

Invisible Logic of Space Forming

Rethinking the Urban Growth in Yueyang, China

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ABSTRACT

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Not only visitors but also local residents of China can be visually aware of the country's spectacular and accelerating urbanization in the last three decades. In the era of globalization, China's urban landscape has been dramatically changed by massive deconstructions of existing building fabric, as well as large scale new construction of imported western architecture, imitational architecture, and replicated real estate buildings, which were mostly driven by the search for economic benefits and recognition. They are composing an image of visible spectacles in many contemporary Chinese cities, and disconnecting modern China from its past, and the collective memory of its citizens.

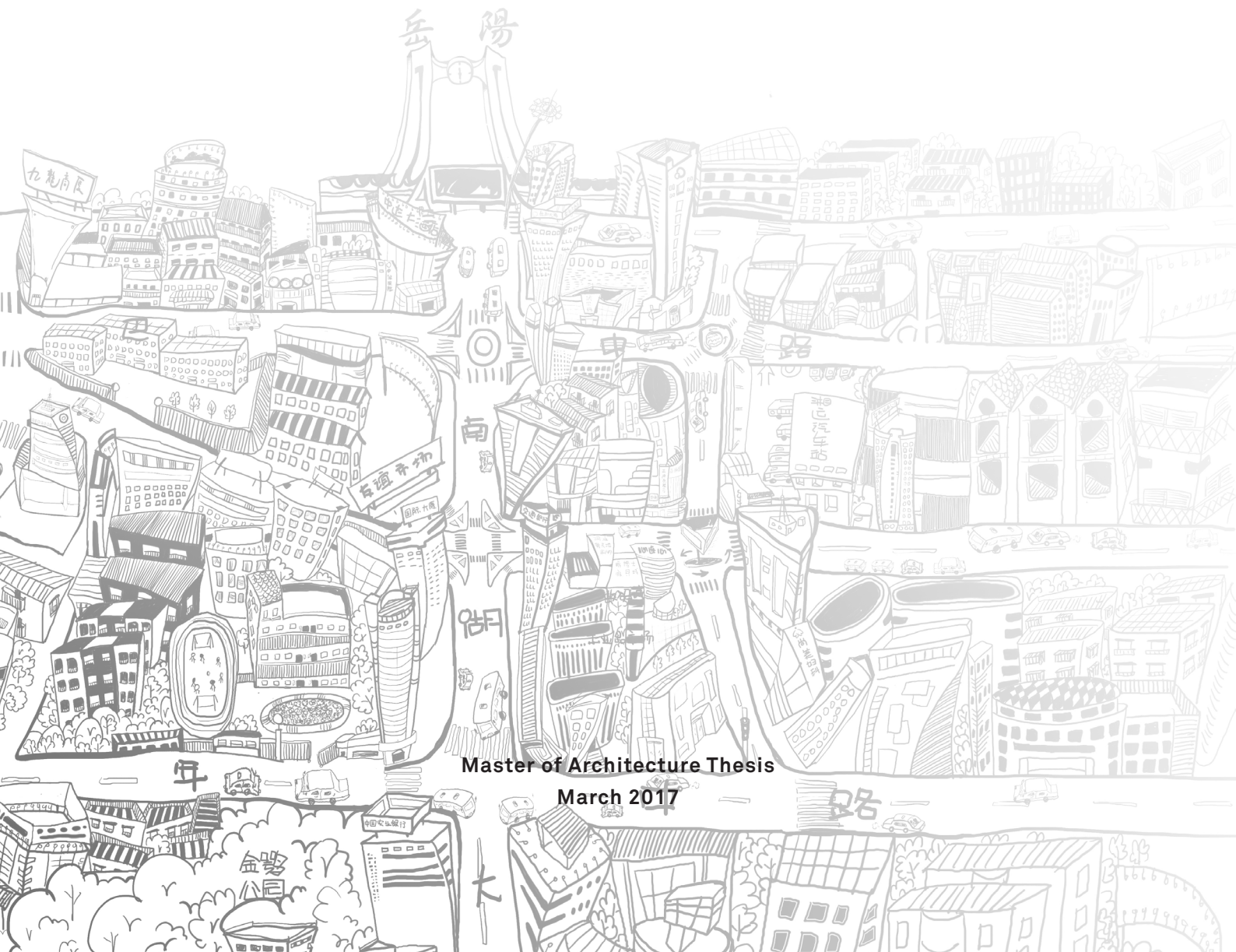
In response to the miracle of urban expansion in China, this thesis studies and re-envisioning the development in Yueyang, located in north corner of the Hunan Province. It provides an overall picture of the process of urbanization in China's small cities. Additionally, this thesis explores public spaces that formed by the logic of urban daily life. By responding and provoking the current city's urban proposal of the Yueyang Pavilion district, this thesis suggests a slower development through a series smaller urban interventions that can enhance the idea of the invisible city. The invisible city is a place of inclusiveness, an open-ended space that permits poetry and dreams, and an engaging life style that contains the city and its people's past, present and expectation of future.



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TABLE OF CONTENTS

| | |
|--|-----|
| Preface | 11 |
| Thesis Statement | 15 |
| Introduction | 17 |
| Visible Cities - The Changing Image of Cities | 21 |
| Icon and Sign | |
| Duplitectural Marvels | |
| Brand New Antiques | |
| Gated Communities | |
| Unborn Cities | |
| Invisible Cities - The Daily Life of Chinese People and Their Space | 43 |
| Living in Communities | |
| Danwei | |
| Urban Daily Life | |
| Hutong and Lilong | |
| Zhang Guying Village | |
| The Exploration of Chinese Architects in China | 77 |
| Wencun Village, Amateur Architecture Studio | |
| West Village - Basis Yard, Jiakun Liu | |
| Shanshui Theory, MAD | |
| Yueyang - The Thesis Site | 99 |
| Location | |
| Climate | |
| Culture | |
| Yueyang Pavilion | |
| Invisible Logic | 115 |
| Recording the City | |
| Pattern Language | |
| Military Supply Factory 3517 | |
| Urban Development of Yueyang | 149 |
| Changing Yueyang | |
| City's Proposal of Yueyang Pavilion Area Urban Planning | |
| Invisible City Interventions | 169 |
| Conclusion | 209 |
| Bibliography | 213 |
| List of Visual Reference | 216 |

PREFACE

I left my hometown, Yueyang, for college in 2007. Since then, I am always amazed by how quickly the look of my city changes when I come back and visit my family every year. A lovely park that I often went to with my childhood friends was replaced by high-rise towers. The time the route 31 bus takes to travel from my home to my high school is no longer 30 minutes, but almost one hour. A food market that I love to visit after school has disappeared, replaced by a group of touristy shops.

Yueyang Pavilion is a significant attraction in Yueyang, and every traveler who comes to Yueyang has been told they must go and see the Yueyang Pavillion. Every recent major development of this city is trying to expand the site near Yueyang Pavilion to attract and accommodate more tourists. Locals who used to live near the Yueyang Pavilion have been

relocated to the periphery of the site or to another part of the city. When I was traveling back to my city this summer, I saw many massive-scale housing projects in town. They are all developed within one year in order to accommodate the urban growth and relocate local residence.

The city that I grew up in, the city that I know is not all about tourism and massive scale of modernized towers. What I cherish about the city is that the back alley of NO. 8 middle school has a small but cozy rice noodle house, the owner and chef is a middle-aged man who always stand in front of his noodle shop and greets passing students with his heavy accent, “Girl, do you want to eat some rice noodle?” “Boy, do you want to eat some rice noodle?” I remember there is a hole on the east side of Jin-e Park’s fence, and kids can squeeze through the opening without paying for an

admission ticket. I also know if you go to the little square near Dongting Lake after dinner-time, you can learn to dance with the ladies who are always exercising there.

The motivation of this thesis began with the feeling of losing the city I remember and the question of what kind of life we want to have in a contemporary city. Besides all the visual changes that stimulate people's eyes and represent the prosperity of a city, what 's the essence of a city and a city space? What's the relationship between me and my city? Can a city preserve its memory while accommodating growth? Can I see the city I remember and find connection with my city after 20 years? I hope to find my answers in the journey of forming this thesis.

THESIS STATEMENT

In response to the dramatic and rapid urbanization process in China, which has resulted in constructing many visible spectacles mainly driven by the economic factors, this thesis explores public spaces that can enhance the idea of the invisible city. The invisible city is an expression of inclusion, active participation, and an open-ended lifestyle that contains people's past, present and expectation of future.



INTRODUCTION

China's rapid economic growth caused an increase in the demand for new buildings and constructions in recent decades, making many Chinese cities more visible in the global stage of architecture, urbanism, and city planning. The dramatic city expansion and development, not only in China but all over the world, results in massive, iconic, and anonymous buildings that belong to nowhere. This lead to the separation of architecture and city. Architecture become symbol and signs that compose people's similar and singular impression of visible cities: Beijing has ancient temples and massive scale of new development, Paris equates the Eiffel Tower with romance; Dubai is rich and consists of numerous skyscrapers; etcetera.

The urban fabric of many Chinese cities is dramatically changed by western imported architecture, imitational architecture, and replicated real estate buildings. The global urbanization trends are creating an urban landscape that is discontinuous with China's past. Moreover, massive new construction and deconstruction are constantly happening everywhere, which is not only generating many urban issue,

Fig 1, Demolition for urbanization, in Shanghai, China.

but also diluting the collective memory of Chinese citizens.

This dramatic urbanization is not just occurring in major cities of China. Yeuyang, for example, a small city in Hunan Province (central south of China), is also on the train of urban expansion, and its urban fabric has been experiencing significant changes in recent years. Playgrounds and open spaces near the waterfront are replaced by high-end residential houses. Old towns are demolished for commercial development. City's roadways become wider and wider, while its traffic gets worse. Thousands of residential towers raise up in newer developed area of the city, while large portions of them remain empty.

A city cannot simply be described by visible symbols, signs, new development, nor mass commerce. More importantly, it is made of its internal structure and landscape: its people, their space, and their life experience, which is the invisible part of a city often hidden by the thick coating of visible parts.

This thesis studies and re-envision the development specifically in old 3517 Factory District, which is located adjacent to a national scenic site: Yueyang Pavilion in Yueyang, Hunan, China. It explores to use daily and city experiences as the main logic of space-forming and seeks an alternative way to evoke memory, accommodate urban growth, and improve daily quality of life. This thesis discusses and imagines public spaces that can enhance the idea of invisible city, which is a place of inclusiveness, a space permits poetry and dreams, and an actively participated life

style that contains the city and its people's past, present and expectation of future.



Fig 2, Roadway expansion near Yueyang Pavilion in Yueyang, Hunan province, China.



Fig 3, New residential towers raised in old district of Yueyang, Hunan province, China.



VISIBLE CITIES

The Changing Image of Cities

“In societies where modern conditions of production prevail, all of life presents itself as an immense accumulation of spectacles. Everything that was directly lived has moved away into a representation.

The spectacle in general, as the concrete inversion of life, is the autonomous movement of the non-living.”¹

¹ Debord, 1967

- Guy Debord, *Society of the Spectacles*

Three decades ago, Dubai was a desert. It sprang up into a global and technologically advanced metropolis seemingly from nothing. In fact, the urban image of many cities around the world are physically changing at a stunning speed, and Dubai is just one spectacular example of how fast cities can become a bustling modern megalopolis nowadays. In order to accommodate economic growth, and seek national and global recognitions, cities are making visible change in their urban fabric to hold the gaze of the viewer. Those visual transformations in urban environments are constructing the image of cities as spectacles, “its most glaring superficial manifestation”² of capitalist-driven phenomena. In visible cities, urban life is increasingly materialized and defined through mass commerce, rapid urbanization, and globalization. It is dominated, and represented by

Fig 4, Shenzhen, which is a small fishing village 30 years ago, has become one of the most urbanized city in China.

² Ibid.

visible signs that creating more desire for more visible representations. This circulation of making a visible image in urbanization progress generates many urban issue such as rising urban dislocation, more traffic, and decreasing quality of urban life. Instead of being active participants of the progress of urban development, people, their lives, and their urban spaces, become passive subjects that contemplate the reified spectacle.³

³ Gyorgy Lukacs, 1923

Icons and Signs

“Travelers return from the city of Zirma with distinct memories: a blind black man shouting in the crowd, lunatic teetering on a skyscraper’s cornice, a girl walking with a puma on a leash. Actually many of the blind men who tap their canes on Zirma’s cobblestones are black; in every skyscraper there is someone going mad; all lunatics spend hours on cornices; there is no puma that some girl does not raise, as a whim. The city is redundant: it repeats itself so that something will stick in the mind.

Fig 5, Result of Google image searching “Beijing”, icons and signs of Beijing.

Fig 6, Result of Google image searching “Shanghai”, icons and signs of Shanghai.

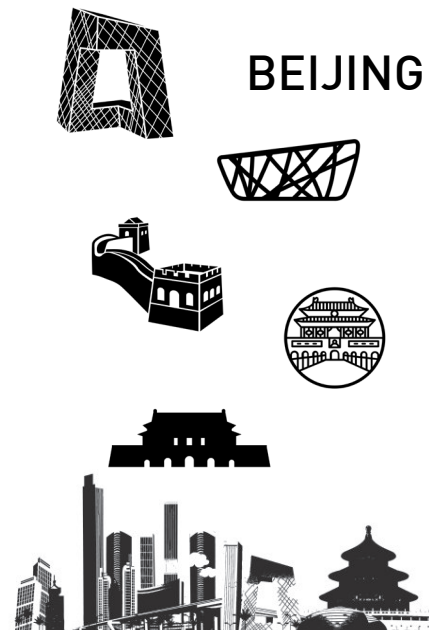
I too am returning from Zirma: my memory includes dirigibles flying in all directions, at window level; streets of shops where tattoos are drawn on sailors’ skin; underground trains crammed with obese women suffering from the humidity. Mt traveling companions, on the other hand, swear they saw only one dirigible hovering among the city’s spires, only one tattoo artist arranging needles and inks and pierced patterns on his bench, only one fat woman fanning herself on a train’s

platform. Memory is redundant: it repeats signs so that the city can begin to exist.”⁴

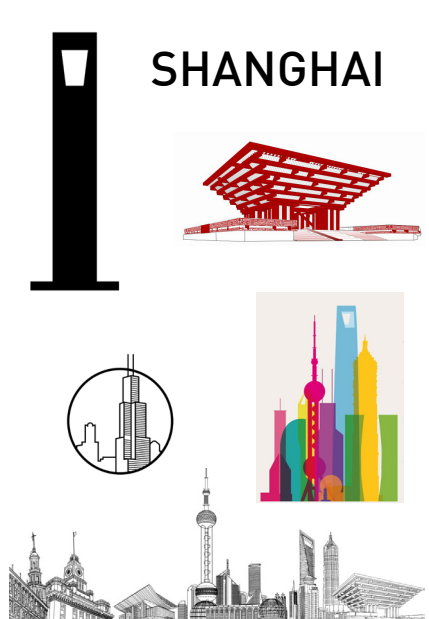
⁴ Italo Calvino, 1972

- Italo Calvino, *Invisible Cities*

It is incredible how quickly the world’s major cities are expanding nowadays. Notably, architecture is an important components of a city, they form and shape the image and



BEIJING



SHANGHAI

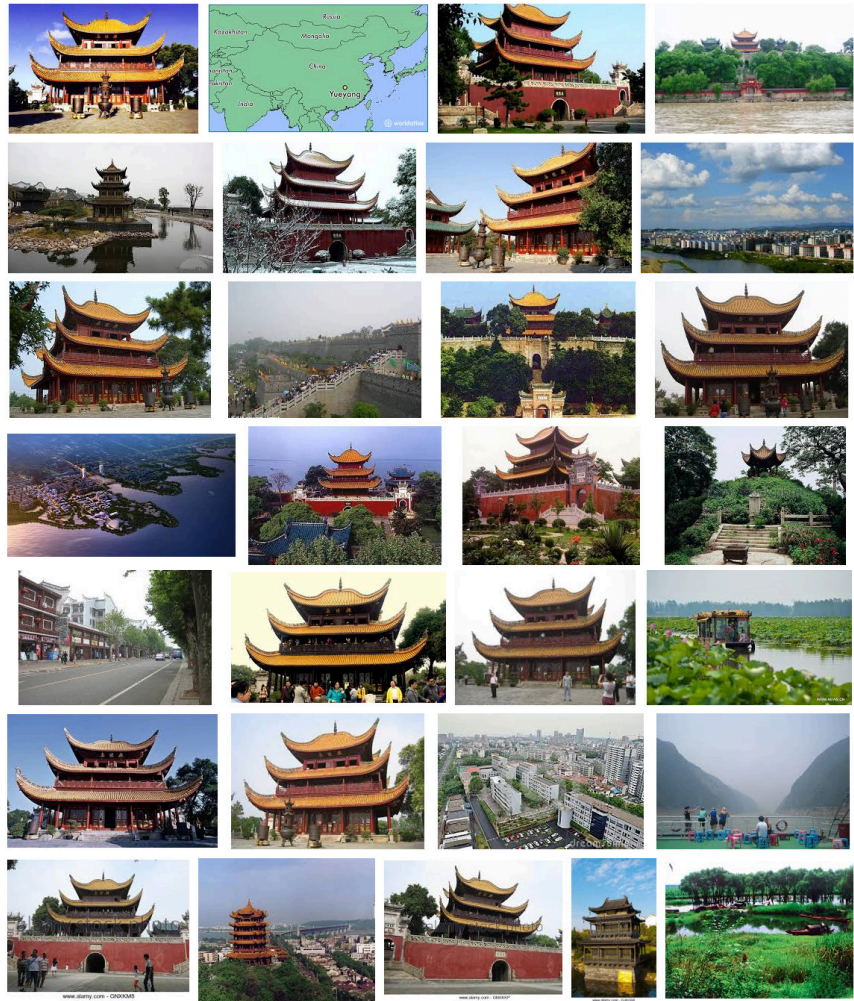


Fig 7, Result of Google image searching "Yueyang", icons and signs of Yueyang.

YUEYANG



identity of a place. However, the dramatic city expansion and development under the influence of globalization today leads to the separation of architecture and city.

In order to establish recognition and attract national and international investment, many cities build iconic buildings and structures to create memorable visual

symbols and signs of the city. Architecture become a tangible symbolic of capital and show city's achievement of urban development. While cities try to use icons and signs to make themselves more distinctive and competitive among other cities, people's impressions of cities are becoming more and more singular. Cities are increasingly shaped and dominated by icons and signs that can be built everywhere and so belong nowhere. Just like the city Calvino depicted in his story, cities try to build distinct signs to let people remember the city, but since so many are trying the same approach, people's impression of different cities are the same. The city and memory become redundant when it repeats itself⁵: Eiffel Tower becomes a must see when people travel to Paris; tall and skyscrapers are words people use when they describe New York City; photos of skyline views from Victoria Harbour are on every travel guide of Hong Kong.

⁵ Italo Calvino, 1972

In the information age, an on-line search of different cities reveals increasingly unified impression of cities. Not surprisingly, the image results of searching "Beijing" and "Shanghai" on Google reveal iconic and massive, newly developed buildings. Even when searching "Yueyang," a small city in China, the image results tell people that Yueyang Pavilion is the most famous structure in this city. At the same time, all those searching results contribute to compose a singular image of a "visible city" to the world.

Duplitectural Marvels

A few hours drive outside of Shanghai will take you to Tianducheng, a small town that wants to be Paris and features a 108 meters high Eiffel Tower replica. In Huizhou, Guangdong province, sits a \$940 million identical copy of entire Hallstatt, a historic Austrian Alpine village. The ancient fishing village of Tianjin was razed to make room for a mini-Manhattan which sets to house replicas of Rockefeller Plaza and Lincoln Center. These examples are but a sampling of China's most popular and startling architectural movement: the construction of monumental themed communities that duplicate towns and cities in the West.

Why does there seem to be an obsession with

Fig 8, Replica of Eiffel Tower, built 2007, Tianducheng

Fig 9, Chateau Laffitte, built 2004, Beijing

Fig 10, Florentia Village, built 2011, Beijing





Fig 11,
Manhattan-style
ghost city in
Tianjin. Much of
the construction
ceased in 2010.

mimicking western architecture and mock-villas in contemporary China? Bianca Bosker, the author of *Original Copies: Architectural Mimicry in Contemporary China*, explains those “copycat” buildings are social-cultural products that offer insight into the complicated aspirations of the rising Chinese middle class and a more consumerist society. A miniature Paris isn’t really an homage to the great French architecture, rather a statement of power and control from the government to show achievement of urban development. The mimicry belies a lack of self-confidence of local cultural identity.



Brand New Antiques

“The streets of a city are like thousands of roots of a tree, the thickest of which is the oldest street of the city. It is deeply rooted in the city’s life and memory. It is the valuable living remains of form and the precious spiritual heritage of a city.”

- Jicai Feng

After thousands of traditional Chinese buildings and old streets were demolished in the fast moving urbanization process, China began to crave a connection with its glorious history in recent decades. A new trend of rebuilding and replicating old Chinese architecture, streets and cities has started in the name of urban cultural construction. Tang Dynasty style palaces, Ming-Qing Dynasty style streets, and Song Dynasty style districts are increasingly springing up in many Chinese cities. “Integrating historical and cultural elements in urban development,” and “highlighting the traditional features and characters of national famous historical and cultural city⁶,” have become cities’ most used slogans no matter in new city planning or urban revitalization projects. Besides the reasons of seeking recognitions, reestablishing self-identity, and recreating memories from the past, the real driver of the booming replication of old towns and streets is the economic benefits that can be brought to the city from the increasing tourist population.

In order to attract more tourism and accelerate economic development, Yueyang built a 300 meters long Song Dynasty style street replica, called Bianhe Street,

⁶ National Historical and Cultural City is a designation recognized by the State Council of China. Yueyang was designated as one of them in 1994.

adjacent to the city's historical symbol Yueyang Pavilion in 2007. It accommodates nearly a hundred touristy restaurants, bars, and souvenir shops. Ironically, many real Ming-Qing period buildings and similar style residential were demolished to make room for the new "old street." In the meantime, the original fabric of the old street was destroyed, and thousands of local residents had to be relocated.

"Fake antique is prettier and cheaper than real antique, fake antique style building is the same," Song Zhang from the urban planning department of Tongji University criticizes the phenomenon of replicating antique style buildings all over China now. He says, "developers believe, rather than spending tons of money in preserving cultural relics and ancient architecture they could not use as they wish neither bring great financial interest, it is much more economical efficient to demolish those imperfect, without significant long history, somehow degraded old buildings, and rebuild fake old street, old towns that can accommodate all kinds of commercial needs." Large amounts of pseudo-ancient style buildings doesn't have the same quality and detail as authentic historical buildings due to limited construction lead time and the lost art of traditional building techniques. In northern China, one major characteristic architectural type is Siheyuan, typically a courtyard residence with house on all four sides. No one single Siheyuan was the same in old times, each courtyard house has its own peculiarity created by different construction intentions, family customs, cultural traditions, and many



Fig 12, Ancient-style replica, Bianhe Street, near Yueyang Pavilion.



Fig 13, Datong, in Shanxi province, had an ambitious plan to raze the old city and replace it with a new “ancient” Tang-style city to draw tourist groups to its inner city.



Fig 14, An old home in inner Datong is covered with placards announcing the new development.

Fig 15, Gucci store in Taikoo Li Chengdu shopping precinct.

Fig 16, Taikoo Li Chengdu shopping precinct.

Fig 17, Mid-high end commercial village, Taikoo Li, in downtown Chengdu, south China.

layers of historical parametric. However, the newly built Siheyuan replicas all look the same and feel like they come from the same factory line.

History and cultural cannot be built like a stage background. They need to be retained through authentic relics rather than fake replicas. It is not wrong to use cultural and traditional elements to develop the local economic, however, it is a mistaken urban development idea if the ultimate goal of historic and cultural constructing is to make economic benefit.





Gated Communities

China has a long history of building walls for defensive purposes. In contemporary Chinese society, a new form of walled community has developed. It has become the standard development pattern of the newly built residential areas in contemporary China. Although this pattern centralized resources and amenities for people who live inside of the wall, it also produces many problems for the city, such as traffic congestions, a lack of vitality in public streets, and the uneven distribution of infrastructural facilities.

Driving along the Xiang River in Changsha, the capital of Hunan Province, an urban scene that cannot be avoided is the Xiang River Century City, a gated residential community that has one million square meters and accommodate 100,000 people. More than three hundred residential towers are placed closely together, and similar to a concrete forest by the water.

The newly released China's 13th Five-Year Plan⁷ suggests gradually opening the gated residential communities to the public. This blueprint of China's future sprawling cities says gated communities have exacerbated traffic congestion and suggest that many of them have become closed places of privilege. The plan calls for banning new gated communities and recommends opening up existing ones "to promote development of neighborhoods that are open and convenient, appropriately scaled, comprehensive, neighborly and harmonious." However, this

⁷ China's Five-Year Plans are a series of social and economic development initiatives.

plan is drawing fierce opposition from the Chinese urbanites, especially from residents of existing gated communities. One thing that distinguishes China's urban middle classes is that a significant and ever-growing proportion of them live in modern residential compounds. Many residents also expressed worries about noise, safety, and property values, which they believe should be fixed first before tearing down the wall.



Fig 18, A private commercial street sits inside Vanke Garden City, a gated community in Shanghai.

Fig 19, A view to residential community, Xiang River Century City, from waterfront.

Fig 20, A view to the Xiang River Century City, from highway.

Fig 21, Satellite view of the Xiang River Century City, in Changsha, China.





Unborn Cities

“China’s rapid economic development has changed much of the country’s appearance. Childhoods of climbing trees, picking dates and grapes, catching fish, shrimp and tadpoles (or cicadas and crickets), making whistles from willow twigs, and spending all day outside until you were deeply tanned are gone. What have today’s children, growing up with TVs and computers, lost?”⁸

⁸Liu Xinyan , 2012

Over the past 30 years, China has built hundreds of new cities, expanded thousands of urban areas, wiped out millions of ancient villages from the map, and urbanized billions of people in rural villages. There is no society in human history that has created such large amount of urban matter as China has in the last three decades.⁹ This dramatic change of urban landscape reshapes China into an urbanized nation with a plan to move 250 million rural inhabitants into newly constructed towns and cities by 2025 – a move designed to boost domestic demand in China. A peculiar side effect of this fast urbanization is there are large swaths of new construction, new urban areas, and new cities that are entirely unoccupied. Even though the demand for modern housing is great, a significant amount of apartments are vacant with a rough estimate that enough floor area to completely cover Madrid. Why are there so many empty apartments and buildings if there is a high demand for homes in China’s cities?

⁹Thomas Campanella

Fig 22, Ordos Kangbashi, was referred as “China’s largest ghost city.

Fig 23, City-scale of new constructions in China.

Besides the housing need due to population growth,



competing for economic become another driven force of many aimlessly new developments for a lot smaller or inland cities, known as “third or fourth tier” cities (Beijing, Shanghai are first tier cities) in China. Newly minted cities visibly showcase the political accomplishments of local government officials who reason that real estate and urban development is a safe, high-return investment to fuel the economic growth of the city. Many inland cities have found it hard to sell off a glut of housing stock. A lot of China’s unsold housing stock is not in the appropriate location nor the right type for China’s toiling masses who need an inexpensive place to live. Some developments were built on cheap land far away from the center of a city. There is no demand of those homes because the location does not have enough transportation or other facilities to support life there. Furthermore, many high-end real estates homes were built in factory towns. They are exclusively built for rich people, and blue collar worker cannot afford to live there.

Massive demolition and reconstruction rapidly erodes the collective memory of cities. Wang Shu, a Chinese architect and Pritzker Winner said, “Cities today have become far too large, and I’m really worried, because it’s happening too fast and we have already lost so much.” If modern architecture in China loses its communication with citizens and users, it will eventually lose meaning completely.



Fig 24, Unborn Cities: the large, brand-new cities of China, waiting to be populated.



INVISIBLE CITIES

The Daily Life in Traditional and Contemporary Buildings in China

“What is a city, but the people?”

“True, the people are the city.”

- William Shakespeare

It is people who make a city. To create and improve urban environments, we must learn and understand the relationship between people's daily lives and urban space, the social container and stage of everyday life. They are interrelated and interact with each other. Unlike visible cities of spectacles that impose a passive participated lifestyle, invisible cities are places for poetry and dreams, which generate active participation in life. An invisible city is created by people, their culture, values, and daily lives. At the same time, people's living environments are enhanced by the invisible city. The notion of living in communities, social custom of urban daily life formed many of the traditional Chinese living spaces such as Hutong, lilong, and skywell typology housing. Each of those spaces has the quality of invisible city: contributing to the collective memory and permitting inclusive, open-ended lifestyle.

Living in Communities

“The system of the family in China has a long history. Since the houses are rooms for the family

Fig 25, Skywell in Zhang Guying Village, Yueyang, Photo in 2016

members, the rooms for each member must be in the neighborhood so that the members can establish and maintain an intimate relationship and assist each other when necessary. Therefore, if the rooms of a family are closely connected, there must be a courtyard house for the family.”

- Wang Guowei

Family has long been an essential component in Chinese society. It is common for Chinese people to live with or close to their families even when one is fully grown with his or her own children, with an ideal concept of family life that “four generation living under one roof”. While this idealization of



Fig 26, Four Generations Under One Roof

the family dwelling could even consist of housing a thousand family members in traditional Chinese society, modern Chinese families commonly include two to three generations living together. However, the ideal of, if not all, all living generations living together still remains.

It is the ideal of “living in communities” that explains many design of the traditional Chinese dwelling layouts. Courtyard and gardens futures the heart of family social space. Connected cloisters and corridors tie different rooms together. Diversified changes in the use of space and combination of “small and large, clear and unclear, in and out, curving and straight, attracting attention”¹⁰.

¹⁰Yunhe Pan, 2012.
Cultural composition.

Danwei

“The largest-scale Danwei tended to have separated residential compounds adjacent to the compound containing the industrial plants and administrative offices. Indeed, the sheer size of some of these Danwei gave them the appearance of small cities of industrial towns.”

- David Bray

The work unit, named as *Danwei* in Chinese, is a unique form of social organization generated during early socialistic era in China’s urban areas. While the term *Danwei* remains in use today, it is more properly used to refer to a place of employment, such as factories, shops, schools, hospitals, institutes, and government officials, before the economic reforms and opening-up of China. During that period, the

Chinese economy was still heavily controlled by socialist, and *Danwei* are state-owned enterprises. It is the basic spatial and social unit organizing workplace and housing together, and it framed most of parts of urban life in China. Each Chinese citizen was assigned to a work unit with work, social and cultural facilities provided, this means the worker was



bound to his or her work unit for life. It is not only a working place, but also an enclosed, multifunctional, and self-sufficient entity.¹¹

¹¹ Lou Li, 2014

The Danwei system is a social framework that defines who you are and where you belong in China. It is an instrument for identifying social status and retaining



Fig 27, Tu Lou, a type of traditional residential building in Fujian Province, China.

Fig 28, Life in Longchang Apartment, Shanghai.

Fig 29, Life in Longchang Apartment, Shanghai.

Fig 30, Life in Longchang Apartment, Shanghai.





¹²Yuwei Wang, 2013

social mobility.¹² Moreover, its layout and design created a unique spatial order to the urban fabric of China. A typical *Danwei* integrates its workplace, housing area, cultural and communal facilities in a big compound, usually demarcated by walls. Sometimes larger-scale of *Danwei* would be divided into several smaller compounds to distinguish different functions and power groups. The fence around *Danwei* is a result of Chinese traditional city layouts with defensive walls, and it later evolved the gated residential community in contemporary China.

The collectivity of *Danwei* is realized through shared facilities. In early *Danwei* residential housing, restrooms and kitchens are shared by three to five families who live on the same floor; gardens and laundries on ground level are shared by adjacent buildings; other larger facilities such as hospitals, schools, and commercial shops are shared at the *Danwei* level.¹³

¹³ Ibid.



Fig 31, Community Restroom on each floor on 70s' Danwei residential building.



Fig 32, Daily life in 70s' Danwei residential building.

Fig 33, Kids play in the hallway.

Fig 34, Kitchen and extended living space in public hallway.

Urban Daily Life

China is an extremely large country. The customs and traditions of its people reflect this, and vary with physical geography and spiritual ethnicity. However, daily life in many urban places of China share commonalities deeply rooted into Chinese culture and values.

Balconies are necessary parts of Chinese home design. And the most common function of balconies in China is air-drying cloth, sometimes even food. While many western cultures consider hanging wet clothes outside in public to be ugly and ruin the appearance of the neighborhood, Chinese people would think hanging laundry in the balcony is an indicator of a lively community. And they believe UV ray of the sunlight help to kill bacteria and create a natural smell of “sunshine” which a dryer machine can not offer.

Large dining areas are commonly seen in Chinese home layout. Unlike traditional low-density Chinese residential have courtyards serve as the center of social life for families and neighborhoods. In contemporary Chinese residential towers, a large dining room can accommodate multi-generational families enjoying a meal together. Additionally, Chinese people has a tradition of visiting families and friends during holidays. Large dining space can allow people to host a meal at home, which is considering a high standard of hospitality in China.

Market and groceries are often walking distance from residential communities. Although this distance is increasing

farther apart in recent urban development, going to the market and buying fresh food every day is a routine for most Chinese. Therefore, a lot of Chinese residential apartments don't need a large pantry or storage spaces for food like in western homes. Buying fresh, locally produced food and cooking what you bought every day still is an indispensable part of Chinese living.



Fig 35, Drying clothes and comforts on balconies, Wuhan, Hubei province, China.

Fig 36, Daily life of going to market and buying fresh food.

Hutong and Lilong

“During the day old men sell vegetables; children study on desks outside their homes; small time cobblers and fruit vendors go about their business; and beauty parlors and massage parlors welcome customers into old collapsing courtyard homes. In the evening many residents gather in the alleys to eat dinner or play. Even in the middle of winter friends gather to chat in the streets and street vendors make their rounds.”

Local people from Beijing often say that the real history and culture of Beijing is contained in the Hutong and courtyards. Hutong, a type of narrow and winding street commonly seen in northern Chinese cities, especially in Beijing. It is formed by lines of Siheyuan, also known as traditional Chinese courtyard housing. Many neighborhoods were formed by joining Siheyuan that on both sides of a Hutong. Hutongs look similar, yet each has its own characteristics. They are not only the main circulation passageway for people coming in and out from their home, but also the stage of life for ordinary local residences. Hutong often twist and turn without obvious rhyme or reason. In the memory of many local people, Hutong were fun to get lost in and they were the best place to play with their little friends. Many hutongs are too narrow for cars, however, provide a more intimate scale for people to walk through and hang out with neighbors.

Lilong is the most prominent urban housing form in Shanghai. In Shanghainese, “Li” means neighborhoods, and “Long” means lanes. This architectural heritage is traditional Chinese courtyard housing with Western features, mainly in

the interior. Two to three stories narrow apartment complexes are organized in a dense pattern with east-west and north-south lanes. Lilong is the main leisure and entertaining place for many Shanghainese. During summer night, many people will move their mats, benches, and bamboo couches out in the alley to enjoy cool breeze. The life in Lilong are lively and diverse, besides serving as kids' playground, public dinning space, laundry room, leisure place, Lilong also is a marketplace for selling and buying small goods, hand-made arts, and local snacks.

In recent decades, many Hutong and Lilong have been demolished to make way for high-rises residential towers and large scale of commercial buildings during the fast-moving urbanization process in China. Just like the old times in childhood, Hutong and Lilong are becoming memories for many people.



Fig 37, Life in a courtyard of Hutong residence.





Fig 38, Small local business in a Hutong residence.

Fig 39, Street market on a Hutong lane.

Fig 40, Daily life on a Hutong street that has intimate scale.





Fig 41, Two friends play chess on a demolition site that used to be Hutong.





Fig 42, A man seat in front of his home on a Lilong lane.

Fig 43, Clothes hang in a Lilong lane, and compose a music of life.

Fig 44, Daily life in a Lilong street.



Fig 45, Tianzi Fang, a touristic arts and crafts enclave that has developed from a renovated traditional residential Lilong, in Shanghai.

Fig 46, Today's Tianzi Fang

Fig 47, Hongkou old street, located in Shanghai, are surrounded by newly developed high-rises.





Zhang Guying Village

Zhangguying Village is an ancient village located in Zhangguying town, Yueyang County. It is named after the forefather who chose this place to build a village for hundreds and thousands people from nothing. It is now famous for its ancient building complex which was mainly build in the Ming and Qing dynasties.

Zhangguying Village is the best preserved village in South Central China, the whole village is basically a single level building complex. So far, 28 generations of people have lived in the building complex, and there are about 2,800 people are living there right now. In this single level building complex, there are about 1732 rooms and 237 living rooms, which are persevered perfectly at this moment. The complex is built by the mountain, in a valley.

There is a main gate outside of the main living area. A Tai Chi map hang on the gate as a sign to protect the village from disasters and hope prosperous for the people. Two large ponds just outside of the gate are like two eyes of the dragon, so the villagers know they are looked after by the gods. Also, the ponds preserve water can be used in case of fire. After entering the main gate, all the rooms are connected by corridors which are built by bricks. The corridors are usually 10 meters high and about 20 centimeters thick, so if one room has fire, it can hardly spread to the room next door. There are about 60 corridors in the complex, the longest is about 152 meters in length. Because of the walls are high in

Fig 48, Skywell Roof of Zhang Guying Village in Yueyang, China.

Fig 49, A public square in front of Zhang Guying's Main gate.







Fig 50, An aerial view of Zhang Guying Village.

the complex, so in the hot summer days, if people are walking in the complex, they don't get exposed to the sun. Also, in the rainy and snowy days, people are hardly get their shoes wet.

Another extraordinary design in the Zhangguying Village is its sky-wells. Generally speaking, one household has at least one sky-well. Over 206 sky-wells brings enough sunshine and fresh air into the complex. The biggest sky-well is about 22 square meters. There is always a sewer under the sky-well in the corner. The rain can flow from the sewer to the closest river. Behind the sky-well is the reception room which is usually the biggest room. Sky-well brings good ventilation and enough brightness to the reception room. Behind the reception room are storage room to keep firewood, barn and farm implements. The rooms on the sides of the sky-well are always symmetrical. They are the living rooms and kitchens. Under the sky-well space is like courtyard in western houses, people usually sit under the sky-well to relax and enjoy the sunshine.

The whole village lives under one connected roof, however, each household has its own private space. The whole complex is linked by eaves and corridors, however, thick brick wall can block hot temperature and fire.

Fig 51, Family members seat in a skywell space in a rainy day.





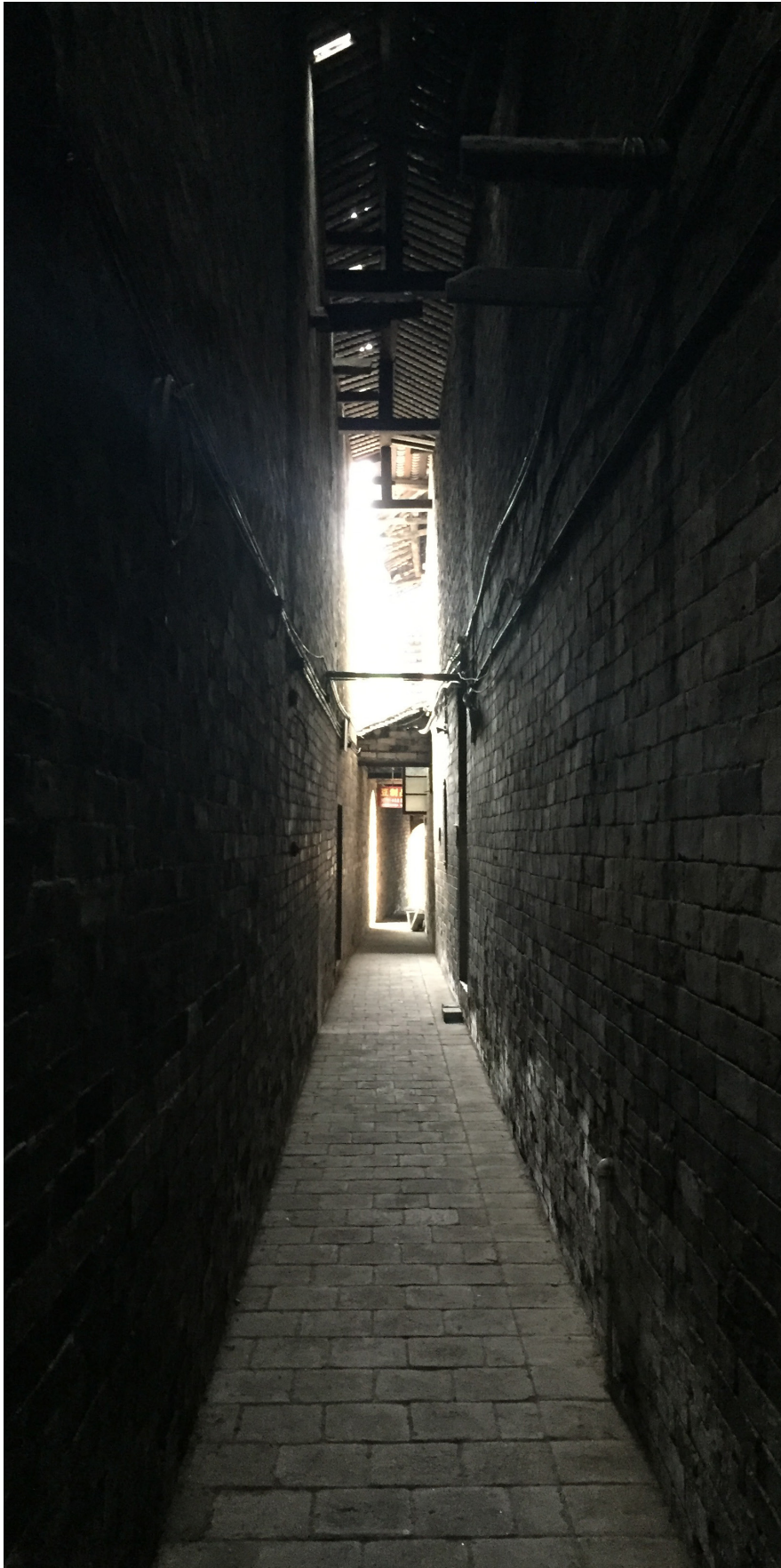


Fig 52, A skywell space in Zhang Guying Village , in Yueyang.

Fig 53, Skywell brings outdoor environment to indoor.

Fig 54, All individual housing units are connected by narrow lanes, and they are under one big roof.





Fig 55, Multiple skywell living spaces can be connected together and hosting community events when doors are open.



Fig 56, Residences use skywell living space to make wines.



Fig 57, An old woman seat in a skywell space.

Fig 58, Skywell allow light filter into and fresh air ventilate through the living space.





Fig 59, A public corridor connects every units and villagers in the Zhang Guying Village.

Fig 60, Kids play in the public corridor.



THE EXPLORATION OF CHINESE ARCHITECTS IN CHINA

China is undergoing one of the most intense and fast-moving processes of urban expansion in the world today, and it makes China has become a global focal point for architecture, urbanism, and city planning. Under the influence of globalization, uncritically imported western architecture and urban design are lacking local translation and appropriation of Chinese context. Massive scale of work done by foreign, celebrity architects are creating an urban landscape that is discontinuous with China's past.

As globalization sweeps through Chinese cities, some Chinese architects start to recognize the importance of finding China's own identities in architectural design. They explore different possibilities of combining modern living environment with China's history and culture.

Wencun Village, by Amateur Architecture Studio

One of the most repulsive consequences of Chinese development policies has been the abandonment of the medium that not so long ago was the country's economic base: the rural world. Designed by Wang Shu and Lu Wenyu's Amateur Architecture Studio, the Wencun Village project proposes an alternative approach to Chinese rural housing

Fig 61, Space under trees, The manmade forest dances with the natural woods in the park. Forest Building, Beijing, China, by Trace Architecture Office.





Fig 62, New and old houses are growing together in Wencun Village, China.

Fig 63, Site Plan of new development in Wencun Village, China.



and construction, and tries to counter this abandonment.

The future skyline of the Chinese country side villages will be rewritten by countless houses with rich local cultural and traditional elements. That is the wishful future for the only Chinese Pritzker Architecture Prize winner Wang Shu. In 2012, Wang Shu won the Pritzker Architecture Prize, people all want to know what is going to be the first project for this famous architect who won the highest award in architecture design field. To everybody's surprise Wang Shu said that he will be spending most of his time on the rural villages design. He said that he is challenging the most difficult areas of Chinese architecture industry: rural housing. Of course, the "most difficult" wording is added by Wang Shu himself. In the rural part of China, various types of rural housing are produced everyday, but Wang Shu spent 3 years on Wencun's 14 houses for 24 households, from planning to constructing.

In 2012, Wang Shu and his wife came to Wencun village, Zhejiang province, for a field trip. He saw people were going to tear down a lot of old houses, and they believe those old houses have degraded and have no use any more. As an architect who is interested in old houses, he stepped up to stop those people. Wang Shu feel it was his responsibility to make those houses useful again.

The reason he chose Wencun Village was because there were about 40 historical building in Wencun Village from Ming Dynasty, Qing Dynasty, and the period of the Republic of China. All the buildings are built along the river, and using the local ash-made stone. Each of the stone has

Fig 64, New houses along river.



different shape, looks random but all of them fit tightly together, which highly impressed Wang Shu.

However, a variety of modern styles houses interspersed among those historical houses, the traditional way of design has not been inherited. And the village has chosen a new site to build new villas for resettling 15 households. Wang Shu is very worried. After Shu Wang studied the initial design, the famous architect said, "I'll help you to make it better."

The design changes made by Wang Shu completely overthrow the original plan of the village, which is building new villas and demolishing old houses. Wang Shu wanted to find the feeling of old and historical village, he said, "Wencun's new village, and the old village cannot be separated. The most ideal form is like the new village is naturally grow out of the new village. The saying of "natural growth" is too deep for the villagers to understand, Shu Wang lead them to look back at the old dwellings. And he patiently explained the beauty of the old buildings, the scientific logic hiding in the design from the ancestors.

Wang Shu's wife was worried his design will not be recognized by villagers, therefore, after they came up with 8 sketches of the design, they consult the villagers household by household. The village are very sensitive to the new design pattern. Even a roof, a wall, may change how people live. Kitchen and restroom space need to be big, there must be an open fire stove, a room for farming tools, a garage, even a basement, Wang Shu tried to make all of them happen. "Once



Fig 65, Each new houses has its own characteristics.

Fig 66, A new bridge in Wencun.

villagers have a different idea, we have to change.” Lu Wenyu said. However, Wang Shu has his persistent ideas: continually use local grey stone, yellow clay and bamboo that was used in local historical buildings. The final outcome of those houses, designed by Wang and Lu, are somehow connected to each other to create a friendly neighborhood environment.

“To live in the countryside with nature has always been an important theme in Chinese culture”, says Wang Shu. Villages in the countryside were long regarded as cultural seeds, a source of intellectuals for the larger cities. Wang Shu was glad that the old village can be retained. The old houses will be reconstructed, or according to the different style of each house for deep transformation. Wang and Lu hope the new houses in Wencun will serve as prototypes for other villages to follow. In Wang Shu’s view, the future of the village could be a concept of “invisible urbanization”, has ecological environment, traditional history, and modern life.

Fig 67, Coutyard space.

Fig 63, Wencun’s new houses.

Fig 64, Public spaces.





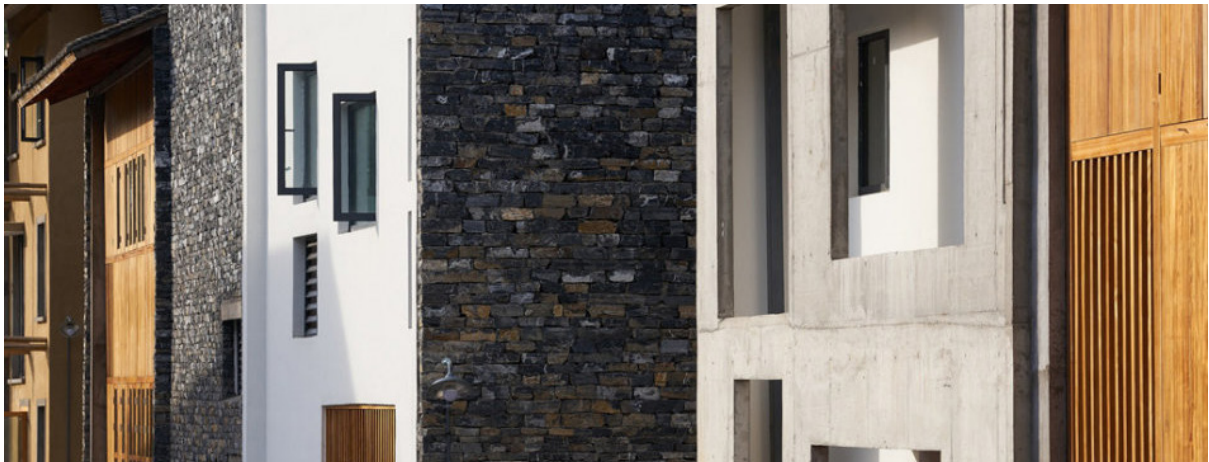


Fig 70, Wencun material palette.

Fig 71, Wencun material palette.

Fig 72, A kid hides behind a column in a porch of new house in Wencun.

Fig 73, Kids play in connected small streets in Wencun.





West Village - Basis Yard, by Jiakun Liu

“Treasuring the value of ordinary lives will be the foundation of our nation’s revival.”

-Jiakun Liu

Fig 74, West Village is located in the heart of Chengdu.

West Village is a mixed-use complex located in the city center of Chengdu, China. It is a multifunctional complex consists of various social resources, cultural and artistic activities, and commercial industries.

Fig 75, Aerial view of West Village’s running track for urban exercises.

The architect, Jiakun Liu’s work, in many ways, celebrates the vitality of everydayness and humanity. Inspired by the prototype of collective living compound that developed during China’s planned economy era (1950s-1980s), West Village encircles and entire block to form a community of collective memories and reproduce conventional lifestyles. A contemporary design approached through an architectural language that draw from the memory of the past. It combines the modern lifestyles, vernacular characteristics, and collective memory in one, which provided a social arena for the diversified lifestyles in modern city.

Fig 76, Open bamboo space in West Village for community events.

Jiakun and his team also paid particular attention to the materiality of this complex building. The design of West Village is dedicated to explore unconventional application of basic construction materials and building techniques. It aims to find a balance among economic conditions, technical standards, and architectural aesthetics.

Fig 77, Larger public spaces for theater use.

Fig 78, Courtyard Facade. Conspicuous stair case connects public and private spaces.







“Shanshui City” Theory, by MAD

“Architects should delineate a new ideal for the city of the future, to gradually construct an urban environment that embodies both the convenience of the modern city and the ancient Eastern affinity for the natural world.”

- Ma Yansong

The concept for a “Shan-Shui City” is a high density urban development inspired by traditional Chinese paintings of mountain ranges that proposed by Ma Yansong, a Chinese architect who founded MAD Architects. “Shan-Shui City combines the urban construction and the natural environment which is mainly composed of the mountains (shan) and the water (shui),” according to Ma’s project description. And he points out that “the tight integration of architecture-landscape-city is the core of the traditional Chinese city design theory and methodology.” Ma’s proposal of “combining the functionality of urban density with the artistic idealization of natural landscape” and the philosophy of “composing a future city that maintains human spirit and emotion at its core” are valuable explorations, however, his projects that reflect the idea of Shan-Shui City, such as the Chaoyang Park Plaza development, are a version of mimicry architecture that depicts natural scenery such as mountains, rivers and waterfalls, a replica of natural landscape.

Ma’s recently completed project is an opera house in a northern Chinese city called Harbin. This project captured



Fig 79, Shan Shui painting, by Luo Mu, Qing Dynasty. In traditional Chinese painting, buildings are often hidden and contained by natural environment.



Fig 80, Visualization of Chaoyang Park Plaza development, by MAD. Buildings become the foreground.

his idea in Shan-Shui City. The design of the Harbin Opera House has continued his philosophy and design theory which is from the traditional Chinese aesthetics to the pursuit of artistic conception, natural and free expression. Harbin Opera House covers land of 1.8 square kilometers, with a total construction area of 79,000 square meters, including a 1600 seats theater and a 400 seats smaller theater. The opera house looks like a snow-capped mountain, because Harbin is famous for its snow. It is located in the north shore of the Songhua River. The design inspiration comes from the surrounding wetlands and northern China frozen natural scenery. The building is like a floating ribbon, growing from the natural standing, as part of the northern white skyline. The white skin of the building is like a cell that breathes, and it makes “photosynthesis” occurs in the northern sunshine. The glass sunroof at the top maximizes natural light into the room. Natural light spilled on the hand-made and local wooden wall.

Fig 81, Aerial view of Harbin Opera House.

Fig 82, Night view of Harbin Opera House.

Unlike a typical landmark building that stands in the middle of the city, Harbin Opera House can be entered from a lot of directions. It emphasizes the interaction and participation of the public. The open theater and observation platform at the top of the building are open to the public and are a vertical extension of the public parks around the building. In the observation platform, people can see the city skyline and the Sanghua River. Even if you do not enter the theater to watch the show, the public can walk from the surrounding parks and public space to the top observation



deck using the ramp on the surface of the building. Harbin Opera House not only is a building of a cultural center, it is also a space that embodies the integration of human, natural landscape, and city identity.

40 years old Ma Yansong is already one of the most famous architects in China. His designs are known for making good use of curves, unrestricted forms, with futuristic style, which often compared with works of Zaha Hadid, who was his mentor and passed away on March 31 2016, only 65 years old. Ma Yansong said that his greatest inspiration came from nature, he is continuing to carry out eye-catching projects not only in China, but also in other countries to expand his understanding towards architecture.

Fig 83, Interior view of Harbin Opera House.

Fig 84, Interior view of Harbin Opera House.







YUEYANG

The Thesis Site

Location

Yueyang is a prefecture-level¹⁴ city at the northeastern corner of Hunan province in south-central China. Yueyang situates on the southern shores of Dongting Lake, which is China's second largest freshwater lake, a flood basin of the Yangtze River, and it is famous in Chinese culture as the place of origin of dragon boat racing.

The location of Yueyang is very convenient, Beijing-Guangzhou Railway, Menghua Railway (under construction), Beijing-Guangzhou high-speed Railway, Beijing-Hong Kong and Macao Expressway, Hangrui Expressway and other national traffic arteries in the urban area. In December 10, 2015 the newly constructed Yueyang Sanhe airport also promotes a more diverse traffic formation of the city.

The administrative area of Yueyang covers 15,087 square kilometers (9,375 square miles), 7.05% of the total area of Hunan province. It consists of four districts (Yueyanglou, Junshan, Yunxi, and Quyuan), two county-level cities (Linxiang, Milou), and four counties (Huarong, Yueyang, Pingjiang, Xiangyin). Its population was 5,629,000 at 2015 Yueyang government census, whom 950,000 lived in the densest built-up metro area, Yueyanglou District.

¹⁴ Administrative Divisions of China:
Provincial level(1st): Autonomous Region, Province, Municipality, Special Administrative Region;
Prefecture level(2nd): Prefecture-level cities, Prefectures, Autonomous Prefecture, Leagues;
County level(3rd): Counties, Districts, County-level Cities, Special District, Forestry District, Autonomous Counties, Banners, Autonomous Banners;
Township level(4th): Towns, Townships, Subdistricts, District Public Offices, Ethnic Townships, Sumu, Ethnic Sumu;
Village level(5th): Village Committees, Neighborhood Committees.

Fig 85, Dong-Ting Lake, Yueyang

Fig 86, Map of Hunan Province, China

Fig 87, Map of China, Showing Travel Distance from Yueyang to Major Cities of China







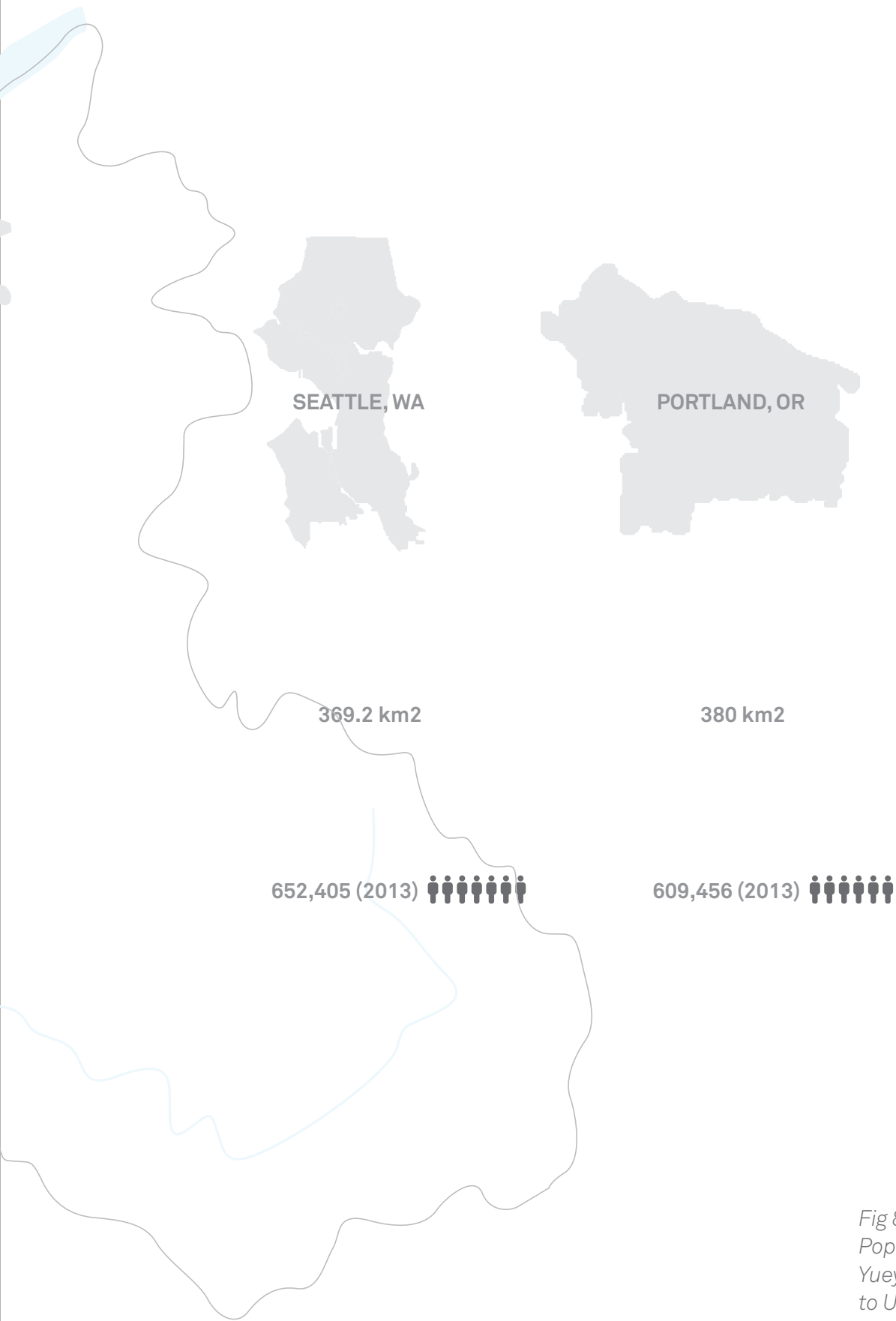
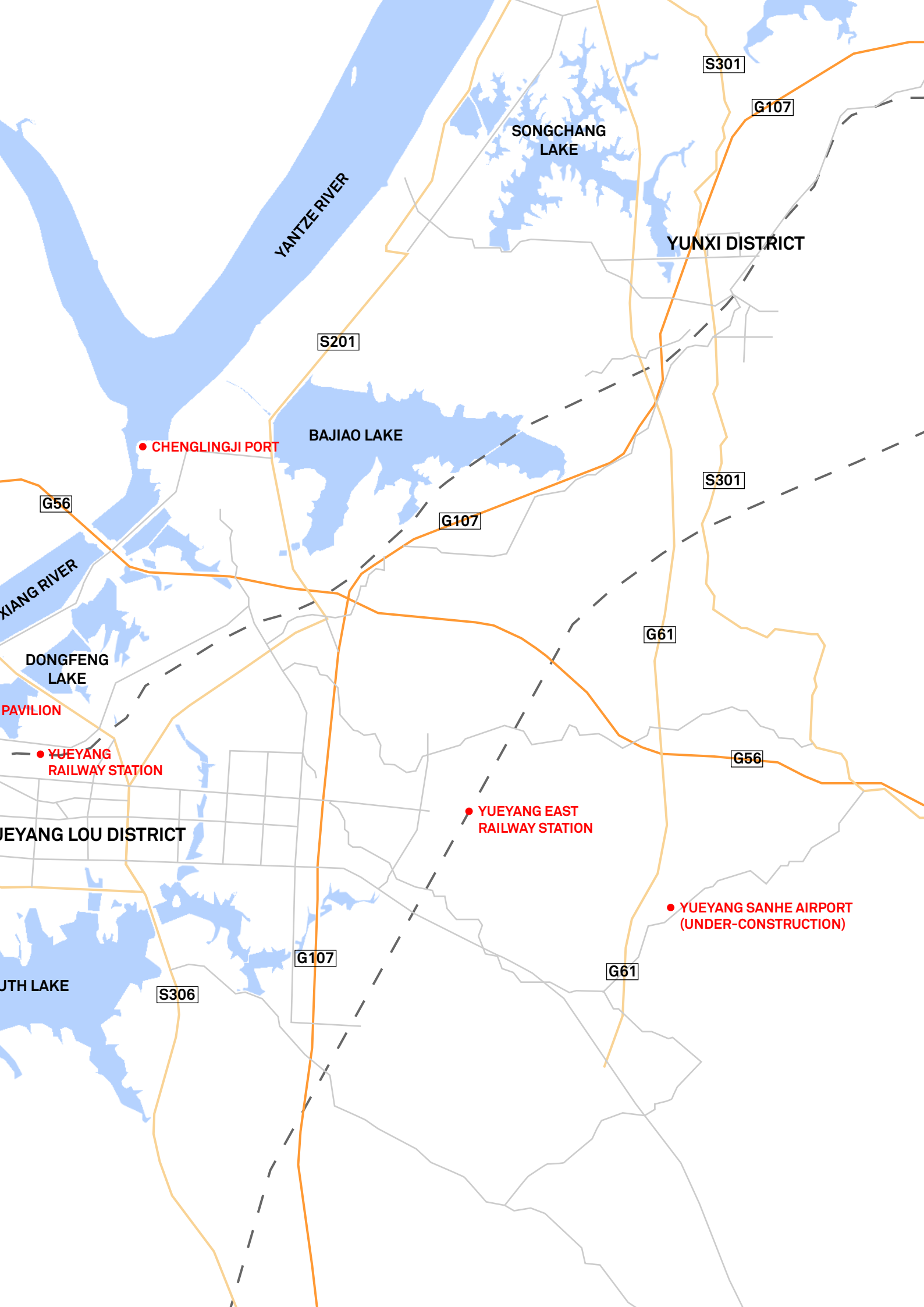


Fig 88, Area and Population of Yueyang Compare to US. Cities Seattle, WA, and Portland, OR



Fig 89, Map of Yueyang City



YANTZE RIVER

SONGCHANG LAKE

YUNXI DISTRICT

BAJIAO LAKE

● CHENGLINGJI PORT

XIANG RIVER

DONGFENG LAKE

PAVILION

● YUEYANG RAILWAY STATION

YUEYANG LOU DISTRICT

● YUEYANG EAST RAILWAY STATION

● YUEYANG SANHE AIRPORT (UNDER-CONSTRUCTION)

SOUTH LAKE

S301

G107

S201

G56

G107

S301

G61

G56

G107

G61

S306

Yueyang has convenient transport facilities. The city is at the confluence of Dongting Lake and the Yantze River. Chenglingji Wharf in the north of the city is the only riverside port open to the outside world in Hunan province. From the Chenglingji Wharf, ships can go upstream to Chongqing, and go downstream to Shanghai. Beijing-Guangzhou Railway, No.107 national highway and Beijing-Zhuhai Expressway go through the city from south to north. With the rapid growth of China's high-speed rail, it only takes about 30 minutes riding of high-speed train from Yueyang to Changsha Huanghua International Airport, and people can travel to Beijing in 6 hours, to Shanghai in 6 hours, and to Guangzhou in 3 hours.

Climate

Yueyang belongs to the subtropical monsoon climate, which has characterized seasons, concentrated rain in spring, very dry summer and autumn, also severe cold period in winter. The climate is complex within the city because of the various landform. There are some climate differences between the hills and the lake. The coldest monthly average temperature is about 4-5°C, the hottest month average temperature is about 28-29°C. The annual average temperature is 16.6-17.2°C. Extreme minimum temperature - 18.1°C (January 30, 1969, Linxiang). City extreme minimum temperature - 11.8°C (January 23, 1956). Extreme maximum temperature of 40.3°C (July 26, 1971, Pingjiang). City maximum temperature of 39.3°C (July 21, 1971). Frost-free period 260-280 days or so,

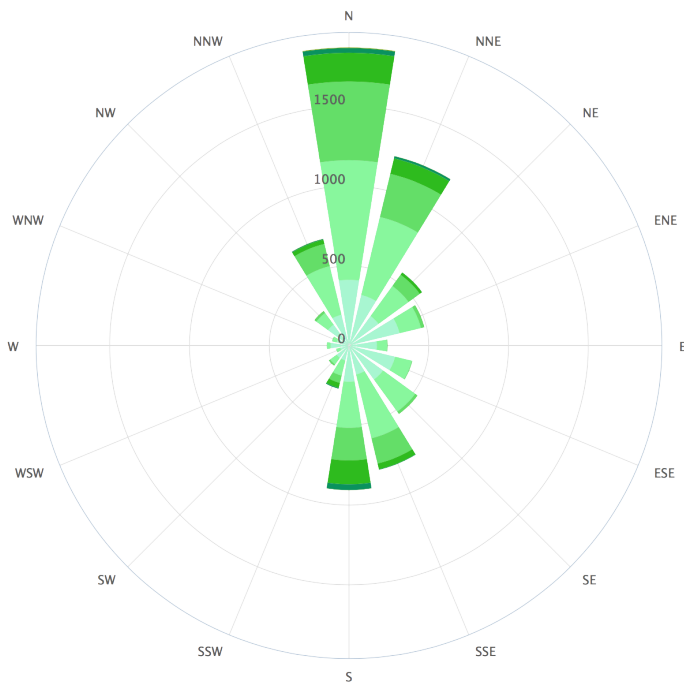
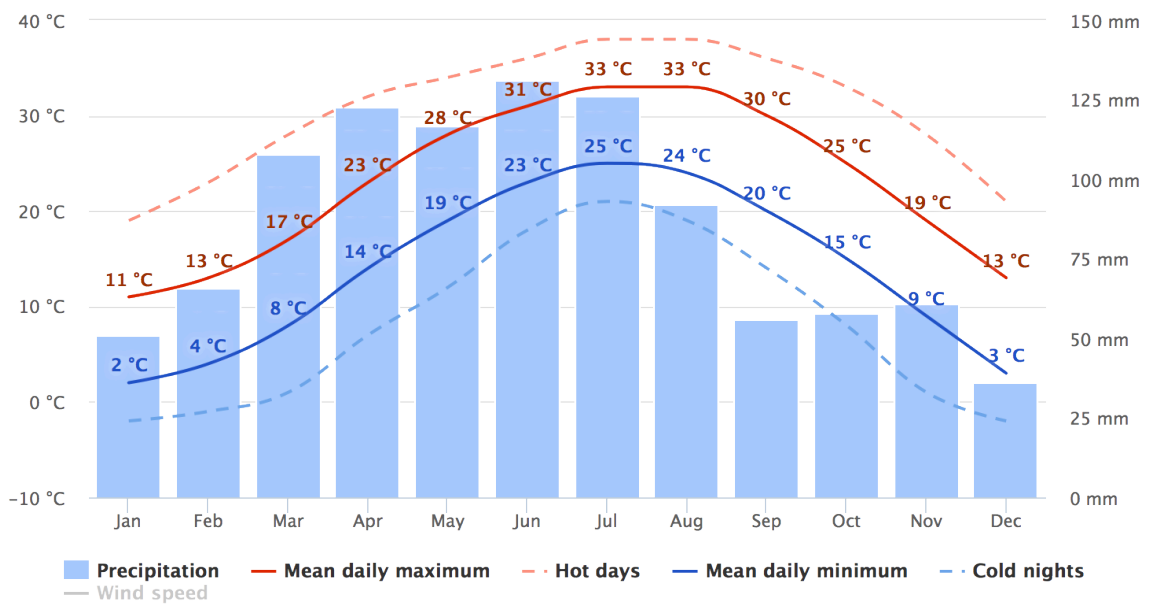


Fig 90, Yueyang Wind Rose



Fig 91, Yueyang Average Temperatures and Precipitation



conducive to a variety of crop growth. Sunshine is abundant, the annual sunshine hours are 1717 ~ 1814 hours. During the year, July and August have most sunshine, which is beneficial to the growth of the main crops. The annual rainfall is 1200 to 1500 mm, the mountain area has more rainfall than the lake, and the southern area has more than the north; spring and summer have more than autumn and winter. From April to June there is a lot of rainfall due to the impact of the summer monsoon, so easy to cause floods. From July to September, due to the impact of Pacific subtropical high zone control, the weather is hot and dry, so drought is a frequent phenomenon.

Culture

Because of the prime location of the Yueyang City, which is close to a key port on the Yangzi River, and by the bank of a major lake, a lot people coming from different places gather here. Different people with different backgrounds contribute to the form of unique culture.

The famous literature “the story of Yueyang Pavilion” attracts poets and literature enthusiast to worship the great literary piece, especially the locals. People in this area has higher education rate than average, so the city has a long historical cultural tradition, which values etiquette as an important part of culture.

Yueyang City is one of the origins of Baling opera. Baling opera is one of the most important and popular local opera form in Hunan province. It started from folk songs

people sang when they doing farm works. People found it was a great way to express their feelings and experiences towards life, so they developed roles, set of plays, different genres, tunes with rhythms and performed them in the stages with simple music instruments like small Suona and percussions.

Different lands nurture different cultures. Special local products, such as Junshan silver needle tea, Dongting silver fish, and Yuezhou fan, are part of Yueyang people's daily life.



Fig 92, Yueyang Baling Opera.

Fig 93, Making Yuezhou Fan.

Yueyang Pavilion

Yueyang Pavilion is located in Yueyang City, Hunan Province, China, high above on the ancient city wall of Yueyang, next to Dongting Lake, north of the Yangtze River. It is one of the four most famous ancient pavilions in China. Yueyang Pavilion is one of the few national 5A level scenic spots in the country. Yueyang Pavilion was built in the 220 B.C, initially it was for the Three Kingdoms period General Lu Su to review the troops. After Tang Dynasty famous poet Li Bai's poetry, it changed the name to "Yueyang Pavilion." At the same time the city of Baling changed to Yueyang City because of the poetry as well. For thousands of years, countless poets and tourists visit the Pavilion to do sightseeing, poet writing. Craft artists use Yueyang Pavilion as the theme to portray Dongting Lake Scene. Yueyang floor is the only one of the three famous Pavilion to maintain the original appearance of the ancient buildings.

Although, what made Yueyang Pavilion become truly national famous was its literary associations "the Story of Yueyang Pavilion" written in year of 1044 by a famous poet Zhongyan Fan. In the spring of the fourth year of the Qingli period (year of 1044), Teng Zijing was relegated to the position of the prefect of Baling. The following year witnessed a great change there in terms of the smooth conduct of government and the harmonious human relations as well as the resumption of a great many neglected undertakings. Thus Yueyang Pavilion was rebuilt on a scale larger than

before and was graced with the inscriptions of the poems and rhythmic prose of the Tang and contemporary celebrities, so Teng Zijing invited his friend Zhongyan Fan to note his contribution. The whole article has only 360 words, however, it described the magnificent scenery of Dongting Lake and extended the scenery to the mean of people's life. The most well-known sentence in the literary is, "To be the first in the country to worry about the affairs of the state and the last in the country to enjoy oneself!"



Fig 94, Yueyang Pavilion.

Fig 95, Literature "the Story of Yueyang Pavilion"



Fig 96, A view of Yueyang Pavilion, Dongting Lake, and Junshan Island.







INVISIBLE LOGIC

The Changing Image of Cities

“The urban daily life itself is not only the content of a city, but also the logic and goal of how urban space can form. The basic necessities of life need to be seen in Chinese urban planning and decision making process.”¹⁵

The image of a city is the synthesis of urban society, culture, economy, and most importantly, the relationship formed among human, space, and urban environment. They include both extroversive physical forms and introversive social forms. The extroversive physical forms are visible structure, and the introversive social forms are invisible structure of a city.

Human perception of the complexity of a city usually start from the physical form and spatial structure in the city, such as architectural appearance, urban spatial shapes, land use organization, transportation system. Those forms and structure can be simple or complicated, loose or dense. They reveal the visible structure of a city’s pattern, function, and order. On the other hand, social culture, value, and custom that concentrated, hidden, permeated in people’s daily life are invisible structure of a city. They formed, developed, and changed through the entire history of the city.

¹⁵Urbanism and Architecture Bi-City Biennale (UABB) in Shenzhen

Fig 97, A view of an informal construction attached to a residential building, in Yueyang, 2016

The Nolli Map of Rome is recognized by scholars as one of the most important historical documents of the city created by Giambattista Nolli in 1748. In this map, Nolli filled black on every building, left streets, squares, and exterior space as white. His utilizing of mass to void relationship of buildings, streets, and public spaces in the Nolli Map is now widely used by the urban planning and architectural design professions in the design process as a way of understanding a city. In 1960, Kevin Lynch, an American urban planner and writer, wrote his influential book *The Image of the City* which explores the human perceptions and the look of cities. In his work, Lynch proposed that the mental map of a city consist of five elements: paths, edges, districts, nodes, and landmarks. And a clear, legible mental map is a great tool to understand how people perceive, inhabit and circular around in urban landscape. Although Nolli Map and Kevin Lynch's theory of city's five elements provided methods of understanding an urban space in terms of the visible spatial relationship, their approaches don't cover the full image of a city which also including the invisible structure of a city.

Fig 98, Nolli Map of Rome, Partial, by Giambattista Nolli, 1748

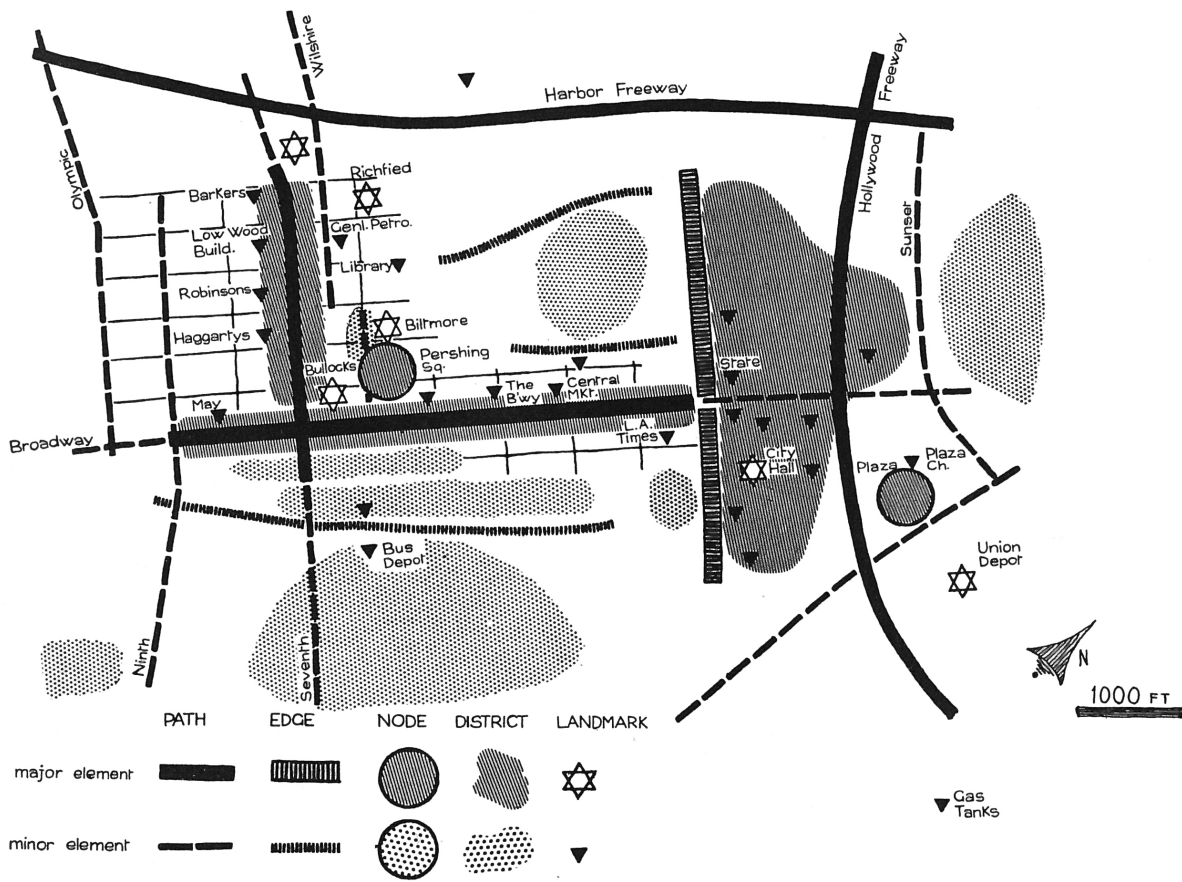
Fig 99, The Visual Form of Los Angeles as seen in the field, by Kevin Lynch

Recording the City

Record

(v.): to show a measurement of (something): to indicate

(n.): a body of recorded facts or observations about something or someone especially with reference to a particular sphere of activity that often forms



a discernible pattern <a good academic record> <a liberal voting record> (2): a collection of related items of information (as in a database) treated as a unit

“.. the greatest thing a human soul ever does in this world is to see something, and tell what it saw in a plain way. Hundreds of people can talk for one who can think, but thousands can think for one who can see.”

- John Ruskin

City is a living record of itself, in both verb and noun forms. It is simultaneously a device for taking measurement and recording the changing image of a city throughout history, as well as a registration of the measurement and presenting itself as a record of time.¹⁶

¹⁶ Recording the City, Mexico Study Abroad Program, Department of Architecture, University of Washington, taught by Robert Hutchison, Cory Mattheis

The rapid change of urban image through build and unbuild ensures the record of Yueyang is re-recorded constantly in recent decades. By exploring, observing, tracing, and knowing the ordinary people, ignored objects, hidden sites, temporal events, and shifting scales on the selected site,¹⁷ the goal of recording the city of Yueyang is to discover the invisible relationship, pattern, and structure of Yueyang. And utilizing those invisible logics to understand the overall image of the city. It can also provide the perspective of daily life in urban planning and architectural design process.

¹⁷ Mapping Studio, Jinan University, China

Informal Change in the City

As time goes on, the function of space and the space itself may require to change based on user's need. Like many other developing cities in China, the government of Yueyang spend most of its energy on new construction and development. However, their work and investment of improving the build environment in older part of the city is lacking behind. People who live in the old district of Yueyang began to make informal



Fig 100, An residential house changed its first floor to a Tailor's shop, an informal expansion attached to its left side.



Fig 101, The inhabitant who live in a residential building sell fresh food on street level.

constructions and changes of their spaces. When the city realized those degraded areas are affecting the overall image of the city, they came back with a demolition plan of those old towns in the name of improving safety and the environment of urban space.

Fig 102, An informal entry built by the house owner to create covered outdoor space.



Fig 103, An informal living unit in front of apartment building.



Personal Space



Fig 104, An old lady seats underneath a tree.



Fig 105, An old man seats in front of a wall of a residential building.



Fig 106, Self built entry space.



Fig 107, Half enclosed entry space.



Fig 108, Two locals seat on an elevated floor around apartment building edge.



Fig 109, An old man seats in between of two utility poles.

Community Space

Fig 110, A father seat on a public table with his kid.



Fig 111, Locals are seat under tree canopies along street and chatting with friends and families.



Fig 112, Locals play Ma-jiang under a self built covered space.



Fig 113, Locals play Ma-jiang under a covered open space.



Fig 114, Local elders' leisure time in a covered street facing small Ma-jiang parlor.



Fig 115, Friends chatting on a street facing coach with covered canopy above.



Air-Drying



Fig 116, Clothes hang on tree branches.



Fig 117, Washing lines hang between trees and utility poles.



Fig 118, Laundries on balconies of residential buildings.



Fig 119, Washed shoes air drying on street ground.



Fig 120, An old lady checks in her air drying food.



Fig 121, Cloths hang between utility poles.

Planting and Farming

Fig 122, Self built fence for growing vegetables.



Fig 123, A land used for gardening allotments.



Fig 124, Locals grow their own food.



Fig 125, Locals grow vegetables on a land near street that not well maintained by the city.



Fig 126, Land behind the market are used for gardening.



Fig 127, Locals live in an attached structure of the market, they growing food and sell in the market.



Small Business



Fig 128, Small business set up their booth in between two trees.



Fig 129, A delivery service built a informal structure attaches to living unit.



Fig 130, Self built covered space for extent commodities display.



Fig 131, Using cloth to cover commodities during closed hours.



Fig 132, A man is selling watermelon in his truck.



Fig 133, Small local business sell shoes and clothes that made in the 3517 factory.

Pattern Language

“Intermediary space is so important because it allows the two opposing elements of a dualism to abide by common rules, to reach a common understanding... The presence of intermediate space makes possible a dynamic, vibrant symbiosis that incorporates opposition.”¹⁸

¹⁸ Kisho Kurokawa,
*From the Age of the
Machine to the Age of
Life*

- Kisho Kurokawa

In design language, gray space is an intermediary space. ‘Grey’ not only describes a kind of color, but also means not this and not that, for example, where both indoor and outdoor, private and public, personal and communal space meet. In old district of Yueyang City, gray spaces are deeply connected with people’s daily life. And the rhythm and pattern of repeating structures can be found in many gray spaces.

Fig 134, Diagram of how vertical elements form spaces.

Fig 135, The foot print of a storage unit informally built based on the location of trees.

Fig 136, Washing lines hang among trees and utility poles.

Fig 137, Vendors set up their booth in between of two trees.

Fig 138, A tree break up the wall built along it.

Vertical

Vertical elements can instantly form spaces. Residences hang their washing line on utility poles; small business vendors set up their selling booth in between of two columns; home owners build their storage unit around trees.

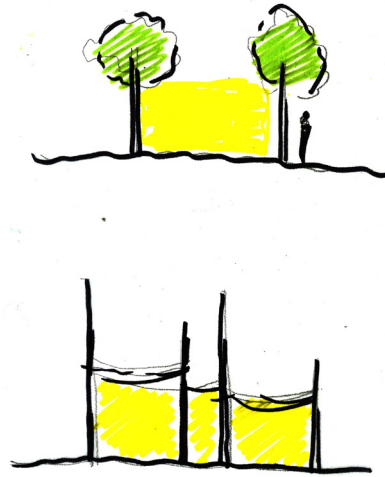
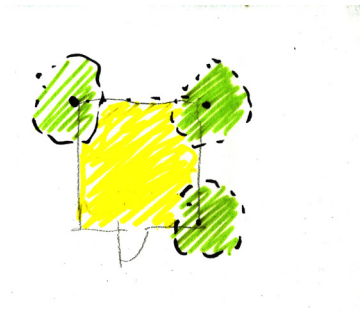


Fig 139, Diagram of how covered elements form spaces.

Fig 140, People playing Ma-Jiang under a covered space

Fig 141, Grocery shop owners extend their product display area to a covered outdoor space.

¹⁹ Kisho Kurokawa, *From the Age of the Machine to the Age of Life*

Fig 142, Tree canopy become the covered elements and create space for people.

Fig 143, A Street vendor created her business under a covered umbrella.

Covered

Covered outdoor spaces allow people to extend their activity from inside to outside, at the same time, provide weather protections for them. Many informal construction includes covered space that attaching to residential buildings. And you can often see people selling stuffs, playing Ma-Jiang, chatting with families and friends under a covered space. “The lack of clear cut boundaries, and the interpenetration of interior and exterior”¹⁹ build a strong connection between buildings and life.



Fig 144, Diagram of how wall elements form spaces.

²⁰ Jay Appleton, 1975

Fig 145, A man seats in front of a wall of a residential building.

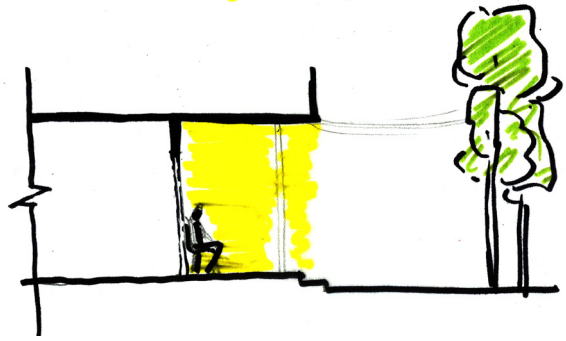
Fig 146, An empty chair in a covered informal structure that against a wall.

Fig 147, An old lady seats near a wall and looks toward the street.

Fig 148, An empty chair near a wall of a residential building which will be demolished soon.

Wall

In his 1975 book *The Experience of Landscape*, Jay Appleton concluded a “Prospect-Refuge Theory” that describes most people have an “inborn desire for environments that allow the capacity to observe without being seen – to assess threats from a place of safety”.²⁰ In the residential area of original 3517 factory compound, people love to seat in front of a wall and look towards the streets. Many empty seats are often left outside near a wall as well. A wall can provide a sense of safe backside for people while allow them to observe the surroundings.



Military Supply Factory 3517

“We are so used to seeing the top down approach in urban planning and thinking. However, city belongs to every resident who live in it. And no matter how the future of a city planning started with a big picture and decided by few elites and, the image of city will present its change through its own logic that beyond the will of a small number of decision makers.”²¹

²¹ Urbanism and Architecture Bi-City Biennale (UABB) in Shenzhen

The current Jihua 3517 Rubber Products Company is a state-owned enterprise, it originally founded as a military supply factory for China's national defense development in 1951 during Korea War which had come at the end of World War II. The 3517 company situated right adjacent to current Yueyang Pavilion Scenic Park. As a typical Chinese Danwei (work unit) which developed during Maoist China, it covers about 247 acres' land includes many different functions, such as processing workshop, heat and power plant, railway station, schools, offices, residential area, and etc.

3517 Rubber Products Factory was the birthplace of first pair of China's Liberation Army rubber shoes. In 1060s to 1970s, people who can own a pair of 3517 rubber shoes is a pride. This old enterprise business which almost has the same age as the new China, witnessed an astonishing industrial and urban transformation in Yueyang. It had more than 6,000 staff in its best time, and almost every staff lives in the company-provide residence.

Under the impact of the market economy, the recession of the old factory started in late 1990s. Although

Fig 149, Aerial view of the old district of 3517 factory.

Fig 150, Works are busy on sewing and making orders in a workshop of 3157 factory.

the company gained independent import and export right in 1997, and sells rubber products to over 40 foreign markets now, the size of the company shrunk down to over 500 stuffs, and the time of not worrying sales has gone. Many people moved to other parts of the city, where has new development. While many old stuffs and elderly still lives in the old residential area of 3517 factory.







Fig 151, A worker is sewing military use shoes.



Fig 152, A worker is making military use shoes.



Fig 153, A worker is folding rain coats.

Fig 154, A worker is exam and repair machines.

Fig 155, Light filtering to the warehouse of storing rubber goods materials.

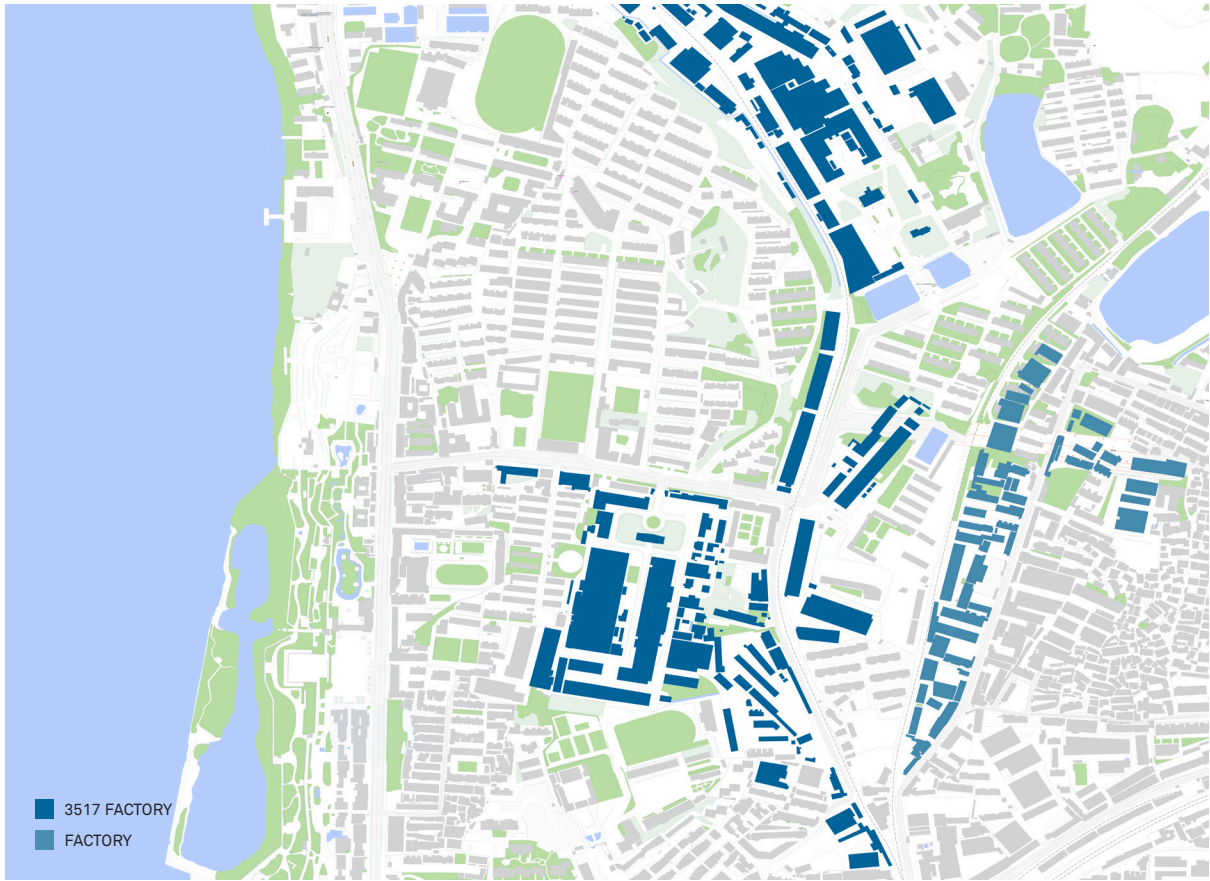


Fig 156, Yueyang Pavilion and 3517 district site map before 2005.

Site Map Before 2005

On east side of the Yueyang Pavilion locates the original 3517 military supply factory. Before 2005, many smaller factories also situated in this area besides the 3517 factory. Two railways go through the site, which provided convenient transportation for them to deliver goods.



*Fig 157, No.6
Workshop Building
of 3517 Factory,
Photo in 2016*



*Fig 158, Inside
Factory Building,
Photo in 2016*



*Fig 159, 3517's
Train Station,
Photo in 2016*

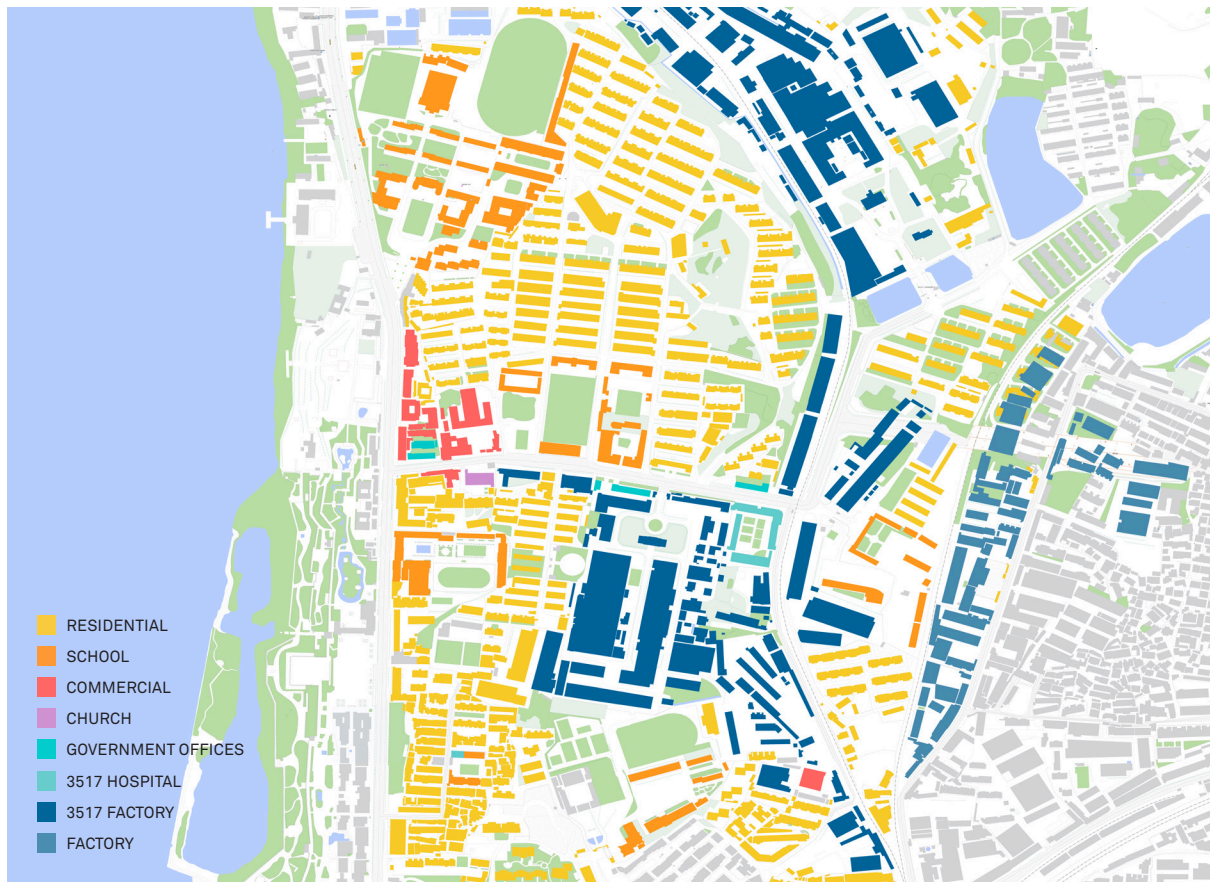


Fig 160, Yueyang Pavilion and 3517 district site map showing high density and diverse functions before 2005

Site Map Before 2005

As a work unit, 3517 factory is a multifunctional and self-sufficient community. Living, social and cultural facilities are provided for its workers and their families. They live and work in a walkable vicinity. Diverse and mixed functions are created on the site to support daily life.



Fig 161, Old movie ticket illustrated the 3517 staff club building that has been demolished.



Fig 162, A typical old office building with each unit door opens to a public corridor on every floor.



Fig 163, A old brick residential building that will soon be demolished in the city's Yueyang Pavilion area development plan. Photo in July, 2016.

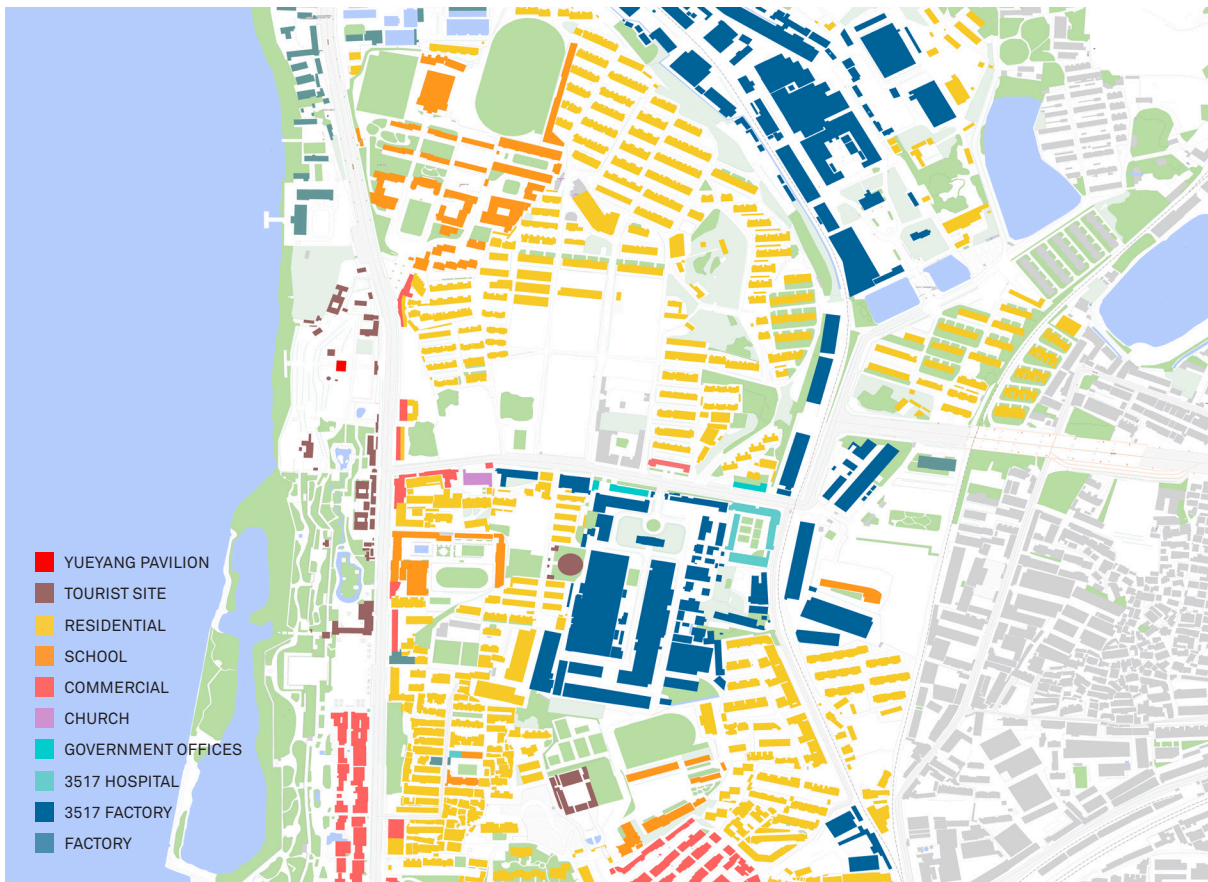


Fig 164, Yueyang Pavilion and 3517 district site map showing functions after 2005.

Site Map After 2005

For the reasons of attracting more tourism and stimulating the economy growth, the city of Yeuyang decided to create a wide boulevard to allow visitors quickly come to the west side of the city, where Yeuyang Pavilion locates, from the east side of the city, where connects train station and national freeways. In order to build this east west axis through the city, hundreds of residential and factory buildings need to be demolished, and thousands of inhabitants have to move and relocate themselves.





Fig 168, A view of the newly built boulevard towards the west where Yueyang Pavilion locates.



Fig 169, A view of the newly built boulevard towards east side of the city.

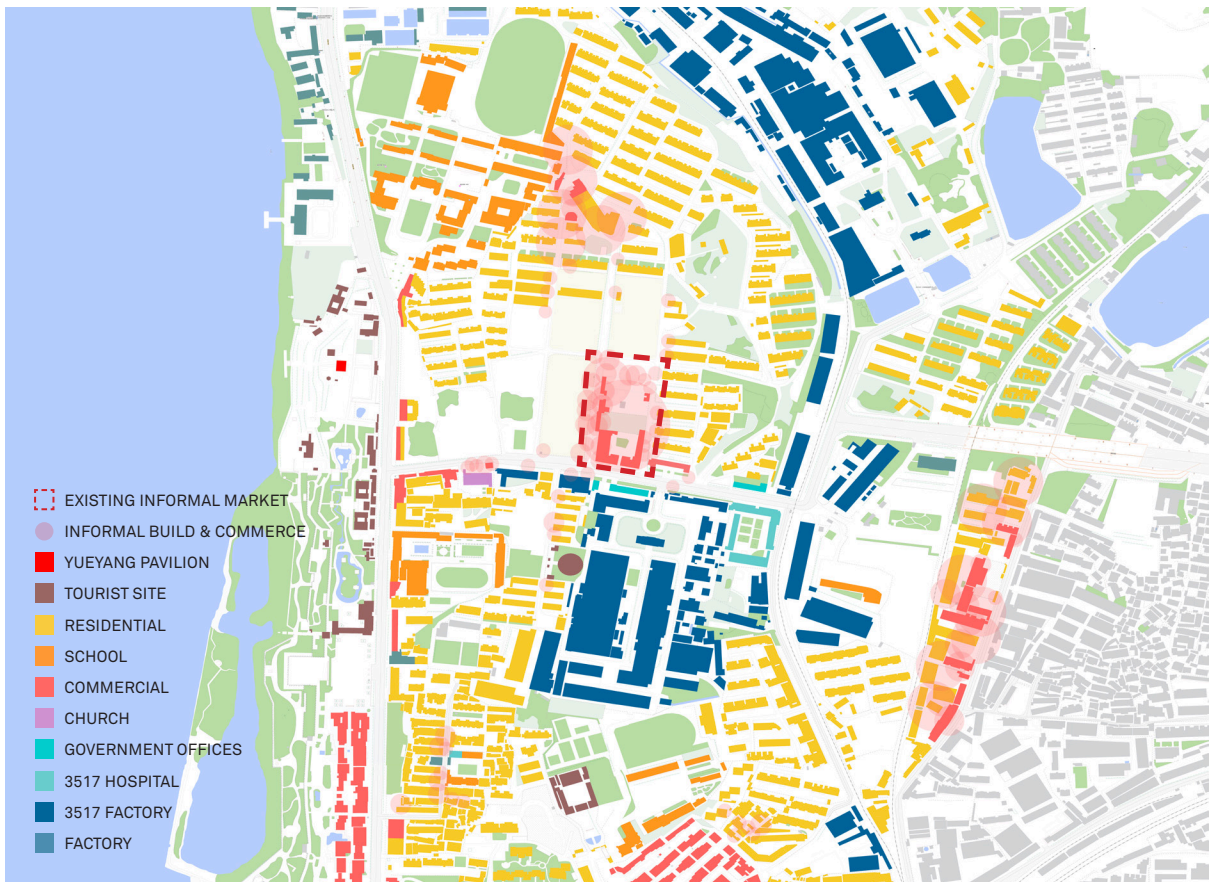


Fig 170, Yueyang Pavilion and 3517 district site map showing existing functions and informal changes after 2005.

Site Map After 2005 / Existing

After many factories relocated or closed off, many of their original works who lived in this area also move to other places around the city. With rapid urbanization in many new areas of the Yueyang City, the old district of 3517 seems been forgot by the city. People who still live around the old residential areas of the old factory started to make informal constructions and changes of their spaces to meet their need in daily life.



Fig 171, Self built informal structures accommodated many local business along the street to food market.



Fig 172, An informal canopy of a local restaurant.



Fig 173, Residence of the 3517 compound walk through the local business street daily to get their necessities.





Fig 174, Open space inside the food market for loading goods and mobile vendors.

Fig 175, Residence buying their daily fresh food in the retails space of the local market.



Fig 176, Different kinds of local business and activities can be found near the market, such as car-washing, barber shops, and cellphone repairing store.



Fig 177, Different size of open spaces connect people to the food market, a sign of "Honest, Fair, Thriving Market" showing on an entry.

Fig 178, A row of local restaurants situated in temporary structures near the food market .



URBAN DEVELOPMENT OF YUEYANG

Changing Yueyang

If paying attention to Yueyang's urban landscape, both residence and visitors will be amazed by the change of Yueyang in recent years. Cable-stayed Dong-ting Lake Bridge setion over the Dong-ting Lake and includes four lanes of traffic. Newly built Yueyang East Railway Station operates high-speed train that takes passengers from Yueyang to Guangzhou in three hours. Chenglingji Port opened the shipping route from Yueyang directly to the ASEAN (Association of Southeast Asian Nations) countries to promote trade internationally. Bajiao Lake, South Lake, and Wangjia River is finishing up the waterfront scenery development. San-he Airport that currently under active construction is aiming to handle 600,000 travelers and 1,800 tons of cargo annually by 2020.

The west side portion of the city, which is the original settlement and oldest district of Yueyang, has more organic urban fabric. On the other hand, the east side of the city that developed through the urban sprawling progress in recent decades has more geometric and grid-looking city fabric. Large scale of government buildings, shopping precinct, conference and exhibition center, stadium, high speed train

Fig 179, Dong-Ting Lake, Yueyang Pavilion, and the city, by Shengbing Yue, in 2008

Fig 180, Satellite Map of Yueyang City



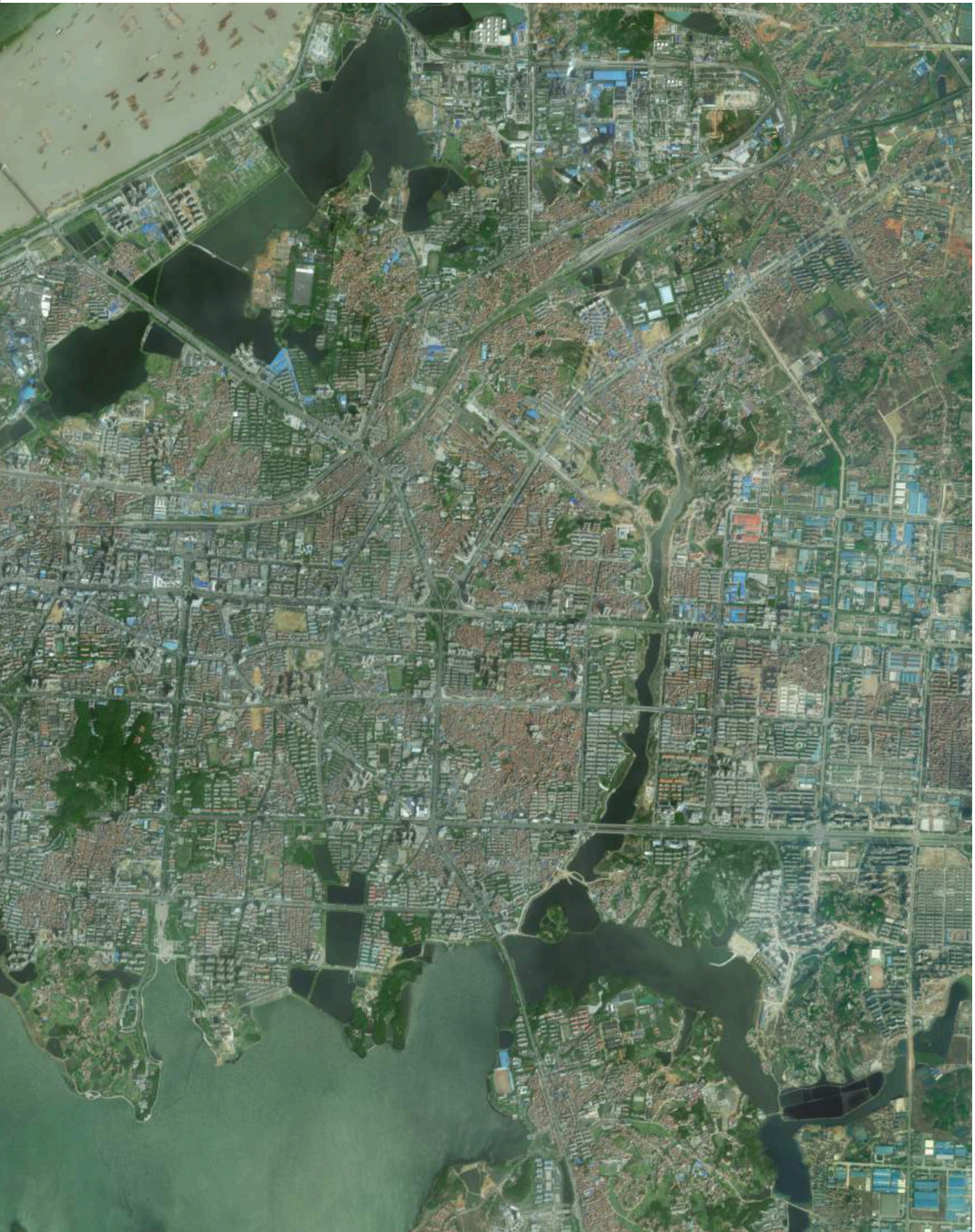






Fig 181, Yueyang Dong-Ting Lake Bridge

Fig 182, Yueyang Chenglingji Port

Fig 183, Yueyang South Lake Square

Fig 184, Dragon Boat Sculpture in front of Yueyang East Railway Station

station, and dense residential towers are placed into the newly developed East area.

With the context of rapid economic development in China, many cities have started massive scale of urban renovation project. Yueyang is one of those cities. “village in city” and degraded old areas of the city become not only a thorn in the government’s side but also an anxiety of improving living quality of local people.

Fig 185, Yueyang Pavilion Scenic Park Scope before 1990s

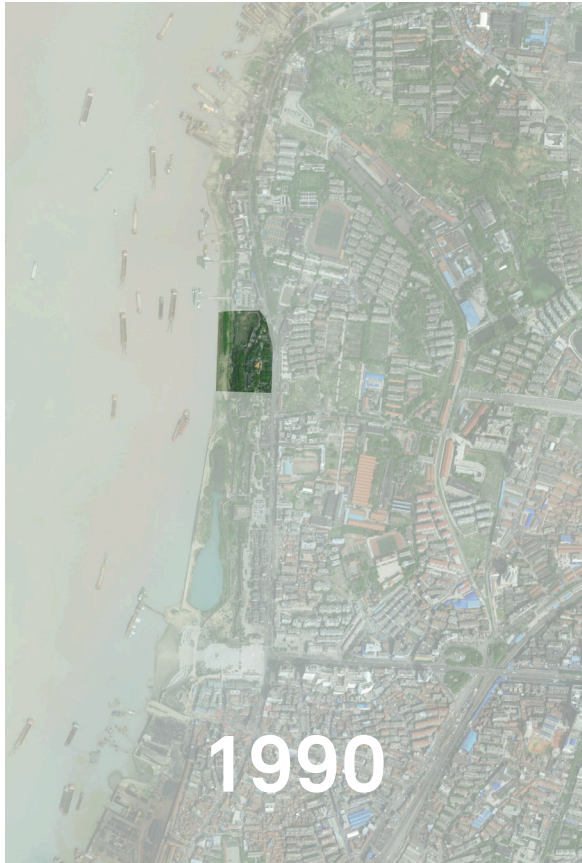
Fig 186, Yueyang Pavilion Scenic Park Scope in 2006

Fig 187, Current Yueyang Pavilion Scenic Park Scope

Fig 188, Proposed Future Scope of Development near Yueyang Pavilion Scenic Park

In September 2015, Yueyang government established the old town renovation leadership team, and later on in early 2016, the government issued the Yueyang City Accelerating Urban Renewal Procedure in Central Town Area Implementation Plan, which designated ten main urban renewal areas. It involves expropriating about 1,700,000 square meters’ (\approx 420 acres) residence, 12,000 household demolition project, and relocating about 60,000 people, which makes it the largest urban renewal development in Yueyang.

One of the main ten urban renewal zones is Jiu-Hua Mountain area, where is adjacent to Yueyang Pavilion Scenic Park and it is one of the oldest area in Yueyang. The government is trying to re-planning this area to be part of the Yueyang Pavilion Scenic Park to accommodate and attract more tourists for accelerating the development of economy in Yueyang. The 3517 Rubber Products Company which is the main occupier of Jiu-Hua urban renewal zone, will be relocated to Hunan Port of Chenglingji New Tech and Industrial District where planned to covers 100



square kilometers (17,000 acres) and has about 69 square kilometers more land to be build.

City's Urban Planning Proposal of Yeuyang Pavilion Area

In 1996's Yueyang city planning, the city decides to gradually expanding the city towards North and East side. The intention behind the orientation of expansion is to getting closer to the National Highway G107 and the G4 Expressway which connects north and south of China. And the City is expecting to promote the tourism industry, business opportunities, and increase economic growth by adjacent to major transportation system.

Fig 189, Satellite Map, East of Yueyang Pavilion Area in 2005

As the most prominent feature in Yueyang, the city always had a plan to make the Yueyang Pavilion more visible to the rest of the world. To allow tourists to visit the Yueyang Pavilion quickly and conveniently, the city plan to build a roadway from east to west that directly take people to the site of Yueyang Pavilion after they get off from airport, high-speed train, and expressway. In the latest Yeuyang 2008-2030 Comprehensive Urban Plan, this idea of creating a major axis to Yueyang Pavilion still been kept.

Fig 190, Satellite Map, East of Yueyang Pavilion Area in 2011

In order to build a roadway directly access towards Yueyang Pavilion, thousands of residential and factory buildings have been demolished, and inhabitants have to be relocated and dispersed to other parts or newer area of the city. The current construction of this boulevard has completed the portion on east of Jiu-Hua Mountain urban renewal zone. An early master planning of this urban renewal



zone shows the city wants to continue the roadway to the edge of a large open public square in front of the Yueyang Pavilion. However, they adopted a new master planning, in June, 2016, which replace the roadway in Jian-Hua Mountain



*Fig 191, Aerial
Render of
Proposed
Yueyang Pavilion
Area Urban
Development,
Early Version*

urban renewal zone with a pedestrian walkway. And the pedestrian path follows the original axis straight towards to the Yueyang Pavilion.







Fig 192, Aerial Render of Yueyang Pavilion Area Urban Development, Proposed in 2016



Fig 193, Aerial Render of The Ancient-Style Commercial Village and Pedestrian Axis in front of Yueyang Pavilion, Proposed in 2016



Fig 194, Perspective View of A Typical Pedestrian Street inside the Ancient-Style Commercial Village, Proposed in 2016

Fig 195, Aerial View of Military Factory Theme Park, Proposed in 2016

Fig 196, Aerial View of New Residential Towers locate on Northeast of the Jiu-Hua Mountain Urban Renewal Zone, Proposed in 2016

Road System

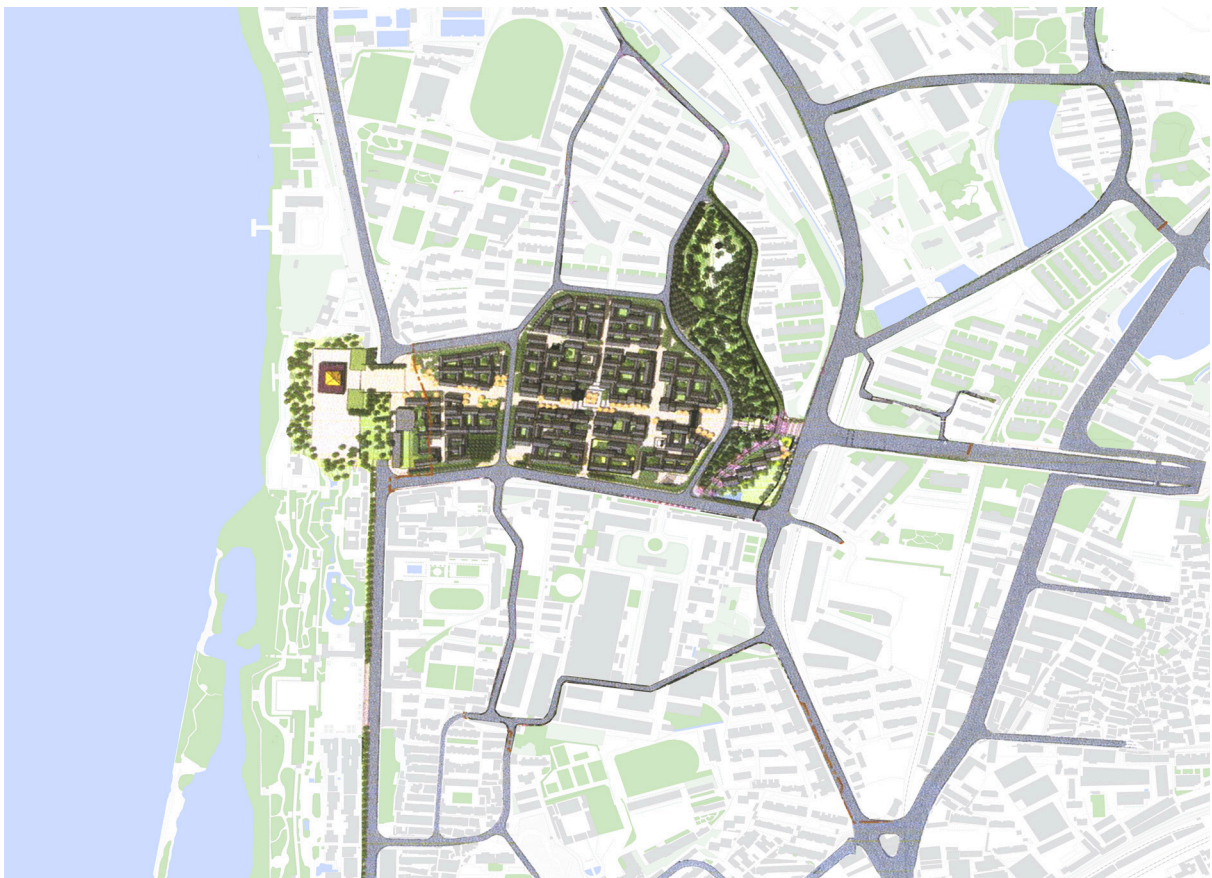
The urban planning in the Jiu-Hua Mountain urban renewal zone includes around 920,000 square meters' land using area. In the latest city's urban planning proposal of Jiu-Hua Mountain urban renewal zone in Yueyang Pavilion Area, the city plan to demolish existing residential and factory buildings to make way of a pedestrian commercial street. New roadway will be constructed, and major arterials will be broaden to connect north and south of the site, as well as to maintain the idea of bring people from east of the city to Yueyang Pavilion locates on the west side of the city quickly by cars. Smaller roads access by vehicles also added on to the site in order to connect different touristy destinations. Although this road system well connects the city in a larger network, it fails to consider and respect the existing context on the site.

Fig 197, City's Proposal of Demolition Area on Existing Vicinity Map of Jiu-Hua Mountain Urban Renewal Zone in Yueyang Pavilion Area

Fig 198, City's Proposal of New Road System in Yueyang Pavilion Area

Zoning

Based on the newly proposed road system, the city divided the site into zones and assigned them in different functions. On the east side of Yueyang Pavilion, existing mixed-use residential area are replaced by singular commercial function. Original inhabitants will be relocated to northeast of the site or dispersed to other parts of the city. Unlike current site that includes diverse and mixed functions, the new zoning proposal emphasis on the big picture of urban planning and simply divide the site into uni-functional zones.



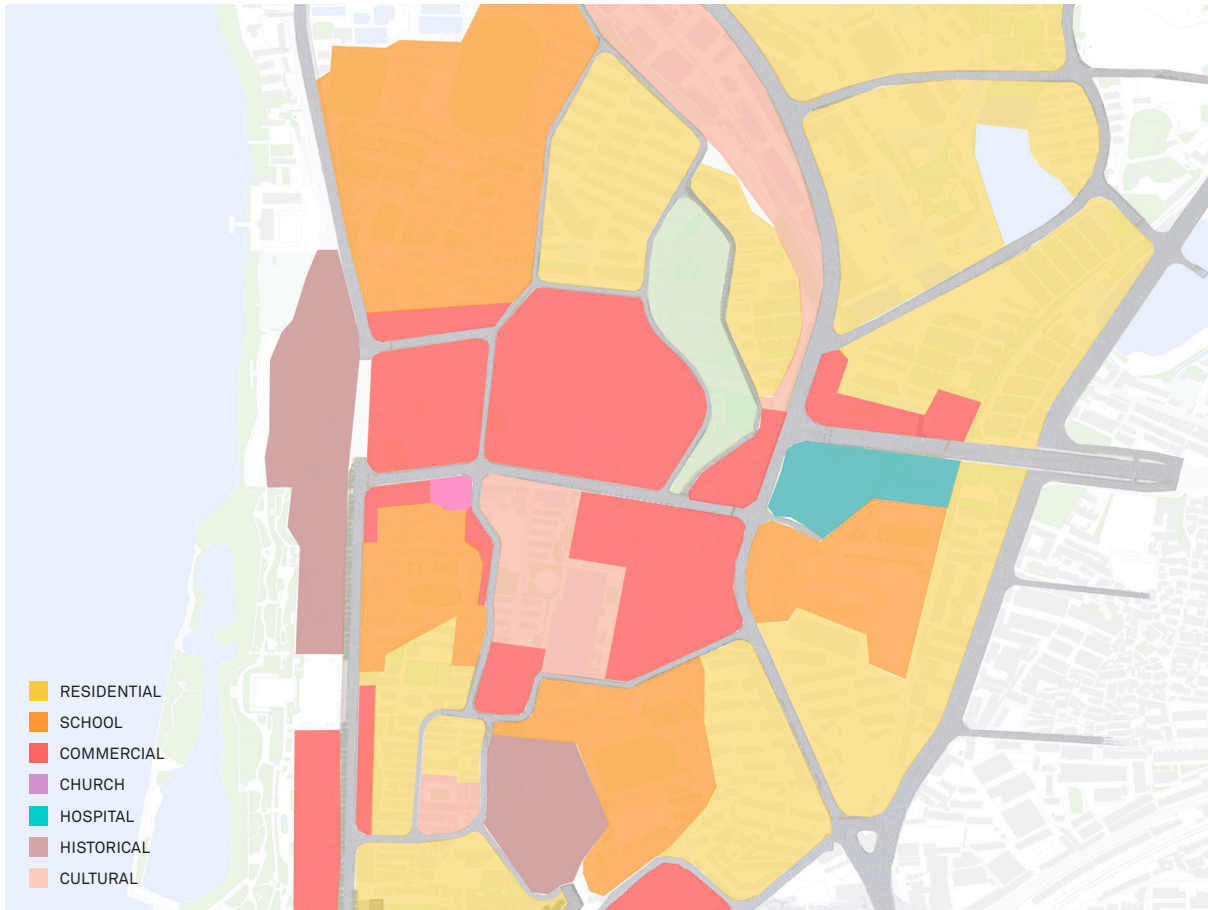
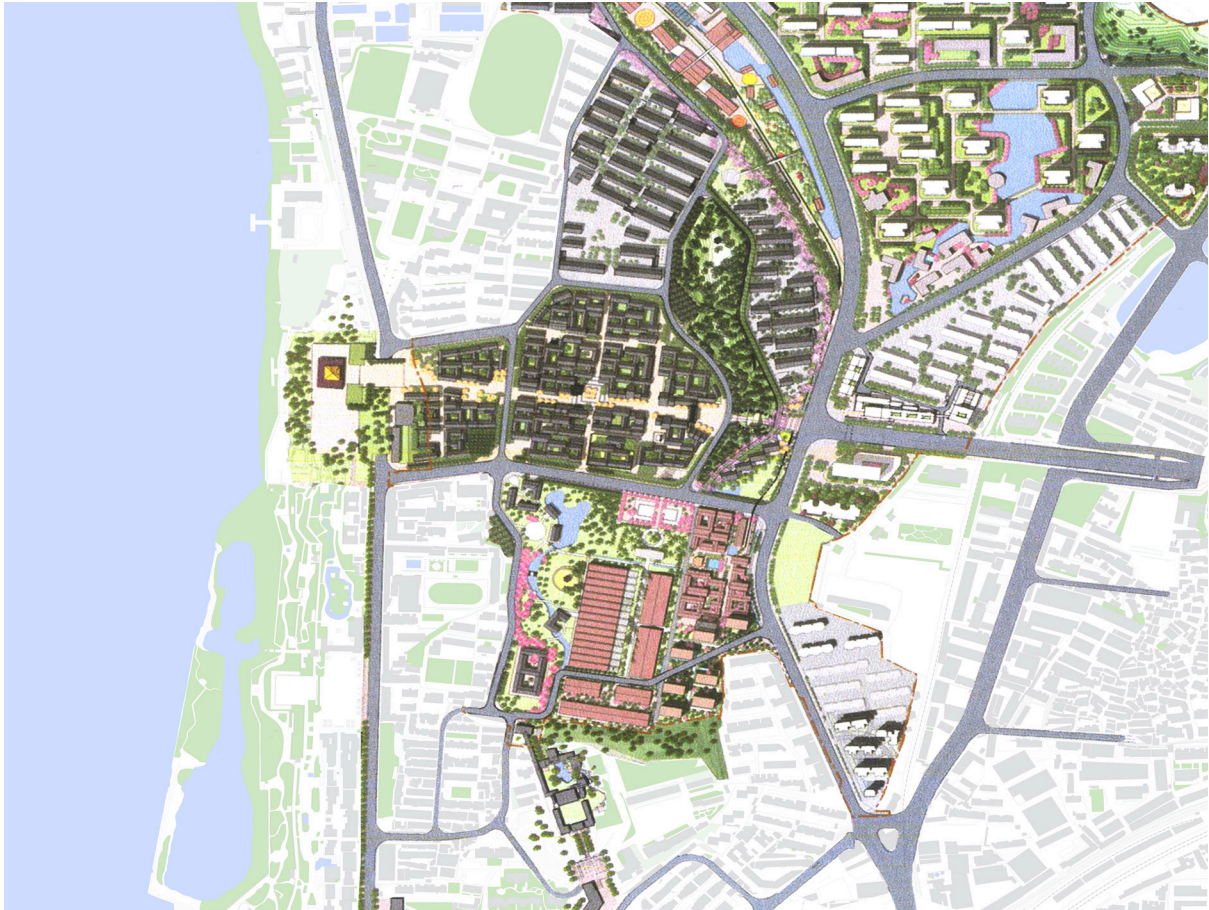


Fig 199, City's Proposal of New Zoning in Jiu-Hua Mountain Urban Renewal Zone of Yueyang Pavilion Area

Programing and Architectural Appearance

In the new urban proposal in Yueyang Pavilion district, an ancient-style commercial village will be located on east side of the Yueyang Pavilion. This commercial village designed to be pedestrian zone, and a major street brings people directly to Yeuyang Pavilion. The master palnning of this area also includes two historical theme entertainment parks that locates on north and south side of the ancient-looking commercial village. The Yueyang Pavilion area has several other historical sites besides Yueyang Pavilion, however, majority of tourism only come to Yeuyang for visiting Yueyang Pavilion, then leave the city and spend their money in



adjacent larger cities, such as Wuhan and Changsha, which have more commercial facilities. Therefore, the goal of this master plan is to attract more tourism and keep them on the site longer by adding new commercial programs that link existing historical sites together.

Fig 200, City's Proposal of New Site Plan in Jiu-Hua Mountain Urban Renewal Zone of Yueyang Pavilion Area





Fig 201, City's Proposal of New Master Planning Plan in Jiu-Hua Mountain Urban Renewal Zone of Yueyang Pavilion Area



Yueyang Pavilion

3517 Factory #6 Workshop

Lu Su Tomb

Dong-Ting Lake

Market

NO. 1 High School

Abandoned Factory Railway

Hills

3517 Residential Area

INVISIBLE CITY INTERVENTIONS

"...Social space is the outcome of past actions, is what permits fresh actions to occur, while suggesting others..."

- Henri Lefebvre

The invisible city is a place of inclusiveness, a space permits poetry and dreams, where allows actively participated lifestyle that contains citizens' past, present, and expectations of future.

In responding to the city's latest urban proposal of radical future development in Yueyang Pavilion Area, the invisible city proposes a slower development with a series smaller interventions that can be developed in a phased manner. Unlike the city's plan of building a middle to high end commercial village that exclusive to wealthy people, the invisible city proposal creates public social spaces for both local residence and tourists. It suggests an incremental change that incorporated with people's daily life. It explores spaces that allow inhabitant's creation and participation. It provides a window to truly know the city and the daily life in the city.

Fig 202, Yueyang Pavilion Area Existing Site Map

City's Proposal Demolition Plan

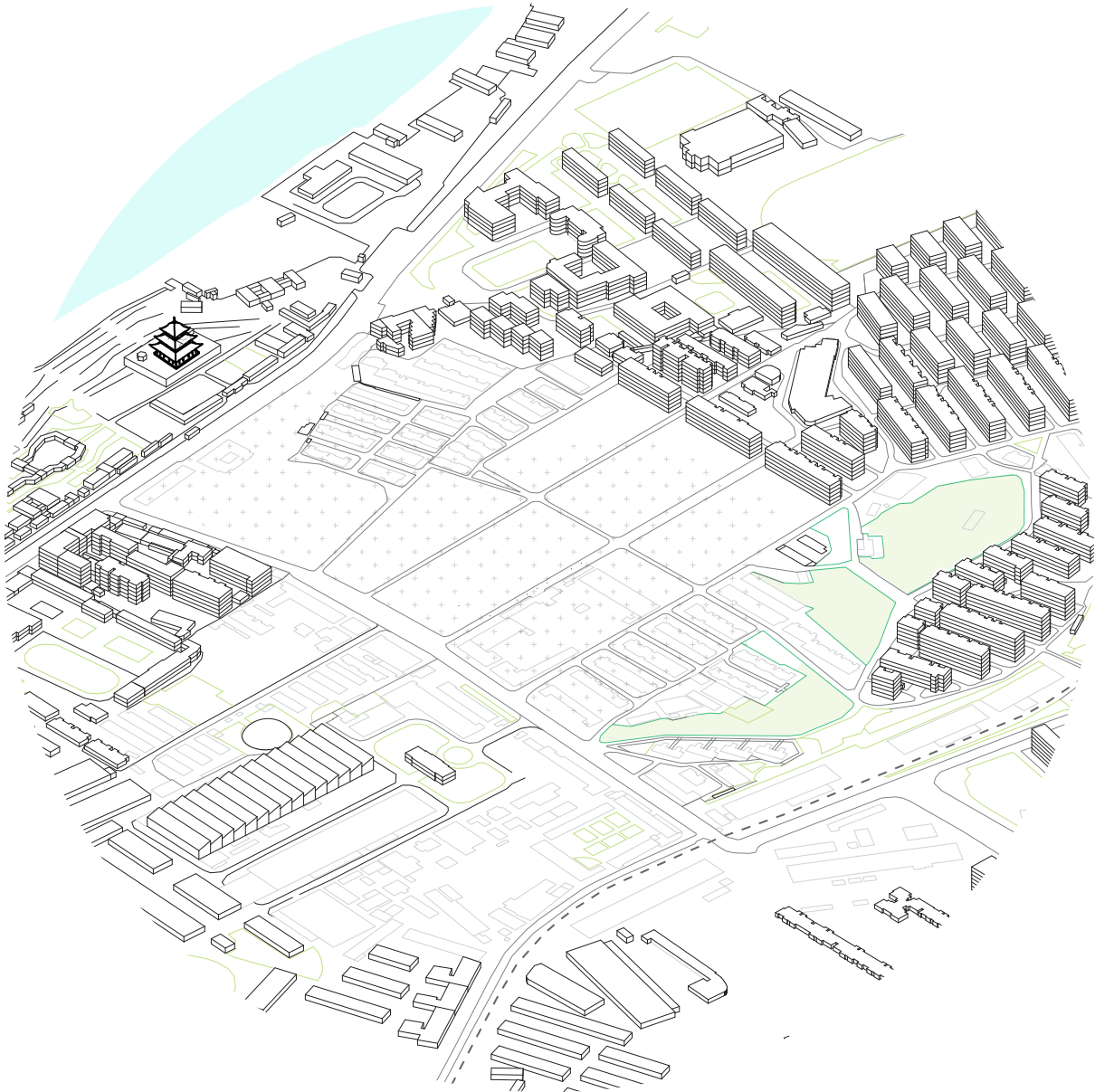
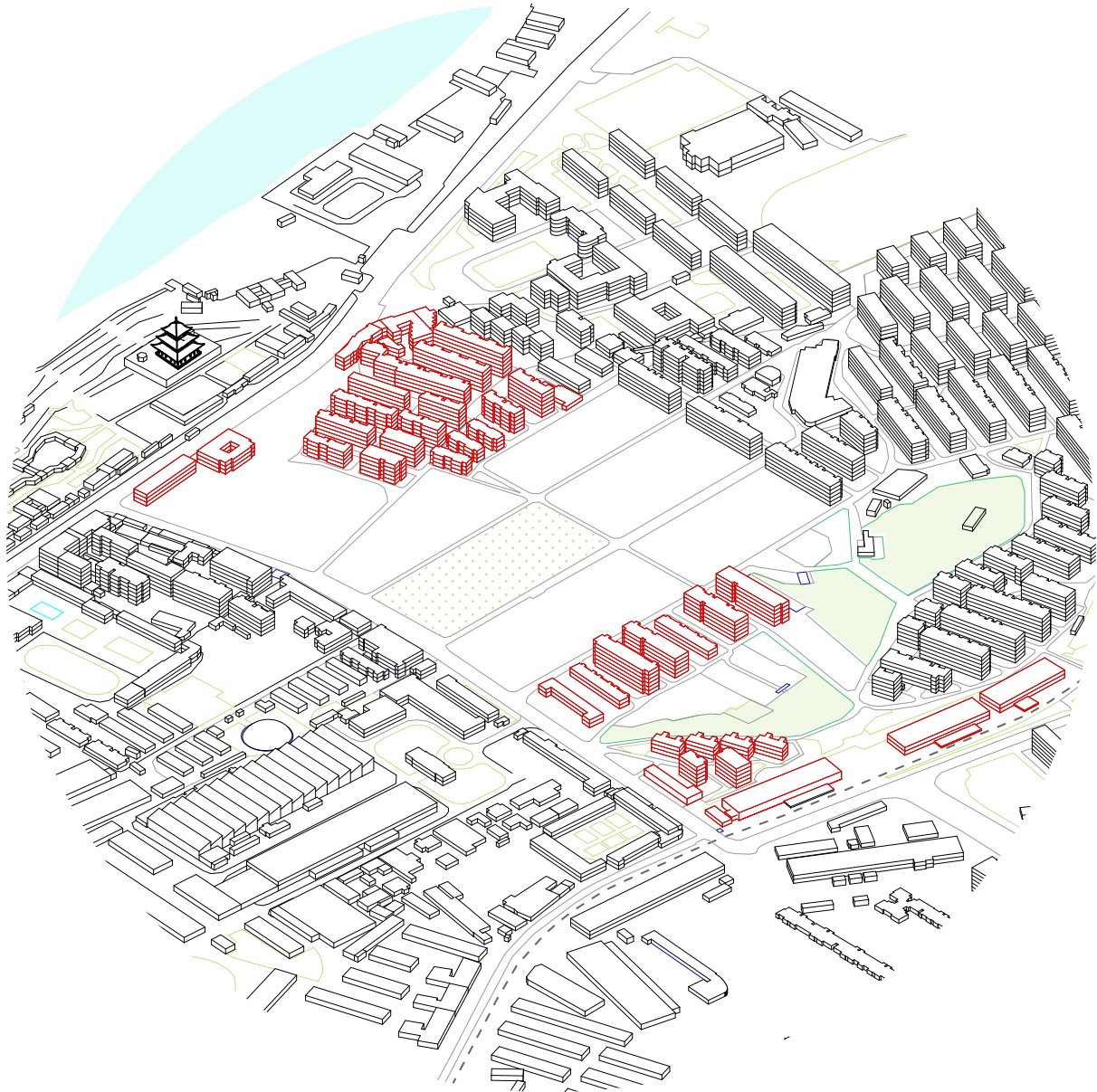


Fig 203, City's proposal of demolition plan in Yueyang Pavilion district.

City's demolition plan is to clear out large area of existing fabric, mainly residential buildings, on east side of the Yueyang Pavilion. Only a few historically significant buildings remains on the site.

Invisible City

Preserving the Memory of Urban Fabric



The invisible city propose to only demolish dilapidated buildings, and keep more existing structures on the site to preserving the memory of city's fabric.

Fig 204, Invisible City's proposal of keeping existing fabric.

City's Proposal Road System

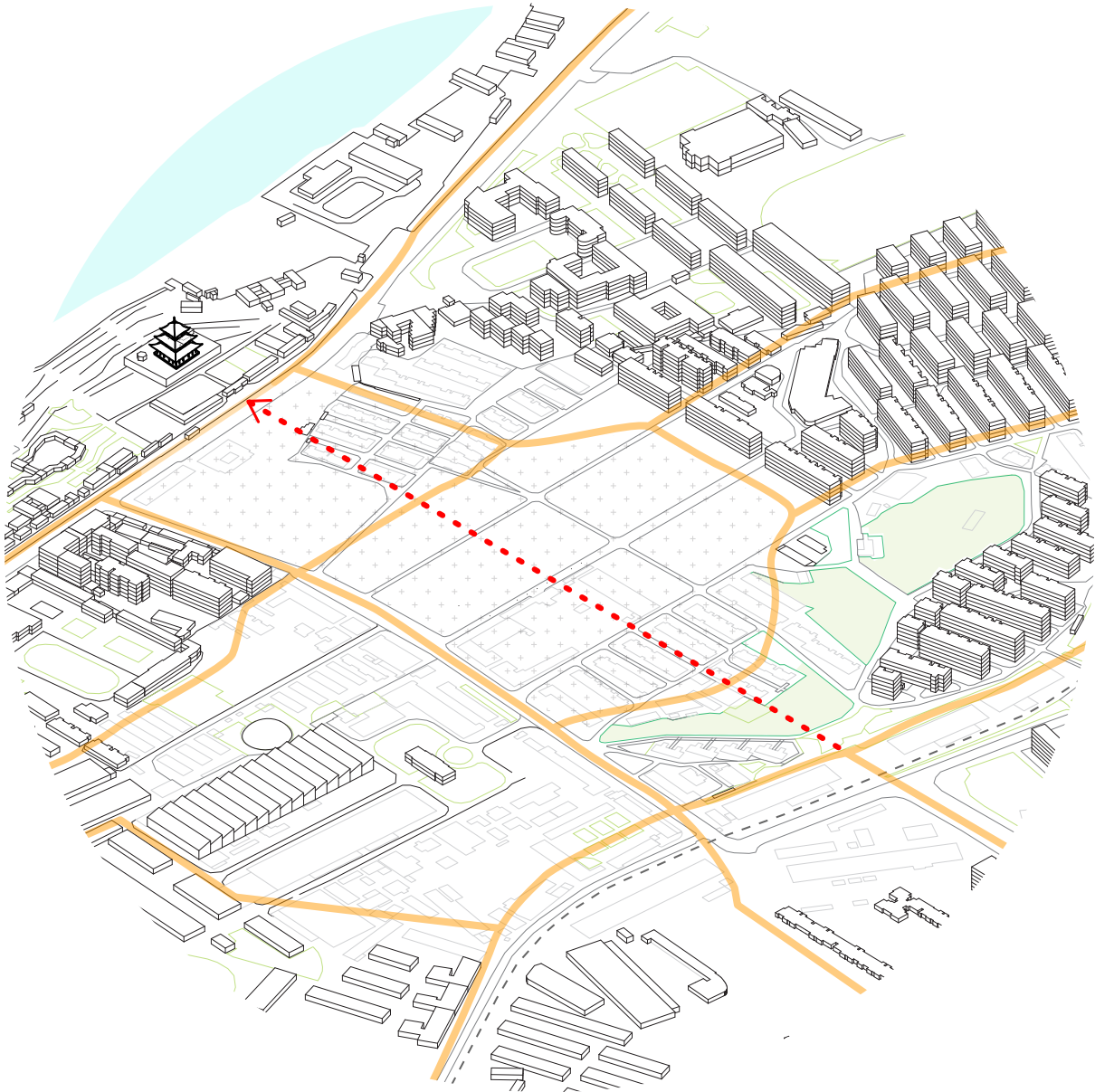
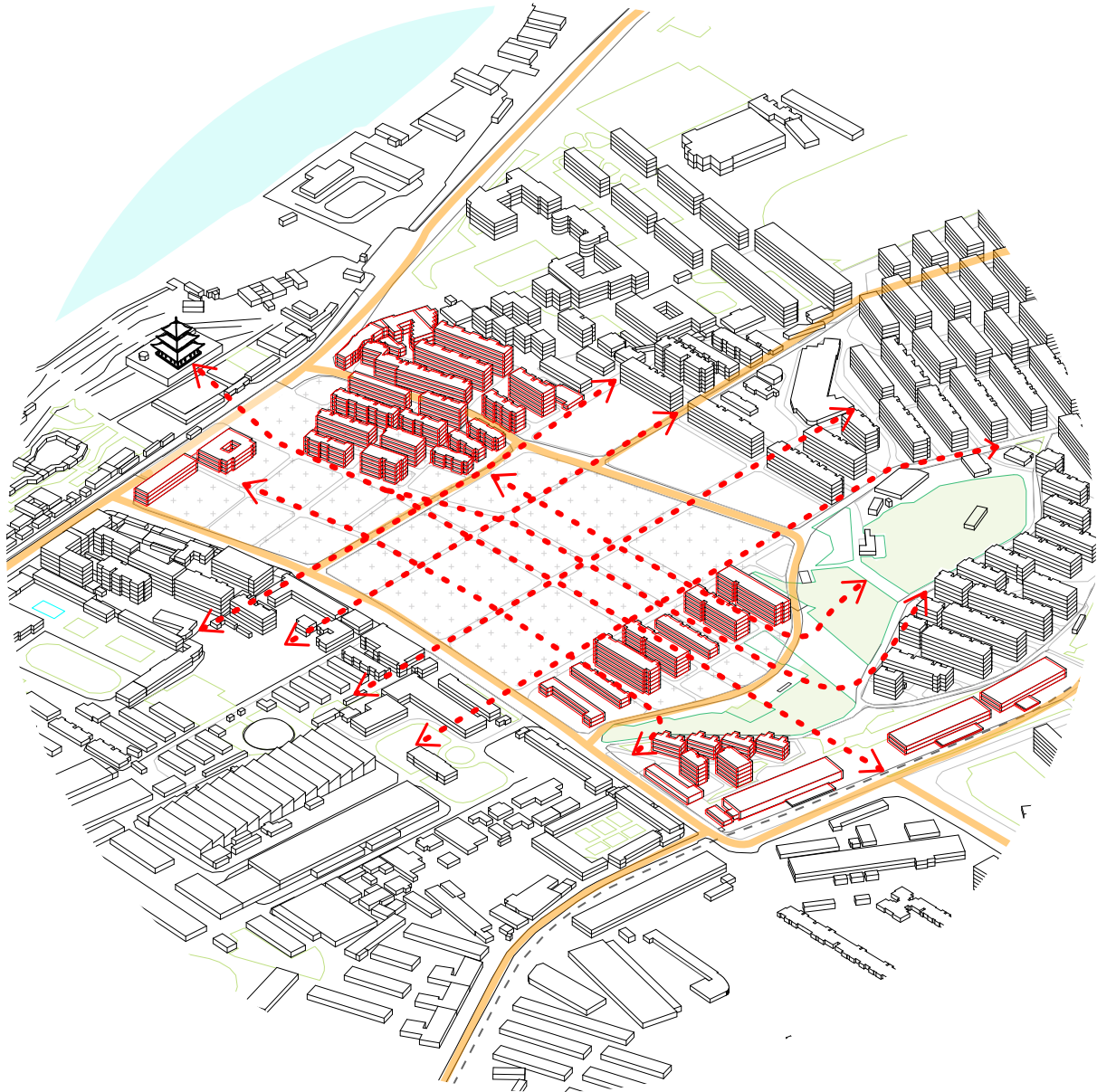


Fig 205, City's proposal of demolition plan in Yueyang Pavilion district.

The city propose to create a single axis towards the Yueyang Pavilion. Instead of setting the Pavilion off to more visible, the wide scale of boulevard and pedestrian walkway is actually making Yueyang Pavilion looks small.

Invisible City

Preserving the Memory of Flow



The invisible city plan to keep the existing pathways on the site. Multiple and smaller scale streets permit people to circular through the site, and find their own ways to the Yueyang Pavilion. Keeping original pathways allows residents come back to the site, and preserves the memory of flows.

Fig 206, Invisible City's proposal of keeping existing fabric.

City's Proposal
Ancient-Style Commercial Village

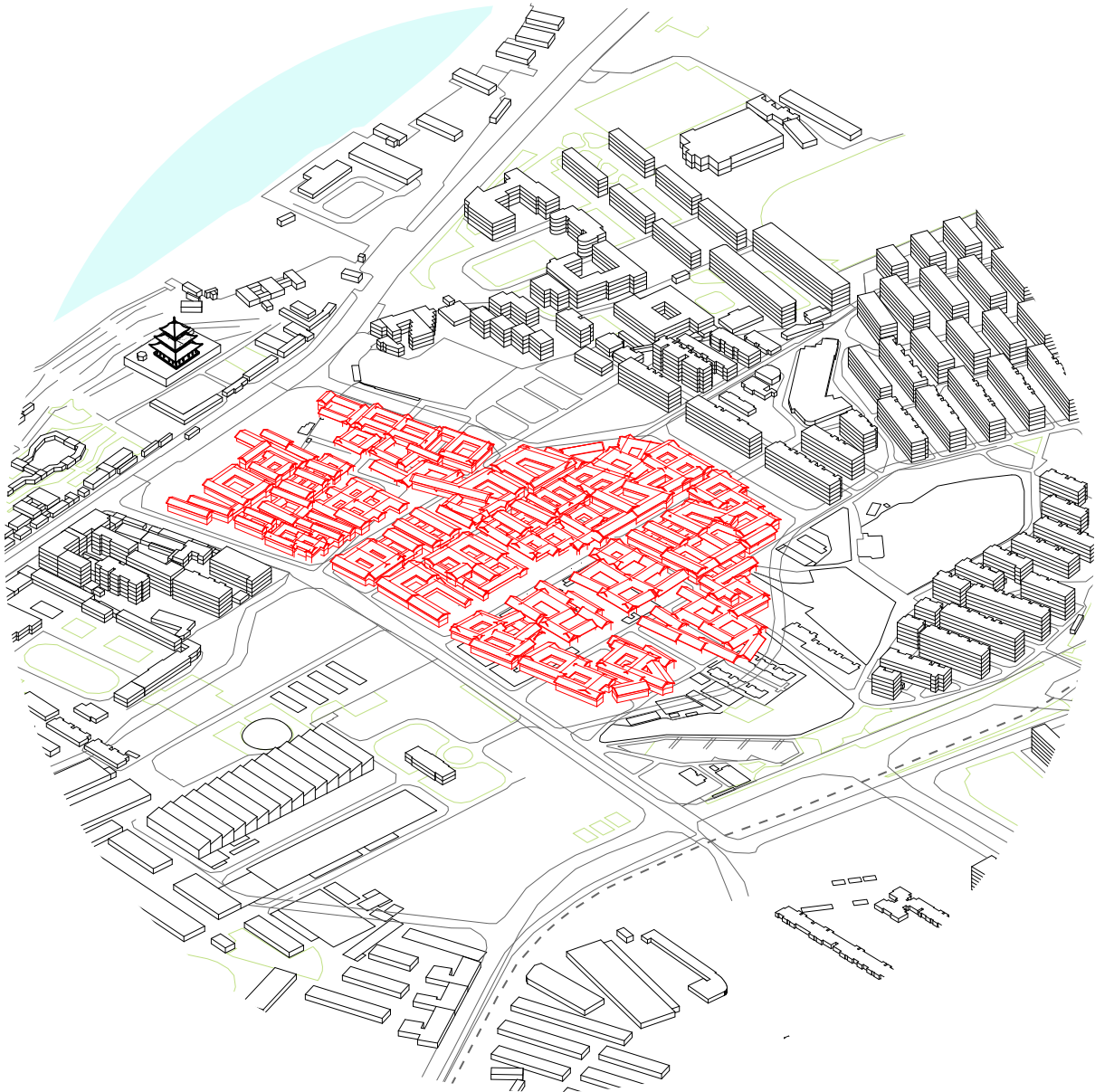
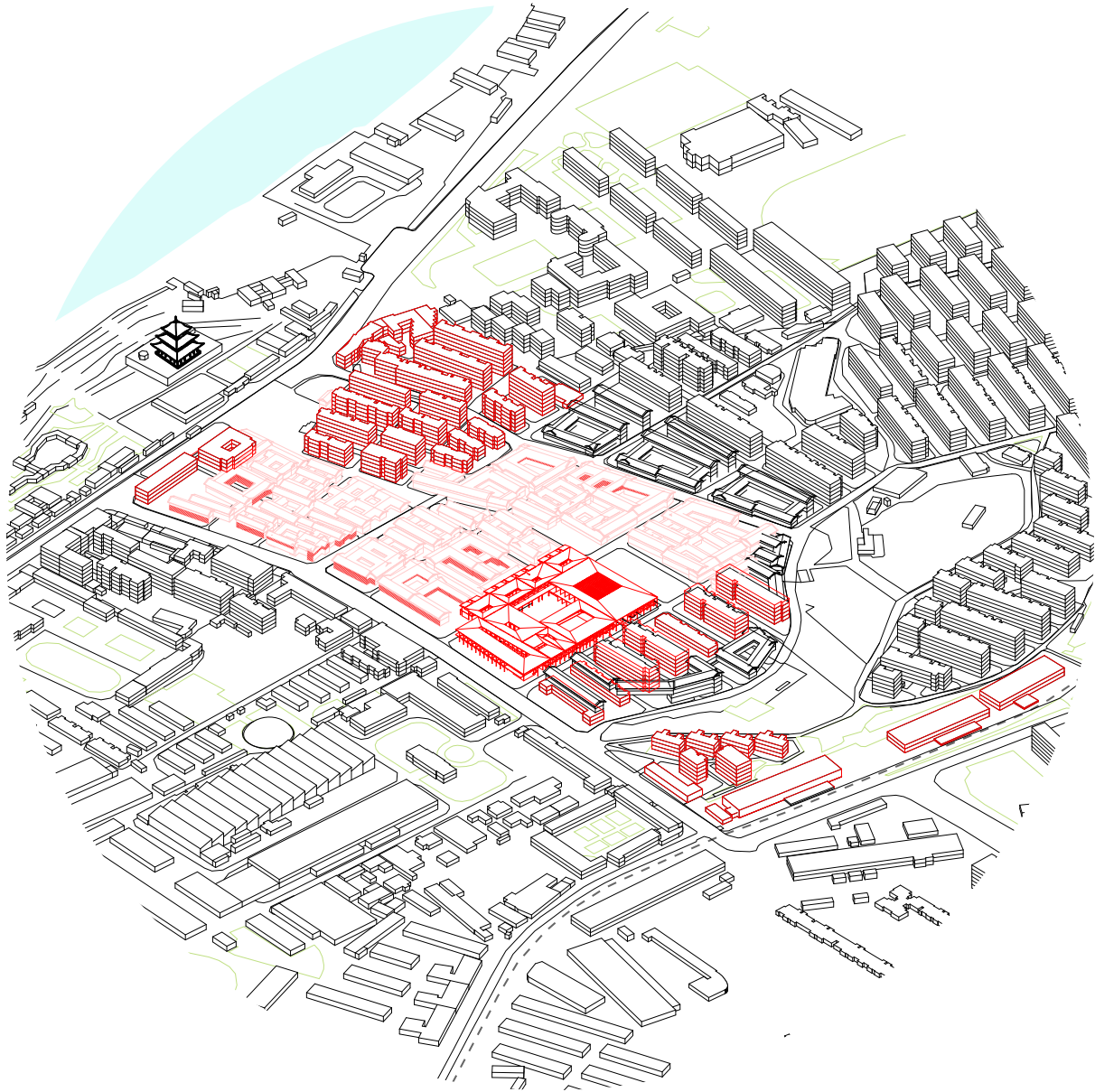


Fig 207, City's proposal of demolition plan in Yueyang Pavilion district.

The city propose to develop an ancient-style commercial village and create new features to attract tourism on the site, which is exclusive to wealthy, and generate passive participation in consumerist society.

Invisible City

Preserving the Memory of Diversity



The invisible city is a place encourages diversity and inclusiveness. It provides new tourist destinations on the site, as well as preserves the memory of original functions on the site, such as fresh food market, a daily place for locals.

Fig 208, Invisible City's proposal of keeping existing fabric.

City's Proposal
Large Green Park

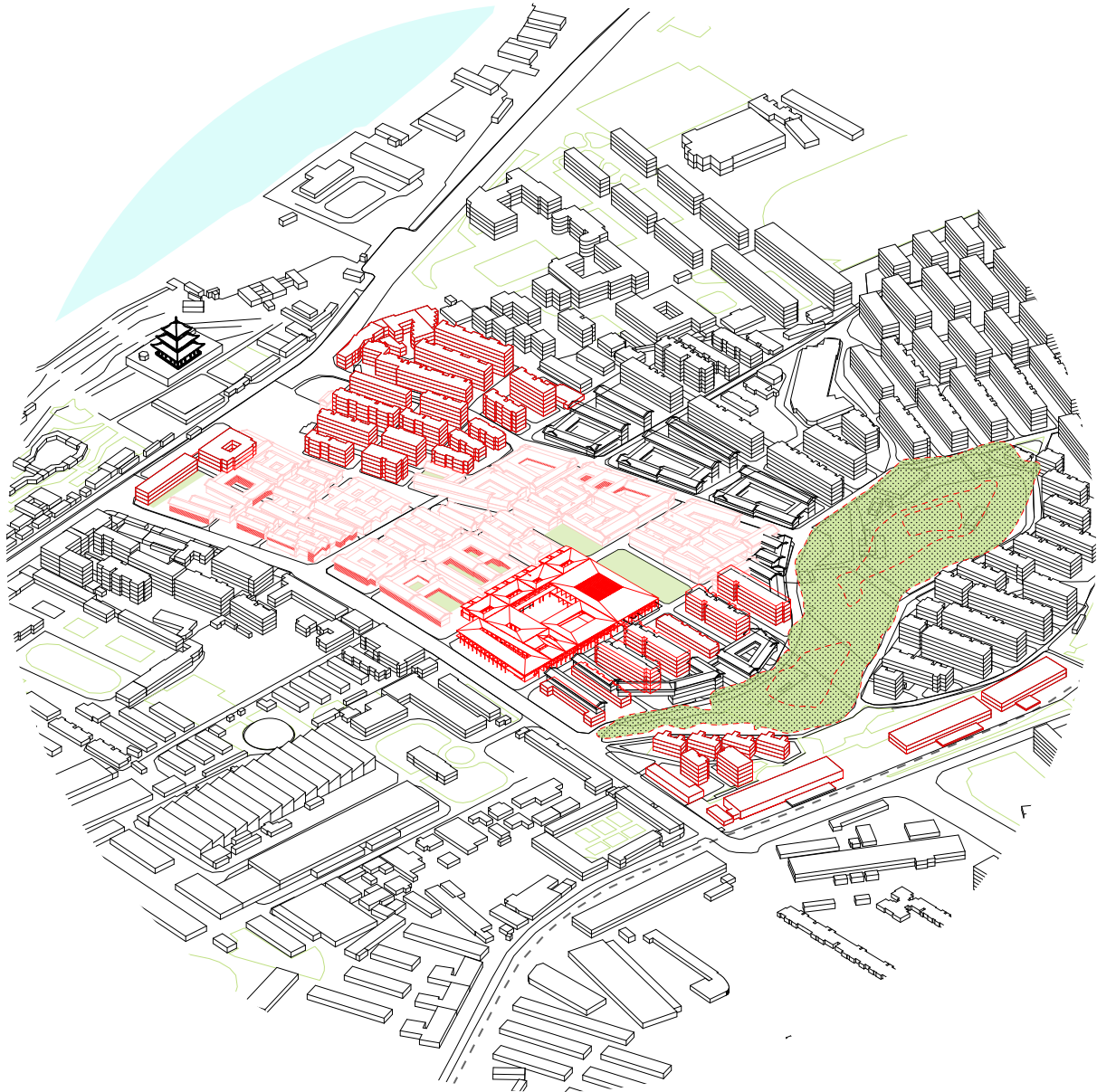


Fig 209, City's proposal of demolition plan in Yueyang Pavilion district.

The city propose to crate a large green park to connect two theme park on north and south side of the commercial village.

Invisible City

Preserving the Memory of Scale



The invisible city keeps the green park as an element to bring local residence back to the site, while creates different and smaller scale of green space to accommodate different activities and to preserve the memory of intimate scale on the site.

Fig 210, Invisible City's proposal of keeping existing fabric.

City's Proposal
Surface Parking

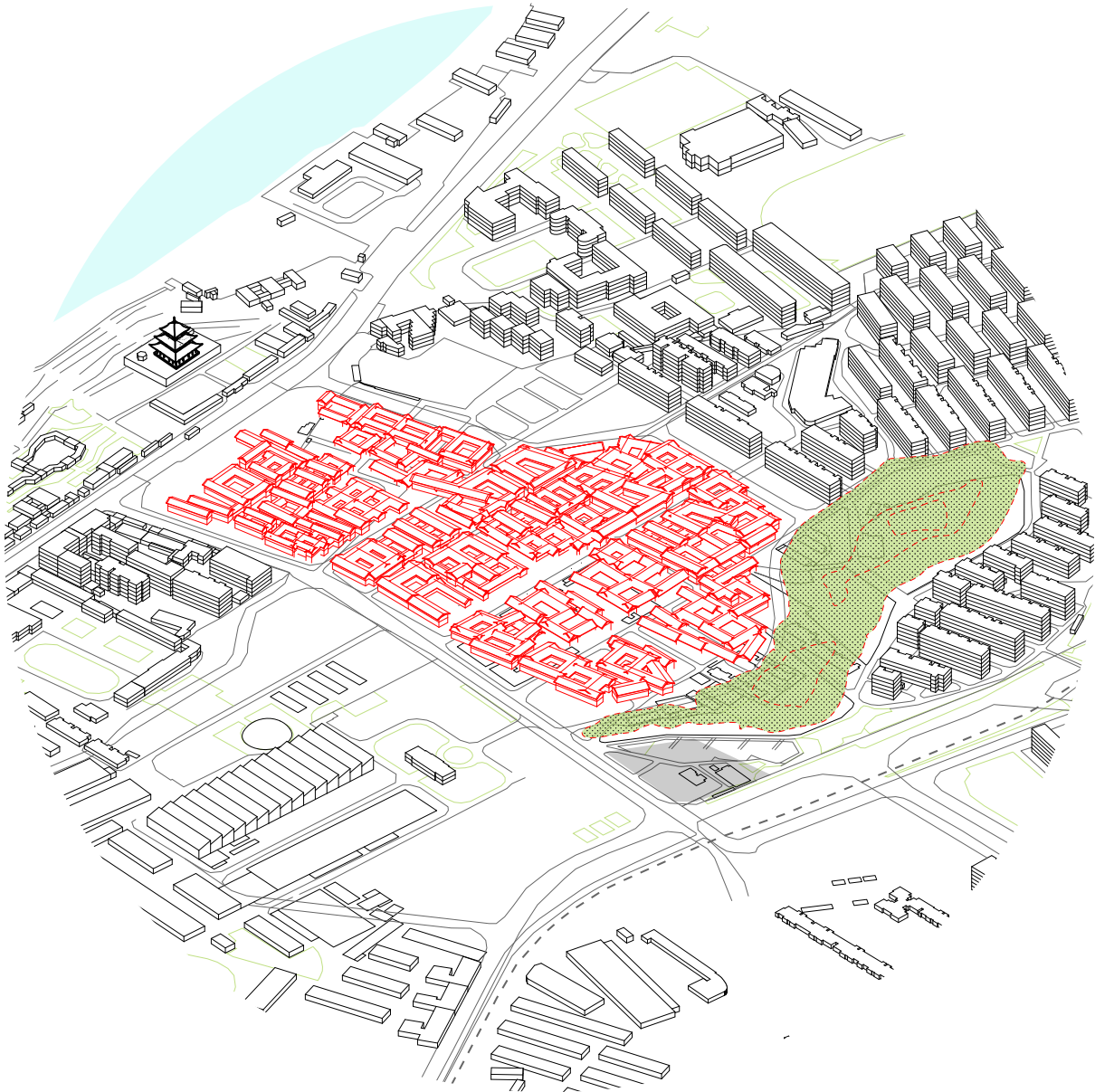
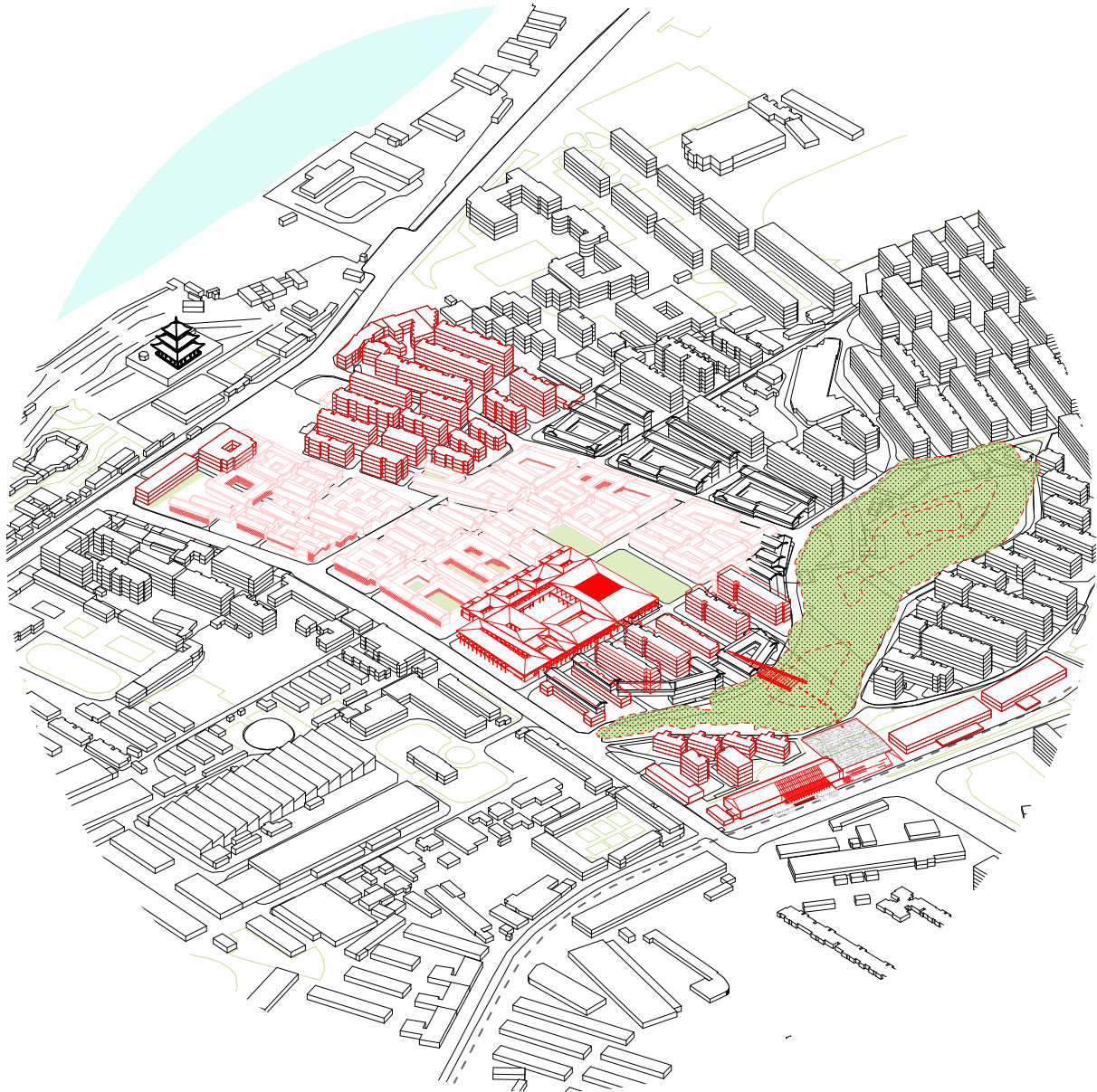


Fig 211, City's proposal of demolition plan in Yueyang Pavilion district.

The city propose to build large area of surface parking to accommodate visitors who drive to this tourism destination mainly from the wide roadway connects the east to the west side of the city.

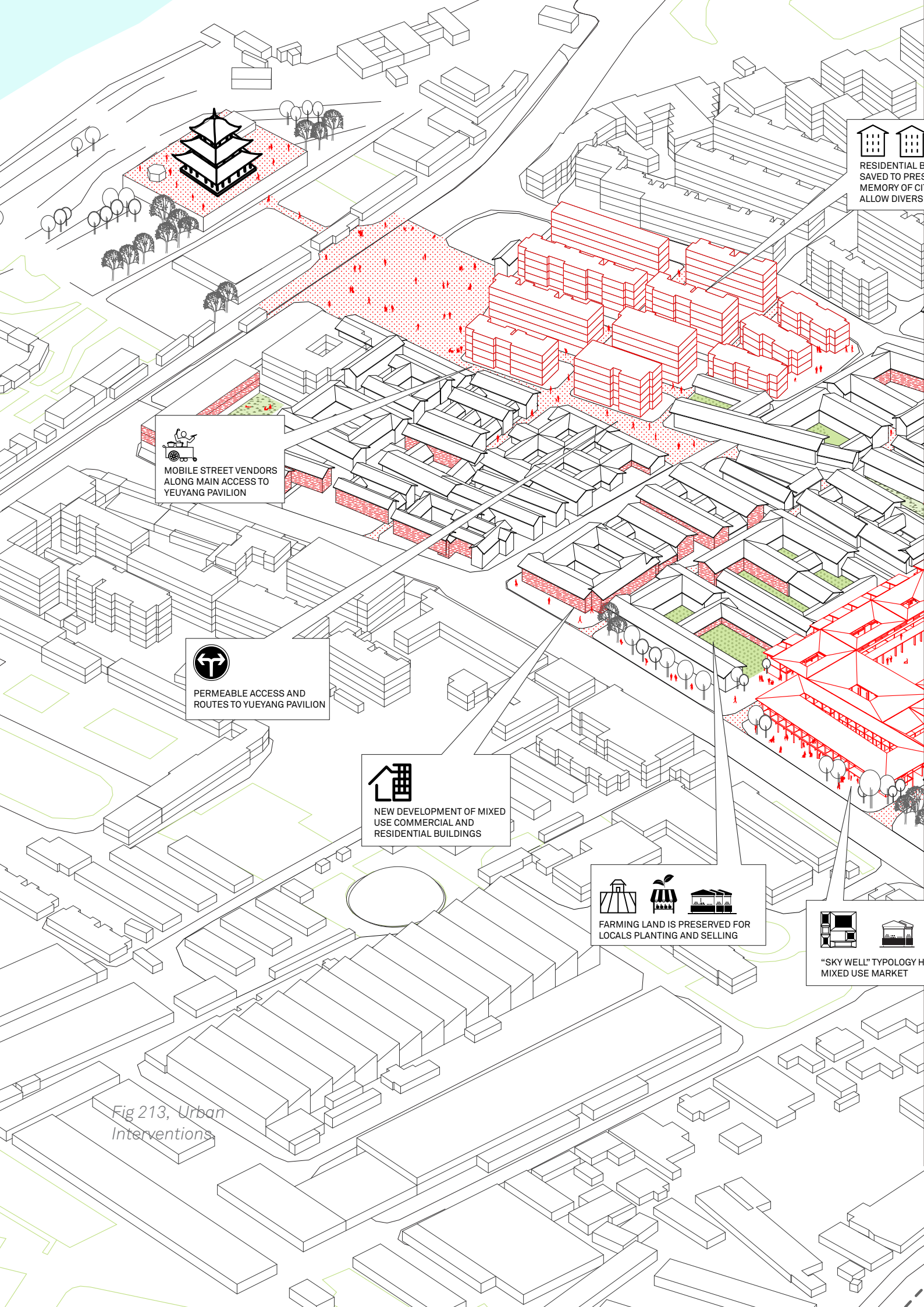
Invisible City

Preserving the Memory of Form



The invisible city propose to renovate the existing 3517 factory building in front of their abandoned train station, and change it to a mixed use of bus stop, book store, and drink shop. A new footbridge connects the bus stop to fresh market and other places on the site.

Fig 212, Invisible City's proposal of keeping existing fabric.



RESIDENTIAL B...
SAVED TO PRES...
MEMORY OF CH...
ALLOW DIVERS...

MOBILE STREET VENDORS
ALONG MAIN ACCESS TO
YUEYANG PAVILION

PERMEABLE ACCESS AND
ROUTES TO YUEYANG PAVILION

NEW DEVELOPMENT OF MIXED
USE COMMERCIAL AND
RESIDENTIAL BUILDINGS

FARMING LAND IS PRESERVED FOR
LOCALS PLANTING AND SELLING

"SKY WELL" TYPOLOGY H...
MIXED USE MARKET

Fig 213, Urban
Interventions

BUILDINGS ARE
SERVE THE
TY'S FABRIC AND
TY TO REMAIN

EXISTING ROAD AND
MOVEMENT OF FLOW ARE
PRESERVED ON THE SITE

DIFFERENT SCALE OF GREEN
OPEN SPACES ARE CREATED TO
ACCOMMODATE DIVERSE USES

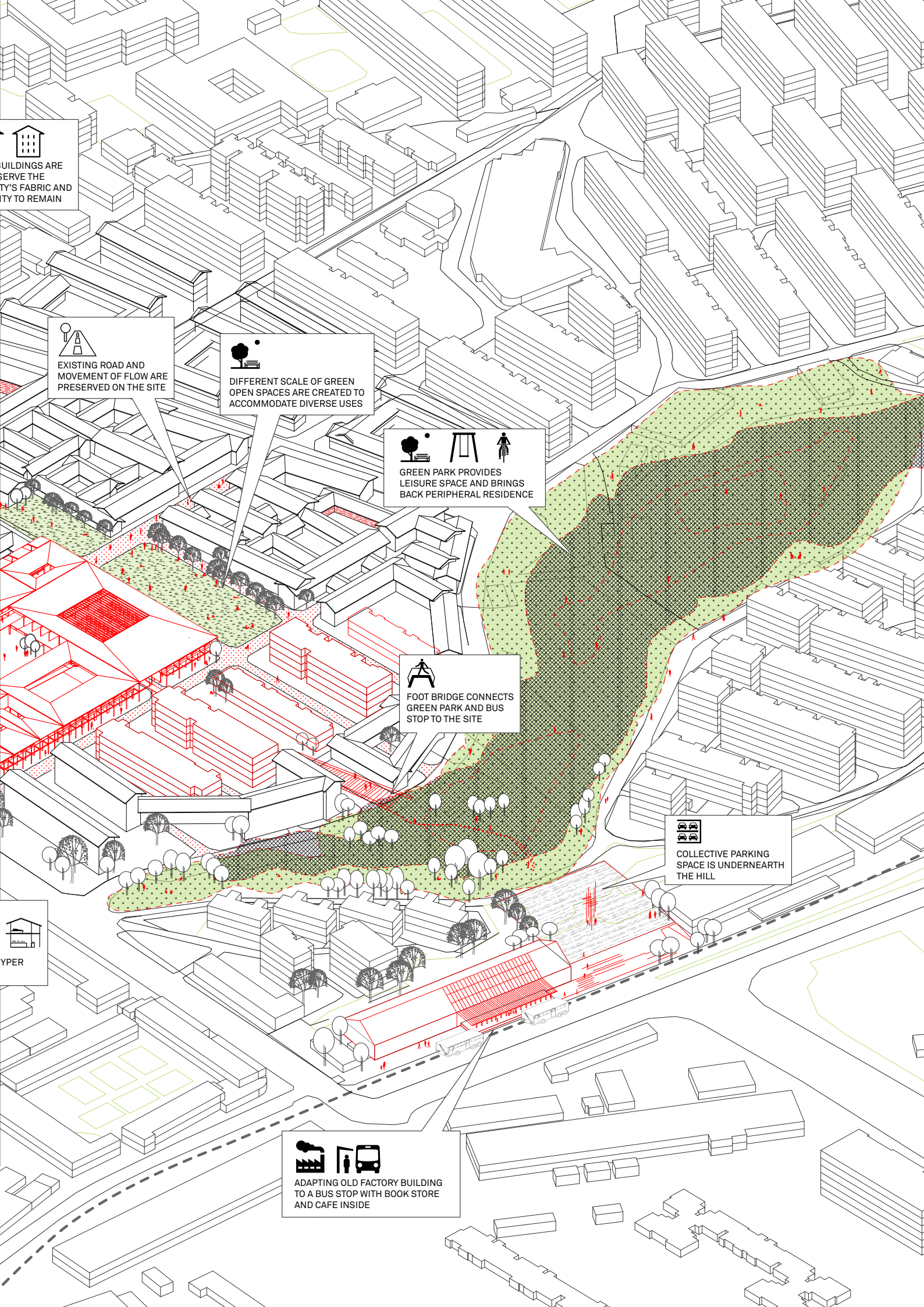
GREEN PARK PROVIDES
LEISURE SPACE AND BRINGS
BACK PERIPHERAL RESIDENCE

FOOT BRIDGE CONNECTS
GREEN PARK AND BUS
STOP TO THE SITE

COLLECTIVE PARKING
SPACE IS UNDERNEARTH
THE HILL

YPER

ADAPTING OLD FACTORY BUILDING
TO A BUS STOP WITH BOOK STORE
AND CAFE INSIDE



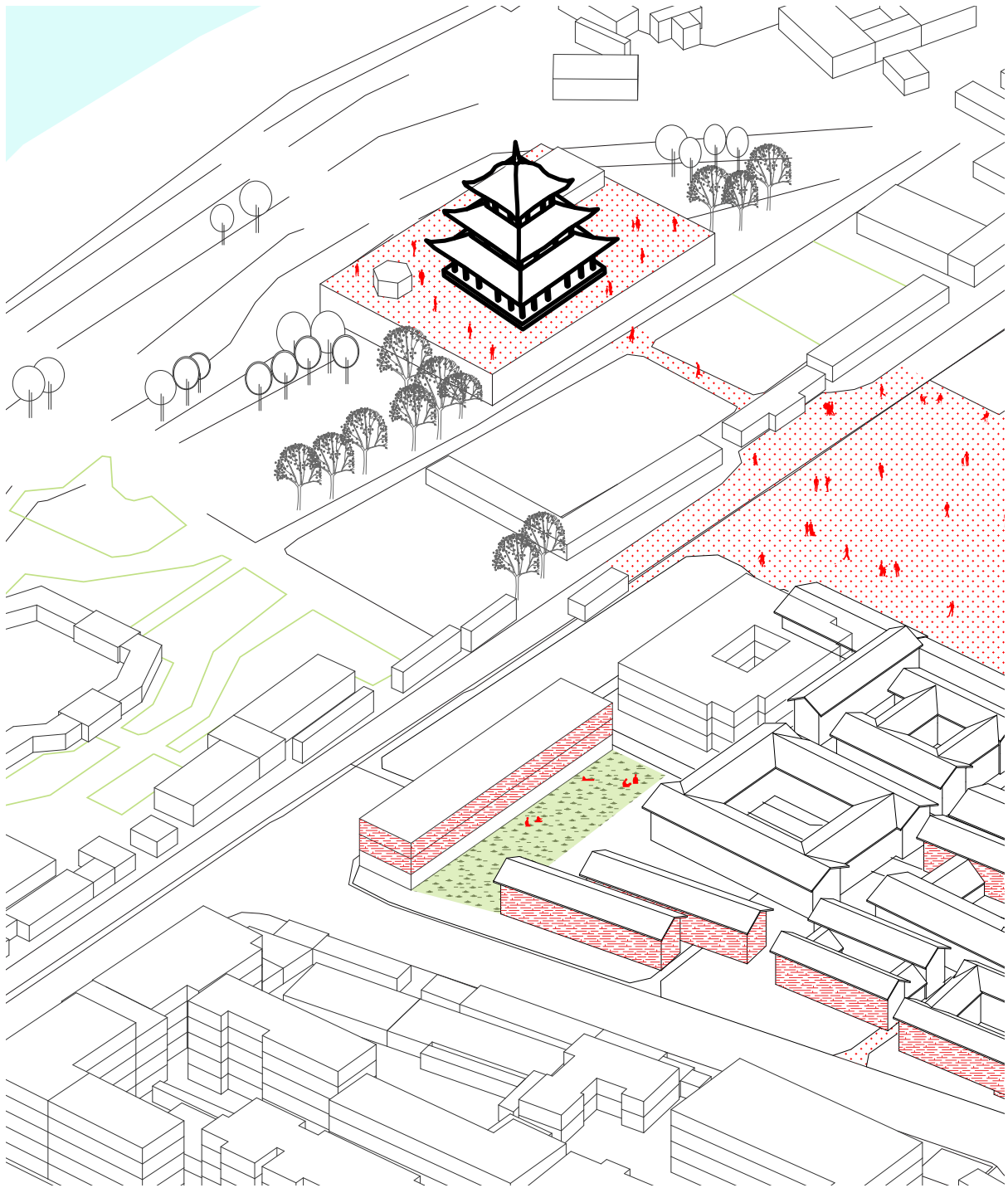


Fig 214, Multiple pathways connect both visitors and locals to the Yueyang Pavilion. Urban intervention detail drawing.

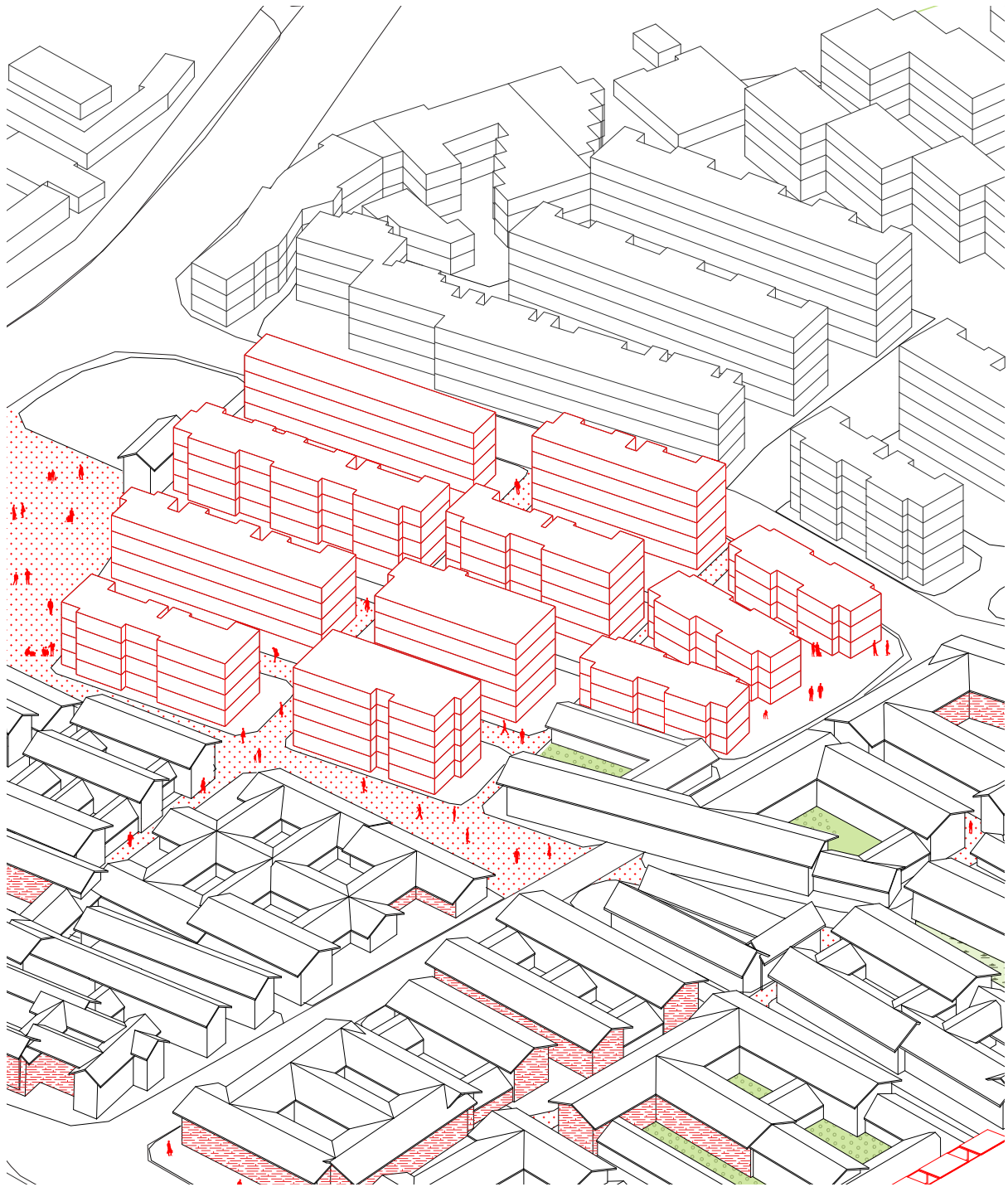


Fig 215, Existing fabric and functions are preserved, while new mixed-use development bring energy to the site. Urban intervention detail drawing.

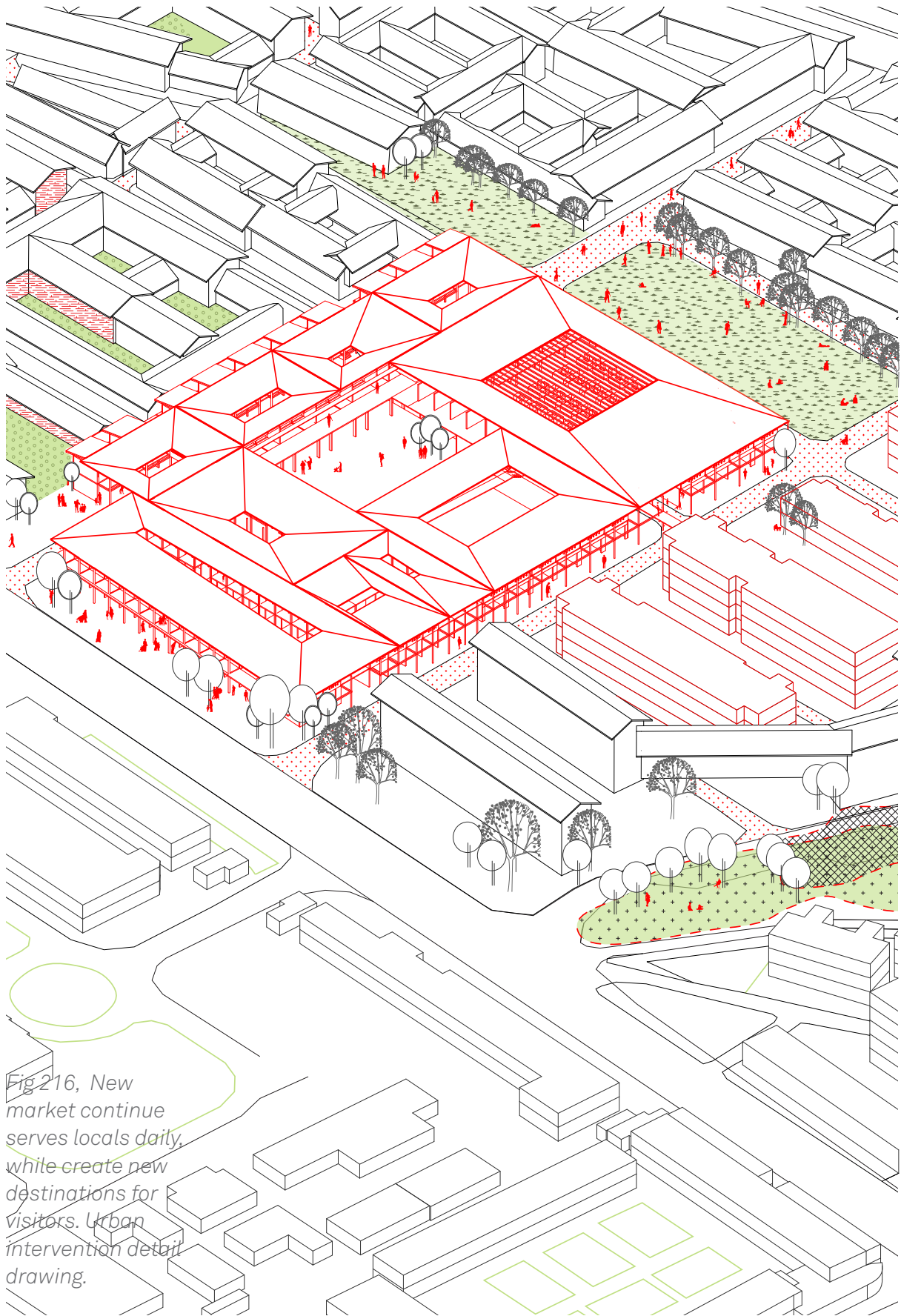


Fig 216, New market continue serves locals daily, while create new destinations for visitors. Urban intervention detail drawing.

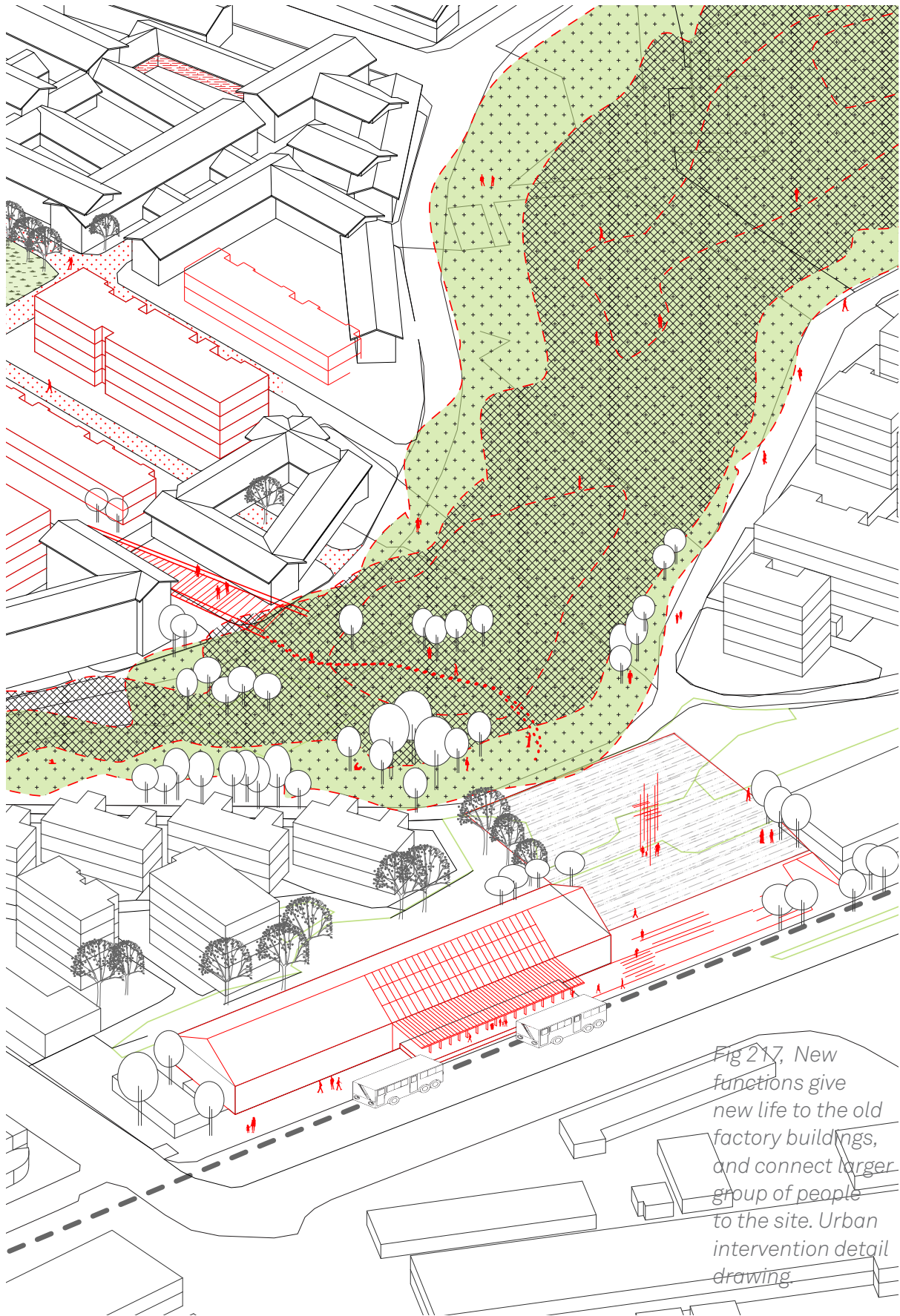


Fig 217, New functions give new life to the old factory buildings, and connect larger group of people to the site. Urban intervention detail drawing.

Market Design

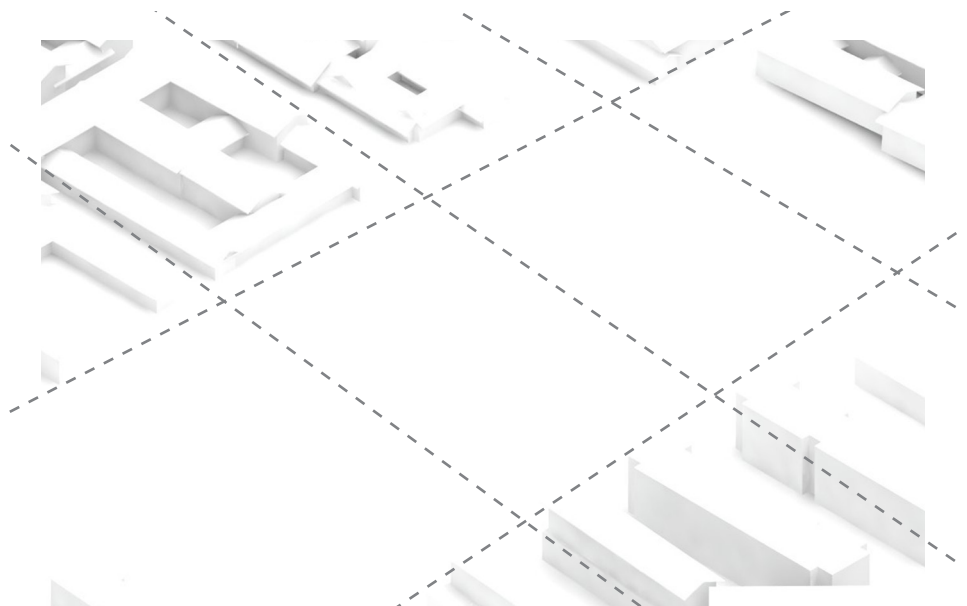


Fig 218, Public movement of flow

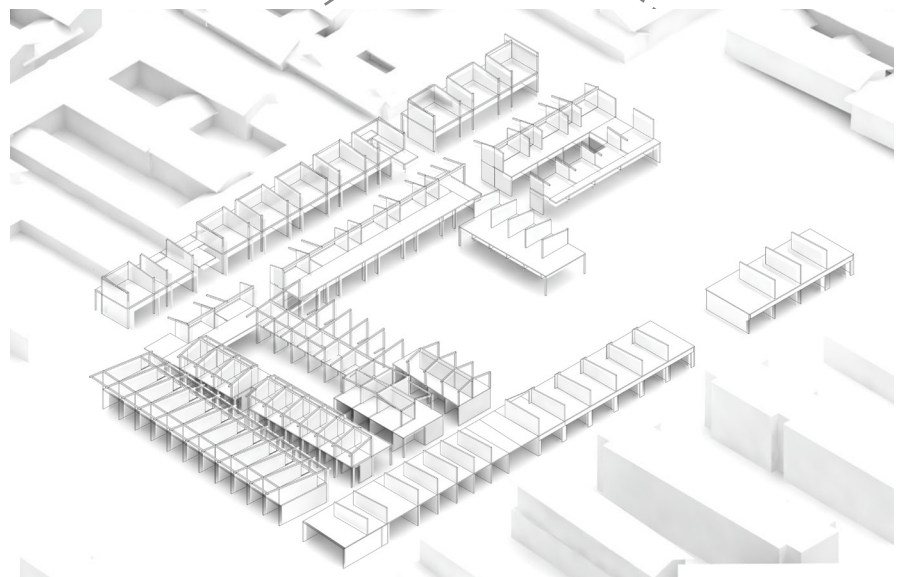


Fig 219, Concrete wall

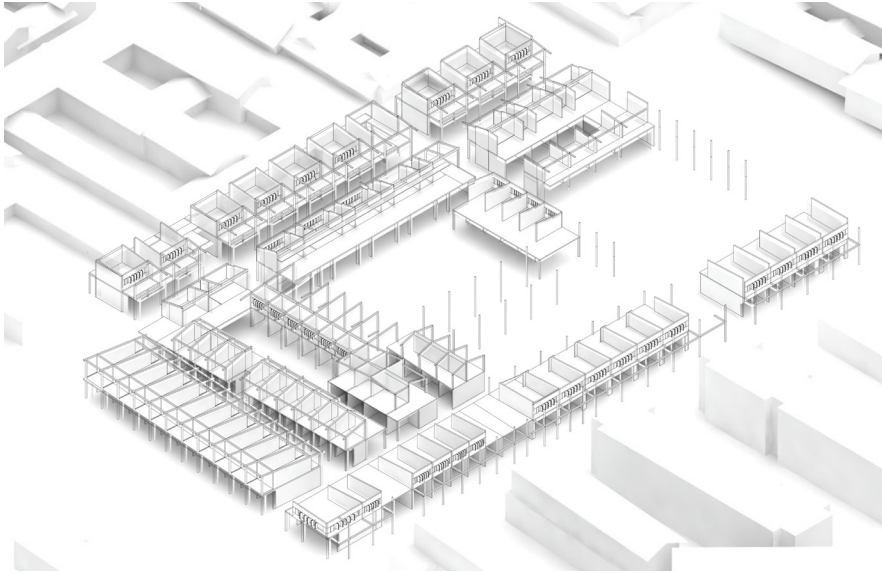


Fig 220, Wood frame

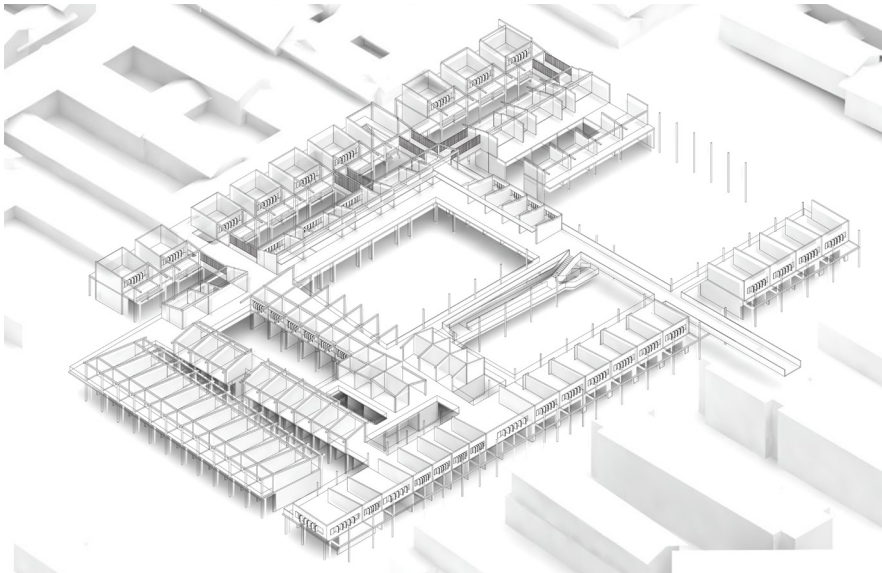


Fig 221, Linked bridge

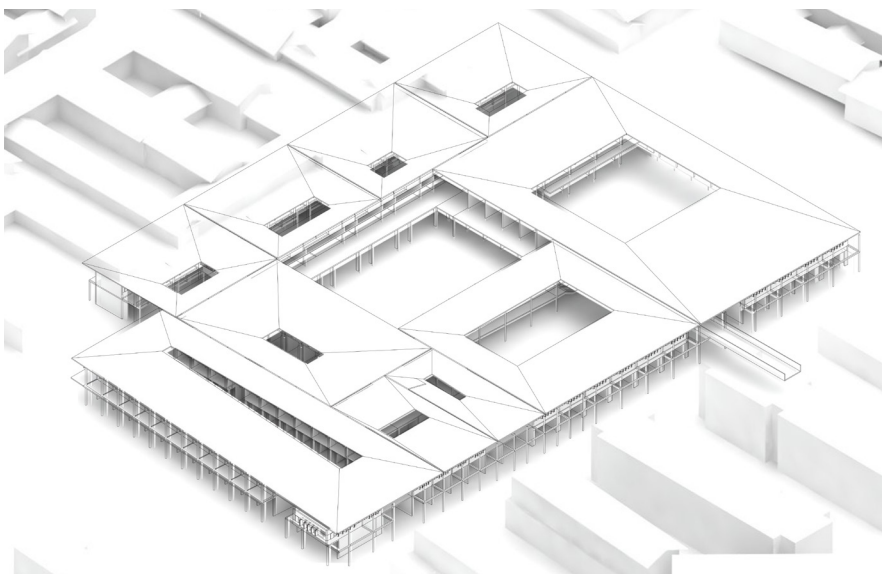
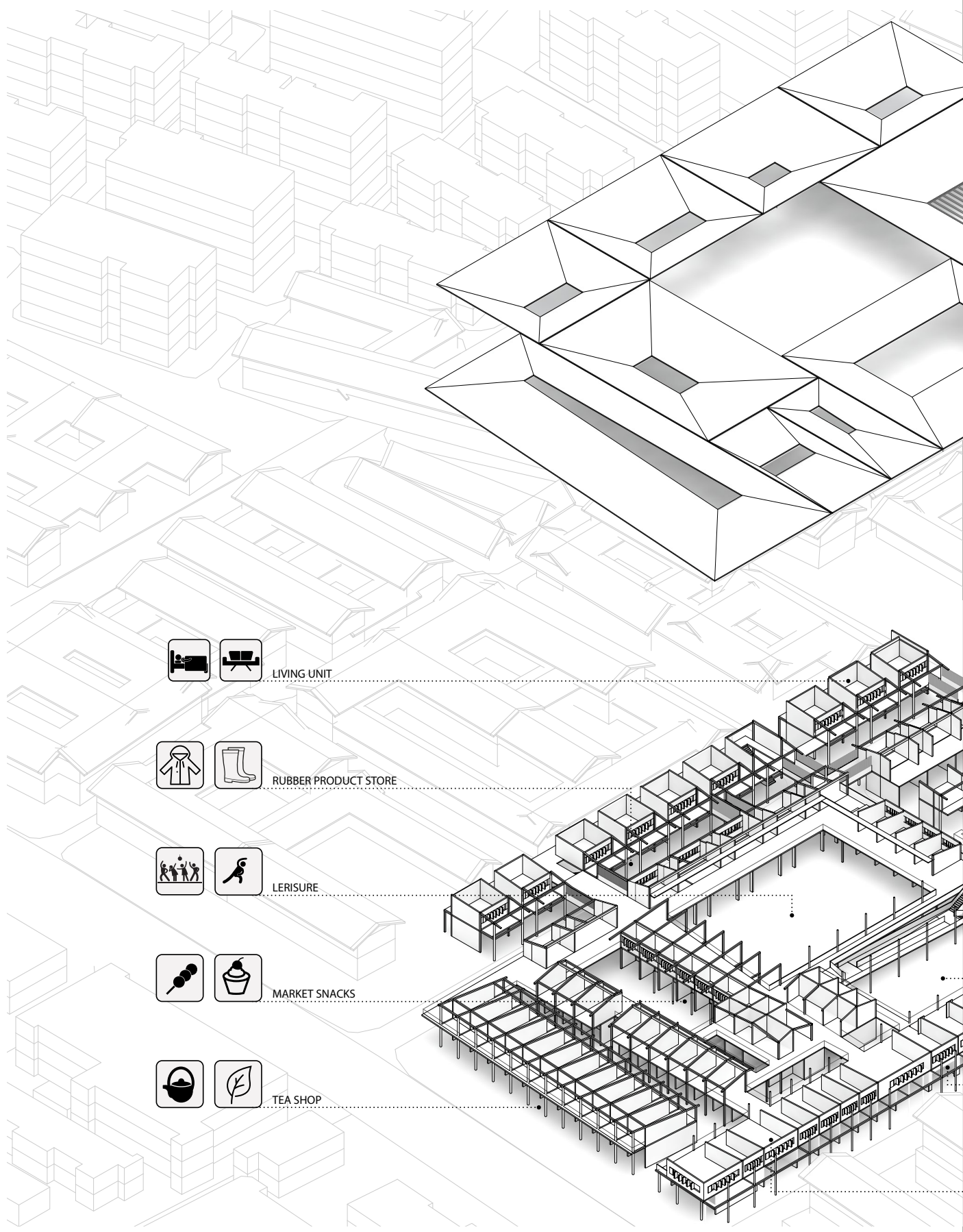


Fig 222, Skywell typology roofscape



LIVING UNIT



RUBBER PRODUCT STORE



LEISURE



MARKET SNACKS



TEA SHOP

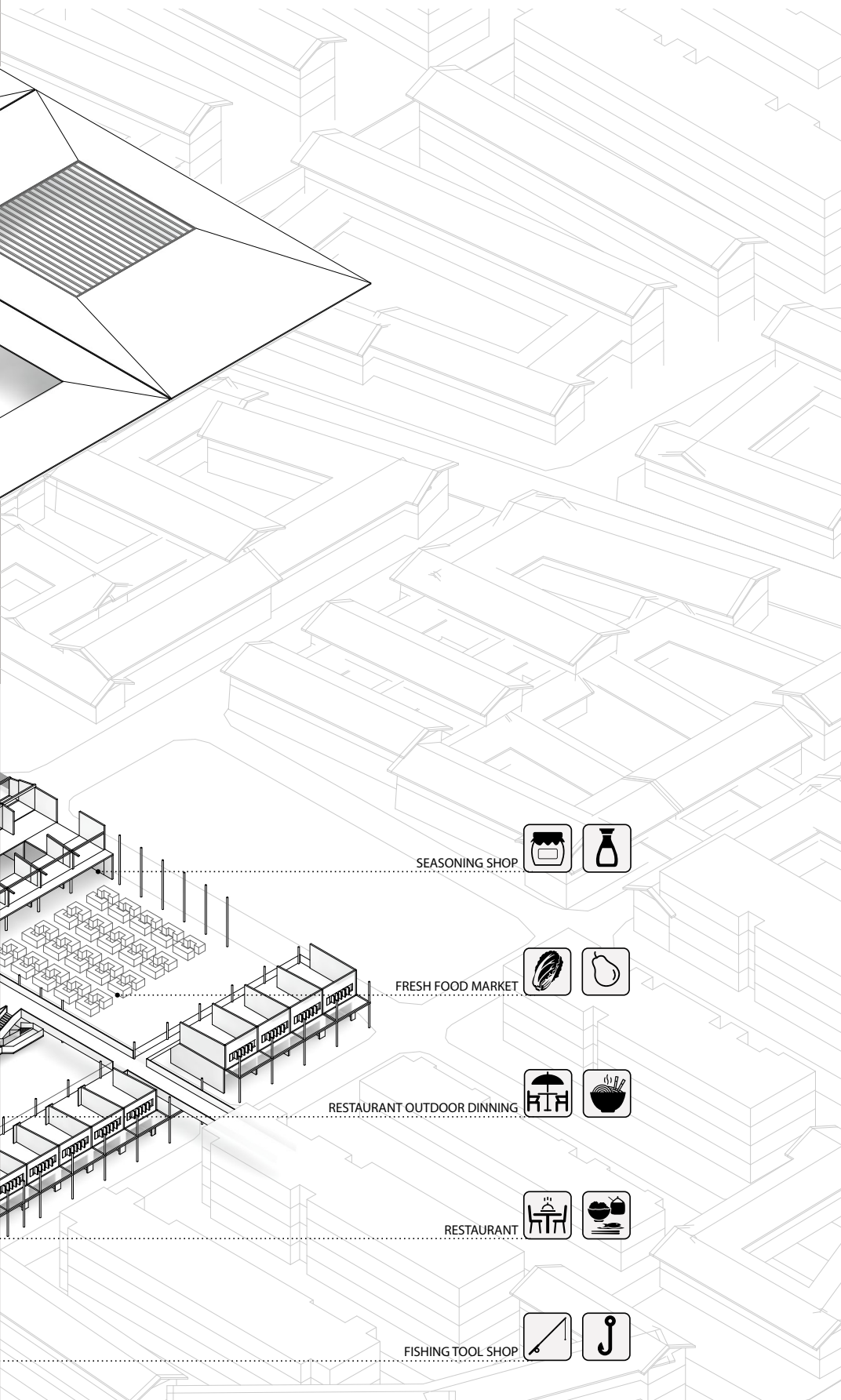
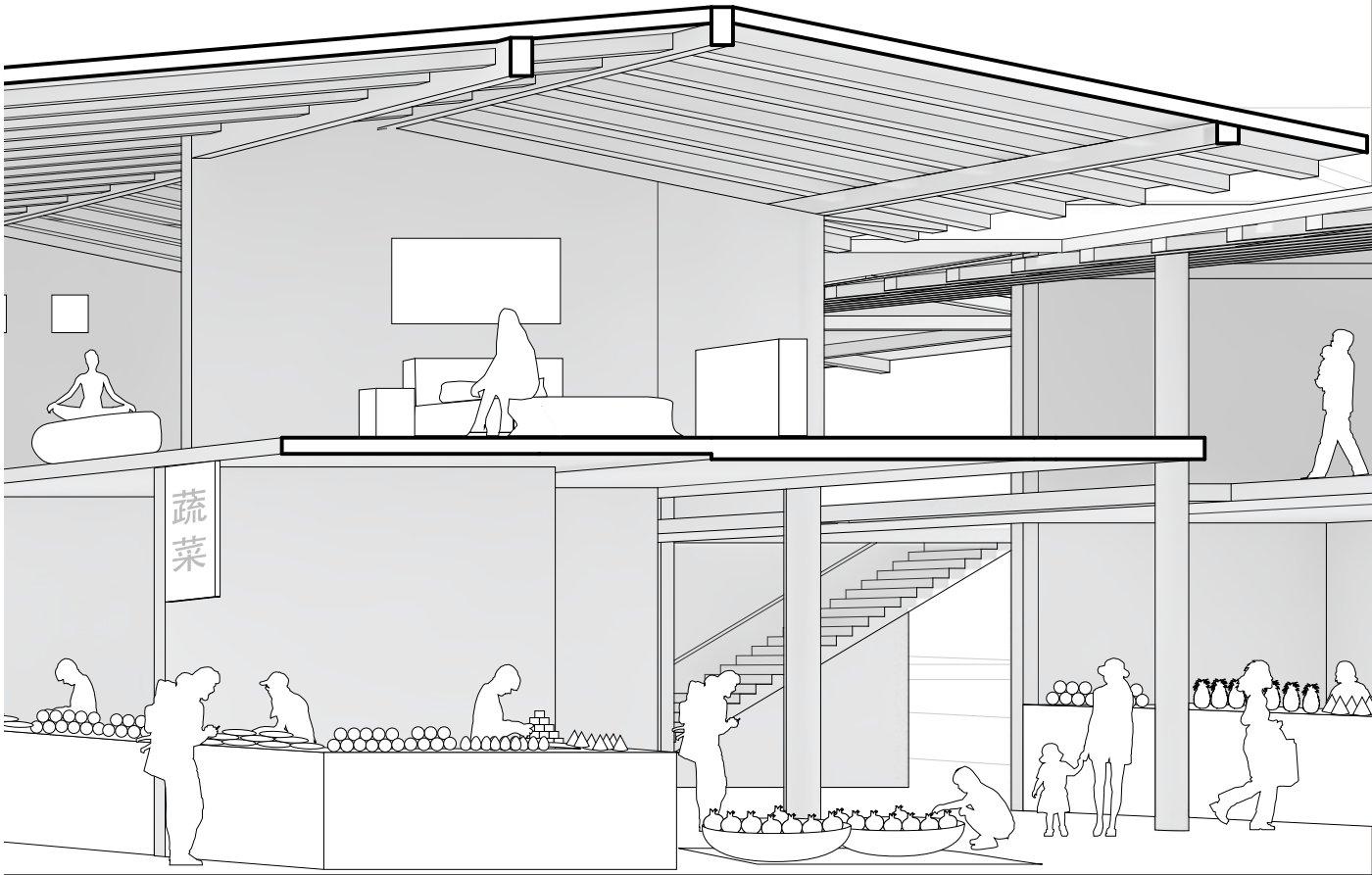
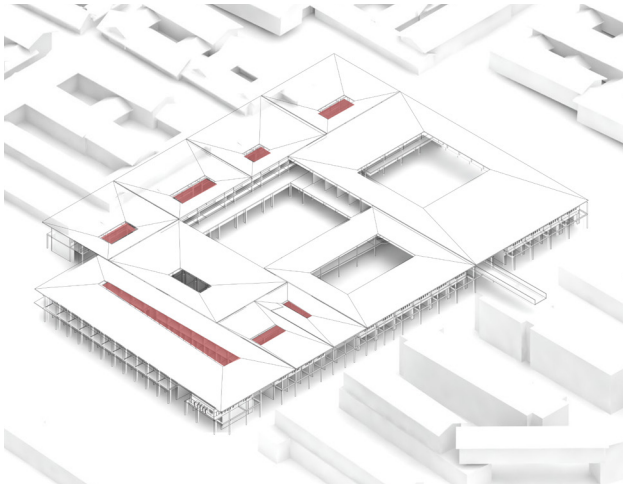


Fig 223, Axon view of the market





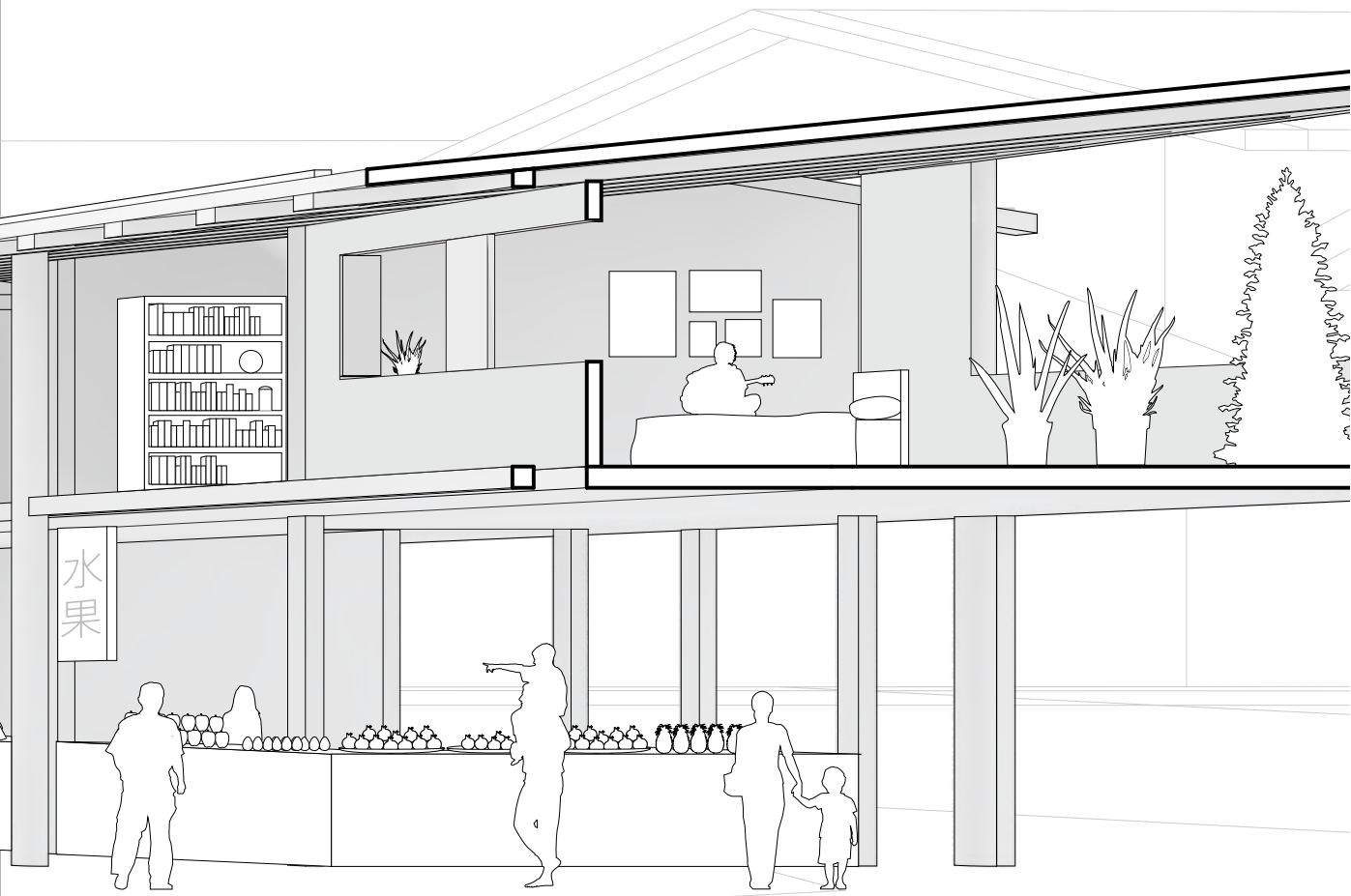
Fig 224, View of entering market from new foot bridge.

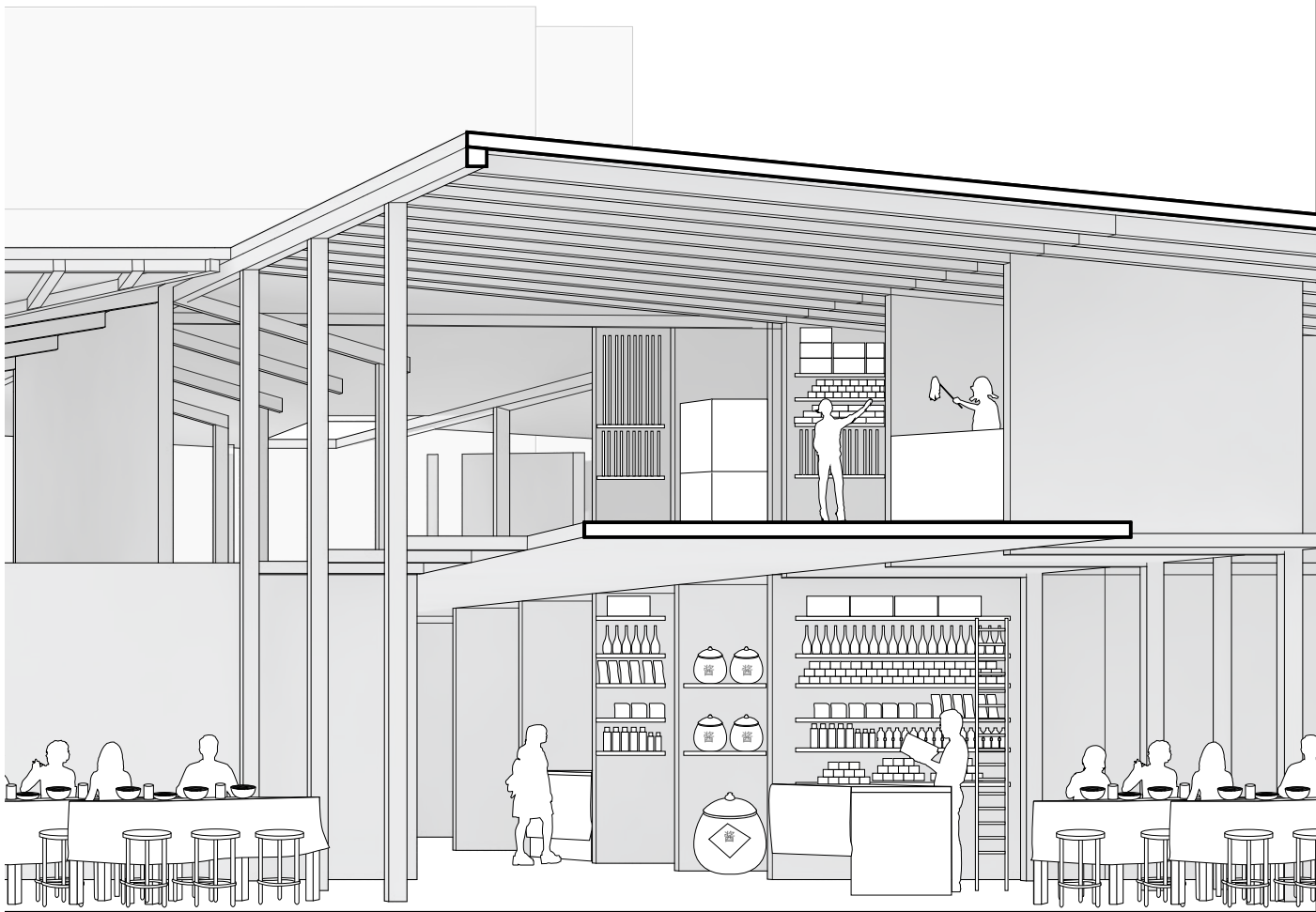
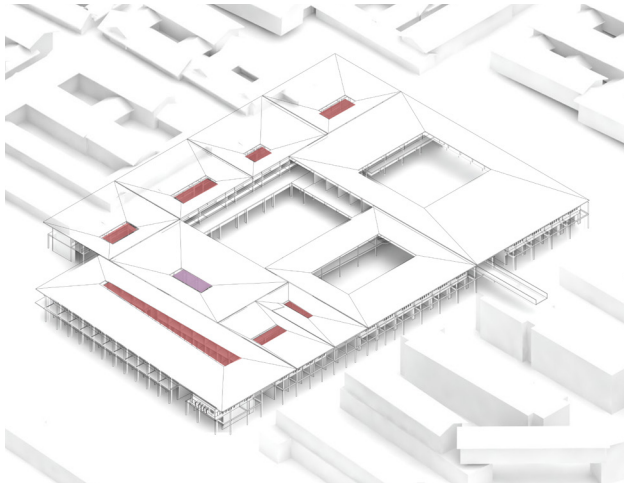


Public Passageway and Infiltration

Living Unit, Fresh Vegetable and Fruit

Fig 225, Section perspective of living unit on top of market retail space.

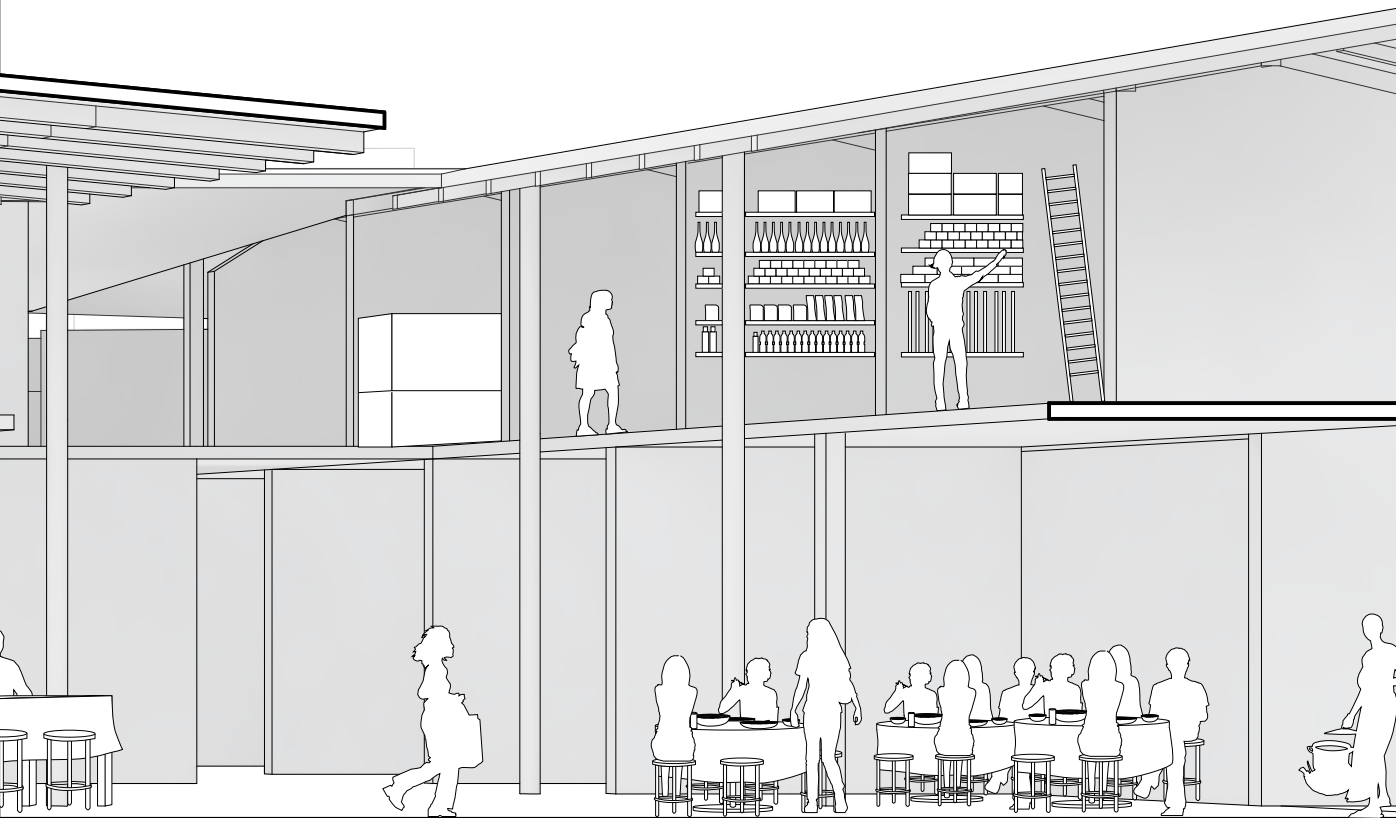


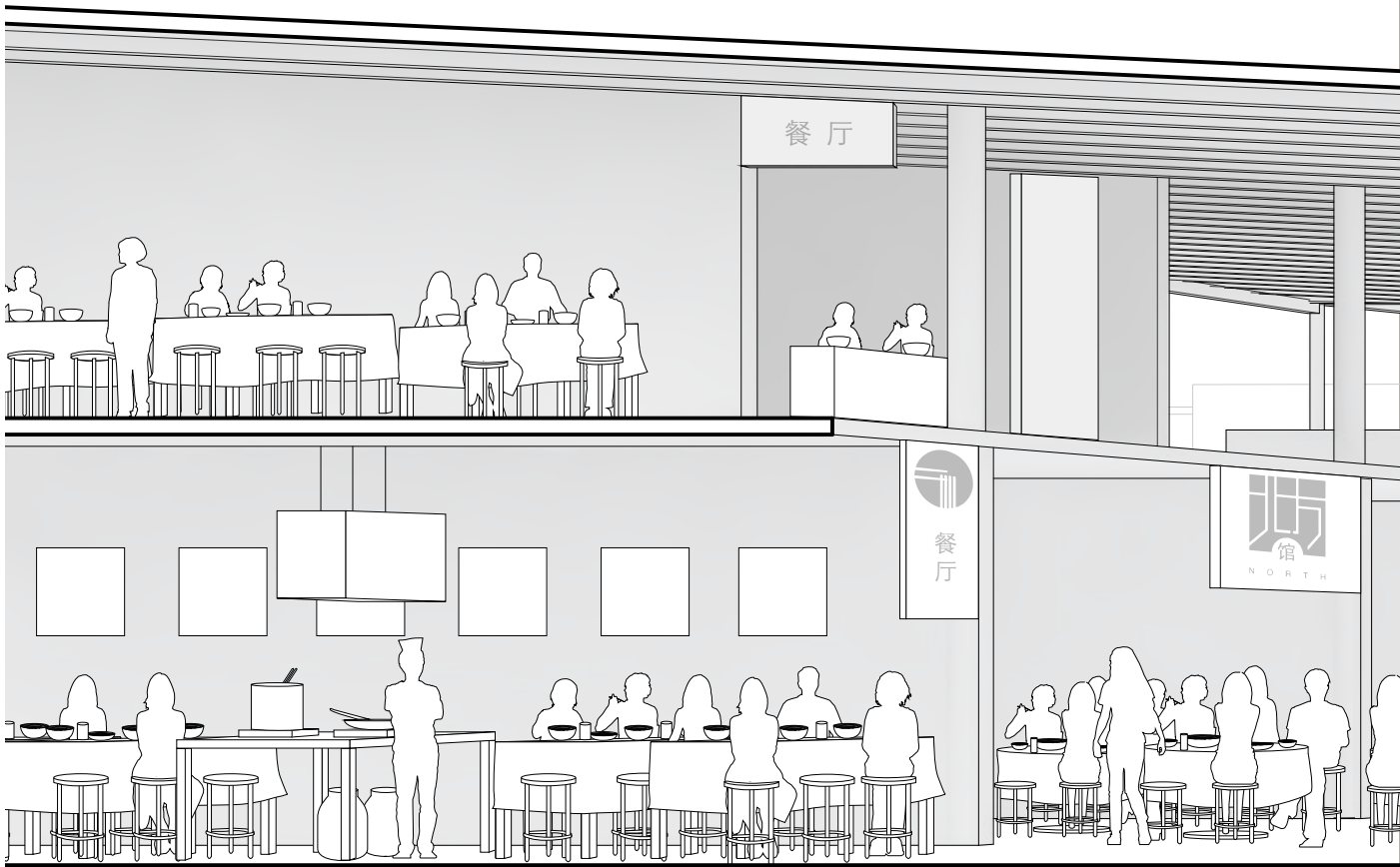
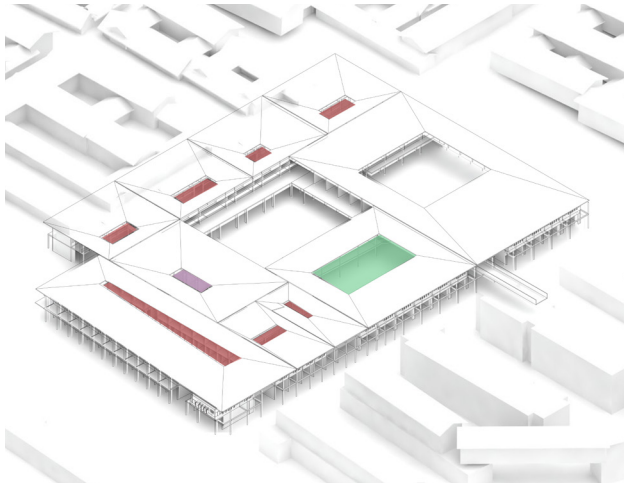


Covered Outdoor Space

Market Snacks, Small Business

Fig 226, Section perspective of covered outdoor spaces connect different business together.

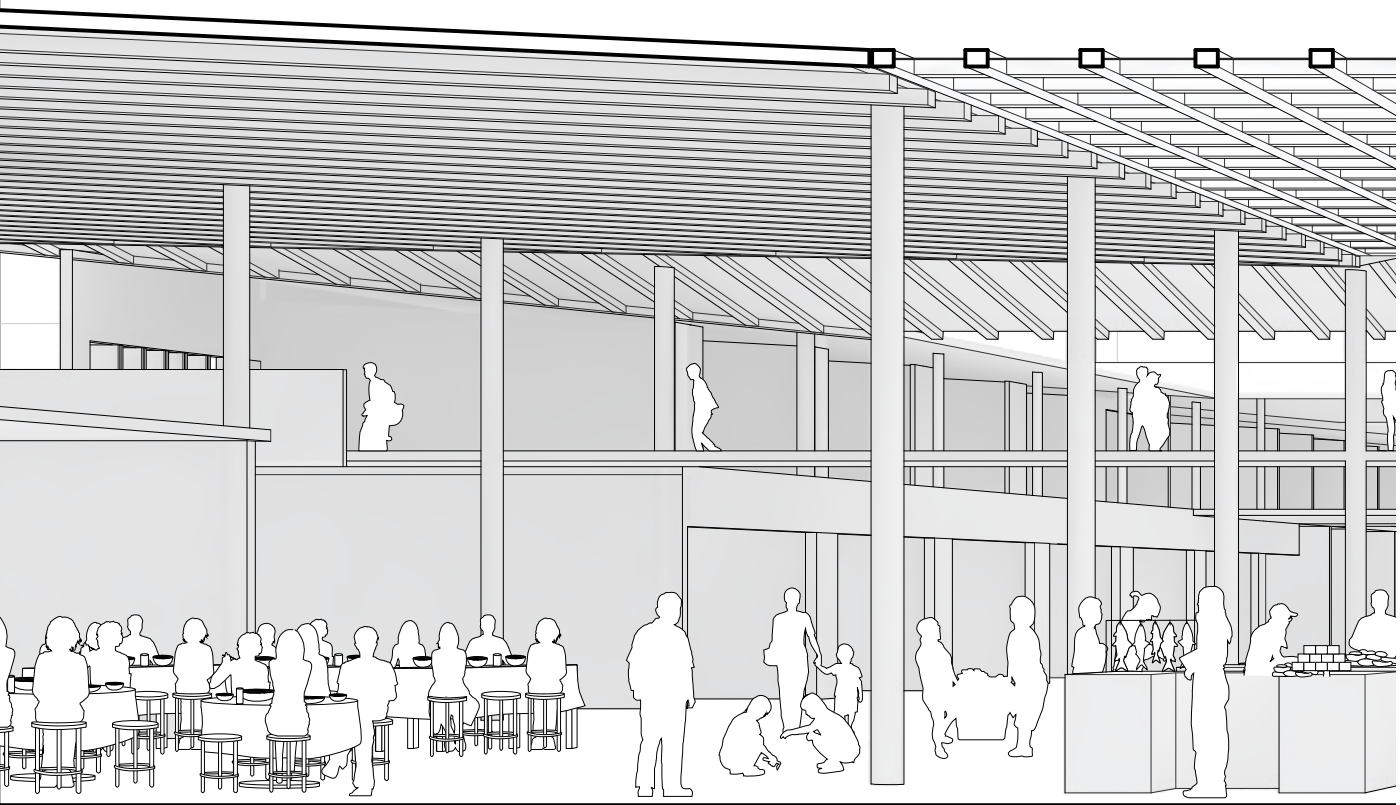


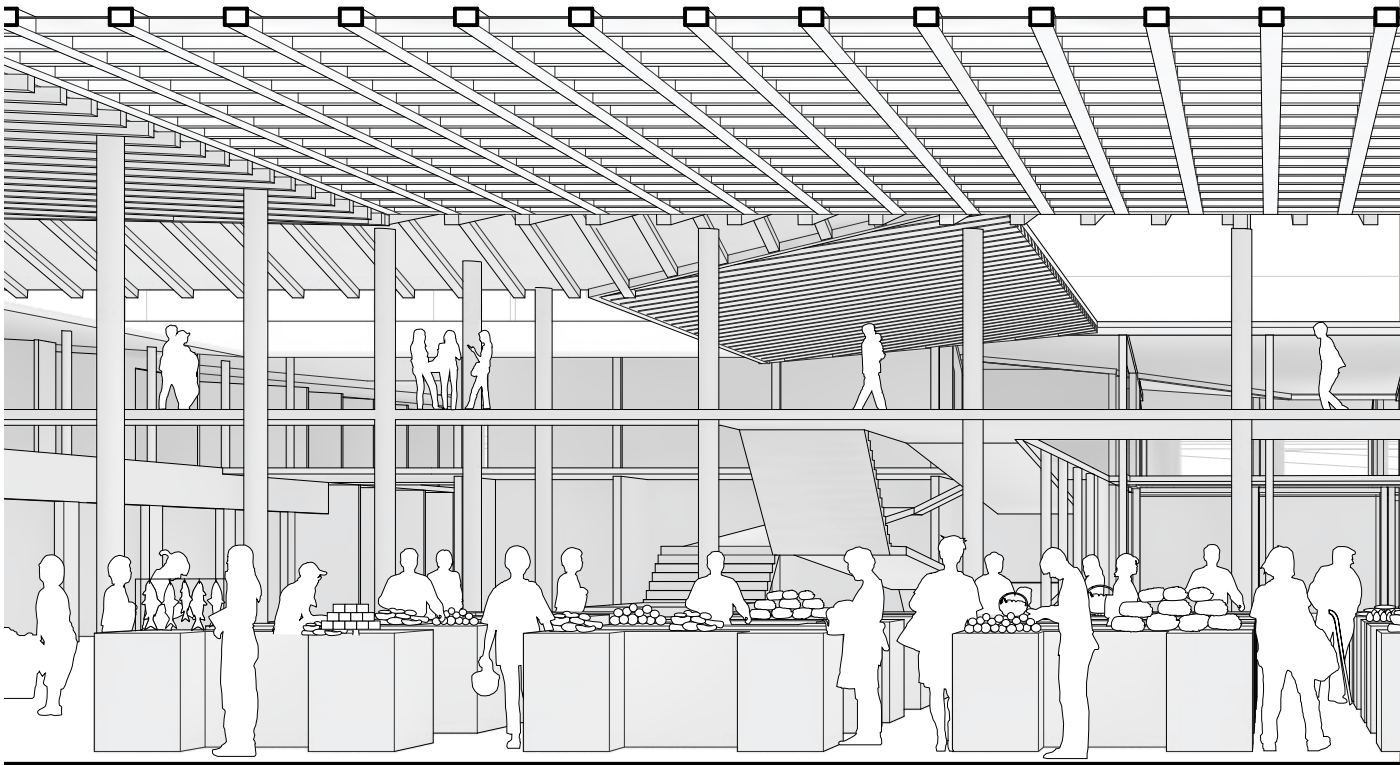
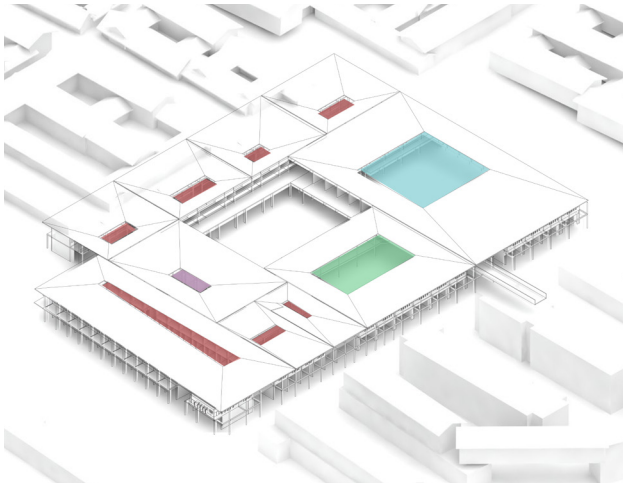


Outdoor Open Space

Restaurant, Loading

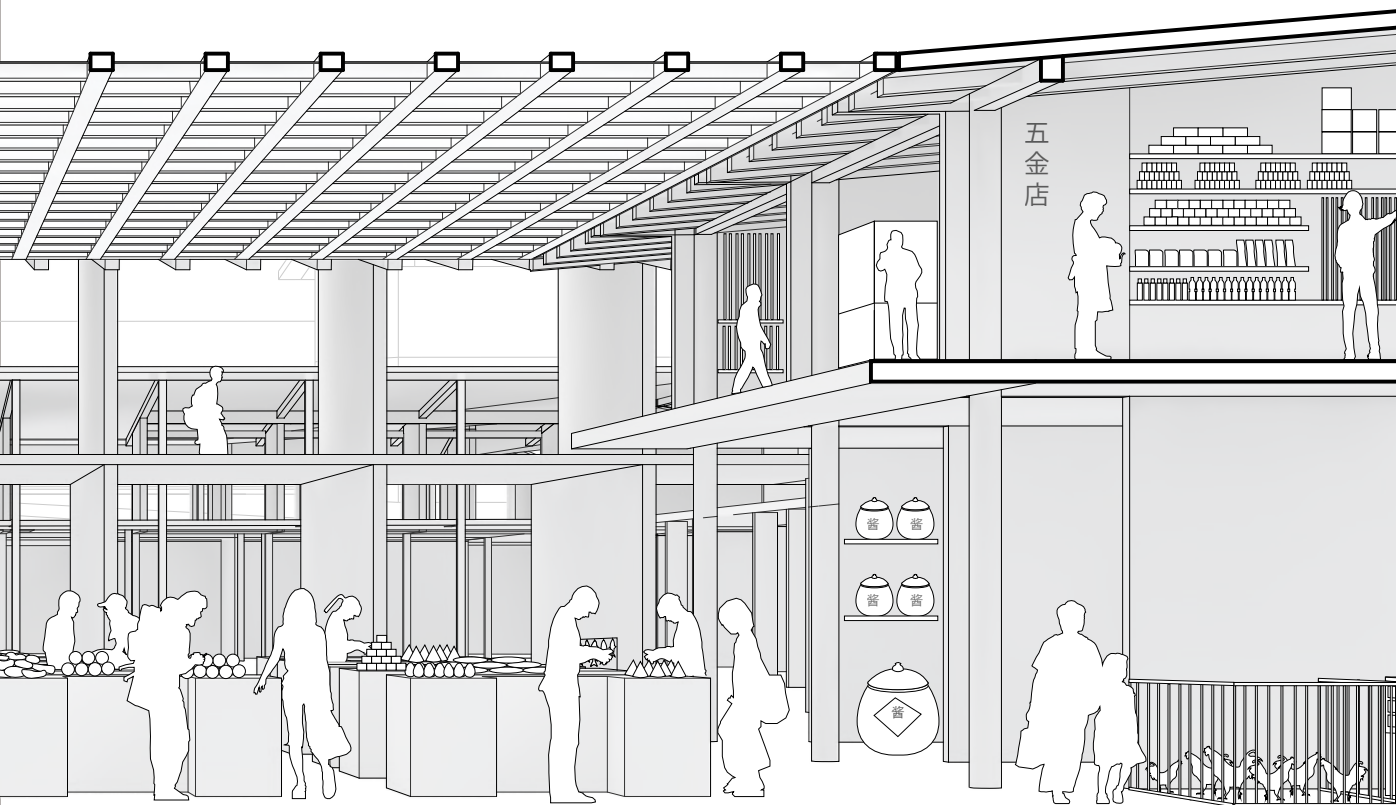
Fig 227, Section perspective of large outdoor open space allow restaurants set up temporary tables.

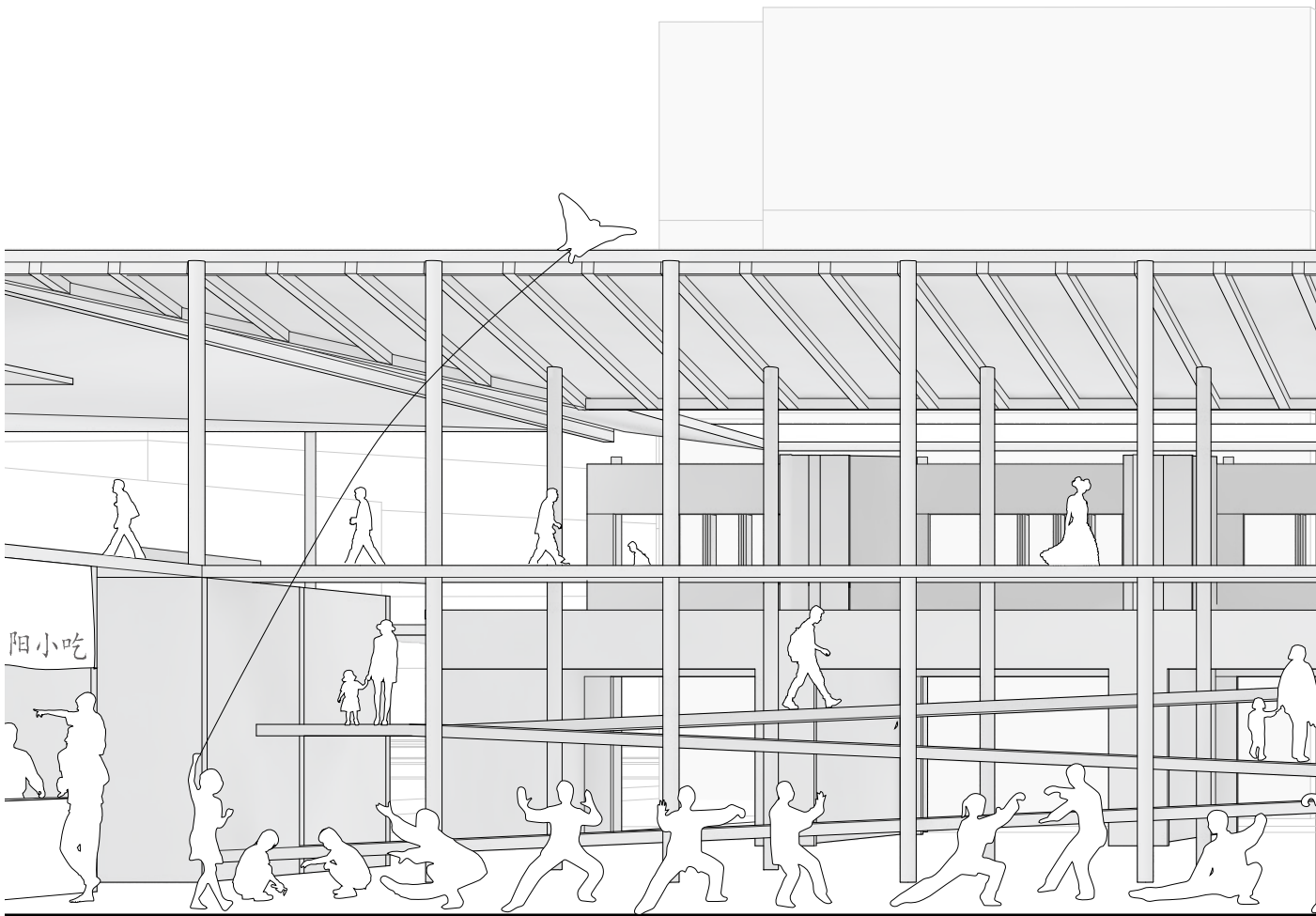
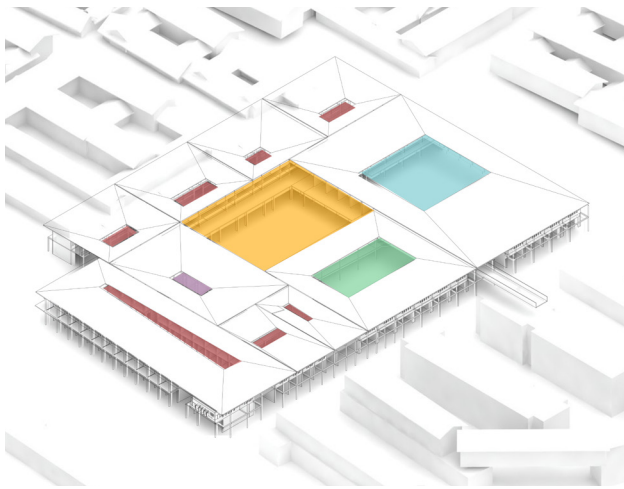




Fresh Food Market

Fig 228, Section perspective of fresh food market under covered space.





Central Open Plaza

Event, Exercising, Playground`

Fig 229, Section perspective of central open plaza allow different kind of events and activities happen simultaneously.

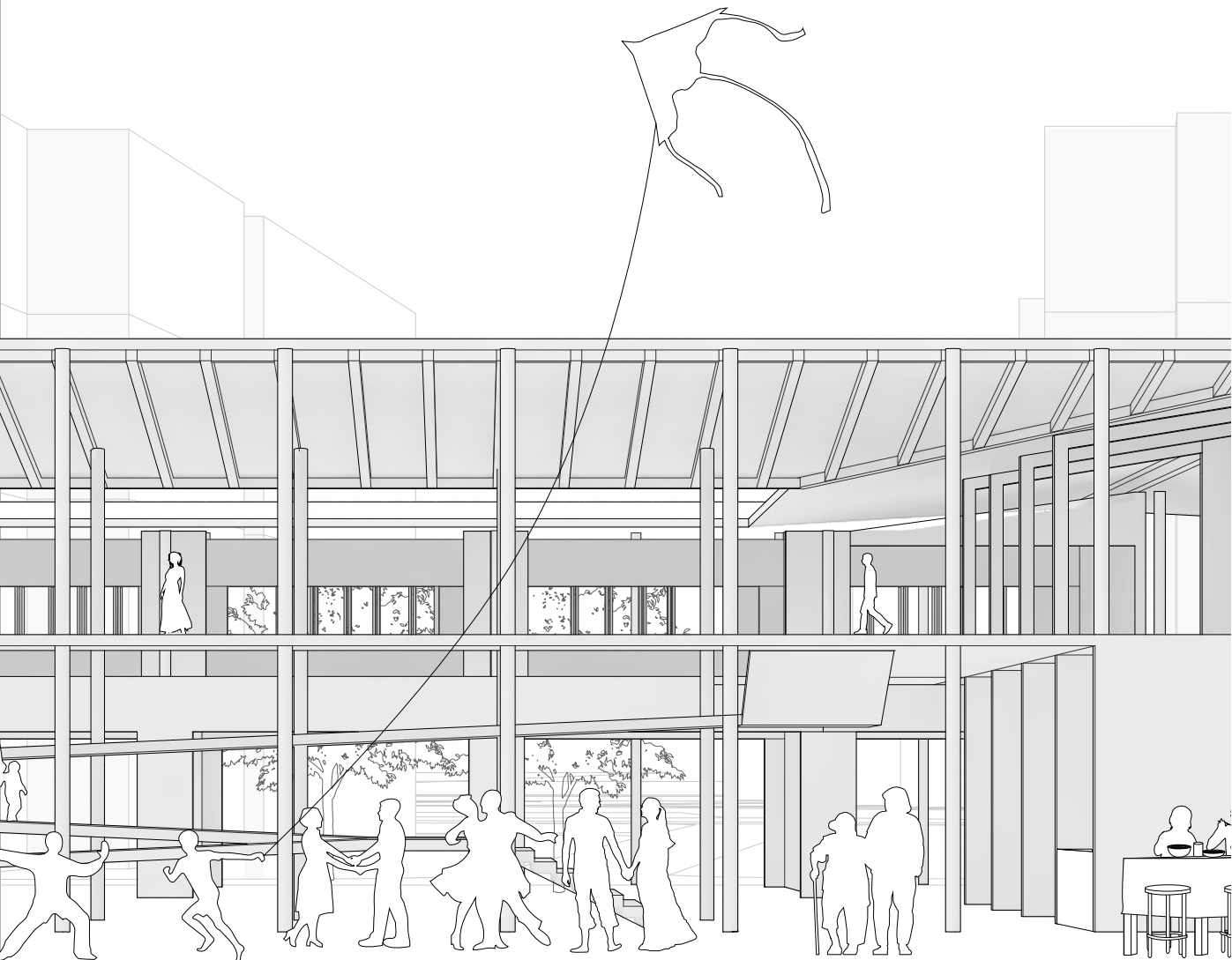






Fig 230, Central open plaza.





*Fig 231,
Residential units
provide a sense
of safety, and
allow pedestrian
walk through the
market 24/7.*



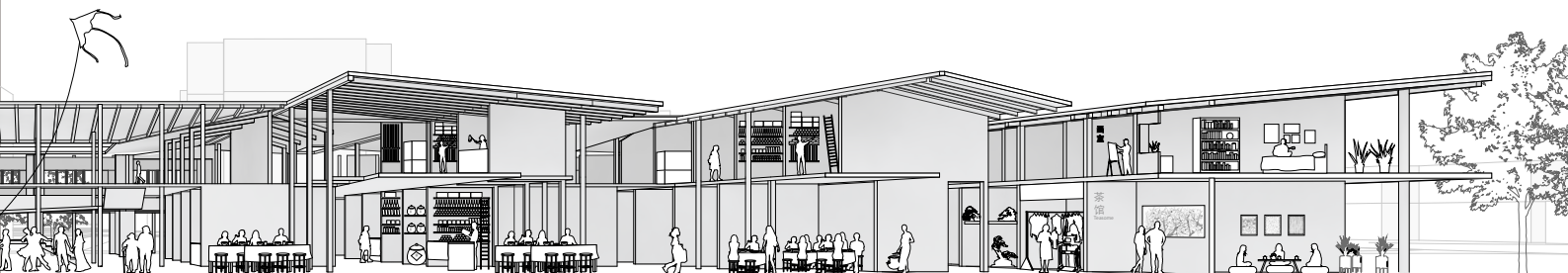
Fig 232, Skywell connects the building to nature. It filters light to both public and private living space, while allowing indoor connects with outdoor environment.



CONCLUSION

As a reaction of the sensation of losing connection with my own hometown, this thesis is an exploration of the relationship between city and its citizens. It has been driven by a celebration of urban daily life, and an appreciation of city's collective memory. Through the lens of everyday life, city's public spaces are instantly shaped and formed by its inhabitants. And the memory of a city continues when people

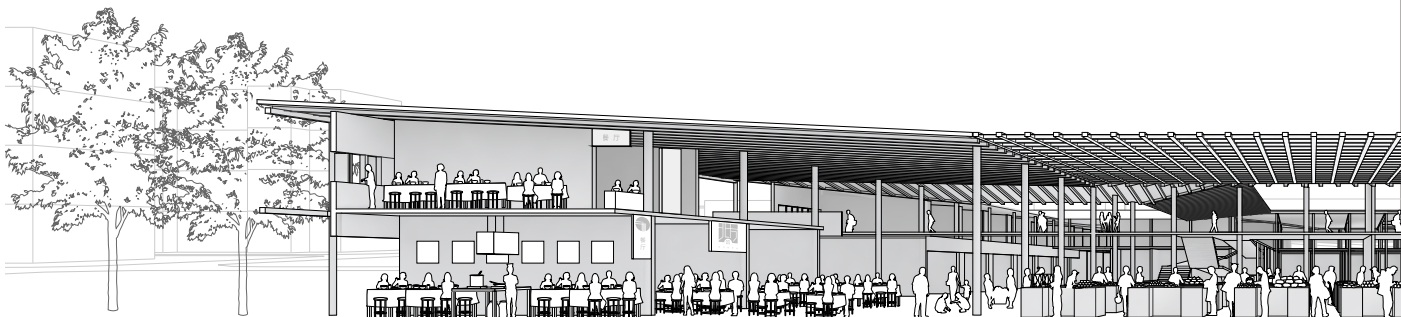
*Fig 233,
Market, Section
Perspective
Looking East.*



are able to actively participate in forming urban spaces.

This thesis is a study of public space that can enhance the idea of invisible city. Opposite to the visible city which is mostly composite by mass commerce, and it imposes a passive participated life, the invisible city is a place of inclusiveness, an open-ended space permits life of poetry and dreams, and an actively participated life style that contains city and its people's past, present, and expectation of future.

The final design project reflects the journey I have taken through the process of researching, refining, and creating the thesis. The quality of an invisible city can not be improved simply through designing one building, rather, it needs to be addressed through an urban scale, because ultimately the invisible city is about the connection between city and

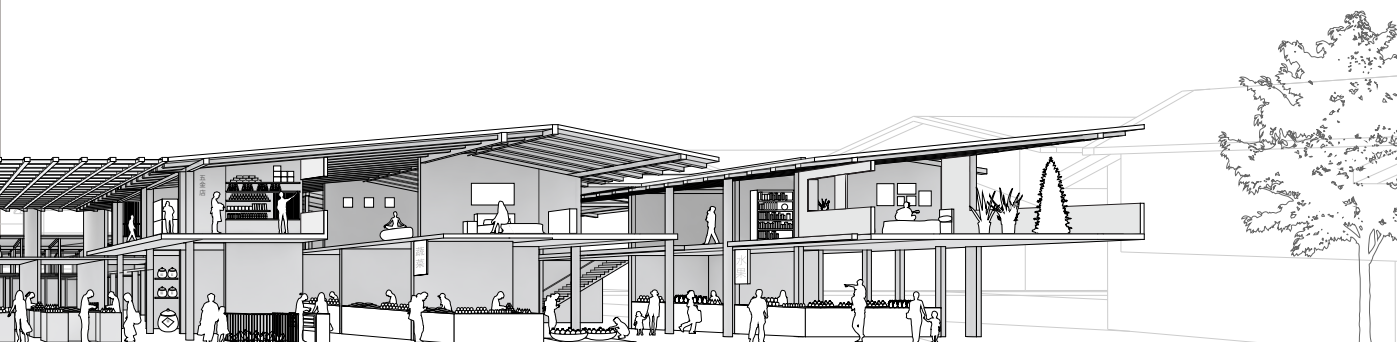


human life, and it requires a collective effort from residence, architects, urban planners, and city's decision makers.

The intension of the design was to create an opportunity for alternative thinking of urban growth in contemporary China. It explores the possibilities of an invisible city that the diversity and memory of a city can be preserved through the process of urban development. It is not the solution but allows for beginnings of dialogue.

At a distant scale, this thesis is also a conversation between me and my city, an understanding of architecture profession that I want to deliver, a memory that I want to record through this journey.

*Fig 234,
Market, Section
Perspective
Looking South.*



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work/10016529.article](https://www.architectural-review.com/buildings/simplicity-rather-than-showmanship-is-something-of-a-hallmark-of-liu-jiakuns-work/10016529.article).

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LIST OF VISUAL REFERENCES

All images created by author unless otherwise noted

Title Page

Hand-draw Yueyang Map, 2008, by Siyu Qu, Chun Tang, Lin Jia.

Introduction

- Fig 1, Demolition for urbanization, in Shanghai, China. <<http://www.aboluowang.com/2013/0409/297574.html>>
- Fig 2, Roadway expansion near Yueyang Pavilion in Yueyang, Hunan province, China.
- Fig 3, New residential towers raised in old district of Yueyang, Hunan province, China.

Visible Cities

- Fig 4, Shenzhen, which is a small fishing village 30 years ago, has become one of the most urbanized city in China. <<http://iguangming.sznews.com/images/attachement/jpg/site640/20121106/4437e641f13e1202cafe5d.jpg>>
- Fig 5, Result of Google image searching “Beijing”, icons and signs of Beijing.
- Fig 6, Result of Google image searching “Shanghai”, icons and signs of Shanghai.
- Fig 7, Result of Google image searching “Yueyang”, icons and signs of Yueyang.
- Fig 8, Replica of Eiffel Tower, built 2007, Tianducheng. <<https://thewheatandthechaff.wordpress.com/2013/08/01/counterfeit-paradise-chinas-copycat-manufacturing-culture-is-scaling/>>
- Fig 9, Chateau Laffitte, built 2004, Beijing. <Image source: Ibid.>
- Fig 10, Florentia Village, built 2011, Beijing. <Image source: Ibid.>
- Fig 11, Manhattan-style ghost city in Tianjin. Much of the construction ceased in 2010. <<https://qz.com/227271/chinas-replica-of-wall-street-is-full-of-half-built-deserted-skyscrapers-and-floods-regularly/>>
- Fig 12, Ancient-style replica, Bianhe Street, near Yueyang Pavilion. <http://blog.sina.com.cn/s/blog_4c225b9f0102vaju.html>
- Fig 13, Datong, in Shanxi province, had an ambitious plan to raze the old city and replace it with a new “ancient” Tang-style city to draw tourist groups to its inner city. <<http://www.skyscrapercity.com/showthread.php?t=1659657&page=3>>



- Fig 14, An old home in inner Datong is covered with placards announcing the new development. <<http://www.citylab.com/design/2014/06/the-strange-case-of-datong-chinas-half-finished-faux-ancient-city/372971/>>
- Fig 15, Gucci store in Taikoo Li Chengdu shopping precinct. <http://www.gooood.hk/sino-ocean-taikoo-li-chengdu.htm>
- Fig 16, Taikoo Li Chengdu shopping precinct. <Image source: Ibid.>
- Fig 17, Mid-high end commercial village, Taikoo Li, in downtown Chengdu, south China. <Image source: Ibid.>
- Fig 18, A private commercial street sits inside Vanke Garden City, a gated community in Shanghai. <<http://www.citylab.com/housing/2016/02/china-wants-to-ban-gated-communities/471018/>>
- Fig 19, A view to residential community, Xiang River Century City, from waterfront. <http://www.cscic.com/Page_H/News_Details.aspx?info_id=20110124285&menu_id=20111123012>
- Fig 20, A view to the Xiang River Century City, from highway.
- Fig 21, Satellite view of the Xiang River Century City, in Changsha, China.
- Fig 22, Ordos Kangbashi, was referred as “China’s largest ghost city.” <<http://www.zoover.nl/blog/algemeen/06-04-2015-spooksteden/>>
- Fig 23, City-scale of new constructions in China. <<http://thequietus.com/articles/17799-ghost-cities-of-china-wade-shepard-psychogeography-economics>>
- Fig 24, Unborn Cities: the large, brand-new cities of China, waiting to be populated. Photo by Kai Caemmerer, 2015 <<http://kaimichael.com/unborncities>>

Invisible Cities

- Fig 25, Skywell in Zhang Guying Village, Yueyang, Photo in 2016
- Fig 26, Four Generations Under One Roof. Lao She’s novel Four Generations Under One Roof, Illustration by Ding Cong,
- Fig 27, Tu Lou, a type of traditional residential building in Fujian Province, China. <<https://bother.tuchong.com/12484032/>>
- Fig 28, Life in Longchang Apartment, Shanghai. <<http://www.lvxbang.com/lvxbang/recommendPlan/detail.jhtml?recplanId=101320>>
- Fig 29, Life in Longchang Apartment, Shanghai. <Image source: Ibid.>
- Fig 30, Life in Longchang Apartment, Shanghai. <Image source: Ibid.>
- Fig 31, Community Restroom on each floor on 70s’ Danwei residential building. <<http://m.fangliju.com/news/657.html>>
- Fig 32, Daily life in 70s’ Danwei residential building. <<http://photocdn.sohu.com/20110831/lmg317933302.jpg>>
- Fig 33, Kids play in the hallway. <<http://www.cnhubei.com/xwzt/2008zt/hbgg30y/bhdss/zfbh/ttbq/200803/t266707.shtml>>
- Fig 34, Kitchen and extended living space in public hallway. <http://house.southcn.com/fcgd/content/2016-11/18/content_159910293.htm>
- Fig 35, Drying clothes and comforts on balconies, Wuhan, Hubei. <<http://www.l6899.com/a/yangguangzaixianqiyeyouju/20161127/59.html>>



- Fig 36, Daily life of going to market and buying fresh food. <<http://eyesonplace.net/2016/05/06/2128/>>
- Fig 37, Life in a courtyard of Hutong residence. <<https://jwill.tuchong.com/at/4393856/>>
- Fig 38, Small local business in a Hutong residence. <Image source: Ibid.>
- Fig 39, Street market on a Hutong lane. <Image source: Ibid.>
- Fig 40, Daily life on a Hutong street that has intimate scale. <Image source: Ibid.>
- Fig 41, Two friends play chess on a demolition site that used to be Hutong. <Image source: Ibid.>
- Fig 42, A man seat in front of his home on a Lilong lane. <http://travel.fengniao.com/slide/503/5035742_1.html#p=3>
- Fig 43, Clothes hang in a Lilong lane, and compose a music of life. <http://image.fengniao.com/slide/476/4761375_1.html#p=1>
- Fig 44, Daily life in a Lilong street. <Image source: Ibid.>
- Fig 45, Tianzi Fang, a touristic arts and crafts enclave that has developed from a renovated traditional residential Lilong, in Shanghai. <<http://nahaowan.com/zixun/6303.html>>
- Fig 46, Today's Tianzi Fang. <Image source: Ibid.>
- Fig 47, Hongkou old street, located in Shanghai, are surrounded by new development. <<http://news.sohu.com/20170112/n478483271.shtml>>
- Fig 48, Skywell Roof of Zhang Guying Village in Yueyang, China.
- Fig 49, A public square in front of Zhang Guying's Main gate. <http://travel.sina.com.cn/hunan_hunan_426-xiangqing-gonglue/>
- Fig 50, An aerial view of Zhang Guying Village. <http://www.yueyang.gov.cn/wgxj/8520/8528/8529/content_381865.html>
- Fig 51, Family members seat in a skywell space in a rainy day.
- Fig 52, A skywell space in Zhang Guying Village , in Yueyang.
- Fig 53, Skywell brings outdoor environment to indoor.
- Fig 54, All individual housing units are connected by narrow lanes, and they are under one big roof.
- Fig 55, Multiple skywell living spaces can be connected together and hosting community events when doors are open.
- Fig 56, Residences use skywell living space to make wines.
- Fig 57, An old woman seat in a skywell space.
- Fig 58, Skywell allow light filter into and fresh air ventilate through the living space.
- Fig 59, A public corridor connects every units and villagers in the Zhang Guying Village.
- Fig 60, Kids play in the public corridor.

The Exploration of Chinese Architects in China

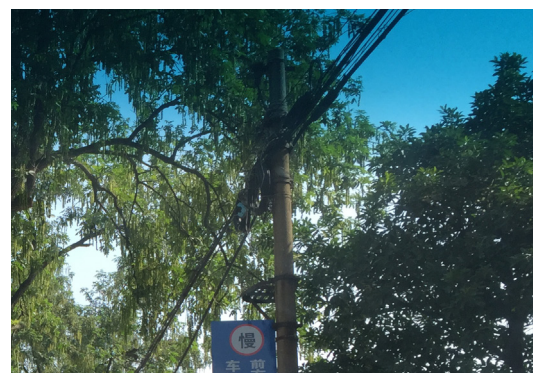
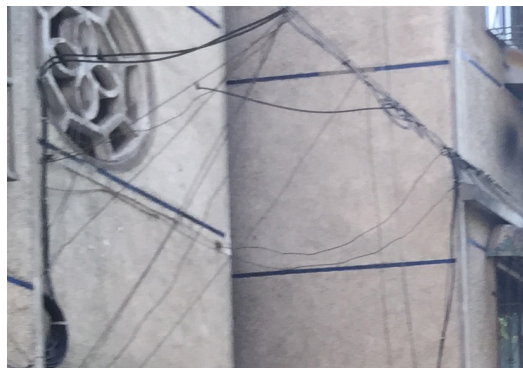
- Fig 61, Space under trees, The manmade forest dances with the natural woods in the park. Forest Building, Beijing, China by Trace Architecture Office. <<http://www.gooood.hk/forest-building-by-trace-architecture-office.htm>>



- Fig 62, New and old houses are growing together in Wencun Village, China. <http://weibo.com/p/230418673c8b9e0102wsl4?pid=PL_Official_CardMixFeedv6__4&feed_filter=2>
- Fig 63, Site Plan of new development in Wencun Village, Chin. <Image source: Ibid.>
- Fig 64, New houses along river. <Image source: Ibid.>
- Fig 65, Each new houses has its own characteristics. <Image source: Ibid.>
- Fig 66, A new bridge in Wencun. <Image source: Ibid.>
- Fig 67, Coutyard space. <Image source: Ibid.>
- Fig 68, Wencun's new houses. <Image source: Ibid.>
- Fig 69, Public spaces. <Image source: Ibid.>
- Fig 70, Wencun material palette. <Image source: Ibid.>
- Fig 71, Wencun material palette. <Image source: Ibid.>
- Fig 72, A kid hides behind a column in a porch of new house in Wencun. <Image source: Ibid.>
- Fig 73, Kids play in connected small streets in Wencun. <Image source: Ibid.>
- Fig 74, West Village is located in the heart of Chengdu. <<http://www.gooood.hk/west-village-basis-yard-by-jiakun-architects.htm>>
- Fig 75, Aerial view of West Village's running track for urban exercises. <Image source: Ibid.>
- Fig 76, Open bamboo space in West Village for community events. <Image source: Ibid.>
- Fig 77, Larger public spaces for theater use. <Image source: Ibid.>
- Fig 78, Courtyard Facade. Conspicuous stair case connects public and private spaces. <Image source: Ibid.>
- Fig 79, Shan Shui painting, by Luo Mu, Qing Dynasty. In traditional Chinese painting, buildings are often hidden and contained by natural environment. <<http://www.58pic.com/suca/10933831.html>>
- Fig 80, Visualization of Chaoyang Park Plaza development, by MAD. Buildings become the foreground. <<http://www.i-mad.com/work/chaoyang-park-plaza/?cid=4>>
- Fig 81, Fig 81, Aerial view of Harbin Opera House. <<http://www.i-mad.com/work/harbin-cultural-center/?cid=4>>
- Fig 82, Fig 82, Night view of Harbin Opera House. <Image source: Ibid.>
- Fig 83, Fig 83, Interior view of Harbin Opera House. <Image source: Ibid.>
- Fig 84, Fig 84, Interior view of Harbin Opera House. <Image source: Ibid.>

Yueyang

- Fig 85, Dong-Ting Lake, Yueyang. <<http://www.5fen.com/zixun/zainaer/4604.html>>
- Fig 86, Map of Hunan Province, China
- Fig 87, Map of China, Showing Travel Distance from Yueyang to Major Cities of China
- Fig 88, Area and Population of Yueyang Compare to US. Cities Seattle, WA, and Portland, OR
- Fig 89, Map of Yueyang City



- Fig 90, Yueyang Wind Rose. <<https://www.meteoblue.com/en/weather/forecast/modelclimate/29.386N113.096E>>
- Fig 91, Yueyang Average Temperatures and Precipitation. <Image source: Ibid.>
- Fig 92, Yueyang Baling Opera. <<http://www.khge584.com/index/5be06Zm15oiP.html>>
- Fig 93, Making Yuezhou Fan. <<http://sns.91ddcc.com/t/60673>>
- Fig 94, Yueyang Pavilion. <<http://blog.udn.com/m100227459/3255455>>
- Fig 95, Literature “the Story of Yueyang Pavilion” <<http://www.khge584.com/index/5bKz6Ziz5qW86K6w.html>>
- Fig 96, A view of Yueyang Pavilion, Dongting Lake, and Junshan Island. <http://hnyy.wenming.cn/wmbb/201609/t20160919_2833983.htm>

Invisible Logic

- Fig 97, A view of an informal construction attached to a residential building, in Yueyang, 2016
- Fig 98, Nolli Map of Rome, Partial, by Giambattista Nolli, 1748. <<http://ideal-city.tumblr.com/image/23051388926>>
- Fig 99, The Visual Form of Los Angeles as seen in the field, by Kevin Lynch. 1960. The image of the city. The MIT Press.
- Fig 100, An residential house changed its first floor to a Tailor’s shop, an informal expansion attached to its left side.
- Fig 101, The inhabitant who live in a residential building sell fresh food on street level.
- Fig 102, An informal entry built by the house owner to create covered outdoor space.
- Fig 103, An informal living unit in front of apartment building.
- Fig 104, An old lady seats underneath a tree.
- Fig 105, An old man seats in front of a wall of a residential building.
- Fig 106, Self built entry space.
- Fig 107, Half enclosed entry space.
- Fig 108, Two locals seat on an elevated floor around apartment building edge.
- Fig 109, An old man seats in between of two utility poles.
- Fig 110, A father seat on a public table with his kid.
- Fig 111, Locals are seat under tree canopies along street and chatting with friends and families.
- Fig 112, Locals play Ma-jiang under a self built covered space.
- Fig 113, Locals play Ma-jiang under a covered open space.
- Fig 114, Local elders’ leisure time in a covered street facing small Maj-jiang parlor.
- Fig 115, Friends chatting on a street facing coach with covered canopy above.
- Fig 116, Clothes hang on tree branches.
- Fig 117, Washing lines hang between trees and utility poles.
- Fig 118, Laundries on balconies of residential buildings.
- Fig 119, Washed shoes air drying on street ground.



Fig 120, An old lady checks in her air drying food.

Fig 121, Cloths hang between utility poles.

Fig 122, Self built fence for growing vegetables.

Fig 123, A land used for gardening allotments.

Fig 124, Locals grow their own food.

Fig 125, Locals grow vegetables on a land near street that not well maintained by the city .

Fig 126, Land behind the market are used for gardening.

Fig 127, Locals live in an attached structure of the market, they growing food and sell in the market.

Fig 128, Small business set up their booth in between two trees.

Fig 129, A delivery service built a informal structure attaches to living unit.

Fig 130, Self built covered space for extent commodities display.

Fig 131, Using cloth to cover commodities during closed hours.

Fig 132, A man is selling watermelon in his truck.

Fig 133, Small local business sell shoes and clothes that made in the 3517 factory.

Fig 134, Diagram of how vertical elements form spaces.

Fig 135, The foot print of a storage unit informally built based on the location of trees.

Fig 136, Washing lines hang among trees and utility poles.

Fig 137, Vendors set up their booth in between of tow trees.

Fig 138, A tree break up the wall built along it.

Fig 139, Diagram of how covered elements form spaces.

Fig 140, People playing Ma-Jiang under a covered space

Fig 141, Grocery shop owners extend their product display area to a covered outdoor space.

Fig 142, Tree canopy become the covered elements and create space for people.

Fig 143, A Street vendor created her business under a covered umbrella.

Fig 144, Diagram of how wall elements form spaces.

Fig 145, A man seats in front of a wall of a residential building.

Fig 146, An empty chair in a covered informal structure that against a wall.

Fig 147, An old lady seats near a wall and looks toward the street.

Fig 148, An empty chair near a wall of a residential building which will be demolished soon.

Fig 149, Aerial view of the old district of 3517 factory.

Fig 150, Works are busying on sewing and making orders in a workshop of 3157 factory.

Fig 151, A worker is sewing military use shoes.

Fig 152, A worker is making military use shoes.

Fig 153, A worker is folding rain coats.

Fig 154, A worker is exam and repair machines.

Fig 155, Light filtering to the warehouse of storing rubber goods materials.



- Fig 156, Yueyang Pavilion and 3517 district site map before 2005.
- Fig 157, No.6 Workshop Building of 3517 Factory, Photo in 2016
- Fig 158, Inside Factory Building, Photo in 2016
- Fig 159, 3517's Train Station, Photo in 2016
- Fig 160, Yueyang Pavilion and 3517 district site map showing high density and diverse functions before 2005
- Fig 161, Old movie ticket illustrated the 3517 stuff club building that has been demolished.
- Fig 162, A typical old office building with each unit door opens to a public corridor on every floor.
- Fig 163, A old brick residential building that will soon be demolished in the city's Yueyang Pavilion area development plan. Photo in 2016.
- Fig 164, Yueyang Pavilion and 3517 district site map showing functions after 2005.
- Fig 165, An old residential building of the 3517 factory will be demolished.
- Fig 166, The abandoned railways in 3517 factory compound.
- Fig 167, Some residential buildings inside the 3517 factory compound has been demolished.
- Fig 168, A view of the newly built boulevard towards the west where Yueyang Pavilion locates.
- Fig 169, Fig 169, A view of the newly built boulevard towards east side of the city.
- Fig 170, Yueyang Pavilion and 3517 district site map showing existing functions and informal changes after 2005.
- Fig 171, Self built informal structures accommodated many local business along the street to food market.
- Fig 172, An informal canopy of a local restaurant.
- Fig 173, Residence of the 3517 compound walk through the local business street daily to get their necessities.
- Fig 174, Open space inside the food market for loading goods and mobile vendors.
- Fig 175, Residence buying their daily fresh food in the retails space of the local market.
- Fig 176, Different kinds of local business and activities can be found near the market, such as car-washing, barber shops, and cellphone repairing store.
- Fig 177, Different size of open spaces connect people to the food market, a sign of "Honest, Fair, Thriving Market" showing on an entry.
- Fig 178, A row of local restaurants situated in temporary structures near the food market .

Urban Development of Yueyang

- Fig 179, Dong-Ting Lake, Yueyang Pavilion, and the city, by Shengbing Yue, in 2008. <<http://citylife.house.sina.com.cn/detail.php?gid=66913>>
- Fig 180, Satellite Map of Yueyang City
- Fig 181, Yueyang Dong-Ting Lake Bridge. <<http://m.330113.net/read/1130583401/>>



- Fig 182, Yueyang Chenglingji Port. <http://www.hunan.gov.cn/zw/hnyw/tpxw/201603/t20160302_2923506.html>
- Fig 183, Yueyang South Lake Square. <<https://lvyou.baidu.com/yueyangnanhuguangchang>>
- Fig 184, Dragon Boat Sculpture in front of Yueyang East Railway Station. <http://www.yueyang.gov.cn/csfm/content_645400.html>
- Fig 185, Yueyang Pavilion Scenic Park Scope before 1990s
- Fig 186, ueyang Pavilion Scenic Park Scope in 2006
- Fig 187, Current Yueyang Pavilion Scenic Park Scope
- Fig 188, Proposed Future Scope of Development near Yueyang Pavilion Scenic Park
- Fig 189, Satellite Map, East of Yueyang Pavilion Area in 2005
- Fig 190, Satellite Map, East of Yueyang Pavilion Area in 2011
- Fig 191, Aerial Render of Proposed Yueyang Pavilion Area Urban Development, Early Version. Jihua 3517 <Yueyang Culture and Tourism Urban Planning, Changsha Architectural Design Institute Company>
- Fig 192, Aerial Render of Yueyang Pavilion Area Urban Development, Proposed in 2016. <Yueyang Pavilion District Cultural and Tourism City Planning, May, 2016>
- Fig 193, Aerial Render of The Ancient-Style Commercial Village and Pedestrian Axis in front of Yueyang Pavilion, Proposed in 2016. <Ibid.>
- Fig 194, Perspective View of A Typical Pedestrian Street inside the Ancient-Style Commercial Village, Proposed in 2016. <Ibid.>
- Fig 195, Aerial View of Military Factory Theme Park, Proposed in 2016. <Ibid.>
- Fig 196, Aerial View of New Residential Towers locate on Northeast of the Jiu-Hua Mountain Urban Renewal Zone, Proposed in 2016. <Ibid.>
- Fig 197, City's Proposal of Demolition Area on Existing Vicinity Map of Jiu-Hua Mountain Urban Renewal Zone in Yueyang Pavilion Area
- Fig 198, City's Proposal of New Road System in Yueyang Pavilion Area
- Fig 199, City's Proposal of New Zoning in Jiu-Hua Mountain Urban Renewal Zone of Yueyang Pavilion Area
- Fig 200, City's Proposal of New Site Plan in Jiu-Hua Mountain Urban Renewal Zone of Yueyang Pavilion Area
- Fig 201, City's Proposal of New Master Planning Plan in Jiu-Hua Mountain Urban Renewal Zone of Yueyang Pavilion Area

Invisible City Interventions

- Fig 202, Yueyang Pavilion Area Existing Site Map
- Fig 203, City's proposal of demolition plan in Yueyang Pavilion distric.
- Fig 204, Invisible City's proposal of keeping existing fabric.
- Fig 205, City's proposal of demolition plan in Yueyang Pavilion distric.
- Fig 206, Invisible City's proposal of keeping existing fabric.



Fig 207, City's proposal of demolition plan in Yueyang Pavilion district.

Fig 208, Invisible City's proposal of keeping existing fabric.

Fig 209, City's proposal of demolition plan in Yueyang Pavilion district.

Fig 210, Invisible City's proposal of keeping existing fabric.

Fig 211, City's proposal of demolition plan in Yueyang Pavilion district.

Fig 212, Invisible City's proposal of keeping existing fabric.

Fig 213, Urban Interventions.

Fig 214, Multiple pathways connect both visitors and locals to the Yueyang Pavilion. Urban intervention detail drawing.

Fig 215, Existing fabric and functions are preserved, while new mixed-use development bring energy to the site. Urban intervention detail drawing.

Fig 216, New market continue serves locals daily, while create new destinations for visitors. Urban intervention detail drawing.

Fig 217, New functions give new life to the old factory buildings, and connect larger group of people to the site. Urban intervention detail drawing.

Fig 218, Public movement of flow

Fig 219, Concrete wall

Fig 220, Wood frame

Fig 221, Linked bridge

Fig 222, Skywell typology roofscape

Fig 223, Axon view of the market

Fig 224, View of entering market from new foot bridge.

Fig 225, Section perspective of living unit on top of market retail space.

Fig 226, Section perspective of covered outdoor spaces connect different business together.

Fig 227, Section perspective of large outdoor open space allow restaurants set up temporary tables.

Fig 228, Section perspective of fresh food market under covered space.

Fig 229, Section perspective of central open plaza allow different kind of events and activities happen simultaneously.

Fig 230, Central open plaza.

Fig 231, Residential units provide a sense of safety, and allow pedestrian walk through the market 24/7.

Fig 232, Skywell connects the building to nature.

Conclusion

Fig 233, Market, Section Perspective Looking East.

Fig 234, Market, Section Perspective Looking South.

Ending Images

Recording the City, June 2016

