

# PLAYABLE GROUNDS

PLAYGROUND AS INFRASTRUCTURE FOR A CITY

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PLAYABLE GROUNDS - "playground" as infrastructure for a city  
Master of Science Thesis

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MASTER OF SCIENCE THESIS



## ABSTRACT

Tampere University of Technology  
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PLAYABLE GROUNDS-“playground” as infrastructure for a city  
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## PLAYABLE GROUNDS

“playground” as infrastructure for a city

**PLAYABLE GROUNDS** is proposed to enhance the walkability in a city by introduction of “playgrounds for public”- an integration of playgrounds and existing city fabrics without any fundamental urban structures changes. The “playgrounds” are injected in the high density city at different levels as an essential elements to promote playability and walkability, hence bringing health and benefits to citizens by strengthening social sustainability of their city.

In recently years, societies are paying increasing attention to “walkability” of a city. In Korea, the government implements policies to improve the walkability in Seoul in 2014. In Hong Kong, an organization conducts a study of walkability in Hong Kong, which shows that the walkability in Hong Kong still has rooms for improvement. Unlike many of the pedestrian friendly cities in Europe, where cycling paths and pedestrian roads are carefully planned, Hong Kong and other similar metropolitan cities are far below the standard of being “walkable”.

Central district in Hong Kong has been selected as the site of this thesis. Being a central business district (CBD) in Hong Kong, this site is full of challenges and potentials. An comprehensive walkability study will be conducted to address the major issues regarding pedestrian unfriendly design, corresponding design intervention will then be introduced to the CDB in order to enhance the pedestrian experience. Existing pedestrian network, footbridge, sidewalk, pocket park, elevated escalator and left-over space are the vacancy sites for injection of energy to the city.

This thesis aims to explore the possibilities of how architectural interventions could actually enhance pedestrian experience by introducing “playground” as an augmented infrastructure - hence the increase of the walkability in the city without intensively changing the existing city infrastructure.

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# **01 BACKGROUND & INTRODUCTION**

# 1.1 ISSUE IN HONG KONG

## DISAPPEARANCE OF STREET LIFE the missing of walking experience

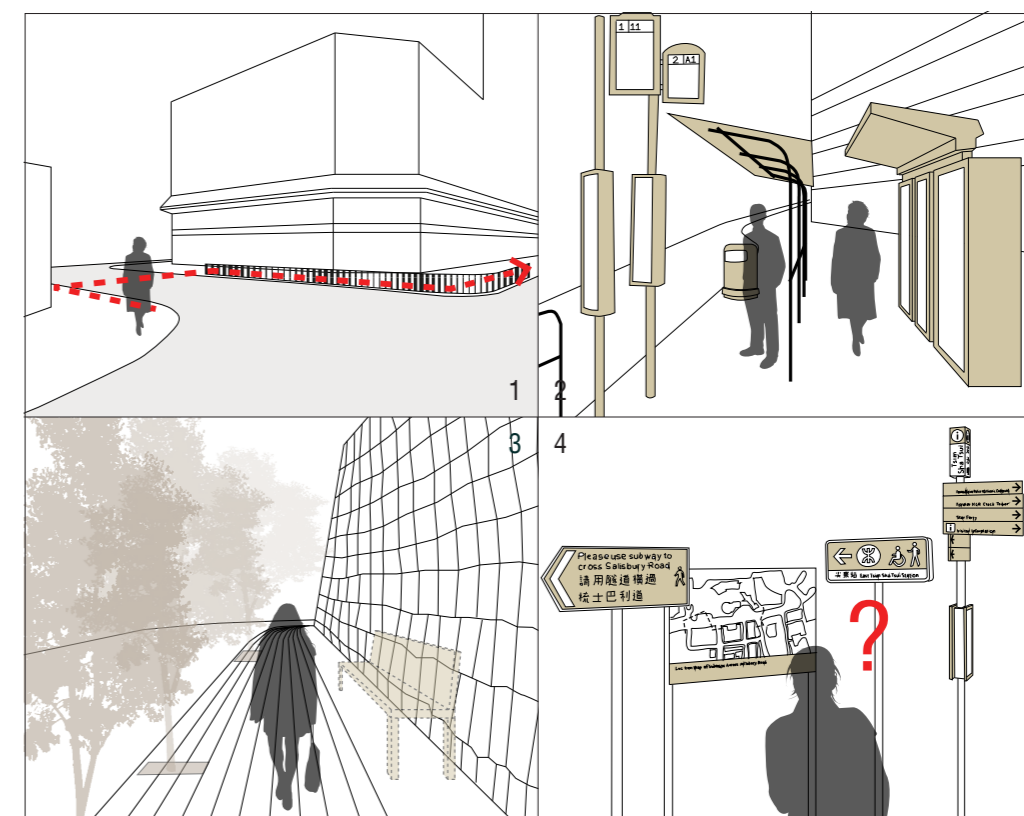
“Walking” is one of the most fundamental experience in the city. People walking on the street can have direct contact with everything on the street. The best way to understand a city is to wandering around on foot, getting in touch with people, breathing in the air along the road and enjoying the sun shine on a lawn. “Walking” is not just for travelling but one of the means of living as it allows you to access every point of the city and witness everything happens on the street.

Over years of rapid urban growth, Hong Kong is expanding vigorously through the transportation network. Hong Kong Government develop every new town by establishing highways as the major infrastructure for the district. Secondary driveway is extending from the main road and forming the city grain and land lot for building development. Pedestrian and bicycle circulation will never be the first priority in Hong Kong urban planning strategies. As a result, pedestrian were forced to be circulated through elevated walkways and subways. Vehicular movement dominating the ground area usage and the space left for pedestrian activities is extremely insufficient to maintain the social sustainability and city health. Vehicle driven urban planning not only create the noise and air pollution problem but also discouraging human interaction on the street. Mispositioned public space and under-designed pedestrian network killing any human activities on the ground and generate different social problem such as increased crime rate, disconnected human interaction and citizen health problem due to the dependence of motor vehicle.

Essential elements like wider sidewalk, seating bench at reasonable interval, leisure space for resting and anchor points for human activities are seriously lacking in Hong Kong urban area especially in Central Business District (CDB) like Central. Pedestrian are always the lowest priority to use the road. Footbridge and underground subway become the only way to across the road in some heavy traffic area. Unclear way finding strategies generate more miscommunication between citizen and the city.<sup>1</sup> Bicycle travelling is further discouraged from the government policy. No bike lane is provided in urban district and no respect from vehicle driver means that there is no way for cyclist to ride on the road. This urban form is discouraging neither type of sustainable living style by rejecting “walking” and “cycling” but only encouraging unhealthy vehicular growth.

This project aims to restore the pedestrian right in a city and to explore the opportunities of enhancing pedestrian experience by architectural intervantion.

## difficulties of walking in Hong Kong



1. detour
2. obstructions
3. unavailable seat
4. unclear directional sign

<sup>1</sup> Mingbao weekly. A cover story - HK, An unwalkable city, 2013

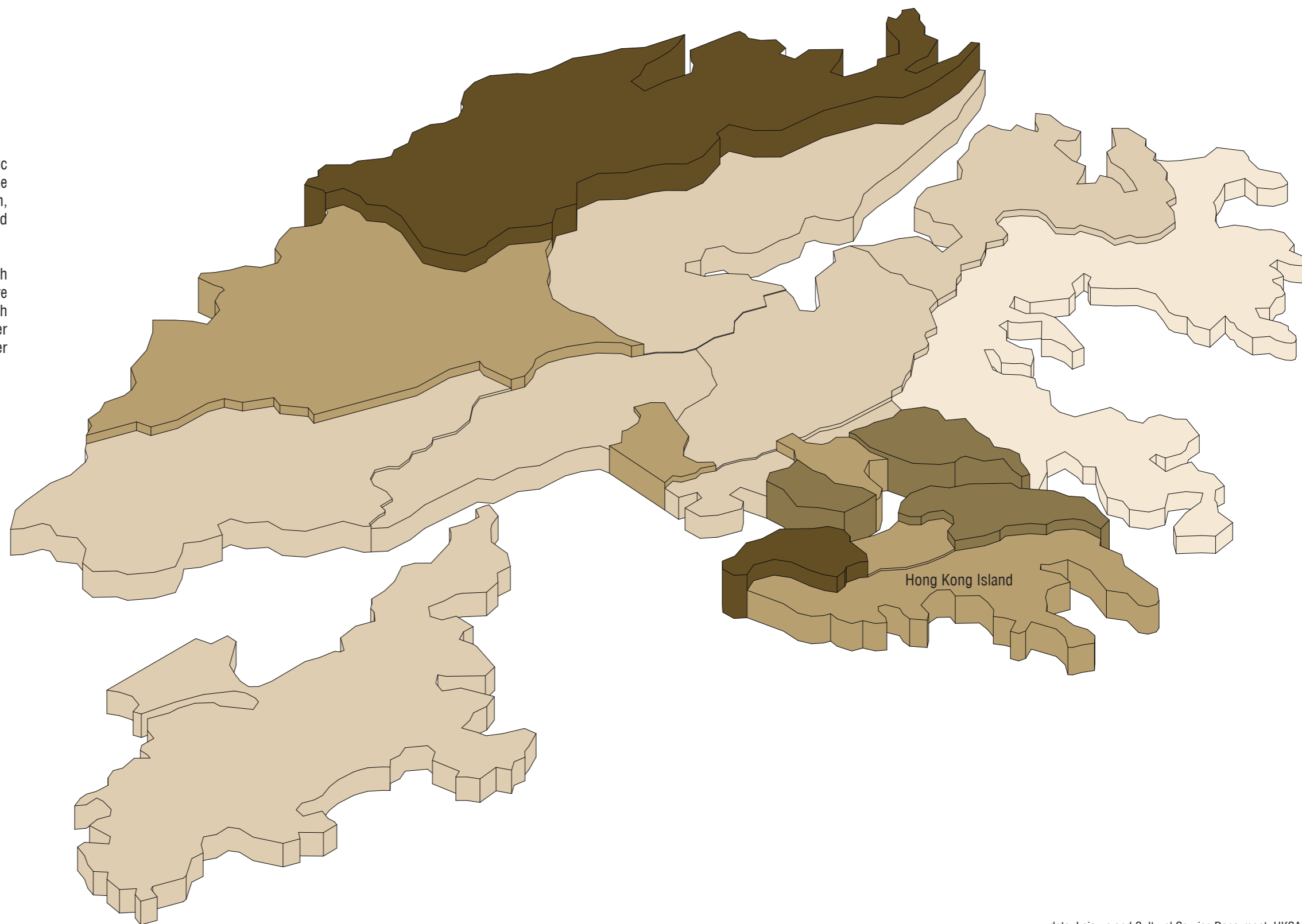
# 1.2

## STATISITIC

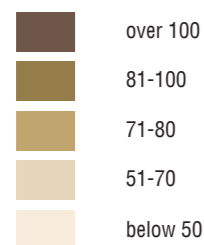
### HONG KONG STATISTICS distribution of public open space

The diagram shows the distribution of public open space in 18 districts in Hong Kong. The public open spaces include public park, garden, harbourfront promenade, children playground and sitting-out area.

The diagram illustrates that the districts which are located close to Victoria harbour have more public open space. Besides, the districts which are located in Hong Kong Island have a higher number of public open space compared to other parts of Hong Kong.



number of public open space:



### cycling paths and cycling tracks in the park

The diagram shows the location of cycling paths and cycling tracks in the park.

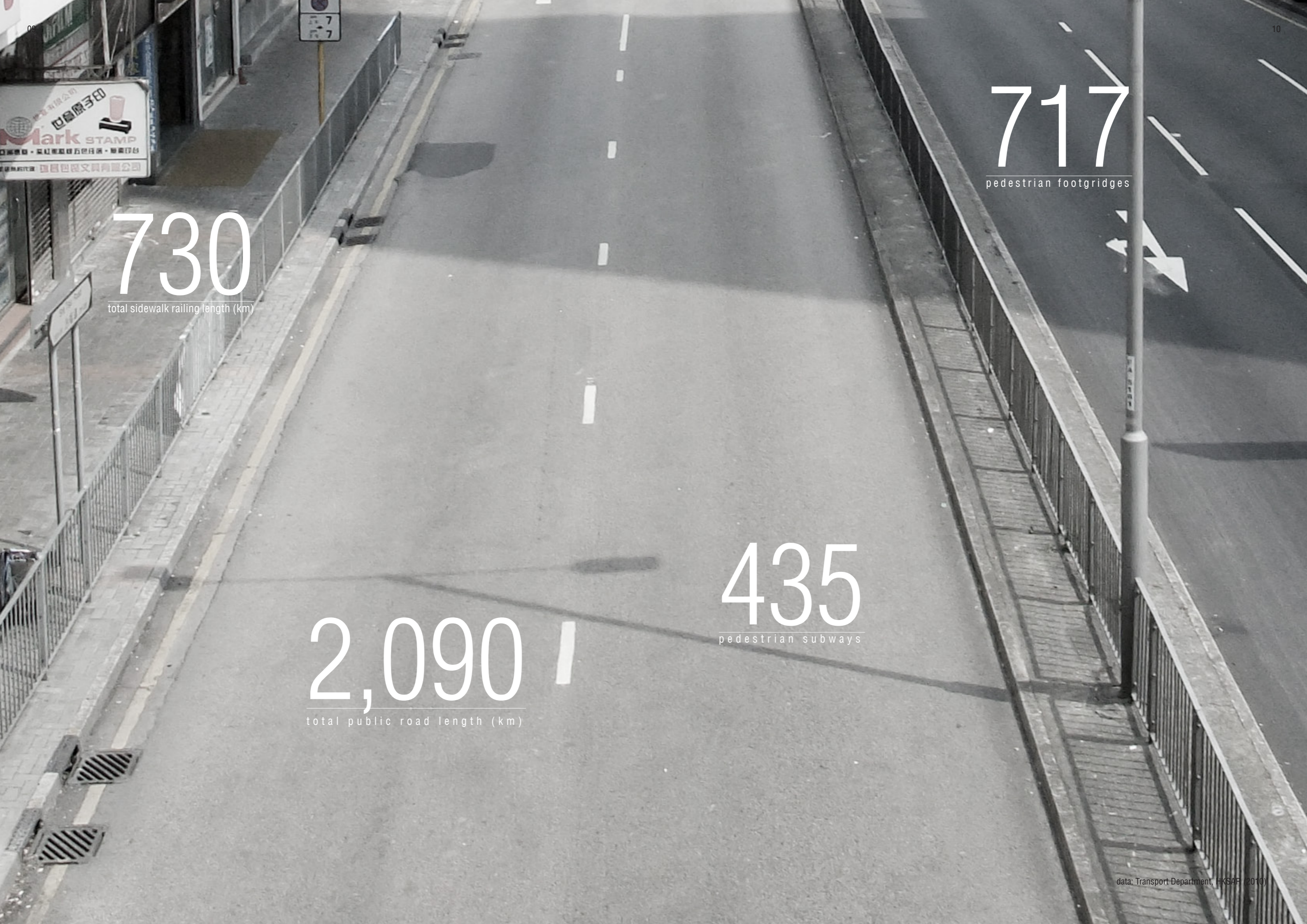
The cycling path is mainly provided in the New Territories since the cycling paths was designed in the urban planning stage when the new towns were developed. The current cycling paths includes Ma On Shan to Sha Tin, Tai Wai to Tai Po, Tai Po to Sheung Shui, and Yuen Long to Tuen Mun.

Besides, there are 16 cycling tracks are distributed in 11 districts for the children and adult. They are usually located in the parks for recreational purpose.



- cycling paths
- cycling track is provided in the park





730

total sidewalk railing length (km)

717

pedestrian footbridges

2,090

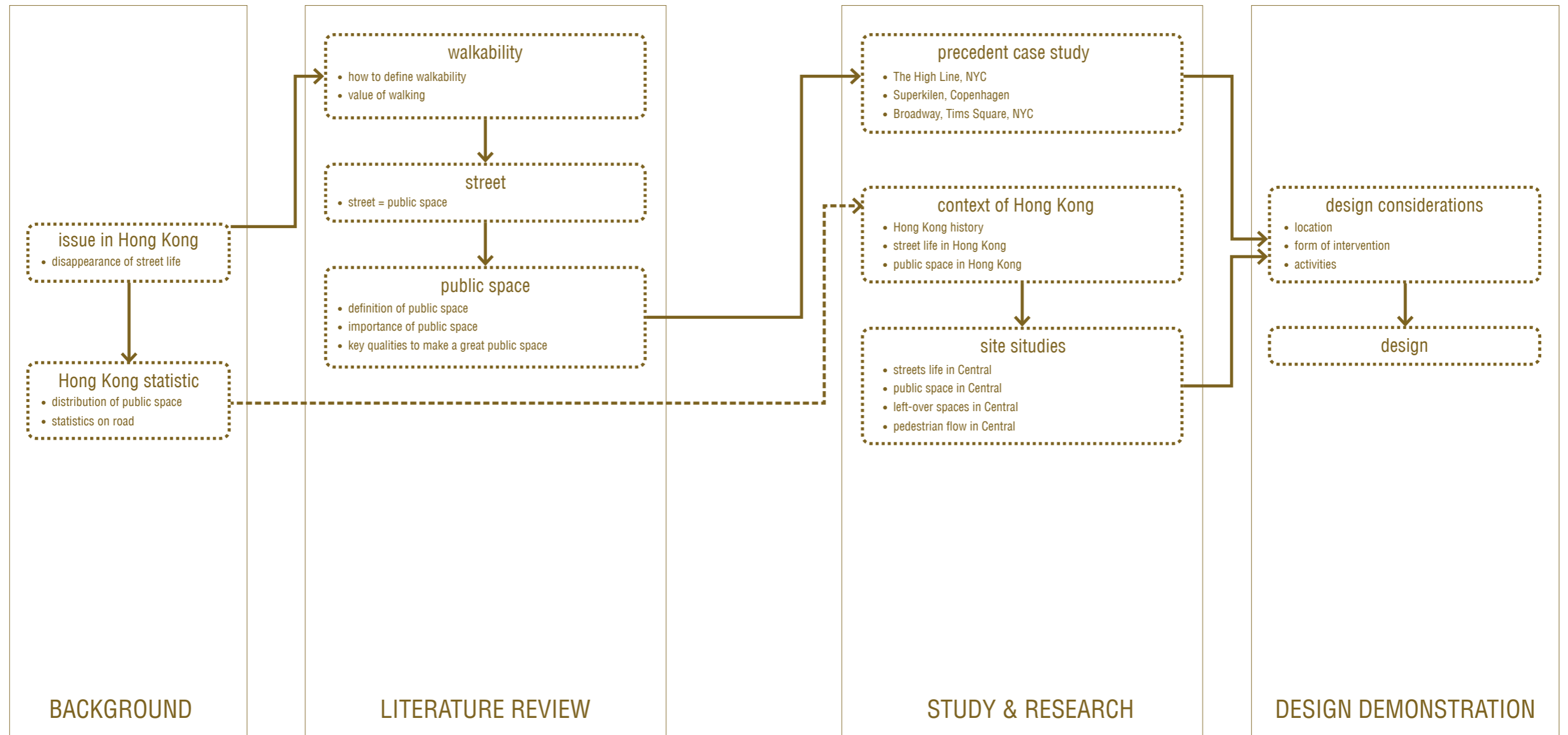
total public road length (km)

435

pedestrian subways



# 1.3 STUDY CONSTRUCTION





# **02 LITERATURE REVIEW**

# 2.1 WALKABILITY

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## DEFINING WALKABILITY

### walkable community and walkable street

“Walkability” is one of the sustainability indicators to a developed country socially and environmentally. Apart from the effective transportation system, high walkability planning play a more important role in delivering a positive impression of a city to citizens and tourists.

In recent years, “walkability” is getting more attention from publics and academic researchs.<sup>2</sup> What is “walkability”? Generally, “walkability” is measuring how friendly, efficient and enjoyable a public realm is in terms of walking experience and other street activities. “Walkability” can be measured in both qualitative and quantitative aspects. It includes the accessibility, attractiveness, connectivity, quality of footpaths or sidewalks, traffic and road conditions, land use patterns and safety.

“Walkability” can be elaborated in two different ways. The definition focuses the walking ability of citizen in the community. Dan Burden, the Executive Director of Walkable and Liveable Communities Institute provided the most in-depth definition to define the “walkability” in the article “How can I find and help build a walkable community?”. He listed 12 categorical variables to define walkable community.<sup>3</sup> The variables include the present of a intact town center with a healthy set of stores, post office and library, residential with mixed use and mixed income, public space where easily accessed by all people, universal design for the disable, speed is controlled in the main street, school is located in the walkable distance. He also mentioned that in a walkable community there are many people in different age group walking and cycling.

The second one is focus on the built environment to define the “walkability”. In other words, it is a study of how pedestrian friendly at built environment is. A guidance of “Improving walkability” provided the best principle to define the “walkability” of an area. The walkability of a place can be characterised by the “5Cs”, which is that walking networks and facilities should be Connected, Convivial, Conspicuous, Comfortable and Convenient.<sup>4</sup> The detailed explanation will be listed in the next page.

#### 1. Connected

Walking routes should be able to connect all areas including the main attractors such as the public transport, main buildings, leisure space and work area. The route should also connect at the local and district level to form a comprehensive network.

#### 2. Convivial

Walking route and the public spaces should be pleasant enough to stay and free enough to encourage social interaction between people. People can do whatever they want in the public space. The walking paths and public spaces should be safe and welcoming to any kinds of activity happen.

#### 3. Conspicuous

Walking route should be clear and legible, if necessary with the help of the sign and guideboard. Street names and property number should be comprehensively provided. The public space should be highly accessible and easy to find.

#### 4. Comfortable

Walking route should have high quality pavement surfaces, attractive architecture and landscape design, and possible far from the noise and fumes arising from proximity to motor traffic. Facilities for rest and shelter should be provided.

#### 5. Convenient

Walking route should be direct and convenience for those on foot and for those mobility disabled. Road crossing opportunities should be provided in a right position at reasonable interval.

<sup>2</sup> Steve Abley. Paper - Walkability scoping paper, 2005

<sup>3</sup> Dan Burden. An article - how can i find and help build a walkable community?, 2003

<sup>4</sup> Mayor of London. A guidance - Improving walkability, 2005



## THE VALUE OF WALKING

environment, social, economic and health

In the past 10 years, "walkability" is getting more attentions from researchers and organizations in different major cities. They advocated that the design of the road should be convenient to the pedestrians instead of the vehicles. The street should be designed to encourage walking and cycling which can benefit to the environment, social, economic and citizens' health, thus enhancing the sustainability of the city.<sup>5</sup>

### 1. Environmental benefit

In a walkable city, the usage of car and public transport could be reduced. The decreasing number of cars on the road would significantly reduce the emission of greenhouse gas, as well as improving the health of residents due to the reduction of air pollution.

### 2. Social benefit

A good walking network and public space in a community could increase the social interaction between the people and strengthen the bonding within the community.

### 3. Economic benefit

A city that is being pedestrian-friendly and cyclist-friendly is one of the factors that attracts tourists. The reduction in the need of cars also has the potential to reduce the financial outgoings and allow the people spend the money on the entertainment.

### 4. Health benefit

More walking and cycling and less driving car is definitely good to health both physically and mentally. A relatively more active lifestyle can help in losing weight and avoiding the disease is caused by overweight. Besides, walking outdoor with tree and parks would improves in self-esteem and mood.

<sup>5</sup> Website of Pedestrian and bicycle information - Facts about walking and bicycling





## 2.2 STREET AS PLACES

### STREETS

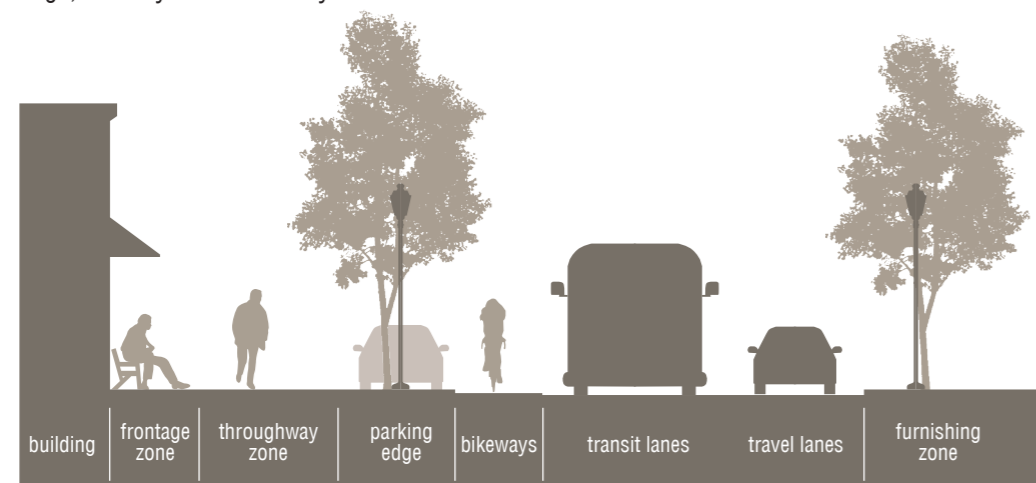
street is not just a “street”

Originally the word “street” simply meant a paved road in the Latin strata. In the urban fabric, street is a paved public thoroughfare in a built environment. It is a public land adjoining buildings in a urban context, on which people may freely gather, interact and move around. This is the definition of street. However, in some congested city like Hong Kong, streets or roads were only be considered as conduits, mainly for mobilizing vehicles from one point to the other point.

An effective road network with large travel capacity is essential to a city’s growth. However, this should not be the only quality to define a road or a street. Street is not only a path for mobilizing vehicles, but also a place to sustain a wide range of activities that is essential to civilization. Citizens own the right to use the street for socializing, entertainment, commerce and doing any activity they want.

#### complete street policy

The complete street is a transportation policy that requires street to be designed to accommodate all the users, from motor vehicles to pedestrians, transit user and bicyclists. Since 1971, the Government in different countries have released their own handbook to provide a design guidance to implement complete streets.<sup>6</sup> Complete street consist of frontage zone, throughway zone, parking edge, bikeways, transit lanes, travel lanes and furnishing zone.



complete street section diagram

<sup>6</sup> Mayor’s office of transportation and utilities. *A design handbook - the philadelphia complete streets design handbook*, 2012

#### street as liveable places

In the book “streets as places: using streets to rebuild communities”<sup>7</sup> mentions that “if a street is to become a convenient and enjoyable place, it must be looked at holistically - that is, as a distinctive environment with many different interrelated elements reflecting the character, needs and aspirations of a particular community”.

To create a liveable place, freeing up street space from domination by vehicles is critical. The book also mentions some points of how to create a “great place” in community. Firstly, the street was not overwhelmed by its width and the speed of traffic. Moverover, street should be relatively narrow and pedestrian should be able to across the road, in other words, the street were designed more for walking than for driving. A well designed street should also be friendly to bicycle and people could safely bike along these streets. Bike parking facilities are also critical in encouraging citizen to use bicycle to travel. Secondly, trees and greenery shall be planted along the sidewalk to provide a physical and psychological buffer between pedestrian and heavy vehicular traffic so that the environment could become pleasant to walk. Lastly, commercial programme could be introduced to encourage wide range of activities in the surrounding area. Restaurants and outdoor cafes along the sidewalk could provide sitting out areas to blur the boundary between street and the building so that the surrounding is inducing people to slow down and stay. All of these played an important role to identify a place and where communities can come together to socialize and take part in the activities.

The following images as an example to show the liveable spaces with unique characters.



01 Amsterdam, Netherlands  
02 Oslo, Norway  
03 Copenhagen, Denmark

<sup>7</sup> PPS & AARP. *Streets as places: Using streets to rebuild communities*, 2008

# 2.3 PUBLIC SPACE

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## PUBLIC SPACE the definition of public space

The definition of public space can be interpreted differently base on different areas and cultures. Generally, a public space can be defined as a social area where everyone, regardless of their social and economic condition can enter without pre-requisite, such as entrance fee. Public squares, parks, street, street market and country parks are typically considered as public space.

Literally, public space can be simply defined as a “space” for the “public”. However, “public” and “space” can be interpreted differently in different contexts. It is difficult to define the “public space”. Public library is a library that is accessible by the public in certain period of a day. Some people may consider it is a “public space”. However, people have to follow the rules inside the library and actually keep monitored by the staff and security guard. Furthermore, shopping malls, sport stadiums and theme parks are in fact privatized spaces.

The “open spaces” that defined by government are usually public. The concept of “open space” is to define a space that is with limited building structure or even no building structure and mainly for conservation and recreational use from the government point of view.<sup>8</sup>

Public spaces are extremely important to public life.<sup>9</sup> Public space is where one can freely interact with the others through different kinds of social activities, entertainment and commercial activities, and those interaction and communication are exactly what a community needs. Indeed, the “public life” is the soul of a city. People usually use public life to indicate how good is a city is.

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<sup>8</sup> Ho, Alfred. *The concept & realization of public space, 2011 (chinese version only)*

<sup>9</sup> Jan Gehl. *Life between buildings: using public space, 1996*

## the importance of public space <sup>10</sup>

“Public space” is physically a space that allows people with different backgrounds to use it for free and fulfils wide range of social needs with its different functions and features. Undoubtedly, it is an indispensable element of a city. In this part, the importance of public space can be elaborated in three levels, including individual unit, community and city.

1. individual level: extend the activity space to maintain the quality of life

Public space allows citizens to carry out various activities, which some of those activities may not be permitted in privately-owned space, such as home, school or work place. Besides working out at gym, doing indoor sport in government sport complex and doing simple stretching at home, public open spaces in the city seems to be the most suitable place for residents to work-out, since they can freely access throughout the whole day. People meet each other in the space when they are doing exercise, walking with their dogs or just resting in the park. These connections are extremely important in developing an all-rounded and healthy citizen.

2. community level: encourage social interaction and strengthen the bond within community

In some congested city like Hong Kong, public space plays a very important role in holding the citizens together by providing space for gathering. There are many constraints for those privately owned gathering place such as shopping malls and restaurants, which is limiting human activities. Therefore, 24-hours opening spaces without any rules and entrance fee would be the essential element to strengthen the bond among communities.

3. city level: act as a buffer zone in urban development

In some high-dense city, public open spaces act as a buffer zone to allow penetration of air and sunlight. The greeneries that are commonly found in open spaces could also help to clean the air in urban areas.

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<sup>10</sup> Hong Kong public space initiative. *Webpage - Significance of public space*

# 2.4 KEY QUALITIES

## KEY QUALITIES TO MAKE A GREAT PUBLIC SPACE accessible, activities, comfortable and sociable

A good public space is where friends could meet each other, culture mixes, and social and economic interaction could take place. When a space works well, it served as a stage for public activities. But what makes a public space successful? The Project for Public Space (PPS) has found four key qualities to create a great public space which are accessibility, participation of people, comfort and safety, and sociability of a place. PPS developed public space diagram that helping people to evaluate public space.<sup>11</sup>

### 1. Accessibility

The accessibility of a place can be judged by its connectivity to its surrounding, both visual and physical. A successful public space should be easily noticed from all direction and accessed by walking.

### 2. Comfort

Comfort includes safety, cleanliness and the availability of seat. Seat location should be easily identified and with high accessibility. Greenery and trees helps to absorb heat from the sunlight and make the place more comfortable to stay by lower the temperature.

### 3. Activities

Having activities (something to do) give people a reason to go to the place and return. When there is nothing to do, a space will be empty. A good public space should be able to provide wide range of activities which can accommodate people from different age and in used throughout the day.

### 4. Sociability

A place where the people meet with friends and greet their neighbours, and feel comfortable to interact with strangers, they tends to feel a stronger sense of place to achieve the quality of sociability. The people will bring their friends and relatives to visit the place or use the place regularly.



The Place Diagram<sup>12</sup>

In the center of circle there is a specific place to evaluate. The place can be evaluated according to four criteria. And the outer ring are a number of intuitive or qualitative aspects by which to judge a place. The next ring are the quantitative aspects that can be measured by statistic or research.

<sup>11</sup> Project for Public Spaces is a nonprofit planning, design and educational organization which was founded in 1975

<sup>12</sup> Website of Project for Public Spaces - What makes a successful place?

**03 PRECEDENT  
STUDIES**



## #01 PUBLIC SKYGARDEN

### The High Line in New York, USA

The High Line was built in 1930s, as part of a massive public-private infrastructure project called the West Side Improvement. It is elevated from the ground to remove dangerous trains from the street and it was designed to go through some building blocks. The train was stopped running on The High Line since 1980 and was under threat of demolition.

In 1999, the Friends of The High Line, a community-based non-profit group was founded to advocate for preservation and reuse as public open space. A design team James Corner Field Operations and Diller Scofidio + Renfro was selected by the Friends of High Line and the City of New York in 2004 and the construction began in 2006. The whole project is divided into three sections. The first two sections was completed and opened to the public. The final section projected to open in 2014.<sup>13</sup>



highline before 1980

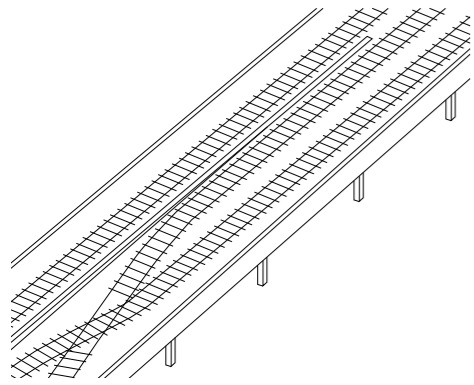


highline after construction

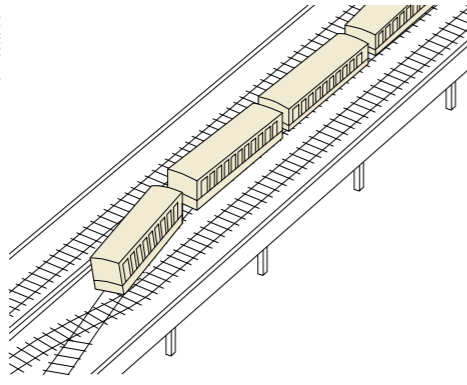
<sup>13</sup> The Official website of the High Line and Friends of the High Line



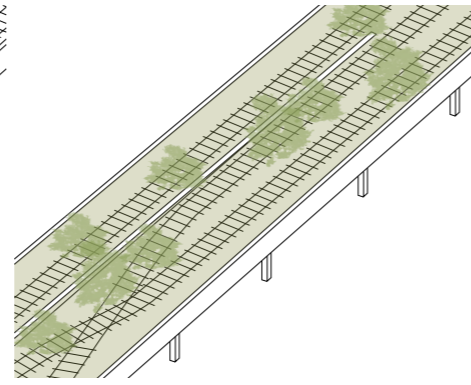
### transformation of the High Line



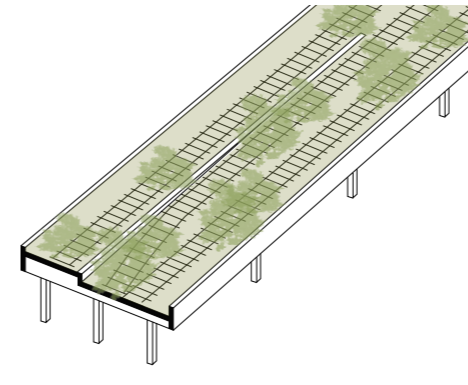
1929-1934  
The West Side Improvement project is started in 1929.



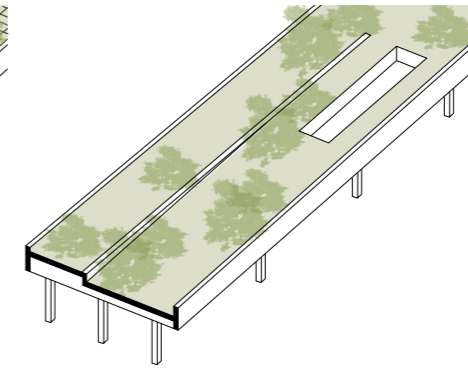
1934-1980  
The High Line opens to train in 1934. It runs from 34th street to St. John's Park Terminal.



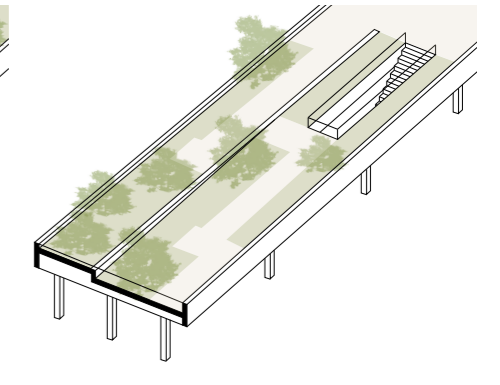
1980-1991  
The train stopped run in 1980 and it is left uncultivated.



1991  
The southern section of the High Line is demolished.



2006-2008  
The first phase of construction on section 1 of High Line begins.



2009  
The section 1 of High Line opens to public and facilities the pathways, access points, seating, lighting and planting.



location of the attractions and features

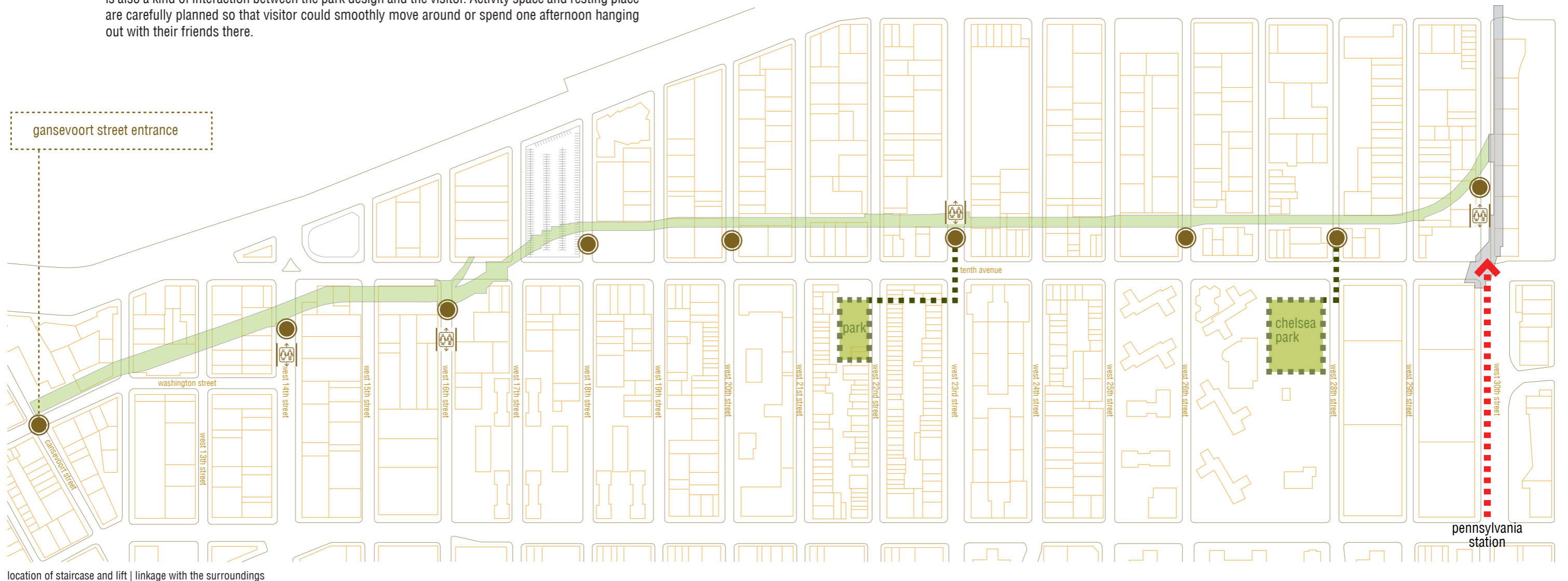
## evaluation of the High Line

1. **Accessibility** - The High Line was transformed into an elevated urban linear park with various facilities. The park extends from Gansevoort Street to 30th Street. The park can be reached through nine entrances and four of them are accessible to people with disabilities. The park is near to the major public transport hub.

2. **Comfort** - This elevated huge garden attraction included naturalized plantings that are inspired by the self-seeded landscape that grew on the disused tracks, wildflower field, chelsea thicket and chelsea grasslands which is an extensive natural environment and relaxation place that rarely seen in NYC. Seats are available all along The High Line, such as the movable bench, sundeck and the grand steps which are located evenly in different featured area. It definitely provides a comfortable environment for the people to spend their time there.

3. **Activities** - The High Line is designed to encourage various activities for people from different age groups. Visitors can enjoy the sunshine and play with the water which water feature and sun-deck are especially designed for this purpose. The environment and the pavement are suitable for walking. Elderly can jog around and do exercise in the park. Street performance is always welcome to perform in the outdoor amphitheatre where the audiences can sit on the big steps to enjoy it.

4. **Sociability** - Tourists from different countries are attracted by the history and the design of The High Line and come to visit the elevated park. Visitors turn the The High Line into a platform that allows international interaction to take place. The sitting areas are carefully located and various kinds of seats area are provided to allow visitors to choose the most comfortable way to stay which is also a kind of interaction between the park design and the visitor. Activity space and resting place are carefully planned so that visitor could smoothly move around or spend one afternoon hanging out with their friends there.



location of staircase and lift | linkage with the surroundings



## #02 MULTICULTURAL PARK

### Superkilen in Copenhagen, Denmark

Superkilen is a kilometre-long urban park situated in the Nørrebro area. It was designed by the arts group Superflex with the collaboration of Bjarke Ingels Group and Topotek1, a German landscape architecture firm. The idea is to design a place that would promote social interaction in the most multicultural district in Copenhagen, the three design team asked the local residents to suggest urban furnishing ideas for the park. Hence, the local residents were actively involved in the process of selecting the different furnishing strategies to be used in the three different areas of the park. The urban park is representing the voice of more than 60 nationalities in the district.

The park is literally divided into three different zones of activity with three different colours:

#### 1. The Red Square

The red square is covered by the red ground painting and it is an area for sports, cultural activities and a weekly marketplace.

#### 2. The Black Market

Asphalt is used as the ground paving material in the area of the Black Market. The curvy white line pattern was moving around the street furniture and children play facilities. The black market act as an urban “living room” where the locals could stay there for whole day since there are benches and barbeque facilities, tables for playing backgammon and chess and a Japanese octopus playing equipment.

#### 3. The Green Park

The green park is a green landscape mainly covered with lawn and scattered playground where families can go for picnics, sunbathing and even take an afternoon nap on the grass. The area also provide severel kinds of sport facilities what young people could play hockey and basketball.<sup>14</sup>

<sup>14</sup> An article - Superkilen celebrates diversity in Copenhagen on the official website of Denmark



red square



## evaluation of Superkilen

1. **Accessibility** - A kilometre-long park is passing through a few blocks and the three main entrances are located on the three main streets. Nørrebrogade is the entrance of the Red Square while Tagensvej is the entrance of Green Park. If people came from the Mimersgade, they can go Black Market on the north or Red Square on the south. Besides, there are some entrances along the green park, allowing the locals access the park from both side.

2. **Comfort** - Denmark is a bicycle friendly country especially in Copenhagen. The park is also designed to encourage biking. To minimize the conflicts between cyclists and other park users, the well-indicated bike tracks are designed. The floor pattern design includes the running track as well.

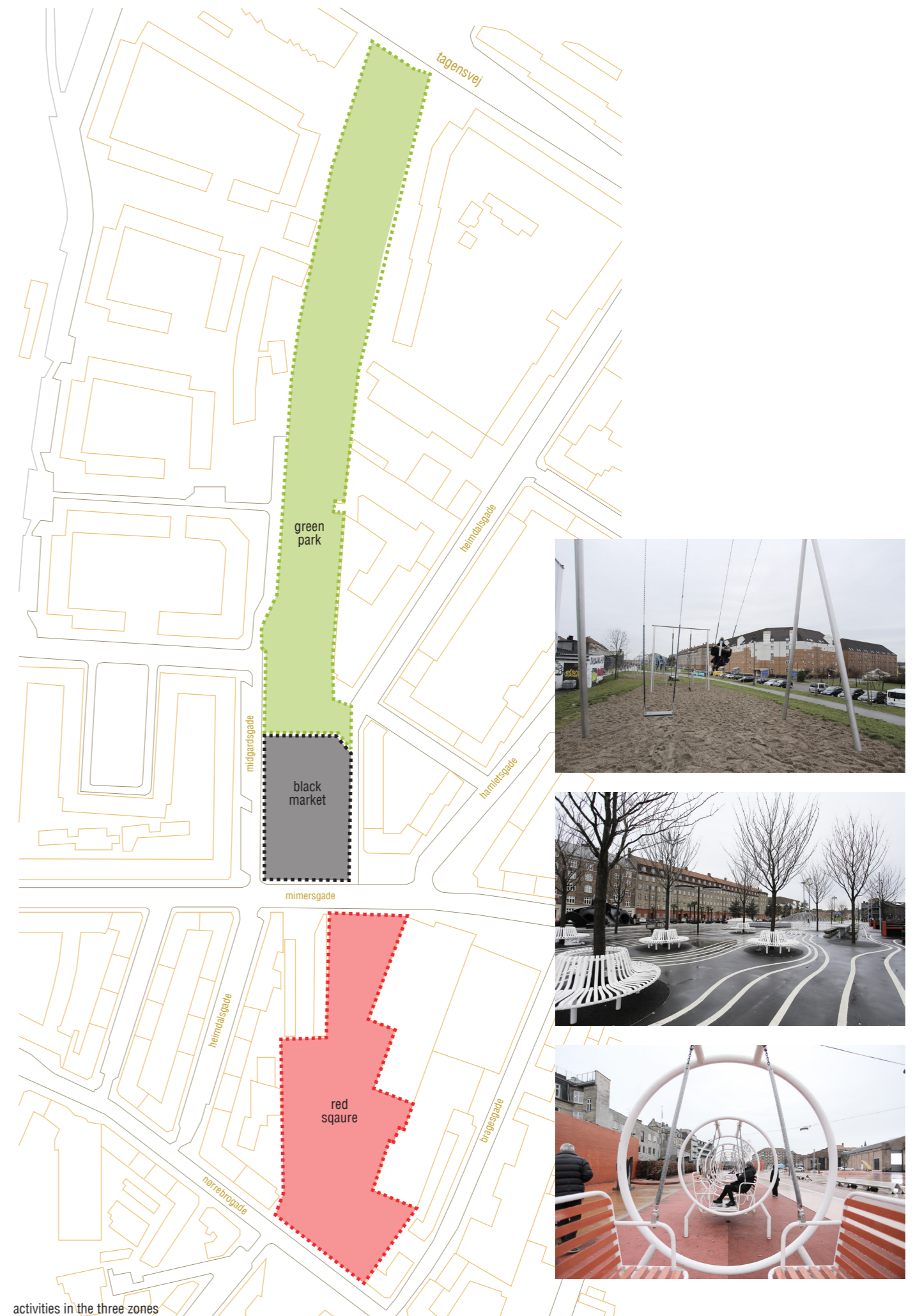
3. **Activities** - The facilities provided in the park allow wide range of activities to happen from the highly active sport, such as basketball, boxing, biking and skateboard, to relatively leisure activities, such as picnicking, chess playing and shopping at the weekly market. It accommodates people in different age group in different time in a day. The retired people can play chess and the children can play in the Japanese octopus slider during the day. The skaters usually play skateboard at night in the Red Square at the sloping corner. The locals can meet their friends in the Black Market where the seat and bench are designed in different language according to different nation characters.

4. **Sociability** - Since Nørrebro district is a multicultural district, the park is designed and existed as a peaceful meeting ground for people who have different nationalities. People can freely express their thought to the others with different cultural backgrounds.



access of Superkilen

bicycling track in Superkilen



activities in the three zones



### #03 PEDESTRIAN PLAZA

Broadway, Times Square in New York City, USA

Times Square is a major commercial center at the junction of Broadway and Seventh Avenue in NYC. Many of the tourist attractions and theaters are located in this area. In 2006, the Times Square Alliance hired Project for Public Spaces (PPS) to study and re-imagine how Times Square performs better as a public space. From May 2006 to June 2007, PPS studied the district through systematic observation techniques such as time-lapses film analysis, activity mapping, tracking and use surveys and found out some general issues and opportunities. From the analysis, they found out that there is no space for sidewalk activities and gathering in the district, the space of the square is not enough to support the demanding activities and the street design does not support the pedestrian movement.<sup>15</sup>

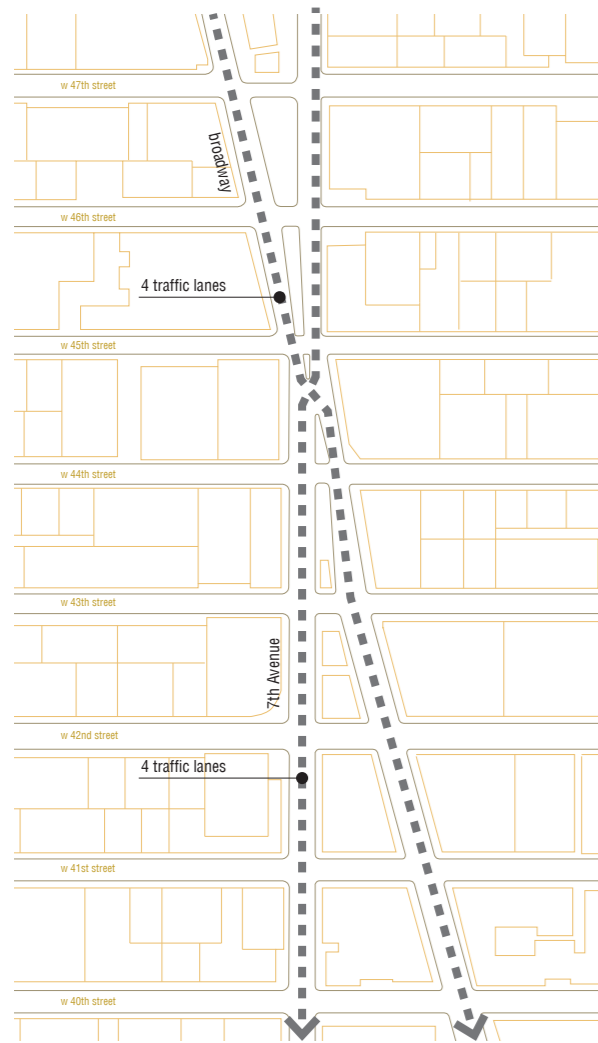
Based on the findings from the analysis and research of international best practices, PPS developed key programmatic recommendations and conceptual plans. The recommendations include re-configuration of street to support walking and reduce the negative impacts of traffic, architectural treatments to improve the pedestrian experience and new public space programming such as performance and markets.

In 2009, the traffic lane along Broadway from 42nd street to 47th street are de-mapped and transformed into pedestrian plazas temporarily as a trial. The goal was to ease traffic congestion throughout the Midtown grid. In 2010, the pedestrian plaza became permanent since the improvements in safety and traffic flow were very successful.

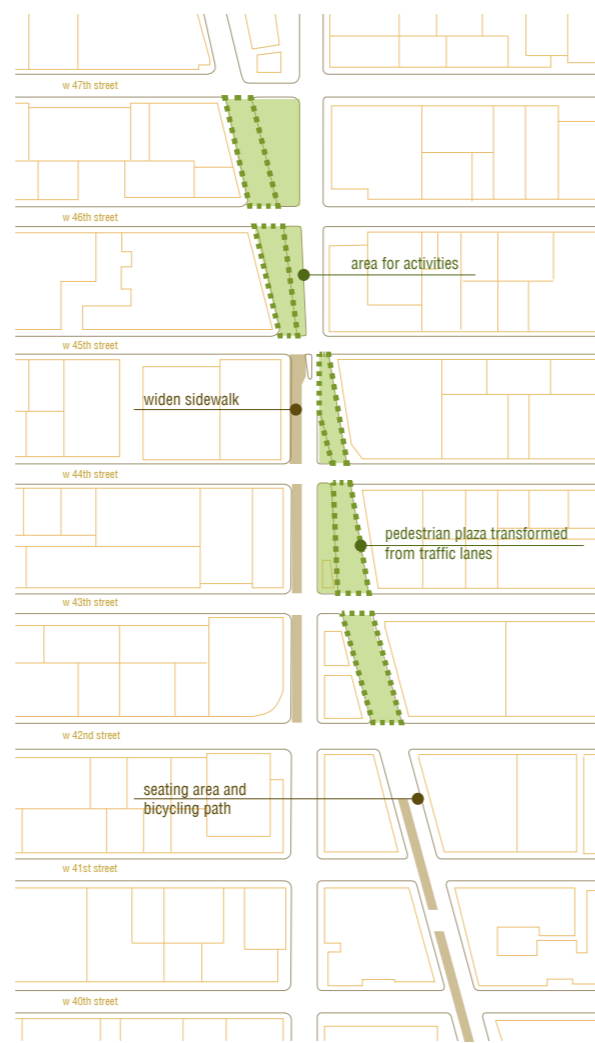
<sup>15</sup> Website of Project for Public Spaces







Broadway before 2009

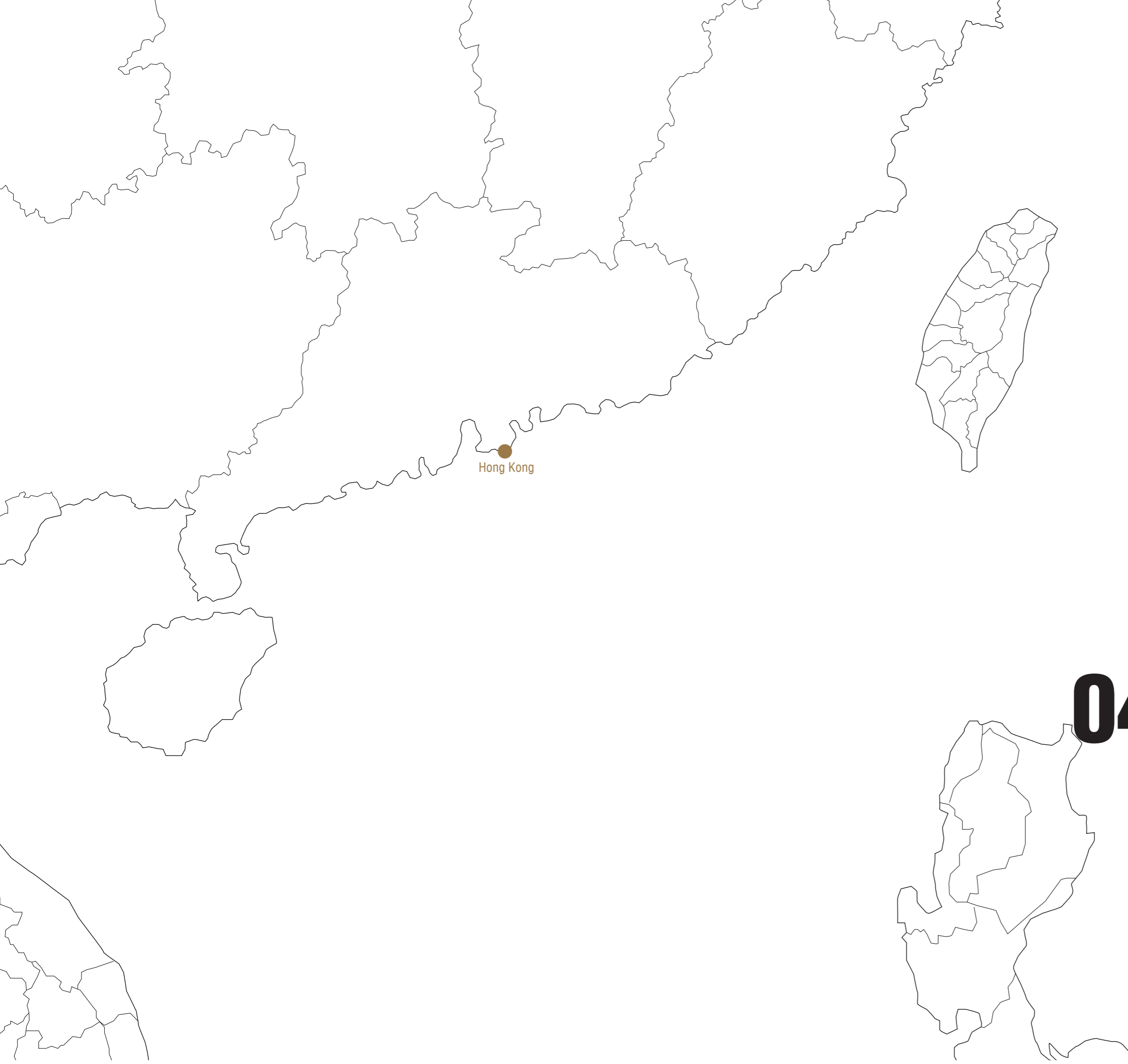


present Broadway

evaluation of Broadway pedestrian plaza

1. **Accessibility** - The Broadway pedestrian plaza is located in the major commercial area where is a good connection to the adjacent buildings. And it is easy to access from any direction. The colourful pavement helps to guide the people to the plaza and define the boundary.
2. **Comfort** - The improvement of the street is successful to ease the traffic congestion and improve the walking experience by increasing the width of the sidewalk and crosswalk. More seats in this area are provided to support the group activities. The area is more bicycle-friendly after a cycling path is provided. The cyclists can ride the bicycle in a safer environment.
3. **Activities** - The pedestrian plaza provide more space for activities. The pedestrian plaza and the red stairs which is located in 47th street can become a performance area. The people can sit on the stairs and enjoy the performance. Market is also a potential activity in the plaza. Besides, the seats that are provided in this area allowing the people have a drinks and chatting with friends.
4. **Sociability** - Time Square is a tourist district. The improvement of the street provide a better shopping and visiting environment for the tourists. The tourists may spend more time in the plaza and the seats provide more interactive opportunities with others.

red square



# 04 CONTEXT OF HONG KONG

# 4.1 HISTORY OF HONG KONG

## HONG KONG history of a Harbour City

Hong Kong, is one of the two Special Administrative Region of the People's Republic of China. Hong Kong is situated in China's south coast and she is known for its expansive skyline and deep natural harbour. With a land mass of 1104 km<sup>2</sup> and a population of seven million people, Hong Kong is one of the most densely populated areas in the world. Hong Kong consists of Hong Kong Island, the Kowloon Peninsula (KLN), the New territories (NT) and several outlying Islands. It can be divided into 18 districts which were established in the early 1980s, when Hong Kong is under British rule.

Hong Kong was originally a small fishing village belonging to China. However, It became a colony of the British Empire after the First Opium War in 1842. The Hong Kong Island was first ceded to the UK in perpetuity, followed by Kowloon Peninsula in 1860 and then the New Territories was put under lease in 1898. It was occupied by Japan during the Pacific War, after which the British resumed control until 1997.<sup>16</sup> Since 1997, China resumed sovereignty over Hong Kong and Hong Kong under the policy of "One Country, Two Systems".

Under the stable, secure and predictable British rule, Hong Kong was flourished from a small fishing village to an important trading port to a center for international trade. Nowadays, Hong Kong is one of the world's leading international financial centers. During the time as a British colony, Hong Kong was greatly influenced in different aspects, such as cultural and educational system.

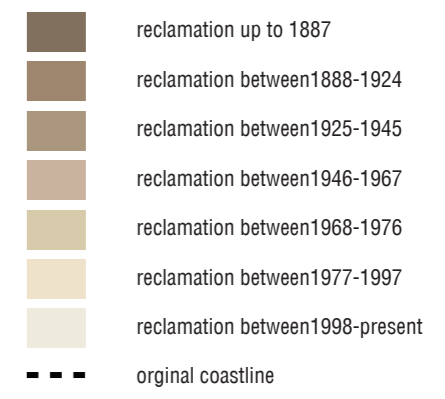
With the prosperity of Hong Kong economic development and extremely high dense population, residential housing, commercial building and other supporting service building are highly demanded. To meet the housing demand, more and more high-rise housings are erected in Hong Kong. There are 1223 skyscrapers in Hong Kong and the number of buildings with height more than 150m is far more than any other city. The high density and tall skyline of Hong Kong is due to the lack of buildable space.

To ameliorate the limited supply of buildable land, reclamation of land from the sea has been used since long time ago. In next section, the history of land reclamation in Hong Kong will be presented.

<sup>16</sup> Frank Welsh. *A history of Hong Kong*, 1997



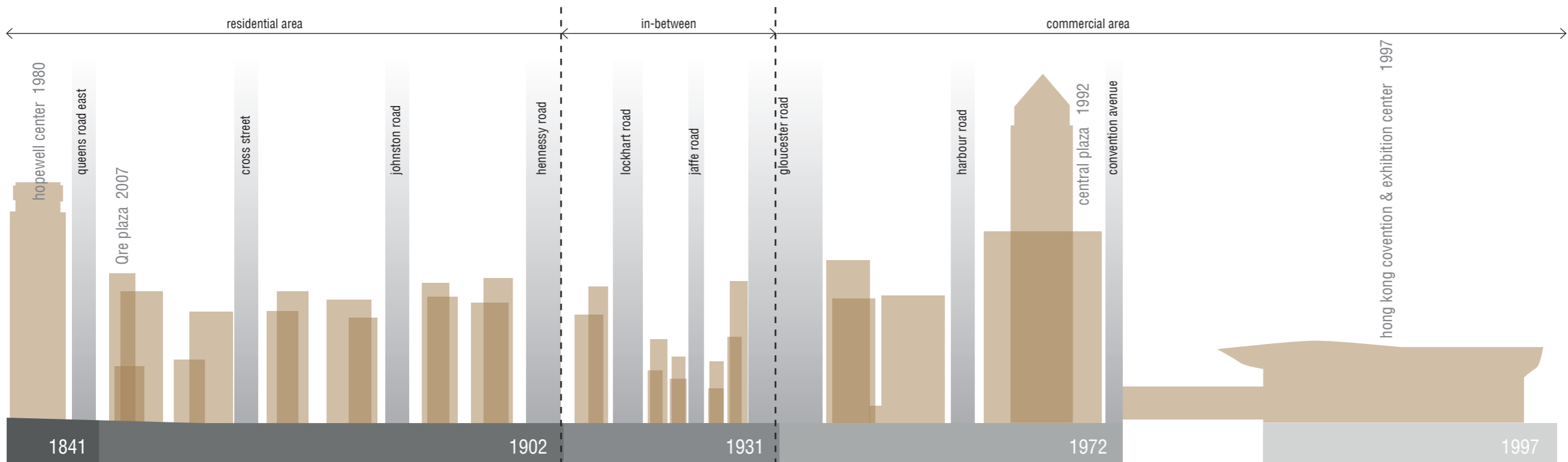
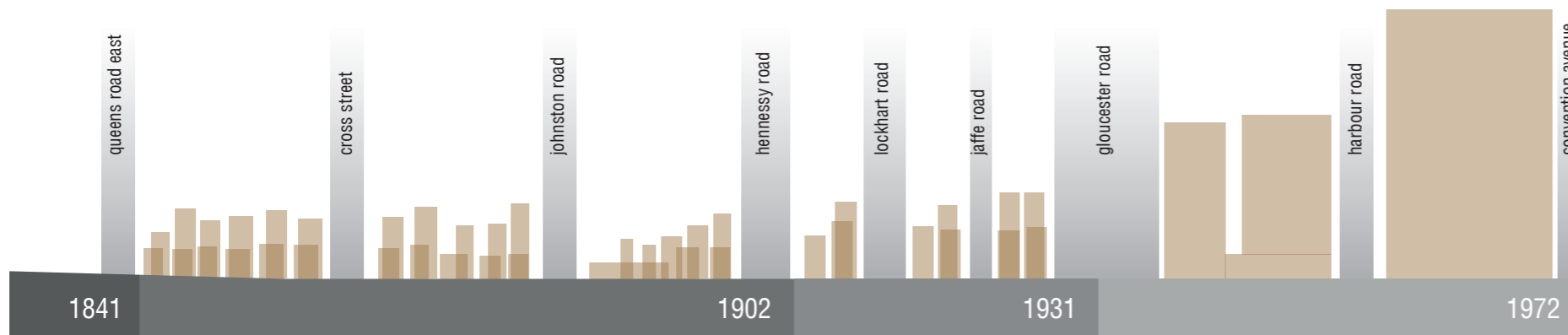
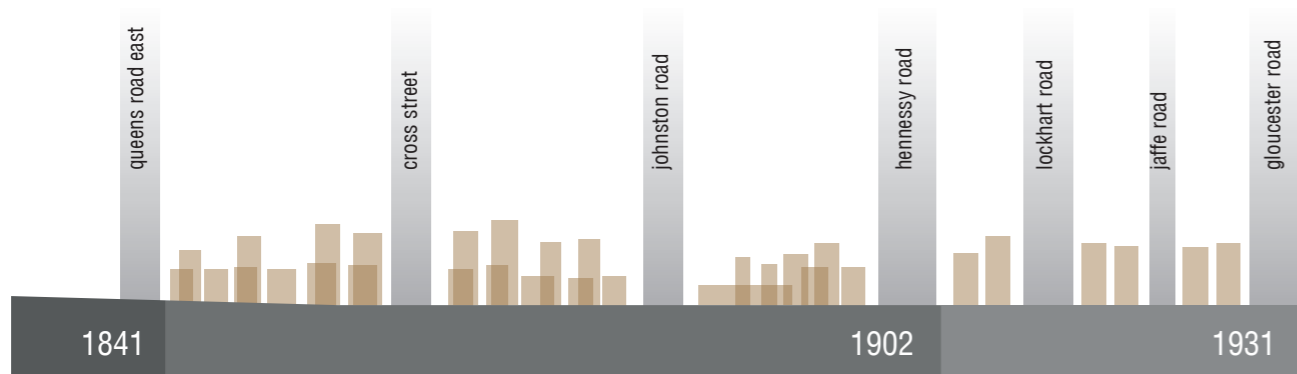
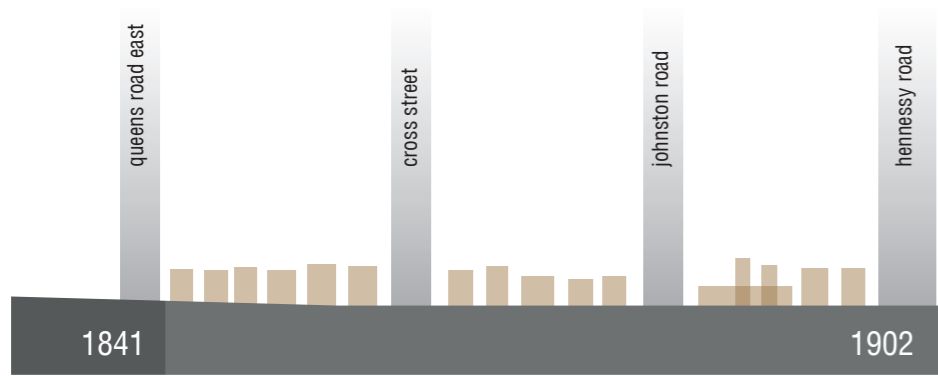




land reclamation history

There are more than 67 km<sup>2</sup> of land which is gained from the reclamation. It is about 7% of the total land area of Hong Kong. The first reclamation can be traced back to 1842. It is an unofficial reclamation that only filling along the coastline with sand and gravel which were the wastes from the construction near the harbour. One of the earliest and well known modern projects was the Praya Reclamation Scheme, which reclaimed 240,000 m<sup>2</sup> of land in 1980 during the second phase of construction. It was one of the most ambitious projects ever undertaken during the Colonial Hong Kong era. Thereafter, few times of land reclamation were carried out. Old Kai Tak Airport and Hong Kong International Airport, and the new towns such as Tuen Mun, Tai Po, Sha Tin and Tseung Kwan O were built on reclaimed land near the coastal area.

Land reclamation helps to gain more buildable area and ease the problem of shortage of housing. However, this shortened the width of the harbour, destruct the marine habitats and pollute the water.



### building development according to years of reclamation

The sectional diagrams show the building development in Wanchai, a district situated in Hong Kong Island. Wanchai has been extended outward with a series of land reclamation schemes. In 1841, original coastline was located at Queen's Road East. In the Praya East Reclamation Scheme, the coastline of Wanchai was extended to Praya East, that is today's Johnston Road and Hennessy Road which is one and two block outwards. After the next two reclamation, the coastline line was pulled out to the areas of Convention Avenue.

In the diagrams, it illustrates the permitted building height is getting higher according to years of reclamation. After 1931, a wide road (Gloucester Road) and series of high-rise commercial buildings were built.



## 4.2 STREET LIFE IN HK

### HONG KONG is an unwalkable city?

Since Hong Kong is a tiny city with compact environment and mixed land use, vehicle can actually excluded from people's daily needs. Housings, office buildings, shopping malls and other supporting service, such as clinic, post office are located in a walkable distance. However, urban and transport development strategy over the last forty years had been focusing mainly on developing large scale housing and transport infrastructure to deal with the increasing population and private cars. Developing purely residential districts and connecting those districts with high speed drive-way becoming the major developing strategies in recent decades. It is undeniable that connecting different district with high way is the most effective way in terms of transportation. However, the large scale road network destructs the pedestrian connection and hence deteriorates the walkability of Hong Kong.

The pedestrian's right will be harmed when the vehicles traffic efficiency is being put at the first priority. Pedestrian suffer from the roadside air and noise pollution, crowding in the narrow footpath, detours and level changes for crossing the road. Due to the development of sub-urban area in the last few decades, large scale residential district and extensive road network inducing a significant drop of walkability level in Hong Kong.

In order to reconnect the pedestrian from one side of the road to the other side, subway and elevated walkway become the only means to allow pedestrian crossing the road. The Hong Kong Government advocated that walking on the footbridge and subways can improve the pedestrian safety since pedestrians and vehicles are separated. The footbridges and subways also protect the pedestrian from external weather condition. However, forcing pedestrian to detour with undesirable level changes will substantially decrease the level of walkability in the area.

According to the survey result which is conducted by Designing Hong Kong in 2011, 77 % of people prefer street-level crossing when they cross a street. Subways and footbridges are 2.6 % and 9.6 % respectively. The result reflected a significant preference for pedestrian in selecting the path. Route with changing level strongly discourage people to walk.



aerial view of Central, Hong Kong



## street experience in Hong Kong

Street was used to be a major public space for the local residents in the past. The street market was one of the significant street style public spaces that enhancing the social interaction between the hawkers and consumers and even among those consumers. People with different social background were easily meet in the street. As the economical advancement and the changing needs for people, the shopping pattern was transformed from street store to shopping mall. There are only a few large scale street markets that are still exist in Hong Kong and they are Tai Yuen Street in Wanchai, Tung Choi Street in Mong Kok and Temple Street in Yau Ma Tei.

Apart from the traditional street market, there are three main street life can be experienced in Hong Kong. The diagrams and pictures below are the general street condition in Hong Kong.



1. wide pedestrian street

Apart from the boulevard in Tsim Sha Tsui, some other major shopping districts such as Causeway Bay and Mong Kok also provide wide shopping street. They provide a more comfortable shopping environment and convenient access to the shops on both side of the street.



2. street market

The market street is usually formed by the foldable structures. The street mainly consist of shops and footpaths on both side, and pop-up shops and one more pedestrian lane in the middle part. It forms a shop-pedestrian-shop-pedestrian-shop sandwiches which pedestrian may not go through all shops at once and hence the shopping experience will be enriched.



3. narrow sidewalk with cantilevered signboard

In Hong Kong, it is very common that the street with one parking lane, one traffic lane and narrow sidewalk on both side. The sidewalk is only about 1.2 m widths to act as a corridor for the people from one point to their destination. The street activities such as chatting, waiting friends are impossible since people cannot even stop walking or stay a while in the narrow street like this.



4. bus terminal or blank wall on the street level

The large scale housing development with the shopping mall or large scale bus terminal on the ground level and tower on the top in the new residential area create a phenomenon of "boring streetscape" that there is no shop on the street level. The street life is disappeared in those area.

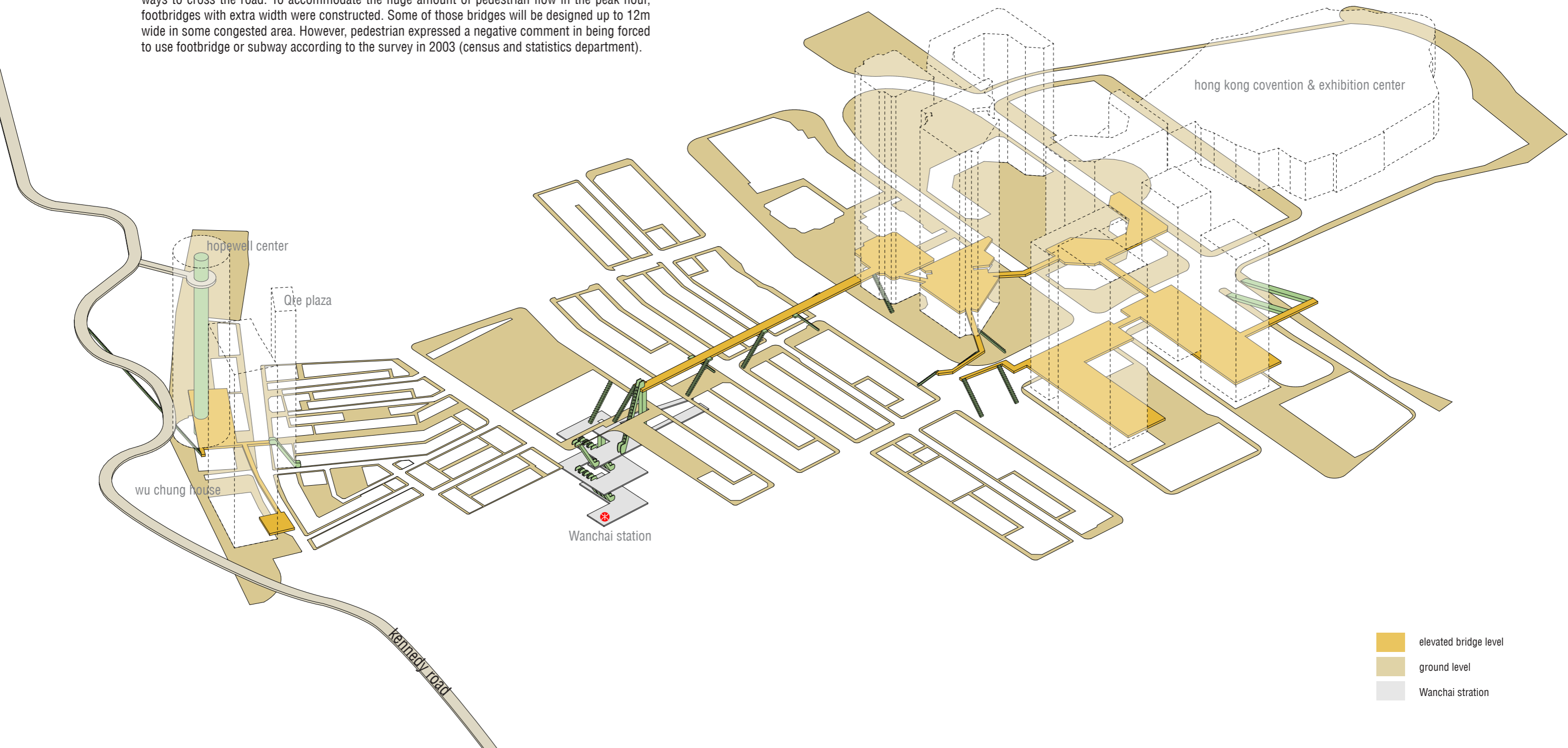


### from street level crossing to 3-dimensional pedestrian networks

The economical advancement was contributed to transform the street level moving pattern into a unique three-dimensional pedestrian networks especially in those business areas and newly developed residential areas. According to the report from the Highways Department, there are 717 footbridges and 435 subways in Hong Kong. The result indicated that, Hong Kong has more than one footbridge or subways for every two kilometers of road.

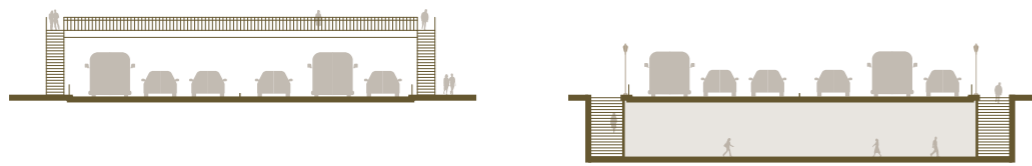
The diagram shows on this page is the pedestrian network in Wanchai. There are two groups of footbridge networks. In the north, the elevated walkways are connected the metro station to the government buildings, commercial buildings and the Hong Kong Convention & Exhibition Center towards the coastline. And the other group of footbridges are connected three commercial buildings and extended up to the mid-level residential area.

To avoid interruption of the vehicular traffic, pedestrian footbridges and subways become the only ways to cross the road. To accommodate the huge amount of pedestrian flow in the peak hour, footbridges with extra width were constructed. Some of those bridges will be designed up to 12m wide in some congested area. However, pedestrian expressed a negative comment in being forced to use footbridge or subway according to the survey in 2003 (census and statistics department).



pedestrian network above and under ground

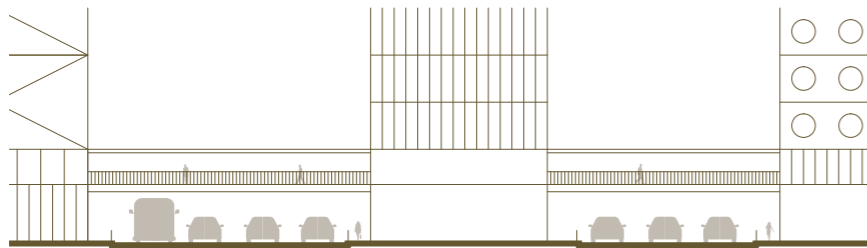
The footbridges and subways were simply functioned as a connector to cross the street when the crossing on street level is not preferable. Pedestrian footbridges system and the underground networks only focus on the point to point connection that the people are separated from the street level activity and neglected the street life in between. The footbridges transfer the people from the office to the public transport while the underground network delivers people from metro station to the shopping mall. People are losing their street life.



1. crossing street footbridge

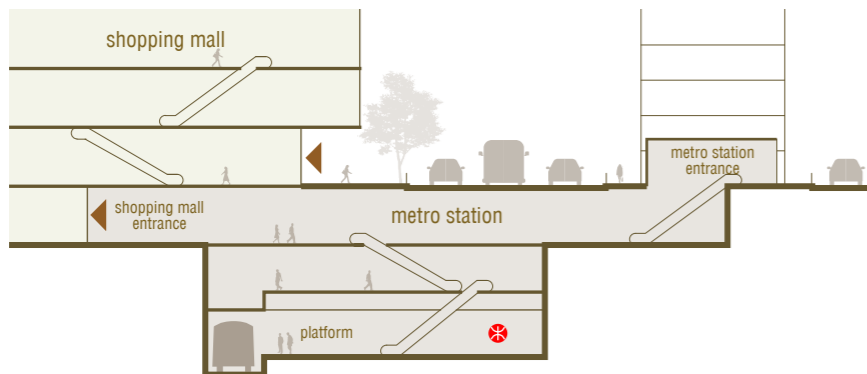
2. crossing street subway

The crossing on street level is not allowed The only way to cross the street is using the footbridge or subway.



3. covered footbridges

The covered footbridges connect the podium of the office towers or the shopping malls. It provides a all weather corridors for the people.



4. underground networks

The shopping mall is connected to the station. Sometimes, people have to pass through the shopping mall before they reach their destination.

street elements

There are some important street elements that cannot exist on the pedestrian footbridges or subways level. The design of footbridges and subways emphasise on the efficiency and hence most of the street activities are neglected. To improve the environment of footbridges and subways and enhance the walkability, some critical street elements should be restored when designing the elevated and underground system.



- 1. seats
- 2. roadside greenery
- 3. activity
- 4. shop



## 4.3 PUBLIC SPACE STUDY

### PUBLIC SPACE IN HONG KONG do hong kong have enough public space?

Hong Kong is a high density city with limited supply of land. Nevertheless, Hong Kong Government acknowledges the essential of public space to the mental and physical health of the individual citizen and the community. Some lands are reserved to be open public space in the urban planning stage. Parks in different scale from the Hong Kong Zoological and Botanical Garden in Central and Kowloon Park in Tsim Sha Tusi to the small scale playgrounds which are located in each residential area are provided for the public. In addition, the Hong Kong Government devoted to develop the harbourfront promenade over the past 10 years to reclaim the harbourfront for public enjoyment.

Undeniably, public open spaces are provided in every district for relaxation purpose. Playgrounds and parks are distributed in every district, even in the most congested areas. However, the usage of those dedicated public open space are actually very low due to the lack of supporting facility in the surrounding area.

Apart from the "official" public open spaces which are designed in the urban planning stage, some "unofficial" public spaces are spontaneously appeared along the street. The "unofficial" public space includes the privately owned public space and the semi-public space. The semi-public space which are usually located on the platform where can be only accessed by the residents. It is a by-product of the large scale housing development in Hong Kong.

In the following sections, different type of public space will be studied and analysed to conclude the strength and weakness of different type of spatial configuration.



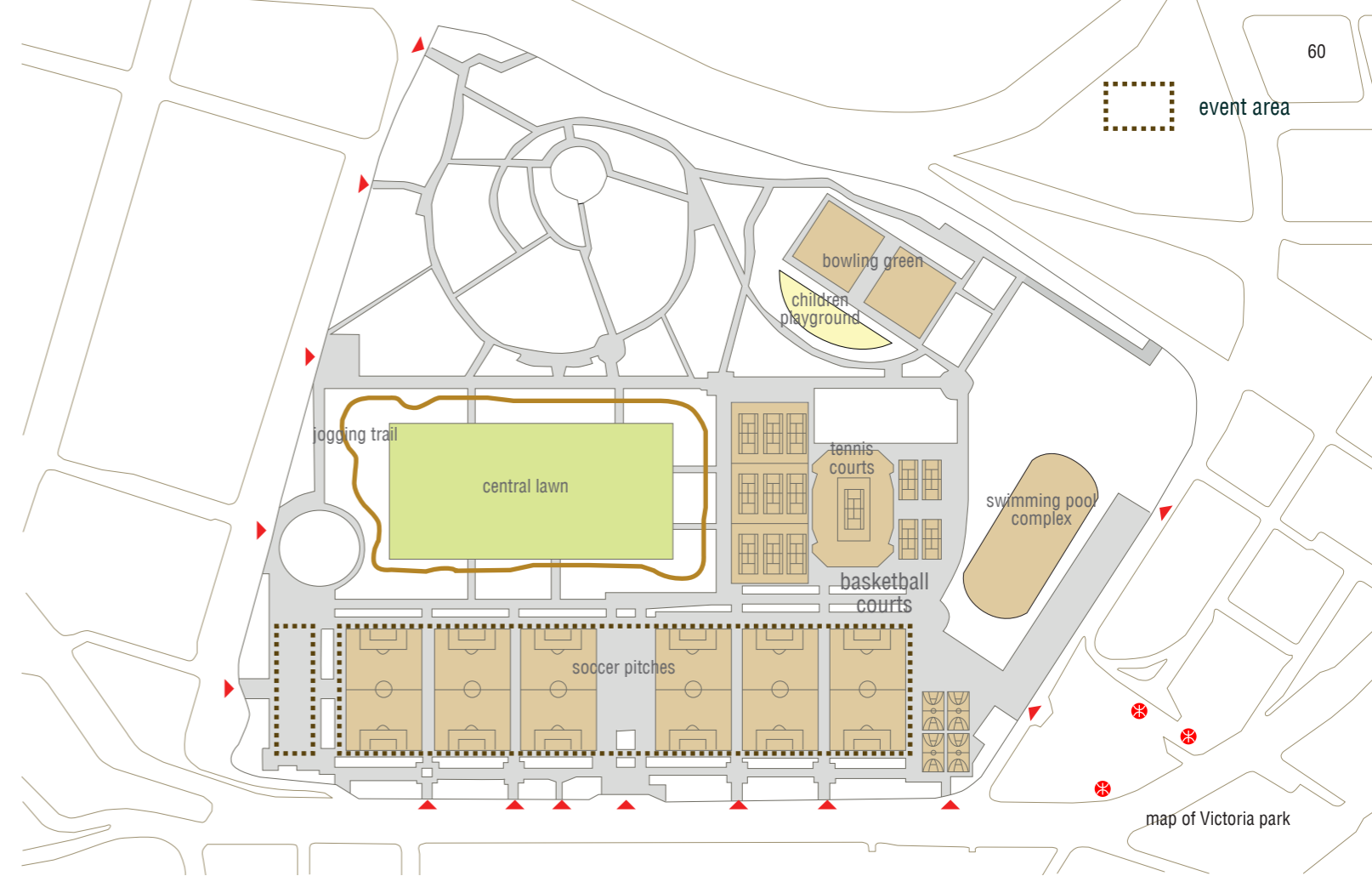
small scale public space in Central, Hong Kong



## 01# large scale public park - Victoria Park in Causeway Bay

The park was opened in 1957. It is the largest park in Hong Kong Island with an area over 19 hectares. It includes soccer pitches, basketball courts, tennis courts, a swimming pool, a skating rink, a bowling green and other sports facilities, as well as the central lawn and children's areas. Victoria Park is a public space for the celebration in different festivals throughout the year. The linear soccer pitches are formed a large public space for events. Lunar New Year fair, mid-autumn festival lantern carnival and Hong Kong flower shows are held in Victoria Park every year. Apart from celebration, political gatherings and city forum also held in the park. Some large scale political assembly like the candlelight vigil (photo below) is held every year since 1990. The city forum is held in the park every Sunday to discuss the current public issue.

- 1. Accessibility** - People can access the park from three directions and by different public transportation. The location is easy to find.
- 2. Comfort** - The beautiful landscape and the large lawn provide a relaxing and comfortable environment to the people.
- 3. Activities** - A wide range of activities from active sport to more leisurely activities like picnic are encouraged to happen in Victoria Park.
- 4. Sociability** - The different event throughout the whole year, social movement event, democratic function and large scale assembly bring people with different background together.



People gather at Victoria Park in Hong Kong for a candlelight vigil every year on 4th June to make the 1989 crackdown at Tiananmen Square in Beijing.



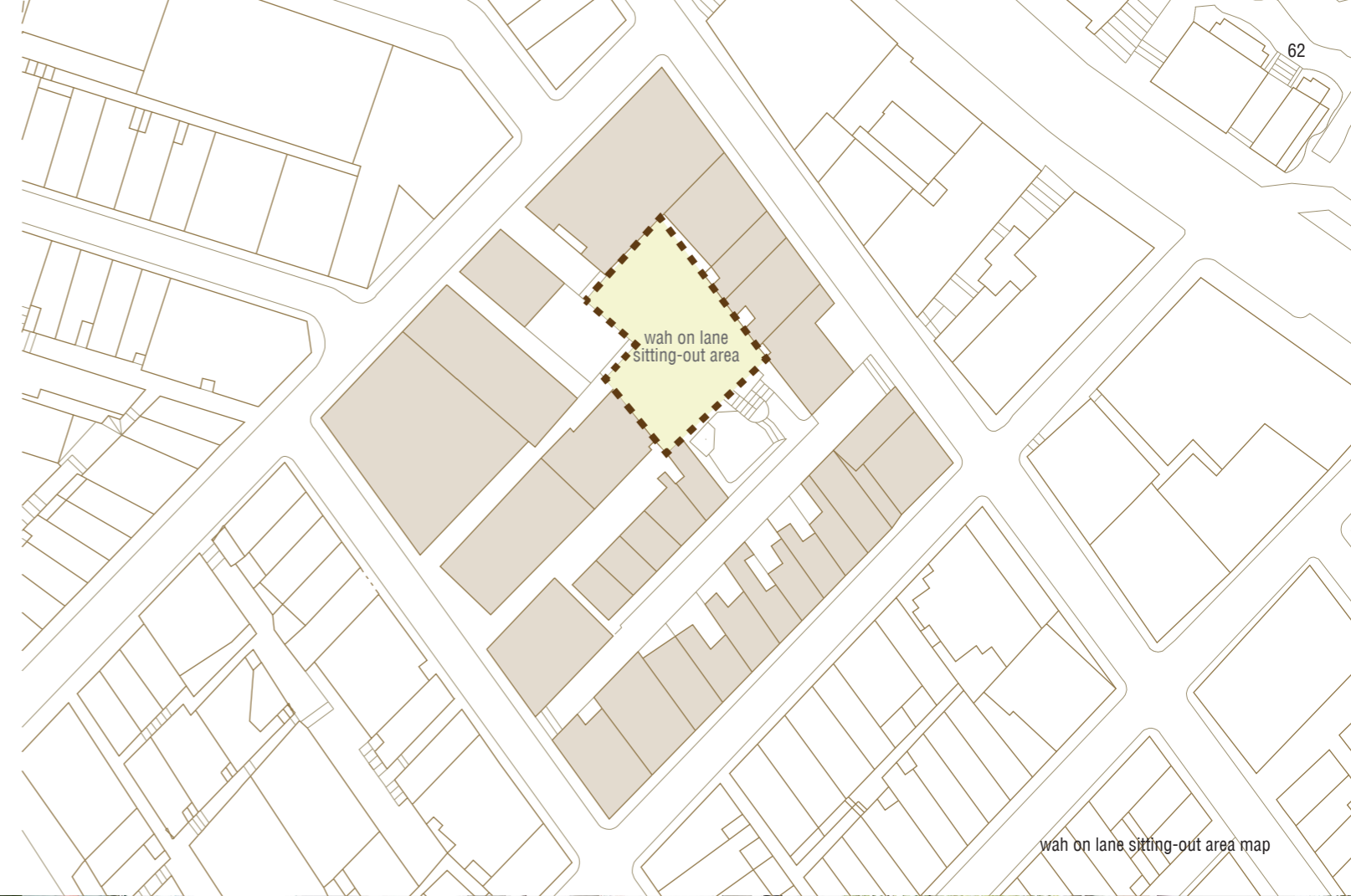
## 02# small scale public space - children playgrounds and pocket parks

The children playgrounds and parks are distributed in each district to meet the needs of people. According to the 2013 report from Leisure and Cultural Services Department, there are 694 children playgrounds in Hong Kong.

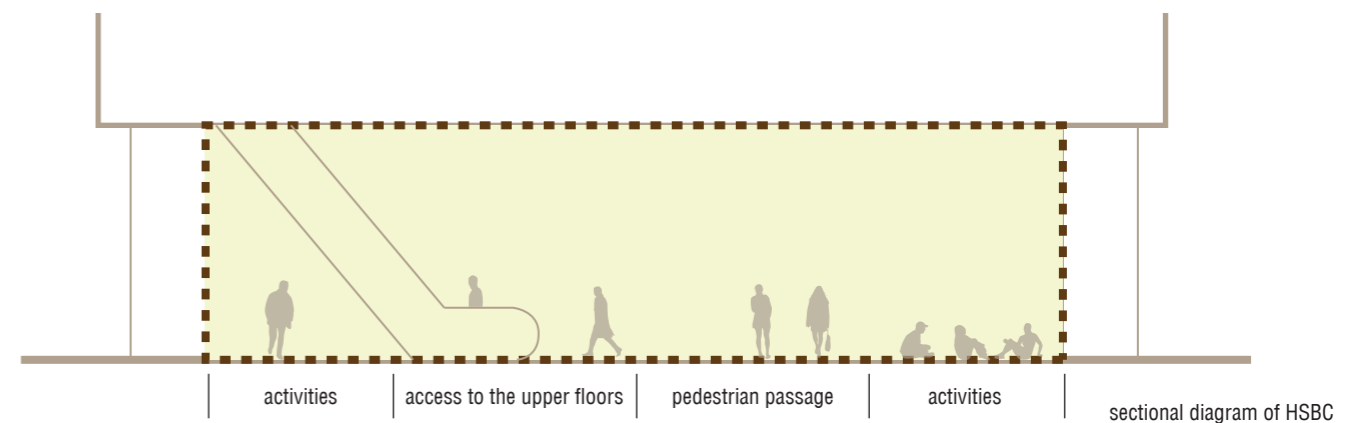
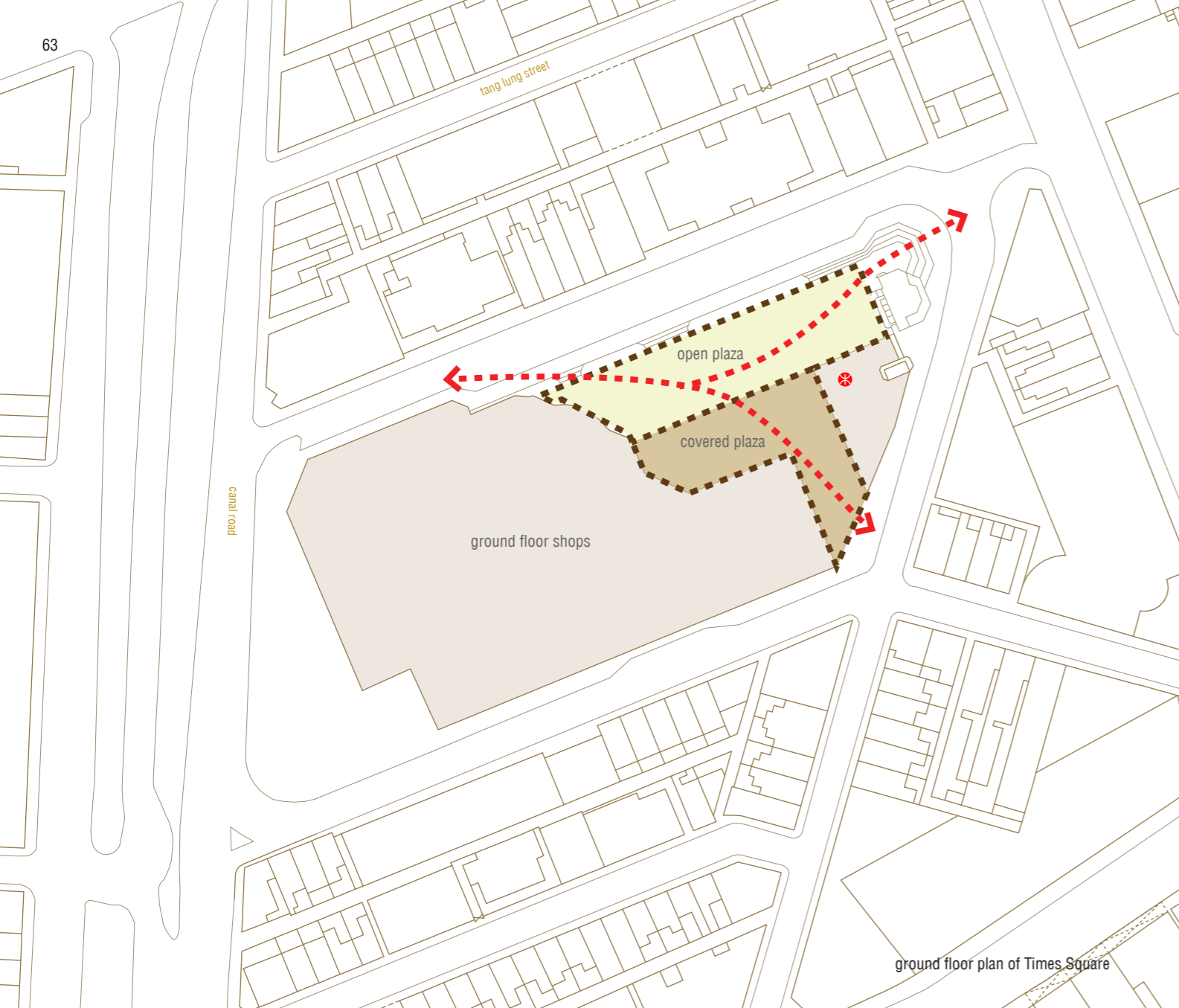
1. **Accessibility** - The location of the parks or playground do not encourage residents to use the space. It is because they are usually not accessible from the main street. Visibility of space is low and hard to be discovered by people. In the opposite page, one of the sitting-out area demonstrates that the public space is surrounded by the residential building, making the space is inaccessible.

2. **Comfort** - The facilities are old and underutilized in some parks and playgrounds, and sometimes, they are occupied by the homeless people at night.

3. **Activities** - Most of the visitors or the users of the public space are the elderly or the parents with their children in the day time. The limited facilities discourage the people of the other age group to spend their time in the public space.







### 03# privately owned public space

There are two well-known privately owned public spaces in Hong Kong. They are the ground floor of Times Square in Causeway Bay and the headquarters building of the Hong Kong and Shanghai Banking Corporation in Central. The ground floor is free for public access and pedestrian passage. On top of that, exhibitions and art and culture activities are allowed to be held in the public space of Times Square.

- 1. Accessibility** - The public space is open to the street and it is easy to access. Besides, it provides a short-cut for the pedestrians.
- 2. Comfort** - To avoid the people stay in a long period, no comfortable seat is provided.
- 3. Activities** - The public space was designed for pedestrian passage, not designed to support any activity. But the exhibitions and some cultural activities is allowed to hold in the public space of Times Square after the approval by the owner.
- 4. Sociability** - These two buildings are famous in Hong Kong, especially Times Square. People will bring their friends or relatives who visit Hong Kong to there, and people often meet their friend there. It is one of the landmarks in Causeway Bay.

### what will attract the people to visit a place?

The successful of Times Square illustrates that the location is as important as the facilities to make a great public space even there is no extra facilities inside the area. Seats, tables and playground facilities are provided in those pocket parks and playgrounds, but the usage is still low since they only reached by the people who live around the spaces. Users are limited to the residents since the location of parks and playgrounds are not visible in a distance and not easy to be recognized as a public space by visitors. Lack of commercial activity around the public space is another reason lead to the low usage of those pocket parks since people have no incentive to even walk close to those areas. For those parks located inside office area will be served as a sitting area during lunch hours, but it is limited to lunch hours only and the usage is still low throughout the other period of a day.

The absent of fence and door of the public space will allow the people access the space any time. However, the parks and playgrounds are usually enclosed by 2 metre tall fence and some of them are closed at night to avoid the homeless people staying there.

The design and the facility of the "official" public space still have some room to improve in order to increase public usage. The Hong Kong Government should pay more attend on its design to improve the living quality of the people.





**05** SITE STUDIES

# 5.1 BACKGROUND

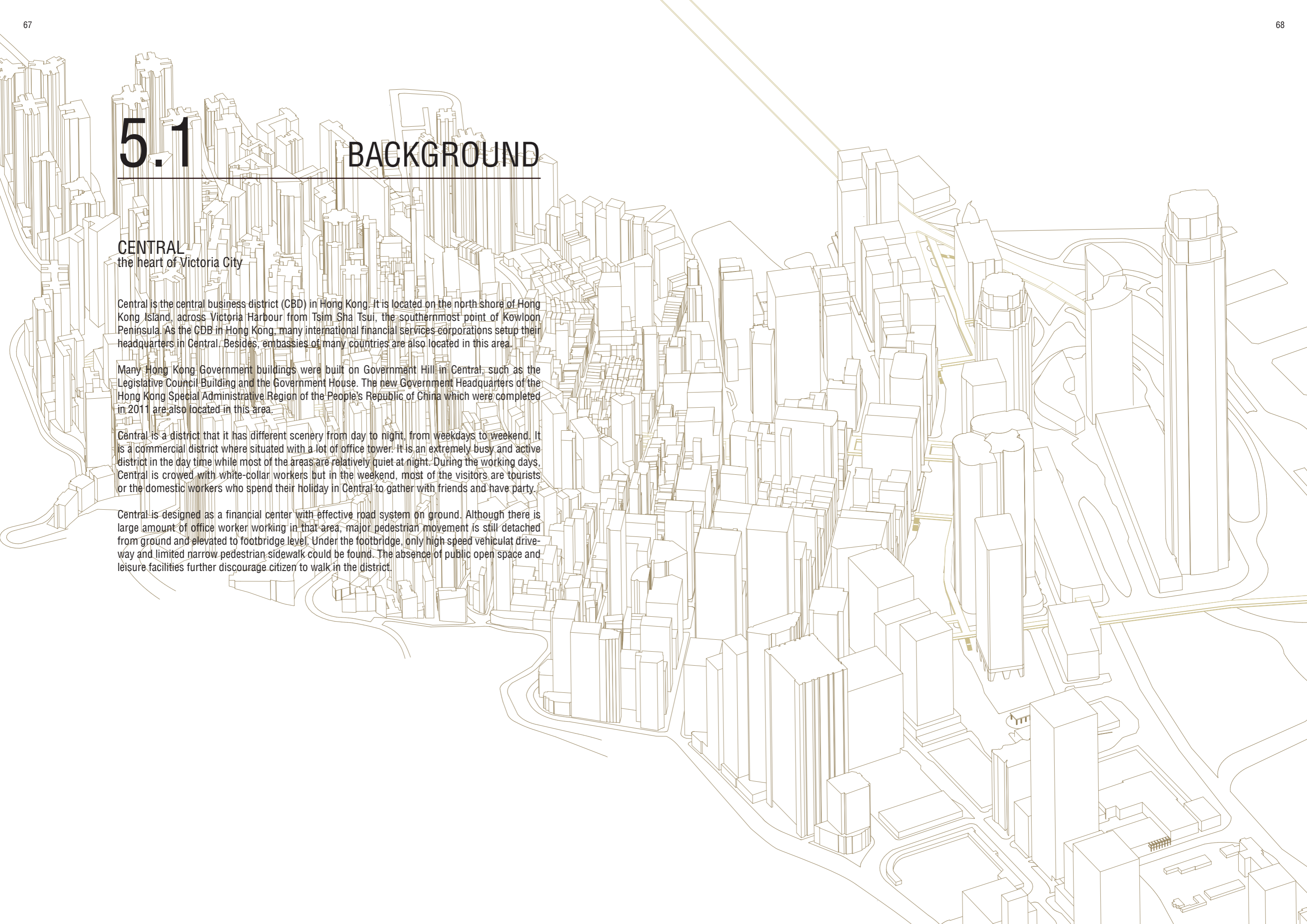
## CENTRAL the heart of Victoria City

Central is the central business district (CBD) in Hong Kong. It is located on the north shore of Hong Kong Island, across Victoria Harbour from Tsim Sha Tsui, the southernmost point of Kowloon Peninsula. As the CBD in Hong Kong, many international financial services corporations setup their headquarters in Central. Besides, embassies of many countries are also located in this area.

Many Hong Kong Government buildings were built on Government Hill in Central, such as the Legislative Council Building and the Government House. The new Government Headquarters of the Hong Kong Special Administrative Region of the People's Republic of China which were completed in 2011 are also located in this area.

Central is a district that it has different scenery from day to night, from weekdays to weekend. It is a commercial district where situated with a lot of office tower. It is an extremely busy and active district in the day time while most of the areas are relatively quiet at night. During the working days, Central is crowded with white-collar workers but in the weekend, most of the visitors are tourists or the domestic workers who spend their holiday in Central to gather with friends and have party.

Central is designed as a financial center with effective road system on ground. Although there is large amount of office worker working in that area, major pedestrian movement is still detached from ground and elevated to footbridge level. Under the footbridge, only high speed vehicular driveway and limited narrow pedestrian sidewalk could be found. The absence of public open space and leisure facilities further discourage citizen to walk in the district.



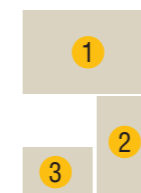


### Building type

The diagram indicates that most of the office buildings are mainly located on the northern part and the residential area is located at the southern part which is the mid-level. Central is the district that situated with the largest number of office buildings and government buildings and at the same time accommodating a significant amount of residential buildings starting from the mid-level area.



- commercial
- public building
- historical building
- residential
- pier
- art & cultural building (historical building reuse)
- government building



- 1. police married quarters (1951-2000)  
--> creative industries uses
- 2. international finance center
- 3. Central Government complex, Tamar








### Public space

Public spaces in Central can generally be defined as 3 types which are large scale public park managed by Hong Kong government, large-scale open space which can be freely access at any time and small-scale sitting area situated in between residential blocks.

- 1. Large scale public park: Hong Kong Zoological and Botanical Gardens and Hong Kong Parks
- 2. Public open space: harbourfront promenade and Statue Square
- 3. Small-scale sitting area: children playground and pocket park

The diagram indicated that most of the public space are located away from the center of the district where most of the office buildings situated and the pocket parks are surrounded by the residential buildings make it hardly to access. Further enhancement of the walkability for those areas will be required.



-  square
-  children playground
-  public park
-  sitting-out area
-  public garden
-  harbourfront promenade



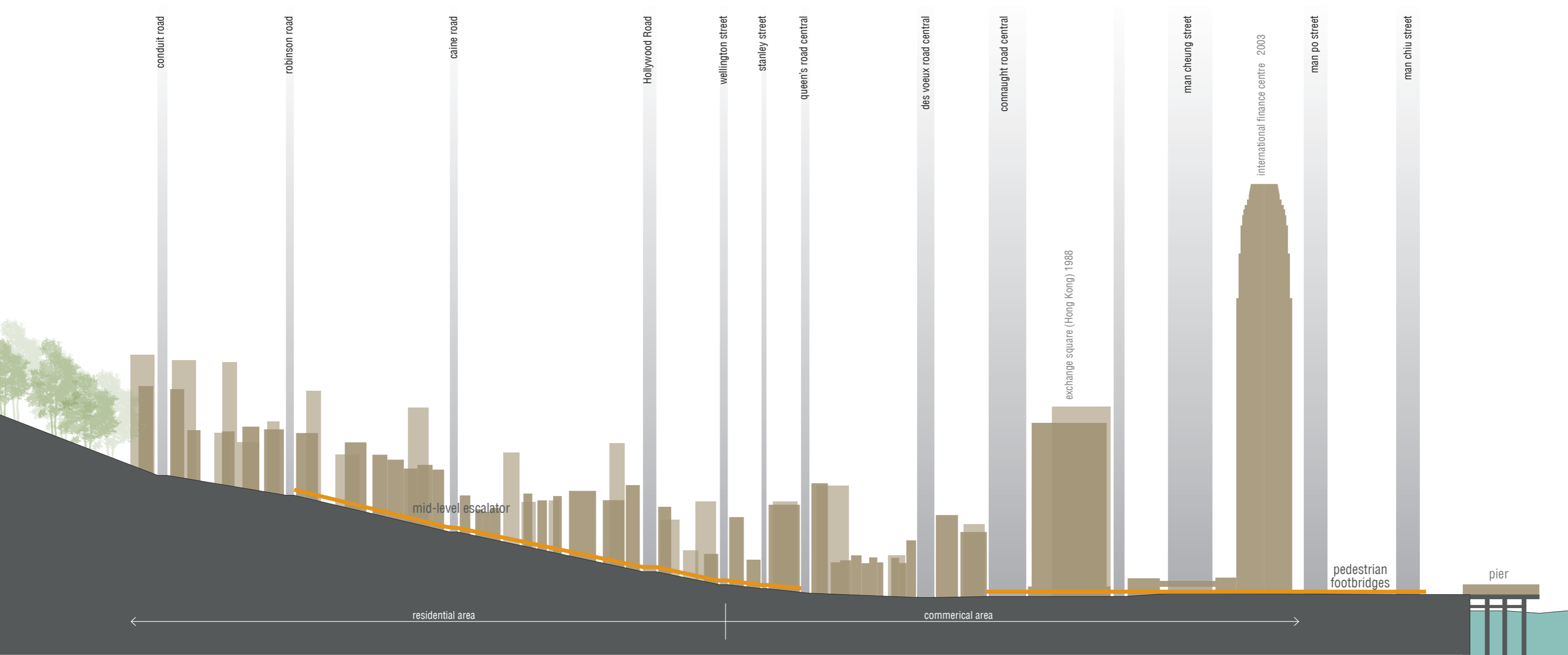
- 1. Central Statue Square
- 2. Central harbourfront promenade
- 3. Wa on lane sitting-out area
- 4. Kwong hon terrace garden





### Geography

Central is located on the north shore of Hong Kong Island, across Victoria Harbour from Tsim Sha Tsui and bordered in the south by mid-levels. In order to provide a better connection for the residents, a Central-mid-levels escalator and walkways system was constructed in 1993. Central is a half-hilly-half-flat land district with a harbourfront area at the northermost part.



sectional diagram of Central



# 5.2 STREET STUDY



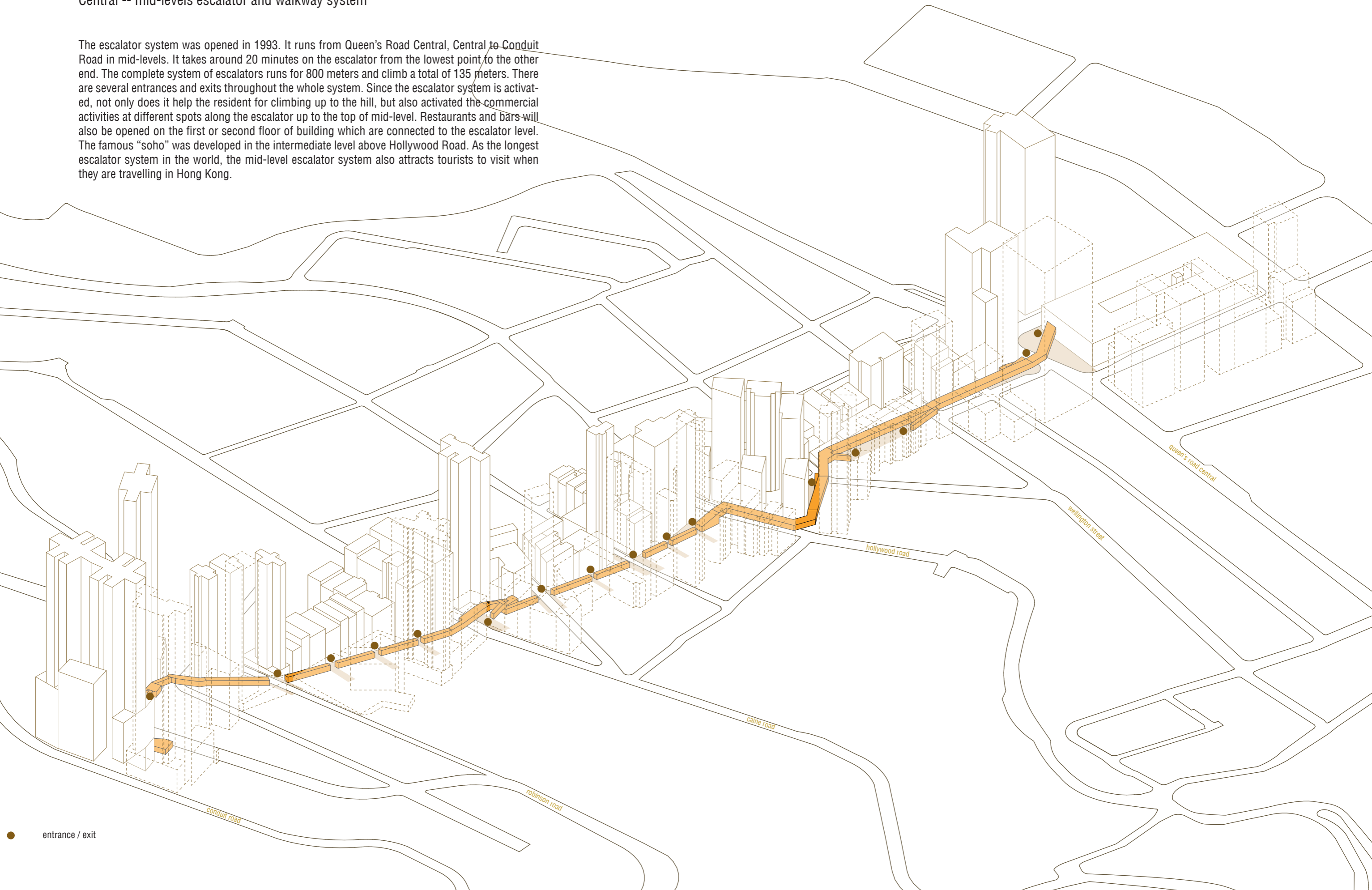
mid-levels escalator and walkway system



## 01# THE LONGEST OUTDOOR COVERED ESCALATOR SYSTEM

Central -- mid-levels escalator and walkway system

The escalator system was opened in 1993. It runs from Queen's Road Central, Central to Conduit Road in mid-levels. It takes around 20 minutes on the escalator from the lowest point to the other end. The complete system of escalators runs for 800 meters and climb a total of 135 meters. There are several entrances and exits throughout the whole system. Since the escalator system is activated, not only does it help the resident for climbing up to the hill, but also activated the commercial activities at different spots along the escalator up to the top of mid-level. Restaurants and bars will also be opened on the first or second floor of building which are connected to the escalator level. The famous "soho" was developed in the intermediate level above Hollywood Road. As the longest escalator system in the world, the mid-level escalator system also attracts tourists to visit when they are travelling in Hong Kong.







## 02# STONE SLABS STREET Pottinger Street

The official name of the street is called Pottinger Street. The name “stone slabs street” was named because the street is literally made up of stone steps paving. It connects Queen’s road central and Hollywood Road. In 2009, the street was listed as Grade 1 historical buildings in Hong Kong.

There are pop-up shops running their business along the both side of stone slabs street and the customers are mainly local residents and foreign visitors. This street is one of the attractions in Central district. It not only attracts the tourists to visit, but also the residents of Hong Kong from other districts. The rare granite stone steps and the nostalgic street is a popular place for taking a photograph.

Seats are provided in the resting area which connected to upper end of stone slabs street. This contribute in enhancing the walkability of this street since the pedestrian or visitors can take a rest after they climb up to this level.



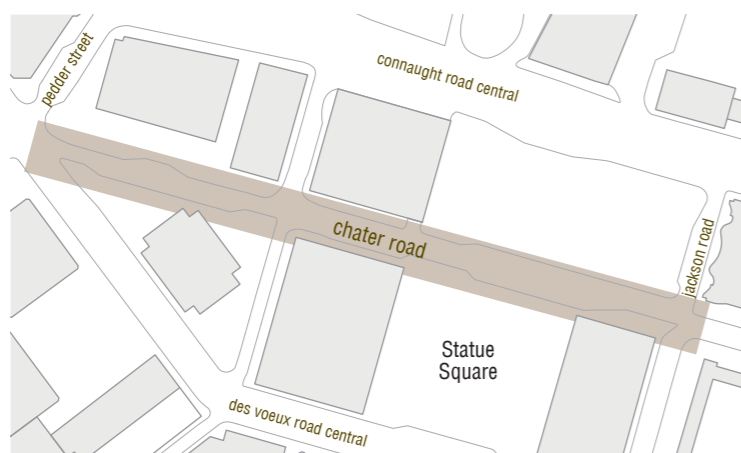


### 03# “PART TIME” PEDESTRIAN STREET Chater Road

Chater Road begins at its intersection with Pedder Street and Des Voeux Road Central in the west, and ends at Murray road in the east.

In the public holiday, a pedestrian plaza is formed between Jackson Road and Pedder Street, allowing some public event such as exhibition, market and the football match (opposite image) to be held there. The plaza is also a good place for the domestic workers to enjoy their holiday with friends. They sit on the ground and enjoy their food.

The temporary pedestrian plaza not only provides a place for the activities, but also helps injecting the vitality to the commercial area in Central where is supposed to be “dead” in the weekend.



street map

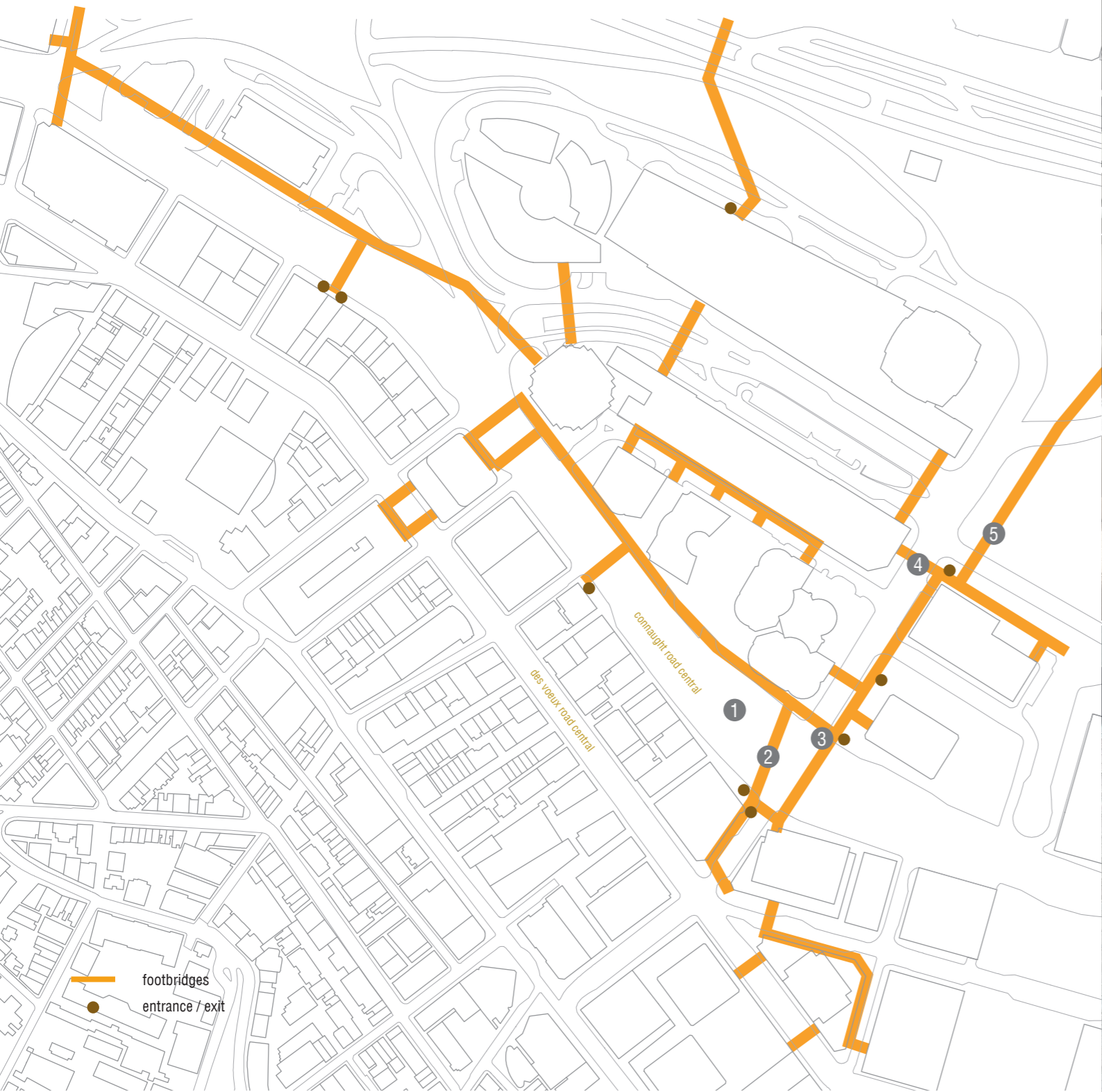


3 on 3 football matches were held on chater road



# 04# PEDESTRIAN CROSSING RESTRICTED STREET Connaught road central

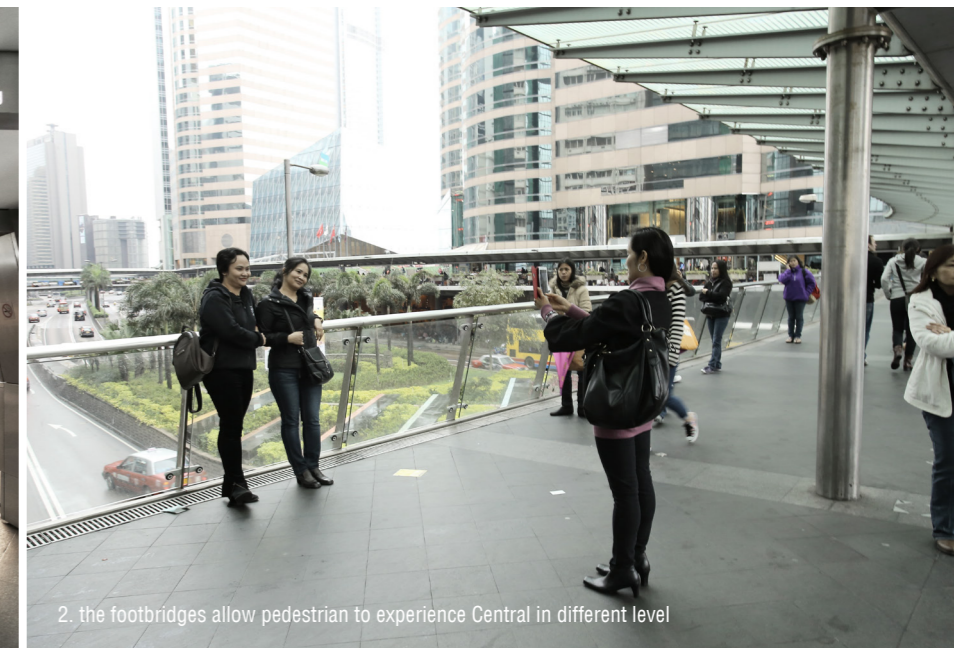
Connaught Road Central is a wide road with 8 traffic lanes. It is a main thoroughfare that runs from Admiralty in the East and connects into Harcourt road, to the Shun Tak Center in the West. There is no pedestrian crossing throughout the whole street. Therefore, several footbridges are built in order to cross the road and connect the office towers or shopping malls. In addition, the footbridges connect the public transportation, allowing people going and leaving the office without reach the ground level. Although it provides a conduit without any obstacle for the pedestrian, limited chance for social interaction between people could be happen along the linear path that only mobilizing people from one point to another. Without any supporting facilities along the elevated walkway, people will only be bypassing without having any other motivation to stay on the footbridge.



1. Connaught road central is a wide road with 6 traffic lanes



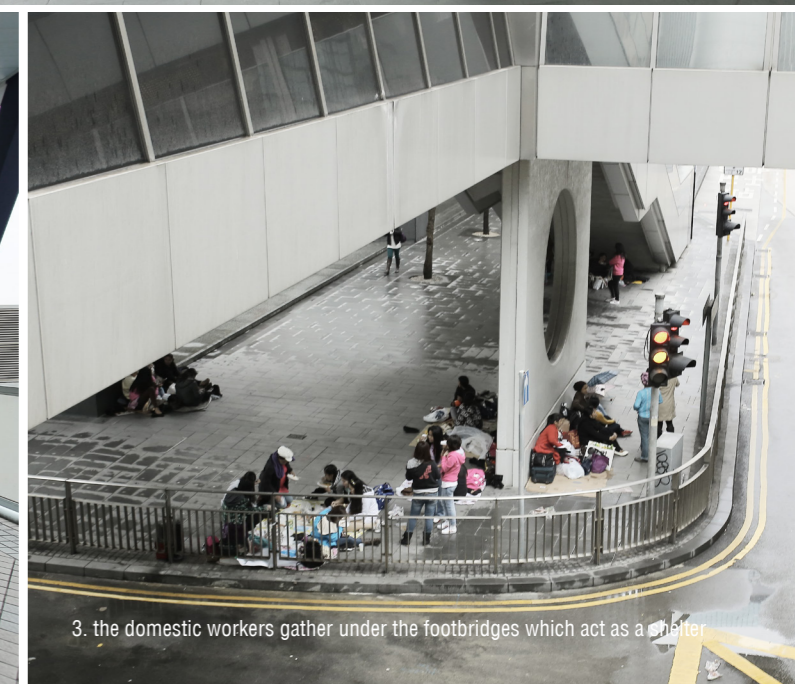
4. the footbridges are designed and built by different parties, so they have difference design



2. the footbridges allow pedestrian to experience Central in different level



5. the footbridge towards harbourfront and the piers, the people can go to the pier from metro station without walking on the ground

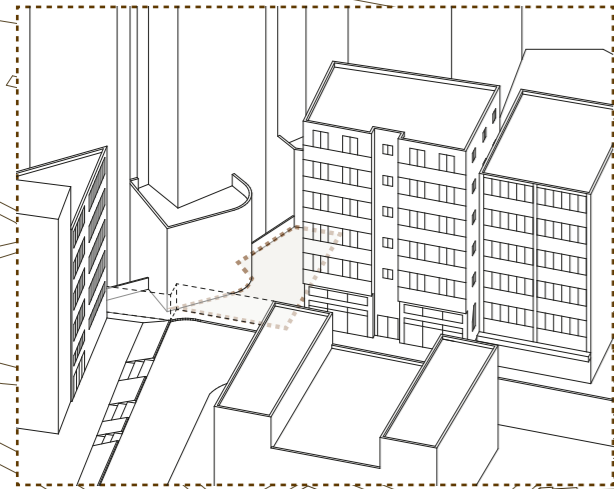


3. the domestic workers gather under the footbridges which act as a shelter

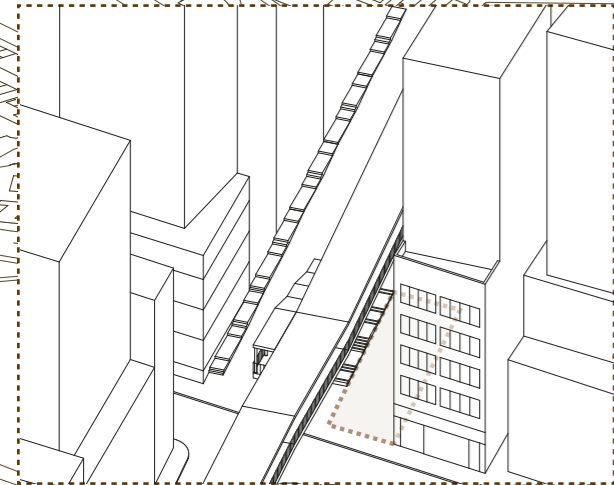


# 5.3 LEFT-OVER SPACES

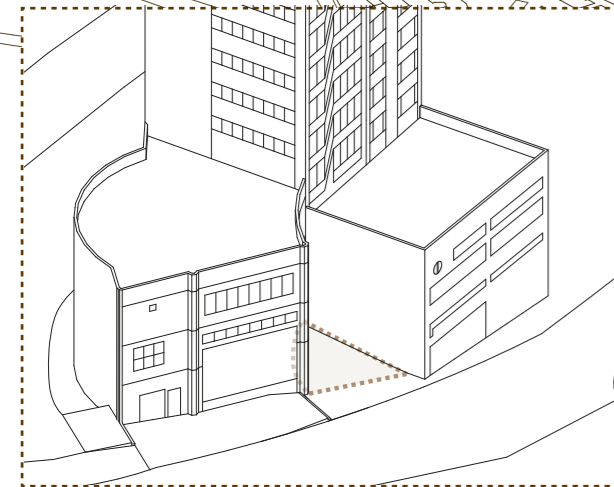
Left-over space is the forgotten empty space in a city. In Central, there are five left-over space can be found. They are a small spaces between the buildings and the inaccessible space which is located under the flyover. The left-over spaces are connected to the pedestrian network and it is possible to transform them into a public space.



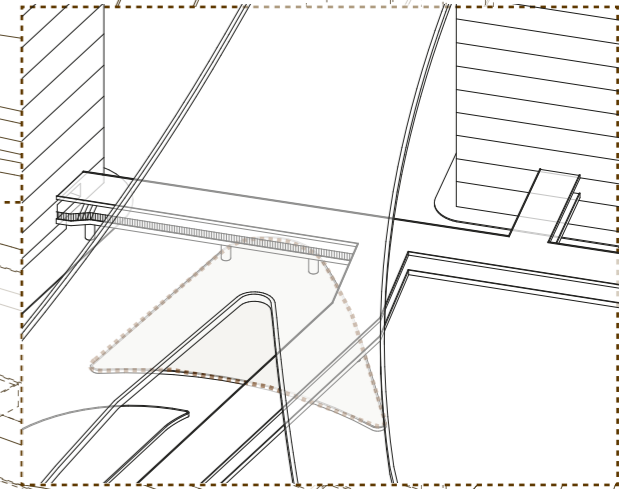
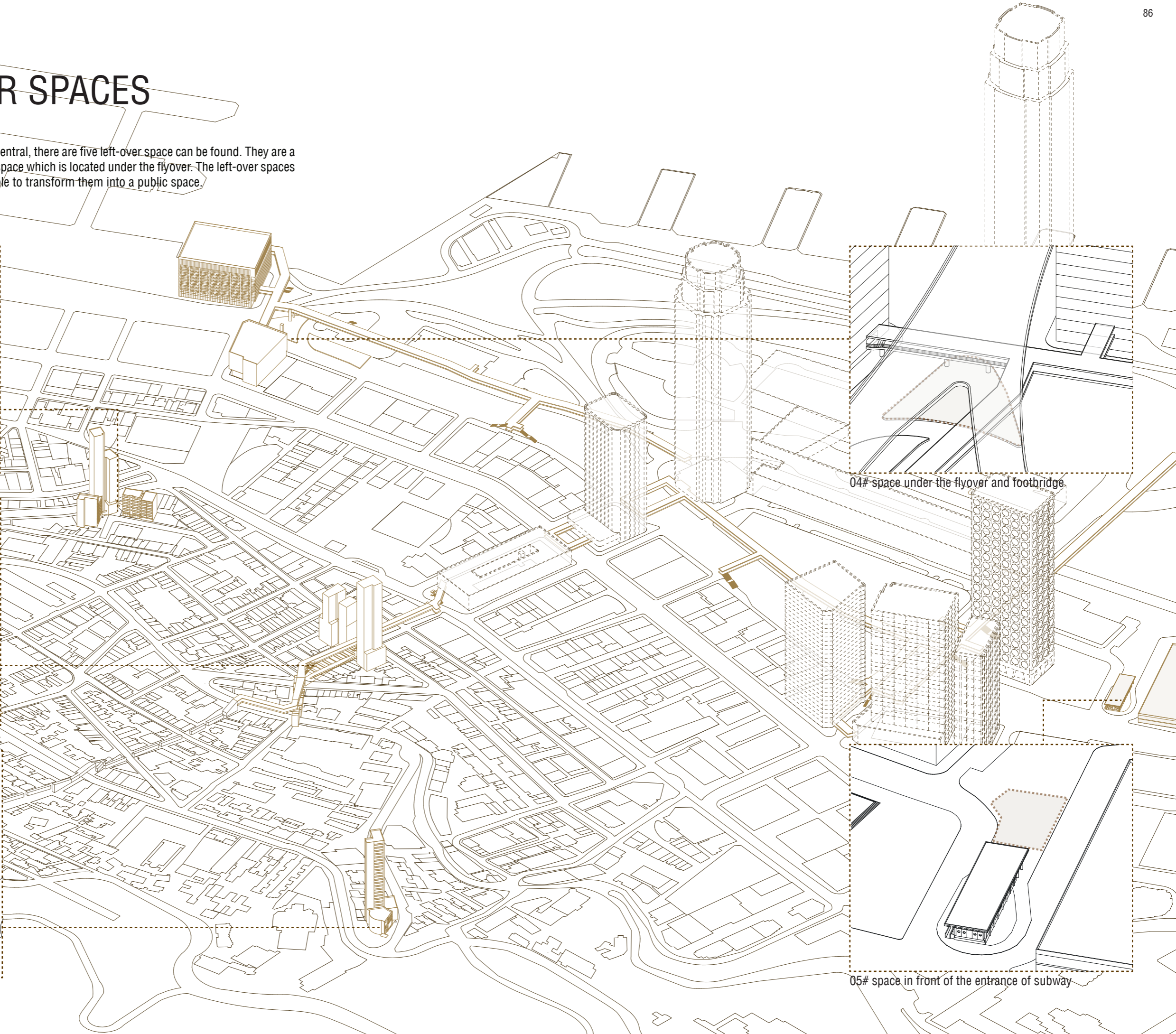
01# gap between the buildings



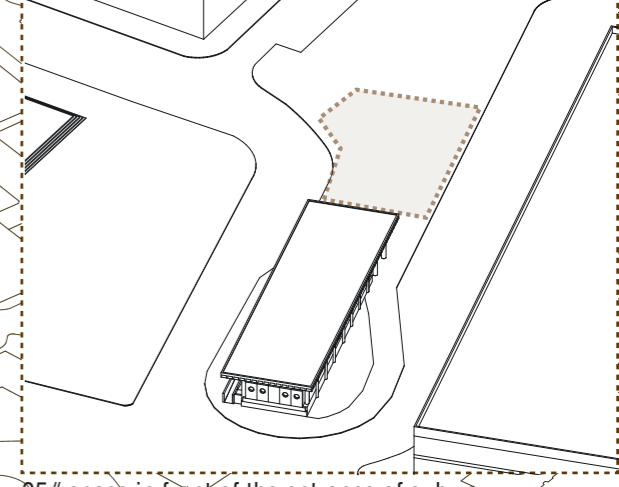
02# space between the building and the staircases



03# triangular space



04# space under the flyover and footbridge



05# space in front of the entrance of subway



# 5.4 PEDESTRIAN FLOW

## POSSIBILITY OF BIKING in Central

In Central, there is no cycling path and bicycle has to be travel on the driveway. To move from the West to the East, the cyclists will go for either Connaught Road Central or Des Voeux Road Central. The permitted speed along Connaught Road Central is actually too fast for cyclist to ride there. Comparing to Connaught Road Central, Des Voeux Road Central where vehicles move slower could be the way for cyclist. However, cycling in Central is still not safe since the cyclists are not separated from the vehicular traffic. In 2012, the cycling-related casualties is 2442, is the highest number in the past 10 years.

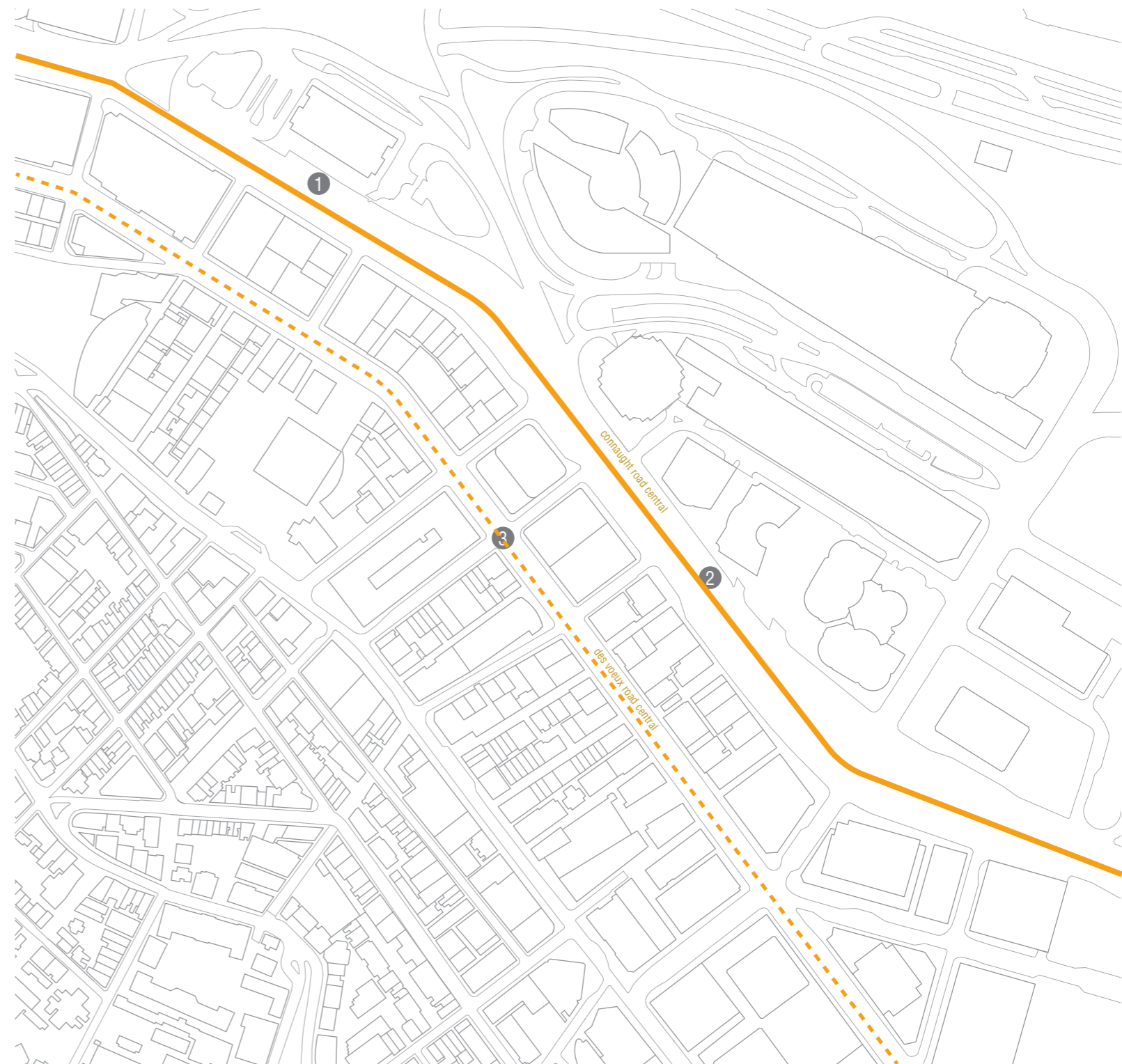


1. the absent of traffic light allows the vehicle move in high speed and the cyclists need to compete with the vehicles. 2. the present of sidewalk railing and narrow roadside increase the danger on the cyclists.



3. the route of the slowest public transport - tram is a safer route for the cyclists who have less road cycling experience. 4. a group of cycling lover formed a group of bike the moment and holds the cycling event regularly.

— more dangerous route  
- - - safer route (follow the tram route)





# DISTRIBUTION OF PUBLIC TRANSPORT

metro, bus, tram and ferry

As a central business district, Central is one of the major transportation hub for Hong Kong. The people can access Central not only by bus, trams and trains. People can also access Central by ferries. The Central ferry piers are situated on the north part of Central. The ferries mostly depart to Outlying Islands, with the exception of pier 1 which served as a government pier, and ferries at pier 7 is departing to Kowloon.

There are 250,000 passengers access and leave Central by train everyday. The Central station is activated in 1980. In 1991-1998, a new railway network was built to connect the new airport and to the city center. The new station - Hong Kong Station is situated in the north part of Central. To connect the two station, a passageway has been built under Connaught Road Central. Most of the entrance and exit of metro is located on the ground floor of the malls.

The photo below illustrates the entrance of metro is one of the concentration points in Central.

- metro - Central and Hong Kong station
- ferry piers
- bus terminal
- tram route

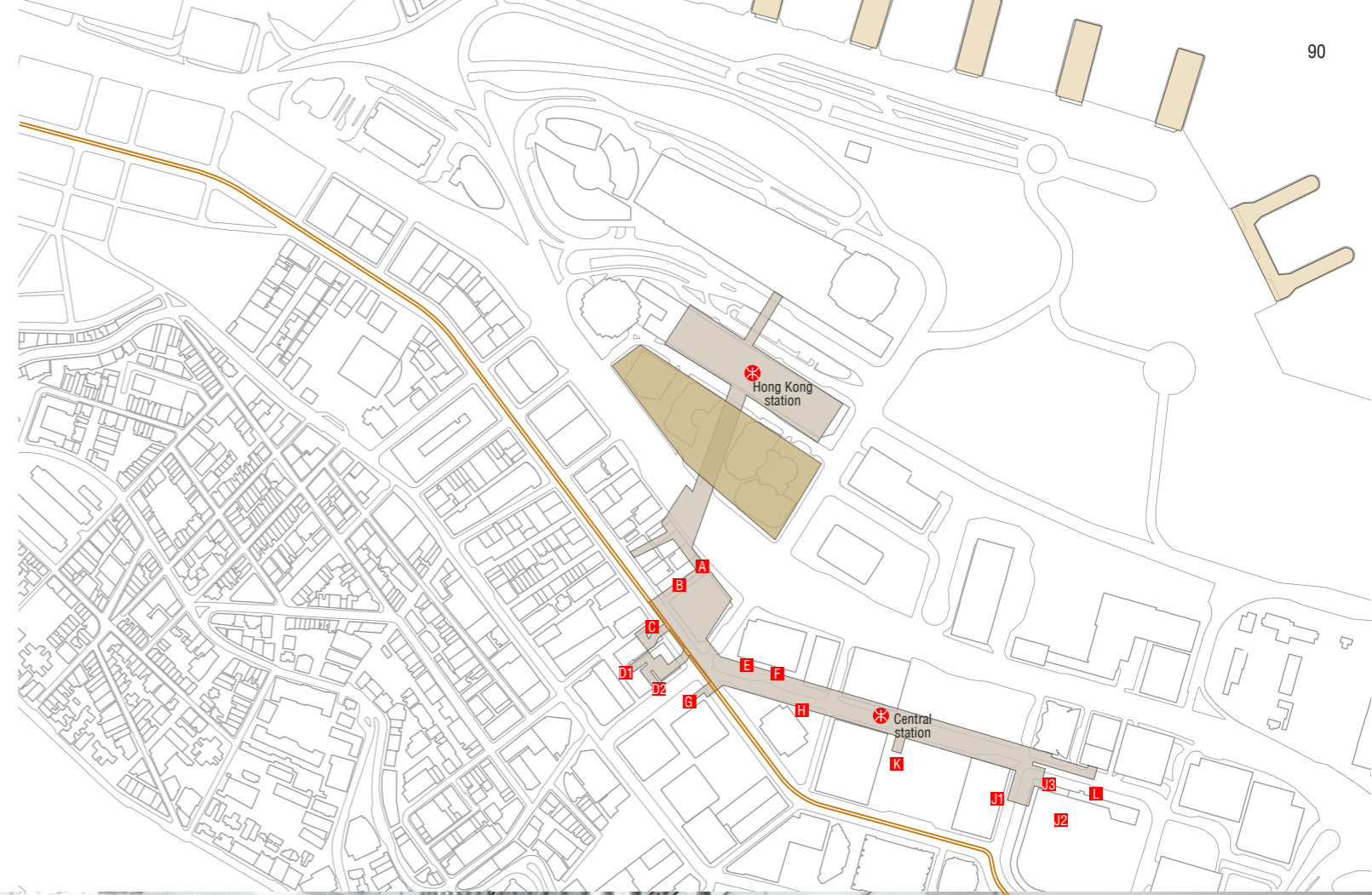
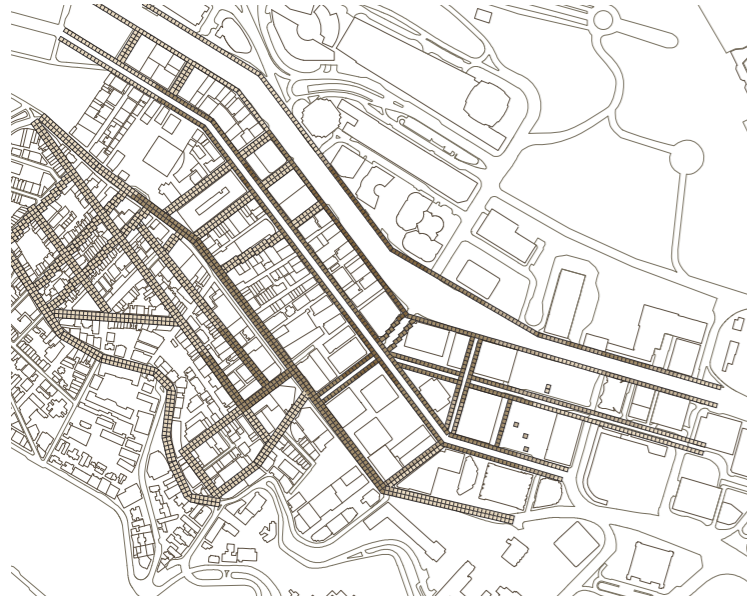


photo has been taken in the exit A



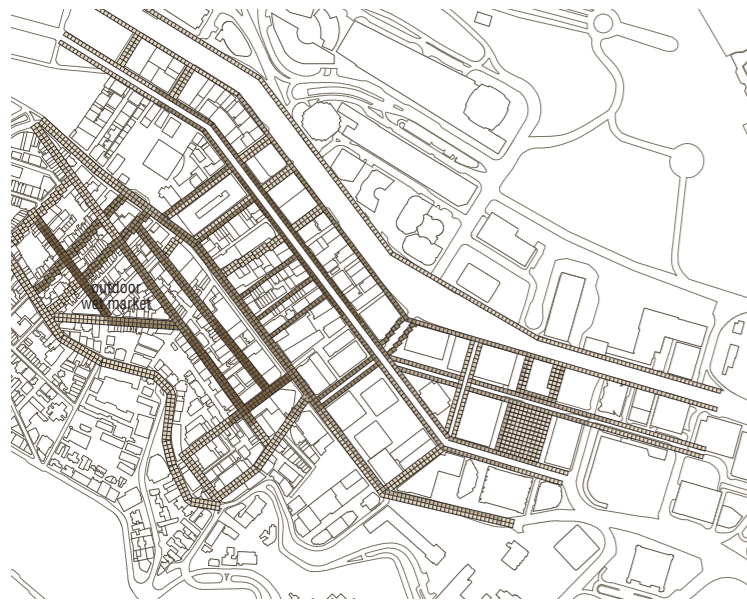
## PEDESTRIAN DISTRIBUTION

weekdays



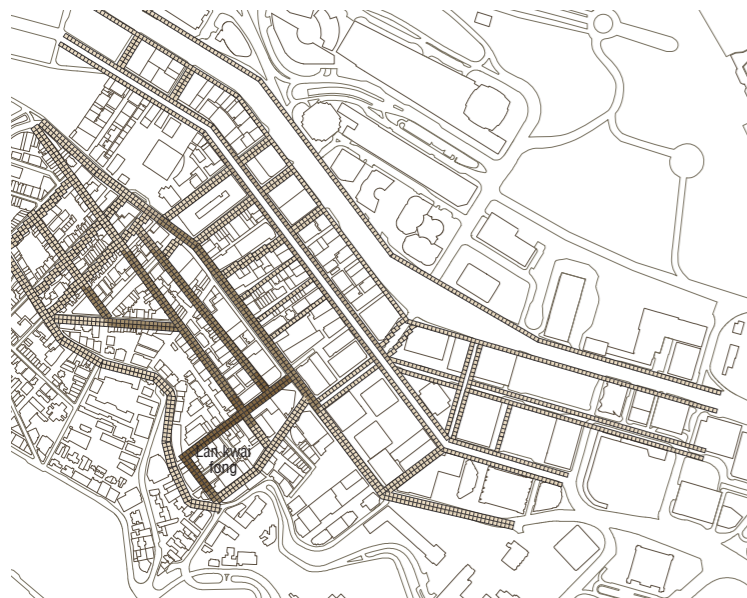
08:30

In the morning, the pedestrians are concentrated in the commercial area. They arrive Central by different transportation method and they spread out from metro station, bus terminal and pier.



13:00

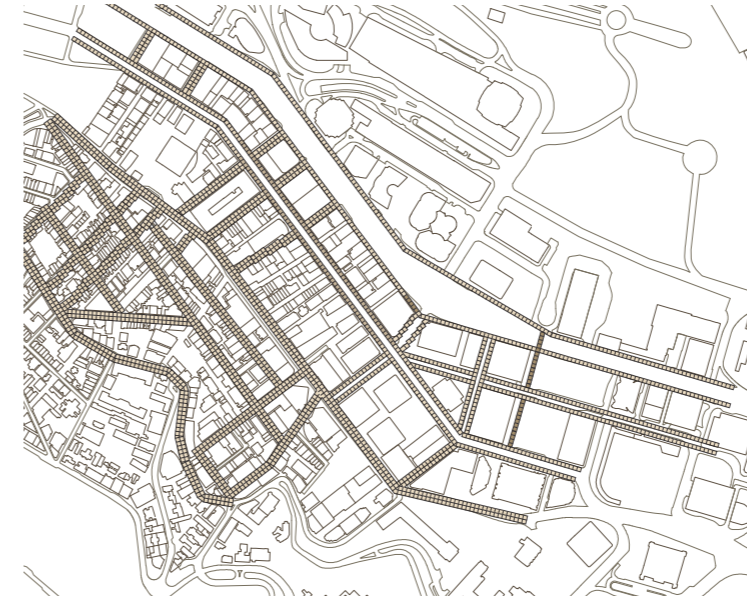
At the lunch hour, the pedestrians are mainly crowded on the street where the food stores or restaurants are located. Besides, the wet market which is situated in the residential area start to operate and hence housewives and domestic worker were staying around those area.



21:00

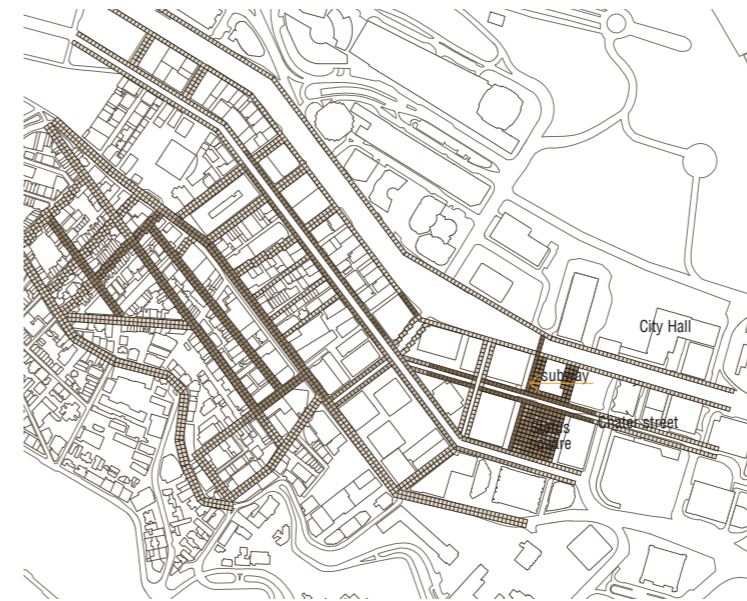
At night, the commercial area becomes silent. The activities in Central are shifting from the commercial area to the bars area. The place is called Lan kwai fong and it is one of the most popular places in Hong Kong for both local residents and foreigners.

weekend or public holiday



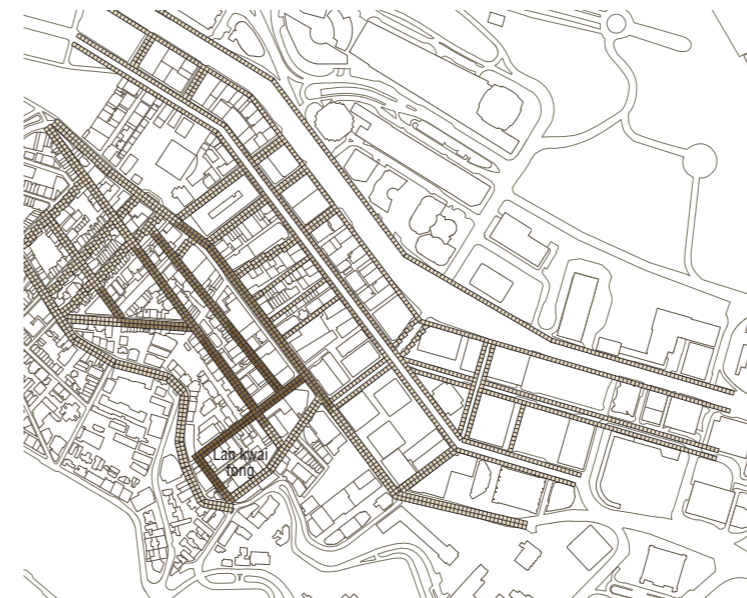
09:30

The morning on the public holiday is different from that on the weekdays. Only small amount of people are having activities in Central. The domestic workers start to gather on the subway towards the harbour.



13:00

In the afternoon, more domestic workers gather in Central. Most of them gather in the subway and some of them stay in the Statue Square, the footbridge and stay outside the Cityhall of Hong Kong. The activities held in the pedestrian street attract many people to stay there as well.



21:00

Lan Kwai Fong still is a major attraction point in the weekend.



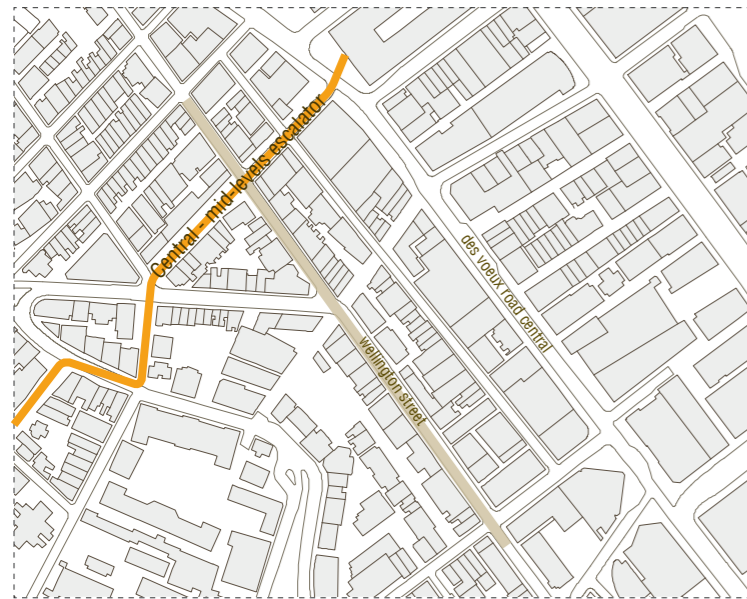
# POINTS WITH HIGHEST PEDESTRIAN FLOW

domestic worker gathering area, Wellington street and Lan Kwai Fong



## domestic workers gathering area

Central is one of the area that the domestic workers would like gather in holiday. They usually spend their day in the Statue Square, outside the City Hall or in the subway where is covered. These places are easy to access and near the public transport station. However, they could only can sit on the ground without any sitting facilities



## Wellington street

The main reason of people concentrate in this street at lunch time is because many restaurants are located along the street. Sometimes, the people have to wait outside the restaurants when the table is not available. The narrow sidewalk and absent of public space make the street even more crowded.



## Lan Kwai Fong

Lan Kwai Fong as an area that can be defined by an L-shaped street - D'Aguilar street, but also can be defined by joining few streets together and form a high-end consumer area.

possibility of street as great space in Central



In Central, people spontaneously using the street for any kind of activity only when the office buildings are shut down on the weekend. People interpret the street space in their own way. However, street activities are only limited to a few spots in Central while most of the other area are suffering from walkability problem. High vehicular speed with no at grade cross facilities, narrow sidewalk, hilly slope, fully enclosed footbridges with no street character and invisible pocket parks create series of problem in terms of walkability.





# **06 DESIGN DEMONSTRATION**

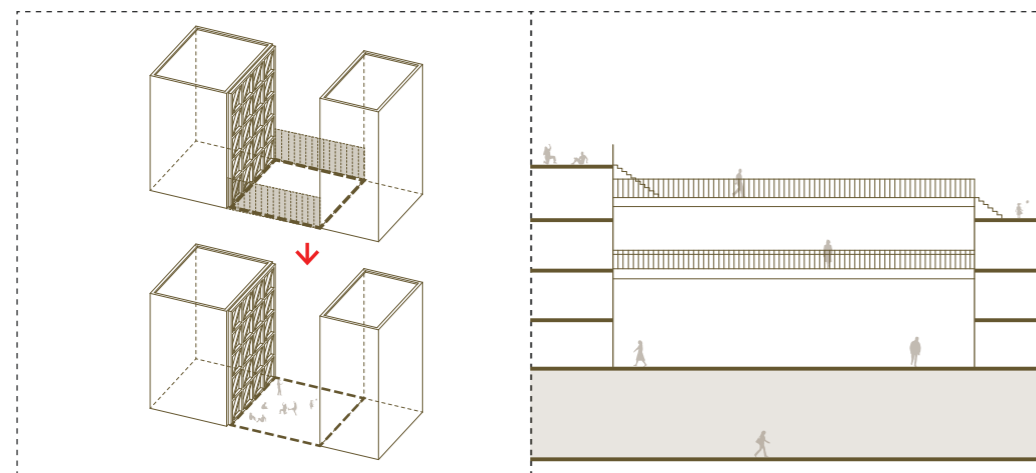


# 6.1 DESIGN CONSIDERATION

## LOCATION

The location of the “playground” is crucial in injecting energy to a city in order to enhance the walkability. Selected sites should be connected to the existing pedestrian network so that those disconnected pedestrian network could be re-linked by adding new public programs in-between. The public space study in previous chapter shows the major weakness of the existing public park and sitting-out area in Hong Kong is that the location is hardly visible from a distance and some of them are even enclosed by 2m high fence wall. In order to enhance the walkability of the city, publics are encouraged to use the public spaces more frequently. Location of each sites are carefully articulated so that the added-on functions could tie up closely with existing pedestrian network and extend the possibilities for public activity to take place.

Although Hong Kong is a high density city and crowded with buildings, there are still many left-over spaces that have not been fully utilized. In between the major transportation facilities, pedestrian infrastructure and building lots, 10 sites were selected for design enhancement.



1. left-over space

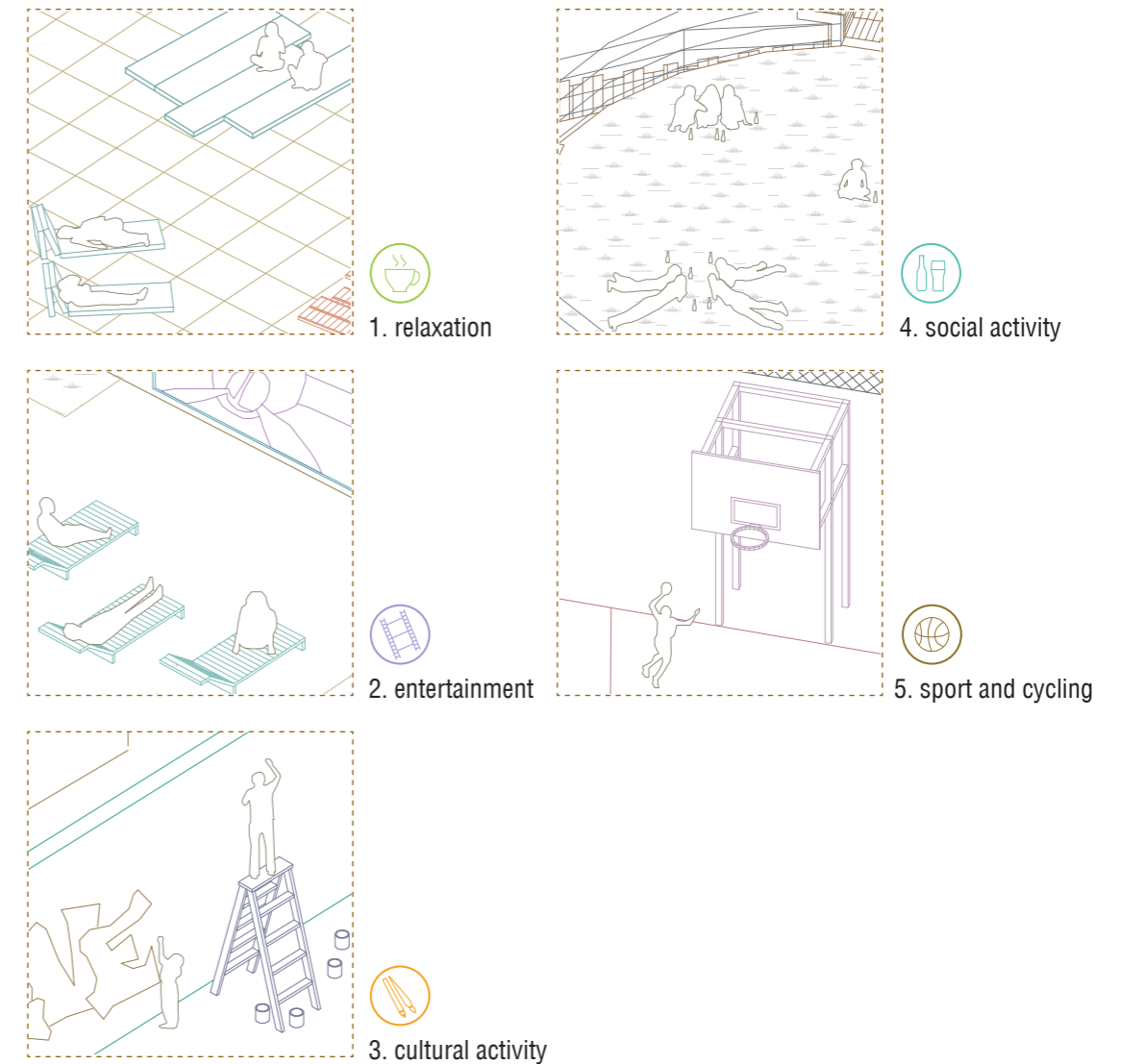
2. footbridge or elevated escalator

## FORM OF INTERVENTION

The “playgrounds” are injected to a city as a form of architecture not only a landscape or street furniture. To maximize the space for public use and enhance the pedestrian experience, the “playgrounds” is not limited on street level but also elevated level. All “playgrounds” are injected to the city without changing the fundamental urban structure.

## ACTIVITY

“Playground” is designed to increase the possibility for public activities to take place. People spending their time and willing to stay on the street can enrich the social life and enhance the sense of belonging to the city. Five types of “playground”, such as place for relaxation, entertainment, cultural activity, social activity and sport will be formed at selected sites. Various activity and character of different “playgrounds” will provide various medium for different activities to take place.



1. relaxation

4. social activity

2. entertainment

5. sport and cycling

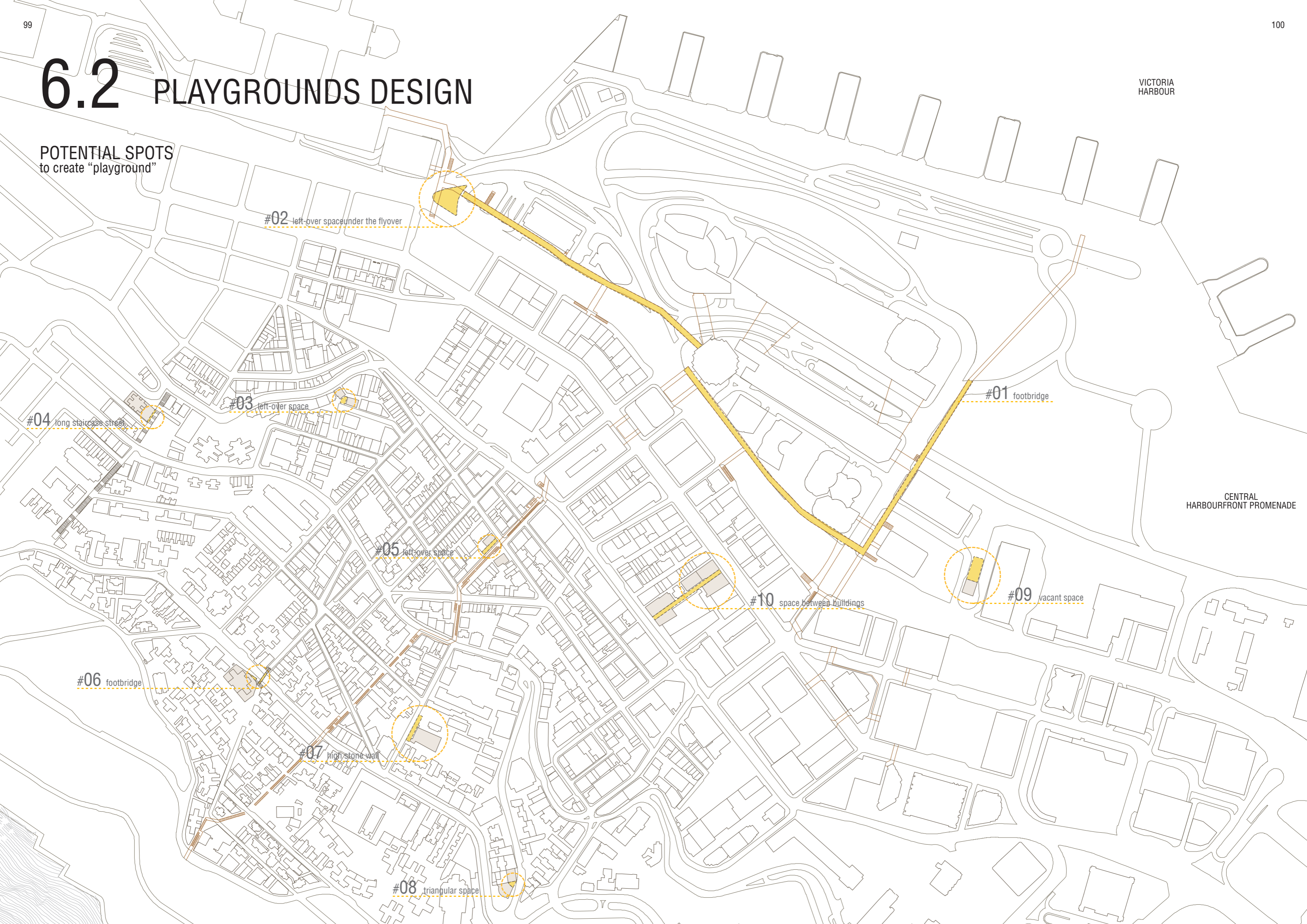
3. cultural activity



# 6.2 PLAYGROUNDS DESIGN

VICTORIA HARBOUR

POTENTIAL SPOTS to create "playground"



#02 left-over space under the flyover

#03 left-over space

#04 long staircase street

#05 left-over space

#06 footbridge

#07 high stone wall

#08 triangular space

#01 footbridge

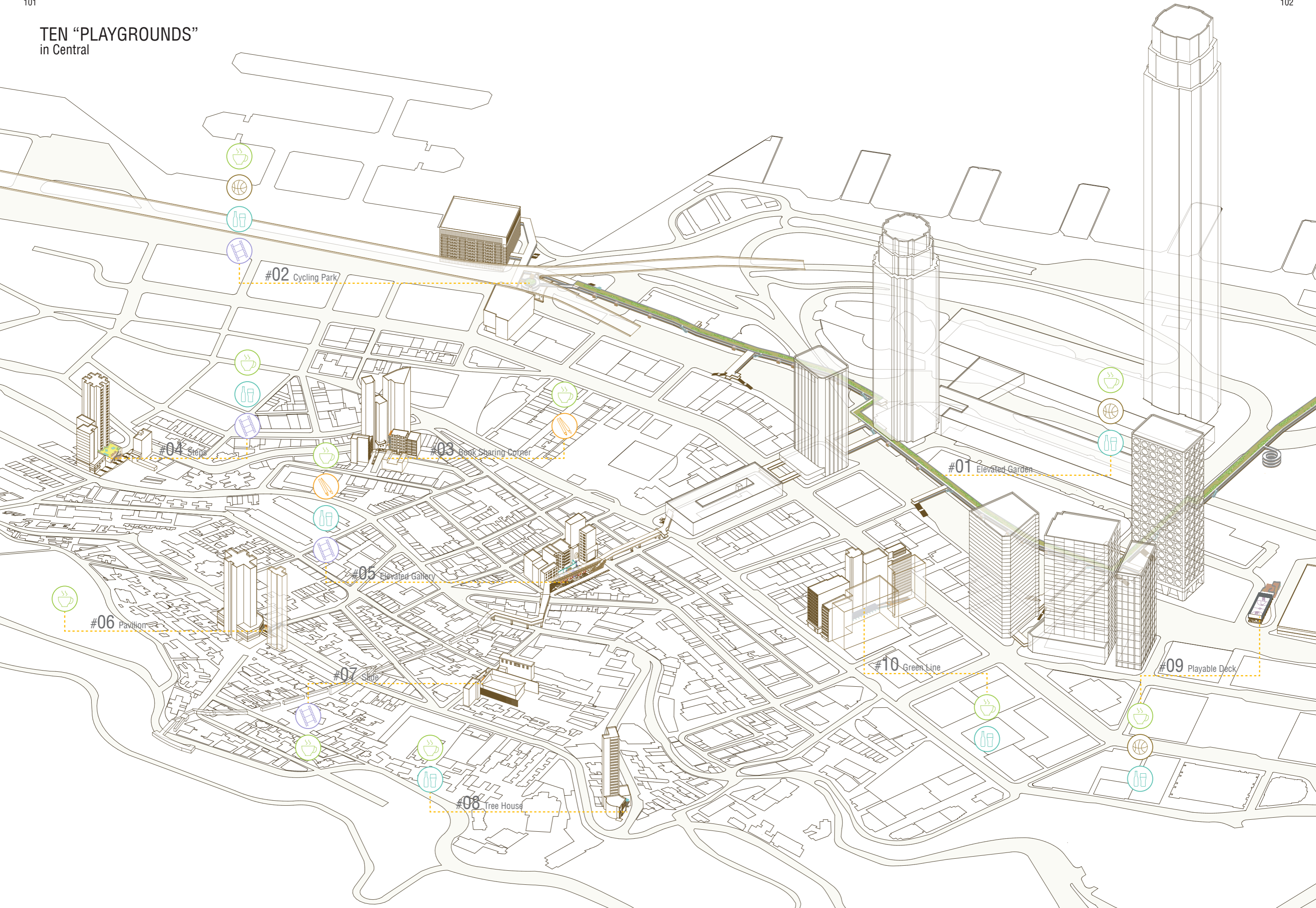
#10 space between buildings

#09 vacant space

CENTRAL HARBOURFRONT PROMENADE



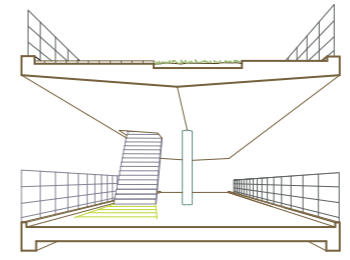
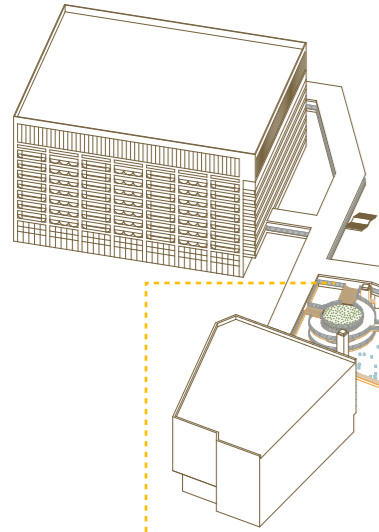
# TEN "PLAYGROUNDS" in Central



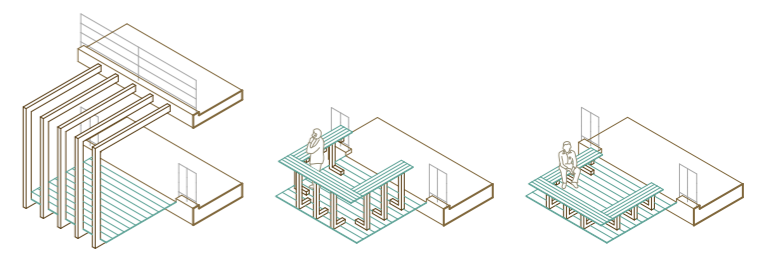


# #01 ELEVATED GARDEN place of relaxation

The elevated garden is situated on the roof of the footbridge which runs from Sheung wan in the West to the Central harbourfront promenade in the East. The footbridge is the only path to cross the Connaught Road Central (an eight-lane high speed road) connecting the adjacent office towers and shopping malls. Since there is no "ground-level" pedestrian circulation path in this area, the injected "playground" focuses on extending the elevated space in order to enlarge the platform of public activities. The roof of the covered walkway is transformed into a roof garden and connected the lower level with accessible ramp and extended stairs. The roof promenade will definitely be an oasis over a eight-lane heavy traffic driveway.

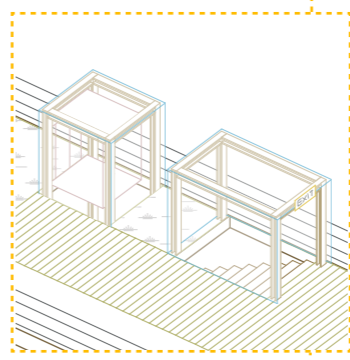


To catch the people attention, some graphic or signal will be drawn on the floor.



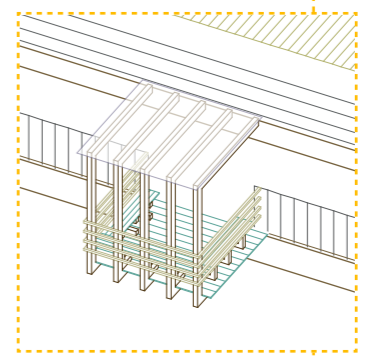
The structure is simple and easy to install.

A bar table or bench can be placed in the modular structure to accommodate different user.



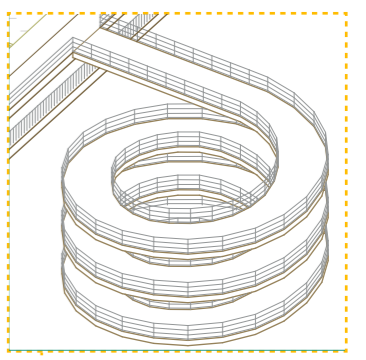
### D. internal staircase and elevator

The disable people can access the elevated garden by using the elevators. Apart from the exposed staircase, few internal staircases is also provided to catch the pedestrian attention



### E. exposed seat area

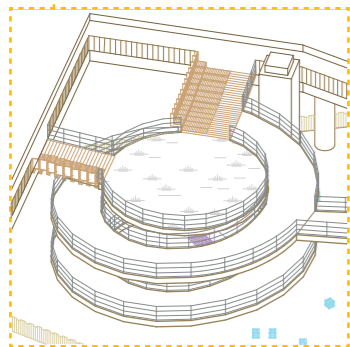
The exposed seat area is designed for the group gathering or resting.



### F. entrance of elevated cycling path

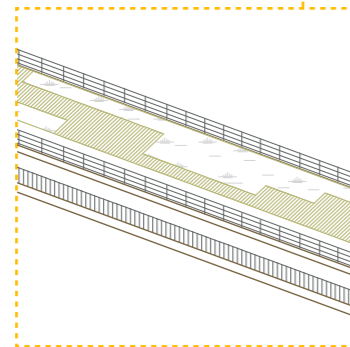
The entrance is located near the Central harbourfront promenade.

## 1. elements of the elevated garden



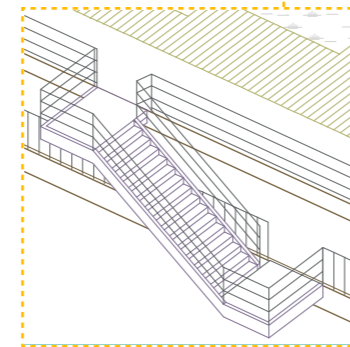
### A. entrance of elevated cycling path

The spiral ramp is designed for the cyclists and disable people access to the elevated garden.



### B. elevated cycling path

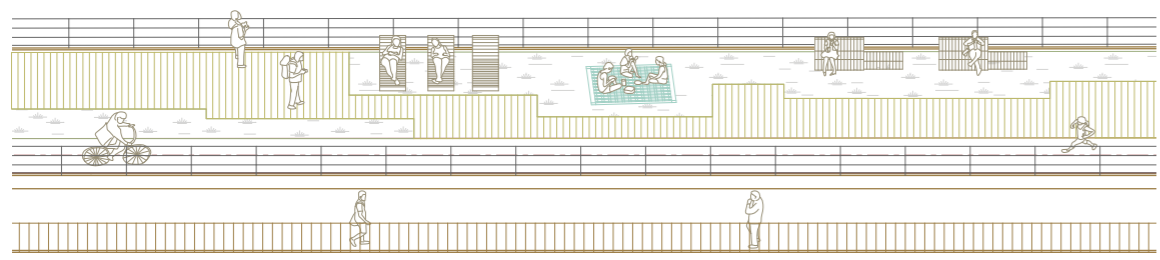
The elevated cycling path provide a safer route for the cyclists travel from Sheung wan to the districts in the East.



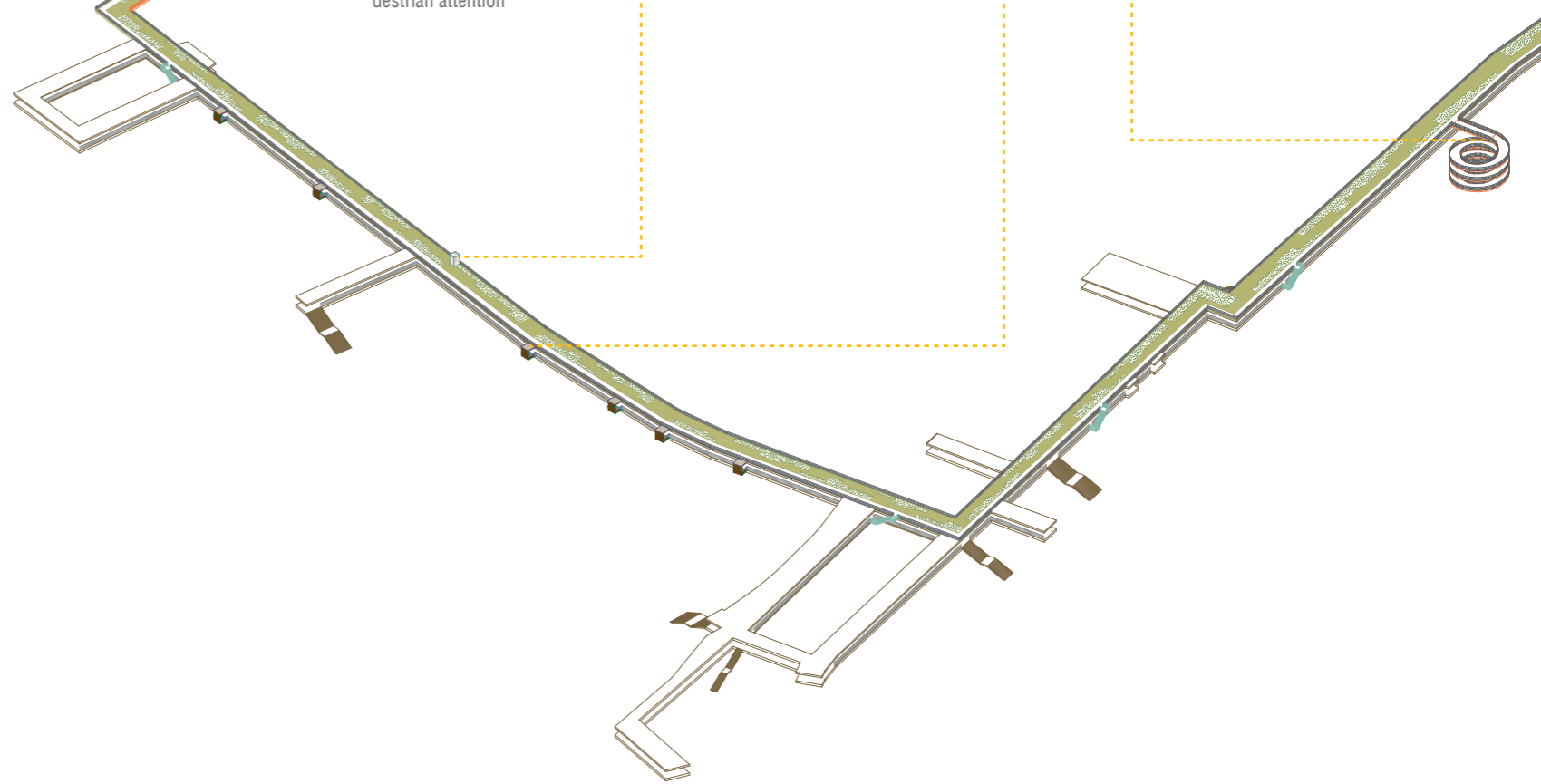
### C. exposed staircase

The elevated garden can be reached through the staircases on the footbridge level.

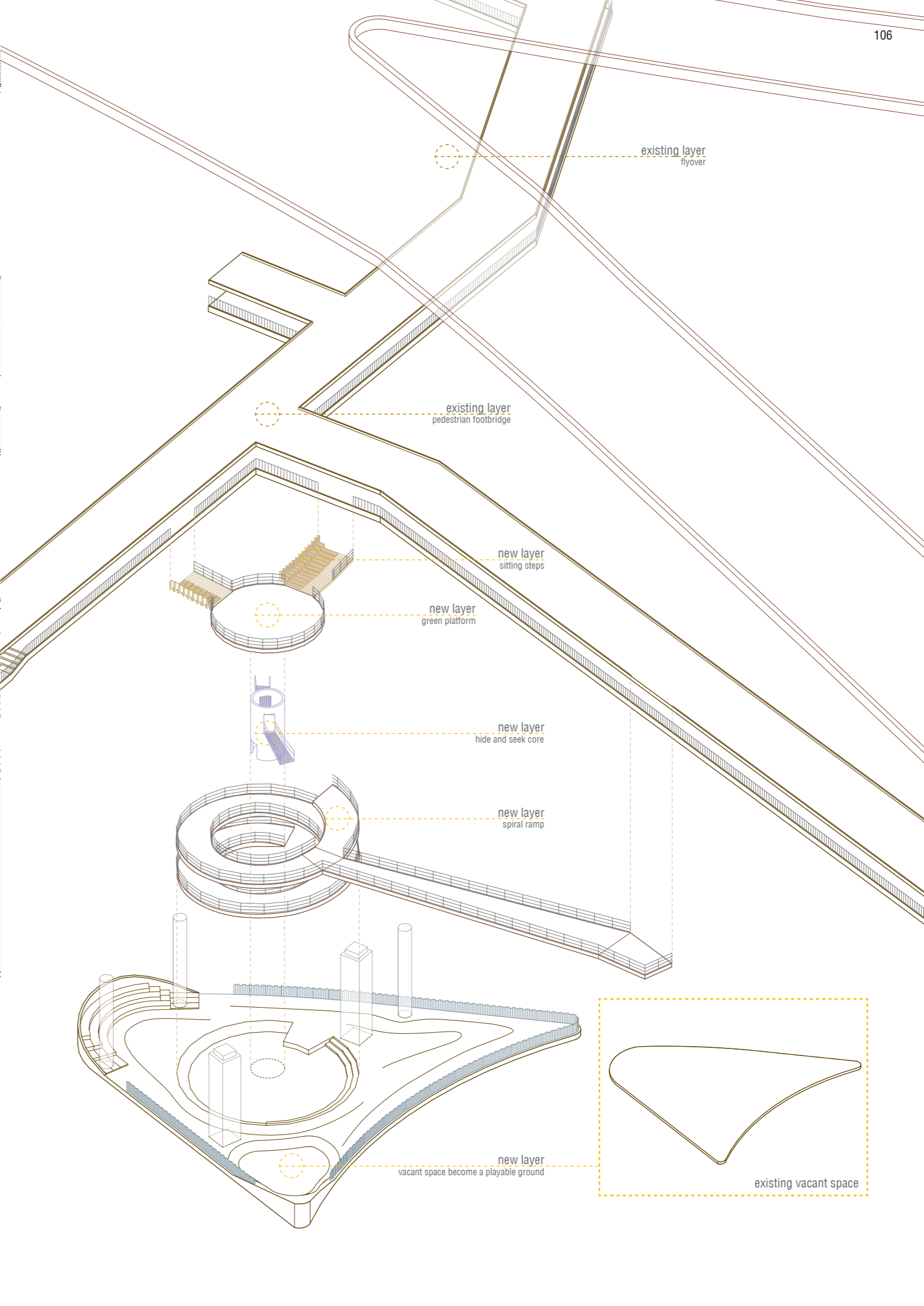
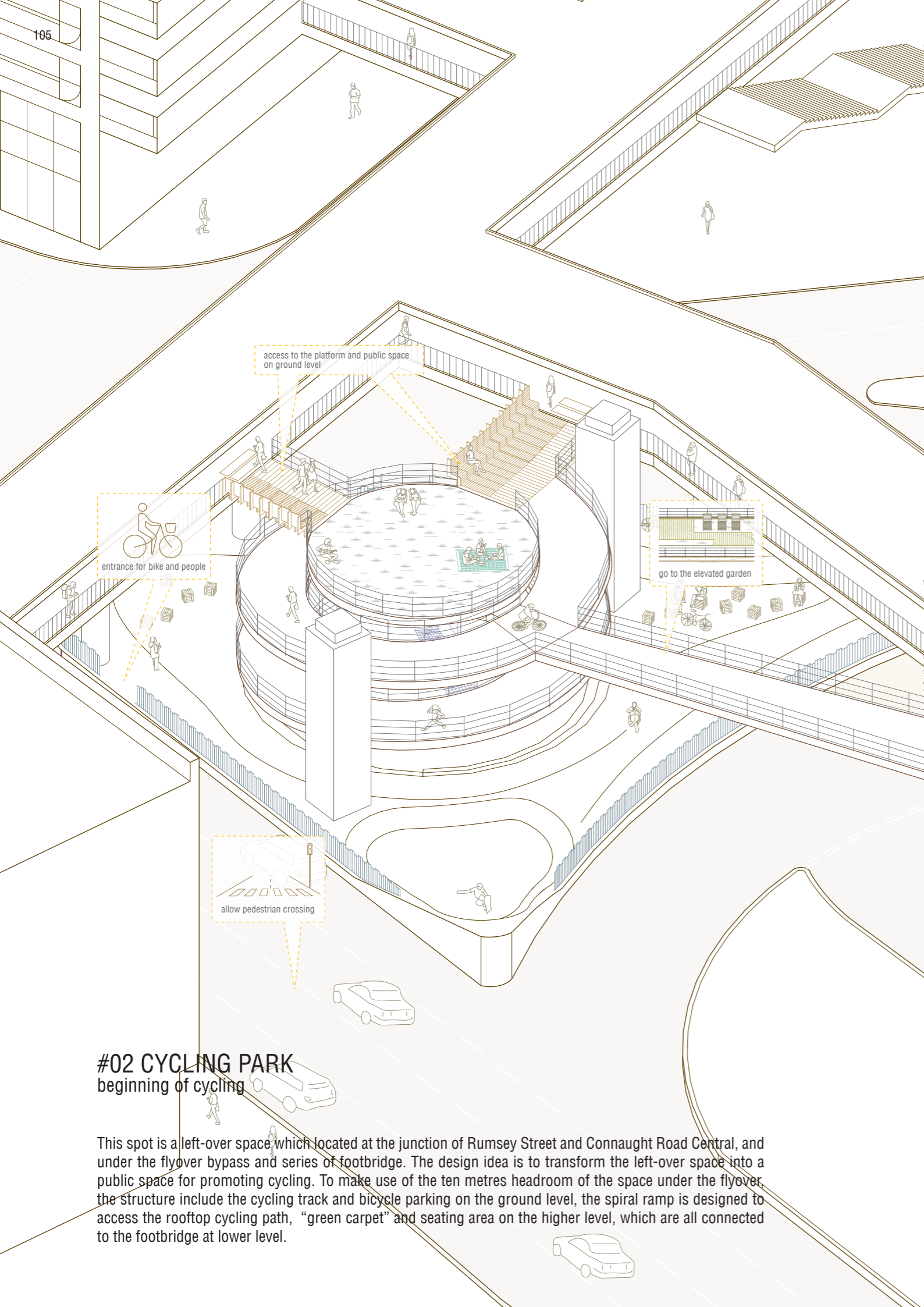
## 2. activities on the elevated garden



- 01. cycling
- 02. photo taking
- 03. sunbathing
- 04. picnicking
- 05. enjoying lunch time
- 06. jogging



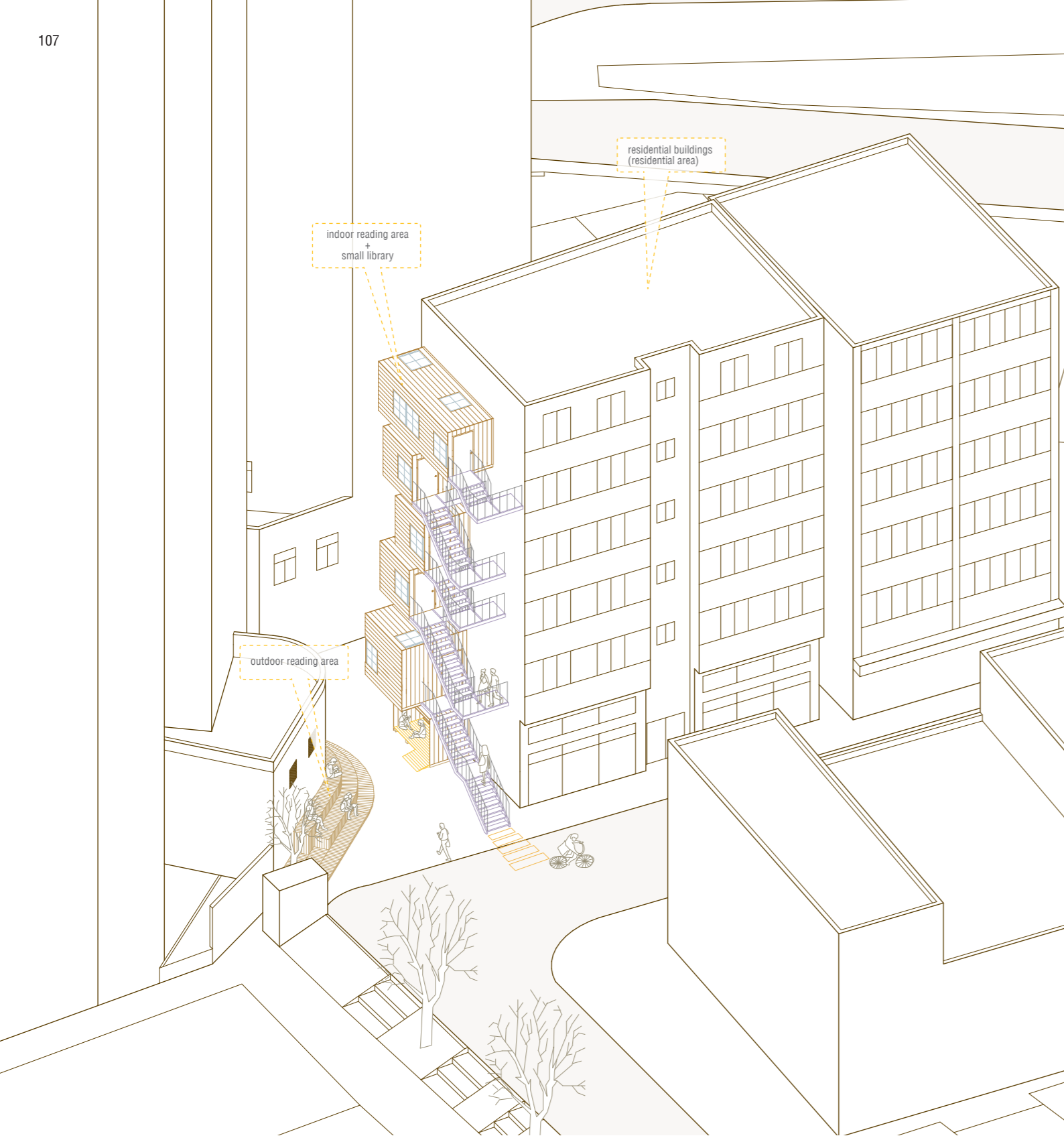




## #02 CYCLING PARK beginning of cycling

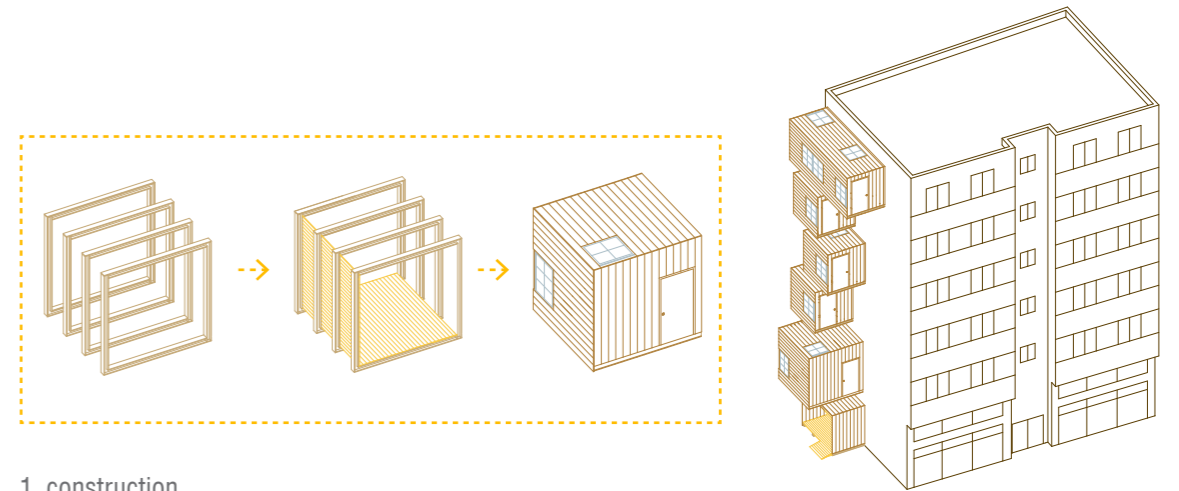
This spot is a left-over space which located at the junction of Rumsey Street and Connaught Road Central, and under the flyover bypass and series of footbridge. The design idea is to transform the left-over space into a public space for promoting cycling. To make use of the ten metres headroom of the space under the flyover, the structure include the cycling track and bicycle parking on the ground level, the spiral ramp is designed to access the rooftop cycling path, "green carpet" and seating area on the higher level, which are all connected to the footbridge at lower level.





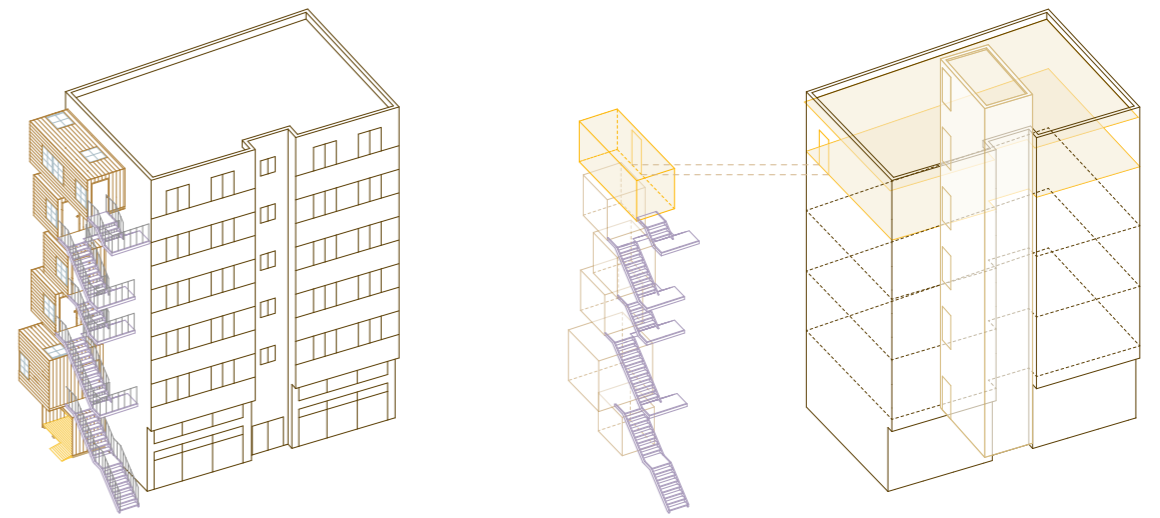
### #03 BOOKS SHARING CORNER community library

In these few decades, the connection between the neighbours is getting weaker while the economic is rapidly growing. To enhance the sense of belonging of a community, a books sharing corner is designed in the residential area in Central. The design is to transform the existing vacant site into an outdoor reading area and a place for gathering. Several blocks are stacked up next to a common side wall of an existing building to form a vertical library so that the residents nearby can leave their book on the bookshelf and take away the other book. This sharing action provides a place to exchange their books and experience, and hence interaction between people are induced.



#### 1. construction

The boxes can be produced in the factory and installed it on the wall of the building on-site to minimize the construction and impact on the residents.

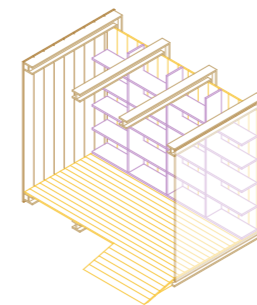


#### 2. accessibility

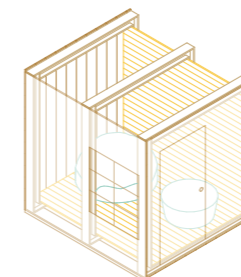
The boxes can be accessed by using the external staircases in the initial stage.

The external boxes erode the building gradually and transform the residential units into public space. In this stage, the boxes can be accessed internally from the building.

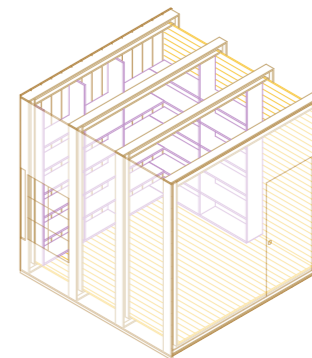
#### 3. function



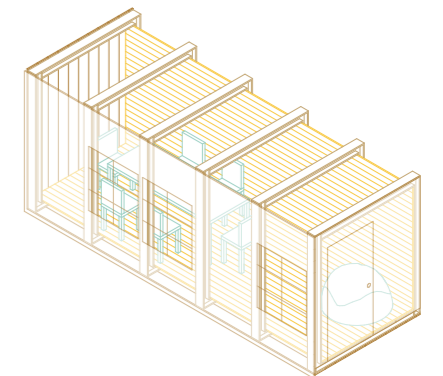
A. bookshelf on the ground level



B. single reading "box"

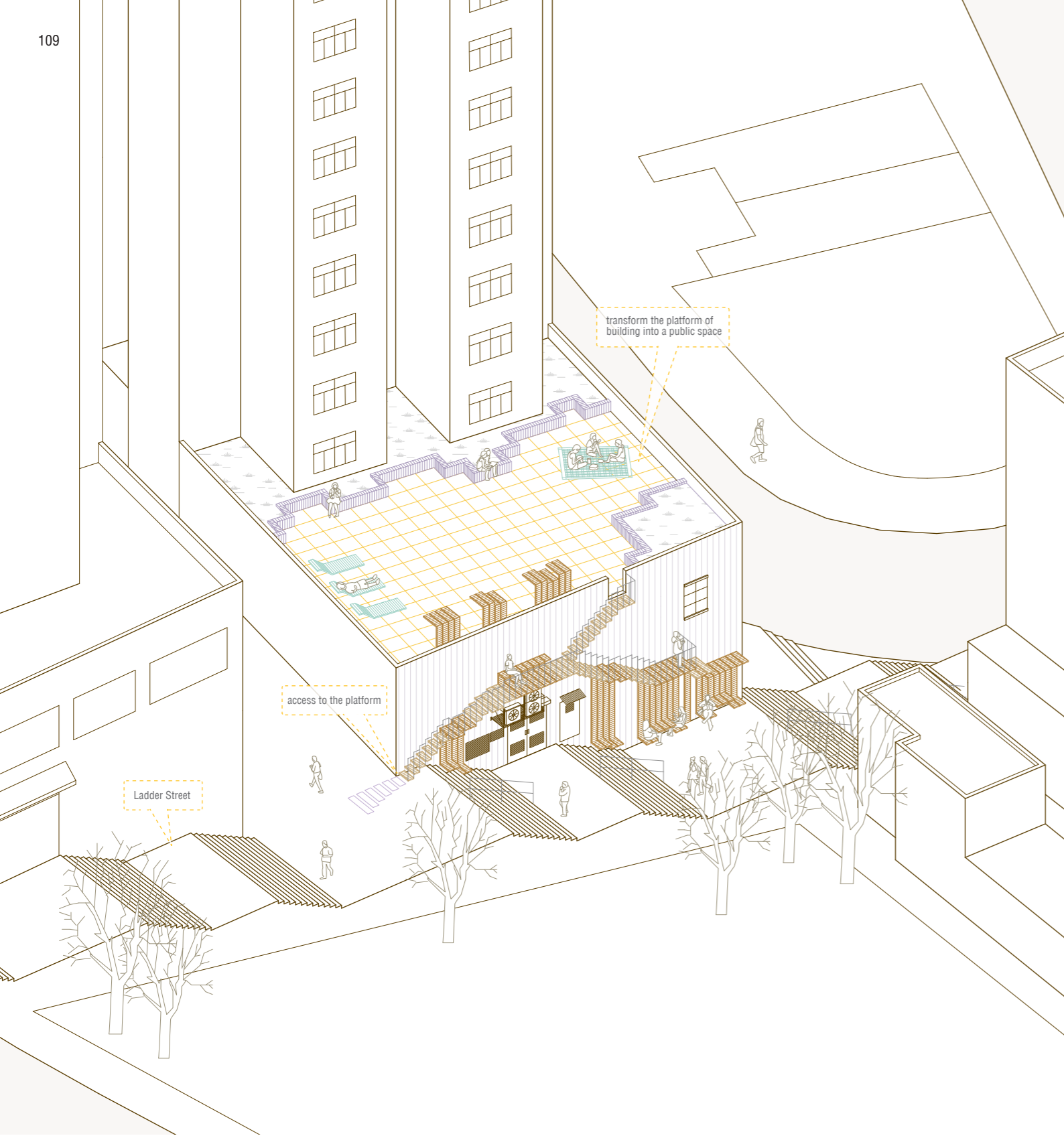


C. book sharing "box"



D. gathering or meeting "box"

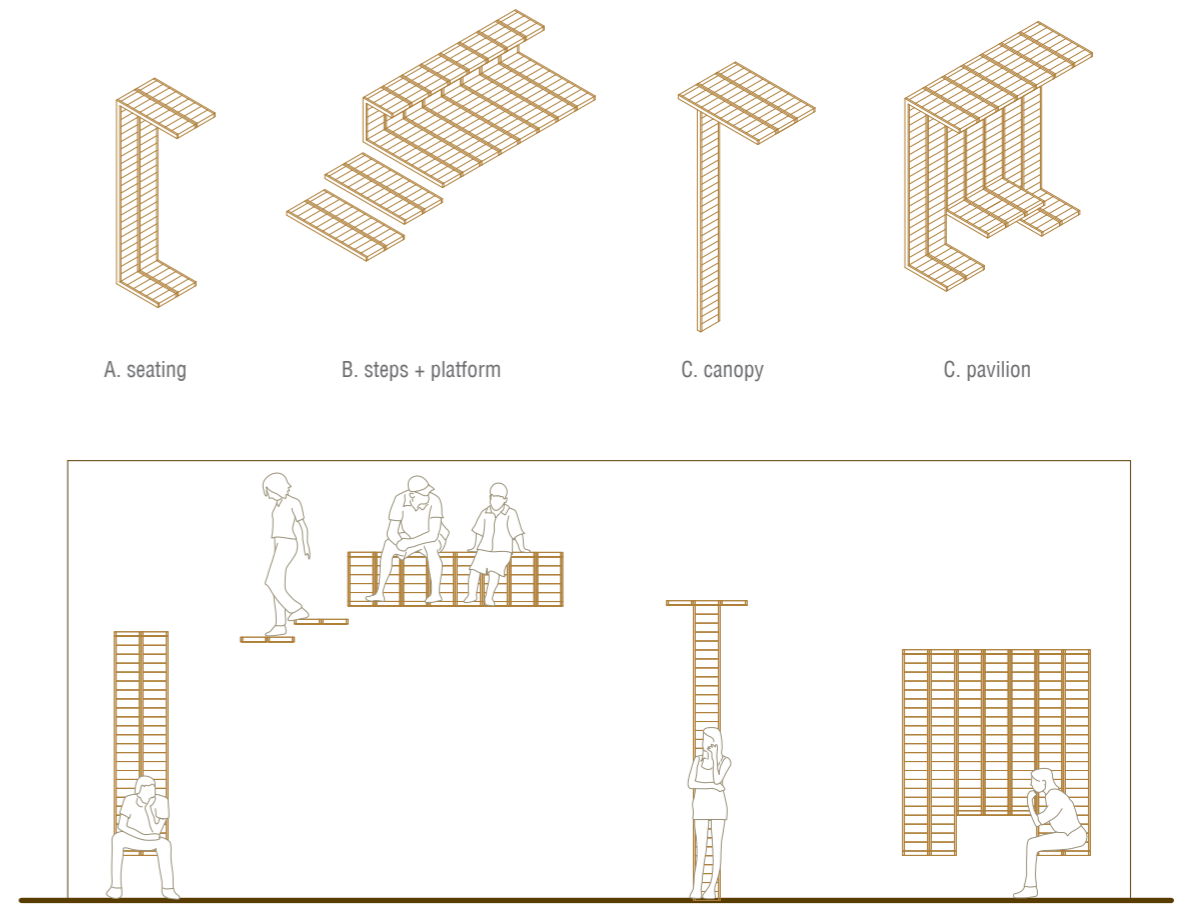




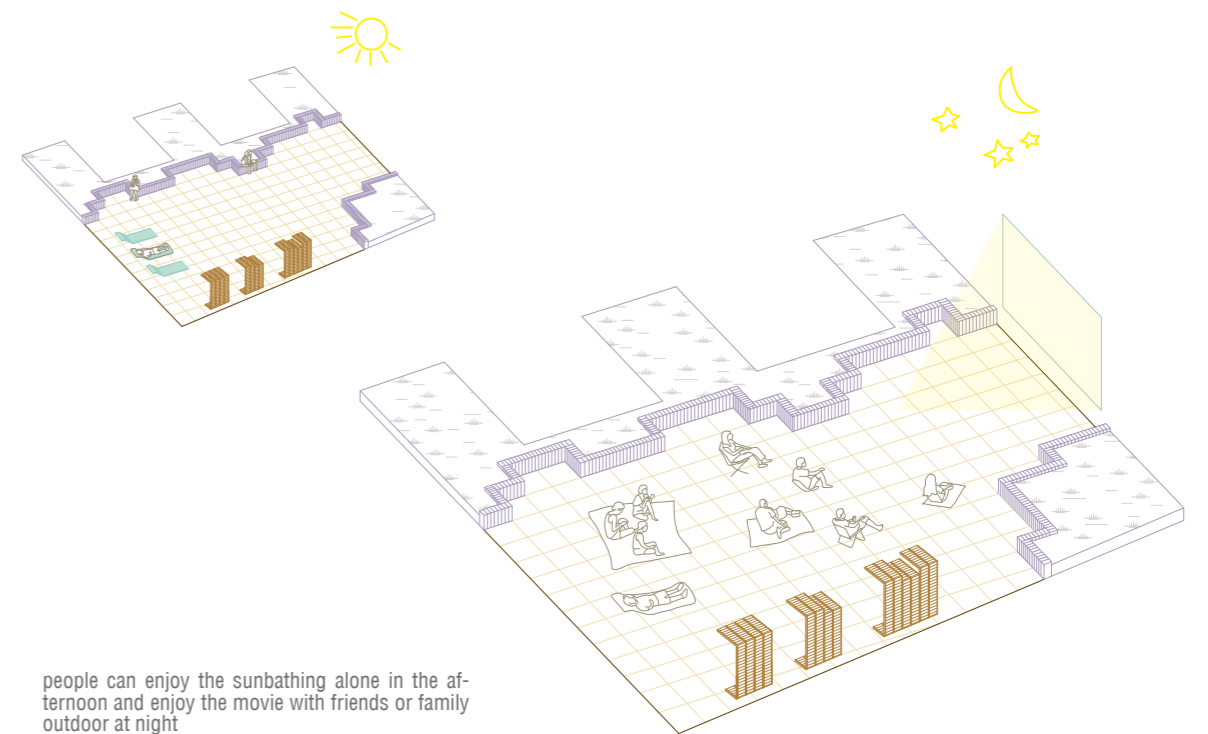
**#04 STEPS**  
seating facilities

The topography of Hong Kong Island is dominated by steep, hilly terrain, and Central is one of the district that has significant level difference - Half of the street in Central is formed by the steep driveway and steps at the side. One of the famous attraction, Ladder Street is entirely formed by granite steps. The intervention idea is to incorporate a series of wooden elements to enrich the walking journey of climbing up to the mid-level. The system consists of steps, seating, pavilions and platform, and they are fixed to the adjacent wall to minimize the obstruction to the major circulation.

1. the elements of the system



2. activity



people can enjoy the sunbathing alone in the afternoon and enjoy the movie with friends or family outdoor at night





elevated gallery box

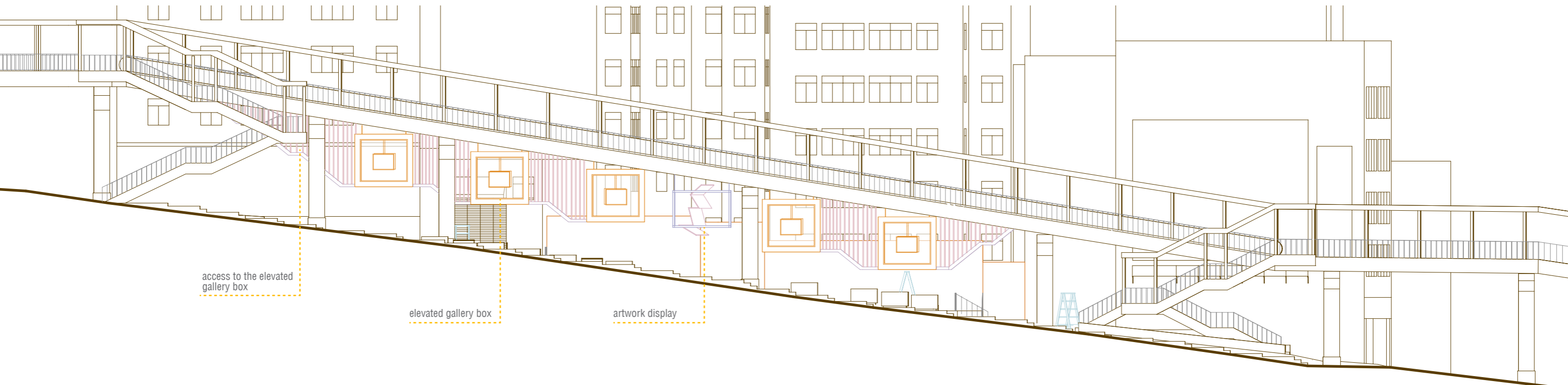
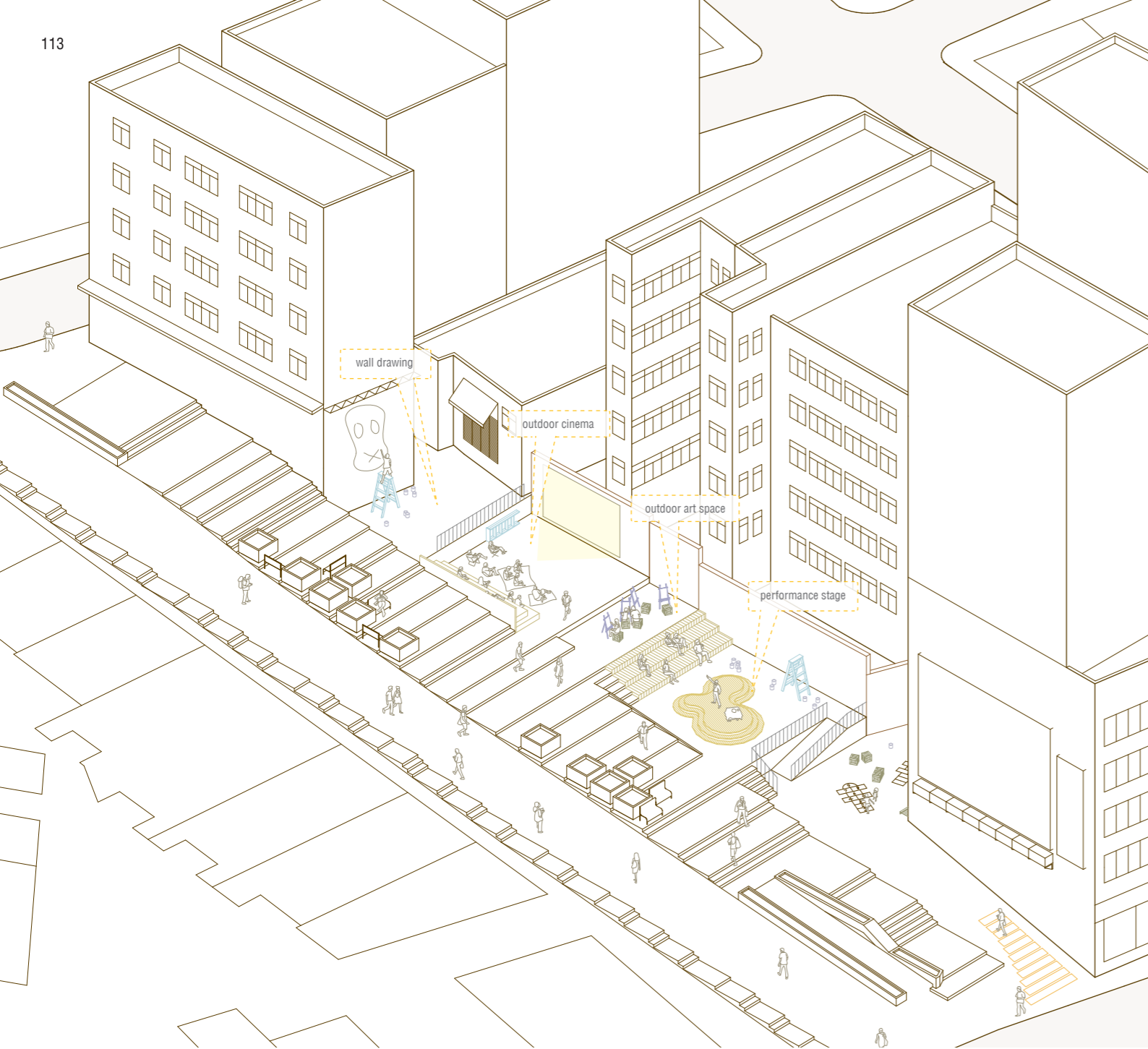
outdoor art space

## #05 ELEVATED GALLERY

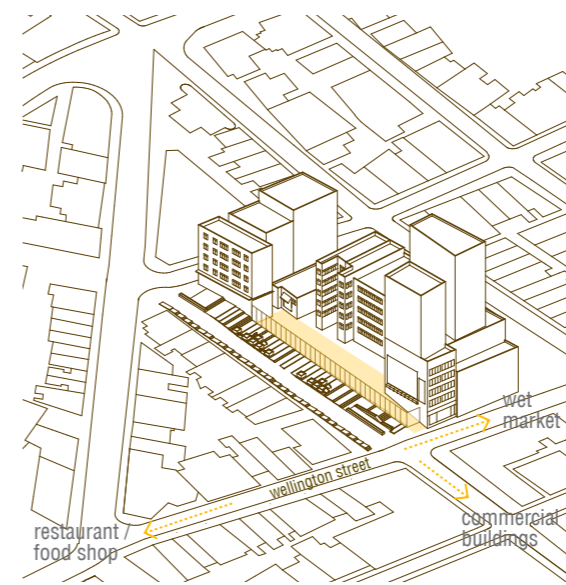
public art space

The design concept of elevated gallery and public art space is merging the cultural activity into the pedestrian transportation system, thus enhance the walkability by inducing activities to take place. The elevated gallery is suspended under the Central to mid-level escalator and walking system which is elevated above street level between Lyndhurst Terrace and Wellington Street. It can be accessed through the escalator level. Besides, the terrace underneath is designed as a public art space to link with the existing staircase and slope. It also provides a sitting area to ease the congestion in that area. The ground level art space and the elevated gallery greatly enhance the walkability of the surrounding area.



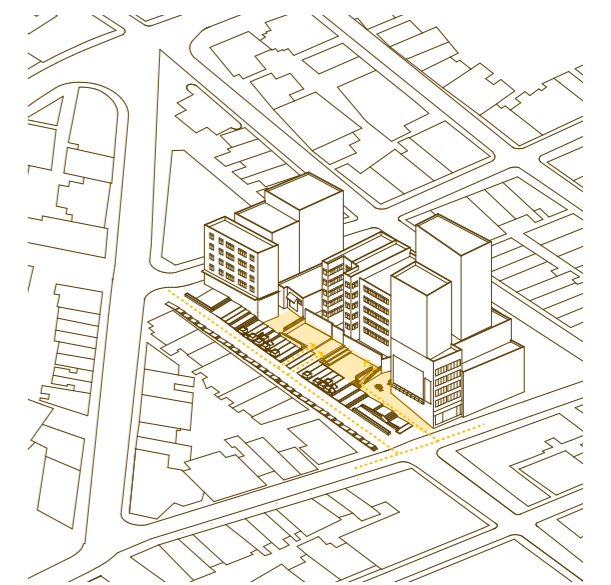


1. transform the left-over space into a public space



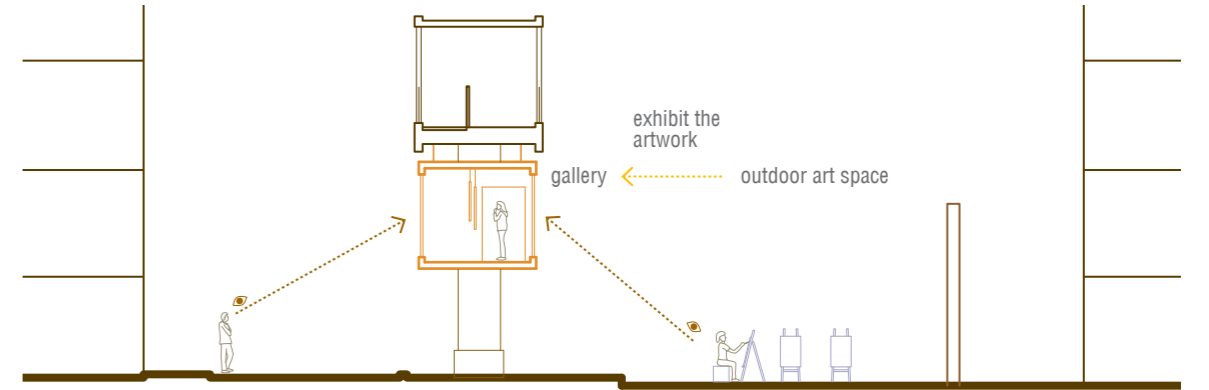
The left-over space is located on the center of three busy area in three directions in the afternoon. A public space is needed for resting

2. accessibility



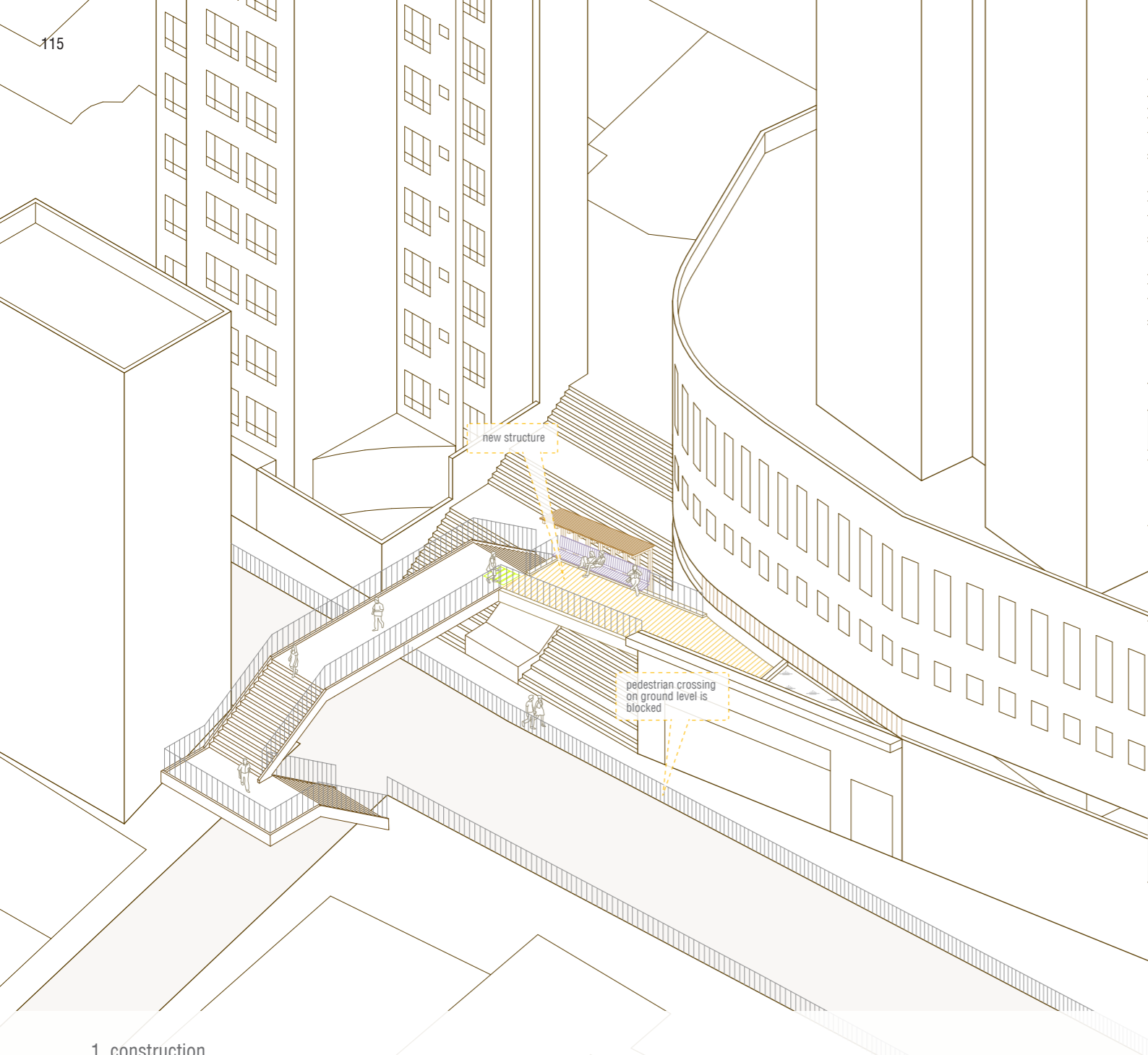
The space is connected with the existing slope and ramp is provided within the space, allowing the disabled people to access.

3. activity

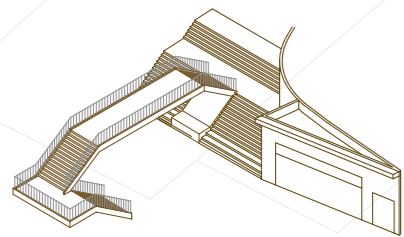


The artworks or photos of Central can be displayed in the gallery. The openings of the elevated gallery box are facing the public art space and the slope to attract the attention of pedestrian, at the same time, and the gallery boxes become the exhibit.

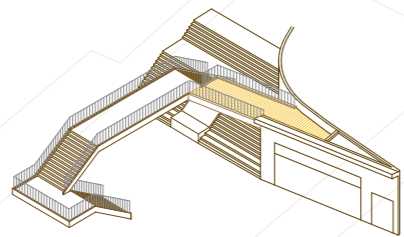




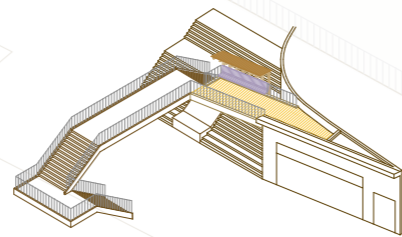
1. construction



existing footbridge



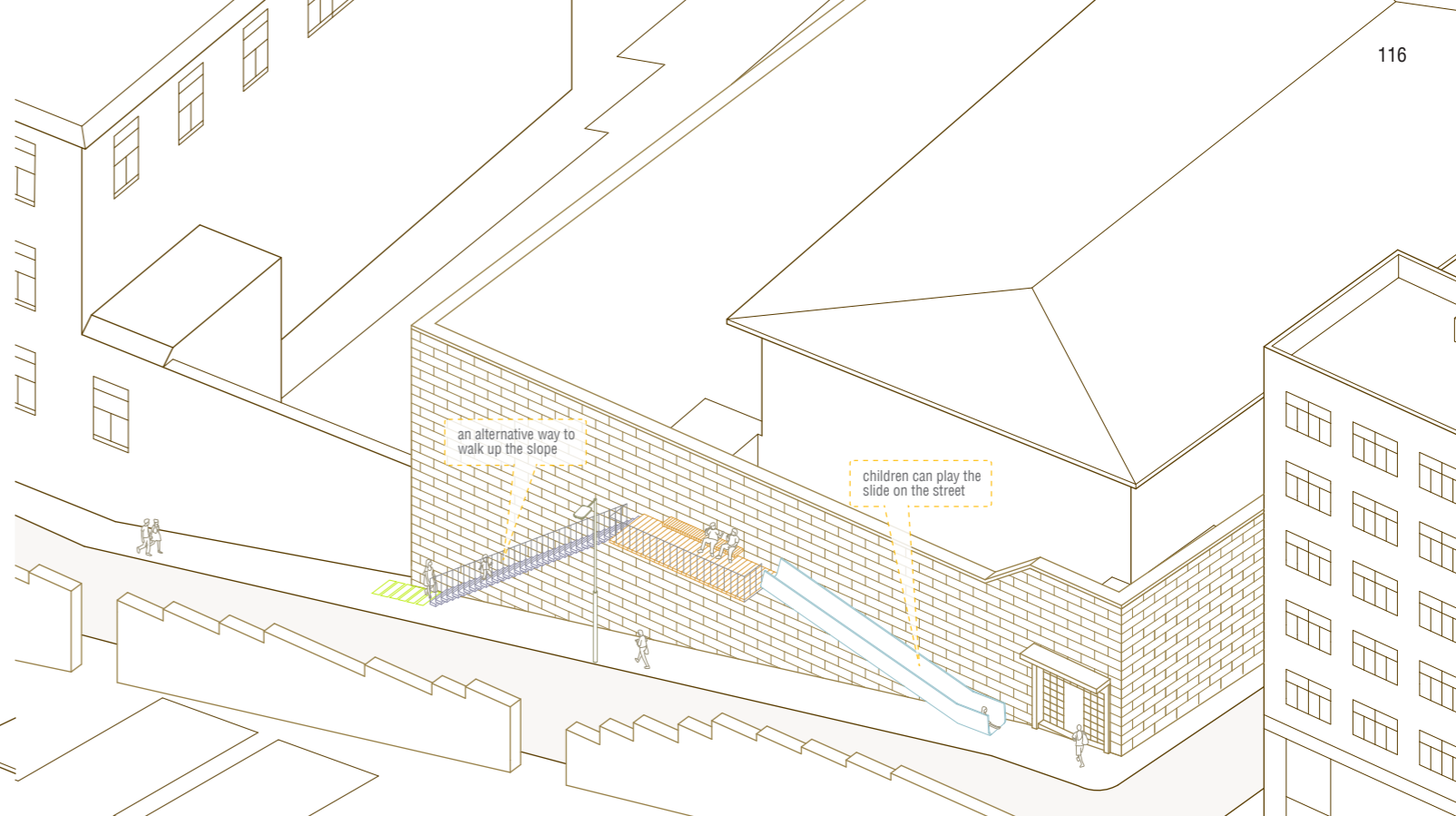
connect the footbridge and adjacent building platform to provide a sitting area



add the cover and seat

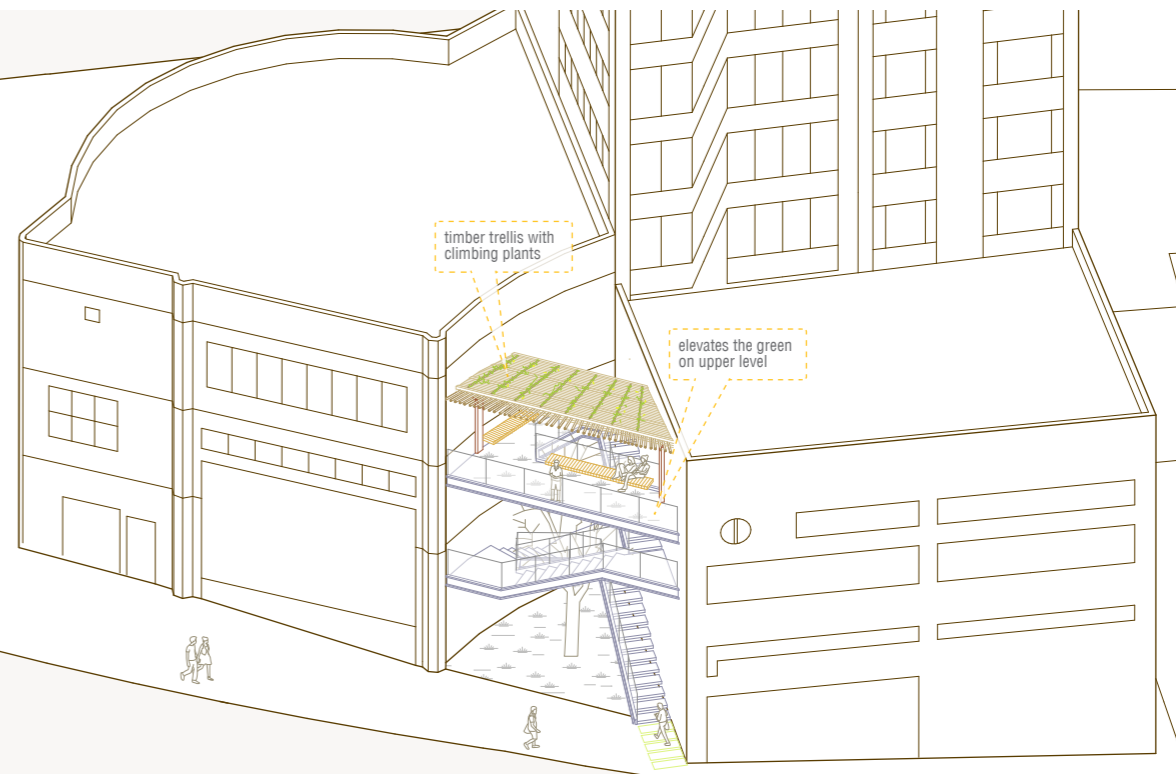
#06 PAVILION sitting area

"PAVILION" is located on Caine Road where the pedestrian crossing on ground level is not allowed. The only way to cross the road is to use the footbridge. The new structure is designed and supported by the existing footbridge to provide a seating area.



#07 SLIDE a slide on the street

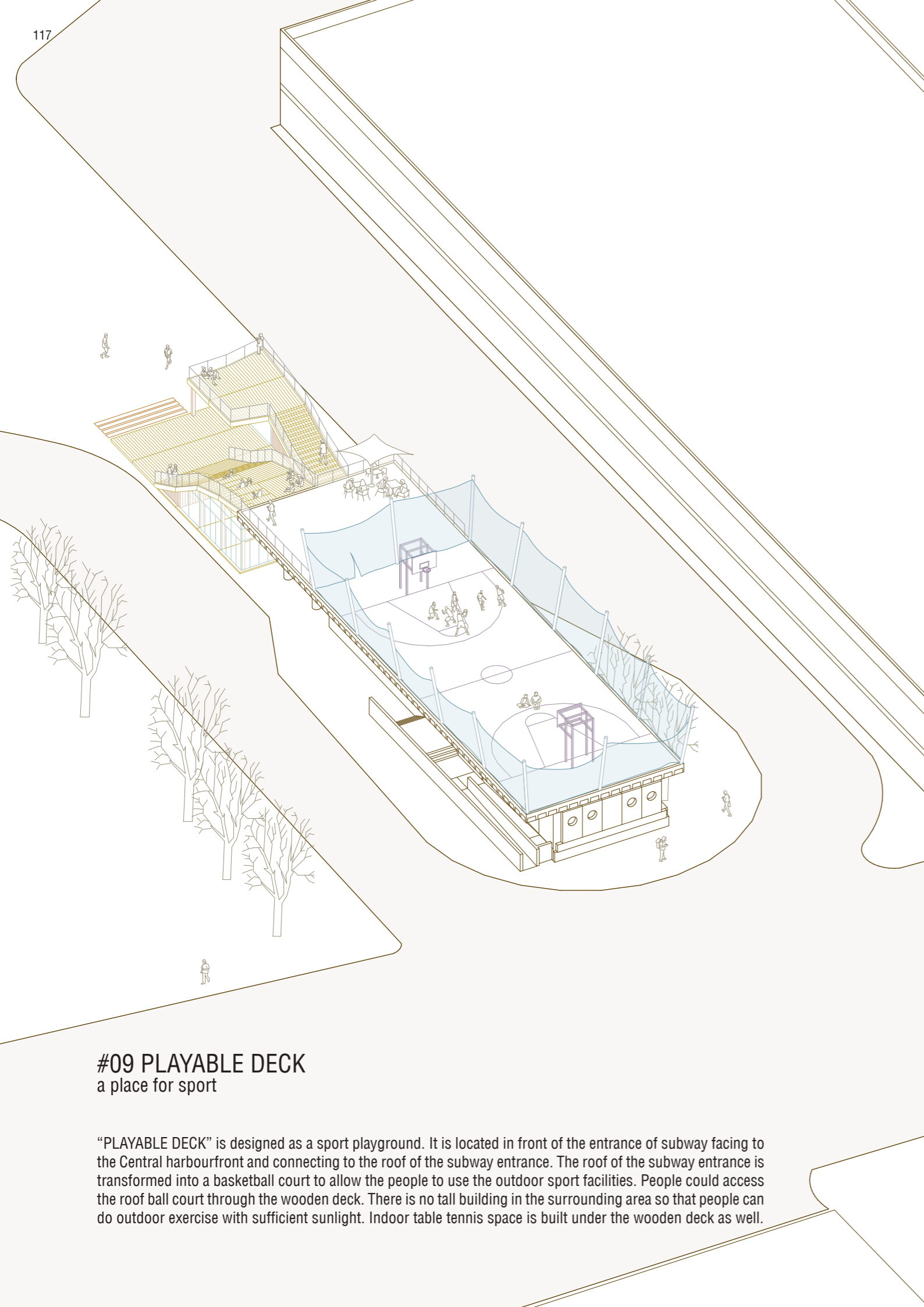
"SLIDE" is designed on the steep slope to bring the playground and public space to the street. The design is making use of the high stone wall and the slope to create a slide on the street. It provides an alternative and playable way to walk up the slope.



#08 TREE HOUSE viewing platform

"TREE HOUSE" is a demonstration of how public space introduce into an empty lot. It is elevated from the ground and supported by the adjacent buildings. The design of the elevated deck multiplies the area for sitting and providing a better view for the pedestrian at higher level. The tree in the middle is preserved and the elevated platform works perfect with the old tree.

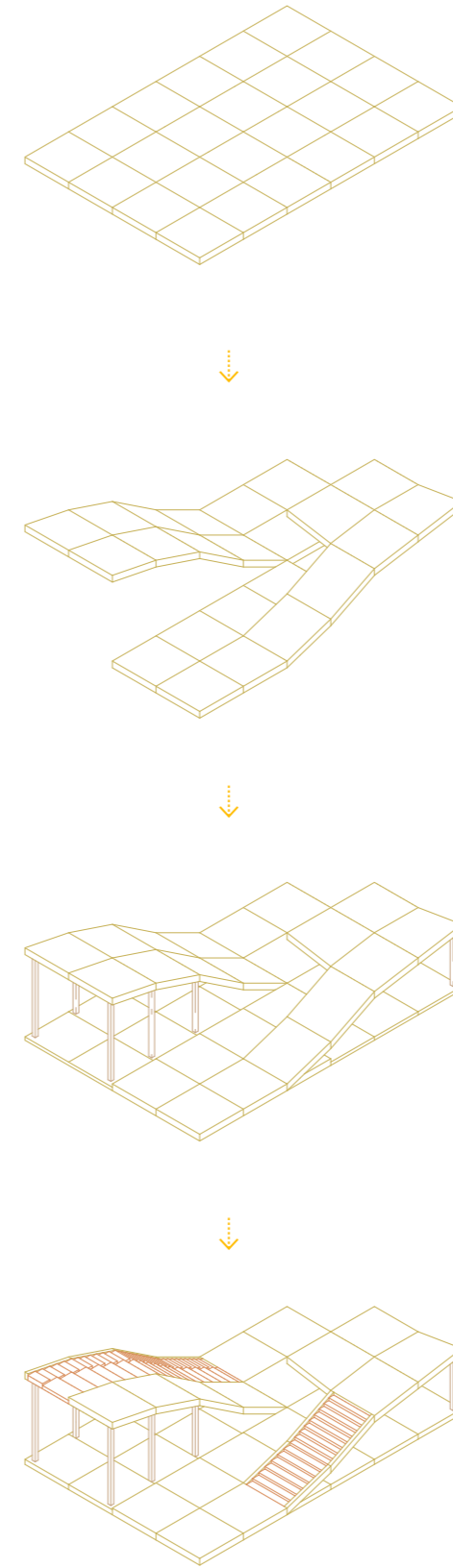




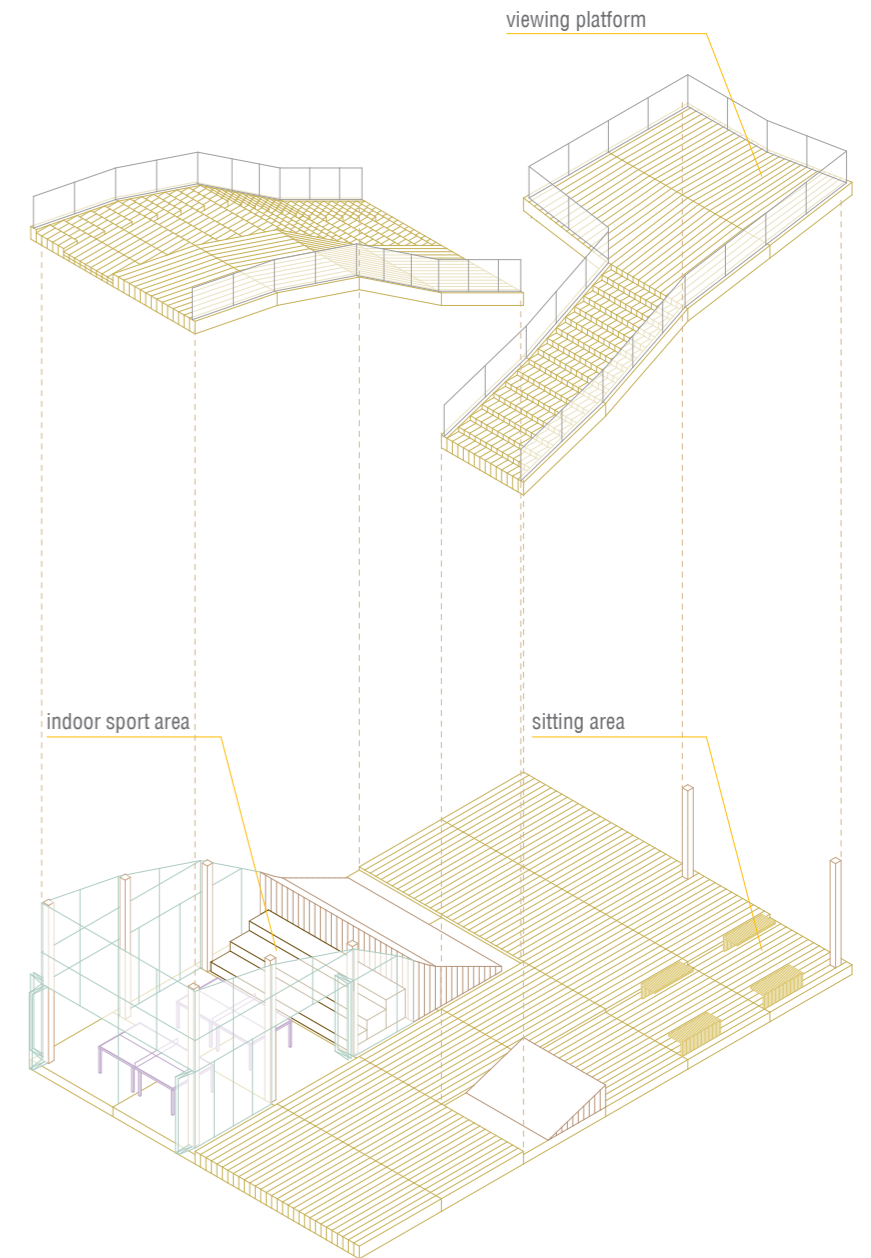
**#09 PLAYABLE DECK**  
a place for sport

“PLAYABLE DECK” is designed as a sport playground. It is located in front of the entrance of subway facing to the Central harbourfront and connecting to the roof of the subway entrance. The roof of the subway entrance is transformed into a basketball court to allow the people to use the outdoor sport facilities. People could access the roof ball court through the wooden deck. There is no tall building in the surrounding area so that people can do outdoor exercise with sufficient sunlight. Indoor table tennis space is built under the wooden deck as well.

1. transformation of the wood deck



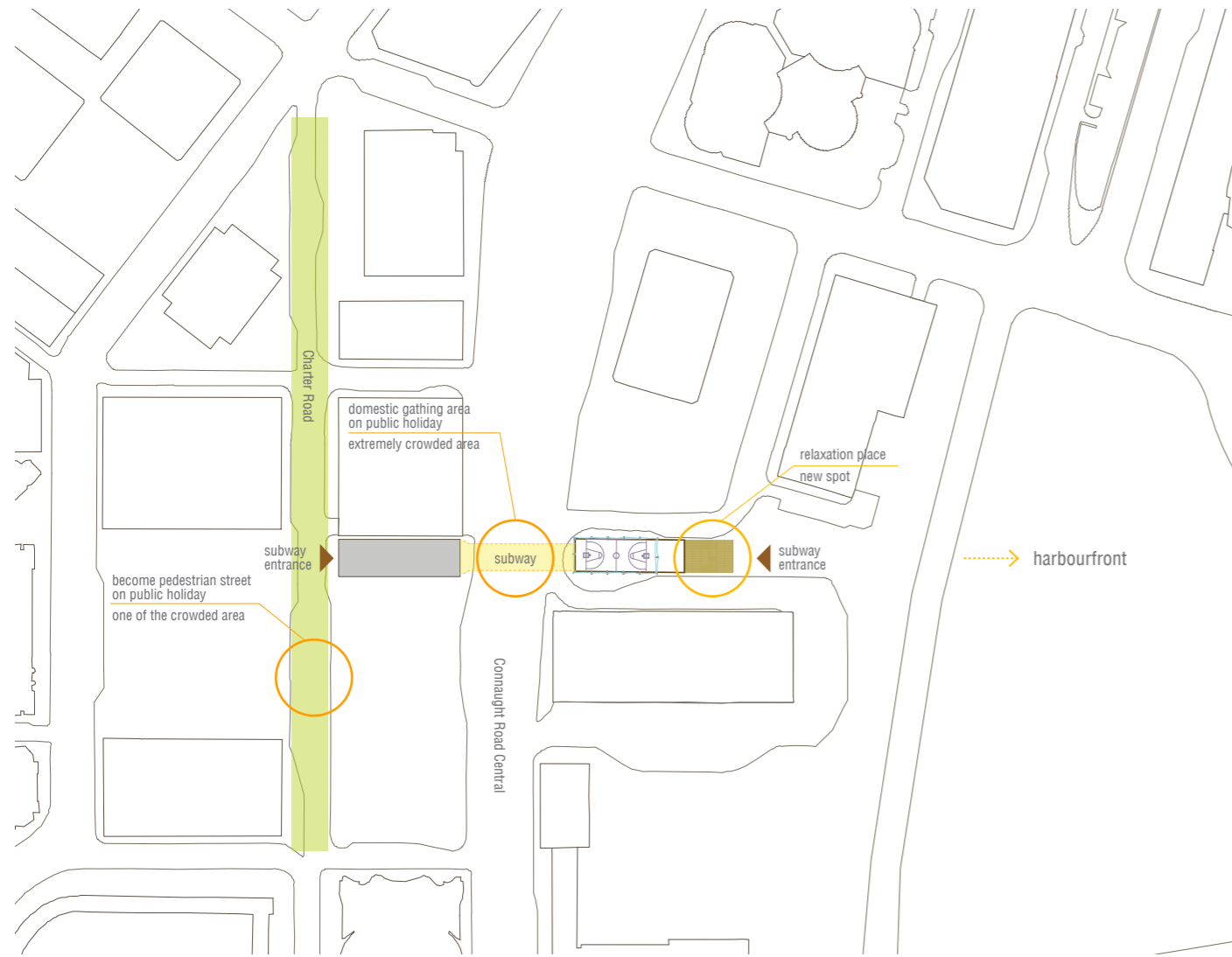
2. program



Outdoor sitting area, and indoor sport and sitting area are provided under the wood deck. Natural ventilation is provided when the sliding door of indoor space are opened.

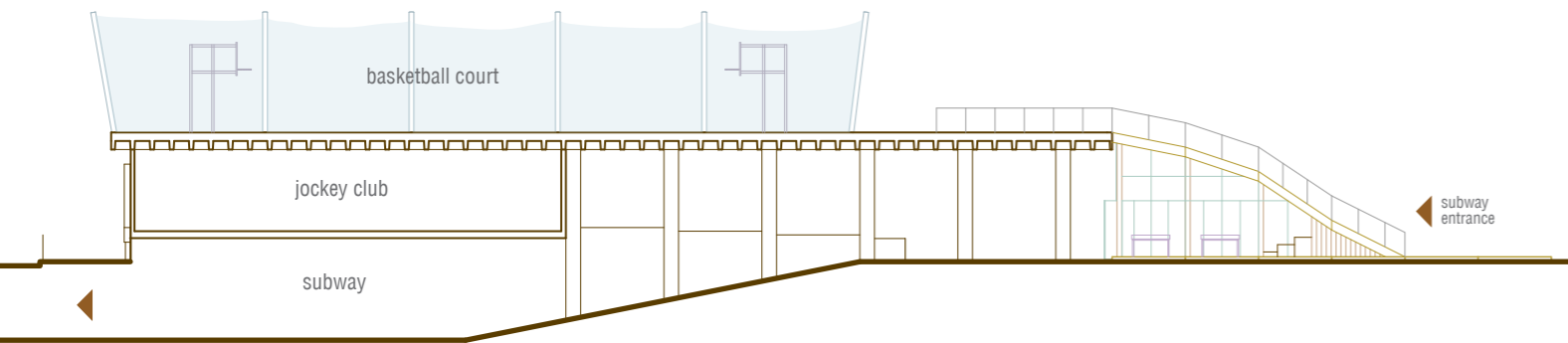


### 3. connection with the surrounding

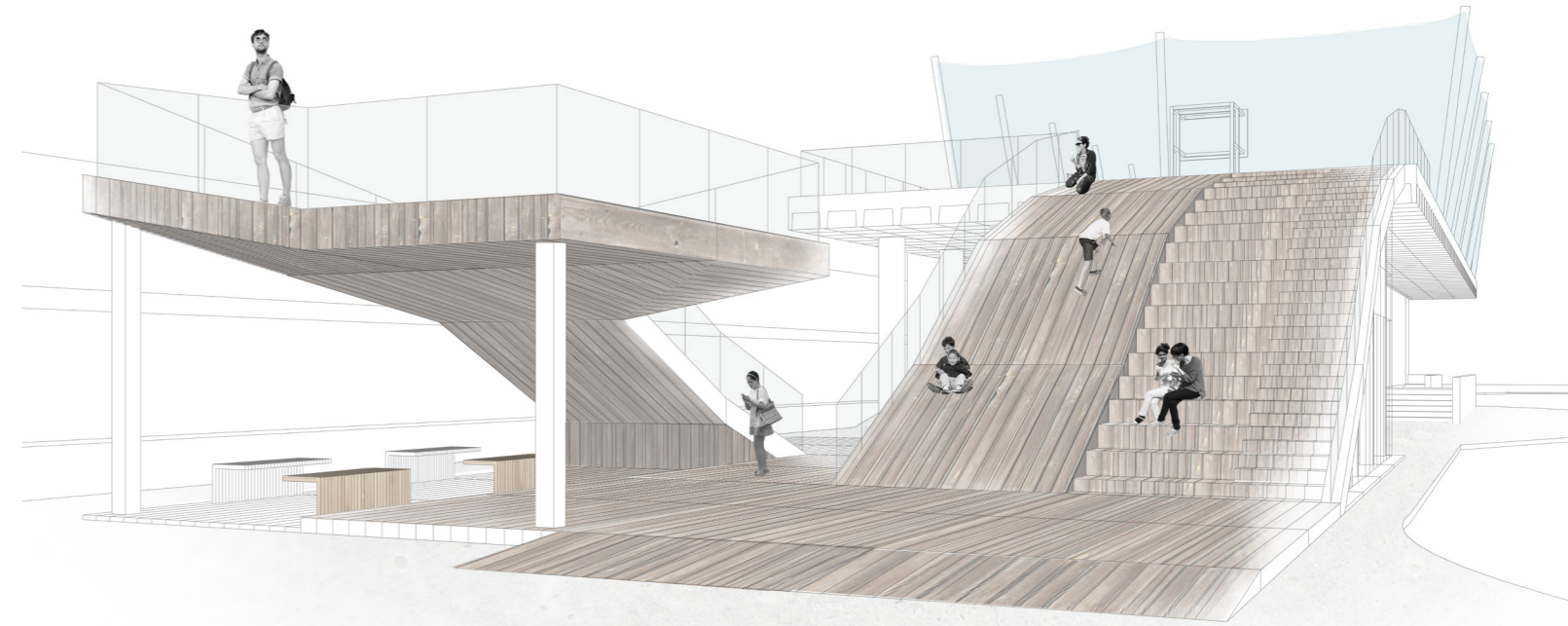


the new spot helps to activate the area and brings the pedestrian to there on weekdays and provide a linear activity and relaxation place on public holiday

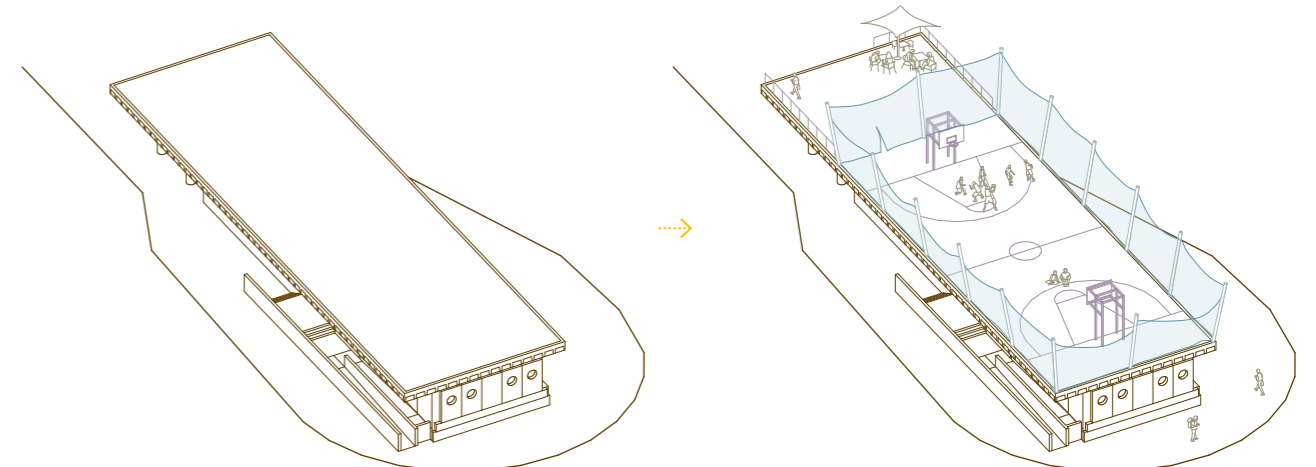
### 4. section of the existing subway and the new structure



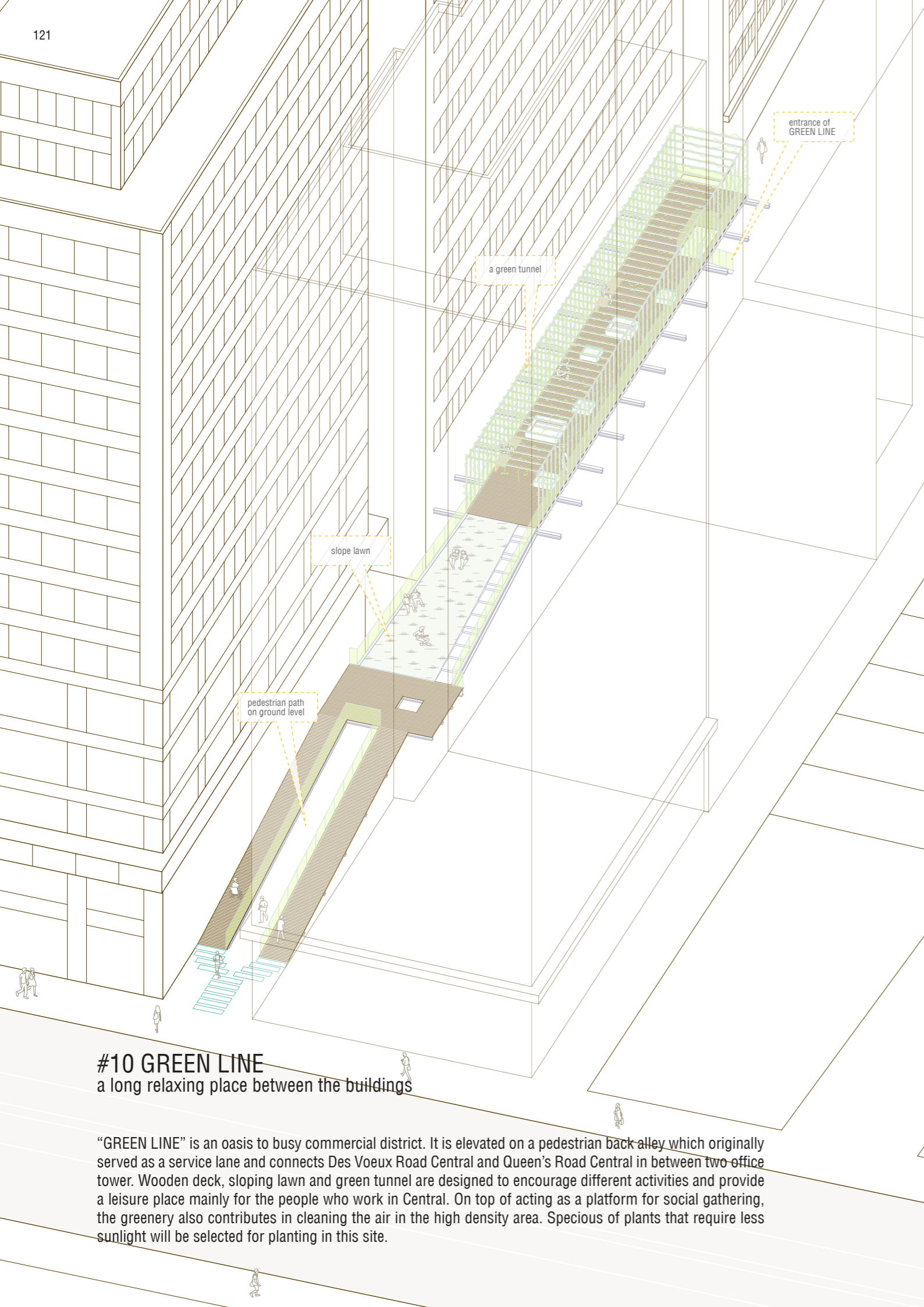
### 5. view from harbourfront



### 6. transformation of the roof



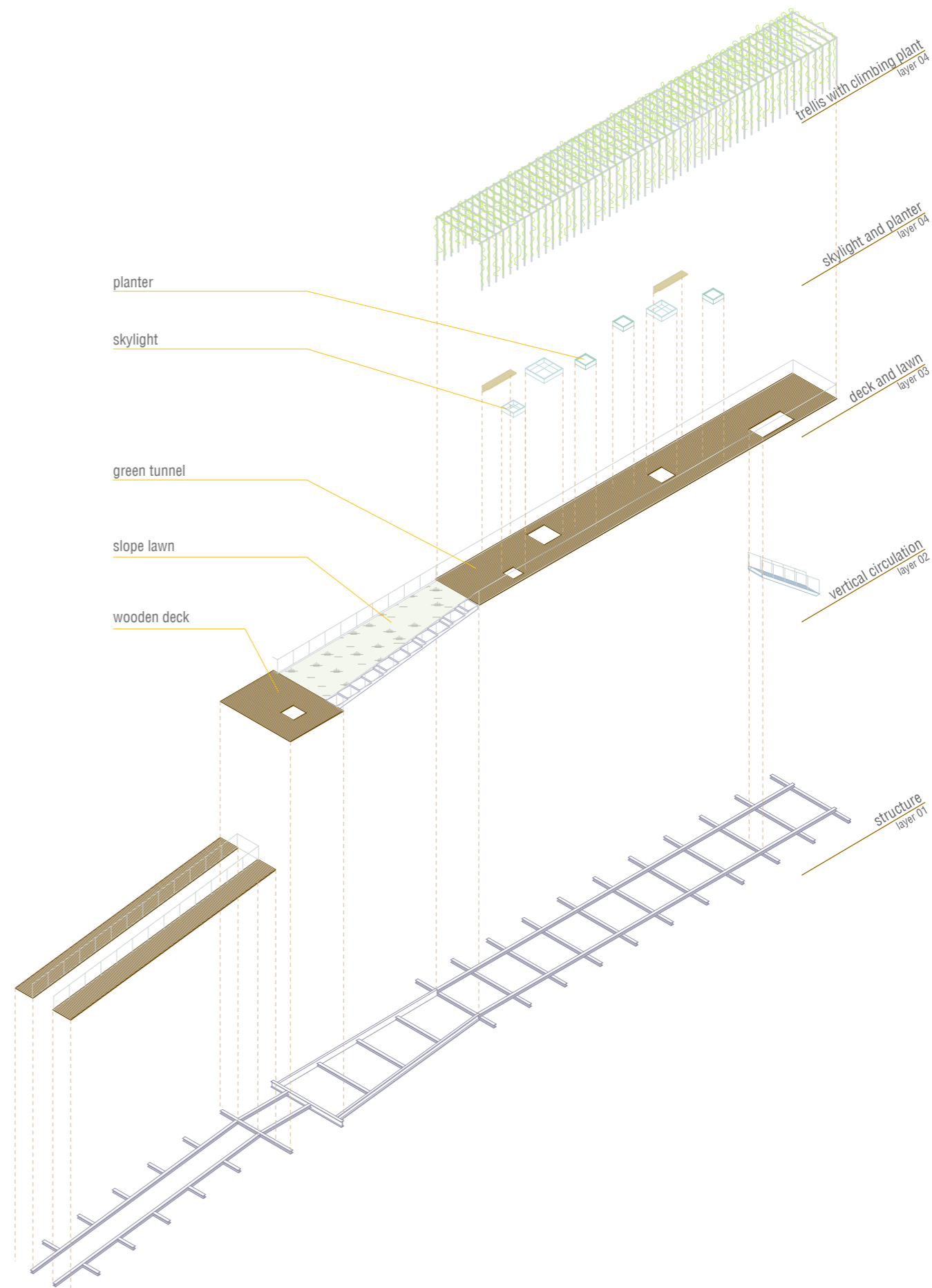




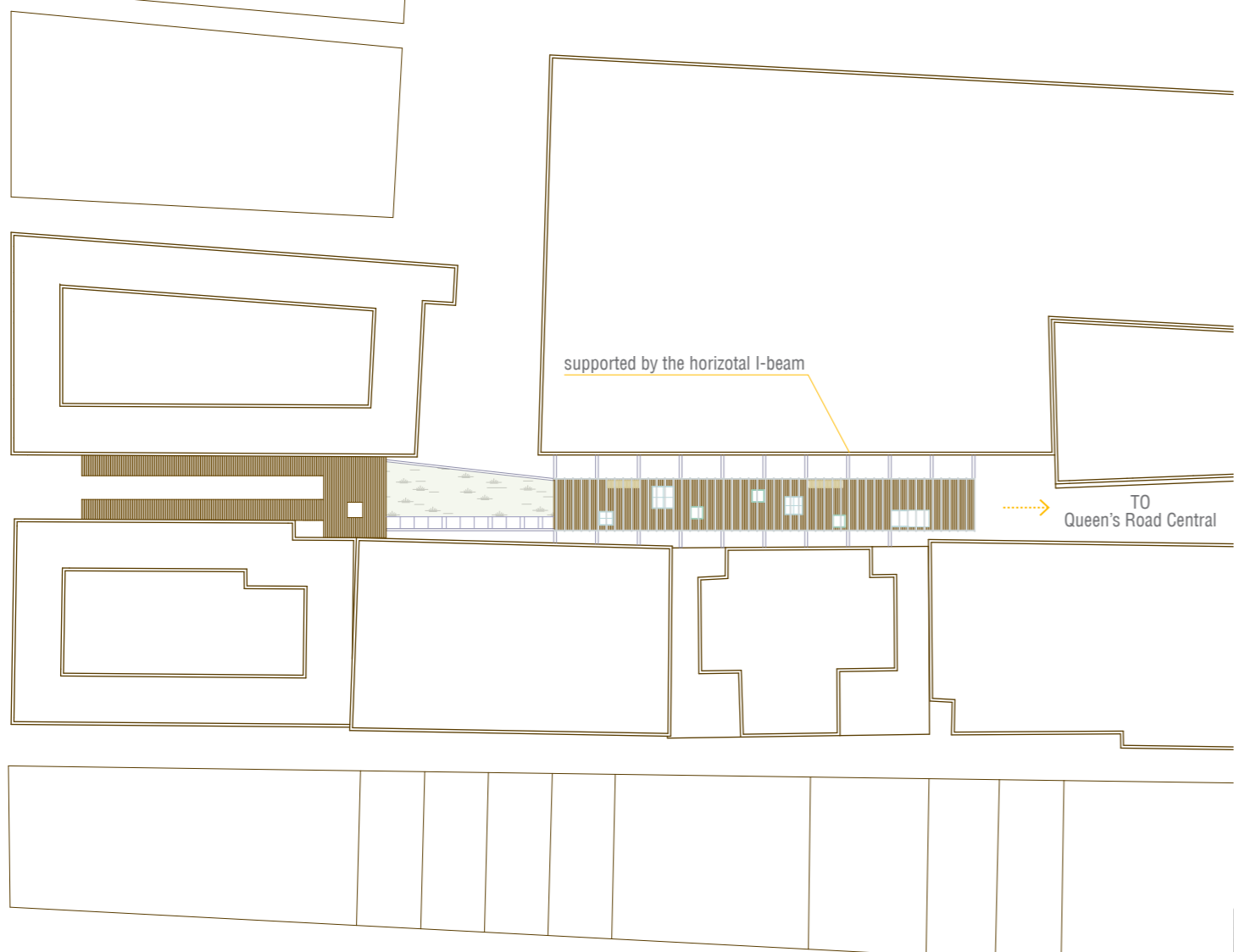
**#10 GREEN LINE**  
a long relaxing place between the buildings

“GREEN LINE” is an oasis to busy commercial district. It is elevated on a pedestrian back alley which originally served as a service lane and connects Des Voeux Road Central and Queen’s Road Central in between two office tower. Wooden deck, sloping lawn and green tunnel are designed to encourage different activities and provide a leisure place mainly for the people who work in Central. On top of acting as a platform for social gathering, the greenery also contributes in cleaning the air in the high density area. Specious of plants that require less sunlight will be selected for planting in this site.

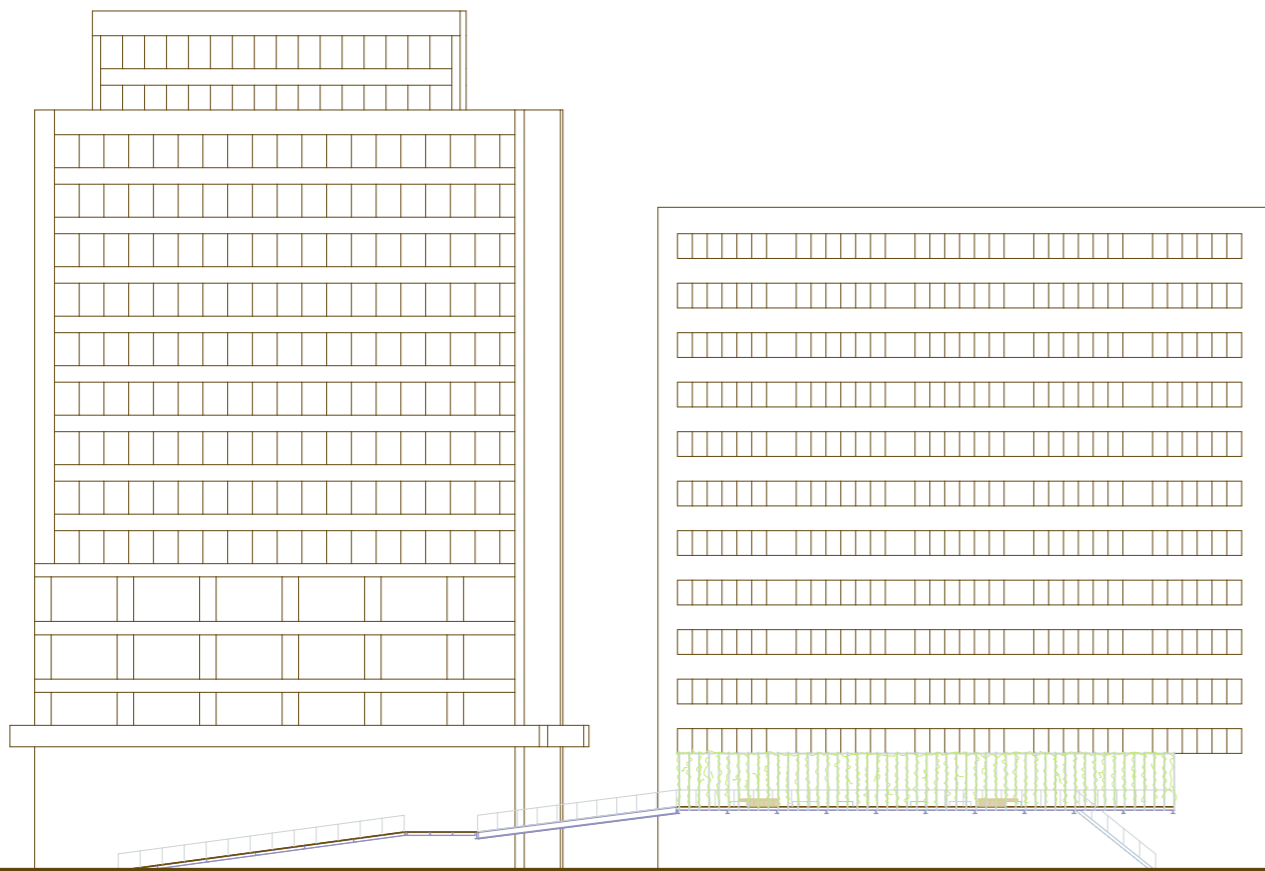
1. the layers of the “playground”







2. plan

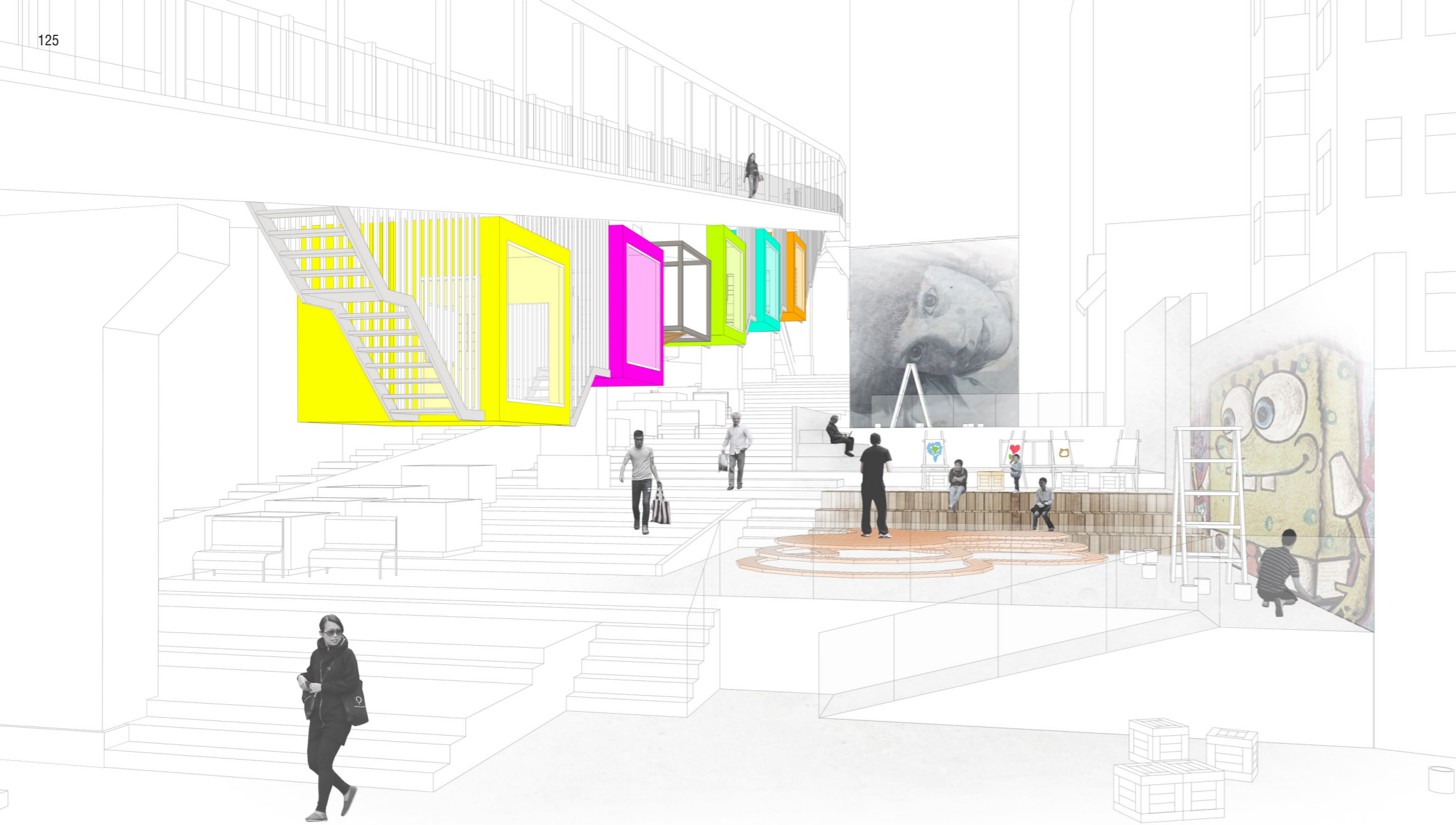


3. elevation

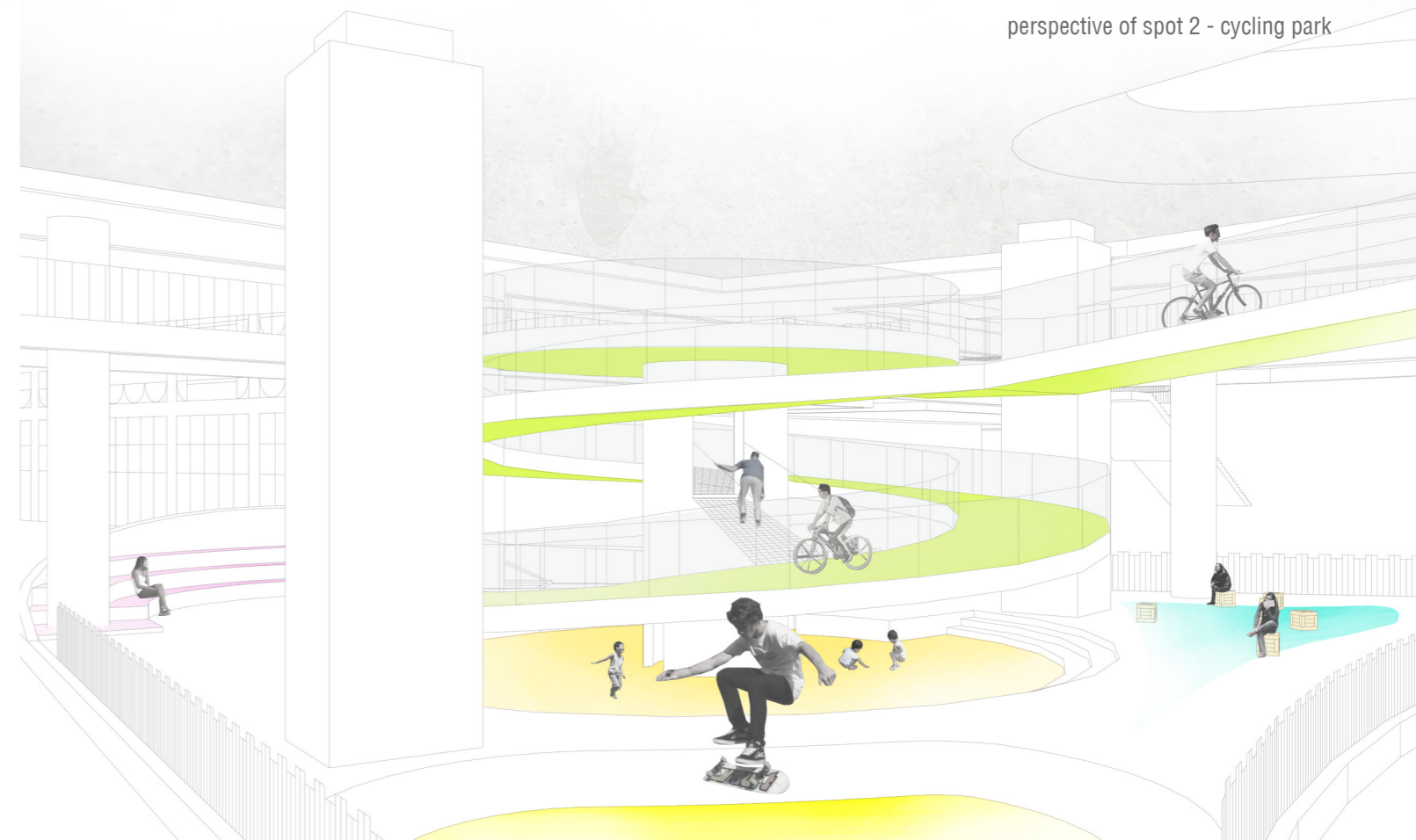
4. view from Des Voeux Road Central







perspective of spot 5 - elevated gallery and public art space



perspective of spot 2 - cycling park



# **07 CONCLUSIONS & RECOMMENDATION**



## CONCLUSION

Walkability in Hong Kong has been studied and reviewed in previous chapters. The finding indicates that Hong Kong's walkability level still has room for improvement. There are four major problems that can be found in most of the district in Hong Kong. Firstly, low permeability in terms of pedestrian movement, seriously affects the walkability of the district. At-grade crossing is not allowed in most of the major driveway especially in commercial district. Most of the ground area is dominated with vehicular traffic and pedestrian can only move along the disconnected sidewalk. Pedestrian is forced to cross the road in other indirect ways such as detour, climbing up to footbridge or going down to subway. Secondly, inadequate wayfinding system is another key factor that reduces walkability of Hong Kong. Since pedestrian had been forced to detour in order to reach their destination, additional wayfinding signage is required as the pedestrian is forced to walk inside the enclosed path with visual connection to their destination. Therefore, people could only rely on the provided signage and wayfinding map in order to locate their destination direction. Misleading signage system further reduces the walkability of the city. Thirdly, obstacles along the street are another serious problem affecting the walkability. Street objects such as lampposts, phone booths, rubbish bins and bus stop stands occupy the valuable space on the congested sidewalks. Finally, seating bench along the pedestrian footpath is rarely seen in Hong Kong and this is strongly discouraging citizen to walk. Street life in Hong Kong is gradually fading out.

"Street" should not only be designed as a path for daily pedestrian transportation, but as a ground that allows activities to take place. In Hong Kong, the narrow side walk, footbridge and subway only mobilize pedestrians from one point to another and discourage any street activities to happen. Although Hong Kong government dedicated certain amount of land to be open public space, isolated location and introversive design of the official public space in Hong Kong is failed to support the street life.

Major cities of the world have adopted some policies to improve the walking condition such as the concept of "complete street" and "shared space". Moreover, there are many successful public space transformation projects in those high density western cities such as Time Square and The High Line in NYC and Superkilen in Copenhagen which proves that public street life and walkability could be greatly improved through city interventions without changing the fundamental urban structure.

Hong Kong is one of the most densely populated cities in the world and she is selected as a testing ground for introducing series of urban interventions as a medium for walkability improvement. A series of "playgrounds" are designed and injected to the CDB of Hong Kong, Central where the district is recognized as a commercial area situated with high speed driveway. While the vehicular traffic is dominating most of the ground levels, "PLAYABLE GROUNDS" is proposing a several architectural strategies to intervene the existing ground conditions, thus enhance the walkability of the city without intensively changing the fundamental city infrastructure.

There are three considerations in the design of "playground" and they are the location of "playground", form of "playground" and the activity in the "playground". "Location" of a "playground" should be highly accessible and formed as a part of pedestrian network. Potential sites could be existing side-walk, elevated escalator, footbridge and left-over space in between buildings. Architectural strategies are applied to shape the form of "playground" design. This thesis aims to explore the possibility of how architectural intervention could enhance the pedestrian experience. Five different categories of activity will be considered in the design of "playgrounds". The activities help to activate the space and enhance the interaction between people.

10 potential sites are selected as the testing ground for injecting "playgrounds for public". They are distributed in different area of Central including the coastal promenade, back alley and empty lot in-between office towers, sloping and stepping pedestrian sidewalk, left-over space under flyovers and footbridges and the roof of existing covered walkway. The form of activity in each of the spot is carefully designed base on the character of the area and the needs of surrounding users. Apart from providing the sitting bench and lawn to those spots, specific function will be incorporated to those playgrounds so that social interaction could be induced and giving incentive for people to stay. Special programmes including book sharing corner near the residential area, outdoor art gallery in the crowded shopping area and rooftop basketball court near the commercial area are provided to accommodate different user's needs and enhance the social sustainability.

## RECOMMENDATION

"PLAYABLE GROUNDS" might be one of the cures for those pedestrian un-friendly cities to improve the walking condition for the urban area. "Playgrounds" is proposed to improve the walking condition as well as to provide an urban space for people to stay. Five categories of activity are proposed in this thesis as a demonstration of how add-on function could help building up the sense of community and it should not be limited to these five only. In actual situation, a long term community workshop with citizen should be setup in order to hear the actual needs from the residents. A platform that engages a wide range of stakeholders is a valuable process for collective inspiration. Since most of the available sites are derived from government land and part of those add-on structure are attached to the adjacent buildings, the involvement from government and building owner is also critical to this project.



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