

Preliminary Study of Urban Design Strategy to Create the Urban Characteristics——Take Baotou City in Inner Mongolia for Example

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Abstract: The city's characteristics have significance for the development of the city. In the process of rapid urbanization, many cities of China are in the crisis of lack of characteristic. This article provides urban design strategies at a macro level to put forward the characteristics in urban design of Baotou city in Inner Mongolia. The urban design strategies to create the city characteristics are to summarize a concise spirit image slogan of the city, to construct a reasonable city spatial structure, to positioning the functional area clearly and to integrate the artificial and natural landscape system. These strategies could be useful to other cities in modern China.

Introduction

The city's characteristics are significant difference between a city from another, The city's characteristic is the positive reflection of urban physical form, social culture and economic characteristics. In the process of rapid urbanization, many cities of China are facing the challenge to create characteristic.

The Importance of City's Characteristics

The city's characteristic which is the charm of the city is a significant difference between a city from another. The city's characteristic can enhance the attractiveness of the city, reflect the city's unique culture, it be used as the urban economic growth point. The city's characteristic includes the natural landscape, the urban layout, the industrial structure, the historical background, the urban construction and the urban landscape etc. Physical image feature is the most intuitive of the city, which is an important research aspect in the field of urban planning.

Cities Are in the Crisis of Lack of Characteristic

With the rapid development, many cities of China are in the crisis of lack of characteristic. Many cities are similar in the image of the city. City characteristic theory can't provide guidance for city construction. As an important city of the Inner Mongolia Region, Baotou city is also facing the same problem.

Baotou is the biggest city and the important industrial city in Inner Mongolia, In the year 2013 the population of Baotou is 2.69million, The area of Baotou is 27768 square kilometers.

In the 1960s, the constructions of Baotou focus on the city public space environment such as city pedestrian street, public gardens, square etc.

In twenty-first Century, the city managers set their sights on the symbol location: such as the central business district, administrative and cultural center, transportation hub area, waterfront area.

At present, the urban design requires to shape city characteristics in a large scale area which including the whole city. But there is lack of corresponding study of Baotou's characteristics in urban planning at a macro level.

To Create the City Characteristics from the Urban Design Strategy

The image of the city is the city's comprehensive impression, is the nature and the function of the city. The content includes two parts which are external physical image and internal mental image.

To Summarize a Concise Spirit Image Slogan of the City

The city image slogan is summary of city image and city spirit, the city image slogan is refined by the whole or partial information of the city. A good city image slogan is excavated by the local culture, refined by the city's own the resources and conditions. A good city image slogan should grasp the city characteristics and personalities, shape the image of the city to a concise spirit image slogan.

Baotou has been a nomadic area as a large group of northern ethnic minority, which gives Baotou unique and inclusive cultural characteristics. After the liberation, with the large-scale economic construction, the workers from all around the China come to Baotou, The cultural of national, traditional, scientific are exchanged and communicated, and finally formed the city of Baotou's culture, which is famous for its inclusive characteristics.

Baotou City is profit from the ethnic spirit of freedom, the Han nationality wisdom and hard-working quality, the industrial civilization law-abiding and advocating science and technology, etc. Today's achievements should thanks to the traditional and foreign culture. In summary, Baotou city image slogan can be summarized as follows: the spirit of open, inclusive, brave and hard-working.

To Construct a Reasonable City Spatial Structure

City spatial structure refers to various elements and various mutual relations of the elements, mainly including economic structure, social structure and spatial structure, the spatial structure refers to the development of various structure demands embody in space.

The present situation of Baotou city spatial structure. The urban planning of Baotou is effected by the former Soviet Union planning ideas. The urban space emphasize plane composition, Linear – Cluster spatial structure has been well implemented in the development, the Linear – Cluster spatial structure has become one of the important characteristics of Baotou spatial form. The master planning of Baotou laid the foundation for Baotou's urban development pattern. The planning of Baotou city spatial structure can be summarizes as “one city two areas, Linear – Cluster structure, the main road connected and come with green belt”.

The current problems of Baotou city spatial structure. First, the west-east axis connection is weak. The west-east axis plays an important role in shaping the city image. The main street such as: Iron and steel road, Arden Street, Jianshe Road is the main space axis and landscape corridor now and in the near future. But in the process of city development, with the rapid development of Jiuyuan District, The west—east of the city traffic flow mainly depends on the existing streets, there is lack of expressway and large capacity public transportation system, which cause traffic jam and delays. Second, the lack of the of internal north-south commuter routes in each group, north-south road is not wide enough, in the peak hour, road congestion phenomenon is serious. Third, the construction land began to penetrate into the green belt, cut the number of the green land, the layout of the city shows the tendency of loose.

To construct a characteristic city spatial structure in Baotou. Firstly, the characteristic structure of Baotou city should be retained green foundation between each group, and should focus on the development of Jiuyuan district, and develop on the South, and ultimately form the characteristic city spatial structure as " linear – cluster, multi center" form. Secondly, Baotou should strengthen the construction of the large capacity of the public transport system to solve the problem of west—east

traffic congestion. Thirdly, to combine the spatial structure of the former Soviet Union to the Baotou development demands in the spatial structure of the city. Put forward the urban construction while ensuring the traffic function and ecological function of the city, to form a characteristic and reasonable function of city form of Baotou.

To Positioning the Functional Area Clearly

The study chose important area of Baotou to discuss the planning strategy, the areas include: Donghe area, Kun and Qing area, New city area. In order to control area characteristics more easily, the study use administrative region as a unit. On one hand, it is facilitate to coordinate relevant departments, on the other hand it is facilitate the implementation of the operation.

The Donghe area. Donghe area was the first area established in Baotou. The main function of Donghe area is traditional business services, administrative function, cultural and entertainment function and Donghe provides commercial services, urban image design should be strengthen the function of the area, what's more, to protect the old city and historical and cultural characteristics.

The urban image design strategy of this area is as follows. For the old city mainly functions in the residential and public service, the urban design should not only to meet the warm feeling for living, but also show different culture here. To allow representatives of different religious buildings symbiosis in the city space, to show the area inclusive and vibrant landscape.

The Kun and Qing area. The Kun and Qing area was the established in 1950's. The main function of this area is: comprehensive city center, including administrative function, commercial and financial function, cultural and sports function, scientific research and education function, business services and the new industry. The urban image design strategy of this area is: to create image of the comprehensive modernization city center, to enhance the design of important area, landmark buildings to enhance the identification, to emphasize the brand characteristics of Baotou "Garden City" through the open green space.

The new city area. The new city area is the latest area. The main function of this area is: a new administrative center, regional service center, exhibition center, municipal Park. The urban image design strategy of this area is: to create modern landscape to show a regional service center and production center. To show the image that The Olympic Park and Tara Khan grassland in the city is in harmony with nature, and large public infrastructure fits to regional. The urban should enhance the identification, highlighting the sense of the times and prominent landscape.

To Integrate the Artificial and Natural Landscape System

The present situation of Baotou city natural conditions. The north of Baotou is Yinshan Mountain range, and in south of the city is the Yellow River. On the north shore, there a large area of river wetland which is valuable resources on the east of the Yellow River, the river wetland is an important ecological barrier in Baotou.

In the city, East River and Kundulun River's ecological landscape forms a unique landscape corridor, Erdaosha and Sidaosha river's coastal landscape still need to improve.

The Squares, the parks and the community green space formed in the urban scattered green plaque in Baotou.

The current problems of the artificial and natural landscape system. The current problems of the artificial and natural landscape system are as follows, firstly, the urban artificial system and the surrounding natural landscape elements don't have very good combination, there is not enough visual corridor and landscape corridor to introduce surrounding mountain view and waterscape into the city. Secondly, the existing green space is not enough and the structure of distribution is not uniform, so the green land can't meet the needs of the service radius.

The design strategy of landscape features. If the city planning extends existing ecological green land outward, and the set organic connection with suburban greening, it will greatly promote the

enrichment and expansion of city landscape. The urban design could better to extend the natural landscape such as the forest, the grassland, the wetlands, the rivers and lakes, and give them new vitality.

Landscape system characteristics in Baotou can be summarized as “north of Yellow River, south of the Castle Peak, penetration of riverside, network of green land”.

The design strategy of landscape features should follow the system characteristics. In the first place, the body of the northern mountain is the barrier of the city, the southern slope of the mountain needs greening projects. The next, the urban design should coordinate the relationship between building community and the mountain, to control the building height for a rich landscape system. Once more, Yellow River is in the southern of the city, it's an important source of water and ecological landscape, construction behavior surrounding Yellow river should be strictly limited. Then, the city's green space system should be enhanced, according to the existing structure of green space is not uniform and the green land can't meet the demand service radius. The city needs to build more parks. Hundreds kilometers of Green Street , the iron and steel street, Jianshe Road and Bayan Tara Avenue is not continued in Donghe district, The old district Donghe District is lack of green space, these problems need to be solved in the urban design in the future.

Summary

The distinctive urban characteristics are an important element of the city's competitiveness. Urban design is an effective way to guide the urban characteristic. This article take preliminary study of the Baotou city and provide guide elements and lead content which include the spirit image slogan, the reasonable spatial structure, the positioning functional area, the integration of the landscape and natural system. These methods could be useful to other cities in China.

The guide elements and lead content shape the image of the city features will be conducive to transform the Baotou's natural and cultural characteristics to the physical environment characteristics. City guide elements are not single and immutable but should be open and be suit to local conditions, it may contain urban color system, urban night landscape etc. Further research should constantly provide more elements and content to guide Baotou characteristic urban image, establish more perfect design strategy.

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References

- [1] Lynch K. The Image of the City [M]. Cambridge, MA: Joint Center for Urban Studies, 1960.
- [2] Hall, Peter. 1988. Cities of Tomorrow-An Intellectual History of Urban Planning and Design in the Twenties Century [M]. Oxford, Cambridge (Blackwell)
- [3] Guangjun Jin. Illustrating urban design [M]. Harbin: Heilongjiang science and Technology Press, 1999. In Chinese
- [4] Jianguo Wang. City design [M]. Nanjing: Southeast University press, 2004. In Chinese
- [5] Information on the Baotou City Planning Bureau. <http://www.btjs.com.cn/cms/>
- [6] Guangya Zhu. Mining characteristics and regional culture of city [J]. Architectural Journal, 2001(11)49-51. In Chinese