this type are valued for their quality, comfort and environmental friendliness. Brick is a material that has been tested for centuries.

Residents love brick buildings because they have the ability to breathe - oxygen easily enters living spaces. In the real estate market, it is difficult to find offers for the sale of apartments in brick houses - this is due to the fact that the construction of brick houses takes a long time, which leads to high prices for apartments.



Earthquake-resistant construction is the construction of buildings and structures erected in seismic (earthquake-prone) areas with the ability to withstand the effects of earthquake forces (seismic forces). Seismic zoning maps indicate in which region of the globe an earthquake can occur with what magnitude. The territory of Uzbekistan is also included in seismic regions; seismic zoning maps have been prepared for it. On these maps, Tashkent and Andijan have 9 points, Fergana, Namangan and Samarkand have 8 points each, Bukhara has 7 points, etc.

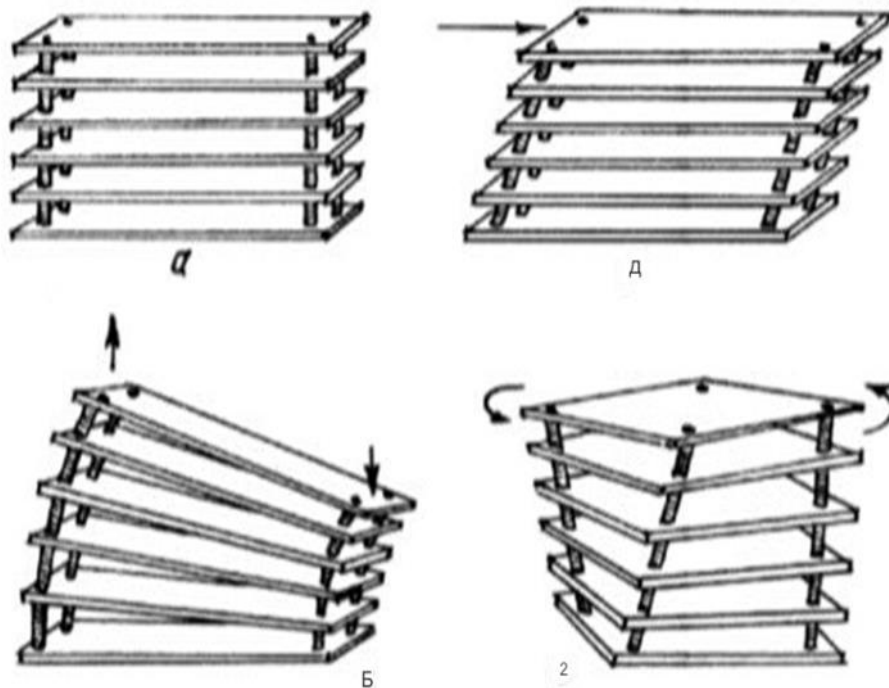
Buildings and structures must be designed and constructed to withstand the force of an earthquake that may occur in the area. To ensure the seismic resistance of

buildings and structures, special anti-seismic measures are used (as a result of which the cost of buildings and structures increases by 3-10%).

When designing earthquake-resistant buildings, structures and metro lines, their appearance should be as simple as possible, since the designs of round, square or rectangular buildings are more earthquake-resistant compared to buildings and structures of complex shapes.

If, according to architectural or operational requirements, it is necessary to construct buildings and structures of complex shape, then they are divided into parts of a simple shape using anti-seismic seams. Construction of external wall panels used in seismic areas. can be 1- or 3-layer. Single-layer panels are made from expanded clay concrete or other types of lightweight concrete. The 2 outer layers of three-layer panels are made of reinforced concrete, and the middle layer is made of thermal insulation materials such as mineral wool, foam concrete. The facing panels are made according to the dimensions of the room and all four edges rest against the wall.

Multi-storey residential buildings include buildings with a height of 6 to 9 floors. The difference from mid-rise houses is that these houses must have an elevator. All categories of projects are used in the construction of multi-storey residential buildings. Sectional, corridor, corridor, tower and mixed series. Sectional and corridor series are especially recommended. These series are universal, are a comprehensive solution for multi-room and small-room apartments and are economically convenient.



Deformations of buildings caused by earthquakes

A - state of rest, б - movement, в - flexion, д - rotation

High-rise buildings should not be too long, as they disturb the environment with their shadow. Therefore, sectional or tower series are more suitable. Due to the fact that

the houses are multi-storey, people move away from natural landscapes, so summer apartments are of great importance in such houses.

Two-story verandas, greenery, they block the house from street noise and protect it from dust. Arrangement of territories along the edge of a flat roof, its landscaping

REFERENCES:

- 1) Shubin L.F. Architecture of industrial buildings. M. 1986.
- 2) Dyatkov S.V. Architecture of industrial buildings. M. 3) 1984.8 Kistyakovskiy A. Yu. Design of sports facilities. M.: 1980. 4). Maklakova T.G., Nanasova S.M., Sharapenko V.G., Balakina A.E. 5) Architecture/Textbook – M.: ASV Publishing House, 2020 – 472 p. 6) N.N. Milovidov, B.Ya. Orlovsky, A.N. Belkin. Civil and industrial architecture. Civil buildings: Textbook for universities on special topics. "Prom. and garage. construction." - M.: Higher. school, 1987 - 352 p.: ill. 7) Orlovsky B.Ya., Magai A.A. Basic design of civil and industrial buildings. - M.: 1980 8). Polyakov S.V. Earthquake resistant structures are natural. - M.: Higher School,
- 9) A. Abdurakhmanov. SEISMIC PROTECTION SYSTEMS FOR BUILDINGS AND STRUCTURES. Monograph. -. Andijan, AIKI, 2024.-198 p.
- 10) ABDURAKHMANOV AKHMATZHON MAKHAMMADOVICH. EDUCATIONAL AND METHODOLOGICAL EDUCATION in the discipline “Seismological and graphic design” and “Scientific graphic design” Andijan, AIKI, 2024.-48 p.