PATTERNS AND PRINCIPLES OF CONSTRUCTING A LANDSCAPE COMPOSITION

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Annotation

This article is devoted to the consideration of patterns and basic principles for constructing a landscape composition. Throughout the article, the author focuses on the architectonics of tree and shrub compositions, the rhythm and metric range of landscape design with the help of landscaping and small landscape and architectural forms. Particular attention is paid to the fundamental foundations of landscape design (complexity, scale, proportionality, harmony of all elements and the whole, stylistic unity, cultural continuity, etc.), harmonization of the interconnections of all elements of the composition.

Key words: landscape composition, principles of landscape construction, small architectural and landscape forms, metric series, landscaping architectonics.

In designing the created landscape, one of the most important aspects is the compositional-spatial aspect. The landscape composition includes landscaping, small architectural and landscape forms, which must be consistent with each other and with the surrounding buildings.

The task of developing the compositional-spatial organization of the landscape is to find priorities in composition, relationships in scale and show how proportionate the whole and all the elements are.

With the transformation, the relief contains repetitions of those forms that are natural for nature. Today, landscape architecture has been enriched by activities that make it possible to bring forms into the created relief, the geometry of which clearly shows artificial origin, and the appearance allows you to be compositionally consistent with the environment of urbanized settlements[1].

During the design of a landscape composition, one of the main tasks is the formation of tree and shrub compositions with an emphasis on the dynamics of the appearance of plants throughout the year, growth and development, as well as changes in the environment. Trees and shrubs are subjected to crown formation in order to obtain the appearance conceived by the landscape designer.

If it is incorrect to evaluate the architectonics of trees and shrubs, namely the shape of the trunk, changes due to age and season, the crown for the structure of the frame, its structure and massiveness, the stem itself for the structure, as well as the totality of plastic properties, then the effectiveness of landscape design measures decreases.

The fundamental principles of landscape design are as follows:

- act comprehensively to create space using elements between which there is a functional and compositional relationship;
- the project must be harmonious, correlate the designed objects on a scale against the growth of people and the adjacent landscape;
- work in stylistic unity so that architectural and landscape compositions and the surrounding space do not differ in style;
- take into account continuity, respecting cultural traditions;
- be effective in order to prevent irrationality in the materials and structures used;

[1]Maksimenko A.P. Landscape design: Textbook / A.P. Maksimenko, D.V. Maksimtsov. - St. Petersburg: Lan, 2019. - 160 p.

- combine utility and beauty - the designed spaces were functional and decorative.

The design concept, the final planning decisions, are adjusted to the function of the object.

In order to make graphics and plastics, you need to decide and enter the optimal textures and materials into the set, select suitable architectural compositions of small forms and sculptures suitable for use. During the selection, the designer needs to focus on those that will hide or highlight, decorate geometric shapes in order to maximize expressiveness. If the spatial construction is filled in a standard way, with rectangular shapes, then due to the graphic-plastic solution, the design is correctly and profitably transformed[2].

Contrasting forms and textures force us to carefully consider the territory, and the elements introduced into the spatial-plastic ensemble are organized on the basis of contrast techniques. If the space is rectangular, then oval and round shapes will optimally stand out here, which mutually distinguish each other. If you compile different textures, they will look new and fresh.

a) Contrast of forms, harmony of textures b) Contrast of text, harmony of forms

c) contrast of lines, harmony of textures

[2]Bertauski T. (2019). Plan graphics for the landscape designer: with section-elevation and computer graphics. Long Grove, Il: Waveland Press, Inc.

Fig.1 Contrast and harmony in landscape composition[3]

The task of harmonizing the relationships and relationships between elements in a spatial composition is solved based on the installation of proportionality and scale, alternating spatial elements according to metric and rhythmic patterns, fulfilling the condition of symmetry and asymmetry, breaking up spatial forms both modularly and proportionally.

In spatial composition, it is important to calculate metric constructions, starting from repetitive forms and setting intervals from one to another.

The metric series is defined as simple, where a repetition of only one variant of the form is noticed. In settlements, spaces are formed due to rows of both types, complex metric series or simple ones. The first introduced simple metric series of two or more. The complexity of the metric series is recognized if an alternation of unequal volumetric elements is noted with a shutter speed from one to another of unequal intervals[4].

A special role in the creation of space has a rhythm that can stimulate and depress feelings. Rhythm occurs when sounds or elements are separated by equal intervals.There are such varieties of rhythm as calm and restless, unidirectionally oriented or converging to the center, oriented horizontally or vertically. The impression is corrected by the literacy of the use of rhythm and its possibilities, careful preparation when alternating elements, volumes, spots of color, and other elements that lead the eye to move in such a way as to follow the rhythm.

In order for a spatial composition to have rhythmic constructions, it is necessary to take into account the laws of progressions, paying attention to increasing, decreasing, accelerated, slowed down.

If the rhythmic series is simple, then the ratio of the elements or intervals of the series that are adjacent is always constant. Combining metric series with

[3]Beck T. (2013). Principles of ecological landscape design. Washington: Island Press, Cop.
[4]The (2010). Architectural Graphic Standards : AND Landscape Graphic Standards. Chichester: John Wiley And Sons.

rhythmic ones, so-called complex rhythmic series are formed. A series is always built as a single one if the elements are subordinate to each other.

Rhythmically ordering the landscape composition, it is characterized as harmonious, and the severity of the rhythm brings solemnity. It is important to avoid excessive length of the rhythmic series due to the property of monotonous elements to be tedious in contemplation. Monotony can be broken by a skillful attempt to translate the rhythm into a complex one. The path to an enriched rhythmic series is that new elements are introduced here as additional ones. We can see this on the example of trees planted in a row and in a sustained rhythm, where different species of trees and shrubs, equipment for leisure and games, decor, necessarily finished with various materials, bring complexity. It is logical to replenish the rhythmic series with elements that will break the strictness of the sequence and introduce complication. Those rhythmic rows that the viewer contemplates frontally, it is acceptable to make in the center a little different in elemental content against the sections on the flanks. So, it is customary more difficult and richer, higher or wider to perform the central arch against the rest.

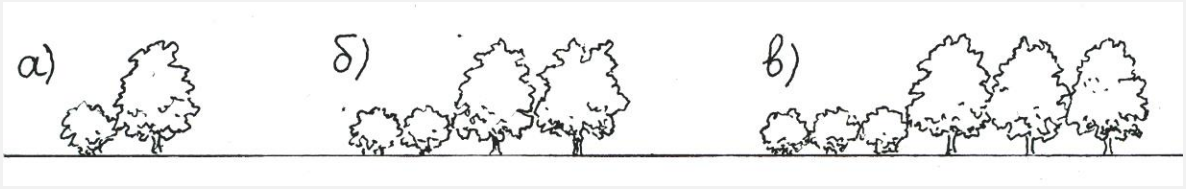

Fig. 2 Rhythm beats: a) one-, b) two-, c) three-part

When creating a rhythmic series, its unit, namely the measure, is taken as a support, which led to the gradation of rhythms into different ones in particular: one-, two- and three-frequency. If the cycles are the same, then a metric series is formed.

Fig. 3 Rhythmic series: a) simple, b) complex of trees and shrubs, c) complex of trees and vines[5]

Visually, objects of large size look heavy in relation to small ones. The composition of the constituent parts cannot be unbalanced for visual perception, repelling the contemplator.

When designing balance in a landscape composition, one should take into account such classes as:

1) static, when the elements included in the composition are arranged strictly in strict symmetry relative to the axis (Figure 3a);

2) dynamic consists in the fact that balance is maintained behind the freely placed elements (Figure 3b).

If the axis and the object are removed from each other, then the severity of perception increases, as we conclude from Figure 3b.

a) b)

Fig.3 Equilibrium schemes: a) static, b) dynamic

[5]Ornamental gardening with the basics of landscape design: a textbook / A. V. Isachkin, V. A. Kryuchkova, A. G. Skakova [and others]. - Moscow: INFRA-M, 2016. - 522 p.

How visually heavy or light, forming the impression of a balanced or unbalanced, landscape composition will be, correlates with the mass of objects placed in a particular space. If numerous window openings are glazed in a building, then the perceiver will evaluate it as lighter than a wooden one without windows.

The object, taking into account the color, is perceived as more or less heavy. The color of the light part of the spectrum is rated light against the dark, and the cold is not as heavy as the warm. In this aspect, they rely on the associative perception of color. Tones from dark and warm are close to the earth and seem heavy, but the quality of lightness, airiness is attached to cold and light[6]. More significant objects have more "weight": interest in the object due to appearance and value information gives the ability to visually equalize in weight with objects whose dimensions are larger, although the significance in the composition is lower.

When creating a landscape composition, it is necessary to take into account contrast and nuance ratios. The first ones are necessary to emphasize the element that is the main one in the spatial composition. Without the latter, it is impossible to organize a gradual transition if it is necessary to connect spaces of different types in this way[7] .

In the aggregate of plastic means, it is possible to create options that make it possible to split up the spatial form, highlighting the dominant elements, mutually arranging each, focusing on the dimensions and configuration inherent in a particular space.

The essence of light-color means is to compile colors, light and shadow. By painting the facades of structures, equipment, elements in landscaping, landscaping and flower decoration in different colors, the way spatial relationships are perceived is corrected.

[6]Kamalipour, H. and Dovey, K. (2019). Mapping the visibility of informal settlements. Habitat International, 85, pp.63–75.

[7]Shikanyan, T.D. Landscaping. With my own hands - from project to implementation / Etc. Shikanyan. — M.: Eksmo, 2017. — 352 p.

Thus, subject to all the laws and principles of landscape construction, the overall composition will turn out to be harmonious, safe, environmentally friendly and convenient.

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