

IFLA ASIA PACIFIC LA & LUMINARY AWARDS 2023 Open Category - Built Project · Environmental Art & Sculpture

China - Blooming Calla Lily Waterscape

Lianhuashan Mountain, Futian District, Shenzhen, Guangdong, China

Project Statement

Under the background of rapid urbanization, problems raised by the renewal of urban high-density core areas has become increasingly prominent. Lianhuashan Park is the largest urban green space in the Shenzhen CBD. It is not only a place of interest, but also a cultural landmark that records the establishment of a special zone. However, in the past two decades, the renewal and development of Lianhuashan Park has lagged far behind the city.

Blooming Calla Lily Waterscape is located at the southeast entrance of the Park, at the junction of two main urban roads, Hongli Road and Caitian Road, in Futian Central District. Taking advantage of the opportunity of the construction of Shenzhen Metro Line 10 and the improvement of the street environment of Caitian Road, the project team redesigned the original waterscape of the site, and proposed three strategies: Reorganizing the slow traffic system, optimizing the waterscape experience, and reshaping the city's image. The design emphasizes reactivating the diverse vitality of streets and parks. It covers the optimization of the park's slow-moving streamlines, waterscape sculpture modeling and water drop effect evaluation, in order to provide citizens with a new urban landmark waterscape, and rebuild the connection between man and nature.



Project Narrative

Project Location, Size and Scope

Blooming Calla Lily Waterscape is located at the intersection of Hongli Road and Caitian Road, the main roads in Futian Central District, Shenzhen, covering an area of 3,200 square meters. It is not only the entrance to the southeast side of Lianhua Mountain, but also an important display interface of the city.

In 2020, the project team was entrusted by Shenzhen Futian District Transportation Bureau to carry out a comprehensive improvement design of traffic and space environment on Caitian Road, aiming to comprehensively improve the road system by taking advantage of the opportunity of repairing the subway surface, and to find potential plots for regreening, to upgrade the public space and urban green space along the road to improve the quality of urban public space. The lotus flower waterscape is a key regreening plot. The design aims to reshape the urban landmark waterscape while linking surrounding landscape resources to create a high-quality street space full of diverse urban vitality, bringing new vitality to the area and promoting the development of local tourism.

Context Investigation

The background research covers the high-level planning such as land use attributes, urban architectural style, street interface and slow traffic system along the roads in the area. After half a year of on-site investigations, interviews with citizens, and workshop discussions with government departments, the project team finally integrated the existing design scheme based on the comprehensive evaluation and consideration of the demands of multiple parties.

Design Intent

White Calla Lilies are recognized as the symbol of elegance. Inspired by the layered and scattered calla lilies, the main shape of waterscape consists of 12 white flowers and leaves overlap in order, forming a light and flexible water drop landscape. Meanwhile, it also creates a more inclusive and accessible park entrance, providing urban heat island reduction using light colored materials and with the cooling effect of water.

In order to ensure the best water drop effect, the scheme with the highest water film integrity was carefully selected through testing and comparison of three drop weirs with different slopes. In addition, the design also fully considers the users' real landscape experience, and repeatedly deliberates on the three-dimensional space layout of 12 calla lilies, while avoiding the water spray of the water film from wetting the outer seat, and ensuring a multi-directional view of the street viewing effect. In addition, the landscape also fully considers the relationship between waterscape, sunlight and lighting, creating a pleasant lighting atmosphere at all times.

Design Programme

The Blooming Calla Lily Waterscape has currently become a landmark landscape at the important urban traffic node on Caitian Road and a new gateway to Lianhuashan Park. It not only plays a role in revitalizing and updating urban street space, but also becomes a city card that is popular on social media, attracting many citizens and tourists come to check in.

In the morning and evening of weekdays, it is a fitness square for citizens to do morning exercises. The tree shade square next to the landmark water feature retains the status quo of Terminalia lobata, and many young people warming up by morning jogs and elderly people doing Tai Chi and dancing square dances all gathers here. During traditional festivals and weekends, open air markets and small outdoor event stages can be held here, forming a temporary performance space with a water curtain as the background. It is the most dynamic street space in Futian CBD, radiating new vitality of Lianhuashan Park.

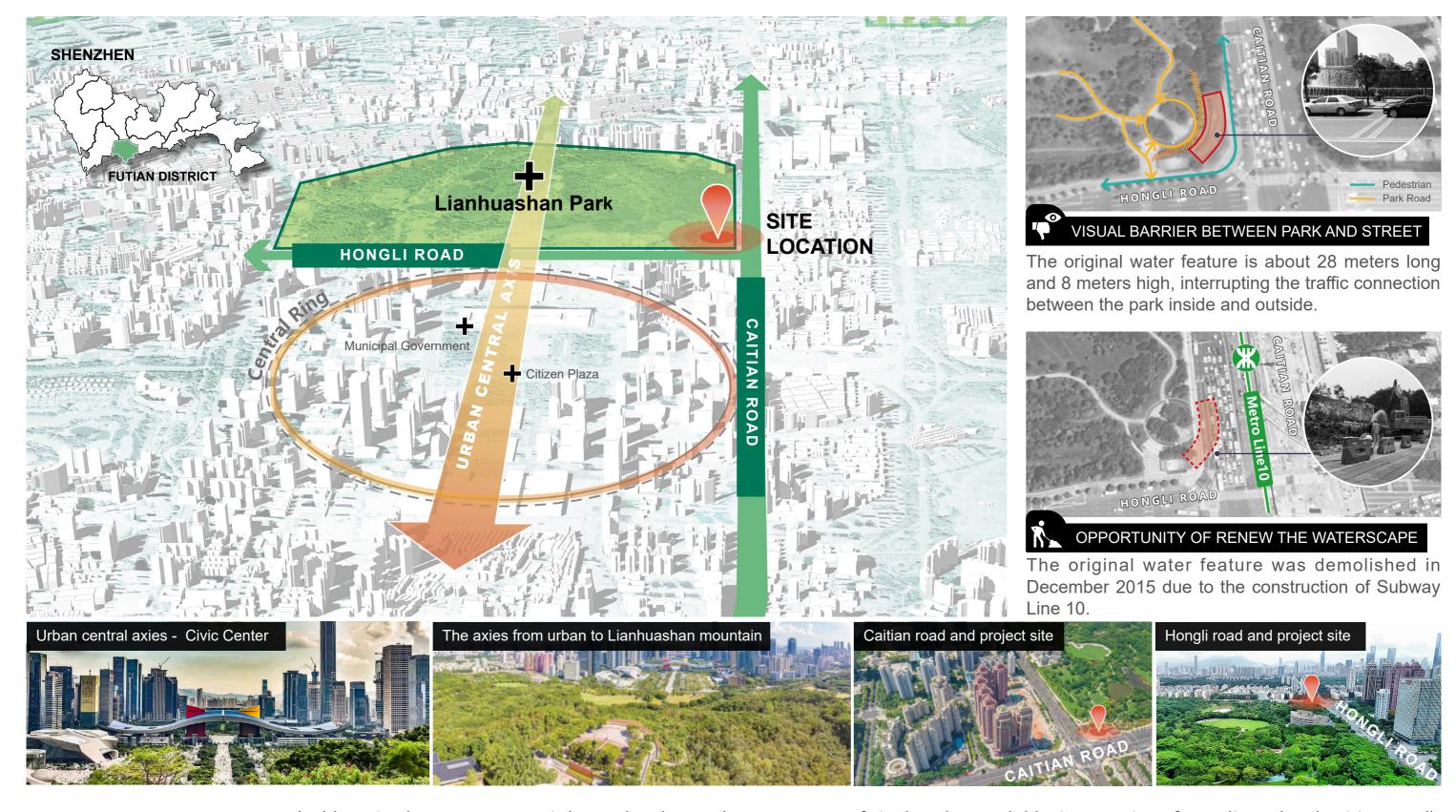
Material

Considering the convenience of on-site assembly and the construction effect, the waterscape adopts a modular design, and each calla lily structure is composed of 30,000 structures. The waterscape sculpture is finished with creamy white stainless steel, which has the characteristics of high strength, high durability and stain resistance, which can fully show the characteristics of calla lilies. The bottom of the waterscape is made of dark-toned granite, which can easily set off the reflection of the waterscape, forming a beautiful mirror effect.

Collaboration with the client and other designers

The success of the design is attributed to the close collaboration between the government, clients, design and professional consultants. The project is an open space project jointly constructed and managed by three government units, Shenzhen Metro Group Company, Shenzhen Futian District Transportation Bureau and Shenzhen Park Management Center. In the overall planning and design stage of the project, AECOM proposed the overall landscape concept planning scheme of Caitian Road and the scheme design of the lotus flower waterscape, covering urban planning, transportation, landscape, engineering structure, lighting, etc. WATECH was invited as a waterscape consultant to coordinate and cooperate to formulate a scientific and complete water circulation system to ensure best effect of the waterscape.





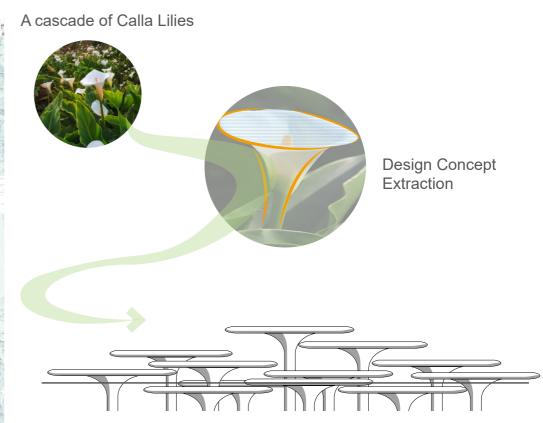
The blooming lotus waterscape is located at the southeast entrance of Lianhuashan Park (the intersection of Hongli Road and Caitian Road).

The project covers an area of about 3,200 square meters.









12 Calla Lilies overlapping, layered at random, light and elegant

STRATEGY 1

Optimize the slow traffic system to provide pedestrianfriendly urban open space and streetscape. The project also provides a restful public space at important traffic nodes and guidance for the Lianhuashan Park.

STRATEGY 2

With the Lianhuashan Mountain as the background, the existing six *Terminalia Mantaly* are preserved, and the cascading waterscape is used to recreate the new city landmark in the central area of Futian.

INSPIRATION

Lianhuashan Park is named after the seven hills scattered like lotus. As the gateway of the park, the waterscape design draws inspiration and design language from calla lilies to create 12 staggered and elegant calla lilies.

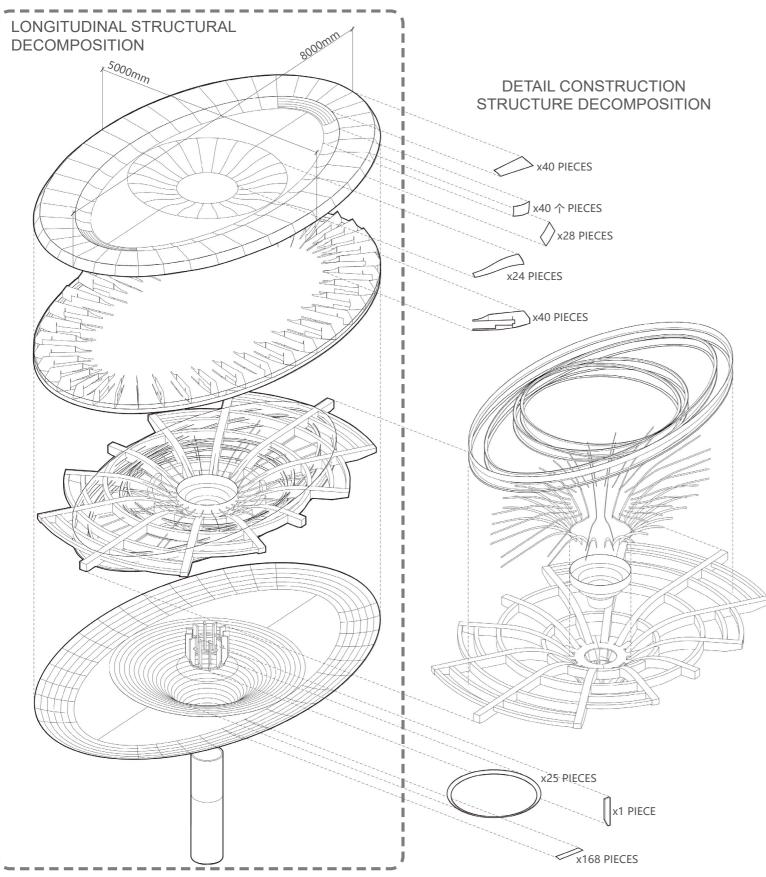
'Blooming Calla Lilies' is the name given by the mayor of Shenzhen, the meaning of name can be explained as a wish of opening a new landmark and entrance to Lianhuashan Park in Chinese.





The Blooming Calla Lily Waterscape has been completed in may 2021. The design seek the best solutions to provide citizens with a brand-new urban landmark waterscape from optimizing slow-moving streamlines, sculptural shapes, heights, water drop effects, materials, etc.

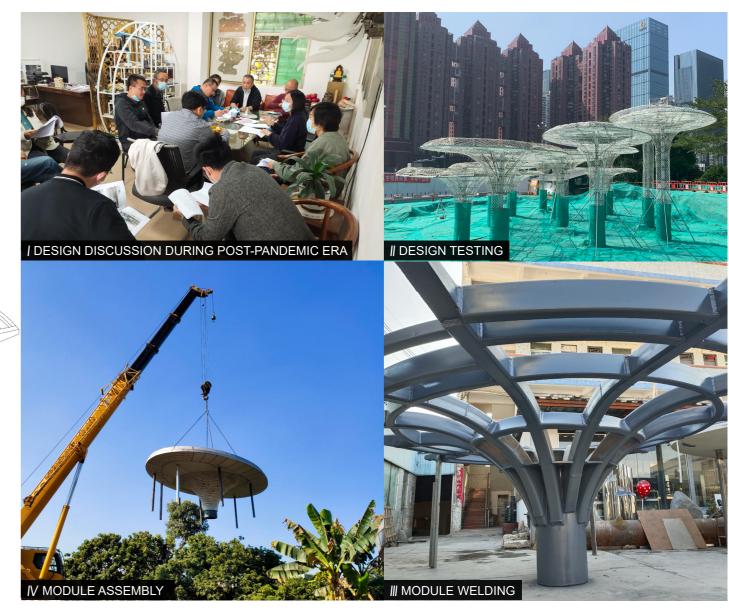




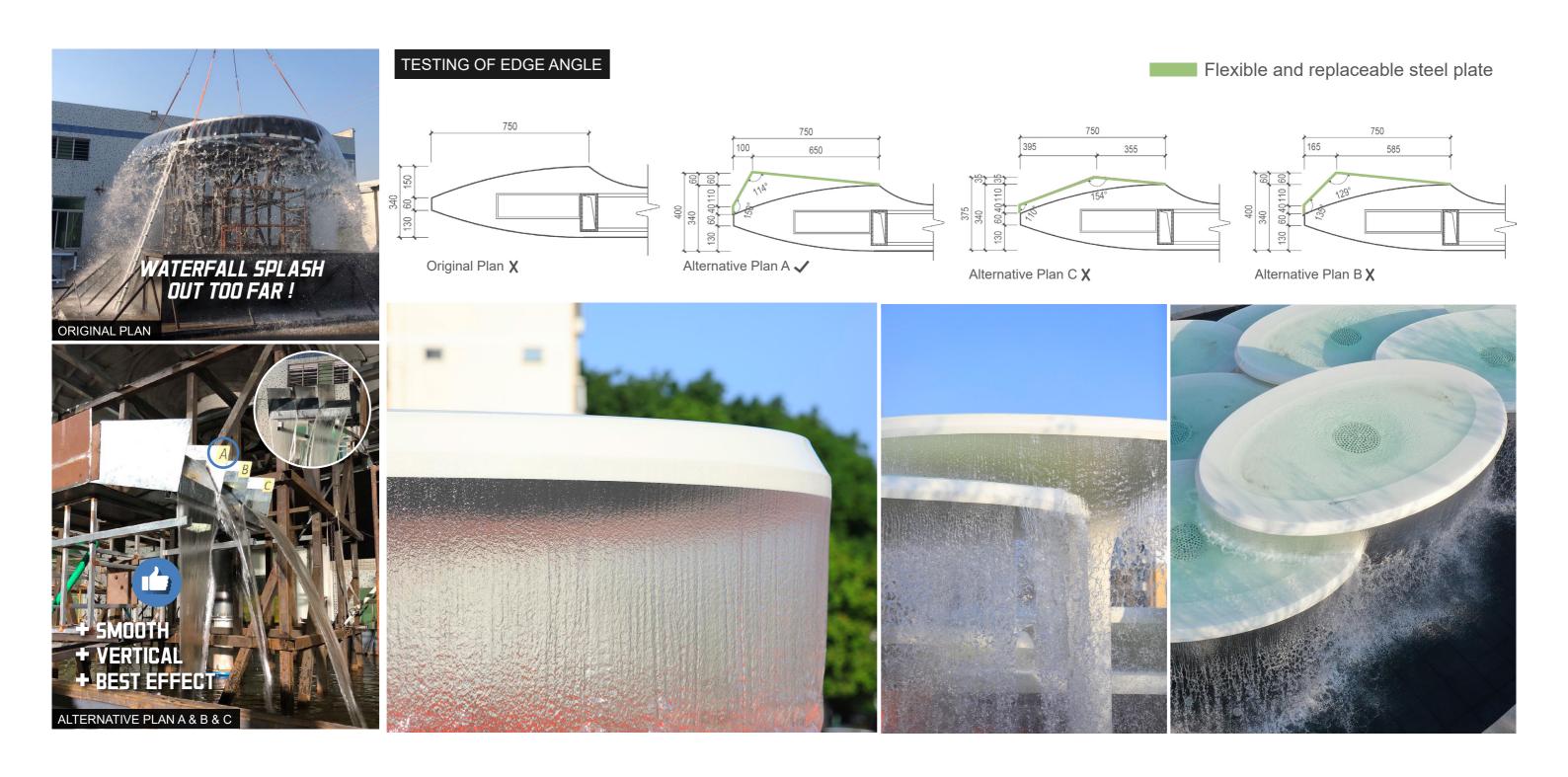
CALLA LILY MODULE CONSTRUCTION STRUCTURE

The waterscape structure shaped like Calla Lily adopts a modular design, each calla lily consists of 30,000 components, which are custom processed and installed in the factory.

The height of 12 calla lilies can be adjusted on the basis of the fixed transverse size, so as to achieve the waterscape effect of falling layer upon layer.



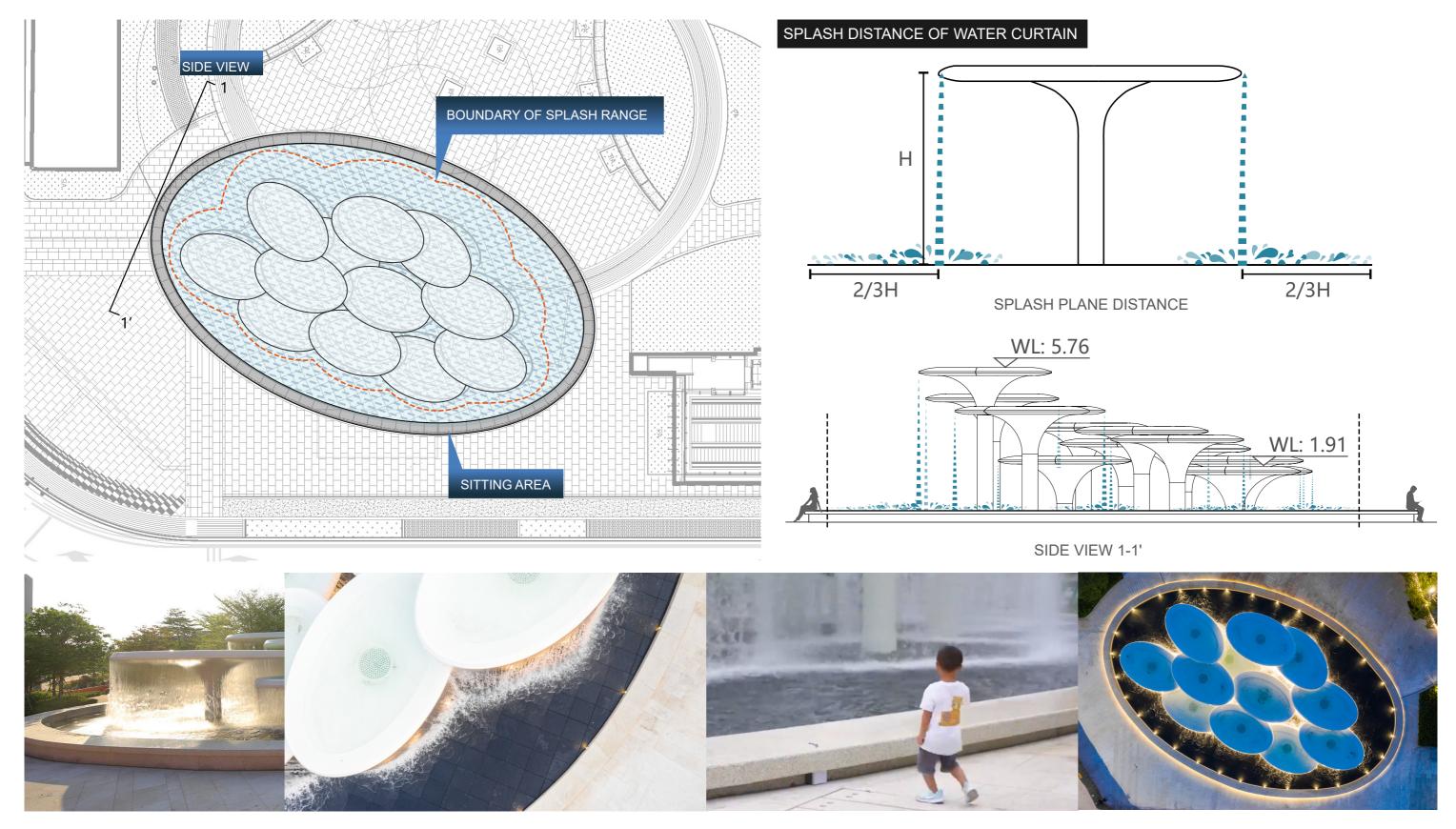




In order to seek the best drop effect, we make several plans to test the drop effect of the calla lily drop edge. The effect of the original water testing scheme is not ideal. After comparing alternative plan A, B, C on site, alternative plan A is finally determined.

The drop weir slope of the scheme is 30 degrees, which can form a complete 1.5-meters water curtain.



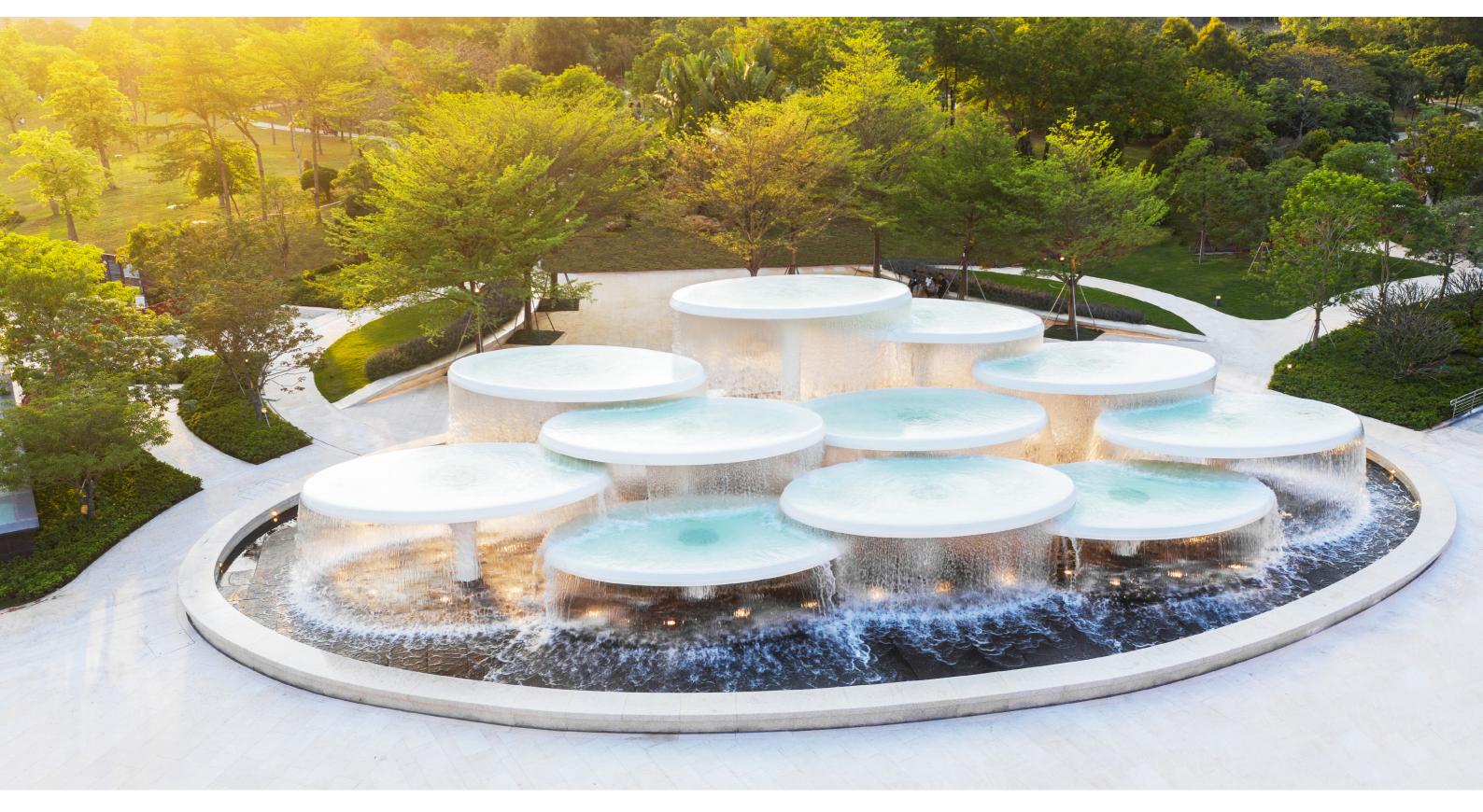


Considering the users' experience,

the design should avoid the splash of water curtain wetting the outer sitting area.

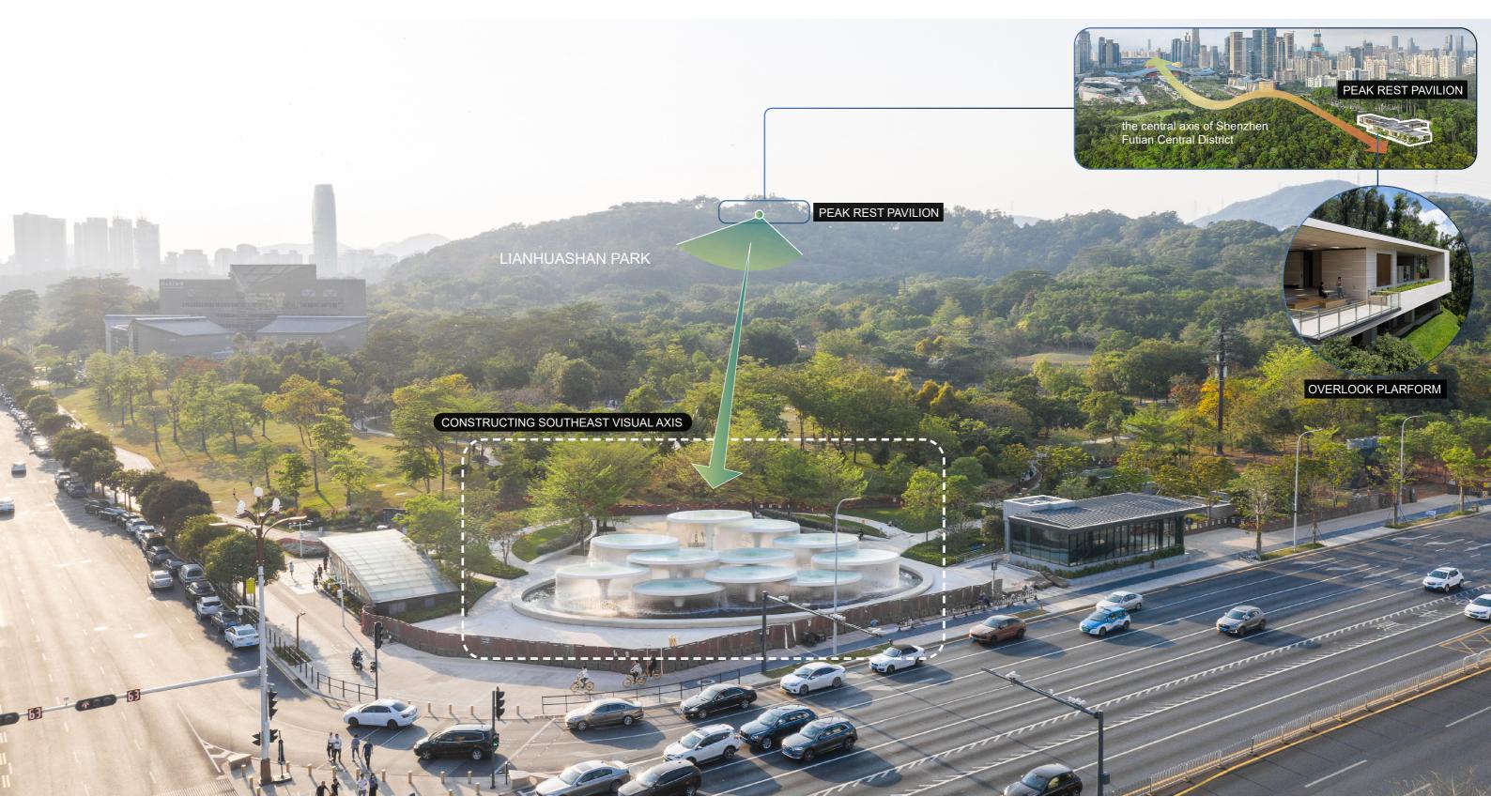
Based on the calculation that the splash plane distance is two-thirds of the height of the waterfall, the 12 waterscape sculpture were carefully placed.





Using pure white landscape materials and graceful design language, 12 waterscape sculpture shaped like calla lilies echo the clear water and emerald mountain background. The tree shade square behind the waterscape has become the most popular and comfortable resting place.





The feature waterscape after completion has shaped the new entrance landscape of the southeast entrance of Lianhuashan Park, providing a new facade for one of the the city's important traffic nodes.

At the same time, the waterscape and the peak rest pavilion create a southeast visual axis of Lianhuashan Mountain.





The carefully-adjusted landscape lighting system ensures the harmonious and beautiful lighting effect of the waterscape. The lighting design from bottom to top further highlights the fairshaped appearance of the waterscape and forms golden water curtain, injecting new vitality into the park entrance and the street-facing space of the city main road at night.













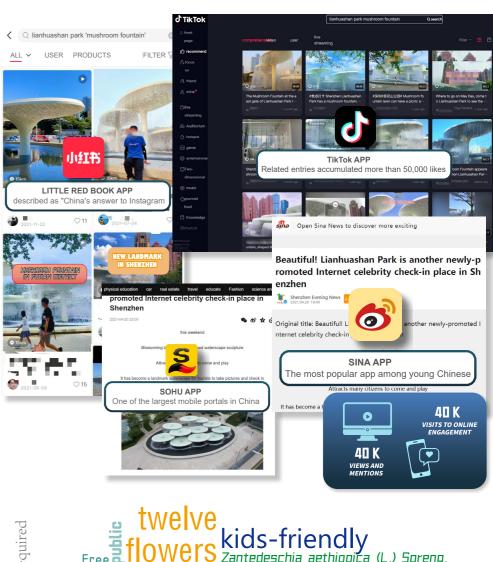
Waterscape cascades are turned on from 7:30 AM to 9:30 AM and 5:30 PM to 7:30 PM.

As the night falls, citizens walking after dinner and the young people off work gather here to enjoy their leisure time.

This public place between the water curtain and the shade of the trees becomes a welcoming and dynamic social place in the city at night.









Since the completion of the project in 2021,

the design team has deeply felt the public's recognition and resonance with vistors by collecting feedback on project from the various social media.

Despite its inspiration from calla lilies, citizens have named the waterscape as 'Mushroom Fountain'.

It has none the less activated the urban space and created an iconic new landmark.