EXPLANATORY NOTE

To Competition Project No.

Integration into the urban landscape:

The close neighborhood of the site shows a very mixed picture of functions: two-story smaller apartment buildings and office buildings almost 10 stories high are also located in the direct vicinity. The site is surrounded by older buildings in the shape of a horseshoe, built on 3 units. When designing the new building, we have considered the location of the aforementioned already existing structures to be decisive; therefore, the new building is designed to be located in the middle of the already built environment, forming a cuboid, and creating symmetry with the surrounding buildings. When locating the new building, an important aspect was to reduce the impact on the existing surroundings. We have designed the outer contour of the building to eliminate as few trees as possible. To counterbalance the felling, we plant new trees.

Static frame:

The static frame has been designed so that should the functional needs change, the rooms and premises can be reallocated with the least amount of work. External walls are brick walls and partition walls are gypsum walls. The structure of the building is pier-framed with monolithic reinforced concrete slabs, so future adaptation is easier, if necessary. Two-way reinforced concrete braced walls provide protection in case of earthquake.

Access:

The building can be accessed by car through a ramp tunnel outside the building, leading to the underground garage. Pedestrian access is possible through a pedestrian walkway accessible also for people with disabilities, leading to the main axis of the building. This walkway also adjoins the pedestrian walkway to be created on the plot of the building.

Functional layouts:

We have eased the mass rigor of the building by inner atriums. The inner, circle-shaped atriums have several roles, they supply the internal functions with natural light and natural ventilation. Passage on levels above the ground floor has been grouped around the two atriums, various function groups can be reached from here. We have created an easy and simple system for passage within the building. It was important to apply clear axes from where the function groups can be reached easily and logically. When designing the floor plans, we have created community spaces in addition to close functional relationships, which provide a comfortable atmosphere, and where children, parents, and professionals can relax and enjoy themselves during the joint "work". Spaces are easily understandable and ergonomic. The spatial organization of the building creates a socially inclusive surrounding, the circle shape as the symbol of equality appears repeatedly within the building.

Basement level:

The basement level can be accessed by car through a ramp tunnel from the street, thereby the ramp does not take up useful floor space under the building, and it also bypasses several already existing trees to be protected. We have created 20 general and 2 accessible parking spaces in the underground garage.

Ground floor and park:

When arriving through the main entrance of the building to the ground floor, the reception area as central space is the main function, placed on the central axis of the floor plan. The Medical Center, the Physiotherapy Center, and the Hydrotherapy Unit are located on the ground floor and can be accessed from the reception area. The medical and physiotherapy functions have been specifically intended to be located on the ground floor because of their outdoor connections. The building can be accessed through two entrances: the southern is the main entrance, while the northern provides garden access and escape route in case of fire. Swings for children with special needs, integrated playground and a sensory path are located along the garden walkway. The walkway leads to the two entrances of the new building; when designing its track, the existing environment was taken into account.

First floor:

The Center for Diagnostics and Therapy, the Center for Family-Mediated Intervention, and the Early Intervention Center are located on the first floor. The internal simple and easy passage system is best applied on this floor. On the main axis of the building a community area has been created.

Second floor:

The Montessori Center, the Training Center, Administration, and Staff functions are located on the second floor.

Third floor and rooftop terrace:

Two apartments for families from the country are located on the third floor. The rooftop terrace may be used by all internal functions. Special swings, integrated playground, and raised garden beds are placed there. The canopy provides shelter against bad weather or excessive sunlight.

Sustainability:

Economic construction has been the basis of the designing process. We have given priority to the economic use of natural forces. Natural ventilation is applied, and with the help of the two atriums ventilation can be maximized in respect of the whole building.

Engineering:

Exchange of air is natural due to the stack effect of the two inner yards. We have applied mechanical exchange of air only by hydrotherapic functions. Heating will be provided by gas boilers. Re-use of greywater. Use and temporary storage of rainwater. Protection against overheating in the summer by external textile blinds.

Façade, materials used:

The materials used in the interiors have been chosen in the light of the principle of sensory awareness. We have reduced the levels of stimuli to the minimum. Acoustic panels have been allocated to the ceilings of the rooms. We have avoided the use of bright colors. The windows are equipped with external textile blinds to avoid glaring light. The interior materials are easy to clean and have an accident-free design. We have applied pastel colors to the surfaces.

Aluminum composite sheet lamellae have been put to the front façade to provide shade, which is an economic solution for protection against excessive sun exposure.

Estimation of construction and maintenance costs:

When designing the building, cost-effective implementation and the creation of a sustainable building was a primary consideration. It was important for the location and design of the building to maintain consistency with its existing environment. Thanks to the two atriums, the building can ventilate naturally with the help of the daily breeze circulation in Varna, thereby reducing the use of mechanical power. The use of reinforced concrete structure is also a cost-efficient solution as it reduces the costs of future adaptations of the building. The design of the building pays attention to the reduction of energy and water consumption. The aim is to use solar energy, greywater, and rainwater. External textile shades provide protection against summer overheating. In its complexity, we have applied materials and structures in the building that are cost-effective both in respect of their construction and their maintenance.

According to our calculations, assuming the institutional function of the building, the estimated costs of construction are in line with the planned budget specified in the competition brief.