

PROJECT: Multifunctional building

PART: Architecture

PHASE: Conceptual design

EXPLANATORY NOTE

SITUATION AND VOLUME-PLANNING

SITUATION ANALYSIS:

The subject of this project is the creation of a multifunctional building for the needs of the Karin Dom Foundation, which combines all functional areas in one volume.

The property is a park space, part of a complex of two dormitories. It has one entrance - exit for pedestrians and cars.

In order to avoid conflict between pedestrian and highway lines, it is necessary to provide good visibility and short road routes.

Due to the need for shading during the summer season, we have decided to maintain the existing vegetation in the play areas in the yard and in the southwest of the property.

Trees intended for removal will be offset during the working phase of this part of the project. The required amount of new saplings will be foreseen, if possible, within the boundaries of the property and, if necessary, outside the terrain designated by the Varna Municipality.

The character of the building is "medium". Cornice height is + 11,20m. The building has 3 floors above ground.

The structure has 21 pcs. of parking lots located in an underground parking lot by order (Ordinance No. 2, Art. 24 for planning and designing of the communication and transport systems in the urbanized territories).

The volume of the designed building is geographically oriented in order to align with the sun movement, in accordance with the architectural regulations.

ACCESSIBILITY DECISIONS

The building is designed with a minimum of levels to overcome in a vertical and horizontal direction.

There are designated parking spaces for people with disabilities, planned in accordance with Ordinance No. 6 of November 26, 2003 to build an accessible environment. These places are marked with road sign D21. An accessible route (Art. 31/) is provided from the parking lots to the reception area, second and third floors by an elevator with a capacity of 800 kg. and in front of the building via a 15% ramp. The slopes are made of non-slip frost-resistant pavement. Lift platforms are foreseen to overcome levels in front of two of the building's entrances. The other three entrances are at elevation $\pm 0.00\text{m}$. The entrance doors are 120 cm wide with handles comfortable for holding 90 cm high (art. 36, art. 37). The green roof on the third floor is accessible via an elevator and a staircase.

CONTENTS AND FUNCTION

To ensure independent access and autonomy of the individual functional areas, the proper and convenient use of the building has been developed: main entrance through the central lobby, reception for access to the Montessori Center on the second floor, separate entrance to access the pool area. An elevator has been designed to access all floors of the building.

BASEMENT LEVEL - 3.00 m

There is an underground parking lot (U) with 21 pcs of parking spaces available at this level, which are accessible from the parking lot - yard ramp, stairwell and elevator in the building.

FIRST FLOOR LEVEL ± 0. 00 m.

In order to provide independent access and the required light height by reference, at this level are located:

- **Reception room (A)** - with reception, coffee area with necessary equipment and technology, bathroom, toilet for disabled, wardrobe, playground for children, waiting room for parents - soft corner with 12 seating places, chat room for parents and specialists.
- **Playhouse (B)** - developed as a green winter garden, transitional from the reception area, with visual contact. The library may house cabinets for toys and for children to play. Through a collapsible, glass system, the space can be joined to the reception area and used for coffee breaks by participants in training sessions.
- **Medical Center (I)** - with reception, accessible from the main lobby and provided exterior to the building, independent pedestrian and vehicular access. It is located near the bathroom on the floor and the vertical communications - stairs and an elevator. It has a doctor's office, electrotherapy room, treatment room, waiting room. The municipal waste facility is located below the staircase, adjacent to the medical center, with access from the treatment room from the central lobby and outside.
- **Physiotherapy (C)** - main hall for physiotherapy with three entrances, hall for trampoline therapy, ergotherapy room, warehouse. The room is transformable, with folding systems, with the possibility of full opening and observation of the therapy inside. In the common parts of the physiotherapy there are two corners for changing and attaching outerwear. Warehouses are easily accessible from the halls by folding partitions.
- **Hydrotherapy (E)** - is in close proximity to Physiotherapy. They share hydrotherapy sanitary facilities. Includes 5m * 10m pool. and a depth of 1.30m., changing rooms for men and women separately, showers, toilets, including a toilet for the disabled, a dressing table. The baby gym is connected to the swimming pool area. It has a bathtub measuring 2m * 1m., baby changing table, sink and cabinets. Access to the pool is via steps for easier entry of people (without wheelchairs). The illumination of this area is provided from electric LED lamps and also there is natural light provided from the East and South. In this area there is a storage room equipped with a sink, which can be used by gardeners to maintain the yard.
- **Training Center (J)** - A multi-purpose hall with 100 seats, with the possibility of transformation into three smaller zones with separate entrances, a translator's cabin, an office space, a kitchenette for serving coffee breaks with refreshment from the bar in the main lobby. , warehouse. The hall can be used for celebrations and performances of children. It is located next to the reception and the main entrance, so that when the events take place the rest of the building will function independently.

It is envisaged, through wide-open windows, to open this floor to the outer courtyard so it can integrate as much as possible into the yard.

SECOND FLOOR LEVEL +4.50 m.

An introverted, secure space with independent, controlled access through two spaced staircases and an elevator. It can function independently from the first floor.

Due to our desire to provide a variety of spaces that allow for group activities throughout the year, this floor is developed around a closed common area and natural light comes from 3m * 12m wide panel. Designed as a gaming area and an entrance hall to various functional areas

- **Montessori Center (D)** - includes a vestibule with the required number of wardrobes. The group room, the group room for children with special needs and the rest room are transitional with double doors. There is a separate bathroom with two lavatories for children and

two sinks, which has a visual connection at eye level with the lounges. The kitchen (bottling) is accessible from the common areas and from the lounge. The center has a south terrace adjacent to the group halls. It is accessible through a separate entrance near the playground and through the reception. The rooms are furnished with soft quiet corners. All premises of the Montessori Center are planned accordingly to the sun movement and regulations.

- **Diagnostic and Therapy Center (F)** - includes multisensory darkened room, individual work rooms, diagnostic room, utility room, music therapy room, art therapy room, sensorimotor room, demonstration kitchen, team room, room to work with parents. The last two are adjacent and near to the lift and staircase. The rooms on the floor are arranged and furnished according to the requirements of the assignment.
- **Early Intervention Center (G)** - Team Room Early Intervention, Family Counseling Room;
- **Family Mediation Intervention Center (H)** - located near the bathroom and the demonstration kitchen. Includes "Small +" group room, "Rainbow" group room, self-contained utility room and separate connection to "Rainbow" group room. All three rooms are accessible through a vestibule for dressing.

There is a shared bathroom for the floors with three toilets and three sinks, including a toilet for the disabled. A room for equipment and hygiene products for the building is provided.

THIRD FLOOR LEVEL +7.50 m.

On this floor are located administrative offices - accounting room, development team room, meeting room and group activities with parents, executive room, management office, team dining room, rest room and changing rooms, server room and a private bathroom. Exit to the spacious panoramic terrace is provided. The approach to this floor is via the staircase and the elevator.

Signs indicating the direction of movement Art.150. The maximum distance from the doors of the rooms to the staircase is according to Table №18, Art. 163, ie less than 25 m. Doors made of glass on the escape route shall be filled with a glass thickness not less than 5 mm. Art. 163 (3). The doors separating the staircase to all floors are smoke-sealed, self-closing, and the walls are non-combustible, evacuation lighting is provided, Art.170. The walls of the elevator shafts are non-combustible with a fire resistance of at least 1 hour.

All escape exits and escape routes should be provided with glowing signs indicating the escape route.

MATERIALS

Facades- Long-lasting, natural materials are used. Ground floor - clinker cladding bricks, wooden suspended facade for the second floor. On the third floor there is a vertical planting of local ivy species. Minimum maintenance required.

The type of load-bearing structure of the structural facade is determined in the process of selecting a contractor. The whole architecture of this structure is detailed in a working design. Walls - Veneered MDF for the conference room and foyer, clinker cladding bricks in the reception room and playroom, "JOTUN" paint – antibacterial and washable, in other common areas and rooms. The colors of the walls and floor coverings are selected by a catalog by the author of the project.

Ceilings - Ground floor - gypsum cardboard, second and third floor gypsum plaster;

Flooring- In all rooms except bathrooms the flooring is vinyl Polyfloor Prestige Pur. In the pool area - Polysafe Hydro - a safe vinyl flooring with a guarantee of slip resistance and high durability. Features vinyl safety units for extra grip and safety. Highly suitable for disabled people's therapy rooms. In the bathrooms the flooring is tile. They are defined in the interior design. Type of plates, color, size, texture, edges, etc. are selected by the designer according to the selected samples.

Roofs - flat green roof with a soil layer and thickness of 20 cm.

Exterior flooring - paved flooring and concrete slabs.

Railings - railings are a detail that will be specified in the work design.

The windows are with three-chamber low-emission glass (K).

CONSTRUCTION

The construction of the building is solid. Exterior and partition walls are brick. The roof is flat.

ELEVATORS

There is an elevator with a capacity of 800 kg and the possibility of use by disabled people. The type, the main dimensions of the shafts, the size of the doors and the machinery spaces shall be provided in accordance with the applicable standards, BDS ISO 4190-1 and Art. 23 of the law for architectural regulations. The building has a character of average construction / height 15m /. The depth of the platform in front of the elevator is greater than the depth of the cabin which is shown in the drawings,

4.3.3., BDS ISO4190-1.

ENERGY EFFICIENCY

The energy class of the building is A. Annual energy consumption is 82 kWh / m².

Energy efficiency measures:

- Glazing (windows, doors, etc.);
- Thermal insulation of walls, roof (green roof - detail 1) and floor;
- Construction of solar installations for hot water, if permissible;
- Implementation of energy-saving lighting in the common parts of buildings;
- Gasification of the building;
- The energy efficiency of the lift;
- Heating - we recommend built-in floor, at the base of the windows on the ground floor, heating - detail 2. Natural convection is used.

PROJECT VALUE

The project's projected value is calculated based on the BIM model

Building - 1 032 000 E excluding VAT

Interior - 333 333,333E without VAT

Green roof - 41 666,67 E without VAT

Intelligent control system - 30 000 E without VAT

HVAC - 99 000E without VAT

Total: 1 437 000 E excluding VAT

ARCHITECTURE OF THE BUILDING

- The task we set ourselves is to create the most useful building that inspires peace and security. Game-Driven environment. A wonderful world behind every open door.
- Through visual links between the functional areas and the possibility of separating them, we have increased the efficient use of the building.
- The durable materials embedded in the project harmoniously fit the volume into the environment.
- The maximum visual and functional connection to the environment realized through large window openings, communications and terraces has conditionally removed the border between the outside and the inside.
- The elements of accessibility, multifunctionality and transforability contribute to efficiency.
- Last but not least, the color and graphic coding of the areas included in the interior solution complements the conceptual ideas embedded in the project.

We believe that our proposal will make everyone who is committed to living in the building - the children, their parents and the Karin Dom Foundation happier.

PROJECT AREA

Total floor area - 3092 m²

Overground areas - 2328 m²

Underground parking - 764m²