

## **New Residential Area at the Outskirts of Zalău**

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*(Published online 28 February 2016)*

### **Abstract**

*On the basis of the urban plans are economic criteria and development strategies. Actors participants: mayors, landowners, technicians and designers, are involved in achieving these initiatives and plans with different logics. Chaining actions of all those interveners creates a product with a certain finality from economic, social and cultural points of views. Specifically, it is the spatial organization proposed in the project of urban planning. Designing a new residential area on the outskirts of town Zalău is a case study illustrating the balance between the constraints of implantation, property status and requirements of reflection and valorisation of a place and of a social group. They are presented in succession boundaries - both in its own sense and figuratively, on the size, topography, geology, ownership status as well as the intentions of valuation, functioning, aesthetic and identity of the studied area. The work is original, shows the zonal urban project (PUZ), made by the authors for a new residential area in the city of Zalău, covering 43 575 ha. It aims of the study is also for education purposes, because it illustrates the design lab of urban design.*

### **Rezumat**

*La baza planurilor de urbanism stau criteriile economice și strategii de dezvoltare. Actorii participanți: edili, proprietari de terenuri, tehnicieni și proiectanți, intervin în realizarea acestor planuri cu inițiative și logici diferite. Înlanțuirea acțiunilor tuturor acestor intervenienți crează un produs cu o anumită finalitate economică, socială și culturală. Concret, ea este reprezentată de organizarea spațială propusă în proiectul de urbanism. Proiectarea unei noi zone rezidențiale la marginea intravilanului orașului Zalău constituie un studiu de caz ce ilustrează balanța dintre constrângerile implantării, statutul proprietății și cerințele specifice de reflectare și de valorizare a unui loc și grup social. Sunt prezentate în succesiune delimitările – atât în sens propriu cât și figurat, privind dimensiunea, topografia, geologia, statutul proprietății, precum și intențiile de valorizare, funcționale, estetice și identitare ale ariei studiate. Lucrarea este originală, prezintă proiectul de tip PUZ realizat de autori pentru o nouă zonă rezidențială din municipiul Zalău, în suprafață de 43, 575 ha. Scopul studiului este și didactic, pentru că ilustrează laboratorul de lucru al proiectării de urbanism.*

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**Keywords:** location, site, outskirts, nodes, analysis of the site, characteristics of the site, level curves, land resistance, territorial balance sheet, local identity, agricultural pattern.

## 1. Location

Zalău municipality, main town of Sălaj county, located in the historic region Crișana, at its Easter border with Transylvania, on the axis Cluj - Satu-Mare - Vama Petea, DN1F - E81, is connected to a road network with access to Western Europe. Besides its economic importance, the city is also a powerful cultural, educational and touristic center. In Zalău, in addition to the reputed high schools which gave important personalities for Romania's culture, there are two accredited university colleges.

The municipality of Zalău is located in the central area of the county, in Zalău river hydrographic catchment, at the contact limit of the basin with the same name with the Meseșului ridge. With a total area of 90.09 sq.km, the municipality includes Stâna village, settlement south-east of Meseș in the basin Agrij.

After 1989, in the economic landscape of Zalău also turned up a wealth of activities in the tertiary sector with private capital, which indicates a healthy economic development, based on supply and demand. This development explains population growth (Fig. 1) in recent years, the city attracting many immigrants from the neighboring but also from abroad.

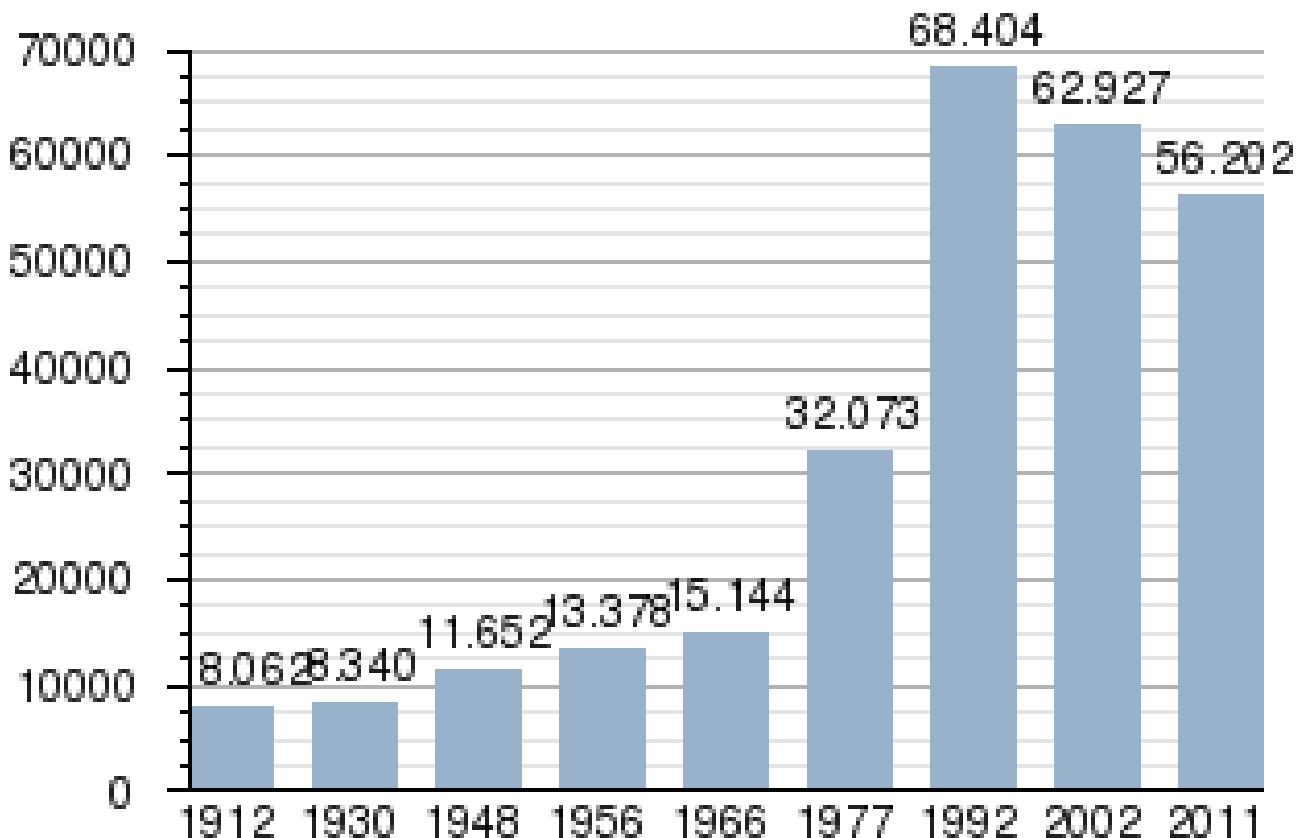


Figure 1: Population growth in Zalău [1]

This population growth and the improvement of quality of life caused an increase in the need of

housing. Compared to previous years, the trend in preferences for habitation of the population is heading towards the single family house.

Factors of these preferences are represented on the one hand by cost of living much lower, and on the other side, by a number of benefits such as privacy, higher housing space, higher personal safety, quality of the environment etc.



Figure 2: Zalău in Josephinische Landaufnahme, 1769-1773 [2]



Figure 3: Zalău, 19th-century painting [3]

Located in northwestern Romania, crossing the Eastern Carpathians and the Apuseni Mountains,



Sălaj County is known from ancient times Silvaniei country, “the Forests Country”, with an area of 3850 sq.km neighboring to the north Satu-Mare and Maramureș west and south-west Bihor County and to the southeast, the county of Cluj.



Figure 4. Map of Sălaj County.

Sălaj County (Fig.4) is located near the former Roman Empire border, namely 8 km from the Roman camp Porolissum - the most powerful defensive fortification in the north-west province of Roman Dacia. In the Middle Ages, the territory represented the passage from Central Europe toward the heart of Transylvania, including the well-known salt road.

## 2. Characteristics of the site

Google - satellite view of Zalău expresses the urban form of the settlement, developed at the intersection of roads, linking and crossing the territory, hidden between hills and winding along some rivulets among which Zalău is the most important. Therefore, nowadays Zalău is crossed by national and communal roads, is densely circulated and a belt problem is raised acutely. The city developed on the slopes of the north-west and south-east orientation (being specific here the ample panoramas towards Meseș Mountains), like in an amphitheater. In the south-east outskirts of the city, close to a former apple orchard, after 1989 the owners' private properties have been restored. Thus, the real estate business put a significant pressure to build single-family houses, individual houses with courtyard, one of the unfulfilled dreams before 1989. In 2007, the City Hall has decided to conduct the auction of a zonal urban project, allowing the recapitalization of the area constructing roads, parceling the land, equipping it with water, sewage, electricity, gas, this area being formerly in a semi-rural status. The area is also situated along a major street, that is to connect



the city with one of the main highways in Transylvania.

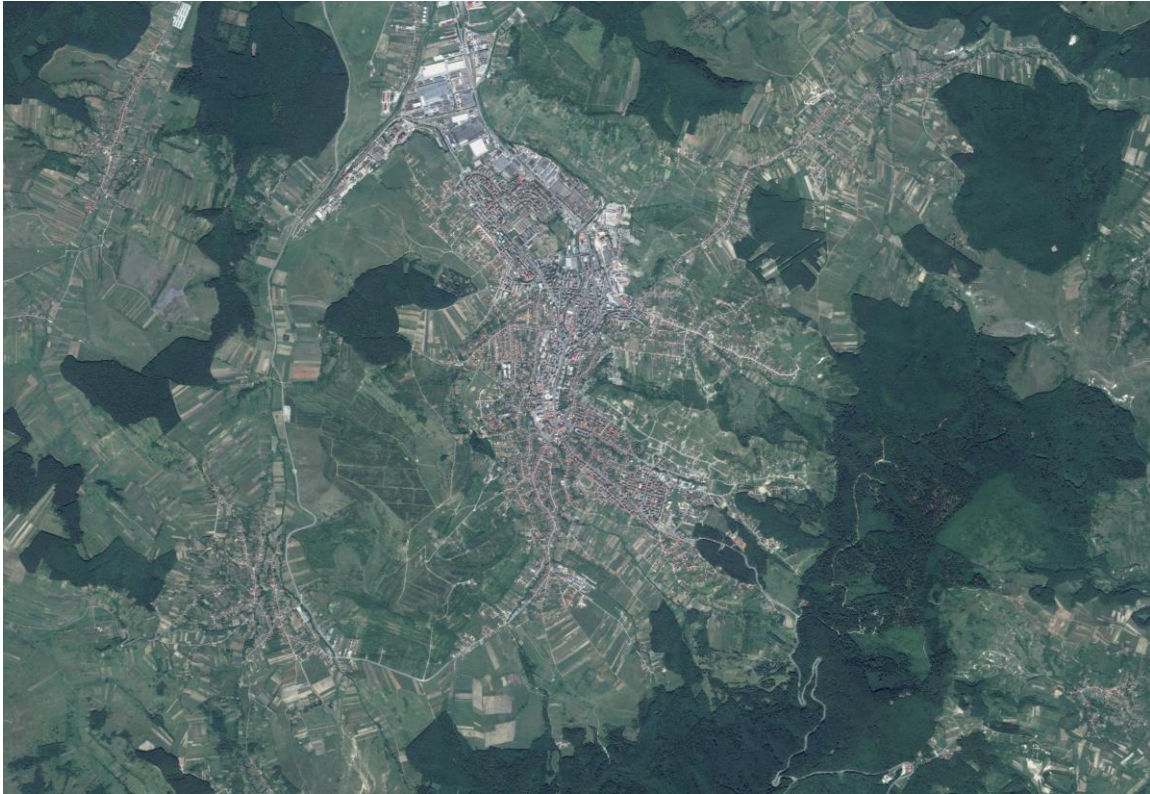


Figure 5. Google maps / satellite view of Zalău [4]



Figure 6. Detail of the studied area - from Google maps / satellite view of Zalău [5]

In surface of 43,5 ha, the area is also at the edge of the built surface of the town, bordered arbitrarily without any connection to the situation of new properties. Adjacent plans show the form of the area



demarcation, also kept identical in the new urban development plan of the city.

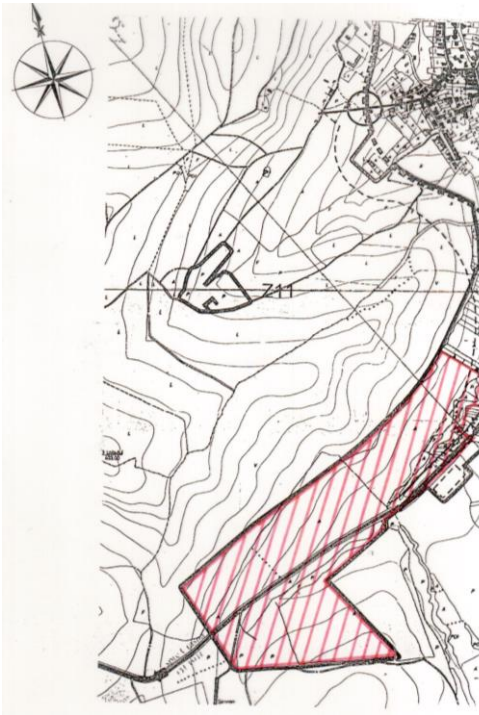


Figure 7.  
Urban position

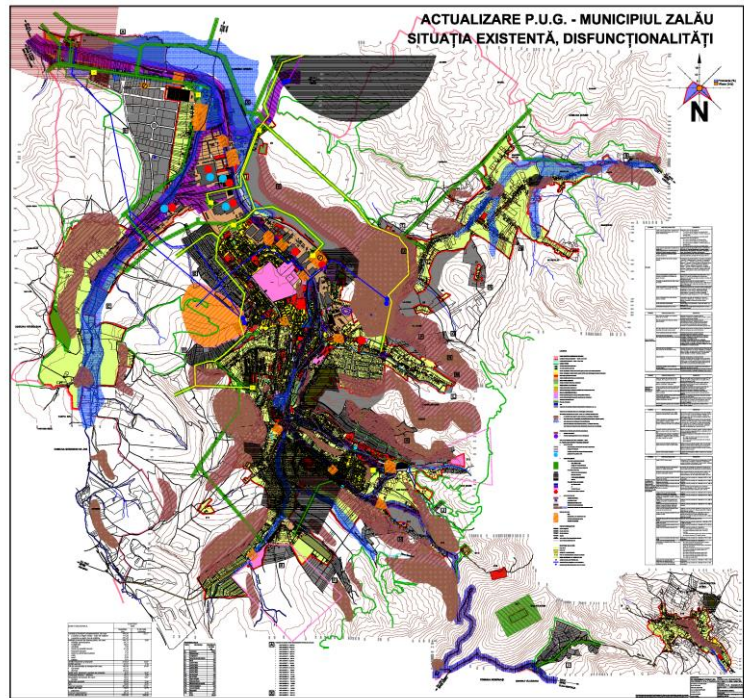


Figure 8.  
Urban position in the new development plan- Zalău [6]

### 3. Analysis of the site

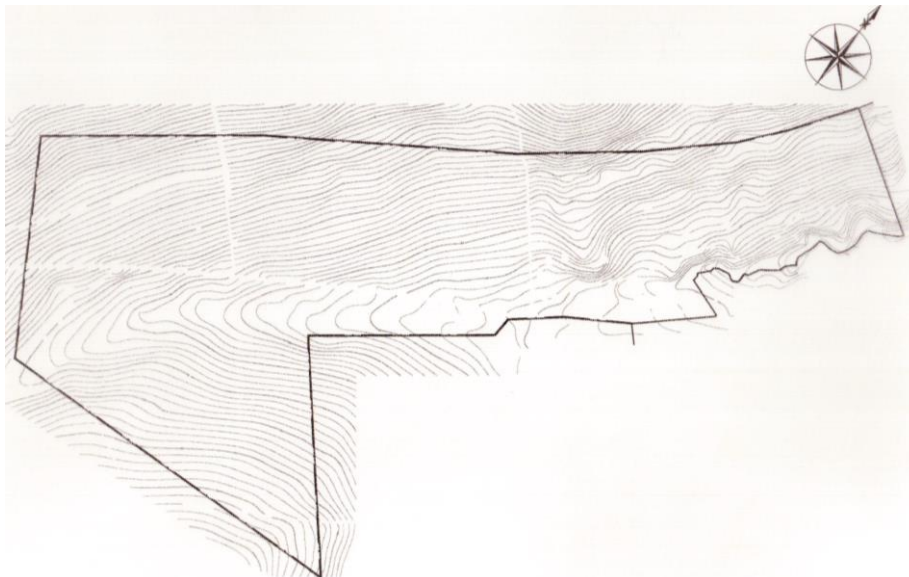


Figure 9. Level curves.

The land is in steep slope, more than 10%, in a horseshoe shape (Fig. 9) around the confluence of Zalău with one of its affluents, where the slope decreases along the main street – the national road.

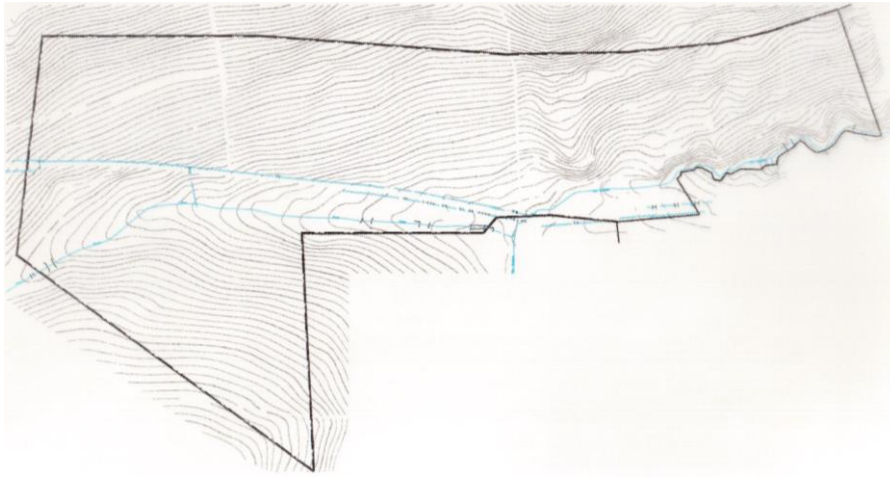


Figure 10. Watercourses.

The course of Zalău river has many meanders (Fig. 10), affecting the resistance of the land transversed. This fragmentation is revealed both by the wavy slopes and the retaining walls strengthening the river banks. Its affluents with intermittent courses, are identifiable especially after the trees which line them.

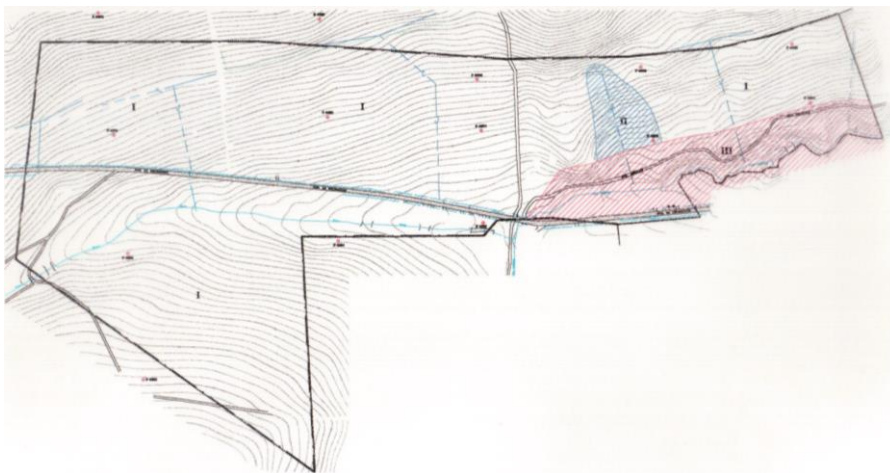


Figure 11. Land resistance.

The plan above summarise the land resistance of the studied area: red shaded area represents the zone with interdiction of building, and blue shaded area represents the zone of building with height restrictions.



Figure 12. Street Merilor - parallel to the valley of Zalău.



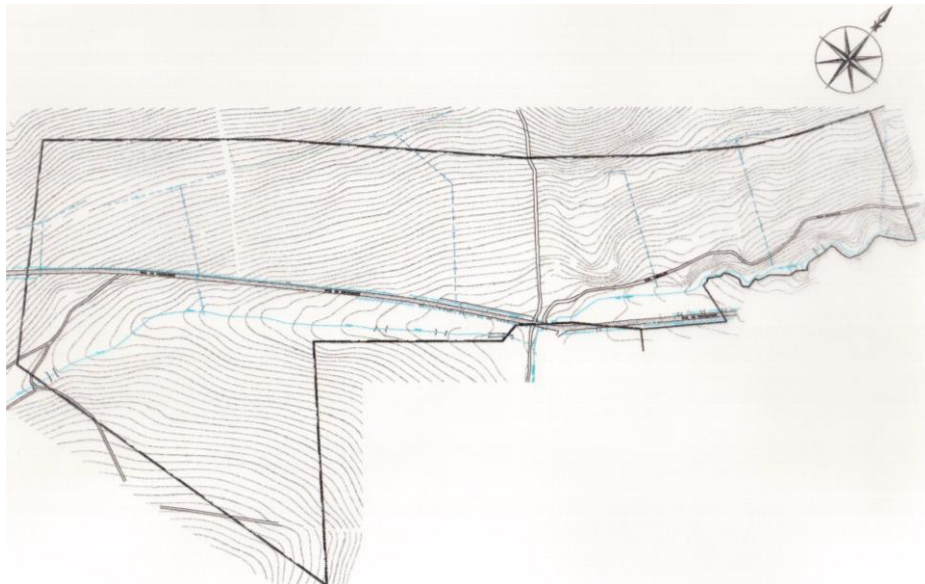


Figure 13. Roads and drains.

Due to the weak land resistance, which tends to slide, in 1975 were carried out land improvement works by introducing drains (Fig. 13) identified and protected. The land is traversed by two roads, one parallel, the other at 90 deg. to the slope.

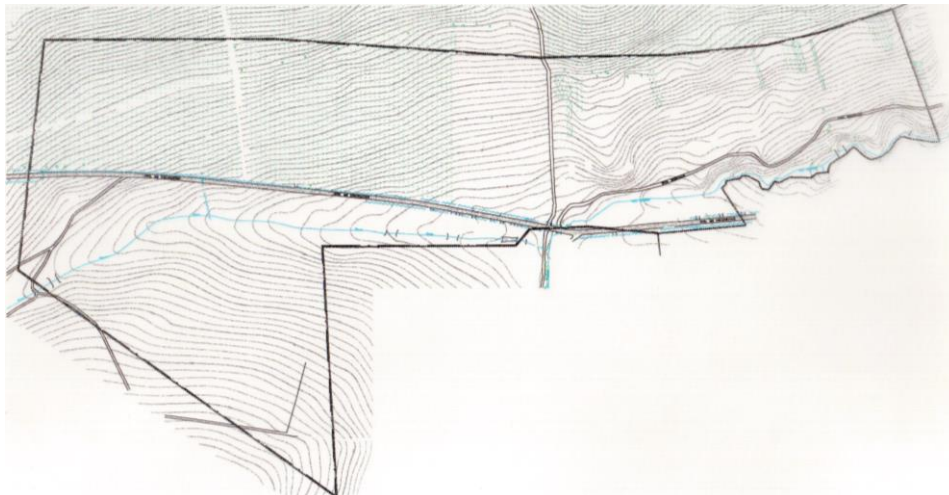


Figure 14. Vegetation.

The characteristic vegetation of the land is formed by vines and fruit trees (Fig.14), but the previously existing apple farm is completely abandoned, with seare trees, so the land is allocated to construction of houses.



Figure15. Images along the river Zalău and of one of its affluents.



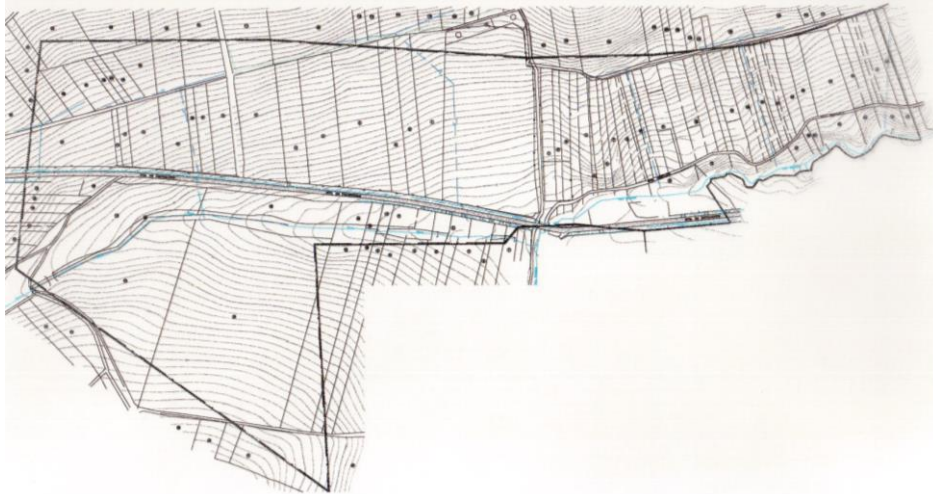


Figure 16. Land properties.

Restituted land plots (Fig.16) belong to both individuals and institutions ( ex.: firefighters direction from Zalău). Every owner wants to exploit land more efficiently, with fewer losses. The specific agricultural pattern, plots in the form of elongated rectangles in the direction of the slope characterize the land organization . The building area border cuts arbitrarily the properties.

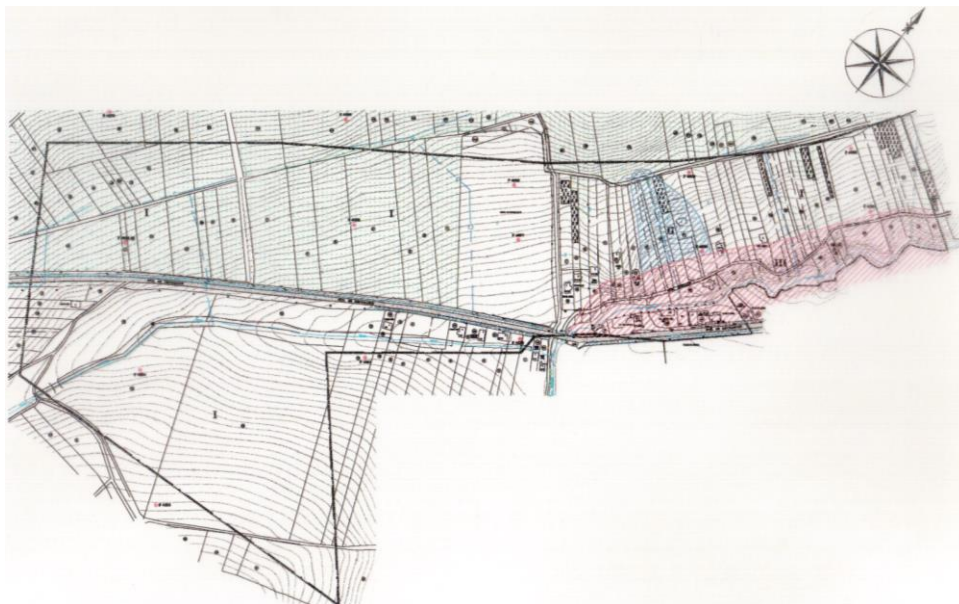


Figure 17. Existing situation of studied area.

The above plan (Fig.17) summarises the current situation, by overlapping all aspects of interest, allowing the establishment of land use directions for building houses. Adjacent images surprise the status of the zone, yet unstructured, of the land and of the crossing roads (Fig. 12, 15, 18, 19), and of a few new decent villas built in the area, providing intimacy, the welfare of their inhabitants, security, a good scale, are bright , accessible, and provide also a stable and sustainable structure, having access to technical infrastructure (water, waste, sewage).



Figure 18. First villas built in the area.

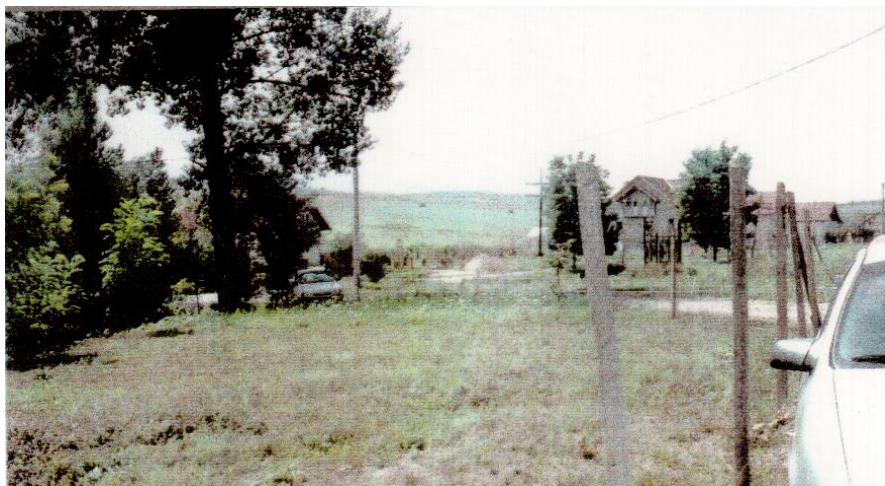


Figure 19. Crossroads - Merilor street with the national road.

#### 4. Local identity – the project

The motto of the project: to create an identity by exalting the characteristics of the site.

The main features - to be developed on the studied area - also called Merilor – are:

- Fast steep slopes, towards small river creeks bordering the main road which crosses the area;
- Favourable slope orientation - as sunlight and as open panorama to the mountains Meseş;
- Outskirts with friendly atmosphere in its neighborhoods, with specific residential buildings, hidden in courtyards shaded by vine;
- Agreeable scale of the buildings already constructed.

The most important reason for organizing the new district was the owners desire to live in a neighborhood of cottages, without blocks of flats, where the comfort of home must be completed by the urban ambience of good quality. The placement of housings follows a favorable orientation of buildings, so that they have the same beautiful views toward surroundings.

Scale of buildings to be built will be in direct relation with plots ranging, in size of 500 and 700 square meters. Plots ranging size determined also the distance between the new streets, that follow the same way of specific guidance in this area, parallel to the slope and on slope direction (Fig. 20).



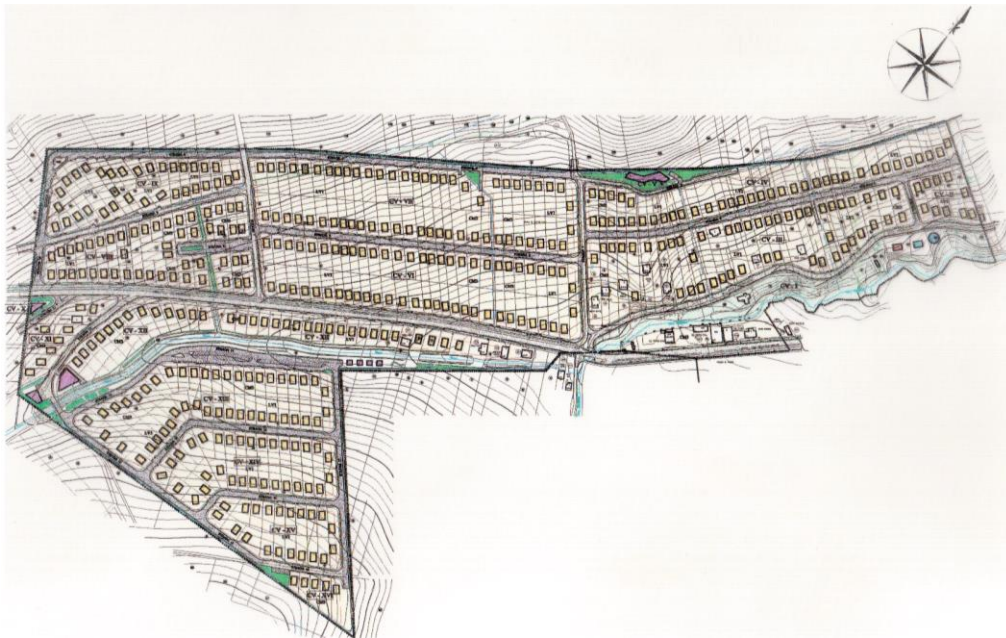


Fig.20. Plots ranging

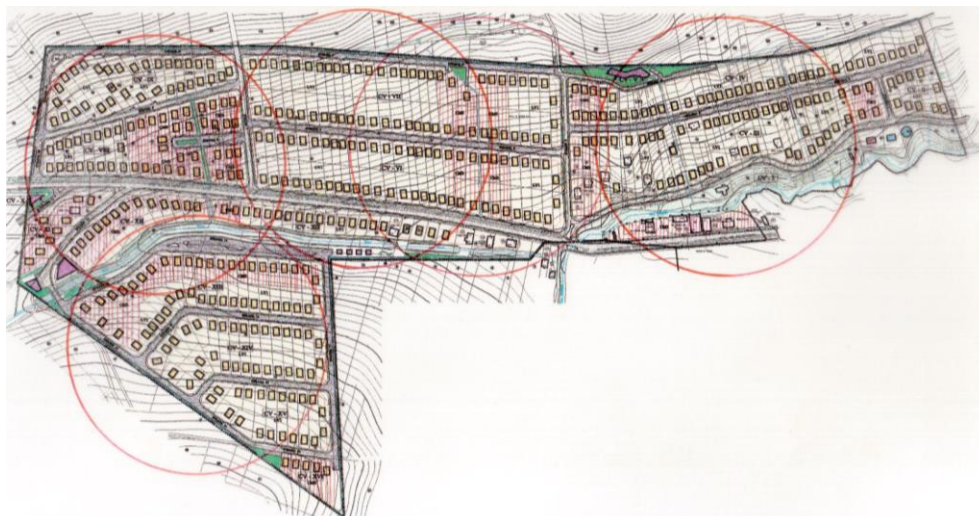


Fig.21. Establishment of mixed function areas, of public interest – in red.

In addition to housing, we proposed, at distances of 300 meters among them (Fig.21), public spaces as areas with mixed functions (with small surfaces of accessories – until 200 square meters: commercial areas, educational spaces, churches and services). For the purpose of establishing friendly communities, the equity of the endowments is an important factor. We proposed small distance between areas of public interest, also to encourage walking directions or bike rides creating numerous meeting points. This succession of walks, "force lines of slope", are fragmenting and customizing the new neighborhood.

One of the elements of a particular importance for the overall impression of a place is the network of streets[7] and street space image.

In transversal profiles of the streets and pedestrian alleys, we proposed alignment plantations, for shading and also for fixation of the field which tends to slip; for this purpose we used maples whose strong roots strengthens the land (Fig.24 ).

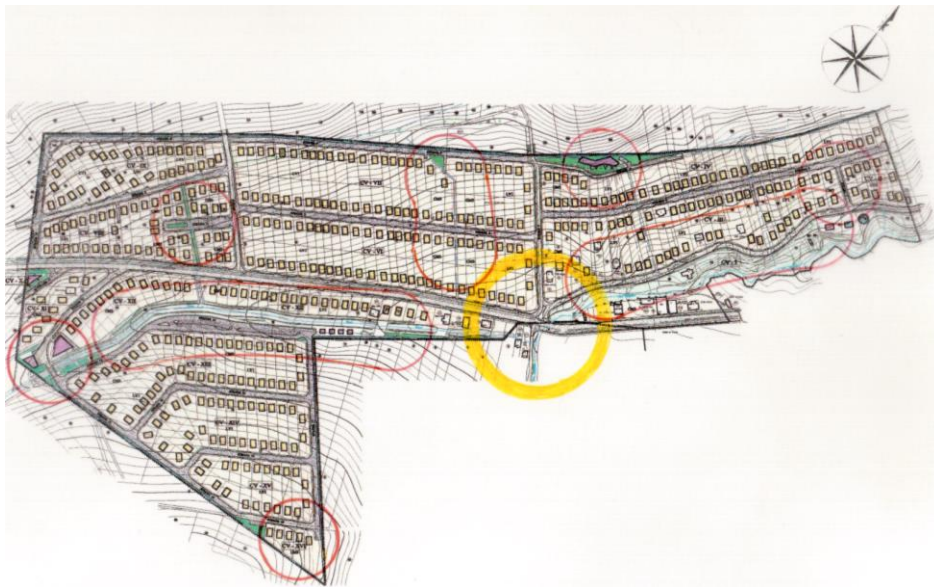


Fig.22. Nodes - identifying places.

To create a readable space, we proposed new identification elements, nodes [8], other than the only intersection in the area. The trail of drains is preserved and protected, becomes sidewalk and the axles for accessories mixed with dwellings. The contour of the land was established arbitrarily, as the result of planning and previous endorsement, it could not be changed. To reconcile disadvantaged owners by this situation, we proposed in places which favor, the assembling of small lots for erecting new equipment for this residential area (Fig.22). These places became reason for making identities and also hinge elements that allow different future developments.

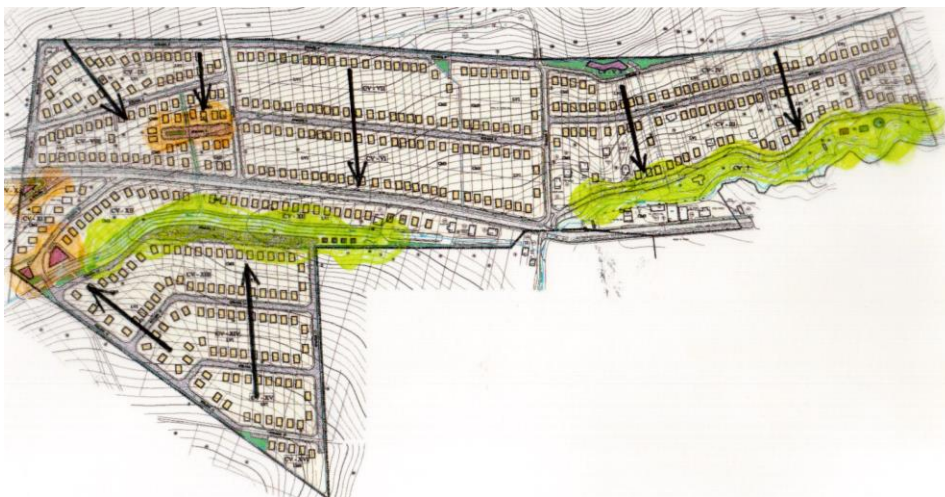


Fig. 23 . Green recreational areas and social facilities (in orange).

The proposed green recreational areas are boosted by the presence of the streams. Interwoven with equipment, these green areas stimulate socialization, and became articulation points for the neighboring structures, whose organization can be thus different (Fig.23).

The main road which crosses the area and is connecting the city with the highway, is an important factor of air pollution and noise. Therefore, the green curtains assure real protection against pollution and also ensure the attractiveness of the area - important factor for the development of the zone and, implicitly, for creating new jobs here.



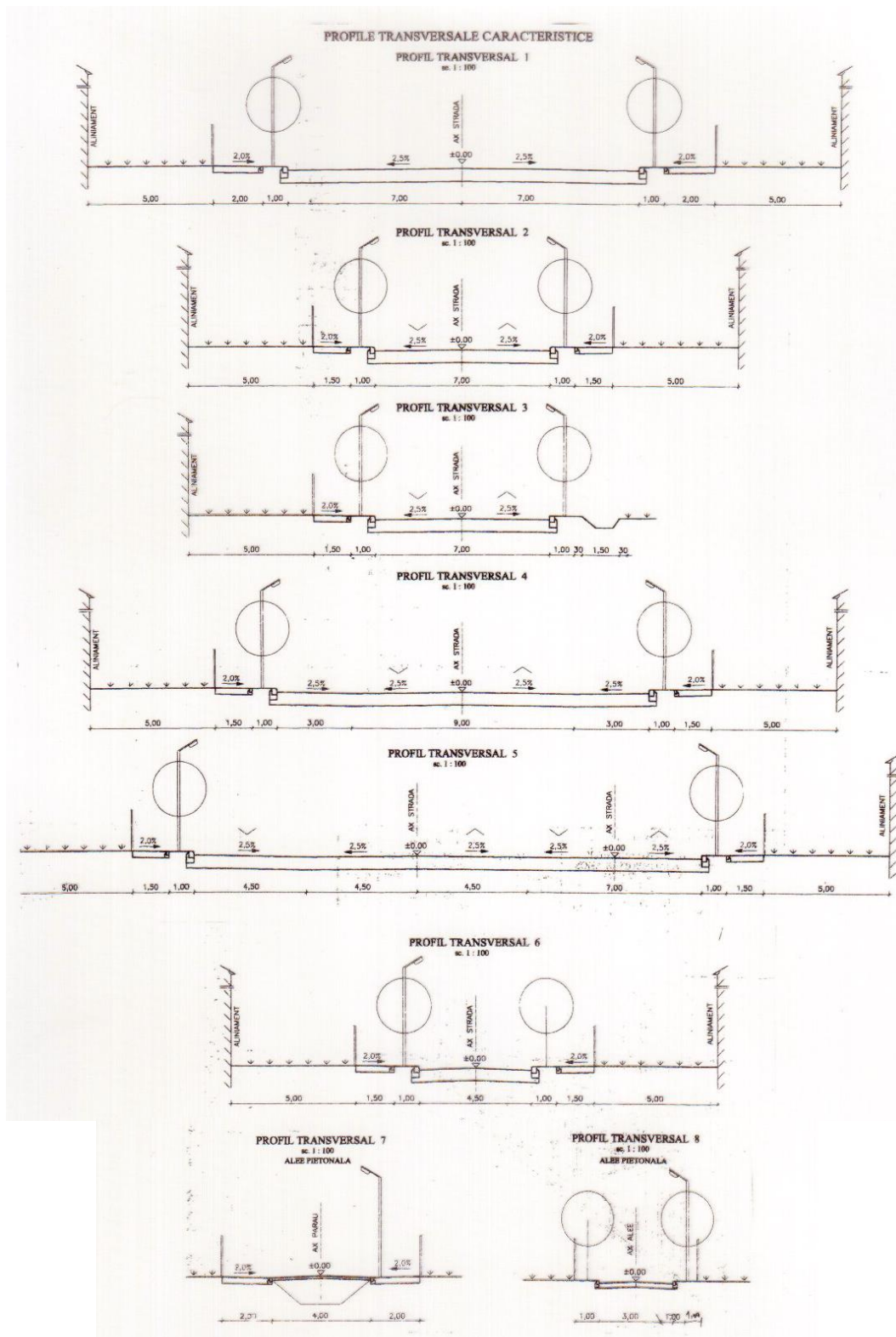


Fig. 24. Cross sections of the proposed streets in the studied area.

## 5. Conclusions and territorial balance sheet, or achieved qualities and quantities

BILANT TERITORIAL						
NR. CRT.	ZONA STUDIATA	EXISTENT		PROPUȘ		OBSERVAȚII
		mp	%	mp	%	
1	ZONA DE LOCUIT	21278,00	4,88	301685,00	69,23	PARCELARILE ȘI CIRCULATIILE INTERIOARE AFERENTE SE REGLEMENTEAZA PRIN P.U.D.
	LV1 LOCUINTE INDIVIDUALE MICI CU MAXIM P+2E SE ADMIT ECHIPAMENTE PUBLICE DE NIVEL REZIDENTIAL ( ADC MAI MIC DECAT 200mp) P.O.T. MAX. 15% ; C.U.T. MAX. 0,30mpADC/mp teren	-	-	215522,00	49,46	
	CM3 SUBZONA MIXTA DE LOCUINTE ȘI ACTIVITATI COMPLEMENTARE DE COMERȚ ȘI SERVICII CU INALȚIMI MAXIME P+2E P.O.T. MAX. 15% ; C.U.T. MAX. 0,30mpADC/mp teren	-	-	86143,00	19,77	
2	ZONA DE CIRCULATII	18513,50	3,79	84858,00	19,47	CONFORM PROFILE TRANSVERSALE CARACTERISTICE
	DRUMURI EXISTENTE DIN PAMANT	9163,50	2,10	-	-	
	DRUMURI EXISTENTE DIN BETON	7350,00	1,69	-	-	
	DRUMURI EXISTENTE MODERNIZATE	-	-	28401,50	6,52	
	CAROSABIL NOU	-	-	25907,50	5,94	
	PARCAJE	-	-	1432,00	0,33	
	PLATFORME GOSPODAREȘTI	-	-	170,00	0,04	
	TROTUARE	-	-	24881,00	5,66	
	ALEI PIETONALE	-	-	4266,00	0,98	
	3	ZONA SPATII VERZI	130646,00	29,98	26380,00	
PLANTATII DE ALINIAMENT	-	-	9677,00	2,22		
SPATII VERZI CU DOTARI	-	-	6978,00	1,60		
SPATII VERZI CU DOTARI AMENAJABIL DUPA REGULARIZAREA PARAUULUI ZALAU	-	-	9725,00	2,23		
LVADA	126221,00	28,96	-	-		
4	VIE	4425,00	1,02	-	-	CURSURILE PARAIELOR SE VOR REGULARIZA PRIN PROIECTE DE SPECIALITATE
4	CURSURI DE APA CU ZONE LIMITROFE	16374,00	3,76	20627,00	4,73	
	PARAU NEAMENAJAT	7074,00	1,62	-	-	
	PARAU AMENAJAT	-	-	7100,00	1,63	
	PARAU ZALAU NEAMENAJAT	9300,00	2,14	9300,00	2,13	
5	SANT DE GARDA	-	-	4227,00	0,97	
5	ZONA ECHIPARI EDILITARE	-	-	2220,00	0,51	
	STATIE GAZ	-	-	886,00	0,20	
	STATIE POMPE CU HIDROFOR	-	-	1344,00	0,31	
6	ALTE FOLOSINTE	250938,50	57,99	-	-	
	TOTAL	435750,00	100,00	435750,00	100,00	

Fig.25. Territorial balance sheet.

We called into question constraints of land delimitation and of possibilities that can be reached up to.

- We presented a way to think and design in terms of constraints.
- At the basis of urban plans are economic criteria and development strategies. The participants, mayors, landowners, technicians, designers, are involved in achieving these initiatives and plans have different logics to be harmonized.
- To achieve extension of residential areas in the outskirts of Zalau, which is intended to be a residential area of villas, we started from the existing urban landscape characteristics, by exalting them as values, not as constraints.
- We organized agricultural pattern by adapting it to the logic of urban tissue [9];
- By adapting and restructuring the former agricultural land from the margins of the town, we tried to create a harmonious neighborhood for a community of about two thousand people, to create a place of strong identity, recognizable in Zalău.
- We believe that DIALOG is the main characteristic dimension of a project.

## 6. References

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