ORDINUL ARHITECȚILOR DIN ROMÂNIA

LUCIAN BLAGA HIGHSCHOOL CLUJ-NAPOCA

DESIGN COMPETITION

ANNEX 1.1.
COMPETITION BRIEF

ORDINUL ARHITECȚILOR DIN ROMÂNIA

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1. GENERAL DATA

The Contracting Authority and the context of the competition

The municipality of Cluj-Napoca has started a program several years ago to rehabilitate and complete the school infrastructure, which it wants to continue with the help of European, national and local funds. Through this initiative, the municipality supports:

- the creation of new high-performing preschool and school facilities in the proximity, thus relieving overcrowded facilities, supporting non-motorized mobility at the city level and strengthening the education of students in the spirit of competence, responsibility and belonging to a community;
- the modernization and extension of existing facilities to provide the proper framework for an education in the spirit of the 21st century, avoiding depersonalizing institutional structures, cultivating the community's identity and a willingness to cooperate;
- the relocation of some facilities to provide them with better operational and development conditions in the future;
- the opening of facilities for the local community outside the school hours, such as open and green spaces, sports fields, playgrounds, libraries, halls of festivities and others, in order to integrate education into the life of the community through access to these resources for continuous professional and personal development, with a view to community and cultural life and leisure activities;
- the modernization of urban spaces in the vicinity of educational institutions.

The Municipality approved at the beginning of 2022 two important urban development strategies to guide future investments, namely: the Integrated Urban Development Strategy of the Cluj-Napoca metropolitan area (SIDU) 2021-2030 and the Cluj-Napoca Sustainable Urban Mobility Plan (PMUD) 2021-2030[1].

These documentations established the investment priorities, which were then correlated with the results of surveys carried out among the inhabitants to establish measures for the development of communities in the municipality, respectively in the metropolitan area, as follows: (1) rehabilitation and modernization of public spaces, green spaces, spaces between blocks, public lighting, (2) creation of new parking spaces, (3) modernization of compulsory educational infrastructure (nurseries, kindergartens, schools, high schools), (4) modernization of streets, intersections, roundabouts, (5) modernization and infrastructure development for pedestrians and cyclists.

The *Safe School* program was outlined in the PMUD, which also includes the *"Lucian Blaga" Theoretical High School*. All projects to modernize educational facilities and adjacent streets targeted by the program will also include traffic calming interventions to ensure a student-friendly route as safe as possible.

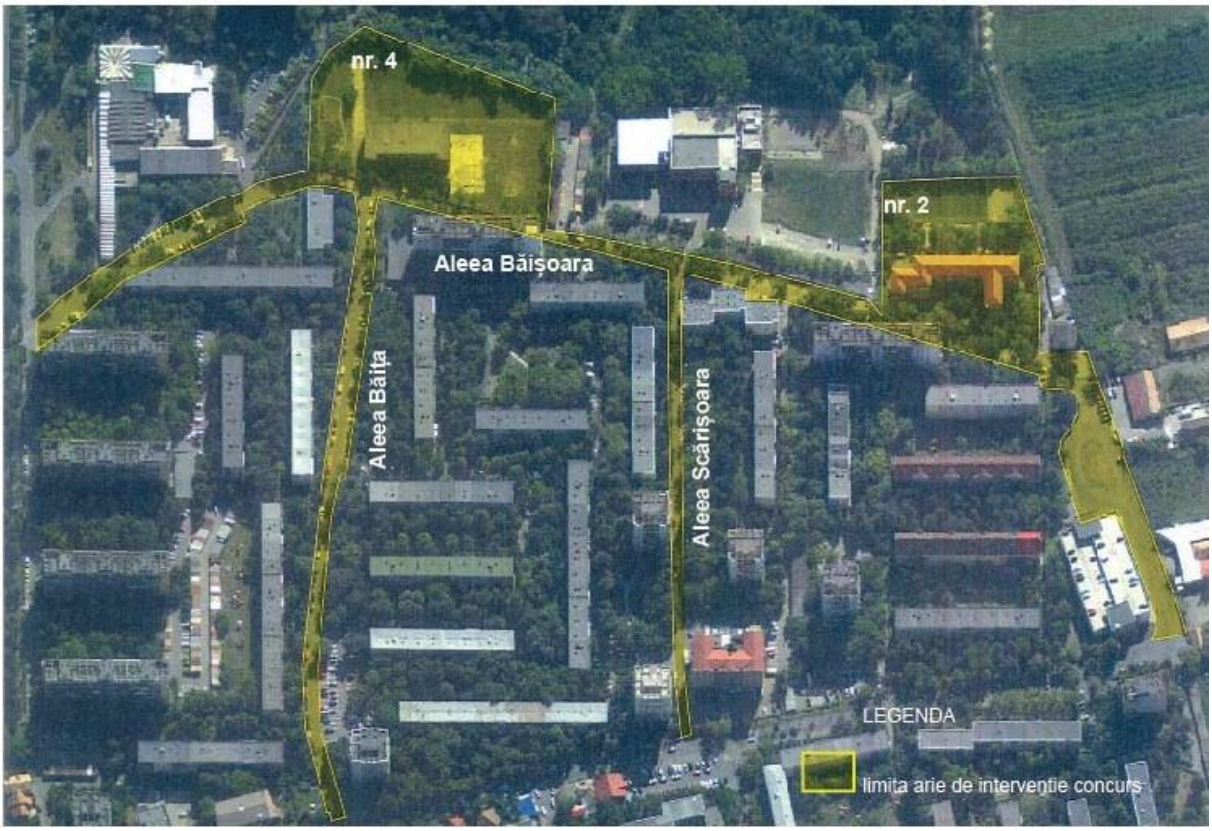
[1] approved by HCL (Local Council Decision) 1/18.01.2022, respectively HCL 2/18.01.2022

For the *„Lucian Blaga" Theoretical High School*, the municipality chose the architectural design competition as a step to find the best solution to solve the current problems of this high school and the adjacent urban space. The contracting authority of the competition is the Municipality of Cluj-Napoca, which will become the beneficiary of the project contracted following this competition.

The area referred to in this documentation as the *„Lucian Blaga" Theoretical High School* has an area of approx. 1.7 ha and includes 2 independent plots, and on each there is a building functioning as a school. Their location is: for the southern building - 46°45'47.7"N 23°37'25.7"E (https://goo.gl/maps/qS4XtJfuyCwweXBd7) and for the northern building - 46°45'56.6"N 23°37'29.7"E (https://goo.gl/maps/Xyb97SPKTgZemZ4Y9).

Considering the need to ensure a coherent, unitary, functional and sustainable project of the educational complex, the intervention should propose the arrangement of the alleys adjacent to the school, with an area of approx. 1.5ha, in order to adapt them to the proximity of some educational institutions, while preserving at the same time their nature of alleys serving the neighbourhood.

The municipality wants to solve as many of the shortcomings and problems that the buildings and the institution, as well as the adjacent urban space, are currently facing. As such, they are looking for an optimal solution with an average investment budget that proposes a very good management of the construction works necessary to achieve the objectives, while observing the norms and standards in the field of school constructions and, at the same time, the related functions and the urban regulations of the area.



Satellite image with the marking of the competition area

Purpose of the competition

The purpose of the competition is (1) to find the optimal balance between the functional modernization of the school buildings, the integration of the extensions into the site, the architectural aspect, the technical solutions, the economic solutions, the functional solutions for the extension of the high school in the competition area, (2) to transform the adjacent streets into a vibrant urban space of good quality.

Project objectives

- Completion and reorganization of the educational complex in order to maximize the surfaces used for the school and to adapt its spaces to the educational principles of our century
- Integration of existing buildings in the area and suitability of new interventions
- Incorporation of the area intended for the constructions of the proposed high school complex into a total constructed area of a maximum of 10,500 sqm.
- Modernization / extension of the current functions and spaces of the high school, so as to meet the needs of a maximum number of 1,002 students, organized in 39 classes.
- Determination of an energy efficiency solution for existing and proposed buildings and implementation of the nZEB concept.
- Arrangement of the school yard with an emphasis on as large green areas as possible and environmentally friendly materials.
- Streamlining the investment by maximizing the use of spaces and increasing the number of final beneficiaries, by the multi-functionality of some of them and by opening them to the local community to be uses outside the school hours.
- The arrangement of the urban space adjacent to the high school in order to facilitate its most pleasant and safe passage by students and teachers, residents of the area or passers-by and generating a quality infrastructure by integrating the *walkable* and *smart city* principles.

Organizer of the competition

The competition is organized by the Romanian Order of Architects (OAR), in accordance with the Competition Regulations of the International Union of Architects (UIA) and the provisions of the International Recommendations for architecture and urban planning competitions adopted in the UNESCO General Conference of 1956, revised on 27 November 1978, in compliance with the provisions of the legislation in force regarding the awarding of public procurement contracts.

2. DESCRIPTION OF THE CURRENT SITUATION

Context – Gheorgheni district

The plots on which the schools were built are located at the edge of micro-rayon II in the Gheorgheni district[2], between the block area of the neighbourhood (to the west), the Mercur shopping complex[3] (to the north) and Detunata Park[4] (to the east). To the south of the studied area is the experimental horticultural resort - the former Palocsay orchard.

The construction of the Gheorgheni district started in 1964 with micro-rayons I and II, which were completed in 1965. They were designed[5] according to the principles of free urban planning and included, in addition to housing blocks, green spaces, parks, recreational areas, public institutions and district centers. All these functions were distributed evenly in the neighbourhood, based on service ranges ranked in relation to the various functions. In 1969, the areas built with blocks were expanded with micro-rayons III and IV.

The neighbourhood nowadays still preserves the identity of the original concept due to the fact that no developments were made in the 1970s that would alter the principles according to which it was designed.

In the initial project from 1964, 2 schools and 2 kindergartens-nurseries were provided in the 2 micro-rayons, and in the plan of the micro-rayons after 1970, another 2 schools can be observed in micro-rayons III and IV and 2 large school centers north of the block area. The locations of the present-day educational institutions comply with this project. Most of the schools have been extended over time with new wings / bodies and the two educational areas are now fragmented and also house related functions (sports facilities, dormitories, offices, etc.).

One of the objectives of the 1964 project was a good accessibility in all areas of the district. This objective was achieved by designing the car traffic in the shape of a comb with the pedestrian one. The large number of cars has changed over time the ratio between the pedestrian and the car area, unfortunately in favour of the latter – now driving is possible on many of the alleys between the blocks.

After the completion of the constructions, all the circulations and the spaces between the blocks were landscaped and massively planted, so that the vegetation now predominates at the pedestrian level and it is still pleasant to walk / pass through the area in the shade of the trees. [6]

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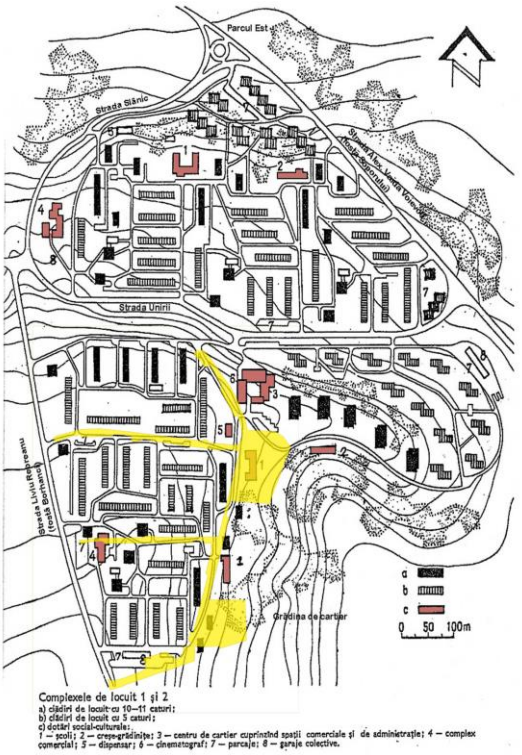
[2] The information, plans and photos in this chapter are extracted from the chapter "*Locuirea. De la plombe la marile ansambluri"*, author Vasile Mitrea, pg. 173 -180 in the Pănescu Eugeniu publication (coord.), Vasile Mitrea, Emanoil Tudose, Aurelian Buzuloiu et al., „*Cluj-Napoca în proiecte, 50 de ani"*, *1960-2010*, Casa Cărții de Știință, Cluj-Napoca, 2016

[3] The Mercur complex was designed by arch. Mircea Amitroaiei and it was completed in 1968. It was imagined as the district hub in its first form with micro-rayons I and II.

[4] The district garden was completed in 1970 and had a larger area than the current park.

[5] The design team of the first 2 micro-rayons of the Gheorgheni district: architect Augustin Presecan – project manager, arch. Vasile Mitrea, arch. Aurelian Buzuloiu

[6] Gheorgheni district walk-score 61/100 according to PMUD 2021-2030



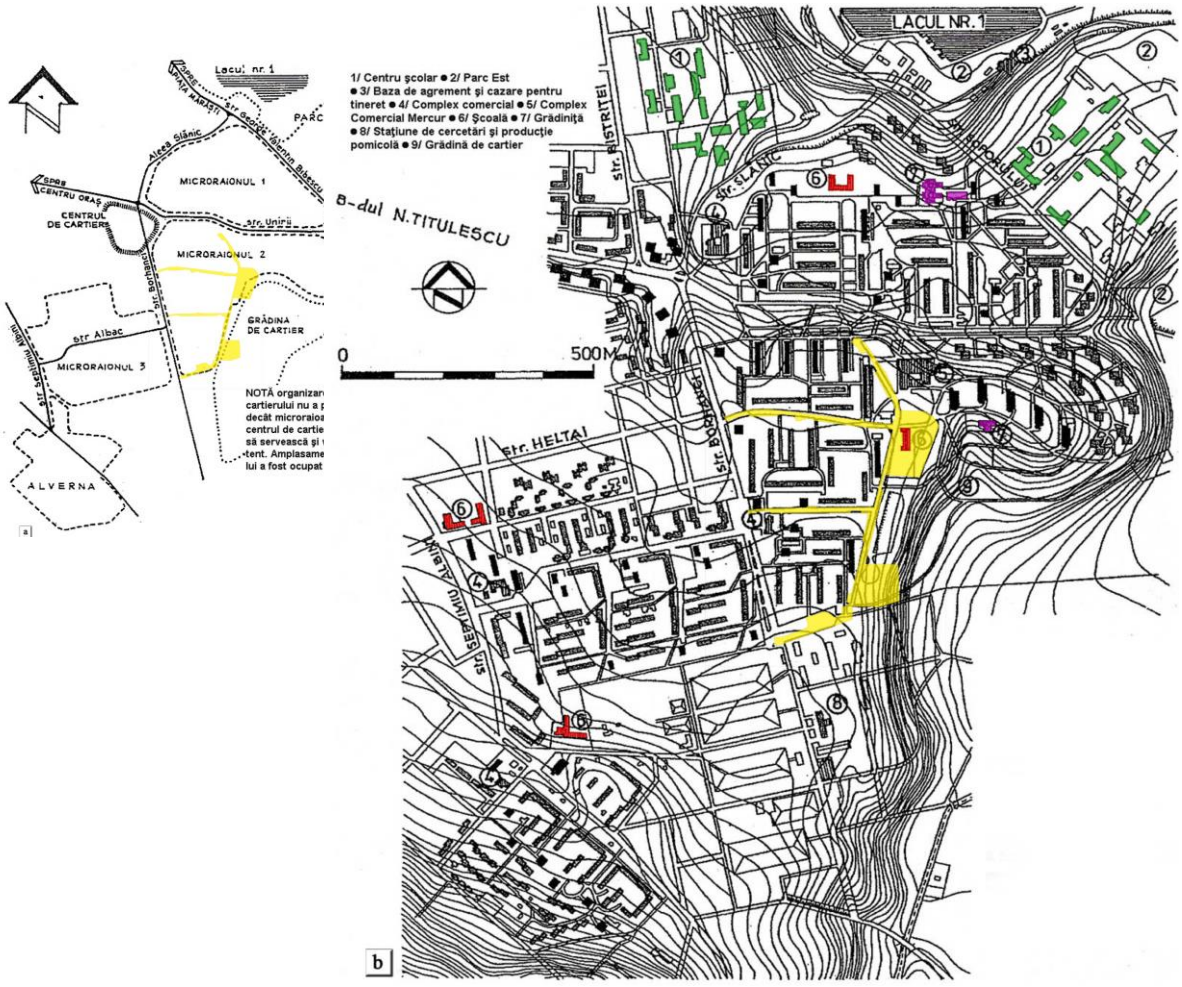
Competition area (yellow)

– location in the Gheorgheni district

Upper left – the plan of micro-rayons I and II with the marking of the social & cultural facilities in the neighbourhood (red)

Bottom left – sketch of micro-rayons I-IV

Bottom right – the plan of micro-rayons I-IV after 1970 with the marking of the planned educational facilities (green – educational center, red – school, magenta – kindergartens / nurseries)



Historical photos (1970) of the Gheorgheni district showing the primary school

Neighbourhood garages appeared as a program associated with collective housing in all Romanian cities. After the mid-1970s, they were placed directly on the public domain[7] and created a familiar image of apartment blocks. Rows / batteries of sheet metal or prefabricated concrete garages appeared then in the Gheorgheni district.

Along with the rapid growth of the motorization index[8], against the background of using the garages for other purposes – storage spaces, workshops, trade, meeting places etc., the struggle between those who do not have garages and those who have garages and occupy the public space and have a negative impact on the urban image[9]. This situation superimposed on the Cluj-Napoca municipality's desire to return the public space to the community for community activities and facilities, including finding solutions for additional parking spaces - led to the gradual evacuation of the garages.

The demolition of the garages in the area began in 2010 with the approval of the Băișoara parking lot project and continued as the problems regarding the ownership or legal status of some of the buildings were clarified[10]. Other suitable places for the construction of parking lots in the neighbourhood have been identified, but so far only studies have been started and no construction projects have been approved in this regard.

The process of recovering the urban space is still progressing quite slowly, especially because there is still a shortage[11] of parking spaces in residential neighbourhoods, and the

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[7] Alex Axinte, *Block garages. Closed, semi-open and open* elaborated within the *Open Garage* project, https://cdfd.ro/povesti/la-garaje/#București

[8] Micro-rayon I in the Gheorgheni neighbourhood was the second district in the municipality whose motorization index exceeded 50% even before 1989. The motorization index in Cluj-Napoca is currently over 550 vehicles / 1000 inhabitants according to PMUD.

[9] In the 4 micro-rayons of the Gheorheni district, there were around 8900 apartments estimated in the Gheorgheni district in 1970 - ibid. 2. In 2007, when the municipality publicly announced that it wanted to demolish the clusters of unsightly and unsanitary garages - more than 10,000 throughout the city, in the Gheorgheni district there were approx. 1750 of these.

[10] The process of legal decoupling of apartment garages originates prior to 1989 – ibid. 7

[11] Many people are on the waiting lists and many car owners residing in Cluj-Napoca park their cars in an irregular manner on the sidewalk or along the streets.

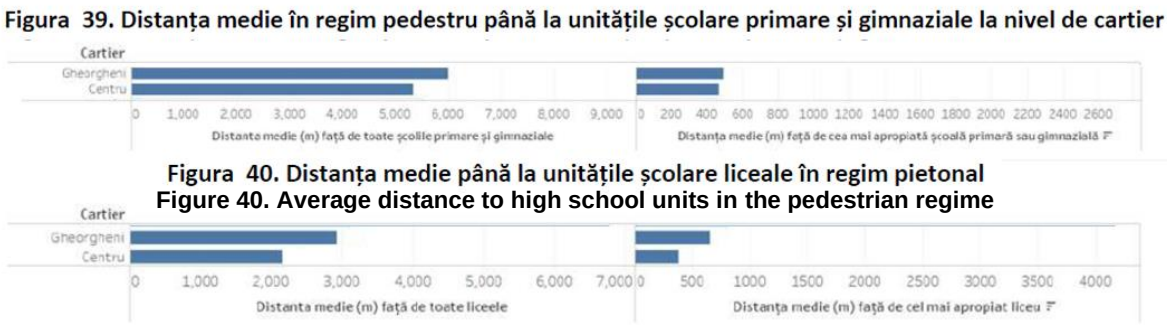
arrangement[12] and management[13] manner off those already laid out is inefficient from the point of view of urban space consumption.

Contrary to the intentions, the process of increasing the number of parking spaces on the ground has considerably reduced the quality of public space, but also road safety and the fluidity of traffic in certain areas. The need for parking has thus become one of the main consumers of urban space, an aspect noticed by the community only in recent years, when the need for quality public spaces has become an increasingly present topic on the public agenda.

At the level of neighbourhood amenities that are accessible from the competition area, we can note (1) the location of the Gheorgheni district town hall south of the high school, at the bend of Băișoara alley, (2) a small play space on the same alley between the 2 plots of the high school, (3) a municipal waste area on Băița alley, (4) commercial spaces to the north in the Mercur complex and to the west on Liviu Rebreanu Str., (5) educational institutions on Băișoara alley and nearby on Detunata alley (kindergarten, primary school, gymnasium, high school and private school), (6) access to the Detunata park and sports base to the east, (7) district parking at the end of Baișoara alley.

The SIDU analysis on the distribution of residential buildings in relation to the nearest primary/secondary education unit within the neighbourhoods highlights pedestrian access times of 5-10 minutes in the Gheorgheni neighbourhood. The general accessibility to high school education units shows great spatial variability within the municipality, but highlights short pedestrian access times in the neighbourhood, close to the well-served central area.

Figure 39. Average distance on foot to primary and secondary school units at neighbourhood level



Extracted from SIDU 2021-2030. Source: Cluj-Napoca City Hall

[12] In order to increase the amount of parking lots, we resorted to the introduction of one-way streets, the arrangement of parking lots along the streets, in spikes, on sidewalks and parking lots on the ground instead of garages, generating an increase of approximately 25% compared to the situation with garages.

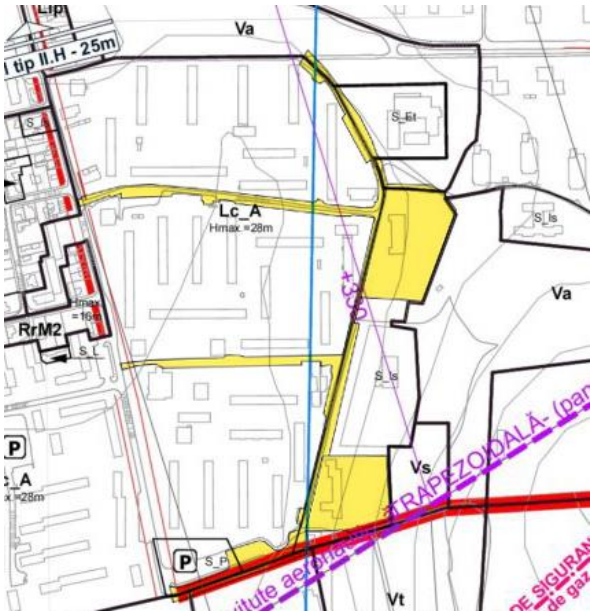
[13] Residential parking lots are rented to residents throughout the day. For this reason, visitors to a residential neighbourhood often do not find parking spaces available, but they also cannot park on the reserved spaces, even if they are free.

In this sense, in the urban development documentation (SIDU) various investment priorities were indicated for the neighbourhood and the areas in the vicinity of the schools, respectively: a) supporting non-motorized mobility by expanding the cycling network on the major traffic network and connecting it with the district's objectives of interest: district center, schools, shopping centers, etc.; b) rehabilitation of pedestrian routes in the vicinity of schools; c) rehabilitation of green spaces on the basis of dendrological and landscape studies - which really ensure regulations for real improvement of the quality of public green spaces in collective housing areas; d) establishment of a protected area PUZ (Zonal Urban Plan) for the micro-rayons I and II of the Gheorgheni district.

Provisions of the urban planning documentations

The area proposed for the competition is located within urban area of Cluj-Napoca. It is a semi-peripheral area built in 1964-1970 on the site of gardens and orchards and semi-urban housing.

The provisions of the Local Urban Planning Regulation (RLU) related to the General Urban Planning Plan (PUG) of the Municipality of Cluj-Napoca approved through the Local Council Decision 493/2004 for the reference unit included in the competition area, respectively S_Is subzone IS_A: *Area of public institutions and services and of public interest constituted in independent complexes*, can be consulted in the annexes of the competition brief.



The framing of the competition area in the PUG Cluj-Napoca[14]

[14] The proposals for the reconfiguration of the urban space marked in the RLU of the PUG as areas of public servitude (red in the plan above) were cancelled after the approval of the documentation (2019) and do not constitute a competition brief.

Location

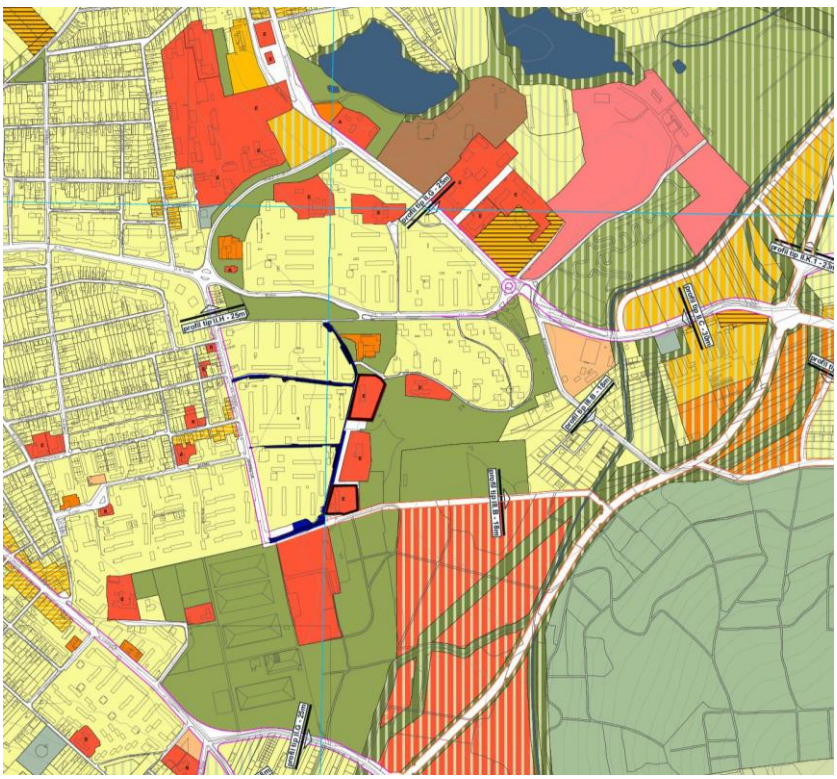
Access to the two plots of the *"Lucian Blaga" Theoretical High School* is from Băișoara alley. The northern parcel also has an access in the northern part, towards Detunata alley.

The plot between the two lots of the institution was concessioned[15] by the municipality to a foundation, and in 2009 the construction of the private school Transylvania College began on it (extended in numerous stages with various building bodies) and thus the connection between the two plots of the Lucian Blaga high school is made only on Băișoara alley.

The southern location (cadastral no. 338257) with an area of 7,070 sqm has a slope of approx. 7m EV and is arranged on 2 terraces: the high school occupied the area towards the street and the football and basketball courts are arranged at the bottom.

The northern location (cadastral no. 338273) with an area of 10,132 square meters has a slope of approx. 3.5m EV and is laid out with a terrace facing the street where the school and sports fields are located and there is also a sloping green area.

The streets adjacent to the educational complex for which the arrangement is proposed within the framework of the competition are Aleea Băișoara, Aleea Băița and Aleea Scărișoara - only the segment that connects Băișoara Alley with Liviu Rebreanu street.



Extract from PUG Cluj-Napoca with the marking of the competition area – Urban Planning Regulations Sheet – Zoning of urban territories

[15] In 2004, a plot of 10,000sqm (between the plots of the *„Lucian Blaga" Theoretical High School*), and in 2006 another plot of 6,000sqm were both concessioned for a period of 49 years

The alleys[16] with a total area of approx. 15,750 square meters connect the 3 plots on which educational institutions are located to the main arteries of the city as follows:

- to Liviu Rebreanu street (former Borhanci) – artery that connects the Gheorgheni neighbourhood to the city center (to the northwest 3-4km), to the Becaș and Borhanci neighbourhoods (to the south 3-4km) and to the Andrei Mureșanu neighbourhood (to the west);
- to Unirii street (via Bizușa alley) – the central axis of the Gheorgheni neighbourhood that will connect the future Sopor neighbourhood with the city center.

„Lucian Blaga" Theoretical High School

In 1972, the High School of Electrotechnics and Physics no. 3 was established, which trained specialists in the field of nuclear physics and electronics technicians for automation under the patronage of the State Committee for Nuclear Energy. The high school operated in a different location than the one in Aleea Băișoara. In 1979 it became the High School of Mathematics and Physics no.1. In 1981, the high school moved its headquarters from Calea Mănăştur to the Gheorgheni neighbourhood, and in 1988 it changed its name to Theoretical High School no. 1. In 1994, this high school was merged with General School no. 18 and the educational unit with classes I - XII under the name of *"Lucian Blaga" Theoretical High School* was established.

Since then, the *„Lucian Blaga" Theoretical High School* is a high school with an upward evolution. In recent years, more than 200 students have won awards at contests and competitions above the county level. It is a high school with a traditional theoretical direction that focuses on mathematics, physics and computer science, and which, more recently, also emphasizes foreign languages (English and French).

In the 2021-2022 school year, the *"Lucian Blaga" Theoretical High School* had a number of 980 students organized in 2 zero classes with afterschool, 11 primary classes, 8 middle school classes (mainstream education) and 12 high school classes, the theoretical stream, with the profiles:

- Sciences – major in mathematics & computer science – intensively computer science – 1 class/year
- Sciences – major in mathematics & computer science – intensively English – 1 class/year
- Sciences – major in natural sciences (intensively English) – 1 class/year

[16] Băișoara Alley (cad.no. 350535), Scărișoara Alley (cad.no. 327203), Băița Alley (cad.no. 350256)

The institution operates in two buildings located on two independent plots, separated by a plot on which a private education unit operates. 472 children organized in 15 classes studied in the northern building, and 508 students organized in 18 classes studied in the southern building. All classes have more than the maximum number of students per class approved by the *National Education Law*. The school staff consists of 52 teaching staff, auxiliary teaching staff: 4 people, non-teaching staff: 8 people. The 62 people work in both buildings.

The current number of students is the maximum the school has hosted in the last 10 years. Its capacity increased by approx. 150 students compared to 2013, respectively by approx. 75 students compared to 2017. Considering that at the level of the municipality the school infrastructure extended much more slowly than the residential developments and the number of families with children, a fact that led to the crowding of all educational institutions, the school management predicts that in the next 5-10 years the number of those studying here will increase to over 1000 students and the school staff to approximately 75 people.

Regarding children's travel to school, according to the information on the high school's website, in the 2020-2021 school year, the average travel time to school was under 30 minutes for 870 students, of which 17 live in another locality and stay at the boarding school /host, and between 30-60 minutes for 90 students who live in another locality and commute daily.

The northern plot and building

The northern plot is bounded to the north by a public parking lot and the Mercur shopping area, to the west by Baișoara alley, to the east by Detunata park and to the south by Transylvania International College. A primary school is located on the plot, and physical education and sports fields and a children's play area are set up.

Pedestrian access to the courtyard is from Baișoara alley, next to the main entrance to the building. Car access is at the end of the plot, from Băișoara Alley next to Băița Alley. There is also a car access to Detunata Alley in the northeast of the plot. Currently, there are 10 improvised parking spaces for teachers or auxiliary staff in the alley connecting the 2 entrances to the premises.

The GF+2F building is a typical school building project from the 1970s. The construction was originally intended as an educational space. The footprint is 774 square meters, and the gross building area is 2317.15 square meters. The building has a basement / central technical corridor.

It has a simple composition, characteristic of the 1970s, without special architectural value. The finishes of the external walls are made with evened plasters. They have never been restored and now show decay and cracks.

According to the layout of the classrooms, the building has a double tract, with the spaces facing east towards the school yard and park and west towards the block area. Vertical circulation is ensured by monolithic reinforced concrete stairs positioned on the

western side of the building. On the two short sides of the school, you can exit into the yard. All accesses to the building from the school yard are made under concrete canopies.



Images from the school's archive

The following are currently organized in the building: 15 classes with an area of approx. 50 square meters each, 2 physical education rooms with an area of approx. 50 square meters each, a computer lab with an area of approx. 70 square meters, girls' and boys' toilets, administrative spaces, a small library, a teachers' room, medical offices, a workshop and a counselling room. There is currently no other common recreation space besides the corridors.

The spaces are organized on the basis of a 9x6m spatial module, which has undergone subdivisions and reorganizations to accommodate the various functions necessary for operation over time (cabinets, warehouses, etc.).

The partitions are made of thin masonry walls. The finishes are simple, with washable paints, chipboard panels or painters, respectively tiling in the bathrooms.

The floors are made of PVC carpet in the corridor area and mosaic in the staircase area, wooden or laminate parquet in the classrooms and tiles in the bathrooms.

The structural frame of the building consists of:

- continuous plain concrete foundations[17] with flares next to the pillars
- reinforced concrete elevations[18]
- vertical structure with brick masonry walls reinforced with cores and reinforced concrete belts, combined with reinforced concrete columns and beams
- reinforced concrete floors[19] on all levels
- terrace-type roof, with insulation[20].

[17] The uncovering of foundations within the geotechnical study revealed concrete foundations with a depth of 1.1m and a width of 0.5m, and the foundation ground made of sandy clay.

[18] The prefabricated panels from that period were load-bearing and had the following layering: 12cm of load-bearing concrete on the inside, 7cm of mineral felt in the middle, 6cm of protective concrete on the outside. *I did not have access to the school archive project, but it can be assumed that these types of panels were used here.*

[19] The floors between levels from that period were prefabricated semi-panels of 10cm. *I did not have access to the school archive project, but it can be assumed that this type was used here.*

Technical expertise no. 277-B/2022 classified the construction in the RSIII seismic category. This study should be investigated for the expert's recommendations and other details about the condition of the building. In addition to this study, it is specified that in the case of buildings that belong entirely to the public domain and in the case of capital repair works, intervention works are required on the construction to classify it in accordance with the norms in force in the RsIV seismic category.

Following the site visits, the following were noted:

- wooden carpentry was replaced by PVC carpentry in the period 2006-2009;
- locally, the expert found elements with degraded concrete;
- in most areas, the insulation layers of the terraced roof are of poor quality, outdated, degraded, favouring water infiltration;
- the exterior finishes are degraded in some areas as a result of water infiltration and the freeze-thaw phenomenon;
- interior finishes and installations are outdated and degraded;
- the building is connected to the city's heating network;
- the construction analysed as a whole had a satisfactory behaviour over time, no significant degradation of the main structural elements being reported, only some local problems due to water infiltration and the aging of the finishes.

The building's energy performance certificate placed the building in category B with 87.89 points, the reference building also falling into category B.

Images of the northern plot and building – image from the sports field with the green space

[20] Thermal insulation was ensured during construction with BCA boards or mineral felt, and waterproofing with layers of asphalt cardboard. *I did not have access to the school's archive project, but it can be assumed that these materials were used here as well.*

Southern plot and building

The southern plot is bounded to the north by Transylvania International College, to the west by Baișoara alley, to the east by a green space and to the south by the experimental horticultural resort. The building of the general school & high school is located on this plot, and physical education grounds and an outdoor grandstand on the slope are laid out.

Pedestrian access to the courtyard is made from Băișoara alley next to the main access to the building. Car access is made at the south-west end of the plot. Approx. 20-25 parking spaces are organized inside the premises on the concrete platform in front of the school.

The GF+3F building is a typical school building project from the 1970s. The construction was originally intended as an educational space. The footprint is 913 square meters, and the gross building area is 3,638.37 square meters. The building has a basement / central technical corridor.

It has a simple composition, characteristic of the 1970s, without special architectural value. The exterior walls were finished with evened plasters, later thermally insulated and finished with decorative plaster.

According to the layout of the classrooms, the building has a simple tract, with the classrooms facing the green area to the east and 2 perpendicular wings on the north and south ends where the laboratories and gyms are. Vertical circulation is ensured by monolithic reinforced concrete stairs positioned on the western side of the building. You can also go out to the school yard by the 2 extremes of the building near the stairs. All 4 accesses to the building from the school yard are made under concrete canopies.

The following are currently organized in the building: 18 classes with an area of approx. 52 square meters each, 2 physical education rooms with an area of approx. 67 sqm each, 4 laboratories with annexes with an area of approx. 87 sqm (71 sqm + 16 sqm) each, 2 laboratories with an area of approx. 50 square meters each, girls' and boys' toilets, administrative spaces, a small library, medical offices, a workshop and a teacher's room. There is currently no other common recreation space besides the corridors.

The spaces are organized on the basis of a 9x6.5m spatial module, which has not undergone subdivisions and reorganizations over time.

The partitions are made of thin masonry walls. The finishes are simple, with washable paints, chipboard panels or painters, respectively tiling in the bathrooms.

The floors are made of PVC carpet or mosaic in the corridor and stairwell area, parquet in the classrooms and tiles in the bathrooms.

The structural frame of the building consists of:

- continuous plain concrete foundations [21] with flares next to the pillars
- reinforced concrete elevations[22]
- vertical structure with brick masonry walls reinforced with cores and reinforced concrete belts, combined with reinforced concrete columns and beams
- reinforced concrete floors[23] on all levels
- terrace-type roof, with insulation[24].

Technical expertise no. 277-A/2022 classified the construction in the RSIII seismic category. This study should be investigated for the expert's recommendations and other details about the condition of the building. In addition to this study, it is specified that in the case of buildings that belong entirely to the public domain and in the case of capital repair works, intervention works are required on the construction to classify it in accordance with the norms in force in the RsIV seismic category.

Following the site visits, the following were noted:

- the southern building was rehabilitated in 2009 by insulating the facade with 5cm expanded polystyrene;
- the wooden carpentry was replaced by PVC carpentry around 2009;
- the building was originally provided with a terrace roof, with thermal and hydro insulation. Later, during 2009, a thermally insulated wooden frame roof was provided over the original terraced roof. In July 2021, following a strong storm, part of the roof was destroyed and later rebuilt. The quality of the wood and of the fasteners between the roof truss elements is poor;
- at the main entrances there are canopies executed on a reinforced concrete structure. They were originally provided with a terrace-type roof, with insulation. Over the original terraced roof, a wooden frame type of roof was later executed starting from the concrete canopies, most likely during the construction stage of the school's roof truss;
- behind the building, above a secondary entrance, there is a canopy on a metal structure, made after the school building. This is an improvised structure that is unsafe to operate in its current form;
- interior finishes and installations are outdated and degraded, except for the 3rd floor where they were completely replaced in 2021;
- the construction analysed, as a whole, had a satisfactory behaviour over time, no significant degradation of the main structural elements being reported, only some local problems due to water infiltration and the aging of materials.

[21] The uncovering of foundations within the geotechnical study revealed concrete foundations with a depth of 1.5m and a width of 0.4m, and the foundation ground made of sandy clay.
[22] Similar to the northern building
[23] Similar to the northern building
[24] Similar to the northern building

The energy performance certificate classified the building in category A with 99.45 points, while the reference building was also classified in category A.

Images of the southern plot and building – the yard facing the street and image from the sports field

An own thermal plant is mounted in a building body specially made for the building in the 2000s and attached to the school.

The construction has no architectural value and can be relocated within the premises if the competitors wish to propose another location.

A changing room was recently built next to the sports field. The building has no architectural value and can be demolished.

Note

Additional information on the structure of the buildings, uncovering of foundations, the general condition of the buildings and various recommendations can be found in the substantiation studies:

- geotechnical investigation no. 69/2022 drawn up by SoilTesting SRL
- structural expertise no. 277/2022 performed by Prof. Dr. Eng. Păcurar Vasile
- energy certification carried out by Eng. George-Anton Lăzărescu
- 2021 survey by SC Graphein Topo SRL

The theme described in the structural expertise is a simulation of possible interventions on the existing constructions and ***it does not constitute a competition theme****. These guidelines were generated so that a series of calculations and recommendations for interventions on the building can be developed. The technical expertise that will substantiate the intervention / modernization / extension works will be updated based on the winning solution.*

Adjacent streets in the competition area

The urban space included in the competition brief is made up of neighbourhood pedestrian and car circulations, which at the same time represents the school's pedestrian connection with the bus stops on Liviu Rebreanu Street and the trolleybus and bus stops on Unirii Street.

The infrastructure reserved for pedestrians consists of the existing sidewalks adjacent to the road areas and the access alleys to the blocks. Important pedestrian arteries are all the alleys in the competition area, especially the Băișoara alley that joins the 2 plots of the *"Lucian Blaga" Theoretical High School*. Sidewalks are quite narrow in the area and some are crossed by parking lots at 90° and are occupied by informal or abusive parking where no resident parking spaces are marked. Pedestrians cannot cursively use all sidewalks, being forced to travel on the carriageway.

Car circulations in the competition area are: (1) Băișoara alley – two-way in front of the neighbourhood parking lot and the bus station, one-way towards Baița alley, two-way between Băița alley and Bizușa alley, (2) Băița alley – two-way, (3) Scărișoara alley (the competition segment that connects Băișoara alley with Liviu Rebreanu street) – one-way from Băișoara and two-way from Liviu Rebreanu, with restricted access to residents.

At the end of Băișoara alley, at the intersection with Liviu Rebreanu street, is the end of the line for buses. A multi-storey car park intended for the residents of the area (Băișoara car park) was built in 2011 next to this station, following the demolition of approx. 100 garages. The parking capacity is 358 parking spaces, of which 25 spaces are for visitors and 48 parking spaces are for bicycles. At the time of building the parking lot, the municipality[25] announced that another 80 spaces would be created on Băișoara alley and another 100 on Detunata alley (adjacent to the competition area) by reconfiguring the alleys and demolishing the garages and that all these spaces would be enough for the residents of the area.

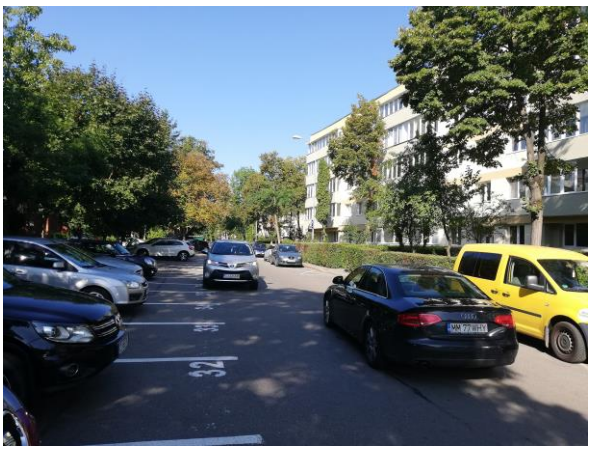
But the large number of cars currently parked in unmarked spaces and garages not yet demolished contradict the coverage of the need for parking in the area. Moreover, it is obvious that the problem of residential parking goes beyond the competition area and cannot be solved only by arranging the 3 alleys in the competition area. In this regard, 3-4 other sites for multi-storey or modular parking lots have already been initiated in the neighbourhood for which studies have been started, but no project has been implemented so far.

The studied area is very well served by public transport lines[26]. The bus and trolleybus lines have stops at 5, maximum 10 minutes away from the access to the school

[25] https://www.youtube.com/watch?v=z8Gu4DunYo0
[26] Urban lines 34, 48, 48L, 3, 25, 33

premises, and the frequency of the means of transport is high.[27] As part of the city's urban strategies, it is proposed to extend the trolleybus lines on Liviu Rebreanu Street - Băișoara.

In recent years there has been an initiative to establish a network of bicycle paths to connect various important points in the city and provide adequate infrastructure. But until now, the network has only been extended in the central area of the city. There are no special pavement markings, dedicated lanes or specific infrastructure in the competition area. The operation of the bicycle path network is also made difficult by the rugged terrain on which the city is developing. This aspect makes it especially difficult to travel between the central area and the southern neighbourhoods such as Zorilor, Bună Ziua or Gheorgheni. The municipality's goal for 2027 is that every major neighbourhood has a safe and direct bicycle connection to the city center. Bicycle connections with these areas of interest in the neighbourhood are scarce.




Images of Baișoara alley towards the 2 buildings of the Lucian Blaga Theoretical High School


Images of Băița alley – middle and intersection with Băișoara

[27] Frequency 0.6-5 minutes on Unirii str. and 5-10 minutes on Rebreanu str. according to PMUD 2021-2030

Images of Scărișoara alley – middle and intersection with Băișoara

3. COMPETITION BRIEF

The solution for the modernization of the *„Lucian Blaga" Theoretical High School* must bring the chance of an example of good practices both in terms of school architecture and in terms of creating an urban environment in relation to the school function in a group of collective housing from the 1964s.

Requirements for the modernization and extension of "Lucian Blaga" Theoretical High School

In parallel with the planning of new constructions intended for education, the strategy at the municipality level is to maximize the capacity of the existing school infrastructure. The pressure on the existing fund is a real one and it is growing continuously. Thus, the number of students in all classes exceeds the maximum number approved by the *National Education Law* and the school is converting various spaces of the school for the supplementation of classrooms. Furthermore, considering that the constructions no longer fully correspond to the current standards and needs of the institution, there is a need for the spatial reorganization and extension of the school premises with those functions that are currently missing / insufficiently sized within the current limits of the premises and regulations of the area in question.

Following the analysis of the degree of compliance of the existing constructions with the current standards and the estimation of the effort required to satisfy them, respectively of the effective and coherent solving possibilities of the educational complex, it is proposed to keep the buildings of the schools on the 2 plots and the possibility of intervention on annex buildings (storehouses, changing rooms, thermal plant).

Therefore, 2 types of interventions are defined within the design brief:

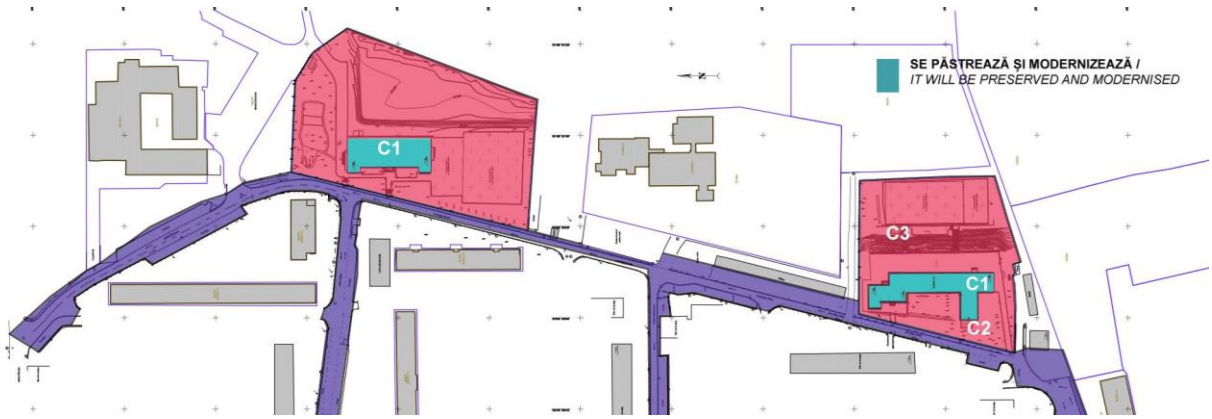
a. **interventions on the existent** considered necessary by the competitor to make the building comply with the norms in force[28], optimization of some flows, works for energy efficiency, rehabilitation works, works necessary to connect new building bodies or canopies, etc.
b. **new constructions to host school and sports functions** that will be proposed within the limits of the complex, in compliance with the urban regulations of the area.

The negotiation of the urban constraints imposed by the location and the rethinking of the ensemble rest with the competitors constitute an important aspect in the evaluation of the proposed solutions. The final architecture proposal will form the basis for the development of a **zonal urban plan**. The regulatory area will include exclusively the plots from no. 2 and no. 4 on Baișoara alley.

Competitors are invited to submit practical and feasible proposals for the extension and modernization of the school, both in terms of volume and general image, as well as in terms of the allocation of various functions. Competitors will have to present creative approaches that can be implemented within the budget described by the competition brief.

Given its position in the neighbourhood, the school aims to open certain facilities to the wider community for documentation purposes (library), for cultural and sports events (sports halls and fields, green spaces) or various activity clubs.

The positioning of the plots with a view to open / planted spaces and to the hills in the south-east of Cluj, but also the slope angle of the land, confers them a very high potential for landscaping arrangements to encourage the practicing of sports and spending time outdoors for both school students and for the residents of the area.



Competition intervention areas. The PUZ regulatory area is marked in red

[28] Essential requirements defined according to Law 10/1995 on quality in constructions and any other regulatory acts that apply to the school function and related functions.

As it is a school architecture project, the competitors have the chance to redefine, through the proposed solution, the way in which the built environment, the school yard and the urban space support the development of the contemporary educational act. Thus, the proposed solution:

- Will aim to create student-centred spaces, while the school experience will start from the school gate, aiming for any arrangement to facilitate the students to come closer to the school space – exterior and interior, and to diversify the ways and contexts of learning;
- The spaces must be flexible and adaptable to possible changes and adaptations of the various age groups students' program;
- It will have an innovative spirit, integrating contemporary technical solutions and offering a flexible structure to adapt to contemporary educational methods and organizational needs;
- It will shape diverse educational contexts, both in terms of the way of working (working formations, learning styles, etc.) and the aesthetics of the learning environment (e.g. keeping informational stimuli at a low level for younger ages and multiplying them as age increases);
- It will propose a sustainable attitude regarding energy consumption, offering viable solutions for reducing energy consumption in the medium and long term;
- It will have to describe a balanced relationship between the quality of the intervention and the investment with the integration of technical and architectural solutions that satisfy the energy requirements and those regarding a moderate maintenance of the building;
- It will seek the efficiency of the investment by opening certain spaces and facilities for use by the local community without affecting the school program;
- It will mediate the relationship between the existing urban fabric and the extension proposal, through contemporary inserts, capable of generating quality spaces, and which fall within the urban planning parameters of the area (POT – percentage of land occupation, CUT – land use coefficient, H max);
- Without predefining the elements of the architectural intervention, competitors are expected to interpret the whole in such a way as to optimize the exterior space, and above all, the interior space. The recommendations of the preliminary studies will be taken into account to the extent that they correspond to a reasoned vision of the competitors.

Spatial & functional requirements

1. *Given that there is no official estimate of future schooling needs, the capacity of the institution has been calculated at the maximum number of students that the existing buildings proposed to be preserved and possible extensions could accommodate, within the current limits of the premises.*

   Thus, taking into account the total number of students in recent years, the forecasts of the increase in the number of students in the area and the rules regarding the maximum

number of students per class in the educational units, **the solving of a situation with 39 classes** (with 6 classes in addition to the current situation), **7 laboratories, 75 teachers and auxiliary staff will have to be considered for the school modernization and expansion scenario**.

The proposed scenario for the school community is the following:

- a maximum of 66 children in 3 preparatory school groups with afterschool
- a maximum of 264 students, distributed in 12 primary cycle classes
- a maximum of 312 students organized in 12 secondary school classes
- a maximum of 360 students organized in 12 high school classes.

The laboratories will be configured and equipped in a multifunctional way, so that they can accommodate various activities with similar requirements. At least one teacher/lab annex will be provided for each of these rooms for the main activity (physics, chemistry, computer science/ICT, biology) and storage and/or teachers' offices will be proposed for other activities (e.g. STEM (science, technology, engineering) activities, music and fine arts). For the computer/ICT labs depending on their location, annex spaces for teacher, system engineer, storage, server, etc. can be grouped.
The allocation of activities to specialised rooms will be made taking into account the frequency of the activities concerned and the need for classes in certain subjects to be held wholly or partly in the specialised rooms, so that the use of each space is maximised. Curricular activities will take place within the school timetable, extra-curricular activities - outside the school timetable, in the afternoon, at weekends and/or during holidays.

Competitors will propose airy classrooms and laboratories, but also cabinets and ateliers, well-lit and ventilated, safe, with good acoustics, with furniture that can be easily reorganized to ensure maximum flexibility of activities during school hours. The modernization of the existing laboratories and classrooms can be done even with the preservation of some elements of furniture / equipment.

2. *The school operates in 2 buildings located in 2 independent premises, located at a distance of approx. 300m from one other. The institution shall be managed by the same legal entity, with the same administrative staff.*

   Consideration will be given to supplementing each premises with functions to facilitate student and teacher access to laboratories, gyms, library, festive hall or administrative and technical spaces, and also to create new spaces for students to interact.

3. *The sports halls are currently organized in 4 modules with classroom surfaces, and are therefore undersized for the number of students of the school.*

   The solution must take into account the overall integration of two sports halls for teaching purposes, each with an indoor playing surface of min. 13*24m and H:7m, suitable for a basketball court. Connected functions related to the total number of students who will use them will be located adjacent to the gyms: access hall, changing

rooms and showers, toilets, sports equipment storage, cleaning office, technical spaces, teachers' offices.

4. *There is currently no other common indoor space for spending the breaks, apart from the corridors – which should mainly have the role of circulation and evacuation in case of emergency, nor any meeting spaces for various activities / events of students and teachers and for building the school's identity.*

   The solution must consider:

- **The provision of catered dining rooms** with a total capacity of 190 people and which operate in such a way that students and teachers can dine in several different series per school / educational age group. During the rest of the day, these spaces can host the play area, the activity area or other compatible functions – organized by age groups or not, according to the scenario proposed by each competitor. The food heating areas can be proposed near the dining rooms, without considering the equipment of professional cooking equipment.
- **A festivities hall** that can accommodate 240 people, which can be organized in one of the sports halls by equipping it with mobile stands and sound systems.
- **Arranging the hallways** so that the break is spent as pleasantly as possible inside the school. Competitors may consider niches for various activities and interrelation with the multifunctional spaces described above.

5. *The library is now organized in a classroom module and there is a need to create a suitable space for this function, supplemented by a reading room, related facilities etc.*

   Competitors should propose a new space for the library for all students in the school. If the library is organized in only one of the premises, the competitors will propose spaces for material / textbook storage in both buildings. The total recommended area for the library and related spaces is of minimum of 320sqm in both buildings. The library, particularly the reading room, will be organised to facilitate a variety of activities: group reading, individual reading and study, collaborative/group study, etc. The group reading area may be combined with a multimedia room to function similarly to a media library outside school hours.

6. *The sanitary facilities are insufficient compared to the number of students and staff*

   Competitors will propose new sanitary groups for students separated from adult staff, separated by gender, including in physical education rooms. Sanitary facilities will be optimally distributed and sized according to standards.

7. *The teacher's room is organized in a classroom module and it is undersized even for the current number of teachers and educators.*

   Competitors will propose a teacher's room with annexes that can accommodate the entire teacher's council in one of the buildings, and other teacher meeting spaces in the other building.

8. *Sports fields[29] are currently arranged on each of the plots, but they require rehabilitation with natural materials or which are environment- and user-friendly. There is a playground on the northern plot and a few benches (north) and an outdoor grandstand (south) - not maintained - next to the sports fields.The fencing of the enclosure is made of metro netting, grating or precast concrete, is dilapidated and needs to be replaced.*

   Regarding the reorganization of the outdoor space, the arrangement of play areas, physical education and sports fields, green spaces, the placement of attractive facilities for the most pleasant recreations or for the creation of informal learning contexts, bicycle and car infrastructure.

   - **Competitors will propose the location of a multi-sport field** with a playing surface of 20*40m in each area, which will allow practicing and learning all sports: football, handball, basketball, volleyball. The sports fields can be set up on the ground or the terrace of buildings, to maximize the permeability of the soil.
   - Depending on the vision of the competitors for the organization of the outdoor areas, it is recommended **to complete the physical education and sports areas** and to imagine within the premises of the school of a route for a running / long jumps from a standing start or other sports spaces with a surface area of at least 640 sqm.
   - **Competitors will propose various play areas** (total area of approx. 500sqm), **recreation spaces and green spaces in both premises.** The placement of furniture for use during breaks will take into account the ages of the students who will use it.
   - **Depending on the solution for the location of the sports halls and fields, competitors can set up small tribunes / stands for students.**
   - **Competitors will propose a fencing** in relation to the architectural and urban planning proposal and to the arrangement of the premises.

9. *Considering the lack of clearly marked parking spaces in the premises and the significant number of parking spaces for vechicles and bycicles required for the educational institution resulting from the General Urban Plan of Cluj-Napoca,*

[29] South plot: asphalt football field built between 2006-2009 and covered with synthetic material in 2011. North plot: asphalt sports fields built between 2016-2018.

these will be limited by the competition brief and will be regulated by the urban planning documentation.

Inside the 2 premises, competitors will set up parking spaces for 25[30] cars, 70-80 bicycles and 10 scooters. Competitors are recommended to consider in the solution a parking lot organized in the semi-basement of a new building body for part of the automobiles, so that the ground level car parks blend in unobtrusively and do not interfere with pupils' educational, sports or recreational activities. If a coach / minibus parking space is to be provided for school trips, it will overlap the car parking spaces. Bicycle parking will preferably be protected from the weather.

Technical requirements

In the case of existing and preserved buildings, although rehabilitation and repair works have been carried out in the last 15 years (replacement of: exterior carpentry, roof repair, change of sanitary ware, interior and exterior renovations and painting, etc.) and systems have been introduced with apparent routes of internet systems, audio-video surveillance, audio-video design, modern furniture - the works must be analysed in order to establish the level of intervention so that the following topics are addressed:

a. **Improving the energy capacity of preserved buildings**

Competitors must imagine a system to improve all the significant parameters of the energy balance, at the level of the building fabric and facilities, with the condition of ensuring an indoor climatic environment suitable for education, but taking into account the age of the buildings and the site conditions.

b. **Possible intervention to consolidate the preserved buildings**

Considering the classification of the buildings as a whole in the RsIII seismic risk class, it is very important to emphasize that the solution adopted by each competitor will determine whether consolidation is necessary for the proposed intervention or not.[31]

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[30] The calculation is within the guidelines of the General Town Planning Regulation approved by Decision No 525 of 27 June 1996, i.e. 3-4 cars per 12 employees.

[31] In the case of existing buildings (with the exception of cases in which the technical expertise is carried out for the substantiation of some extension works, by increasing the gross built-up area of the building by more than 10%, as well as in the case of buildings belonging entirely to the public or private domain of the state or to administrative-territorial units, where the intervention works are accompanied by capital repair works) it is allowed to ensure the fundamental requirements defined in P100-1 for seismic movements of lower intensity than those considered in the design of new buildings, corresponding to higher probabilities of exceeding in 50 years than the design earthquake. According to the design code P100-3/2019, in the case of buildings belonging entirely to the public or private domain of the state or administrative-territorial units, where the intervention works are accompanied by capital repair works, the type and scope of the intervention works are established so that, after their execution, the building can be placed in the Rs IV seismic risk class.

For new constructions, the following topics will be addressed:

a. The proposal of technical solutions (building fabric and installations) that involve a **reduced energy consumption** and the provision of nZEb[32] specific equipment within the limits of the investment budget.
b. **Rational structural and spatial configuration,** suitable for the proposed functions, which falls within the norms and the investment budget.
c. **The proposal of structures that allow various scenarios of functional reorganization of the school.**

Requirements for the arrangement of adjacent streets

The main dysfunctions of the urban space in the competition area are: a) lack of raised pedestrian crossings in front of the schools; b) the existence of parking spaces in front of the schools; c) limited community access to school premises, outside school hours, for sports and recreation, social and community interaction; d) low-quality, unattractive pedestrian infrastructure; e) lack of infrastructure for bicycles and electric vehicles; f) low vegetation and poorly maintained alignment trees suffocated by the cars parked among them; g) unmodernized urban lighting.

The intervention at the level of the streets (alleys) in the area described by the competition brief raises the discussion of the development of some urban spaces in a neighbourhood with collective housing in the vicinity of an (some) educational institution(s) with a very large total number of students so that the result discourages the excessive use of a personal car.

As part of the competition, rearrangement proposals of low and medium complexity will be made, while taking into account the concepts of *walkable city* - the city for pedestrians and *smart city* - intelligent mobility – that are part of the investment programs of Cluj-Napoca municipality.

Competitors will be able to intervene in the street profile and rearrange the alleys in the competition area to transform them into safe and healthy ones, accessible and comfortable for all users, attractive and active.

Considering the role that the alleys have in the circulation scheme, the competition brief does not impose purely pedestrian spaces, but routes with very low speeds, with priority for pedestrians and bicycle routes. At the same time, the increased growth in the use of

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In the event that the technical expertise is carried out for the substantiation of some extension works, by increasing the gross built-up area of the building by more than 10%, intervention works are required, the type and extent of which are established so that, after their execution, the building can be classified in the Rs IV seismic risk class.

[32] According to national legislation, a building whose energy consumption is close to zero is a building with a very high energy performance, where the energy requirement for energy performance is close to zero or very low and at least 30% is covered by energy from renewable sources, including energy from renewable sources produced on-site or nearby within a radius of 30 km from the GPS coordinates of the building in the period 2021-2030.

small-size electric vehicles (e.g. scooters, bicycles) must also be taken into account, which in their turn need charging stations.

In this sense, various urban facilities can be proposed in the competition through the recovery and activation of some surfaces, e.g. drinking fountains, bicycle parking spaces, charging stations for cars and electric bicycles/scooters, benches equipped with USB chargers or light poles with WI-FI connection, etc. The lighting must be appropriate to the area, without becoming polluting.

Considering that the solution of residential parking depends on a strategy at the city level and parking is one of the main challenges of the transport system in Cluj, it is not the responsibility of the competitors to solve the parking situation at the level of the entire area, but only to arrange the alleys in the competition area.

Within the framework of the competition project, respectively within the winning project, construction works for above-ground or underground collective parking lots, land swaps, changing of street routes or urban space layouts outside the competition area will not be studied and detailed. The proposals may indicate options / strategies to address the situation at the level of the area of which it is a part, to be discussed in the future by the municipality and integrated into an urban regeneration project.

Financial feasibility of the proposals

According to the document *Annex\ 2.6. –* *Maximum cost estimate of the investment and design value,* it refers to construction and installations works, without cadastral works, without furniture, IT equipment, household appliances and intangible assets for the construction part, without urban planning documentation of urban regeneration.

The gross building areas were considered as follows:

Maximum gross building area (buildings of the educational complex): 10.500sqm

Area of the educational complex: 17.202sqm

Urban space area: 15.750sqm

„Lucian Blaga" Theoretical High School:

Maximum cost estimate of the investment: 13.426.167 EUR + VAT

Maximum cost estimate of the design and technical assistance: 3.045.059 lei + VAT

Adjacent urban space:

Maximum cost estimate of the investment: 3.465.000 EUR + VAT

Maximum cost estimate of the design value and technical assistance: 519,750 lei + VAT

Total

Maximum cost estimate of the investment: **16.891.167** EUR + VAT

Maximum cost estimate of the total value of the design and technical assistance: **3.564.809** lei + VAT

4. REQUIRED MATERIALS

4.1. Written materials

4.1.1. Financial Proposal

Each project will include the Financial Proposal, filled in according to *Annex 2.3.1 – Financial proposal – competition material*. The financial proposal will have values expressed in lei and **will not exceed the maximum cost estimate for design costs.**

All the provisions of *Annex 2.1 of the Competition Regulation*, respectively *Annexes 2.3.1. Financial Proposal - competition material*, *2.3.2. Description of services and deadlines* and *2.6. Maximum cost estimate of the investment and design*, as well as any other information communicated through the competition documentation will be taken into account.

4.1.2. Brief description of the concept of architectural-urban intervention.

The conceptual bases of the proposed solution will be explained and the specific decisions for the presented solution will be justified. Explanatory texts, other than captions and image titles, will not exceed 1000 words and will be arranged on the sheets alongside the drawings.

4.1.3. Area summary table

It will be filled in according to Annex 1.2. Area summary table, and it will be arranged on the competition sheet 2, next to the drawings.

4.2. Drawn materials

The projects will be presented on 4 **A0** format (841x1189mm) sheets **vertically** oriented (portrait), white paper, without rigid support.

All drawn elements included on the sheets will be identified with the indication of the element's title, their scale (for example: Ground Floor Plan, scale 1:200) and the indication of the North direction.

Note: Unless otherwise specified, the buildings adjacent to the site will be represented by *solid fill*; failure to comply with this requirement will be considered a breach of anonymity.

The sheets will contain at least the following materials:

Sheet 1: Outline of the general concept

- **Site plan of the entire layout** (school parcels, adjacent streets, and their vicinities), scale 1:1000. The plan will present indications for the urban and lanscaping design proposal of the competition area.
- **Relevant schemes for the arrangement concept of the urban space** in relation to the whole of the high school and the neighbourhood, with references to materials, the proposed urban furniture, identity elements etc.
- **Arrangement detail (plan),** 1-2 segments of the alleys in the competition area totalling 200-250mp - scale 1:200
- **2 overview images (exterior perspectives)** from Băișoara alley showing both the (existing / proposed) high school buildings on each plot, as well as the intervention from the urban space

Sheet 2: Detailing of the school's courtyard

- **Plans of the 2 school yards,** with details of the exterior fittings of the enclosure, **and of the segments of the Baisoara alley** in front of the plots, and with details of the access level of the preserved buildings, scale 1:300
- **Concept schemes / relevant sketches for the arrangement concept of the high school courtyards** with references to materials, urban furniture, various specific arrangements, identity elements etc.
- **Functional schemes of the proposal, in axonometric projection or in plan,** scale 1:1000, from which the distribution and number of classes and laboratories, the distribution of the common spaces, administrative spaces etc.
- **Area summary table**, according to point 4.1.3 – Written materials of this Competition Brief. – will be visibly and legibly integrated on the competition sheet, in English, keeping the set fields, by filling-in the values in the indicated cells for the automatic calculation of the urban indicatos.
- **Minimum 2 representative images** of the precints (minimum 1 image from each courtyard) representing both the arrangement of the courtyard and the high school buildings, respectively the integration of the new high school buildings alongside the existing and modernized ones

Sheet 3: Detailing of high school buildings - north plot

- **All floor plans of the new buildings proposed by the competitor,** specifying the functions and maximum number of users and, where appropriate, marking the connection with the retained building, scale 1:200
- **2 general sections through the site and existing and proposed buildings,** scale 1:200. On one of the sections **the sustainability concept will be presented** (highlighting technical systems in terms of energy reduction, stormwater management, outdoor microclimate improvement, etc.).
- **All elevations** of the proposed buildings, scale 1:200
- **Proposal for the main facade of the existing building,** scale 1:200
- **Intervention detail on the existing building (span)** – scale 1:50 or 1:100
- **Atmospheric visualization of 2 multifunctional common spaces** considered

important by the competitor for the proposed solution (e.g. library, dining area, game areas, sports hall, etc.), realized at eye level.

Sheet 4: Detailing of buildings - southern plot

- **All floor plans of the new buildings proposed by the competitor,** specifying the functions and maximum number of users and, where appropriate, marking the relationship to the retained buildings and/or the embankment, scale 1:200
- **2 general sections through the site and existing and proposed buildings,** scale 1:200. On one of the sections the sustainability concept will be presented (highlighting technical systems in terms of energy reduction**,** stormwater management, outdoor microclimate improvement, etc.).
- **All elevations of new buildings proposed by the competitor,** scale 1:200
- **Proposal for the main façade of the existing building**, scale 1:200
- **Detail of intervention on the existing building (rafters),** scale 1:50 or 1:100
- **Atmospheric view of 2 multipurpose common spaces** considered important by the competitor for the proposed solution (e.g. library, dining area, play areas, sports hall, etc.), made at eye level.
- **A view showing the proposed layout and design of the premises on the east side.**

Note:
The position of the sections shall be marked on all plans with the designation.

The plans may also contain other elements of the competitors' choice, considered important to support the proposed solution: atmospheric sketches, schemes, sketches, text.

5. EVALUATION CRITERIA

In evaluating the solutions, each criterion will be given points between 0 and the maximum value indicated for each criterion. The maximum total score is 100 points. The weighting of the criteria is explained as follows:

A. FULFILLMENT OF THE SPATIAL, FUNCTIONAL and TECHNICAL REQUIREMENTS 60% of the final evaluation (maximum 60 points)
The compliance with the **minimum requirements** demanded by the competition brief is evaluated on a scale from 1 to 60. It is calculated by the sum of the points awarded by the jury for the following aspects:

A1. Spatial quality of the intervention – maximum 20 points
The following will be scored:

- integration of the intervention in the urban context, compliance with the regulations and urban conditions of the area, consideration of the relationship with the vicinities, with the existing and preserved buildings and with the areas of interest in the vicinity - **maximum 12 points**

- the proposed urban landscape - the viability of the urban arrangements, the roadway/pedestrian area, the parking areas, the transitions between the public spaces and the educational complex, the way of relating to the existing built and vegetal background, etc. – **maximum 8 points**

A2. Functional quality of the proposed solution – maximum 25 points
The following will be scored:

- compliance with the program (integration of all functions requested by the competition brief), compliance with the standards and norms regarding school buildings, sports halls, etc. **– maximum 10 points**
- functioning of the overall proposal and the optimization of the space usage, their accessibility, versatility and flexibility in ways that are appropriate to the functions and in relation to the proposed scenarios of use, the possibility of subsequent adaptation to new ways of use**– maximum 15 points**

A3. Technical value: energy concept and means of realization – maximum 10 points

- the energy concept in relation to the current regulations regarding energy economy **– maximum 5 points**
- the economy and rationality of the means of realizing the project in order to limit the construction and operating costs **– maximum 5 points**

A4. Financial criterion – maximum 5 points
The following will be scored:
Falling within the maximum cost estimate for the investment and design indicated in the competition documentation – maximum 5 points.
*__Failure to meet the maximum cost estimate leads to the disqualification of the project.__

The maximum score (5 points) is awarded for falling within the indicated maximum cost estimate by the lowest price; for other prices, points are awarded proportionally.
P(n) = [Price(min) / Price(n)] x 5 points
The score (P(n) = max. 5 points) is awarded as follows:
a) For the lowest of the prices offered (marked Pricemin) 5 points are awarded.
b) For the other prices offered (marked Price(n)), the score P(n) is calculated proportionally, as follows:
P(n) = [Price(min) / Price(n)] x 5 points

B. THE EXPRESSIVE-ENVIRONMENTAL ATTRIBUTES OF THE INTERVENTION, THE ADDED VALUE OF THE PROPOSAL
40% of the final evaluation (maximum 40 points)

The architectural value of the proposed solution, respectively the added value that the solutions bring to the correct and adequate resolution of the competition brief requirements is evaluated on a scale from 1 to 40. It is calculated by the sum of the points awarded by the jury for the following aspects:

B1. Artistic expressiveness of the proposed intervention in itself and in relation to the vicinities – maximum 25 points

- the overall concept, the architectural, urban planning and landscaping expression, the quality and clarity of the representation of ideas **– maximum 20 points**
- the representative/contemporary nature of the proposed complex **– maximum 5 points**

B2. The character, quality and atmosphere of the proposed spaces – maximum 15 points

- the quality of the proposed spaces, the experience of different categories of users **– maximum 10**
- the adaptation of details and finishes to the specific needs of each function **– maximum 5**

The calculation algorithm for the final evaluation of the projects is as follows:

Final score (maximum 100 points) = criterion A score + criterion B score
Criterion A score (maximum 60 points) = A1+A2+A3+A4
Criterion B score (maximum 40 points) = B1+ B2

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