

Regeneration and Revitalization of Public Space in Ancient Villages

Yitang Zhang

Suzhou Science and Technology Town Foreign Language High School, Suzhou 215000, China.

Abstract: Due to the influence of economic development, the number of people traveling on vacation is increasing. Ancient village, as a perfect example of cultural heritage, attracted a great number of tourists, which is treating the daily rhythm of residents. In the following article, I will analyze the problems faced by the ancient village and my solution to a specific case that happened near me. Since I believe that architectural design is unique, solutions should be designed according to local conditions, so it is difficult to say that my design is universal. My project is located in the Mingyue Bay Ancient Village in Suzhou. I have identified the problems in this ancient village through research and field research and tried to solve some local problems through my major - architectural design.

Keywords: Ancient Village; Urban Regeneration

1. Introduction

1.1 Background

The generation of a building needs to consider a lot of factors, I have been planning this design since May 2021. After the teacher's recommendation, I read some books and articles on the Internet, including "The Death and Life of Great American Cities" by Jane Jacobs.

Design is a very complex process. As an area with rich historical and cultural background, the difficulty of designing here is self-evident. During the Tang and Song dynasties, with the increase of the population, the villages also expanded accordingly. By the Tang and Song dynasties, Mingyue Bay had basically formed a chessboard-like mountain village pattern. During the Qianlong period of the Qing Dynasty, Mingyue Bay reached its peak, and a large number of exquisite houses were built, as well as public buildings such as ancestral halls, stone streets, river ports, and wharfs. And the perfect village pattern has continued, and has attracted much attention from the world for its unique and complete ancient village style.

The goal of my design is to improve the lives of local villagers and solve local problems.

2. Problem investigation

2.1 Problem overview

I visited Mingyue Bay myself, and I found that the problems of Mingyue Bay were concentrated in three parts. 1. There are few attractions in Mingyue Bay Ancient Village, mainly including an ancestral hall, an ancient pier, and a thousand-year-old camphor tree. The average browsing time of tourists is only about two hours. 2. With the increase of tourists, the daily public activity space in the village is squeezed, and the villagers have no space to relax, communicate, gather, or even play sports. 3. Mingyue Bay Ancient Village is adjacent to the scenic Taihu Lake, vibrant fish ponds, and beautiful mountains, but because the ancient village is located at the foot of the mountain, a lot of scenic resources are wasted. Tourism purpose is lacking, public space is squeezed, and natural scenery is not utilized.

2.2 Overview of the situation in Mingyue bay

Mingyue bay Ancient Village is located at the southern end of Xishan Island in Taihu Lake. It belongs to Jinting Town (formerly Xishan Town, renamed Jinting Town in 2007, and the locals still call it Xishan), Wuzhong District (Taihu National Tourism Resort), Suzhou City, Jiangsu Province.

Most of the existing houses in Mingyue bay were built during the reign of Emperor Qianlong in the Qing Dynasty. They built high-end houses such as Xuejia Hall, Jinjia Hall, Deng's ancestral hall, etc. These houses and ancestral halls are exquisite and elegant. Brick carvings, wood carvings, stone carvings, and some gorgeous Soviet-style paintings.

“Traditional villages carry history, culture and memory, and have unique spiritual and cultural connotations. Vigorously promoting the protection and utilization of traditional villages is not only a protection for the spiritual home of the local people, but also a promotion for the local people to increase their income and become rich. ” Said Ling Xiaoping, deputy director of the Municipal Bureau of Housing and Urban-Rural Development.

3. Conception of the solution

After I observed the problem existing in Mingyue Bay, I should try to come up with accessible solution.

Considering the lack of tourist purpose (the first question), I think it is necessary to make the building attractive: not only to make the landscape around the building attractive, but to make the building itself a work of art, with artistic value and ornamental value.

Second, the gradually compressed public space. First of all, we can divert some of the tourists gathered in the ancient village and let them enter the mountain behind the ancient village, so as to reduce the pressure on the local public space. And this building will have many public spaces for people to walk, negotiate and view. Semi-open or open spaces such as bridgeheads, under trees, and village entrances are more attractive to villagers than indoors with neatly arranged tables and chairs.

And the last problem, the surrounding scenery is not used. The height of the terrain and the height of the building allow tourists to overlook the beautiful surrounding scenery at a height of about 70 meters, and the beautiful Taihu Lake and fish ponds can be seen.

4. Morphological conception

After thinking about it for a while, I perfected the form and function of this project, and here is my brief description of my thoughts:

I want to start designing this project by setting up a public trail. I want to increase the amount of exercise by increasing the changes, ups and downs and staggering of the trails, while making the overall shape more interesting and richer.

After listening to the advice of the instructor, it seems that the trails alone seem to be lacking, so I plan to build a cafe in the middle, with a sales office, tables and chairs on the first floor, and you can walk on the trails on the second floor after passing the spiral staircase to the second floor. This trail connects with the outside, the indoor and outdoor trails connect with each other, and the public and private parts blend together.

5. Artistic treatment

Regarding the "artform" I mentioned, I took into account the traditional Chinese culture, the sense of movement like an abstract painting, the rhythm of music and some avant-garde ideas of modernist architecture.

When I visiting the Mingyue Bay, I found that the materials of the bricks in the local villages are full of humanistic atmosphere, rich textures and historical imprints. I think it is more appropriate to use textures similar to masonry to complete my project.

The masonry structure is an ancient traditional structure, which has been widely used since ancient times, such as the pyramids in Egypt, the Colosseum in Rome, the Great Wall of my country, the Anji Bridge in Zhao County, the Big Wild Goose Pagoda in Xi'an, and Mount Wutai. Wuliang Hall, etc. The masonry structure has the advantages of low cost, good fire resistance and durability.

The curves are soft and moving, like water waves and wind, I want to make this project dynamic and interesting through rich curves and changes. I carefully analyzed the original river landforms around the project, paid tribute to Niemeyer, the "father of curves", extracted the elements of rhythmic water ripples, and implanted the heritage of the Yangtze River and the agility of Taihu Lake into the concept.

First, the minimum width of sidewalk, in order to consider pedestrians, the narrowest part of the trail is also 1.2 meters wide, which is suitable for tourists and villagers of different ages and statures, without crowding and dangerous situations.

Second, the consideration of various group of people, the route is divided into wide road and narrow road. The narrow road is ups and downs, while the wide road has many rest points. The widened design is suitable for the elderly to walk and will not block pedestrians.

Third, the construction of parapet, the parapet refers to the low wall around the roof of the building. In addition to maintaining safety, it can also be used as a waterproof pressure brick for construction as a stop, and it can also prevent rainwater from spreading or prevent the occurrence of Water seepage problem. According to the regulations of construction technology, the parapet is regarded as the function of the railing. For example, if the building is above 10 floors, the height should not be less than 1.2 meters. In order to prevent the owner from deliberately raising the parapet to facilitate the construction of illegal construction in the future, it is also stipulated. The maximum height should not exceed 1.5 meters.

Fourth, the protection against floods and heavy rain. Although the location of the building is on a hill, rapid rainfall could still cause flooding. With this in mind, I think it's very necessary to add low guardrails on both sides of the trail, and to raise the floor of the cafe slightly off the ground.

6. Data Modeling for Projects

Terrain modeling should require a lot of observation data to ensure accuracy. When I actually measured on the spot, due to the undeveloped environment on the mountain, with lush vegetation, it can be said to be difficult. After much consideration, I chose to download the latest data from satellite measurements from the website. This is the most accurate and efficient method, very effective and straightforward. I learned about the website cad mapper with the help of my teacher.

After obtaining the data, what I need to do is to improve the model according to the satellite image provided by Google, and then classify it according to the functions corresponding to the lines on the model, for example, blue represents roads, purple represents houses, etc. This classification can greatly reduce the workload when building the entity model later, and also avoid some errors. After classification, cut according to the height, extrude the entities, and then stack these entities into a contour topographic map, and the modeling of the terrain is completed. And the final step is to color the solids for easy classification, and use the commands to create a flat line art outline for each piece.

7. Solid Modeling of Projects

After completing the data modeling of the project, the next step is to perform solid modeling, first of all, the construction of the terrain model. The first step, since there is an electronic version of the modeling, an accurate and convenient way is to laser cut, and then paste it piece by piece. I am very satisfied with the final effect. The models built with the CAD mapper data are disassembled piece by piece, classified, labeled, and sent to Taobao shopkeepers for cutting. The second step is to use wood glue to glue the boards together after arrival, and use a utility knife to make fine adjustments. In the third step, use a piece of 4mm thick cardboard as a base and glue the entire model to it.

Regarding the solid model of the building, since I already have model data in my computer, I choose to use the laser cutting method. After sending the data directly to the factory, I got my materials, I used cardboard for concrete and plastic sheets for glass. The curved part is textured with a utility knife for easy bending.

8. Conclusion

I can't guarantee that all ancient villages in the world will benefit from my architectural form, but I think I have provided a case, a method to solve a problem faced by a village, and think in its own shoes.

Design is an evolving process. I think we need to pay more attention to the lives of the occupants. As Le Corbusier said, "Architecture is a machine for living" and we need to constantly innovate and embrace new methods and suggestions. At the same time, maintain the goodwill that was for the sake of the people, the high respect for the construction industry, and the tireless perseverance. Only in this way can a truly useful building be designed, a building worthy of history.

Traditional villages have a large number of unique historical memories, lineage inheritance, slang dialects, township regulations, and production methods. They contain unique spiritual and cultural connotations. They are the non-renewable cultural heritage of farming civilization and carry the essence of traditional Chinese culture. To "rejuvenate" ancient villages is to protect history, inherit culture, and protect our spiritual and cultural homeland.

References

- [1] Addis B. (2007). *Building: 3000 Years of Design Engineering and Construction*. Phaidon Press.
- [2] Jacobs J. (1961). *The Life and Death of Great American Cities: The Failure of Town Planning*. Hatmondsworth: Penguin Books, 10, 111-29.
- [3] Corbusier, L. (1977). *Vers une architecture (Vol. 1)*. Arthaud Press.