



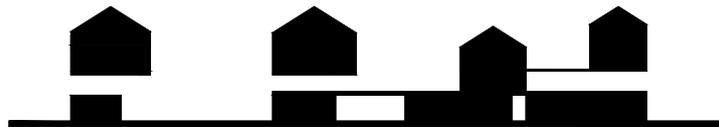
POLITECNICO
MILANO 1863

Scuola di Architettura Urbanistica Ingegneria delle Costruzioni
ARCHITETTURA - PROGETTAZIONE ARCHITETTONICA

Tesi di Laurea Magistrale

Evolution and Translation of Urban Village in Xi'an

Study on Renew of Xia Village in the Small Wild Goose
Pagoda Area, Xi'an, Shaanxi



Wang Yikai _ 876421
Gao Yingxian _ 877327

Supervisor
Laura Anna Pezzetti

ACKNOWLEDGMENTS

Two years ago, We started our Double Degree program. So we had an opportunity to come to Politecnico di Milano to study. In the in the period of Master study, We have learned a lot both in architectural theory and design. Serious attitude towards academics is also our harvest. And many people have made invaluable contributions, to whom I would express my gratitude here.

Our deepest gratitude goes first and foremost to Professor Laura Anna Pezzetti, our supervisor, for her constant encouragement and guidance. She has walked us through all the stages of both my research and design. Without her consistent and illuminating instruction, this thesis could not have reached its present form. We are also impressed by her rigorous attitude and respect to relics in research and design, which will also benefit rest of our life as ar-

chitects.

We are also grateful to Professor Li Yueyan and Professor Song Zhaoqing, our tutors in XAUAT, for their guidance and suggestion before We came to Italy. And Professor Carol Monticelli, for her guidance on our Structure selection and technological drawings.

A very special gratitude goes to Livia De Zan in Double Degree Office for always helping us patiently when we have problems. With her help, we can successfully register for the final exam.

Last but not the least, our thanks would go to our parents for their loving considerations and great confidence in us all through these years. We also owe our sincere gratitude to our friends, Tian Qinxue, Chao Yibo, Zhang Haoxi, Huang Heqing, Yin Xiaoxi, Shi Jiayi, who gave me their help and study with us together.

ABSTRACT

This paper mainly studies the transformation of urban villages. The problem of urban villages is a serious problem that is common in the process of rapid urbanization in modern China, causing many contradictions and opportunities. At present, we need to solve the problem of urban villages and stimulate their potential. Therefore, the transformation of urban villages is of great research value. First, a comprehensive introduction to the basic conditions of the phenomenon of the village in China, including the definition of villages in the city, the reasons for formation, and existing problems. Next, because the project base is located around Small Wild Goose Pagoda in Xi'an, Shaanxi Province, the next step is to study the development and transformation of urban village in Xi'an. First of all, because Xi'an has an important position in Chinese history, it in-

roduces the historical overview of Xi'an. Among them, the Tang Dynasty, which was built during the period of the Small Wild Goose Pagoda, and the Qing Dynasty, which had an important influence on the modern Xi'an pattern, were mainly studied. Next, an overview of the current situation of urban village in Xi'an is introduced. What is more, we also studied the Main types and Institutional Changes and Land Conversion Models of urban village transformation methods in Xi'an.

The project base is Xia village on the south side of Small Wild Goose Pagoda. In order to rationally transform it, we selected three levels of prototypes to study. First of all, in order to better understand the texture of natural villages, we studied the existing outstanding villages, Dang village in Shaanxi Province. A detailed analysis of its texture and public space was car-

ried out. Next, in order to better understand the way of collective living in China, we studied the "unit", a classic living mode of New China after liberation. Understand the distribution of public and private features. Finally, in order to meet the overall architectural style of the Small Wild Goose Pagoda, we studied the "Courtyard", a traditional Chinese architectural prototype. And the courtyard is reasonably applied to the building.

Finally, based on the research and study, we completed the transformation of the Xia village in the south of the Small Wild Goose Pagoda and its surrounding environment.



INDEX

1_ INTRODUCTION OF URBAN VILLAGE IN CHINA	1
1.1_ Definition and special character of urban village	3
1.2_ Causes of urban village	9
1.3_ Main problems in urban village	15
2_ INTRODUCTION OF URBAN VILLAGE IN XI'AN SHAANXI	19
2.1_ Xi'an General Situation	21
2.2_ Urban Village General Situation in Xi'an Shaanxi	33
2.3_ The development stages of urban village in Xi'an Shaanxi	39
2.4_ Main types of urban village transformation methods in Xi'an Shaanxi	47
2.5_ Institutional Changes and Land Conversion Models of Urban Villages in Xi'an Shaanxi	55
3_ ANALYSIS AROUND THE PROJECT AREA	59
3.1_ Analysis of the community and surroundings	61
3.2_ Analysis of the community	71
3.3_ Evolution of the community	81
3.4_ Analysis of Xia urban village	89
4_ DESIGN STRATEGY	97
4.1_ Site strategy	99
4.2_ Architecture strategy	117
5_ PLATES	145
6_ BIBLIGRAPHY	149

1
INTRODUCTION
OF URBAN
VILLAGE IN
CHINA

1.1
DEFINITION AND
SPECIAL CHARACTER
OF URBAN VILLAGE

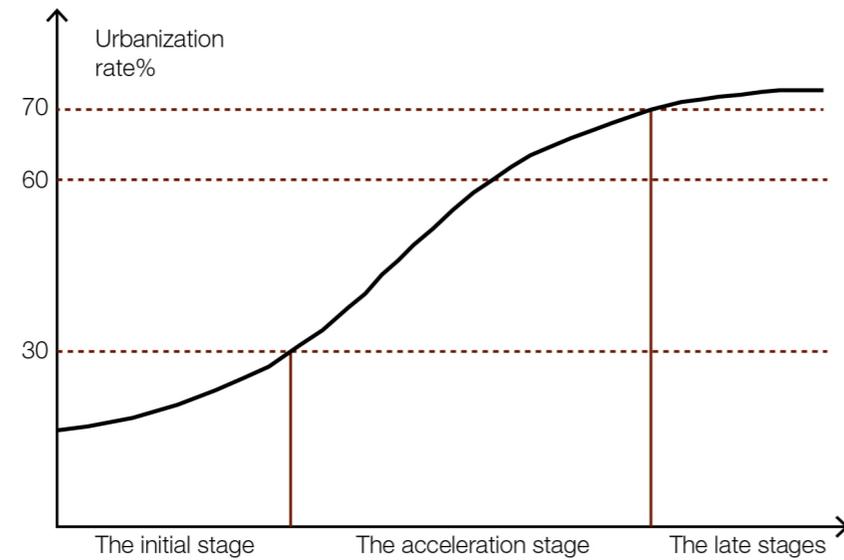
DEFINITION

The proposing of "Urban village" concept is closely linked with the urban development and urbanization process. According to the American scholar Northman, the change in the proportion of the urban population of a country or region to the total population can be summarized as a slightly flattened "s" curve (Fig 1.1). The process of urbanization of a country or region can be divided into

three stages: (1) the initial stage of urbanization development level (2) the acceleration stage of urbanization process (3) the late stages of urbanization process.

According to this theory, a country or region in the process of urbanization after the first inflection point will appear a period of rapid growth of the urban population proportion. At this stage, urbanization is faster than urban facilities construction and cities development, which raises many

Tab 1.1_ Urbanization Process Diagram



Tab 1.2_ Characteristics of Urbanization Process in Each Period

	THE INITIAL STAGE	THE ACCELERATION STAGE	THE LATE STAGES
THE CHARACTERISTICS OF THE URBANIZATION PROCESS IN EACH PERIOD	<ol style="list-style-type: none"> 1. Mainly to agricultural settlement, mainly to agricultural development; 2. Low level of urbanization and slow development. 	<ol style="list-style-type: none"> 1. The number of cities has increased rapidly and the urban areas have been expanding; 2. Industrialized societies, leading to secondary industry, tertiary industry rising; 3. The population is rapidly concentrating on the city. 	<ol style="list-style-type: none"> 1. Urban and rural regional integration, and the emergence of reverse urbanization and suburbanization of the central city phenomenon; 2. Post-industrial society, the tertiary industry dominated; 3. The proportion of urban population growth slowed down or even stagnant.



Fig 1.1_ Present situation of Urban Village

Took by author

[1]. Zheng Hongyi, *Research on Rural Urbanization*[M], Nanjing University Press, 1998

problems. Combined with China's national conditions, China's urbanization is mainly accompanied by the great changes of reform and opening up in 20 years. From the past 20 years since 1980, China's urbanization rate has accelerated significantly, the level of urbanization has increased from 17.9% in 1978 to 39.1% at the end of 2002. According to the above theory, this period is in the transition from the "initial stage" to the "accelerated stage" transition period, that is, "urban disease" high incidence period. It was in this period, large numbers of urban villages appeared in China's large cities.

In general, "village" refers to the rural land has been included in the scope of the overall urban planning, with little or no agricultural land, residents are basically "non-agricultural". These urban villages are surrounded by urban architectures. Although the residents are mainly the original villagers, but there gathered the foreign population which are times the original villagers.

TYPES

From the form, the urban village can be divided into three categories: one is in the downtown area, has no agricultural land, as mature urban villages; the second is around the urban areas, there is a small amount of agricultural land, as extending urban villages; the third is in the suburbs, there is more agricultural land, as birthing urban villages. The characteristics of these three types of urban villages are as follows.^[1]

The "urban village" studied in this paper is mainly the mature village. They are mainly concentrated in the urban built-up area, still retain the rural system, use collective land, basically do not have agricultural land, agriculture is not the main source of life of the villagers.

Tab 1.3_ Types of Urban Village

TYPES	MATURE TYPE	EXTENDING TYPE	BIRTHING TYPE
LOCATION FEATURES	Downtown area	City edge	Suburbs
SPATIAL FEATURES	<ol style="list-style-type: none"> 1. Close to the city center, there is no agricultural land, surrounded by urban land; 2. The village has stopped to expand, and the internal structure changed, which has a great impact on the city. 	<ol style="list-style-type: none"> 1. Located on the edge of the city, with a small amount of agricultural land staggered with urban land; 2. High building density, high volume rate, poor environment; 3. Urban land invasion, internal space relations are constantly changing and forming, urban and rural contradictions gradually appear and increase. 	<ol style="list-style-type: none"> 1. Located outside the city built area, inside planning and development areas, with some agricultural land; 2. Building density is relatively low, low volume rate, the environment in general; 3. Urban land invasion began, but smaller-scale, urban-rural contradiction is not obvious.
ECONOMIC FEATURES	Agricultural production disappeared completely, to rental housing based tertiary industry developed.	The proportion of agricultural production continued to decline until the disappearance while the tertiary industry is more developed.	Transition from agricultural to non-agricultural production.
SOCIAL FEATURES	Mainly non - agricultural population.	Mainly agricultural population, but few people engaged in agricultural activities.	Mainly agricultural population.
MANAGEMENT SYSTEM	Turning from the rural management system to the urban community management system.	Rural management system.	Rural management system.

1.2
CAUSES OF URBAN
VILLAGE

SYSTEM CAUSE
- URBAN AND RURAL DUAL
SYSTEM

Each urban village has its own causes, but the underlying reason for their formation is the same, that is, "urban-rural dual structure". "Urban and rural dual structure" refers to the urban society composed of the citizens as a party, rural community composed of farmers by as the other party. In the household registration management, land management, administration, social security, public investment system, education system, employment arrangements and other aspects, agricultural population and non-agricultural population was strictly distinguished. The impact of the dual structure on the formation of the village is mainly manifested in the urban and rural dual household registration policy, urban and rural dual land system and urban and rural dual management system three aspects.

(1) Urban and rural dual household registration policy

China's current population

household registration management system mechanically completely separated urban residents with farmers. Compared with farmers, urban residents in the housing system, education system, health care system, pension system, labor protection system and others had obvious advantages. This policy made the distribution of urban and rural population and labor allocation in a long time in a solid state, leading to that farmers cannot just change the place of residence or their career.

Although the urban village villagers living in the city, but they are still belong to the rural household registration, all without any difference institutional arrangements with farmers. This makes the villagers in the city in a lower status, in the production, life, social security and other aspects are extremely scarce, cannot be integrated into the normal city life.

(2) Urban and rural dual land system

In this system, the urban land is owned by the whole people, by the local government on behalf of the state management, planning

the use of land. The rural land is owned by the rural collective, owned by the village committee management, while allowing farmers to have a certain homestead for residential construction. In the process of urban expansion, the state can requisition agricultural land, but it is difficult to requisition homestead.

The homestead system still exists, which is obviously different from the state-owned land system in the urban area. It is this difference that forms the dual structure of the land in the urban village and the city. The duality of the land system is the core factor in the formation of the urban villages.

(3) Urban and rural dual management system

The urban and rural dual social management system is a kind of administrative mode unique to our country. Its basic structure is that the city government organization is responsible for the management and service of the inhabitants of non - agricultural household registration. While the rural political organizations are responsible for the management and service of

farmers in the agricultural household registration.

At present, the urban village still retains the rural social organization and rural management system. This makes the rural nature of the urban village did not a fundamentally changed. Its management system is in a closed state, almost completely independent of the city management system. So that the urban villages show the exclusiveness. The local government cannot exercise the appropriate management authority in the urban village, resulting in the management confusion.^[2]

EXTERNAL FORCE
- HIGH-SPEED URBANIZATION
PROCESS

The expansion of urban built areas inevitably involves the surrounding countryside. Under normal circumstances, rural areas close to the urban area are gradually annexed, agricultural land was requisition for construction land, while villages and villagers will have to go through a process of demolition, resettlement and con-

[2]. Xiaoying Feng, *The Systematic Problems that Must Be Solved in the Dual Society*[J], Urban Assemblies, 2002(4)

version to urban residents. However, in a stormy manner process of urbanization, the cities quickly expand the built area in a very short period of time, and they did not have time to slowly absorb, digest the original rural settlements. In the near “land grab” like city expansion, land developers are seeking to get the plots are most easy to deal with in the shortest possible time. When facing with the demolition resettlement and other troublesome problems, they often choose to put a release and wait. As a result, the farmland was quickly requisitioned for construction, while the village was retained. Until the surrounding high-rise, wide road, land prices rose when the original cheap villages have become “worth” up. Then even if they want to turn it into a coordinated construction with the surrounding environment, demolition compensation cost a lot and became more difficult, so these villages had to continue to stay. Over time, this produced a later “village” problem.

OBJECTIVE REASON - RURAL POPULATION URBANIZATION, DEMANDS FOR LOW-RENT HOUSING INCREASED

The development of urban economy and the evolution of industrial structure will inevitably lead to the change of social and economic structure and the labor productivity gap between departments. In the situation of urban and rural income gap increased, the household registration system gradually relaxed, a large number of farmers left the land, and began the migration of rural population to the city. In the influx of millions of population tide in the city, there are a lot of low quality, low income labor, they have great liquidity, and financial strength is very low. They have housing needs. They have housing needs. But in the big cities of China, the government is only responsible for providing affordable housing to low-income families with urban household registration, and there is no low-rent housing market to meet the low-income migrants. Therefore, these huge flow of people exclud-

ed from the urban social security system can only seek solution from the market. So there has been a huge gap between supply and demand of social housing in the community. The urban village housing with low cost, easy procedures, loose management became their first choice.

According to statistics, so far all cities in China, there are more than 80 million residents not having urban household. It can be seen that the influx of rural population during China’s urban development and their living choice are indeed the realistic background of the formation of the urban village problem.^[3]

[3]. Lan Yuyun, *City in the Village: The Last Link of the End of the Village*[J], Journal of the Chinese Academy of Social Sciences, 2001(6)

1.3
MAIN PROBLEMS IN
URBAN VILLAGE

THE EXTENSIVE USE OF LAND IN URBAN VILLAGES, THE LOSS OF LAND ASSETS

Due to the lack of unified planning and management of urban village, land utilization rate and output rate are low. Driven by profit, villagers' houses tend to occupy public space as much as possible, seriously violating the requirements of urban planning and forming unique scenery such as "first-line day", "handshake building" and "veneer building"; At the same time, the conditions in the "village in the city" are relatively superior and the property rights of the village belong to the village collective. The superior location conditions and the relatively low land prices in the city make the irregular secondary real estate market in the village more active, resulting in the loss of some state-owned land assets which has caused the appreciation by the improvement of planning and infrastructure.

THE ENVIRONMENT IS BAD IN URBAN VILLAGES, AFFECTING

THE CITY'S IMAGE

Due to the typical urban-rural dual system in urban villages and the fact that they have not been well managed for many years, their planning and environmental governance are extremely scarce. High building density and high volume ratio in the urban village, building density some even as high as 60%, inadequate lighting, poor ventilation, fire hazards;

In terms of environmental hygiene, the sewage in the urban village has been brought together into a "river." In the summer, the air in the village is dirty and the mosquitoes and flies are rampant. The difference in environment is unimaginable in the prosperous cities.

In the functional layout of buildings, the most obvious feature in the urban villages is that there is no obvious difference in the level of land use. There is no functional division and the houses occupy the vast majority, with few commercial shops, workshops, warehouses and so on. Houses along the street have more obvious ver-

tical differences, like "live above the business", "business under the factory", "live under factory" confounding phenomenon.

URBAN VILLAGE MANAGEMENT SYSTEM CHAOS, POOR MANAGEMENT PRACTICES

Urban villages have been surrounded by urban communities, as a special type of community that is both urban and rural, neither urban nor rural. From the perspective of management system, there is a big difference between the management system of urban communities and of rural communities. They will create contradictions and conflicts in the urban village and may even create a "vacuum" in management. The rural nature of "village in the city" makes it impossible for urban management department to manage, but the management of the village and town is relatively weak. In this way, the village collective and villagers driven by profit, chaos build style rampant, widespread on illegal land, residential land seriously overweight.

THE COMPOSITION OF URBAN VILLAGE POPULATION DIVERSIFICATION, SOCIAL SECURITY WORRYING

Urban villages constitute a complex population, the village has both rural population, but also urban residents and migrants. Migrant population have low quality, low income, and complex social relations. Coupled with the villagers living a rich material life by renting houses, undermined a fair and efficient social environment and exacerbated social injustice. Some villagers have fostered habits of leisure and idleness, making fighting happen in urban village. The problems of pornography and gambling are serious, not only worsening the quality of life of the entire community, but also seriously affecting the social atmosphere and order of the city.

2
INTRODUCTION
OF URBAN
VILLAGE IN
XI'AN SHAANXI

2.1
XI'AN GENERAL
SITUATION

[4] Shi Nianhai, *Xi'an Historical Atlas* [M] Xi'an: Map Publishing House, 1996, 6.

GEOGRAPHIC LOCATION

Xi'an is located in the northern hemisphere in the southeastern Eurasia, China's geometric center. Qinling Mountains to the south and Weihe River to the north. The topography is characterized by high south and low north. The small plain of Xi'an where the urban area lies is open to the wilderness with lingering rivers, fertile soil, mild climate and excellent natural environment.^[4]

HISTORICAL EVOLUTION

Since ancient times, the small plain of Xi'an is the place where the ancient human ideal lived. Since the Western Zhou Dynasty more than 3,000 years ago, it has become the first choice area for emperors to build their capital in history. In the history, there have been thirteen dynasties and regimes like western Zhou, Qin, Western Han, Sui and Tang dynasties built their the capital in Xi'an for about 1100 year. Therefore, in the historical period of nearly three thousand years, for

more than one third of the time, Xi'an was at the center of Chinese politics and culture, which effectively promoted the development of Chinese history.

Especially the Han and Tang dynasties, the territory is vast, developed economy, scientific and technological progress, cultural prosperity, convenient transportation, far-reaching reputation; the capital of Chang'an is not only the country's largest and most prosperous city, or an international metropolis.

Since the Tang Dynasty, Xi'an, although losing its status as a state capital, has been regarded by successive generations as a key town in guarding the northwest and controlling the southwest. Xi'an, as the economic and cultural center in the northwestern region, still played a significant role in history. And Song, Ming dynasty, in the restoration and reconstruction of Xi'an city also done a lot of work. Only two hundred years of the Qing Dynasty, seldom saw any constructive measures in Xi'an. It is from this period that Xi'an has become in-



Fig 2.1_ Geographic location of Xi'an Shaanxi

Drew by author, Information from *Chinese Atlas*

creasingly backward in the face of the modernization of cities started by some emerging western capitalist countries.

After the founding of the People's Republic of China in 1949, Xi'an became the economic center of the northwestern region. In the past half a century, especially since the reform and opening up, Xi'an has made remarkable progress both in economic and cultural development and in urban construction.^[5]

Xi'an total area of 9983 square kilometers, the total population of 7166000. The central urban planning area of 275 square kilometers, built-up area of 203 square kilometers, is divided into 6 districts as Xincheng, Beilin, Lianhu, Baqiao, Weiyang, Yanta. The urban population is 5102600.^[6]

ENCLOSURE AND AXIS OF XI'AN IN TANG DYNASTY

In Sui Dynasty Sui Wen Emperor reconstructed the new capital. The new capital site located in Longsheyuan Heights, is located in southeast to Han Changan.

Construction started in 582 AD, chaired by Yu Wenkai. It was named Daxing City. Later, the Emperor Sui Tang, and the emperor in the early Tang carried out some construction. It was named Chang'an City in the Tang Dynasty. Sui and Tang Chang'an City, an area of about 8300 hectares (not including the construction of the Daming Palace), the city east and west of 9721 meters, 8651 meters long from north to south, was the ancient world's largest city. The Chang'an City was the first newly built capital city after the Wei dynasty. The planning and layout summed up the fine traditions of the past and was built according to certain intentions. It has become a model for the strict layout of the capital in China.

Since Chang'an City was completely newly built, this kind of traditional planning and layout has become more obvious and has made significant progress on the basis of it. Urban layout Founder, with a clear central axis of the city. Each side opened three doors. The palace was in the center, and around it were the ancestral tem-

[5]. Shi Nianhai, *Xi'an Historical Atlas* [M] Xi'an: Map Publishing House, 1996: 14.

[6]. *Xi'an Statistical Bureau 1985-2003 Xi'an Statistical Yearbook* [M] Beijing: National Statistics Press, 2003

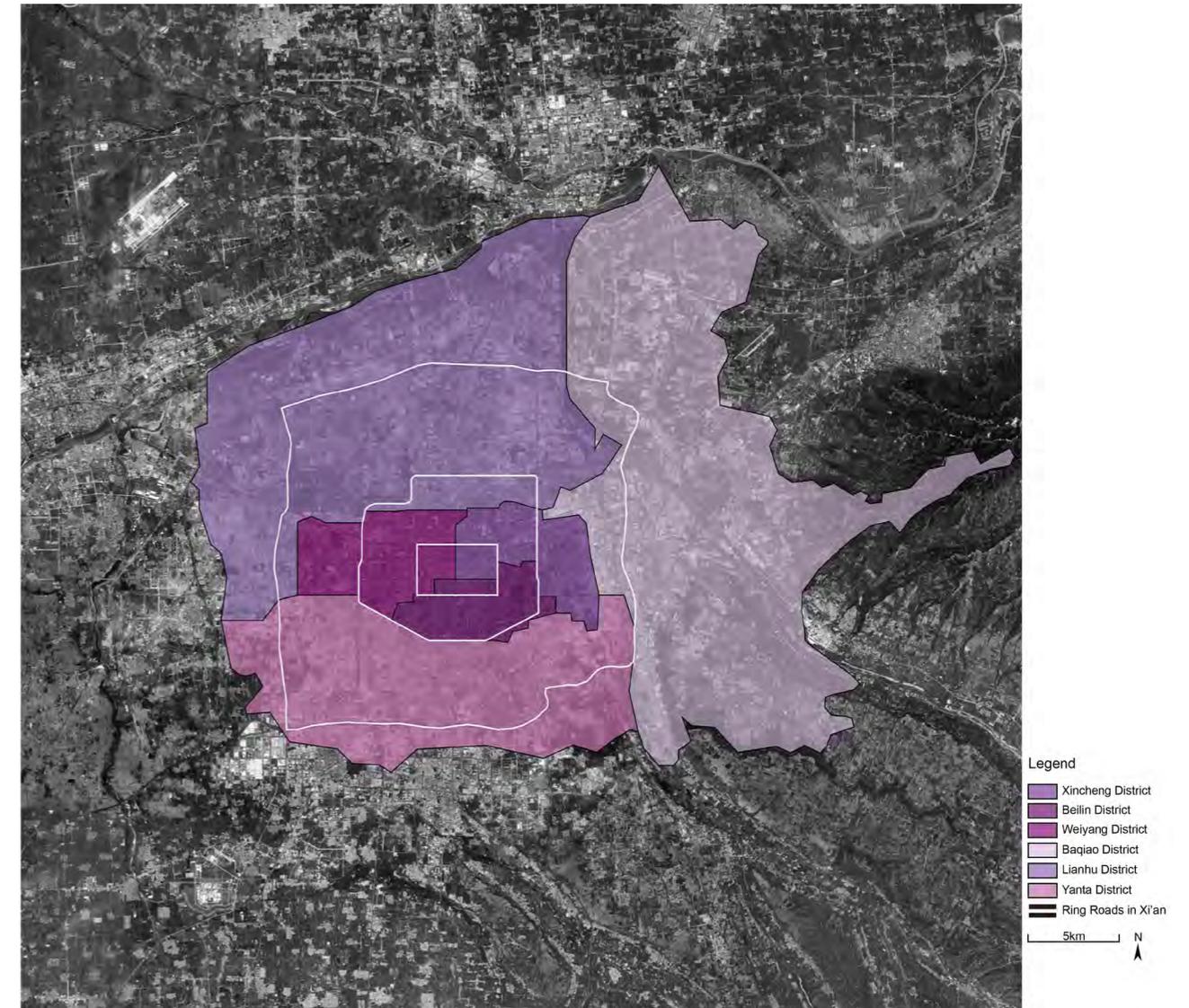


Fig 2.2_ The administrative division of Xi'an Shaanxi

Drew by author, Information from *Baidu Map*

ple and the altar. And this feature is clearly the layout of “Zhou • Kaogongji” capital system reflects. Since Chengtian gate through the main gate of the palace, Zhuque gate, until the south gate of the outer city, Mingde gate, was the main axis of the city. The street from Zhuque gate to Mingde was called Zhuque Street, about 5316 meters. And the southern side of this axis facing the Zhongnan mountain meridian fortress. Inside Chang’an City, the road network, square, market and City Gate also Zhuque Street as the axis and the symmetrical layout. This layout highlights the central axis, and also through the central axis highlights the dominant of the palace in the city. This kind of composition of the city as a whole, so that the road, Fang, building layout as a unified planning techniques, is an excellent tradition of urban construction in ancient China. Changan City’s layout was more rigorous than any of the ancient city.

To sum up, the spatial characteristics of the central axis of the city of Xi’an during the capital are

mainly the following points:

(1) Relying on the natural geography environment of Xi’an city and limited by the restriction and influence of some geographical factors, the walls, Miyagi, roads, shops, temples, etc. were used to organize the central axis of the sequence and create a ritual urban planning ideas in accordance with the spatial order.

(2) The spatial composition of the central axis of the city is mainly for the imperial nobility services, and its size scale, spatial order, color, form, etc. were better than other regions.

(3) Traffic, administration were the main function of the axis, and tall and majestic buildings as the finale of the city to embody the dignity of imperial power.

(4) Have a clear hierarchy of primary and secondary position and hierarchy.

(5) The central axis of the portal space as both ends, and connected with the mountain in the south and the plain in the north. Embodies the ancients “through North and South”, “harmony between man and nature” philosophy.^[7]



Fig 2.3_ Enclosure and axis of Xi’an in Tang dynasty

Drew by author, Information from Shi Nianhai, *The Historical Atlas of Xi’an*, Xi’an Atlas Press, Xi’an, 1999

[7]. Zhu Guangshi, *Ancient Capital Xi’an - Historical Changes and Development of Xi’an* [M]. Xi’an Publishing House, 2003.

ENCLOSURE AND AXIS OF XI'AN IN MING & QING DYNASTY

During the Ming and Qing Dynasties, major changes took place in Xi'an City, six major changes, and the changes in the six urban spaces also had a profound impact on the spatial pattern of the central axis.

The eastward and northward expansion of Mingxian City combined with the establishment of Qin Palace and the eastward movement of the bell tower formed the clock tower as the center of the East, South, West and North four corners of the urban space pattern. For the first time after Sui Chang'an, the central axis of Xi'an City was strengthened. The north-south axis of the city about 4 km long, with the clock tower as the core, mainly by North and South Avenue, north and south gates, South Gate City and Beiguan City constitute. Distribution on both sides of the axis of the major palace, temples, commercial areas, cultural and educational areas, a city with a vibrant zone. North-South Street

space is more transparent. Bell Tower, north and south gates become the hallmark of the axis, especially the clock tower, become the hearts of residents agree that the city center.

The space of the axis is the linear space composed by the road, there is no big open space, so the overall space is more compact. The establishment of Man City and South City in the Qing Dynasty formed a huge impact on the axisymmetric pattern of Xi'an city. The original north-south axis only became the geometry of the city as a whole. Due to the establishment of the Man City's west wall, the urban axis space is high in the east and west, and therefore appears to be unbalanced and relatively closed. The clock tower's landmark is weakened. The overall length of the axis has not changed significantly.^[8]

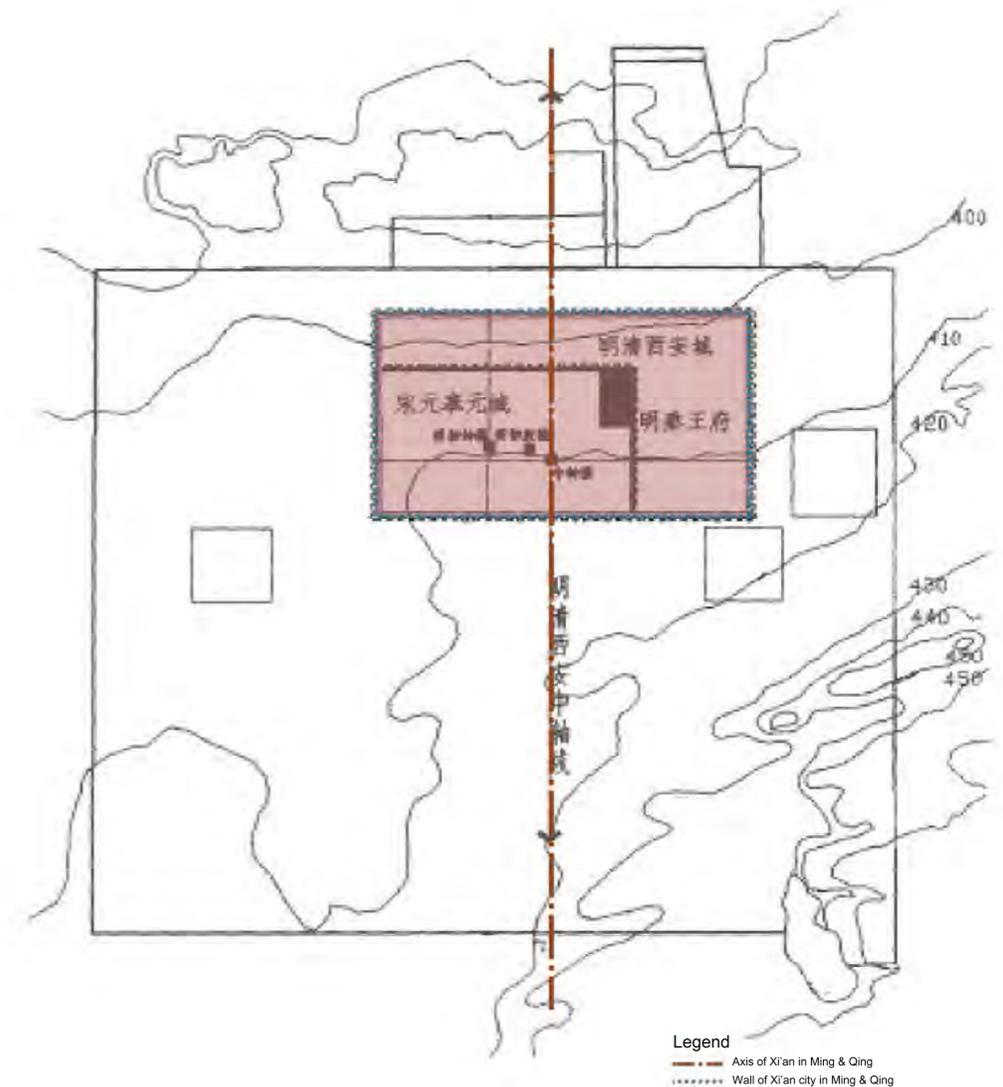


Fig 2.4_ Enclosure and axis of Xi'an in Ming & Qing dynasty

Drew by author, Information from Shi Nianhai, *The Historical Atlas of Xi'an*, Xi'an Atlas Press, Xi'an, 1999

[8] Shi Hongshuai, *Xi'an Urban Geography in the Ming and Qing Dynasties* [M]: China Social Sciences Press, 2008.1,19

OVERLAP OF HISTORICAL ELEMENTS

The central axis of Xi'an City are developed from the historical sites of major cities and palaces. These axes formed the axis system of historical and cultural buildings in Xi'an and are important historical and cultural heritages of Xi'an. Along Xi'an city center axis, many historical sites, historical blocks, historic buildings and other historical and cultural relics are distributed, which is the main framework of Xi'an historical and cultural space, is an important part of Xi'an city historical and cultural construction. After thousands of years of Xi'an city history, these axes are the portrayal of social characteristics in different historical periods in Xi'an.

Chang'an Road, the central axis of modern Xi'an was formed in the Ming Dynasty, and was completely continuation, which had an important impact on the planning of modern city, and also the city center of Xi'an. However, the Zhuque Road in the center of the Chang'an City of the Tang

Dynasty should have been separated by the passage of time. It has lost its important status as an ordinary north-south trunk road. Considering the glorious history of the Chang'an City in Tang Dynasty and the small Wild Goose Pagoda along the Zhuque Road as a monument of the Tang Dynasty, we should revive the axis of Tang Chang'an, Zhuque Road. This better reflect the label of Xi'an historical and cultural city.

The Tang Dynasty Li Fang system also has an important impact on Xi'an City. Tang Dynasty Lifang had a regular pattern, the modular division, and the road network display chessboard format today has a profound connection. And the Jianfu Temple and the Small Wild Goose Pagoda were built in the Tang Dynasty, and were located in Anren Square, so the relationship between the textures of the small wild Goose Pagoda surrounding the area should have some impact on urban design. So the texture of Li Fang should have a certain impact on the Small Wild Goose Pagoda surrounding area urban design.

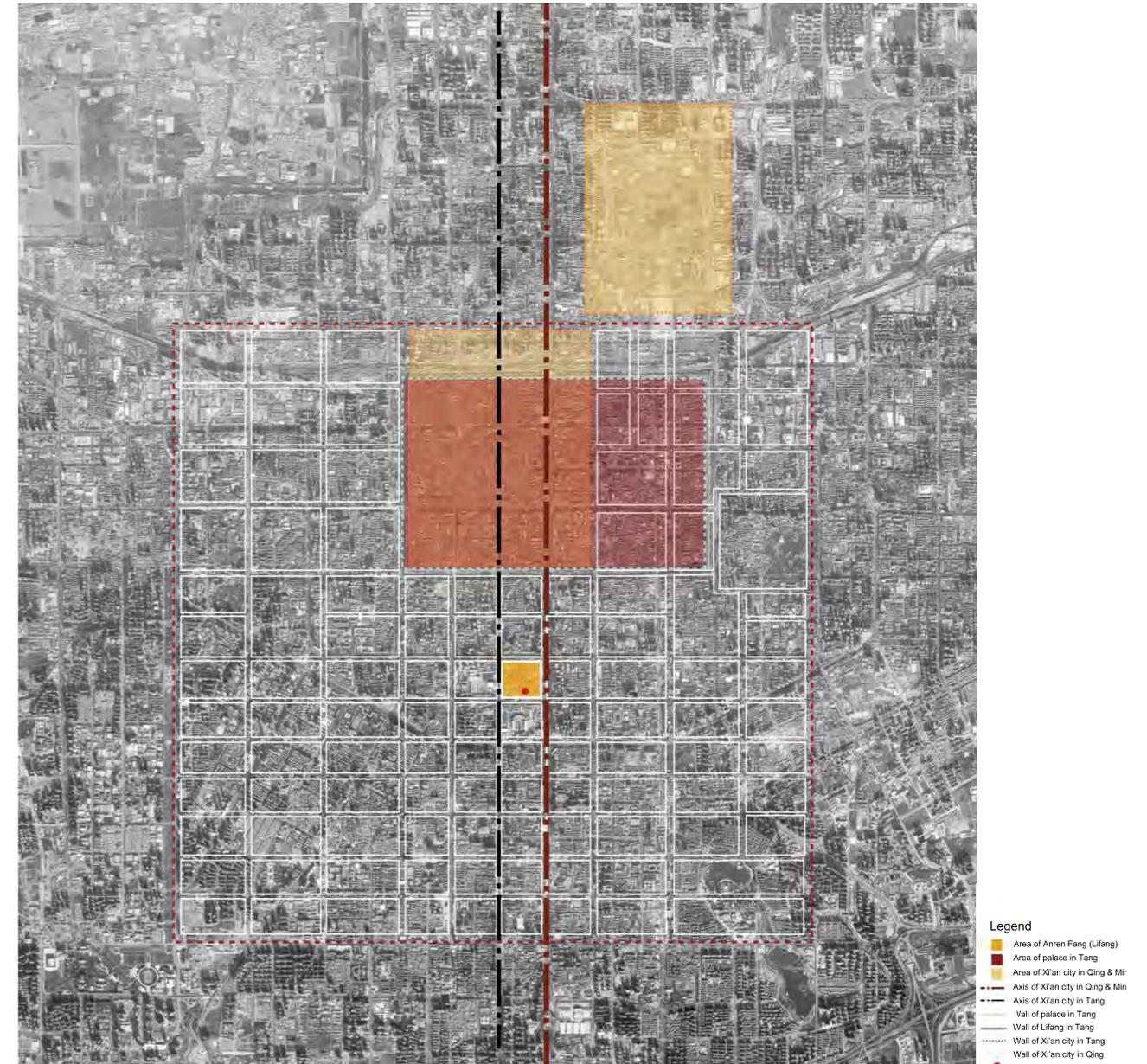


Fig 2.5_ Overlap of historical elements

Drew by author, Information from google map and Shi Nianhai, *The Historical Atlas of Xi'an*, Xi'an Atlas Press, Xi'an, 1999

2.2

URBAN VILLAGE

GENERAL SITUATION

IN XI'AN SHAANXI

[9] According to the summary of Xi'an Urban Village Reconstruction Office data, 2005(12)

QUANTITY

According to statistics, there are total 408 villages in the six urban districts in Xi'an, 187 urban villages in the urban built-up area of 203 square kilometers, including 13 in the Xincheng District, 15 in the Beilin District, 24 in the Weiyang District, 29 in the Baqiao District, 35 in the Lianhu District

and 71 in the Yanta District (Table 2-1). The urban villages have a total population of 261,500, of which 210,800 are rural residents and 50,400 are non-agricultural residents. The urban villages cover an area of 8714 hectares, of which 2386 hectares are for dwelling, 880 hectares for enterprises, 4502 hectares for arable land, 945 hectares.^[9]

Tab 2.1_ Statistics of urban village population and household register in all districts of Xi'an

	URBAN VILLAGE	TOTAL POPULATION	AGRICULTURAL POPULATION	NON-AGRICULTURAL POPULATION
XINCHENG DISTRICT	13	20331	12707	7624
BEILIN DISTRICT	15	17431	11961	5470
WEIYANG DISTRICT	24	39820	29936	9884
BAQIAO DISTRICT	29	31117	28454	2663
LIANHU DISTRICT	35	46251	36002	10249
YANTA DISTRICT	71	106500	91759	14533
TOTAL	187	261450	210819	50423

Tab 2.2_ Xi'an City Urban Village scale statistics

THE NUMBER OF URBAN VILLAGE \ THE POPULATION OF URBAN VILLAGE	500 OR LESS	500-1500	1500-2500	2500-4000	4000 OR MORE
187	14	112	39	18	4
PROPORTION (%)	7.49	59.89	20.86	9.63	2.14

Tab 2.3_ The statistics of the location distribution of Urban village in Xi'an

LOCATION \ DISTRICT	INSIDE THE WALL	BETWEEN THE WALL AND THE SECOND RING ROAD	BETWEEN THE SECOND RING ROAD AND THE THIRD RING ROAD	OUTSIDE THE THIRD RING ROAD	TOTAL
XINCHENG DISTRICT	/	9	4	/	13
BEILIN DISTRICT	/	15	/	/	15
WEIYANG DISTRICT	/	14	6	4	24
BAQIAO DISTRICT	/	/	25	4	29
LIANHU DISTRICT	1	17	17	/	35
YANTA DISTRICT	/	/	69	2	71
TOTAL	1	55	121	10	187

SCALE

The urban villages in Xi'an are generally small in population. As shown in Table 2-2, there are 14 urban villages with 500 persons or less, 112 urban villages in 500-1500 persons, accounting for 58.89% of the total, and 39 urban villages with 1500-2500 persons, accounting for 20.86% of the total. ; There are 18 urban villages in 2500 ~ 4000 people, accounting for 9.63% of the total; 4 with more than 4000 people.^[9]

DISTRIBUTION

In terms of the distribution of urban villages (Table 2-3), there are 56 urban villages within the second ring road in Xi'an, of which 1 is located in the inner city area. The most widely distributed area among the urban villages is between the second and third ring road, for 121 urban villages, accounting for 64.7% of the total. And there are 10 urban villages outside the third ring road.

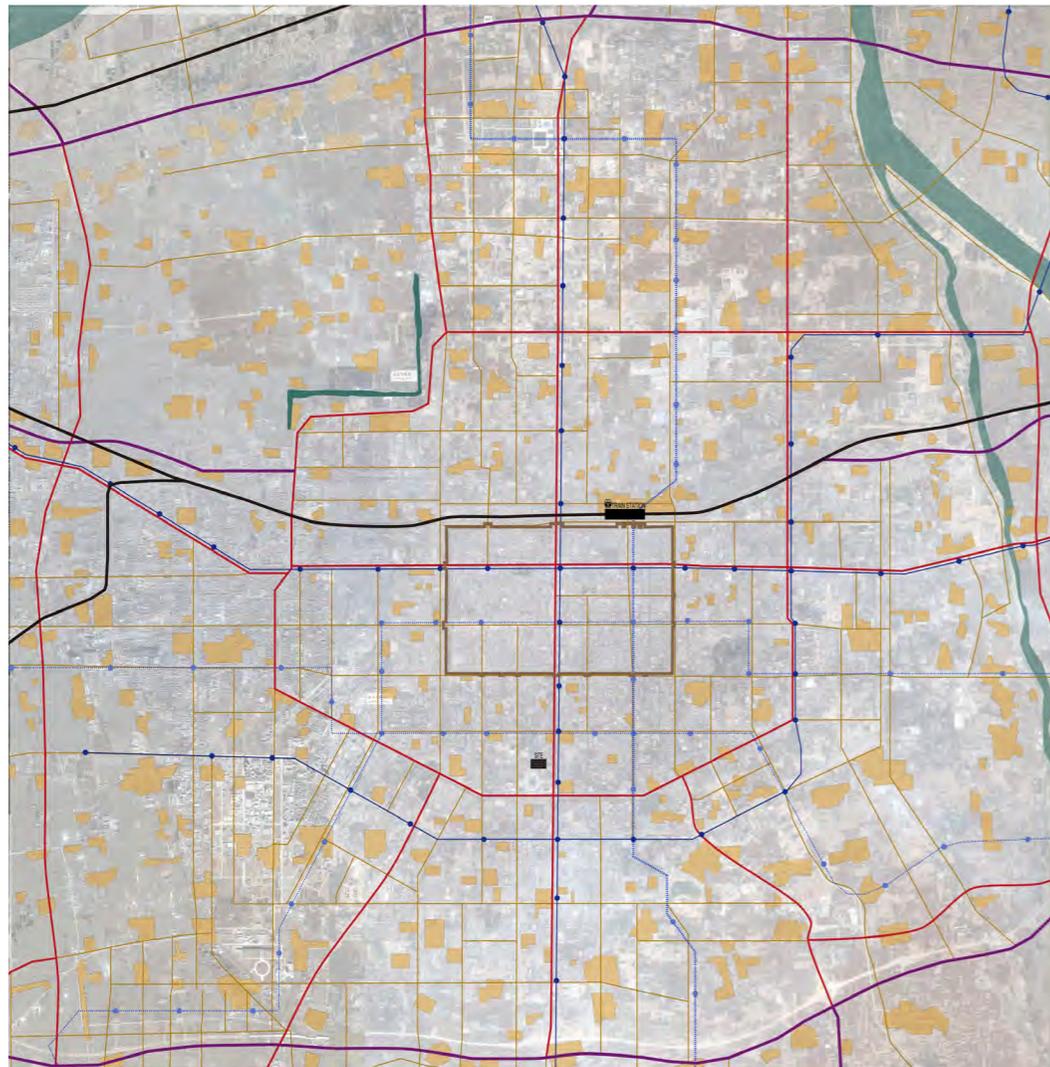


Fig 2.6_ City mobility and urban village distribution

Drew by author

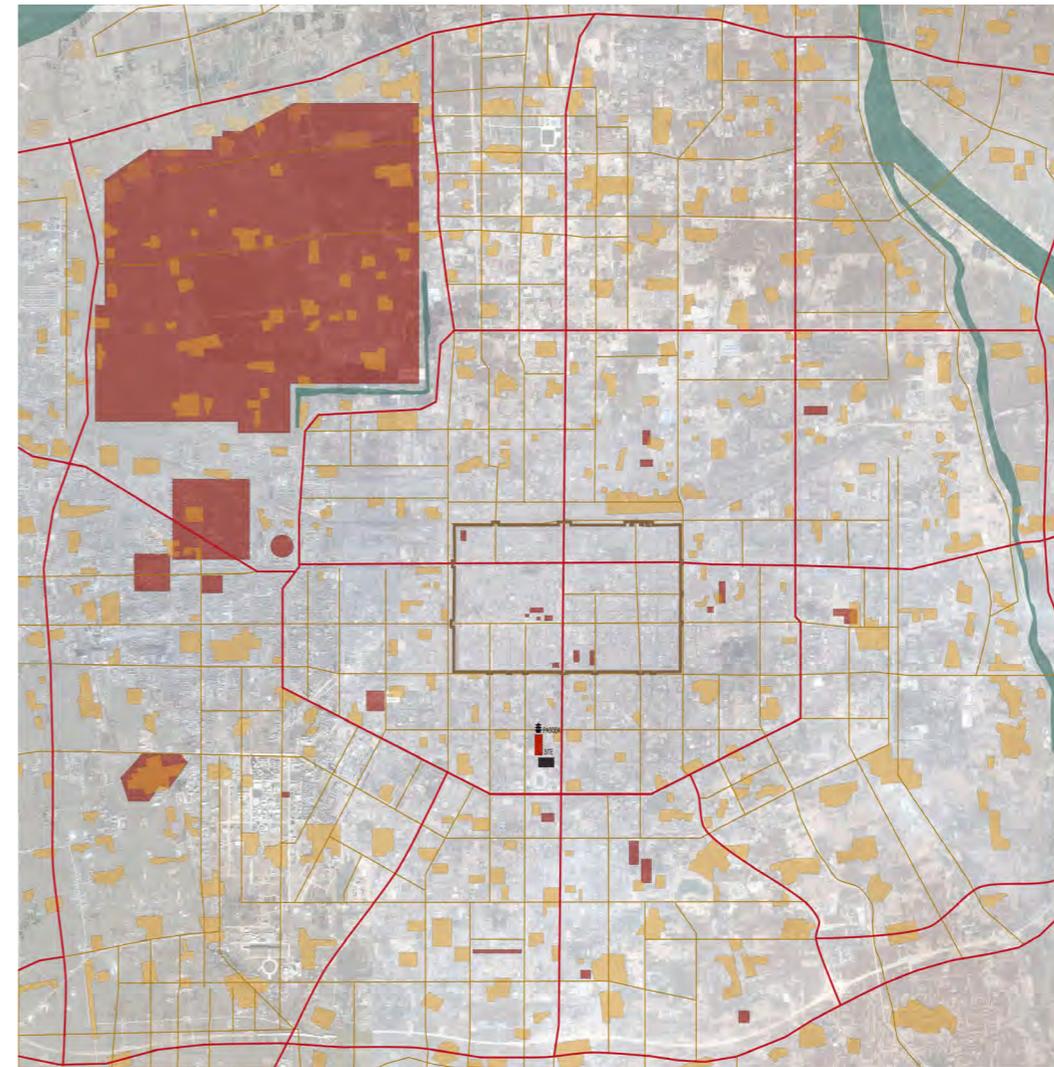


Fig 2.7_ Heritage and urban village distribution

Drew by author

2.3
THE DEVELOPMENT
STAGES OF URBAN
VILLAGE IN XI'AN
SHAANXI

URBAN EXPANSION STAGES IN XI'AN SHAANXI

Xi'an's urban construction has gone through several major historical periods, with different characteristics at each stage. However, in the long-term development process, more emphasis is placed on the development of newly-built urban areas, while the villages that lose farmland due to the expansion of cities are neglected. The problems in urban villages caused by them also show the evolution along with the stage of urban expansion. According to related research, Xi'an development is roughly divided into four stages.^[10]

The first stage was 1949-1960. Although this stage was the initial stage of urban development in Xi'an, the development was rapid. At the beginning of 1949, Xi'an built-up area only 13.4K square meters, urban population 396000 people. Its geographical scope is mainly within the Ming City wall and around the train station. Xi'an, as the capital city, ranks first in the development pace of Shaanxi Province. The area of

urban built-up areas expanded rapidly. By 1957, the built-up area of urban areas had reached 80K square meters and the population reached 1.01 million. Due to the outward expansion of urban land, some villages on the edge of the city are surrounded by the built-up areas in the city and gradually evolved into the urban village.

The second phase was from 1961 to 1978, during which time China experienced three years of natural disasters and the Great Cultural Revolution. During this

period, the state of urban construction was in turmoil and the national economy was in a state of stagnation. As the country mobilized a large number of urban population to return to their hometowns and adjusted the system of towns and cities, the urban size was reduced and the urban population was greatly reduced. This stage, staggered urban and rural areas, with poor management. At the same time, the situation in urban village is similar, disorderly and unmanaged and in a stage of

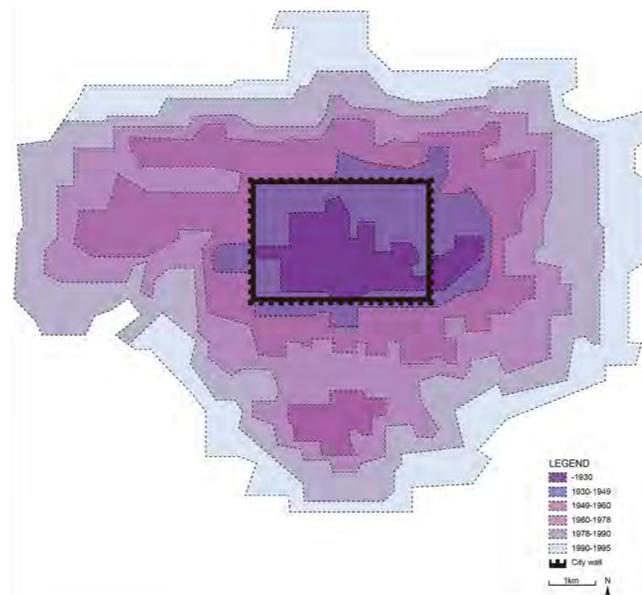


Fig 2.8_ General situation of concentric circle expansion in Xi'an
Drew by author, Information from Wang Xingzhong, *Research on Urban Social Space Structure in China*, 2000.6

free development.

The third stage was from 1979 to 2000. With the implementation of China's reform and opening up policy and the rapid economic development during this period, urban construction in Xi'an has also entered a new stage of development. Urban land has expanded rapidly. By 1990, the urban core area reached 133.6K square meters, while the population living in urban areas and non-agricultural population also increased rapidly. The number of villages in the city is also rapidly increasing at this stage. Some of the villages around the city have been encircled in the cities, forming some typical villages in the middle of the city.

The fourth stage is that since 2000, the proposal of "Western Development" strategy has provided a unique opportunity for Xi'an to accelerate its economic development and urbanization. Xi'an urban construction has entered a rapid development stage and expanded rapidly both to south and to north. As of 2002, the urban area has reached 193.4K.m2, with a population of

more than 4 million. In the new round of urban master plan, the strategy of integrated development of urban and rural areas has been strengthened. It requires that while the outward expansion of urban built-up areas be carried out, the transformation of urban villages surrounded by city will be thoroughly realized so that the western metropolis development strategy will be gradually realized.

URBAN VILLAGE EVOLUTION STAGES IN XI'AN SHAANXI

With the rapid development of urban construction in Xi'an, the city is constantly showing the trend of the expansion of the circle. As each round of urban space expands, many villages are continuously surrounded by the cities. The evolution of urban village has a high degree of correlation with the above four stages of urban expansion. According to Zhang Hongbo's research, the evolution of the village in Xi'an from its formation and development to its demise can be attributed to four stages.^[11]

[10] Zhou Yixing, Cao Guangzhong, *China's urbanization process in the 20 years of reform and opening up* [J], urban planning, 1999.12

[11] Zhang Hongbo, *Study on Planning Strategy of Renewal and Development of Urban Village*, Xi'an, 2007

Tab 2.4_ Urban village evolution stages in Xi'an Shaanxi

EVOLUTION STAGE	THE FIRST PHASE - URBAN-RURAL COLLISION	THE SECOND STAGE – URBAN VILLAGE, URBAN-RURAL CONTACTS	THE THIRD STAGE - URBAN VILLAGE, URBAN-RURAL CONFLICTS	THE FOURTH STAGE - URBAN VILLAGE RECONSTRUCTION, URBANIZATION ACCELERATED
PERIOD	1949 - 1960	1961 - 1978	1979 - 2000	2000 - now
SPATIAL FEATURES	A small number of rural settlements are surrounded by built-up areas.	Urban-rural fringed, villages formed	Contradictions among the urban villages have become increasingly prominent, and new urban villages keep evolving.	Urban village began to disappear
URBAN DEVELOPMENT SITUATION	Urban development has just started, and the edge of the built-up area is relatively fixed.	Urban space accelerated the expansion to rural areas, continuing to surround the surrounding villages and towns.	Urban built-up areas continued to accelerate the expansion, doubled in a decade, the phenomenon of urban villages was more common.	As the urban population continued to increase, the built-up area was still expanding.
URBAN-RURAL COLLISION SITUATION	Urban-rural dual structure of the initial collision, urban dominance in rural areas.	Villages transferred farm land to the cities while the villager's homestead was left, which made rural settlements left in the urban built-up areas.	Urban and rural conflicts intensified, the urban villages had already affected urban planning and construction.	In the urban villages with mature reconstruction conditions, the villagers gradually reduce, urban management was strengthened.
OTHER FACTORS	Urban land gradually expand outward.	The formation of a large number of industrial areas, urban and rural development is not coordinated, the village in a disorderly management.	The urban villages had gradually deteriorated the urban investment and living conditions and formed a place of residence for the floating population.	Increased the transformation of urban villages, while the villagers' placement or migration according to urban settlements.



Fig 2.9_ Evolution of urban village and Extending in Xi'an Shaanxi -- 1984

Drew by author, Information from Google earth

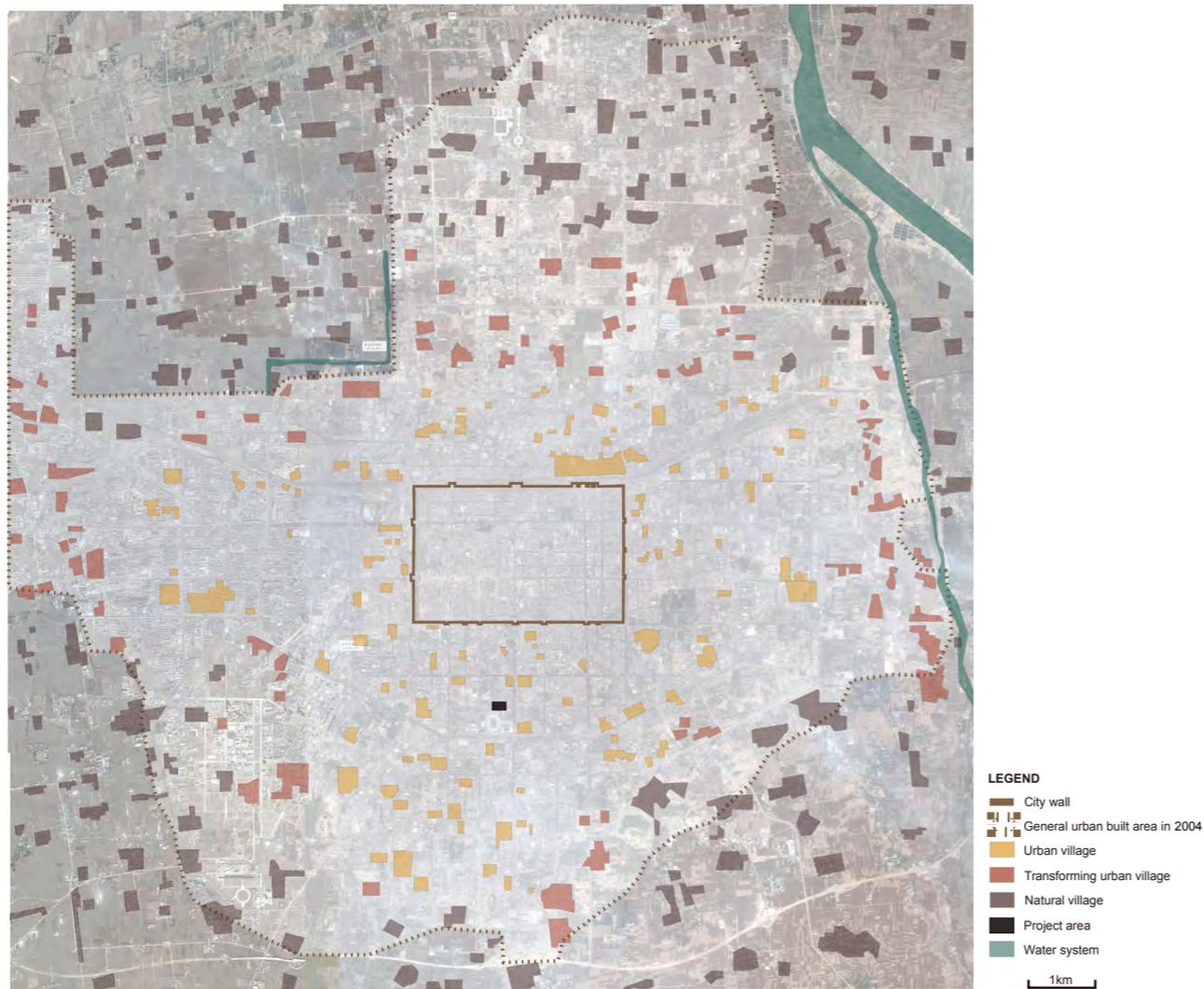


Fig 2.10_ Evolution of urban village and Extending in Xi'an Shaanxi -- 2004
 Drew by author, Information from Google earth



Fig 2.11_ Evolution of urban village and Extending in Xi'an Shaanxi -- 2016
 Drew by author, Information from Google earth

2.4
MAIN TYPES OF
URBAN VILLAGES
TRANSFORMATION
METHODS IN XI'AN
SHAANXI

[12] According to the summary of Xi'an Urban Village Reconstruction Office data

MAIN TYPES

According to the classification of the urban planning land in Xi'an City, the turnover land, the intensity of land use and the geograph-

ical location, the urban villages in Xi'an City can be classified into four types. The current reconstruction methods of different types of urban villages are as follows.^[12]

Tab 2.5_ The current reconstruction methods of different types of urban village in Xi'an Shaanxi

NO.	TYPES	THE CURRENT RECONSTRUCTION METHODS
1	The urban village is located in the built-up area of the city. There is no land for conversion and the village land is planned for public construction.	The potential for appreciation of the land in these urban villages is large, and urban village reconstruction can be accomplished through land replacement. The original village retains a certain amount of land as the source of land for villagers' living, and develops the collective economy in urban villages.
2	The urban village is located in the built-up area of the city. There is no land for conversion and the village land is planned for residential use.	This kind of urban village usually has high building density and high volume ratio. There is a need to requisition some land for the reconstruction work.
3	The urban village is located around the built-up area of the city. There is some land for conversion and the village land is planned for residential use.	Such village's original village homestead area is too large or have some construction reserved land. Use the original place to transform In the transformation.
4	The urban village is located in the built-up area of the city. There is no land for conversion. Village land in the city's overall planning is planned for urban roads, squares, green spaces, cultural relics and other sites.	Such transformation of urban villages require the government to allocate land for whole village relocation, replacing of urban roads, plazas, cultural relic's sites.

THE CURRENT SPECIFIC MEASURES OF URBAN VILLAGE RENOVATION IN XI'AN SHAANXI

(1) Start from the policy to develop relevant laws and regulations

There are many complex problems in the renovation of the urban villages and involve many interests. Therefore, in order to ensure the smooth progress of the transformation of the urban villages in Xi'an, the government has formulated a series of laws and policies. Have successively promulgated "the Administrative Measures for the Reconstruction of Urban Villages in Xi'an City", "the Opinions of Xi'an Municipal People's Government on Speeding up the Reconstruction of Urban Villages", "the Measures for the Administration of Housing Construction in Villages and Villages of Xi'an", and "the Decision of Xi'an Government on Invisible Reconstruction of Urban Villages Work-related issues notice".

(2) Adhere to the principle of government-led and market operation and coordinate multi-stake-

holder interests

The transformation of urban villages is not a simple demolition of old buildings, but an effective integration of stock land resources under the unified planning of the city. Its essence is to regulate the government, villagers and real estate developers' tripartite relationship, in order to achieve a balanced game of interest. The government is dominant in this process, but in most cases it does not serve as the main body of transformation. Because of the large capital demand for the reconstruction of the villages in the villages, most of the transformation of the villages in the cities adopted the mode of market operation to attract large real estate enterprises with strong strength, good reputation and high qualification to participate in the transformation of the villages in the villages in the city of Xi'an.

(3) To the whole village demolition and resettlement, vigorously protect the quality of life of residents

The renovation of the urban village of Xi'an takes the demo-

lition of the whole village as the mainstay, avoiding the incomplete reform and the subsequent secondary reconstruction. The implementation of resettlement sites and demolition funds in the entire village demolition are the two major issues. In the reconstruction planning first, while the demolition of the building, to ensure the rapid return of residents.

(4) Make Great Efforts to Ensure the Interests of Villagers in Transformation, Strengthen the Investment in Housing, Employment and Medical Security

The transformation of the urban villages involves the vital interests of the broad masses of the people. After the transformation, the villagers are truly integrated into the urban life and enjoy a series of urban welfare measures. They are the purpose of the reconstruction of the villages in the cities and also the major task in the transformation.



TYPE---A
 Urban villages on the Daming Palace site have been completely removed. Considering the heritage, the whole site was converted into urban green space.



Fig 2.12_ Urban village transformation types - To be heritage garden
 Drew by author, Information from Google earth



TYPE---B
 Urban village near the commercial center, Yongning Gate, has been completely removed. The government sold this land to developers by auction. The developer built the shopping mall along the main road and built the apartments inside the site for selling.



Fig 2.13_ Urban village transformation types - To be commerce and dwelling
 Drew by author, Information from Google earth



TYPE---C
 Urban village along the main city axis, Chang' an Road, has been completely removed. The government sold this land to developers by auction. The developer built the office building along the main road for renting and built the apartments inside the site for selling.



Fig 2.14_ Urban village transformation types - To be office and dwelling

Drew by author, Information from Google earth



TYPE---D
 Urban village located inside one community, not along any main roads, also has been completely removed. The government sold this land to developers by auction. The developer built the tower residential buildings in the site for selling. The buildings are very tall almost 100m high if there is no high limitaton here. So the developer can get as much area as possible. This is the most common type.



Fig 2.15_ Urban village transformation types - To be dwelling

Drew by author, Information from Google earth

2.5
INSTITUTIONAL
CHANGES AND
LAND CONVERSION
MODELS OF URBAN
VILLAGES IN XI'AN
SHAANXI

So far, the villages within the scope of transformation have been gradually realizing three changes:

The first change is that all members of the rural collective economic organizations should be changed into urban residents at one time. All the original villagers in urban village are going to be urban residents who hold urban household. In accordance with the relevant provisions, the restructured residents enjoy the same social security as urban residents.

The second change is the restructuring of the collective economic entity originally managed by the village committee into a joint-stock enterprise (company) held by the collective legal person shareholders and individual shareholders. The shares are specifically quantified to individuals. The company acts as an agent to manage the original rural collective economy.

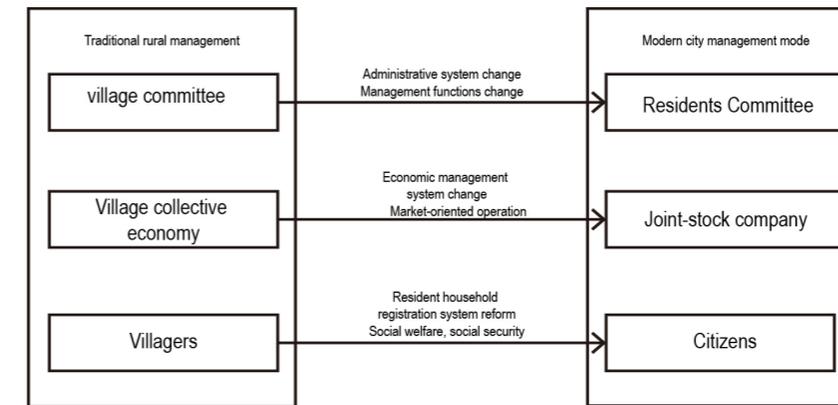
The third change is the revocation of the original village committee system, replaced by urban community committees. The main functions of the village

committee before the transfer include the two aspects of economic management and social affairs management, which involve economic benefits. The functions of the community neighborhood committees focus on service, management and economy. The change is to transfer the social management of the original administrative village to the community committees responsible for the management. The collective economy is separated from the government and enterprises. The economic development company is responsible to the shareholders and carries out management. Land, infrastructure and housing management are transferred to the urban government Unified planning, construction and management.

Xi'an should first of all, as soon as possible from the policy to achieve the "peasants to residents, withdraw the village to build a home," the preparation for the nationalization of the land in the urban village in the law to find the basis to try to achieve the nationalization of the transfer of land

within the village. In the meantime, after the land of the village in the village is transformed into a nationalized land, some of it can be brought into the urban land bank, and some of it can be converted into land assets operated by joint-stock companies. The joint-stock companies can operate the land to preserve and increase the value of the land. Followed by a joint-stock company as the main body to transform the transfer of land to carry out the follow-up of urban reconstruction work, to achieve "self-financing, self-improvement, self-reliance" purposes. At the same time, in the process of subsequent reformation, the government should also withdraw a certain percentage of the proceeds from the operation of the village-owned village land and return it to the joint-stock company as the government's investment in the municipal infrastructure of the village in order to achieve a balanced distribution of benefits.^{[13][14]}

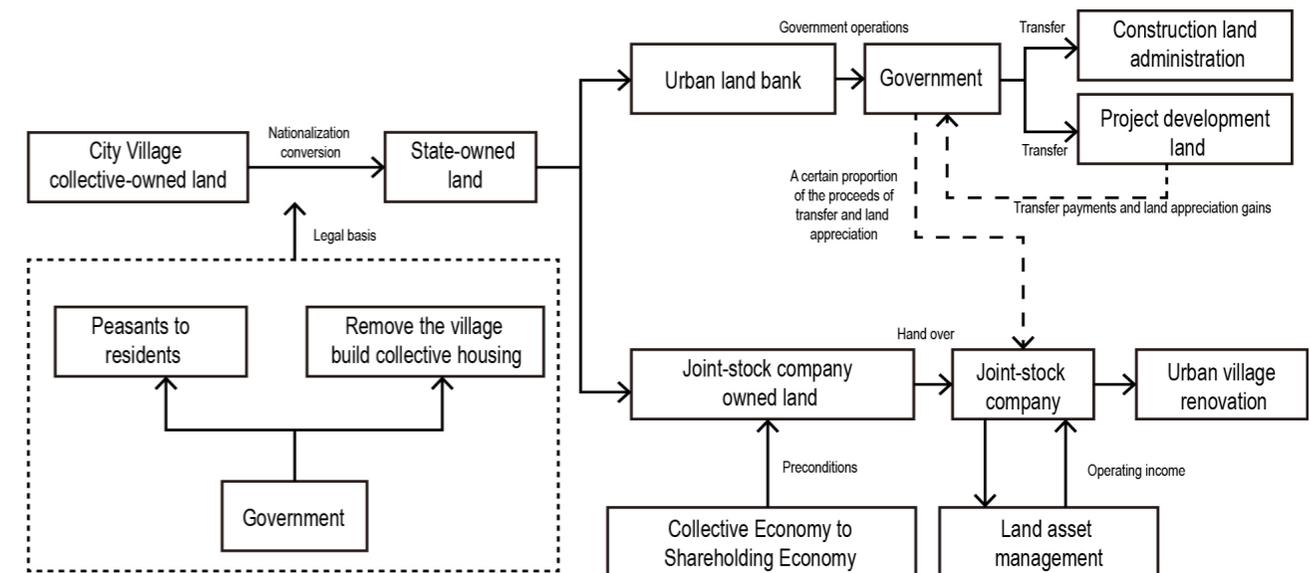
Tab 2.6_ Schematic diagram of changes in the system of urban village reconstruction



[13] Liu Ji, Zhang Pei, Analysis and Countermeasure Research on "Urban village", Journal of Xi'an University of Architecture and Technology, 2003.9

[14] Zhang Chi, Qian Meirong, Research on the Countermeasures of Urbanization of "Urban village", Journal of Xi'an University of Architecture and Technology, 2003.9

Tab 2.6_ Xi'an urban village land conversion and operation of land model design map



3
ANALYSIS
AROUND THE
PROJECT AREA

3.1
ANALYSIS OF THE
COMMUNITY AND
SURROUNDINGS

This time, first select the project base around a larger area of urban space, north to the city wall, south to the Second Ring Road, each containing two blocks. From three aspects of function, traffic and green space research, from a larger context to understand the location of the base in the city of Xi'an, as well as the overview of the surrounding environment.

The most important historical building in the area is the Jianfu Temple and Small Wild Goose Pagoda. The Small Wild Goose Pagoda is an important landmark preserved in the Chang'an City of the Tang Dynasty. It is located in the Jianfu Temple in Anren Fang, Chang'an City, and was listed as a World Cultural Heritage Site in 2014. As in most urban centers, the area, as the city started earlier, went through the construction of several rounds of cities in Xi'an and gradually formed a large number of major land use patterns including unit houses, urban villages and some shanty towns, On the other hand, in recent years, numerous urban public cultural facilities in the area have been grad-

ually built, including the immediate vicinity The Temple Museum of Xi'an and the library of Shaanxi Province, the Provincial Art Museum and the Provincial Stadium are all built in the museum of the Jianfu Temple, which have accumulated very rich cultural resources for the development of the area. With the completion of the comprehensive reconstruction of the Greater South Gate area, the image of the city along the Ring Road has been greatly improved. As one of the three key areas for urban renewal in Beilin District, Chang'an Road Central Business District takes full advantage of the cultural. The effective combination of resources and the construction of the Central Business District will become a unique highlight in the renewal of the area's urban area.

(1) From the edge of the city to the core of the city

Since the founding of the People's Republic of China, the development direction of urban space in Xi'an has been gradually evolving from east-west expansion to north-south development. With the gradual expansion of urban

construction in Xi'an, the area is close to the old city of Xi'an in the Ming and Qing dynasties. As the edge of the city, under the influence of "first production and later life", a large-scale unit compound and a village in the city form a high-density residential area. Since the reform and opening up, the city has gradually expanded to the south. With the development and construction of Qujiang New District and High-tech Zone, the area has developed from the urban fringe of the past to the present urban core. The trunk road has formed itself a retail, catering, entertainment, Office-based formats. In recent years, with the service industries such as the tertiary industry focusing on the area, the development of the area shows the thriving city center area and the pressure of industrial restructuring on the adjustment of the spatial structure and land use change.

(2) From the corner of the research and education district to the core of the southern central business district

"1953-1972 Xi'an City Master

Plan", that is, the first edition of the city master plan to establish the southern city of the city as a research and education and education area, with the previous overall urban planning, area and functions continue to increase. On the basis of the study of the overall urban development in Xi'an, Wang Shengxue (2009) pointed out that the future development of Xi'an industry should not only pay attention to traditional industries such as manufacturing, high-tech industries and tourism, but also promote modern business, information, finance, trade and consulting and so on the development of modern service industry. In the CBD construction process to promote the level of industrial development to enhance and create a good atmosphere for industrial development, making the area will focus on industrial development to modern service industry.

[15] Now along the Chang'an North Road, has a clear central position, known as the modern dragon vein in Xi'an, Beilin area is better development conditions, but also in Xi'an city location advantages

more obvious areas for the construction of the city CBD provides a good Basic conditions.¹ With the gradual outward commercial and commercial functions of Xi'an Old City, the construction and development along Chang'an Road are changing with each passing day. From the traditional urban commercial center, the city gradually evolves into an open, service area with attractive modernity Service industry cluster area, its carrying capacity and external radiation capabilities are also continuously strengthened. At present, the area is developing into an influential, prominent and versatile urban business center in the Greater Xi'an area. It is also one of the important carriers of Xi'an in building an international cosmopolitan city and a symbol of urban competitiveness.

[15] WANG Shengxue, SHI Huiqiong, WANG Weiran. *Study on the Planning and Construction of Xi'an CBD - Simultaneously Discussing the Central Area of Beilin District in Xi'an* [J]. *China Urban Economy*, 2009 (2): 18-23

FUNCTION ANALYSIS OF CITY

From the functional analysis point of view, the vast majority of the area is residential, public buildings are mainly concentrated along the Chang'an Road. Chang'an Road, as the modern axis of Xi'an City, from the Second Ring Road up to the walls, along the street gathered a large number of hotel office buildings. Only in the South Gate shopping district and the clock tower business district appeared some commercial complex. For the base around, a strong cultural atmosphere. West close to the small wild goose pagoda comprehensive conservation area, there are a series of ancient relics and the modern Xi'an Museum. Second Ring Road south of the base is the Shaanxi Provincial Library and Art Museum, and the stadium. Urban public resources are very rich, but located near the historical sites, the business climate is slightly less than adequate. The consequence of this is that the Little Wild Goose Pagoda Comprehensive Reserve, although of great historic value,

is deserted and unpopular. The contrast Big Wild Goose Pagoda, there are two major north and south squares, surrounded by large commercial complexes and commercial pedestrian street, so there are bustling, the coming and going of the scene. The Little Wild Goose Pagoda is not because of the surrounding commercial functions and for the crowd to stay in the large square, it cannot gather popularity, and cannot better show the public reflect the value of this brilliant historical buildings. Moreover, the value of land around the attractions cannot be improved, this is a waste of historical resources.

This has a great guide to our entire small wild goose pagoda south planning concept, as well as the transformation of Xiajiazhuang urban village functional ratio. Combined with the general form of ancient temple buildings and the status quo around the Small Wild Goose Pagoda, a large area of square space should be reserved on the south side as a starting point for entering the temple sequence and also a place for

people to rest and relax. And it should be equipped with appropriate business functions in the proper position on the south side.

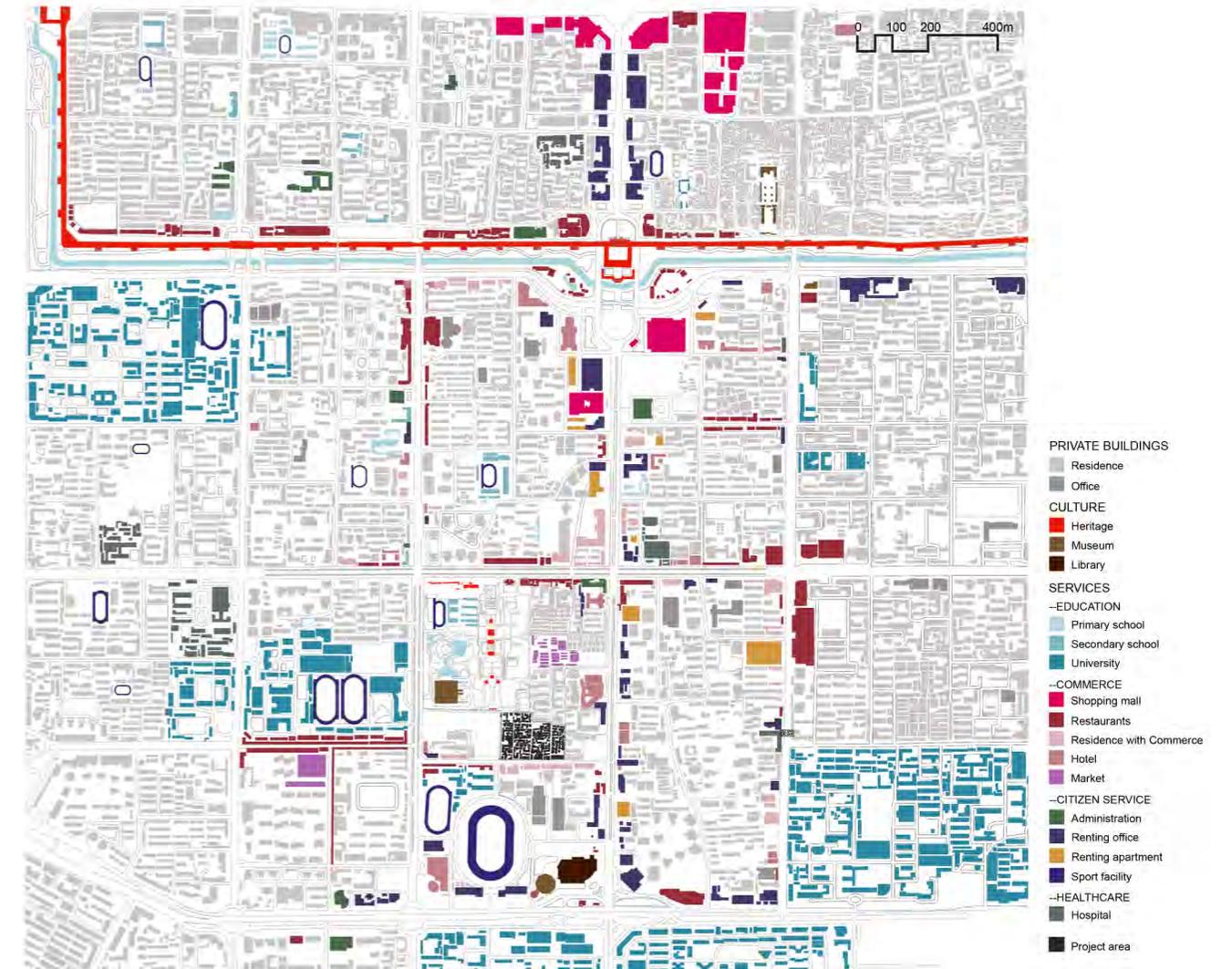


Fig 3.1_ Function analysis of city

Drew by author

MOBILITY SYSTEM OF CITY

From the perspective of road structure, urban planning in Xi'an apparently inherited the chess-board pattern left by the Li-Fang system in the Tang Dynasty. East and West North-South road, horizontal and vertical, staggered, very regular. Therefore, it can be clearly seen that the density of buildings in the base area is too large and the road density is insufficient, and the lack of a scale parking lot makes the accessibility of the small wild goose pagoda and base not high. The base is just in front of the two subway stations, and there is no bus through, starting from the base, before reaching public transport, there must be a large walk distance.

Therefore, the planning level can consider the open of horizontal direction of the east-west. Increase the road density, and increase bus stops. And reconstruction should consider appropriate to reduce the building density, combined with the small wild goose pagoda, and more to provide urban public space.

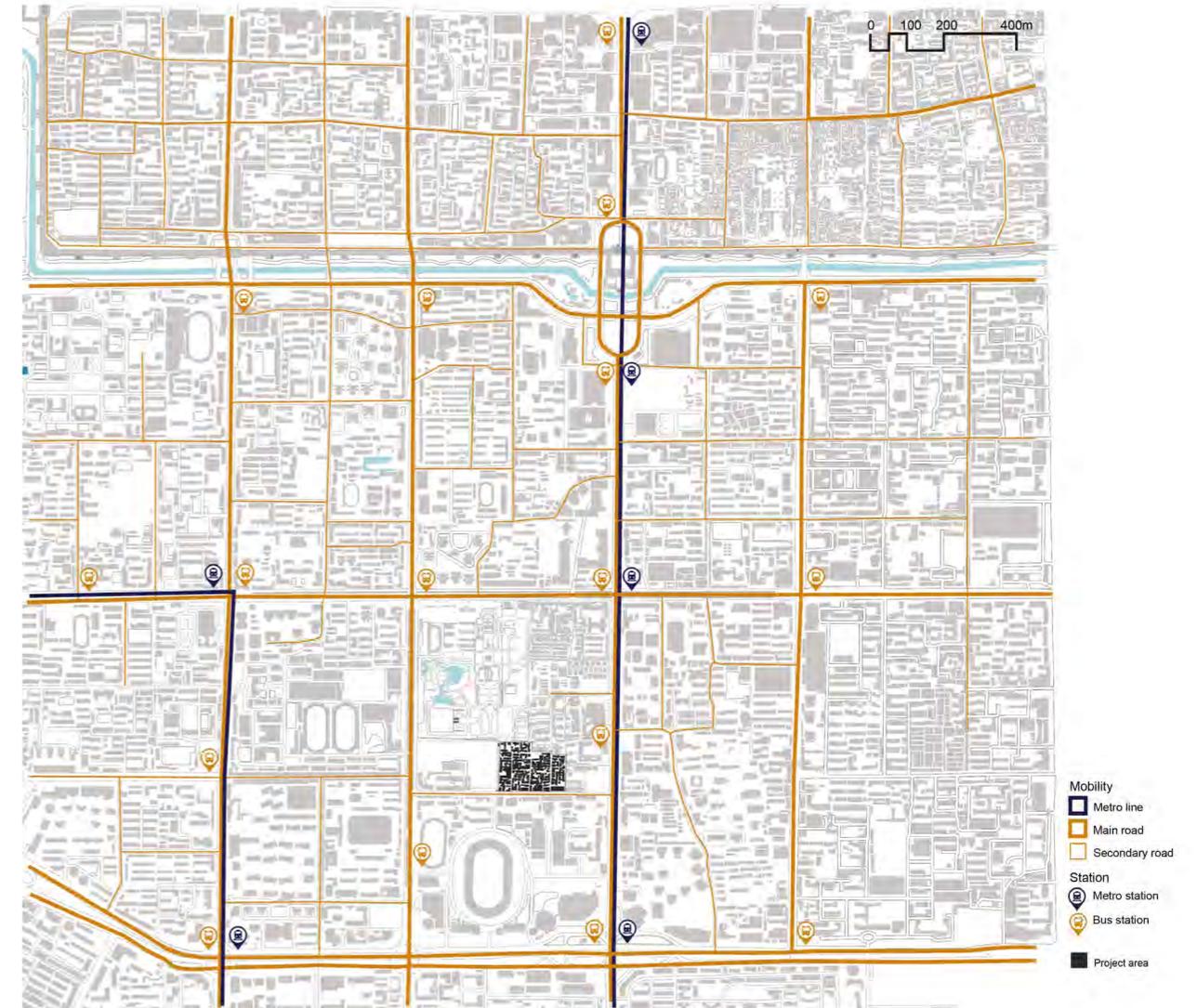


Fig 3.2_ Mobility system of city

Drew by author

GREEN AREA SYSTEM OF CITY

As for the urban green space, it can be clearly seen from the figure that the park where the Little Wild Goose Pagoda is located is the only public urban green space outside the city wall and within the second ring and southwest of the city, except for the Ring City Park. This is a huge advantage that can gather popular sentiment to a certain extent. However, the surrounding area lacks the richness of functions and cannot make people stay for longer time, resulting in attracting only regular people, such as the elderly and runners. But cannot attract more common consumer groups. What we have to do is to make proper use of the existing green space resources, add new functions and inject new vitality into the area so that the entire small Wild Goose Pagoda and the surrounding area will become an attractive cultural area.

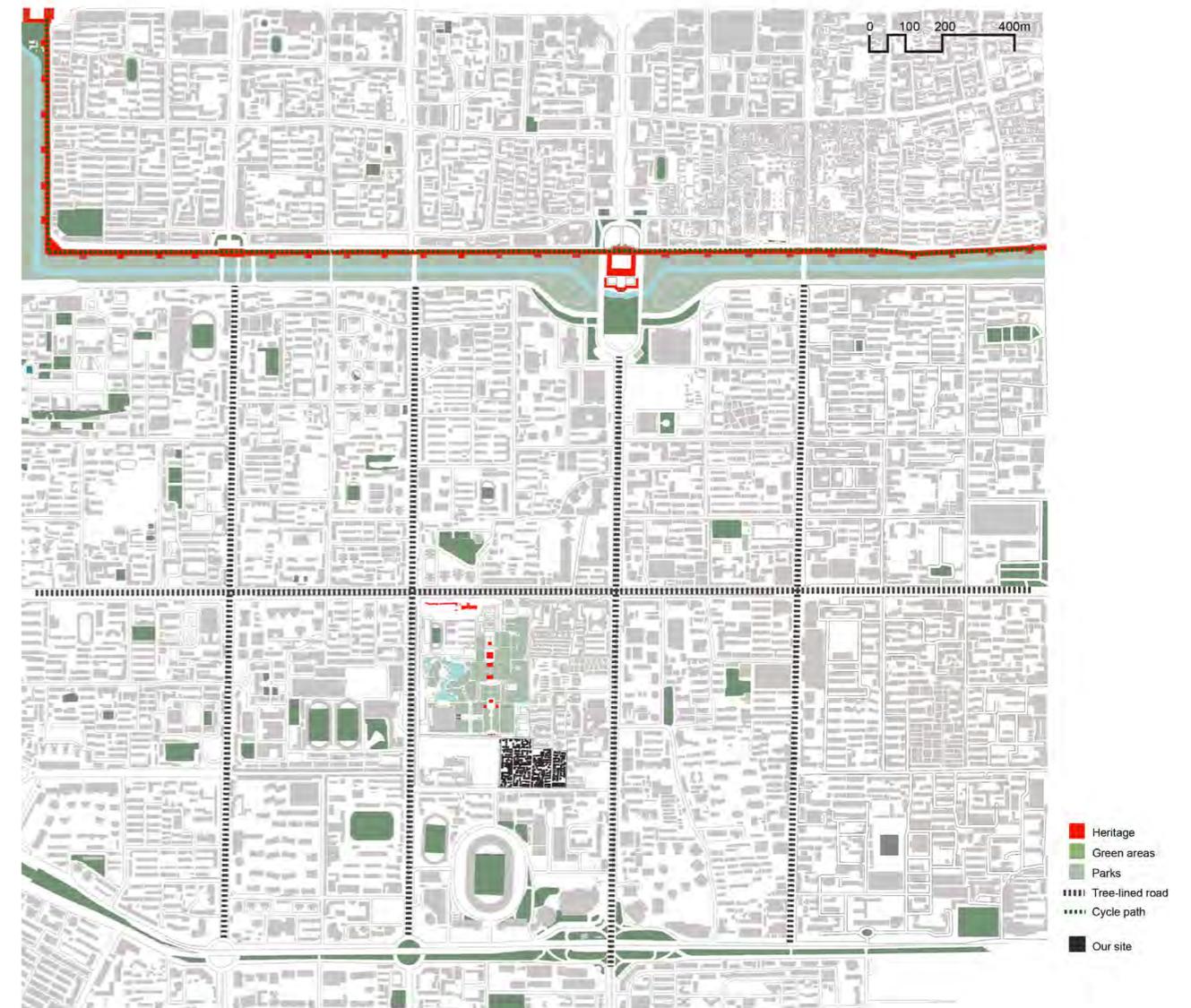


Fig 3.3_ Green area of city

Drew by author

3.2
ANALYSIS OF THE
COMMUNITY

Analyzing the current situation of the environment within the block area is of great significance to the planning and design of the later period. To Zhuque Road, Chang'an Road, Friendship Road, Stadium North Road as the boundary, the formation of the scope of the study.

There is a Small Wild Goose Pagoda historical and cultural park within the site, including the Jianfu Temple, the Small Wild Goose Pagoda and the Xi'an Museum. In addition, the ancient architectural sequence of the Jianfu Temple where the Small Wild Goose Pagoda is located is relatively intact and has a high cultural and artistic value. Small Wild Goose Pagoda restrictions on the surrounding land development, land development intensity is generally low. Near Small Wild Goose Pagoda, Xiajiazhuang village, South Guo Village, South Guan Village are low-rise building-based, higher building density, the construction quality is generally poor. Stadium North Road and Chang'an North side of the multi-story building, mostly built in the 80s and 90s

of last century, with the general construction quality and building density. There are low-rise commercial buildings along Youyi Road, mainly catering. There are high-rise buildings on the side of South part of Second Ring Road with good building quality. Along the Chang'an Road, there has Xi'an Hotel and Changxing Hotel. Due to the low density of road network inside the block, traffic is not smooth. In addition, there is a lack of connection between the Little Wild Goose Pagoda Historical and Cultural Park and the stadiums of the southern province, the provincial library and the Provincial Art Museum, which cannot give full play to the scale effect of high-quality cultural resources.

WALLS AND ENTRANCE IN THE COMMUNITY

In the study area and the entrance walls can understand the situation of the regional accessibility. It can be seen from the figure that most of the entrances and exits in the area are self-contained entrances for the units themselves to use. Lack of effective model entrances and exits and parking. For the wall, first of all, the small Wild Goose Pagoda and Jianfu Temple lost part of the wall, lack of effective sense of enclosure. The Small Wild Goose Pagoda now is standing in an open area, which does not meet the prototype of the traditional Chinese temple. Because of the large number of units in the neighborhood and the high density of buildings, their respective walls are disorganized and cut off the routes in the blocks, which seriously hindered traffic accessibility.

So here to consider two points, first is the Jianfu Temple Pagoda area for effective enclosure. The second is the reorganization of the walls of all units.

HEIGHT OF BUILDINGS IN THE COMMUNITY

Because Pagodas is an important historic architectural monuments, so the surrounding buildings must have height requirements, the building height within the study area will be very important. As can be seen from the figure Pagodas surrounding residential type building was built several decades earlier, it is a multi-layer-based, and along the Chang'an Road, because of the need of urban construction, there are many high-rise office or hotel class commercial building.

Therefore, the building height within the block should be controlled from two aspects. On the east side of the block, along Chang'an Road, high-rise office buildings can be allowed to build at higher levels. In the rest of the area, the height limit of buildings around the Small Wild Goose Pagoda should be taken into consideration, and the over-high buildings should be demolished. The new buildings must be at lower level.

DEMOLITION IN THE COMMUNITY

Considering the height of the building and the quality of the building, as well as the reservation of the public space in the city, part of the residential and commercial buildings on the south side of the Small Wild Goose Pagoda should be completely demolished in our concept. As for the part of the urban village, which is the focus of design, so there need further research to selective retention and demolition.

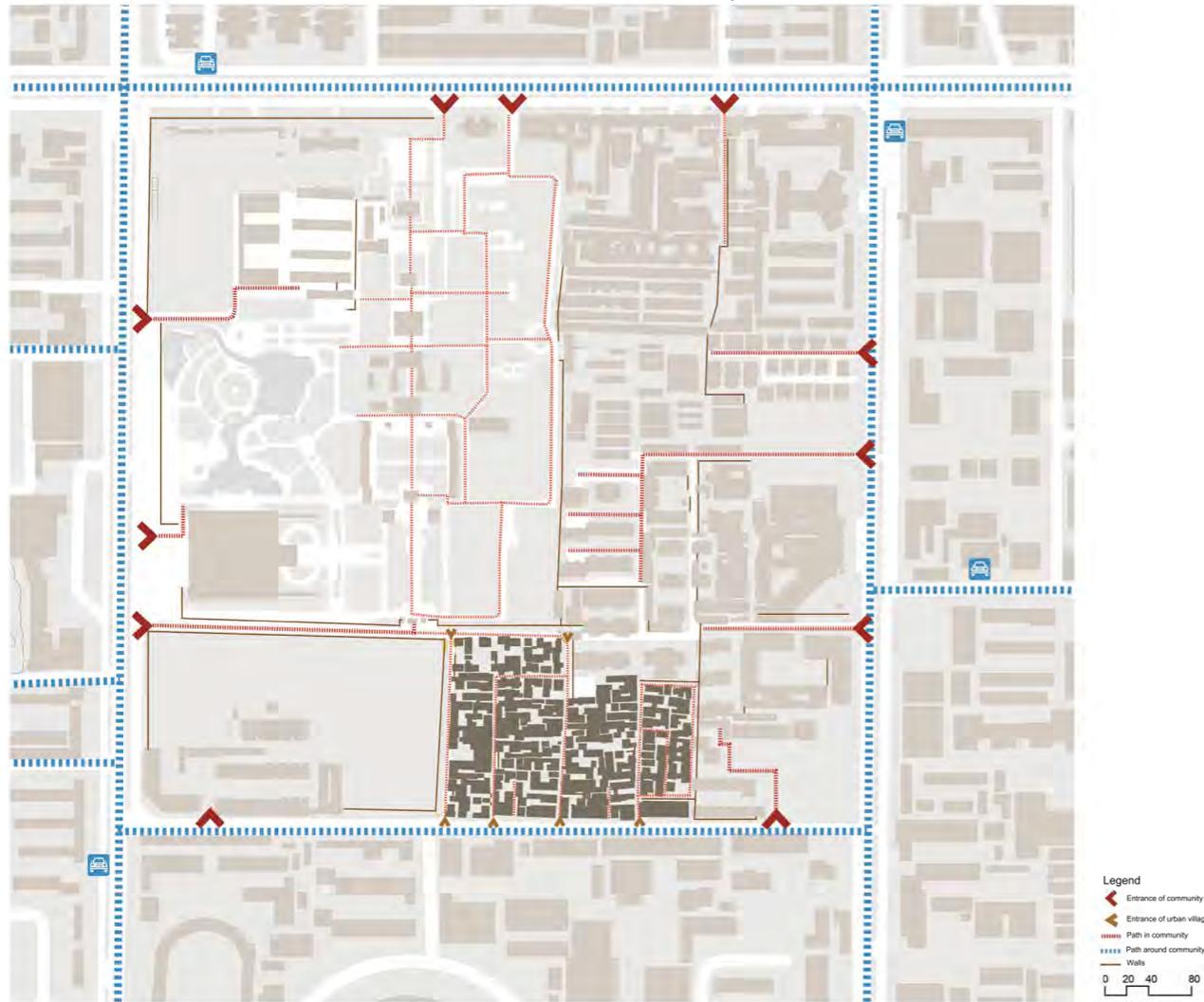


Fig 3.4_ Walls and entrances in community
Drew by author



Fig 3.5_ Height of buildings in the community
Drew by author



Fig 3.6_ Demolition in the community
Drew by author

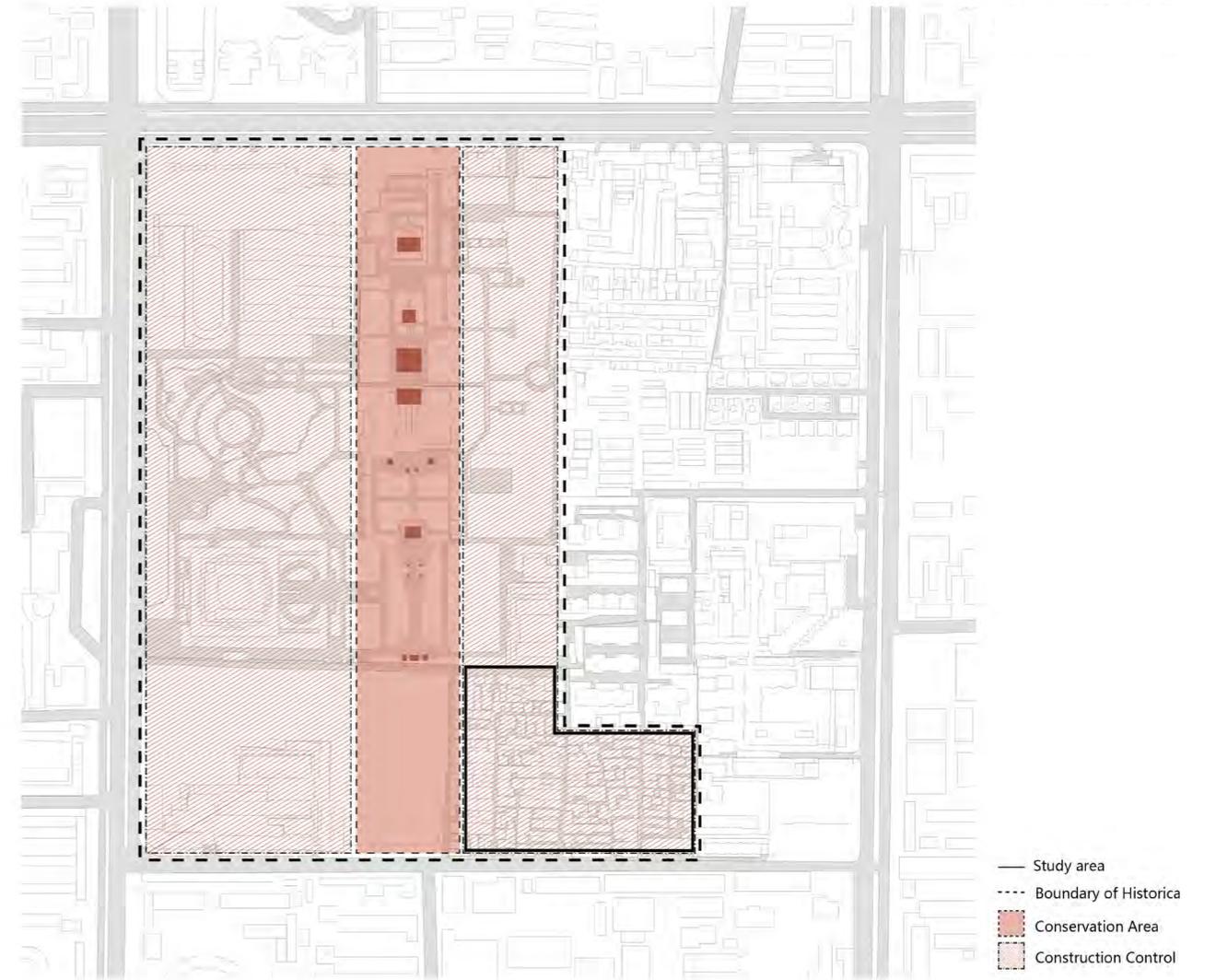


Fig 3.7_ Conservation priority
Drew by author, Information from Xi'an City Planning

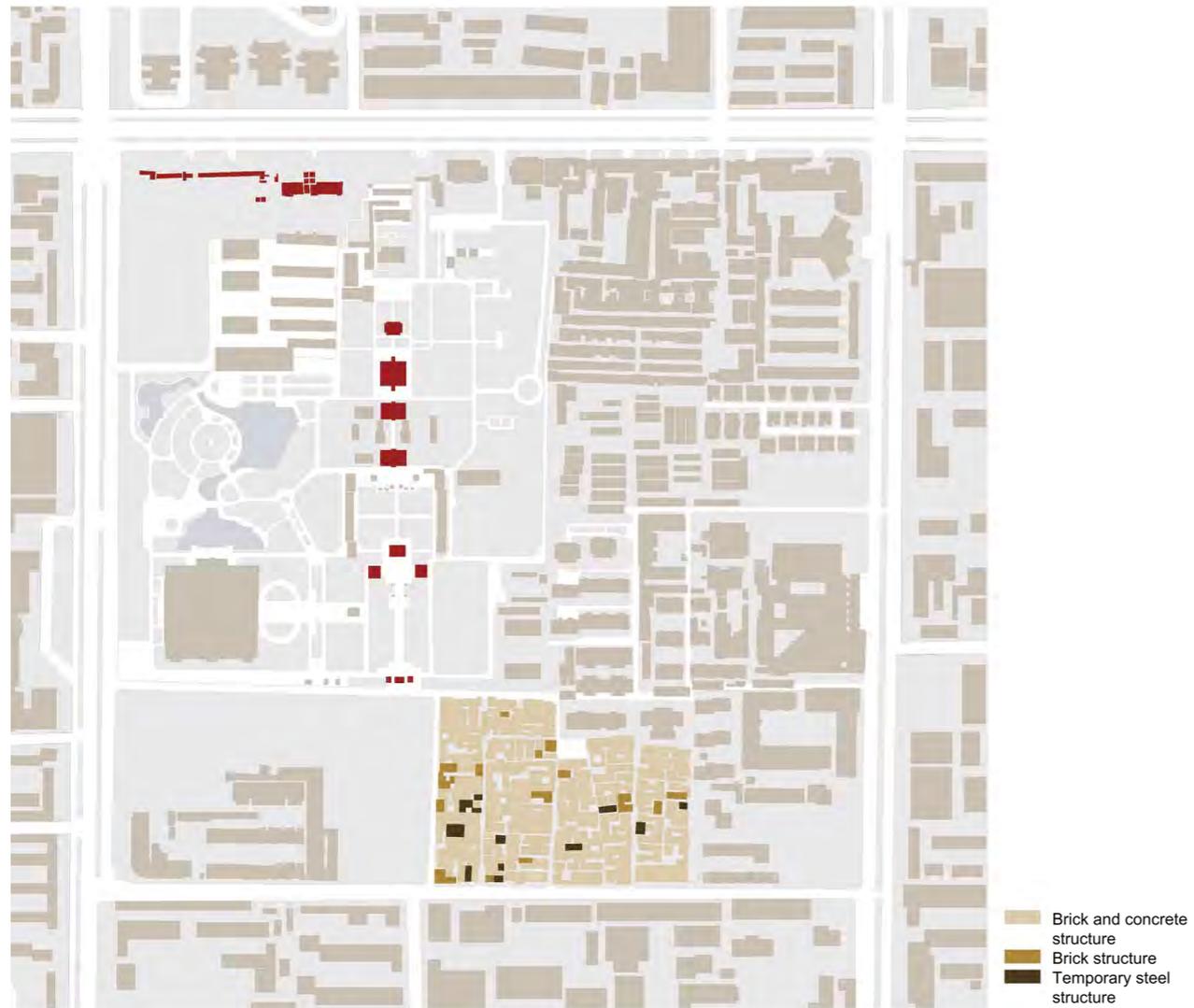


Fig 3.8_ Building structure in Xia village
 Drew by author

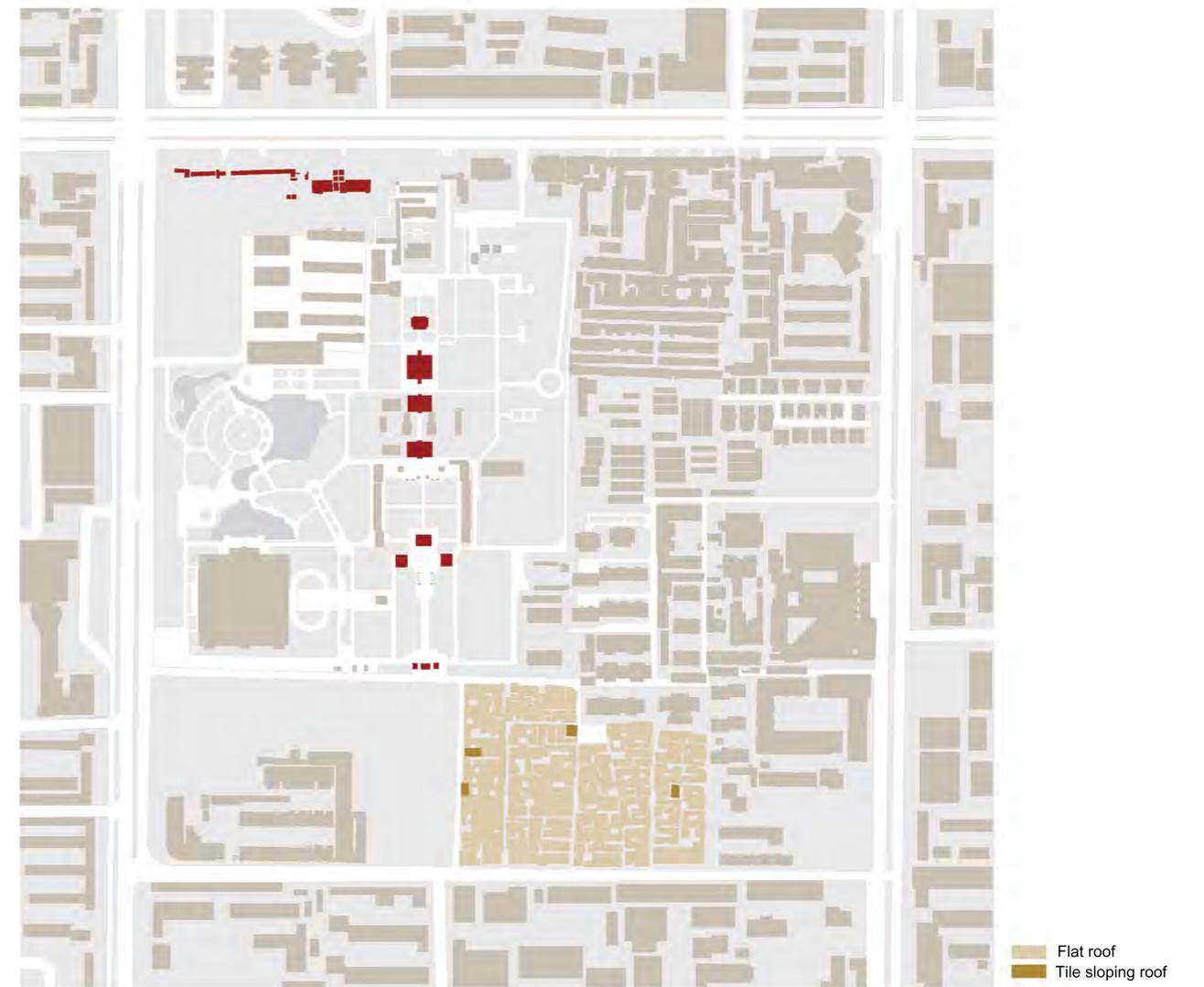


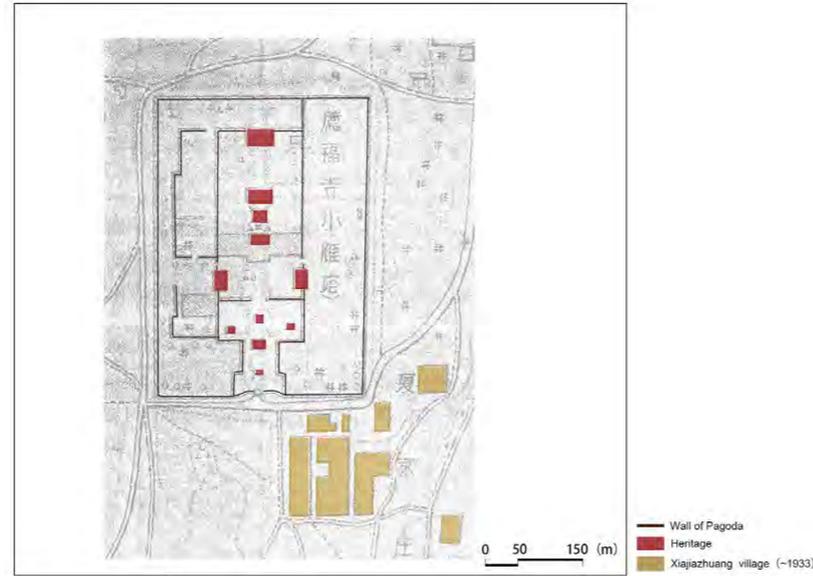
Fig 3.9_ Roof type in Xia village
 Drew by author

3.3
EVOLUTION OF THE
COMMUNITY

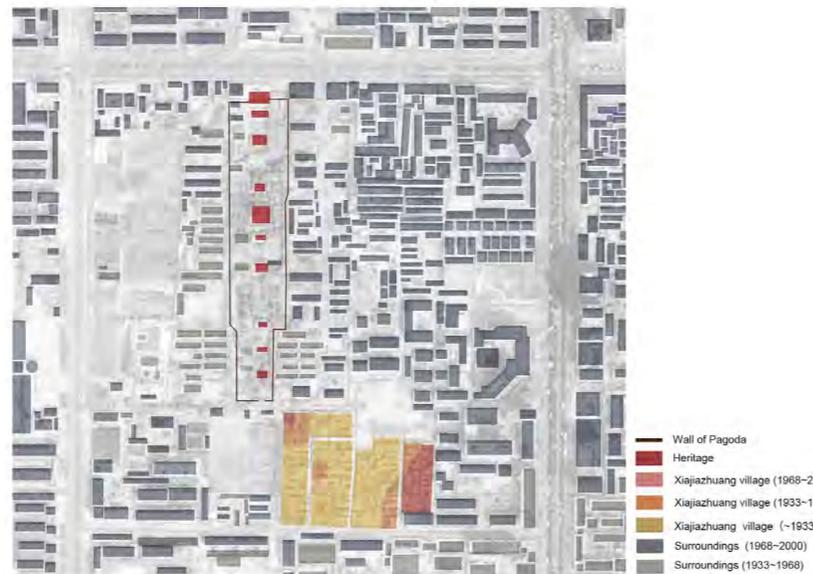
For the transformation projects, the study of the historical development of land is very important. We need to know more about the emergence and development of the Xiajiazhuang village and the district where it is located. Through the study and depiction of maps of the plot in different periods, we can find the texture growth process of parcels, including buildings, roads and public spaces. By overlaying the historical layers of different ages, we can see which elements are historical and which are the distortion of post-growth. For the transformation, we should retain the texture included people living collective memory and which are unreasonable newborn texture deleted. Only in this way can the new building have a historical basis and will not be overly abrupt in the plot.

EVOLUTION OF XIA URBAN VILLAGE

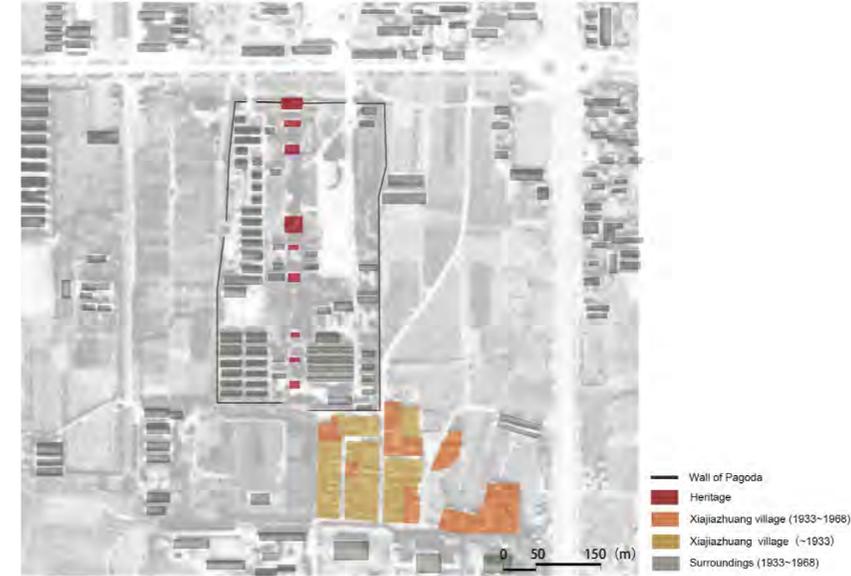
Before the founding of the People's Republic of China, the present Xiajiazhuang urban vil-



1933 Evolution of village and surroundings
< Republic of China >



2000 Evolution of village and surroundings
< People of Republic of China >



1968 Evolution of village and surroundings
< People of Republic of China >



2016 Evolution of village and surroundings
< People of Republic of China >

lage was originally a Xiajiazhuang village residential base. It was relatively scattered and distributed between the farm lands of the village. The building layout was not regular, with L shape and some small pieces. After the founding of New China, reform and opening up, with the rapid development of urbanization in Xi'an, urban construction continued to spread south. As the cultivated land in villages was gradually collected by the state and was allocated to other units for construction, the house sites in the villages were gradually concentrated and expanded. Village homestead because of land ownership issues, and resettlement of farmers, the collection of higher difficulty, it was shelved. When the urbanization of the entire block was completed, Xiajiazhuang village still remained in place and the villagers conducted a large amount of illegal construction. However, the shape and texture of the original buildings were still preserved, some irregular texture appeared.

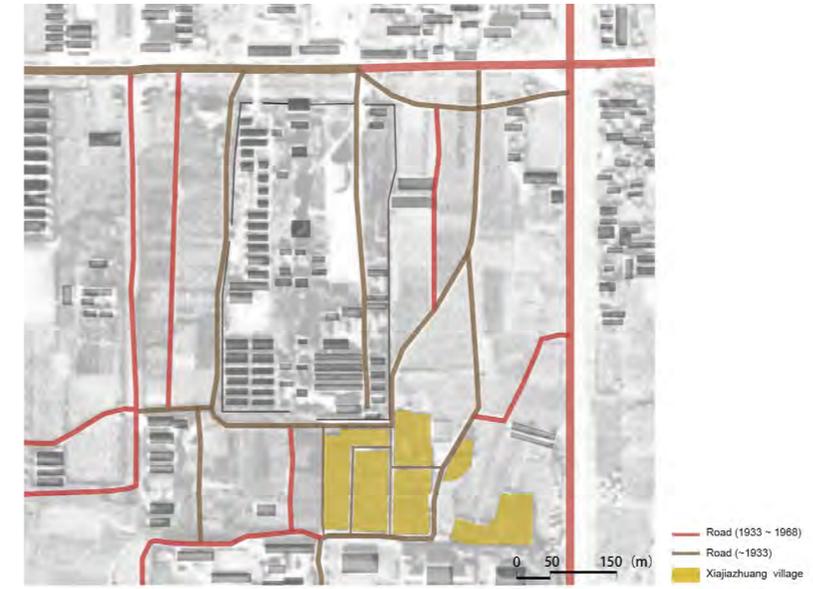
Fig 3.10_ Evolution of Xia village
Drew by author, Information from Google earth

EVOLUTION OF MOBILITY IN THE COMMUNITY AND SURROUNDINGS

From the road development point of view, is a kind of growing relationship. The inner road in the village was originally established, which is a reasonable division of early villages. Other roads in the neighborhood are slowly forming with other buildings. Because the entire block has not undergone major demolition and reconstruction, the road has not changed dramatically. Instead, it has gradually enriched its development based on its original situation. Therefore, in the reconstruction of the buildings in the villages within the city, three internal historic roads should be preserved while the more chaotic roads outside should be reorganized.



1933 Mobility system <Republic of China>



1968 Mobility system <People of Republic of China>



2000 Mobility system <People of Republic of China>



2016 Mobility system <People of Republic of China>

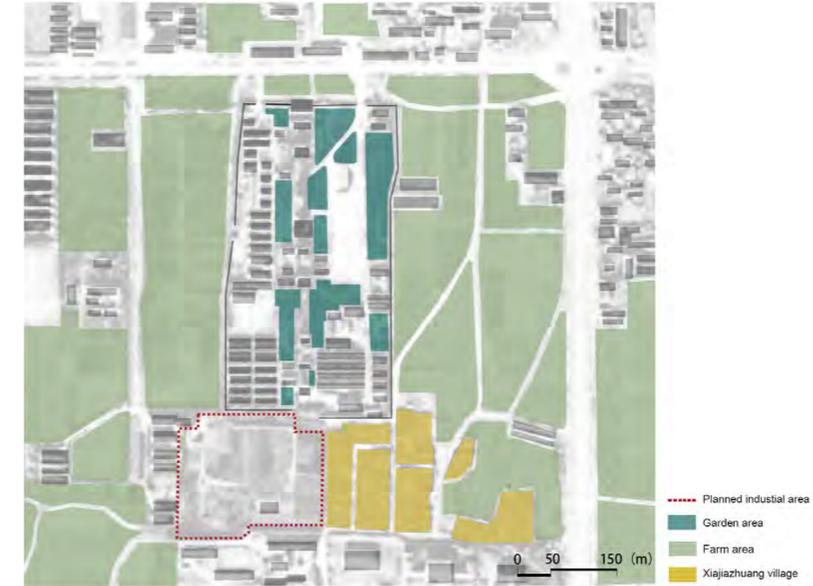
Fig 3.11_ Evolution of mobility
Drew by author, Information from Google earth

EVOLUTION OF GREEN AREA IN COMMUNITY AND SURROUNDINGS

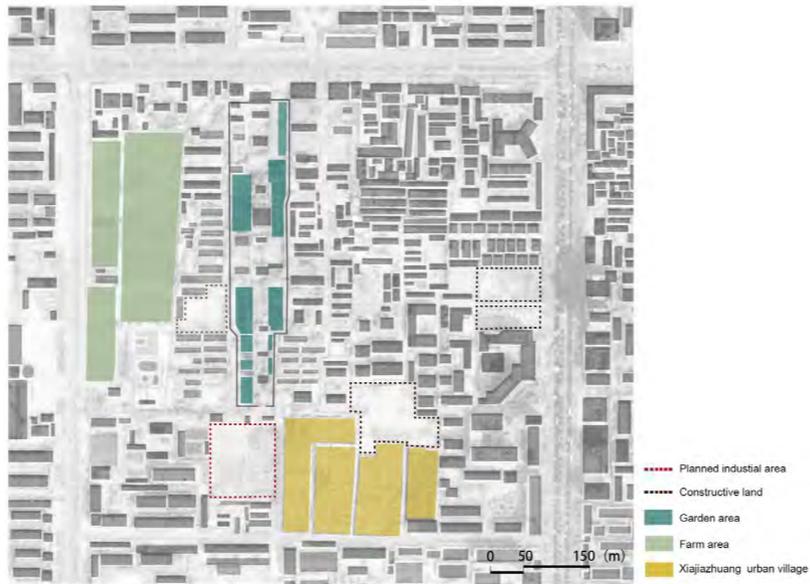
Before the founding of the People's Republic, the Small Wild Goose Pagodas and Xiajiazhuang village were located in the outskirts of Xi'an and were not included in the built-up area. Therefore, in addition to the Small Wild Goose Pagoda historical buildings and Xiajiazhuang village, the rest are all farmland. With the rapid development of Xi'an City after the reform and opening up, the land mass quickly was included in the urban construction. The original farmland is levied by the state and distributed to various business units. The original green farmland, it becomes a factory, and unit families residential area. Chang'an Road along the construction of a large number of office buildings. There is also part of the land from farmland into workshops, and later abandoned idle. Now, the green area in the neighborhood is only the Little Wild Goose Pagoda Park area.



1933 Green area system <Republic of China>



1968 Green area system <People of Republic of China>



2000 Green area system <People of Republic of China>



2016 Green area system <People of Republic of China>

Fig 3.12_ Evolution of green area
Drew by author, Information from Google earth

3.4
ANALYSIS OF XIA
URBAN VILLAGE

STATISTICS OF XIA URBAN VIL- LAGE

We need to study the composition of the inner city village and the mode of construction growth. Xiajiazhuang urban village in the fixed population accounted for 65% of the floating population accounted for 35%. We conducted a study on the existing types of villagers' families and the types of migrant families in urban villages. We also studied the caged courtyard-based urban village construction types, dates of construction and functional composition.

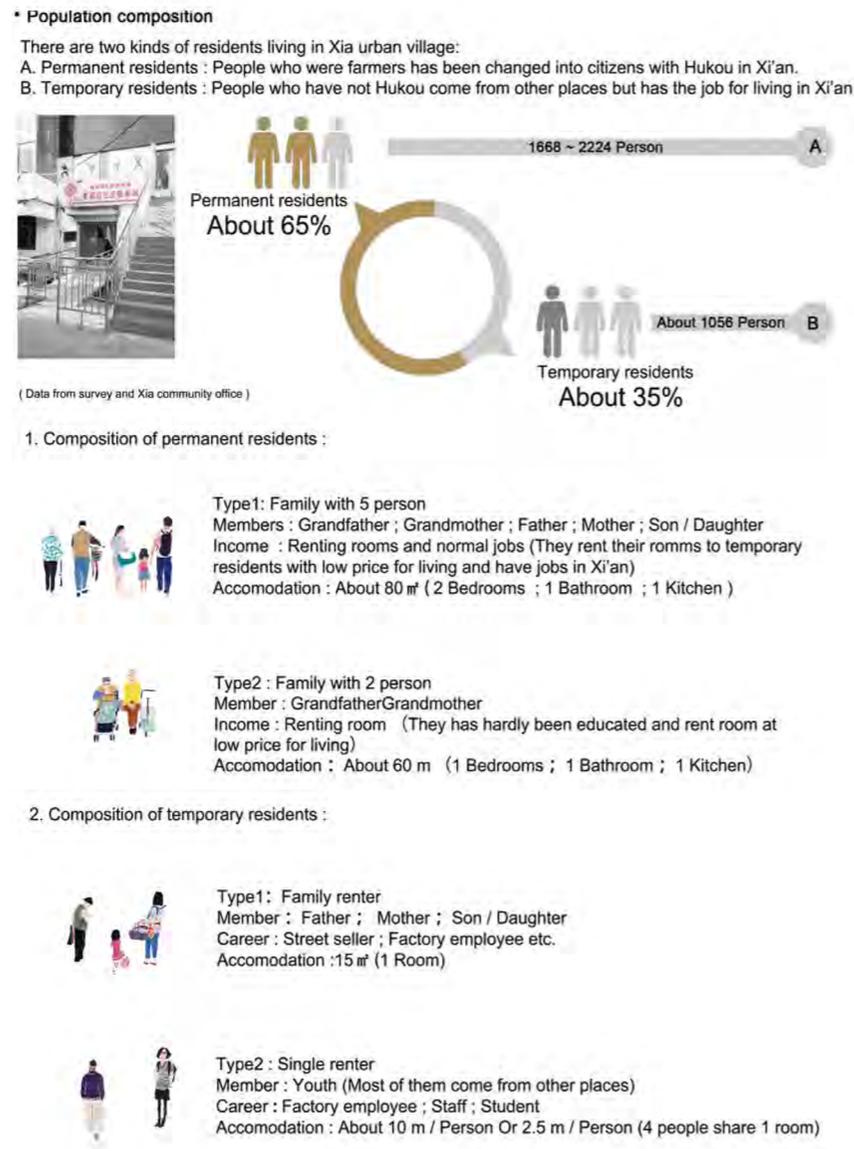


Fig 3.13_ Population composition of Xia village

Drew by author

• Social relationship & Evolution of buildings in urban village

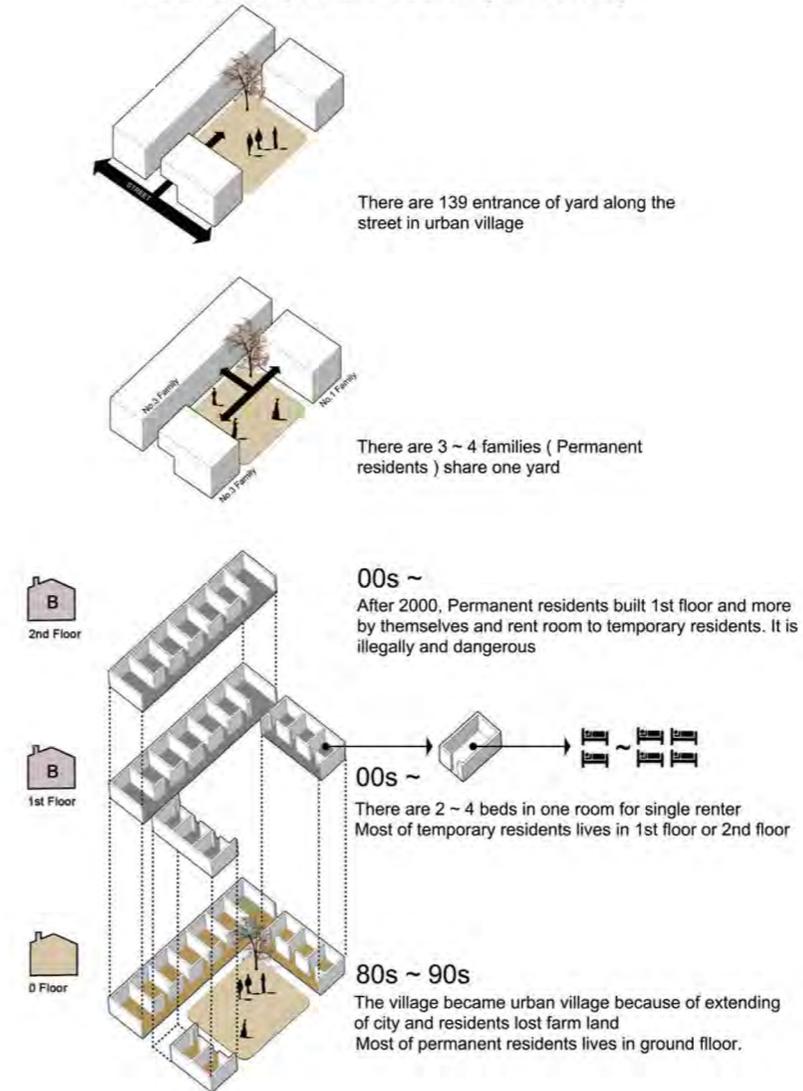


Fig 3.14_ Social relationship and evolution of buildings in Xia village

Drew by author

BUILDING SAMPLES IN XIA URBAN VILLAGE

The village is a scar for a modern city. However, when it was still a natural village, it also had its own distinctive style of residential architecture. After decades of brutal additions, many deformities and bad buildings have been created that need to be demolished and rebuilt. However, there are also some original dwelling houses that have been preserved and are valuable to the village in the village.

As an inevitable phase of the rapid development of China's big cities, the village in the city should be rebuilt, but it should not be erased. Therefore, the selection of valuable buildings for preservation and alteration is a respect for history and a reservation for collective memory.

After investigation, we conducted a survey on the existing buildings in the Xiajiazhuang urban village, selected them for reservation, and studied architectural shapes.

SECTION SAMPLES IN URBAN VILLAGE

The construction inside the village is not completed through the overall planning and construction, but through the villagers' spontaneous construction so far. Construction did not consider the relevant norms at all, whether it is from the fire or lighting ventilation are huge problems. Because every household is seeking to maximize the construction area, which formed a unique scale of relations within the village. Yards, streets are compressed, cramped space, building physical environment is poor, but in space formed a unique life complex atmosphere.

Take a whole section of the point of view, we can see yard scale, street scale, building spacing, balcony and many other issues. There are many unique living spaces in the village residents.

INTEGRATED STUDY OF XIA URBAN VILLAGE

The transformation of the village in the city requires an in-depth study of its elements. The graphical aspect, including the road and the bottom of the map, is the key message that needs to be extracted. Researching internal functions is also crucial for functional screening of reconstructions. In addition to living outside the village, the public functions mainly include catering, hotel and retail, which will be reflected in the new construction. Because the villages in the villages lasted for a long time and they had not undergone large-scale reconstruction and reconstruction, many old and aged trees were retained in their houses. These are also extremely valuable objects in the villages and the carriers of collective memory of the residents. Old trees must be marked, studied and preserved.

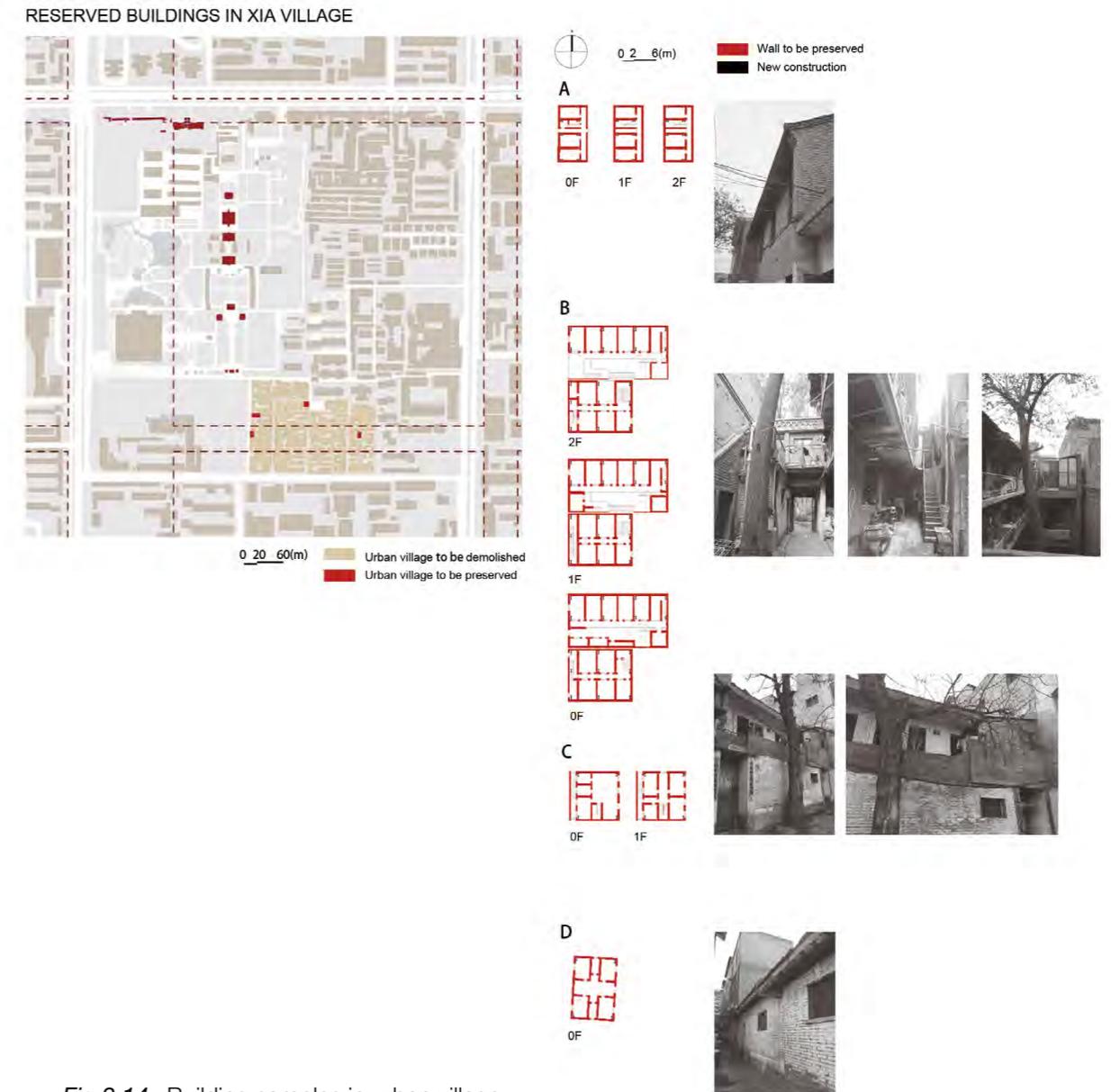


Fig 3.14_ Building samples in urban village

Drew by author



Fig 3.15_ Situation in urban village
Drew by author

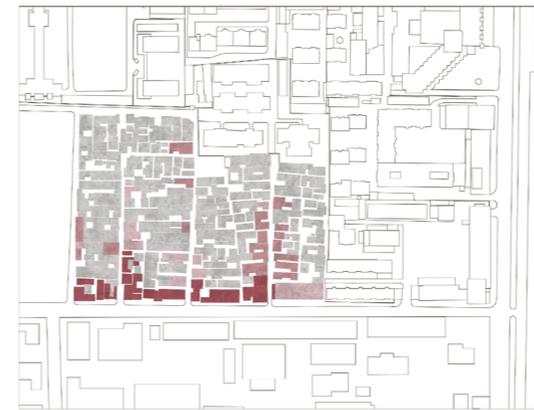
Mobility system in Xia Village



Solid and void of Xia Village



Existing function system in Xia Village



Existing function trees in Xia Village

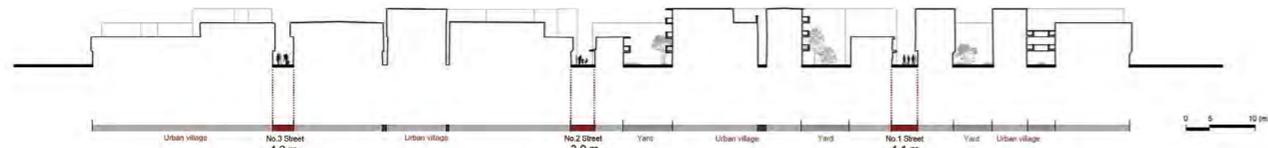


Fig 3.16_ Section sample in urban village
Drew by author

Fig 3.17_ Integrated study of Xia urban village
Drew by author

4
DESIGN
STRATEGY

4.1
SITE STRATEGY

DANG VILLAGE PROFILE

(1) Population and land

There are more than 300 dwellings in the village, with a population of about 1,400. The whole village has 2,216 acres of arable land. The village ranges from about 2,000 meters north and south to 800 meters east and west, covering an area of nearly 160 hectares and a part of bleeding valley of about 20 hectares. Village residential land 12.36 hectares.

(2) Village site selection

Dang Village is located on the edge of Loess Plateau in the eastern part of Hancheng with an elevation of 400 to 460 meters. The general selection of villages is mostly based on the gentle plateaus, whereas the Dang village is chosen among the valleys of the bleeding rivers as typical of valley villages (Figure 28). From the field survey we can see that the village site selection of village have the following points:^[16]

1) Convenient water source, Mishui river perennial water, can provide some domestic water,

and due to being located at the bottom of the valley, high groundwater level, drilling well, there is sufficient source of drinking water. 2) The valley formed by the Mishui River is 35 meters wide from north to south and 800 meters long from east to west with a certain scale of land to meet the needs of village construction.

3) Dang village site north is higher than south, drainage is very favorable.

4) Basically no dust. The Plateau around Dang Village is full of the soil multi-clay, not easy to dust, and affected by the Yellow River valley in the region, the wind speed is high. Dangjia village is in the valley, the dust is not easy to land, so the village air is clear.

(3) Road network skeleton

Roadway within the Walled Dang village and all with pebbles or pieces of brick paving, primarily in "J" word, grid-like. The main street is divided. The village center east-west street, said the main road, is the village's main road, south of four secondary roads. The north side of the lane has three secondary roads. At the

same time, according to feng shui, alley walls embedded stone. In the stockade, the road network is simple and clear. The three roadways from north to south are East Lane, Middle Lane and West Lane respectively. Around the village is a loop, known as horse road.



Fig 4.1 _ Dang village profile

Drew by author, information from Baidu map

DANG VILLAGE PUBLIC OPEN SPACE CHARACTERISTICS

The public open space in Dang village is formed as a narrow shape with the combination of roads, public facilities and main buildings. The space is used and transformed in the original space. Through the analysis of the distribution characteristics of public space in different periods of Dang village and the components Characteristics and utilization analysis and evaluation, combined with the major activities and frequency of people in this space, found that these spaces are still full of vitality. At the same time, it reflects the traditional culture and customs from the characteristics of people's activities, embodies a strong and distinct regional culture and a profound accumulation of culture, and highlights the potential Chinese civilization. Although as people's lifestyle changes, but traditional thinking and people's way of life are still affecting the people now, space is still full of vitality.

(1) The Open Space of Dang Village in Ming and Qing Dynasties

Historically, the birth and development of a village started with the most basic needs of people's production and life. After satisfying the basic material functions, we seek the idealized natural environment and humanistic environment. Therefore, the formation of a certain open space for people to communicate daily, combined with some environmental components built around the space, over time, people are accustomed to this activity, these spaces will be truly perfect, a public open space. The open space in Dang village presents the traditional Chinese village culture. These long-term preserved spaces are inherited from generation to generation, have a good historical context, reflect the spatial characteristics of traditional Chinese villages, and are part of the history and culture of Chinese history and culture the reflection.

The original public open spaces are: (1) a small square at the entrance , with defensive guard posts at the entrances, and a strict definition of the limits of the residential area of the village ; (2)

For fields such as wheat farms opened for agricultural production, there are many shared water wells , which are public spaces of production units; (3) The square at the center of the village is the gathering square of the village; (4) a small square at the entrance of Biyang Fort, an ancestral hall on the north side, public pools in front of the hall, disc, wells and other public The open space formed by the living facilities is the transportation hub and entertainment center of Shangzhai; (5) The stage around Wenxing Pavilion is also a public open space for people to gather and entertain, but now the stage, Guan Temple has been destroyed, this open space has become a primary school.

As can be seen from the public open space and its environmental components, its main social activities are mainly worship of ancestors and gods, consultations on important events in the village, cultural and entertainment celebrations, and daily life exchanges. The usual worship of ancestors and gods, accompanied by cultural and recreational activities,

these spaces mainly focus on the following.^[16]

(2) Dang village modern public open space

With the change of people's needs, the passage of time, the development of history, and the later man-made destruction, the public open space in the original village has changed. Many environmental components in the space have been destroyed, such as temples and the stage has now disappeared exist. Nowadays, the public open space of Dang Village is divided into four spaces to study: (1) The location of the entrance of the village, as the gateway to the village and the main distribution center of the flow of people. This space was originally used as the public meeting space in the village, Stage, now due to nearly two or three decades to adapt to new life and production needs opened up new asphalt road. As a result, the nature of this space has also changed to become the gateway to the present village. (2) Administrative space for assembly, there are two places in this space, one is the former

space for the ancestral shrine of the party, and the ancestral hall is now replaced by the village committee, as a new cohesion formed by the space. Here is the space for people to gather, convey orders from superiors, and convey information. Space for the entrance to Biyangpu not only serves as a traffic hub but also serves as a gathering space for activities inside the stockade. (3) Space for cultural activities, namely the original Jia Family Memorial Hall Front ground; (4) neighborhood exchanges space, mainly around the wells and the gateway to each other for people to eat, take children, chatting and other activities.

1) Portal space

① The village portal is the entrance and exit area of the village and is the first part of the village space where people enter the village and the last space experience node to leave the village. ② "Village Gateway" is a window to the external image of the village, showing the social, economic, cultural and visual characteristics of the village. At the same time,

it is the beginning of people's cognition of a village. As the first impression node, it plays a strong role in marking two different functions and properties outside the village and village. Such as the arch at the entrance to the village, kiosks, trees and other markers. ③ "Village Gateway" is a regional gateway to the village. It is a centralized entrance for the exchange of material, energy and information between the city and the outside world. It should play a corresponding role in shaping the spatial environment of the village and provide psychological comfort to the residents of the village. Security. Therefore, the entrance to the village is often the gateway to a village. At the entrance there is often a more open space for people to disperse. Usually, many villages have an archway at the entrance of the village, symbolizing the entrance sign of the village. The original archway at Dang Village no longer exists , Originally on both sides of the stage and Guanyin Temple and other temples, the rectangular space formed between the two is

a party and village surrounded by buildings Square space, every social activity or staged drama, here has become a cheerful ocean, is a public Open space.

From the original environment visible component, where the original is more open lively place, although it is not part of the original, but still cohesive space, combined with shops on both sides of the road, hotels, parking and people flow, here is still a large flow of people, activities more places.

2) Meeting administrative space

The rally administration mainly serves as a window and bridge for the government to communicate information to the masses, orders from superiors, and the demands of the masses to their superiors. Whenever this force plays an important role, it is the guarantee of Cathay Pacific peace. Often the government departments are usually the center of the expansion, in space requires a large enough space to meet people gathered to meet, selection, tax queuing and other activities.

The party's ancestral temple in Dang Village is now replaced by a

village committee mainly serving as a venue for information transmission. Normally there is a large flow of people and additional longevity benches, wooden sticks, and recreational facilities for chess tables and exchange of information Suggestion box.

3) Cultural activities space

Cultural activities are mainly cultural and entertainment. They are non-professional ways of life that people show through certain forms of art. They include theatrical performances, films, social fire performances, stilts and small percussion performances, chess activities and calligraphy competitions. Therefore, cultural and recreational activities are never an abstract existence, but exist in the concrete process of social life. Any one of the cultural and recreational activities are a certain form of art and entertainment at the same time.

There are two cultural activities in Dang Village. One of the main activities is to start with Jia Family Ancestral Hall in the Cultural Center, mainly for elderly activities. There are wooden

clubs, slabs and tables for rest in the periphery, People are talking about where they are while lifting water. In the meantime, because there is a watchtower of one of the representatives of the party's village and village, tourists will stay here for more pictures. From the behavior of people can know that people have the desire to see and be seen, so the villagers will chat more in this chatting.

Another space for Wenxing Pagoda open space, the original in this space temples, stage, the villagers' burn incense and worship Buddhism and entertainment activities place, now stage and temple have been destroyed, the nature of the space has changed. However, the space here is better utilized. The first is that the school under Wenxing Tower just meets the psychological needs of people. The open space also provides entertainment for children. Every festivals, bumper harvest, people will also be gathered here to see on stilts, dance, social fire performances and the like. Or major village conventions are held in this space, combined with the previ-

ous literacy classes. Now here to primary school, mainly as a village children playing, learning places.

4) Neighborhood communication space

"Neighborhood" is a field of sociological research. It refers to a small group of people living together and keeping watch and helping each other, which are based on the geographical proximity to this natural condition and based on the friendly relations with relatives and friends.^[17]

Adjoining people, living together, through the shared outdoor living space acquaintance, meet, build friendship, so as to share the joy and crisis of life, such as for the dead to send the final, wedding happy event, the child was born with the joy of celebration, a difficult, Neighborly support, both material mutual assistance between residents, and spiritual mutual assistance, make the villagers live in the neighborhood more beautiful. This kind of neighborhood mutual aid and exchange shows the good sentiments of helping each other.

In the neighborhood of Dang

village, the space for social interaction is mainly the place where people often come near to their daily life. Usually, they are usually "face-to-face" encounters with relatively few people around water wells, waterlogged ponds and more spacious open spaces in front of each other. Mainly grouped together playing cards, eating, chatting, help each other to take care of children, look at each other and other portals.

[16] Zhou Ruoqi, Zhang Guang, "Hancheng Village and Dangjia Village Houses", Shaanxi Science and Technology Press

[17] Xuan Zhaokai "Introduction to New Social Studies", Beijing China Personnel Publishing House, 2000



Dang village was formed in the Ming Dynasty. There has well-preserved ancient houses, hall, and stone pavement. Many historical buildings have been preserved and their relationship with the neighborhood is good.

The road network is simple and clear. There are three main roads called East Lane, Lane Lane and West Lane, surrounded by a loop known as the horse road.

Fig 4.2_ Solid and void of Dang village

Drew by author

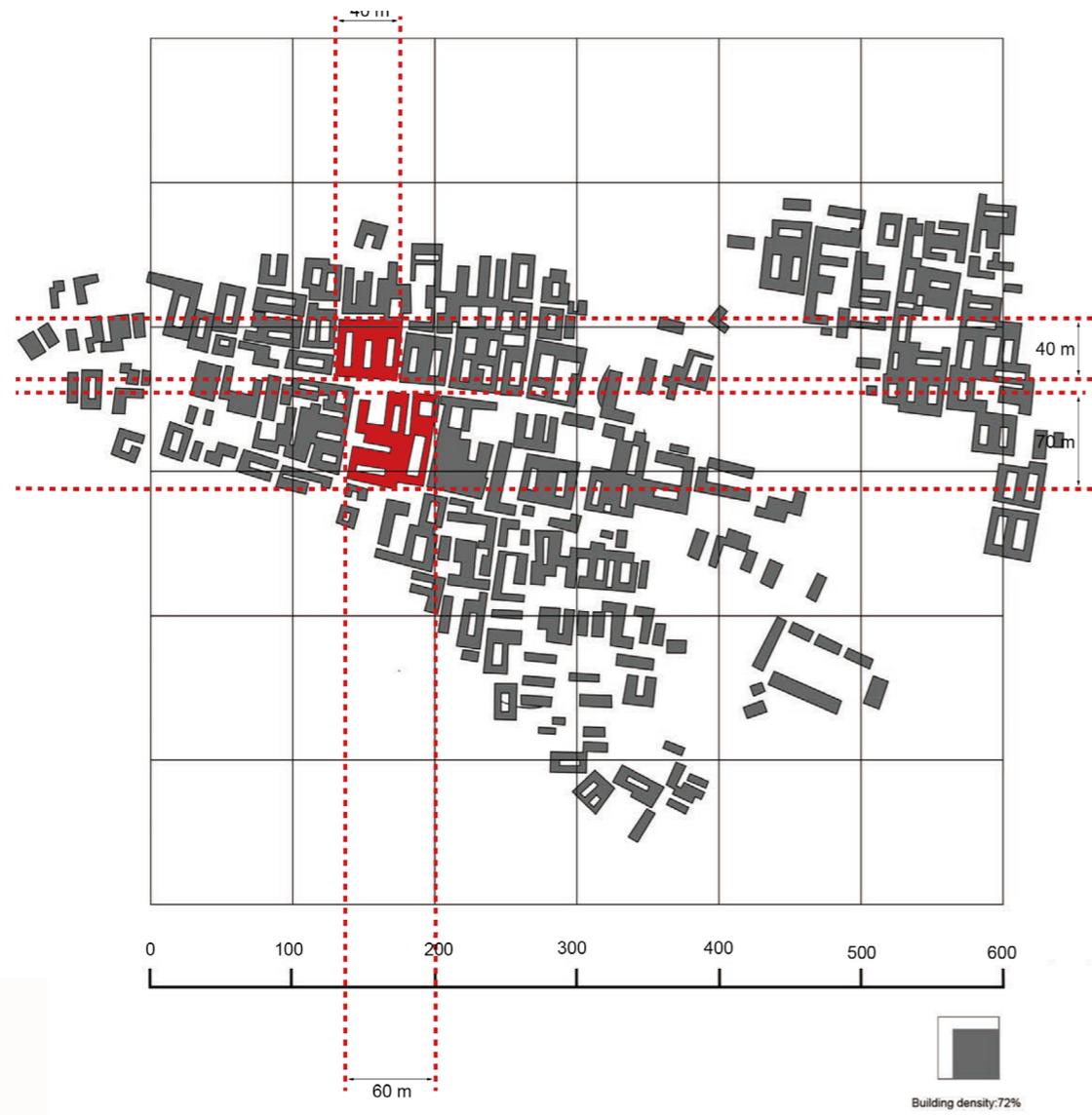


- Main street of settlement
- Street of settlement
- Yellow Open public area
- Orange Public area for neighborhood
- Red Historical buildings
- Brown Monument
- ① Wills and workshop --- Public place for daily life
- ② Ancestral hall --- Place for daily activities and patriarchal activities
- ③ Kuan Yin Temple and Stage --- Center of public activity space
- ④ Refuge --- Special form of public activities place
- ⑤ Guandi Temple --- Public activities place
- ⑥ White Temple --- Shehuo activities place



Fig 4.3_ Functional sequence of Dang village

Drew by author



The average length of side of one block is 40 ~ 60 m, and the average density is 72%

Fig 4.4_ Measurement of Dang village

Drew by author

Abstract structure of Dang village

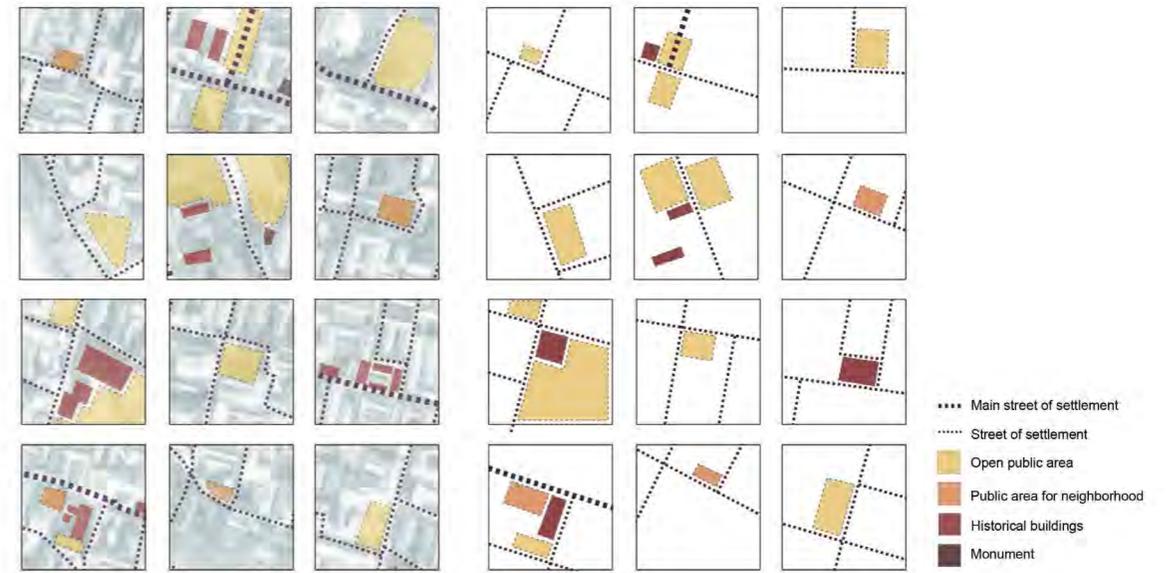
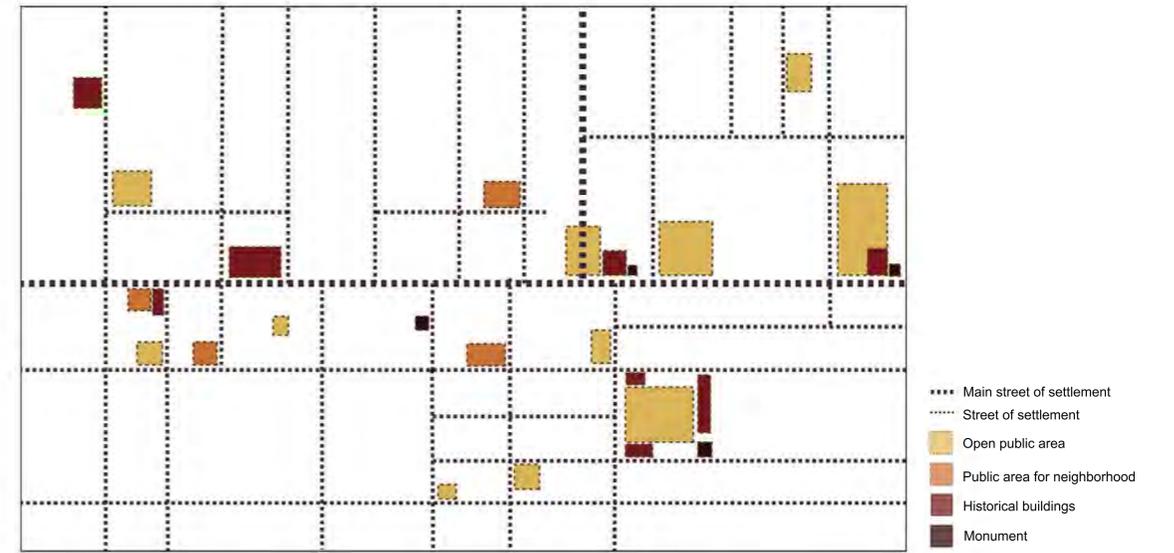
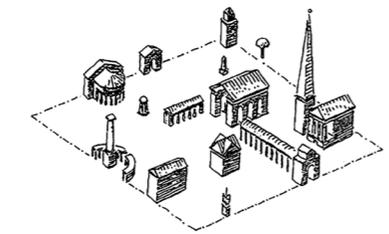
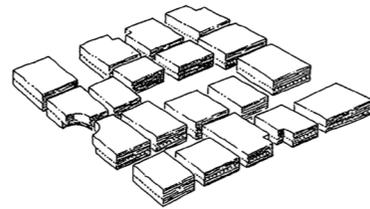


Fig 4.5_ Abstract structure of Dang village

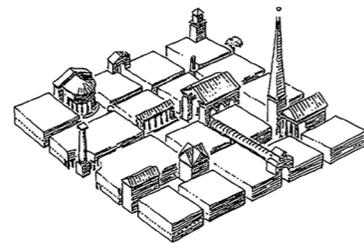
Drew by author



PRIVATE PART



PUBLIC PART



ENTIRE CITY

Fig 4.6_ The Urban Morphology Theory of Krier

Krier, the Reconstruction of European City, 1984

SITE RENEW STRATEGY

Krier divides the city's morphological elements into two categories: one is the public element public, and the other is the private element private.

Public factors are dominant in the whole city. They are diverse and complex in type. They include large public spaces, public places, monuments and infrastructures. Individual buildings are subordinate and include residential, commercial, Production base, health and administration, etc. This kind of factor division clearly defines the hierarchical order of cities in the architectural form. We can use the images of Krier's theory of urban morphology.^[18]

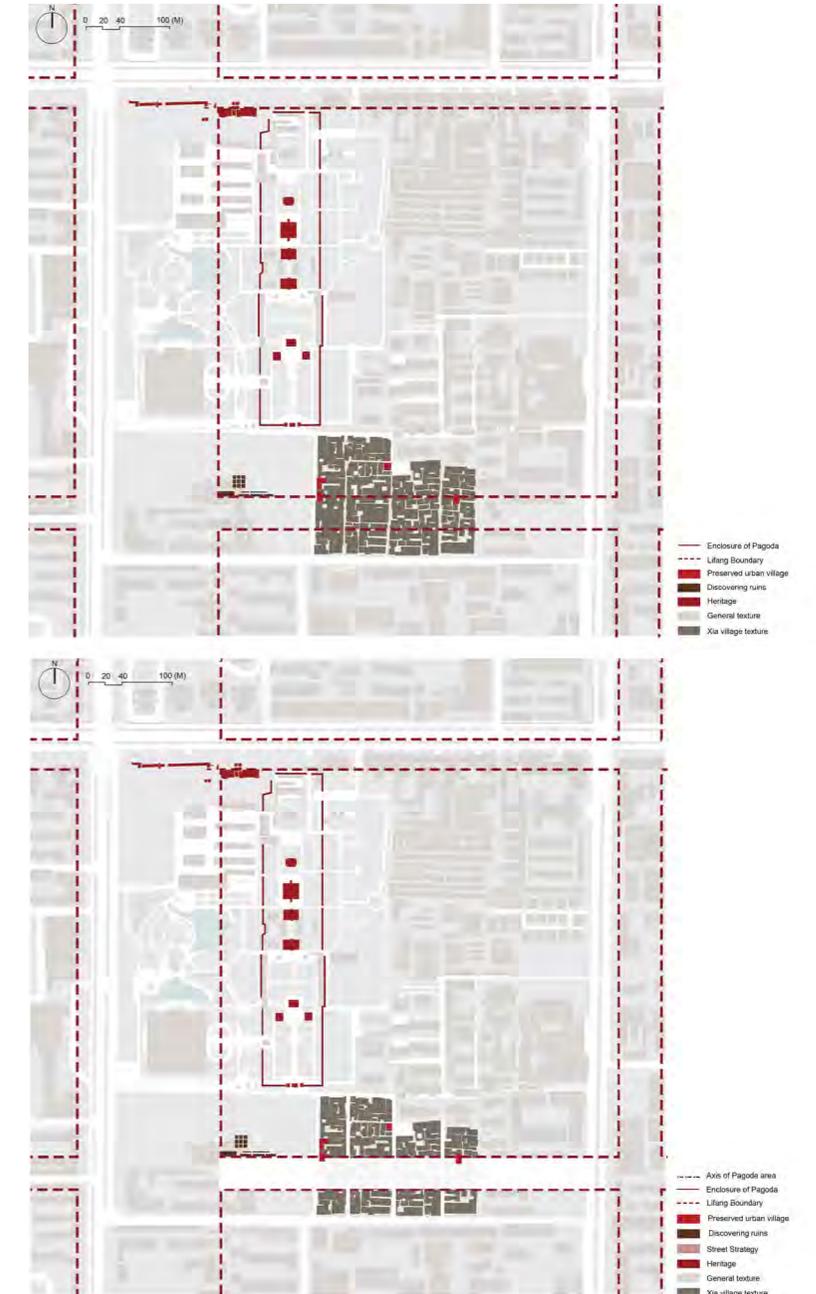
We translated the block size of the natural villages in Shaanxi Province into the renew plan of Xia Village, respected the original spatial structure and main road relations of Xia Village. We continued the three retained historical roads in Xia Village and incorporated them into the new street network. The scale of the renovated block is similar to that of the natural vil-

lage. People can still experience the walking distance of the villages in the new block and also retain the scale of urban village.

In the process of Renew, the old buildings with the tile sloping roof were preserved. These brick-and-wood mixed-structure buildings are the traditional symbols of the village and represent a piece of history here, so they will be treated as the heritage in the village. These buildings will be transformed into community cultural exhibition spaces, bringing a sense of belonging to the original residents of the village. In the planning of the area around the base, we respect the axis of the Small Wild Goose Pagoda and the boundary of the Lifang, and superimpose the historical layers of this area to get the final planning strategy.

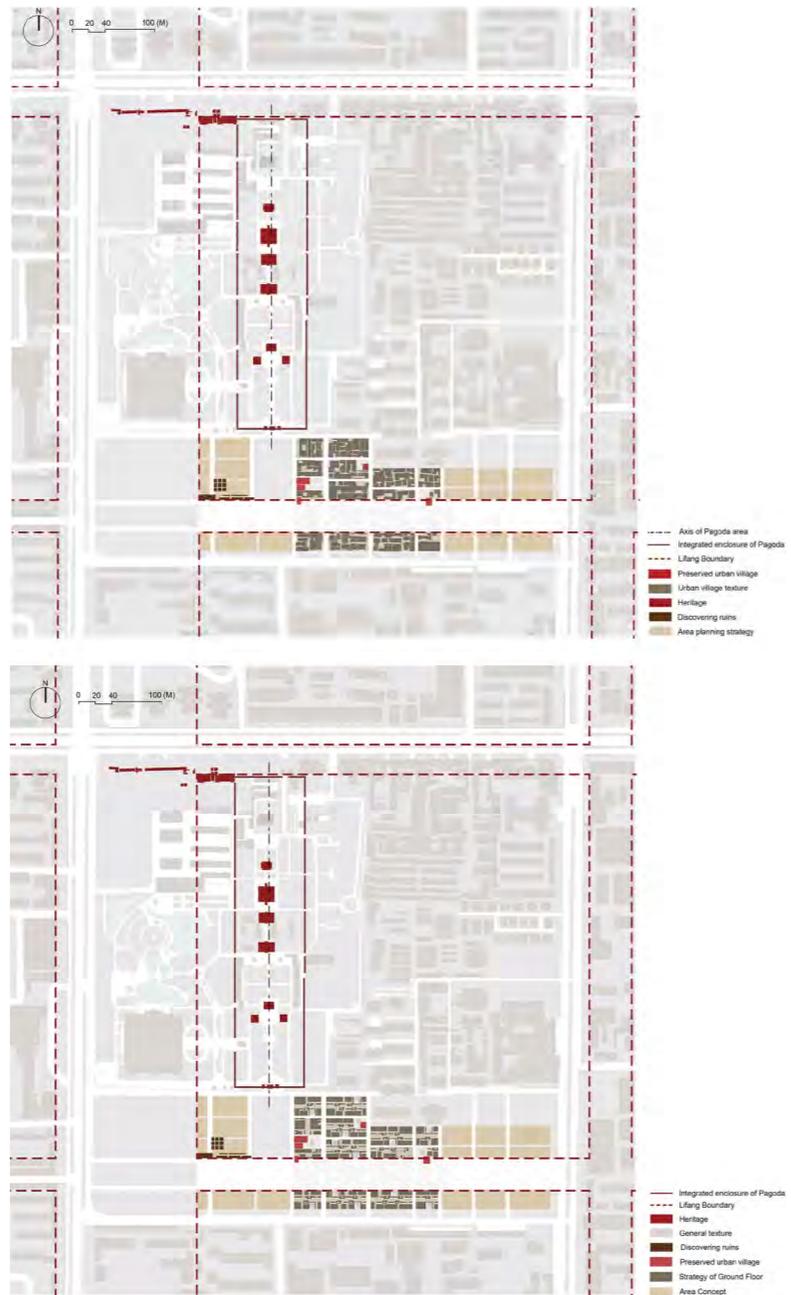
Fig 4.7_ Concept proposal _1,2

Drew by author



[18] Krier "The Reconstruction of European City"

1984



GROUND FLOOR AND PAGODA AREA

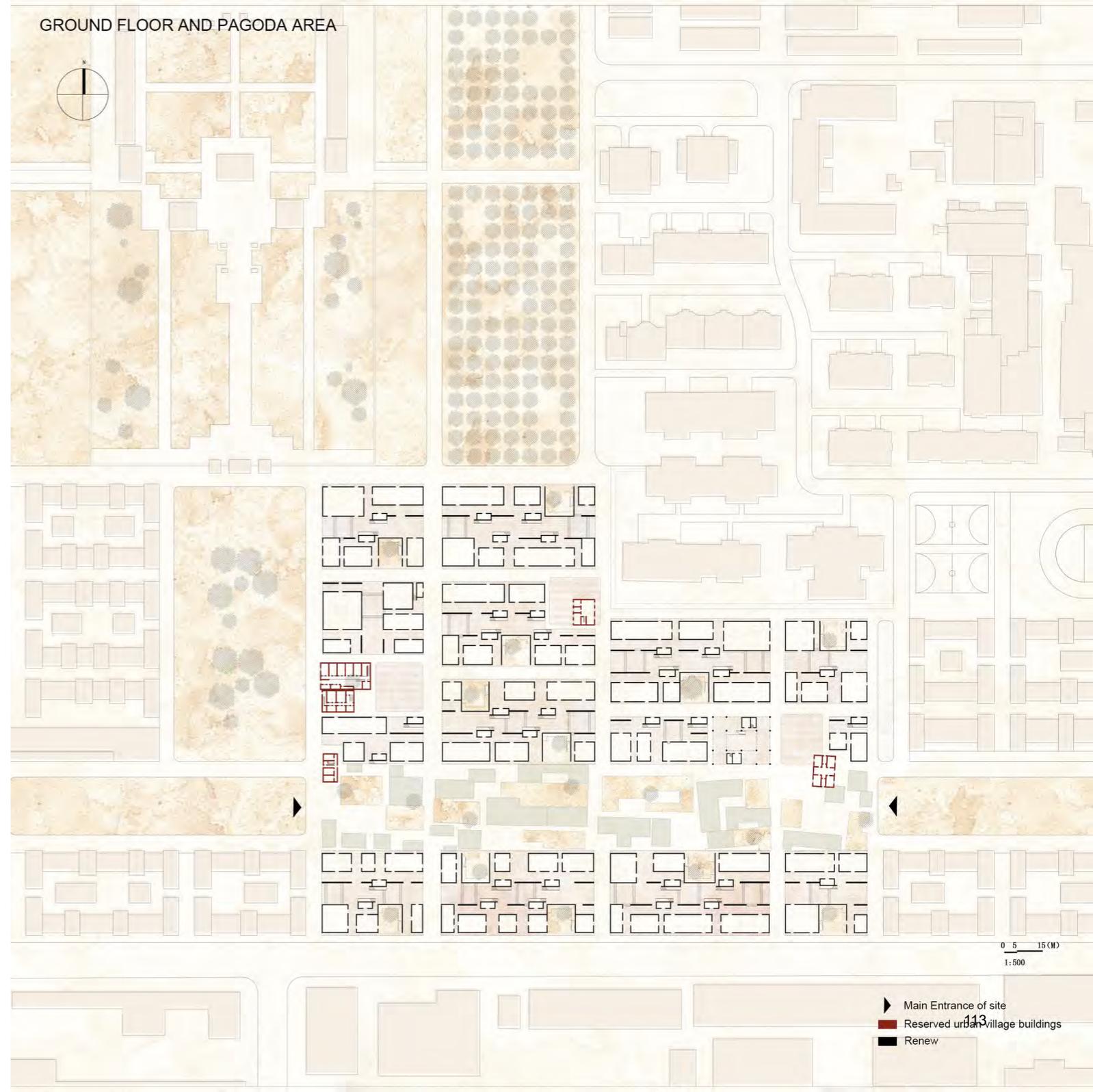


Fig 4.8_ Concept proposal _3,4
Drew by author

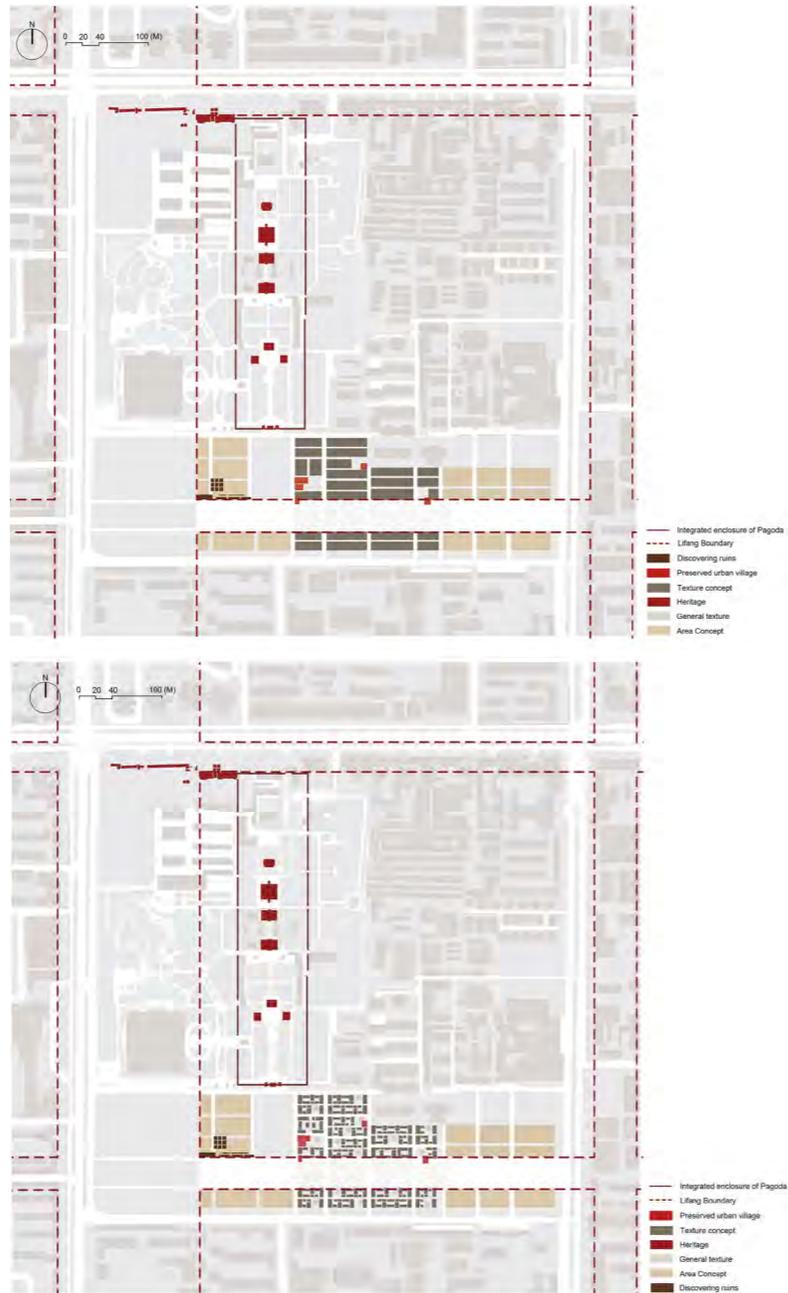


Fig 4.9_ Concept proposal _5,6
Drew by author



4.2
ARCHITECTURE
STRATEGY

“DANWEI” TYPOLOGY

(1) Working Unit Courtyard

Working unit refers to enterprises and public institutions and related government authority that provide all kinds of employment opportunities for urban residents, including factories, shops, schools, hospitals, research institutes, cultural groups and party and government organs.^{[19][20]}

During the socialist planned economy period, the working unit courtyard was the most basic form of social management and organization in Chinese cities.^[21]

In space, units often achieve the confinement, occlusion and integrity of their space through the "wall" and organize the residential facilities, living facilities and welfare facilities within the unit in the form of "courtyard". Unit courtyard, in short, is the material form and space carrier of a working unit.

In the 30 years after the founding of New China and before the reform and opening up, the unit courtyard formed the "cells" of China's urban space and was the most important way for urban

space to expand. Different types of units outside the old city area constitute the city's new built-up area.^[22]

Until after the reform and opening up in 1978, facing the all-round economic, social and institutional transformation, China's urban space is facing intense spatial restructuring.^[23] Under this background, the unit began to change as the most basic geographic unit in Chinese cities under the socialist planned economy.

(2) Case Study: Beijing Cotton Plant

In 1957, the Beijing Cotton Plant basically completed, and there was an obvious central axis in the spatial layout of it. The main entrance of the production area, entrance square, office building and factory building, main entrance of living area, landscape road, auditorium and other landmark buildings are all distributed on the central axis while other factories and residential buildings are symmetrically distributed along the central axis.

The production area of Beijing

Cotton Plant covers an area of about 19 hectares. The entire plant adopts a long-span serrated design, forming a magnificent and distinctive roof texture. Within the production area, the office building is connected to the plant to facilitate the organization and management of production. In the vicinity of the entrance to the production area, some production and living service facilities are also planned, such as nurseries and public baths.

The planning and design of the living area was completed under the guidance of Soviet experts. The entire unit residential area using "peripheral", "double peripheral" form of neighborhoods, each covering an area of about 1-2 hectares. Residential layout along the roadside around the four, was "T" or "L" shaped distribution. All residential buildings were designed into three-story buildings, large floor space, the outer wall of the red brick, roof form to two or four slope-based, laying gray wave roof tile. At the entrance to the living area and the central courtyard, it also provided living

services such as auditorium, staff hospital, canteen, barber room, kindergarten, primary school, secondary school, clubhouse, guest house and so on, which basically met the needs of staff and workers in daily work and life.

[19] Chai Yanwei. *The Unit-Based Spatial Structure of Living Spaces in Chinese Cities - An Empirical Study of Lanzhou* [J]. *Geographical Research*, 1996, 15 (1): 30-38.

[20] Lu Feng. *A special form of social organization* [J]. *Chinese Social Sciences*, 1989 (1): 71-88.

[21] Bjorklund E M. *The Danwei: socio-spatial characteristics of work units in China's urban society*[J]. *Economic Geography*, 1986(62): 19-29.

[22] Chai Yanwei. *Urban Space* [M]. Beijing: Science Press, 2000.

[23] Ma Laurence, Wu Fulong. *Restructuring the Chinese city: diverse processes and reconstituted spaces. Restructuring the Chinese city: changing society, economy and space* [M] London: Routledge, 2005.

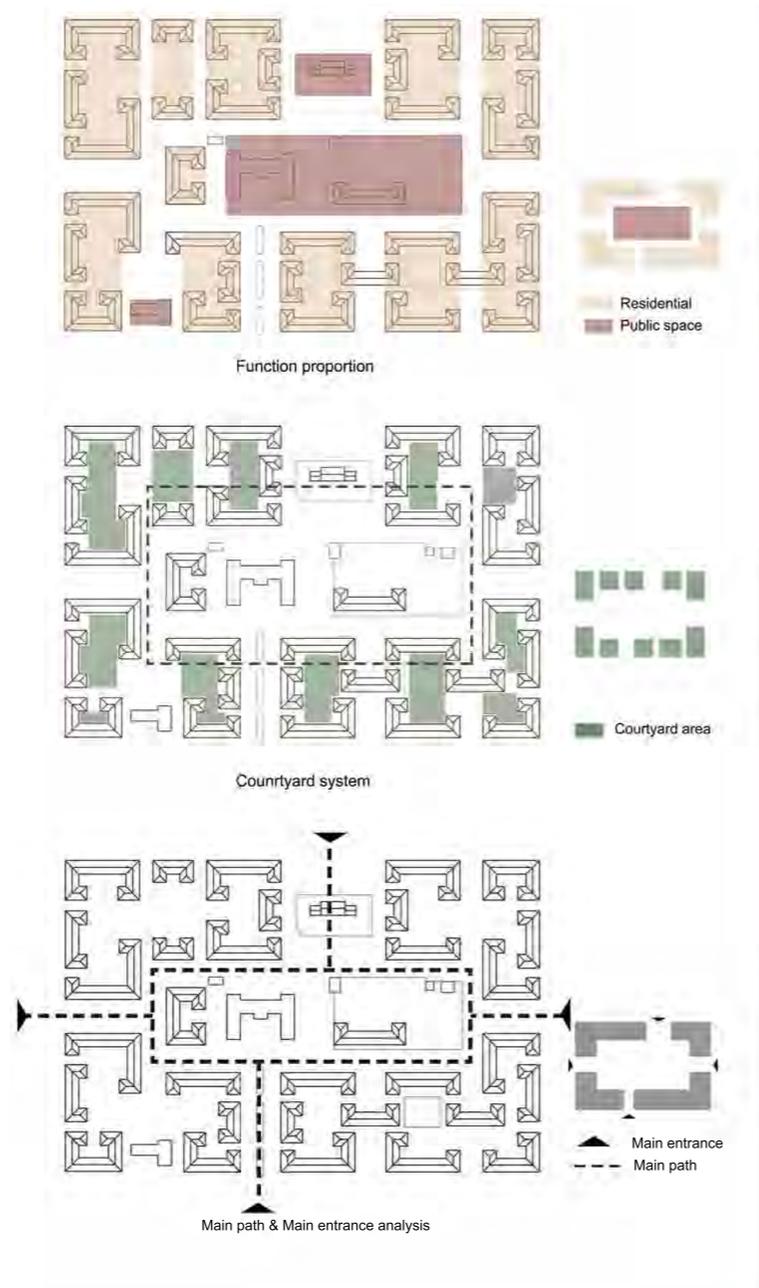


Fig 4.10_ Function of Beijing No.2 Textile Factory

Drew by author, Information from Zhang Yan, Chai Yanwei, Zhou Qianjun, *The Spatiality and Spatial Changes of Danwei Compound in Chinese Cities: Case Study of Beijing No.2 Textile Factory* [J], International Urban Planning, 2009

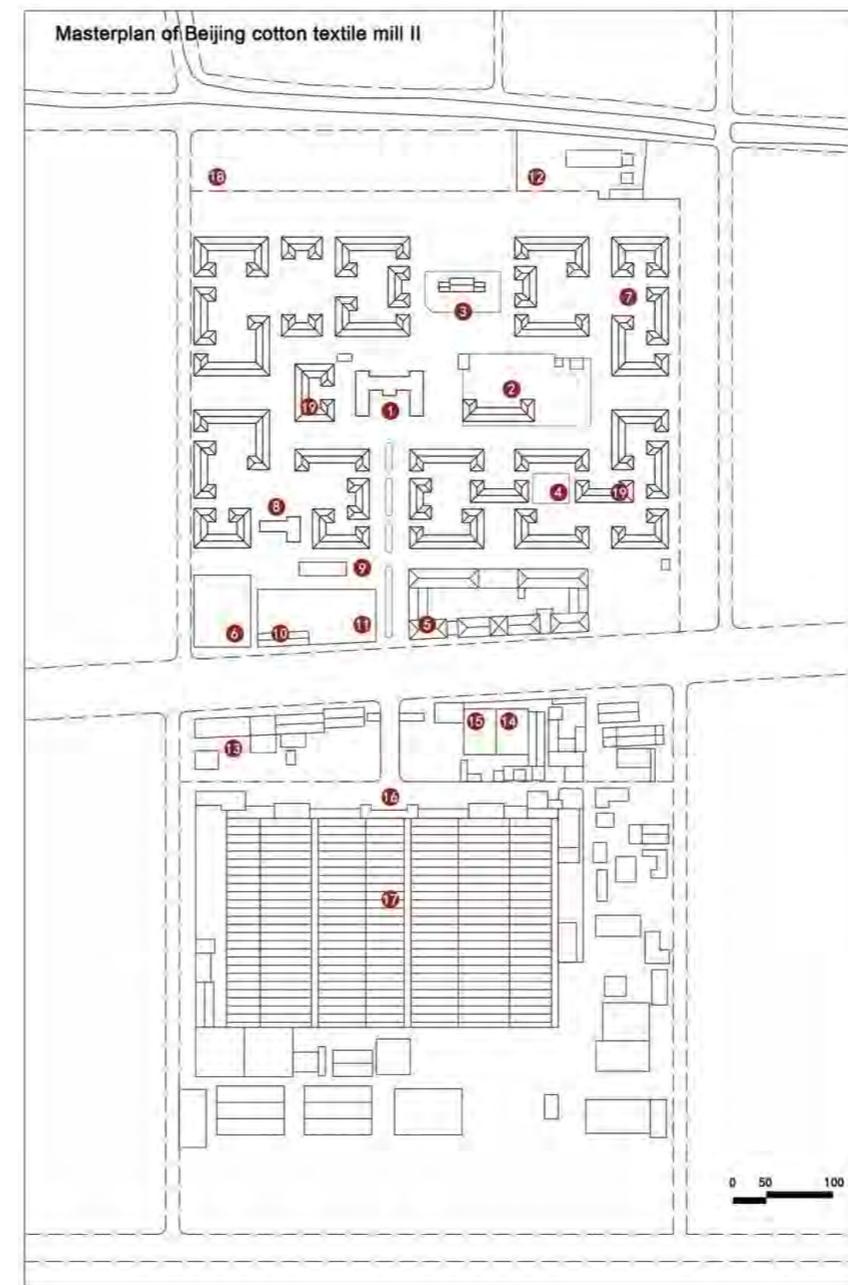


Fig 4.11_ Masterplan of Beijing No.2 Textile Factory

Drew by author, Information from Zhang Yan, Chai Yanwei, Zhou Qianjun, *The Spatiality and Spatial Changes of Danwei Compound in Chinese Cities: Case Study of Beijing No.2 Textile Factory* [J], International Urban Planning, 2009

- 1. Auditorium and restaurant
- 2. Primary school
- 3. Kindergarten
- 4. Flower room
- 5. Single staff apartment
- 6. Balizhuang commune
- 7. Residential in 1970s
- 8. Textile Industry School
- 9. Commerce
- 10. Post office
- 11. Nursery
- 12. Secondary school
- 13. Nursery
- 14. Collective bathroom
- 15. Garage
- 16. Office building
- 17. Factory
- 18. Undeveloped land
- 19. Residential in 1960s

We analyze the functional distribution of the “Danwei” unit compound and translate it into our design. We use the perimeter of the new buildings as a living function to get better sunshine from south. The space in the middle part is used as a public activity room and a service room to facilitate people’s gathering and communication.

Every small courtyard inside the building is connected by the main streamlines of the building, which increases the opportunities for communication between neighbors and promotes neighborhood relations. In the project area, the public space is processed hierarchically. The smallest level of public space are the courtyards. The middle level are the gardens near the main entrance of the building and the small square enclosed by buildings. The highest level of public space are the street between the Lifang and the south square of the Small Wild Goose Pagoda. The hierarchical processing of public space enables the design to meet needs of different scales and types of activities, and

promotes the publicity of the region.

The main path of a single building is designed around the courtyard, allowing people to reach everywhere of the platform without dead ends. The main entrances connecting the first and ground floors are the large ramp around the courtyard and the large staircase on the inner street, providing more publicity.



Fig 4.12_ Architecture strategy

Drew by author

“COURTYARD” TYPOLOGY

A – (HJ10), NO.10 IN OLD ALLEY

This is a two-layer courtyard, facing west. In the west side is a five-bay two-floor building open to the street. In the front yard, there are four rooms for both north and south wings. The middle hall is a three-bay building, doors and windows in the middle not existing anymore. In the back yard, there are four side rooms for both wings, and the main building has three bays and two floors. In the middle is a round hole, and in the second floor is also a round window.

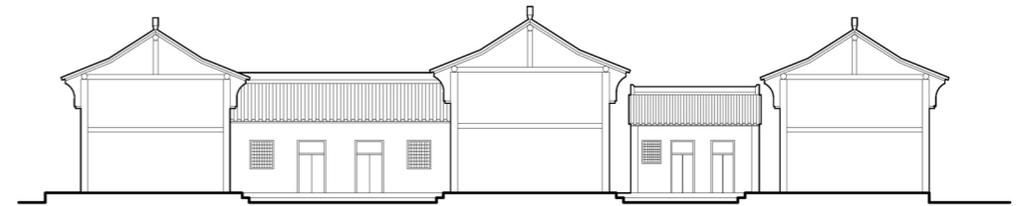
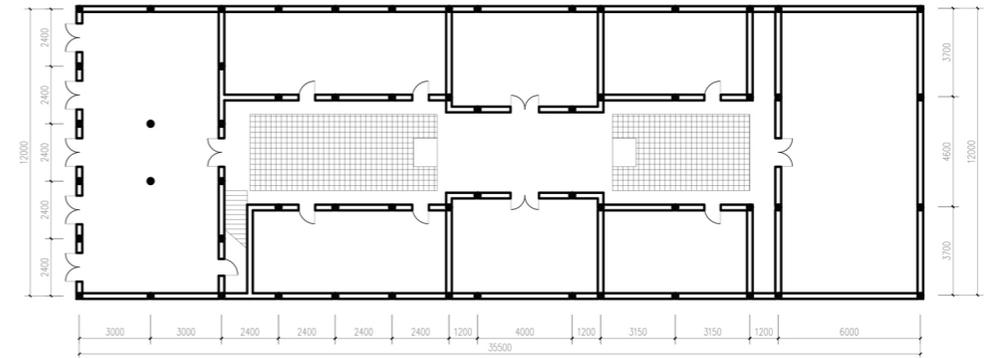
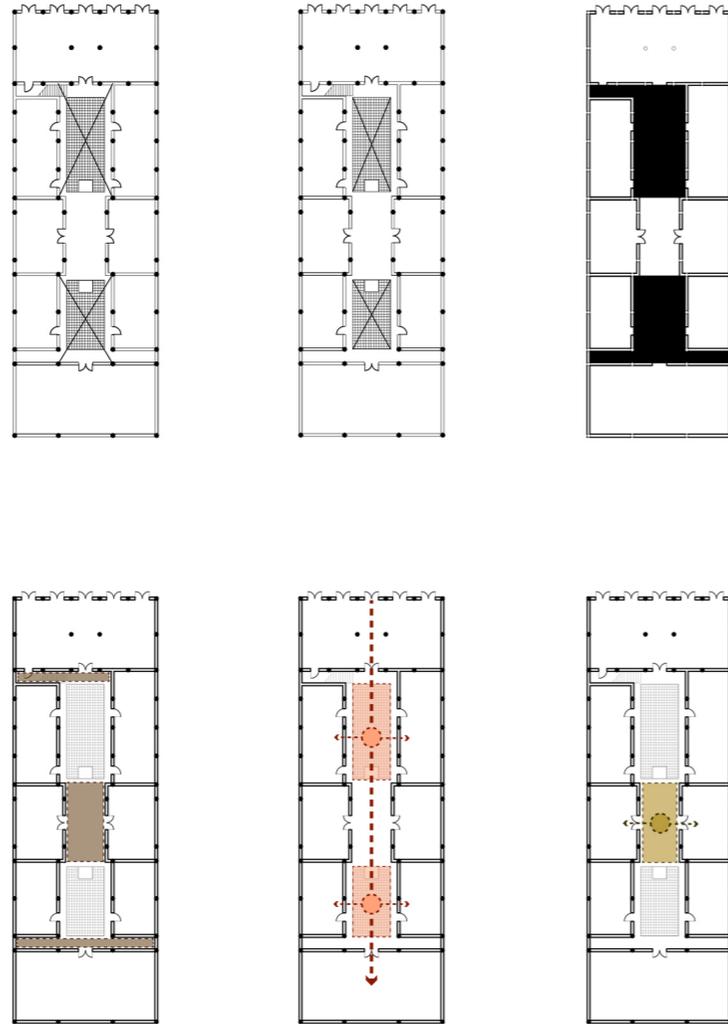


Fig 4.13_ Courtyard A

Redrew from Xue Yinsheng, *Hancheng Ancient City* [G]. Han City Information Compilation, 2000

B - ZHANG'S FORMER HOUSE
(HG08), NO.27 IN XIAOGAO AL-
LEY

This is a northern and south-
ern direction two-layer courtyard,
well-preserved. The concierge
in the front courtyard is a three-
bay building. The gate opens to
the south with the lettering above
the door. There are three rooms
for both wing. The middle hall
has three rooms. The back yard
has three side rooms in both wings.
The main building has three rooms
and two floors. From the back
there is a trace of the back door.

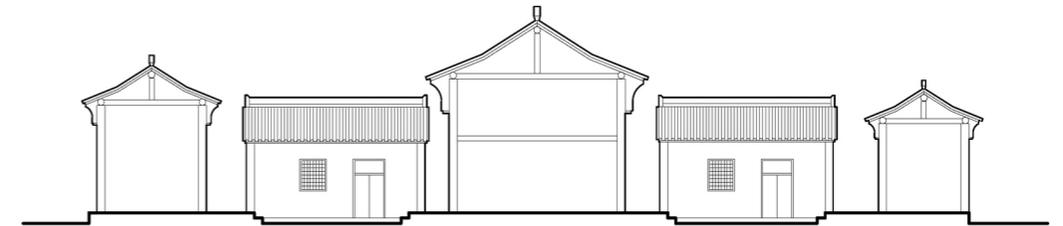
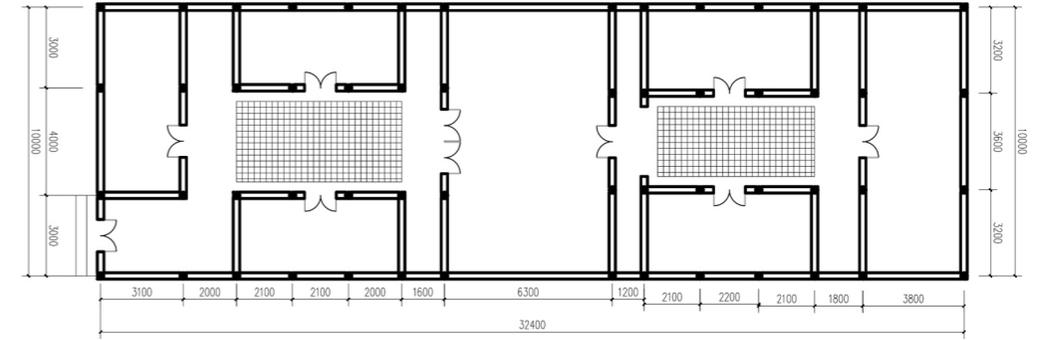
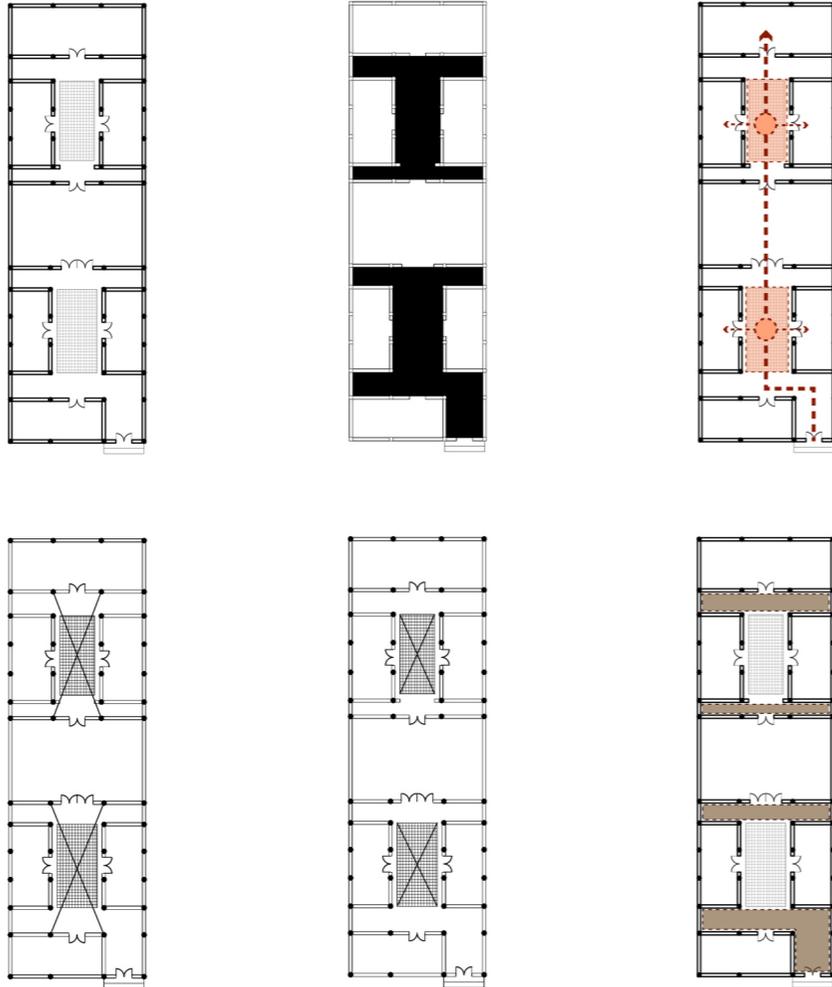


Fig 4.14_ Courtyard B

Redrew from Xue Yinsheng. Hancheng Ancient City [G]. Han City Information Compilation, 2000

C - CHENG ZHONGZHAO'S
FORMER HOUSE (HX06), NO.5
IN NEW ALLEY

The yard is the front yard of Zhongzhao former residence, facing south. Along the central axis from south to north are the concierge, hall, embracing mansion, main room, is a combination of a form of deformation. Concierge is a five-bay xieshan eave building. The gate has lintel inscriptions with screen door inside. The yard has no side room, but each about 2 meters wide corridor. The hall in the middle is five-bay single floor xieshan eave building, and the back building is five-bay two-floor building.

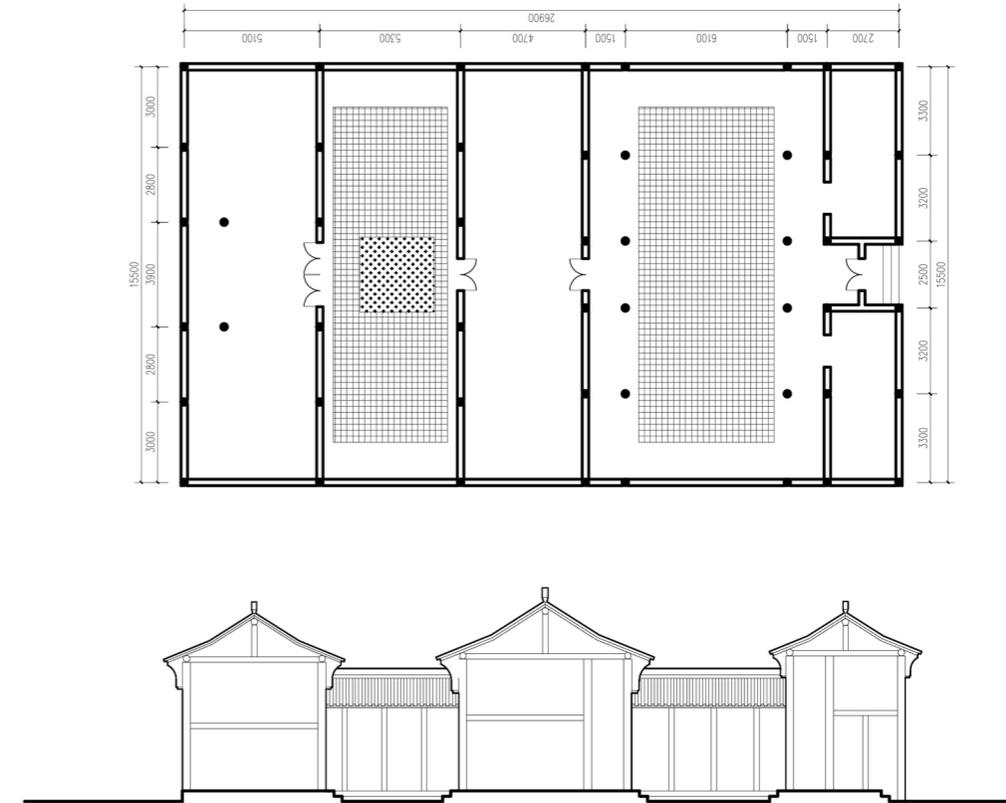
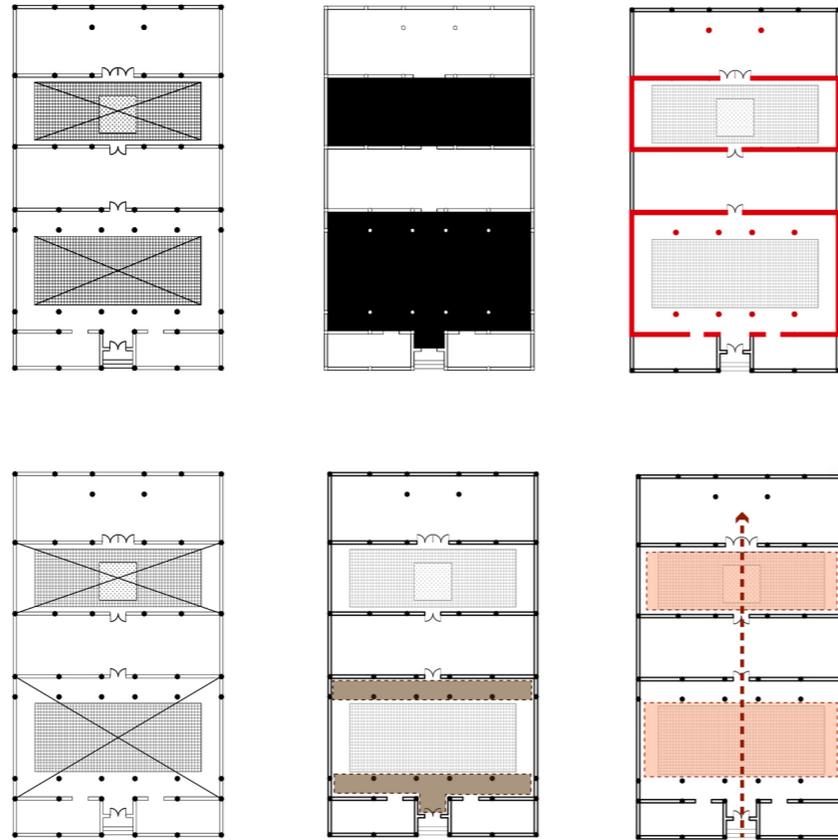


Fig 4.15_ Courtyard C

Redrew from Xue Yinsheng. Hancheng Ancient City [G]. Han City Information Compilation, 2000

D - "A PRINT" HOUSE (HX01),
 LOCATED IN EAST PART OF XIE
 ALLEY SOUTHERN SIDE

This house is the unique "a printed" courtyard in the Hancheng ancient city. The courtyard plane is basically a square, spacious inner courtyard, there is no Guanzhong residential narrow sense. The yard is north-south direction, the door open to the south, the lintel inscription "Lu and Tai". The main house is the five-bay Xieshan eaves building, the second floor has a wooden bar balcony. The side buildings in east and west have three bays, with xieshan eaves, the second floor front eaves wooden window out without balcony.

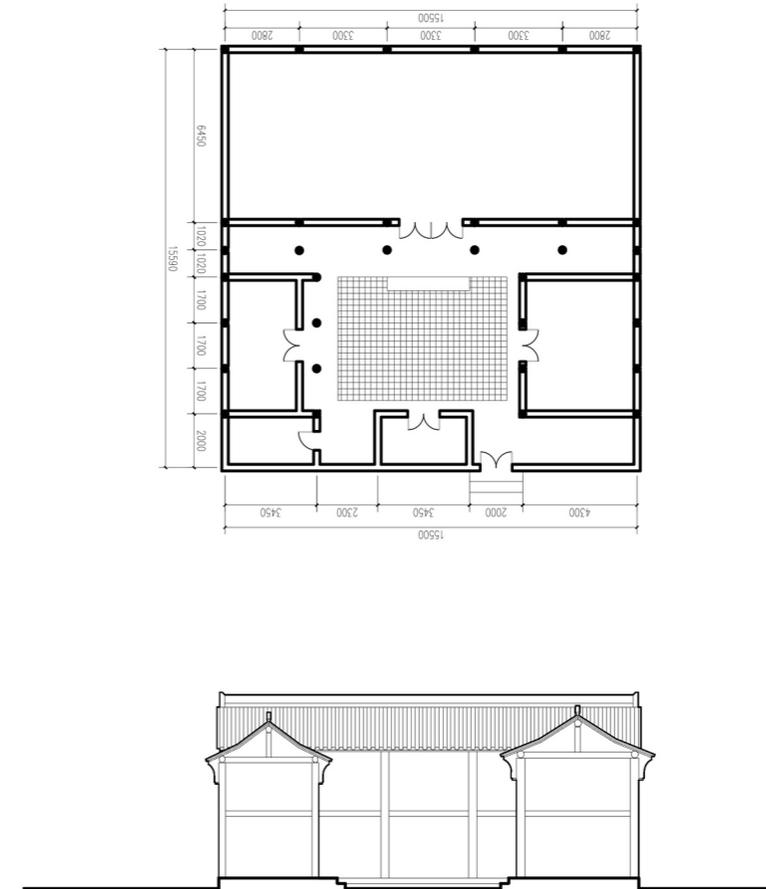
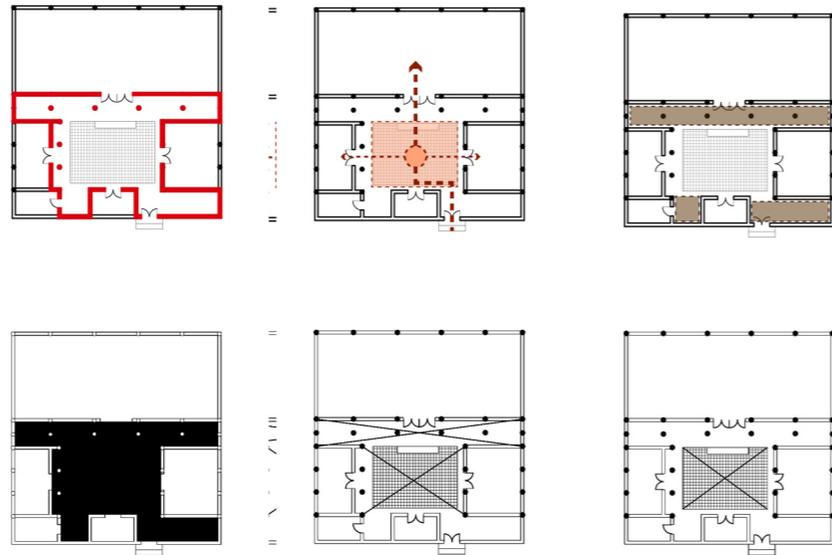


Fig 4.16_ Courtyard D
 Redrew fromXue Yinsheng. Hancheng Ancient City [G]. Han City Information Compilation, 2000

E - FAN KANGSHENG'S FORMER HOUSE (HB04), NO.31 IN BOZI ALLEY

Courtyard facing south, there is a brick wall enclosed the front yard before the concierge. Along the axis from south to north followed by the gate, shadow wall, concierge, and four-bay side building with loft rooms in both east and west. The backyard has a four-bay single-storied building in the east while the West Wing no longer exists.

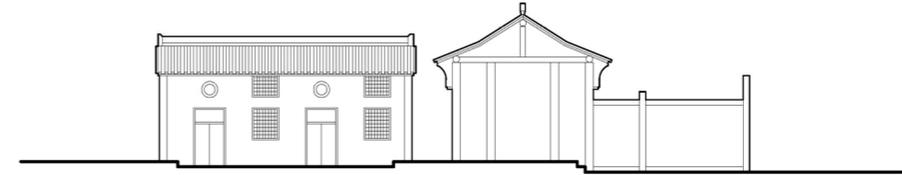
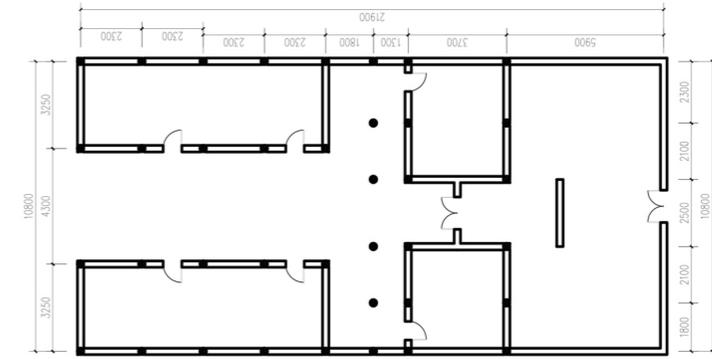
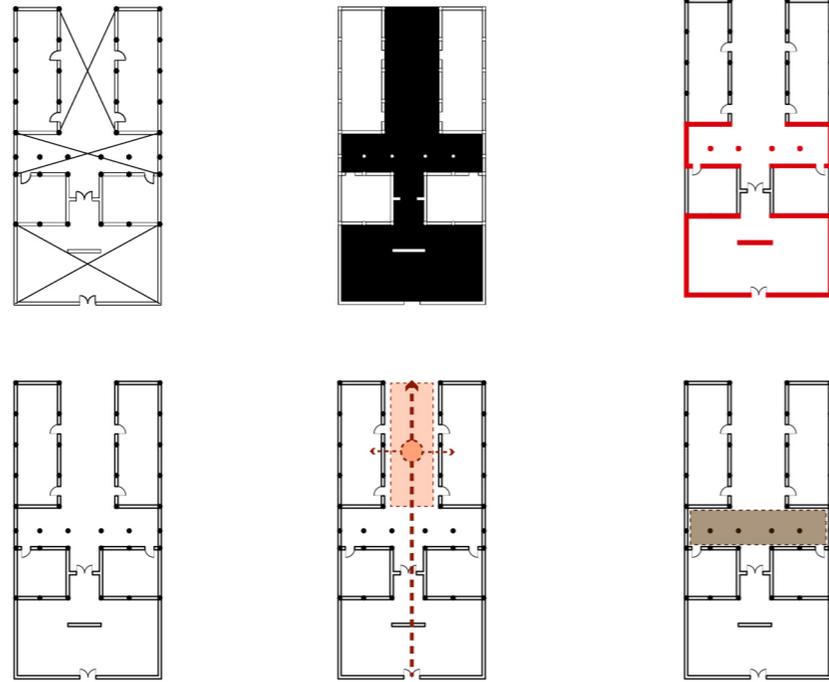


Fig 4.17_ Courtyard E
Redrew from Xue Yinsheng. Hancheng Ancient City [G]. Han City Information Compilation, 2000

F - (HC02), NO.12 IN CHEN ALLEY

This is a north-south facing courtyard, with a plane aspect ratio of about 2: 1. The concierge is a small five bays two-story building. The side buildings in east and west have four bays, and west side has a higher cornice. The gate opens in the south west side of the yard. There is a corridor in the east of the doorway concierge.

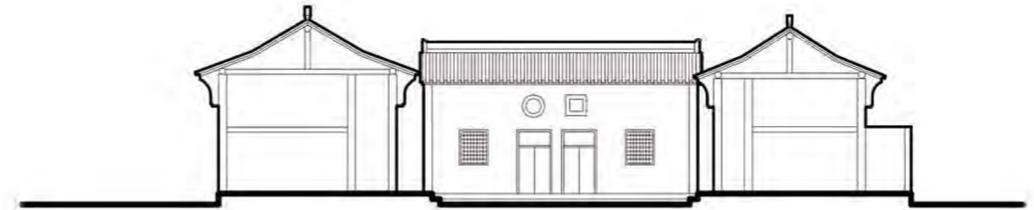
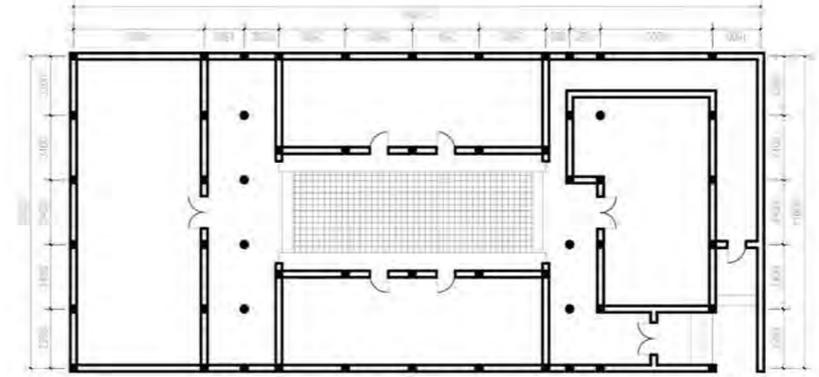
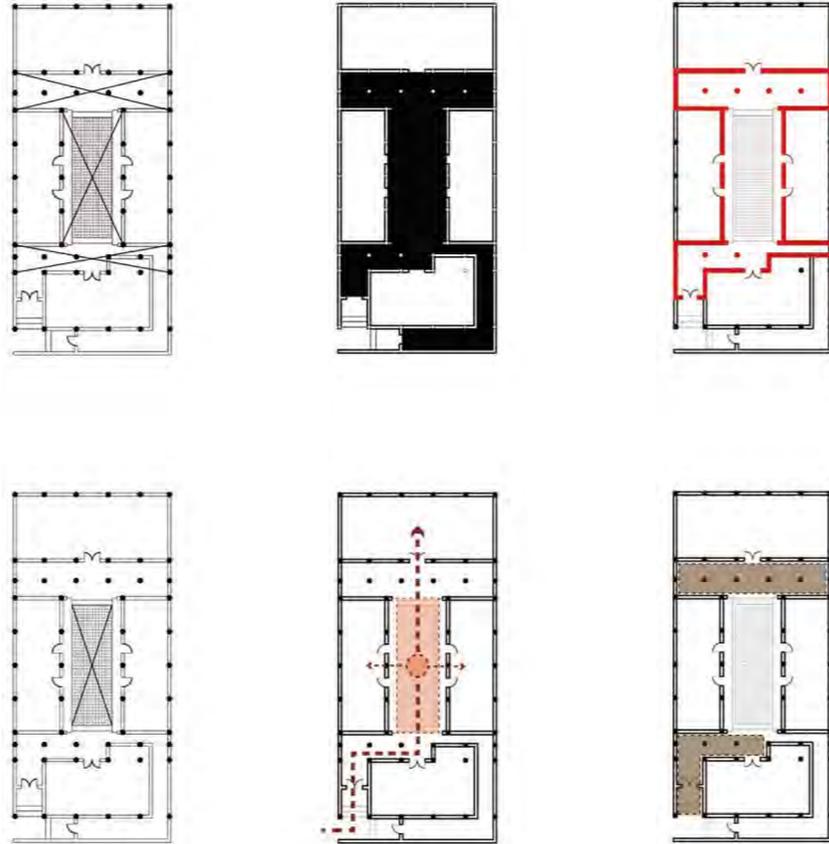


Fig 4.18_ Courtyard F

Redrew from Xue Yinsheng. Hancheng Ancient City [G]. Han City Information Compilation, 2000

URBAN VILLAGE ARCHITECTURAL LANGUAGE

We summarized and analyzed the architectural elements of Xia Village, integrated some architectural languages with the characteristics of urban villages, and apply them to new architectural designs. These include the form of balconies and the integration of balconies and rooms, the integration of brick wall features, the integration of features in the form of stairs, and the integration of street forms and scales.

We abstractly integrate these features into new buildings, making the new buildings have memories of the villages in the city, giving people a sense of belonging, allowing people to feel what has happened here and continue these characteristics.

Balcony



Brick wall

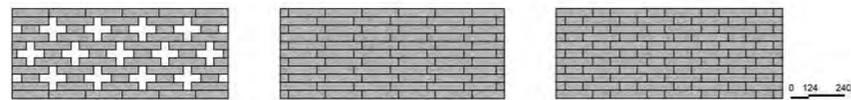


Fig 4.19_ Urban village architectural language_1

Drew by author

Stairs



Street

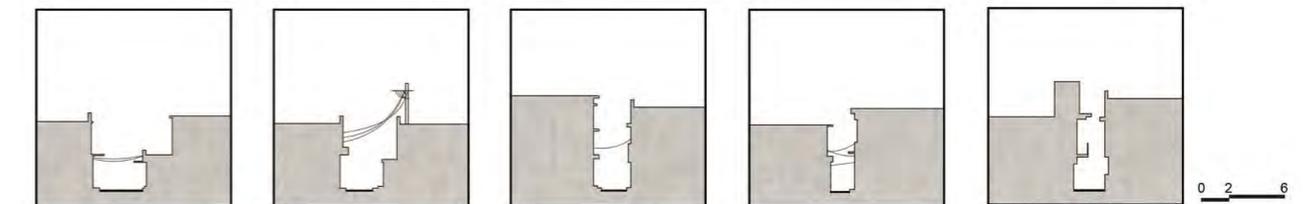


Fig 4.20_ Urban village architectural language_2

Drew by author



In our architectural design, the courtyard is the smallest unit of living space, which is arranged to preserve the scale of the natural village courtyard. Each family can share a courtyard unit, which promotes neighborhood relationships

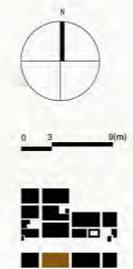
and maintains social relationships. This is also a continuation of the social characteristics of the villages in the city.

The building's ground floor uses the architectural features of the urban villages to integrate it as a public gallery and store for people to interact and communicate, with the above part being a more intimate residential function.

According to the type of residential population surveyed, we

divide it into different types of living rooms for people with different needs.

There are 1668~2224 of original permanent persons. We consider the healthy density of population in the site, so we give the new part for youngers. The number of person in the renew part is 500 ~ 700 and others (About 1500 person) are placed in new apartment near to the renew part.



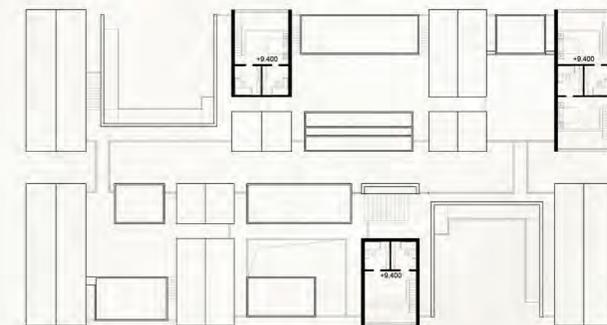
Ground Floor



1st Floor



2nd Floor



3rd Floor

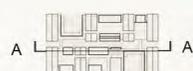
SECTION AND FACADE



0 3 9(m)



SOUTH FACADE



SECTION A - A

UNIT TYPE

0 1 3(m)

A. Unit for one family



B. Unit for couple



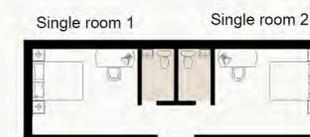
C. Unit for single



Under floor



Upper floor



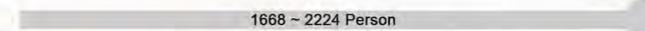
RESIDENTIAL DATA AFTER RENEW



■ New residential
■ Renew part



Original permanent population : 1668 ~ 2224 Person

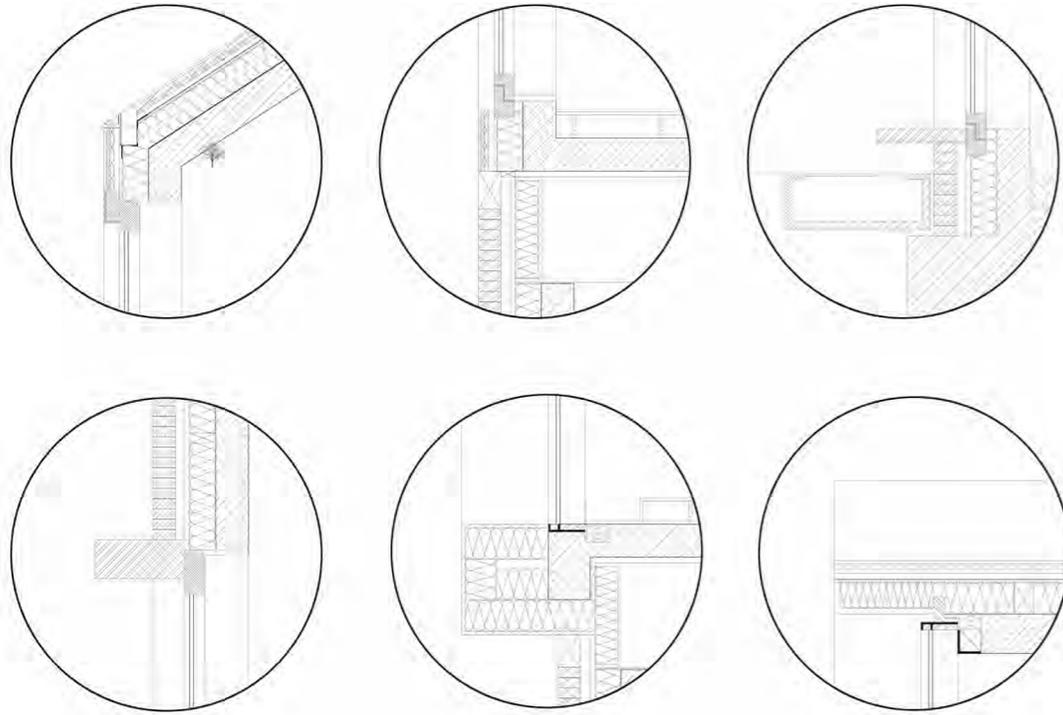


Population kept after renew : 500 ~ 700 Person

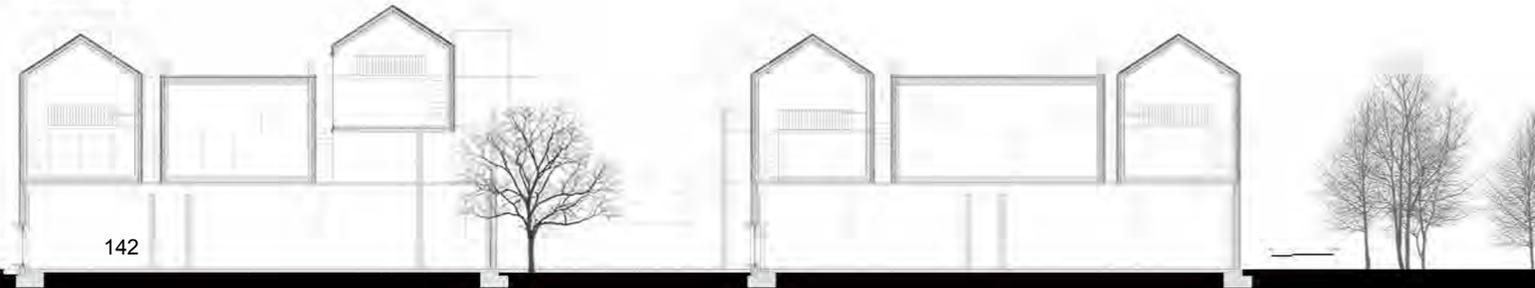
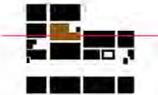


Population placed in new apartments : ~ 1500 Person





STRUCTURE DETAILINGS 1:10





5
PLATES

1. LOCATION OF XI'AN IN CHINA



2. EVOLUTION OF URBAN VILLAGE AND EXTENDING OF XI'AN - 1984



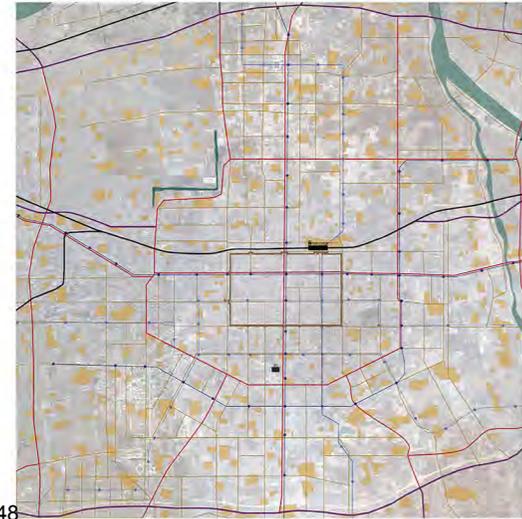
3. EVOLUTION OF URBAN VILLAGE AND EXTENDING OF XI'AN - 2004



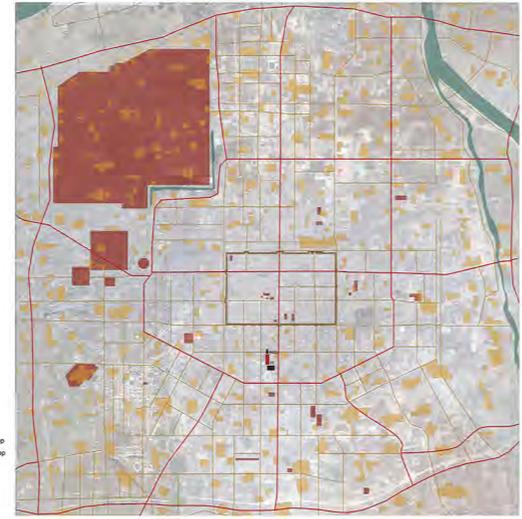
4. EVOLUTION OF URBAN VILLAGE AND EXTENDING OF XI'AN - 2016



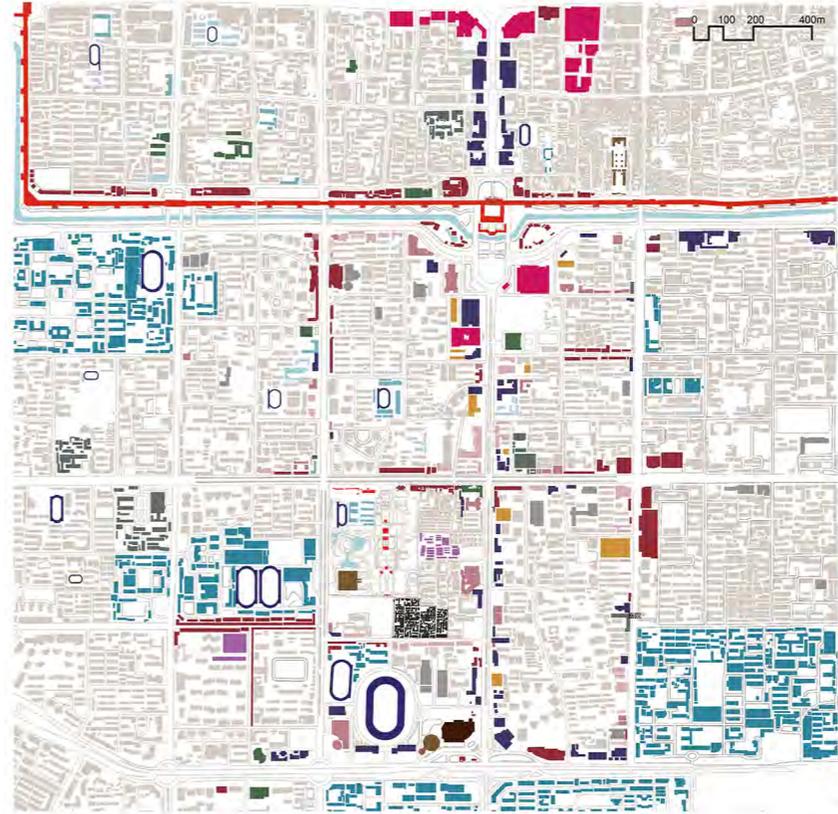
5. CITY MOBILITY AND URBAN VILLAGE DISTRIBUTION



6. HERITAGE AND URBAN VILLAGE DISTRIBUTION



7. FUNCTION RESEARCH OF XI'AN CITY



8. WALLS AND ENTRANCE OF COMMUNITY



9. HEIGHT OF BUILDINGS IN COMMUNITY



10. DEMOLITION IN COMMUNITY



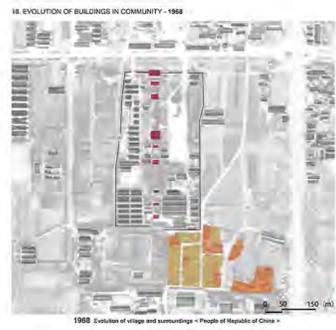
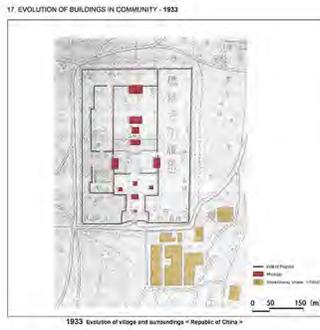
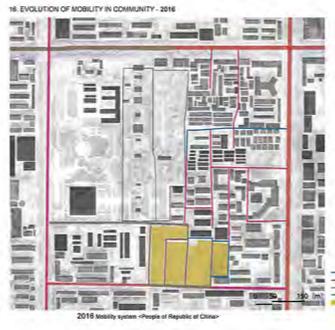
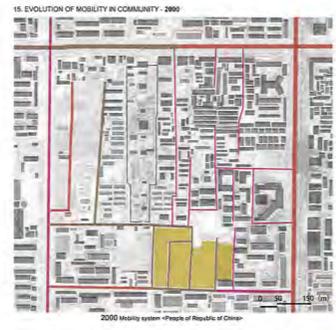
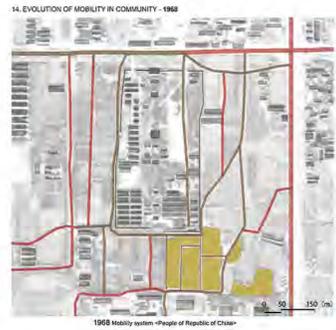
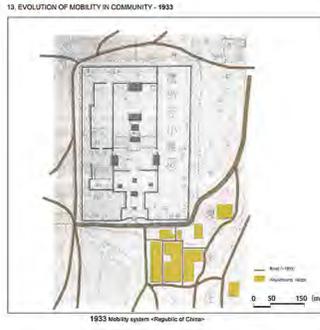
11. MOBILITY SYSTEM OF XI'AN



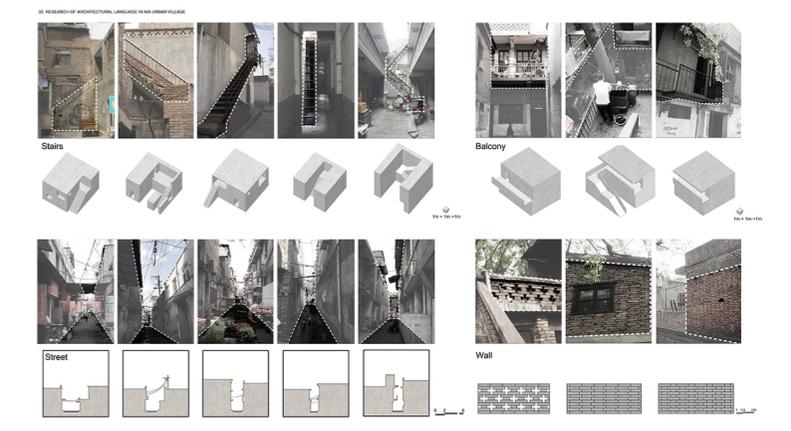
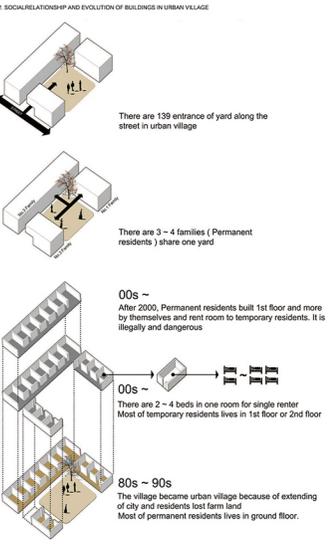
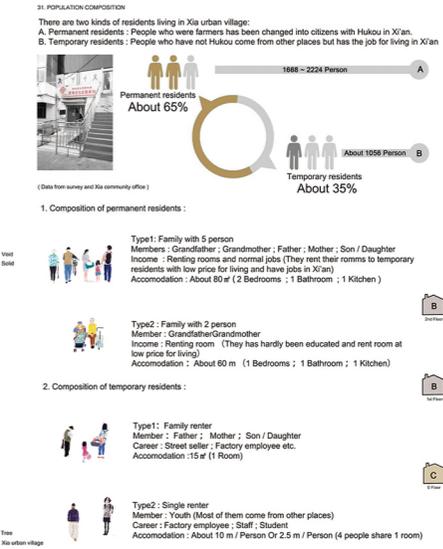
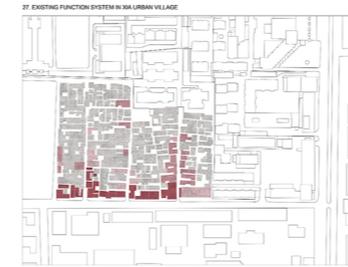
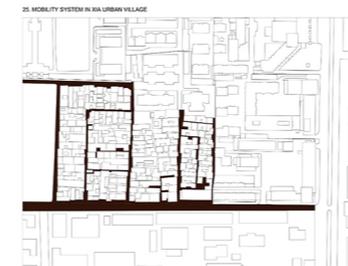
12. GREEN AREA SYSTEM IN XI'AN

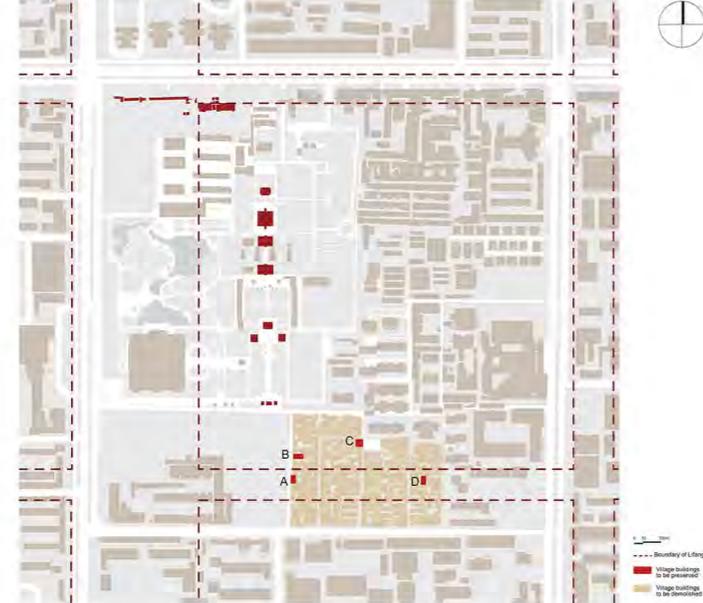


EVOLUTION OF XIA COMMUNITY
夏家庄社区演变过程分析



EVOLUTION OF XIA COMMUNITY
夏家庄社区演变过程分析

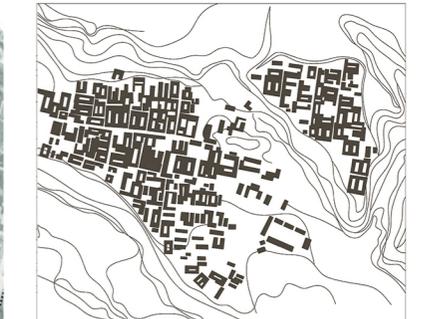




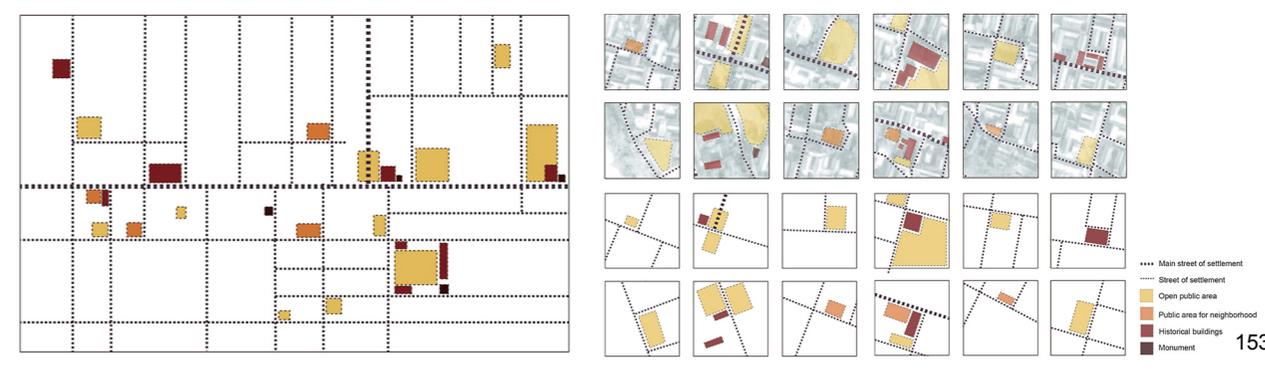
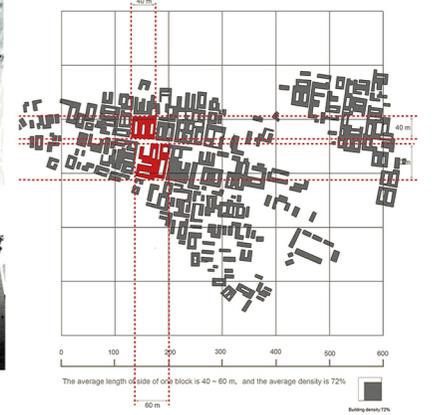
EXTERNAL PUBLIC SPACE SYSTEM, HERITAGE SYSTEM AND MOBILITY SYSTEM OF DANG VILLAGE



SOLID AND VOID OF DANG VILLAGE



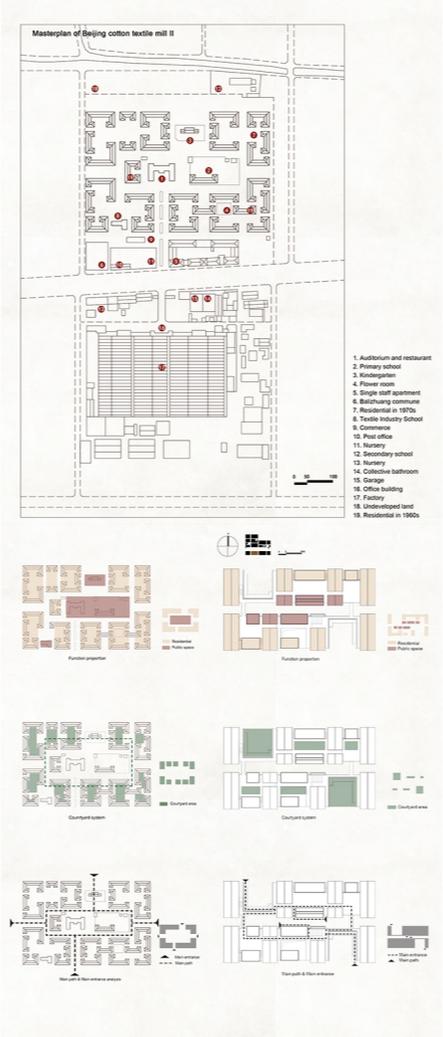
MEASUREMENT OF DANG VILLAGE



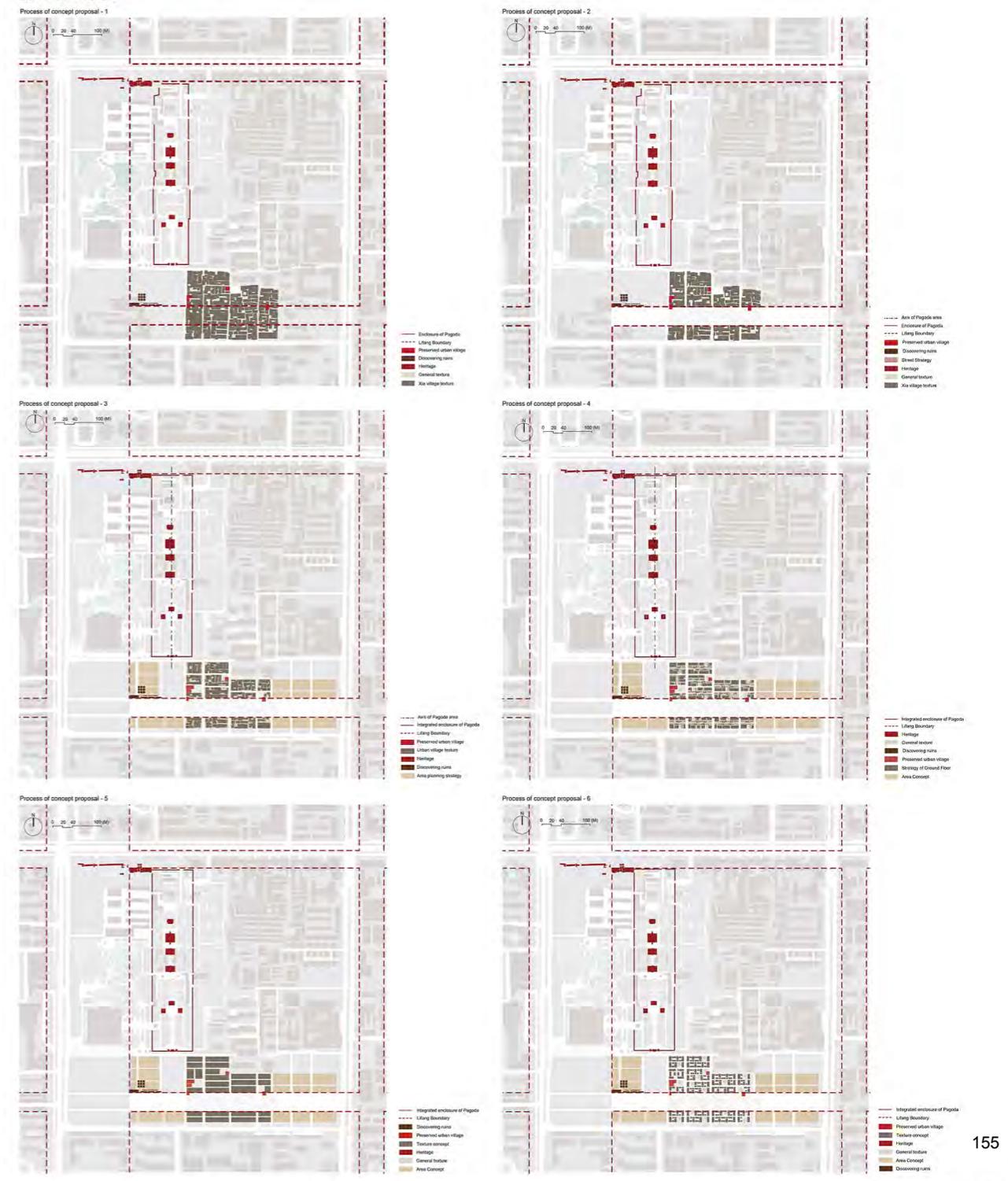
SHAANXI COURTYARD TYPOLOGY ANALYSIS
陕西合院类型分析



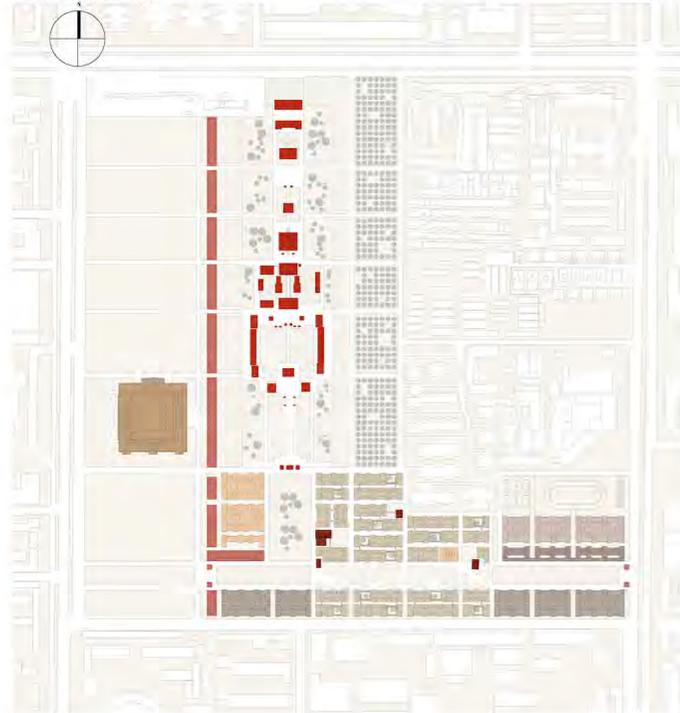
DANWEI TYPOLOGY ANALYSIS
中国单位社区类型分析



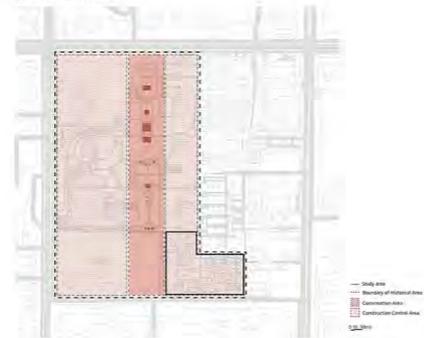
CONCEPT PROPOSAL DRAWING
项目概念生成过程



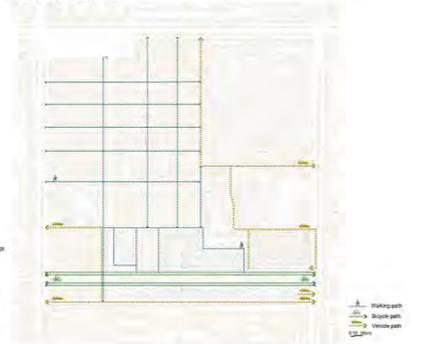
NEW FUNCTION IN XIA COMMUNITY



CONSERVATION PRIORITY



NEW CIRCULATION SYSTEM



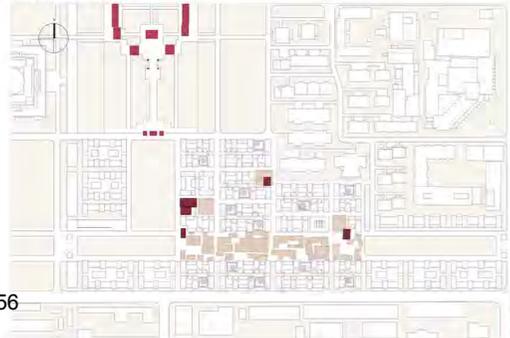
1ST COURTYARD PUBLIC SPACE



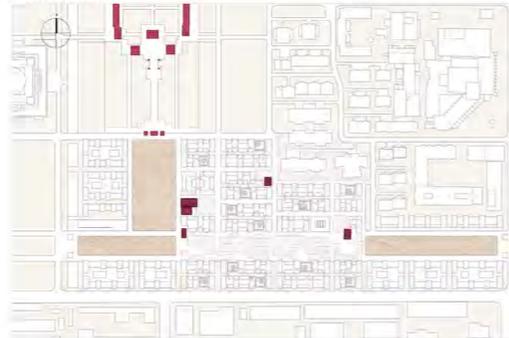
2ND ENTRANCE PUBLIC SPACE



3RD GROUND PUBLIC SPACE



4TH URBAN PUBLIC SPACE



AXONOMETRIC AERIAL VIEW



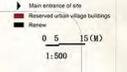
POLITECNICO DI MILANO - ARCHITECTURE - ARCHITECTURAL DESIGN
SCHOOL OF ARCHITECTURE ARCHITECTURE OF ENGINEERING

PAAGODA VILLAGE TRANSFORM IN PAGODA AREA
ACADEMIC YEAR 2017-2018

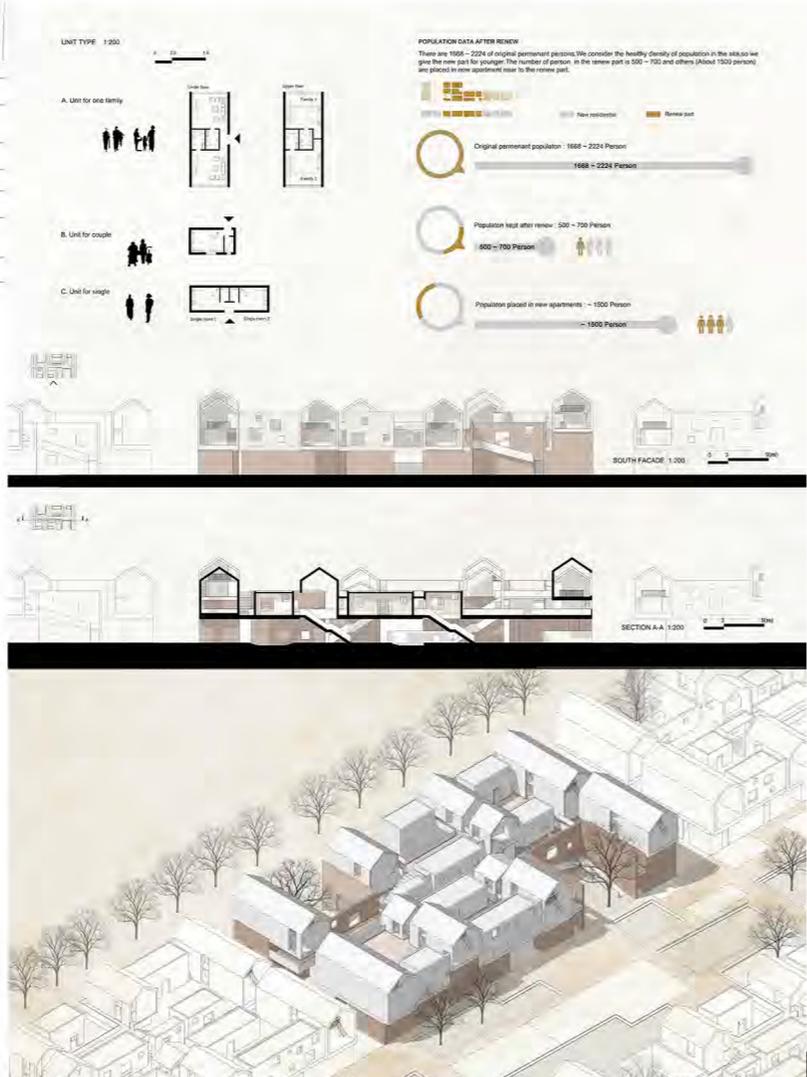
SUPERVISOR: PROF. PEZZETTI LAURA ANNA
STUDENTS: WANG YIKAI (816421), GAO YINGXIAN (877337)



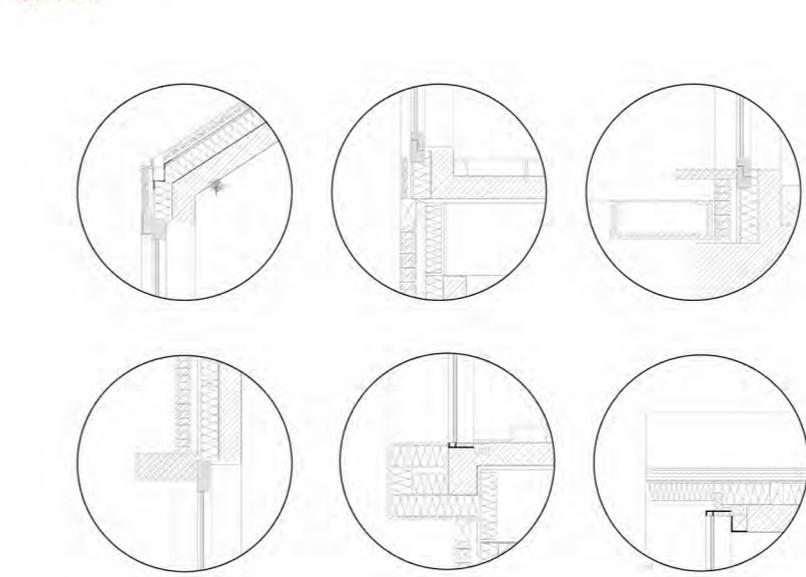
GROUND FLOOR AND PAGODA AREA
首层平面图与小雁塔方位



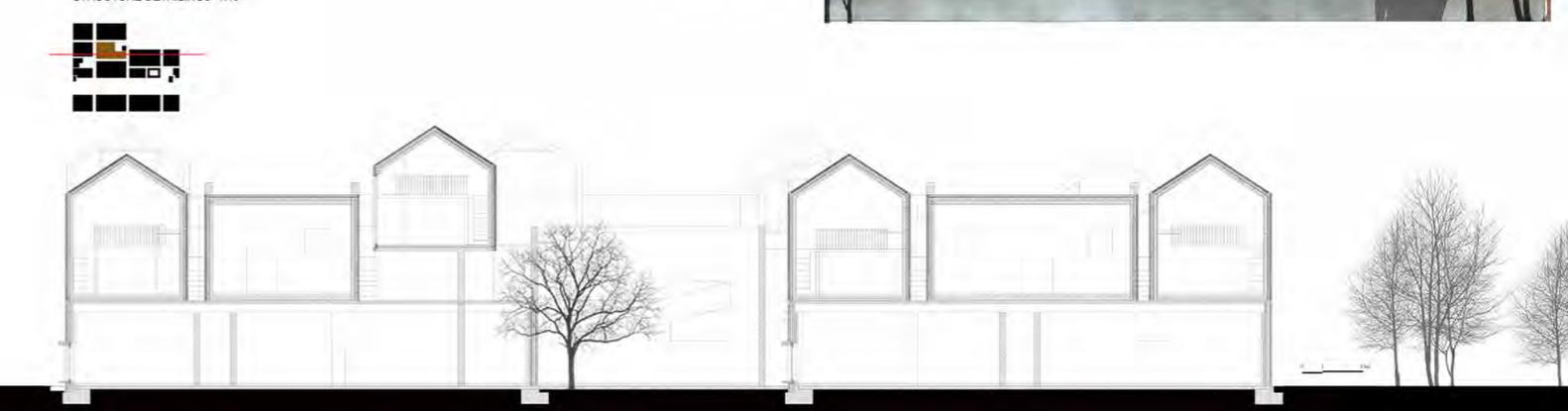
PLAN DRAWING AND DESIGN
单体平面设计与设计



CONSTRUCTION DRAWINGS
结构构造详图



STRUCTURE DETAILINGS 1:10



6
BIBLIOGRAPHY

- [1]. Zheng Hongyi, *Research on Rural Urbanization*[M], Nanjing University Press, 1998
- [2]. Xiaoying Feng, *The Systematic Problems that Must Be Solved in the Dual Society*[J], Urban Assemblies, 2002(4)
- [3]. Lan Yuyun, *City in the Village: The Last Link of the End of the Village*[J], Journal of the Chinese Academy of Social Sciences, 2001(6)
- [4] Shi Nianhai, *Xi'an Historical Atlas* [M] Xi'an: Map Publishing House, 1996, 6.
- [5]. Shi Nianhai, *Xi'an Historical Atlas* [M] Xi'an: Map Publishing House, 1996: 14.
- [6]. *Xi'an Statistical Bureau 1985-2003 Xi'an Statistical Yearbook* [M] Beijing: National Statistics Press, 2003
- [7]. Zhu Guangshi, *Ancient Capital Xi'an - Historical Changes and Development of Xi'an* [M]. Xi'an Publishing House, 2003.
- [8] Shi Hongshuai, *Xi'an Urban Geography in the Ming and Qing Dynasties* [M]: China Social Sciences Press, 2008.1,19
- [9] According to the summary of Xi'an Urban Village Reconstruction Office data, 2005(12)
- [10] Zhou Yixing, Cao Guangzhong, *China's urbanization process in the 20 years of reform and opening up* [J], urban planning, 1999.12
- [11] Zhang Hongbo, *Study on Planning Strategy of Renewal and Development of Urban Village*, Xi'an, 2007
- [12] According to the summary of Xi'an Urban Village Reconstruction Office data
- [13] Liu Ji, Zhang Pei, Analysis and Countermeasure Research on "Urban village", Journal of Xi'an University of Architecture and Technology, 2003.9
- [14] Zhang Chi, Qian Meirong, Research on the Countermeasures of Urbanization of "Urban village", Journal of Xi'an University of Architecture and Technology, 2003.9
- [15] WANG Shengxue, SHI Huiqiong, WANG Weiran. *Study on the Planning and Construction of Xi'an CBD - Simultaneously Discussing the*

- Central Area of Beilin District in Xi'an* [J]. China Urban Economy, 2009 (2): 18-23
- [16] Zhou Ruoqi, Zhang Guang, *"Hancheng Village and Dangjia Village Houses"*, Shaanxi Science and Technology Press
- [17] Xuan Zhaokai *"Introduction to New Social Studies"*, Beijing China Personnel Publishing House, 2000
- [18] Krier *"The Reconstruction of European City"* 1984
- [18] Krier "The Reconstruction of European City" 1984
- [19] Chai Yanwei, *The Unit-Based Spatial Structure of Living Spaces in Chinese Cities - An Empirical Study of Lanzhou* [J] .Geographical Research, 1996, 15 (1): 30-38.
- [20] Lu Feng, *A special form of social organization* [J]. Chinese Social Sciences, 1989 (1): 71-88.
- [21] Bjorklund E M, *The Danwei: socio-spatial characteristics of work units in China's urban society*[J]. Economic Geography, 1986(62): 19-29.
- [22] Chai Yanwei, *Urban Space* [M]. Beijing: Science Press, 2000.
- [23] Ma Laurence, Wu Fulong. *Restructuring the Chinese city: diverse processes and reconstituted spaces. Restructuring the Chinese city: changing society, economy and space* [M] London: Routledge, 2005.
- [24] Xue Yinsheng, *Hancheng Ancient City* [G]. Han City Information Compilation, 2000

FIGURES INDEX

Figure number	Figure name	Source	Page
Fig 1.1	Present situation of Urban Village	Took by author	5
Fig 2.1	Geographic location of Xi'an Shaanxi	Drew by author, Information from Chinese Atlas	23
Fig 2.2	The administrative division of Xi'an Shaanxi	Drew by author, Information from Baidu Map	25
Fig 2.3	Enclosure and axis of Xi'an in Tang dynasty	Drew by author, Information from Shi Nianhai, The Historical Atlas of Xi'an, Xi'an Atlas Press, Xi'an, 1999	27
Fig 2.4	Enclosure and axis of Xi'an in Ming & Qing dynasty	Drew by author, Information from Shi Nianhai, The Historical Atlas of Xi'an, Xi'an Atlas Press, Xi'an, 1999	29
Fig 2.5	Overlap of historical elements	Drew by author, Information from Google map and Shi Nianhai, The Historical Atlas of Xi'an, Xi'an Atlas Press, Xi'an, 1999	31
Fig 2.6	City mobility and urban village distribution	Drew by author	36
Fig 2.7	Heritage and urban village distribution		37
Fig 2.8	General situation of concentric circle expansion in Xi'an	Drew by author, Information from Wang Xingzhong, Research on Urban Social Space Structure in China, 2000.6	40
Fig 2.9	Evolution of urban village and Extending in Xi'an Shaanxi -- 1984	Drew by author, Information from Google earth	43
Fig 2.10	Evolution of urban village and Extending in Xi'an Shaanxi -- 2004		44
Fig 2.11	Evolution of urban village and Extending in Xi'an Shaanxi -- 2016		45
Fig 2.12	Urban village transformation types - To be heritage garden	Drew by author, Information from Google earth	50
Fig 2.13	Urban village transformation types - To be commerce and dwelling		51
Fig 2.14	Urban village transformation types - To be office and dwelling		52
Fig 2.15	Urban village transformation types - To be dwelling		53
Fig 3.1	Function analysis of city	Drew by author	65
Fig 3.2	Mobility system of city		67
Fig 3.3	Green area of city		69

Fig 3.4	Walls and entrances in community	Drew by author	74
Fig 3.5	Height of buildings in the community		75
Fig 3.6	Demolition in the community		76
Fig 3.7	Conservation priority	Drew by author, Information from Xi'an City Planning	77
Fig 3.8	Building structure in Xia village	Drew by author	78
Fig 3.9	Roof type in Xia village		79
Fig 3.10	Evolution of Xia village	Drew by author, Information from Google earth	83
Fig 3.11	Evolution of mobility		85
Fig 3.12	Evolution of green area		87
Fig 3.13	Population composition of Xia village	Drew by author	90
Fig 3.14	Social relationship and evolution of buildings in Xia village		91
Fig 3.15	Building samples in urban village		93
Fig 3.16	Section sample in urban village		94
Fig 3.17	Integrated study of Xia urban village		95
Fig 4.1	Dang village profile	Drew by author, information from Baidu map	101
Fig 4.2	Solid and void of Dang village	Drew by author	106
Fig 4.3	Functional sequence of Dang village		107
Fig 4.4	Measurement of Dang village		108
Fig 4.5	Abstract structure of Dang village		109
Fig 4.6	The Urban Morphology Theory of Krier	Krier, the Reconstruction of European City, 1984	110
Fig 4.7	Concept proposal 1,2	Drew by author	111
Fig 4.8	Concept proposal 3,4		112
Fig 4.9	Concept proposal 5,6		114
Fig 4.10	Function of Beijing No.2 Textile Factory	Drew by author, Information from Zhang Yan, Chai Yanwei, Zhou Qianjun, The Spatiality and Spatial Changes of Danwei Compound in Chinese Cities: Case Study of Beijing No.2 Textile Factory [J], International Urban Planning, 2009	120
Fig 4.11	Master plan of Beijing No.2 Textile Factory		121
Fig 4.12	Architecture strategy	Drew by author	123
Fig 4.13	Courtyard A	Redrew from Xue Yinsheng. Hancheng Ancient City [G]. Han City Information Compilation, 2000	125
Fig 4.14	Courtyard B		127
Fig 4.15	Courtyard C		129
Fig 4.16	Courtyard D		131
Fig 4.17	Courtyard E		133
Fig 4.18	Courtyard F		135
Fig 4.19	Urban village architectural language_1	Drew by author	136
Fig 4.20	Urban village architectural language_2		137