LIJNBAANPARK

The roofs of the Lijnbaan are transformed into a sizable park in order to bring the city into balance.

The Lijnbaan Park brings the 'living room feeling' and thus the quality of stay back to the Lijnbaan. In addition, the park introduces evening programs, programs for children and space for events to create a lively city center throughout the whole day. Residential amenities will serve the 50.000 new homes that will be added to the center of Rotterdam. This is achieved by placing terraces, footpaths and pavilions aimed at recreational functions in a park-like landscape on the roofs of the Lijnbaan.

The design of the Lijnbaan Park responds to the principles for the design of the existing Lijnbaan. The concept of 'the city valley' is enhanced by adding alternating volumes and greenery. The grid of the Lijnbaan forms the basis for the entire design of the Lijnbaanpark. Repetition of the grid creates continuity in the design and cohesion with the existing buildings.

By making connections with the ground level at important junctions, the city functions, such as shopping, culture and meeting places, will form a network. As a result, the center of Rotterdam can be transformed into an experience center in which all functions are connected. Visitors will therefore spend more time here and thus create a lively city center both during the day and in the evening.

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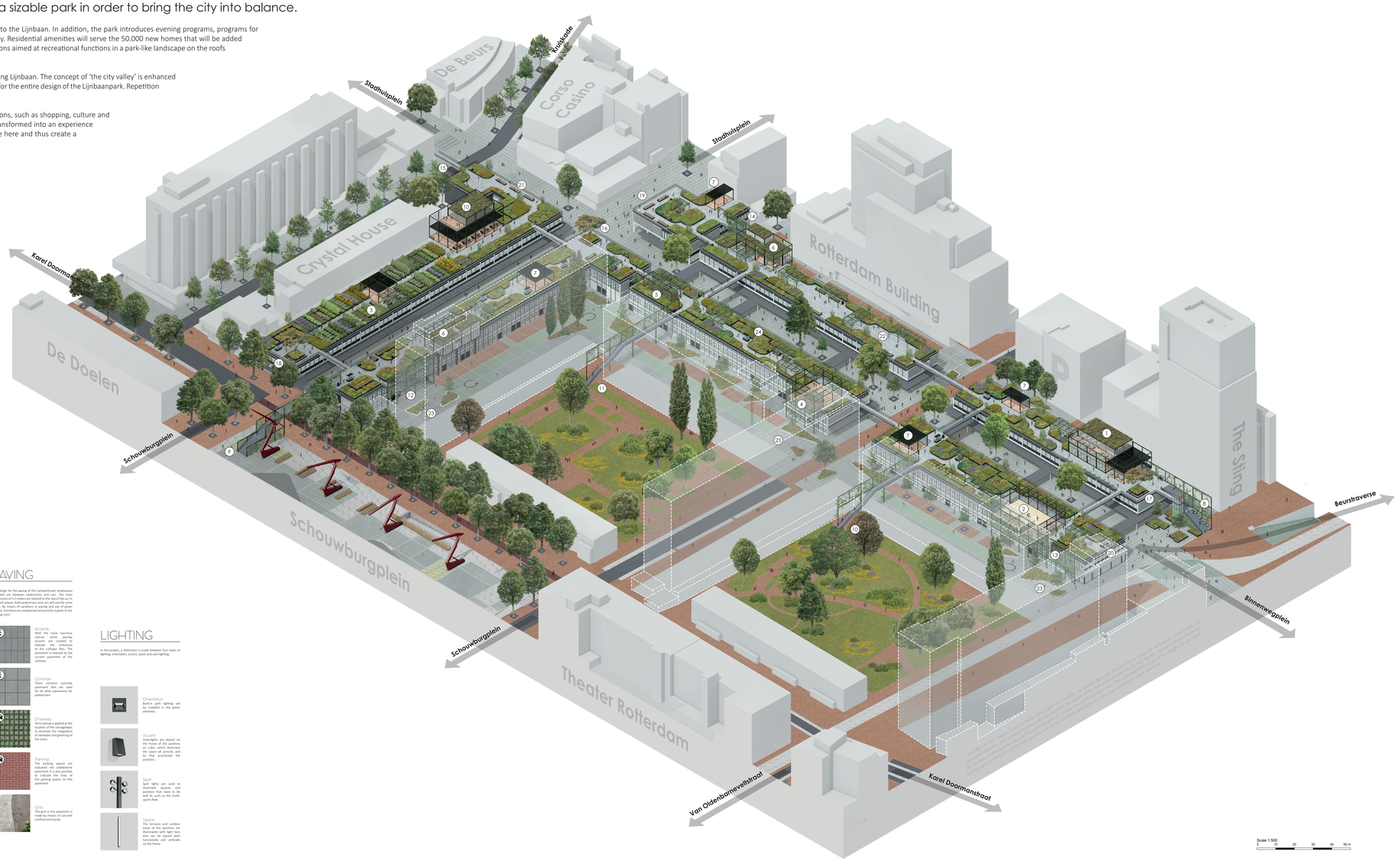


PARK ELEMENTS

Pergola
This park element marks places to stay in the Lijnbaan Park and provides the necessary shelter and cooling in the summer.

Planter A
The planter park element has a maximum size of 2.2 m wide, 2.2 m long and 0.55 m high. The depth of the planter is 0.35 m. This ensures enough in the planter and the space required under the planter for installations for the shops of the Lijnbaan.

Planter B
The planter park element has a curve and is placed on the outer corners of green areas, so that walkers cannot run into sharp corners.

Planter C
This street object will be placed in the Lijnbaanhoven to make it greener, to slow down cars and to demarcate areas for pedestrians.

Showcase
Showcase for interchangeable art brings culture and space to exhibit to the Lijnbaan.

Picnic table
This seating element provides space to meet at with friends, family or colleagues. These elements are often located near the shops and offer a more meditative offer some privacy and tranquility.

Bench A
This seating element offers space to rest between shopping. These elements are often located on the paths or offer a special view.

Bench B
Benches can be combined with green elements for maximum integration.

VEGETATION

The vegetation must consist of plants that contribute to the biodiversity of the city. The vegetation provides shelter for insects, birds and small mammals. In addition, the plants provide shade and cooling for the park level and the surrounding area.

Frames
The frames are covered with various climbing plants. The varieties are chosen depending on the location, shade or sun. For example, the Wisteria is suitable for sunny places, and the Hop for shady areas. Flowers vegetation is preferred to provide the gray city with color. Climbing plants such as Clematis or Jasminoides are very suitable for this.

Planters
Much of the vegetation consists of herbaceous vegetation. Such vegetation has the advantage that it places little stress on the roof structure. In addition, it contributes to the high level of biodiversity. In some places, deeper planters can be used in which plants can be placed that need to root more deeply, for example the butterfly bush.

PAVING

The design for the paving of the Lijnbaanhoven emphasizes the grid of the Lijnbaan. The paving tiles have the dimensions of 0.1 meters can be tailored to the size of the up. In different places, both pedestrians and cars will use the same space. By means of variations in paving and use of green objects, functions are emphasized and priority is given to the serving users.

Accents
With the more luxurious paving tiles, visual accents are created to indicate the entrances of the Lijnbaan Park. The pavement is inspired by the original pavement of the Lijnbaan.

Common
These common concrete pavement tiles are used for all other pavements for pedestrians.

Driveway
Asphalt is applied at the location of this carriageway to promote the integration of rainwater and greening of the areas.

Parking
The parking spaces are indicated not cobblestone pavement. It is also possible to place a tree in one of the parking spaces on this pavement.

Grid
The grid in the pavement is made by means of concrete confinement bands.

LIGHTING

In the project, a distinction is made between four types of lighting: orientation, accent, space and spot lighting.

Orientation
Bollard path lighting will be installed in the green elements.

Accent
Downlights are placed on the pavilions, mounted on 2.8m, which illuminate the space all around, and by that accentuate the pavilions.

Spot
Spot lights are used to illuminate squares and pavilions that need to be lit up, such as the multi-sport field.

Space
The terraces and outdoor areas of the pavilions are illuminated with light bars that can be placed both horizontally and vertically on the frame.

LEGEND

PAVILIONS

1. **Burger King**
The existing Burger King has made way for the grand staircase and will therefore be given a new place in the Lijnbaan Park under the new concept of a 100% vegetarian Burger King.

2. **Multi-sportfield**
Above the 10 Sports is a multi-sports court where children and adults can play multiple sports, including basketball, and test the newly purchased shoes.

3. **Neighbourhood garden**
Residents of the Lijnbaan flats have a view of the neighborhood garden and have space here to come together, garden and exercise.

4. **Playground**
Children can play throughout the park, but also have a specific place for them in the playground pavilion. The playground pavilion is designed for free play, following the example of the Gallery of Common Units by Rozana Montiel.

5. **Toilet**
The toilet pavilion is located in the middle of the Lijnbaan Park. A public toilet is an important factor for many people to be able to leave the house and is therefore essential for this park that is aimed to accommodate as many different people as possible. The central location in the park also makes this a suitable place as a base for the park manager.

6. **Catering Pavilion A-B**
These medium-sized pavilions provide space for small catering people. Both pavilions have a covered outdoor space where they can get an outdoor terrace. The outdoor space is indicated by the pergolas that also provide shade to the terraces.

7. **Pavilion C-F**
In these small pavilions, stalls or small bars can be placed in the open air. The aim is to provide a flexible space for different users in each season.

CONNECTIONS

8. **Van Oldenbarneveltttrap**
At the location of the Burger King, a large staircase with seating steps will be placed in the Lijnbaan Park greenery. The stairs will be equipped with seats that have a view over the lively intersection between Lijnbaan, Beurstraverse and Binnenwegplein.

9. **Schouwburgtrap**
At the corner of Schouwburgplein will be a large staircase with lift and a path that bridges the busy cycle path. A connection will be made under the stairs with the bicycle parking under Schouwburgplein.

10. **Jan Evertsentrap**
The Jan Evertsentrap connects the Lijnbaan Park with the Jan Evertsenplaats and bridges the Van Ghentstraat, creating a green connection between the two parks independent of car traffic.

11. **Joost Banckertstrap**
The Joost Banckertstrap connects the Lijnbaan Park with the Joost Banckertsplaats and bridges the Van Ghentstraat, creating a green connection between the two parks independent of car traffic.

12. **Zoutmantrap**
The Zoutmantrap is located in the Zoutmanstraat opposite the entrance of the Lijnbaanflat, giving residents of the Building a stronger connection with the Lijnbaanpark.

13. **Van Ghenttrap**
The Van Ghenttrap is located at the end of a route through the Lijnbaanpark and in the Van Ghentstraat opposite the entrance of the Lijnbaanflat, giving residents of the building a stronger connection with the Lijnbaanpark.

14. **St. Luciatrap**
The St. Luciatrap is located at the intersection between the St. Luciastraat and the Hennekijnstraat and is the closest staircase from the Stadhuisplein. The stairs have been given a place in this area to connect the terraces in the St. Luciastraat with the Lijnbaan Park and not to disturb the space on the shopping promenade. Due to its central location, this connection also has an elevator.

15. **Kruiskadebrug**
The Kruiskadebrug connects the Lijnbaan Park with the Luchtsingel. If this connection is made, a 3.5 km route will be created through the city that is completely separated from car traffic.

PLACES

16. **Stadhuisbalkon**
This balcony is located at the intersection between Lijnbaan and Korte Lijnbaan and offers a view over the entire shopping promenade and Stadhuisplein. This balcony is equipped with a special green element and seats.

17. **Van Oldenbarneveltbalkon**
At the beginning or end of the route through the Lijnbaan Park, this balcony offers a view over the lively intersection between the Binnenwegplein, the Beurstraverse, the Van Oldenbarneveltplaats and the Lijnbaan. This balcony is equipped with a special green element and seats.

18. **Schouwburgbalkon**
The Schouwburgbalkon offers a view over the Schouwburgplein and De Doelen. It is also possible to see the Kruiskade. This balcony is equipped with a special green element and seats.

19. **St. Luciabalkon**
Like the Stadhuisbalkon, the St. Luciabalkon offers a view over the intersection between the Lijnbaan and Korte Lijnbaan and the City Hall Square. This balcony is equipped with plenty of seating and a water feature.

20. **Binnenwegbalkon**
Like the Van Oldenbarneveltbalkon, the Binnenwegbalkon offers a view over the lively intersection between the Binnenwegplein, the Beurstraverse, the Van Oldenbarneveltplaats and the Lijnbaan. The balcony is relatively small and therefore subordinate to the Van Oldenbarneveltbalkon.

21. **Kruiskadebalkon**
The Kruiskadebalkon is located in the transition zone of the connection with Luchtsingel and the Lijnbaan Park. The balcony offers a view over the terraces at the Beurs and at the end of the Lijnbaan.

22. **Event Plateau**
This part of the Lijnbaan Park has a special status, because it can be completely closed off during events by closing the two bridges between the other parts. When closed, the other route through the park will remain open. The event platform has its own connection to the ground level in St. Luciastraat.

23. **Entrances Lijnbaanflats**
The quality will be improved at the entrance to the Lijnbaan flats by installing new surfacing and green elements. The space for the car makes way for pedestrians and cyclists, making these places a lot more pleasant. There is sufficient space between the green elements for the car to turn around.

24. **Discovery Paths**
Short discovery paths have been constructed throughout the park where one can walk among the vegetation. The paths are also used for the maintenance of the greenery.

Scale 1:500
0 10 20 30 40 50 m

Paul Bernards

LAYERS

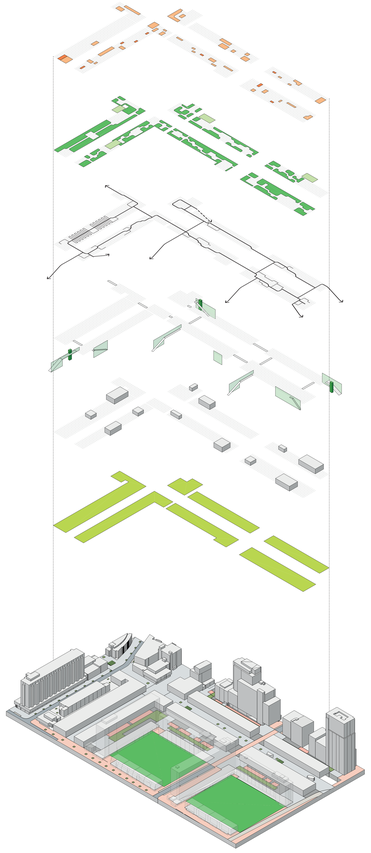
The Lijnbaan Park starts at the roofs of the two storey buildings of the Lijnbaan. A new green layer will be placed on top of the roofs, on which pavilions, greenery and park elements will be placed.

Pavilions
Pavilions have each have unique proportions and functions aimed at recreation. The placement and varying heights of the pavilions respond to the heights of buildings in the area, especially to the Lijnbaan flats.

Connections
The park is connected to the ground level in various places by means of stairs and elevators. At the connections to ground level, the pavilions are placed in strategic places, such as at the entrances of the Lijnbaan flats and in the parks. Schoudergolven and Beurtvoorrie and serve the general public. The sub-stairs are placed at strategic places, such as at the entrances of the Lijnbaan flats and in the parks. As a result, residents of the flat are involved in the park and connections are created between the green zones in the city.

Routing
Routes will be created between the greenery that will connect the pavilions and connections with the ground level. Here too, a distinction is made between main routes and sub-routes through the park. Moreover, there are numerous discovery trails in the park that allow visitors to get closer to the vegetation and also serve for maintenance of the park.

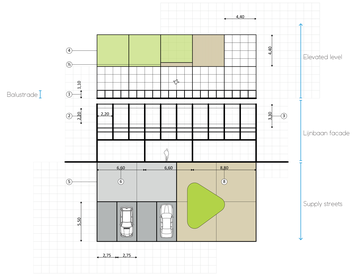
Places
In the design, a great diversity of places has been created between the greenery. The places offer a view of the city and to the ground level through the various balconies in the plan. Additionally, there are picnic areas and benches with a greater or lesser degree of privacy versus the public and sun versus shade.

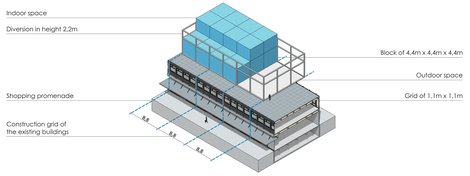


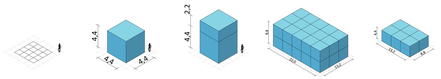
GRID & SYSTEM

A system has been drawn for this new architecture within which the pavilions, park elements and area layout can be designed. This system promotes cohesion within the plan and connection with the existing Lijnbaan.

The grid of the system is derived from the existing grid of the Lijnbaan of 1,1m. The main dimensions in new buildings are 4.4 meters, which is a multiple of the existing grid and thus fits well with the existing structure. The main dimensions of the pavilions are therefore constructed from blocks of 4.4m x 4.4m x 4.4m. In the supply streets, the grid is geared to the car and therefore has a standard size of 5.5 m.







Base grid
Grid of 1,1m x 1,1m
Allign with the Lijnbaan

Main Dimensions
4,4m x 4,4m 4,4m
Allign with the Lijnbaan

Diversion in height
2,2m

Big Pavilion
30 blocks, with a maximum of 26,4m x 17,6m x 8,8m

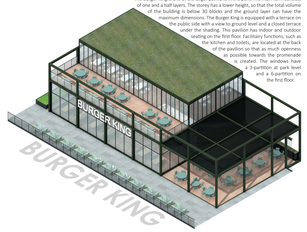
Small Pavilion
6 blocks, with a maximum of 13,2m x 8,8m x 4,4m

Big Pavilion
- The total volume can be a maximum of 30 block
- The maximum dimensions are 26,4m x 13,2m x 8,8m
- Maximum of ½ of the area can be used as indoor space
- The outdoor space must be connected to the promenade side
- The indoor space on the first floor can only be built above the indoor space of the ground floor
- The outdoor space must be connected to the promenade side

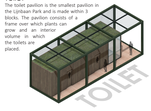
Small Pavilion
- The total volume can be a maximum of 6 blocks
- The maximum dimensions are 13,2m x 8,8m x 4,4m
- Maximum of ¾ of the area can be used as indoor space
- The outdoor space must be located directly on the promenade side

Windows
- A division is made at ¾ (2.8m) of the height of the grid
- On the top level it is possible to deviate from the grid up to a height of 3.15m
- Windows always fill the entire grid (4.2m x 4.2m or 4.2 x 3.15m)
- At park level, a distribution of 2, 3 or 4 is possible
- Above 2.8 m, a distribution of 6 or 8 is also possible
- Preferably, the division in the frames on each level is smaller

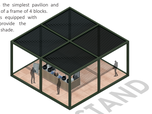
Burger King
The Burger King is one of the larger pavilions in the park. The main form consists of one and a half layers. The stores has a lower height, so that the total volume of the building is below 30 blocks and the ground layer can have the maximum dimensions. The Burger King is equipped with a terrace on the public side with a view to ground level and a closed terrace under the shading. This pavilion has indoor and outdoor seating on the first floor. Facilitary functions, such as the kitchen and toilets, are located at the back of the pavilion. The entrance is as accessible towards the promenade as possible created. The windows have a 3-partition at park level and a 6-partition on the first floor.



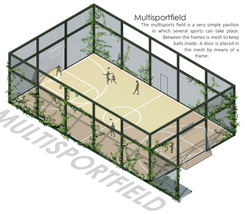
Toilet
The toilet pavilion is the smallest pavilion in the Lijnbaan Park and is made within 1 block. The pavilion consists of a frame over which plants can grow and an interior volume in which the toilets are placed.



Stand
The stand is the simplest pavilion and consists only of a frame of 4 blocks. The frame is equipped with slats that provide the pavilion with shade.

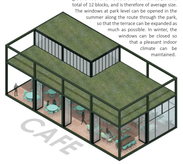


Multisportfield
The multisports field is a very simple pavilion in which several sports can take place. Between the frames is mesh to keep balls inside. A door is placed in the mesh by means of a frame.

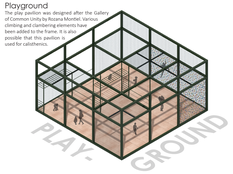


Community Center
Due to the location of the community center, far from other buildings, this pavilion can become the highest in the park. This pavilion consists of exactly 30 blocks and has a double height in the frame. The outdoor area is equipped with several picnic tables where residents of the city can gather, for example, for neighborhood barbecues. At garden level, the windows have a 3-partition with a 4-partition at the top. The windows on the storey have an 8 partition.

Cafe
The cafe pavilion consists of 8 blocks on the ground floor and 6 blocks on the first floor, with a total of 12 blocks, and is therefore of average size. The windows at park level can be opened in the summer along the route through the park, so that the terrace can be expanded as much as possible. In winter, the windows can be closed so that a pleasant indoor climate can be maintained.



Playground
The play pavilion was designed after the Gallery of Common Ones by Rozanna Montiel. Various climbing and clambering elements have been added to the frame. It is also possible that this pavilion is used for catalthenics.



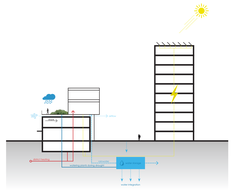
INSTALLATIONS

Lijnbaan
Installations of the existing buildings are removed from the rear facades and placed on the roof. The installations can be placed between the existing roof and the park level. On top of these installations are removable planters so that they are hidden and maintenance can be performed. There is sufficient airflow for the installations between the existing roof and the park level.

Lijnbaanflats
The advice is to provide the flat roofs of the Lijnbaan flats and the three-storey buildings near the two parks with solar panels. The surface of the roofs of Lijnbaanflats is 5.700m2 and of the three-storey buildings is 2.500m2. The total area that can be used for solar panels is therefore more than 8.000m2. The residents of the flats, the shopkeepers and the new park can all benefit from the generated energy.

Pavilions
Heat is supplied via district heating. Warm air is blown in through the floors and extracted through the plenum.

Water
The park level provides additional water storage through added greenery. Excess water can be drained via the existing roof to storage under the renovated Lijnbaanhouses. During drought, the water can be used to water the plants at park level.



CONSTRUCTION

The construction of the Lijnbaan Park consists of steel and must be as light as possible. The grid in the facades of the pavilions is not constructive. The real construction has been moved to the rear so that the grid can be given a slim design, allowing as much light and air as possible to enter the pavilions.

The steel construction is placed on top of the existing construction of the Lijnbaan like a table construction. The maximum span is therefore 8.8 meters. First, new steel beams will be placed on the load-bearing walls of the Lijnbaan, so that the forces can be distributed evenly. Between these beams, other steel beams will be placed on which the steel composite floor will be.

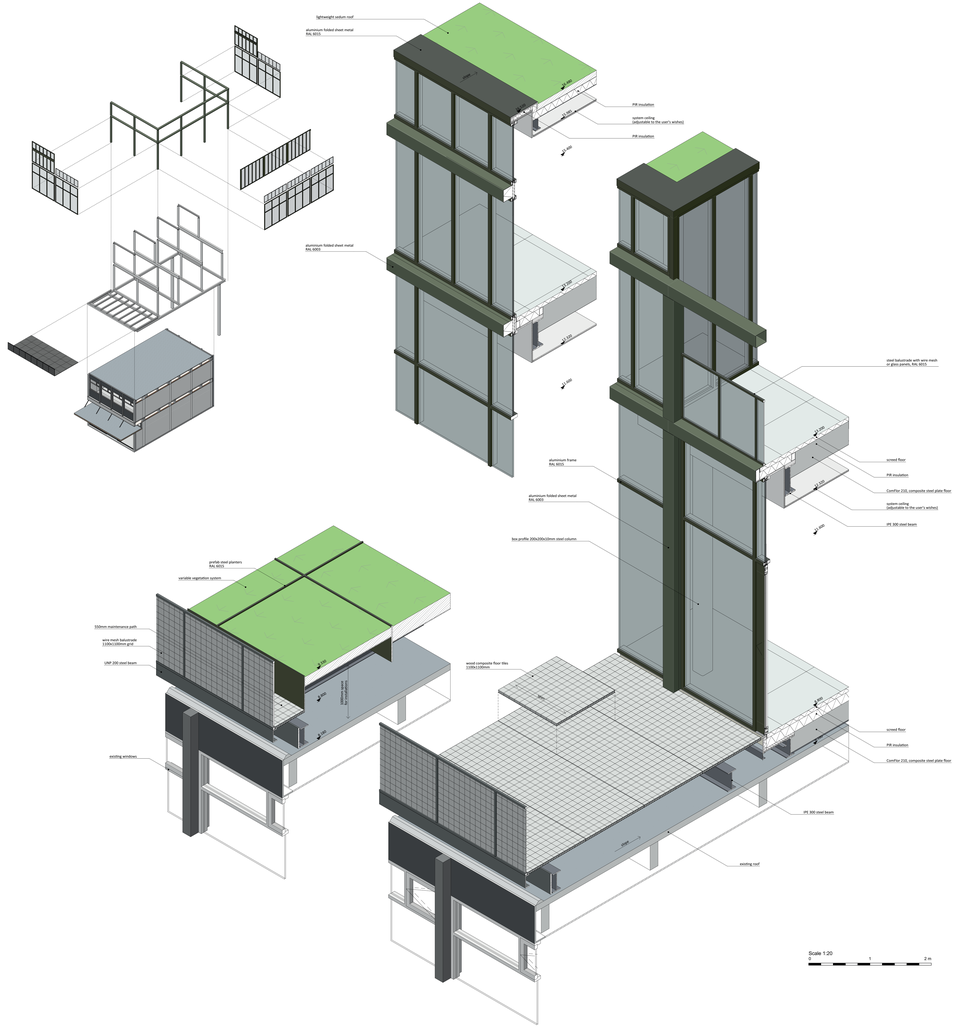
To further relieve the existing construction of the Lijnbaan, the larger pavilions will be placed at the rear so that they can have columns in the expedition streets. Facilitary functions, such as kitchens and toilets, are placed at the back of these pavilions, transferring the greater weight to the columns in the expedition streets.

DETAILS

Besides the construction, the materials in the project must be as light as possible. The windows of the pavilions consist of aluminum curtain walls and the frame of aluminum folded sheet metal. The park floor consists of wood composite tiles of 1,1m x 1,1m. Due to the light weight, the tiles are easy to remove and replace after heavy wear. Furthermore, it is easy to carry out maintenance on the roof of the Lijnbaan.

The balustrade consists of steel frames with wire mesh stretched in between. A space of 550mm has been kept between the planters and the balustrade for maintenance.

The finish of the interior of the pavilions depends on the use and users. Here too, preference is given to light materials with warm tones in order to accentuate the places to stay.



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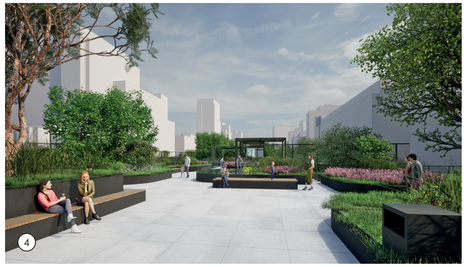

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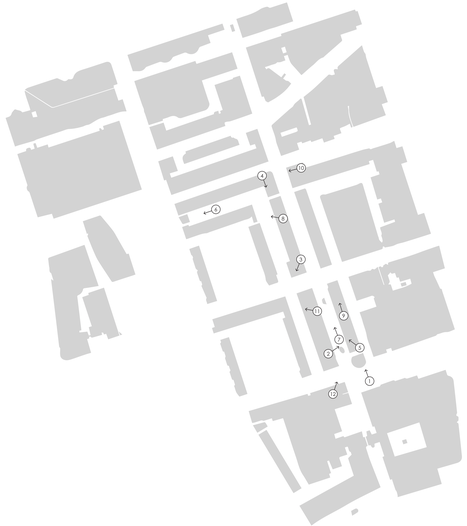
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