

**Folding & Flowing**  
**A Museum of Paper Art in Suzhou, China**

# **Folding & Flowing: A Museum of Paper Art in Suzhou, China**

By Qiuda Lin

Thesis submitted to the faculty of the Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of

## **Master of Architecture**

---

Professor Joseph C Wang  
Chairman of committee

Professor Hans Christian Rott  
Committee member

Professor Steven R Thompson  
Committee member

May 2005  
Blacksburg, VA

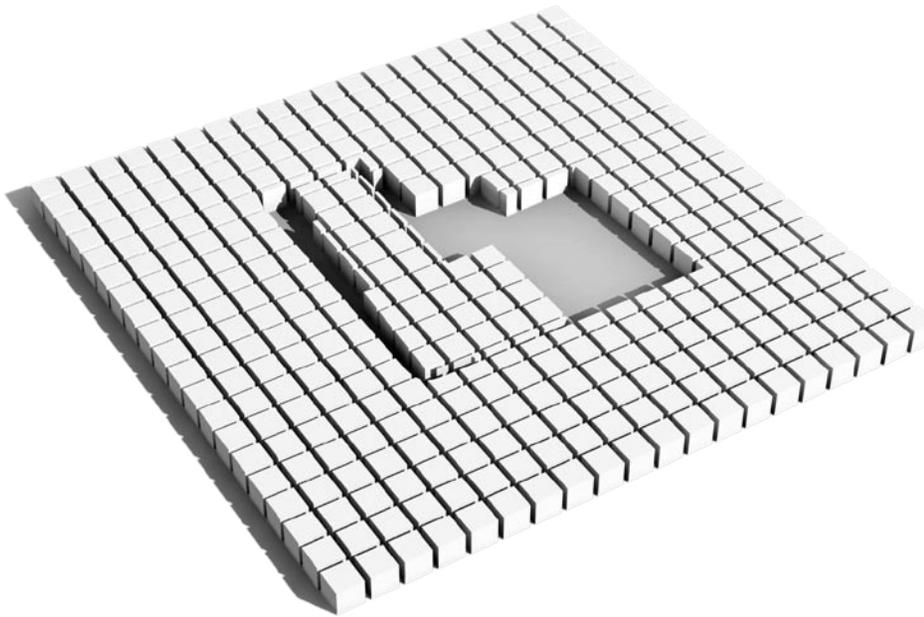
Keywords: Paper arts, Folded plates, Chinese Tradition, Courtyard, Garden

Copyright 2005, Qiuda Lin

## Abstract

In a culture that was credited with the invention of paper in the 1st century, Chinese paper art have existed since that time with products ranging from paper fans, lanterns to decorative designs and structures accomplished by folding, rolling and cutting.

The thesis is about the inception and design of a museum dedicated to the paper art in China as well as its counterparts in the rest of the world. To be located in Suzhou, Jiangsu Province, the museum will curate its exhibitions primarily on local traditional folk arts using paper. It will be a museum with a comprehensive mission of displaying, preserving, education and research on paper arts.



# Table of Contents



■ The Museum and the Paper Art	1-9
History of Chinese Paper Making and Paper Art	
Content of Exhibitions	
Spaces Requirements	
■ The Urban Context	10-19
The Urban Settings of Suzhou City	
Choosing of the Site	
■ The concept	

The Urban Transition  
Continuity of Folding  
Skin VS Structure

20-29



The Project

The Site and  
the Humble Administrator's Garden

Plan

Section

Space Sequences

Materials

Structure System

Assemble & Details

Water System

30-77



Conclusion 78



Selected Bibliography 80



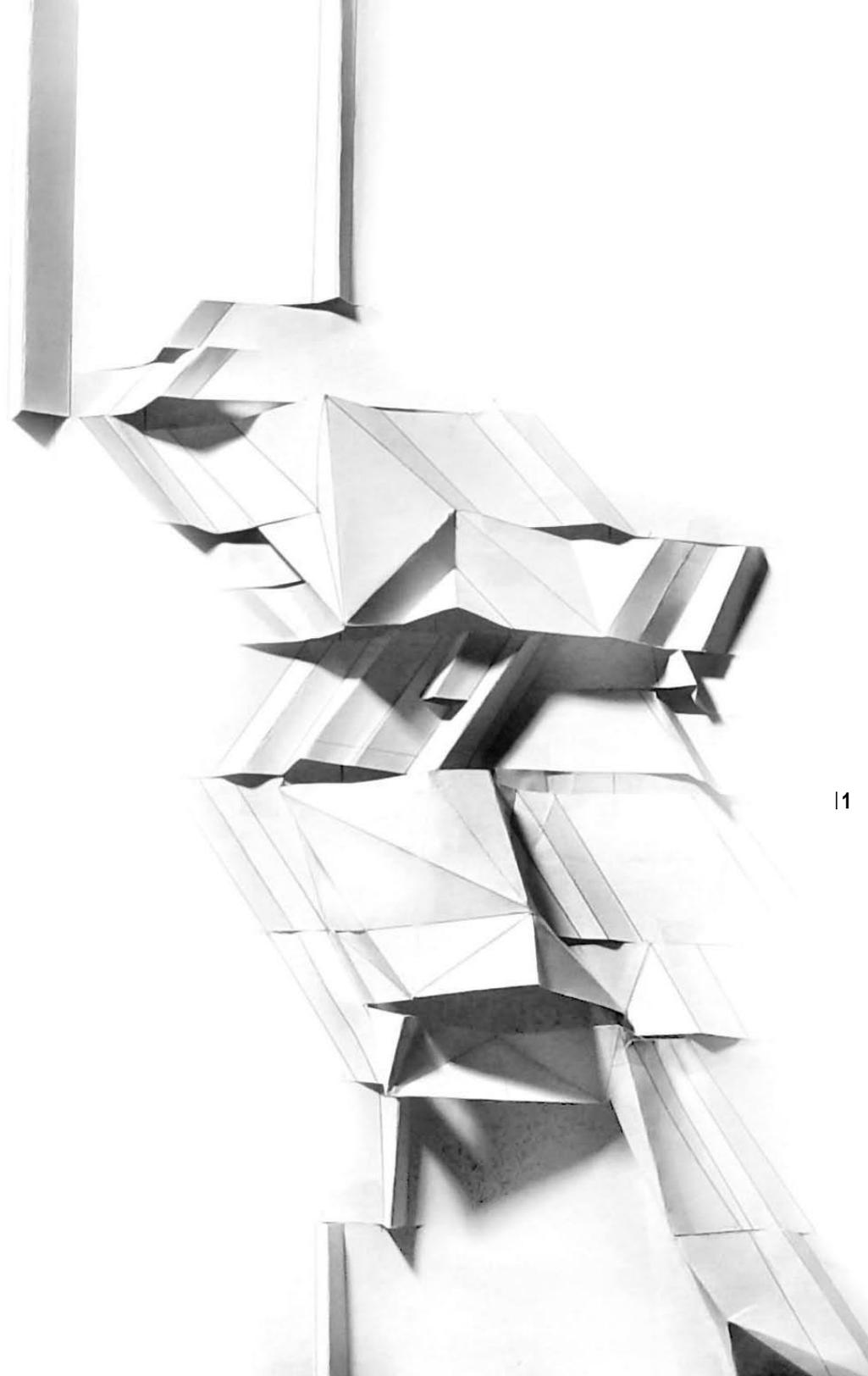
Vita 82

紙  
紙  
紙  
紙  
紙  
紙  
紙  
紙  
紙  
紙

紙  
紙  
紙  
紙  
紙  
紙  
紙  
紙  
紙  
紙

紙  
紙  
紙  
紙  
紙  
紙  
紙  
紙  
紙  
紙

**The Museum and the Paper Art**



## A Museum of Paper Art

*Paper making is one of the inventions by Chinese. 105 A.D. is often cited as the year in which papermaking was invented. In that year, historical records show that the invention of paper was reported to the Eastern Han Emperor Ho-di by Ts'ai Lun, an official of the Imperial Court. Recent archaeological investigations, however, place the actual invention of papermaking some 200 years earlier.*





*Ts'ai Lun broke the bark of a mulberry tree into fibres and pounded them into a sheet. Later it was discovered that the quality of paper could be much improved with the addition of rags hemp and old fish nets to the pulp. The paper was soon widely used in China and spread to the rest of the world through the Silk Road.*

[http://www.kepu.ac.cn/gb/technology/ancientech/ancientech\\_papermaking](http://www.kepu.ac.cn/gb/technology/ancientech/ancientech_papermaking)

<http://www.silk-road.com/artl/papermaking.shtml>

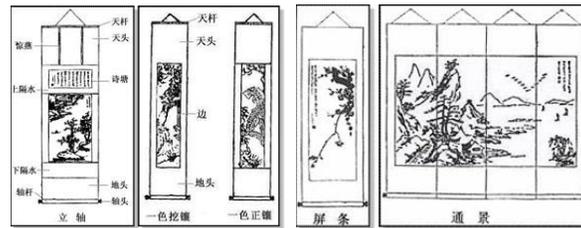
[http://www.hisnibs.com/paper\\_art.htm](http://www.hisnibs.com/paper_art.htm)

## Chinese Folding Screen

The earliest surviving folding screens, which served originally as partitions painted with serious works, are Chinese. Existing Chinese screens, some of which are made of paper, date from the eighth century AD, although literary references date as far back as the Zhou dynasty (fourth to third century BC), and depictions of screens occur in Han dynasty tombs (200 BC-200 AD).

<http://www.japangarden.co.uk/folding%20screens.htm>

<http://www.artsuzhou.com/>



## Suzhou mounting for Chinese Painting

Mounting is the Chinese counterpart of matting in Western art. The history of Chinese mounting and conservation techniques began two thousand years ago (Wills, 1987). Over this long period, the Chinese developed very efficient tools and methods of conservation. It puts strong paper backing and silk borders around Chinese paintings so the paintings look better and can be well preserved after framed.

<http://funalliance.com/ink/painting/mounting.htm>

## Chinese New Year Painting

As late as the Western and Eastern Han Dynasties (206B. C. -220 A. D.), people liked to paste the images of various gods on both sides of the doors, expecting them to ward off the evils and usher in good luck. These images are called "the door-gods". Since people pasted them up during the Spring Festival, these pictures gained a special significance for the Spring Festival occasion. Along with the improvement of printing technology, more and more new materials are used for Nianhua, or new year painting.

Suzhou New Year Painting is spread in the south of the Changjiang River, and originated from Suzhou, Jiangsu Province. In the middle of the Qing Dynasty, there were a great number of workshops which printed and sold New Year Paintings. This traditional artistic form of Nianhua is full of vigor now and widely loved by the people.



<http://www.chinavoc.com/arts/folk/nianhua.htm>

## Window Frame and Window flower

Window paper-cutting refers to the type of paper-cutting works pasted on windows as ornaments. In the north of China, farmers' houses are mostly windowed with wooden squares. It is commonly seen that a layer of white leather paper is pasted on rectangular or geometrically patterned squares. In case of some important holidays, such as Spring Festival, instead of the old leather paper, new paper-cutting work is pasted as a symbol of bidding farewell to the outgoing year and ushering the New Year in. The fauna and flora, figurines as well as a series of theatrical tales can all become the themes of the window paper-cuts.



[http://www.hisnibs.com/paper\\_art.htm](http://www.hisnibs.com/paper_art.htm)

<http://www.e-art.cn/ReadNews.asp?NewsID=98>



### Chinese Puppets and Shadow Plays

*Chinese shadow puppets are very delicate items, normally made from donkey skin and decorated with cut-out designs and translucent dyes. They are usually so thin that the colors as well as the outline are displayed on the screen. There is a very wide range of Chinese characters to perform in many different plays, whether military, religious or simple folk tales.*

<http://www.princetonol.com/groups/iad/lessons/middle/china.htm#Traditional>

<http://www.ccnt.com.cn/show/chwindow/culture/qyzjmopy/ohter/pyx1-2.htm>



### Suzhou Paper Cutting

*Paper-cut is one of China's most popular and characteristic folk arts. It takes paper as the material and scissor or engraving knife as the tool. The tradition can be traced back to the 6th century. However, it probably emerged even a few centuries earlier. In Chinese culture paper-cuts symbolize the idea of blessedness, luck and fortune. Most Chinese families use them as window decorations and patterns, and for religious and decoration purposes.*

[http://www.hisnibs.com/paper\\_art.htm](http://www.hisnibs.com/paper_art.htm)

## Folk Toys Made of Paper

*Chinese folk toys enjoy a history as old as the nation itself. Revealing aspects of the land and its rich cultural heritage, they portray the wisdom and creativity of folk artists throughout China.*

[http://www.travelchinaguide.com/intro/arts/folk\\_toys.htm](http://www.travelchinaguide.com/intro/arts/folk_toys.htm)

<http://info.toys.hc360.com/html/001/001/009/14355.htm>



## Chinese Paper Lanterns

*Chinese paper lanterns are more than just decorations. Since 250 B.C. they have silently spoken of births, celebration and social status. The Chinese have celebrated Lantern Festival since the Han Dynasty (206 BC-221 AD).*

<http://www.dengcai.com/main.htm>

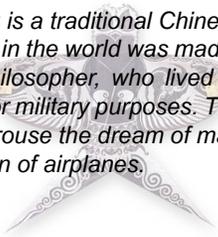
<http://www.chinahighlights.com/travelguide/lantern.htm>



## Content of Exhibition

### Chinese Kites

*Kite making is a traditional Chinese folk handicraft. The earliest kite in the world was made by Mo-tse, a famous Chinese philosopher, who lived 2300 years ago, and was used for military purposes. The invention of the kite helped to arouse the dream of mankind to fly and led to the invention of airplanes.*



<http://www.travelchinaguide.com/intro/arts/kites.htm>

<http://www.gog.com.cn/xb/x0205/ca174483.htm>

### Suzhou Style Fans

*Suzhou Fan is a big family with great varieties. Suzhou Fans may date back to the East Jin Dynasty (317-- 420 AD) when the famous imperial palace tissue fans were not popular among the common people. In about 13th century, the scholars made a very good use of the tissue part of a fan for calligraphy and painting. At the same time, the making of folding fans also burst into full blossom. They are not only the articles for daily use but also the works of art widely used for decoration, gifts and collections.*



<http://www.yangtze.com/gallery/specialties/suzhou.html>

## Space Requirement of Exhibits



As to the nature of paper art, the sizes of exhibits vary from palm-size folding fans to oversize items such as full scale paper dinosaur sculptures. Spaces of various proportions are required to display items of assorted sizes. Specific lighting environments are also essential for presenting particular exhibits. Elaborated and fragile items need to be kept away from direct sunlight; self-illuminated paper lanterns need to be placed in obscure spaces to provide sufficient contrasts.

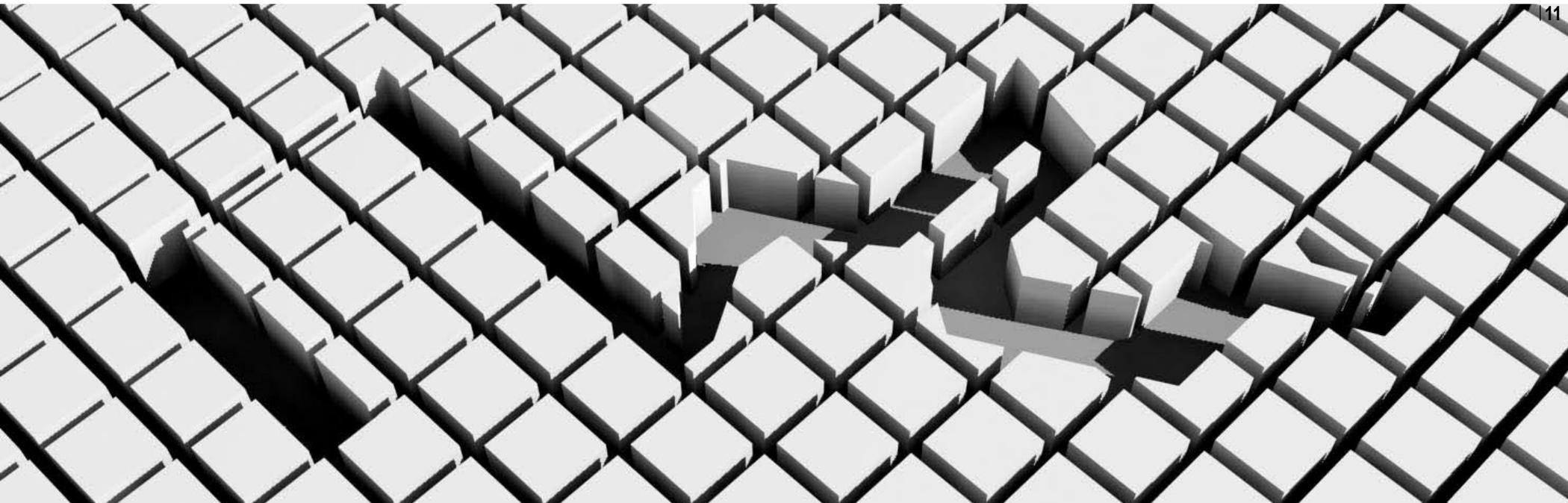
<http://southeastorigami.home.mindspring.com/dinorental.htm>

<http://suzhou.eastday.com/show.php?id=246>

<http://www.abeautifuldifference.com/webdoc.98572.ballet.html>

**The Urban Context**

**The Concept**



## The Urban Setting of Suzhou City

*Suzhou was mentioned in history books as early as in 514 B.C. since it was the capital of the State of Wu during the Period of the Warring States Period (403-221 B.C.). It flourished as a trading and silk center in the early sixth century, linked with the capital through the Grand Canal.*

*Encircled by the Grand Canal, Suzhou has its unique scenery of crisscrossing waterways and streets lined with houses and stone bridges. It was called a "Paradise on Earth" in ancient times and is known as the "Venice of the East" today.*

*During the Ming and Qing Dynasties, Suzhou experienced a period of feudal economic prosperity and cultural flowering. Consequently, the number of privately-owned gardens in the city of Suzhou and its environs increased dramatically. A galaxy of great masters emerged and the art of landscape gardening reached its apogee. Many have survived to the present day and are open to the public.*

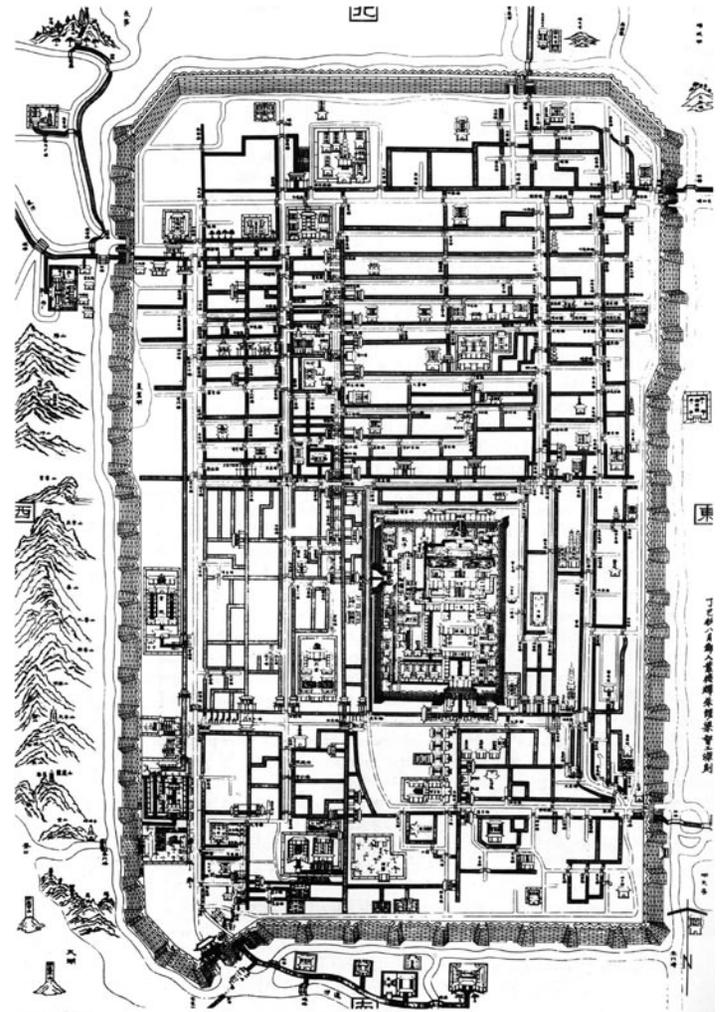
<http://www.ichina.com/suzhou.htm>

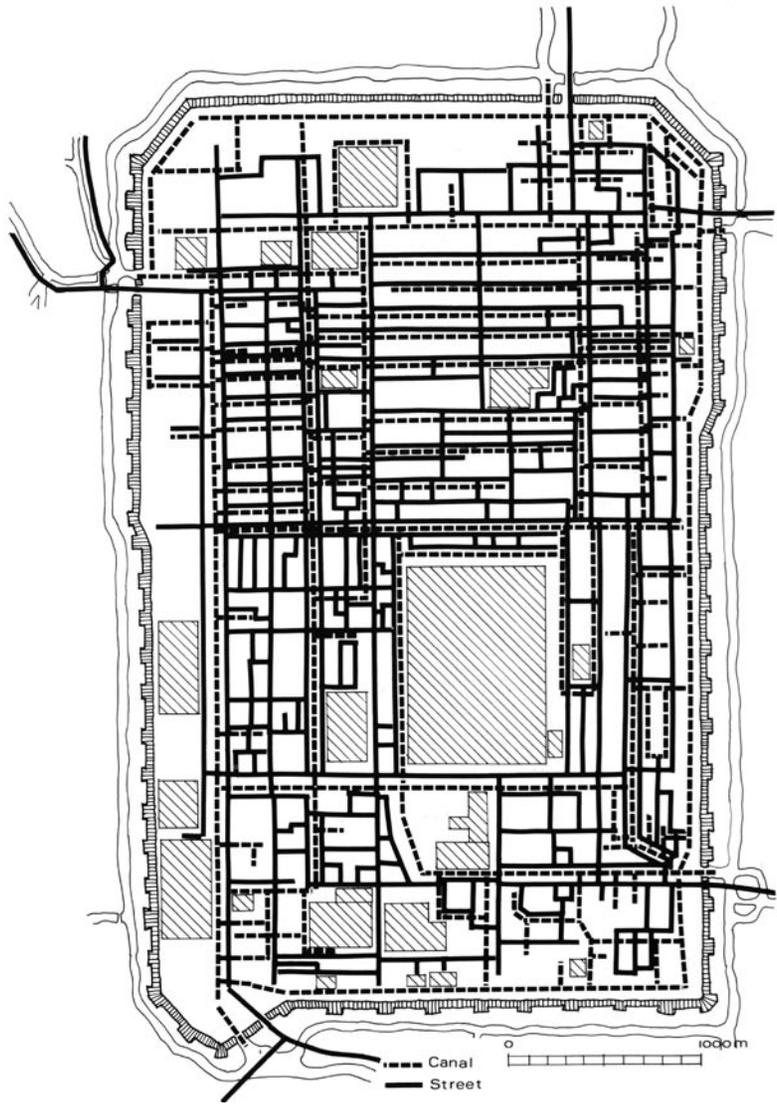
*The Humble Administrator's Garden and the Garden for Linger In, noted for their artistic perfection and individual characteristics, are known as China's four most famous gardens along with the Summer Palace in Beijing and the Imperial Mountain Resort in Chengde. A Suzhou garden is the "origination of urban scenery", a microcosm of the world made of the basic elements of water, rocks, plants and buildings, which are arranged in such a way that they reflect the sequential beauty in the garden, the passage of time, the dissimilarity between mornings and evenings, and the succession of the seasons within the boundary of the wall and lead a sequestered life amongst the bustling city.*

<http://www.ichina.com/suzhou.htm>



Plan of Song Dynasty Suzhou sculpted on stone in 1229





## Choosing of the Site

Bounded by the Main Street and DongBei Street in the northeastern section of Suzhou, the chosen site is adjacent to the historical 16th century mansion and gardens of Zhuozheng Yuan, or Humble Administrator's Garden. Of special interest is the fact that the Suzhou Museum by I.M.Pei is now under construction on the same site. The site usage of this thesis, however, differs from that of Pei's museum in that the 2.5 acres of the traditional "Shabby houses" are preserved instead of being demolished..





## Choosing of the Site

In the case of Suzhou museum, I believe that there are still hopes to save the old houses while constructing a new museum at the same time. The investigations show that there were some valueless contemporary buildings which occupied the centre of the site that could be cleaned out in order to make enough room for the museum. My thesis is an attempt to suggest an alternative proposal in the site without demolishing the whole area. The new building will occupy only a portion of the area and wrap around the site like a Chinese knot binding the survived houses to the Humble Administrator's Garden.



the Suzhou Museum



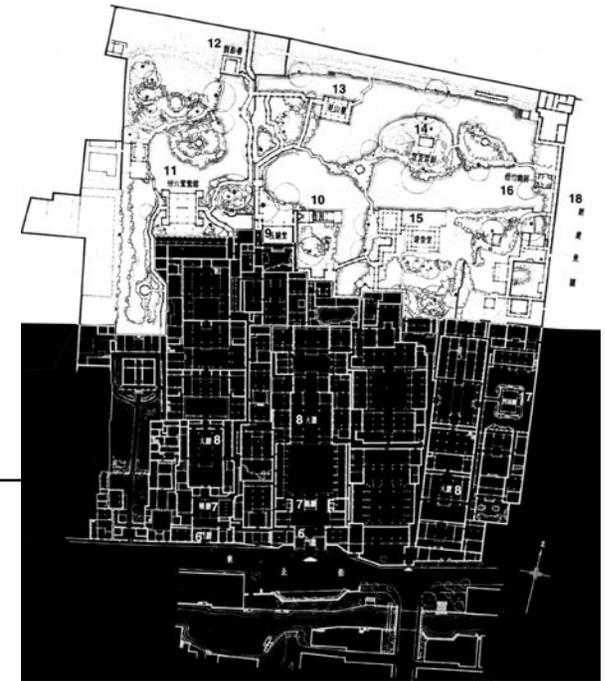
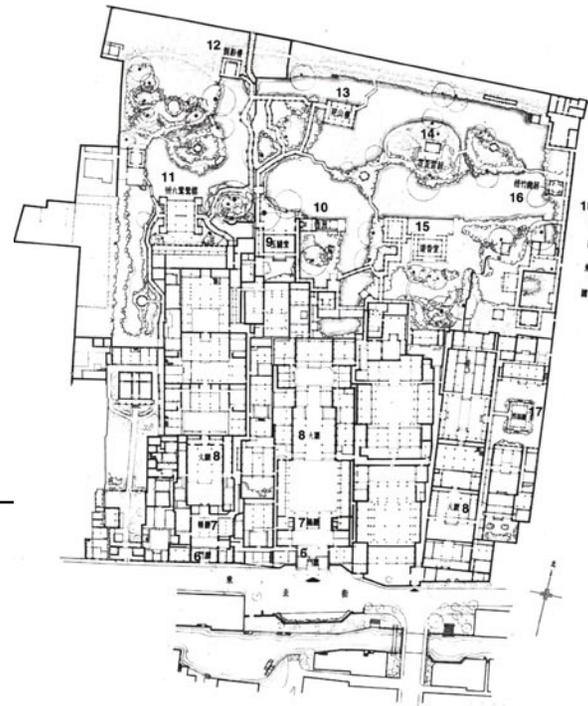
the site after demolition

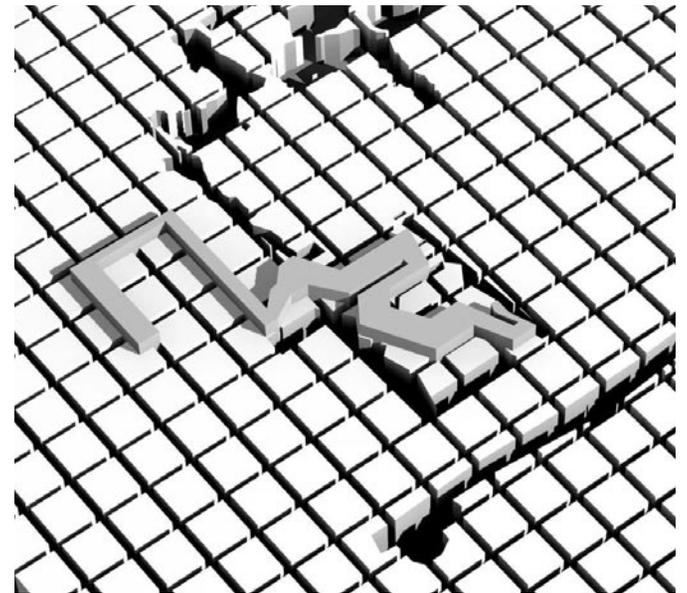
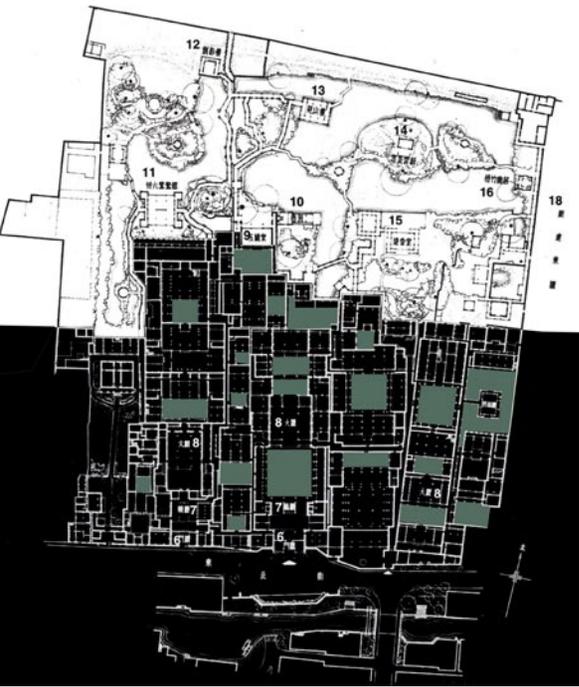


the site before demolition

## The Urban Transition

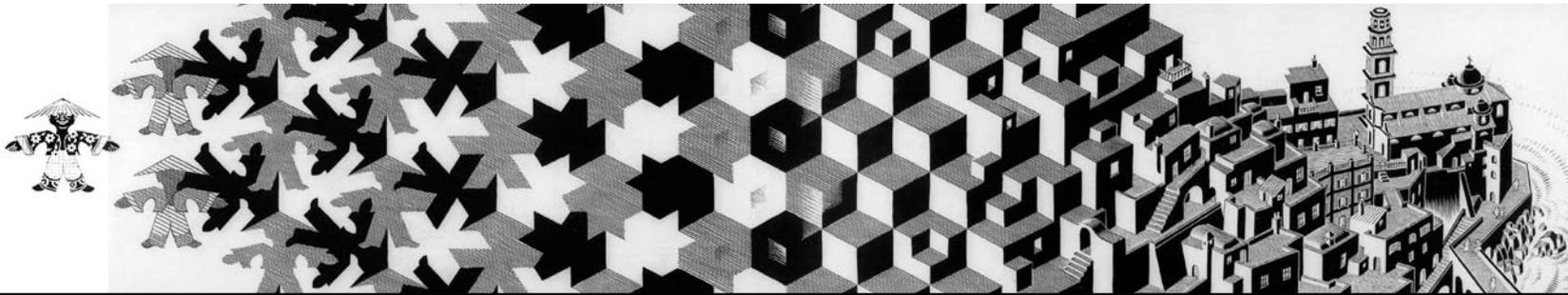
The rectilinear pattern of residential areas coexisting with natural style gardens is a characteristic of Suzhou's urban form. The transition between these two patterns, which creates infinite space sequences in Suzhou gardens, is the reflection of the Chinese philosophy "the doctrine of the mean". The interlocking of gardens and residential blocks, as well as the contrast between regular and irregular urban settings, amplify the properties of each other and emphasize the Chinese philosophy "nature and human in one". In the case of the Humble Administrator's Garden, the gardens and the courtyard houses are juxtaposed in the city block, then a bunch of courtyards take the role of transit spaces and blend the garden into the residential neighborhood.





## The Urban Transition

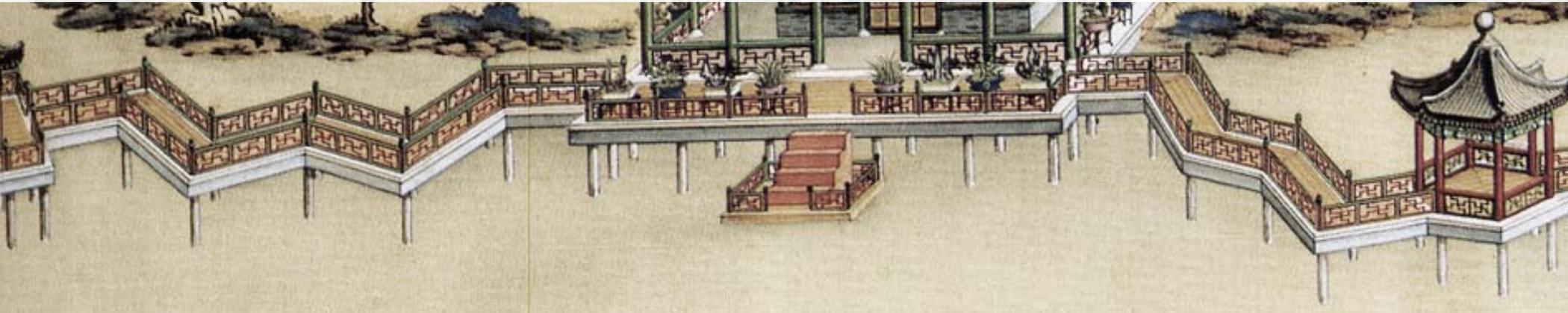
In the graphic "metamorphosis I" by M.C. Escher, a man is transformed to abstract patterns, then to squares, and finally to a City. The boundary between the man and the city has been blurred into continually changing entities.





## The Urban Transition

Winding bridges and tortuous paths, which maximize the lingering time of visitors in a limited area, are very popular in Chinese Gardens. Their irregular and unexpected shapes also fit perfectly into the natural settings of the gardens such as rocks, pools, and tree paths.







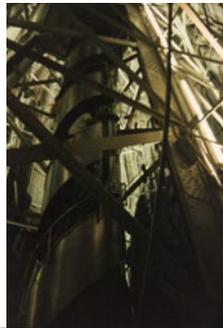
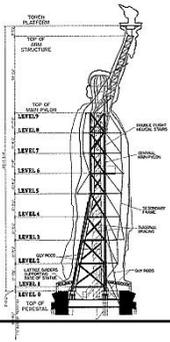
An extreme example of the continuity of folding is the Möbius Strip. In M.C. Escher's graphic "red ants", ants would be able to walk on the Möbius strip on a single surface indefinitely since there is no boundary in the direction of their movement. The infinite of continuity of the surfaces in paper folding enhances the flowing of spaces.

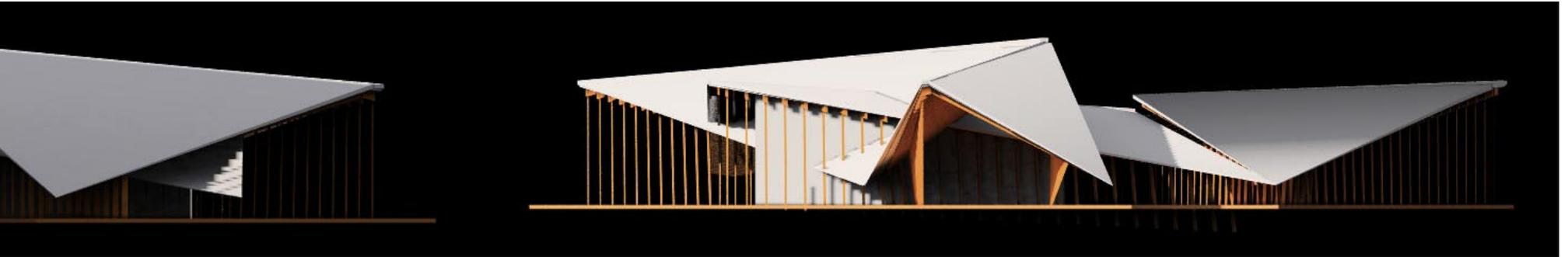




# Skin VS. Structure

As a Form-giver, folding can be either as the skin of the forms which is supported by inner structures, like the statue of liberty, or as a self-supported folded plates structure system. As skin folding loses its structure meanings and only serves as a container of spaces. On the other hand, as folded structure system, the folding serves both as the structure and the space's former.

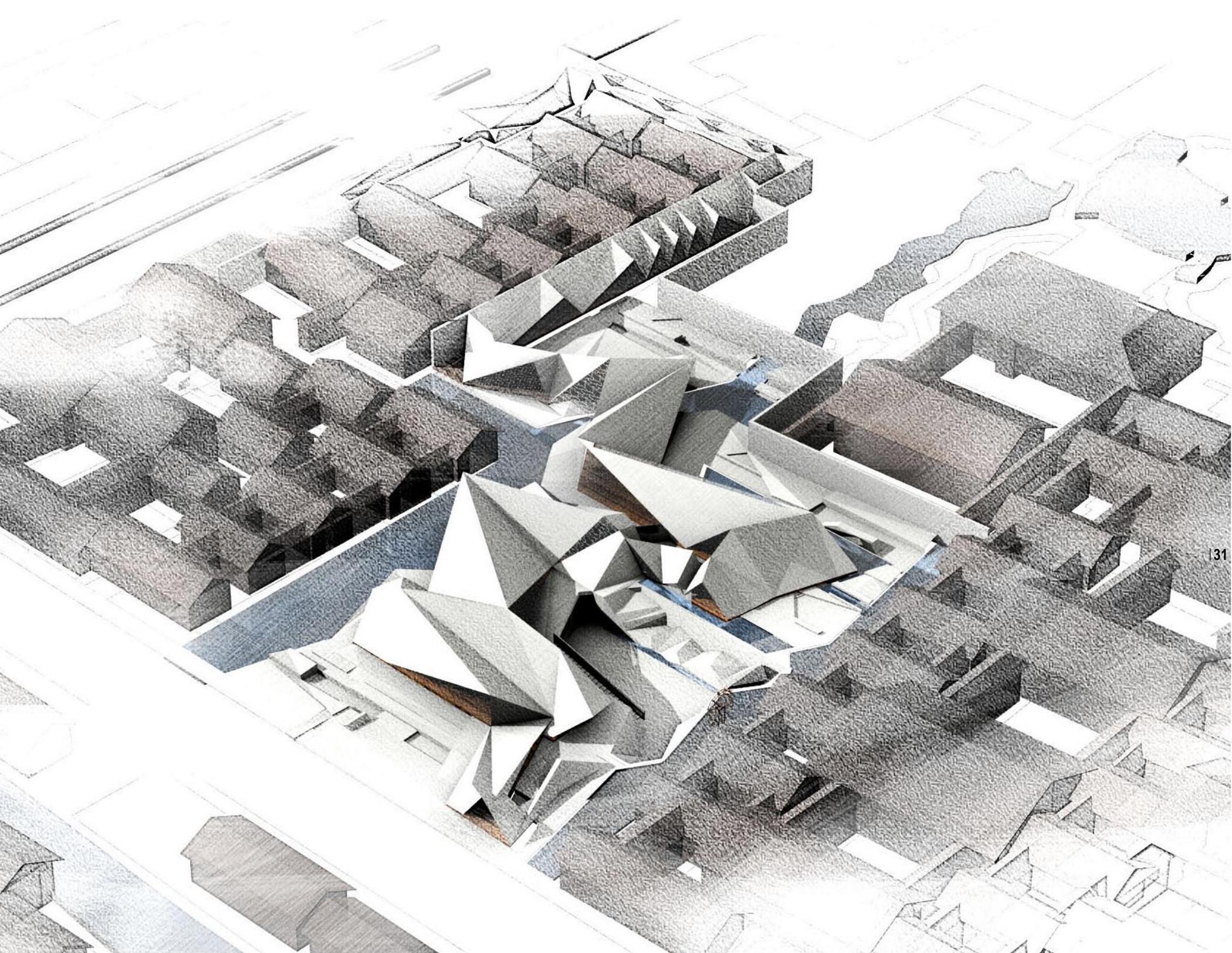






## The Project

---





Xiao King Alley



Existing Court Yard Houses

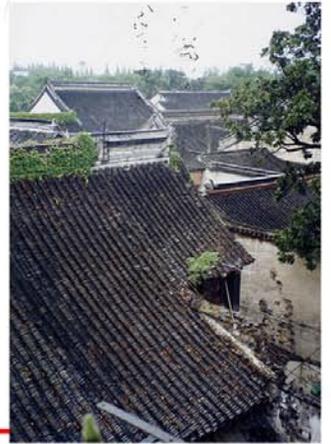


View over the Roofs





Looking to the Garden

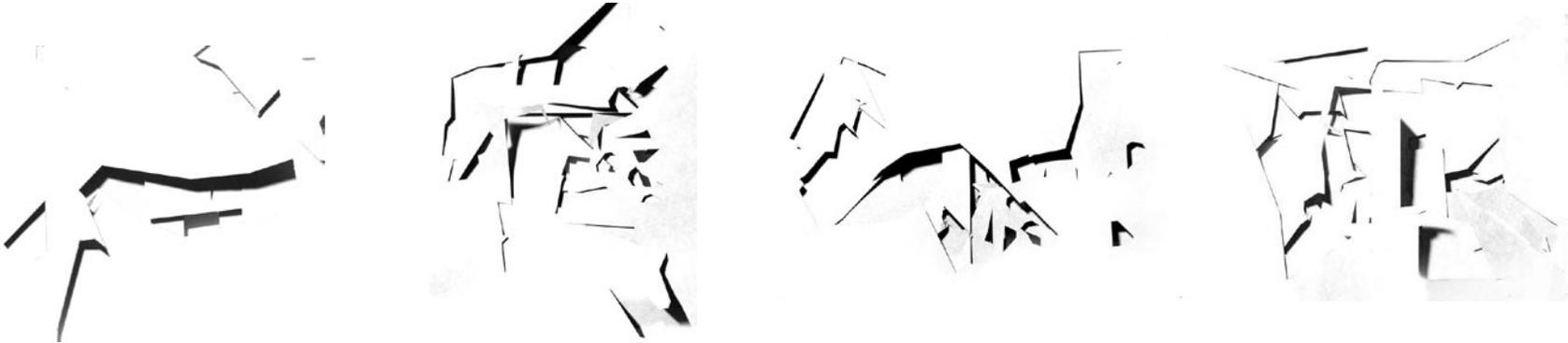


北王前中路大厅, 观博物馆  
大展厅的东厢 东仁堂北侧屋面

Views from the Canal

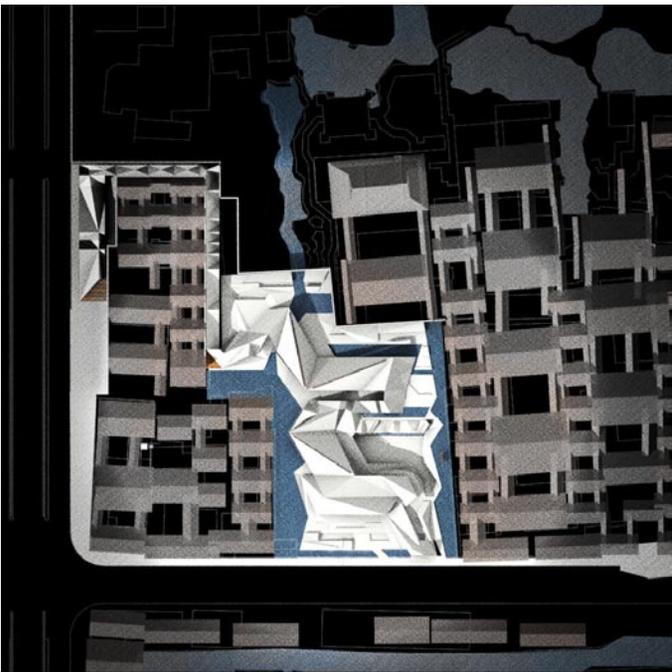


View from Main Street



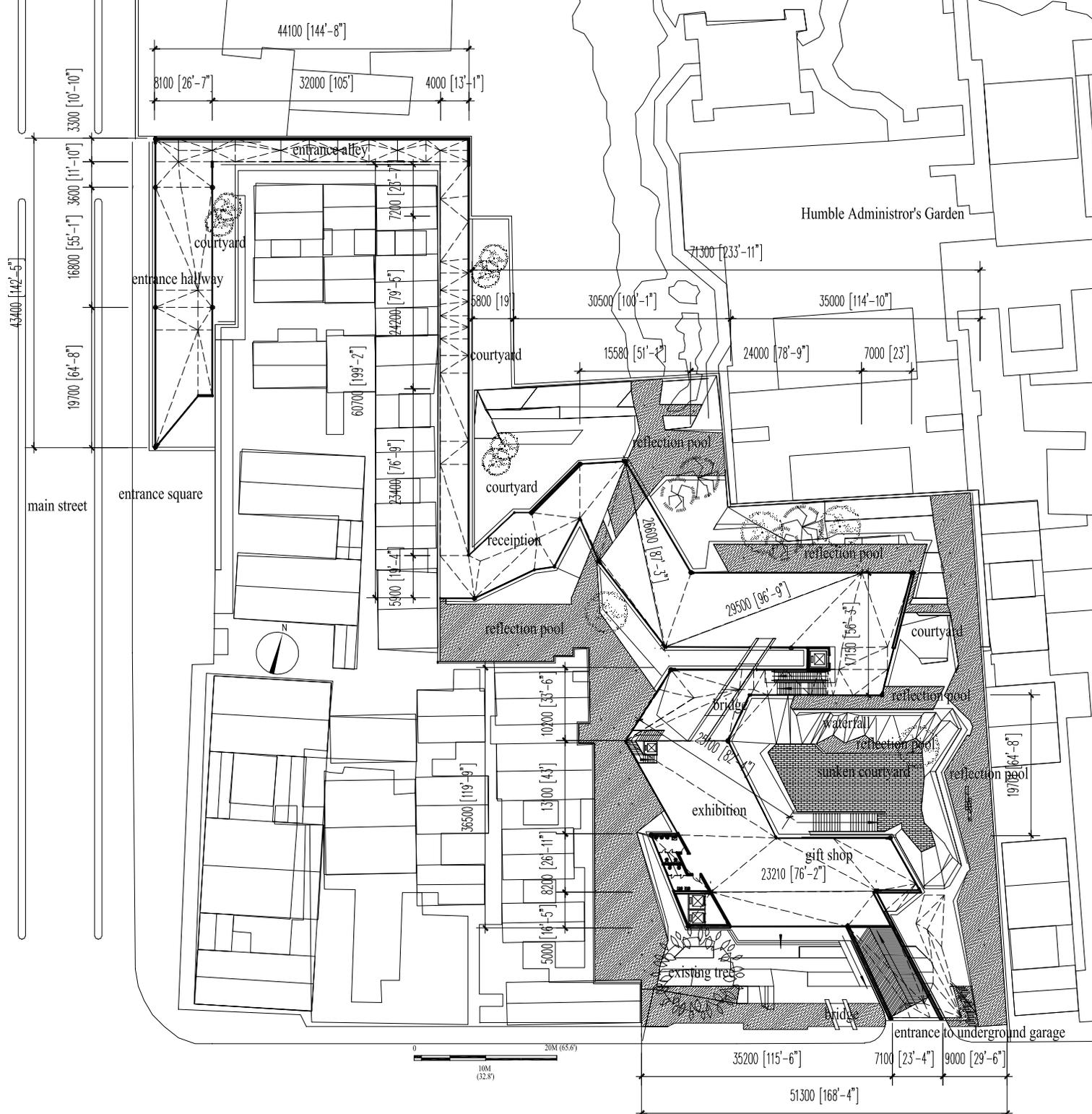
Early Study of Site Plan





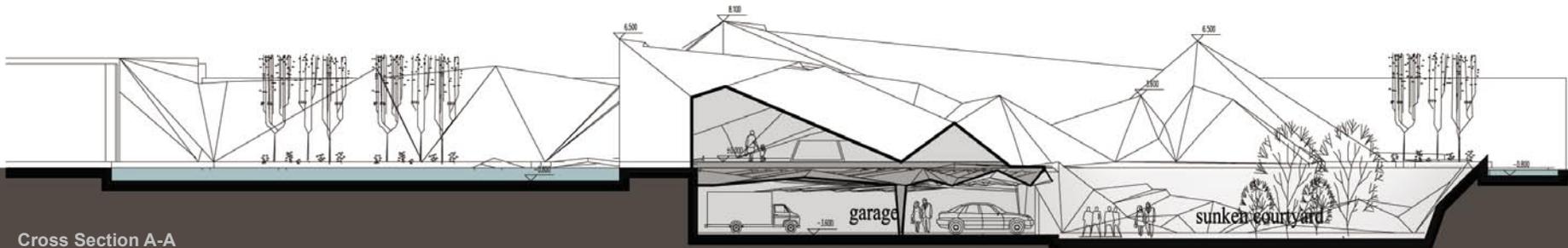
## Exhibition Level

The exhibition level accommodates the majority of the functions of the museum. Exhibition halls, gift shops, entertainment center, and service spaces such as ticket house and offices are all located on this level. It features column-free open spaces covered by folded-plates roof systems which provide flexible rooms for permanent and temporary exhibitions.

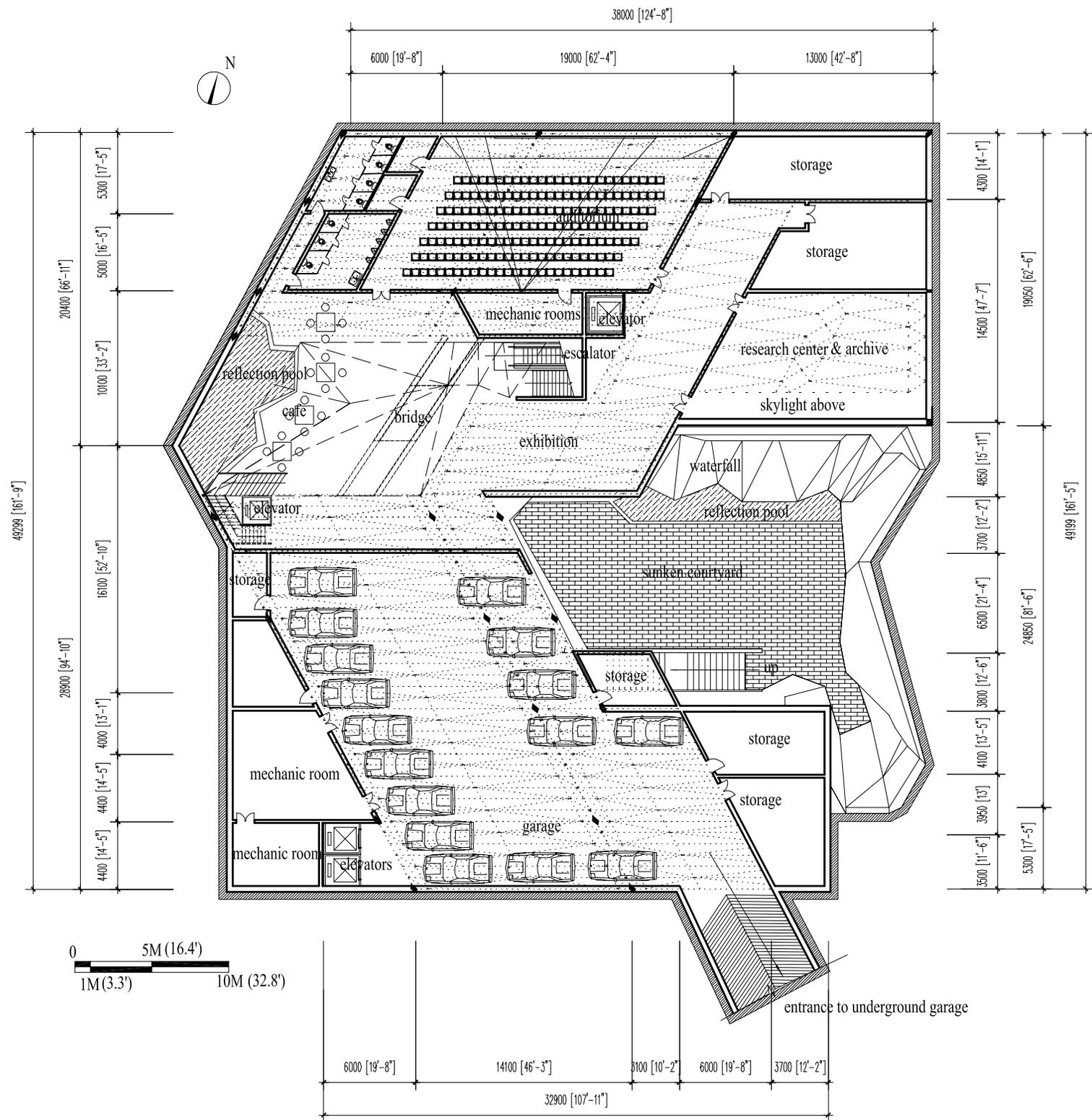


## Underground Level

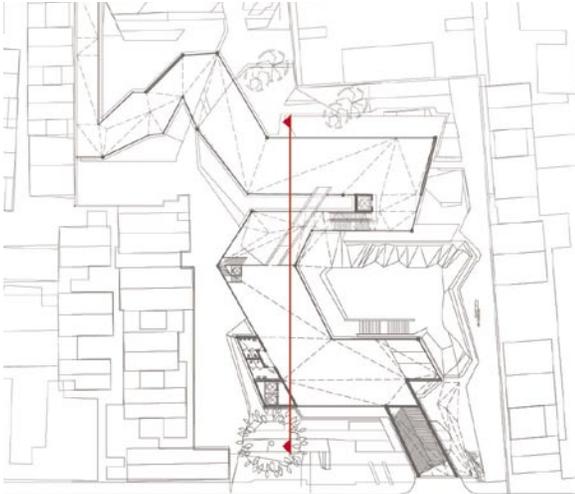
On the same level with the sunken courtyard, the underground spaces accommodate an auditorium, café, research center, and garage. It also provides exhibition spaces for Chinese paper lanterns which are self-illuminated. Illuminated by natural lighting and animated by the falling water from the reflection pools on the ground level, the underground spaces are tranquil areas for visitors to have a break from the tour of the museum. Visitors can find convenient accesses to the exhibition level, such as elevators, escalators, and the exterior staircase.



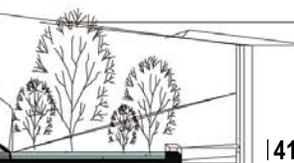
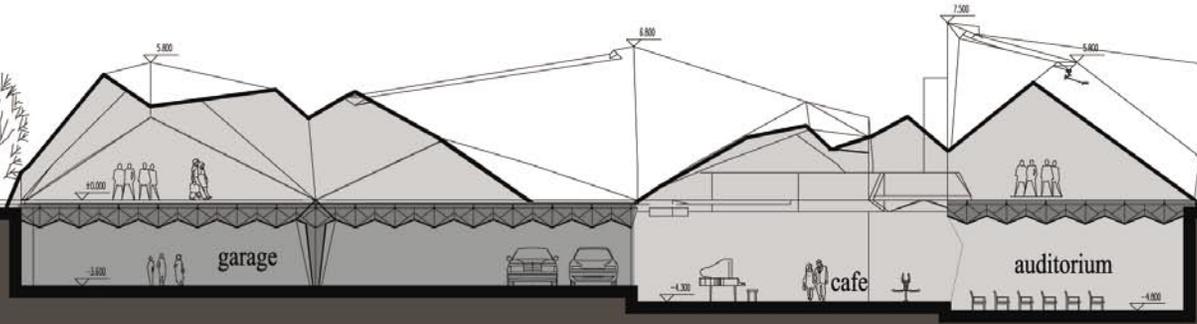
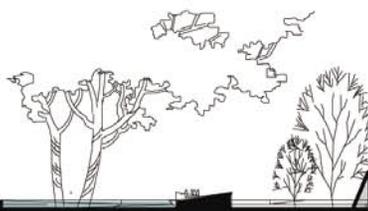
Cross Section A-A



Longitudinal Section

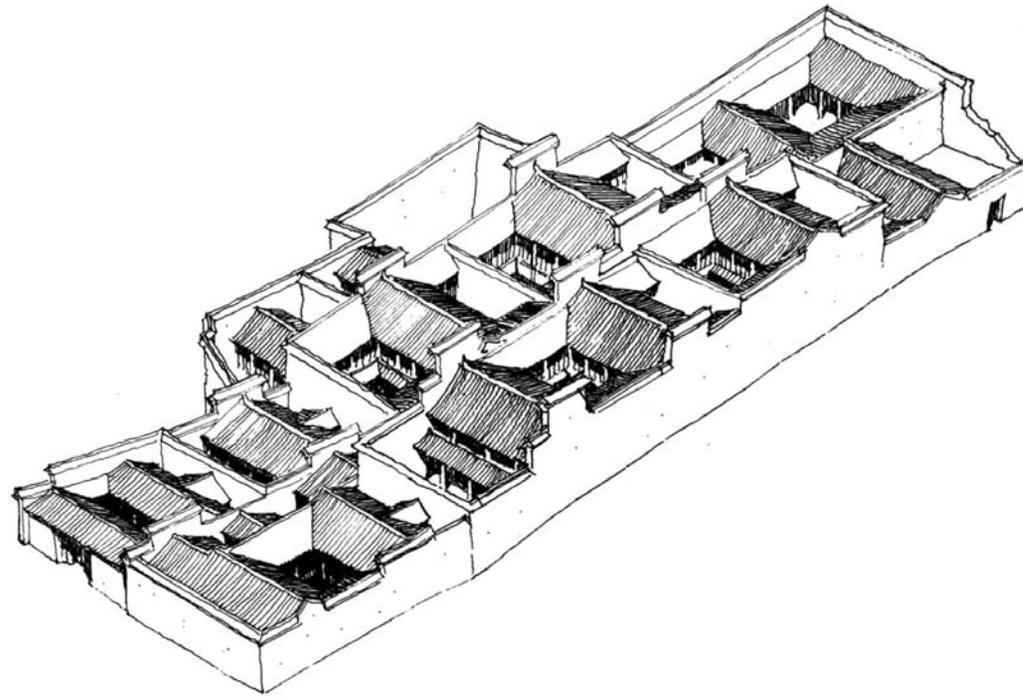


main street

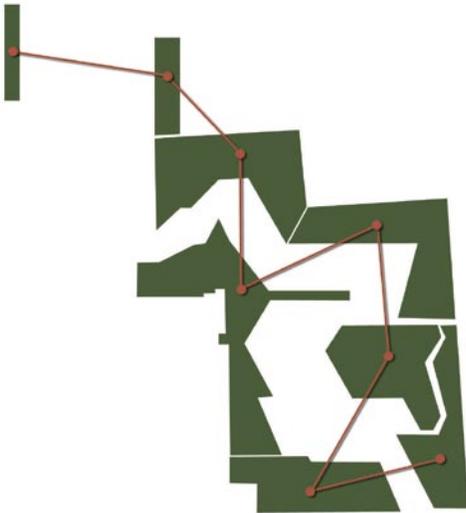


## Space In-between

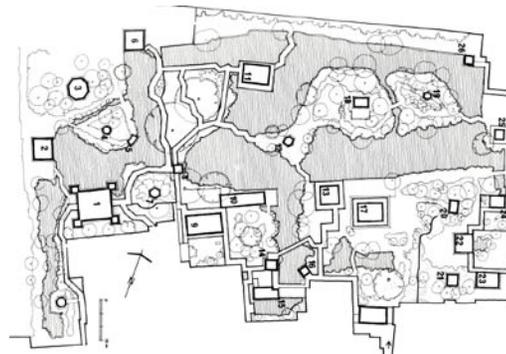
In traditional Chinese gardens, space sequence is a critical element of the design. Visitors usually start from a depressed or narrowed entrance, go through a labyrinth-like-pathway and finally end up at the open spaces of the main garden. The entire sequence dramatically amplifies or even exaggerates the feeling of changing spaces. In the design of Chinese courtyard houses, the courtyard serves the purpose of an in-between space alternating between the semi-closed or closed houses. The urban pattern, with alternate positive and negative spaces, resembles a checkerboard pattern.



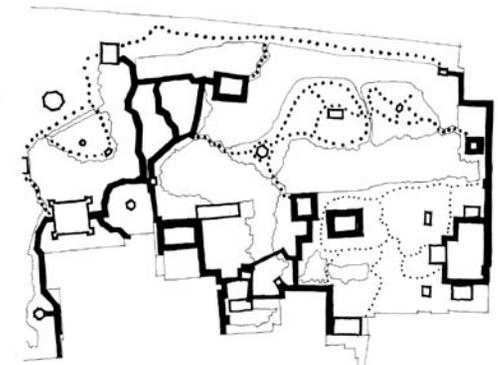
Courtyards in the museum

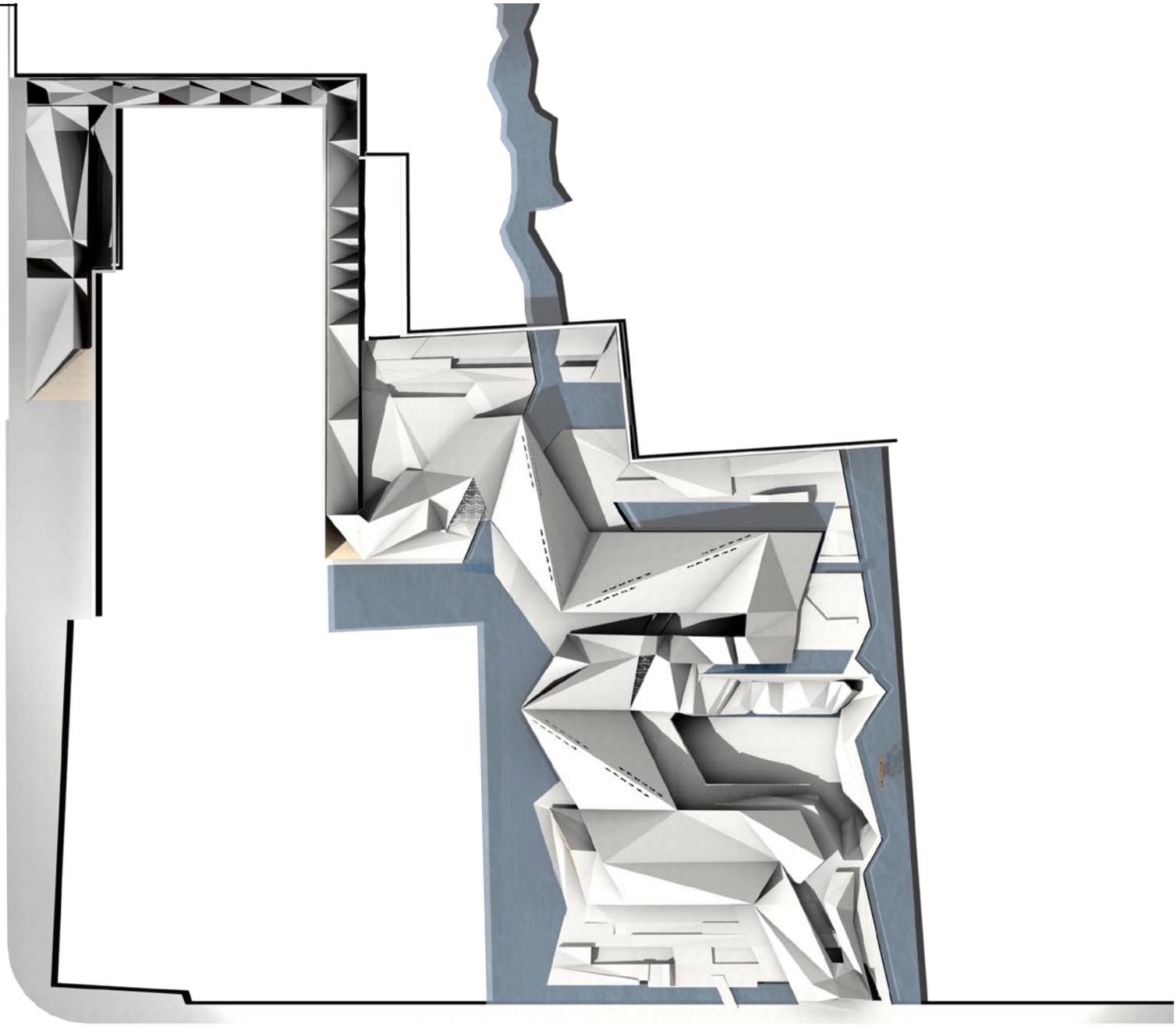


Analyses of space



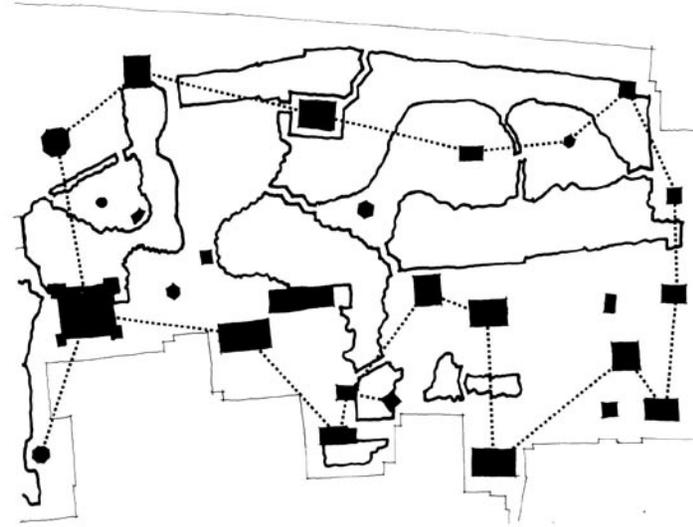
Plan of the garden





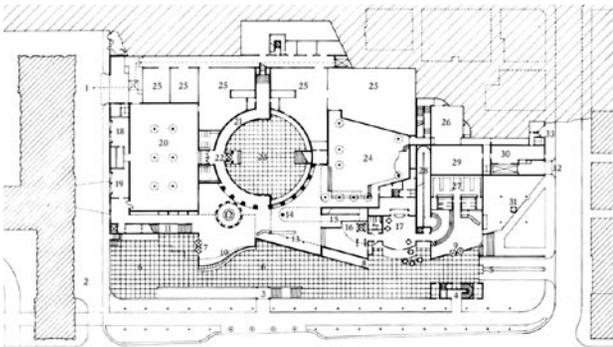
## The Museum Tour As Events.

The tour in the Humble Administrator's Garden features continually altered sceneries following a non-linear path. Similar approaches of designing spaces have been applied to modern architecture as well. In the Stuttgart museum designed by James Stirling, the tour of the museum is a series of continually changing events along the non-linear path. The same idea is also carried out by Hans Hollein in the Municipal Museum Abteiberg Monchengladbach, Austria.

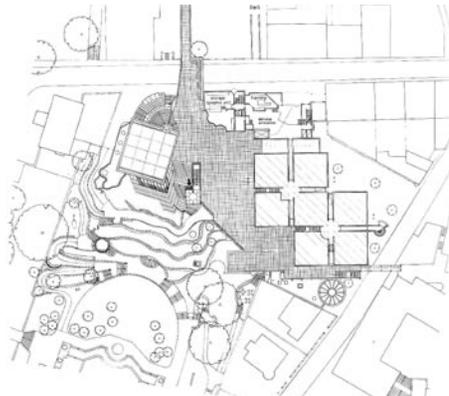


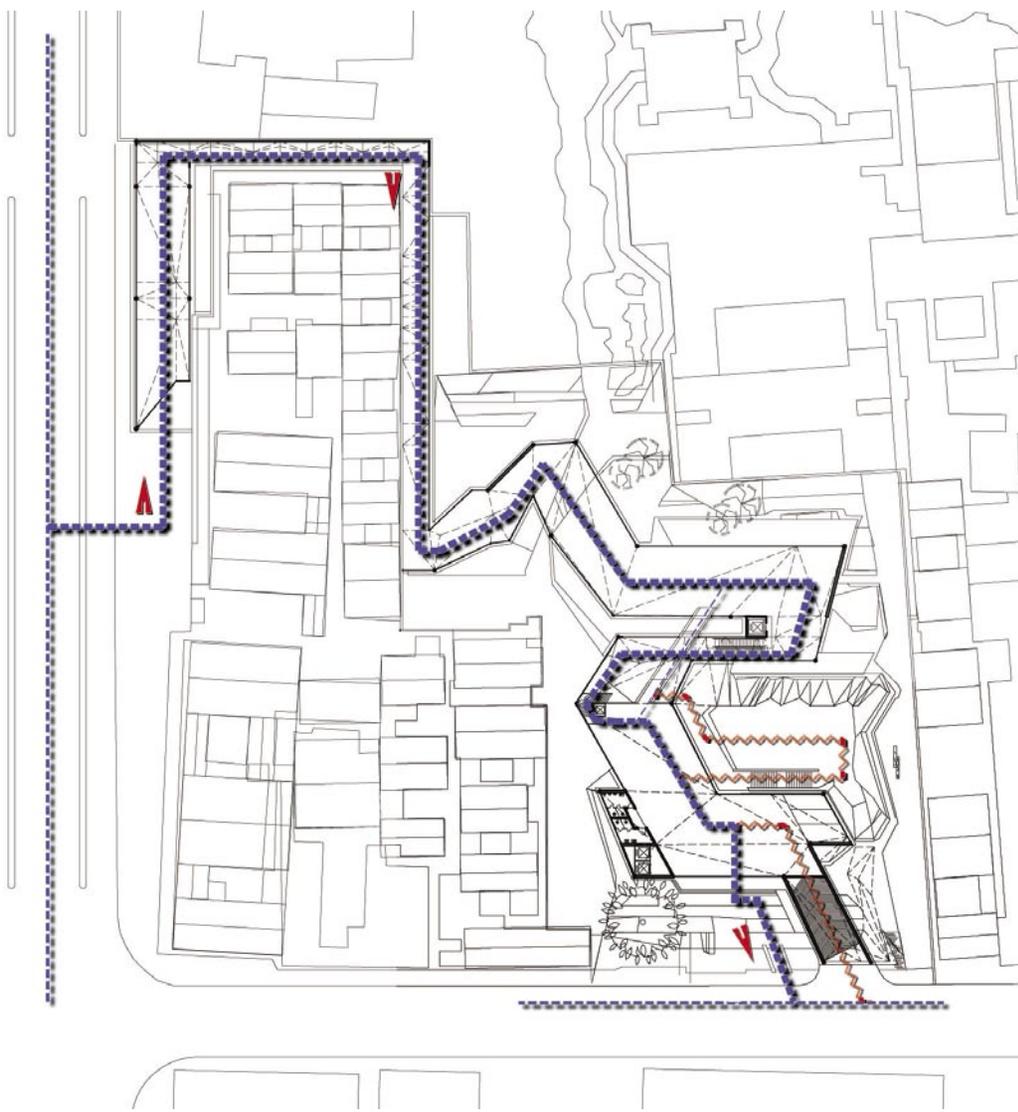
Analyses of movement in the garden

Stuttgart museum



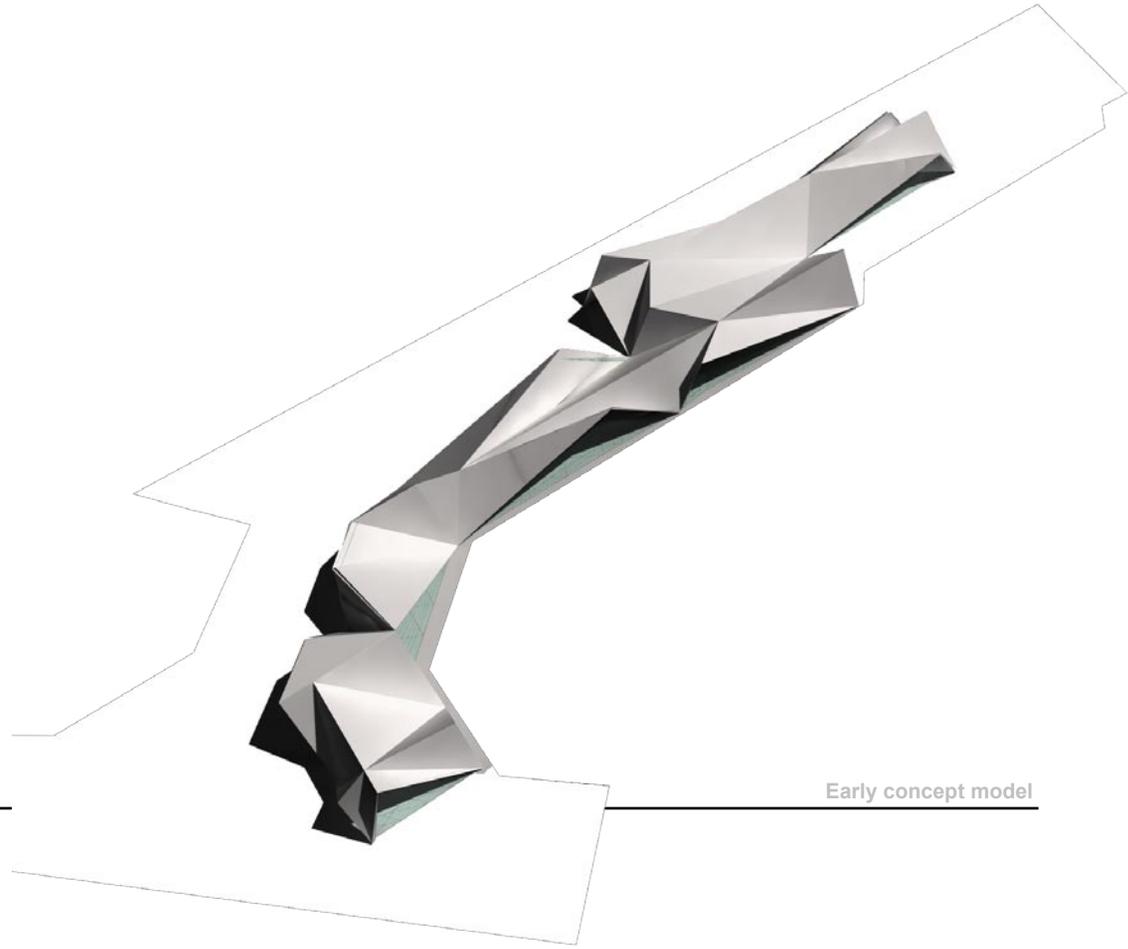
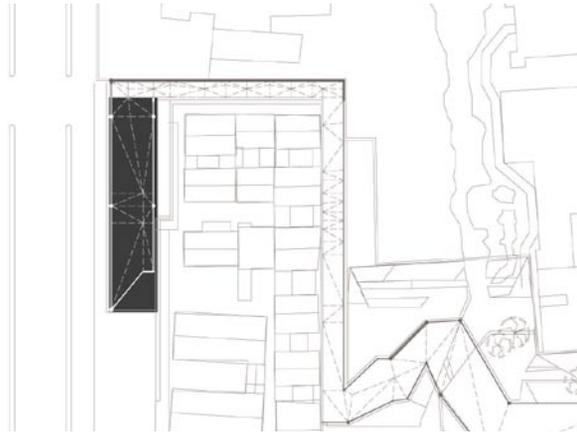
Municipal Museum Abteiberg Monchengladbach



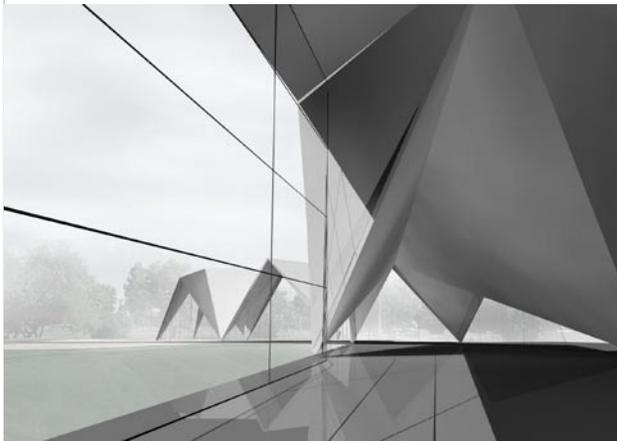


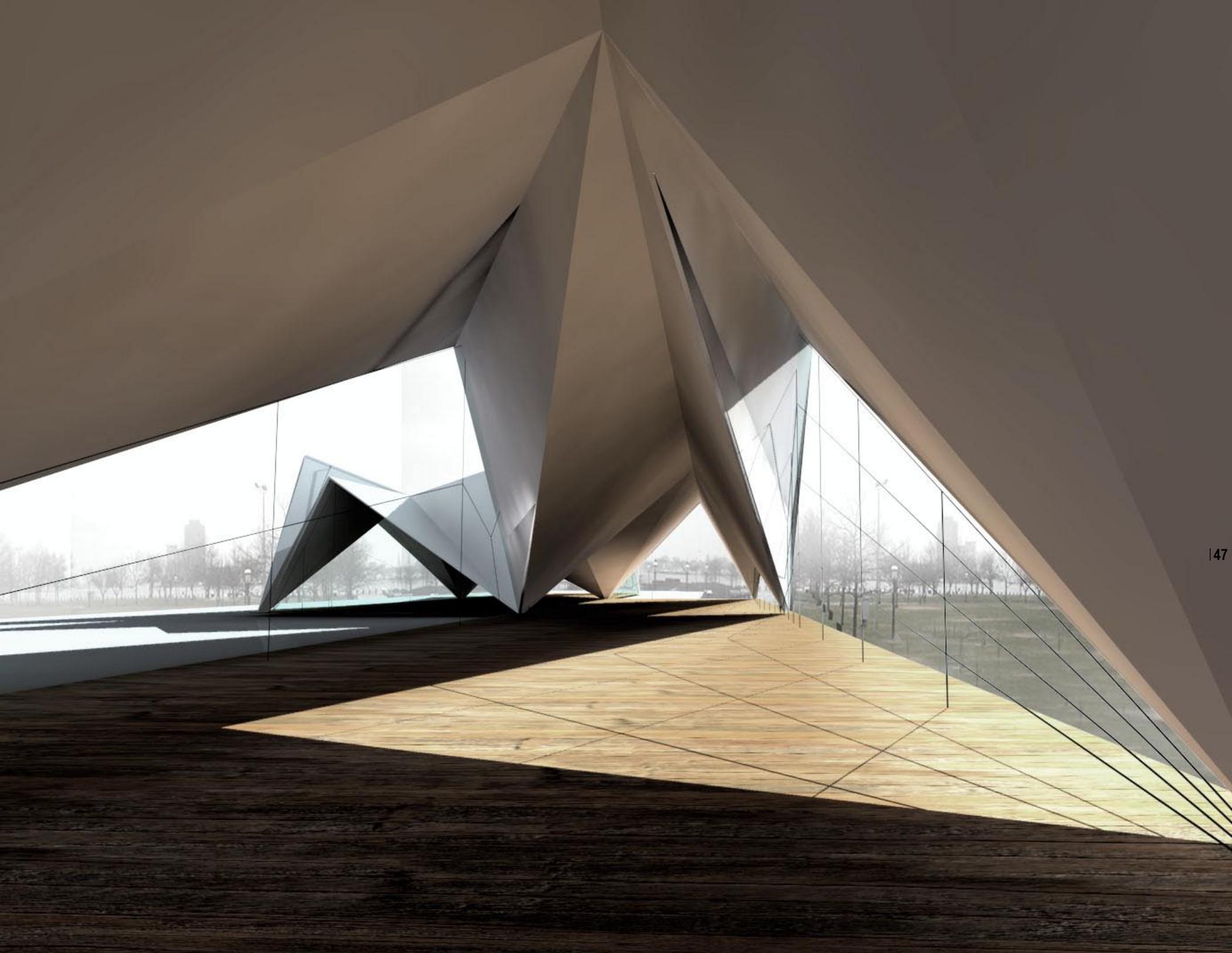
## Entrance Hallway

The entrance hallway, which houses ticket services and reception, is located in the strip along the main street which was initially occupied by some contemporary commercial buildings. Its volume, which features intimate scale folded-plate-structures, indicates the presence of the museum in the main street. It is the prelude of the space sequence as well as a screen between the busy traffic noise of the Main Street and the silent alley.



Early concept model

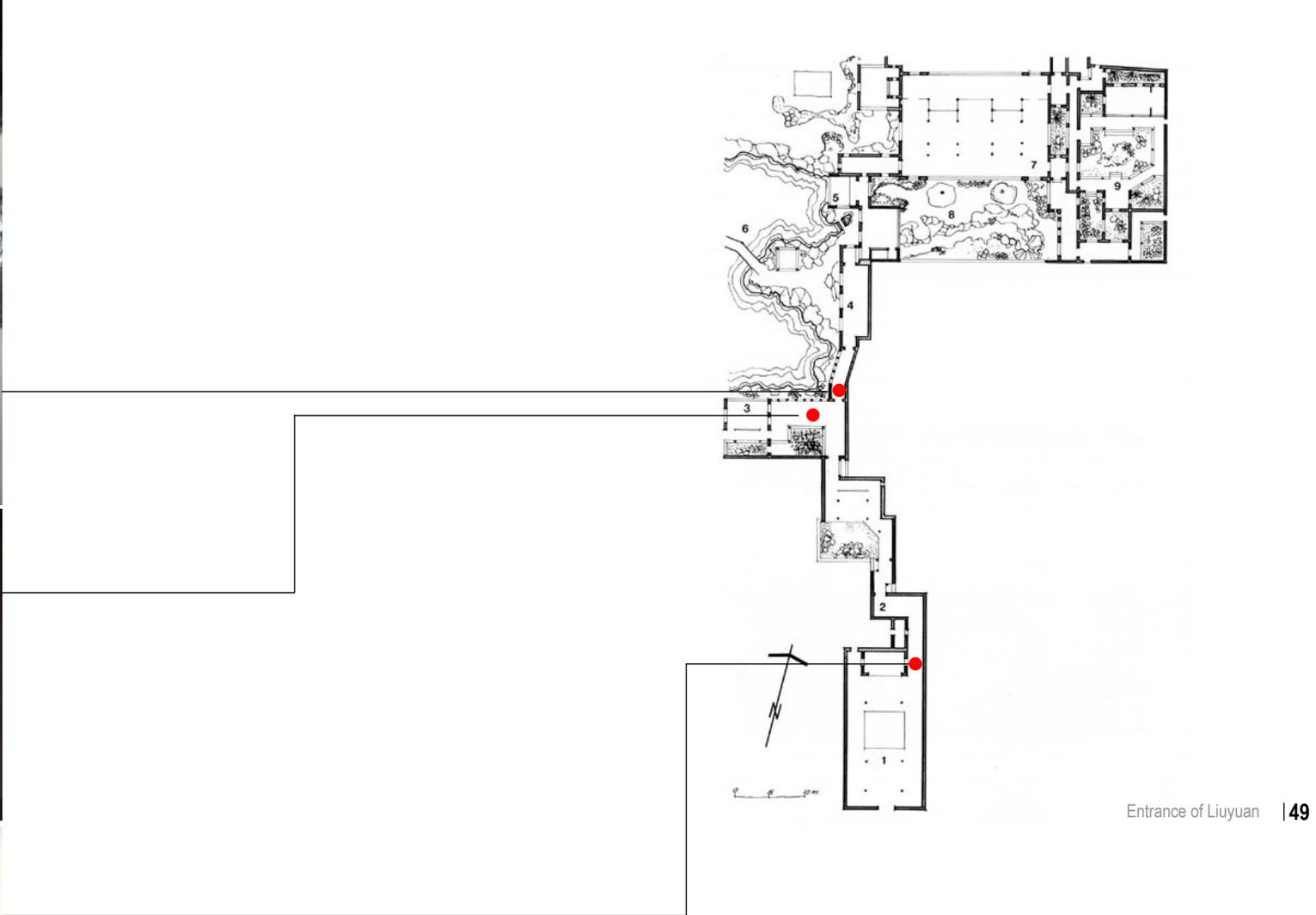




## Entrance Alley

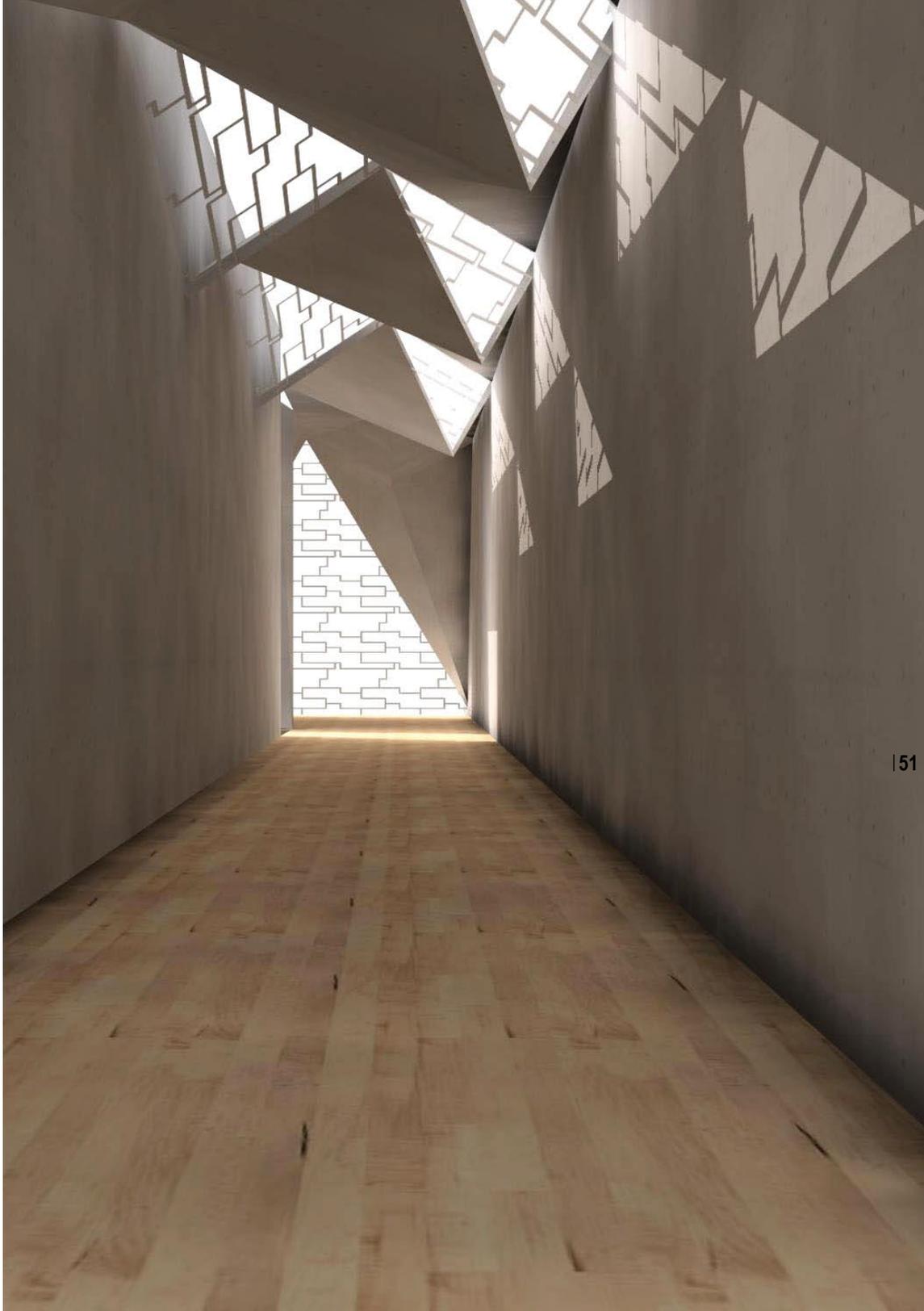
The visitors enter the dark and narrow space of the alley before they reach the main exhibit hall. The shadows from the framed skylight create an interesting pattern on the white concrete wall. Light is the only indicator of the outside world in this space. The proportion of the space, which is 20 meters long but only 3 meters wide, provides a strong sense of the direction which leads visitors to the scenery at the far end. The contrast between depressed and open spaces will dramatically enhance the space experience.





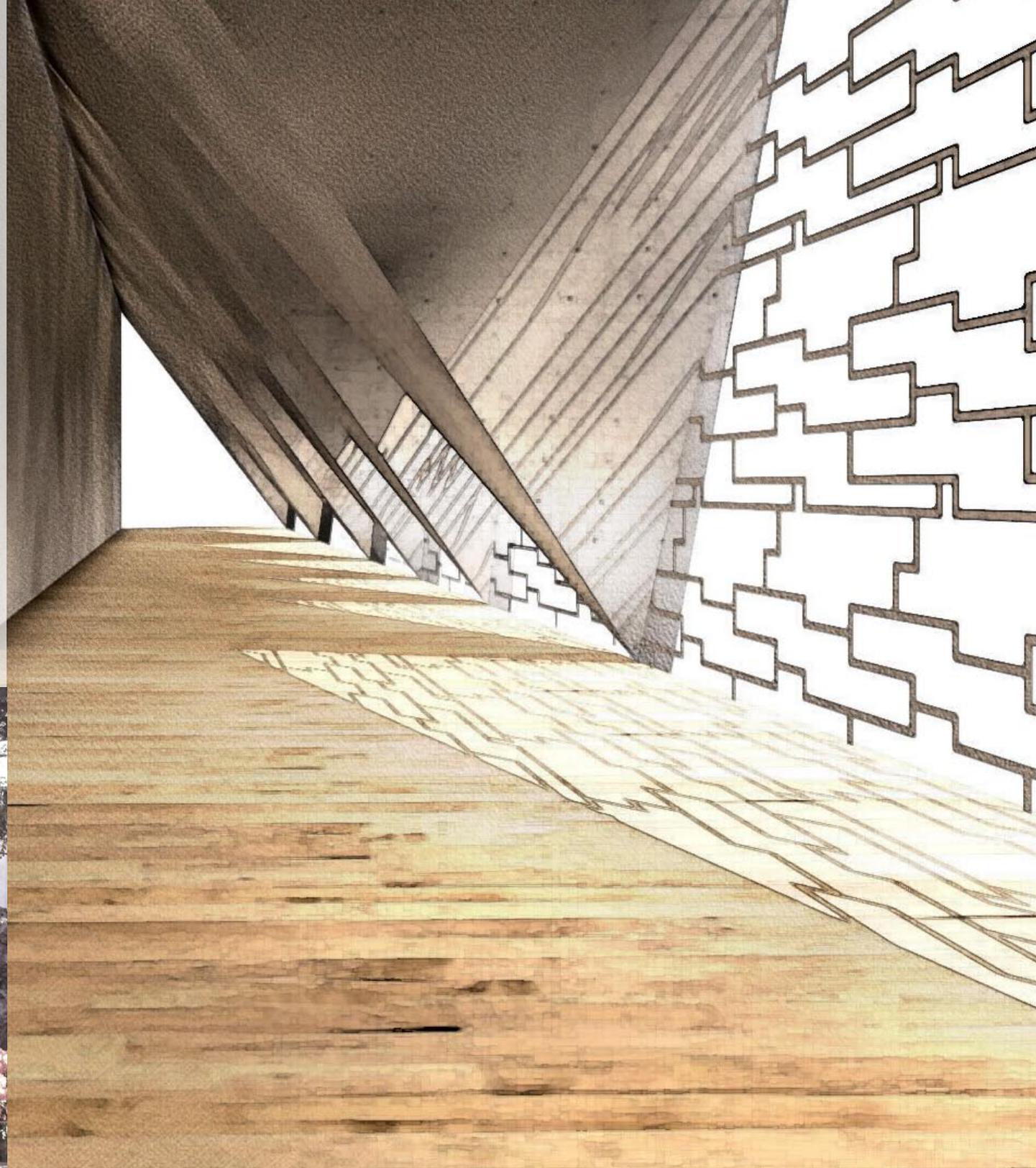
# Entrance Alley

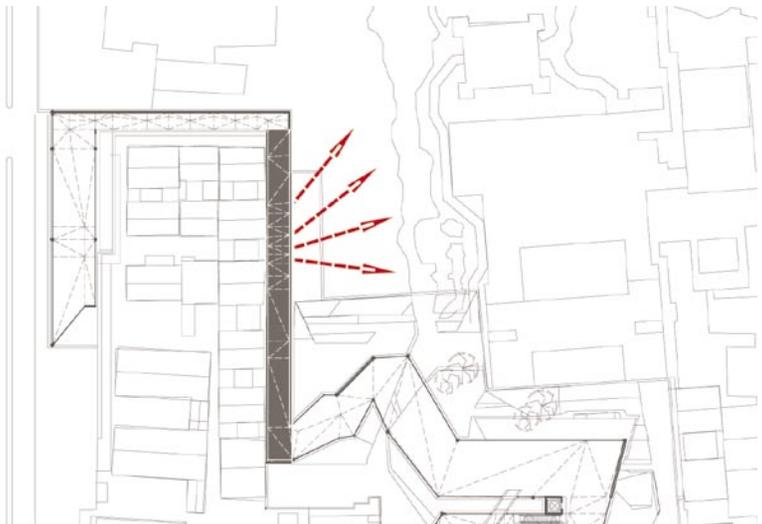




## Folding Corridor

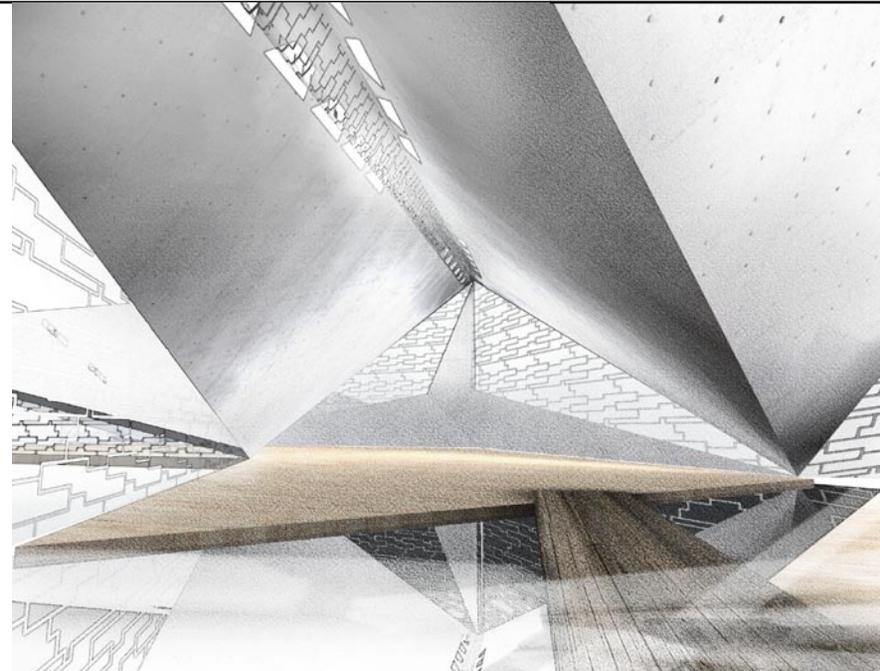
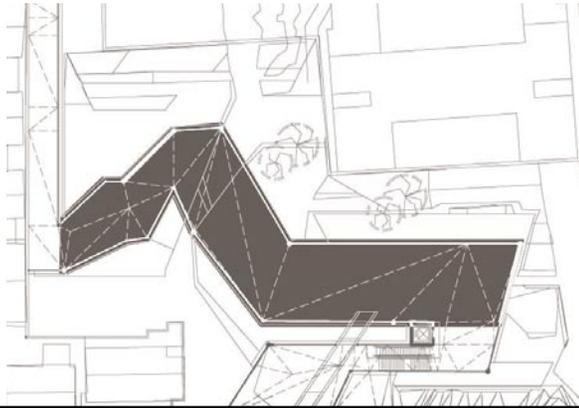
The folding corridor is the first in-between space which connects the Humble Administrator's garden and the museum. Leaving the narrow space of the alley, the visitors start to appreciate the scenery of the Humble Administrator's Garden through a semi-open garden and perforated wall before they arrive at the first exhibit hall.

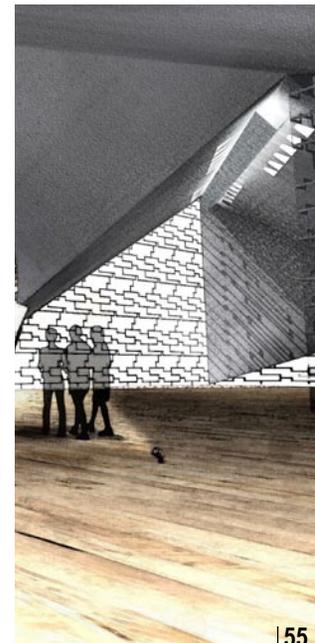




## Exhibition Hall I

With full height and partially lit by natural lighting, the exhibition hall I is the beginning of the exhibitions which start with the history of Chinese paper making and paper art. The procedure of ancient paper making dominate the hall and give the visitors an overview of the origin of paper art. A stream which connects the reflection pools in the gardens runs through the exhibition hall and enriches the space by reflecting the surrounding folded plates.

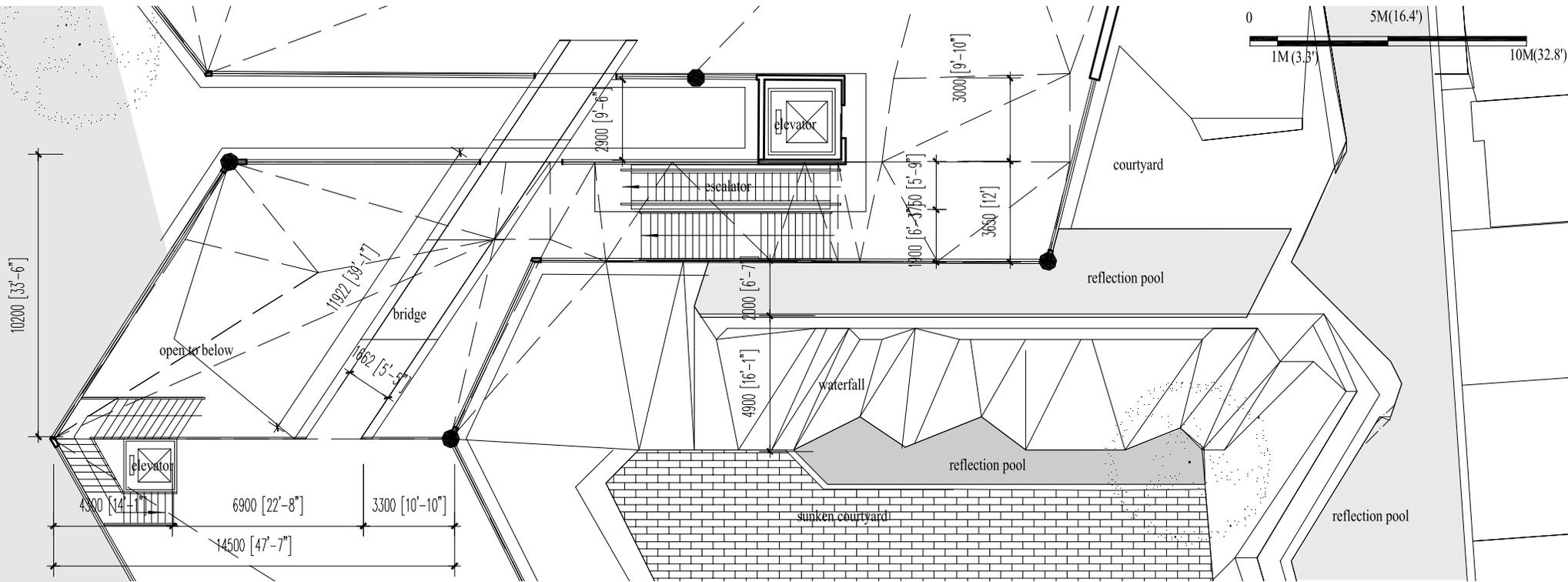


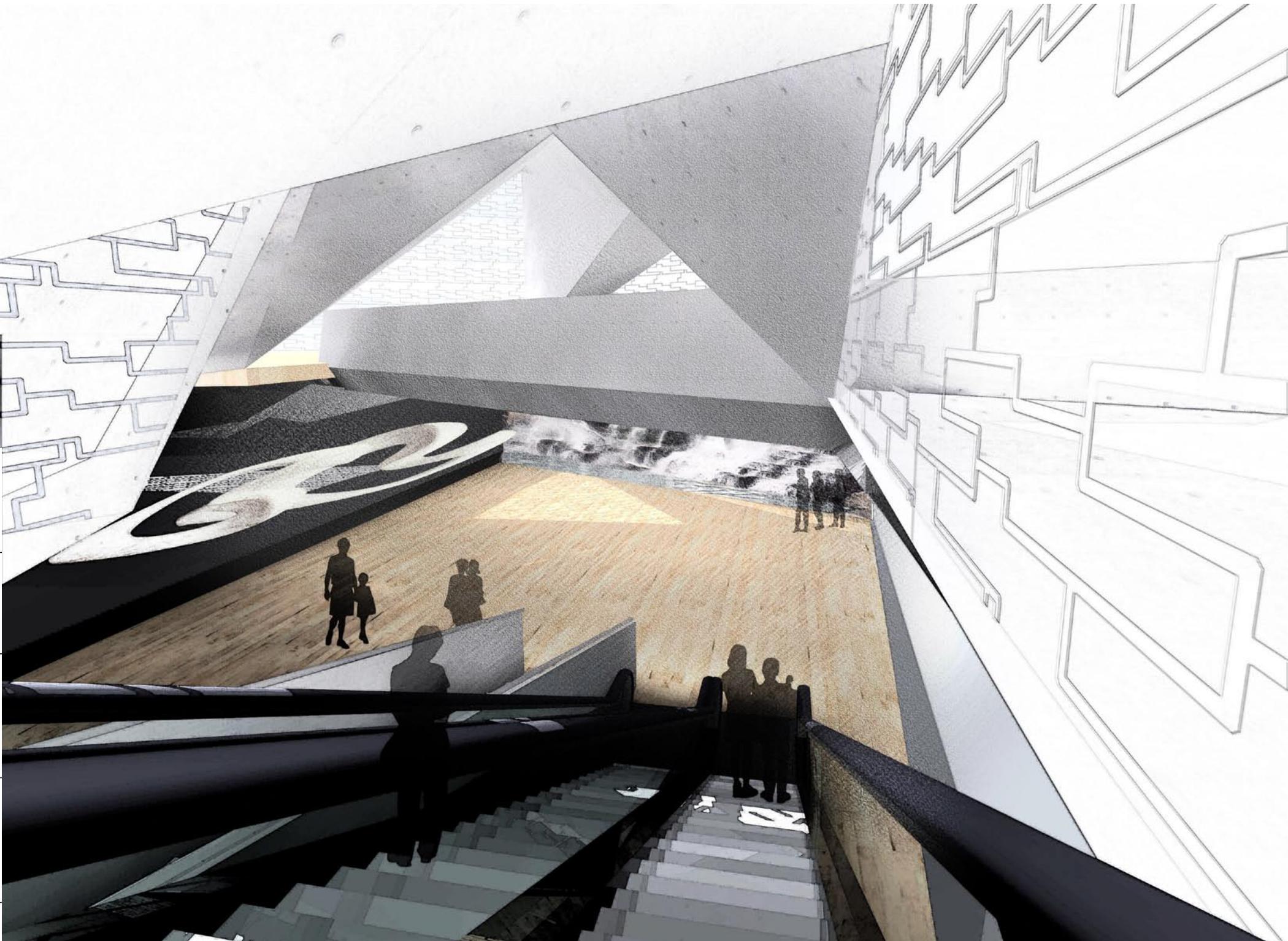


In this hall, direct sunlight is controlled by operable shading devices underneath the skylight next to the folding ridges. Translucent double-layer low-e smoked glass framed in traditional Chinese patterns provides overall lighting without letting in the direct sunlight. Directional spot lights, which will provide focus lighting for specific exhibits, are located in the ridges of the folded-plates roofs. The strategies of illumination, which supply both diffused reflection of natural lighting and artificial spot lights to the exhibition spaces, allow visitors to appreciate the beauty of the paper art in the changing of the time and season.

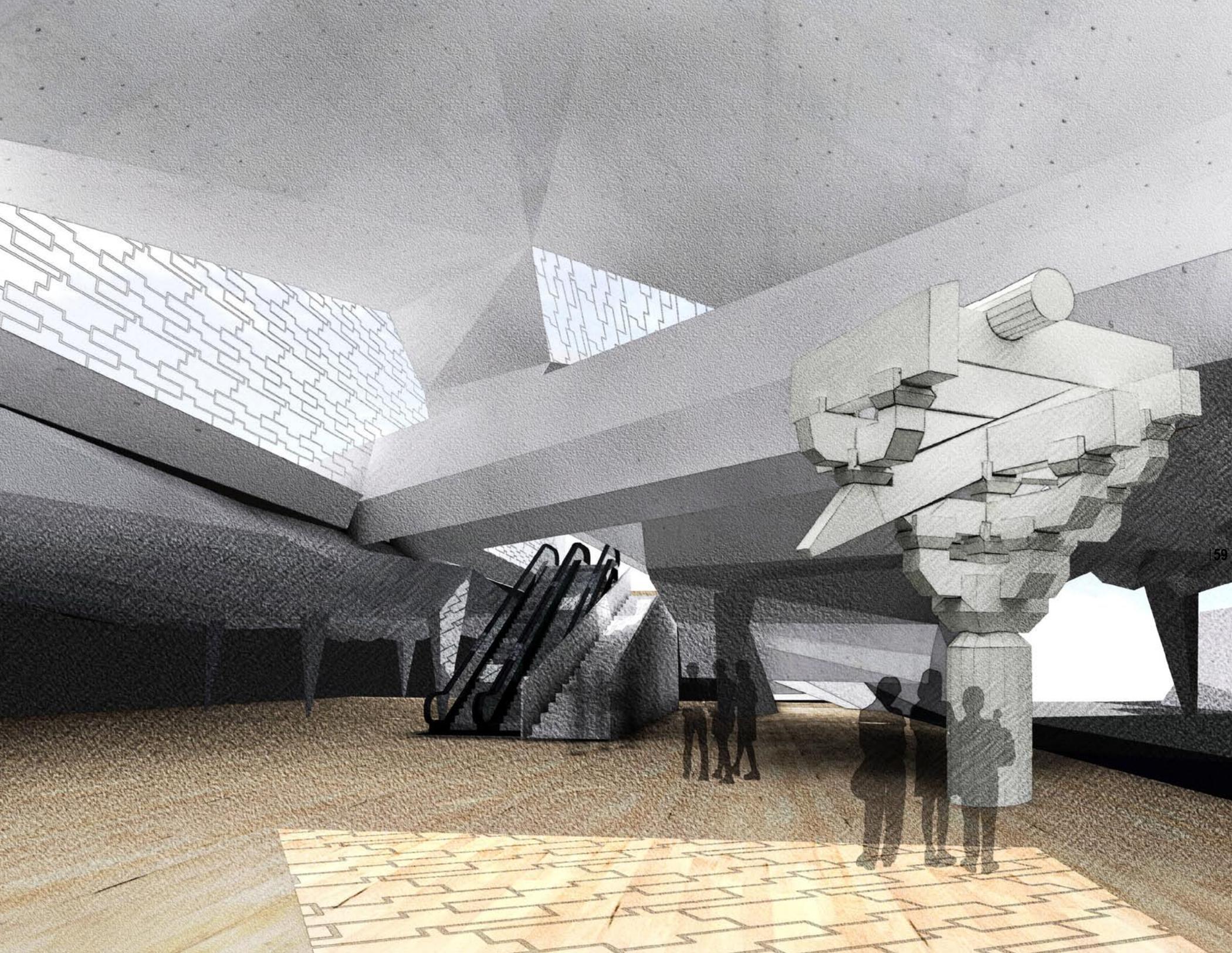
# Café

The café is the space which connects all the key points in the museum: the exhibition halls, the auditorium, the sunken courtyard and the underground garage. With sunlight puncturing into the double-high spaces, the café is the space for visitors to enjoy the tranquility of the museum.



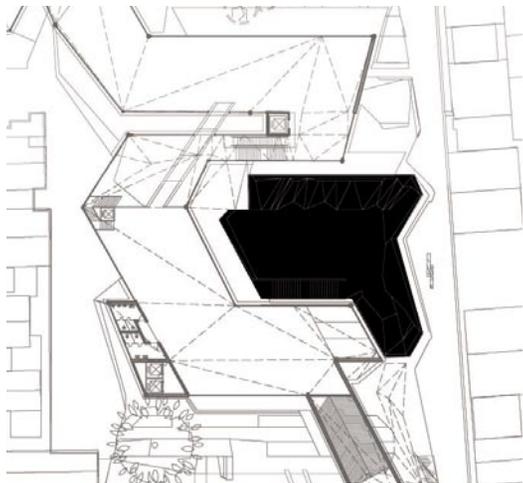
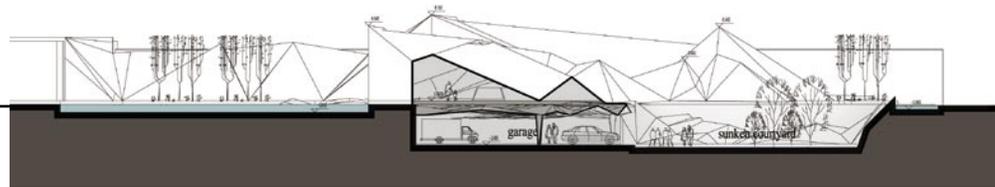


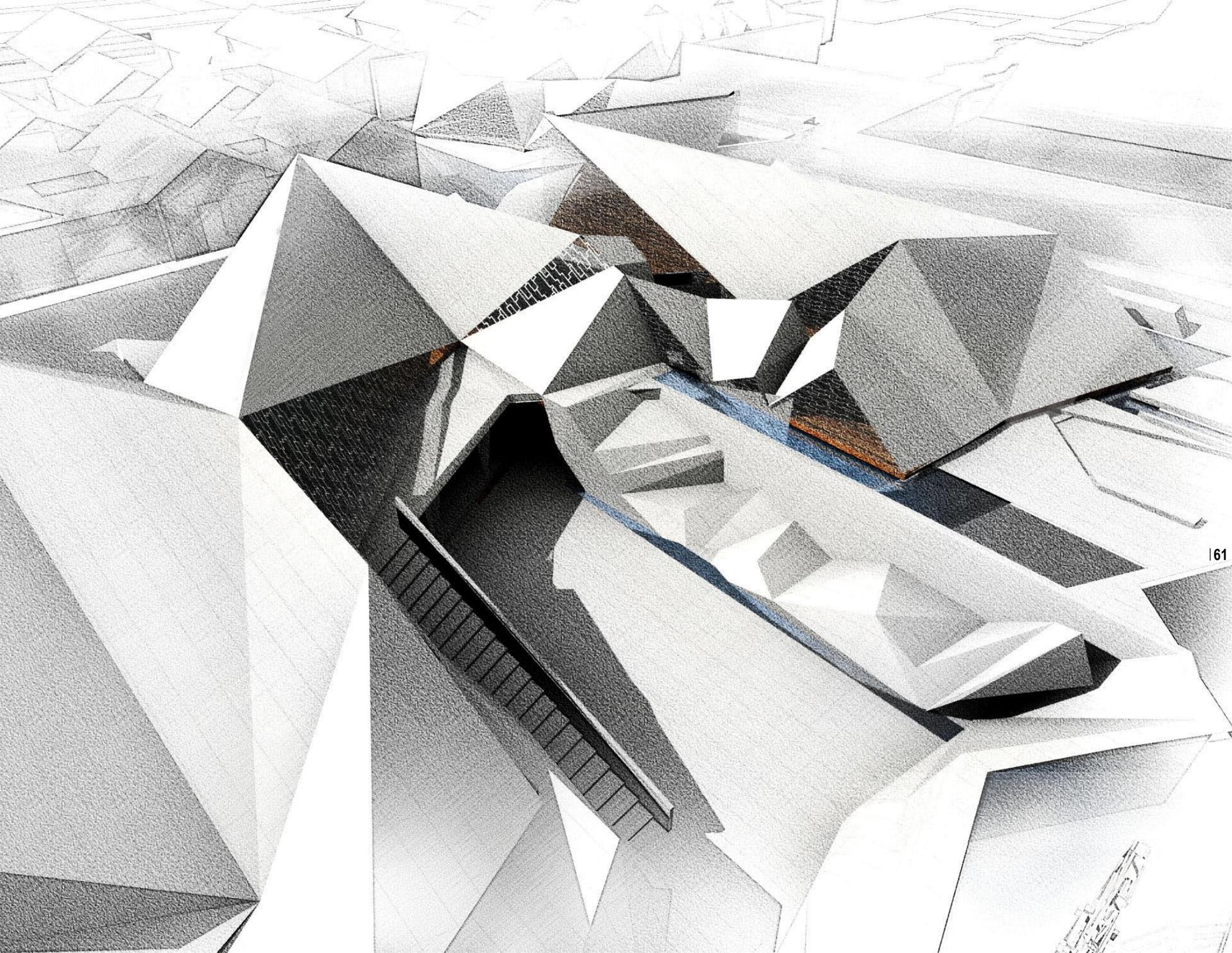




## Sunken Courtyard

Kept away from the noises of the street, the sunken courtyard provides the visitor with a serene semi-enclosed space to join the dialogue between modern architecture and traditional Chinese houses. Like a Mobius strip, the folded roofs cascade and merge into the walls surrounding the courtyard and thus enhance the continuity of landscape. The waterfall, which comes from the reflection pools above, bounces into the canal surrounding the courtyard and brings a vivid point into the silent area. The sunken courtyard is open to the public as a city plaza when the museum is closed to visitors.



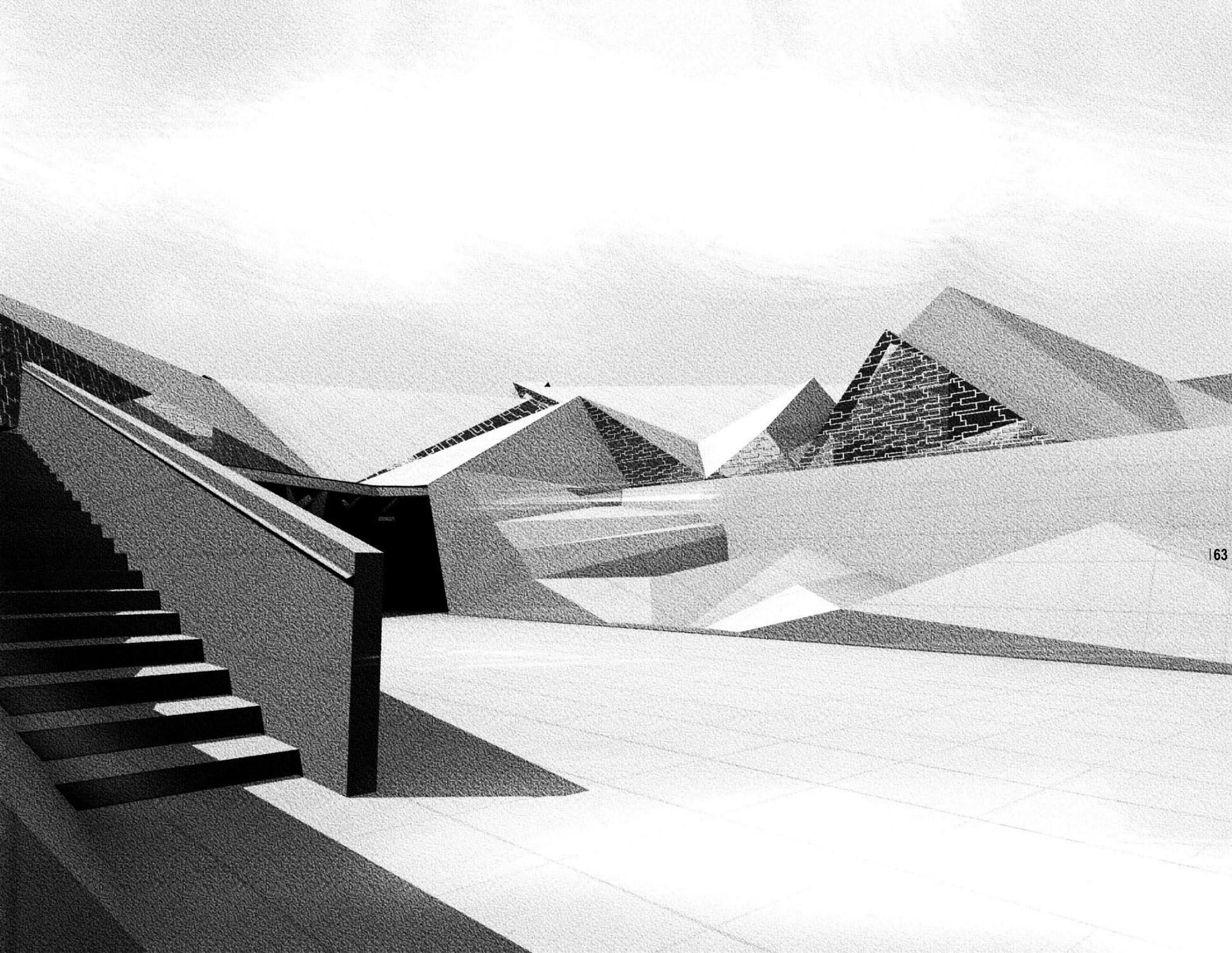


## Sunken Courtyard

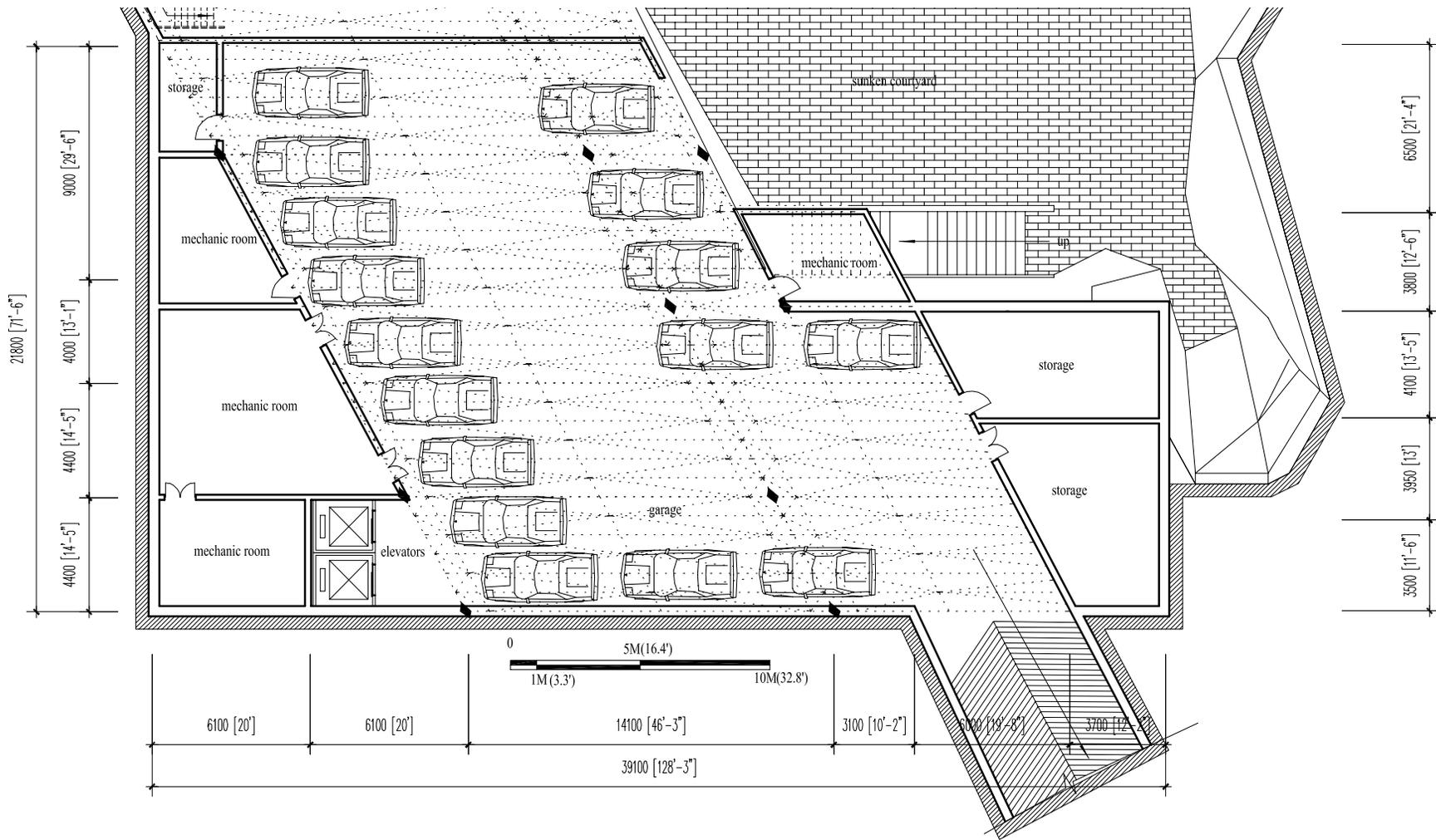
In the sunken courtyard, uninterrupted folded roofs are reminiscences of Chinese roofs. At the lowest point of the site, visitors are overwhelmed by the discipline of traditional Chinese architectural layout which is applied to the new museum: the roofs on the base.



Sketches by John. Utzon indicating Chinese roof and base



# Underground Garage

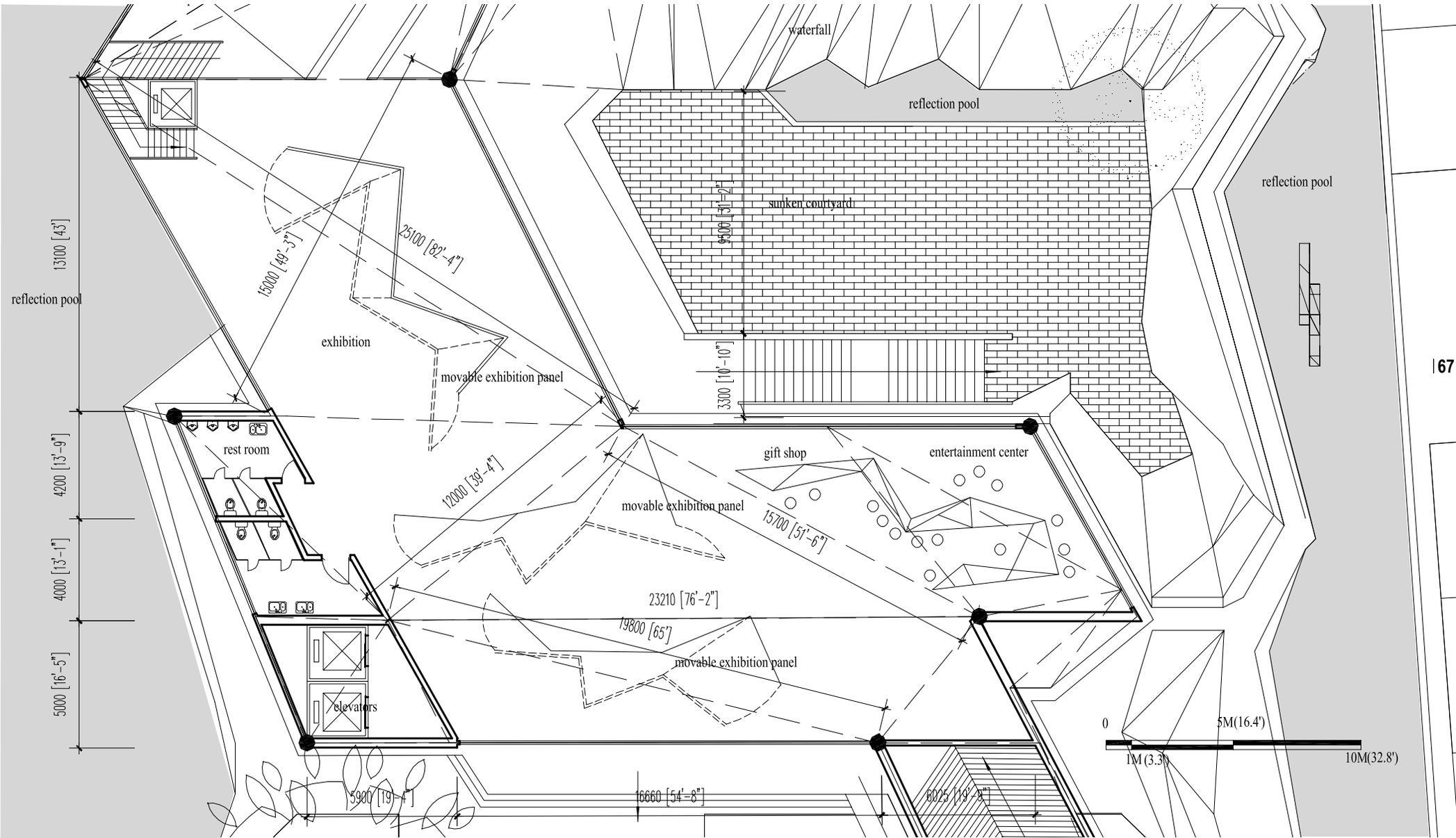


The underground garage is for internal parking for cargo and staffs vehicles. Three elevators are used for carrying cargos or for the convenience of people parking here. Accesses to the adjacent sunken courtyard or the café are provided in the garage. In this space, an intimate scale of folding is presented and will eventually lead people to a monumental scale of folding in the café and exhibition area.

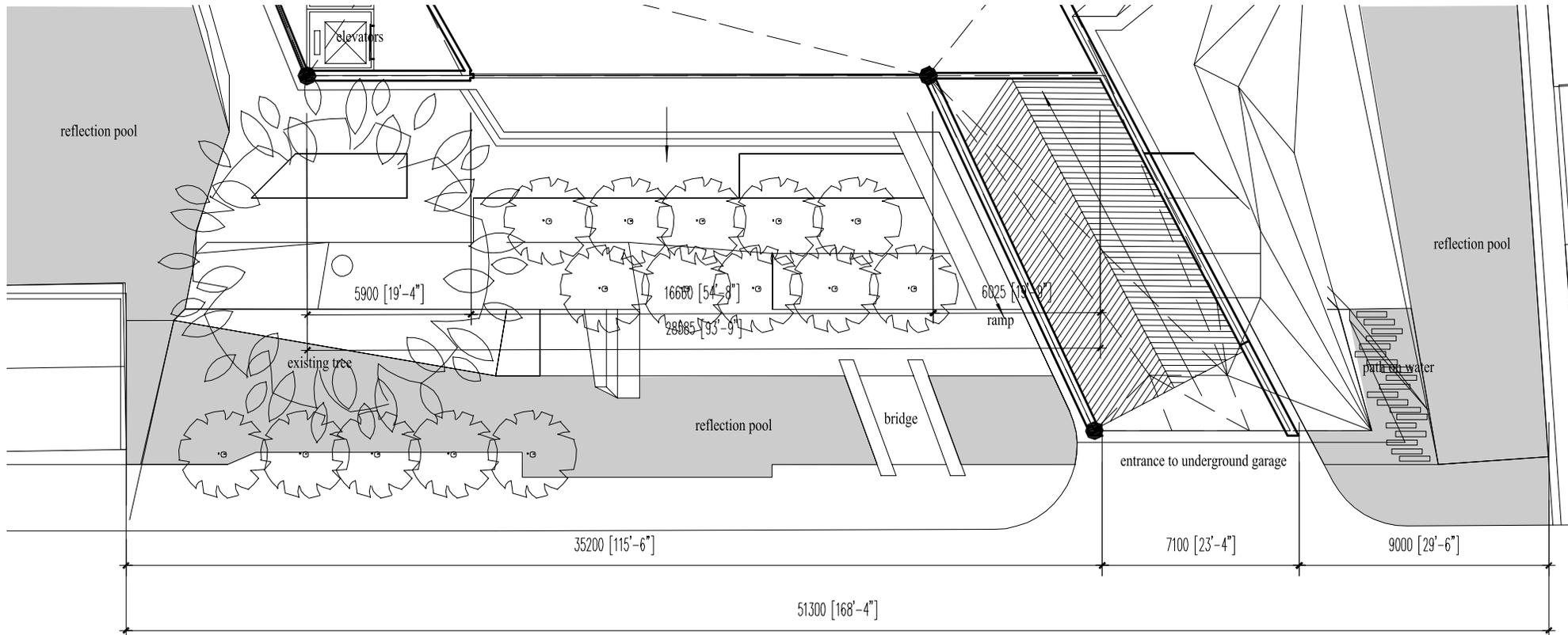




The last exhibition hall is dedicated to the exhibition of paper art in the world and its development into the future. The paper art museum not only serves the purposes of displaying and researching paper arts, but also for education and entertainment. Before the visitors end the tour, the gift shop provides them with opportunities to get copies of the exhibit in the form of souvenirs or books. The entertainment center supplies materials, tools and instructions for visitors to personally experience the making of paper art.



# Exit Square



An exit square marks the end of the museum tour. The canal and heavy plantings surrounding the square obscure the view from the side street and thus prevent people from using the square as the entrance. A historical tree is preserved in the square and integrated into the new landscape. The entrance of the Humble Administrator's Garden, which launches another tour, is along the side street and very close to the exit square.





疏朗

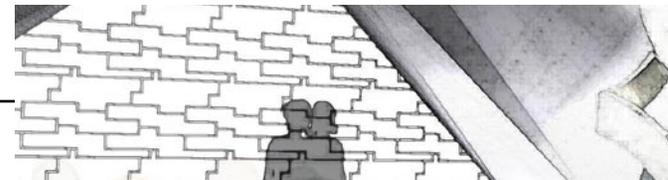
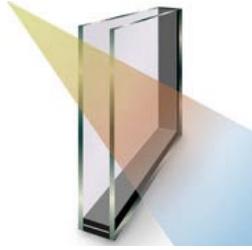
拙政園

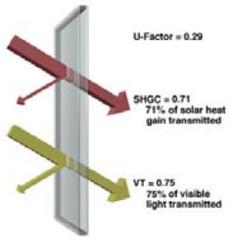
天澤

Entrance of the Humble Administrator's Garden

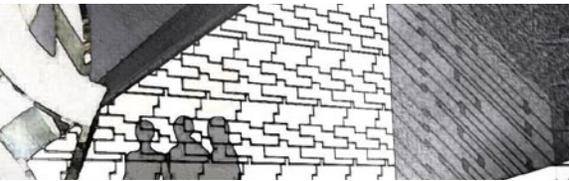
## The Materials

Three major materials are used in construction of the museum: reinforced concrete for the folded plates system, wood for the floor and Double-Glazed with High-Solar-Gain Low-E Glass for the openings. White concrete surfaces are used to reduce the sense of weight and increase diffused reflection of natural light. Smoke-glass framed in abstract patterns in the openings supply diffuse background lighting for the exhibits. It reminds people of the traditional Chinese window frames made of wood and translucent paper.



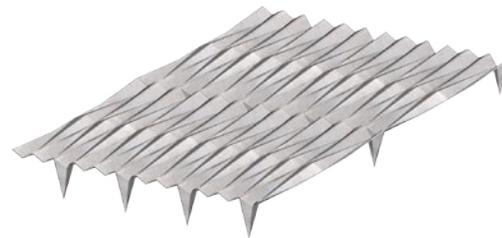
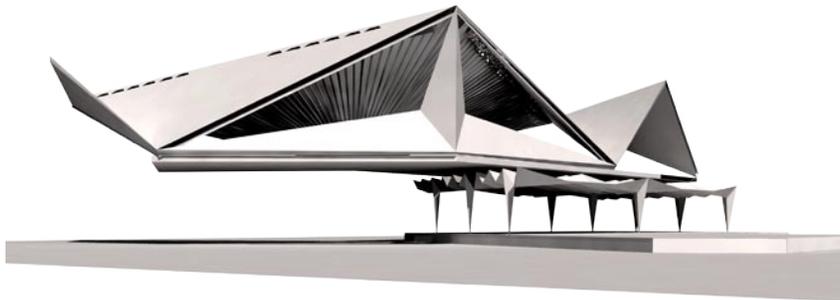
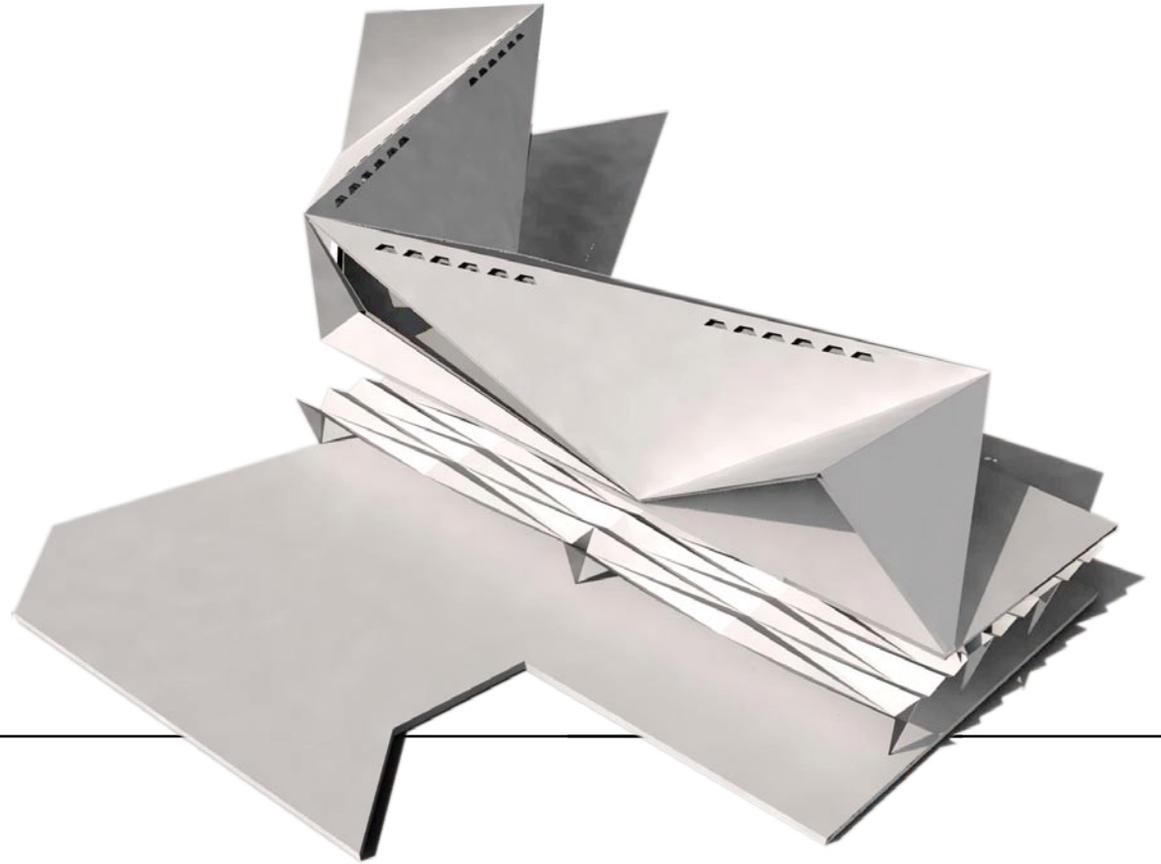


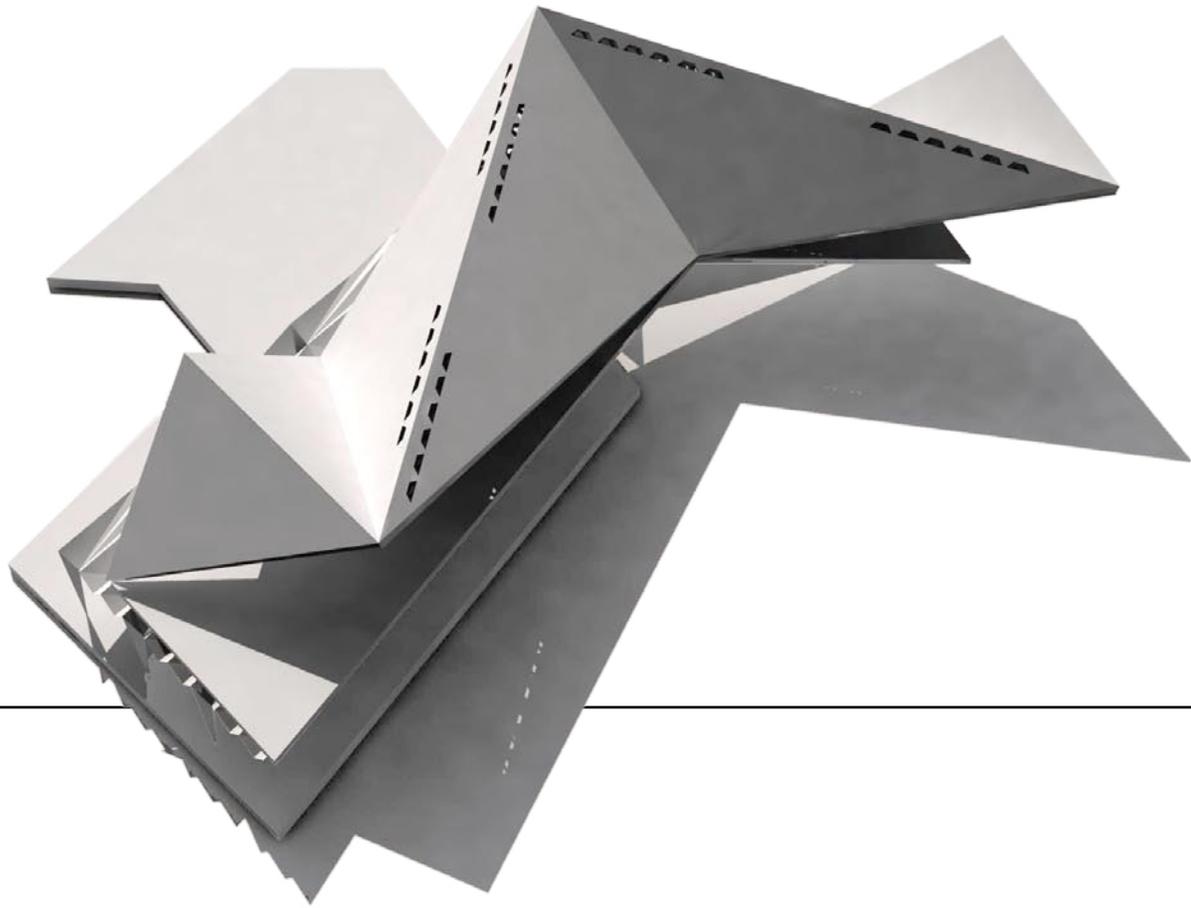
<http://www.sunwindows.com/Pages/Options/GlassOptions.html>



## Structure System

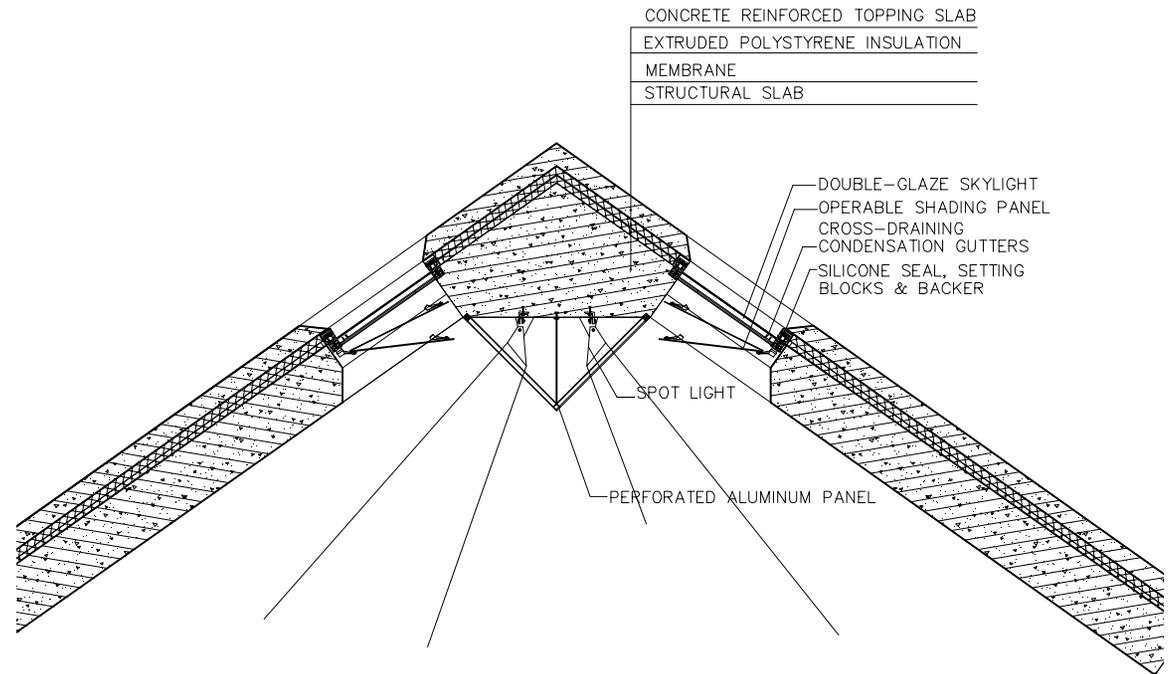
There are two layers of folded plates in the museum: the folded roofs of upper level exhibit spaces and the folded plates which support the exhibit level and form the spaces of the underground garage. They provide two kinds of scales of the structure: the monumental scale in the exhibit level and the intimacy scale of the underground level. The hierarchy of the structure also articulates the obligation of each level of the folding plates in the museum: the base and the roof.



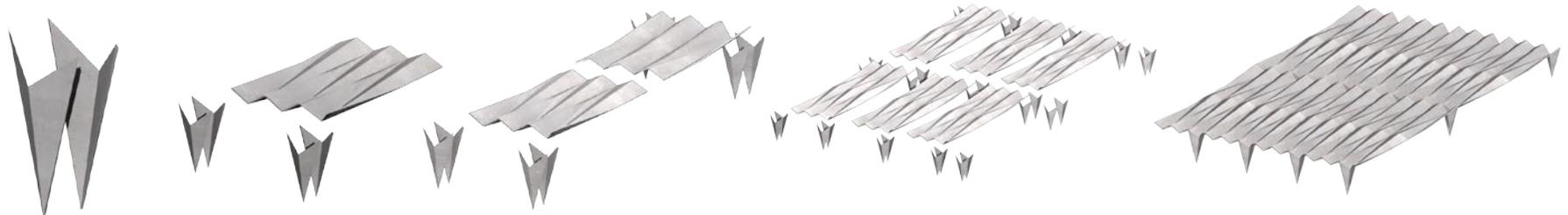


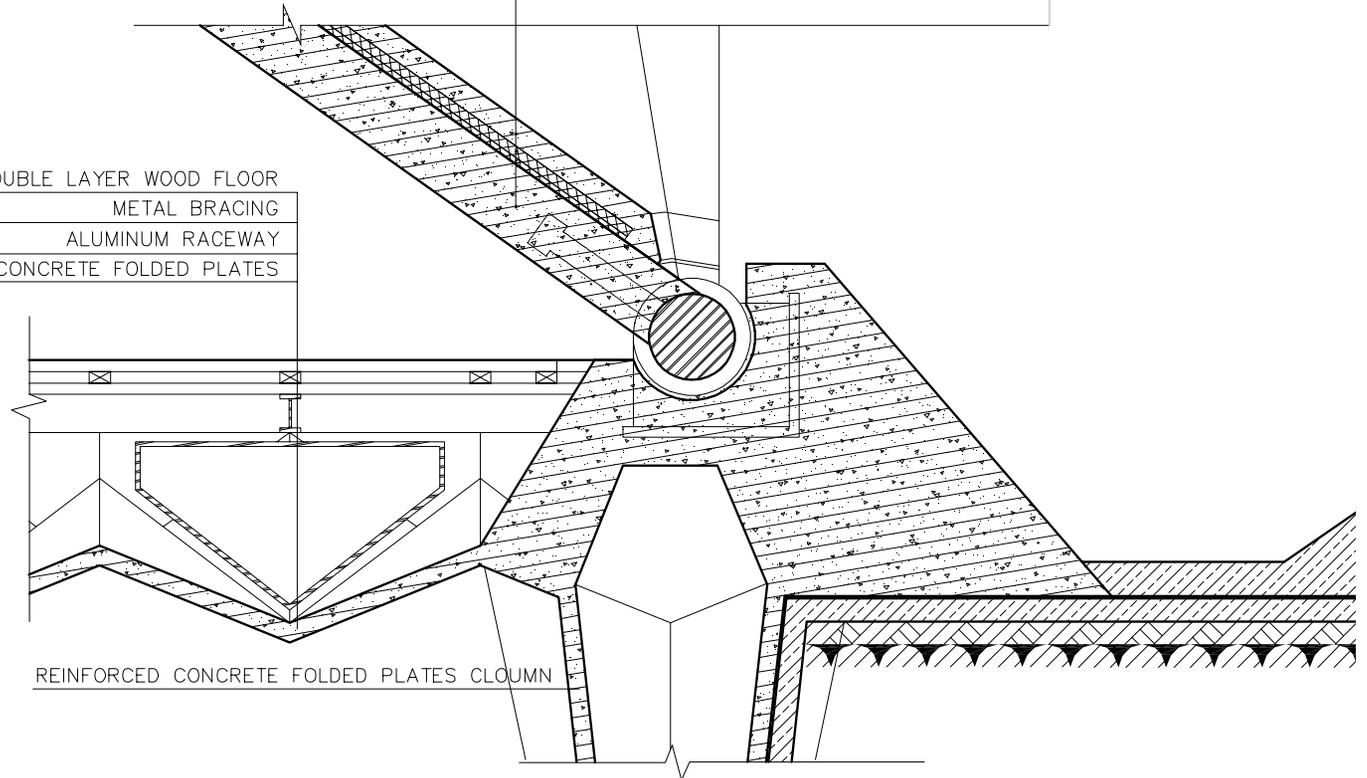
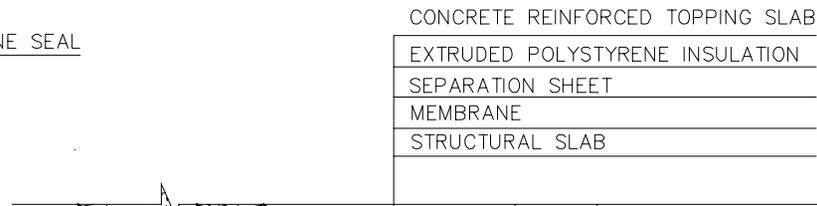
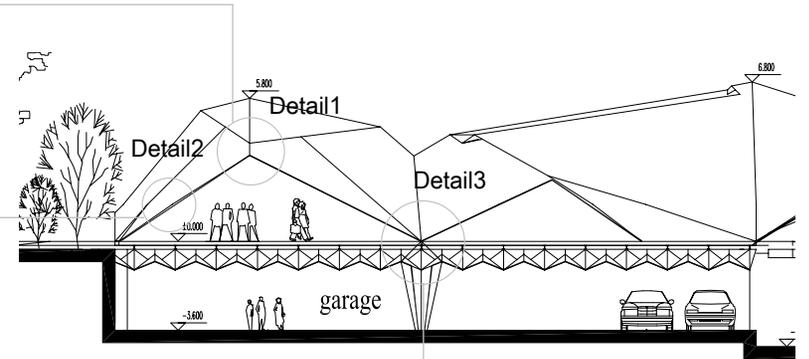
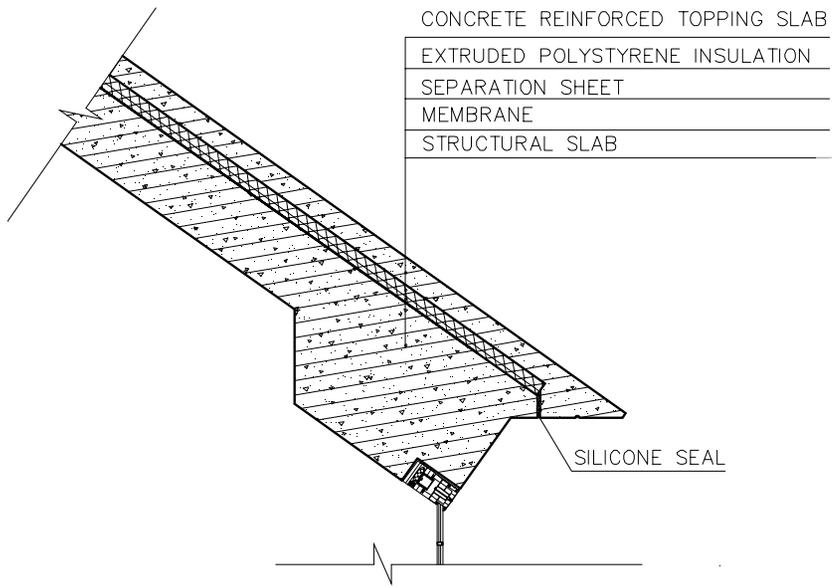
## Assembly and Details

The section detail 3 shows the point where the folded plate of exhibit lever meets the folded plate underneath. The spaces between the garage lever folded plates and the wood floor provide rooms for all the electric system, ventilation conduits and vents. All the lighting fixtures are located in the central band underneath the ridge. This strategy provides a clean separation of served spaces and service spaces. The interior spaces are free of ceiling and concrete surfaces are exposed to show the genetic of the structure system.



Assembly of precast concrete plates in underground garage





## The Water System

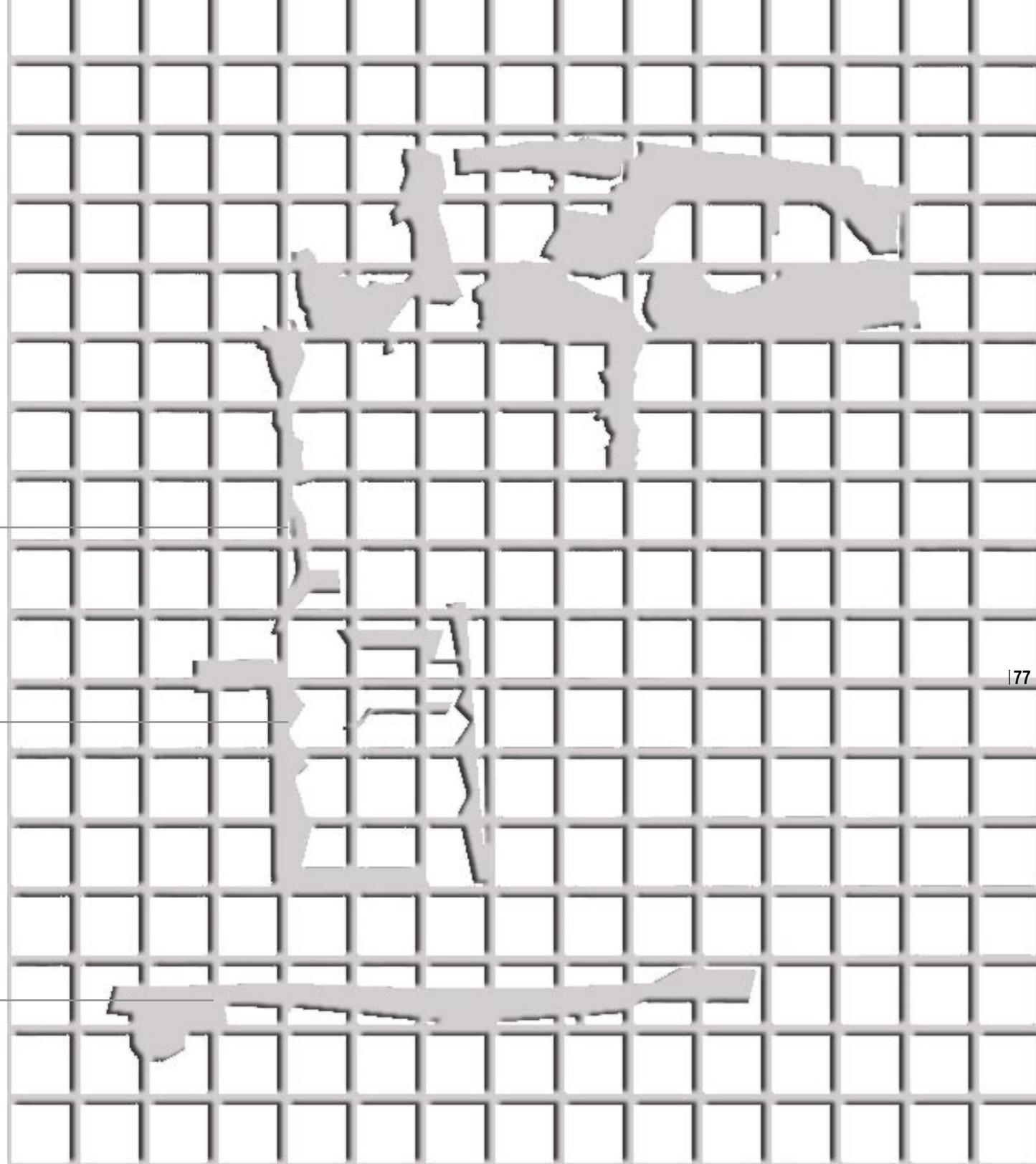
Chinese believe that water is the spirit of life. A large portion of the Humble Administrator's Garden is covered by water pools and canals. The reflection of the historical houses and the silhouette of the contemporary museum are blended in the reflection pools surrounding the site. It serves as the media which blend the new into the old.



Water pools in the garden

Reflection pools

the canal



## Conclusion

China, with 5,000 years of glorious history, now has the most flourishing architectural market in the world. However, it is paying a high price for the “prosperity”. Not only did the old houses disappear in an astonishing speed, but the vernacular architecture was overwhelmed by international-styled buildings throughout the country. Architects in China today are at a cross-road facing the conflict between tradition and Westernization. This conflict is manifested in many contemporary buildings which emerged as a result of quickly expanding urbanism that wiped out historical memories thoroughly, implacably, and irretrievably.

No matter what cultural background, responsible architects are bound to share a commitment to innovation and progress in this millennium. Architecture must be more than a simple categorization of ideas into various “isms”. Something must be done along the continuum of vernacular spirit and the age-old tradition.

Balancing between tradition and modernity is never easy. This thesis represents an effort in that direction.



## Publications

### Chinese Classical Gardens of Suzhou

Tun-Chen Liu, Joseph C. Wang

ISBN: 0070108765, McGraw-Hill (Tx) (January 1, 1993)

### Scholar Gardens of China : A Study and Analysis of the Spatial Design of the Chinese Private Garden

R. Stewart Johnston

ISBN: 0521394775, Cambridge University Press (October 25, 1991)

### Yang-chou yuan lin = The gardens of Yangzhou

Chen Tsung-chou.

Shanghai : Shanghai Ko hseh chi shu chu pan she, 1983.

### Classical Chinese gardens

Edited by Qian Yun.

Hongkong : Joint Pub. ; Beijing [Peking] : China Building Industry

### A pictorial history of Chinese architecture : a study of the development of its structural system and the evolution of its types

Liang Ssu-cheng ; edited by Wilma Fairbank.

ISBN: 0262121034, The MIT Press (June 19, 1984)

NA1540 L536 1984

### Analyses of Chinese Traditional Garden ( Chinese Version)

Peng Yigang

ISBN7-112-00360-1

### M. C. Escher

Sandra Forty

ISBN 1-84406-012-8, Published by TAJ Books 2003

### Utzon : inspiration. vision. architecture

Weston, Richard

ISBN: 8788978982, Edition Blondal (August 15, 2002),

NA1223 U88 W47 2002

### Santiago Calatrava : the poetics of movement

Tzonis, Alexander.

ISBN: 0789303604, Universe (November 20, 1999)

NA1313 C35 T9723 1999

### Structure and form in modern architecture.

Siegel, Curt, Translated by Thomas E. Burton.

ISBN: 0442120826, Krieger Publishing Company (September, 1962)

NA680 S533 1975

### Paper: folded, cut, sculpted.

Temko, Florence. Illustrated by Virginia Davidson.

ISBN: 002616910X, Collier Books (1974)

TT870 T46 1974

### Creating with paper: basic forms and variations.

Johnson, Pauline

ISBN: 0486268373, Dover Publications (September 1, 1991)

NB1270 P3 J58

### Hansu Horain sakuhinshu = Hans Hollein.

Hollein, Hans

Tokyo : E ando Yu, 1985.

N6811.5 H58 A4 1985

## Internet Resources

Some resources from internet using in the book have been indicated in the according pages. Additional information can be obtained from the links below:

<http://www.abbs.com.cn/bbs/post/view?bid=6&id=1735948&sty=1&tpg=1&ppg=1&age=-1#1735948>  
forum discussion titled in Chinese "which one is more important?"

[http://www.ppa-ny.com/html/projects/suzhou/projects\\_suzhou.html](http://www.ppa-ny.com/html/projects/suzhou/projects_suzhou.html)  
Project: Suzhou Museum

<http://archrecord.construction.com/people/interviews/archives/0406IMPei-1.asp>  
interview with Architectural Record:  
At the twilight of his career, I.M.PeI shows few signs of slowing down

[http://english.people.com.cn/200407/01/eng20040701\\_148120.html](http://english.people.com.cn/200407/01/eng20040701_148120.html)  
Newly-designed Suzhou museum to cause no damage to world heritage: UNESCO official

<http://www.china.org.cn/english/2004/Jul/100008.htm>  
Heritage Site Management to Be Questioned

[http://hcs.harvard.edu/~hapr/summer97\\_culture/roots.html](http://hcs.harvard.edu/~hapr/summer97_culture/roots.html)  
Finding Roots By I.M. Pei

## Credits

Unless otherwise noted, images are reproductions of original drawings, renderings or photographs by the author. Resources of quotations have been indicated beside the texts.

p20, p21, map of song Suzhou, p48, p50, analyse of garden, Scholar Gardens of China, P24 P25 P129 P152

p28 City, p32 Red ants, M.C. Escher, P39 P81

p55, entrance of Liuyuan, Photoed by Dr. Joseph C. Wang  
p87, Window, Chinese Classical Gardens of Suzhou, Tun-Chen Liu, Joseph C. Wang

p88, the Window Yang-chou yuan lin = The gardens of Yangzhou, Chen Tsung-chou

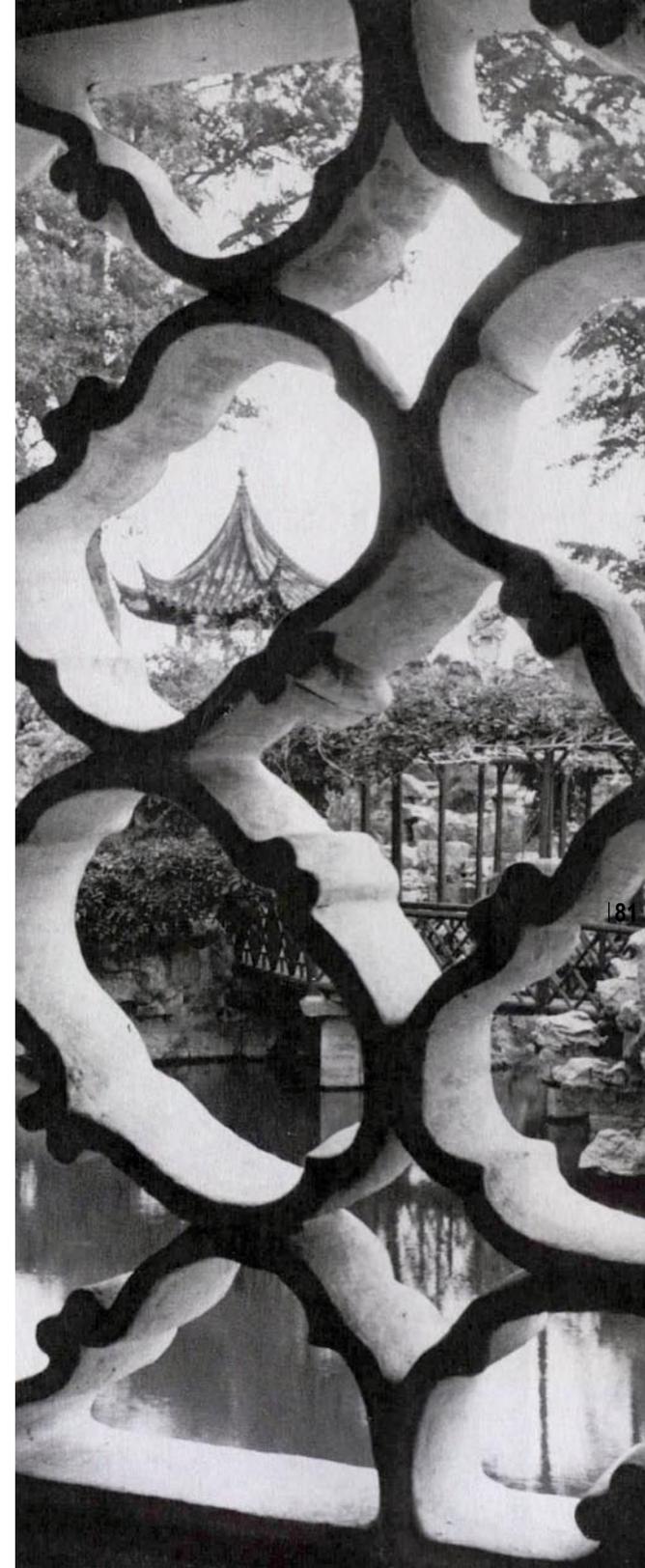
p19, photo: town on the water, <http://pics.photo.163.com/compete/0401/0404.jpg>

p56, photo of the alley, [http://www.wvfchina.org/desk/upload/1063709884\\_113-1359\\_IMG.JPG](http://www.wvfchina.org/desk/upload/1063709884_113-1359_IMG.JPG)

p74, photo of the entrance, <http://cq.focus.cn/msgview/1761/17656049.html>

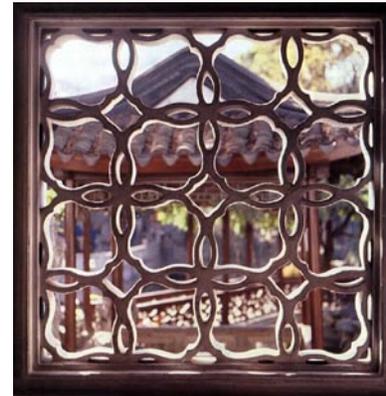
p80, photo of the canal, <http://www.cmr.com.cn/culture/jun/photo5.htm>

p84, photo of the river, <http://bbs.yynet.com/cgi-bin/ReadFile?typeid=35&whichfile=333&filetype=Elite>





Name: Qiuda Lin  
Gender: Male  
Birth: Sep 20, 1975  
Nationality: P. R. China  
E-mail: Qiudal@vt.edu



Education: 2003-2005  
Virginia Polytechnic Institute and State University  
M.Arch II, Professional degree.  
  
1994-1999  
Xiamen University, China  
Major: Architecture  
Degree: Bachelor of Engineering.

