



## TYPES OF PLANNING STRUCTURES OF SMALL HISTORIC TOWNS OF UKRAINE

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**Abstract.** The present article exhibits the results of systematic analysis on structure and planning of fragments of urban environment. The results have been obtained by looking into the prerequisites of formation of urban environment, specifically the impact of the Magdeburg Rights on urban culture. The study covers the small towns in Ukraine, which retained their historical background to a greater extent. 70 towns in Ukraine that had the Magdeburg Law have been analyzed and their historic, architectural and planning capacity investigated. The most valuable urban fragments have been classified in accordance with a number of criteria, such as the form of the plan, planning composition, etc. Based on the conducted analysis the author presents further generalized proposals for comprehensive development of historical and architectural heritage within the socio-cultural and tourism infrastructure of the Ukrainian towns.

**Keywords:** urban development, planning structure, towns of the Magdeburg Law, typology, historical nucleus, historical and cultural heritage.

### Introduction

Nowadays, the preservation of historical and architectural heritage and its adaptation to the modern urban environment is becoming more and more important, which leads to the search of patterns for harmonious development. It is a mistake to believe that the adaptation is connected solely with the object-space component of the environment. Adaptation has to include a number of other fields, such as socio-cultural field, natural landscape, engineering, transport and so on. In addition, the “historic town” must preserve its unique structure, while having a positive, nonverbal impact on people. Historic environment should affect emotions, mood, cause inspiration and thirst for the study of national history and identity.

The main elements of harmonious urban environment are the following: consistent and logical planning, functional interconnections between structural elements and attractive, proportionally aesthetic content. Almost all efforts of scientific theorists and architects were focused on the abovementioned issues (Barhin 1986; Lynch 1986, 1982; Shebek 2008; Vechers'kyj 2003). Therefore, creation, development and research of integration methods of historical and architectural heritage into modern urban object-spatial environment are relevant issues. A necessary precondition for development of effective integration methods is analysis and typology of the components of urban environment and their

interconnections. It is clear that adaptation techniques may vary depending on a particular town. This creates a need to organize available urban planning information about historical towns. The main criterion for choosing the Ukrainian towns for analysis and their classification on the basis of architectural and planning features has been their belonging to privileged urban structures, i.e. the Magdeburg Law. The decision has been made based on their large percentage in the Register of Historic Urban Settlements. In the future, the chosen study subject will enable to disclose the logical interconnections of subject-spatial environment and its genesis.

### Main content

The research on architectural and planning features of historic small towns in Ukraine has been carried out in 3 consecutive stages. *The first stage – the search.* Archival sources were examined in order to confirm that certain Ukrainian settlements belonged to the type of towns with the Magdeburg Rights. It has been discovered that the total number of such towns in Ukraine was 185 (Kravcov 1993; Kryp'jakevych 1962; Sas 1989a). It is important to note that the Magdeburg Law phenomenon took root in the German city of Magdeburg, as the embodiment of the socio-economic and political liberalism during the 13<sup>th</sup> – 19<sup>th</sup> centuries, and was adopted in most

East European countries, including the territory of modern Ukraine. Each town followed its own way of development, which led to demographic and territorial diversity. Currently, towns differ by a number of objects of preserved historical and architectural heritage, population, area, year of establishment, and year of adopting the “German Law”. This is why the author suggests choosing towns with the population of less than 50,000 for further research<sup>1</sup>.

There are 70 towns of this kind in Ukraine. The sampling strategy of towns has been confirmed by the fact that the small towns were less affected by the invasion in their architectural and urban structural identity in comparison to the big cities. It has been estimated that 57% of such towns are located in three regions of modern Ukraine: Lviv, Ivano-Frankivsk and Ternopil regions. Other towns are located in 16 regions of Ukraine, as shown in Figure 1.

The Magdeburg rights were actively adopted on the right bank of Ukraine, which was at first in the Grand Duchy of Lithuania, then in the Polish–Lithuanian Commonwealth, and later in the Russian Empire. It influenced not only legal and economic aspects, but also particularly the urban planning culture. Despite of the fact

that the “German Law” in Ukrainian lands is characterized by the national authenticity, it is possible to figure out the genetically rooted compositional and planning features that can be found in any city with these privileges. Thus, the center of cultural, political, economic and social life of the town was central (market) area with trading stalls and a town hall, usually surrounded by a perimeter of buildings that had visual and planning axis, with religious buildings on its corners. As a rule, such a tight frame of the mentioned buildings was implemented in a regular planning network, from which transport lines to the entrance gates were constructed. In general, such towns had features of a castle-fortress. It is confirmed by the existence of fortifications and defensive walls (Kobylec’kyj 2008; Kryp’jakevych 1984; Mogytych 1993; Rybchyns’kyj 2000; Rychkov 1996; Sas 1989b).

Considering the abovementioned structure of a town with the Magdeburg Rights, i.e. a kind of space-planning framework, *the second analytical phase of the study has been initiated*. The research focused on the towns with the highest possible historical, cultural, natural landscape potential, as well as on the aforesaid preserved components. The analysis has revealed that there are 22 such towns: Berestechko, Volodymyr-Volyn, Lyuboml (Volyn region), Ostrog, Dubno (Rivne region), Bar (Vinnycja region), Novgorod-Siverskyi (Chernigiv region), Kremenets, Terebovlia, Berezhany,

<sup>1</sup> The upper limit of urban population that fall under the category of “small town” in Ukrainian town planning regulations (DBN 360-92\*\*: 2002).

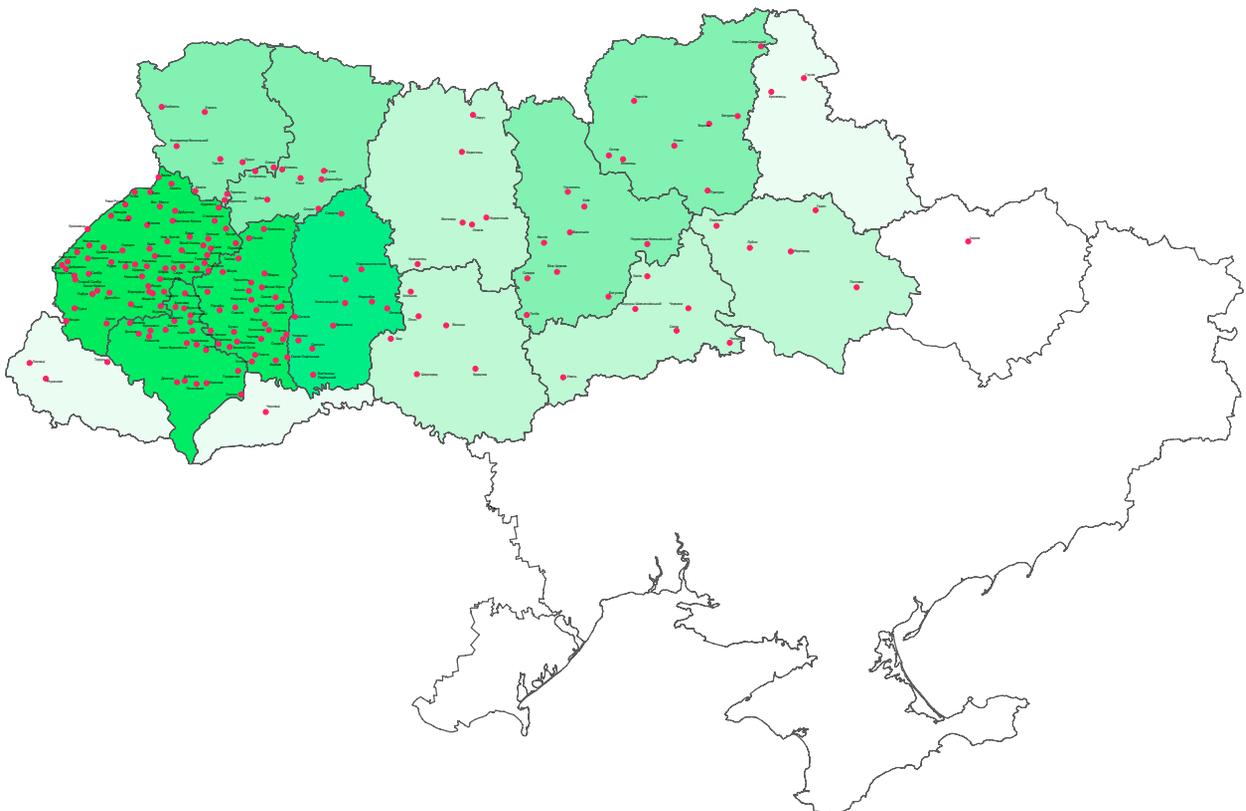


Fig. 1. Distribution of towns with the Magdeburg Rights in Ukraine

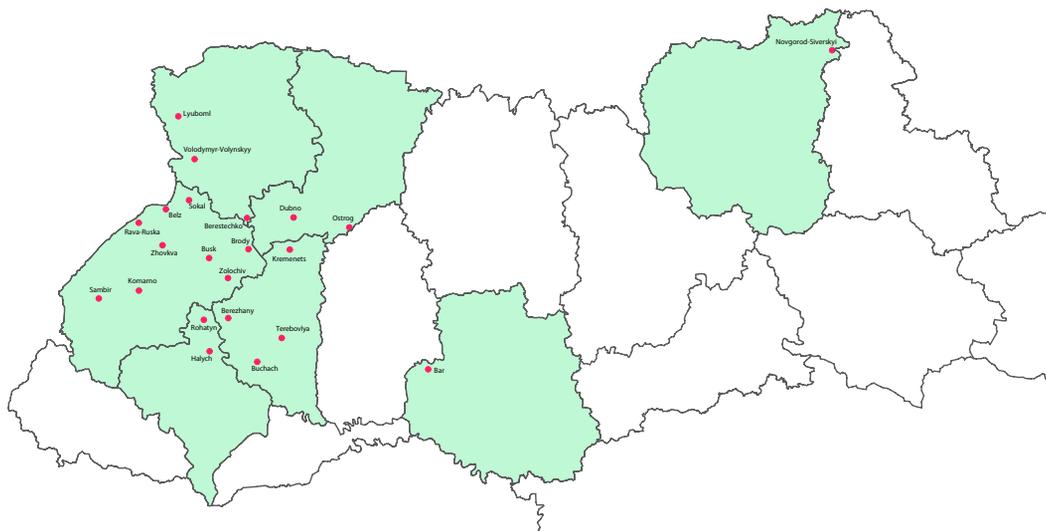


Fig. 2. Location of towns with the highest possible historical, cultural and natural landscape potential

Buchach (Ternopil region), Rohatyn, Halych (Ivano-Frankivsk region), Brody, Zhovkva, Rava-Ruska, Sokal, Belz, Sambir, Busk, Komarno, Zolochiv (Lviv region). The location of the analyzed towns is reflected in Figure 2. In the *final phase of the study*, towns have been classified in accordance with the type of city planning features. In particular, individual passports of towns have been introduced and developed. They reflect modern town shape, planning features of transport and communication frame, location of a historic core in a town structure and its compositional features. Towns have been divided into four types according to most common forms of the plan.

Moreover, information about the location of the most valuable objects of historical and architectural heritage has been included in the passports. Additional information has been provided in the form of reference. It includes the data concerning population, area, year of establishment and the date of adoption of the Magdeburg Rights. In addition, morphological research of historic nucleus of small towns has been conducted. It has allowed us to distinguish three main formative types, which are also reflected in the passports of the towns. Passports, legends and results of the morphological research of some towns are represented in Figures 3 and 4.

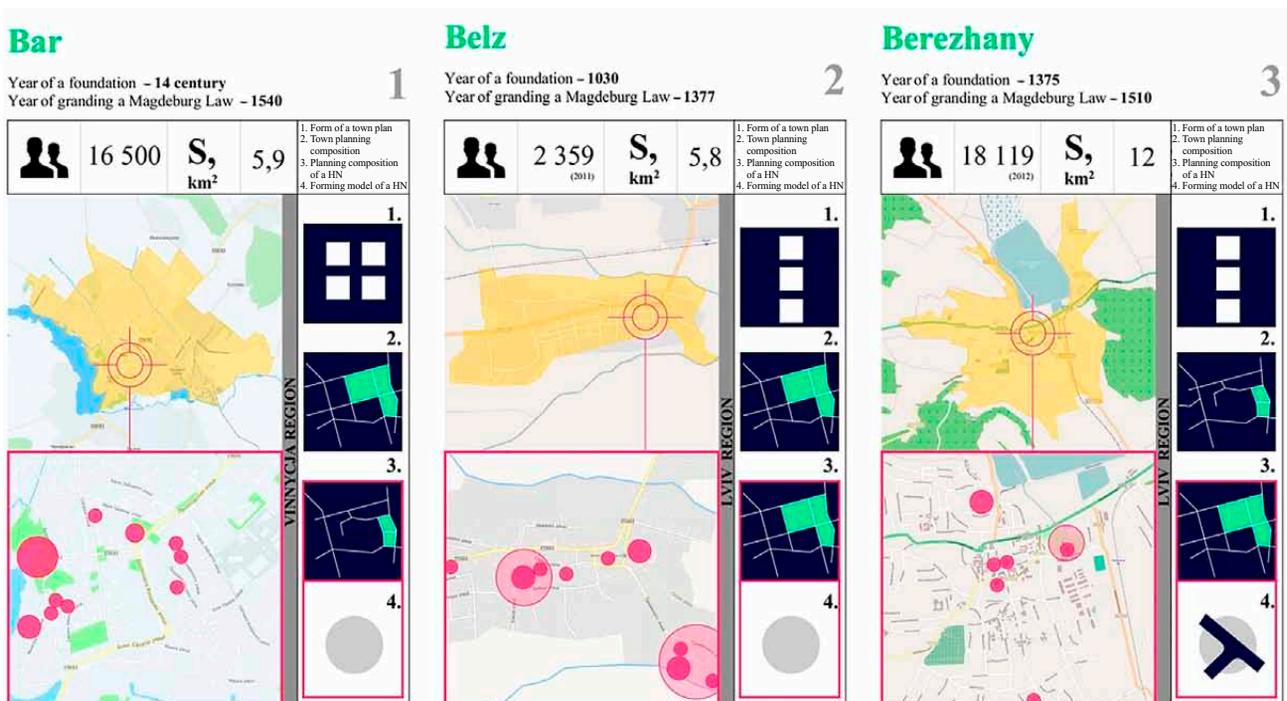
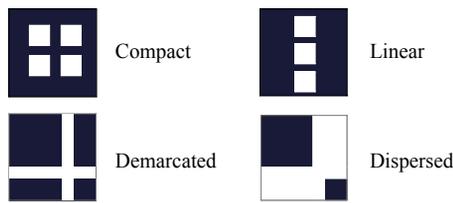
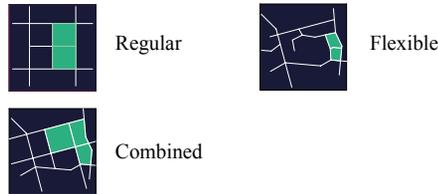


Fig. 3. Passport of the studied towns

*Form of a town plan:*



*Type of planning composition both to whole town and historic nucleus:*



*Formative models of a historic nucleus:*

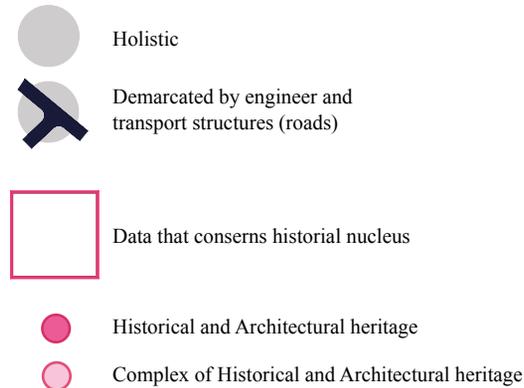


Fig. 4. Legends of the urban analysis

According to the analysis, the most common form of the plan is demarcated, which includes 13 towns, such as Berestechko, Brody, Busk, Volodymyr-Volynskyy, Zhovkva, Ostrog, Rava-Ruska. The next form of the plan is linear. It includes the following towns: Belz, Sokal, Berezhany, Kremenets. Compact type of the plan is typical in the following towns: Bar, Zolochiv, Novgorod-Siverskyi. Dispersed type of the plan is found only in the urban structure of Dubno.

As for the planning structure of historic nucleus in the Ukrainian towns with the Magdeburg Rights, it should be noted that most of them have flexible construction of transport and communication framework. This fact is definitely connected to the peculiarities of relief and national approach to planning. These towns encompass Bar, Berestechko, Busk, Buchach, Volodymyr-Volynskyy, Komarno, Lyuboml, Ostrog, Rohatyn, Terebovlya. Another group of towns is characterized by symbiosis of regular planning compositions and flexibility. This type of towns includes: Belz, Berezhany, Zhovkva, Kremenets,

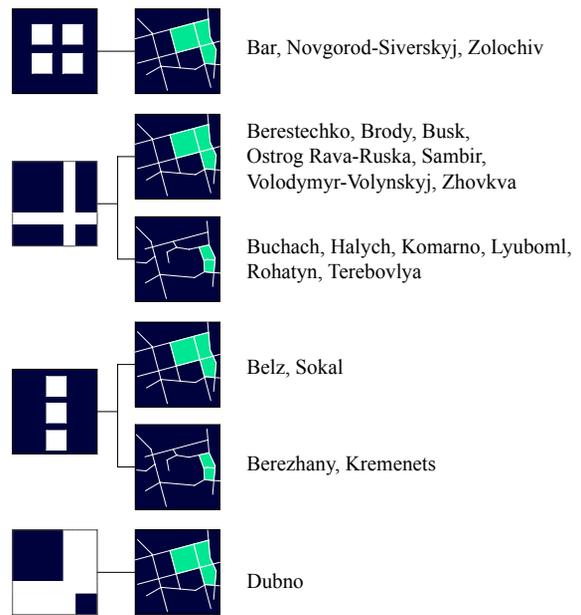


Fig. 5. Classification of towns according to the form of urban plan and planning composition



Fig. 6. Classification of towns according to the type of urban planning compositions of historic nucleus

Novgorod-Siverskyi, Rava-Ruska, Sokal. The smallest group characterized by regularity of planning structure includes Sambir, Zolochiv, Brody. The classification is shown in the info-graphics (Figs 5, 6).

The model of shaping of the historical core has been also studied. It is noteworthy that in the research the objective has been not to outline the historical nucleus of the town (this work requires a methodology, based on detailed historical and cartographic analysis), but to define the model of its shaping. The borders of the historical nucleus, which became the ground for distinguishing the shaping model, have been outlined hypothetically, based on the most complete coverage of known historical and architectural objects. Three main types of historic core shapes, presented in three morphological patterns, have



Fig. 7. Shaping models of the historic nucleus and symbols

been identified. These are a holistic model; a model in which objects are divided by engineering and transport facilities (such as roads), and the model in which the division is due to the existing natural features and landscape areas (e.g. rivers). In this research, the holistic model of the historic nucleus has been formed on the basis of such compositional characteristics as compactness and hierarchical structure. The results are graphically presented (Fig. 7).

## Conclusions

The object of the study has been defined as the historical towns of Ukraine, which adopted the Magdeburg Rights. Among all historical localities of Ukraine (185 in total), 70 have been studied. Selected towns have been analyzed with the purpose of defining the most valuable historical and architectural heritage, especially urban planning components related to the Magdeburg Rights, such as the market square with perimeter buildings, religious buildings, castle (palace), defensive walls and fortifications, and historical landscape objects. 22 towns with the greatest potential have been defined. Analysis of the selected towns has allowed the author to single out groups of towns that have common shape of planning, type of planning composition of the towns themselves and their historic core, and formative model of historic nucleus. The most common form of the plan of small historic towns in Ukraine has proved to be divided form with mixed type of planning composition. Regarding the planning composition of historic nucleus, the most common is free transportation and communication type of urban framework.

The analysis has shown that 36% of studied historic small towns have engineering and transport facilities, mostly highways with different character of traffic service, in their formative model. These facilities interfere with the integrity of the towns. On the other hand, a river in the structure of historic nucleus of such towns as Buchach and Busk, also divides their integrity, but enhances the artistic and aesthetic component.

The results of the developed classification will help to understand the development of urban organism better and to define common architectural-planning characteristics. Such analysis could become a basis for comprehensive recommendations in the sphere of further urban deployments. It is vital to facilitate the integration of historical and architectural centres into modern urban environment in certain selected groups of towns, taking into account the peculiar characteristics of each individual town.

## Disclosure statement

I do not have any competing financial, professional, or personal interests from other parties.

## References

- Barhin, M. 1986. *Gorod. Struktura i kompozicija*. Moskva: Nauka. 258 p. (in Russian).
- DBN 360-92\*\*: 2002. *Mistobuduvannja. Planuvannja ta zabudova mis'kyh ta sil's'kyh poselen'* [Urban development. Planning and real estate development of urban and rural settlement]. Kyiv, 2002 (in Ukrainian).
- Kravcov, S. 1993. *Principy reguljarnogo gradostroitel'stva Galichiny XIV–XVII vekov* [online]. Moskva: VNIITIA [cited 5 November 2014]. Available from Internet: [http://www.academia.edu/720610/Sergey\\_Kravtsov\\_XVI-XVII\\_Principles\\_of\\_regulated\\_town\\_planning\\_in\\_Ruthenia\\_Rubra\\_14th\\_-17th\\_Centuries\\_supervisor\\_Dr.\\_Rais\\_M.\\_Gariayev\\_All-Russian\\_Research\\_Institute\\_for\\_Theory\\_and\\_History\\_of\\_Architecture\\_and\\_Town\\_Planning\\_8\\_June\\_1993\\_Moscow\\_In\\_Russian](http://www.academia.edu/720610/Sergey_Kravtsov_XVI-XVII_Principles_of_regulated_town_planning_in_Ruthenia_Rubra_14th_-17th_Centuries_supervisor_Dr._Rais_M._Gariayev_All-Russian_Research_Institute_for_Theory_and_History_of_Architecture_and_Town_Planning_8_June_1993_Moscow_In_Russian) (in Russian).
- Kobylec'kyj, M. 2008. *Magdeburz'ke pravo v Ukrai'ni*. (XIV – persha polovyna XIX st.): istoriko-pravove doslidzhennja. Lviv: PAIS. 406 p. (in Ukrainian).
- Kryp'jakevych, I. 1962. *Dzherela z istorii' Galychyny periodu feodalizmu (do 1772 r.)*. Kyiv: Akademija nauk Ukrai'ns'koi' RSR, 60–65 (in Ukrainian).
- Kryp'jakevych, I. 1984. *Galyc'ko-Volyns'ke knjazivstvo*. Kyiv: Naukova dumka. 173 p. (in Ukrainian).
- Lynch, K. 1986. *Sovershennaja forma v gradostroitel'stve*. Moskva: Strojizdat. 264 p. (in Russian).
- Lynch, K. 1982. *Obraz goroda*. Moskva: Strojizdat. 328 p. (in Russian).
- Mogytych, R. 1993. Elementy reguljarnogo planuvannja u mistah knjazhoi'Galychyny, *Galyc'ko-Volyns'ka derzhava. Peredumovy vynyknennja, istorija, kul'tura, tradycii'*, 90–91 (in Ukrainian).

- Rybhyns'kyj, O. 2000. *Arhitektura perymetral'noi' zabudovy rynkovyh ploshh mist ta mistechok Galychyny u kinci XVIII – na pochatku XX stolit'*. Lviv: L'vivs'ka politehnika. 228 p. (in Ukrainian).
- Rychkov, P. 1996. Rynkovi ploshhi, *Pam'jatky Ukrai'ny: istorija ta kul'tura* (2): 26–31 (in Ukrainian).
- Sas, P. 1989a. *Feodal'nye goroda Ukrainy v konce XV– 60-h godah XVI v.* Kyev: Naukova dumka, 212–215. (in Russian).
- Sas, P. 1989b. *Feodal'nye goroda Ukrainy v konce XV– 60-h godah XVI v.* Kyev: Naukova dumka, 35–66, 173–187. (in Russian).
- Shebek, N. 2008. *Garmonizacija planuval'nogo rozvytku mista.* Kyiv: Osnova. 216 p. (in Ukrainian).
- Vechers'kyj, V. 2003. *Spadshhyna mistobuduvannja Ukrainy: Teorija i praktyka istoryko-mistobudivnyh pamjatkoohoronnyh doslidzhen' naselenyh misc'*. Kyiv: NDIITA. 560 p. (in Ukrainian).

## MAŽŲ UKRAINOS ISTORINIŲ MIESTŲ PLANAVIMO STRUKTŪROS TIPAI

### J. Zapunna

#### Santrauka

Pateikiami urbanistinės aplinkos fragmentų struktūros ir planavimo sisteminės analizės rezultatai, gauti nagrinėjant urbanistinės aplinkos formavimosi prielaidas, ypač – Magdeburgo teisių įtaką miesto kultūrai. Tyrimas apima mažus Ukrainos miestelius, kurie geriausiai išlaikė savo istorinę praeitį. Buvo išanalizuota 70 Magdeburgo teises turėjusių Ukrainos miestų, ištirtos jų istorinės, architektūrinės ir planavimo galimybės. Patys vertingiausi miesto fragmentai buvo klasifikuojami pagal tam tikrus kriterijus, pavyzdžiui, plano formą, planavimo struktūrą ir kt. Remdamasi atlikta analize, autorė pristato apibendrintus pasiūlymus dėl Ukrainos miestų istorinio ir architektūrinio paveldo plėtotės atsižvelgiant į sociokultūrinę ir turizmo infrastruktūrą.

**Reikšminiai žodžiai:** miesto plėtra, planavimo struktūra, Magdeburgo teises turėję miestai, tipologija, istorinis branduolys, istorijos ir kultūros paveldas.