

Rural Memory and Rural Development

by

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ABSTRACT

In recent years, the Chinese government has been promoting the infrastructure construction of rural China. However, most of the rural construction still uses the same set of methods of urban development and planning and ignores its own inherent special qualities; due to China's rapid urbanization, many agricultural workers went to the city to work. Rural China is gradually losing its spirituality, vitality and culture.

This thesis reviews the growth system of the Chinese countryside itself while emphasizing that rural development needs to inject collective memory to meet the requirements of local culture and customs. Based on a comprehensive understanding of the current economic, social, and political conditions in rural China, strategies are proposed to revitalize the village and create some economic stimulus. The primary goals of this project are to restore local identity to the village and create vibrant rural space.

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CHAPTER 1: INTRODUCTION

The development of Chinese cities in recent years has attracted worldwide attention, but it seems that we do not hear or take the initiative to pay attention to the construction of rural China. In fact, there are nearly 600 million people in China's rural areas, accounting for about 42% of China's total population. China is trying to achieve a comprehensive modernization and the Chinese government has been also promoting the infrastructure construction of rural China. However, most of the rural construction still uses the same set of methods of urban development and planning and ignores its own inherent special qualities. The rural image is gradually blurred and the rural memory is gradually forgotten. On the other hand, due to China's rapid urbanization, a large number of agricultural workers went to the city to work and even migrated directly to the city. Only the elderly, children and a few women live in the countryside. Therefore, rural China is gradually losing its spirituality, vitality and culture.

This thesis reviews the growth system of the Chinese countryside itself while emphasizing that rural infrastructure development needs to inject collective memory to meet the requirements of local culture and customs. It seeks architectural solutions by studying China's rural society, rural memory and local architecture, specifically in Liujiadu village. Based on a comprehensive understanding of the current economic, social, and political conditions in rural China, the building proposes to revitalize the village and create some economic stimulus. The primary goals of this project are to restore local identity to the village and create vibrant rural space.

1.1 Thesis Questions

How to improve the living conditions without losing the identity of the village?

How does the collective memory of residents help build a suitable architecture for today's life?

1.2 Rural China

The countryside is different from the city; China's rural areas have distinct characteristics. First, most of China's rural population is low in density. The settlements are distributed in the environment of agriculture, and the living environment is placed in the field.

China's rural areas are a relatively stable space, which has not undergone major changes for thousands of years. Most rural areas in China are relatively isolated in time and space. One of the more typical features is the phenomenon of family settlement in rural China. Usually the residents of the village are from the same family and have the same surname. Some villages are named with the surnames of the villagers, for example, “李家村”(the literal meaning can be translated into: the village of the Li family). This independent nature makes Chinese villages have their own unique memories.

China's rural areas are generally unplanned and grow and develop naturally.¹ Residents' lives depend on nature and are usually cultivated, propagated or harvested. China's rural areas have strong regional characteristics. The regional characteristics have created different agricultural production, building materials,

1 Tao Wang, Zhu Wang, and Shizhao Chen, “The cultural interpretation of rural settlements under the vision of villagers' cognitive,” *Architecture & Culture*, no. 12 (2013): 52-54.

architectural forms, cultural entertainment, and so on. These regional characteristics affect all aspects of village life. To sum up with a Chinese proverb: “一方水土养一方人” (The unique feature of the local environment always brings special characteristics to the residents.)

1.3 History of Rural China

China's rural areas have maintained a very stable state for a long time. From primitive society to feudal society to semi-colony society, China's rural areas did not change drastically with the change of social nature.

However, in the modern era, rural China has undergone tremendous changes with several revolutions, including the Land Reforms in the 1940s and 1950s, the People's Commune Movement in the 1950s and 1980s, and Chinese Economic Reform after 1978.

The reforms before 1978 were full of strong collectivism. Because the structure of China's rural society itself is composed of the same family, this reform of collectivism actually promotes exchanges between villagers. Many architectural spaces full of communist features were born at that time, such as the people's commune canteen. However, these public facilities and public spaces have gradually withdrawn from the historical arena in rural China after economic reform.

Economic reforms after 1978 have had a huge impact on China's rural areas today. Economic reforms after 1978 did not directly change China's rural areas, and more indirectly affect China's rural areas. China's cities have become very active because of economic reforms, and the process of urbanization has changed the

original structure. The city has become the main body; the development of the city has become the focus, and the study of the city has become the mainstream direction. The almost crazy development in 30 years has made people seem to have forgotten the countryside that is very different from the city.

1.4 Chinese Rural Society

The rural society in China is small. For a long time, the countryside has been managed by local prestigious elders. After 1982, the Chinese government also continued and improved this tradition and implemented the village committee election system. The high degree of autonomy in the countryside makes it easier to integrate village resources; this also enables today's rural areas to form decisions that are in line with local society.

In *From the Soil*, a book on traditional Chinese rural society, Mr. Fei Xiaotong emphasized that the traditional Chinese rural society is "The Differential Mode of Association."² He likened this association to a ripple that was pushed out of a circle that occurred when a stone was thrown on the water and everyone is at the center of the circle that his social influence has launched.³ "The Differential Mode of Association"⁴ reflects people's interpersonal relationships and attitudes towards public and private life in rural China.

In the society of China's rural areas, the villagers attach great importance to and depend on their relationship. The villagers' respective industries are independent

2 Xiaotong Fei , *From the Soil, the Foundations of Chinese Society*, trans. Gary G. Hamilton and Zheng Wang (Berkeley: University of California Press, 1992), 60.

3 Ibid.

4 Ibid.

and shared. The chores in the villagers' lives are also intertwined, such as helping each other to care for children, caring for a lonely old man, or organizing a young blind date. The villagers establish their own relationships and maintain their credit in the process of mutual help.

1.5 Challenges and Problems in Rural China

Farming civilization was once the most important symbol of Chinese Han civilization; the countryside was once the basic spatial form of traditional Chinese farming civilization; agriculture was once the basic production form and organizational form of Chinese civilization; farmers were once the identity of more than two-thirds of Chinese.

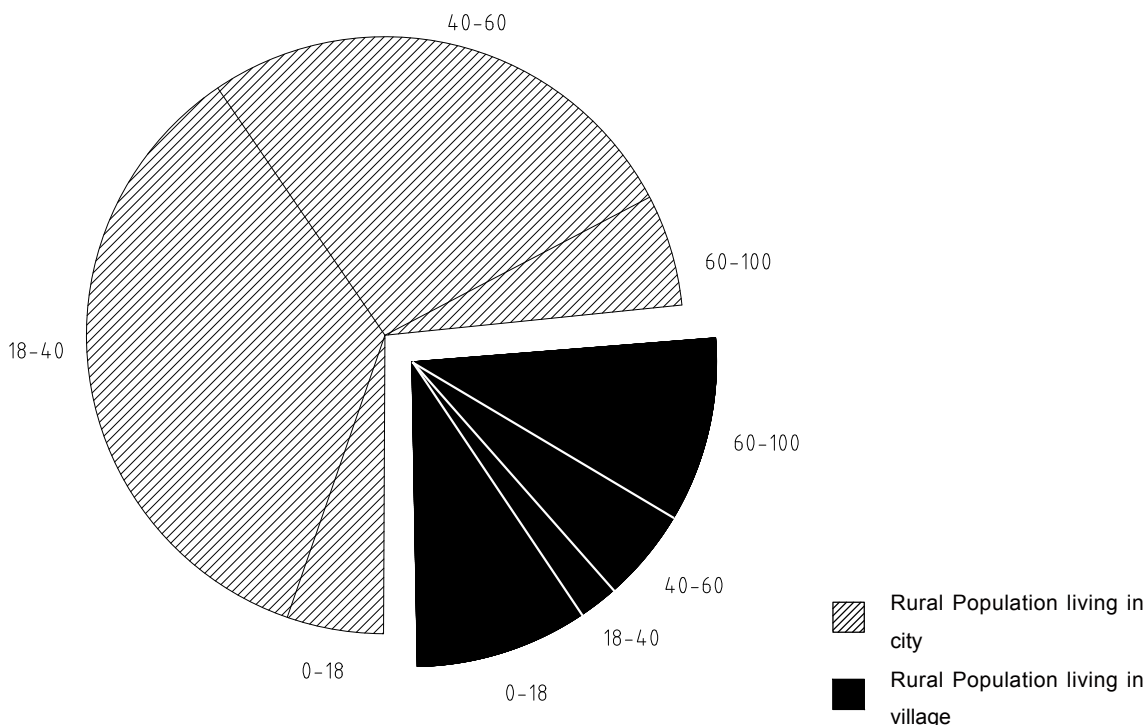
The problem appeared in the mid-19th century when industrial civilization invaded the Chinese traditional civilization and broke out after the economic reforms after 1979. The rapid transformation of Chinese civilization will inevitably break the original structure of traditional farming civilization.⁵ The Chinese traditional civilization characterized by farming civilization has been affected, and it has to passively start the modernization process from the agricultural civilization to the industrial civilization.

The public spaces of traditional villages, such as the laundry dock, the space for chatting under the shade trees, and ancestral halls, were once important places for rural public activities. However, in most of the villages now, these traditional public spaces with rural characteristics are gradually falling into disuse, losing their attraction and being used by few people. Modern public spaces such as the

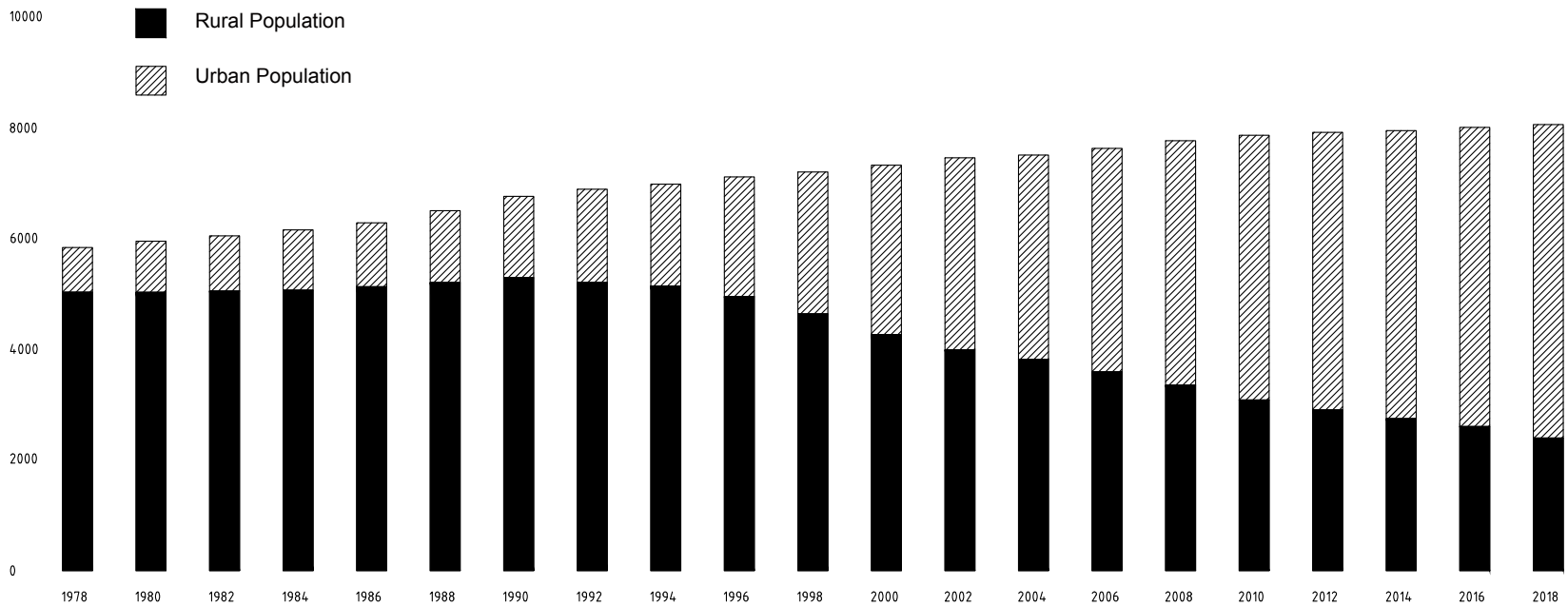
5 Rong Zhou, "Three Issues of Rural Constructions," *World Architecture*, 2 (2015): 20-23.

People's Commune's Great Canteen and the People's Hall, which were established in the era of planned economy, are no longer full of vitality, and have mostly become warehouses for sundries.

Many villages have been re-planned to build new villages. The construction and development of villages have always been the work of local governments. Due to the lack of effective planning strategies and relevant guidance, the construction of villages often takes the city as a reference. these new rural planning and construction presented a trend of urbanization, and the government and planners have only paid attention to the improvement of living quality and simply imitated the city, which made the new villages lose their unique rural characteristics.



Proportion of population in Liujiadu Village. Data from the statistics of the village head of Liujiadu Village.



Jiangsu Province Population Trend Chart. Data from Jiangsu Provincial Bureau of Statistics.

Due to uneven development of the region in China, a large number of farmers are going to work in big cities to earn more income. Therefore, the current Chinese villages are gradually losing their original vitality; only the elderly, children and a few women live in the village. More people believe that the only way to improve their living standards is to leave the village to enter the big city life.

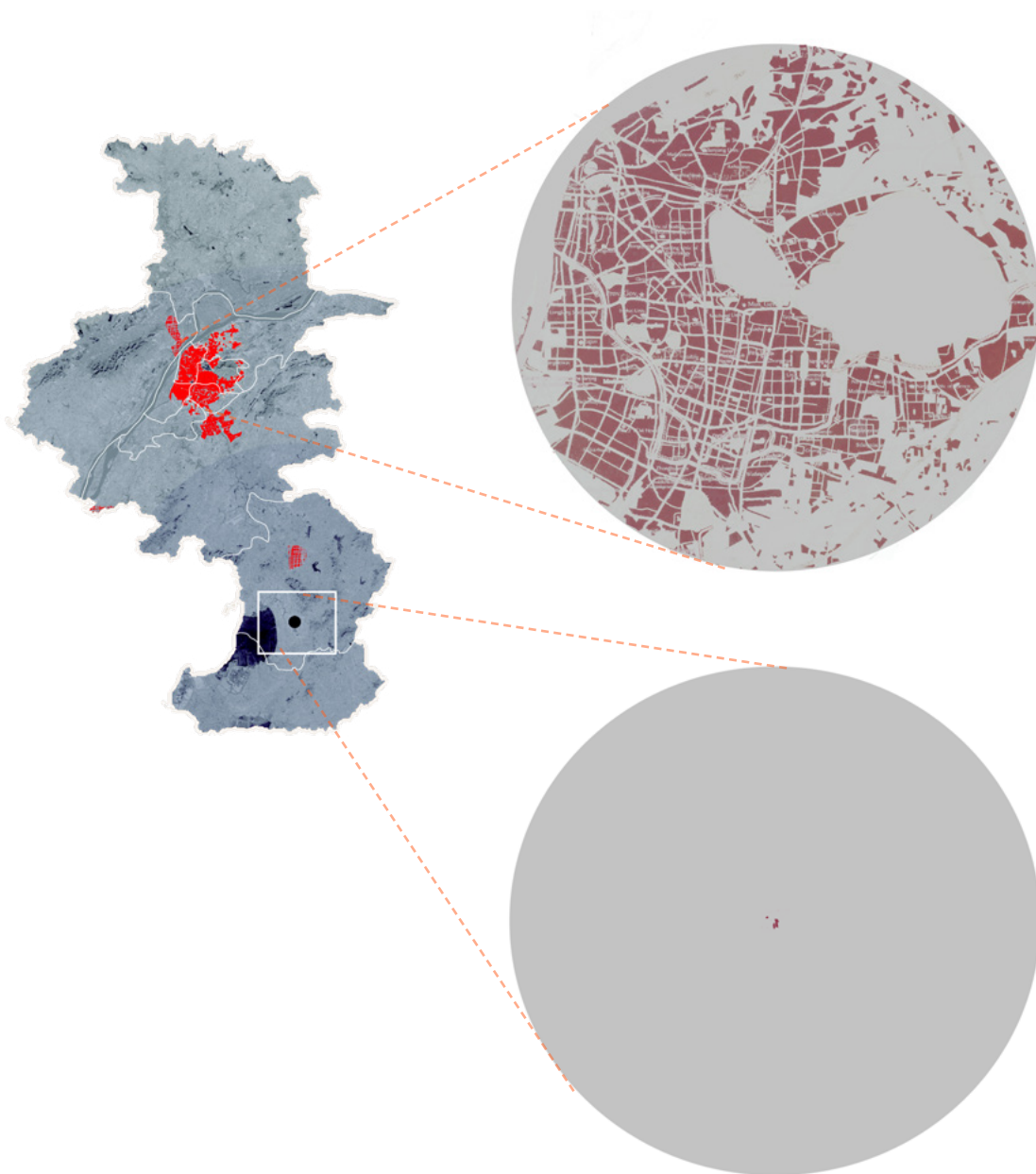
The problems of contemporary Chinese rural areas are reflected in the loss of rural youth population, the collapse of rural grassroots social organizations, the loss of traditional farming culture and the loss of local technology, and a series of inevitable social problems during the transition period of civilization. Faced with the complexity and contradiction of China's contemporary rural construction field, the thinking patterns and design tools used by urban architects are undoubtedly ineffective.

However, China's society, economy and politics are not immutable, but are constantly seeking change and progress. In a changing China, the village is full of opportunities and potentials. It is the responsibility of the architect to think about the opportunities and potential of the Chinese countryside and guide it in a relatively correct direction.

1.6 The Relationship Between City and Rural Area

Since the Industrial Revolution, the development of the entire city has taken on a very strong momentum of development. In the 1990s, due to the urban modernization process, the rapid extraction of rural resources and the breakthrough of the critical point of the previous farming ecosystem led to system imbalance. In China, the previously dominant village has gradually declined. The city's powerful

efficiency provides a life that is irreplaceable in the countryside. The density of urban area is far greater than that of rural areas, so this excitement and the possibility of creating opportunities are not available in rural areas.



Left: map of Nanjing City. Base map from Baidu Map, 2018.

Upper right: map of downtown Nanjing City City, 1: 200000. Base map from Baidu Map, 2018.

Bottom right: map of Liujiadu Village, 1: 200000. Base map from Baidu Map, 2018.

1.7 Opportunities for Rural China

Rong Zhou stated in the “Three Issues of Rural Construction” that the key to China’s rural problems is agriculture; he believes that industries will attract people, and good industries will make people settle down, and then they will take into account the environmental quality of rural areas.⁶ Therefore, rural development, first of all, depends on economic construction, followed by social construction and environmental construction. The rural architecture designed by the architect should not be just a striking material shell.

The impact of “silicon-based space” on “carbon-based space” has narrowed the advantages of cities relative to rural areas.⁷ The physical space of the current city is declining. The rise of the “silicon-based space” represented by the Internet seriously threatens the value of the “carbon-based space.”⁸ Under the trend of urban decline, the traditional advantage of the city for the countryside is actually disintegrating. In this case, the opportunity of the countryside has come.

Most of the rural industrial structure is based on primary industry; the industrial structure of the city is dominated by secondary industry and tertiary industry. The boundaries between the traditional three industries can be broken. The future of the countryside can integrate the primary industry, the secondary industry and the tertiary industry in the industrial structure.

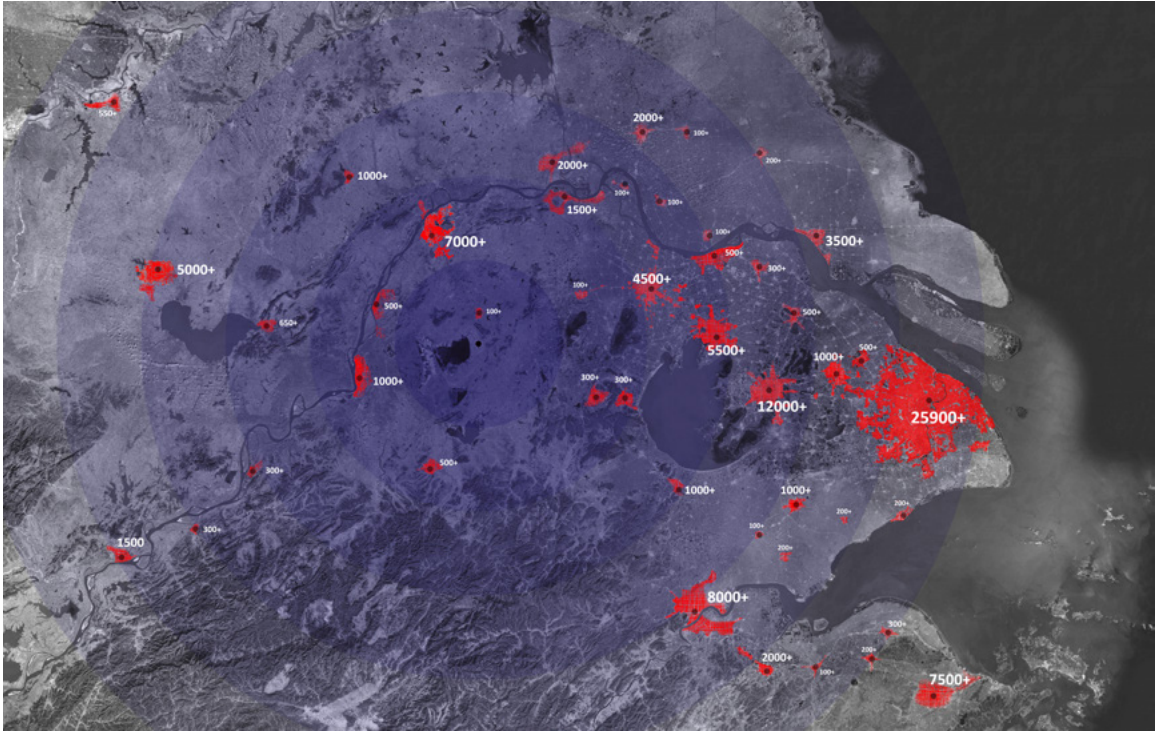
Due to the recent development of Internet shopping in China, the Chinese express delivery industry is also developing rapidly. The high speed of the express delivery industry allows rural products to reach more regions faster. This connec-

6 Rong Zhou, “Three Issues of Rural Constructions,” *World Architecture*, 2 (2015): 20-23.

7 Rong Zhou, “Towards or Away from Internet, the Upgrading or Degradation of City,” *Design Community*, 1 (2017): 114-119.

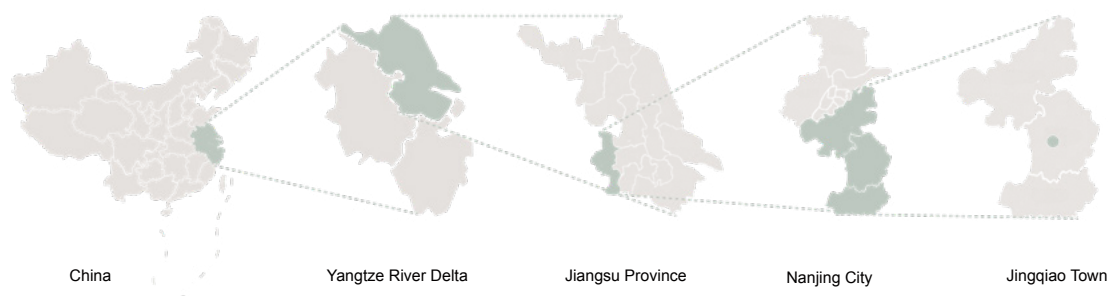
8 Ibid.

tion has led the countryside and the city to be drawn into a common development team.



Statistics on the number of cities express delivery stations in the Yangtze River Delta. Data from Baidu Map.

1.8 Site: Liujiadu Village

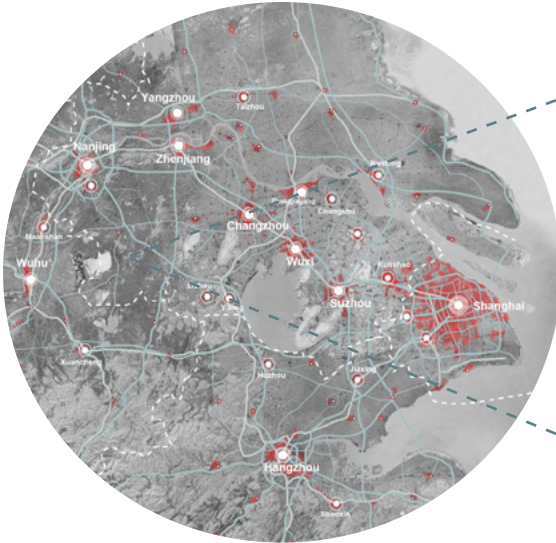


Site location. Base map from Baidu Map

Liujiadu Village is located in Jingqiao Town, Lishui District, Nanjing City, Jiangsu Province. The village is 3 km from the downtown area of Jingqiao Town. The village covers an area of 1 square kilometer and has a total of 92 households with a total population of 356. The main industries in Liujiadu Village include aquaculture and rice.

The area where the village is located is in the Yangtze River Delta. The area includes highly developed, large cities such as Shanghai, Nanjing, Hangzhou, Yangzhou, Wuxi, Changzhou and Zhenjiang. The villages I studied provide agricultural products for the surrounding cities.

The village is adjacent to Xinqiao River and Jipo Mountain; from the perspective of *feng shui*, this is called “fronting water and with a hill at the back”. This *feng shui* means that residents can get living resources from the river and mountain. The area south of the Yangtze River where Liujiadu Village is located is traditionally known as the land of fish and rice. Before industrialization, the region became one of the most affluent regions in China by virtue of agricultural production. After Chinese economic reform, the economic gap between towns and villages has gradually widened. The revolution has made people radical; more people have turned “modern and traditional” into a multiple choice question. However, I will use Liujiadu Village as a research object to explore rural development without losing the village tradition and identity.



Linkage from countryside to city.
Base map from Baidu Map



Village morphology. Base map
from Baidu Map



Liujiadu village site photos

CHAPTER 2: RURAL MEMORY STUDY

2.1 Collective Memory

The research on “memory” has a long history. It first appeared in the fields of medicine and psychology, and at the same time, was mentioned in the fields of philosophy and literature. Sociology, history, linguistics, and behavioral studies have also carried out related research on “memory”, and proposed concepts such as “collective memory,” “historical memory,” and “social memory.” The concept of “rural memory” is mostly in the field of literature, and its research is limited. Rural memory is a kind of collective memory and can also be regarded as rural collective memory.

The study of collective memory can be traced back to the concept of “collective conscience”⁹ by French sociologist Emile Durkheim. He proposed that collective memory plays a vital role in strengthening the self-identification of ethnic members.¹⁰ The concept of “collective memory” was put forward by the French sociologist Halbwachs in the 1920s, and it was defined as the process and result of members of a specific social group sharing the past events.¹¹ The condition to ensure the inheritance of collective memory is that social interaction and group consciousness need to extract the continuity of the memory. In *On Collective Memory*, Halbwachs gradually expounds that collective memory is selective, reconstructed, and based on reality.¹² In the process of reshaping past memories, people are always affected by the current environment. Halbwachs believes that people from different eras and different periods may have different ideas about

9 Emile Durkheim and W. D. Halls, *The Division of Labor in Society* (New York: Free Press, 1997), 39.

10 Ibid.

11 Maurice Halbwachs and Lewis A. Coser, *On Collective Memory: The Heritage of Sociology* (Chicago: University of Chicago Press, 1992), 55.

12 Ibid.

the same “past” and people construct and narrate the past largely according to their current ideas, interests and expectations.¹³ People always reshape the memories of the past from today’s social environment, needs and interests, so the memories of the past are not preserved, but are reconstructed on the basis of the present.

In the field of architecture, Aldo Rossi, in *The Architecture of City*, puts forward the collective memory of people living in cities, which is composed of people’s memories of the space and entities in the city.¹⁴ This memory in turn affects the shaping of the image of the future city, because when people shape space, they always transform it according to their own mental image, but at the same time they follow and accept the limitations of material conditions. The city as a collective memory place interweaves historical and personal records, when memories are triggered by certain city segments, past experiences (history) are presented along with personal memories and secrets.

People feel emotions in group activities and form similar values, identities and collective memories. Collective memory is an important factor controlling individual memory and even behavior. Memory exists in each individual mind, with individual differences, and the resulting behavior and reaction could not be exactly the same. However, the memory is fixed for each individual in the same region. Architecture, environment, accent, activities and so on can all arouse people’s corresponding memories, and are also the carrier of preserving and transmitting the memory, which is shared by the local.

13 Ibid.

14 Aldo Rossi, Peter Eisenman, and Graham Foundation for Advanced Studies in the Fine Arts, *The Architecture of the City* (Cambridge, Mass.: MIT Press, 1982), 130.

2.2 Characteristics of Rural Memory

The village is a place to accommodate people's collective memory. In terms of geographical limitation, it is different from other forms of collective memory such as family memory, urban memory and national memory. Rural memory is not just the known objects, history or ruins; rural memory is the overall impression and cognition of rural residents on the countryside. The impression and cognition contains a sense of identity and belongingness and is a dynamic, continuous, and continuously constructed process.

2.2.1 Language and Text

Language is the most important way to convey information and the most important way to convey local memories. When I started my project and did my research, I was trapped in finding a detailed description of the memory of Chinese villages. However, when I read Mr. Fei Xiaotong's *From the Soil*, I realized that the memory of the Chinese village is more of a language expression than a written record.

Fei Xiaotong believes that the countryside is a "face-to-face community".¹⁵ Language is the most commonly used medium for information transmission in rural areas. In the rural areas, many experiences and knowledge about rural life and production are passed on from generation to generation through word of mouth. The "face-to-face" approach has a limited scope of action; however, it is the most efficient mode of communication in small-scale villages. Language communication makes it easier for memory to be shared by rural groups, and has a far-reaching impact on people.

¹⁵ Xiaotong Fei, *From the Soil, the Foundations of Chinese Society*. trans. Gary G. Hamilton and Zheng Wang (Berkeley: University of California Press, 1992), 66.

Text can save memory for a longer period of time. However, in rural areas, the influence of text as a collective memory medium is not enough compared to language. Fei Xiaotong also discussed the difficulty of using text in rural areas; he believes that in this society, language is enough to convey the experience of generations.¹⁶ Although the education level in rural areas has a good development and the rural residents have a high grasp of the text, the role of the text as a carrier of local memory in the villagers is still less than the language. The text communication is not direct, and the villagers are still accustomed to “face to face” communication, which is also caused by the unique memory of the countryside.

2.2.2 Public Space

As the villagers in Chinese villages tend to communicate “face to face”, a series of communication places are gradually formed in rural areas to generate intersection, promote feelings and enhance communication, thus forming a unique public space in rural areas¹⁷. Public space acquires the “Genius Loci”¹⁸ through human activities. For example, in the village, there is a special space under the tree. First of all, the villagers have the need to stay cool in the summer. The villagers are willing to go to the windy, shaded trees to cool down. People are chatting together and playing chess together, thus forming a distinctive feature public space under the tree. Another example is the collective laundry dock at the Waterfront; the villagers have the need to do laundry, and then choose the right waterside to build a laundry platform. In the process of washing, helping each other, chatting, and generating basic social interaction activities, the villagers eventually established a

16 Ibid.

17 Dong Wang, Yong Wang, and Guangbin Li, “The Research of the Rural Public Space Evolution and Characteristics Under the Function and Form Perspectives,” *Urban Planning International*, 2 (2013): 57-63.

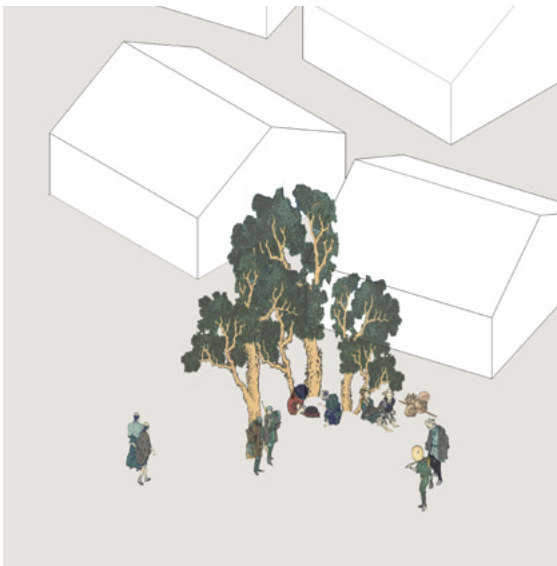
18 Christian Norberg-Schulz, *Genius Loci: Towards a Phenomenology of Architecture*. (New York, N.Y.: Rizzoli, 1980), 164.

real public space on the gathering place.

The traditional village is a relatively closed society, and activities are limited by geographical restrictions and little contact with the outside world. The rural public space is the main source and even the only source for the villagers to obtain external and internal information and has irreplaceable value and significance for the villagers.¹⁹ Therefore, the public space in the countryside should be a functional complex that acquires information and social interaction.

2.3 Extracting Rural Memories

2.3.1 The Memory of “The Tree”



The memory of public space under the village tree.



The memory of rural traditional market

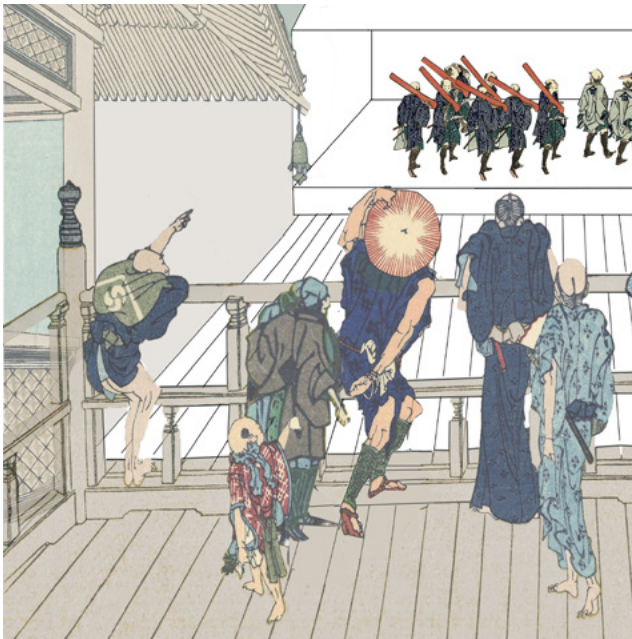
From my childhood memories, my grandmother would chat and drink tea with her friends under a fig tree at the entrance to the village. Numerous famous Chinese rural novels, TV dramas and movies have described the public activities of “the tree” at the entrance of the village. For example, in *White Deer Plain*, the big tree at the entrance of the village is the meeting place of squires. In Yu Hua’s novel

¹⁹ Xijun Hu, Xiaoling Jin, and Xia Zhen, “Research on Public Association space in Traditional Rural Settlement,” *Economic Geography*, 5 (2009): 823-826.

Brothers, the elm tree at the entrance of the village is an important place where the story happened. Chinese rural people have entrusted their rich feelings to the tree at the entrance to the village.

The tree at the entrance to the village has a special significance for the Chinese countryside; “the tree” is the most important public and social place in the Chinese village. Villagers usually meet, gather, chat, drink tea, play chess, and farm under “the tree”. A lot of stories happened under “the tree”. “The tree” is the important spiritual sustenance of many Chinese rural people.

2.3.2 The Memory of “Theater”



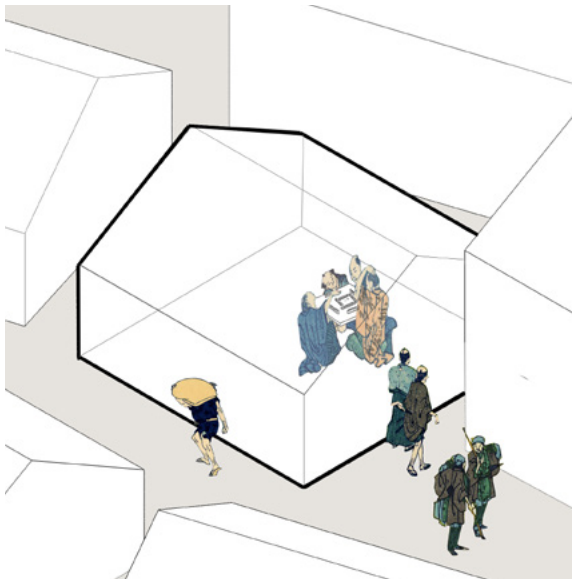
The memory of theater

Liujia Village is located in Jiangsu Province, which is in an area with rich opera culture. The operas in this area include Kunqu Opera, Yang Opera, Xi Opera, Huai Opera and so on²⁰. There is a large audience base for opera in Liujia Village.

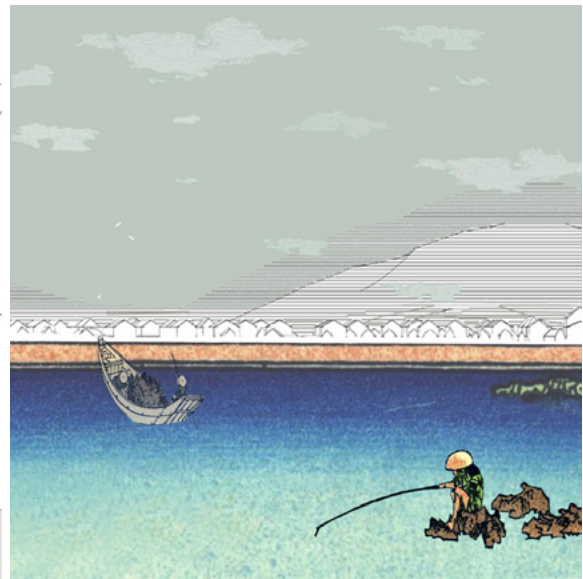
²⁰ Fei Zhou, “The Status and Development of the Opera in Jiangsu Area,” *Arts Study*, 2 (2018): 238-245.

The memory of opera in the village is always accompanied by festivals or major days of the village. For example, in the major festivals, the villagers will invite the troupe to perform in the village; or in the days of marriage, the newly married family will invite the troupe to perform in the village to celebrate. Unlike the urban theaters that require a seated serious audience, the memories of this rural theatre environment are more free and provide a place where audiences can chat.

2.3.3 The Memory of Mahjong and Fishing



The memory of mahjong.



The memory of fishing.

There are agricultural busy seasons and slack seasons in rural areas. For example, mid-May is a busy season for rice and wheat growers; October is a busy season for peanut and corn growers. In China's traditional calendar, there is a day called "Mang Zhong", which is the day when grain is planted. Therefore, on these special days, it is the season when farmers are busy with farming. In agricultural slack seasons, people from different regions have different ways of entertainment. In Liujiadu Village, the most common are mahjong and fishing.

2.3.4 The Memory of Children's Playground



The memory of children's playground

The countryside is full of children's playgrounds. The sparsely populated countryside provides a large number of areas for children to release their excess energy. From my own memory, every time I visited my grandparents' home in the countryside in summer, I would always play in the farmland until I was exhausted.

However, rural memories of children are not only happy but also sad. Rural areas are often complex in terrain and, due to the absence of guardians, there are often child safety incidents that happened in rural areas. For example, in the Jiangnan area of China, where water is abundant, there are many children drowning in the countryside every summer. Therefore, in the construction of rural facilities for children, we should pay special attention to safety issues and properly handle the lack of child guardians.

2.4 Design Method Within Rural Memory

The transformation of the natural environment should be maintained within a moderate range to ensure the integrity of the natural environment and the stability of the ecosystem. The landscape design in the village is based on natural landscapes and continues the natural landscape structure.

Rural society has a special blood and geographical relationship, and this native social network is an important foundation for local memory. Retaining the original social network is conducive to the continuation of collective memory.

The clues in physical space should be properly preserved. Traditional ancestral temples, ancient bridges, ancient houses, ancient wells, stone monuments, sculptures, production tools and objects with historical memory, etc., have special significance. These clues can be shaped into spiritual places that conform to local characteristics, and help to trigger and continue the collective memory and spatial identity of the villagers.

The overall image is a kind of subjective psychology that people establish through the perception of the environment. Some poems and paintings describe the overall image of the village; these descriptions can be expressed in architectural language.

2.4.1 Case Study - Dongziguan Affordable Housing

Urbanization in China has widened the gap between urban and rural areas. Some of the residents in Dongyuguan Village still live in buildings that have been in disrepair. In order to improve their living and living conditions, the local government has decided to use the model of government agency for resettlement to build a

new demonstration area of agricultural residence with certain promotion.²¹

The project team looked for a state between traditional residential and urbanized residential modes. The façade is not limited to the styling symbols of traditional local dwellings, but is extracted and abstracted. The treatment of the facade shapes the charm and artistic conception of the traditional Jiangnan dwellings.

The design aims to avoid the city's invasion of the traditional village texture, and strives to restore the authenticity of the village; to ensure quality on the basis of low cost; to reconstruct traditional elements in modern formal language, to achieve regional expression in contemporary construction.²²



Dongziguan affordable housing for relocated farmers, China, Gad Architecture Studio. From Xiyun, “Dongziguan Affordable Housing” (2017)

21 Xiyun Shang . “Dongziguan Affordable Housing for Relocalized Farmers / Gad,” *ArchDaily*. January 03, 2017. <https://www.archdaily.cn/cn/802742/dang-dai-xiang-cun-ju-luo-hang-zhou-fu-yang-dong-zi-guan-hui-qian-nong-ju-gadjie-di-she-ji>

22 Ibid.



“漓江晓日” by Wu Guanzhong (1988)



Dongziguan Affordable Housing for Relocalized Farmers, China, Gad Architecture Studio. From Xiyun, “Dongziguan Affordable Housing” (2017)

The upper picture is “漓江晓日” painted by Wu Guanzhong. Wu Guanzhong inherits the style of Chinese freehand brushwork, and he can draw the most obvious visual features with few strokes. The architects of the Dongyuguan Village project captured the most obvious features of the local architecture; they used the simple brushstrokes to delineate the designs.

2.4.2 Case Study - Wangshu: Ningbo Museum

The Ningbo Museum, also known as the Ningbo History Museum, is a project designed by Wang Shu in 2008. Ningbo Museum is located in Ningbo City, Zhejiang Province. Most of the building facade consists of fragments of various sizes, shapes and material.

Wang Shu and his team have been committed to preserve the regional identity of architecture. Wang's team collected materials from the demolition caused by urban development; these materials are used in the facade of a new building. These facades record history and carry the memory of the area. These fragments contain multiple histories; most were from the Ming and Qing Dynasties, and the oldest was from the Tang Dynasty 1500 years ago.



Ningbo Museum, By Wang Shu and Lu Wenyu, Amateur Architecture Studio. From "Ningbo Museum" (2010)

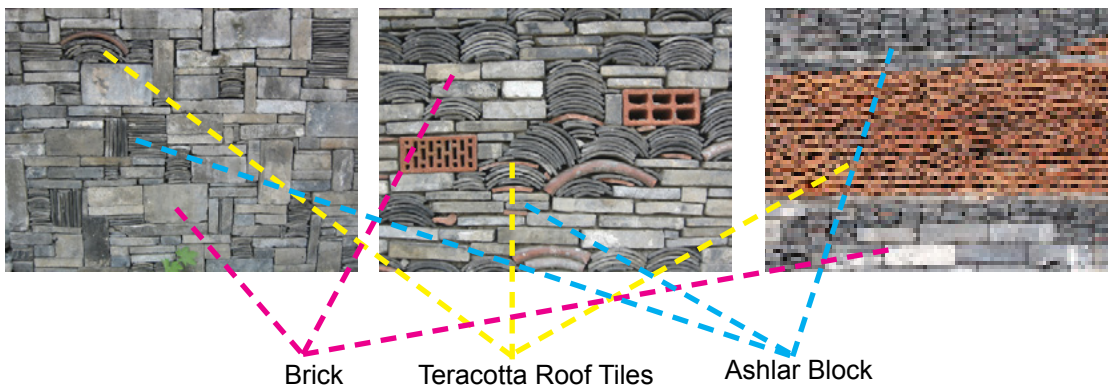


Wapan masonry facade. From “Architecture | Wang Shu’s Ningbo Museum” (2013)



Wapan technique. From Ying, “Fenghua: Old Craftsmanship” (2015)

Technically, the architectural Wang Shu explored the application of traditional Chinese architectural techniques to modern architecture. The technique of spliced façade is called “Wapan”.²³ Wapan is an ancient Chinese architectural method using disused building materials; the technology can accommodate an unlimited variety of source materials.



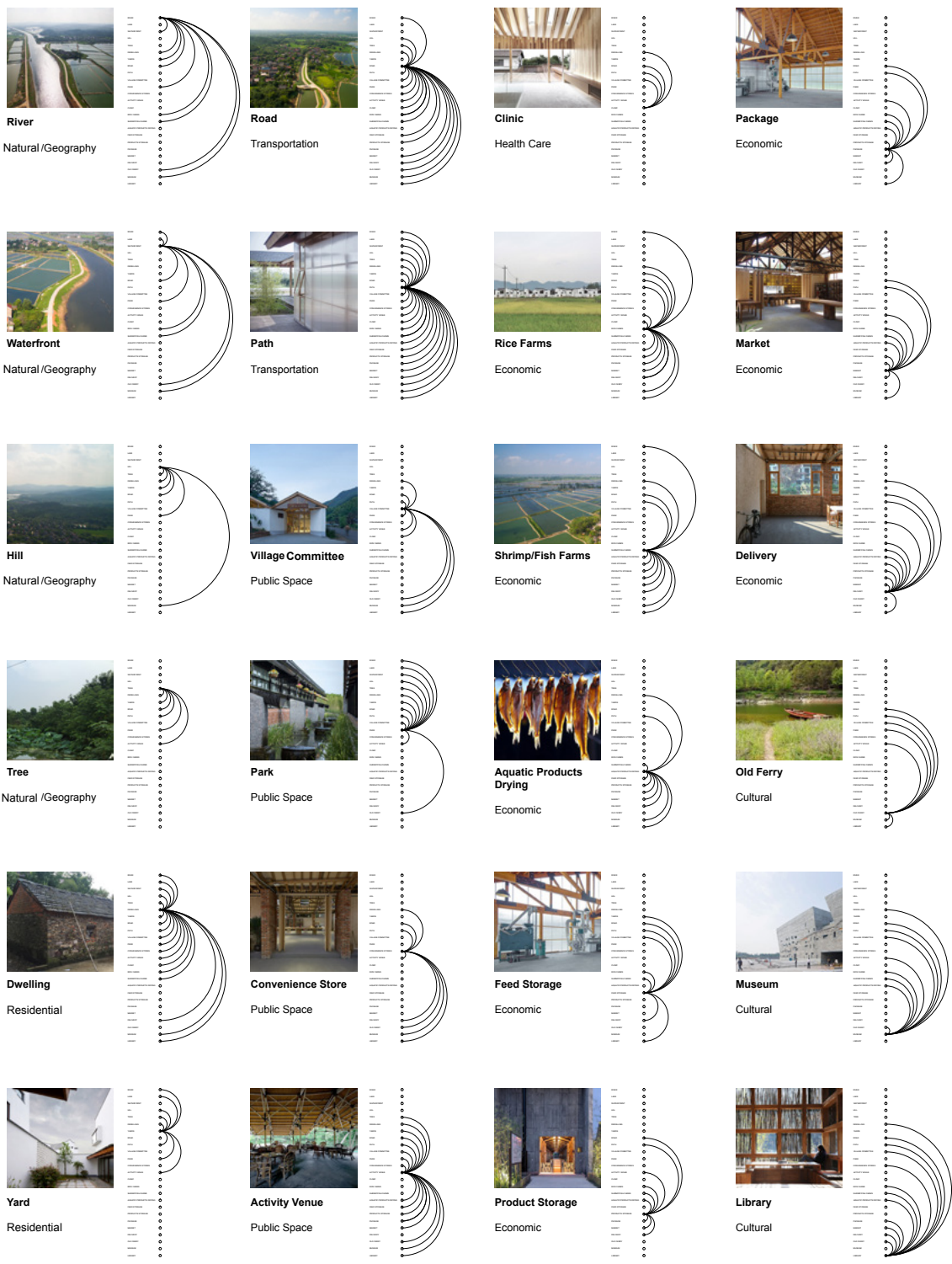
Facade detail. From Guillaume, “Photography” (2012)

Wang Shu and his team has earnest respect for historical building materials at the Ningbo History Museum project and explores traditional architectural techniques. This not only preserves the material memory at the physical level, but also preserves the memory of the architectural technically level.

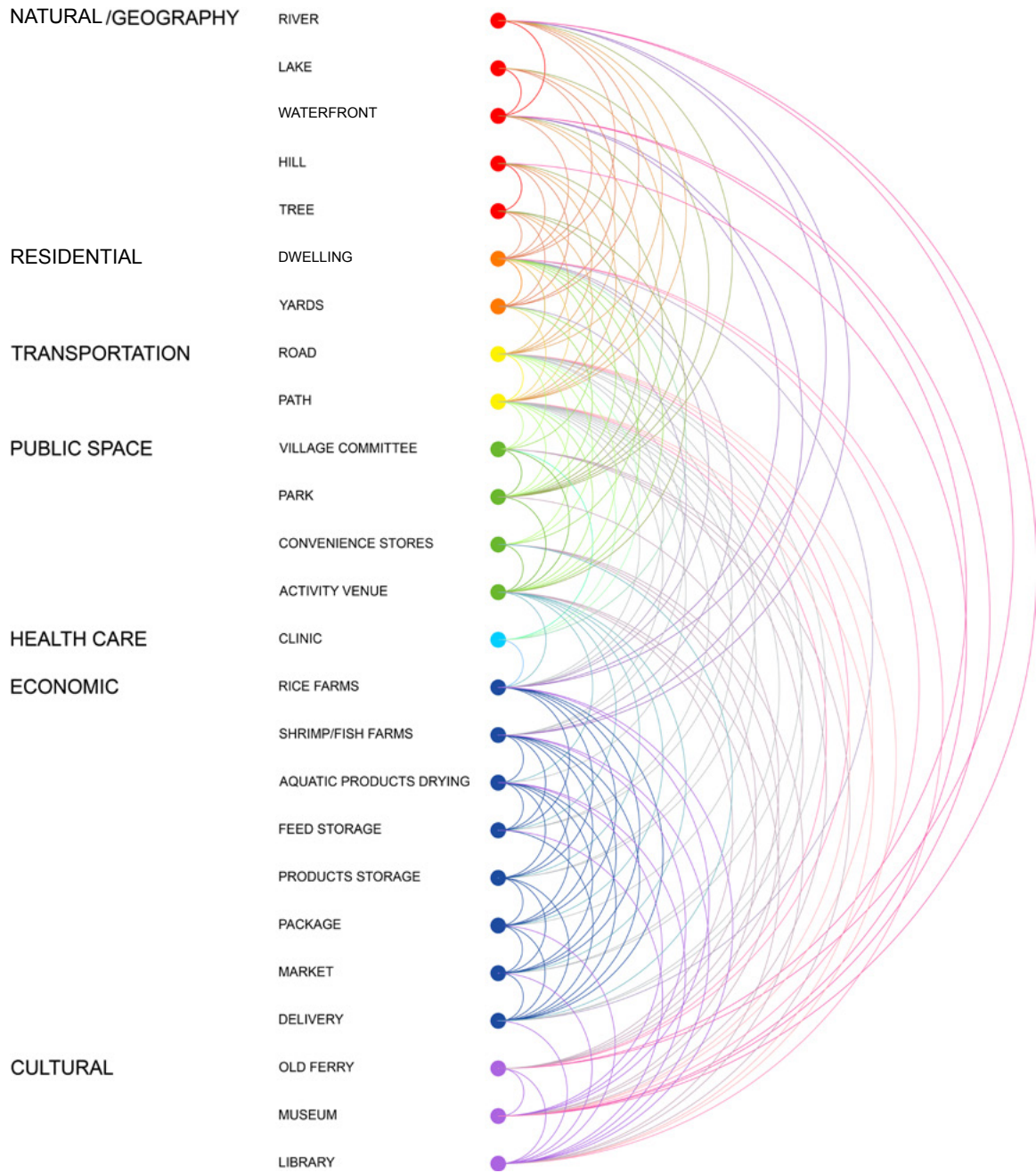
²³ Qi Li. “Memory and Continuation, to Analyze Suzhou Museum and Ningbo Museums’ Architecture Design,” *Art and Design*, no. 1 (2010): 125-127

CHAPTER 3: PRE-DESIGN

3.1 Program

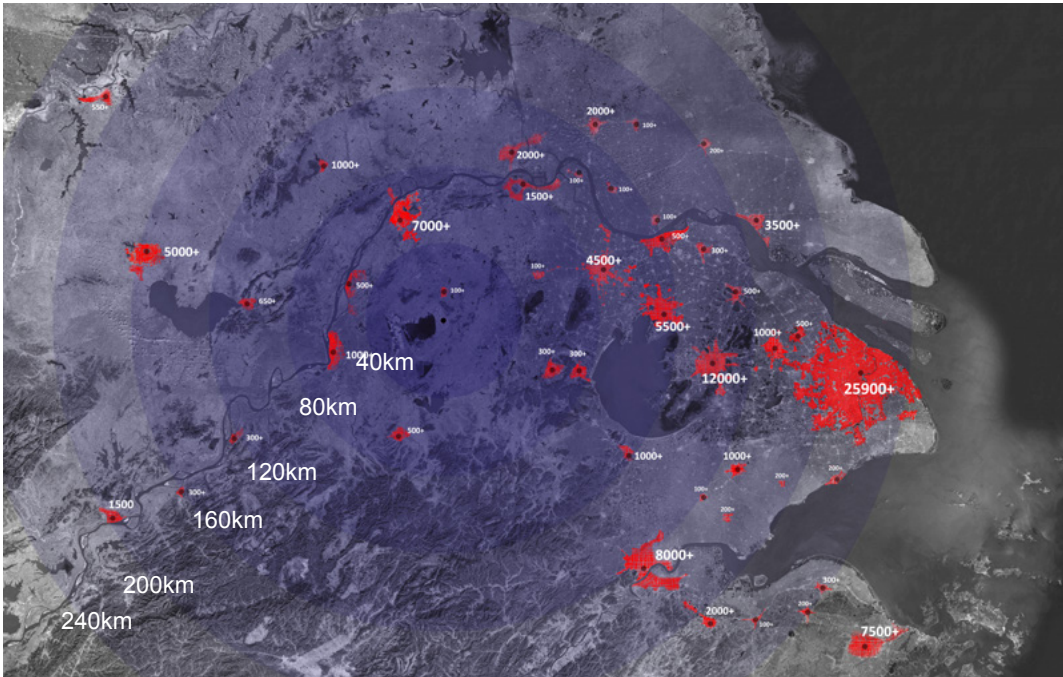


Program study diagram

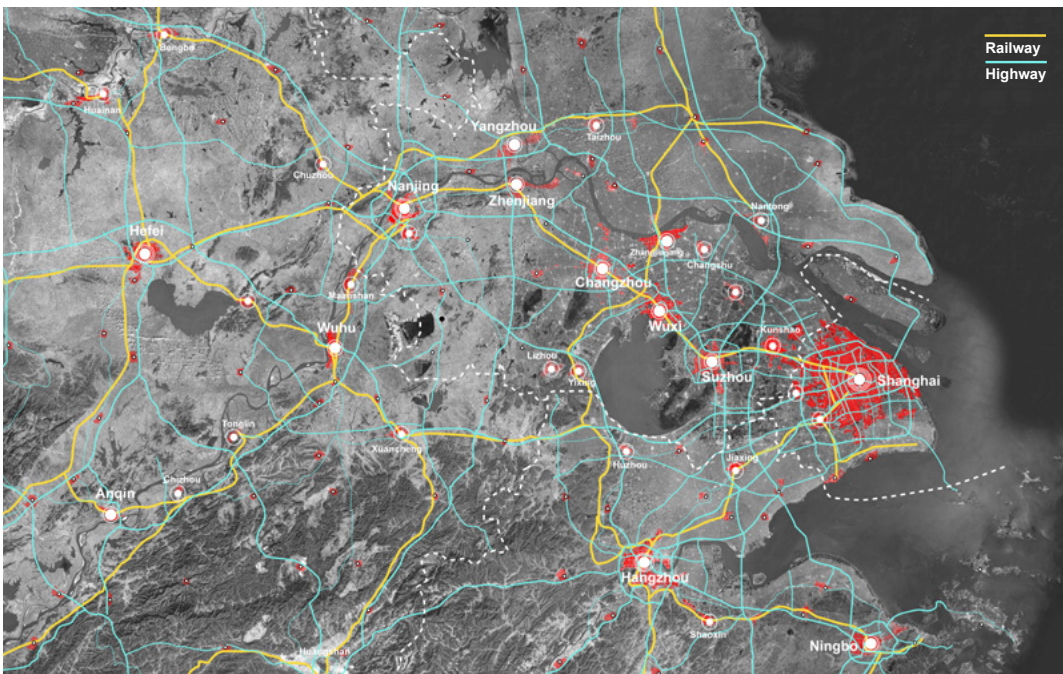


Program study diagram

3.2 Cities Link: Delivery System



Statistics on the number of city express delivery stations in the Yangtze River Delta. Data from Baidu map; base map from Baidu Map, 2018.



Public transport system in the Yangtze River Delta. Data from Baidu map; base map from Baidu Map, 2018.

The rapid development of the Internet has driven the rapid development of China's express delivery. The express delivery network inside the city has been rolled out. Taking Nanjing City as an example, there are more than 7,000 express delivery stations in Nanjing. Nanjing has a resident population of 6 million, so about one express station is shared by every 800 residents in Nanjing City. However, in the area near Liujiadu Village, the ownership rate of express stations is much lower. Residents of Liujiadu Village need to go to the county express station 3 kilometers away. Private vehicles are not very popular in today's rural China, so this will be a long way for the villagers of Liujiadu who need to carry goods.

In recent years, the Chinese government has done a great job in building public transportation. Rural areas and cities have formed a perfect transportation network. Therefore, rural areas should take advantage of this, and the rapid delivery of agricultural products to cities also creates a closer link between rural and urban areas; rural areas can therefore participate in more economic activities. Villages should build more connections with cities. These connections can be a delivery station, a product distribution area or an agricultural product processing area.

3.3 Villages Link: Farmers' Markets

There is a well-developed transportation network between the residents near Liujiadu Village. The area where Liujiadu Village is located is rich in resources, and the villages near Liujiadu Village produce different agricultural products, but there seems to be a lack of vibrant interaction between the villages.

Liujiadu Village is in a junction zone. It can be seen from the figure that the villages

to the east of Liujiadu Village mainly produce agricultural products; the villages in the west of Liujiadu Village produce mainly aquatic products. The farmers in Liujiadu Village produce both agricultural and aquatic products. The agricultural products of Liujiadu Village include fish and shrimp, rice and bamboo shoots; this area where Liujiadu Village is located is a good place for agricultural products exchange to bring more communication.

Farmers' markets can connect residents of Liujiadu Village and residents of neighboring villages and promote the exchange of agricultural products. The mutual movement of village residents will also create more economic benefits, thus forming a positive impact.



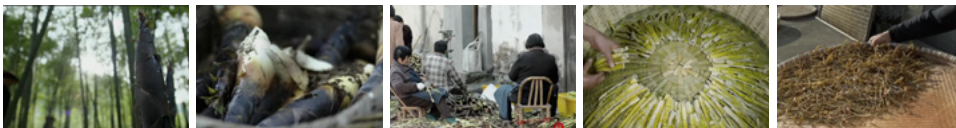
Food products from nearby villages. Base map from Baidu Map, 2018.

3.4 Food Processing

Liujiadu Village has always had a tradition of processing food. China's food culture emphasizes the selection of foods in different seasons. The principles of this food culture can be found by exploring the food processing products of Liujiadu Village. In the spring, the villagers collect bamboo shoots from the mountains and make dried bamboo shoots; in the summer, the villagers collect shrimp eggs to make shrimp egg noodles; in autumn, the rice matures and the villagers process rice; in the winter, the villagers make dried fish for storing protein.

Local work habits should also be an important factor in architectural design considerations. Local residents need to play an active role in public buildings to expand their contribution to the local landscape.²⁴ These memories of food should be preserved and continued, so I thought about providing a food processing space which should be flexible to cope with different seasons and different food processing.

Spring: Bamboo Shoot Processing



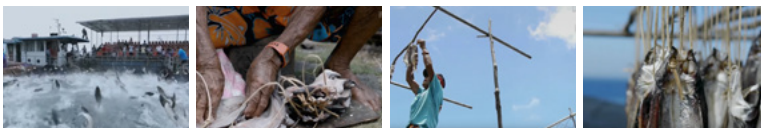
Summer: Shrimp Egg Processing



Fall: Rice Processing



Winter: Fish Processing



Food processing in Liujiadu Village. From "A Bite of China" (2014)

²⁴ Dolores Hayden, *The Power of Place: Urban Landscapes as Public History* (Cambridge, Mass.: MIT Press, 1995), 76-78.

CHAPTER 4: DESIGN

4.1 Project

In combination with the social, economic and cultural issues of Liujiadu Village, I divided the project of Liujiadu Village into activity centre, community centre and working station. The Activity Center project includes a children's interactive place and an elderly activity place; this project undertakes the activity place of the villagers in the village. The Community Center project includes daily meetings, opera performances, farmer's market and delivery space; this project mainly undertakes the function of the villagers communicating with the outside world and is a symbol of the village. "The Workstation" projects include places where farmers process food, storage, and have work breaks.



The activity center wish image

The problem of solving left-behind elderly and left-behind children was placed in the same project. The villagers in Liujiadu Village have established a good trust;

neighbors helping the children and the elderly is common. However, help between individuals is relatively inefficient; the young labor force is insufficient in rural areas; and the manpower will be even more insufficient in busy seasons in rural areas. Therefore, left-behind children and left-behind elderly people should be taken care of together; the children's activity place and the elderly's activity place should be put into the same project. Old people are relatively patient with children, and children bring more vitality to the elderly. Older people and children have more opportunities to care for each other, and the two event centers only need to arrange a small number of young adults.



The community center wish image

Building a new connection is the mission of the community center. Community center projects include farmers' markets, delivery stations, theaters, storage rooms, and more. The farmer's market has increased the connection between Liujiadu and the surrounding villages. The delivery station established the con-

nection between Liujiadu Village and the surrounding cities, and increased the opportunity to communicate with the city; the community center also provided villagers with face-to-face meeting places.

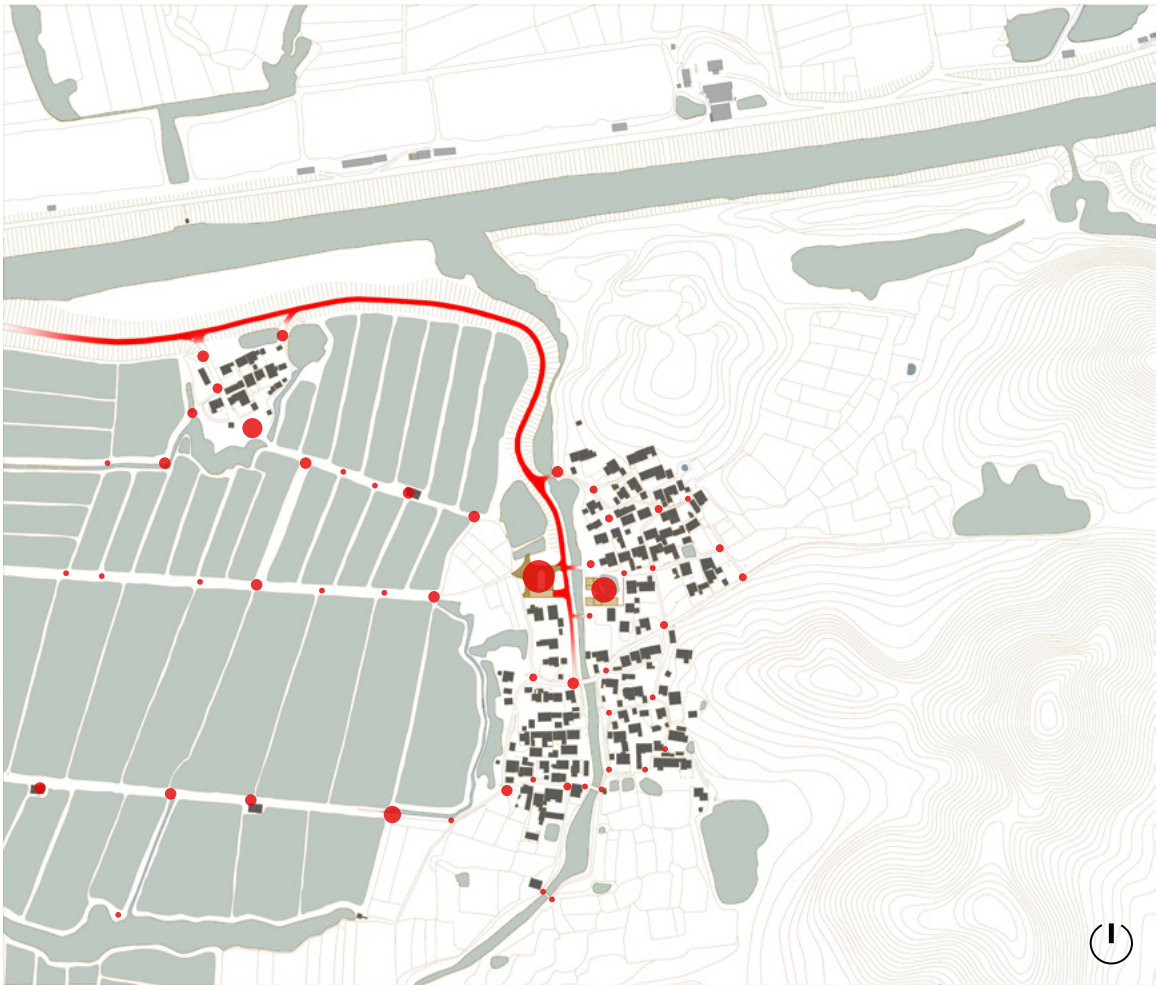


The working station wish image

Workstations are projects that improve the working environment of farmers and bring economic benefits. The workstation includes a farmer's rest area, food processing area and storage area. The upgrading of the industry and the improvement of the working environment of farmers will attract young people to return to the countryside.

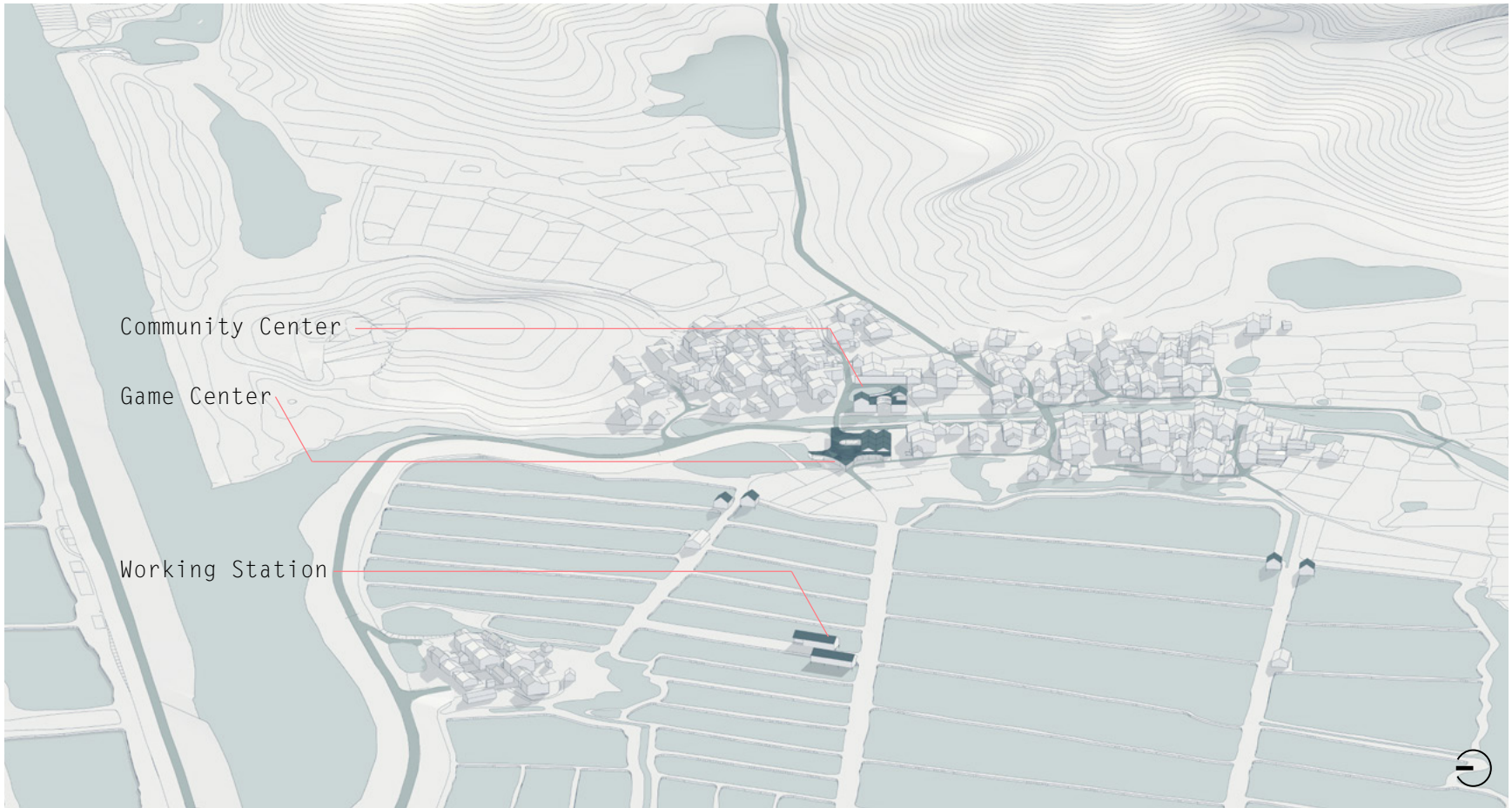
4.2 Site Analysis

These three projects are different in terms of function and orientation, and the best geographical location will be different. "The community center" is the place



Meeting spots in the Liujiadu Village. Base map from Baidu Map

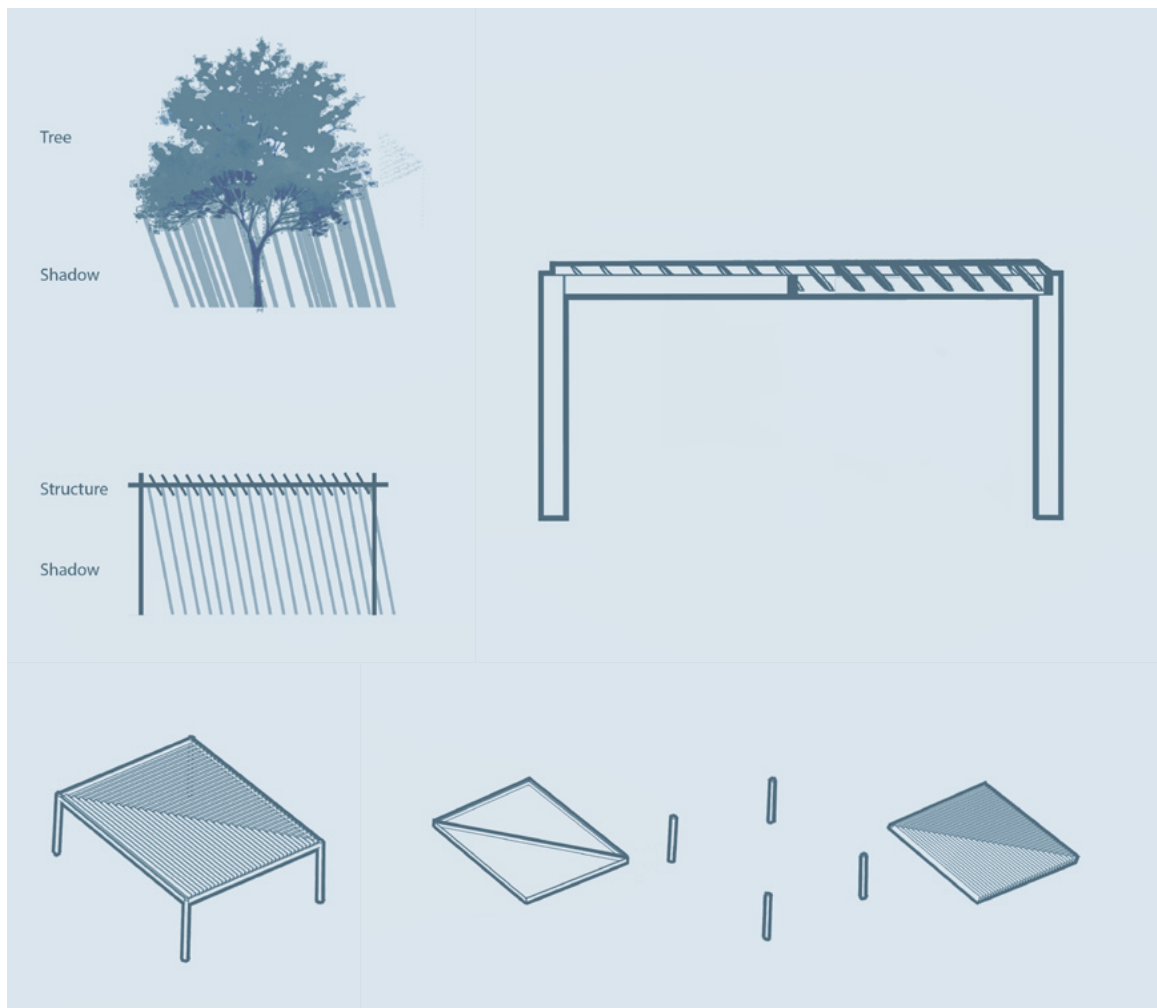
where the villagers meet and communicate with the outside world. Therefore, “the community center” should be located at the entrance to the village. The people in “the game” are children and the elderly, and it is more responsible for the use of people inside the village. In order to facilitate the convenience of the residents and the safety of the elderly and children, the location of “the game” should be in the heart of the village. The workstation is designed to provide convenience to farmers; therefore, the workstation should be located in the field.



Site drawing showing the main program components of the project

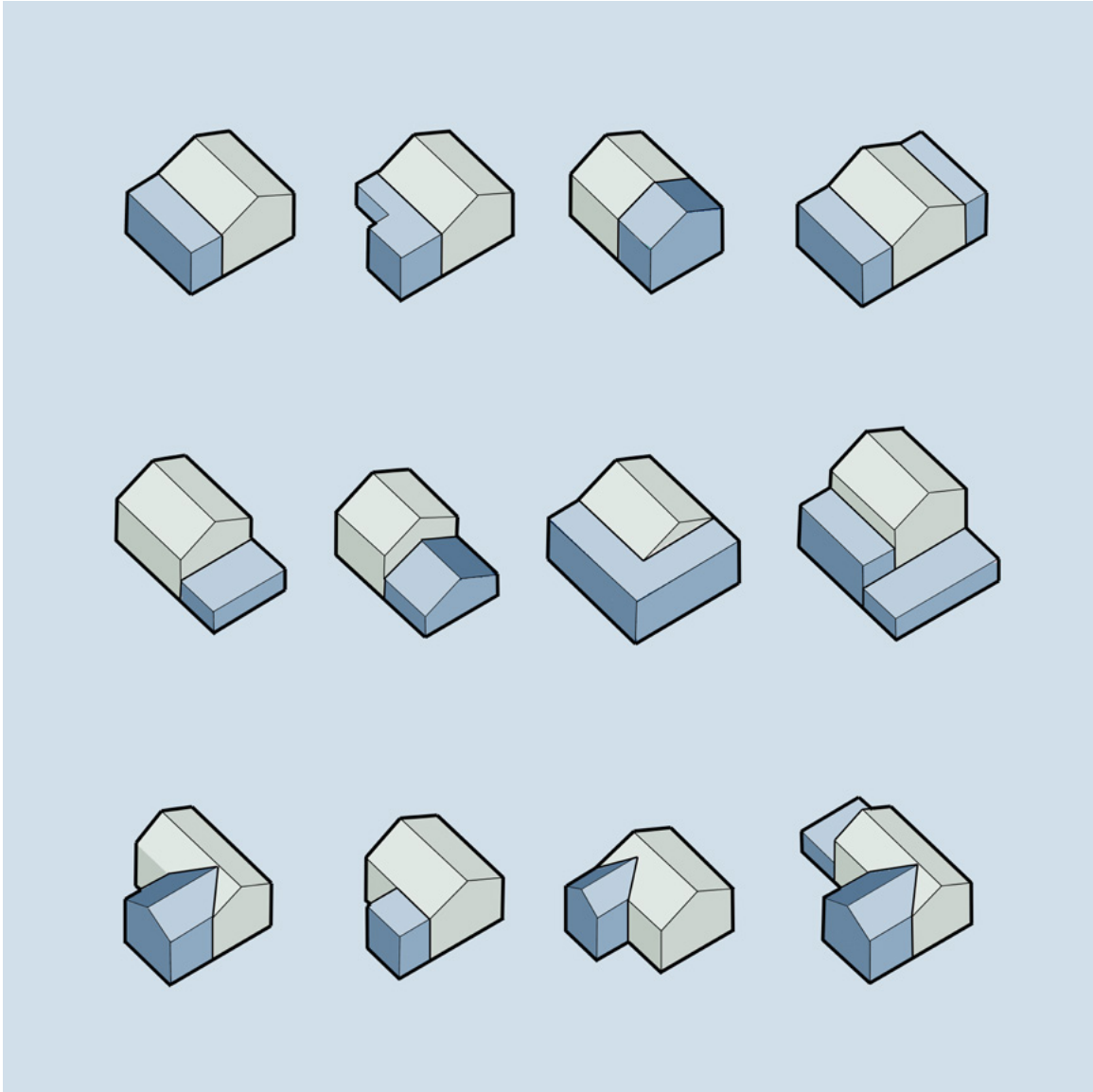
4.3 Design Method

The project started with the group memory of the villagers. My design method was to visualize the abstract concept of villagers' memory. The big tree in the village is a symbol of meeting in rural China. The impression of trees under nature is open. This design is an open meeting place for the villagers. This meeting place is called "the village tree". The design of "the leaves" of "the tree" are arranged in different directions at an angle of 45° . Therefore, the shadows from the sun at different times will appear with different shapes. The interaction with natural light gives the building a more subtle and varied light and shadow effect. This light and shadow effect increases a mild atmosphere.

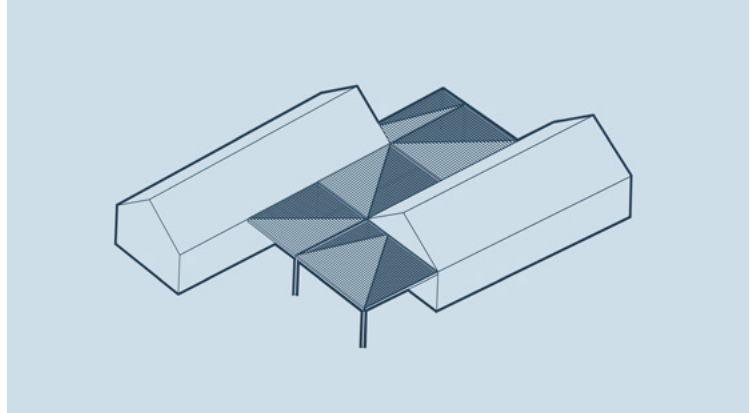
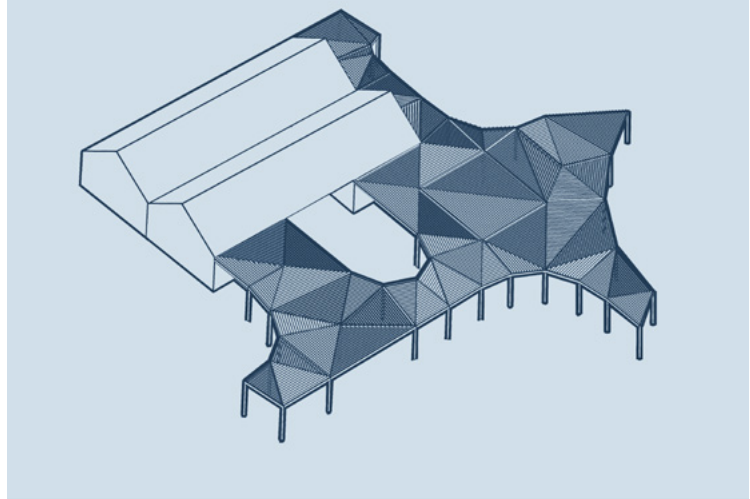
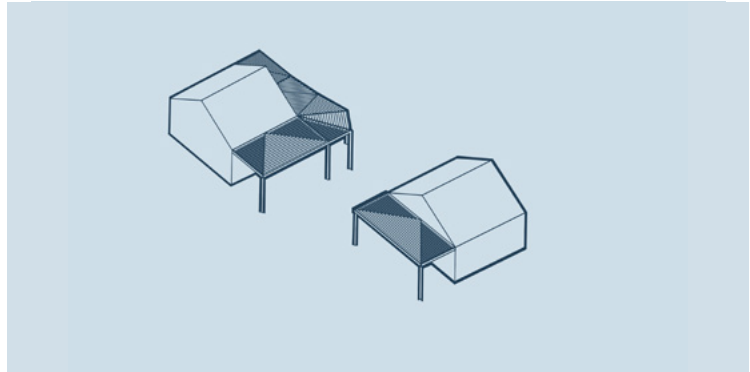
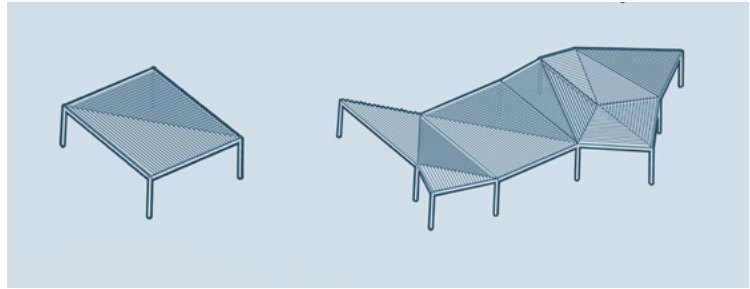


The "tree" diagram

The local houses in Liujiadu Village have their own regular pattern of growth. When the villagers want to extend the space, they will expand it in the way shown below. Therefore, the design method will follow this local architectural regular pattern.

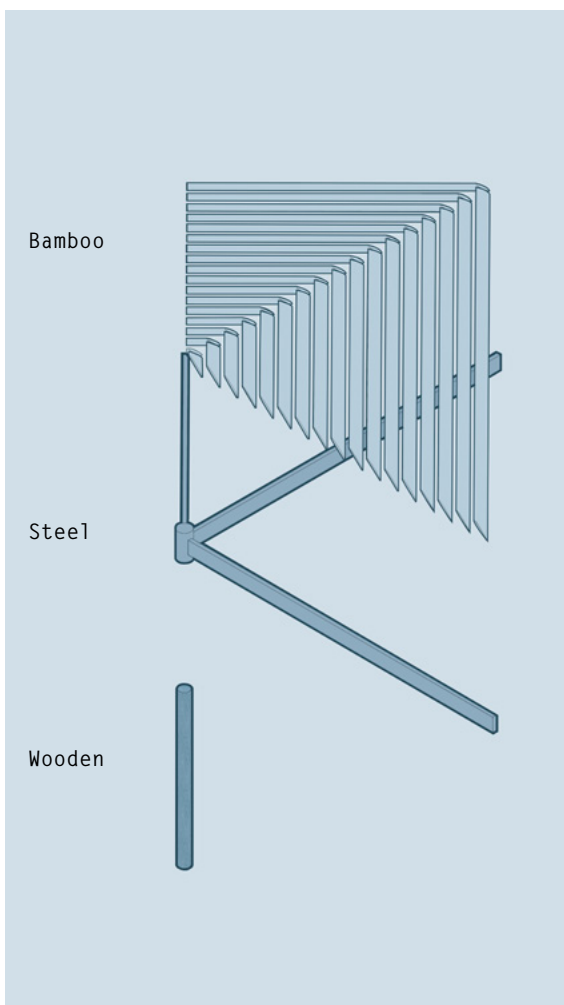


Expand the space

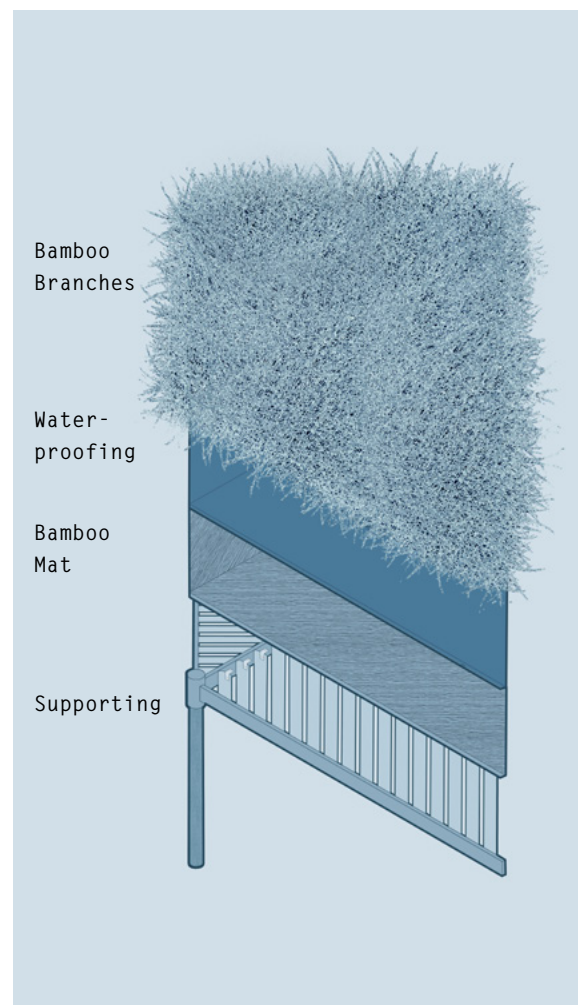


Tree growing on the houses

Building the “tree” uses mostly local materials, such as wood and bamboo. Wooden columns are for weight bearing. Printed steel is the “twig” that connects the various “trees”. The “leaves” are made of bamboo that is light and extensible. Some of the roofs have snow and rain protection functions, and they are covered with a bamboo mat layer, waterproof layer and a large of bamboo branches. There is a bamboo forest and woods on the hill on the east side of Liujiadu Village; these materials are very easy to obtain locally. Bamboo’s trunk, bamboo branches, bamboo leaves, almost every part of the bamboo is fully utilized in these designs.



Structure

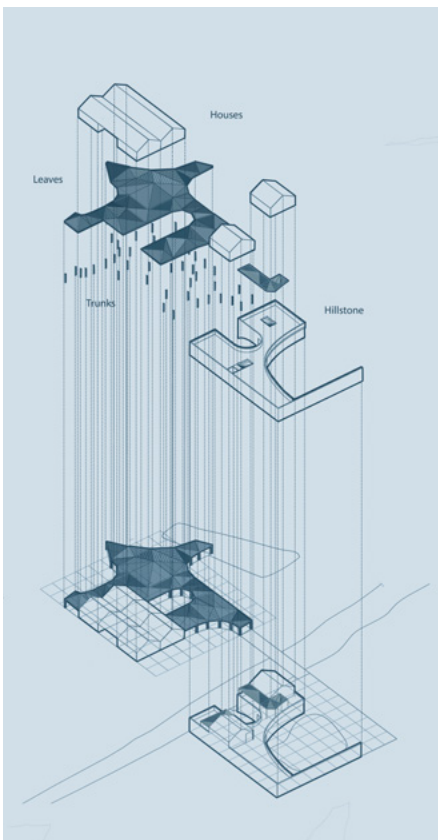


Structure

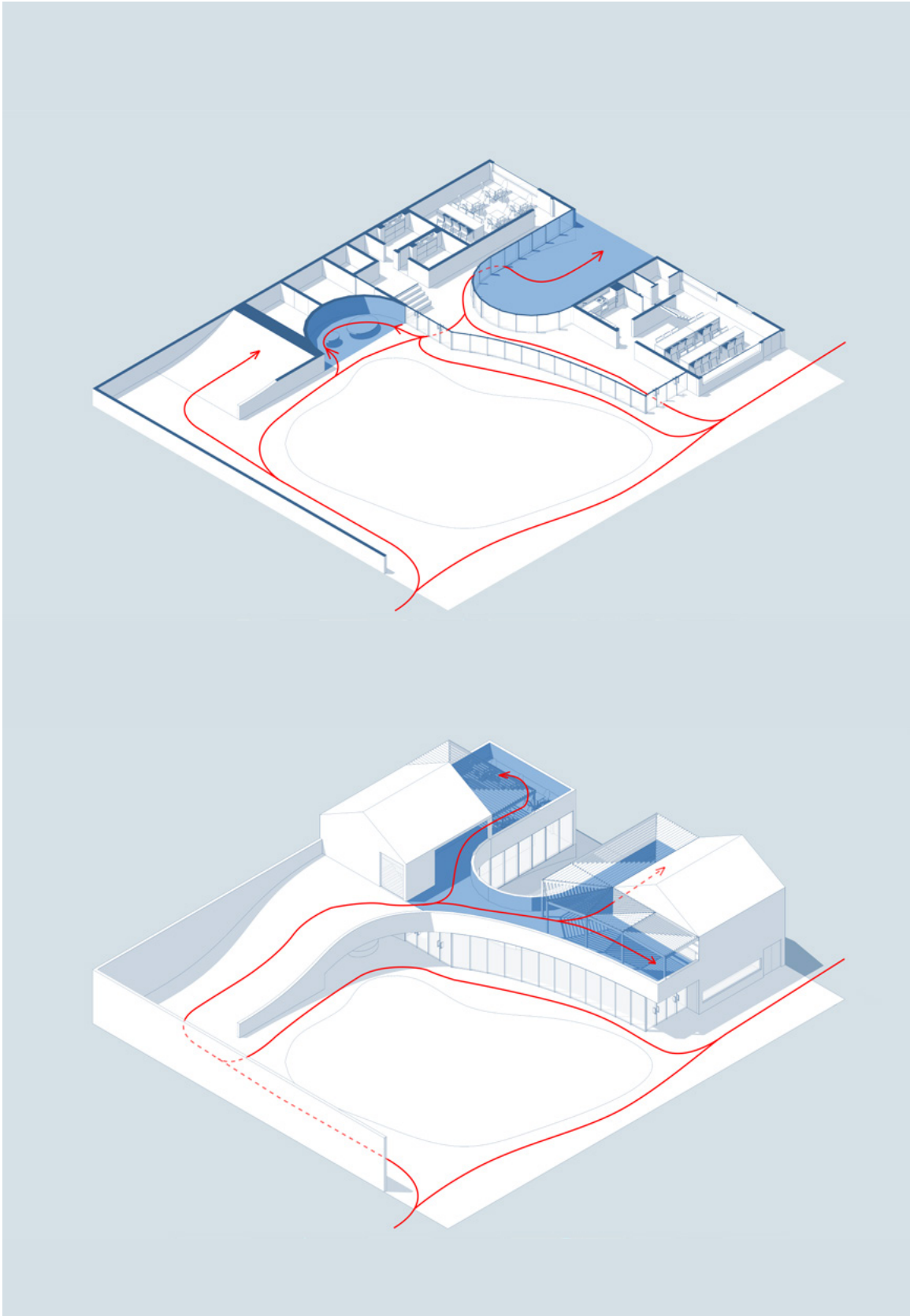
4.4 Activity Center

The main target groups of the activity center are the elderly and children. Therefore, my design started with two relatively independent houses. However, the two separate houses are connected on the first and second floors. This is in consideration of the fact that the elderly and children are completely different in the type of activity, but the elderly can also supervise the safety of the child. Therefore, the activity space of the two groups is distinguished, but each other's activities can be observed.

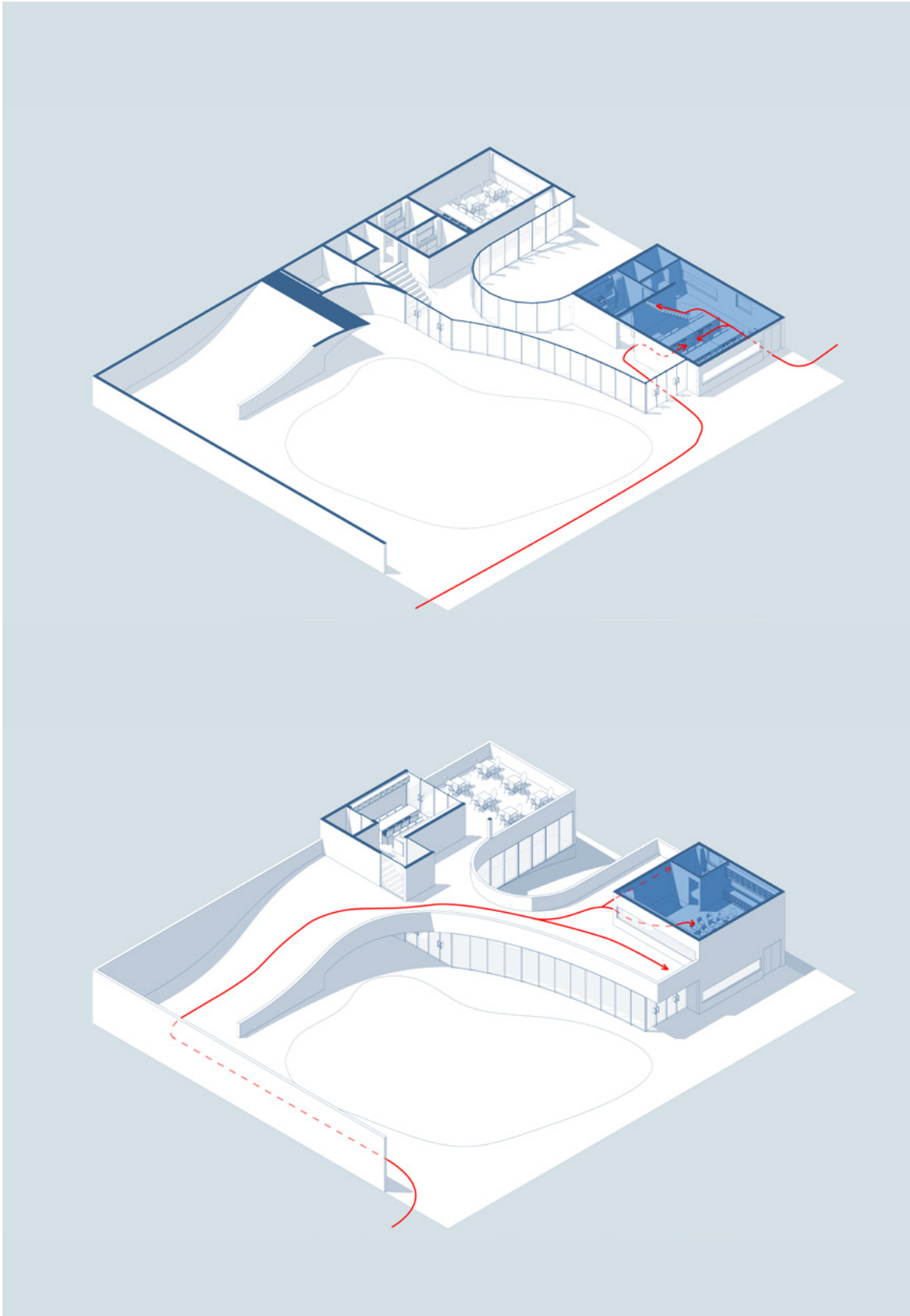
Another focus of the design of the activity center is on security. Considering the mobility of children and the elderly, the entrance to the second floor of the building is set on a slope rather than a staircase. In the active area of the elderly, the design of barrier-free elevators was added.



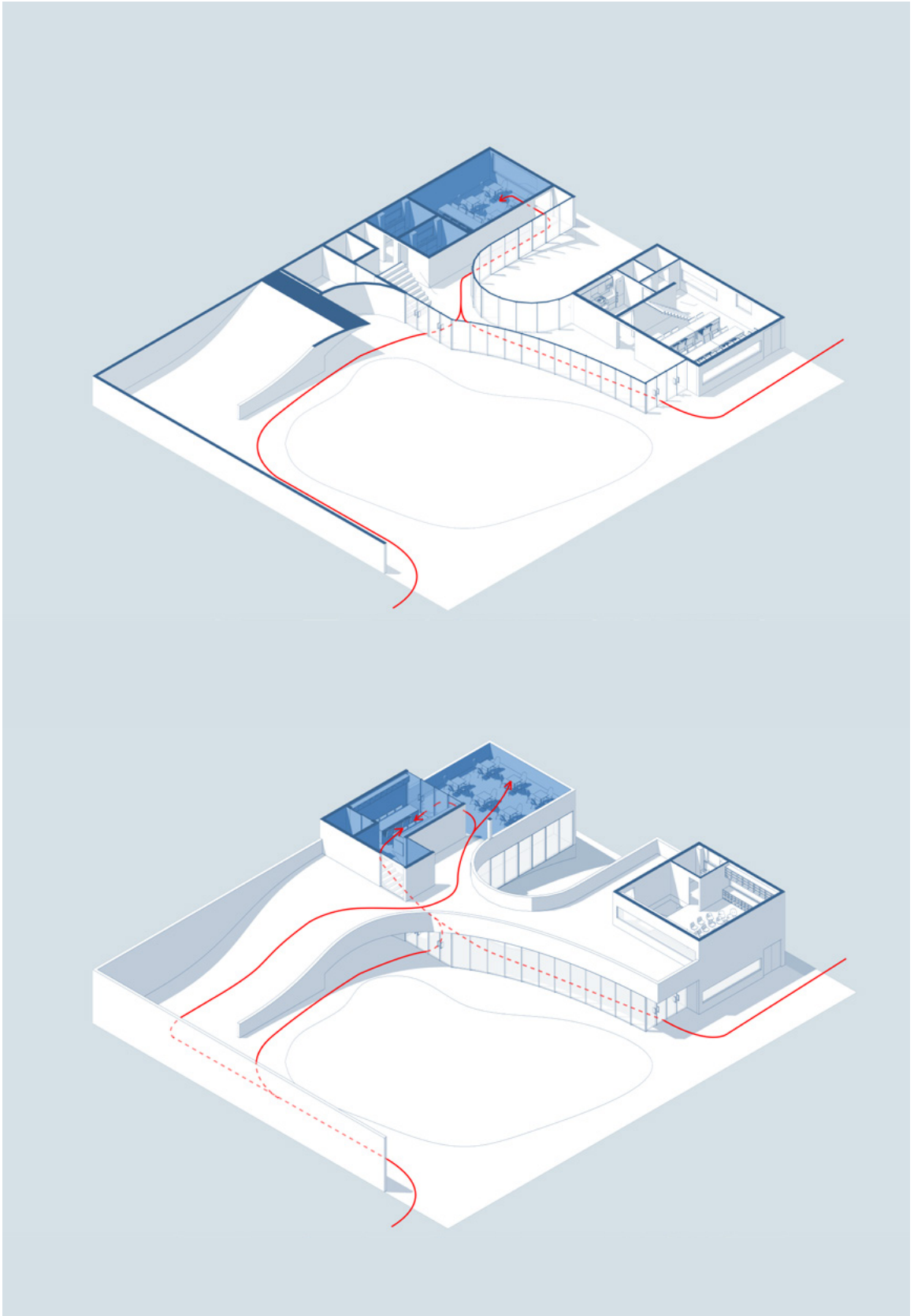
Axo drawing of community center and activity center



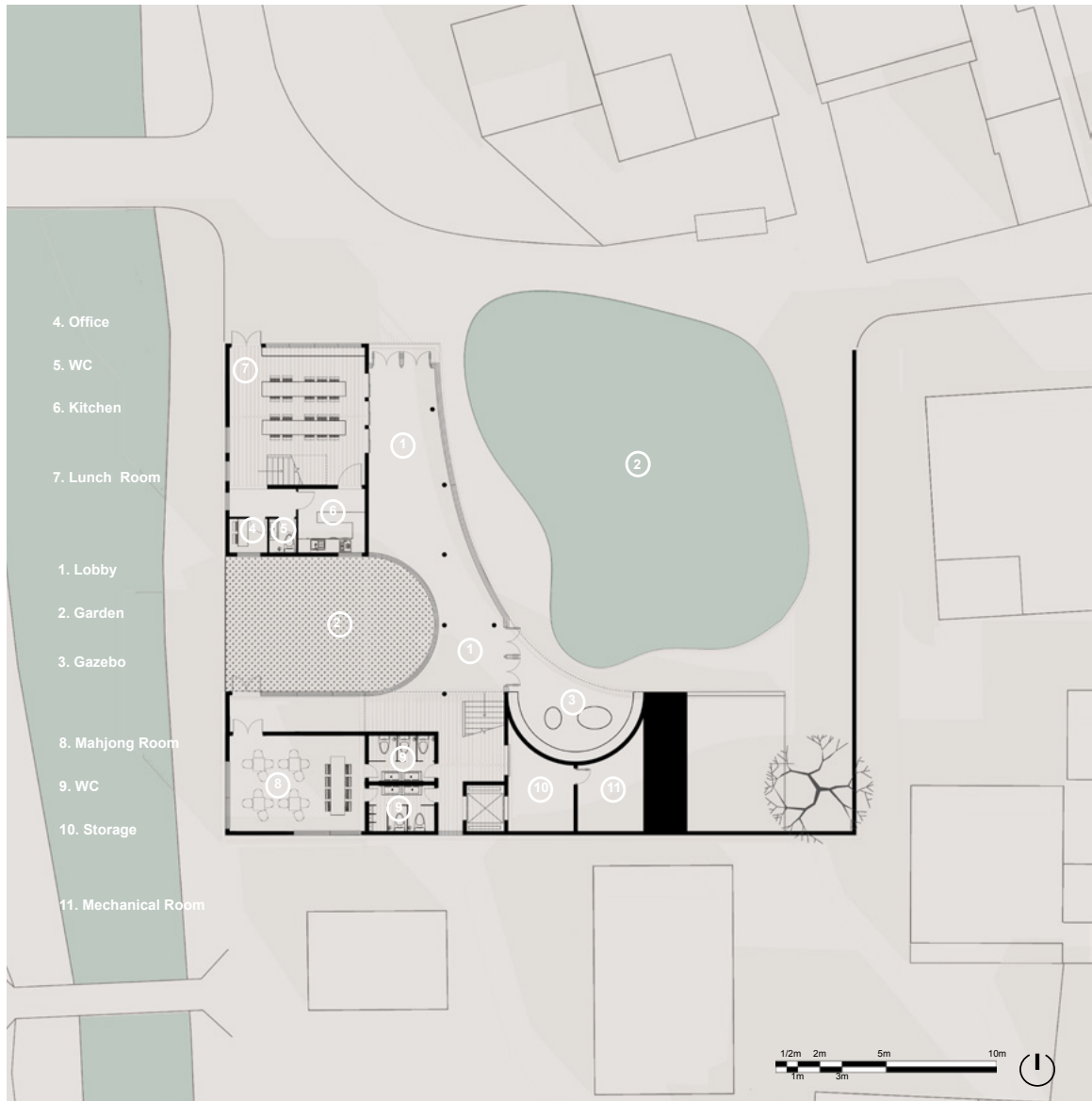
Garden and terrace circulation



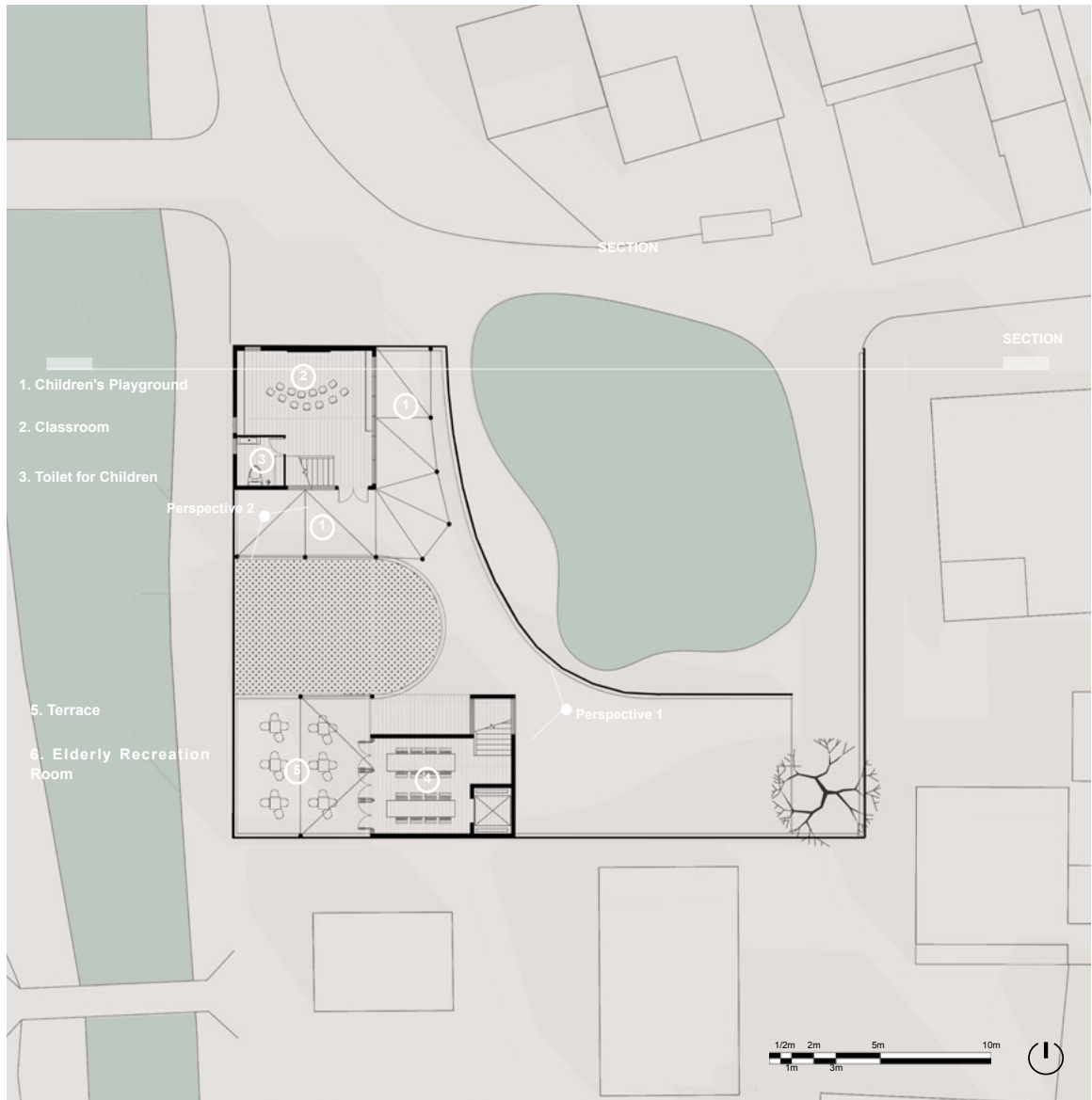
Children activity space circulation



Elderly activity space circulation



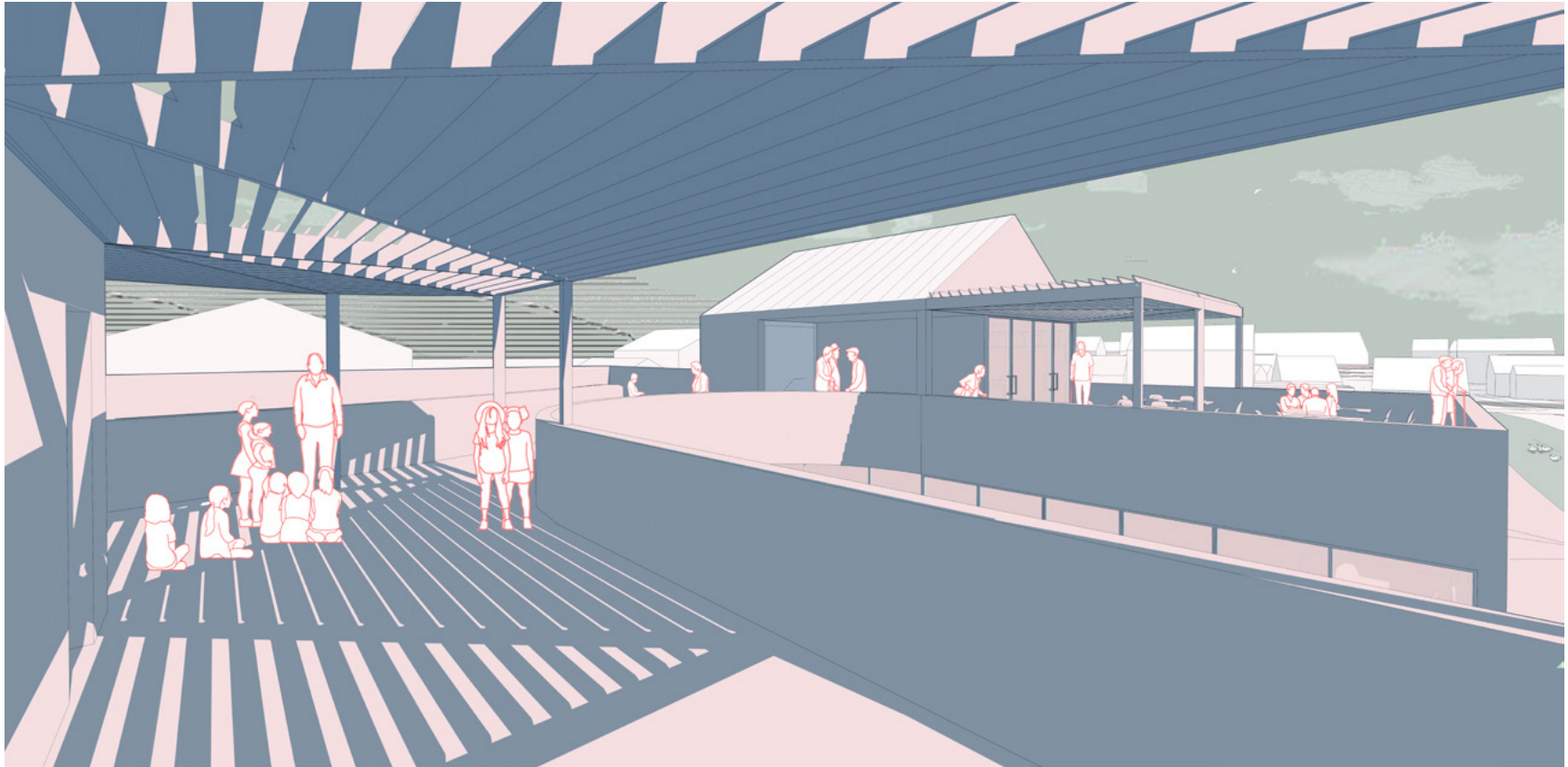
First floor plan



Second floor plan



Activity center section drawing



Rendering drawing (from the perspective of the children's activity area)

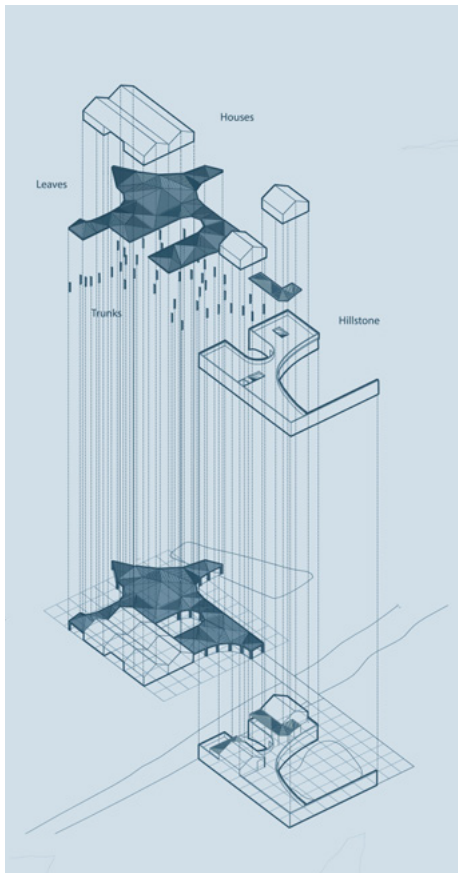


Rendering Drawing (from the perspective of the elderly's activity area)

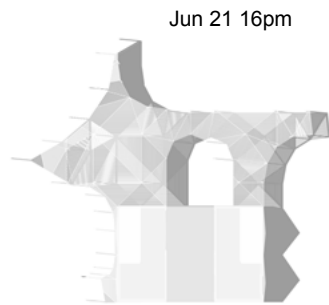
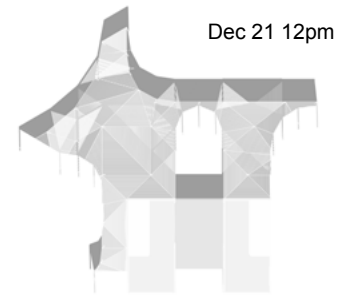
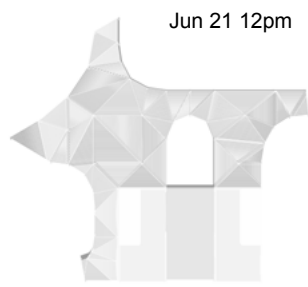
4.5 Community Center - “The Tree”

This “village tree” connects the farmland in the west and the village road in the west. The “tree” bears the responsibility of communicating with the surrounding cities and villages, and the role of connecting farmland and residential areas; therefore, the structure of the “tree” needs to be extended to outside villages, inside villages and farmland.

The local villagers have a Mazha culture. The Mazar is a bench that can be carried around and folded. Local seniors carry Mazar to chat under the shade, and because the space under the “tree” requires flexibility, there is no fixed seat under the “tree”. Under the huge “tree”, the villagers are given enough space and freedom to find a comfortable chat environment.



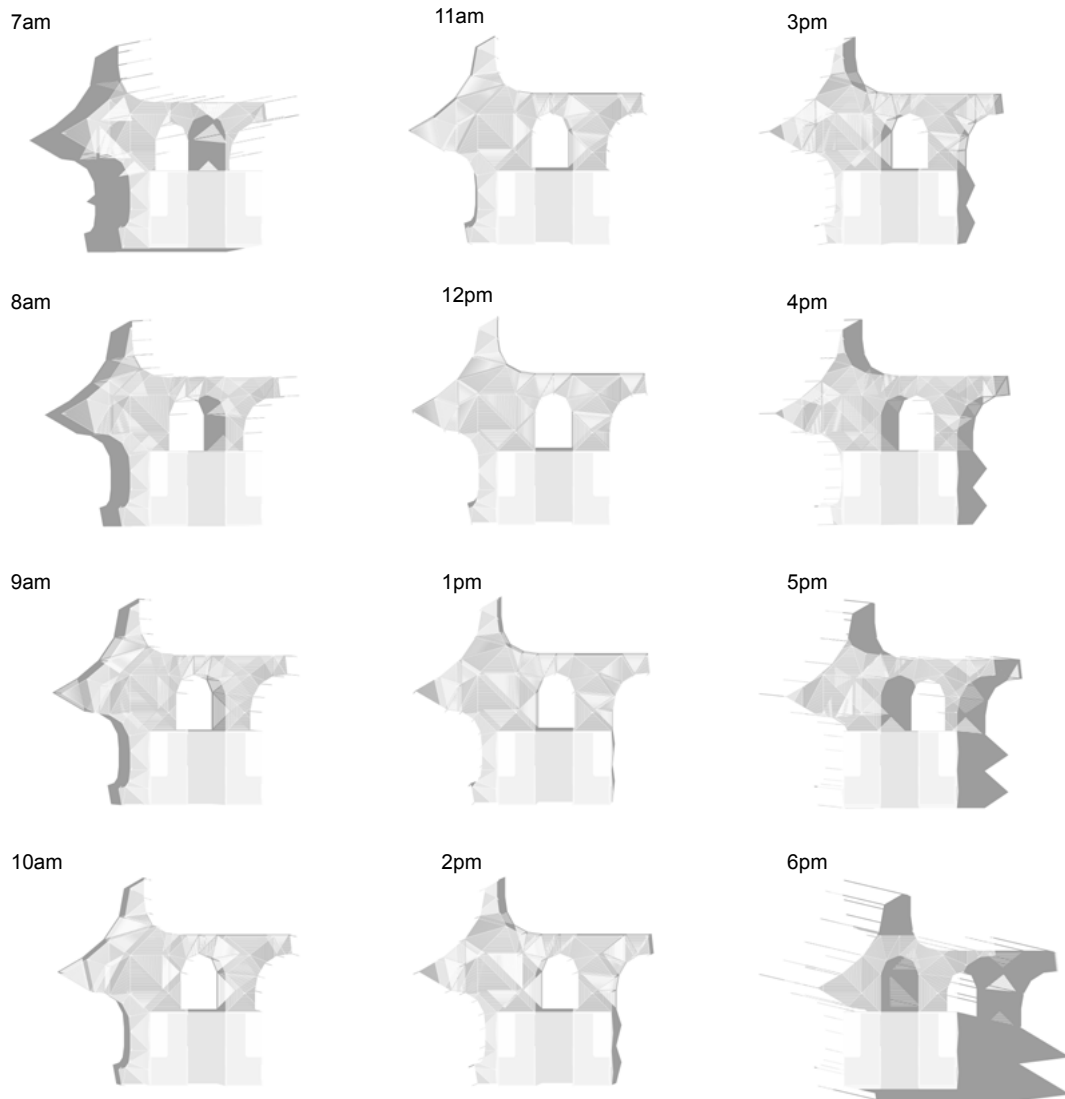
Axo drawing of community center and activity center



Shadow test

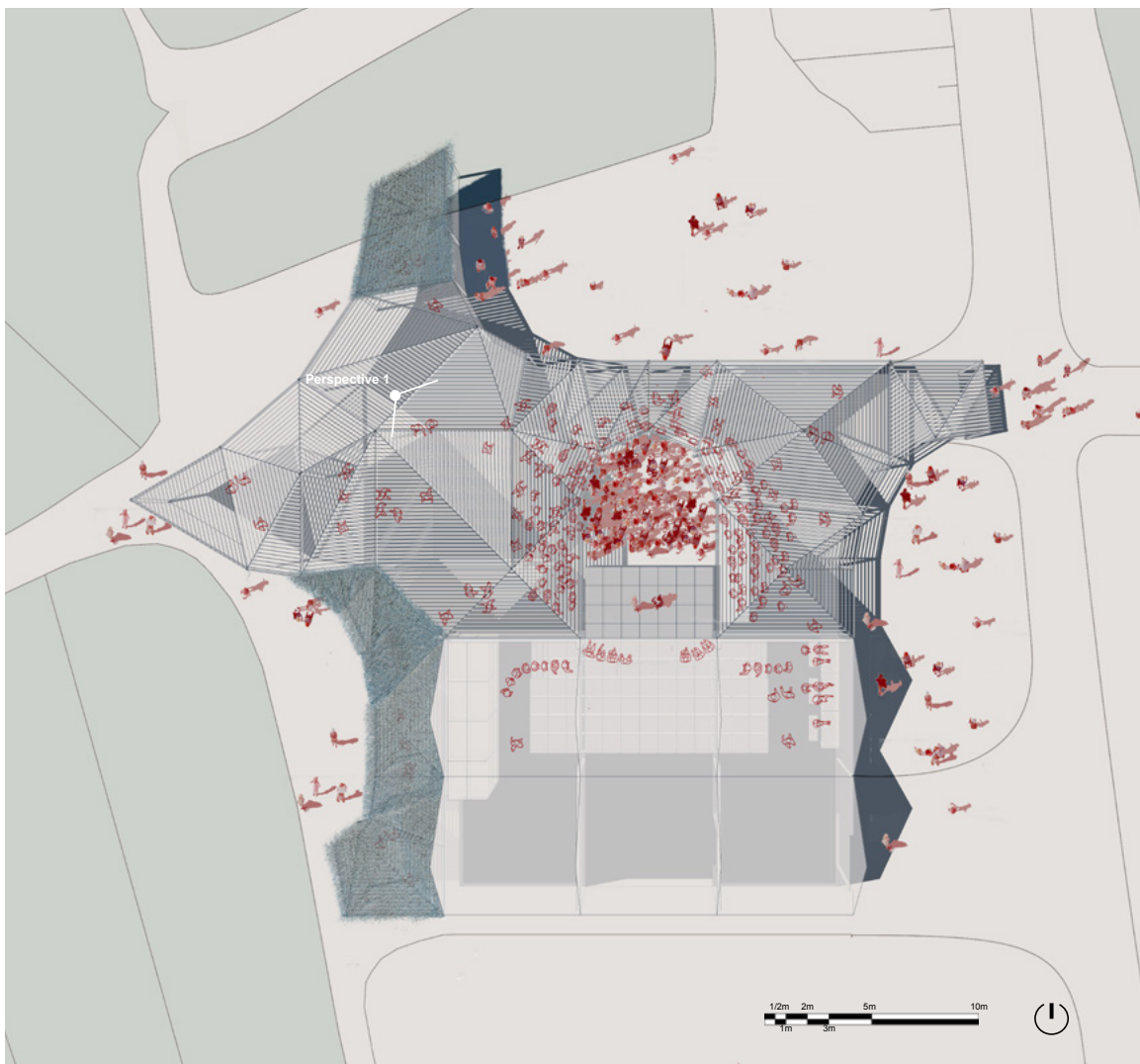
I conducted two sets of tests on the “tree” in the shadow of the sun. For the first set of tests I chose June 21 (the longest daytime), December 21 (the longest nighttime) and September 23 (the most balanced daytime and nighttime). I selected three times: 9:00am, 12 noon and 4 pm to test the shading effect.

July and August are the hottest months in Liujiadu Village. Therefore, my second set of experiments chose August 1st to test the shading effect of the “tree” in a relatively extreme temperature.

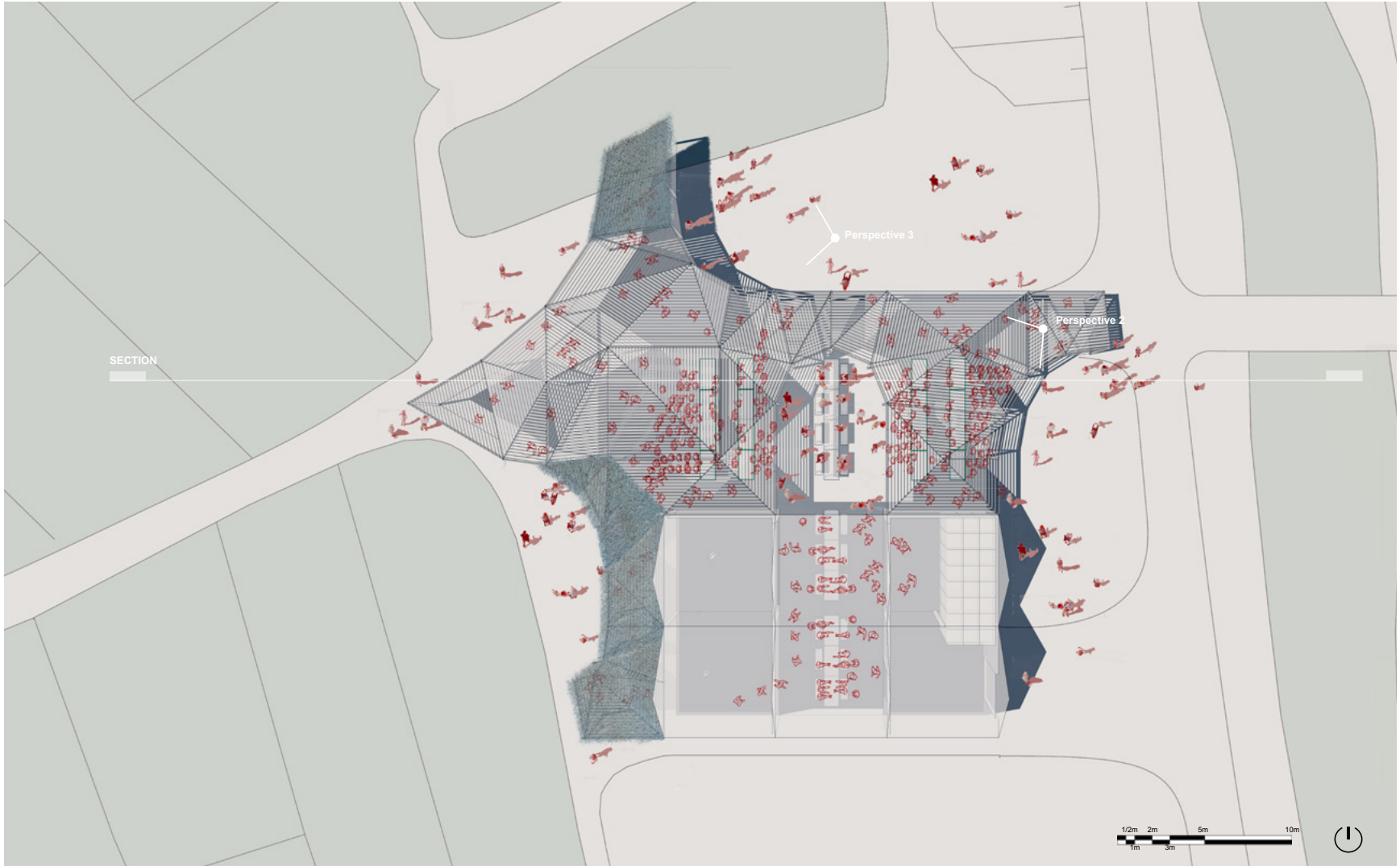


Shadow test for August 1st

In terms of functionality, the tree supports different activities such as drama performances and markets. Therefore, the design of the village tree needs to be more open and flexible. The big tree at the entrance to the village also needs a large storage space to meet the needs of furniture and equipment for different activities. Therefore, from the two layout drawings, when the market starts, the theater equipment is stored in the storage room on the left; when the opera is performed, the furniture in the market is stored in the storage room on the right. In daily use, excess furniture and equipment can be stored in both storage rooms at the same time.



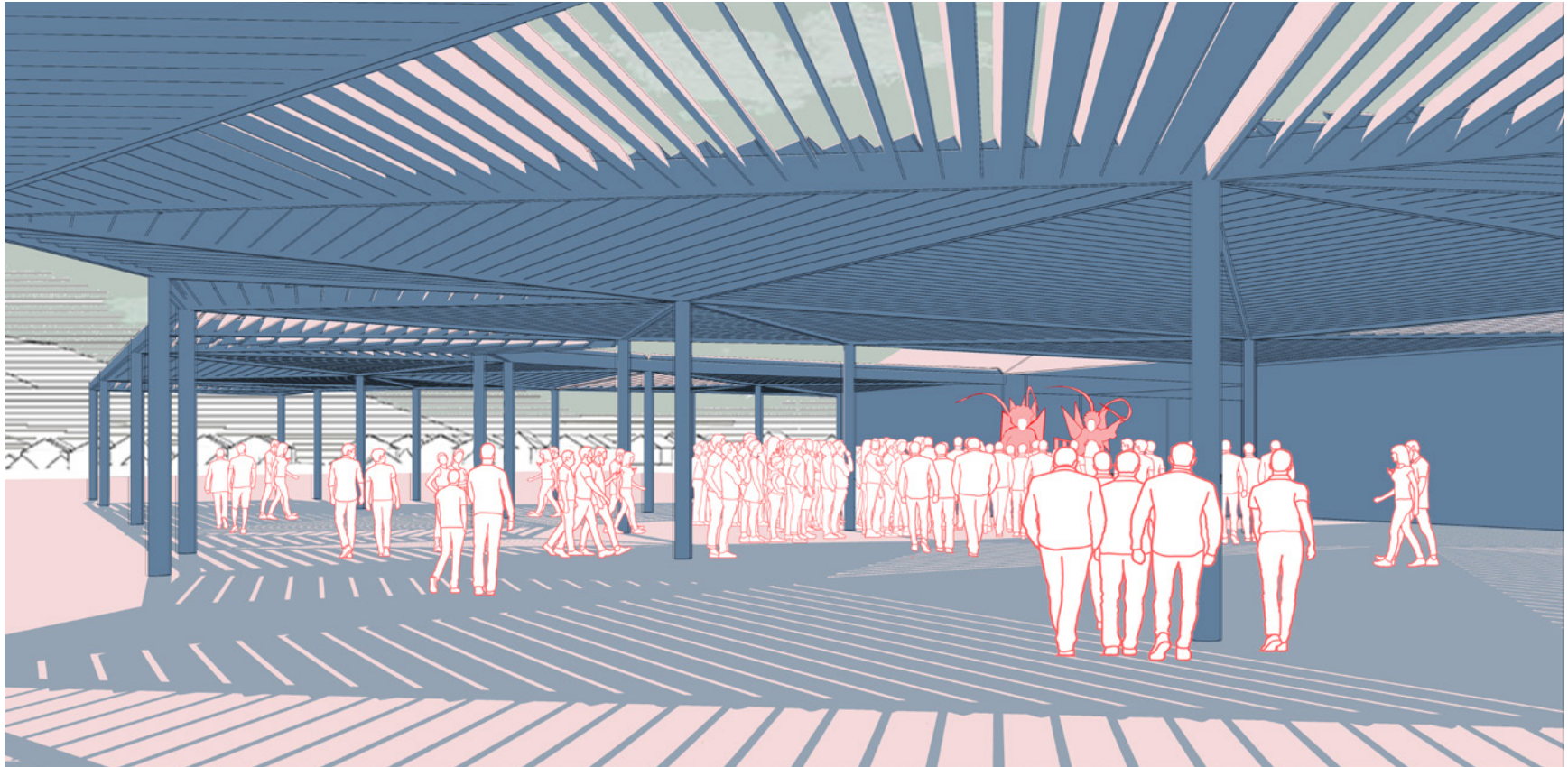
Theater layout



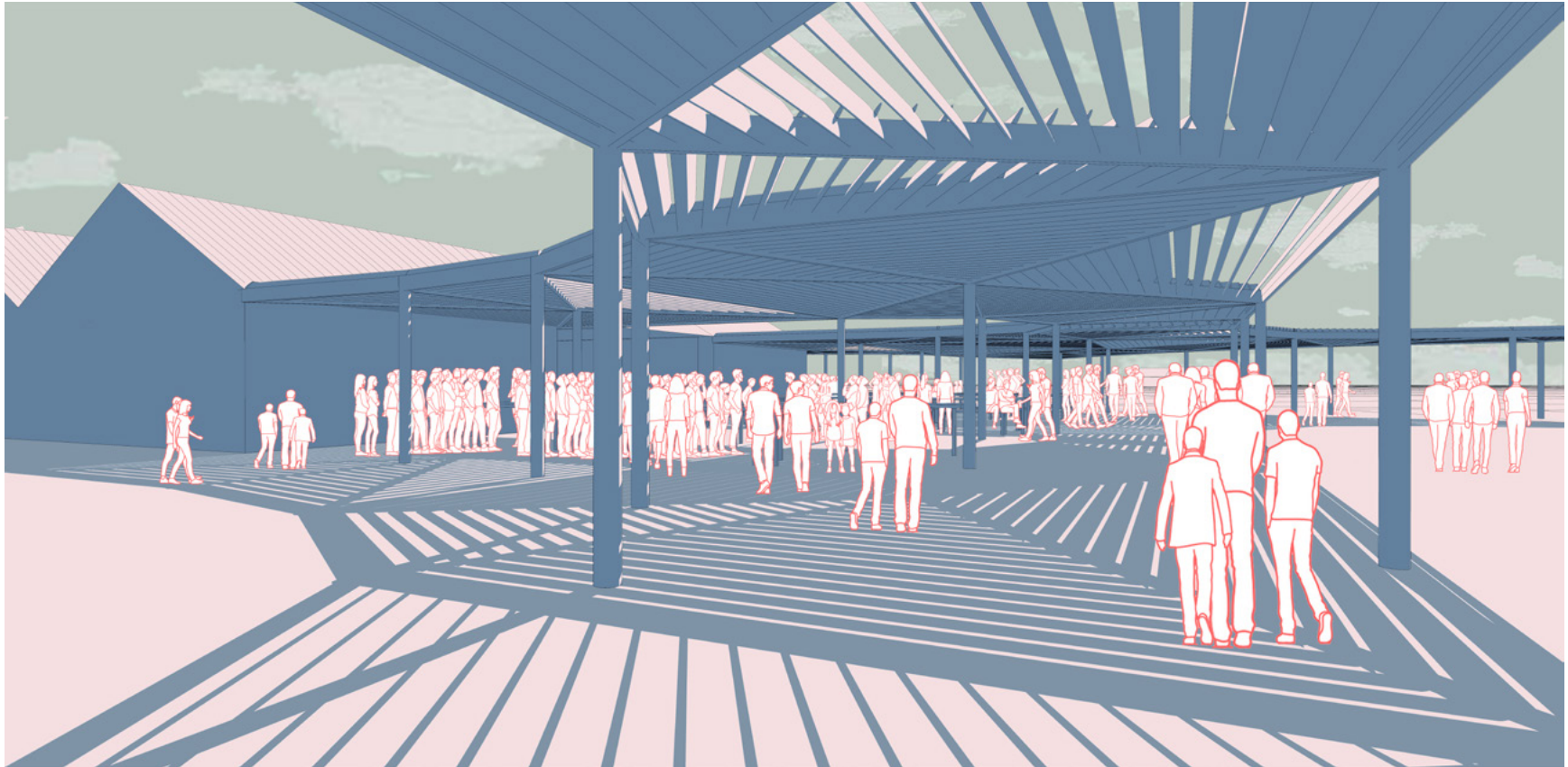
Market layout



Community center section drawing



Rendering drawing of theater layout



Rendering drawing of market layout

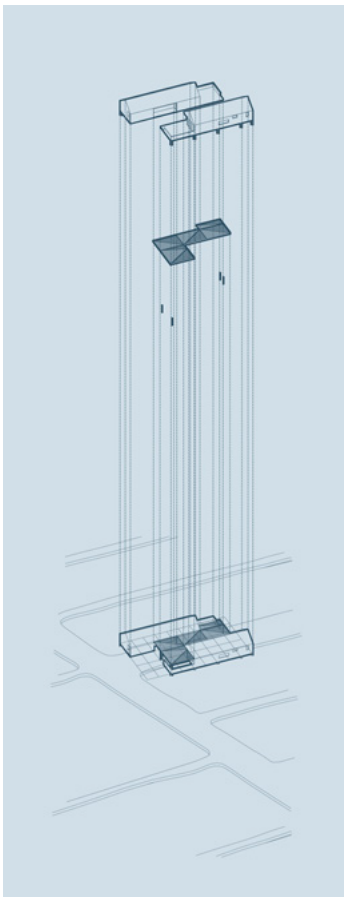


Rendering drawing of fishing in snow

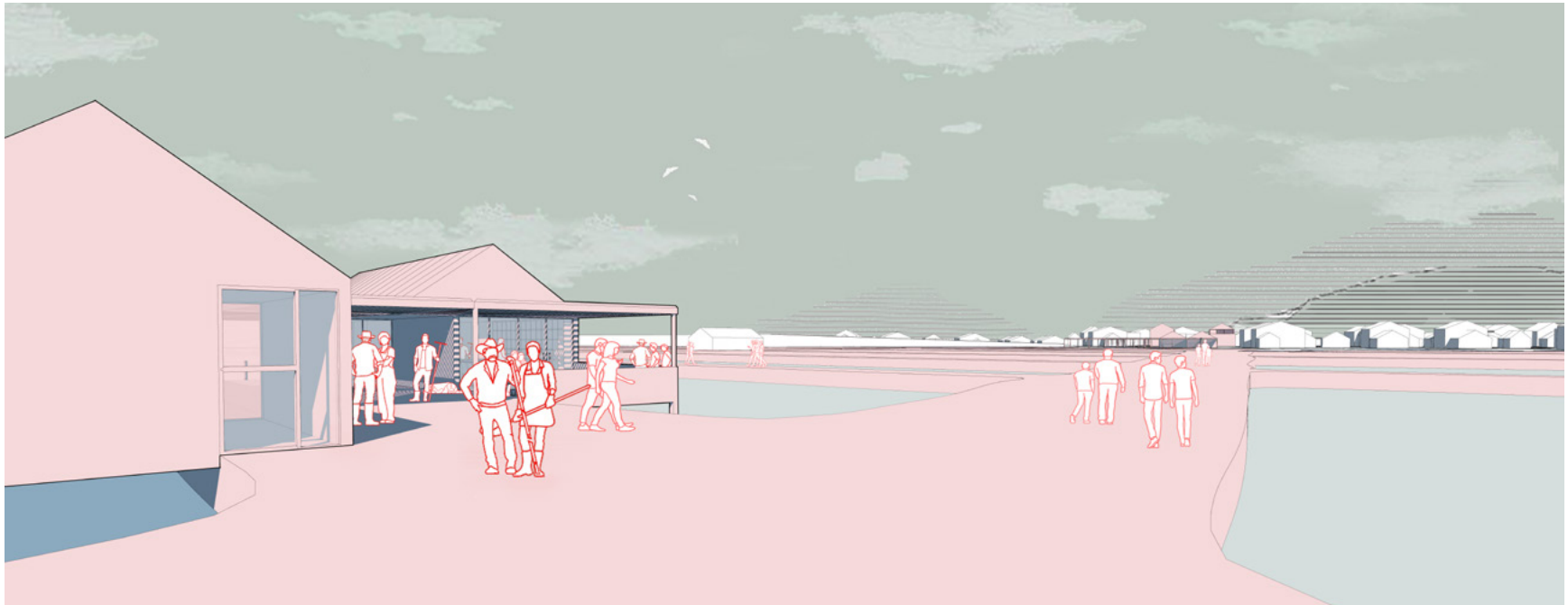
4.5 Working Station

The design of the workstation takes over the design language of “big village tree”. The workstations are located on either side of the field trail. “The leaves” unfolded in different directions give the farmers a restful and cool place during the field work, and connect the houses on both sides.

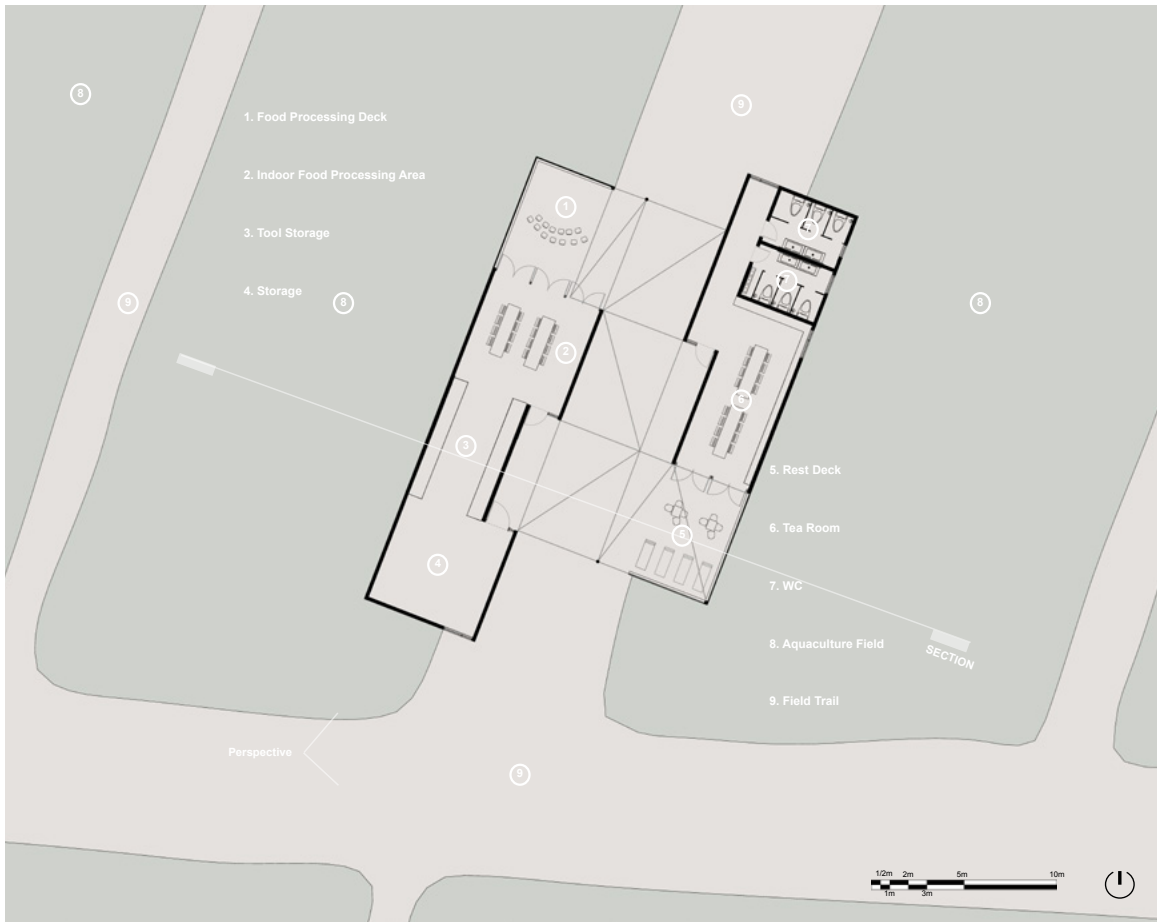
The two houses are functionally divided into two categories, rest and work. The rest house includes a small tea room and toilet. The work house includes food processing areas, tool storage rooms and food storage rooms. The tea room of the rest house and the food processing area of the work house are relatively open spaces. Therefore, the space for tea rooms and food processing extends even from the interior to the outdoor field trails under “the leaves”.



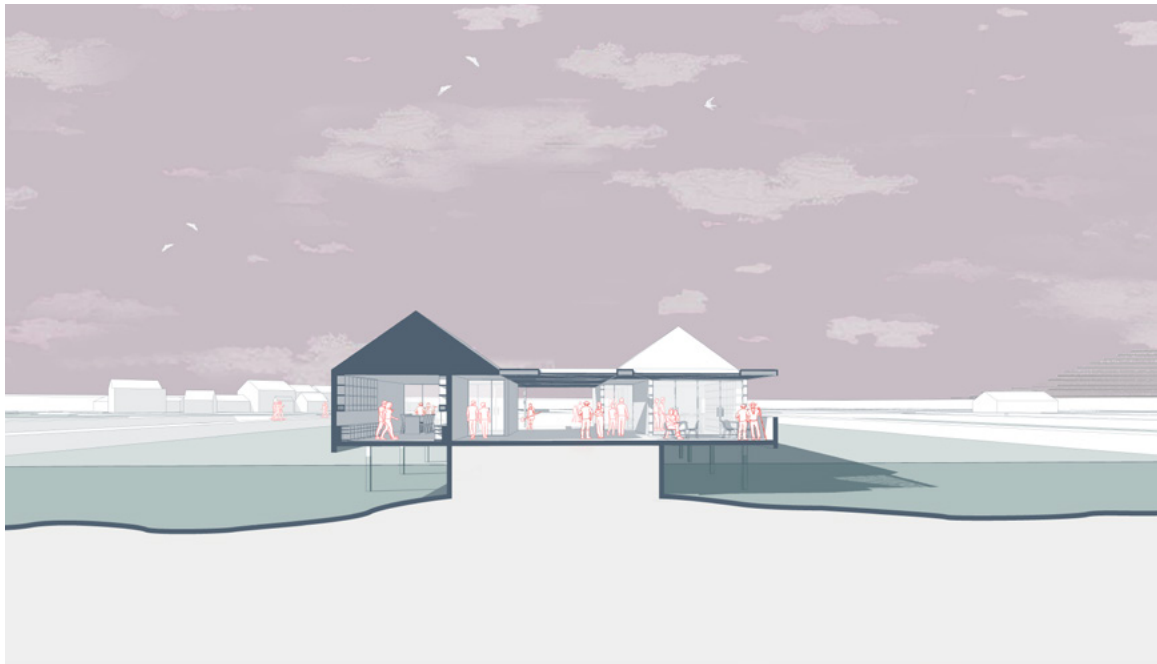
Axo drawing of working station



Rendering drawing of working station



Working station plan

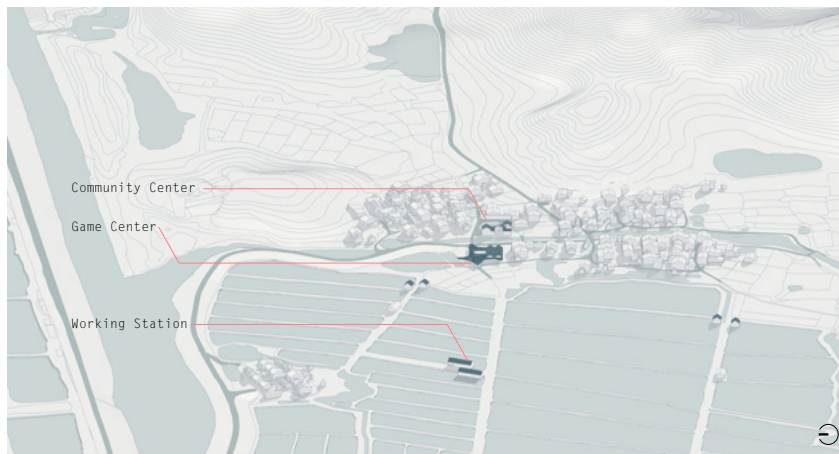


Working station section

CHAPTER 5: CONCLUSION

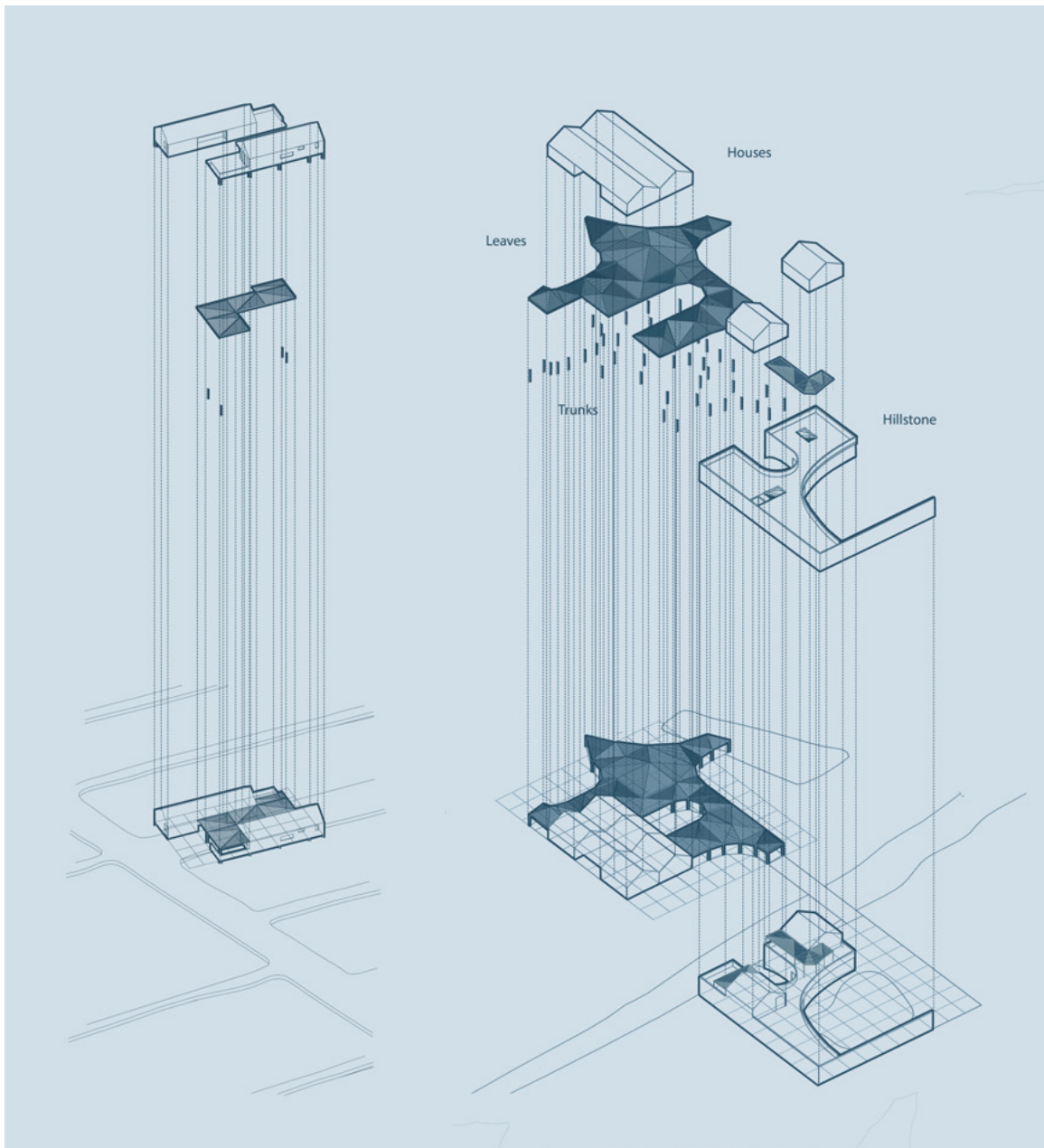
The Chinese countryside has a strong uniqueness. Their uniqueness is reflected in the villagers' exclusive memories of their villages. These memories include the villagers' communication habits, communication methods, living customs, working methods, and so on. Today's Chinese villages have problems from different levels of economy, society and culture. Taking Liujiadu Village as an example, I solved the economic, social and cultural problems of Liujiadu Village by studying the collective memory of the villagers.

The choice of project combines the actual problems with the collective memory of the villagers. Economic-related projects such as seasonal food processing projects, urban express projects and rural farmer market projects have clarified the positioning of Liujiadu Village in this area and deepened the influence of Liujiadu Village on the surrounding areas. Social-related projects such as the Children's Activity Center and the Elderly Activity Center project have solved the social problems of children and elderly that are left on their own with out adults to care for them through the study of social relations in Liujiadu Village. Entertainment-related projects such as theaters, mahjong rooms, tea rooms and fishing areas have added more vitality to Liujiadu Village base the study of the memory of the villagers.



Site drawing showing the main program components of the project

The principle of rural architecture design should be to keep tradition but also to develop. The new public buildings in the village should make the villagers feel familiar and intimate, and at the same time should be more attractive and different from the private houses. The design language of the Liujiadu Village project is mostly inspired by the memory of local people. I extracted the important features of the villager's collective memory and used those as the basis for the design of the public buildings so as to make them meaningful for all ages.



Axo drawing of Liujiadu Village new projects

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