

IFLA AAPME Awards 2024
Award Categories-Analysis and Planning

PROJECT BINDER
Design of the venue for the 2024 Chinese Farmers Harvest Festival

Project Name: 2024 China Farmers' Harvest Festival Venue Design

Project Address: Muduo Bay Rural Revitalization Demonstration Area, Lankao County, Kaifeng City, Henan Province, China

Area: 590 hectares

Award Category: Analysis and Planning

Project statement

The site, located in the Muluobay Rural Revitalization Demonstration Area of Lankao County and spanning 590 hectares. Established to host the 2024 China Farmers Harvest Festival and create a demonstration site for rural revitalization. Its purpose is to restore the ecosystem, increase agricultural yields, boost the economy, and stimulate reverse migration to the countryside.

The following three categories of construction are included in this plan:

Optimize Infrastructure:

The improvement of Muduo Avenue strengthens the link between urban and rural areas, serves as a windbreak against sandstorms, and contributes to increased farmland productivity.

The **innovative cultural landscape** includes the following three aspects:

The Paulownia Germplasm Resource Reserve aims to preserve the diversity of the local Paulownia trees by planting a variety of specialized groves and conserving over 400 germplasm samples.

The establishment of Meteorological Park is intended to educate villagers about the significance of meteorological information, promoting more scientifically informed agricultural practices.

The Harvest Square, utilizes innovative paving materials derived from agricultural waste recycling, setting a standard for sustainable rural design.

Region-specific architectural design:

The Maker District features buildings constructed using materials sourced directly from the surroundings to prevent additional carbon emissions. This area is poised to attract more "new farmers" to return to their hometowns to pursue entrepreneurial opportunities.

SITE ANALYSIS

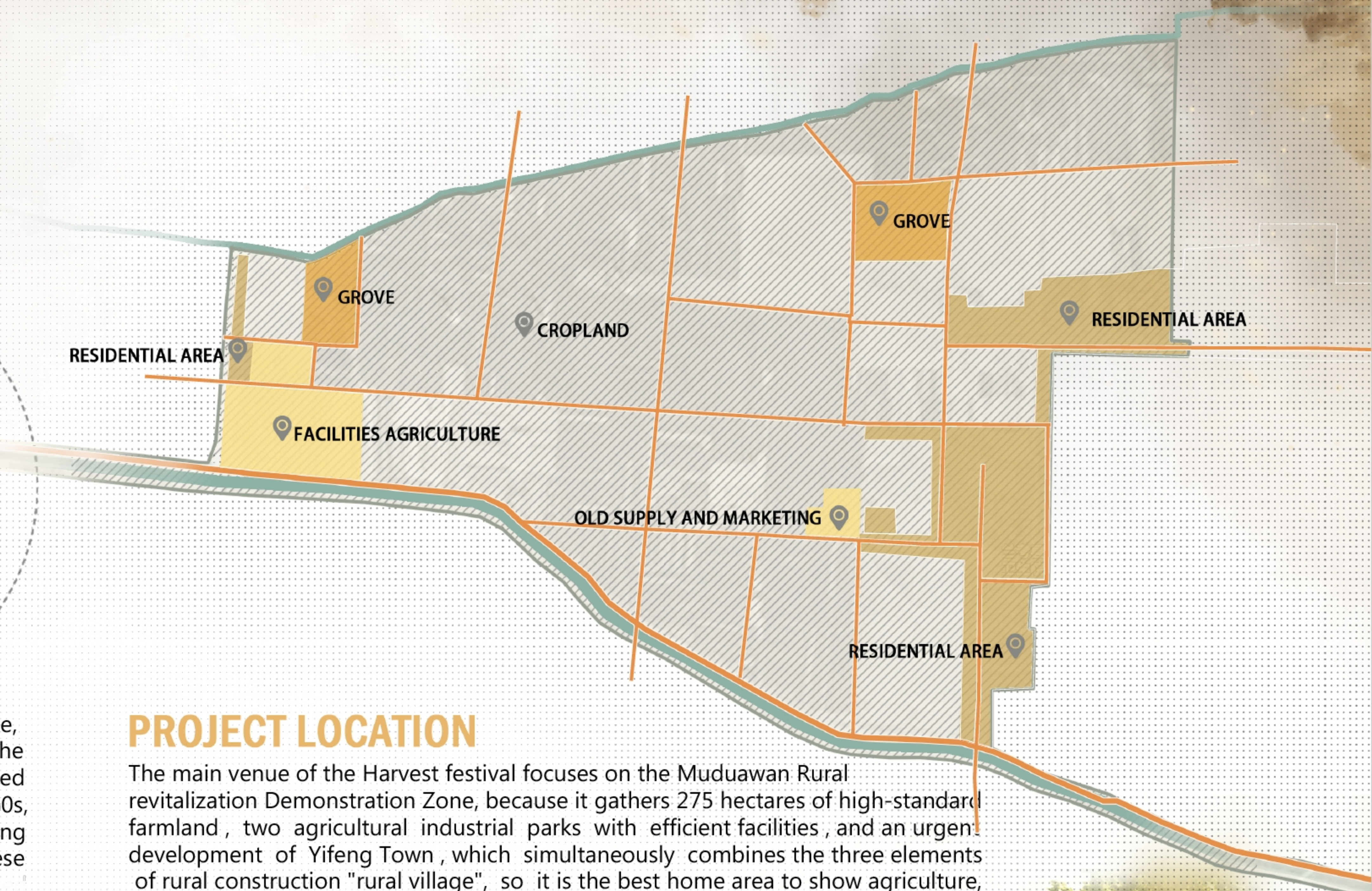
Since 2018, China has designated the autumnal equinox of each year as the "Chinese Farmers' Harvest Festival," aiming to set benchmarks for rural development under different themes annually and establish exemplary models for villages. This festival not only commemorates the harvest but also highlights the ongoing struggle and achievements in rural revitalization, inspiring hope and action towards a brighter and more sustainable future for rural communities.



CHANGES IN HISTORY

Lankao County lies at the center of a vast alluvial fan formed by the Yellow River's sedimentation, predominantly consisting of sandy land. Historically, Lankao suffered from frequent sandstorms, saline-alkali conditions, and flooding. In 1962, Jiao Yulu arrived in Lankao and led the local population in extensive tree planting to control sandstorms, dredging mud to counteract salinity, digging ditches to improve drainage, and battling the harsh environment. During this period, Jiao Yulu identified the Paulownia tree as the most effective species for combating sandstorms. He spearheaded research into the concurrent cultivation of crops and Paulownias. By the early 1960s, they successfully experimented with the small root method for Paulownia seedling cultivation, accelerating the growth of Paulownia plantations. However, despite these efforts, rural development in Lankao has stagnated once again, necessitating renewed momentum through events such as this.

HARD-WON HARVEST



PROJECT LOCATION

The main venue of the Harvest festival focuses on the Muduawan Rural revitalization Demonstration Zone, because it gathers 275 hectares of high-standard farmland, two agricultural industrial parks with efficient facilities, and an urgent development of Yifeng Town, which simultaneously combines the three elements of rural construction "rural village", so it is the best home area to show agriculture, farmers, and the countryside.

CULTURAL RESOURCES OF LANKAO



(1)
The sound of a wooden
clapper with a golden voice

(2)
Confucius Culture

(3)
Jiao Yulu's Spirit

(4)
Qingjian academy

(5)
The Yifeng official requests to meet

(6)
Paulownia Guzheng

(7)
Qilin Dance

(8)
Yi Feng San Xian Shu

(9)
The Pottery Crafting Skills
of Penyu Village

(10)
Crouching Guai Yangge

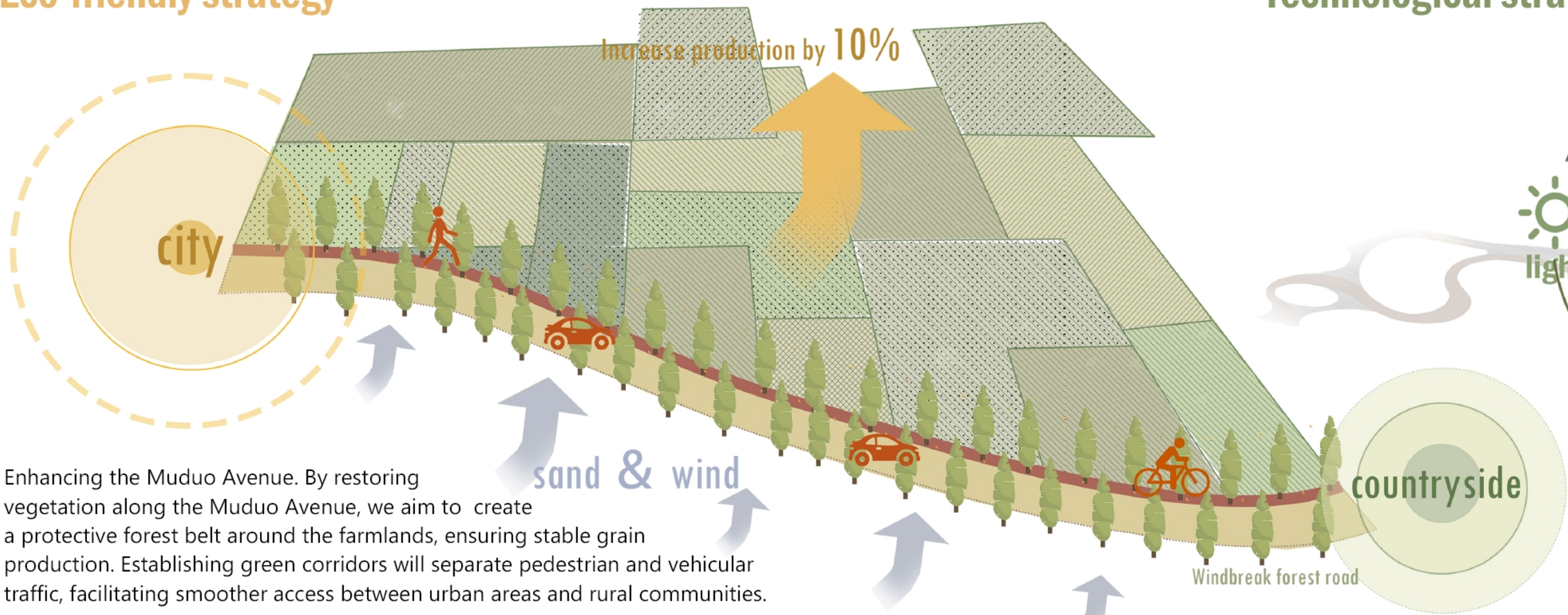
(11)
Li's Woodblock Prints

(12)
Henan Zhuizi

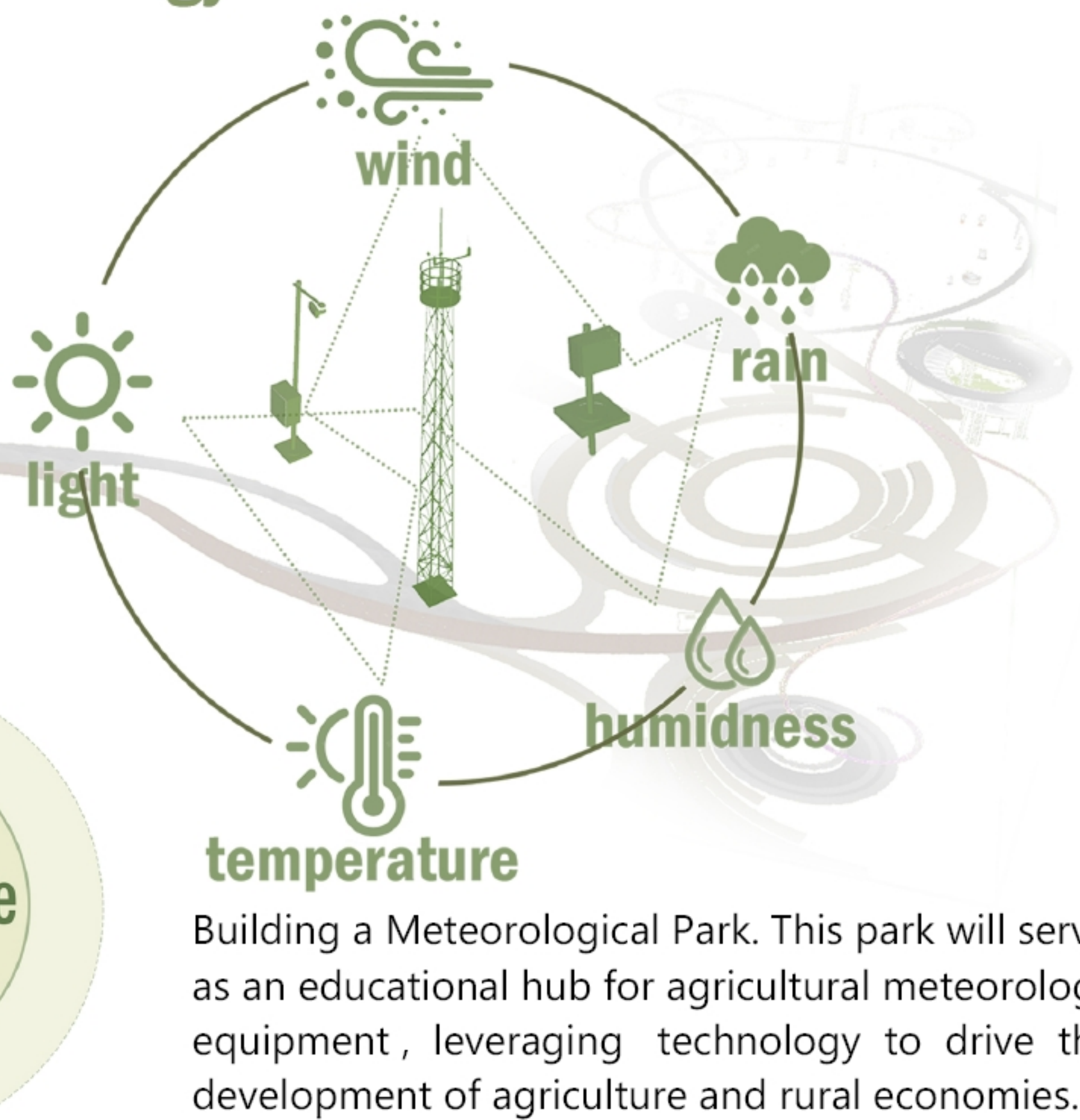
PROJECT POSITIONING AND STRATEGY

The project is positioned as a regional rural revitalization initiative, with its design philosophy and strategies deeply rooted in the site's unique context and characteristics. Consequently, we propose the following five core design strategies: Eco-friendly strategy, technological strategy, innovative strategy, sustainability strategy, cultural strategy.

Eco-friendly strategy

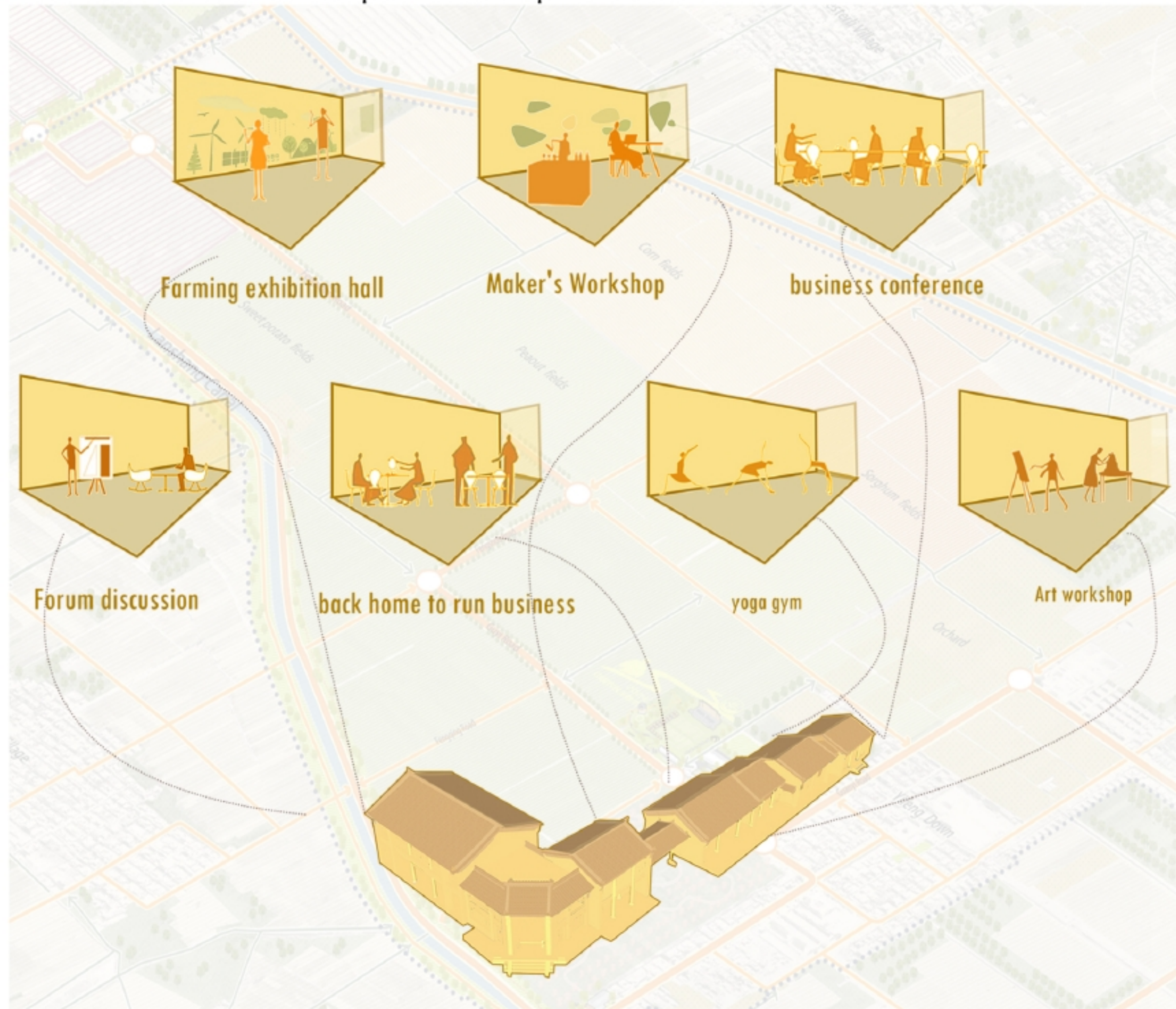


Technological strategy



Innovative strategy

Constructing a Maker District. This district will provide space for new agrarians returning to their hometowns to start businesses, fostering innovation and entrepreneurship in rural areas.



Sustainability strategy

Creating a Paulownia Germplasm Resource Bank. This initiative will preserve Paulownia resources, serving as a strategic reserve for Lankao's future defense against natural disasters. Building a Harvest Plaza to showcase the technology of recycling and reusing seed shells and straw. All functional buildings and pavements will be constructed using reclaimed old bricks found on-site, contributing to reduced carbon emissions.



Cultural strategy

Establishing a Paulownia Germplasm Resource Bank as a tribute to the Red Culture and the spirit of Jiao Yulu; developing a Meteorological Science Education Park to illustrate the historical relationship between meteorology and agriculture; and creating a Harvest Square to narrate significant agricultural events in China's history.

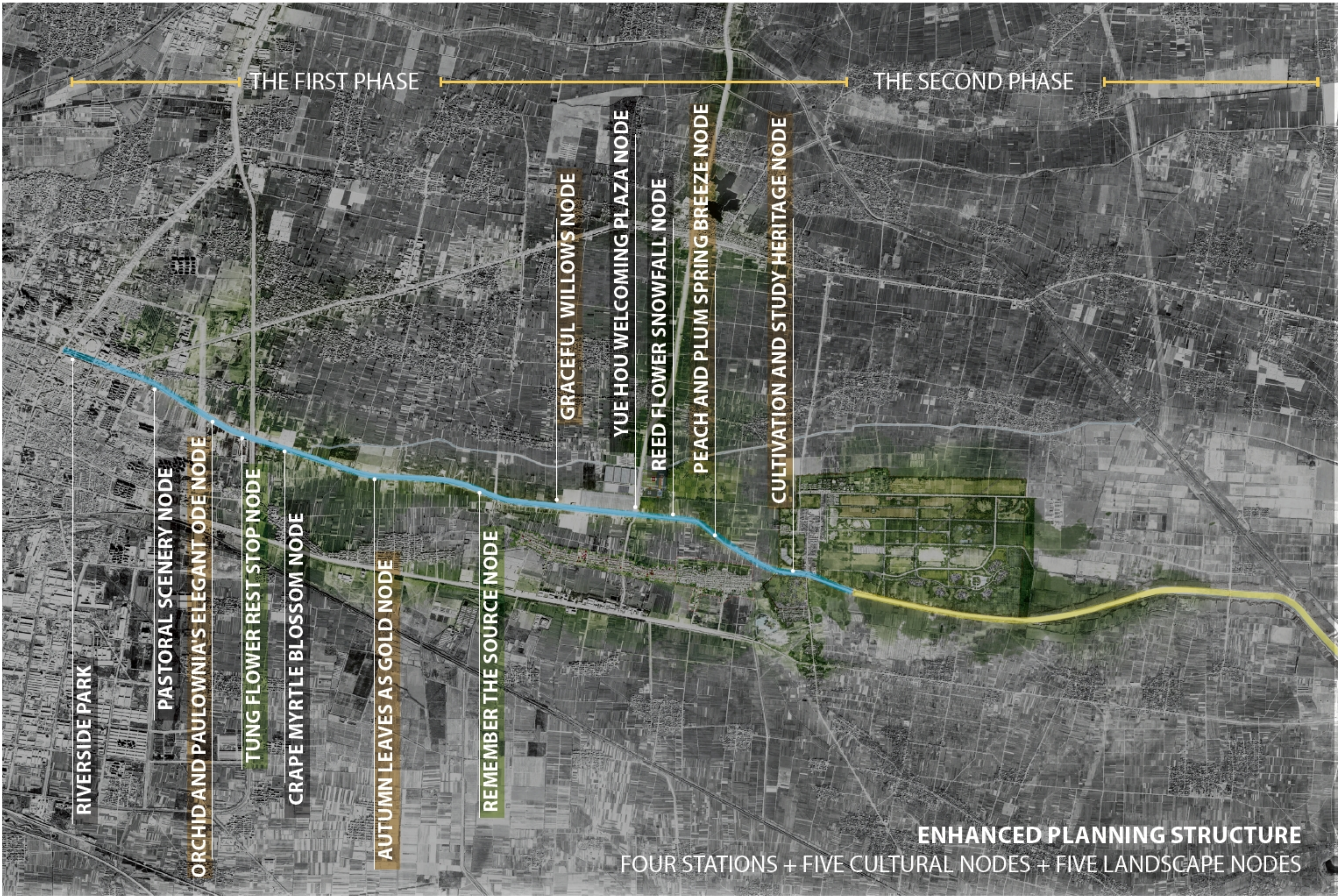
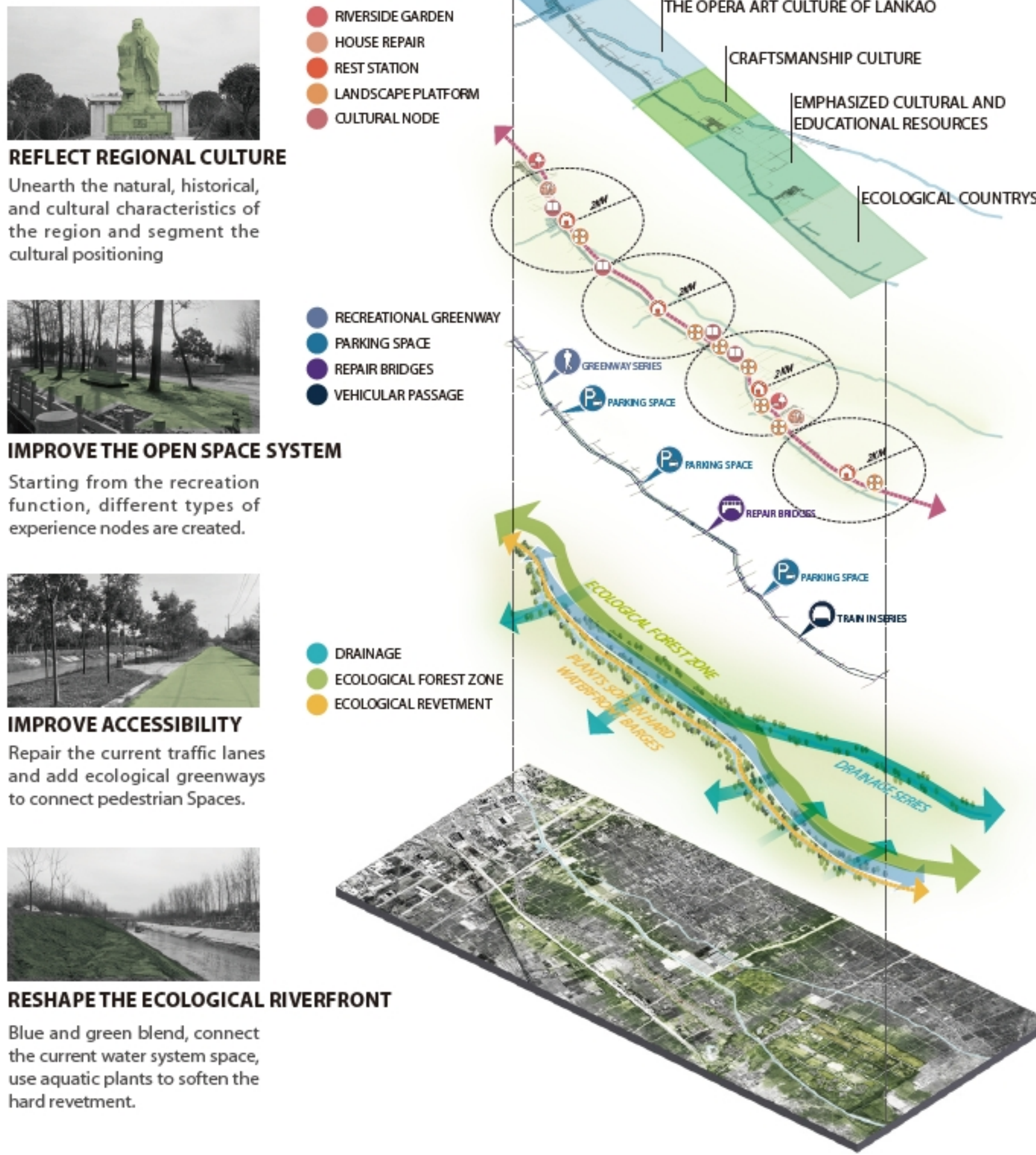


OPTIMIZE INFRASTRUCTURE - MUDUO AVENUE

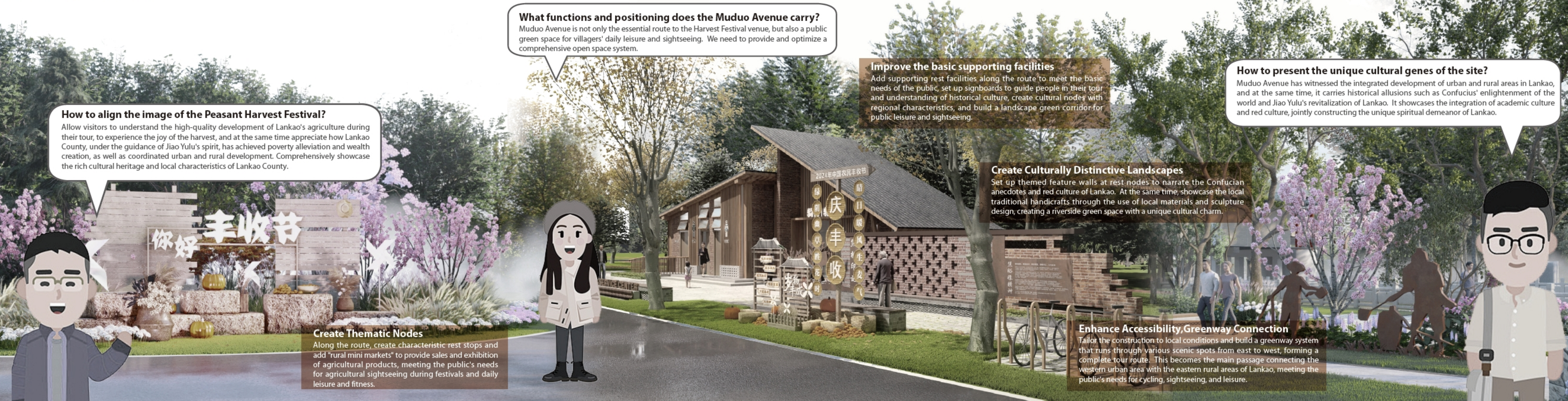
The total length of Muedo Avenue is approximately 21 kilometers, with renovation and enhancement implemented in two phases. Phase I covers the section from Victory Road to the Helan High-Speed Railway Overpass, while Phase II extends from the Helan High-Speed Railway Overpass to the Lan-Zhao Line.

In terms of design, based on the diverse planting species and cultural characteristics along the entire stretch of Muedo Avenue, five thematic sections have been planned: Yutong Red Brilliance, Artistic Harmony, Craftsmanship Legacy, Jinglin Splendor, and Mangyin River Fun, as well as four rest stops, five cultural nodes, and five scenic points.

INNOVATIVE PLANNING



PROBLEM AND STRATEGY



OPTIMIZE INFRASTRUCTURE - MUDUO AVENUE

In construction, relying on the existing green belt conditions, additional plantings will be made to fill gaps on both sides. For the overall rhythm of planting in the green corridor, a combination of dense and sparse planting techniques will be used, with local openings where understory flowers and grasses can be planted.

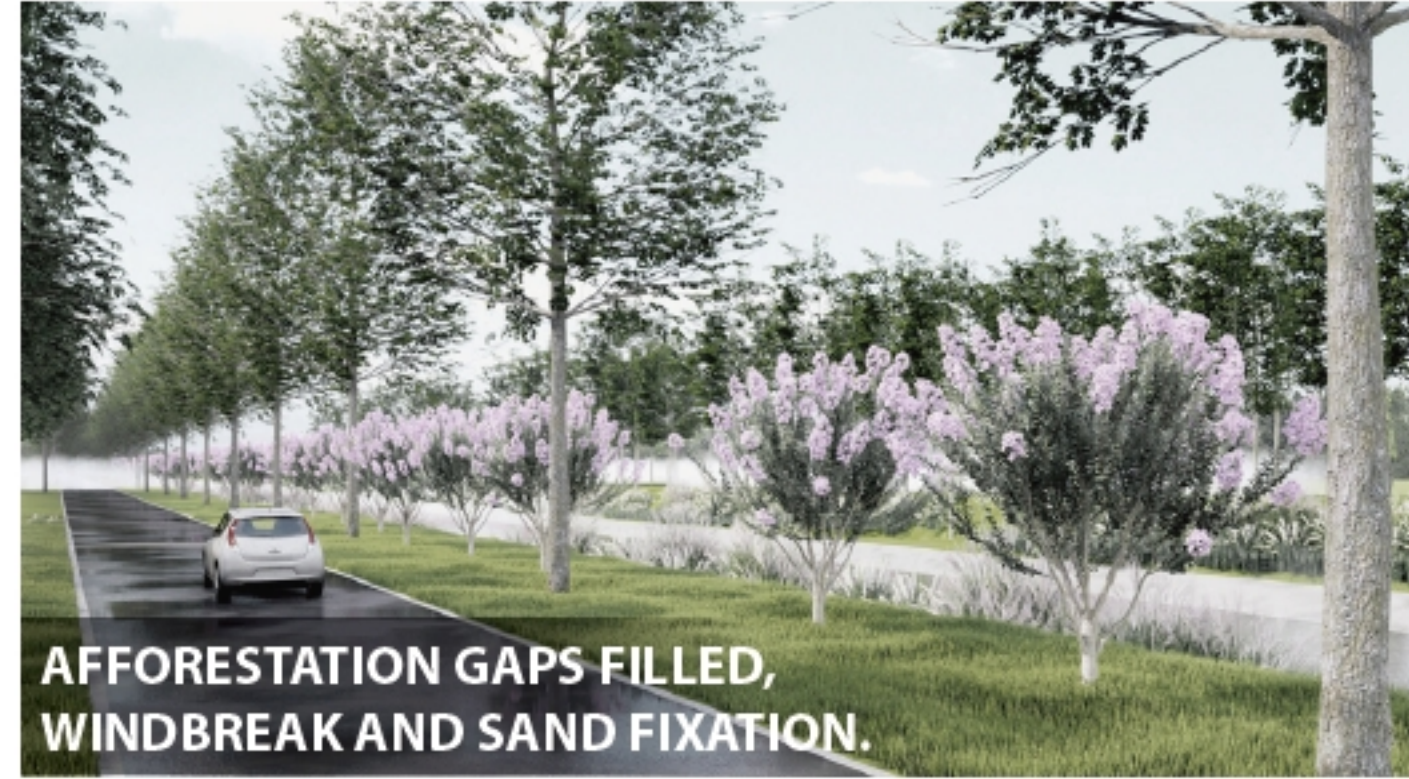
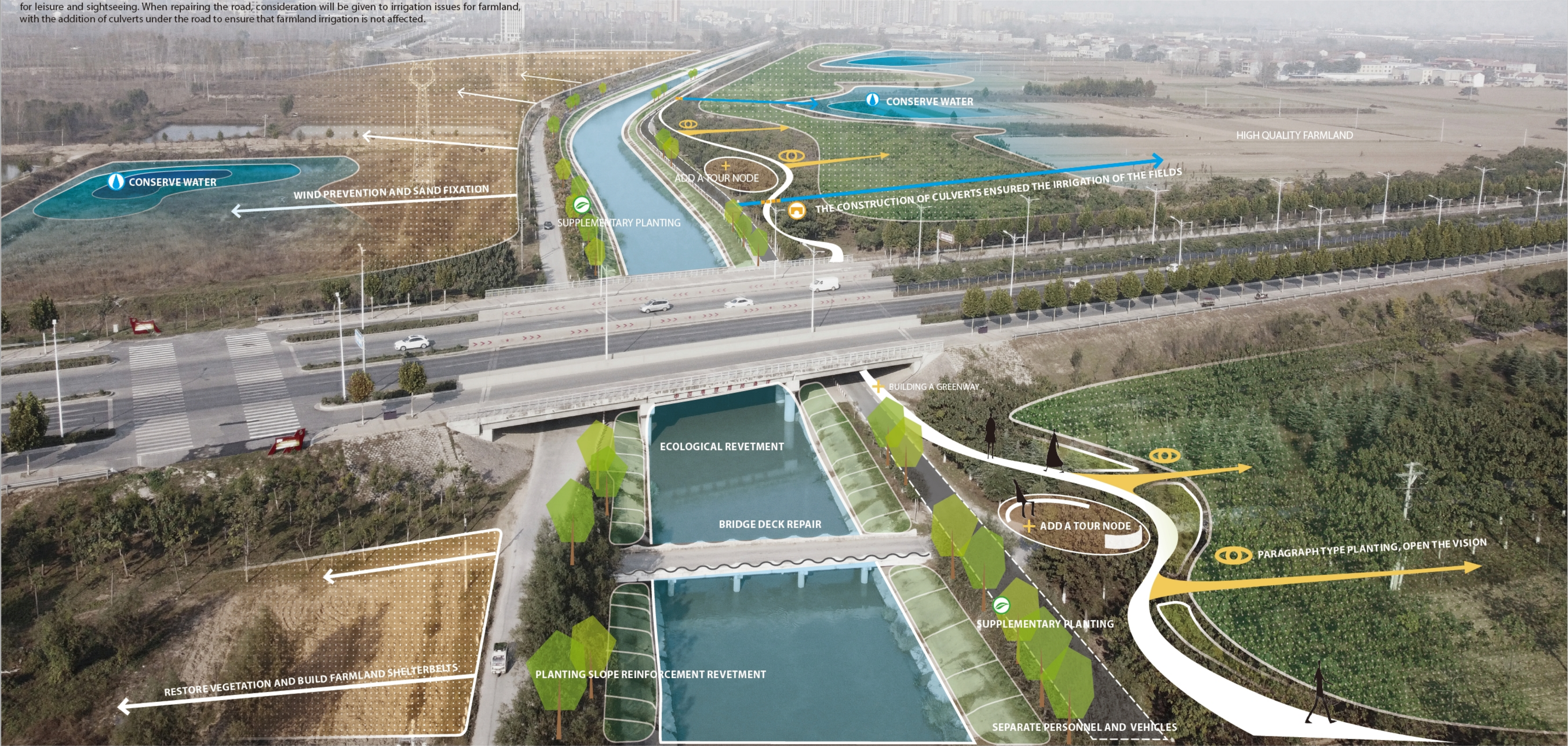
This way, one can experience the ecological corridor and also partially view the high-standard agricultural demonstration area. Bicycle paths and rest points will be designed along the road, transforming Muedo Avenue into the main thoroughfare connecting the urban area of Lankao and country , as well as a scenic green corridor for leisure and sightseeing. When repairing the road, consideration will be given to irrigation issues for farmland, with the addition of culverts under the road to ensure that farmland irrigation is not affected.

- Create a Protective Forest Belt for Farmland along the Old Yellow River Course**

The ecological foundation of the project is fragile, with sand being blown away by the wind. By restoring the vegetation along Muduo Avenue, a protective forest belt for farmland is formed to prevent wind erosion and stabilize grain production.
- Create a Soil and Water Conservation Ecological Belt for the Yellow River Main Canal**

The greening on both sides of the route is mainly used for water source conservation. While repairing the roads, additional culverts are installed to ensure that farmland irrigation is not affected.
- Create an Ecological Corridor Connecting Urban and Rural Areas with Consideration for Agricultural Sightseeing**

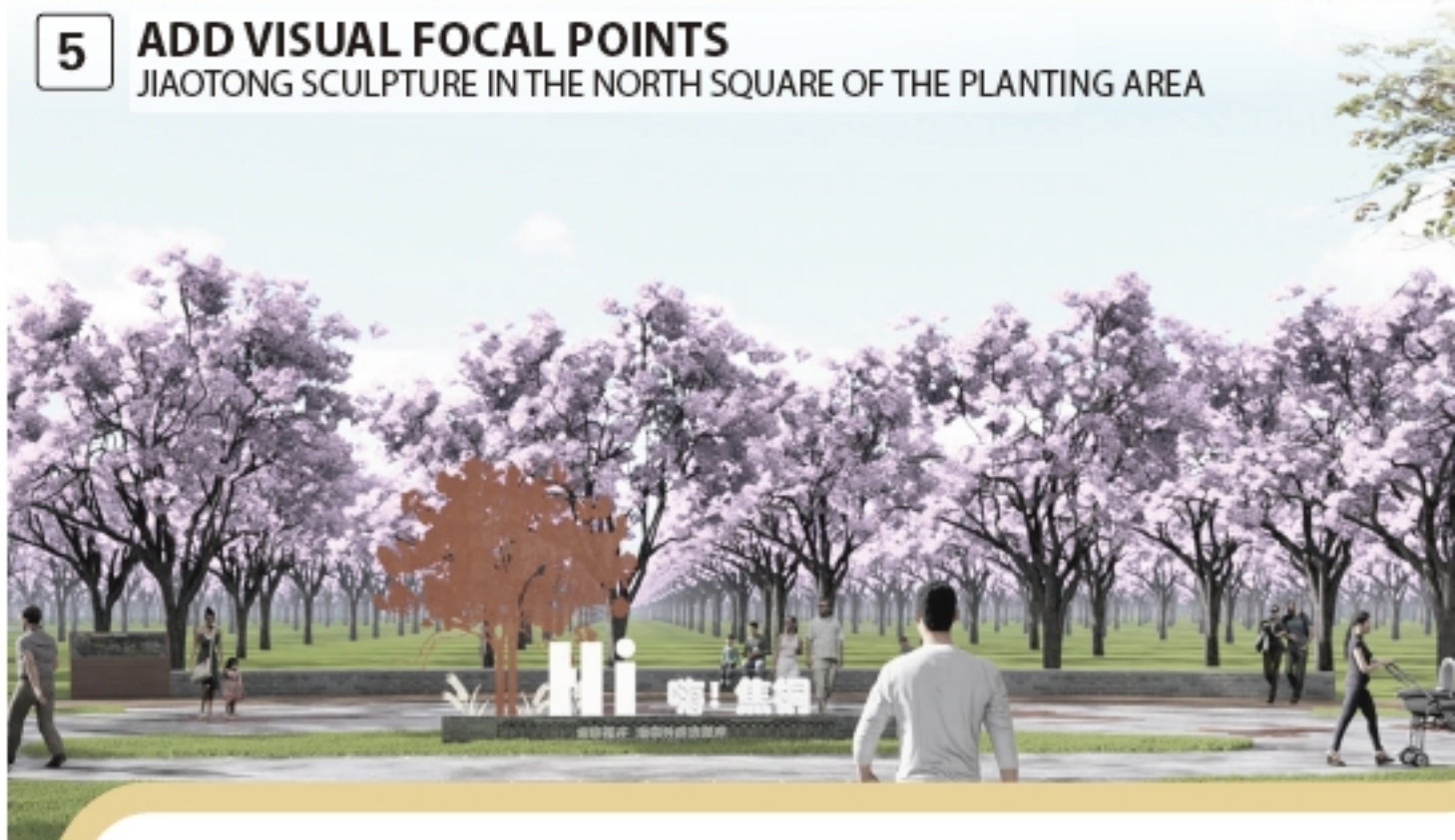
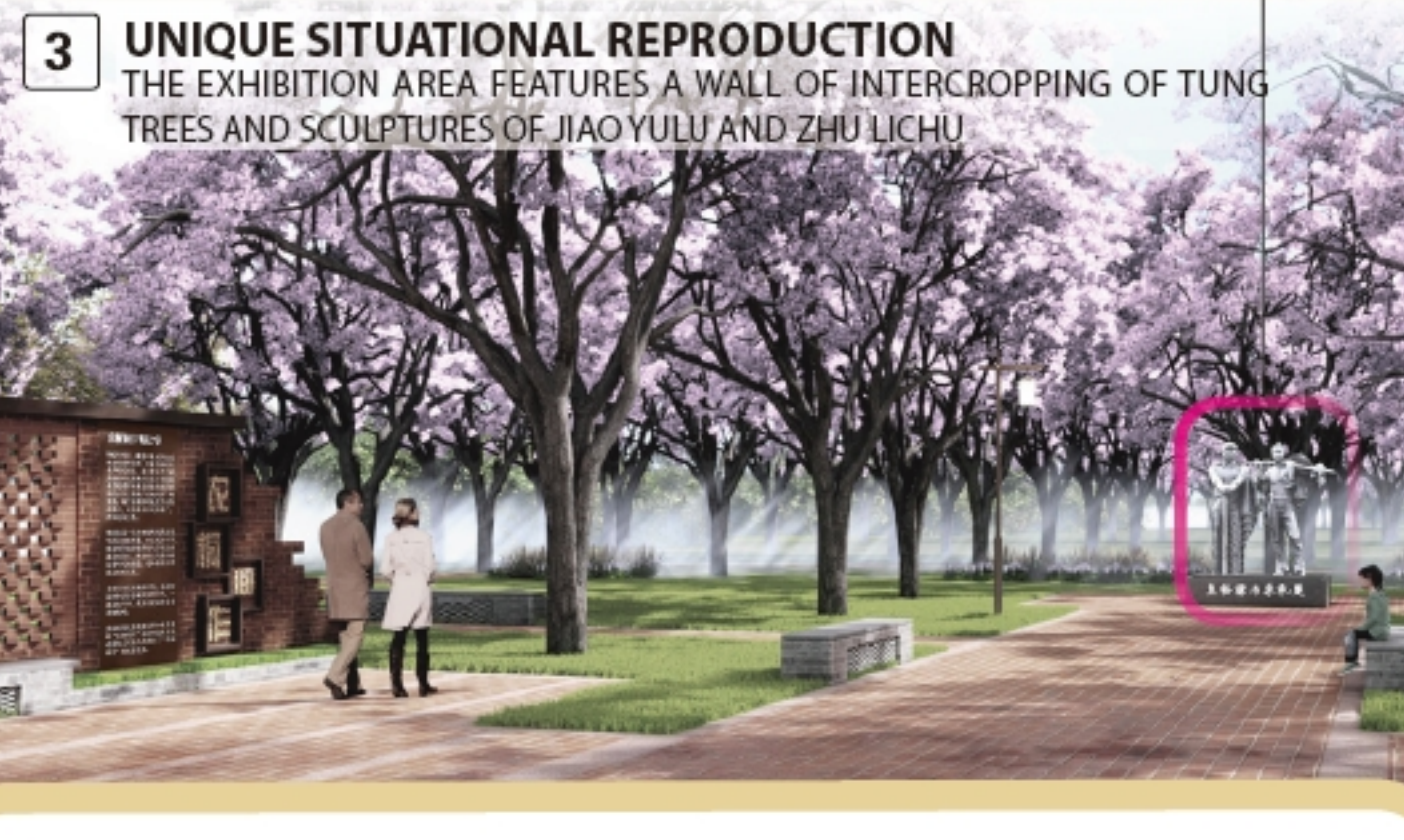
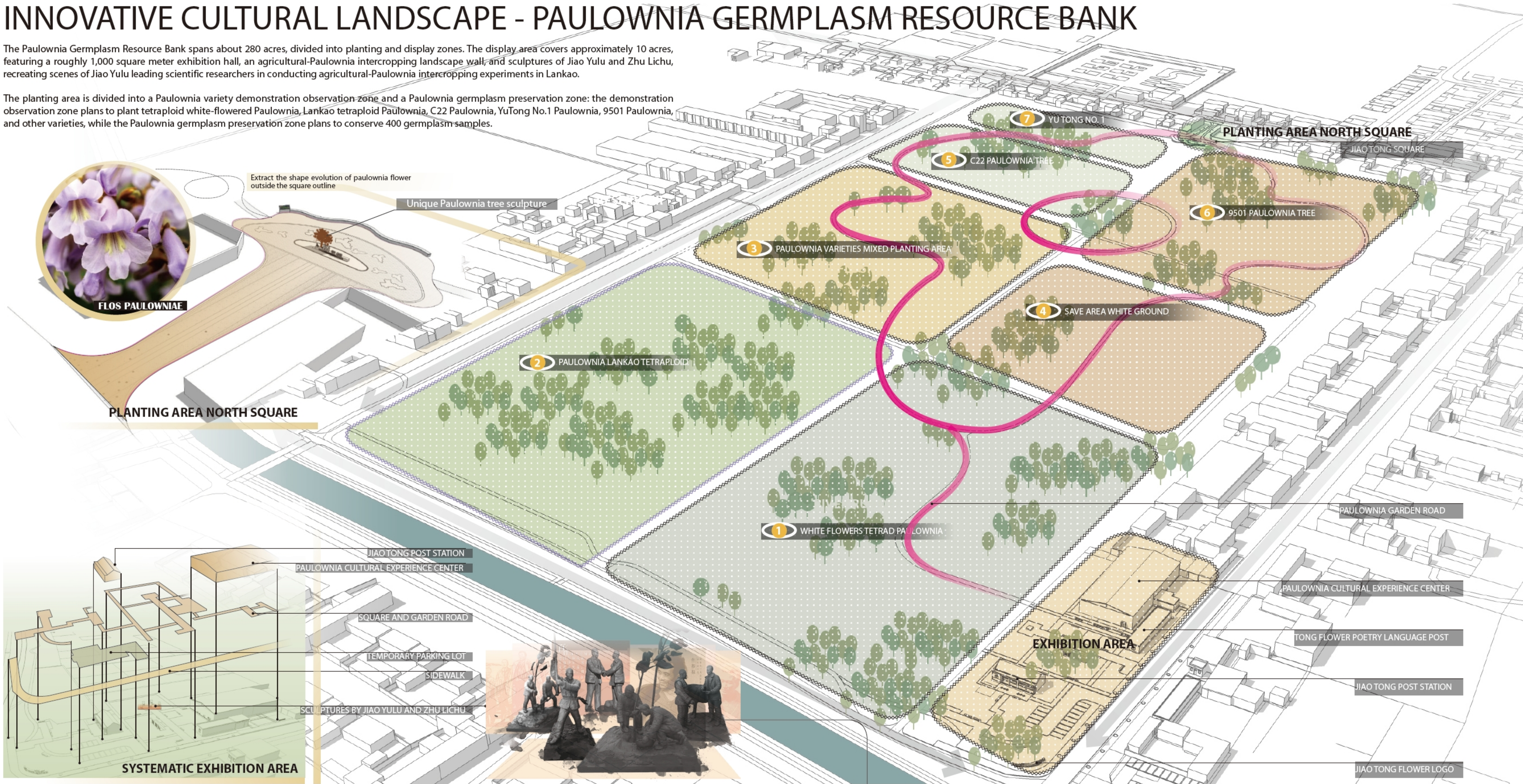
Protect and restore the ecological environment of the riparian zone, replant aquatic plants, stabilize slopes and protect banks, repair existing hard revetments to meet ecological requirements, enhance the ecological functions of the riparian zone, and create a more livable environment for citizens.



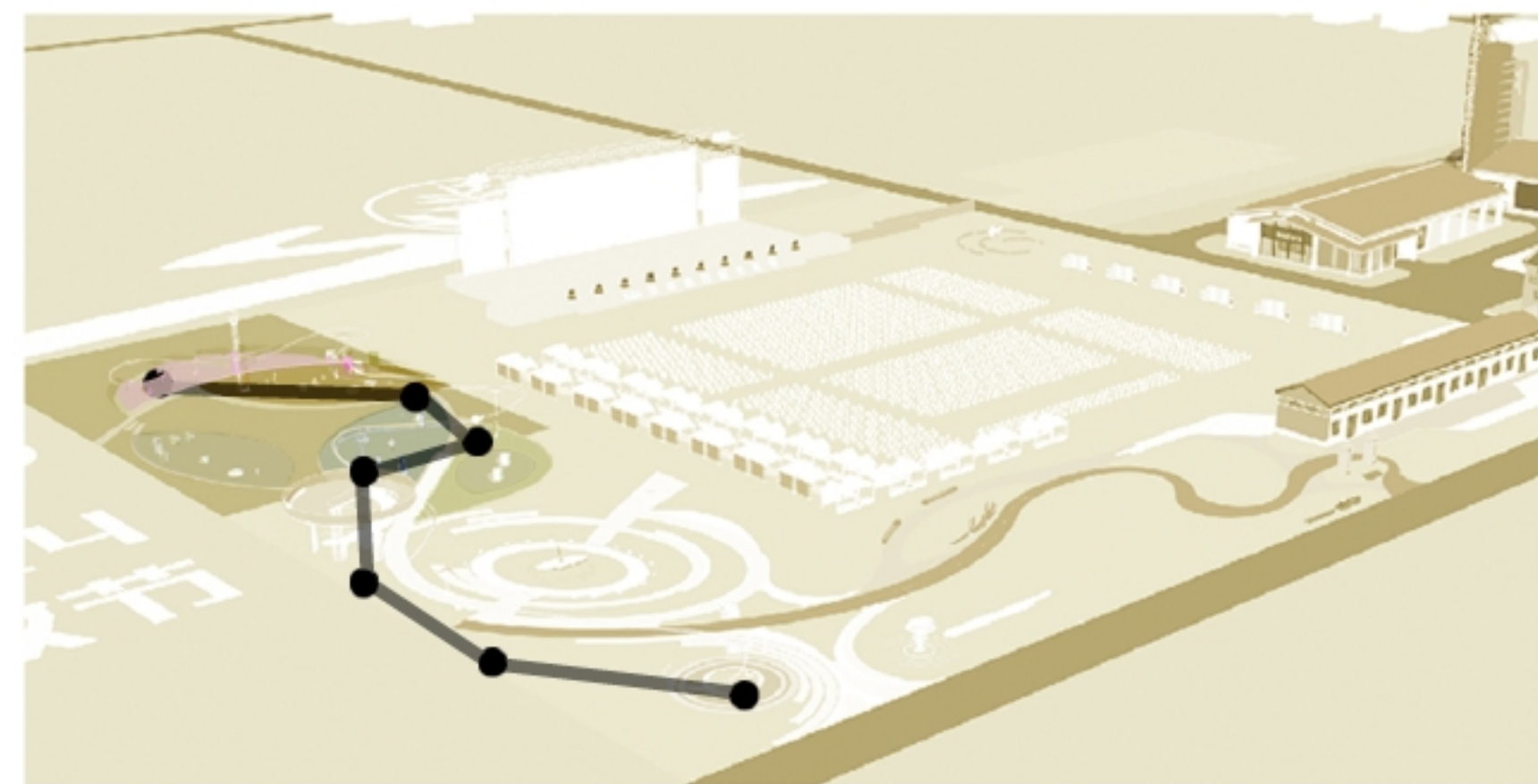
INNOVATIVE CULTURAL LANDSCAPE - PAULOWNIA GERmplasm RESOURCE BANK

The Paulownia Germplasm Resource Bank spans about 280 acres, divided into planting and display zones. The display area covers approximately 10 acres, featuring a roughly 1,000 square meter exhibition hall, an agricultural-Paulownia intercropping landscape wall, and sculptures of Jiao Yulu and Zhu Lichu, recreating scenes of Jiao Yulu leading scientific researchers in conducting agricultural-Paulownia intercropping experiments in Lankao.

The planting area is divided into a Paulownia variety demonstration observation zone and a Paulownia germplasm preservation zone: the demonstration observation zone plans to plant tetraploid white-flowered Paulownia, Lankao tetraploid Paulownia, C22 Paulownia, YuTong No.1 Paulownia, 9501 Paulownia, and other varieties, while the Paulownia germplasm preservation zone plans to conserve 400 germplasm samples.



INNOVATIVE CULTURAL LANDSCAPE-Meteorological Science Park and Harvest Plaza



Fuxi through the observation of the changes in the sun, moon and stars exhibition, to the rise and fall of the people grass and water, the alternation of heat and cold, fog, rain, frost and snow and othernational phenomena, the concept of the year, month and season has developed.

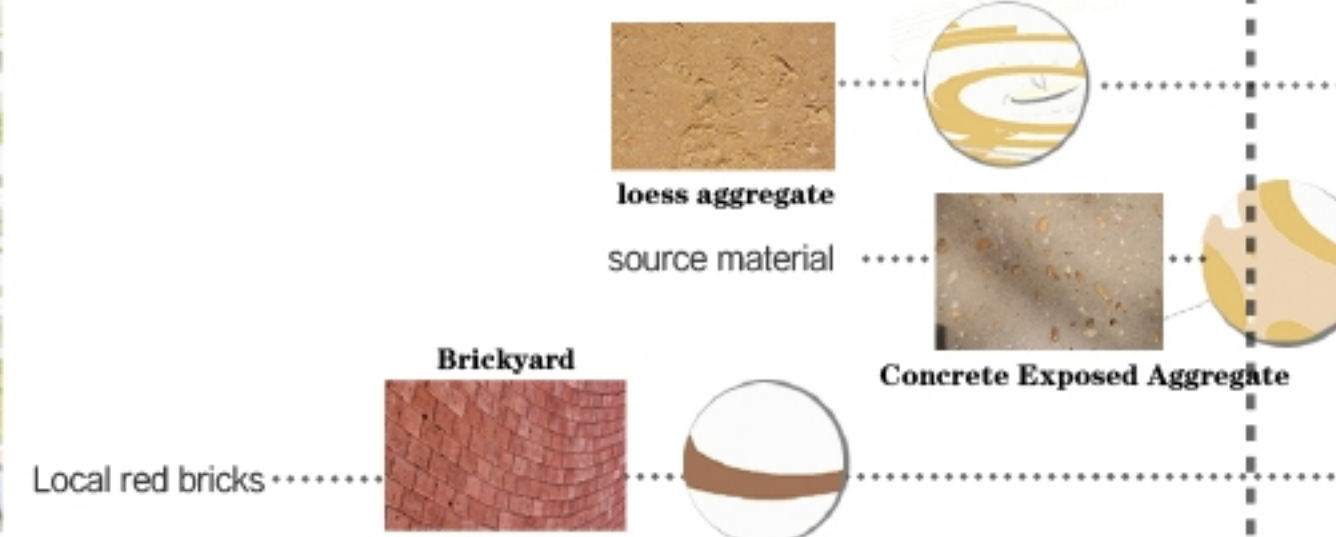
When the handle of the dipper points to the east, the world is in spring;
when the handle of the dipper points to the east, the world is in summer.
When the handle of the dipper points to the west, all the world is in autumn.
When the handle of the dipper points to the north, all the world is in winter.

Spring planting, summer growth, fall harvesting, winter storage, people's lives have a basis.



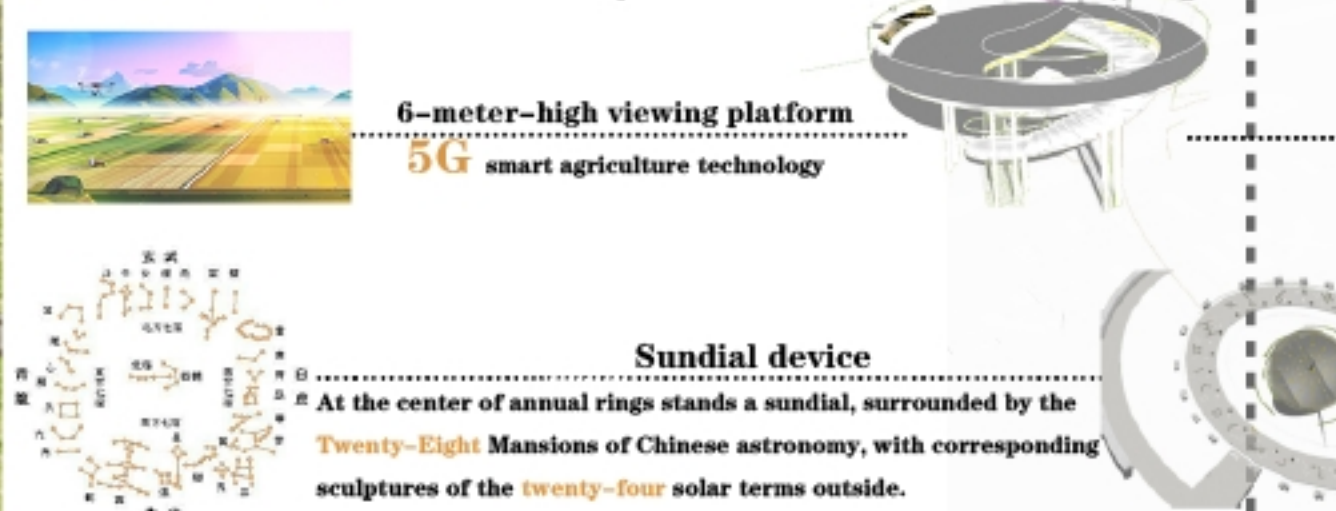
PAVEMENT ANALYSIS

In the northern part of the Meteorological Park, a novel material of wood chip permeable pavement is used. In the southern area, local yellow soil is mixed into exposed aggregate to create a more site-specific paving style, making the overall design more eco-friendly. For the main stage area at the Harvest Square, we have opted for a pure grass surface, aiming to avoid additional construction due to a single grand event, thus preventing new carbon emissions—a choice that is both ecologically sound and economical.



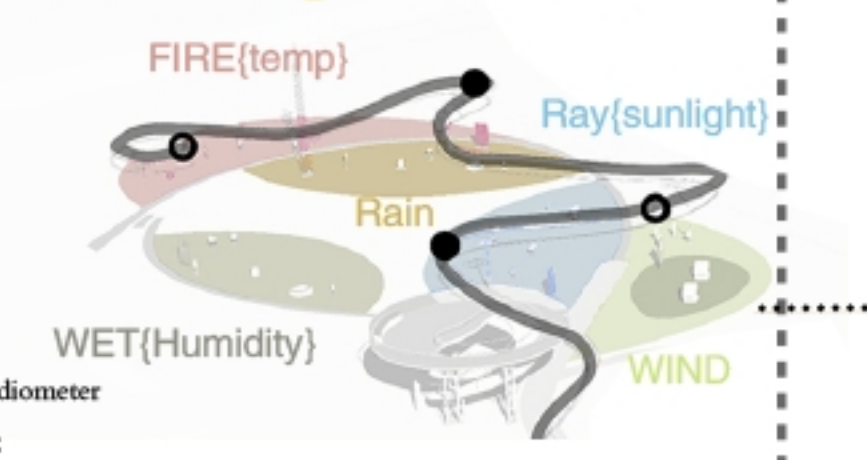
CULTURAL ANALYSIS Meteorological Park South

Within the Meteorological Science Education Area, seasonal annular landscapes representing the four seasons are set up, with sundials, the 28 Lunar Mansions, the 24 Solar Terms, and the He Tu and Luo Shu patterns arranged from the inside out, recounting the historical relationship between ancient Chinese meteorology and agriculture. A 6-meter-high 5G Observation Deck stands here, blending distant farmland with 5G smart agriculture in a virtual-reality experience.



CULTURAL ANALYSIS Meteorological Park North

Wind: Ancient: Copper Crow;
Modern: Wind Tower
Rain: Ancient: Round Poppy;
Modern: Rain Barrel
Temperature: Ancient: Ice bottle;
Light: Ancient: Sundial; Modern: Radiometer
Humidity: ancient: hanging charcoal;



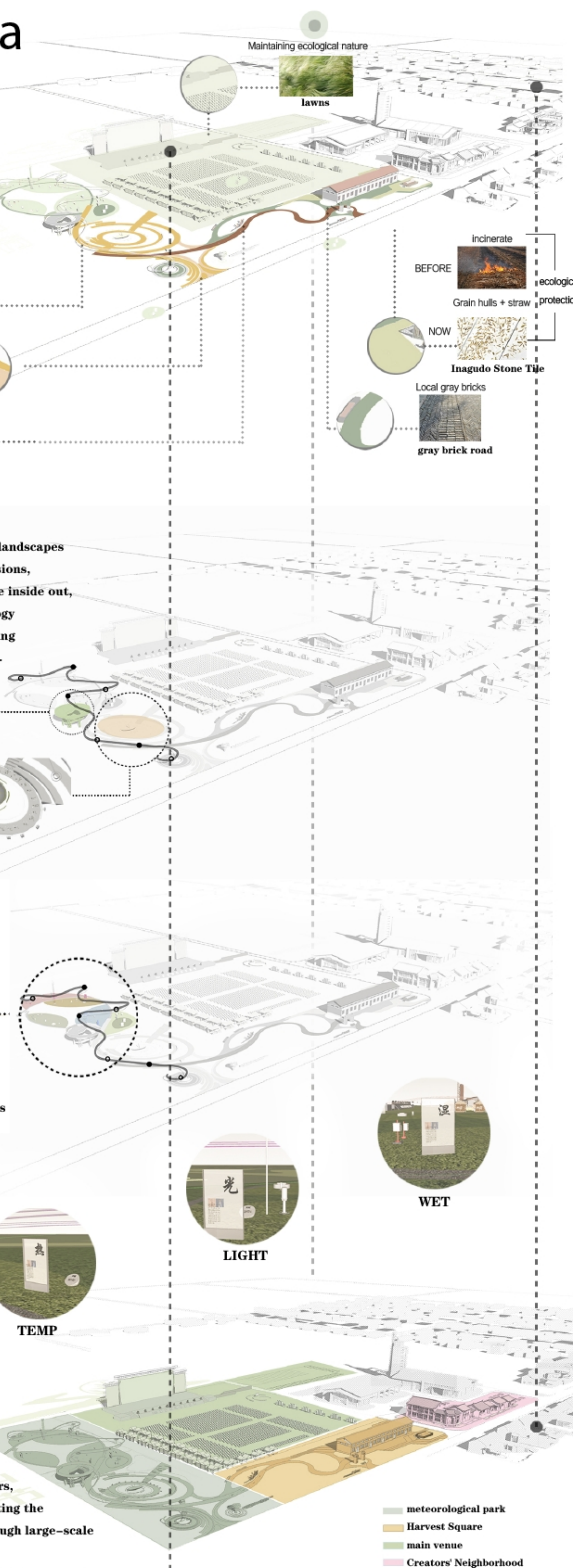
Focused on the five elements of meteorological monitoring—wind, rain, light, heat, and humidity—the Facility Display Area showcases meteorological equipment. It demonstrates to the villagers how advancements in technology can make our farmlands more efficient and stable.



FUNCTIONAL PARTITION

The establishment of the Meteorological Park aims to educate villagers about the significance of weather data, encouraging a more scientific approach to farming. Spanning approximately 4,500 square meters, the park's layout is inspired by the constellation of the Big Dipper, connecting the Meteorological Science Education Area and the Facility Display Area through large-scale landscape lighting installations.

The Harvest Square serves as the main stage area, covering about 2,500 square meters. We interpret the concepts of the Yellow River and wheat grains through the paving design, one symbolizing the region and the other representing harvest.



REGION-SPECIFIC ARCHITECTURAL DESIGN - MAKER BLOCK

REFINED ARCHITECTURAL LAYOUT ——The site is adjacent to the roads on the west and south sides, with an L-shaped layout to fully display the street-facing architectural interface effect.



The Maker Block spans approximately 4,500 square meters, designed in the style of Eastern Henan rural dwellings to create an agricultural innovation commercial street. Through the creation of the agricultural innovation commercial street, this area not only provides a practical platform for new rural entrepreneurship but also aims to attract more new farmers to return to their hometowns to start businesses, driving economic growth.



West side street view featuring a double-layered corridor reminiscent of ancient front porch designs.



At the road intersection perspective, the main building's lobby is designed to create a visual focal point.



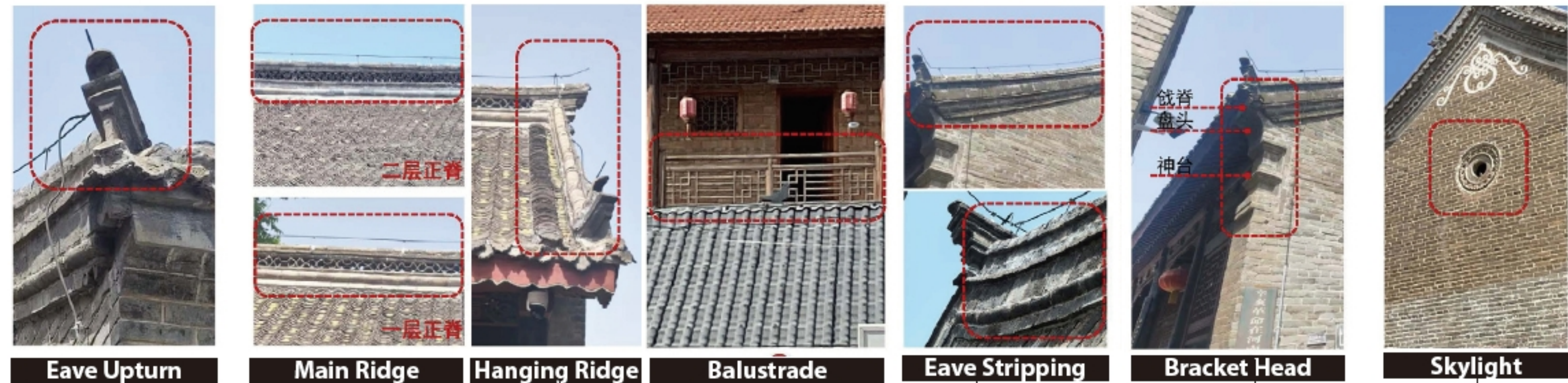
South side street view with single-story buildings showcasing the old residential area.



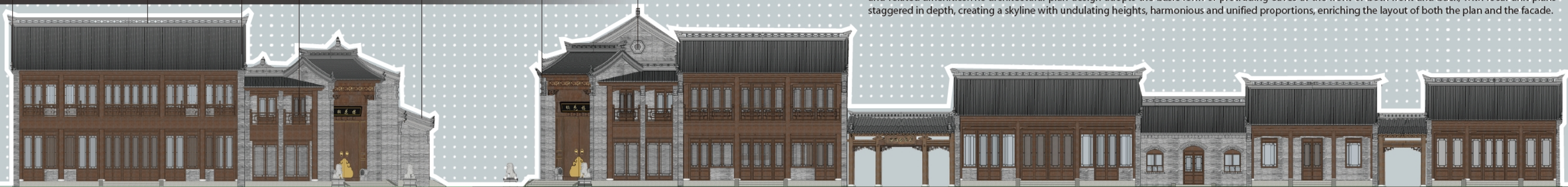
The view along the street on the south side, with external facilities creating a leisurely holiday atmosphere.

EXQUISITE ARCHITECTURAL DETAILS- Researching and showcasing traditional eastern henan residential architecture.

The construction employs traditional masonry techniques, fully demonstrating the stylistic characteristics of Eastern Henan rural dwellings. Here, the original architectural style of Eastern Henan rural houses will be presented, setting a model for future reference.



UNIQUE ARCHITECTURAL FACADE——Create a skyline with a rhythmic and undulating profile.



Central Plains Agricultural Exhibition Hall

MAIN BUILDING LOBBY

INTANGIBLE CULTURAL HERITAGE CREATIVE PRODUCTS STORE

CORRIDOR

MAKER WORKSHOP

ANCILLARY BUILDINGS

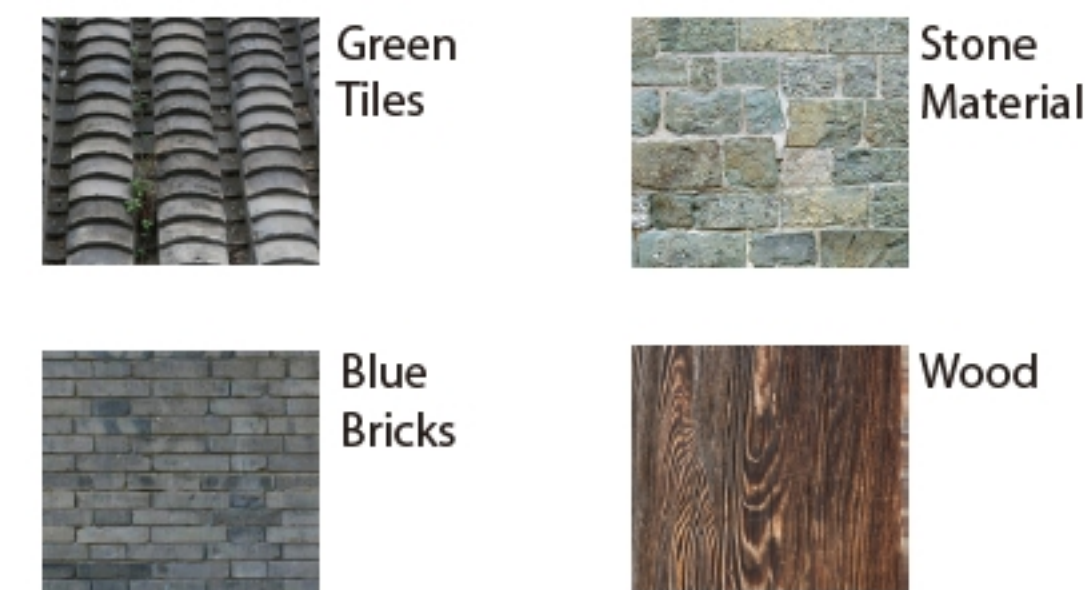
COFFEE SHOP

CORRIDOR

CONFERENCE SERVICES

ECOLOGICAL LOCAL MATERIALS

the architectural materials and decorations utilize traditional materials such as blue bricks, tiles, and timber, sourced locally. These materials are derived from the debris of abandoned buildings dismantled in the area, aiming to avoid generating new carbon emissions.



CULTURAL DECORATIVE DETAILS -Integrating local Paulownia culture into architectural details innovatively.



The overall layout of the buildings forms an "L-shape," consisting of the Central Plains Agriculture Exhibition Hall, maker workshops, conference facilities, and related amenities. The architectural plan design adopts the basic form of protruding eaves at the front or both front and back, with local unit plans staggered in depth, creating a skyline with undulating heights, harmonious and unified proportions, enriching the layout of both the plan and the facade.