

IMPROVING THE ARCHITECTURAL SOLUTIONS OF HIGHER EDUCATION INSTITUTIONS

Abdurazzakov Farruh Farhodjon ogli

Fergana Police Institute, Bin and Technician Majoring in Architecture,
Master's Degree +998 (91) 679 88 67 Farrux8867@gmail.com

Mirzaolimov Azizbek Abduhokim ogli,

Fergana Police Institute, Bin and Technician Majoring in Architecture,
Master's Degree +998 (99) 999 64 44 azizbekmirzaolimov10@gmail.com

ABSTRACT

Radical review of the content of training in accordance with the sustainable objectives of socio-economic development of the country, providing the necessary conditions for higher education at the level of international standards President of the Republic of Uzbekistan April 20, 2017 Adoption of Resolution No. PQ-290 "On measures to further expand higher education." With this decision, the quality of higher education and the level of radical education, the material and modernization of the material and technical base of higher education institutions, equipping them with modern teaching and research laboratories, information and communication technologies lim approved a comprehensive development program for 2017 - 2021.

Keywords: Higher education process, architectural solution, supply, modernization, reconstruction, artistic aesthetic environment, architectural design, national memory solution.

INTRODUCTION

In accordance with these decisions of the President, on the improvement and modernization of the material and technical base of higher education, equipping it with modern training and technical laboratories, information and communication technologies, perhaps to meet the needs of higher education in high demand. and providing comfortable training facilities and auditoriums. This national work is highly profitable and has an artistic and architectural solution.

It is one of the forms of national, artistic and aesthetic environment in higher education. This, of course, requires a rethinking of traditional teaching methods. Spacious, bright, comfortable modern or adapted classrooms, including classrooms and science rooms, gym, kitchen, hallways and other rooms of the university or the courtyard of the building material, that is, posters. , the work of stand and other decorative ornaments requires a modern approach to it. Decoration should be concise, simple and effective. The condition of the visual rhyme and spirituality works, i.e. the decorative works, in the present spiritual building is not at the level of demand. The content and poor quality of the work done not only spoils its overall appearance, but also reduces its impact. The fact that outside artists are invited to this injury does not justify itself. The work done by them does not meet the educational and pedagogical requirements of the educational work, which does not allow to create an offer of professional decorators due to the

low financial resources of colleges. Higher education can only improve the situation in the country if it is able to organize decorative work in the country and in higher education. The role of architects and designers is invaluable.

They should be able to see the audience, give qualified advice on the preparation of visual aids, and provide practical assistance if necessary. All this requires the designer to be able to perform work of different appearances in a masterful practice. In many cases, different designers are involved in the design of various invitations, emblems, posters, decorations for the building pottery for various nights and ceremonies, which gives the skills acquired in the lessons "Art Decoration".

About designing and sketching a building

The first step is to study the work and prepare a sketch;

The second stage is to work on architectural and structural drawings and structural details;

The third step is to complete the drawings, the façade, the master plan, and the explanatory text. Draw structure views for the first step.

Dimensional plan solution The project sketch consists of sketches of the building. While working on the sketches, determine the architectural and planning solution of the projected building, the function of the rooms, the dimensions of the building, the furniture and equipment, the appropriate shape of the rooms and their placement in accordance with international standards, grouping and flooring, as well as natural lighting. determines whether it meets the requirements such as humidity, noise and temperature and humidity regime. In addition, the structure and slope of the roofing, the solution of the cornice, the stairwell, the front of the door, the entrance areas are determined: When viewed on a city-wide basis, the building under construction will be required to have an exterior finish and an artistic expression. All of this is needed to work on the size and structure of the building plan.

Content of architectural and construction drawings Basic drawings at the stage of technical design M 1: 100, 1: 200; parts (detail) and node (joints) working drawing is prepared as M 1:10, 1: 5.

Floor plan When you start drawing a building plan, you should pay attention to the following:

a) the structural thickness of the outer wall depends on the climate of the construction site and the structural load-bearing capacity;

b) It is necessary to know the structural drawing of the building, to determine the location of the load-bearing walls and separate columns.

The plan begins with drawing a grid of planning axes and attaching load-bearing vertical structures to them.

Find the size of the stairwell, the march and the area, as well as the number of steps in the march.

The size of the window sills (proem) is determined based on the size and the curtains are drawn. The thickness of the curtains depends on the material, structure and purpose.

The location and opening of the doors depend on the organization of easy access to individual rooms in the building.

Sanitary facilities (sinks, toilets, etc.) located in separate rooms are marked with appropriate symbols.

The cross-sections of the inner and outer walls of large block and large-panel buildings are shown in the plan in the form of separate blocks and panels.

The first floor plan shows several intersecting lines in parallel planes to visualize the nature of the building structures. It should also be borne in mind that in architectural drawings, the cutting planes must pass mainly through door and window sills, entrances, between columns, beams, and so on.

Section of the building The characteristics of the main structures of the building can be determined by the transverse and longitudinal sections.

It is advisable to cross the main section of the building and the stairwell. The horizontal dimensions are taken from the developed plan, most of the structural nodes are shown in the cross section of the outer wall.

Transverse section of the building The shear drawing begins with drawing the longitudinal arrows (along the profile of the building) in a vertical position on the paper, and the outer and inner edges of the wall are connected to the arrow line (privyazka). The horizontal lines of the vertical plane are taken as the sign of the first layer relative to the poly surface (0.00).

The vertical symbols of the structure are calculated relative to the same symbol (0.00). The height of the floors, the thickness of the floor covering and the roof covering are determined, and the level of the stair area is determined. Then the drawing is shown on the given scale of structural solutions of the main load-bearing structural elements of the building. Below the zero mark, the sokol, the front and entrance areas, and the slopes around the building are described. Below ground level, the foundation is shown, if the foundation is in the form of a ribbon, with continuous lines, if it is in the form of a column, it is indicated by a dotted line. The cut should help to visualize the structural scheme of the building. All nodes and details must be completed.

Exterior wall section The exterior wall structural section shows the main structural elements of the wall and their combination with foundations, cladding and roofing. In this section, the structure and shape of the foundations of the cornice part of the building with the roof covering and the inter-storey coverings (perekritiya) of large blocks and structures are correctly imagined. The exterior wall section is done as working drawings, so this section must have all the dimensions and inscriptions. All horizontal dimensions are taken from the plan (total length of the building, the width of the door and window openings, as well as their dimensions, front door dimensions, etc.). building height, beams, door and window locations, etc.).

There may be some changes in the plan and structure in the architectural representation of the facade, so it is necessary to draw based on the plan and section of the building. The choice of the proportions and size of the seats to express the building in terms of architecture, their placement in front of the facade, the architectural design of porches, porches (loggias) and their grilles, the entrances to the building will have to be selected. The front view is drawn with door and window sills (pereplets) and layers (canvas). It is also necessary to show in the front view small architectural-structural details, including slopes, awnings above the entrances, elevators, car section, roofing devices (superstructures), ventilation pipes, shutters, emergency and fire stairs. and so on. The front of the building is divided into sections, that is, brick, large block and

panel or volumetric block, thus maintaining the order of mutual arrangement of parts of the building. The left side of the front view is marked by external dots along the vertical axis.

Foundation, Roof Plan If the buildings are symmetrical, then the plan of the foundation and the plan of the roof and the roof can be drawn together. When showing the plan of the foundations, the signs indicating the depth of the foundations of different shapes, the places of transition from one depth to another, the location and designation of all applied structures (block cushion, foundation blocks and panels, columns, etc.) is displayed.

The plan of the enclosure shows the signs of the panels and their placement, fastening to each other and to the retaining walls.

The dimensions of the reinforced concrete slabs are indicated on the basis of special records. The inner load-bearing walls, the drawing lines and the inner edges of the outer wall are drawn with a dotted line. As in the floor plan, this drawing must show the ventilation ducts and pipes. For the construction of the building on the basis of the specified intervals, the panels are selected from the industrial catalogs.

The roof plan includes the slope, direction, pipes and ventilation ducts, as well as the roof grilles. Combined roofs must show the roof exit through the stairwell, the machine rooms of the mines and elevators, as well as the location of the tunnels when the sewage flows through the building, the parapets installed along the contour.

Details It is necessary to describe all the main structural parts of the building under construction. You will need to draw at least four or five knots on the paper during the working drawing phase. Therefore, more brick, large block, and large panel walls are shown where they join vertically, as well as nodes where the beams rest on columns.

Depending on the appearance of the building, it is necessary to specify the following elements: curtains, stairs and floor nodes, parts that connect and support the curtains to the walls and coverings, details of filling doors and windows, porch tiles, porch (loggia), cornice, parquet, etc. (parts that do not fall into the building shear). An image of some of the details can be drawn on the screen or in millimeters and shown in the explanatory text.

Master plan Part of the master plan is drawn on a scale of M 1: 500 or 1: 1000, depending on the size of the projected building and the number of buildings located in it.

The master plan outlines the plot and places the projected building in the direction of the light. The location of the building is determined by the insulation of the main rooms, the direction of the wind in summer and winter, the ventilation of the rooms and the interior space.

The wind direction is shown in the upper left corner of the master plan.

The plan of the building will include other residential and public buildings, the distance between which will be adjusted to the sanitary and hygienic standards and fire safety requirements. The master plan includes sidewalks, streets, sidewalks, driveways, and green spaces. Streets and sidewalks will be at least 6 m long, and sidewalks will be 2.75 to 3.5 m wide. On closed streets (cul-de-sac), a circle with a radius of at least 10 m or a platform with a size of 12-12 plan is taken to retrieve cars. The width of the sidewalks and walkways is 0.75 m when moving in a row. If a row of green trees is held, the width should be at least 2 m, if two rows - 5 m, depending on the height of the bushes - 0.8-1.2 m, lawn - 1 m, depending on the type of trees - from 2.5 to 6 m, the building 5 m from the edge of the wall.

All designed building types and main areas must be indicated in the description. Protected buildings from external noise and dust are protected by trees and shrubs that are moved around the building. To connect the project vertically, it is necessary to calculate the red and black markings on all corners of the building and determine the conditional sign of the floor. The conditional relief is taken independently and the actual relief horizontals are held every 0.5 and 1m.

The possible slope between the corners of the building is 0.03-0.003. To determine the floor level sign on the first floor, you need to calculate the red mark (entry) of the entrance and raise it to the height of the project. The minimum apparent height of the cyclone (excluding the entrance to the building) shall be at least 0.3 m.

The following technical and economic indicators (TEC) (TEP) are taken into account in the development of the master plan: plot area (P1), m² or building area, m², the sum of the area of buildings designed for the plot (P2); building construction coefficient (ratio of P2 to P1); greening area (P3) m², greening coefficient (ratio of P3 to P1); area of roads, sidewalks, sidewalks, m, area utilization factor (ratio of usable area to plot area).

In conclusion, the policy pursued by the President today does not bypass the process of higher education. With this decision, the quality of higher education and the quality of education, modernization of the material and technical base of higher education institutions, equipping them with modern teaching and research laboratories, technology and communication technologies, and a quality architectural solution. providing a wide range of lighting and comfortable auditoriums and academic buildings, as well as the reconstruction of dilapidated educational buildings. It is worth noting that the necessary conditions are being created for the young generation of our rapidly developing country to be trained only as highly qualified specialists.

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