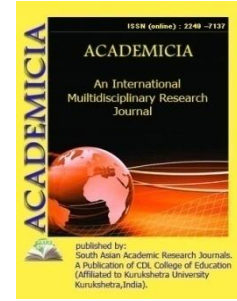




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## ORIENTAL ARCHITECTURAL MONUMENTS. THE OBJECTIVES AND TASKS OF THE COURSE OF DESIGNING ARCHITECTURAL ELEMENTS

**Haqberdiyev B.R\***

\*Head of the Department TSMG,  
 Andijan State University,  
 UZBEKISTAN

### ABSTRACT

*Uzbekistan enjoys thousands of historical monuments that have been erected through out history, which still attracts people from all overtheworld. They are considered as invaluable and rare heritageem body ingtherich spiritual values of our people formed over the centuries, aswellasthe potential for creativity and ingenuity, passed down from our ancestors to future generations. These buildings reflect the architectural achievements of our ancestors, dating back to the long history of our country. The challenge of architectural design lies in the task of resolving a wide variety of functional and aesthetic requirements (the problem) into a coherent, satisfying structure (the solution).*

**KEYWORDS:** *Integration, Engineering Graphics, Design, Development, Cultural, Architecture, Nature, Designing Architectural Elements, Patterns, Drawing, Knowledge And Skills, The Art Of Architecture, The Art Of Carving, General Plan, Architectural Drawings, Interior, Reinforced Concrete Structures, Residential, School, Business, Hospital, Gravel, Sand.*

### INTRODUCTION

The Republic of Uzbekistan has entered a new phase of development thanks to independence. The people of the country gaine ditsrich historical, culturaland spiritual heritage. Turnedup opportunities not only to visit the millennial history of architecture and urban planning, the architectural monuments, which were forbid dentovisit, but also to study and rest orethem. The time has come to educate students the unique architectura lmonuments created in ancienttimes (in thecounty), the history of urban planning, construction methods and rules. Today, morethan 7000 monuments, including 2500 architectural monuments and more than 2700 monumental

works of art are understate protection of the government. The Itchan Kala Reserve in Khiva (1991), the monuments in the center of Bukhara (1993), and the monuments in the center of Shahrissabz (2000) were in scribed in the UNESCO World Heritage List.

Uzbekistanen joys thousands of historical monuments that have been erected through out history, which still attracts people from all over the world. They are considered as in valuable and rare heritage embodying the rich spiritual values of our people formed over the centuries, as well as the potential for creativity and ingenuity, passed down from our ancestorst of uturegenerations. These buildingsreflectthearchitecturalachievementsofourancestors, dating back to the long history of our country. They embody the demonstration of hard work in construction through presenting subtleties of art in a beautiful and attractive way even many centuries ago.

In order a construction work to become an architecture, it must becreated in the form of a high-level work of art or work. The difference between architecture and other types of human activity, including construction, isthat, in additiont outility issues, it also perform sideological and artisticaesthetic functions that meet the needs of a certain historical and socio-spiritual environment and epoch.

### **The aim and tasks of designing architectural elements**

The principal task of architecture is to create a space or environment that is convenient for people to live, work and relax. Yet, its objective is not limited to this. It is common knowledge that any environment affects the psyche and formation of consciousness of people. As the volumetric (three-dimensional) forms and the environment used in architecture might have some attractive appearance or information which could have a positive or negative impact on people's tastes and minds.

The challenge of architectural design lies in the task of resolving a wide variety of functional and aesthetic requirements (the problem) into a coherent, satisfying structure (the solution). The effort to resolve the varied requirements makes use of specific design elements by assembling the properties of these elements into a coherent whole<sup>1</sup>.

Designing architectural elements encompasses several tasks such as creating a specific comfort and convenience for people in this environment, satisfying one's need for beauty, reflecting the cultural life of the society in which s/he lives, expressing national traditions of the people, and advanced aesthetic feelings. The science of Designing architectural elements is driven by specific tasks. In addition to the designed indoor environment, building ensemble and complex, cities, villages, specially organized outdoor environments (streets, squares, parks, neighborhoods, areas, etc.), the following features are also encompassed: buildings and small architectural forms that do not have an internal environment, but serve to create an open environment (monuments, obelisks, pictorial windows, bridges, roads, beaches, bridges, overpasses, road junctions, fountains, stairs, barriers, etc.). In this sense, the science of Designing architectural elements is a discipline that arises from the social, industrial, and ideological needs of the society. It is precisely these needs that set specific tasks before the architects. The created architecture defines and reflects the material and spiritual culture of the society and its certain period.

The course of Designing architectural elements has its own specialities. In order to understand this, it is advisable to compare it with other types of arts. The course of Designing architectural

elements is not like the art of depicting things in concrete terms, such as painting and sculpture. Architecture is the art of expressive creativity. It expresses existence in a comprehensive way. To a certain extent, it reflects the ideas of a class, a society, or an entire era. With the help of lines and paint, the author creates a work in a plane with two coordinate dimensions - width and height, expresses and describes the chosen theme in a graphic style or in a set of colors.

In our area, the culture of construction dates back to ancient times. According to the findings of archeological excavations, we can witness that strong fortresses, cities were built, and high yields were obtained via irrigation through various canals in BC period.

At the present time, we can claim that we have established strong, beautiful, unique (national) construction standards, in line with international standards and based on the culture of construction inherited from our ancestors.

When it comes to implication, a building means all the structures to be constructed. A construction is a building erected to meet the material and cultural needs of the people. Before building any construction a careful thought, imagination is needed, in addition to preparing its layout, model, landscape design, or vivid image and drawing on a plane. In other words, the structure must be projected in accordance with contemporary design.

In construction, design and research institutes, design offices, construction companies, as well as construction and installation companies are involved. The general construction project begins with the project of leveling of the construction site. At this point, we identify the location of underground facilities, such as sewerage, hot and cold water pipes, and the connection points of electricity and telephone networks to the main network. The drawings illustrate the plan, section and facade of the building, as well as the location.

Construction and engineering structures – architectural creations, are built on the basis of projects and estimates. The project includes drawings, explanatory notes and estimates of the construction. The drawing illustrates the work to be done, and the estimate demonstrates the full cost of the construction. The estimate also reveals the volume of work to be performed, the type of construction materials and their number, the number of skilled workers and machinery used in construction. Project documents are prepared by separate project organizations and institutes. Diverse entries are made in the design and layout of projects. These records, in addition to standard fonts, use a variety of architectural and industrial construction fonts.

We can think of the elements of design as a collection of abstract tools. They can be combined and arranged in any way we like to create some sort of visual statement. The elements of design are the raw materials or building blocks for any form of visual expression. By looking at our work in terms of each individual element we are better able to analyze and understand what we are creating. When we analyze any form of visual expression, consciously considering it in terms of the elements and principles of design gives us a broad platform on which to base our judgments<sup>2</sup>.

In our republic, meeting the requirements of single modular system (SMS) is mandatory for all kinds of construction. The primary goal from this is the classification and standardization of designing and construction of various engineering structures such as of civil, public, industrial nature. 100 mm is mainly accepted as a module. Sometimes 50 cm can be taken. Modules are

enlarged as 2 m, 3 m, 12 m, 15 m, 30 m and 60 m or can be fractional like 1/2 m, 1/5 m, 1/10 m, 1/20 m, 1/50 m and 1/100 m.

There are two types of construction drawings: architectural-construction type and engineering-construction types. Architectural-construction drawings include drawings of civil, industrial buildings. Engineering-construction drawings include the drawings of bridges, tunnels, dams etc.

Construction works are divided into general construction works and special construction works. General construction involves the construction and decoration of buildings. The construction of water, sewerage, electricity, gas and telephone networks belong to special construction.

As general construction works and special construction works are separated, the drawings are also divided into separate parts and each will be stamped. Stamps are marked with capital letters, depending on the type of drawings.

General plan and transport	BP
General plan	BP
Transportation facilities	TR
Architectural drawings	AR
Architectural and construction solutions	AS
Interior	A
Rein forced concrete structures	KJ
Steel structures	KM
Metal constructors divided into details	KMD
Wooden structures	KD
Water supply and sewerage	VK
Heating and ventilation	OV
Power supply	ES
Electric lighting networks	EO

Making construction drawings is slightly different from drawing mechanical drawings, and commonly two different lines are used. The contours of the shear are on the main connecting lines, the remaining contours - on the main connecting lines, the remaining contours - on the dimension lines, and are drawn in thin lines.

Construction drawing has a part which teaches drawing of buildings (residential, school, business, hospital, etc.). And it belongs to architectural-construction drawing. Thus, now we shall look at drawing and understanding of architectural-construction drawings.

Based on their functional peculiarities, the elements of any building are divided into two main groups: lifting group and barrier group. Because buildings generally have to hold some kind of load, all potential loads intended are taken into account during their design. Barrier structures protect the building from atmospheric phenomena. Some structures serve as both lifting function and as barriers at the same time.

Every building should have the following main structural elements: foundation, walls, columns, coverings, stairs, barriers, roof, windows, doors, etc. Both natural and artificial materials are used

in the construction of the building. Some natural materials are recycled and then used in construction, while others, such as sand, is used as it is.

Rocks - irregularly shaped stones weighing 20-40 kg and 150-500 mm. They are used in foundations and basement walls.

Large boulders - big stones used on streets and slopes (Figure 1).



Figure 1

Gravel - small stones with a size of 5-70 mm. They are used in cement mixtures and asphalt concretes (Figure 2).



Figure 2

Sand - belongs to mountain rock consisting of fine grains 0.14-5 mm in size. It is used in cement and concrete mixes (Figure 3).





Figure 3

Sawn slabs - made of granite, marble, alkali and volcanic tuff. Such tiles are used in painting decoration works (Figure 4).



Figure 4

Concrete - an artificial stone made of a mixture of cement, water, sand and gravel. It is used in concrete and reinforced concrete structures, road pavements (Figure 5).



Figure 5

Building mixes - consists of water, sand, and cement or soil, and the difference from concrete is that gravel is not added. They are used for bricklaying, reinforced concrete filling and plastering (Figure 6).



Figure 6

Reinforced concrete - consists of concrete and rods (steel armateur). They are used in columns, slabs and sheds, beams, crossbars, etc. The use of reinforced concrete accelerates construction and increases strength of buildings (Figure 7).



Figure 7

Blocked windows - used for external and internal barriers which are exposed to light. They are also used to make showcases, glass packages, pipes, doors, etc. (Figure 8).

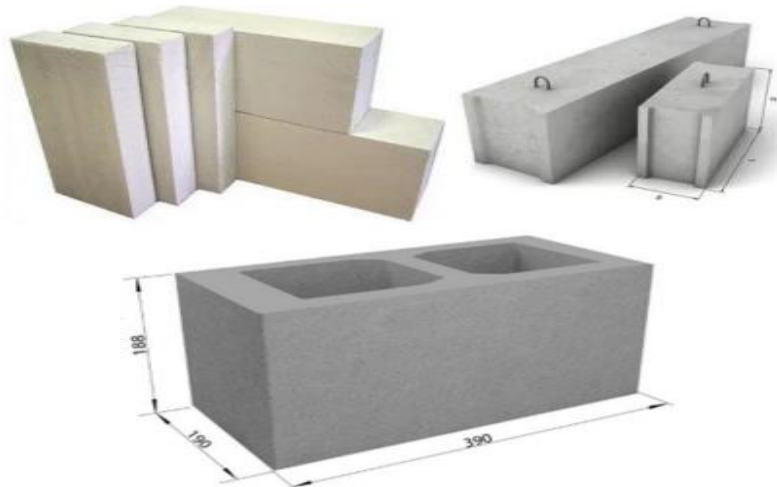


Figure 8

Wood - widely used in construction. It is used on walls, windows, doors, floors, plinths which must hold heavy weights (roof timbers, farms with roof timbers, bridges) (Figure 9).



Figure 9

Metal - often used in a construction. These include steel ducts, ridges, channels, aluminum, and cast iron (Figure 10).



Figure 10

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