



LUCIAN BLAGA HIGH SCHOOL CLUJ-NAPOCA

DESIGN COMPETITION

ANNEX 2.6. MAXIMUM COST ESTIMATE FOR THE INVESTMENT AND DESIGN

MAXIMUM COST ESTIMATE FOR THE INVESTMENT AND DESIGN

The set of works that are the object of the Consulting Services Contract for the preparation, organization and judging of the solutions of the design competition on the theme "Modernization of the "Lucian Blaga" Theoretical High School and adjacent streets" no. 638104 / 31.12.2020 was divided into three investment objectives, taking into account the functional nature, respectively the potential ways of financing and operation/administration of the constructions and related lands:

- Objective 1 & 2 – “Lucian Blaga” Theoretical High School
- Objective 3 – Arrangement of adjacent streets

Each of the 3 objectives includes one or more types of works with different standards and complexities, for which the investment and design costs differ:

- Rehabilitation and modernization
- Demolition (constructions)
- Construction of new educational spaces
- Arrangement of sports fields, gardens and ground parking lots
- Arrangement of the streets (outside the educational premises)

Based on the recent experiences of some investments in Romania, many of which in the Cluj area, and after having observed the condition of the preserved buildings, the following minimum acceptable costs were estimated:

- Rehabilitation and modernization – 800 euros/sqm
- Demolition (constructions) – 80 euros/sqm
- Arrangement of sports fields, educational gardens and parking lots on the ground – 200 euros/sqm

In order to make a maximum cost estimate of the investment value, a comparative study for similar investments that includes the works mentioned above is further required.

Given Romania's membership, both politically and in terms of cultural aspirations, to the European Union, this comparative study began by documenting several relevant examples from Europe, with similarities in terms of the scope and nature of the interventions.

In addition thereto we mention Kogălniceanu Street, “Feroviarilor” Park and the East Park in Cluj, arrangements that are executed following recent architectural competitions, examples that are relevant due to their location (Cluj-Napoca) and by the complexity level of the designed intervention.

Examples of similar projects, as recent as possible, have been chosen.

For the arrangement of outdoor recreation spaces for children and students and green spaces, the environmental cost of two recently arranged parks in the municipality of Cluj-Napoca was assimilated, where to a reduced complexity coefficient of 0.9 was applied (land with a difference in level of approximately 7m in the south and 2.5m-3.5m in the north). Thus, the estimated cost for the arrangement of green space and recreation is **140 euros/sqm**.

Analysis of investment costs for the arrangement of parks and gardens

Objective	Country	Acceptance year	Investment value (euro)	Built area (sqm)	Unit cost (euro/sqm)
"Feroviarilor" Park, Cluj	RO	2019	9,860,000 €	54,000	183 €
East Park, Cluj	RO	2021	58,833,360 €	455,000	129 €

Average investment cost 156 €

Average investment cost with reduced 0.9 complexity factor 140 €

The reference cost for the adjacent streets was taken over from the experience of the arrangement of Kogălniceanu street in the municipality of Cluj-Napoca, our project having the profound educational nature in common with it. Thus, the estimated cost for the arrangement of the streets is 220 euros/sqm.

Analysis of investment costs for the development of streets of similar nature

Objective	Country	Acceptance year	Investment value (euro)	Built area (sqm)	Unit cost (euro/sqm)
Kogălniceanu Street, Cluj-Napoca	RO	2018	5,600,000 €	25,500	220 €

The construction and extension of educational spaces has been little addressed / implemented in Romania in the recent period. Therefore, the investment costs of some projects in the European economic space, of which Romania is a part, were analysed. Coefficients corresponding to the country indices provided by the *European Construction Costs* platform were applied to these costs in order to be connected to Romania's economic reality.

Thus, for educational spaces (and sports halls used for educational purposes), seven investments made / in course of execution in Switzerland, France and Slovenia, including school buildings and sports halls, were analysed. The average investment cost at the economic level of the three countries was 3,698 euros/sqm, which, adapted to the economic reality of our country - "Cost ^RO" - becomes 1,399 euros/sqm. For the calculation of the investment value of the educational spaces under this contract, an average cost of **1,400 euros/sqm** was taken into account.

Analysis of investment costs for educational spaces

Objective	Country	Acceptance year	Investment value (euro)	Built area (sqm)	Unit cost (euro/sqm)	Cost ^RO	Coef. Index
Les Valettes Bovernier Primary School	CH	2010	6,277,050€	1,180	5,320€	1,796€	2.96
Salvan Primary School	CH	2015	16,124,534 €	3,250	4,961 €	1,675 €	2.96
Chateauneuf Conthey School	CH	2015	15,644,637 €	3,610	4,334 €	1,463 €	2.96
La Plaine High School	FR	2017	34,170,000 €	16,500	2,071 €	925 €	2.24
Croset-Parc Ecublens College	CH	2019	31,769,172 €	7,800	4,073 €	1,375 €	2.96
Grande Prairie Education Center	FR	2021	19,000,000 €	6,120	3,105 €	1,387 €	2.24
Bovec sports hall	SLO	2023	8,900,000€	4,400	2,023 €	1,174 €	1.72
Average investment cost					3,697 €	1,399.3€	

A. OBJECTIVE 1 & 2 – LUCIAN BLAGA THEORETICAL HIGH SCHOOL NORTH & SOUTH

The resulting investment value for the complex of buildings of the "Lucian Blaga" Theoretical High School, including rehabilitations, demolitions and new constructions, for both plots on which the institution is now located, amounts to €11,090,894. The arrangement of the exterior spaces, including sports surfaces, educational gardens, recreation spaces and ground parking for cars and bicycles, was estimated at €2,335,273.

The total investment value for objective 1 is **€13,426,167**, and the estimated design value is **€609,012**.

Based on the winning solution, the 2 objectives described in this chapter will be detailed as follows: objective 1 - Lucian Blaga Theoretical High School North building, respectively objective 2 - Lucian Blaga Theoretical High School South building, corresponding to each cadastral number.

Financial calculations do not include:

- technical assistance more than the Determining Phases and Acceptance of works
- site management (works quality control)
- *project management* (organization of the bidding, organization of the execution processes).

Investment and design costs for objectives 1&2

Category of spaces	Estimated gross building area (sqm)	Estimated investment cost (EUR/sqm)	Estimated investment value EXCLUSIVE OF VAT (EUR)	Design percentages relative to the investment value	Estimated design value (EUR)
Rehabilitation and modernization	6,004	800	4,803,316 €	4.4%	211,346 €
Demolition	935	80	74,800 €	4%	2,992 €
(New) Educational buildings	4,438	1,400	6,212,779 €	4%	248,511 €
TOTAL Constructions	11,377		11,090,894 €		
Sporting ground, parking lots and educational garden	6,450	200	1,290,072 €	3%	38,702 €
Outdoor recreation spaces	7,466	140	1,045,201 €	3%	31,356 €
TOTAL Land arrangement	13,916		2,335,273 €		
Energy performance certification and energy audit of buildings (nZEB) - <i>estimate 2.5 euro/sqm</i>					26,105 €
Drafting of the urban planning documentation - PUZ					50,000 €
TOTAL			13,426,167 €		609,012 €

B. OBJECTIVE 3 – ARRANGEMENT OF ADJACENT STREETS

The Romanian Order of Architects regulates the value of the basic tariff in accordance with the REFERENCE FEES approved by the National Conference of OAR from 30-31 May 2005. Thus, according to this guideline, the arrangement of the streets adjacent to the "Lucian Blaga" Theoretical High School could fall into Class I (Table 1-2) simple problem, low design requirements – landscaping, urban and garden furniture, etc.). For an investment value between 3,300,000 – 10,000,000 euros (Table 3), as is our case, the value of architectural design should be **3% of the**

investment value. This value should also include the design of urban furniture and other easily demountable structures. The value of the design-related studies (as the case may be, Zonal Urban Plan, geotechnical investigation, etc.) must be added to this value.

The percentage of **3%** of the investment value of €3,465,000, respectively **€103,950 exclusive of VAT**, is taken into account for the calculation of the design value, which will include the contribution of the following specialties:

- design of road, carriageway and pedestrian system with intermittent carriageway access
- stormwater capture and storage design (sanitary engineers);
- night lighting design, including lighting calculations (electrical engineers);
- landscaping
- urban design

Financial calculations do not include:

- technical assistance more than in the Determining Phases and Acceptance of works
- site management (quality control of the works)
- *project management* (organization of the bidding, organization of the execution processes).
- PUZ Urban regeneration at micro-rayon/area level

Investment and design costs for objective 3

Category of spaces	Estimated gross building area (sqm)	Estimated investment cost (EUR/sqm)	Estimated investment value EXCLUSIVE OF VAT (EUR)	Design percentages relative to the investment value	Estimated design value (EUR)
Arrangement of adjacent streets	15,750	220	3,465,000 €	3%	103,950 €
TOTAL			3,465,000 €		103,950 €

IMPLEMENTATION VALUE OF THE WHOLE COMPLEX

	Implementation value (EUR) exclusive of VAT
Objective 1&2 – Lucian Blaga Theoretical High School	13,426,167 €
Objective 3 – Arrangement of adjacent streets	3,465,000 €
TOTAL implementation of Constructions + Arrangements	16,891,167 €

DESIGN VALUE OF THE WHOLE COMPLEX

	Design value (EUR) exclusive of VAT	Design value (LEI) exclusive of VAT, 1EUR = 5 LEI
Objective 1&2 – Lucian Blaga Theoretical High School	609,012 €	3,045,059 lei
Objective 3 – Arrangement of adjacent streets	103,950 €	519,750 lei
TOTAL Implementation of Constructions + Arrangements	712,962 €	3,564,809 lei
2nd and 3rd Prize of which 2nd Prize: 75,000 lei 3rd Prize: 40,000 lei	23,000 €	115,000 lei
TOTAL prize fund	735,962€	3,679,809 lei

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