

THE NEW ARCHITECTURAL TREND IN CHINA:  
THE HERITAGE AND DEVELOPMENT OF TRADITIONAL CULTURE

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# The New Architectural Trend in China: The Heritage and Development of Traditional Culture

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## ABSTRACT

After the failed Anglo-Chinese War of the 1840s, China was forced to open to international trade. China is still borrowing developing experiments from the West in the distinctive Chinese cultural context. By doing so, a cultural conflict between China and the West leads to a chaotic time in art and architectural design. How can Chinese architects, educated and working globally, identify Chinese culture when designing and building today's China? New buildings in the Chinese urban condition mostly constructed by international firms, which is leading to the lack of local unique replaced by global similarity. To solve this architectural problem, well-known Chinese architect Liang Sicheng (1901-1972) first proposed the grammar and language of buildings and transferability of different local architectural language. He is the founder of Chinese modern architecture and city planning. His ideas still influence most Chinese architects and architecture students. According to Liang Sicheng's study, the pattern language abstracts from the traditional architecture to state Chinese culture as a valuable tool for future Chinese architectural design.

This paper begins with a brief discussion of the current cultural situation in China, and based on the case studies of Chinese buildings that attempt to combine vernacular culture with contemporary buildings, this paper suggests the trend of "New China" architecture style will lead to a great transition of Chinese contemporary buildings. Using the unique Chinese elements from the traditional architecture to reconstruct new Chinese buildings, this experiment will also contribute to the worldwide architectural design for a unique national identity.

## KEYWORDS

Regionalism, Chinese History, Chinese Architecture

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## INTRODUCTION

Beijing was always considered a magic city in China. In the past twenty years, I have experienced great changes in this ancient imperial city, which is gradually becoming a global metropolitan center. The function of the city is becoming very complex in order to address the great increasing population, urbanization is growing intensely, and contemporary skyscrapers are breaking this old city's texture. Recently a new description of this global city is proclaimed: "Beijing, a city being lost before our eyes"<sup>1</sup>. The buildings in Beijing are no longer showing the abundant historical culture. When it is developing in a high speed, most experiments are borrowed from Western developed countries. Copying and imitating western ways in Chinese cultural context creates chaos in modern and contemporary architecture and art scenes in China. Continuity, evolution, foreign influence and the presence of the state most influenced the history of modern and contemporary Chinese architecture. After 2008, many different architectural styles appear in this amazing country. Furthermore, without fully understanding of western culture, local residents cannot accept today's new buildings. They are calling for a new style to identify Chinese culture. From the 1950s, Liang Sicheng has pointed out the language and grammar of buildings and the transferability of different local architectural language.<sup>2</sup> However, this topic of using traditional elements in architecture was set aside for the Chinese economic and political intentions. During the ten-year Culture Revolution (1966-1976), China suffered greatly from the ten-year disaster especially in the unique cultural development for most Chinese traditional culture was abandoned for politic intend. 1978 for the economic intention, the reform and opening bring the high technology and idea from the outside world. Compared with other countries, China seems pedantic and useless. After the 2008 Olympics in Beijing, China showed its powerful wealth and culture to the world. More Chinese architects as well as other Chinese artists are beginning to look back to find the root of traditional culture and adapt it to today's life. Developing the traditional culture is becoming a new chapter of Chinese development. Reconstruction of Chinese culture to strengthen the national identity is the urgent concern of contemporary China.

A series of architectural traditions evolved in China's history timeline. What traditions remain relevant for today's life? How it can be applied to current and future building design? How can architects identify the culture of China in the current architectural method? China is a part of the world. Improving Chinese architectural design should be an experience to contribute to the whole world. Identifying the culture is a global architectural problem. Answering these questions is not only enriching Chinese architectural language but also worldwide cultural aspects.

## METHODOLOGY

This paper studies Chinese history (including modernization progress), and finds the difference and connection between today's and past architecture. It is outside of the scope of this research to study all historical Chinese architecture styles, as in China there are numerous styles from north to south based on the local climate and economy. This paper concentrates most on the historical record of Beijing city. Here will test series Chinese billings that attempt to combine vernacular culture with contemporary buildings. Based on the cases study finds what architectural methods have been used and what needs to be strengthened in future design project identifying the new China.

## HISTORY AND MODERNIZATION

Chinese culture has a long history and it still influences today's Chinese life. Confucianism is considered the most important Chinese religious roots and through the Han Dynasty (206 BC- 220AD) it was always the main thought governing the whole society. Like other countries, Chinese history was accompanied with the wars and conflicts. Confucianism shows its adaptability and governmental power. Chinese culture still keeps its unity and continuity. Considered on the long-term stable social cultural condition, without outside conflicts, Chinese culture has not changed so much. That means Chinese culture developed has some limitation. It is ridiculous to just forsake or follow all the Chinese tradition, for its strong existing power and developed limitation.

In the long history of Chinese traditional culture government, Western technology and

culture are novel and attracted most Chinese eyes. In the 18th century a visual breakthrough could be discovered in Chinese drawing and furniture; however, this change only occurred on the surface of Chinese culture aspect. After the failure of the Anglo-Chinese War in the 1840s, China was forced to open to international trade. In order to keep up with the developing pace of the world, China looked to the West. In later Qing Dynasty (1644-1912), China raised the idea of "Chinese Learning for Fundamentals, Western Learning for Practical Application".<sup>3</sup> However, after often experiencing the failure of wars, Chinese cultural dominance declined and Chinese feudalism was overthrown in 1912 and a new political institution adapted in China. After the World War II, Chinese modernization gradually settled into a pattern. Cultural Revolution<sup>4</sup> (Wen Hua Da Ge Ming, 1966-1976). This movement significantly affected the Chinese society and most Chinese traditional culture was abandoned for politic intend and following the Soviet. After the Cultural Revolution, China faced a big problem of economic development. In order to solve this problem, China started to adopt the policies of reform and opening. Globalization in China increased at high speed and International architectural works have emerged dramatically in recent years, as the greatest economic boom leads to the increasing visibility of China.<sup>5</sup> In the 21th century, China is one of the heated topics on television and the center figures of newspaper and magazine, because of the Chinese super speed in developing and constructing. The New China phenomenon extracts great attention from the world.<sup>6</sup>

### THE TYPICAL CHINESE TRADITIONAL ARCHITECTURE

For the typical Chinese traditional architecture, this paper focus is on the highest population area, the east part in China (the yellow part in Figure 1), and more specifically, the central plains (the orange part in Figure 1), which is always considered as the center part in ancient China. In this area based on the historic record, Chinese traditional architecture, like the traditional culture, does not have so many changes in this long historic progress.



Figure 1: Study Area

Confucianism focuses on the concept of "Li", which is a type of Chinese feudalism social system. This reflects from the major feature of Chinese antique architecture, the strict hierarchy based on the collective situation. Supported by the different classes in society, the buildings have unique requirements of sizes, architectural features, and architectural forms. Chinese traditional architecture shows its flexibility and adaptability to address the contradictions and difficulties. In order to protect inhabitants from war, enclosed spaces were used in building design and gradually developed to a matured form, the traditional courtyard houses.

Unlike other pre-modern world architecture, Chinese ancient architecture rarely used stone or other durable materials. The buildings constructed before 15th century seldom exist in China. Why are all Chinese buildings wood construction? Chinese uses wood-structure for its best fit to their understanding of architecture. Chinese buildings focus on the human scale for Chinese thought does not consider architecture as a memorable subject that needs to stand for a long time. A short construction time is the main points of ancient Chinese architecture.<sup>7</sup> It is not difficult to notice that the human scale and modular design are the basic ideas in today's building. Chinese traditional architecture cannot be seen as an isolated part in architectural history and it has some connection with today's architectural theories.

What traditions remain related to today's life? How can architects use Chinese tradition as an architectural method complies with the Chinese character, habits and tastes? Numerous attempts appear in China. Contemporary Buildings in Beijing and Shanghai cities are good examples to explain today's Chinese architecture situation.

### INTERNATIONAL DESIGN IN CHINA

While there exists no conclusion of how to develop and protect the inner city of Beijing, the National Centre for the Performing Arts was built beside the Forbidden City (Figure 2). Forbidden City is located in the center of Beijing city, which was built in the Ming dynasty (1368-1644) and was developed during the Qing dynasty (1644-1912). It used to be considered as a symbol of the supreme power of the feudal society and today it is the honor of Beijing city. Most local residents and architects think the design totally disrupted the surrounding environment of the Beijing city. Although the design reflects an idea about the concept of World according to Chinese aspect philosophy as the circle represents the heaven and the square the earth, the Theater's entrance through an underground procession makes most people connect this building with a tomb, which is the only entrance through the underground in Chinese architecture.



Figure 2: Forbidden City and the National Centre for the Performing Arts

In recent years, building the highest skyscrapers seems a way to show super wealth and high technology. And also for its high density, the skyscrapers are one of the most important methods to afford the increasing population. There are many skyscrapers built or under construction in China. Most buildings in Beijing are glass boxes like other cities. In 2008, the CCTV headquarters changed this trend and gave a new idea for buildings design; the competition for height transformed to the competition for visual attraction. This

building seems to present the idea of a cycle that may have some connection with Buddhism. However Beijing residents with the different cultural background, this building does not win the most favorable comment and recognition in China. Especially after the fire in 2009, this CCTV building became a satire of the government. Chinese government paid high price for this building but no residents really enjoy this design.

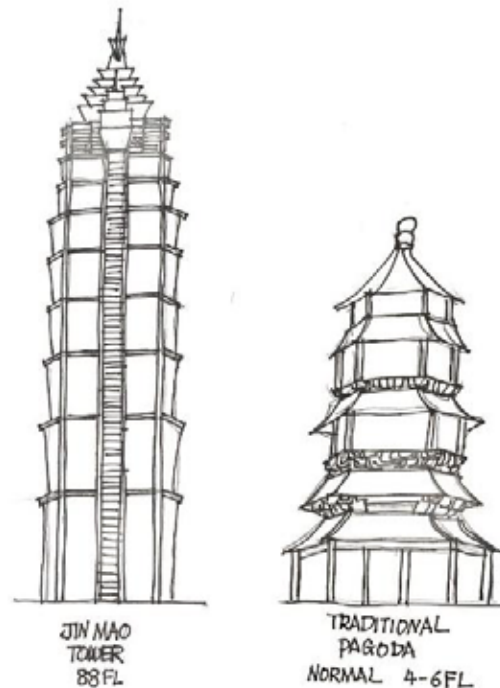


Figure 3: Two Different Scale

Shanghai Jin Mao Tower in 1999 successfully and creatively shows the potential of using Chinese culture in the contemporary buildings. This Tower is located in the Lujiazui area, which is considered as a connection between China to the outside of World and a symbol to identify the new Shanghai. Although this building is designed by a western firm (Skidmore, Owning, Merrill, SOM), the basic concept comes from the traditional Chinese architecture (Figure 3). As the typical height of a Chinese pagoda is around 4-6 floors, how can it be used in an 88 floors height skyscraper? SOM shows their solution. The Shanghai Jin Mao Tower is divided into several parts and each part uses simple architecture language to show the complex structure in Chinese ancient buildings. The pagoda is



originally built for Buddhists in early China (B.C. 220 – 220, Han Dynasty), and 13 is a meaningful number in Buddhist culture. It is easy to see 13 levels from outside of the Shanghai Jin Mao Tower.<sup>8</sup> It stands for the circle of life, and also for early pagoda when Buddhists came to China, 13 is the most common number of stories. For most Chinese building built in wood, Chinese Buddhist pagoda changed the common heights to 4-6 floors. Seldom do Chinese residents notice these special numbers in the contemporary tower. Another wonderful connection of traditional buildings in this tower is its plan layout. As the ancient Chinese buildings already used the modular in historic work for the quick construction in wood, it is not difficult to transfer it into a new building plan. This tower does a wonderful job to link the ancient Chinese building into a new building. The connection to traditional design just occurs in its outside design, but standing beside the Huang Pu River, this connection is seldom noticed.

### CHINESE ATTEMPTS

In later Qing Dynasty (1644-1912), Chinese government wants to learn high technology from western, sending many students to study abroad. After 1912, when the first generation of architects educated outside of China returned from studying, they attempted to create Chinese own buildings to against European colony. In the 1950s Liang supported the Chinese national style, adding the Chinese idiosyncratic roof, which was considered as a wonderful part in ancient buildings, became a way to address the differences between Chinese and Western building design. Further it becomes the main style in China to present Chinese modernism. However, Chinese and western architectural developing is totally different in cultural context and building scales. This combination in some projects, especially when it applied to the high-rises, seems really strange. Also, these style of projects nearly failed because of the high price but useless roof.

In 1980s, a new attempt, Ju'er Hutong, to show the historic culture occurs, designed by Professor Wu Liangyong<sup>9</sup> a follower of Liang Sicheng (Figure 4). This is an effective approach to rehabilitating the inner-city of Beijing in design and policy implementation as

well as an adaption of courtyard houses of residential environments.<sup>10</sup> This project is based on the Beijing's traditional urban structure and typical courtyard house concept, and attempts to merge the social, economic and cultural aspect together. However this design seems too old now and the room size does not meet the requirement of today's life. Without enough area of kitchen and bathroom, most local residents prefer to lease the house in order to get high paid.



Figure 4: Ju'er Hutong

Tulou Affordable Housing (2012) is another project trying to make some connection with traditional Chinese architecture (Figure 5). Design firm Urbanus abstracts the example from the traditional residential typology in Fujian Province, named tulou. Tulou is the highest density residential house in Chinese architectural history (Figure 6). Urbanus using this shape try to develop this sample into today's life. However, this project does not give sufficient reason to show the advantages of this attempt, and this arrangement does not reach the high density like other high-rise residential. It seems as if the designers and client just found this forum and try to make it a success. Although the architects want to move this design to other cities in China, with the distinct climate type in China, it cannot be built in most area for the Chinese building codes, which required at least 1 hour direct sunlight for residential spaces in winter solstice. Most Chinese cities just can get direct sunlight from south, west and east.



Figure 5: Tulou Affordable Housing

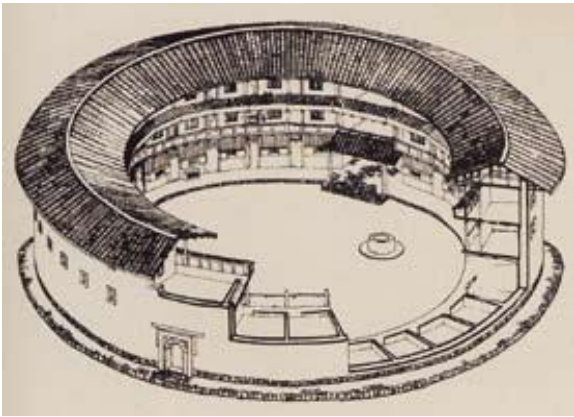


Figure 6: Traditional Fujian Residential – Tulou

Between 2000 and 2001, Charlie Q.L Xue did a questionnaire survey among 1000 architects in China.<sup>11</sup> It shows that the architects' work is influenced by the poor social work environment in China. Most Chinese architects think the present Chinese bidding system cannot provide a fair way to choose the best project scheme. Most of the time the final project chosen is not the best one but related to the preference of the leader and there are many private deals made backstage. Another factor influences the performance of architects is the limited time and payment of design. As Chinese economy rapidly grows in China, the government wants to build the cities quickly at a low price. They just send the photo they prefer to the architecture office. Without enough time and funds, most office would like to imitate existing design in the Western world as well as the traditional sample in China.

## I.M PEI

I.M PEI is an American Chinese architect. With a full understanding of Chinese culture, his projects in China are always considered as signs of future architecture design in China. Suzhou Museum (2006, Suzhou) is one of the most successful projects to connect Chinese tradition and modern design in China. The Suzhou Museum (Figure 7) is just nearby a Chinese traditional Qing Dynasty house called "Zhong Wang Fu", which is an additional exhibition area for the Suzhou Museum. Although it might be easy to use the Chinese Classical Garden to design this museum, PEI chose to combine the modern work with the ancient language based on the traditional Suzhou residential house. In PEI's design, based on these two simple shapes and the three different textures he created a symbol of the typical traditional Suzhou house. In this building, you can imagine the black color as the roof of the house and the white color as the walls. Then a small traditional village in the South area of China will appear, recalling the black roofs and white walls settled in the different level in order to adapt the local site.



Figure 7: Suzhou Museum

The Bank of China Head Office (1989) in Beijing is another project of I.M. PEI. Although it seems like a totally contemporary building settled on Chang'an Avenue, but PEI used several concepts chosen from Chinese culture to meet the bank requirement. The center yard is the most common architectural language in Chinese buildings design. The north of the buildings is the most important area in this building, for the north area is always the important parts in the traditional Chinese buildings. Most capital cities during the ancient time were located in the north. The king is facing to the south seems like governing all the country. Thus, the north side is mainly part of Chinese urban and buildings design. Also PEI added some circle shapes to present the sky and the square the earth. (Figure 8)



Figure 8: Inner of Bank of China Head Office

### PROTOTYPE AND PATTERN LANGUAGE

In 1954, Liang Sicheng first proposed the transferability of different local architectural language in his article "Features of Chinese Architecture".<sup>12</sup> He produces evidences of the connection and translation between Chinese and Western architectural language. This theory is the lamp of Chinese architectural development. During a long time of developing, in 2010, Wang Kai raises the Prototype theory which is a new approach for a new Chinese style.<sup>13</sup> After collected a great number of Chinese traditional space prototypes, extracting and simplifying the prototypes rebuild traditional space in

contemporary method. This approach built a further 2d and 3d Chinese pattern language. In this paper, the pattern language is the same as the idea of "architecture, building and planning"<sup>14</sup> as described in the book of Christopher Alexander. The prototype abstract from traditional Chinese ancient architecture can be a meta-language and develop to be a new pattern. Using the new pattern combined with the concept of architects a new prototype of Chinese building will occur. Combined prototypes and pattern language together could figure out a way to explore and solve how Chinese traditions can be applied to current and future building design. This stating the symbol of China will be a useful instrument for future attempts.

### DISCUSSION

For today's globalization, why do Chinese architects need look back to the history? Because of globalization, most Chinese urban areas lost their local unique identity for global similarity. If all the buildings in the world are like big glass boxes, what a painful and boring life we will have. Every country, every area has a unique culture and taste, and architecture cannot be separated from its context. The architects should be concerned about the local culture instead of only applying other countries language to design projects.

Furthermore, local traditional buildings are experiments over long periods for time to adapt the nature. A global ecological architect, Kenneth Yeang cited the courtyard in Beijing: "by integrating designing of the structures in a courtyard in light of the local ecological conditions, you'll build something that is warm in winter and cool in summer even though not much energy is used. That is what I have worked persistently to achieve."<sup>15</sup> Zero-energy building is today's requirement of building design. The historical design could give many ideas to achieve this goal, why, then, do the architects seldom learning from the past in their design? Most buildings in the Beijing city are high rise built-in glass and concrete. Unconsidered surrounding, buildings seem isolated and they perform a disorder street

### CONCLUSION

In recent years, Chinese government has formulated a series of laws, regulations and

rules to protect and develop Chinese traditional culture. The trend of Chinese traditional culture combining contemporary architecture style should lead a great transition of Chinese contemporary buildings. Do all the buildings in China need to be the same style? Although the Chinese people speak Chinese, it is still difference between Mandarin and Cantonese and also everyone has his or her own speaking habit. Architecture is the same. Every area has their own culture, although they are all Chinese culture. Every architect has his or her comprehension of design. This paper does not insist that every building should be in the same Chinese style, but it could use some architectural language which shows Chinese culture to show the Chinese identity.

## NOTES

<sup>1</sup> Hahn, Thomas H. Foreword. *Beijing Record: a physical and political history of planning modern Beijing*, by Wang Jun. (New Jersey: World Scientific, 2011), xi-xv.

<sup>2</sup> Wang, Jun. *Beijing Record: a physical and political history of planning modern Beijing*. (New Jersey: World Scientific, 2011), 101-107

<sup>3</sup> Zhong Ti XI Yong. This is the mainly idea in later 19th century in China.

<sup>4</sup> Cultural Revolution (Wen Hua Da Ge Ming, 1966-1976). This movement significantly affected the Chinese society and most Chinese traditional culture was abandoned for politic intend and following the Soviet.

<sup>5</sup> Zhu, Jianfei. *Architecture of Modern China: A Historical Critique* (London: Routledge, 2009), 5-10.

<sup>6</sup> Greco, Claudio and Santoro, Carlo. *Beijing: The New City*. (Milano: Skira, 2008), 1-5

<sup>7</sup> Li, Yunhe. *Cathay's Idea: Design Theory of Chinese Classical Architecture* (Tianjin: Tianjin University Press, 2005), 29-34.

<sup>8</sup> SOM and Jin Mao Tower (Part 2). CCTV International (2008). [http://www.cctv.com/program/e\\_documentary/20081224/105102.shtml](http://www.cctv.com/program/e_documentary/20081224/105102.shtml)

<sup>9</sup> Wu Liangyong is a famous professor in Tsinghua University, who founded the Department of

Architecture at Tsinghua University. Wu is one of the central figures in China's urban development and revitalization, and he also founded the China Academy of Architecture and The China Urban Scientific Research Association.

Wu Liangyong. School of Architecture, Tsinghua University. <http://www.tsinghua.edu.cn>

<sup>10</sup> Ju'er Hutong Courtyard Housing Project, Beijing. World Habit Award.

<http://www.worldhabitatawards.org/winners-and-finalists/project-details.cfm?lang=00&theProjectID=119>

<sup>11</sup> Xue, CQL. Chen, XY. "Chinese Architects and Their Practices—an Analysis of a Questionnaire Analysis" *Journal of Architectural and Planning Research* 20, no. 4: 291-306. Social Sciences Citation Index, EBSCOhost (accessed March 18, 2015).

<sup>12</sup> Liang Sicheng. "Feature of Chinese Architecture" Vol. 5 of *The Complete Works of Liang Sicheng* ed. Ma Hongjie (Beijing: China Construction Industry Press, 2001).

<sup>13</sup> Wang Kai. "Meta-Language Space Deduction of Chinese Traditional Architectural Space" (M.Arch., Hunan University, 2010), 179-184

<sup>14</sup> Christopher Alexander. *A Pattern Language* (Oxford University Press Inc., 1977), 10.

<sup>15</sup> Wang Jun. *Beijing Record: a physical and political history of planning modern Beijing* (New Jersey: World Scientific, 2011), 27.

## BIBLIOGRAPHY

[1] Denison, Edward. "Architecture in China and the meaning of Modern." *Architectural Design* 78, no. 5 (September 2008): 118-123. Avery Index to Architectural Periodicals, EBSCOhost (accessed March 18, 2015).

[2] Greco, Claudio and Santoro, Carlo. *Beijing: The New City*. (Milano: Skira, 2008)

[3] Li, Yunhe. *Cathay's Idea: Design Theory of Chinese Classical Architecture* (Tianjin: Tianjin University Press, 2005)

[4] Steinhardt, Nancy Shatzman. "Chinese architectural history in the twenty-first century." *Journal of the Society of Architectural Historians* 73,

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no. 1 (March 2014): 38-60. Avery Index to Architectural Periodicals, EBSCOhost (accessed February 12, 2015)

[5] Wu, Liangyong. *Rehabilitating the Old City of Beijing: a Project in the Ju'er Hutong Neighborhood*. (Vancouver: UBC Press, 1999)

[6] Xue, CQL. Chen, XY. "Chinese Architects and Their Practices—an Analysis of a Questionnaire Analysis" *Journal of Architectural and Planning Research* 20, no. 4: 291-306. Social Sciences Citation Index, EBSCOhost (accessed March 18, 2015).

[7] Zhu, Jianfei. *Architecture of Modern China: A Historical Critique* (London: Routledge, 2009)

[8] Christopher Alexander. *A Pattern Language* (Oxford University Press Inc., 1977).

[9] Wang, Jun. *Beijing Record: a physical and political history of planning modern Beijing*. (New Jersey: World Scientific, 2011)

Figure 1. © Danguan Zhang, 07.2015

Figure 2. © <http://www.epochtimes.com>

Figure 3. © Danguan Zhang, 04.2015

Figure 4. © <http://www.cultural-china.com>

Figure 5. © <http://www.chineseelement.com>

Figure 6. © <http://www.showchina.org>

Figure 7. © <http://photo.zhulong.com>

Figure 8. © <http://news.zhulong.com>

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I would like to express the deepest appreciation to my committee chair, Professor Mary Ben Bonham, for her guidance, support, and patience.

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Finally, I must express my very profound gratitude to my parents and to all my friends for providing me with unfailing support and continuous encouragement throughout my years of study and through the process of researching and writing this thesis. This accomplishment would not have proved possible without them.

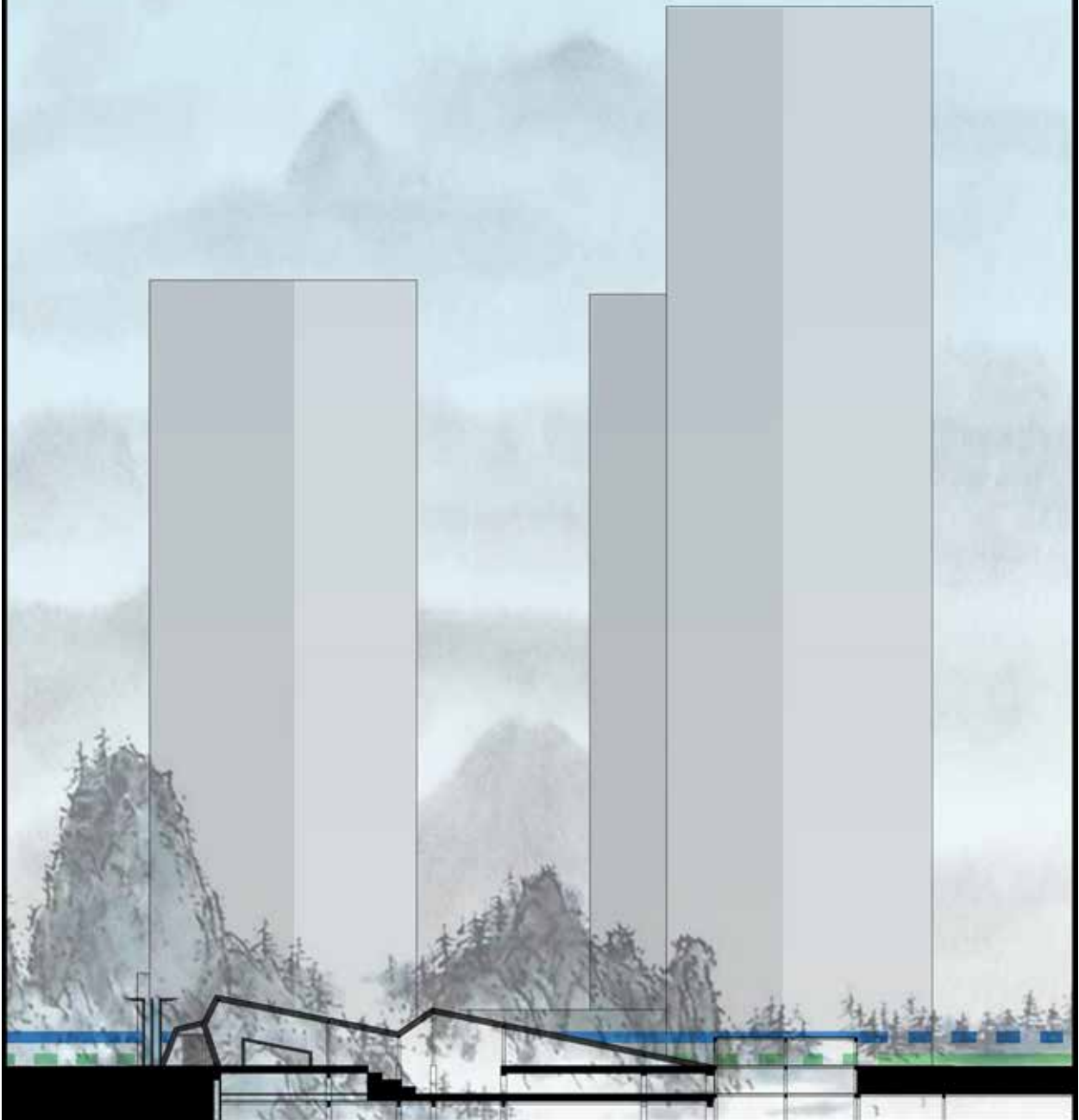
Thank you.

Danguan Zhang

What traditions remain relevant for today's life?

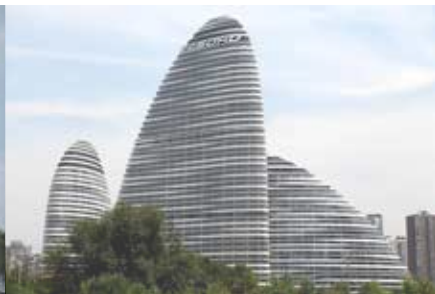
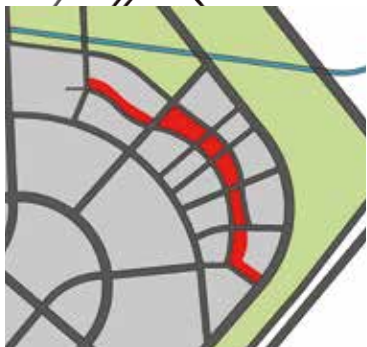
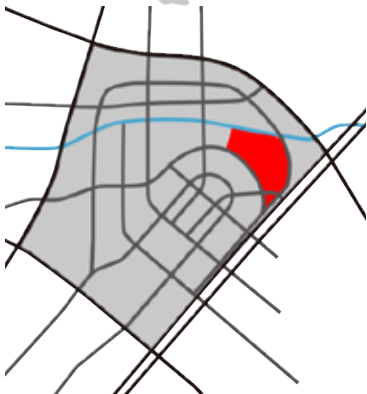
How it can be applied to current and future building design?

How can architects identify the culture of China in the current architectural method?



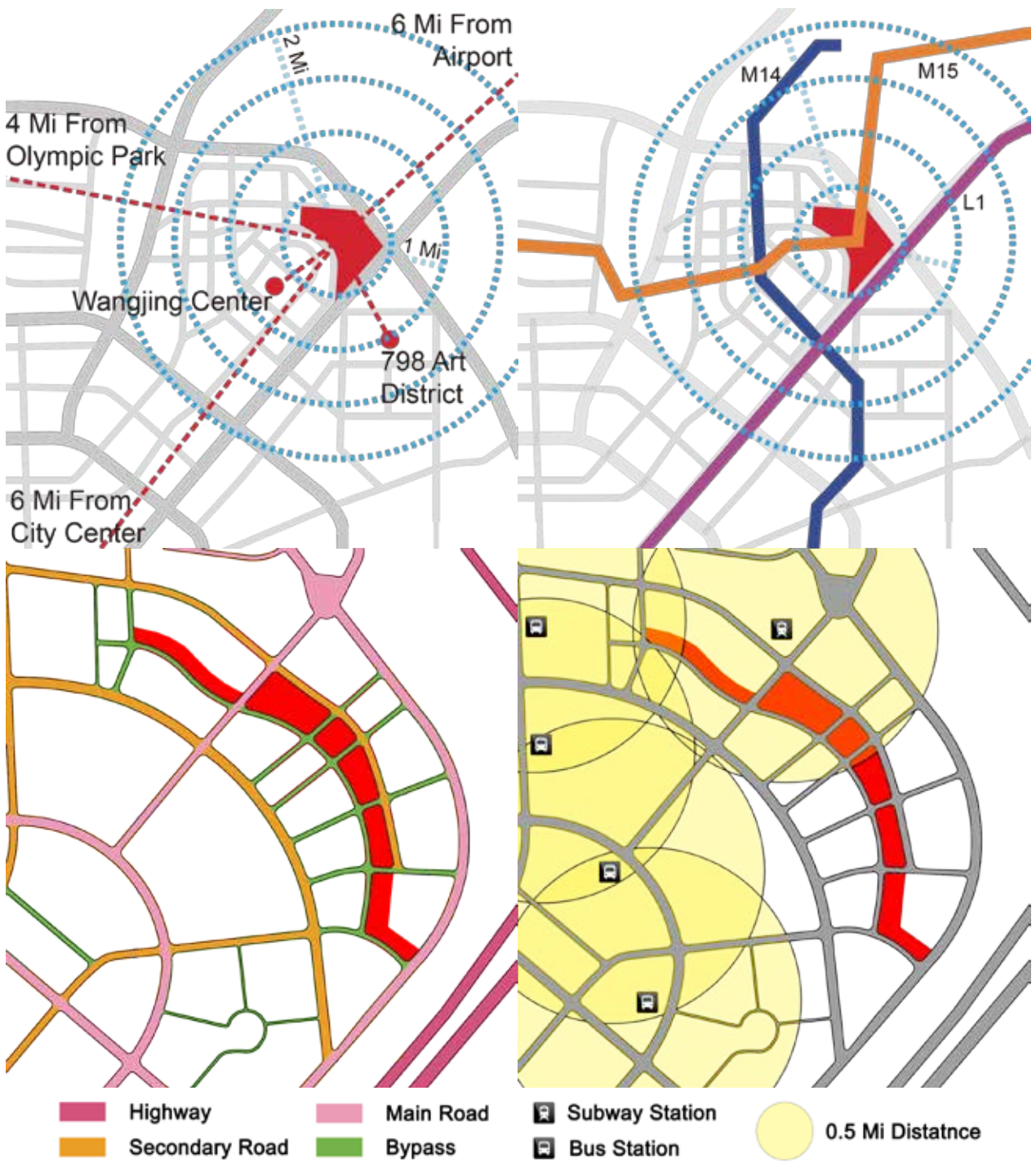
**The New Architectural Trend in China:  
The Heritage and Development of Traditional Culture**

**SITE LOCATION: BEIJING, CHINA**





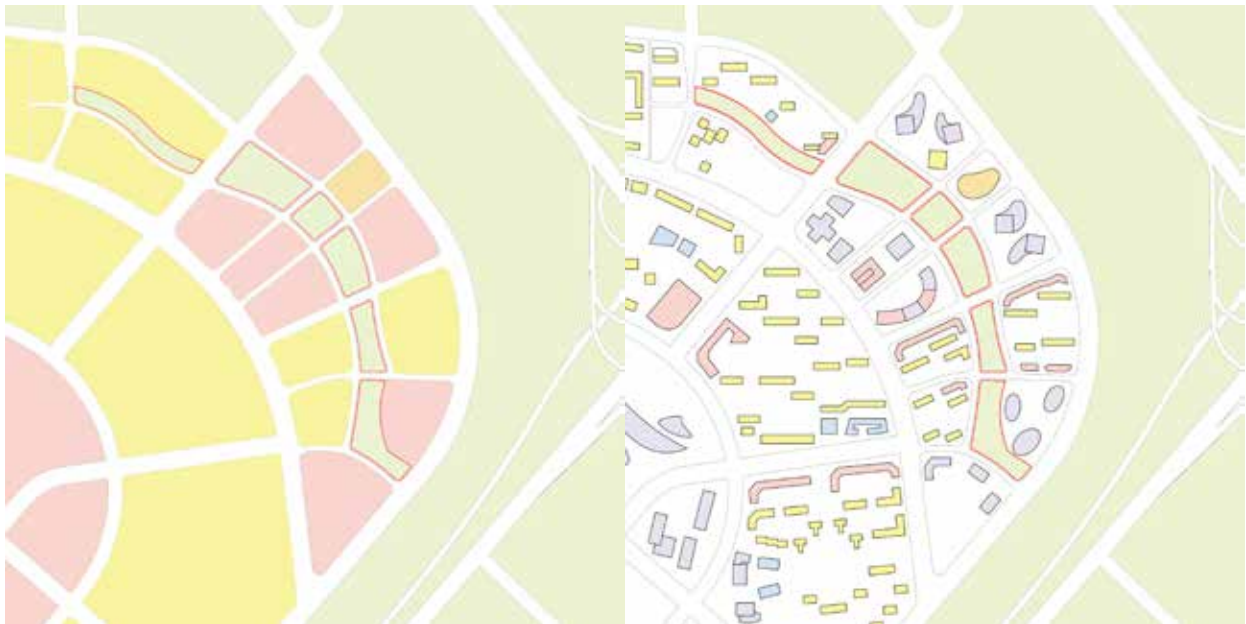
**SITE ANALYSIS: TRANSPORTATION**



Dawangjing is a unique gate way location, which located just over 11km (6 miles) from Beijing Capital International Airport. It is also a landmark district that announces this world class city to all who arrive at the new Beijing Airport.

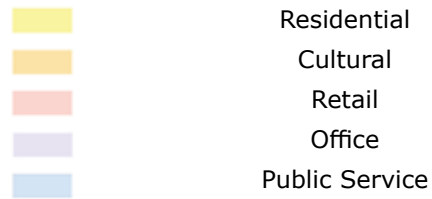
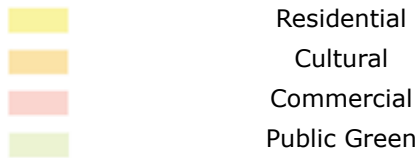
Dawangjing will include a new transit station on the M15 subway line connecting the district into the city.

**SITE ANALYSIS: COMMUNITY**



**LAND USE**

**BUILDING USE**

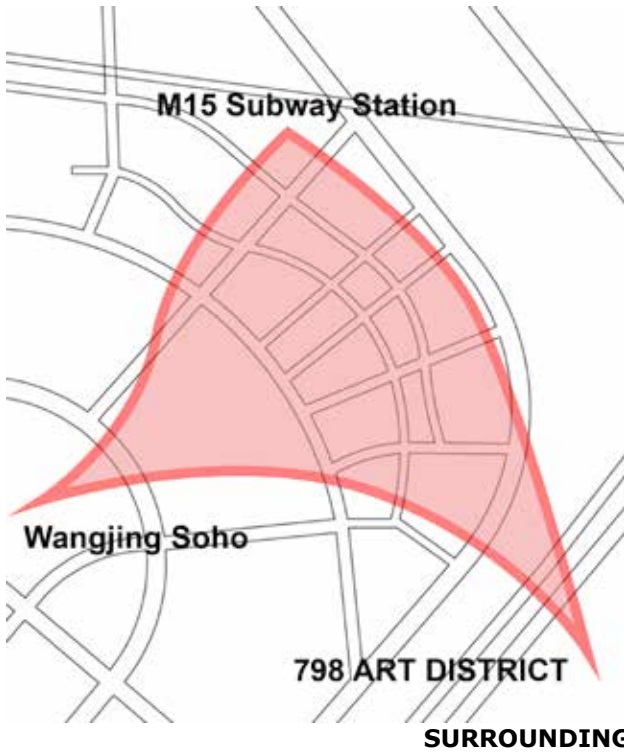


**BUILDING CONDITION**

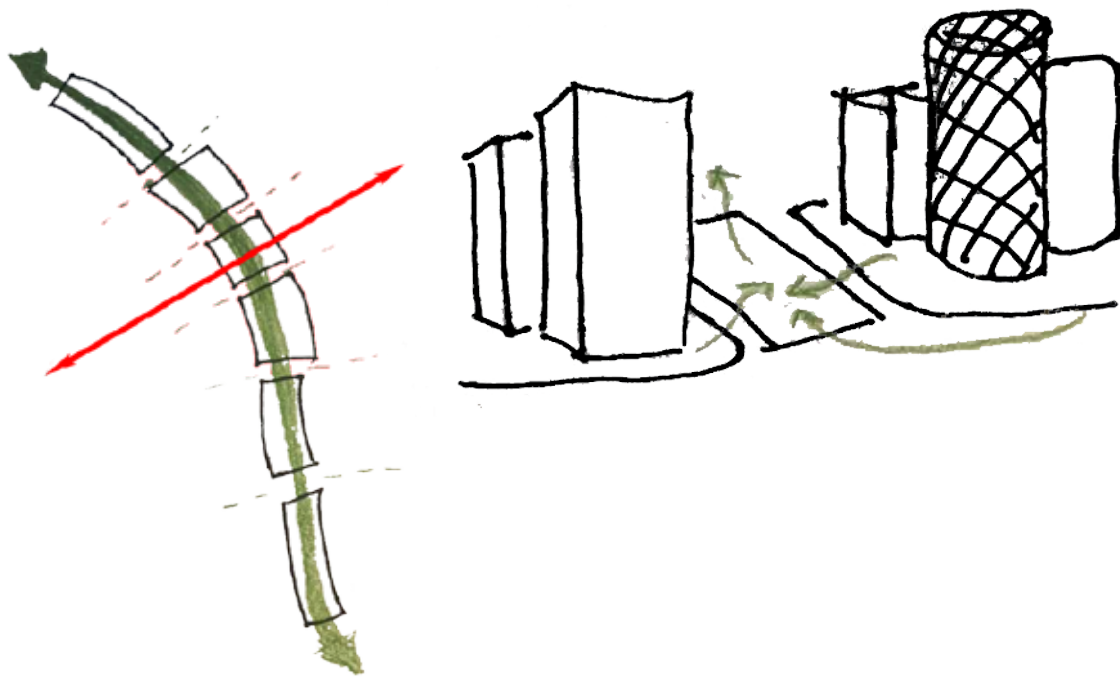
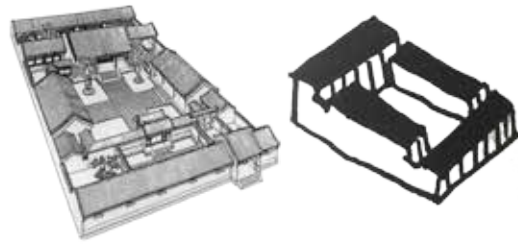
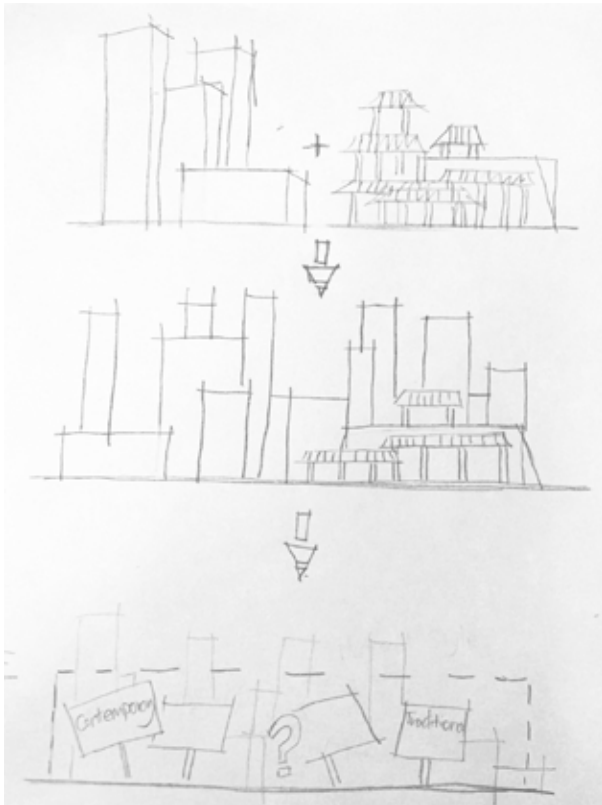
**BUILDING HEIGHT**



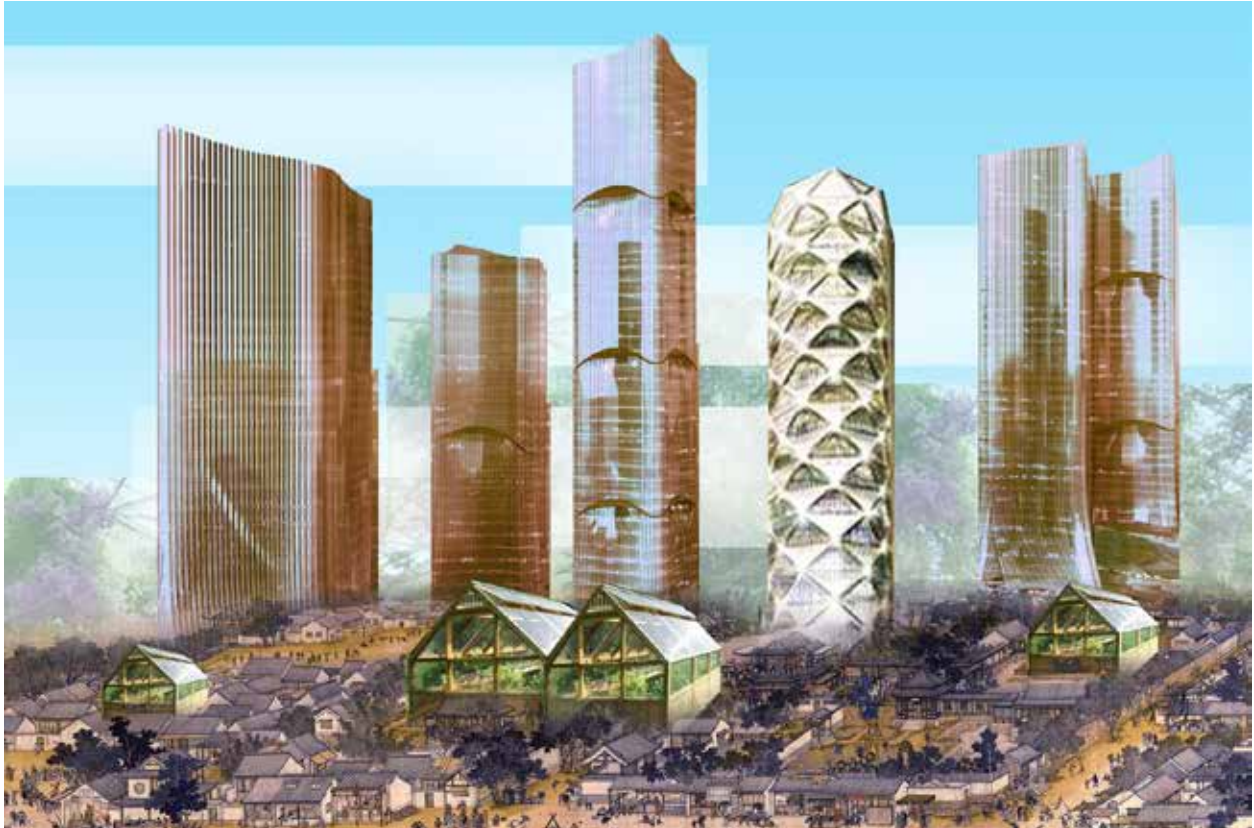
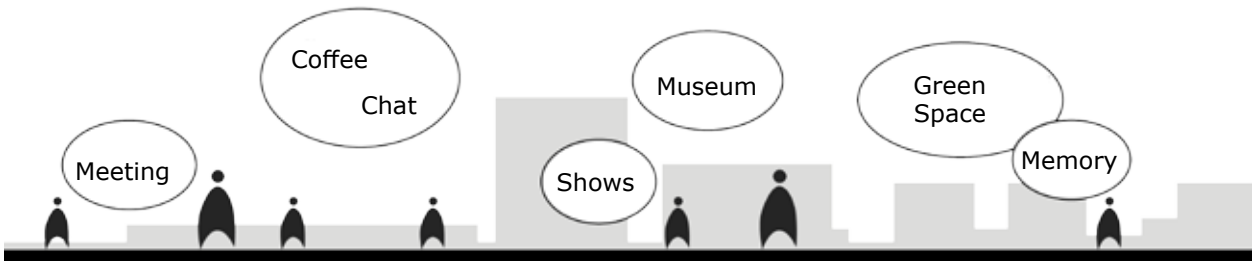
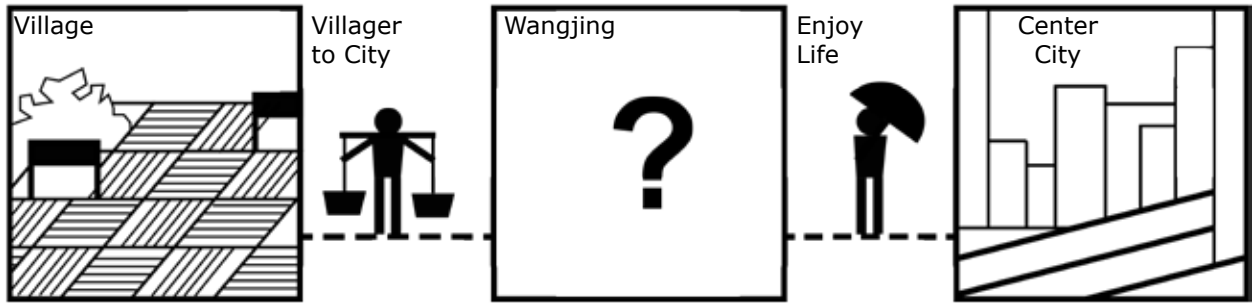
# SITE ANALYSIS



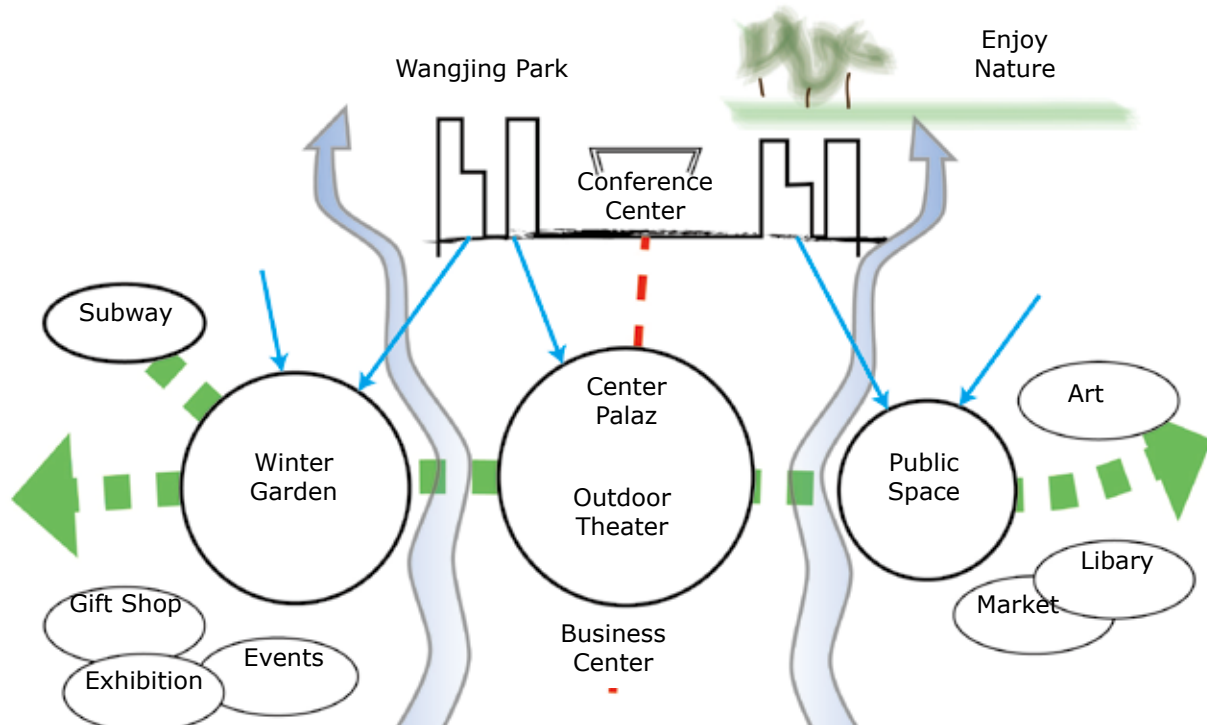
# PRE-DESIGN SKECHES



CONCEPT



## PROGRAMMING



## CHINESE SYMBOL

Chinese dragons are legendary creatures in Chinese mythology, which a symbol of power, strength, and good luck. Based on the history, the dragon symbol could date back to 5000 years ago. This creature is gathering a number of features from different animals. In the legendary, the dragon is in charge of rain.

The dragon symbol is really unique to Chinese people in its long history existence. As Chinese architecture, it has different sample during the historic period but still has common similarity.

- Head: Leading and Soul
- Abdomen: from sea serpent
- Skin: from fish
- Hand: from eagle  
Connection to surrounding and gathering the treasure.



Bamboo Wall  
Kengo Kuma

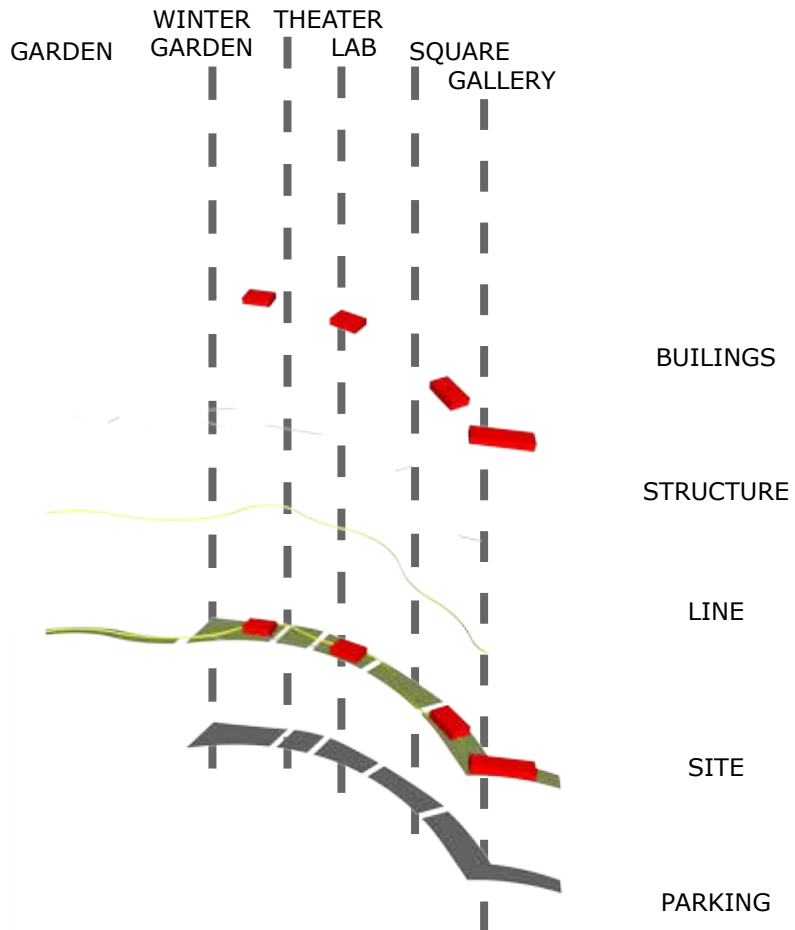
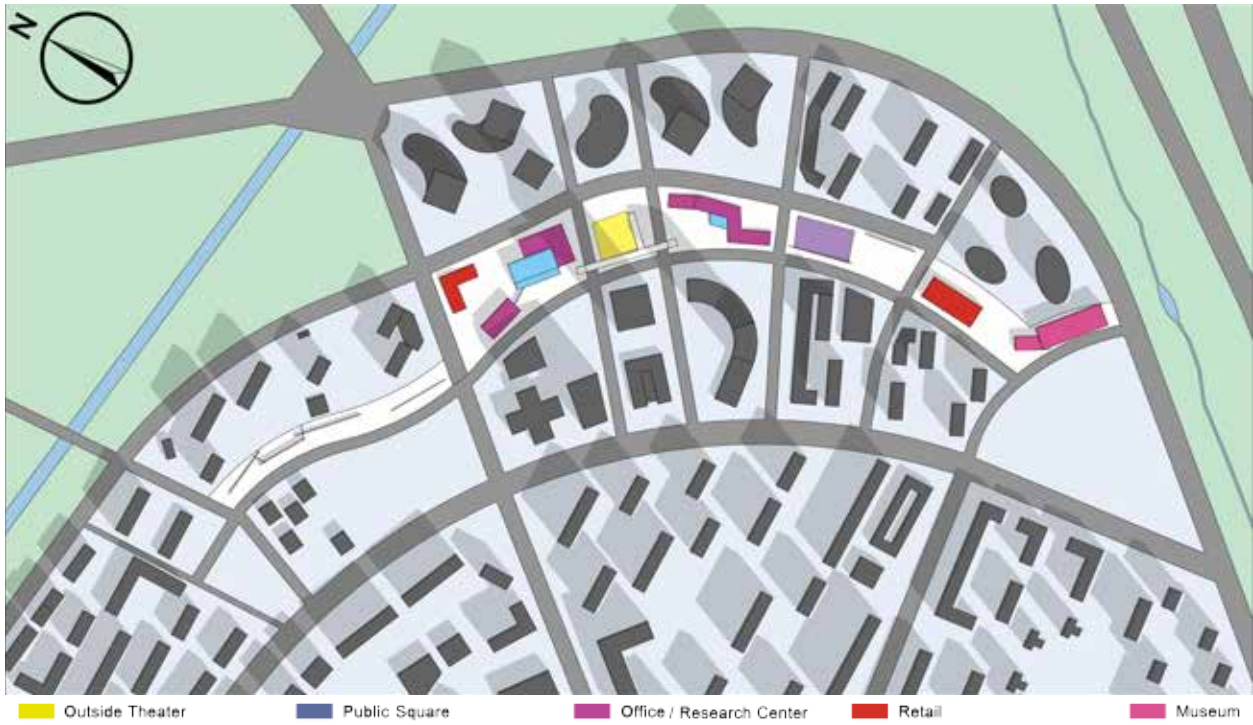


# DESIGN PROCESSES

Site



# DESIGN PROCESSES





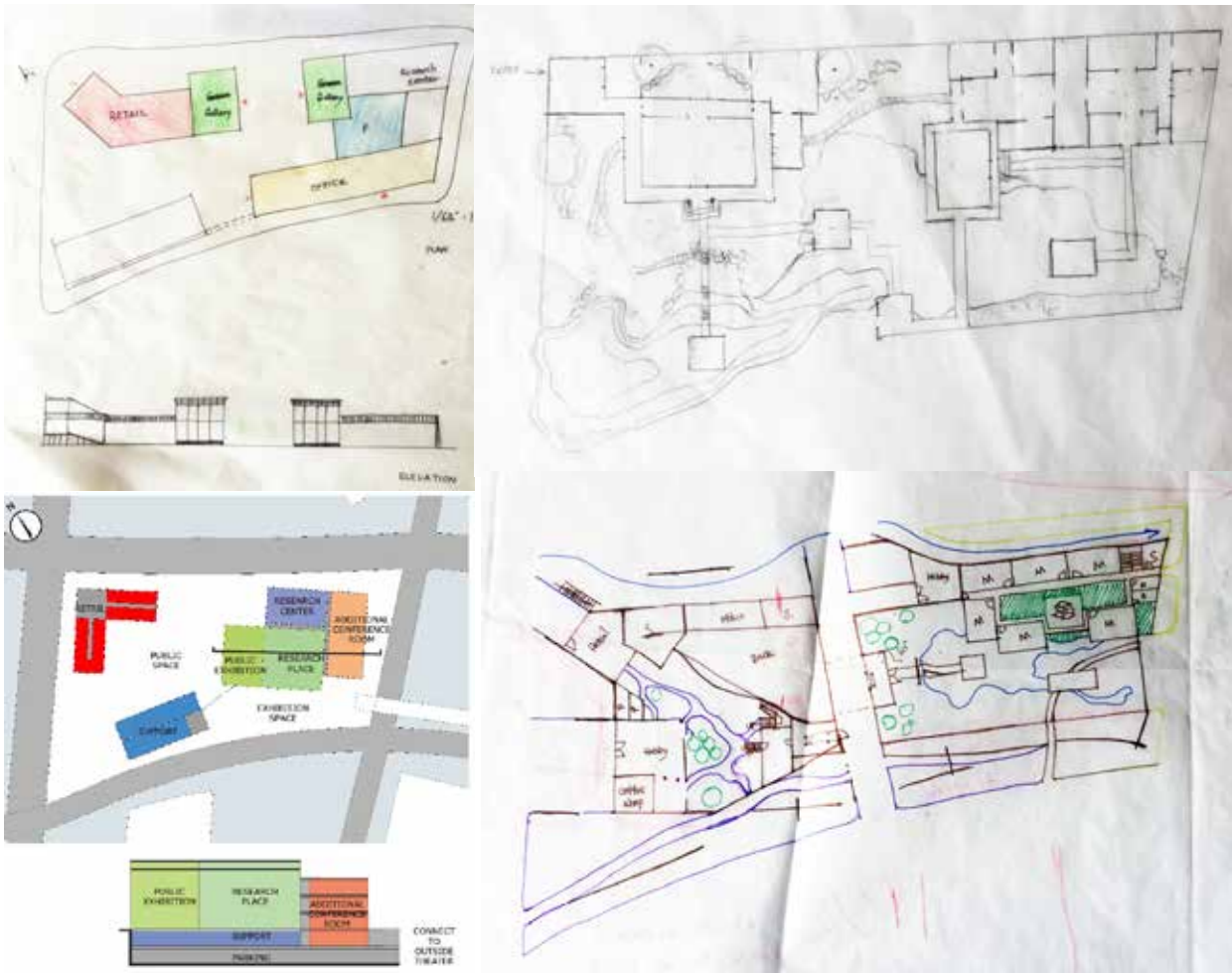
## DESIGN PROCESSES



From Chinese dragon as concept, I attempt to use the line combine whole 6 blocks together. Because of the whole site like a center green for the whole neighbor, there is another line link to the near park to form a circular path for the whole.

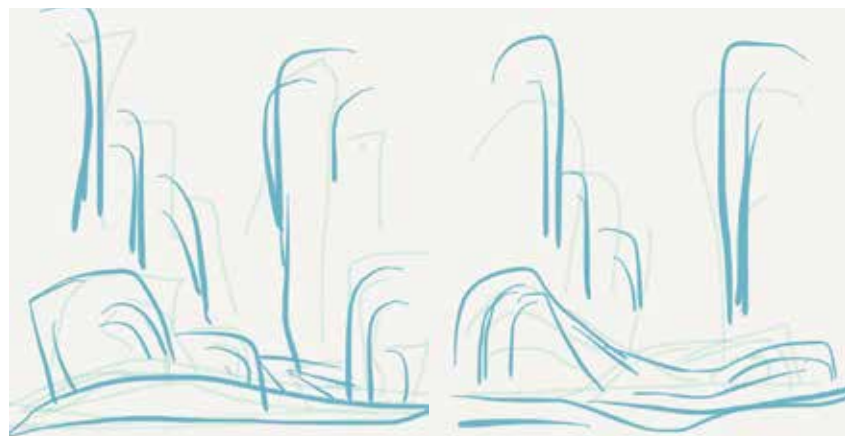
## DESIGN PROCESSES

### Courtyard

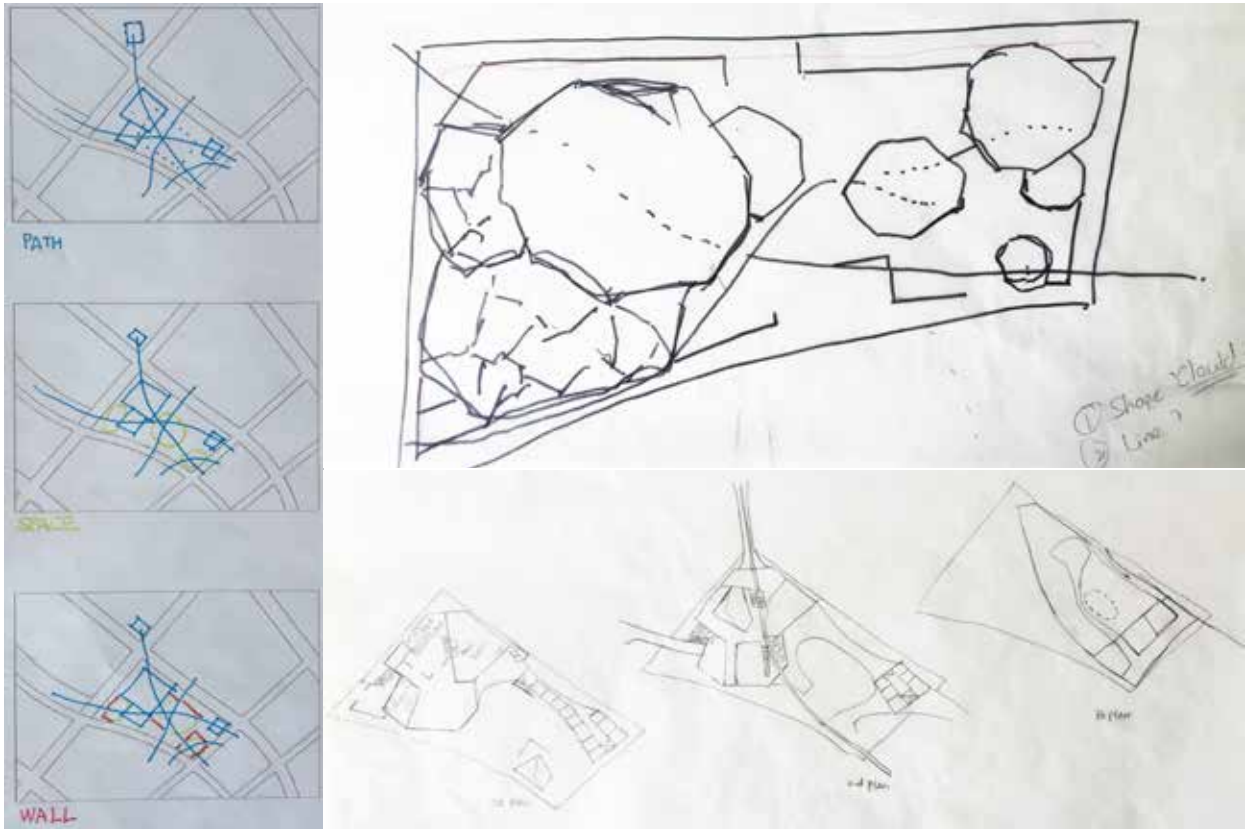


In order to make the whole block connect, emphasize my concept idea. Instead of focussing on the courtyard, I attempt to use the landscape to hold all pieces together. There make two options for my design: buildings as stone or buildings as a part of the landscape.

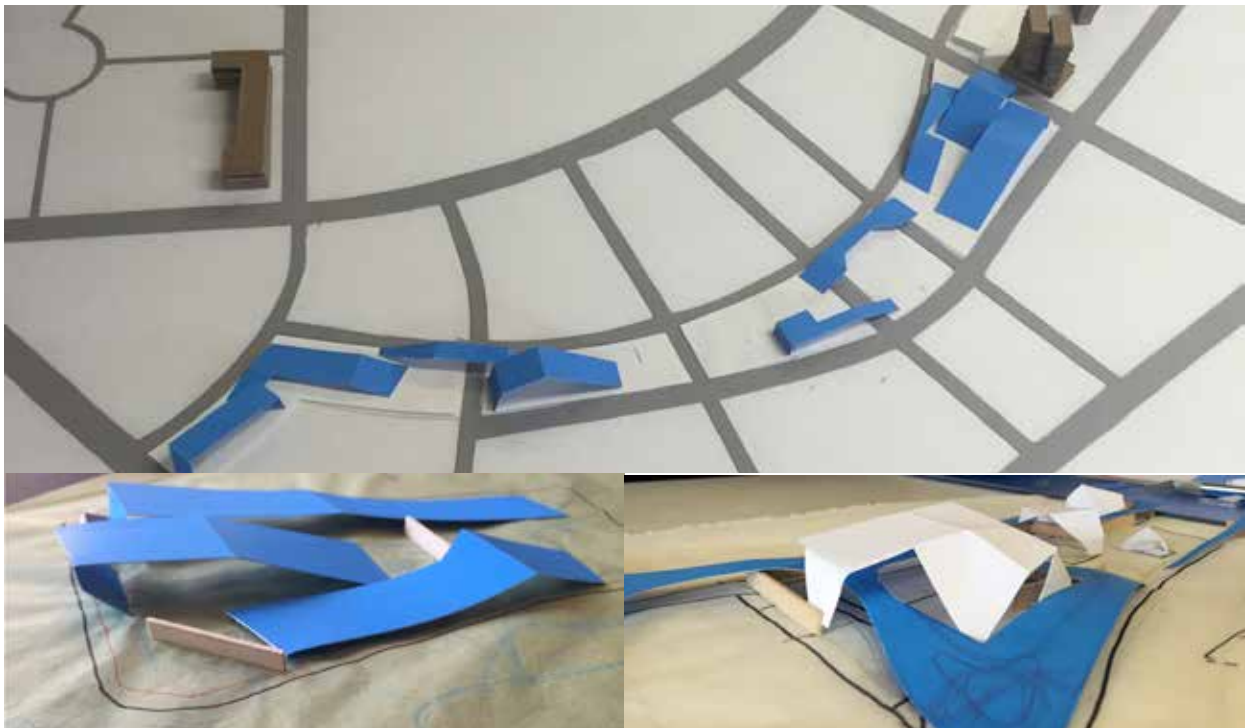
In numerous times trying, I prefer to consider the buildings as a part of the landscape. This idea will flow to the entire site.



## DESIGN PROCESSES

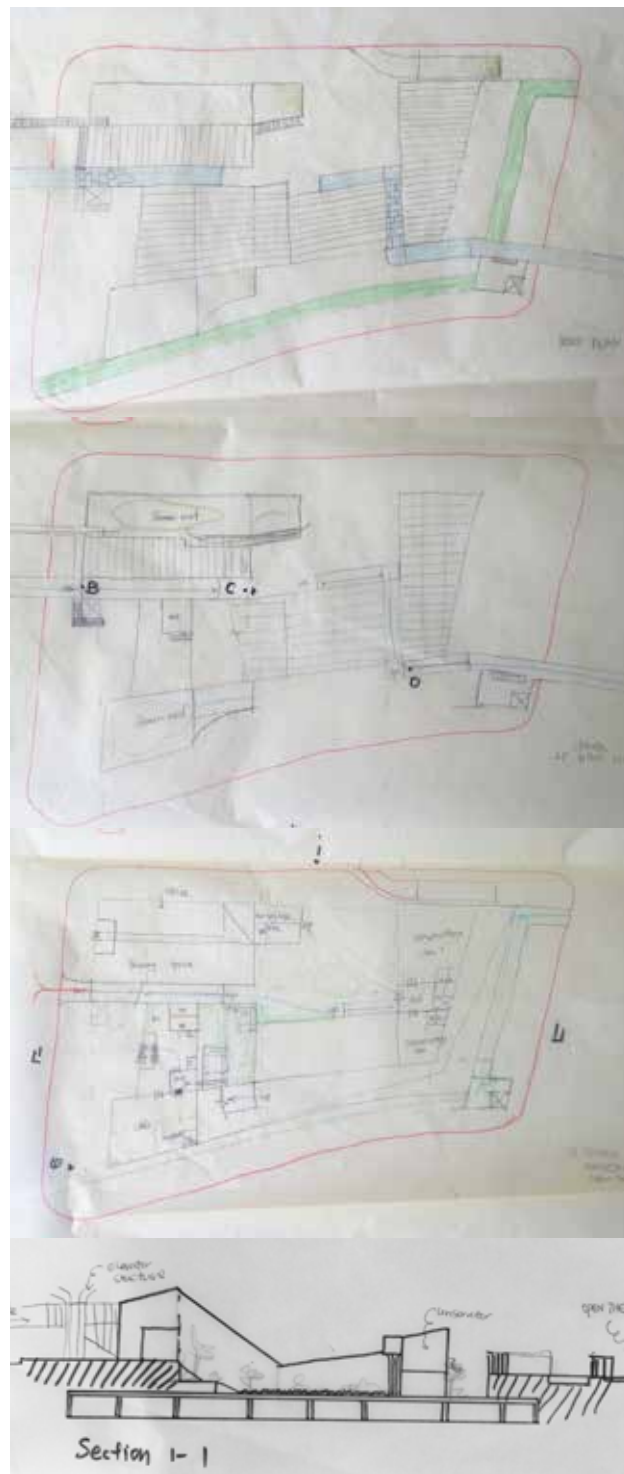
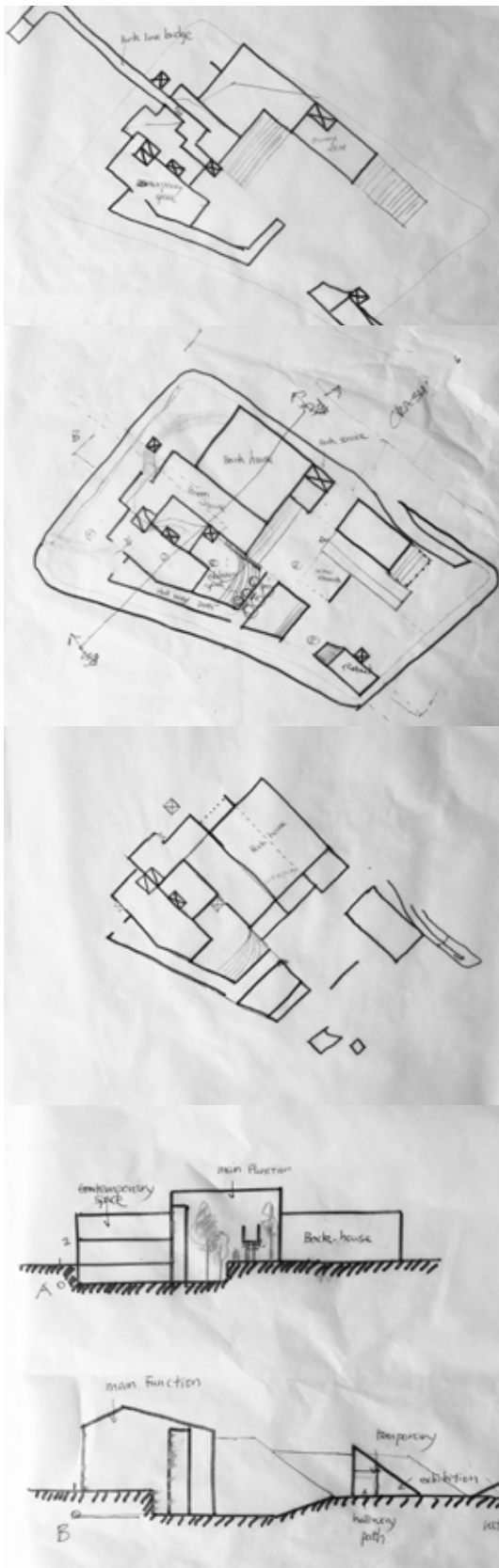


## CONCEPT MODEL



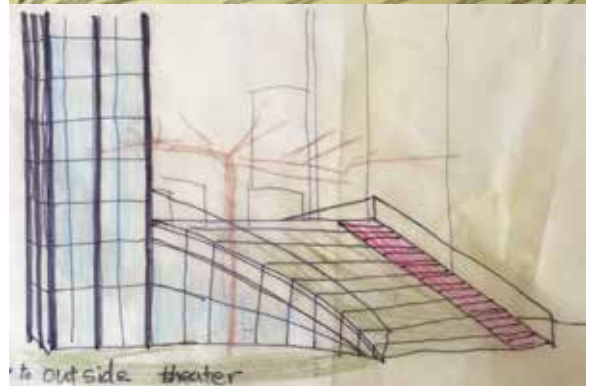
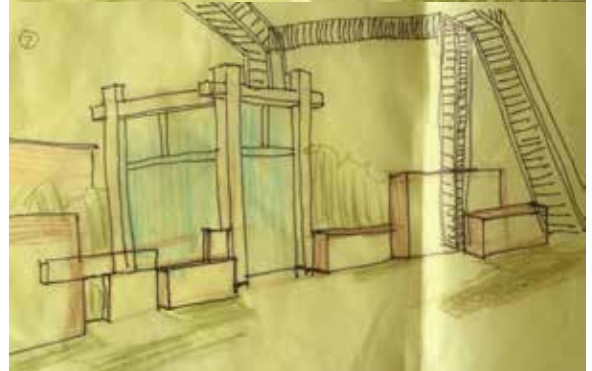
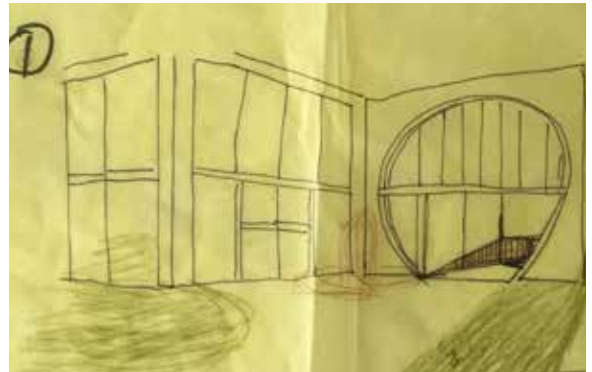
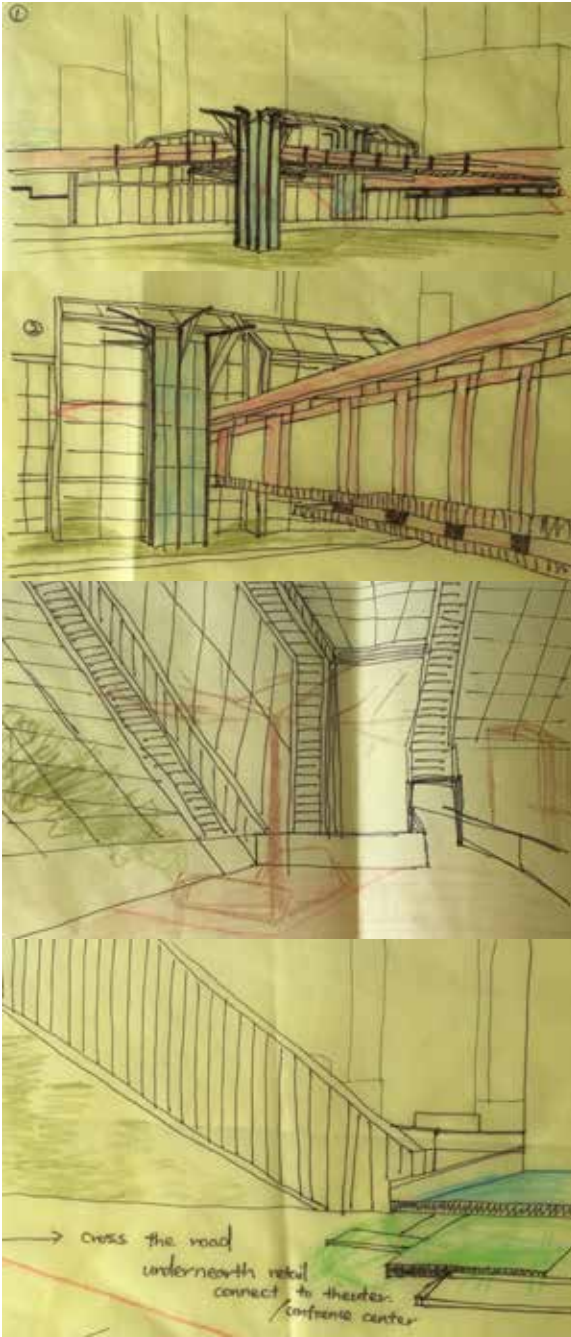
# DESIGN PROCESSES

## Developing Plan

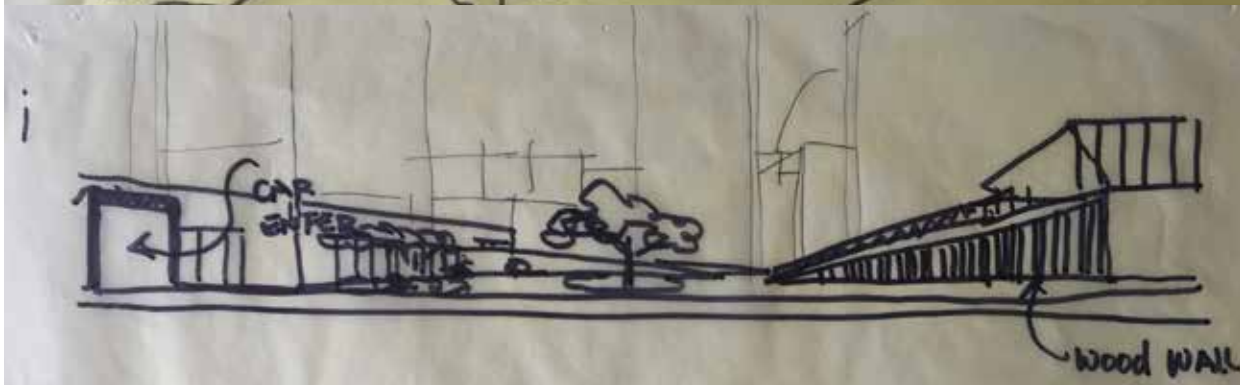


## DESIGN PROCESSES

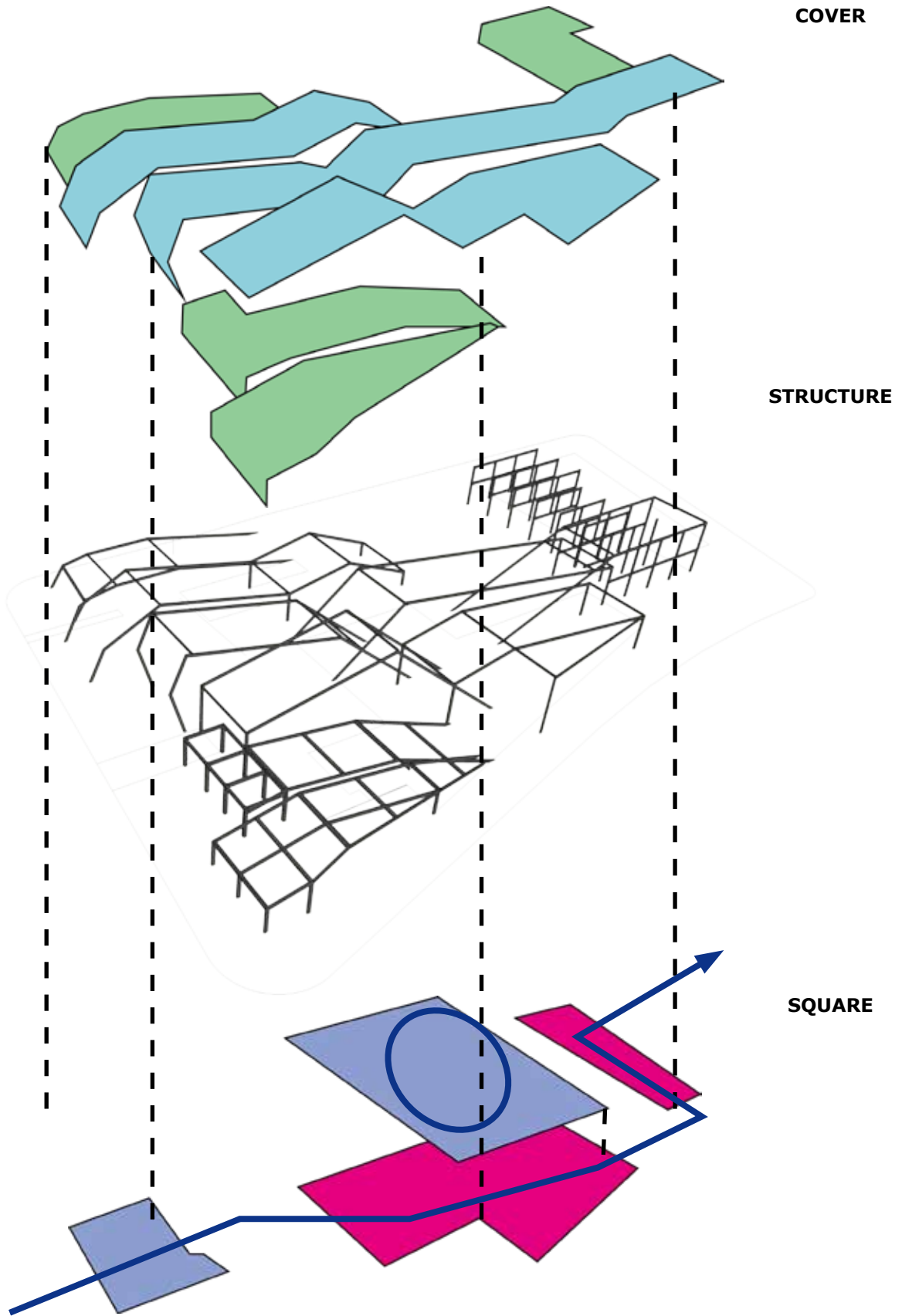
### Skeches



# DESIGN PROCESSES



DESIGN PROCESSES



# FINAL DESIGN

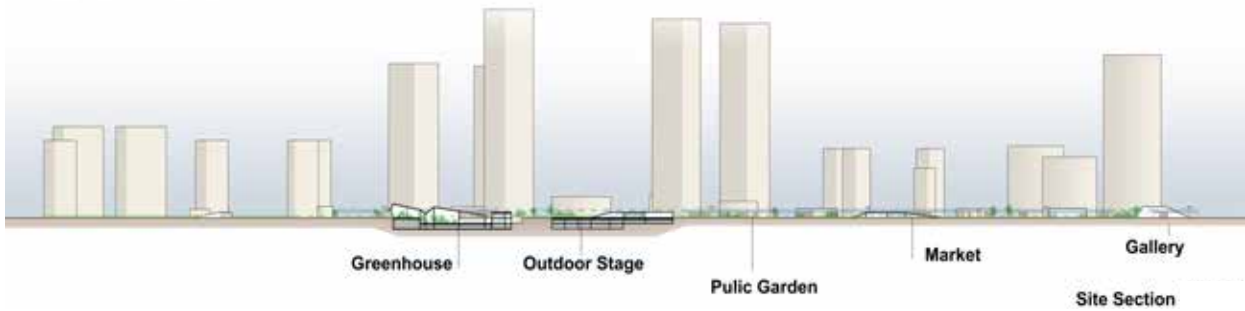
## Site



Two lines connect the surrounding.

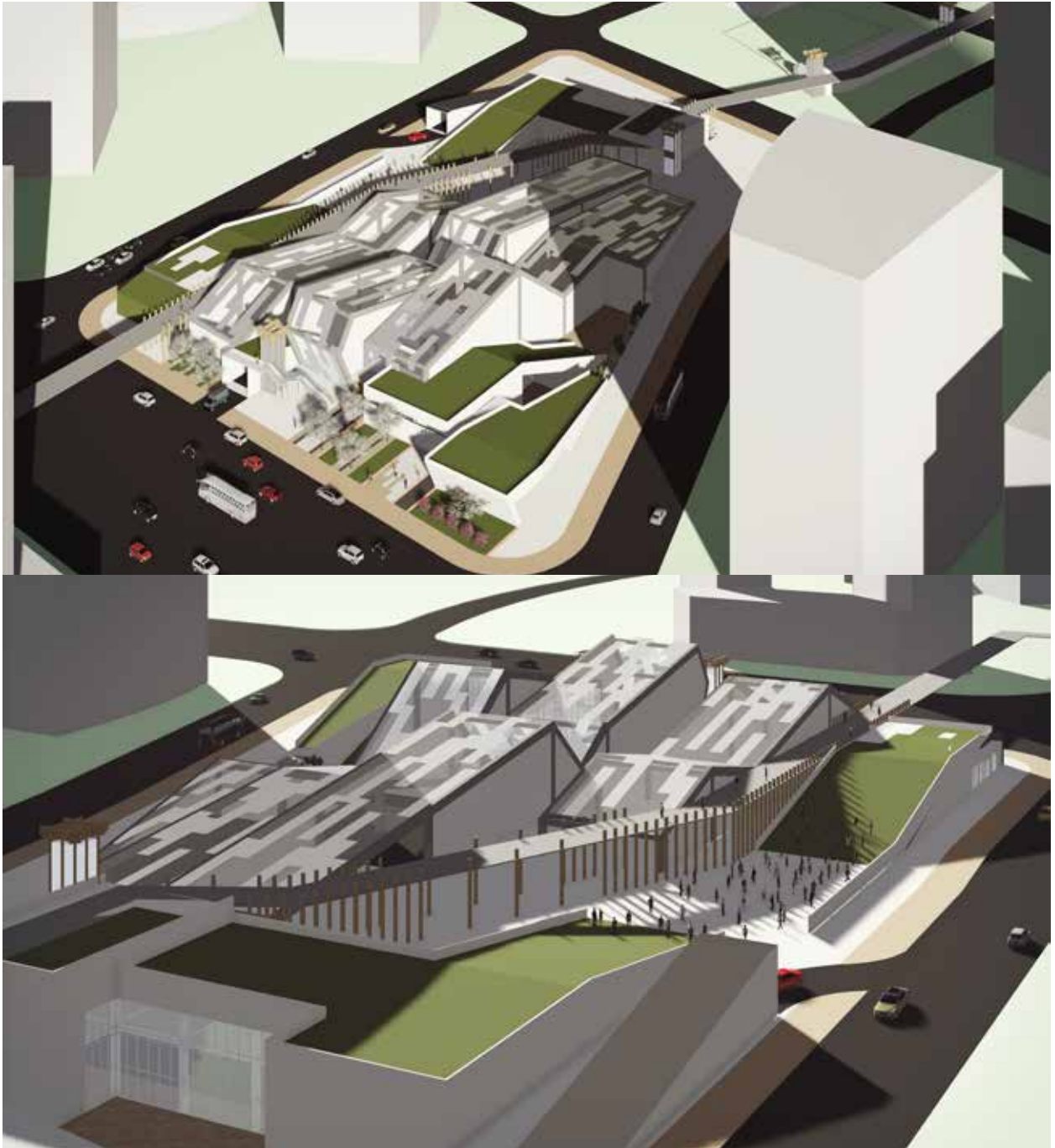
Buildings present the new landscape

Squares and trees divide different area





**FINAL DESIGN**  
Rendering



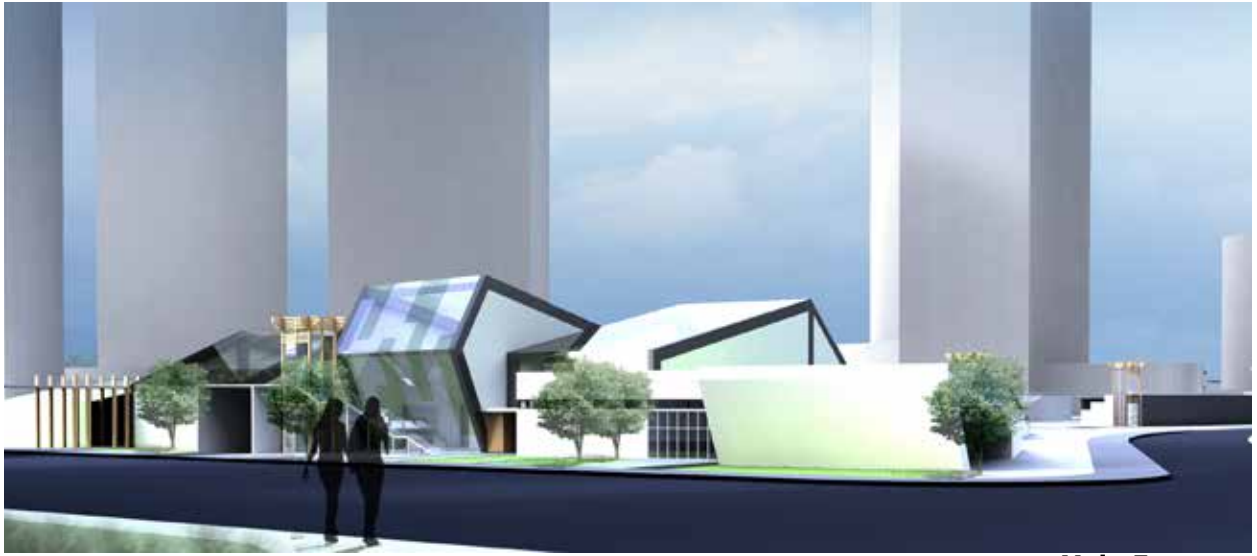
**Aerial View**

**FINAL DESIGN**  
Rendering



**Public Yard**

FINAL DESIGN



Main Entrance

Plan



# FINAL DESIGN



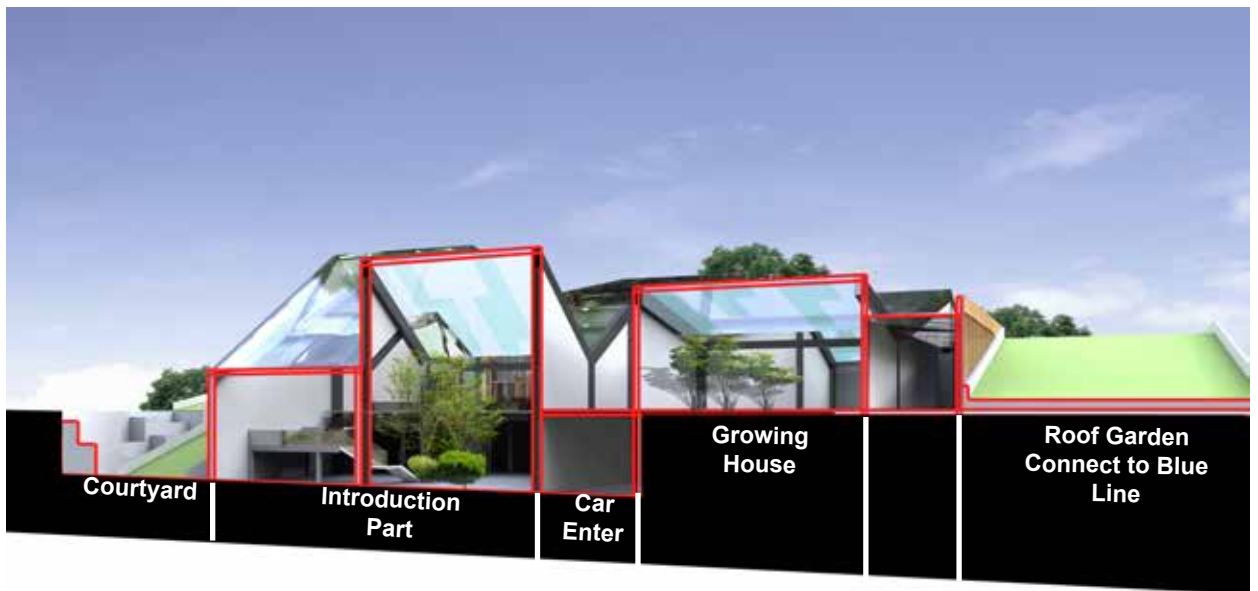
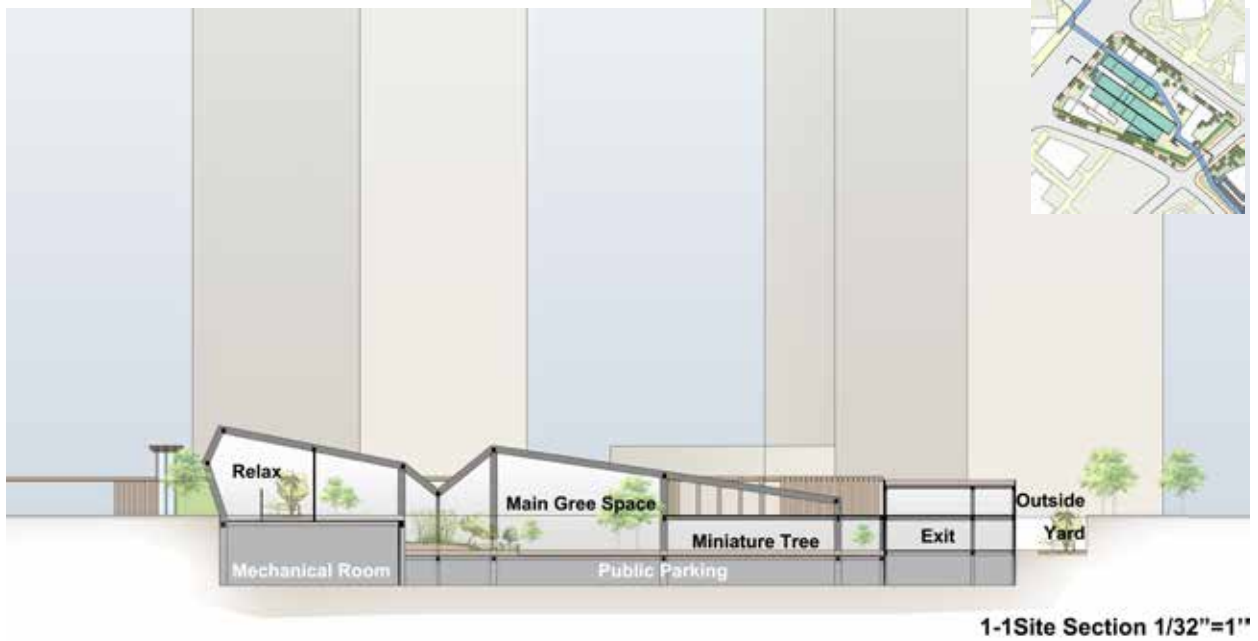
N  
Ground Floor 1/32"=1'



N  
Lower Level 1/32"=1'

# FINAL DESIGN

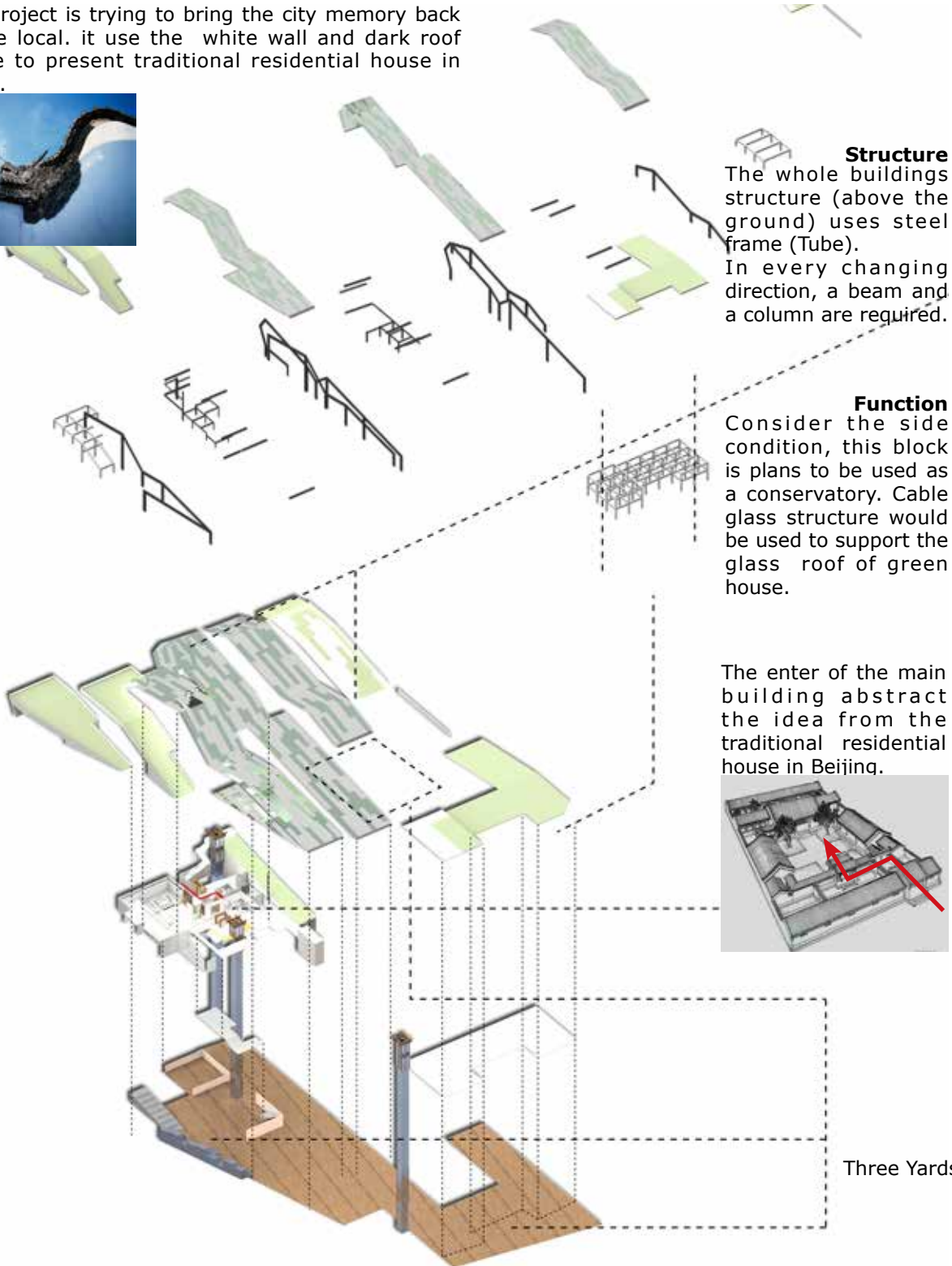
## Section



## FINAL DESIGN

### Explosion Drawing

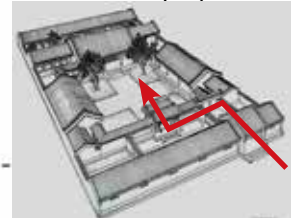
The project is trying to bring the city memory back to the local. it use the white wall and dark roof frame to present traditional residential house in China.



**Structure**  
The whole buildings structure (above the ground) uses steel frame (Tube). In every changing direction, a beam and a column are required.

**Function**  
Consider the side condition, this block is plans to be used as a conservatory. Cable glass structure would be used to support the glass roof of green house.

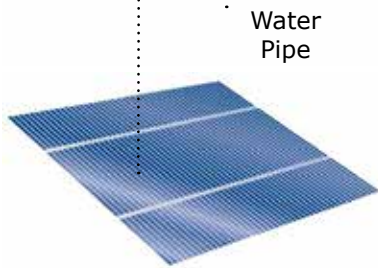
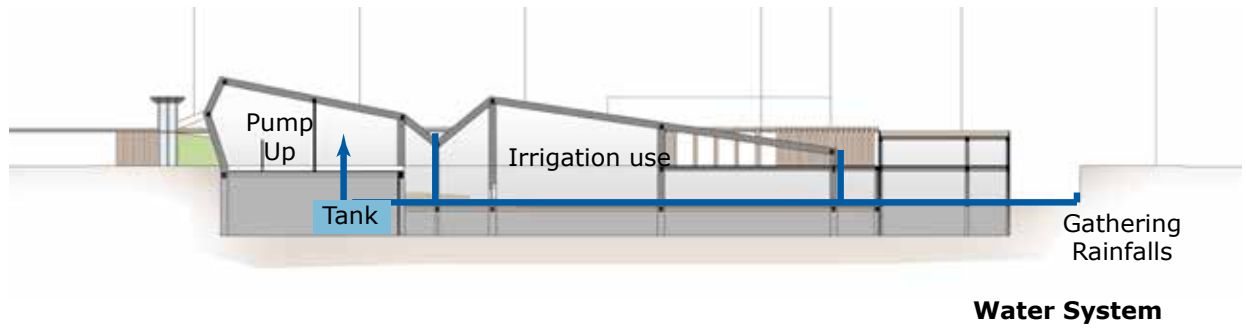
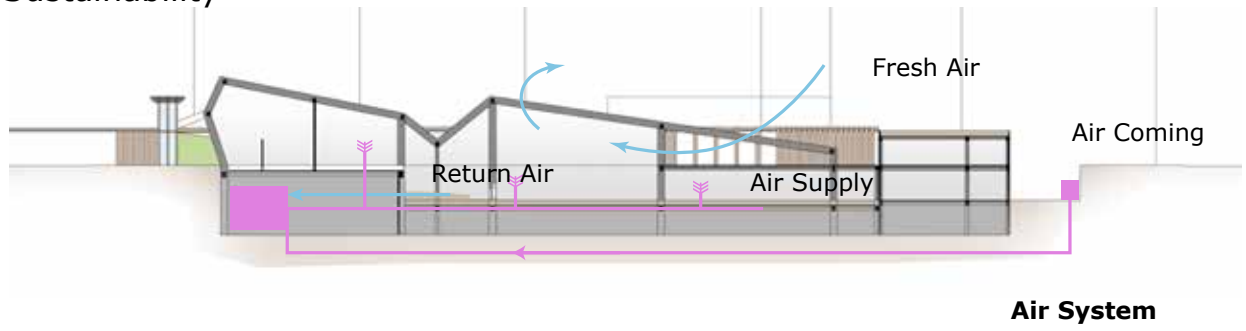
The enter of the main building abstract the idea from the traditional residential house in Beijing.



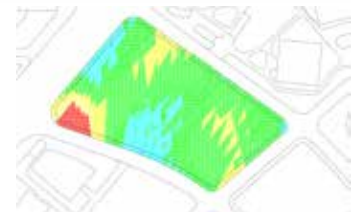
Three Yards

# FINAL DESIGN

## Sustainability



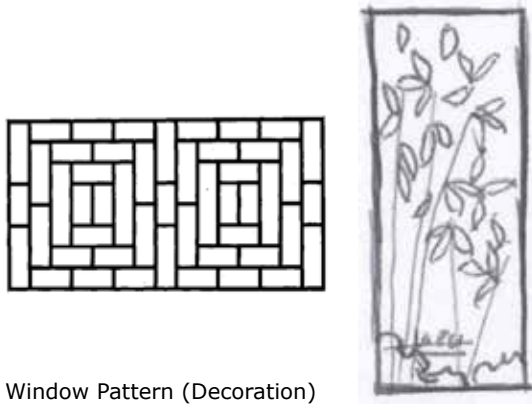
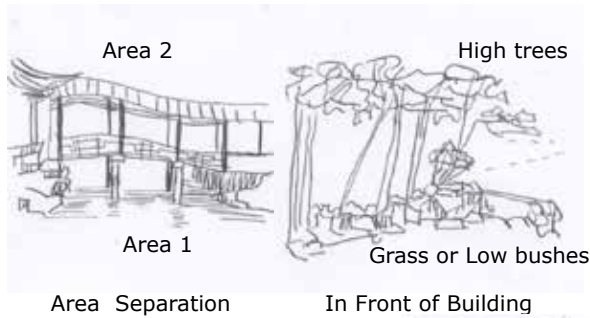
Solar panels could be used for shading and use the solar energy to support the building.



# CHINESE GARDEN PRINCIPLES

## One. Area and Space

Divide all the garden into several pieces (area).  
 Elements: Walls, hallways, buildings, stones, trees, bridge  
 Each area has its own theme and character (feature).  
 Main space +subordinate space: changeable  
 +juxtaposition+contrastive  
 -landscape / flowers and trees, water, stones-  
 combination with architecture.  
 (Height +Size)

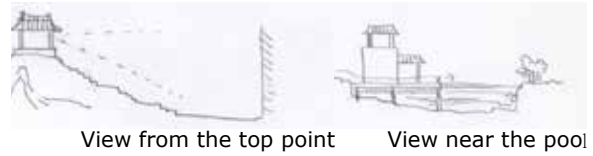


## Two. Views and Path

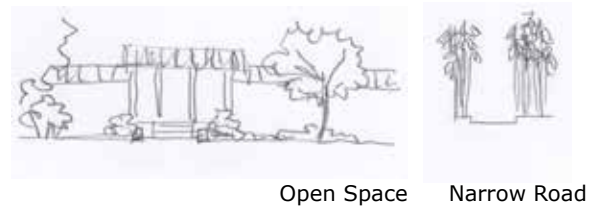
Main building: separated by water and view the mountain or stone (big scale)



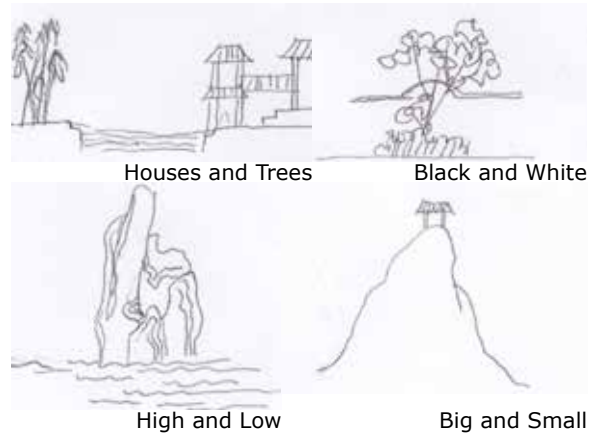
Viewpoint: across the water or mountain



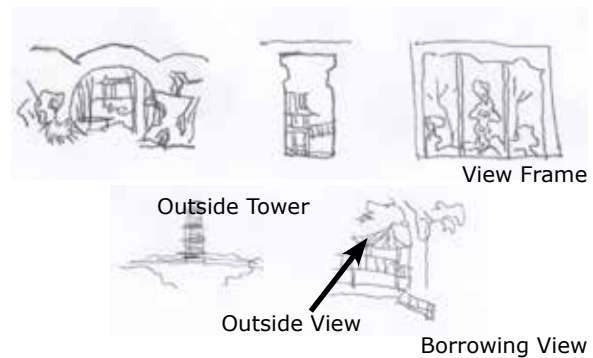
Path:  
 connect buildings (circle path near the wall or hall way)  
 cross water and mountain (small and winding)



## Three. Contrast and Against

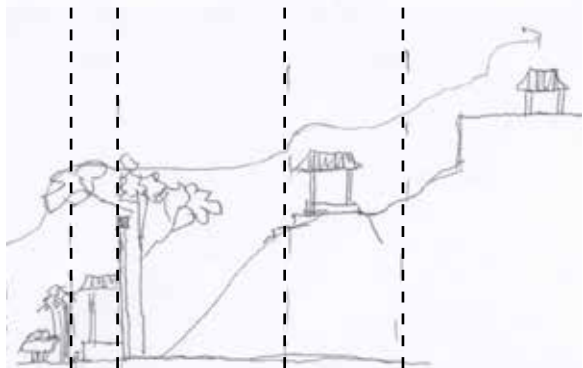


## Four. View Borrowing





**Five. Depth and Layer**



Different layer in Chinese Garden

**Chinese Garden Important Elements**

**One. Water**

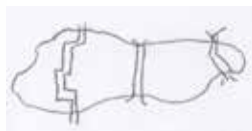
One of the most important elements in Suzhou Gardens. Buildings and plants arrange surrounding water.

(1) Pool

It is always divided by islands (big) or bridges (small). Sometimes may be stones.



Divided by Islands



Divided by Bridges

(2) Bank (Stone and Soil)



Piling Stone



Stone with Flat Piece Near Water



Flat Soil bank

Seldom using One layer stone bank

(3) Others



Waterfall

Stream

Fountain

**Two. Mountain and Stone**



Stone Wall

Single Cave



Valley

Steps

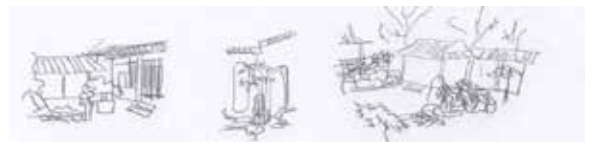
Stone Peak

Stone on Soil

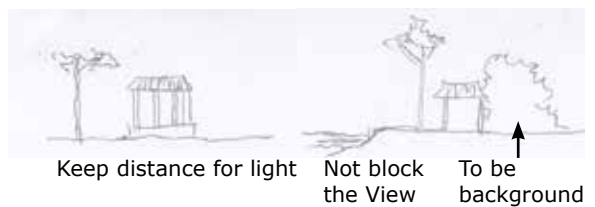
Arrangement



**Three. Building**



**Four. Vegetation**



Keep distance for light

Not block the View

To be background



## REFLECTION

It is a long and arduous journey, especially for a student whose mother language is not English. I am glad to have gotten to the point I am at in this process. It is wonderful that I could develop my idea about Chinese architecture.

### THESIS TO DESIGN

As all my friends told me, my topic is too broad and it is not easy to address this question. From thesis documentation come to design process, it is a way to narrow my topic down to a specific design problem. As my site condition, the design project will be some mixed used program. It is really big site and it is impossible to finish all six blocks design. In this condition, I choose one special block to do the deeper design.

Because my topic is too broad, it is not easy to make one definite direction in the design process. It is easy to view the design concept for the block have many ideas. It begins with the courtyard, and finally comes to a skin cover the courtyard below.

### FINAL REVIEW

Time is always faster than the imagination. I did not make good time management that makes so many ideas in my mind cannot put into my design. The facade design nearly done but the interior design has not yet been reaching my goals. That makes the final plan drawing did not show so many connections to my thesis question. Except the form of landscape and the main entrance coming from traditional courtyard, others part actually is empty. Although the basic idea of the plan axis could be showing the yard space, without detail analysis of courtyard makes my idea so abstract.

As a greenhouse project, I put my eyes more on the Chinese garden. Although all the traditional Chinese architecture comes from the concept of the courtyard, Chinese garden focus more on other elements (green, stones, water).

Another thing I didn't clearly state is what the rules for the courtyard in the Chinese architecture. The courtyard is like a mixed space which could connect all different type use

building together. That is why the yard is the most important idea in Chinese traditional architecture.

It is easily noticed that my building uses the huge glass surface like other skyscrapers did. For the function, it is requiring a huge glass surface to get the sunlight to heat the whole buildings. Although I try to get some pattern of glazing, it is still difficult to bring the glazing into real human scale. At the beginning, this surfaces design for the tower viewing. But coming to the walking viewing, it seems break my beginning idea of the human scale. I plan to develop more detail like the surface or pattern where human can really touch and experience.

During this long process, I have learnt many things and it is a new way to learn a lot about myself. It is just like a mirror showing the way I work and my motivation to work. I always begin the work with the easy parts, and put the awkward parts to side. That is making a really difficult time when the final coming. I hope to continue further with this topic continuing this idea into my own design.

If I could do things over I probably would still choose the same topic or narrow a little bit down which still related to my hometown, although I know the challenge. This is also another learning experience to rethink my country and design.

My thesis journey does not end here. This is just a beginning and I am excited to develop my design in my future professional practice.

All in all, it is a great journey and thanks everyone who support me during this long time.