

Research on the possibility of reforming and renewing the unique, old, socialist community in China

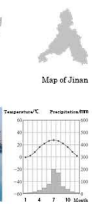
Architectural design proposed for community renewal in China



Since the founding of the People's Republic of China in 1949, due to various social systems and economic constraints, in order to recover the post-war economy and address people's housing issues, a large number of low-cost residential communities have been constructed. These communities are large-scale, without intricate design patterns, which was a typical characteristic of planned economy to provide affordable housing for numerous staff of state-owned enterprises at that time. However, with the development of society and the rapid growth of China's economy, these products of the planned economy in the last century have gradually failed to satisfy people, who pursue a higher quality of life, in the contemporary society. Great number of old residential areas have been demolished in the process of urban renewal, but there are still remaining residential groups in current cities in China.



In order to systematically solve this problem in the future, we are in urgent need to select appropriate sites as a role model to explore how to better activate these old communities in the future. The site chosen is located in Jinan, the capital of Shandong Province, China. Jinan, also known as Qianzhong, is a prefecture level city, provincial capital, sub-provincial city, major city under the jurisdiction of Shandong Province, the core city of Jinan Metropolitan Area, and the central city on the south wing of the Bohai Rim region approved by the State Council. Jinan is located in East China, central and Western Shandong and the southeast edge of North China Plain. It is connected to the capital economic circle in the north and the Yangtze River Delta economic circle in the south. It is an important intersection of the Bohai economic zone and the Beijing-Shanghai economic axis. It is one of the important transportation hubs in East China. Jinan has "12 Famous Springs" due to its large number of springs. Jinan is famous for its eight scenic spots. It is a tourist city with a unique style of "mountains, springs, lakes, rivers and cities". It is a national famous historical and cultural city and one of the first batch of excellent tourist cities in China.

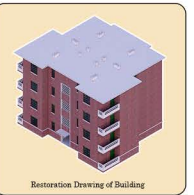


The site is adjacent to the business center of the old urban area with extensive public transportation system and frequent visits of tourists. This community was first owned by Jinan Railway Bureau in the 1960s, mainly for accommodating the living needs of employees of the railway bureau that year. The site is mainly surrounded by residential land and surrounded by kindergarten, primary schools, junior middle schools and senior high schools. The region has perfect educational resources and medical resources, and some commercial and office buildings are also distributed in the area adjacent to the main road.



This old community is formed by ten identical residential units arranged along the north-south direction, and local residents call it "ten buildings". The reasons for choosing this site as the research object are as follows:

1. This site is a special, long and narrow plot along the street with limited depth, which is not favored by Chinese real estate developers at present. Therefore, it is less likely to be demolished in the future. However, the collective residence in this plot has been built for more than 50 years, so the probability of transformation in the future becomes very large.
2. The composition of residents in this site is relatively complex with superior location in the city. As a result, it is of great significance to synthesize this site into the construction of modern city. At the same time, it may also play a guiding role in exploring an ideal solution for similar urban renewal problems.



After preliminary investigation, the following main problems exist in the site:

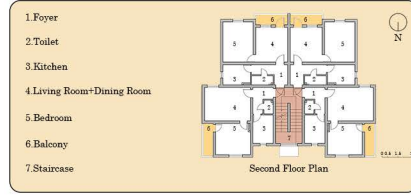
1. Each floor is composed of four families, each with a usable area of about 50 square meters and a narrow living area.
 2. No elevator and other barrier-free facilities.
 3. The space between each building is disorderly occupied by many low, one-floor buildings.
 4. As a street building, the intervention of street commerce is serious.
 5. As a residential group, there is a serious lack of space for community services.
 6. There is no parking lot in the base, and residents' cars are either disorderly parked in the narrow courtyard, or can only be parked on the sidewalk.
 7. There is no activity site and communication space for residents' leisure sports.
8. Due to the long-term natural growth, the facade of the collective residence has become chaotic after rounds of transformation by the residents.



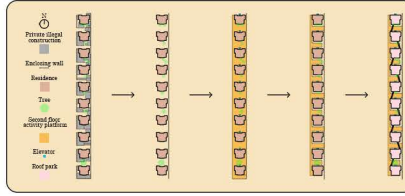
The addition and demolition of the facade of the existing collective residence will restore the original brick texture of the wall. Through the analysis of residents' transformation of their own building facade, it can be seen that most residents choose to extend to the outside to add floating windows to expand the space. This gives designers great inspiration, and eight different facade forms are designed according to the needs of different types of residents for windows with different human body scales and the difference between open-air small balconies. In terms of house type, the designer has increased a certain use space and re-combed the kitchen and toilet space. The kitchen of the south house type is placed in the position of the previous balcony, and the balcony space of the bedroom is increased. The former kitchen space became a second bedroom or study. At the same time, different furniture is placed in different house types to improve the utilization of space and increase a lot of storage space.



After the design of the residential part is completed, the residents in the site are investigated in the form of questionnaire, and the choice of the designed residence is obtained. Therefore, the architectural facade finally presented in this collective residential group is not the result of unified design by designers, but the architectural facade effect formed by residents through their own choice.



Each floor of the house is divided into four families, which are symmetrically distributed from east to west. The main problem of the south house type is that the use area of the kitchen and toilet is too small. Through research, it is found that many residents of the south house type choose to move the kitchen to the balcony. There are two main problems in the north house type. First, the lighting in the south is poor. Second, the use area of kitchen and toilet is too small. From the perspective of collective housing as a whole, there is the problem that there are no barrier-free facilities in the staircase, which is extremely inconvenient for many elderly people living at present. In order to carry out desirable design for reforming the chosen site, a large number of field research and preliminary concept generation were carried out in the early stage.



Composition of residents in the community

Age	101	102	103	104	201	202	203	204	301	302	303	304	401	402	403	404
25																
35																
38																
40																
42																
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52																
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Residential resident preference to rebuild house type

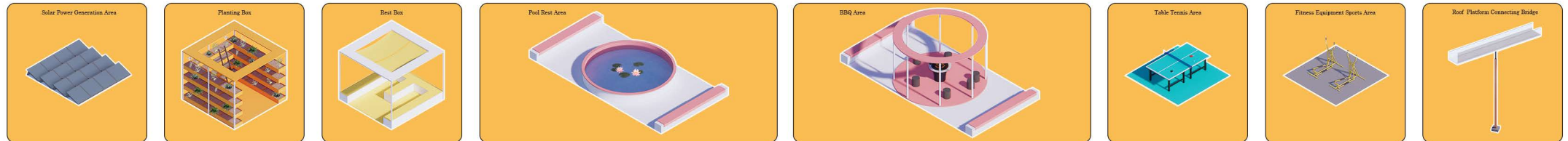
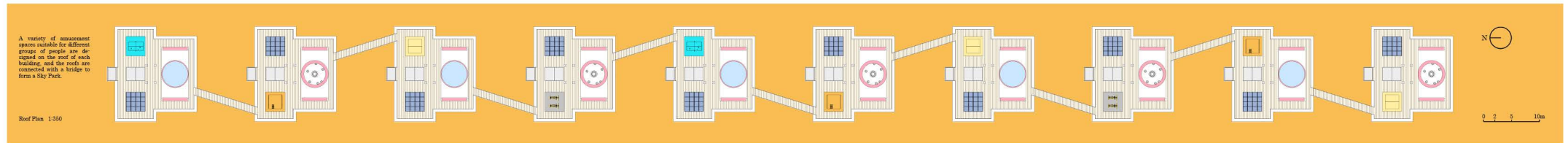
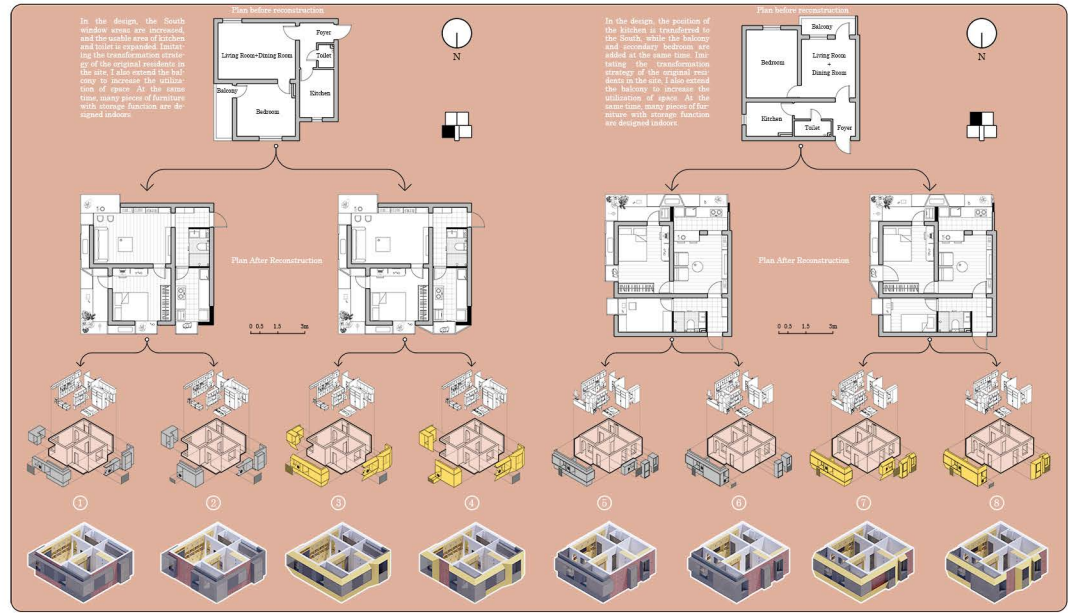
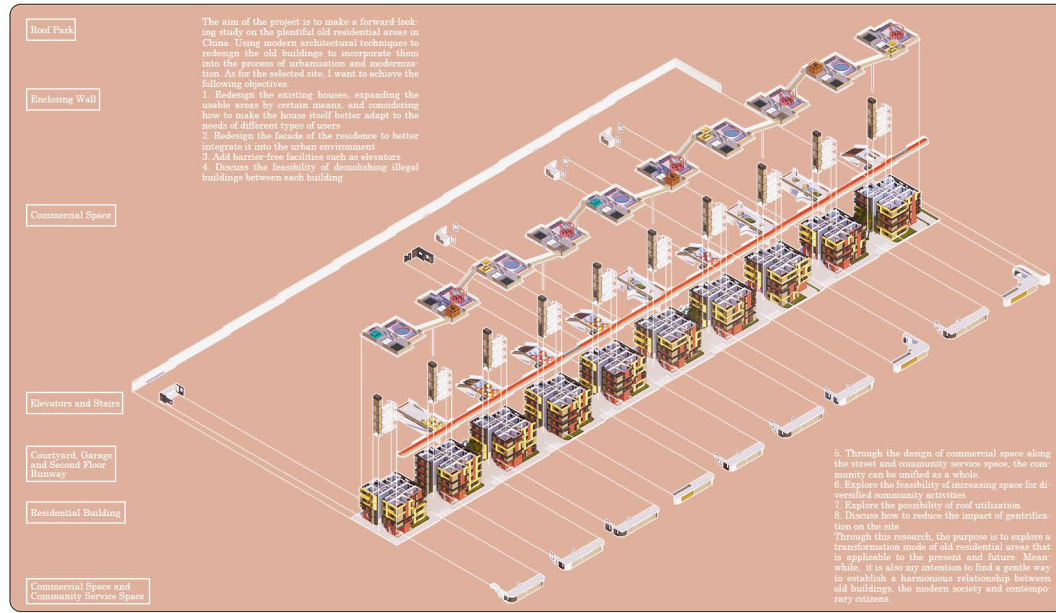
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Legend for resident preferences:

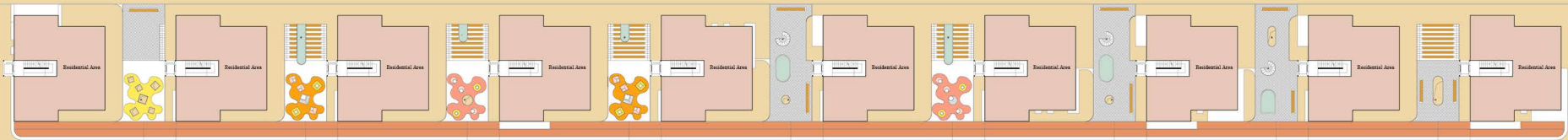
- Young Couple
- Middle Aged Couple
- Elder
- People and Parents
- Senior High School Student
- Young White-collar Worker
- Commercial Space
- Commercial Space
- Young House

Legend for reconstruction types:

- 1 and 5
- 2 and 6
- 3 and 7
- 4 and 8

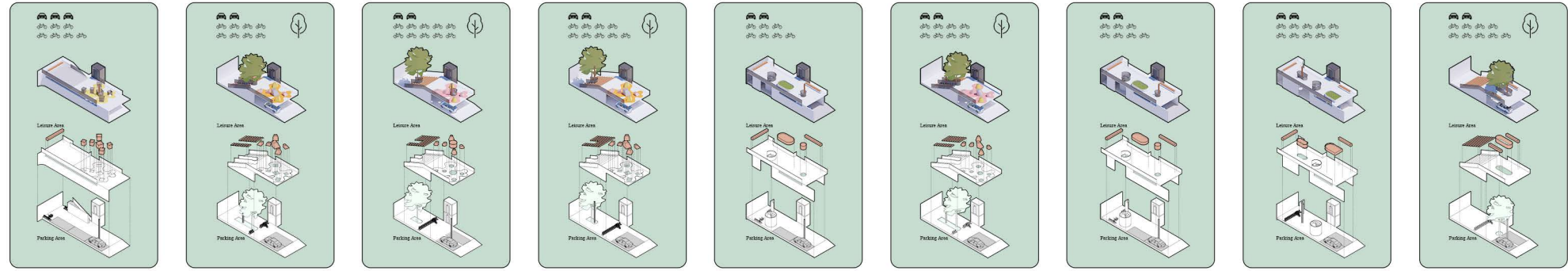


First Floor Plan 1:350



0 5 10m

Through preliminary investigation and analysis, I found that there was a serious shortage of parking lots on the site. At the same time, because illegal buildings are blocked in the courtyard, there are almost no places for residents to entertain themselves through leisure activities in the community. In response to this situation, based on the parking space required and the location of reserved trees, a garage is designed on the first floor between each building, and different types of activity venues are designed on the second floor to meet the activity needs of different people. All of these are connected in series with a long runway.



Ground Floor Plan 1:350



0 5 10m

