



Republic of Croatia
State Geodetic Administration

The Role of Cadastre in the Development of Regional and Local Planning Structure in Croatia

Zdravko Cesarec and Željko Bačić



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Role of spatial planning in modern society

- Harmonization of the development needs of society with the necessary environmental protection for future generations requires proper and full coverage national, regional and local spatial planning
- Good legislation and effectiveness in implementation of legislation and spatial plans represents measure of successfulness of state and society



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Role of spatial planning in modern society

- Requirement for introduction of good spatial planning are spatial plans itself
- Precondition for spatial plans are
 - standards and specifications for its production
 - existence of good topographical and cadastral maps
 - existence of proper property and ownership registration



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Recent Croatian history in modern spatial planning development

- It took 15 years in Croatia to develop
 - effective legislation (3 iterations)
 - Create licensing system for architects, civil engineers and surveyors (chamber)
 - Establish institutions responsible for development of spatial plans (Planning institutes)
 - Establish institutions responsible for implementation of spatial plans (regional and municipal authorities)



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Documents of spatial development

- National:
 - Strategy of Spatial Development
 - Programme of Spatial Development of RoC
 - Spatial plans for the areas with special characteristics
- Regional
 - County spatial plans
 - Spatial plans for the areas with special characteristics
- Local
 - Big City, town or municipality spatial plans
 - Urban development plans
 - Detailed development plans



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Documents of spatial development - passing of the documents

The level and the body passing the spatial development documents	Documents of spatial development	Obligation of territorial production and passing of the Act on SDC
Republic of Croatia Croatian Parliament	Strategy of Spatial Development of the Republic of Croatia	for the territory of the Republic of Croatia
	Spatial Plan for the areas with special characteristics	national park, nature park and the areas with special characteristic defined by the Strategy and Programme
Republic of Croatia Government of the Republic of Croatia	Programme of Spatial Development of the Republic of Croatia	for the territory of the Republic of Croatia
County/City of Zagreb County/City Assembly	Spatial plan of county/ City of Zagreb	county/City of Zagreb
	Spatial Plan for the areas with special characteristics	the areas with special characteristics defined by the spatial plan of counties/City of Zagreb
Big city, town, and municipality Town council/municipality council	Spatial development plan of the big city, town, municipality	big city, town, municipality
	Urban development plan	undeveloped parts of the building area in settlements and undeveloped separated building areas outside of settlements
	Detailed development plan	for the parts of settlements intended for urban land consolidation



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Documents of spatial development – national and regional level



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Spatial development plans of towns and municipalities

Town of Krapina		
Municipality spatial plan (PPUG)	Krapina	O.G. of T. of Krapina no 2.02,12.03,16.04,5.07
General urban plan (GUP)	Krapina	O.G. of T. of Krapina no 2.02,12.03,13.03,16.04,5.07
Urban development plan (UPU)	Krapina new - West	O.G. of T. of Krapina no 2.05
Urban development plan (UPU)	Krapina new - East	O.G. of T. of Krapina no 1.09
Development spatial plan (PUP)	Southern zone – Mihaljekov Jarek	O.G. of T. of Krapina no 11.94,20.94

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Cartographic presentation needed for passing the spatial plans

- **Cartographic presentations are made for:**
 - the county spatial plan on the topographic map at the scale of 1:100.000,
 - the spatial plan of the City of Zagreb on the topographic map at the scale of 1:25.000,
 - the spatial plan for the areas with special characteristics on the topographic map at the scale of 1:100.000 and/or 1:25.000 or on the state base map at the scale of 1:5.000 and/or 1:10.000 depending on the type of characteristics and the area encompassed by the plan,
 - the spatial development plan for a municipality or a town on topographic map at the scale of 1:25.000, and building areas in settlements are defined on the cadastral map at the scale of 1:5.000,
 - general urban plan on the state base map at the scale of 1:5.000 and /or 1:10.000,
 - urban development plan on the state base map at the scale of 1:5.000 or on the topographic cadastral map at the scale of 1:1.000 or 1:2.000,
 - detailed development plan on the topographic cadastral map or cadastral map at the scale of 1:1.000 or 1:500.



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Topographic maps and other cartographic presentation

- **The products needed in spatial planning are as follows:**
 - Topographic map at the scale of 1:100.000 (TK100) made in the period 1980–1984 for the entire state territory in 56 sheets available in analogous (polychromous print on paper) and digital (geocoded in TIF format) form.
 - Topographic map at the scale of 1:25.000 (TK25) has been conceived, processed and made in digital procedures in the period from 1996–2010 for the area of the entire Croatia and it represents the most updated topographic map that is available for Croatia.
 - Croatian base map 1:5.000 (HOK) was made in period from 1954 -2009. There were 9678 sheets made out of the total number of sheets being 9756, available in analogous form (polychromous print on paper in 3 or 4 colours) and digital form (geocoded TIF format).
 - Orthophoto map at the scale of 1:5.000 (DOF5) was made in digital form out of aerial photographs by means of digital relief model. The resolution is 50 cm, and the accuracy 1 m. It was made for the territory of the entire state and it is being cyclically updated. During the years 2009 and 2010 there was 63% of sheets updated for the purpose of establishing the Land Parcel Identification System in agriculture.



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Cadastral maps

Geodetic and cadastral works

- **Cadastral maps:**
 - Until 1990 kept and maintained in analogous form i scales 1:1000, 1:2000, 1:2880, 1:2904
 - 78,4% produced in era of Austro-Hungarian Monarchy, 21,6% later
 - 20% were renewed 1945-1990
 - 7% renewed 1991-2010
 - All maps have been scanned, vectorized and georeferenced 2000-2010
- **Geodetic and cadastral works**
 - the preparation of TK25 for the area of the entire County,
 - the preparation of DOF5 for the area of the entire County,
 - the preparation of digital cadastral map (DKP),
 - new cadastral survey in the part of the Town Krapina.



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Application of spatial development act and role of RCO Krapina

- **The task of the local self-government unit (the Town Krapina) in the given activity is the following:**
 - the issuance of the local permit (Figure 10) in which the formation of a building plot (joining of cadastral plots) is conditioned by means of subdivision documents,
 - the certification of the main project and of the working structure design, on the example of the school,
 - the issuance of building permit,
 - the issuance of operating permit after the technical inspection,
 - the certification of subdivision documents confirming that it was done in accordance with the location permit,
 - the registration of geodetic documents of utility cadastre for all built utility lines,
 - the registration of the house number for the structure.



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Local level spatial planning documents



Extract from the spatial plan



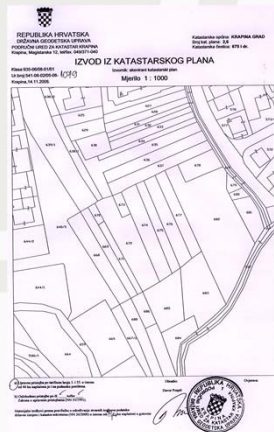
Extract overlapped over DOP



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Local level spatial planning documents



Extract from the cadastral map



Special geodetic document



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The tasks of licensed surveyors are as follows:

- preparation of adequate special geodetic documents needed to obtain the location permit. Adequate special geodetic documents are cartographic documents (digital orthophoto plan with vertical presentation – contour lines and elevation lines with the included cadastral map or topographic presentation with the included cadastral map or topographic presentation with included cadastral map), made at adequate scale and verified by the competent body for state survey and real estate cadastre, i.e. by the cadastral office. On the adequate special geodetic documents the designer presents the planned building plot and the planned location of the structure within the building plot, i.e. the activity in the region,
- the preparation of the subdivision documents for the performance of the location permit whose integral parts are defined by the Book of Rules on Subdivision and other geodetic documents
- the preparation of documents for the layout of the structure. The layout documents of the structure are the documents that present the layout of the structure in the field and the method used to stabilize the points planned for the structure,



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The tasks of licensed surveyors are as follows:

- the layout of the structure within the building plot, i.e. on cadastral plot formed by means of subdivision. The layout of the structure presents the transfer of the plan of external figure of the structure or the axis of the structure allowed to be built in the field within the building plot,
- the preparation of the layout geodetic plan of the real situation for the built structure in accordance with the passed act that has been verified by cadastral office as a part of geodetic documentation for the purpose of obtaining the operating licence,
- the preparation of geodetic documentation of utility lines cadastre (gas pipeline, water supply lines, power supply lines, telephone, etc.) verified by cadastral office for the purpose of obtaining the operating licence. The geodetic documents of the utility lines cadastre are made for the administration body, in this case for the Town Krapina, who ordered the documents, the manager of the lines and producer of the documents,
- the preparation of geodetic documents for the purpose registration, deletion or change of the data about buildings and other structures.



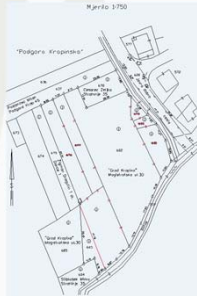
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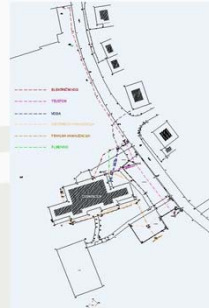
Local level spatial planning & cadastre documents



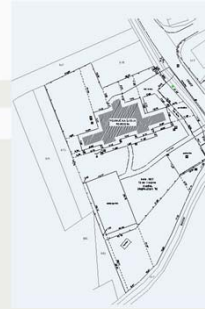
Location permit (title page)



Survey sketch of subdivision document



Presentation of utility lines cadastre



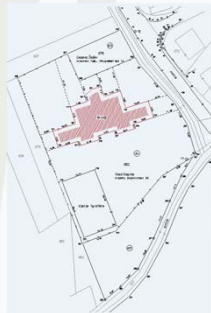
Situation



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Local level spatial planning & cadastre documents



The sketch of geodetic document for the registration of the structure



Cadastral map after implementation of geodetic documents



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The role of Regional cadastre office Krapina

- the issuance of the extract from cadastral map and the list of permanent geodetic points for surveying in the field in state coordinate system needed for the purpose of making adequate special geodetic documents,
- the inspection and verification of adequate special geodetic documents that the cadastral office is obliged to make within thirty days,
- the issuance of the extract from the cadastral map and the list of cadastral plots with owners needed for the production of subdivision documents,
- inspection and confirmation of subdivision documents verified by the competent administration body of the Town of Krapina that it has been done in accordance with acts on building,
- production of the subdivision documents using cadastral documentation after the decision in the administration procedure has been made legally valid and the copies of applications for the land registry delivered officially to the land registry department of the Municipal Court in Krapina,
- the inspection and confirmation of geodetic situation plan of the real situation for the built structure in accordance with the passed act,
- the inspection and confirmation of geodetic documents of the utility lines cadastre,
- the inspection and confirmation of geodetic documents for the registration, deletion or change of data about the buildings and other structures,
- the implementation of geodetic documents needed for the registration, deletion or the change of data about the building and other structures by means of cadastral documents after the decision passed in the administrative procedure has been made legally valid and the copies of the application to the land registry has been officially delivered to the land registry department of the Municipality Court in Krapina.



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Conclusion

- **Topographic and cadastral data are the basic data about the space and the spatial development plans are made on the basis of these data**
- **Topographic and cadastral data are official products of State Geodetic Administration completely renewed in past 20 years**
- **Cadastre offices in Croatia are deeply involved in spatial planning process**
- **All along the process in Croatia in not the simplest one expected intention (reduction of illegal construction) has been achieved!**



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