

The Application of the Parcelling Design in the Field

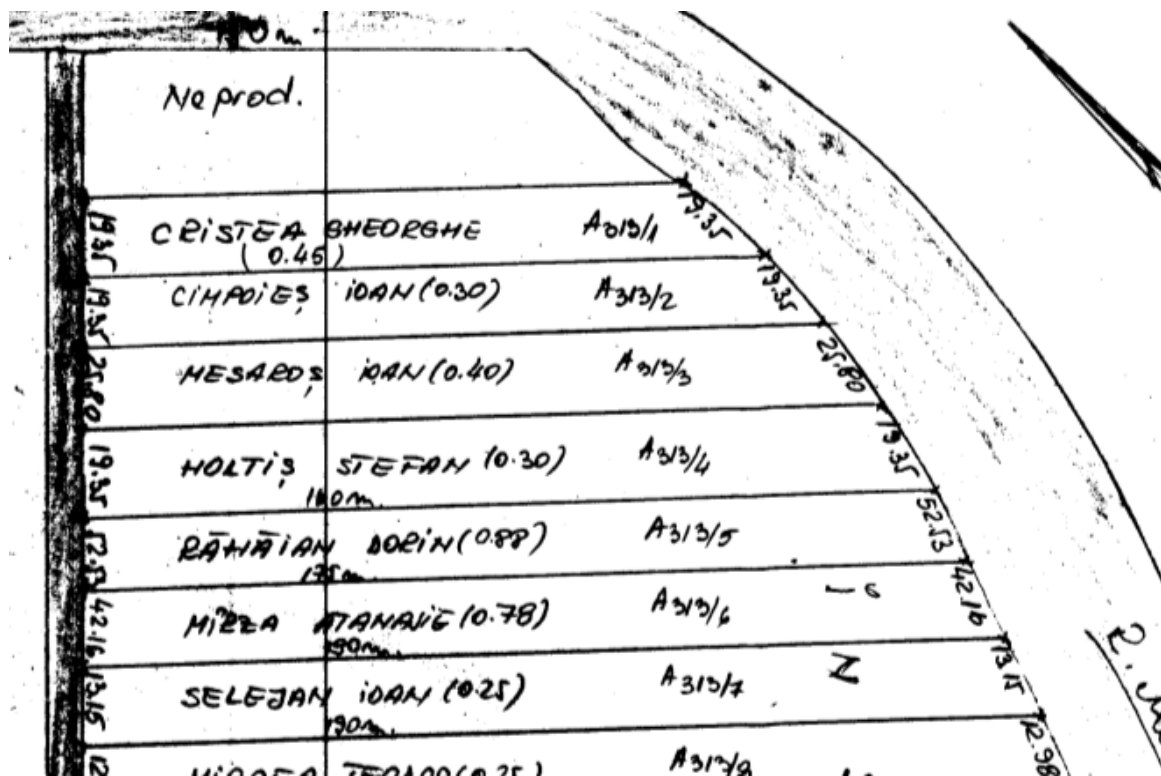
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Summary: The present paper work comes for helping the survey engineers for a quick and precise application of the parcelling design in the field, having the minimum speciality devices and softs.

Introduction

Not for few times, at the estate laws application, is necessary a quick setting out in the field of the lots limits according to the parcelling tables and according to the sketches of ownership setting. Because the ownership laws comes with completions in the way of needing of a re-dividing of some lots or the completion with owners from town hall reserve and because of the applying was made of many times improperly trough works of insufficient technical structure, needing the solutioning of these problems according with the real situation from the field. For that reason is necessary applying the sketches of ownership setting in the field in the situation that these are incomplete (picture 1), the lots sizes are not in accordance with the field situation, but with the specification that the registered surface must be respected, mostly because these schetchs are documents necessary for the real estate advertising.



Picture 1. The sketch of ownership setting

For making all these possible we need of a total station and a laptop equipped with a minimum soft, these devices are necessary for the a quick applying of the parcelling works in the field.

Surveying and data processing

For the begining we survey the outline of the lot, surveying all the limit points ,after that we unload the survey from total station in the PC. The data unload, could be made directly unload the surveyed ponts co-ordinates, or unloading a field book with all the necessary elements for the estimation of the points co-ordinates .

In the case that was unloaded angles or distances is necessary data processing ,using speciality softs or personal estimate programmms in the different programming or using applying of tabel estimate, for example Excel Programm.

The screenshot shows an Excel spreadsheet titled "Microsoft Excel - ridicare_detalii.xls". The formula bar displays the formula: $=IF(AN3+AO\$2>400,AN3+AO\$2-400,AN3+AO\$2)$. The spreadsheet contains the following data:

	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
	Pet.st	Pet.viz.	viza prisma	Dist.cit.	cit.zenit	cit.orizonta	unghi oriz.	orientare	unghi vert	dianta	X	Y	Z
1													
2		2				88.5605		349.7210			4937.113	5082.654	199.593
3	3	137	1.46	10	96.182	232.5100	143.9495	93.6705	3.8180	9.964	4938.102	5092.569	200.125
4	1.39	138	1.46	13.400	96.820	237.17	148.6095	98.3305	3.18	13.3666	4937.463	5096.016	200.195
5		139	1.46	19.000	96.700	230.51	141.9495	91.6705	3.3	18.949	4939.585	5101.441	200.510
6		140	1.46	27.700	98.430	265.22	176.6595	126.3805	1.57	27.6832	4925.967	5107.994	200.209
7		141	1.46	24.200	97.930	258.23	169.6695	119.3905	2.07	24.1744	4929.863	5105.715	200.313
8		142	1.46	24.800	97.430	241.33	152.7695	102.4905	2.57	24.7596	4936.144	5107.394	200.527
9		5	1.46	35.200	99.200	268.78	180.2195	129.9405	0.8	35.1944	4921.164	5114.027	199.969
10		143	1.46	26.800	98.145	250.86	162.2995	112.0205	1.855	26.7773	4932.087	5108.955	200.307
11		144	1.46	25.300	98.500	262.54	173.9795	123.7005	1.5	25.286	4927.915	5106.207	200.123
12		145	1.46	21.500	97.900	279.69	191.1295	140.8505	2.1	21.4766	4924.258	5099.858	200.235
13		146	1.46	23.300	97.870	284.04	195.4795	145.2005	2.13	23.2739	4921.942	5100.304	200.306
14		4	1.46	39.800	97.020	213.1445	124.584	74.305	2.98	39.7129	4952.710	5119.175	201.387
15		148	1.46	30.000	98.849	287.34	198.7795	148.5005	1.151	29.9902	4916.412	5104.354	200.069
16		149	1.46	31.000	98.730	282.9	194.3395	144.0605	1.27	30.9877	4917.338	5106.511	200.145
17		150	1.46	33.200	99.150	280.17	191.6095	141.3305	0.85	33.1941	4917.045	5109.095	199.970
18		151	1.46	14.300	97.730	265.89	177.3295	127.0505	2.27	14.2818	4931.225	5095.666	200.036

Picture 2. Data processing using the Excel Programm

Surfaces Parcelling

After obtaining the co-ordinates inventory, these points will be exported in the AutoCAD Land Development Programme , in that programm will be drawned the lot outline, receiving the sizing of the lot and the total surface of the lot .The export of the points and co-ordinates could be done trough a transferring programme or using the AutoCAD Land Development options, the data base obtained made regarding the point number and co-ordinates for each lot bit.

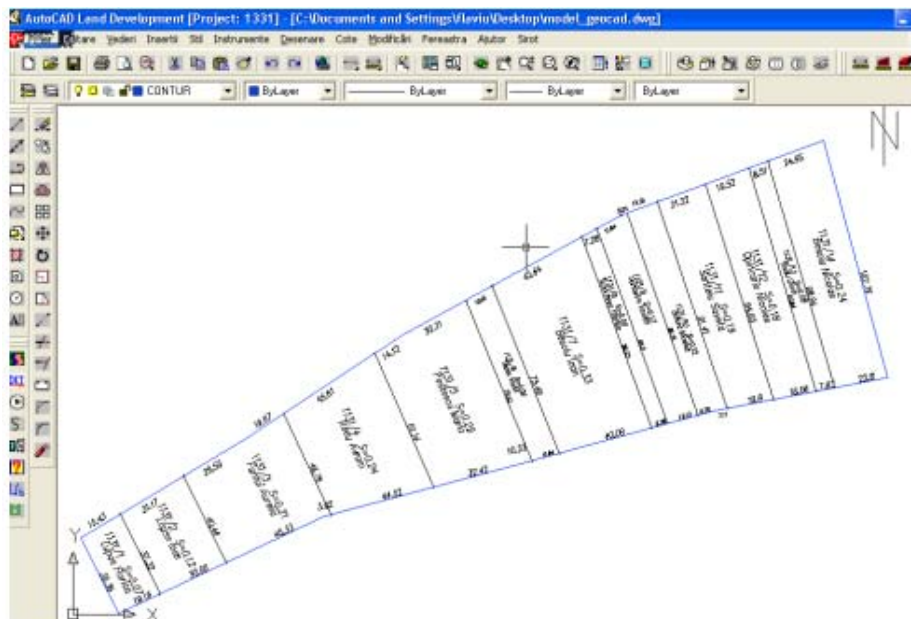
After making the outline lot, regarding the sketch of ownership setting, after the comparing the surface obtained with the total surface from parcelling table and making the corections, will be start the parcelling regarding the surfaces registered in the parcelling tables. This operation could

be done using the „Sirot” programme that works in the AutoCAD programme. Will be made a *.xls file that contained the identification data of each ownerships according with picture no. 3.

	A	B	C	D
1	Denumirea topică			
2	Nr.Crt	Nr.Cad	Nume Prenume	Suprafata
3	1	1131/1	Lupse Florica	700
4	2	1131/2	Lupse Ioan	1200
5	3	1131/3	Furdui Aurelia	2100
6	4	1131/4	Radu Avram	2400
7	5	1131/5	Postescu Maria	2900
8	6	1131/6	Tecau Florin	900
9	7	1131/7	Besoiu Ioan	3300
10	8	1131/8	Tudorescu Florica	600
11	9	1131/9	Suhastru Ionim	1200
12	10	1131/10	Branza Nicolae	1200
13	11	1131/11	Santeiu Saveta	1900
14	12	1131/12	Opincariu Nicolae	1800
15	13	1131/13	Radu Dorin	800
16	14	1131/14	Besoiu Nicolae	2400
17				
18				

Picture 3. *.xls file

After the parcelling with „Sirot” application will be received a parcelling plan with the lots sizes, identification data and points co-ordinate that gives ownerships limits. All that will be added to the initial data base, being possible that these having new identification data, in the way that the numbering futher on existent one, this could be done using other option of Land Development programme.



Picture. 4 Parcelling Plan

The application of the parcelling design in the field

The point coordinate inventory that define each lots, obtained after parcelling will be transferred in the total station through the cable data transfer, using the option of the device unload programme. This could be done using the Excel programme like a intermediary solution for the type file of the used total station.

After the co-ordinates was putted in the total station will be start the marking in the field of the parcelling design. The total station will be located in the station point used at the lot survey, the device will be oriented in the co-ordinate system of the initial survey and will be marked the ownership limits using the setting out programme from the total station. The setting out of the points should be done from co-ordinate or from setting out elements estimated by the total station soft in the memory.

Conclusions

For this works is necessary a minimum device like: total station, laptop, speciality soft. This work could be done in the field if the estimate volume is reduce, and the operations for the final product are automatized. In this way the process of the applying in the field of design parcelling is one in that the application time is short and will be eliminated the office travel, in the conditions in that the work could be done in a local co-ordinates that satisfy all the exigency of this type of work. If in the neighbourhood exists known co-ordinate, the processing data could be done directly in the Stereografic 1970 co-ordinate system.

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