

Landscape Design of “Four Good Rural Road” in Shuangshi Town, Yongchuan District

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Abstract: The construction of the “Four Good Rural Roads” has benefited thousands of households and serves as a foundational step in promoting rural revitalization. This study analyzes the current status of the project in Shuangshi Town, Yongchuan, and proposes targeted landscape design across four key areas: plant promotion, cultural display, service facilities enhancement, and industrial promotion. The objective is to build a “last kilometer” that truly supports rural revitalization and prosperity for local farmers. Through this integrated approach, the rural roads of Shuangshi Town will be transformed into scenic routes that reflect the charm of rural mountains and forests, showcase characteristic agricultural products, and evoke a sense of nostalgia, creating a travel corridor marked by engineering beauty, cultural beauty, plant beauty, and facility beauty.

Keywords: Shuangshi town; Plants; Facilities; Culture; Estate

Online publication: May 30, 2025

1. Introduction

The “Four Goods Rural Roads” initiative, proposed by General Secretary Xi Jinping, is an important project aimed at improving the livelihoods of rural communities. It focuses on developing rural roads as a key factor in rural revitalization^[1]. Since its launch in 2015, Chongqing has made significant progress in building “beautiful rural roads,” laying a strong foundation for further development and branding.

In 2025, marking the 10th anniversary of the initiative, the construction of “Four Goods Rural Roads” began in Shuangshi Town, Yongchuan District. This project integrates natural ecology, industrial development, and local history and culture into the road construction process. It also explores the combined development of rural roads, tourism, and modern agriculture. This approach helps local towns and villages promote industry and tourism through improved infrastructure, allowing people to enjoy the beauty of the countryside while supporting the growth of specialized industries.

1.1. Project overview

The project involves the construction of the ‘Four Goods Rural Roads’ in Shuangshi Town, Yongchuan District, Chongqing. The road connects to G246 National Road, with a total length of 14.7 kilometers. It passes through

Fushengqiao Village, Jiaopenjing Village, Xin'guan'yin Village, and Zhongxinqiao Village, serving as an important image showcase road for Shuangshi Town. The area is adjacent to Yongchuan City, making it a popular destination for weekend trips.

2. Project characteristics and key points of landscape design

- (1) Plants: The rural landscape around the road is beautiful, but the green space along the roadside and on the broken platforms is relatively narrow. Although the road landscape has sufficient greenery, it lacks color and continuity, resulting in a poor landscape effect.
- (2) Culture: The route passes through villages with rich local nostalgia and cultural heritage, but the cultural display is inadequate. Shuangshi's 'Little Golden Dragon' has successfully applied for the Chongqing Municipal Intangible Cultural Heritage Project.
- (3) Facilities: There are many townships and residences along the road, as well as gathering places for villagers' spontaneous activities. However, there is a lack of complete convenience facilities, landscape beautification, and humanistic care.
- (4) Industry: The industrial advantages are obvious, but they are not displayed and promoted through landscape design to achieve the effect of promoting production through scenery.

Through detailed investigation and analysis of the entire route, the characteristics of the road are summarized: good road alignment, good native vegetation, sufficient green volume, rich culture, and abundant industries. However, there are also disadvantages such as messy roadside greening, single color, outdated service facilities, lack of cultural landscapes, and low correlation between the landscape and surrounding industries.

3. Landscape design concept and goals

3.1. Design concept— 'Fruitful flowers and beautiful countryside; characteristic agricultural products and strong nostalgia'

The road passes through Fushengqiao Village and Xin'guan'yin Village, featuring characteristic industries such as fruit and flower forests, including industrial parks for hybrid oranges and plum orchards, as well as fishing and barbecue facilities. The design is inspired by local characteristics, focusing on the concept of a fruitful and beautiful countryside.

The road also passes through Jiaopenjing Village and Zhongxinqiao Village, which have characteristic agriculture such as high-standard farmland, tea gardens, and corn and soybean agricultural bases, as well as rural memory points in Jiaopenjing. The design draws on local characteristics to showcase unique agricultural products and evoke a strong sense of nostalgia.

3.2. Design goals—'Creating a green, beautiful, industrial, and cultural Yongchuan'

The construction of the "Four Goods Rural Roads" demonstration project aims to enhance the rural transportation environment, showcase local culture, and support the development of rural tourism. This will showcase a green Yongchuan with beautiful scenery on both sides of the road, flowers in three seasons, and picturesque scenery in four seasons. It will also promote the protection of water resources along the route, showcasing a beautiful Yongchuan with blue skies and clear water. Additionally, the road will drive the green development of industries, boost rural revitalization, and showcase an industrial Yongchuan. Finally, it will promote cultural integration, evoke nostalgic memories, and create a cultural Yongchuan that thrives due to the road."

4. Principles of landscape design

- (1) Safety principle: Highway landscapes should meet the requirements of traffic safety and driving comfort, mainly reflected in guiding the line of sight and reducing visual fatigue.
- (2) Coordination principle: Make full use of the existing landforms and vegetation to effectively organize the landscape layout within the site.
- (3) Native principle: Greening design should be suitable for the local environment, using appropriate environmental plant materials, and local stone materials should be selected for hard paving.
- (4) Regional principle: Extract and explore the cultural connotation of ethnic regions, and appropriately display the local cultural characteristics through highway landscape design.
- (5) Storytelling principle: Consider the function of service facilities, make the road serve people, and enhance the favorability of drivers and passengers as well as residents along the route towards the road.

5. Design strategies

5.1. Landscape design strategies

Ecological design techniques should be adopted by selecting resilient, low-maintenance plants that reflect local characteristics. To ensure safety, appropriate setbacks should be maintained in curved sections during planting. As defined by Sim Van der Ryn and Stuart Cowan, ecological design refers to any design approach that aligns with natural ecological processes and reduces environmental harm.

5.2. Plant design strategies

Existing roadside vegetation, such as Tianzhugui trees and shrubs like Hongyeshinan, Fodinggui, and Chinese rose, should be preserved and supplemented. Additional plant species that are resilient, low-maintenance, and well-suited to the local environment, such as Muxunju, Begonia, Bougainvillea, Canna, and Winter Jasmine, should be introduced. Emphasis should be placed on increasing the use of Begonia, the regional flower, to establish a spring-themed landscape node centered around Begonia blooms, as shown in **Figure 1**.



Figure 1. Begonia's spring

The mountainous rural roads feature rugged terrain full of steep slopes and sharp turns, and the vegetation in the mountain area is lush. Therefore, visual obstacles may occur at the bends, thereby affecting the safety of vehicle travel. Hence, the importance of traffic safety should be emphasized during landscape design, and unsafe

factors should be eliminated as much as possible. Road signs cannot be covered by plants, especially at bends, where visual obstacles caused by forest vegetation should be reduced. Vegetation that does not obstruct the view should be planted reasonably ^[2].

6. Cultural protection countermeasures

A small thematic node should be created to highlight the cultural significance of Shuangshi’s “Little Golden Dragon.” Recognized in 2016 as a Chongqing Municipal Intangible Cultural Heritage Project, the “Little Golden Dragon” represents an important aspect of local tradition. Its emblem will be incorporated into the design by applying the logo onto the existing slope retaining wall, enhancing the cultural identity and visual interest of the area. An example is shown in **Figure 2**.



Figure 2. “Little Golden Dragon” in Shuangshi

Beautiful waterfront villages should be created as nodes, and the mural on the reservoir management house should be used to evoke nostalgia (**Figure 3**).



Figure 3. Waterfront villages with murals

A cultural post station named “Reminiscing Ancient Well” should be created to strengthen the protection of the regional cultural site “Jiaopen Well” and enhance cultural inheritance (**Figure 4**).



Figure 4. Cultural station “Reminiscing Ancient Well”

7. Facility improvement strategy

Considering the existing functions of the area, the landscape will be improved and upgraded based on these functions. The rest nodes will also be set up.

- (1) Guixiang post station: To meet the needs of parking and grain drying for current residents, the damaged pavement at the entrance will be repaved. The dwarfed *Osmanthus fragrans* on site will be retained, and landscape stones of beautiful villages will be set up to increase the identity of the site.
- (2) Nostalgia station: The site is currently a place for neighboring residents to rest and chat. The design fulfills and enhances the existing functions of the site, uses plants to increase the enclosure of the site, optimizes the pavement, and appropriately adds fitness facilities (**Figure 5**).
- (3) Ascend and look far: On the hills with good viewing effects near the road, design to add viewing pavilions and hiking trails, cleverly borrowing scenery (**Figure 6**).



Figure 5. Nostalgia station



Figure 6. Climbing high and looking far

8. Industry promotion strategy

The area surrounding the route features characteristic industries represented by the corn-soybean intercropping belt planting base, fruit hybrid orange base, and fruit plum planting base. The design incorporates these existing

industrial bases to create distinctive nodes:

(1) Mountains of oranges: Located at the entrance and exit of the Red Beauty picking orchard, the design incorporates decorative elements as highlights, using orange trees as a backdrop to enhance the atmosphere of the picking orchard, as shown in **Figure 7**.



Figure 7. Mountains of oranges

(2) The fragrant plum: Combining the fruit industry in Fushengqiao Village, creating a parking node that offers scenic viewing, rest areas, and supports the agricultural industry, to form a beautiful and fragrant parking node (**Figure 8**).



Figure 8. The fragrant plum

(3) A farm with rice and beans: As shown in **Figure 9**., the surrounding area of the retaining wall is an agricultural technology demonstration and exhibition base, mainly focusing on soybean and corn cultivation. The retaining wall primarily uses text to promote and emphasize modern agricultural technology. The taller section of the wall features acrylic house shapes, harvest-themed figures, and text displays, while the shorter section employs acrylic three-dimensional letters above it. This serves to highlight the soybean-corn strip intercropping technology demonstration and exhibition base. The letters are complemented by glass fiber reinforced plastic bean sprouts to add interest to the roadway.

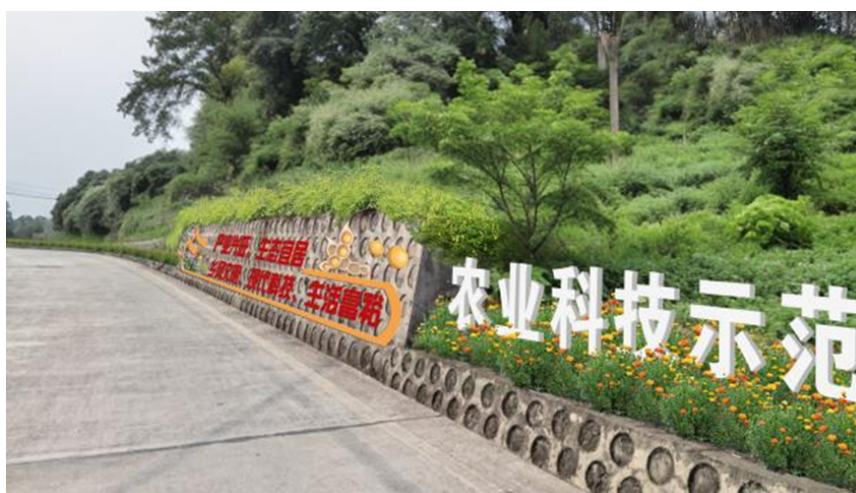


Figure 9. A farm with rice and beans

9. Conclusion

Rural roads connect villages and groups, linking urban and rural areas. The “Four Goods” rural roads carry people’s beautiful expectations for rural travel and open up the “last mile” for rural revitalization and farmers’ prosperity^[3].

The landscape design of the “Four Goods” rural roads requires understanding the region’s resources, culture, industrial development direction, and the needs of local residents. Designers need to conduct various research and communications to carry out targeted designs and implement practical measures. Moreover, the land use for the “Four Goods” rural design is limited and fragmented, requiring careful consideration in selecting nodes, using plants, and choosing materials.

The construction of the “Four Goods” rural roads brings tangible benefits to thousands of households. However, how to create thoughtful, people-centered designs that not only support local livelihoods but also highlight the beauty of engineering, culture, vegetation, and public facilities along these roads is a crucial question for every landscape designer to consider. Successfully addressing this “last mile” is both a challenge and a responsibility that landscape designers must actively embrace and reflect upon.

Disclosure statement

The author declares no conflict of interest.

References

- [1] Wu Y, Peng S, 2018, Landscape Design in the Construction of “Four Good Rural Roads” in Mountainous Areas. *Highway Transportation Technology*, 2018(6): 131–134.
- [2] Guo B, 2019, Study on Landscape Design of Tourist Highway in Guanzhong Area Under Ecological Concept, thesis, Chang’an University, Architecture and Civil Engineering.
- [3] Zheng T, 2022, Research on Brand Building and Promotion of Chongqing Meili Rural Road Under the Background of Traffic and Tourism Integration. *Highway*, 2022(2): 201–205.

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