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Study on the Communication of Rural Architectural Planning—Taking Jialing Village of Shifang City as an Example

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***Abstract**: Based on the analysis of the existing problems in the process of architectural planning communication in Jialing village, Shifang City, this paper puts forward the strategy of architectural planning communication in Jialing village according to the key points of rural architectural planning communication, in order to provide a reference for the path of rural planning communication in Rural Revitalization.*

***Key words**: Village style; Human settlements; Building communication*

Introduction

In order to realize the rural revitalization, it is necessary to improve the living environment, the livability and the economic efficiency of the villages and towns through the reasonable planning of the buildings and natural landscapes.

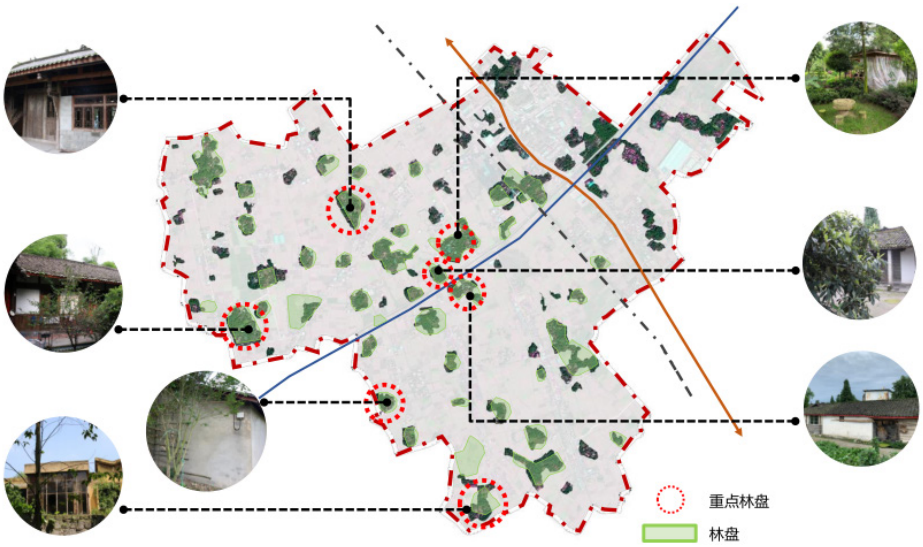
Architectural Analysis of Jialing Village

Jialing village is located in Luoshui Town, Shifang City, Deyang City, Sichuan Province, northwest of Sichuan plain, and 12 kilometers away from Luoshui town. Members of the research team conducted targeted investigation and research in the village. Now, the current architectural situation of Jialing village is analyzed as follows:

Analysis of forest plates distribution

In Jialing village, there are forest plates of different sizes in front of the houses and behind the houses. Before the earthquake, most of the forest plates were inhabited by farmers. However, in the post disaster reconstruction, some of the farmers moved away from the old houses, leaving behind the forest plates, which are seriously hollowed out. At present, there are more than 33 acres of forest plates in the whole village, and there are 9 forest plates of 1.5-3 acres in total.

Figure 1 Distribution of forest plates in Jialing Village



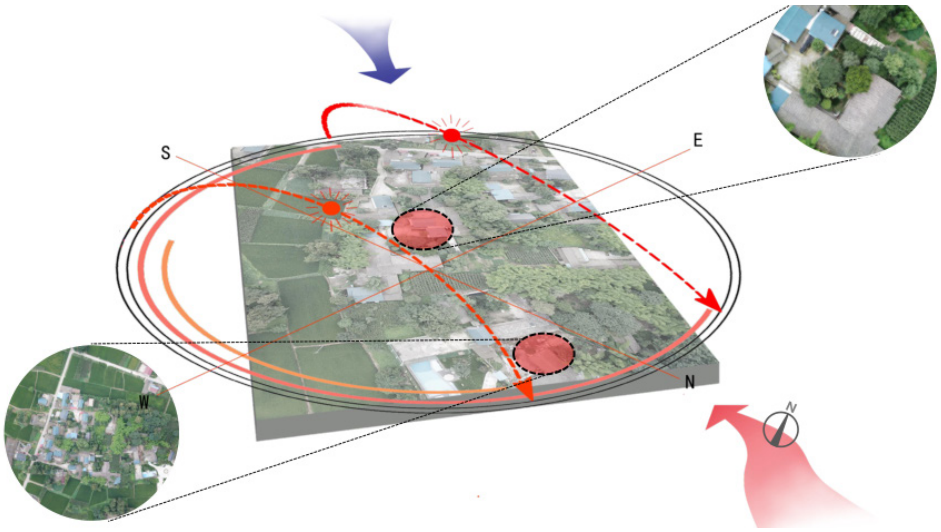
Spatial layout analysis

Jialing village has a traditional style of building volume mainly for one floor, from the plane "L" shape of the building surrounded by a courtyard, or by a number of buildings enclosed into a courtyard; after the earthquake, the new building volume is mostly one to two floors, a plane shape, by the new and old buildings enclosed by the courtyard, or directly from the low wall enclosed.

Building orientation analysis

Influenced by the climate and monsoon conditions, the local houses are mainly east-west orientation; in the forest plate settlement, the main building hall or courtyard is east-west orientation, while the secondary space such as wing room and breeding is still south-north oriented.

Figure 2 Building orientation in Jialing Village



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Building structure analysis

Before the earthquake, most of the traditional buildings adopt the timber structure of lifting beam type, but also a small number of buildings are brick structure; after the earthquake, the reconstruction buildings, in order to ensure that the houses have good resistance to the earthquake and other disasters, mostly use brick structure or brick concrete structure.

Facade style analysis

The facade along the street adopts a unified slope roof style, which is more harmonious and unified in form. Influenced by the upper planning, most of the buildings along the street are modern buildings formed under the new planning documents: the brick structure with a clear color, the tiles are pasted on the outside, and the plinth is distinguished with different color tiles. Compared with the traditional materials, the tiles and other materials on the outside of the facade destroy the integrity of the traditional facade, and the light pollution caused by its reflection seriously.

The color and color system of the facade along the street are disordered, and the saturation and lightness are too low. Combined with the color system of greening along the street, the facade along the street creates a negative space feeling, making the whole street look lack of vitality.

Building materials analysis

In the traditional style of Jialing village before the earthquake, most of the building walls were made of rammed earth or stone, and the surface was plastered or no mortar was used to build joints. After the earthquake, most of the rebuilt buildings are brick structures or brick concrete structures, which are made of new materials, such as cinder bricks, concrete, and plastered with tiles or lime.

Roof style analysis

Before the earthquake, grey tiles were laid on the roof, and the traditional hard mountain style was mostly used on the roof, some of which were xiehills, such as temples. After the earthquake, the roof is paved with single-layer or double-layer materials. The bottom layer of the double-layer materials is steel plastic plate with blue tiles on the top; the single-layer materials are steel plastic plate painted with red paint or blue paint.

Strategy of Architectural Planning Communication in Jialing Village

After field investigation and research, combining with the actual situation of Jialing village, the following analysis are made on the architectural planning communication of Jialing Village:

Transformation of forest plate courtyard

Trees, bamboo and other native tree species can be planted around the courtyard to form a space enclosed forest vegetation; and low shrubs or landscape plants can be planted inside the courtyard; The sense of

rhythm, order and hierarchy of the greening landscape can be highlighted through reasonable layout of ground covers, shrubs and trees. Through reinforcement treatment and material renewal of the house, the quality of the forest plate building will be improved; at the same time, the material style of the wall will be unified and beautified, and the roof cornice culture will be decorated.

Figure 3 Forest plate courtyard in Jialing Village



Building space layout

In the spatial layout of the building, the simple shed built in the yard for stacking sundries can be removed and used as the activity site. Local characteristic materials can also be used to build a simple rest place to meet the multiple functions of storage and rest.

Figure 4 Building space layout in Jialing Village



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In addition, it is necessary to remove the garbage and sundries inside the courtyard to keep the courtyard clean and tidy. The open space in front of the courtyard can be equipped with fences and flower racks, and local flowers and trees or vegetables can be planted to increase the sense of space level of the courtyard.

Figure 5 Building space layout in Jialing Village



For the enclosed courtyard dam, the gate of the wall shall be reconstructed, and removed the advertising painting on the wall. The stone tiles can be used to make the landscape low wall for beautification. The gate adopts the small bamboo door to make have good scenery by the inside and outside of the wall.

Figure 6 Building space layout in Jialing Village



Building orientation

Due to the thick walls, the windows of the houses are mostly towards the courtyard, and the east-west orientation pattern caused by the influence of the monsoon, so the house lighting is poor. Therefore, adding window holes or pieces of walls to the walls, and changing them to the wooden grid extra enclosure structure to increase the lighting requirements.

In order to avoid the common cold of poultry, the livestock sheds are mostly set in the north side, occupying the use site and good orientation. Therefore, corresponding renewal measures should be taken, which can resist the wind and meet the demand of the site design in the windward direction.

Continuation of building structure

In order to ensure that the local houses have good resistance ability when encountering earthquake and other disasters, it is necessary to use modern structures to meet the seismic requirements. For the wooden traditional buildings that are still intact, only on the premise of retaining the buildings, we need to renovate them; we need to demolish the structures such as the shed, temporary buildings and so on, which have potential safety hazards. For the rebuilt modern structural buildings, we should introduce the traditional structure and elements on this basis, so that the traditional building structure can be continued.

Figure 7 Building structure



Building facade control guidelines

Building roof: single storey building is designed as double slope roof, retaining the original blue tile roof; for two-story building, the bottom flat roof is adopted, on which a simple shed is erected for two-story space use, and the ceiling is painted steel plastic plate.

Doors and windows: it is recommended to replace the door and window frames with wood frames, or paint wood color paint on the basis of metal frames, repair the original doors and windows, and apply color uniformly.

Cornice: repair and color the cornice board of the original slope roof.

Building height: it is suggested that the number of floors along the street facade should be one floor, and the height should not exceed the crown height of surrounding trees, so as to avoid damaging the skyline.

Exterior wall: keep the original ancient stone or red brick wall, decorate the clean wall, and finish the exterior wall of rammed earth wall which has no appreciation value.

Color: keep the original cool color system, adjust individual colors to achieve color unification.

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The overall architectural style should highlight the simple and elegant features of traditional folk houses, highlight the local culture, and display the simple and fresh, native and natural forest plate landscape.

Building materials renewal

Some local characteristic materials, such as wood frame and bamboo, have certain plasticity and can be used as building component materials. Characteristic materials are not limited to architecture, but also can be processed and used as decoration, landscape sketch, etc.

Figure 8 Building material



Roof design

Brushed paint and waterproof materials on the surface of the natural strip protruding from the side of the gable avoid the impact of natural erosion on it. For the remaining old houses, the roof tiles are replaced by glass tiles to increase the indoor lighting. Adjust the roofs with different shapes and colors, and adopt unified colors to make the style of the whole village unified and distinctive. For some traditional small green tile roof shall be repaired and transformed.

Conclusion

The research on the propagation of the architectural planning of Jialing village in Shifang City is a new rural construction planning under the guidance of the general requirements of "industrial prosperity, ecological livability, rural civilization, effective governance and rich life". On this basis, village planning should change the old thinking of emphasizing appearance over connotation, emphasizing construction over governance, highlight its own characteristics, avoid large-scale demolition and construction, and find a path suitable for its own rural development.

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