



SH

IFT

# SHIFTING STREET

A New Street form turn street into place

YUNING ZHAO  
MASTER OF LANDSCAPE ARCHITECTURE THESIS  
AUBURN UNIVERSITY, SPRING 2016

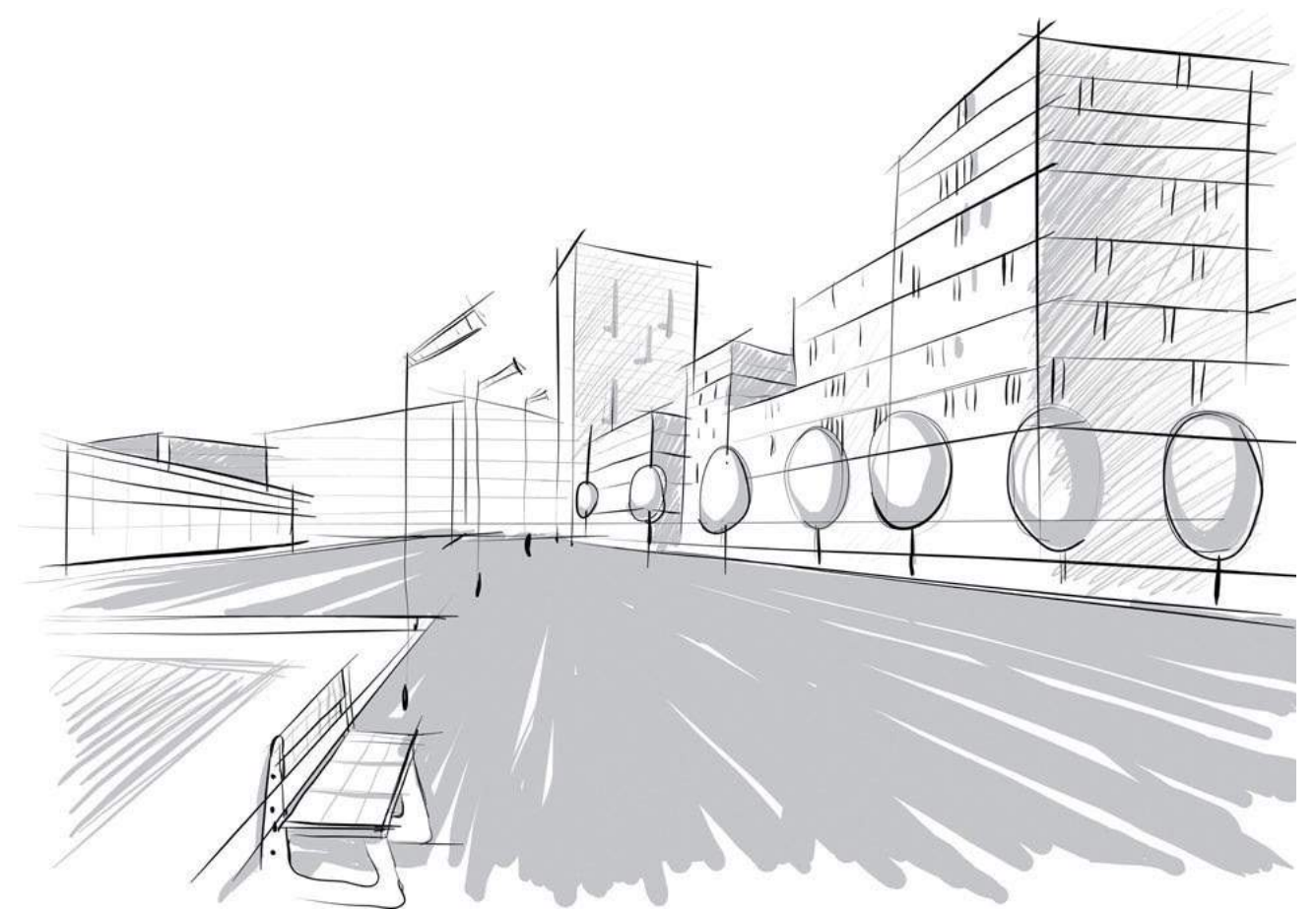
# ACKNOWLEDGEMENTS

This book is dedicated to my parents, Weiyong Zhao and Shu Zhang. Thank you for listening and cheering me up when the work got overwhelming. Without their love and support, I would not have been able to my master degree in the United States.

Much gratitude to Hanlu Yu. With her continued support and encouragement through all the sleepless nights, I was able to complete this research.

Many thanks to Professor David Hill and Kelly Homan for your help, guidance, and mentorship throughout my thesis project.

And last, I would thank all of my classmates and friends, for their encouragement, care and support which help me builds this thesis step by step.



# TABLE OF CONTENT

ABSTRACT .....	1
THESIS QUESTION .....	3
CHAPTER 1 REDISCOVER THE STREET .....	5
Rationale	
Aims	
Research Method	
Theory Framework	
Correlation Theories	
CHAPTER 2 RECOGNIZE SITE .....	23
History on Peachtree St	
Understandings of site	
Case Studies	
Evaluation	
CHAPTER 3 DESIGN EXPLORATION .....	41
Tested Strategies	
Dynamic Neighborhood	
Shifting Street	
REFLECTIONS .....	80
BIBLIOGRAPHY .....	81

# ABSTRACT

The street is one of the key spaces that people spend their time at everyday. The experiences of the street are important to enhance the quality of people's life. There are lots of ways to build a street. With different situations, there should be different ways to organize the spaces of the street. However, the people's street life is not unalterable in a day. So my thesis focuses on using the idea of the street shifting to enhance space experiences of the street to help people enjoy their street life.

In many cases to enhance the street experiences, designers use the pavement, street furnitures, trees

and lights, but all the components are unchangeable, which means they design for the major situation of the street. How about all these street components are alternating to adjust the form of street to meet people's different demands?

Using the shifting street is not to respond to one specific situation, but to build the street to prepare for different traffic volume and different situations. Building a shifting street to respond to more situations in the city street, especially the main street of a metropolis, which include many people's activities in a particular area. Because the changes of people's activities and

traffic volume, we can not make sure what is the major function of the street in a particular time. Besides make an appropriate city plan, landscape should use a shifting street as a tool to enhance the street experiences.

Overall, this thesis looks at throughout the shifting street to enhance the street experiences to make the street space better for the pedestrian.



## THIS QUESTION

How can a dynamic street design change the experience and form of street in the urban area?



# 1 REDISCOVER THE STREET

With the urbanization and industrial development, streets became a unique part of the urban infrastructure. Nowadays, streets are the frame of the urban area and links between each parts of the city, they also carry the unique traits of the city. For most people, streets are epitomes of the city. Travelers recognized the city image by recognizing the street. The landscape of a city street composed a special view through each unique street, every city had its own unique streetscape. In addition, the streetscape also reflects characteristics of political, economic and cultural development of the city, and the

core of the city's image and the urban landscape, such as the Chang'An Avenue in Beijing, Broadway in New York, and the Avenue des Champs-Élysées in Paris.

Because of the urban sprawl, people spend more time on the street than 20 years ago, and streets play an important role on people's social life and daily life. They are the vein and artery of the city. Streetscape, as the tool of urban planning, directly or indirectly effecting the life quality of people. Therefore, the urban streetscape design has become an important and indispensable part of urban planning and city development

and gradually accepted and valued by more and more people and the research of the streetscape has become an urgent task nowadays in rapidly developing city.



# RATIONALE

In the early twentieth century, all the American cities across the country experienced the influence of the City Beautiful Movement. This movement shaped the infrastructure and urban structure in many ways, especially the geometrical landscape design, tree-line boulevards, and public space. Because of the factors of politics, economy, culture and art, the functions of the street changes from walking, driving and the goods exchanging along the street, to becoming a complex linear living space. Notably this change is occurring in the downtown area in the metropolis with the large population. Some

changes to the street as a result of this movement provided long term impacts and benefits. This lengthy movement has significant effects, which are still visible today. However, the population of the United States today is three times larger compared with 1920, the number of vehicles is over 200 times compared with 1920. With the national census projection by 2050, these numbers will grow to 4 times and 380 times compared with 1920. Can our existing street model actually afford this projection? Both people and the street need a new form of street design to balance the pressure on the population and traffic.

By redesigning the street as an adaptive system that manages the movement of pedestrians, vehicles, and other habitats within the intimate intersection of social space and transportation system, a "new dynamic" street form could emerge. One which has the potential to adapt to an increasing population and number of vehicles with the limited area, flexible space management as a response of these unpredictable changes, and create more opportunities for local commercial.





# AIMS

The aim of this thesis is to develop a dynamic form of street design, which enables the coexistence of the pedestrians, vehicles and other elements within a flexible form of the streetscape. This kind of street is not only a vehicle based street form, but also a pedestrian friendly street form. It is the public space that pedestrians and vehicles shared and establish the connections among the all elements on the street.



# METHOD

Streetscape is a complex topic which is a mixture between the planning and landscape architecture. It's a design that incorporates the urban space and landscape in a specific area. Therefore, we, as landscape architects should use an unique method to study this topic. In this thesis, Research by Design method (Barnett 2013) noticed that in recent years this is the major research method to investigate possible designs and solutions to respond the thesis questions.

In Research by Design methods, there are three primary relevance tools used within the thesis were photography, mapping and

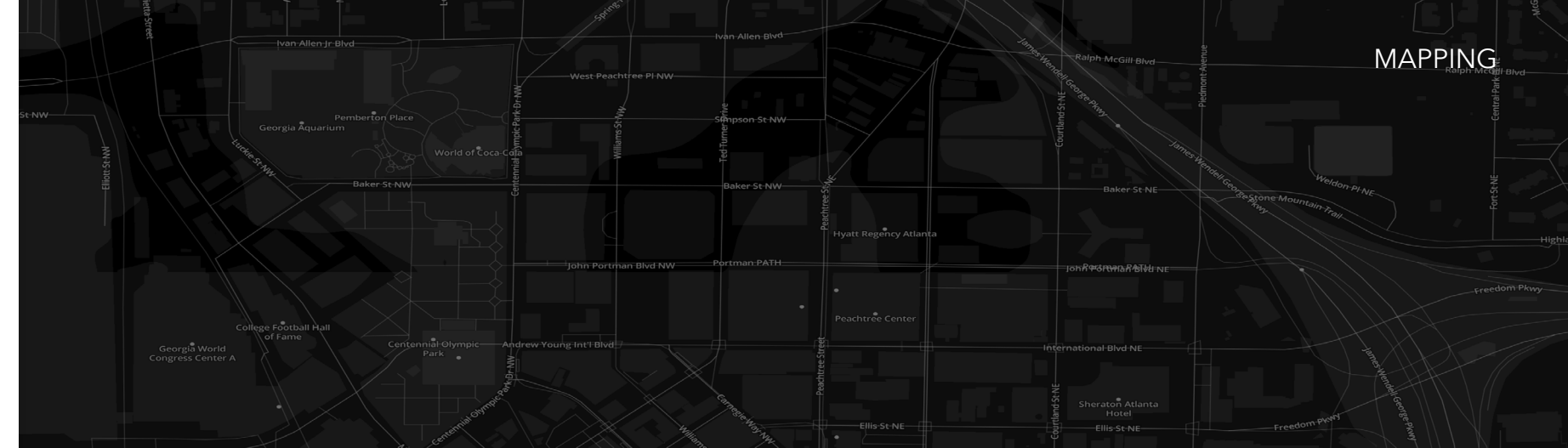
graphic drawing.

Mapping was an investigation tool to analyze how the dynamic street forms effect the street and larger area surrounded this street. This analysis tries to understand how the movements and activities of pedestrians, vehicles, vegetations and other elements on the street and the adjacent area was effected by street shifting.

Photography was used as a relevance tool to record and analyze the surrounding situation and the street space that shifting happened. As an analyzed tool, photography is a good way to

capture the atmosphere on the street and the experience of people. And it also was conducted to understand the relationships between pedestrians and vehicles on the street.

Graphic drawing is good way to understand and illustrate the possibilities and opportunities for shifting of pedestrians, vehicles and other factors on the street and the neighborhood. This kind of drawing is used to capture the changes on the street and compare the condition and experiences of people on the street in different situations.



MAPPING



PHOTOGRAPHY



GRAPHIC DRAWING

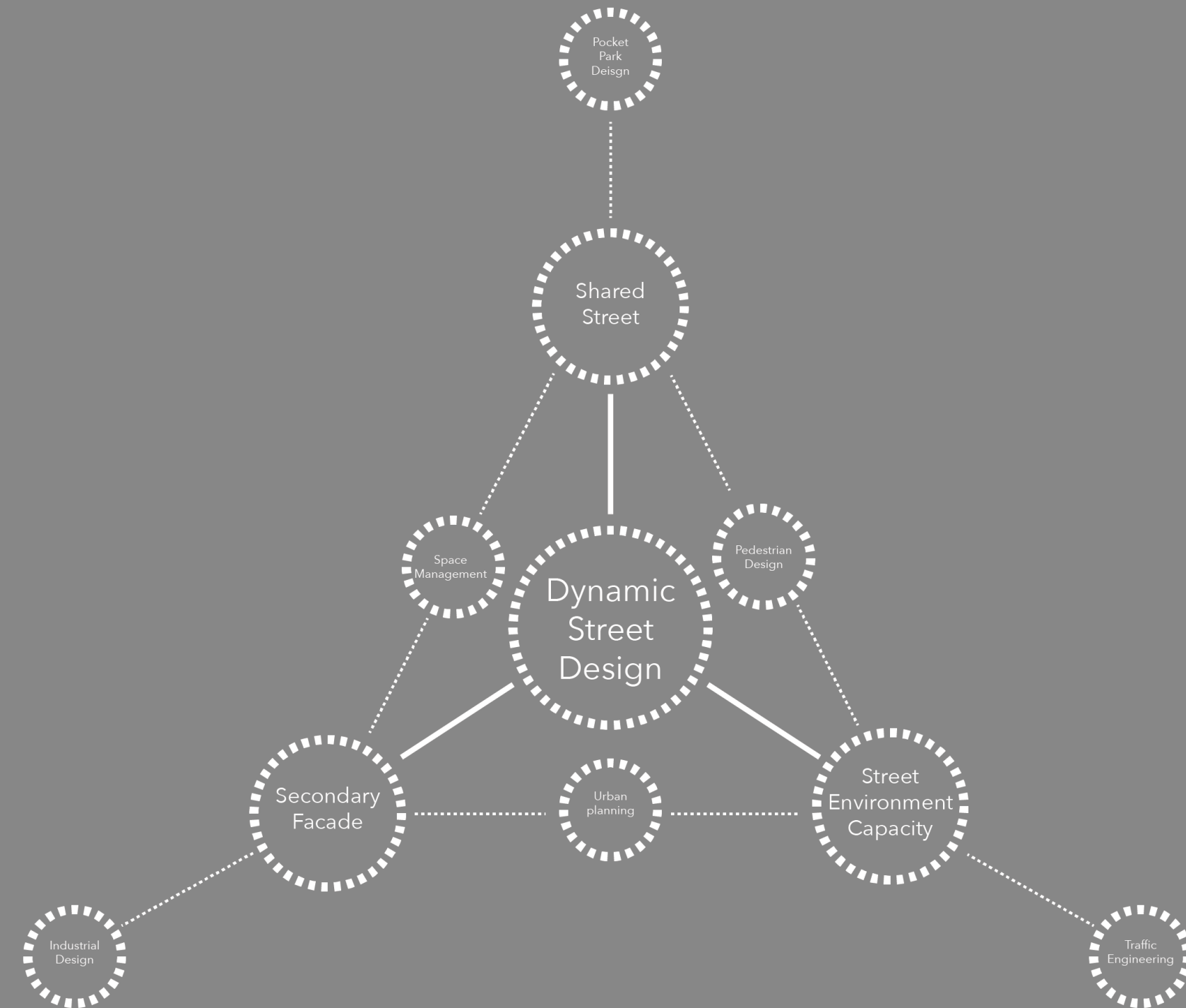
# THEORY FRAMEWORK

Based on urban development theory, the street refers to the spaces that are left after the formation of buildings. Part of these linear spaces which people can pass through and hold the social activities is the original form of the street. As Vitruvius mentioned in the ten books on architecture, the street system that is between the private property and public space is significant.

Developing a dynamic form of street design, which enables the coexistence of the pedestrians, vehicles and other users within a flexible form of streetscape. In landscape architecture, the dynamic street form theory was developed many significant

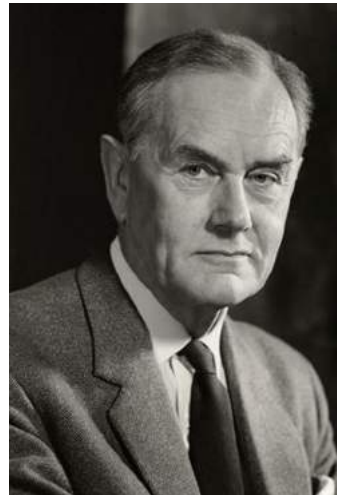
concepts applied in urban design from 1920s. This theory is a complex one that combines urban planning, traffic engineering and landscape.

A street is a complex public space -- including movement of pedestrians and vehicles which is generally described as linear, unpredictable, dynamic, and interactive. The street is characterized by traffic engineering of new trend and the ability to balance the pedestrians and vehicles in different period by themselves. Such a street has many benefits in the ecological, cultural and economic aspect.



## CORRELATION THEORIES

Most of the previous studies of streetscape are based on the vehicle-based street, which means the first consideration is the traffic. With the time changing, the streets are designed more for the vehicle, but not the people. However, there are some pioneers try to rethinking the relationship among the pedestrian, vehicle and street.



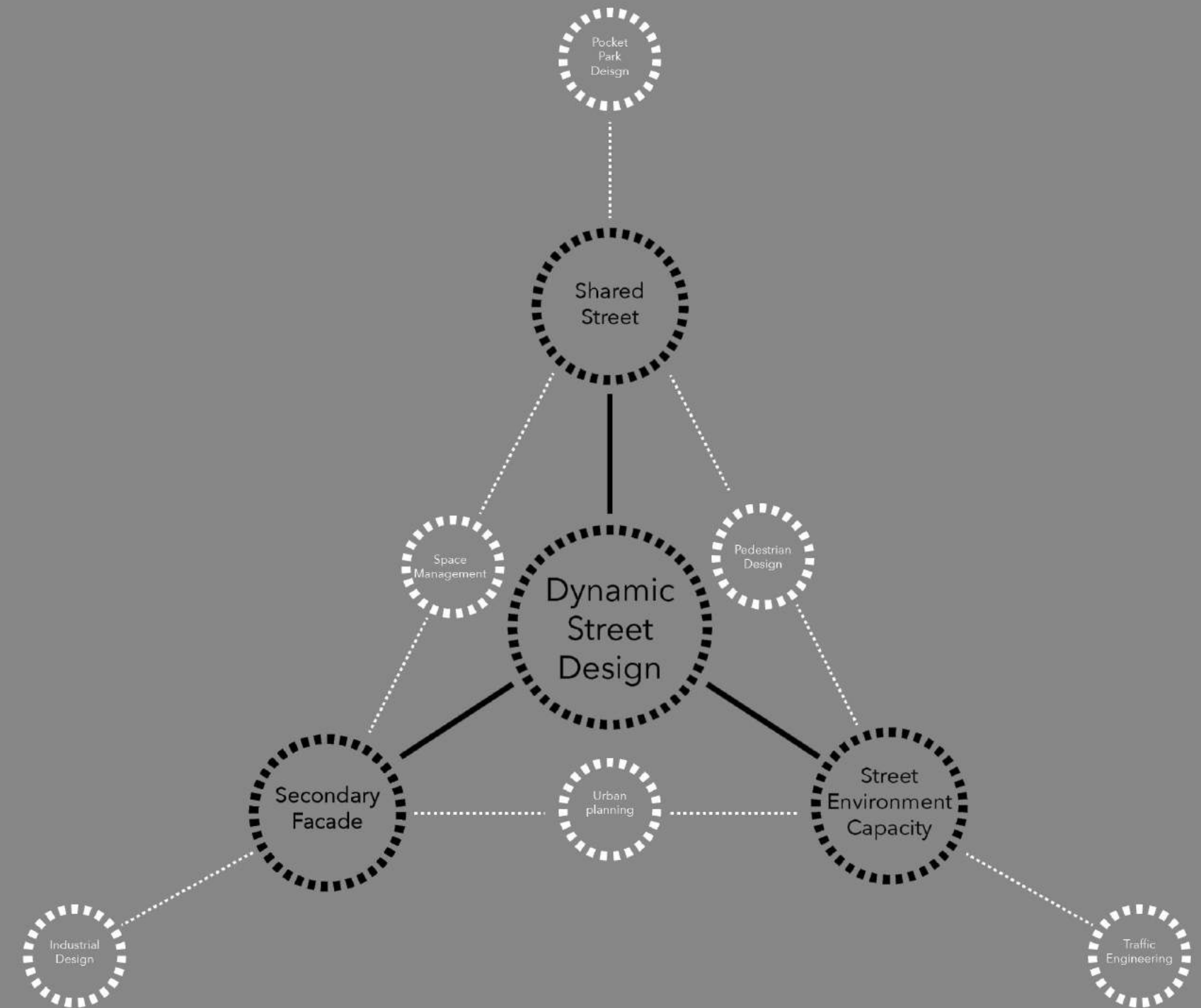
Sir Colin Buchanan



Hans Moderman

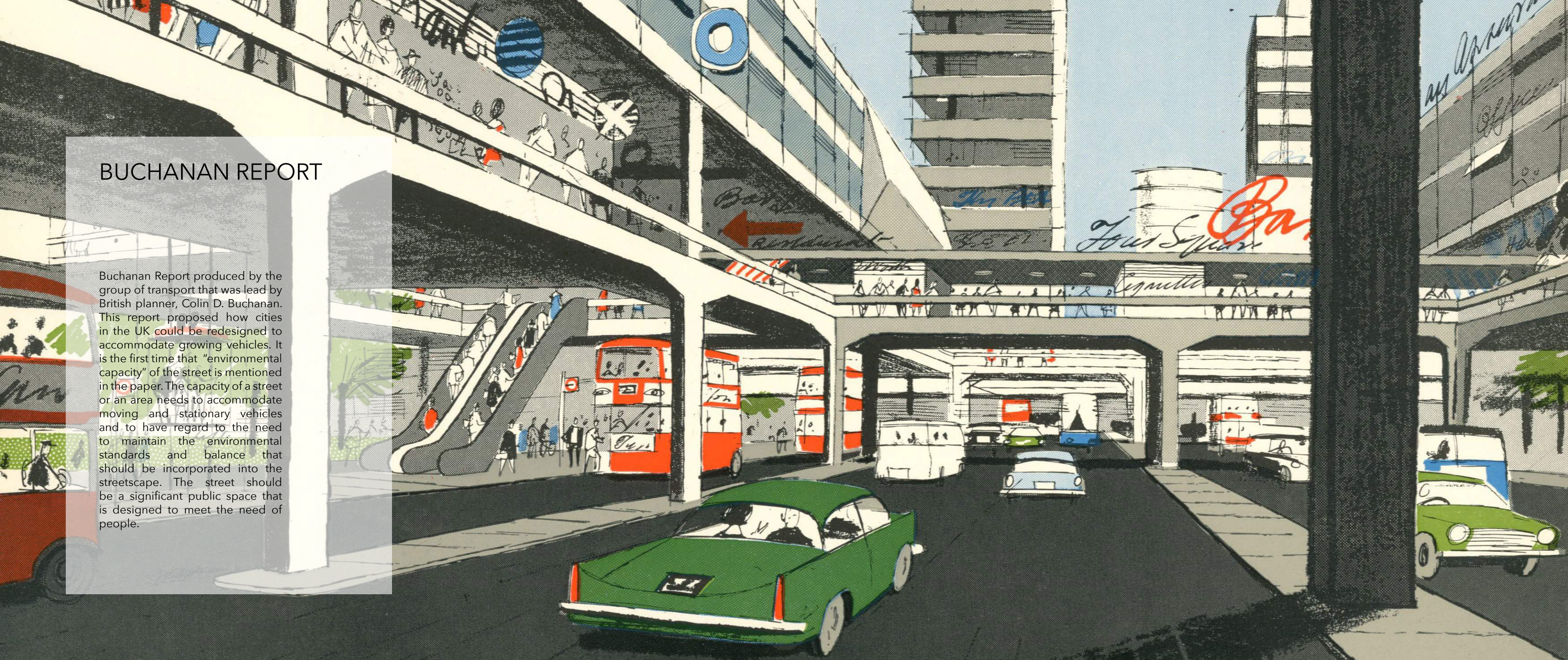


Yoshinobu Ashihara



## BUCHANAN REPORT

Buchanan Report produced by the group of transport that was lead by British planner, Colin D. Buchanan. This report proposed how cities in the UK could be redesigned to accommodate growing vehicles. It is the first time that "environmental capacity" of the street is mentioned in the paper. The capacity of a street or an area needs to accommodate moving and stationary vehicles and to have regard to the need to maintain the environmental standards and balance that should be incorporated into the streetscape. The street should be a significant public space that is designed to meet the need of people.



An aerial photograph of a busy urban street. The street is paved with light-colored rectangular tiles. In the foreground, a dark blue car is parked on the right side. A person in a high-visibility yellow vest is standing next to the car. A woman in a red skirt is riding a bicycle in the center of the street. Several pedestrians are walking in various directions. In the background, a long wooden bench is situated along the side of the street, with several people sitting on it. The overall scene depicts a shared space where different modes of transport coexist.

## SHARED STREET

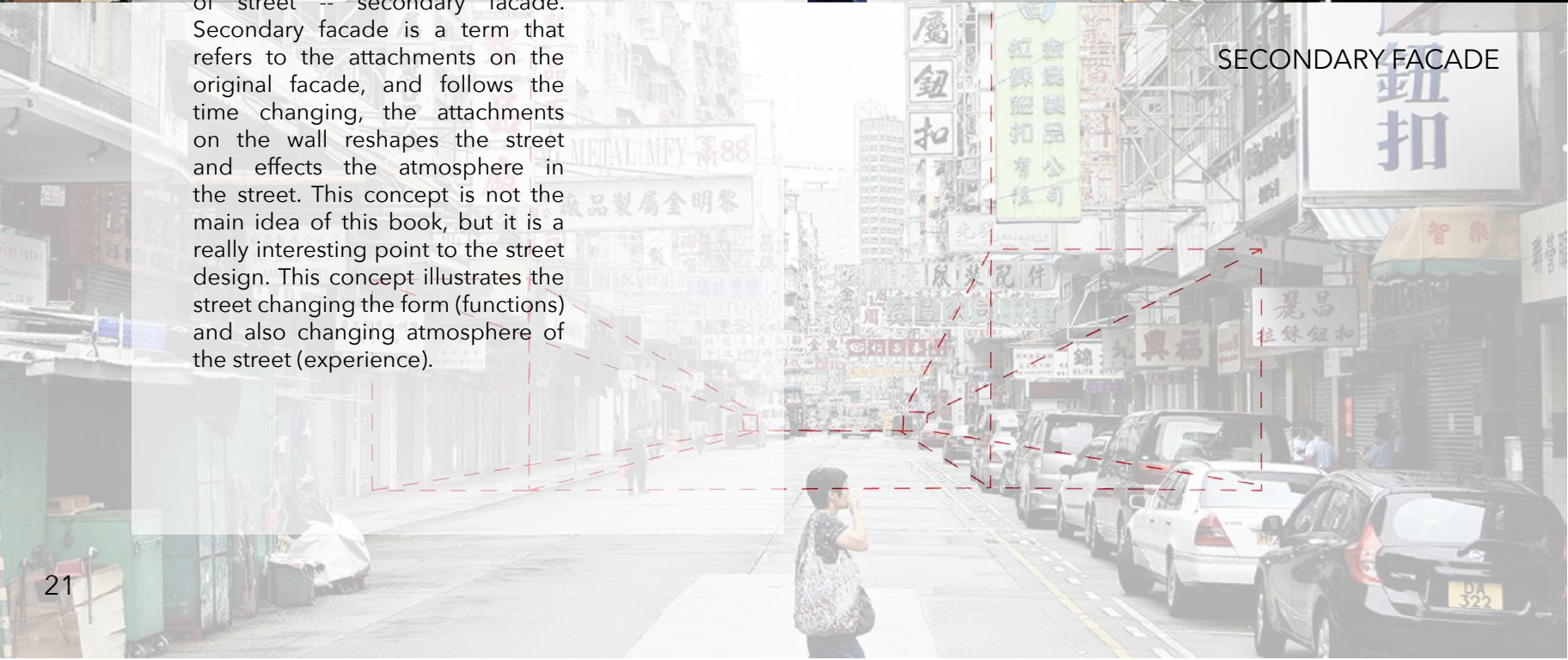
Shared street, also known as shared space, is an urban approach proposed by Dutch traffic engineer Hans Monderman. Shared street emphasized human interaction over mechanical traffic devices and tries to minimize the segregation of vehicles and pedestrians. This concept seeks to removing curbs, traffic signs, traffic lights, and unify the paver on the street. This concept emphasized the coexistence of people and cars, which means to improve the experience for all users. In the shared street, pedestrians and cars share one space and this space is designed to slow traffic to support social performance and all users need to negotiate their way through streets by interacting with, and reacting to, one another.



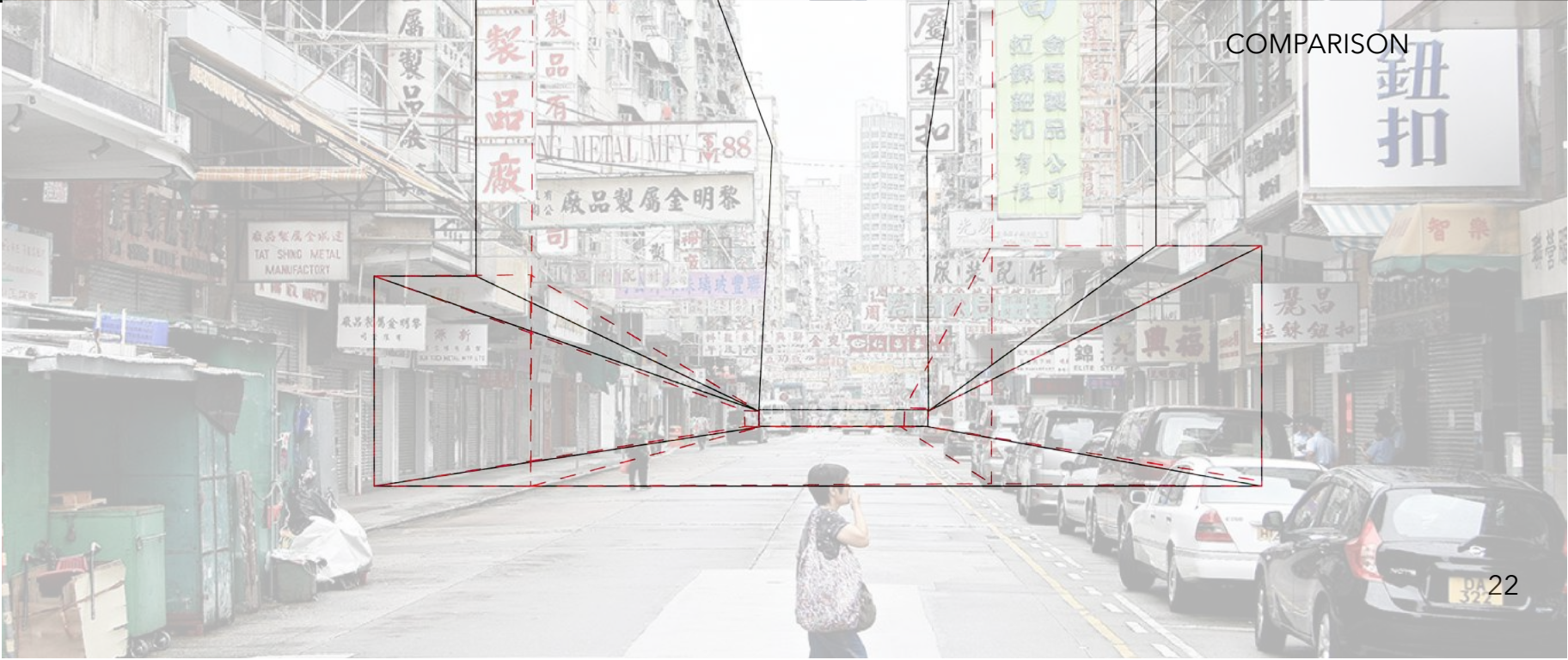
ORIGINAL FACADE

## SECONDARY FACADE

Yoshinobu Ashihara, a Japanese architect who wrote a book named the Aesthetic Townscape. In this book he talked about a concept of street -- secondary facade. Secondary facade is a term that refers to the attachments on the original facade, and follows the time changing, the attachments on the wall reshapes the street and effects the atmosphere in the street. This concept is not the main idea of this book, but it is a really interesting point to the street design. This concept illustrates the street changing the form (functions) and also changing atmosphere of the street (experience).



SECONDARY FACADE



COMPARISON

## 2 RECOGNIZE THE SITE

The site location is a section of Peachtree St. in Downtown Atlanta, Georgia. This area is one of the most busy and energetic areas in Atlanta. The history traces back to 1870 when Peachtree Street was once called Whitehall Street. Much of the city's historic and significant architecture is located along the street, such as the Atlanta Convention Center at Americamart and Peachtree Center where the site is located.

In 2007, Shirley Franklin, the mayor of Atlanta, announced a \$1 billion, 20-year plan to transform Peachtree Street with streetscape upgrades, public parks, underground utilities, and rail corridor.

ATLANTA, GA

PEACHTREE ST ATLANTA

TEST SITE

ANDREW YOUNG INTERNATIONAL BLVD

TEST SITE

JOHN PORTMAN BLVD



# HISTORY ON PEACHTREE ST

A trail known as the Peachtree Trail stretched from northeast Georgia to Standing Pitch Tree along the Chattahoochee River. The original Peachtree Road began in 1812 at Fort Daniel located at Hog Mountain in present-day Gwinnett County ran along the course of the trail to the Chattahoochee. Some portions of the present road trace this route.

In 1867, the name of Whitehall Street, the original road to White Hall Tavern in today's West End neighborhood, was changed to Peachtree Street from Marietta Street South to the railroad crossing (now "gulch") just north of Alabama Street.

Streets during 1940-1950 were made of permeable earthen material. The streets were not paved until later in the century.

In the late 1980s, the portion of Whitehall Street from Five Points South to Forsyth Street and Memorial Drive, a major shopping district from the Civil War through mid-20th century, was renamed Peachtree Street SE.

After hundreds of years of development, Peachtree St. became one of most busiest areas in downtown Atlanta.

Peachtree Street in 1864 - Hunnicutt's Drug Store on right and Marble Shop on left at intersection.

Print shows view of lower Peachtree Street in 1900 with Lester's Book Store, the Flatiron Building, Piedmont Hotel, and the Candler Building visible, also shows trolley cars.

Peachtree St. after Atlantans celebrate V-J Day.(1945)

Peachtree Street, downtown Atlanta, 1974

# UNDERSTANDING OF SITE

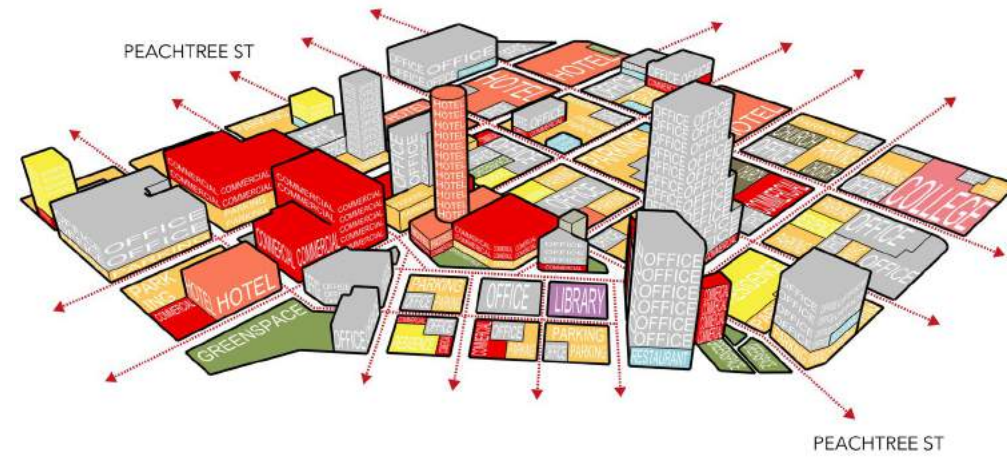
## Active Street

This active street should accommodate for multiple users and perform for multiple activities. For example, runners and exercisers can use this space for recreation in the morning. However, at noon, office workers can use this space to enjoy their lunch. At night, restaurants and bars can use this space to accommodate for outdoor seating and nightlife entertainment.



# Complicated Area

In order to understand the site better, the area adjacent to the site was analyzed. The area was analyzed based on the traffic, spacial conditions, and the potential activities. According to the analysis, the traffic volume in this area fluctuates with time. There are also potential activity areas around the site. This public space is close to the actual testing site. All these features of the site and surrounding areas have strong potential to develop a better street form and enhance the quality of street life.



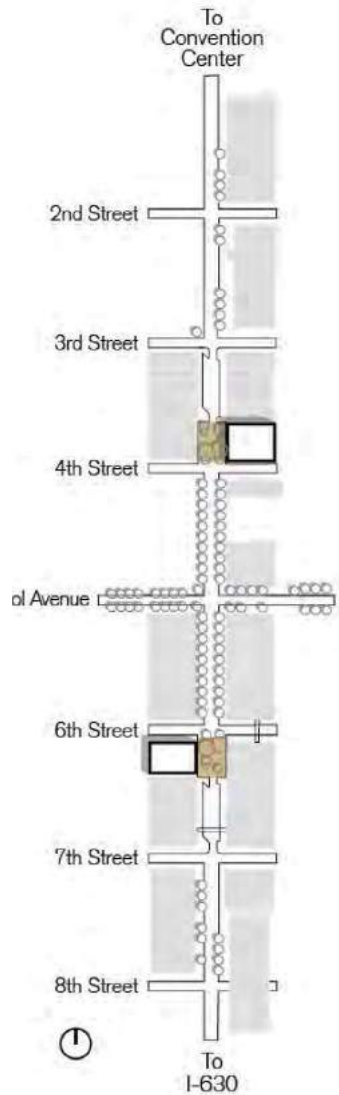
SITE ANALYSIS	WALTON SPRING PARK	HARDY IVY PARK	WESTWOOD COLLEGE PLAZA	MARGARET MITCHELL SQUARE FOUNTAIN	GREEN SPACE FRONT OF PEACHTREE CENTRE STATION
PHOTOGRAPH OF ATTRACTION					
ATTRACTION LOCATION					
TRAFFIC VOLUME BY HOUR	<p>Line graph showing traffic volume by hour for four streets: PEACHTREE, WILLIAMS SPRING, JOHN PORMAN, and LUCKIE. The y-axis represents traffic volume (0, 350, 700, 1050) and the x-axis represents time (8:00, 18:00). Peachtree shows the highest volume, peaking around 1050. Williams Spring peaks around 700. John Porman and Luckie show lower volumes, peaking around 350.</p>				
POTENTIAL ACTIVITIES AT SITE	<p>Illustrations of potential activities at the site: BIKING, SOCIAL, DOGWALKING, LUNCH BREAK, PARKING, and EXERCISE.</p>				
DISTANCE FROM THE TESTING SITE	<p>Distance scale from the testing site:</p> <ul style="list-style-type: none"> <li>WALTON SPRING PARK: 0.11mi</li> <li>HARDY IVY PARK: 0.18mi</li> <li>WESTWOOD COLLEGE PLAZA (INSIDE TEST SITE): 0mi</li> <li>MARGARET MITCHELL SQUARE FOUNTAIN: 0.19mi</li> <li>GREEN SPACE FRONT OF PEACHTREE CENTRE STATION: 0.11mi</li> </ul>				

## CASE STUDIES

### 1. The Creative Corridor: A Main Street Revitalization for Little Rock

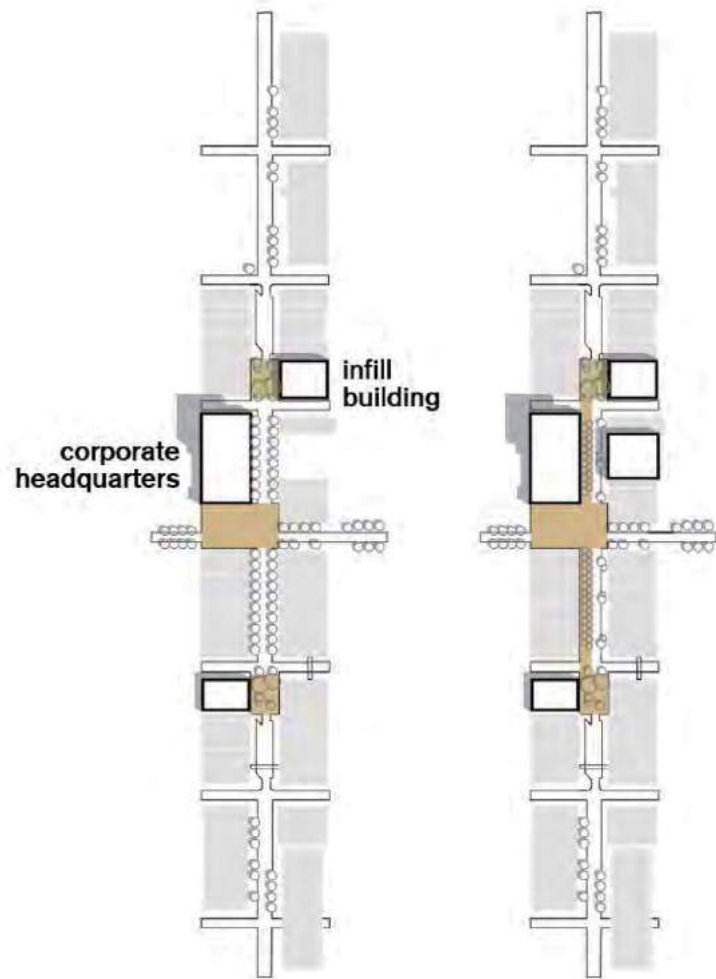
The Creative Corridor retrofits a four-block segment of an endangered historic downtown Main Street through aggregation of the cultural arts rather than Main Street's traditional retail base. The goal is to structure an identity for the Creative Corridor based upon a mixed-use working and living environment anchored by the arts. The design approach restructures the corridor into a node utilizing the urbanism of streetscapes—landscape architecture, ecological engineering, public space configurations, frontage systems and other townscaping elements.([www.asla.org](http://www.asla.org))





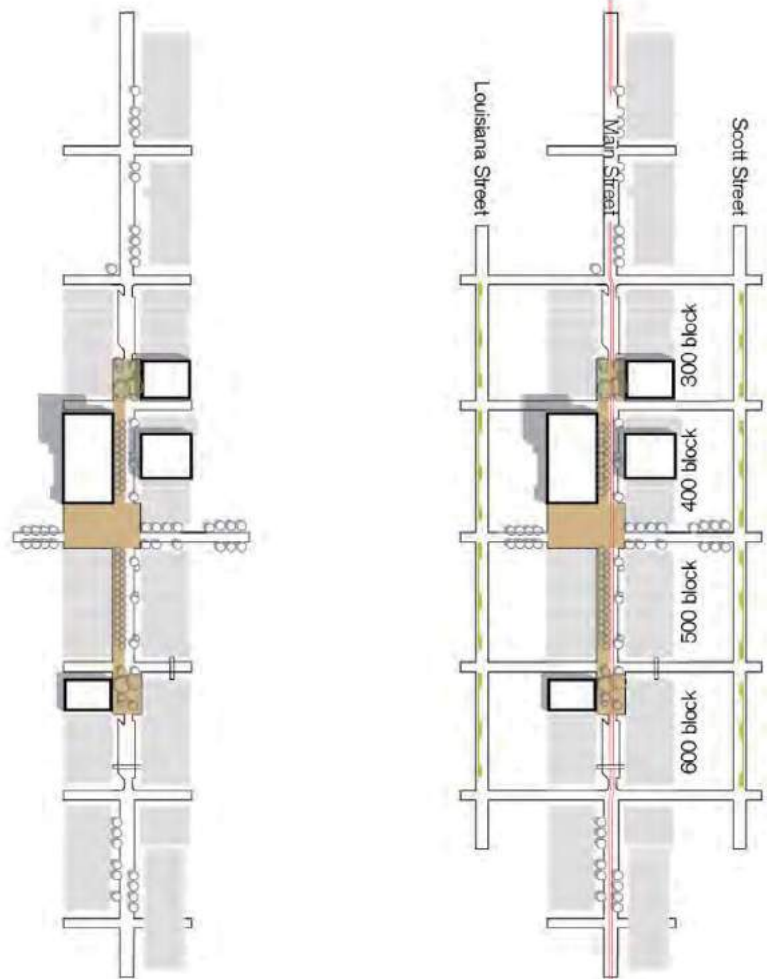
**1**

create gateways...



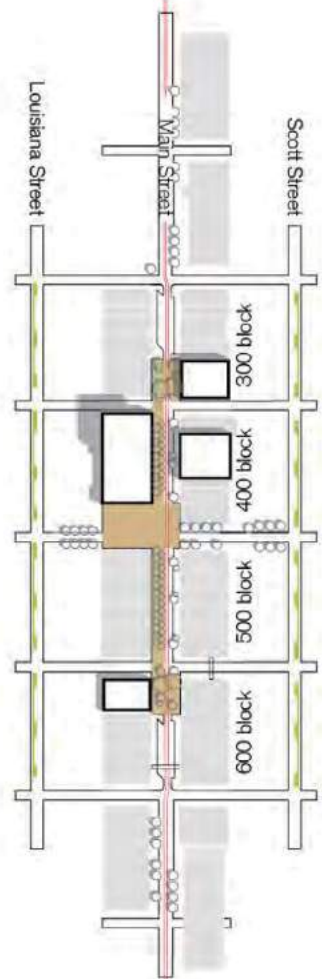
**2**

develop a center...



**3**

thicken the edge...



**4**

create a transit district!



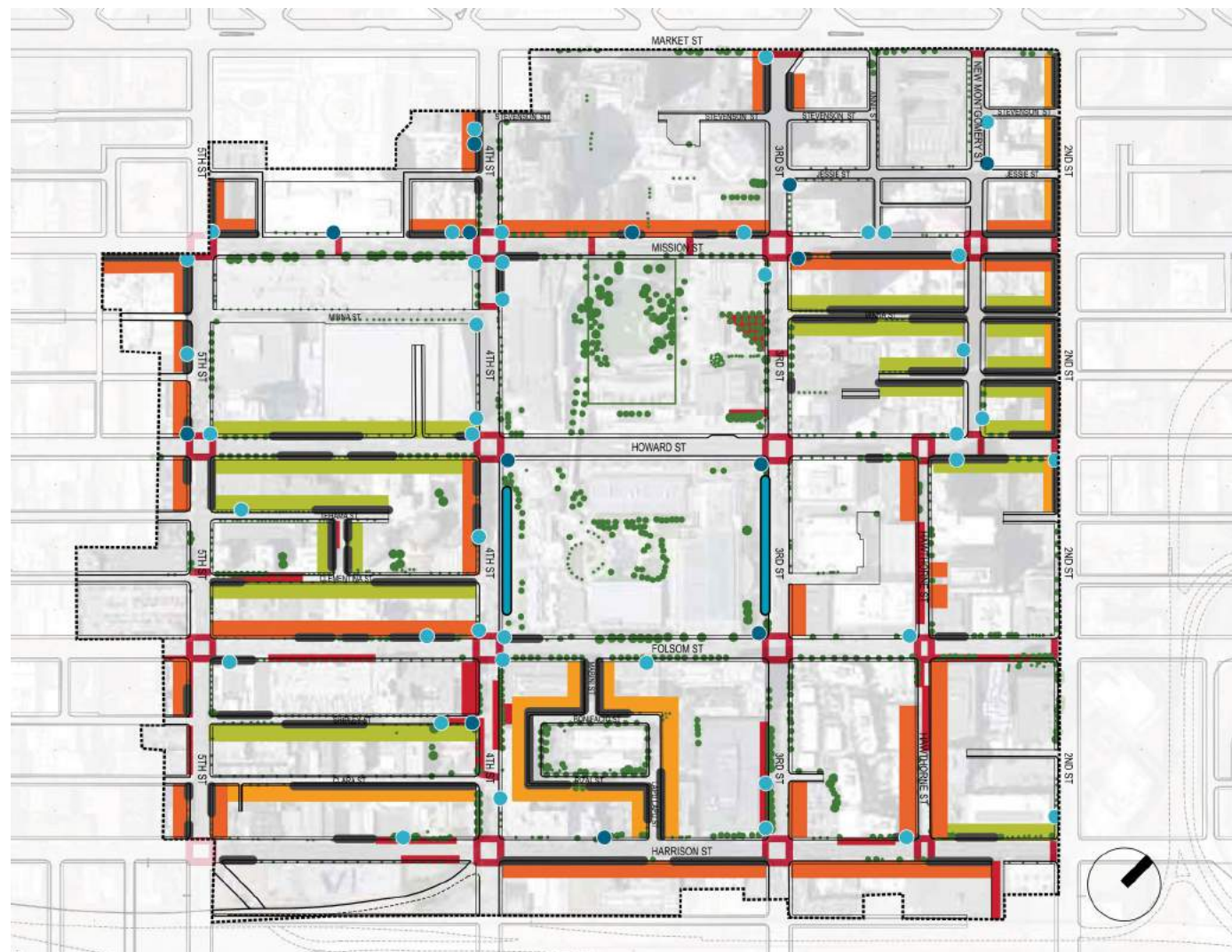
Before



## 2.Yerba BuenaStreet Life Plan

Yerba Buena Street Life Plan aims to create a scenario and street planning based on community input and a long-term needs assessment for the Yerba Buena District in San Francisco. The ultimate goal is to nurture urban life against the rough terrain surrounding the district. The projects are meant to establish character within the district while emphasizing the resident's well-being. ([www.asla.org](http://www.asla.org))





# EVALUATION

These two case studies describe how dynamic street form can contribute to the street life in different cities.

The Little Rock's case looks at the relationship between working and living environments with space management. After the completion of the Creative Corridor, people who live in Little Rock will have the opportunity to enjoy streetscapes. This project emphasizes what dynamic street design can contribute to the making of public spaces with a simple and clear street form as the street design. The emphasis on shared spaces is really what street design needs to engage in the next generation.

The case in Yerba Buena describes the impact of street design for residents of the district. In this research, the residents of Yerba Buena had influence on the design of the street. The street form design is dynamic with positive attributes, such as the mobile street furniture that can easily form the street and change the atmosphere on the street in low traffic situations with accessibility even during the peak hours of the day.

The dynamic street form differs from vehicle-based roads that move traffic from point to point. Dynamic street captures the value of the

street and balances the relationship between pedestrians, vehicles and other users of the street.





# 3 DESIGN EXPLORATION

Dynamic street form can balance relationships on the street in a new way—shifting street design. Design implementation on Peachtree St. at the Peachtree Center demonstrates the idea of how shifting streets can change the people’s experience and form of the street.

This street design on Peachtree St aims to be a solution to fix the existing problems and provide a better vision on the street, which in turns the heavy traffic street into a safe public place.

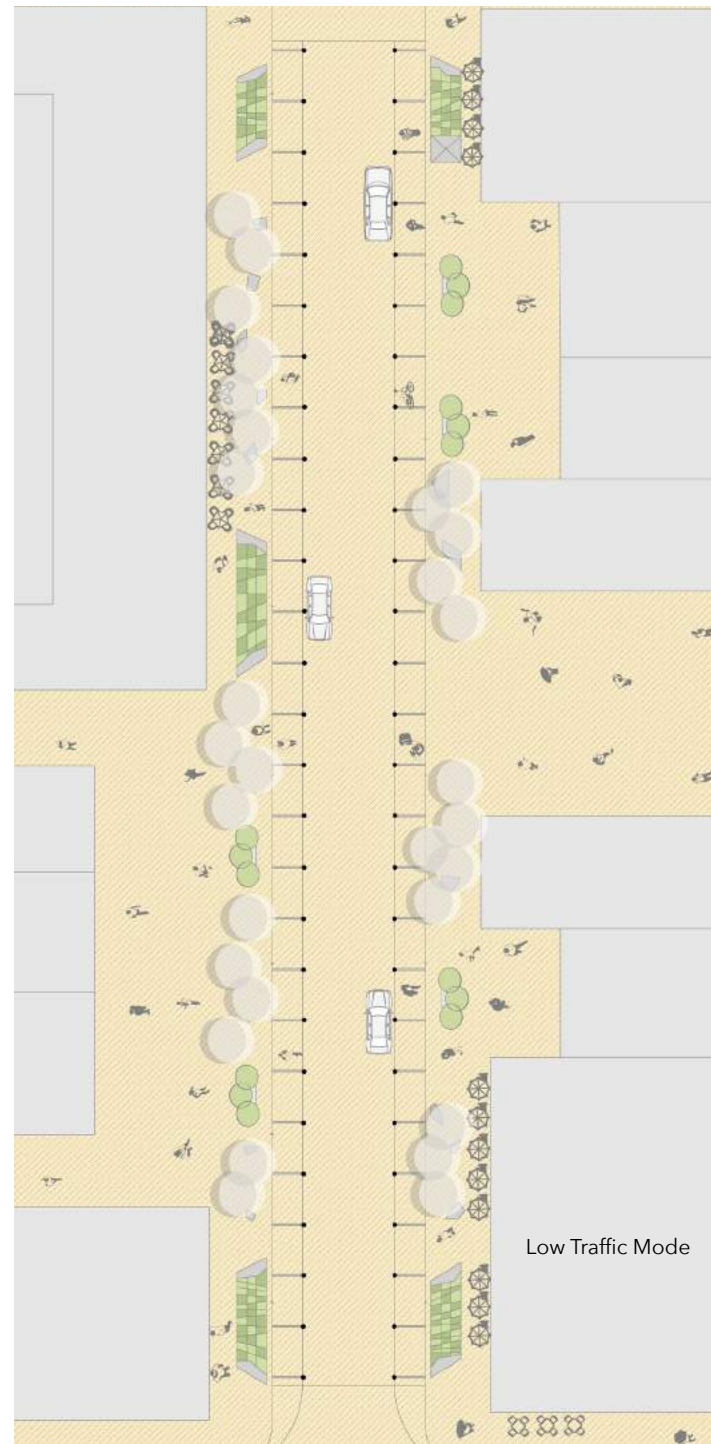


# TESTED STRATEGIES

## Movable Bollard

Because of the consideration of safety and space management, Bollards are a good way to divide the space for different users. The Movable Bollard can easily manage the space as the boundary between the pedestrian and vehicle lanes.

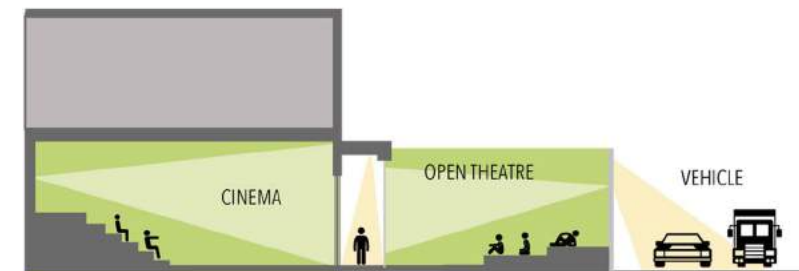
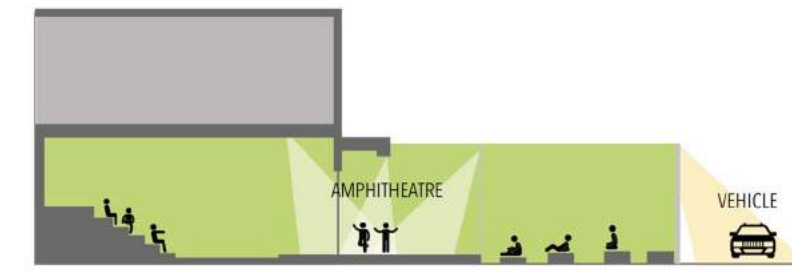
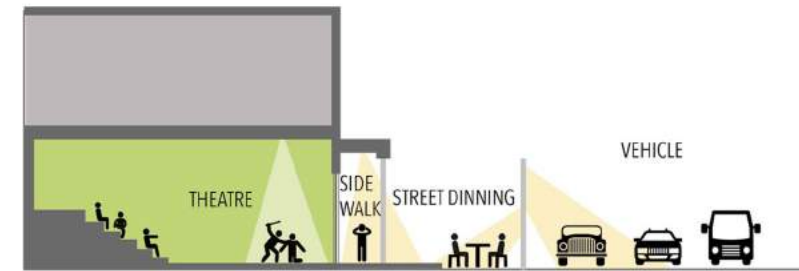
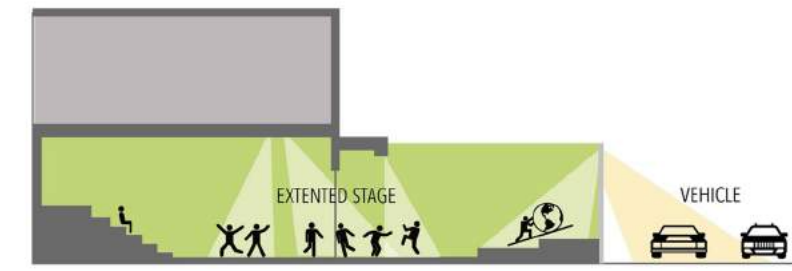
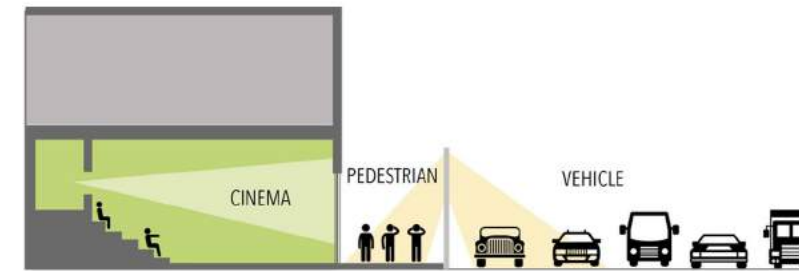
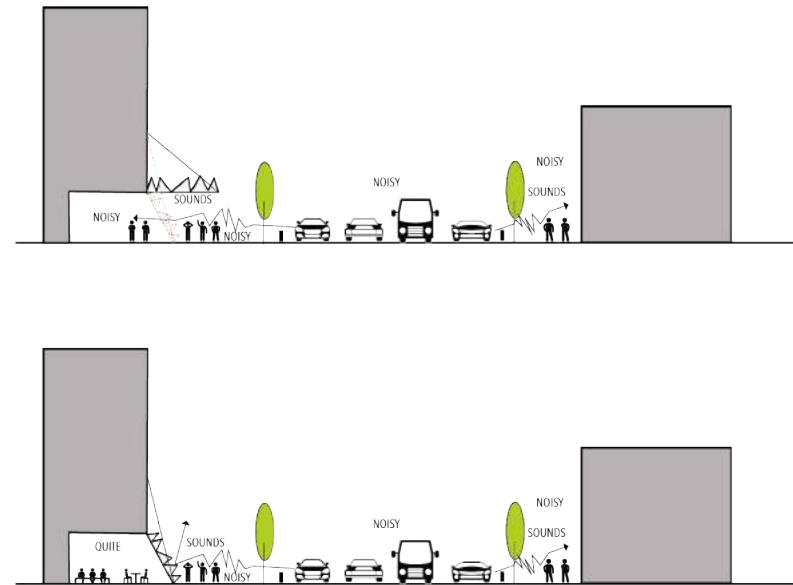
The bollard movement depends on the users's demand. In high traffic volume, moving the bollard back provides more lanes for vehicles. Conversely, moving the bollards closer together provides more space for pedestrians in the low traffic mode. In addition, the bollards can also reframe the street with parking spots to serve the people who want to park their cars rather than block a lane or violate parking in the pedestrian zone.



# Shifting Facade

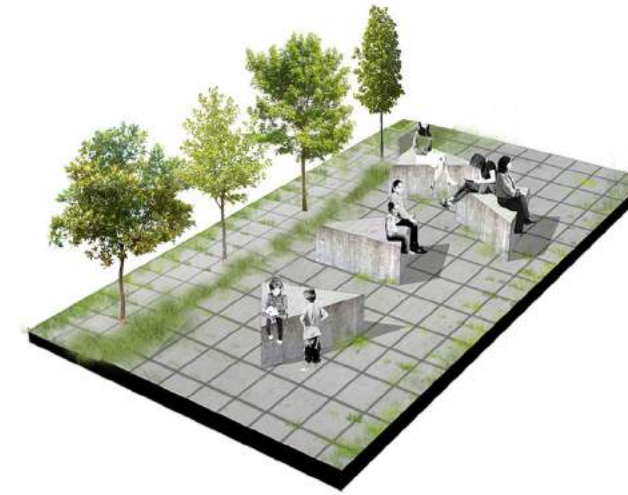
The Shifting Facade is a flexible way to manage the space. The facade here is actually is the secondary facade, which here refers to the lights, plants, or attachments on the building.

The Shifting Facade tries to create new facades to manage space vertically. The attachments on the building are a good method to organize the space both inside and outside of the building. Also, the Facade's movement also depends on the people's activities. Different activities need different qualities of space, and the Shifting Facade should associate with the Movable Bollard to manage space in multiple dimensions.



## Growing Vegetation

The growing vegetation is a long-term strategy that aims to reform the atmosphere on the street. Because of the ephemerality of the plants, the transparency, color and dimensions of plants are ever-changing. These changes of vegetation work to morph the experience and atmosphere on the street. Also, the growing vegetation is a helpful tool to enhance the space quality.



SPRING



SUMMER



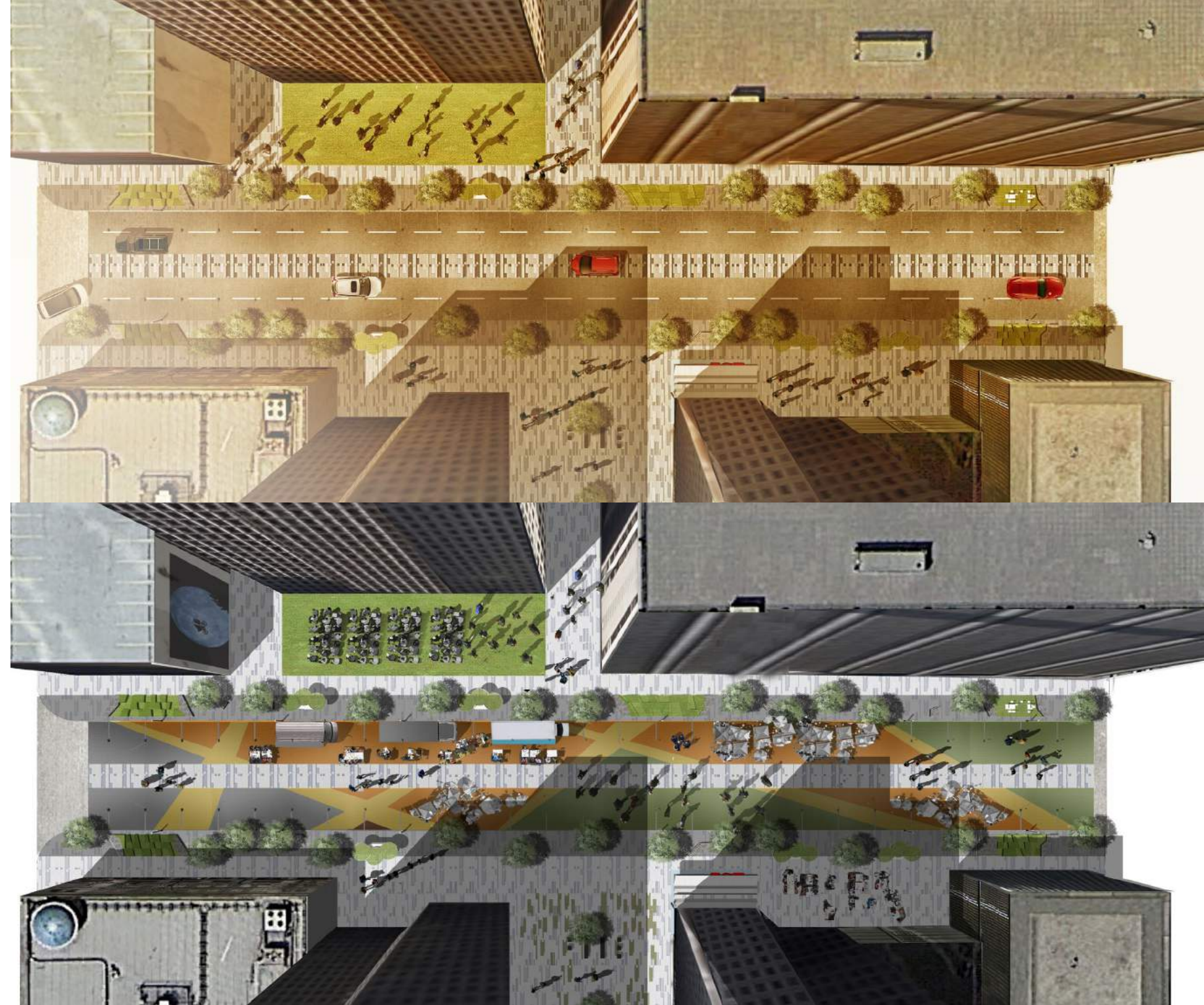
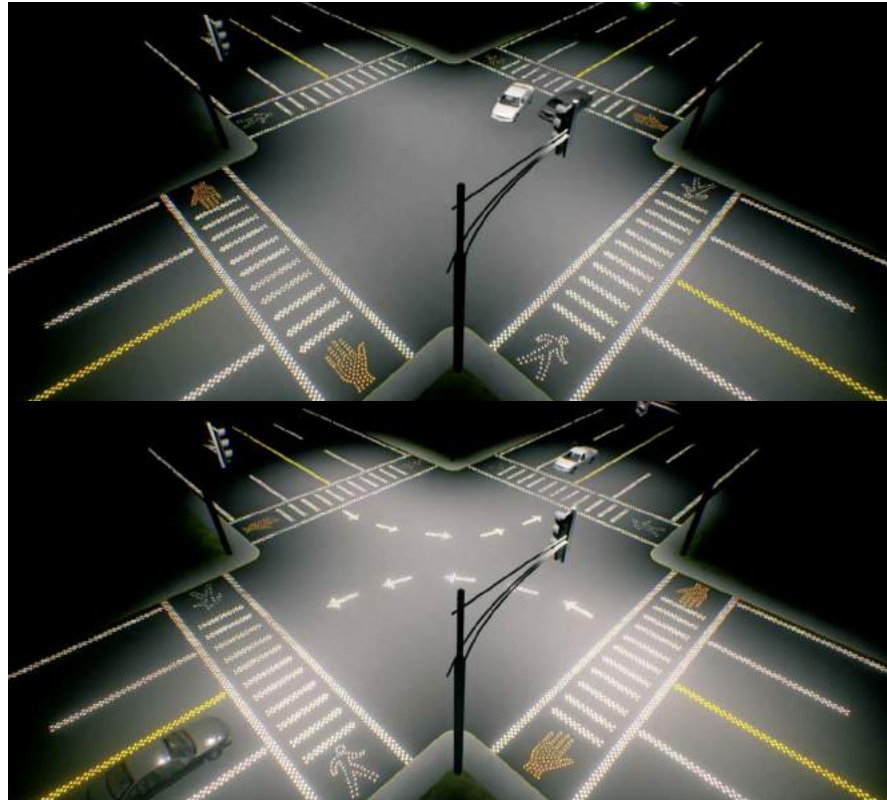
AUTUMN

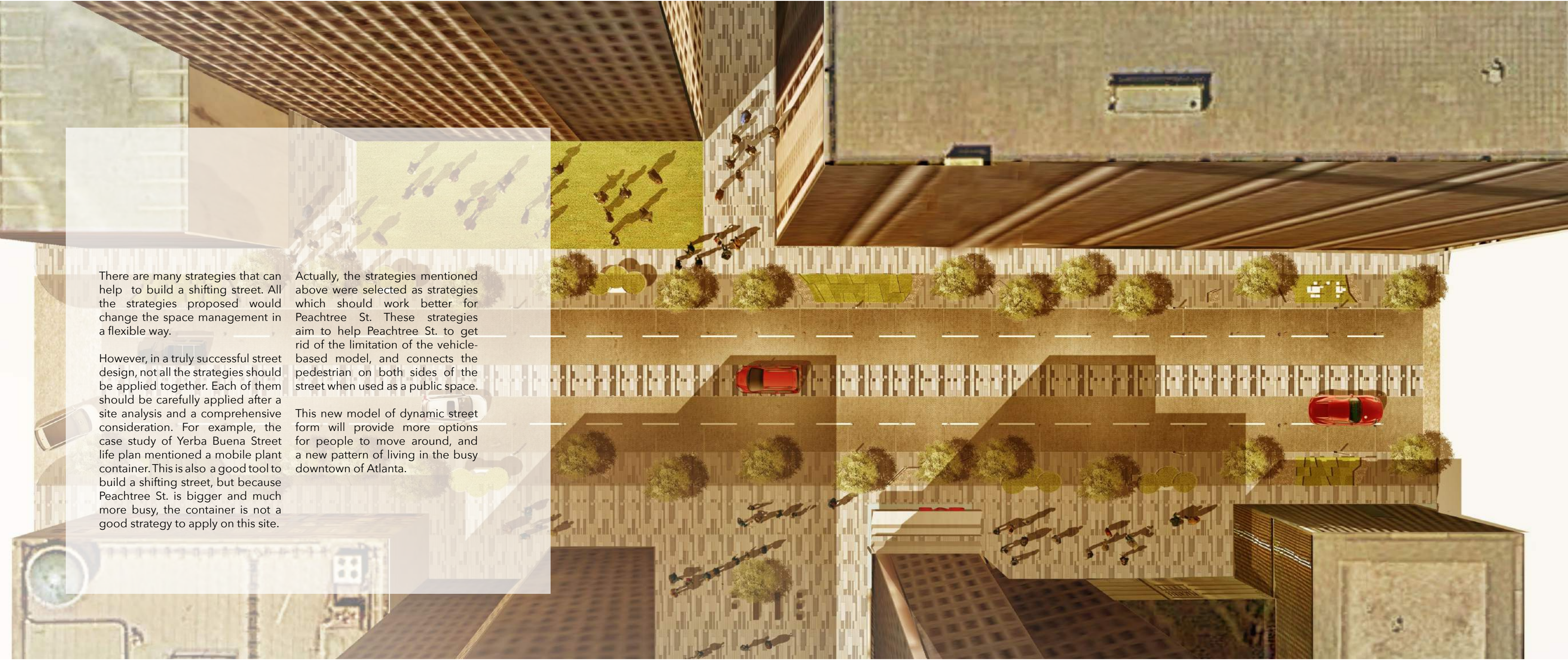


WINTER

## Changeable Pavement

Without a doubt, pavement is a powerful tool that works to reshape the street in both function and experience. However, the paver has a big potential for directing the activities on the ground. For example, Unit pavers are easily arranged to make signage and the make visible by different patterns. Actually, Pavement is a way to program the street. If pavement is changeable, the function of street will be reprogrammed. In another aspect, the pattern and material of paving also effects people's feelings. So changeable paving is an important tool to building the shifting street.



An aerial, top-down perspective of a city street intersection. The street is wide and paved, with a central lane for vehicles and sidewalks on both sides. Pedestrians are walking on the sidewalks, and a few cars are visible on the road. The surrounding buildings are tall and modern, with a grid-like facade. The scene is brightly lit, suggesting a sunny day.

There are many strategies that can help to build a shifting street. All the strategies proposed would change the space management in a flexible way.

However, in a truly successful street design, not all the strategies should be applied together. Each of them should be carefully applied after a site analysis and a comprehensive consideration. For example, the case study of Yerba Buena Street life plan mentioned a mobile plant container. This is also a good tool to build a shifting street, but because Peachtree St. is bigger and much more busy, the container is not a good strategy to apply on this site.

Actually, the strategies mentioned above were selected as strategies which should work better for Peachtree St. These strategies aim to help Peachtree St. to get rid of the limitation of the vehicle-based model, and connects the pedestrian on both sides of the street when used as a public space.

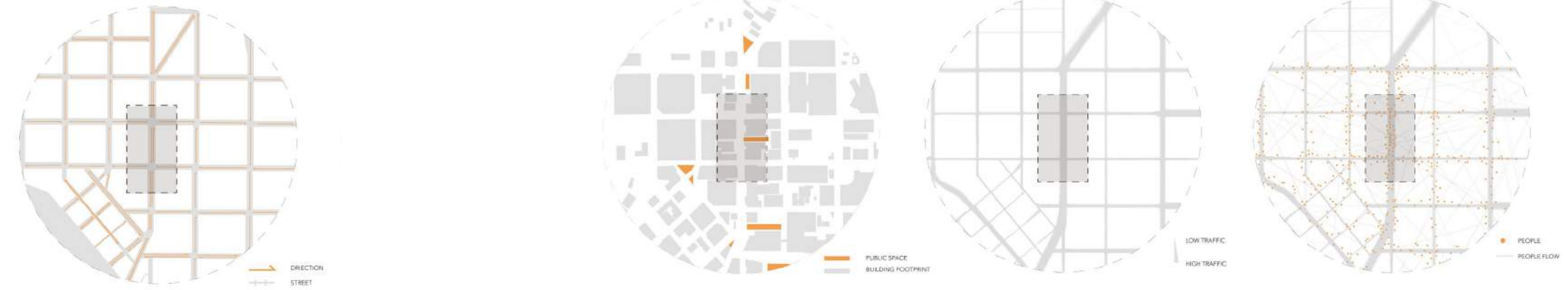
This new model of dynamic street form will provide more options for people to move around, and a new pattern of living in the busy downtown of Atlanta.

# DYNAMIC NEIGHBORHOOD

As a part of city infrastructure, the street design should consider the impacts in a systematic angle. Thus, the shifting street also needs to consider the effects on the neighborhood or surrounding area.

In the downtown of Atlanta, the shifting street should associate with the adjacent streets. When the street form is changed by the people's activities on Peachtree St., the traffic pattern of the surrounding area should also shift in accordance to meet the traffic demand of the area.

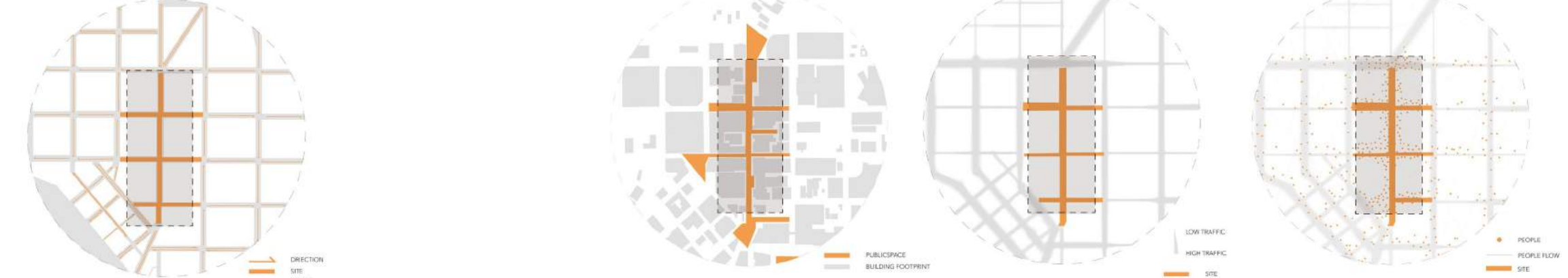
## EXISTING CONDITION



## TESTING SITE



## ADJACENT AREA





In the systematic considerations, the shifting street on the Peachtree St. needs the help of John Portman Blvd. and Andrew Young International Blvd. to balance the increasing traffic caused by street form changing.

In planning, the street around the site should have some shifting features to support the major shifts happening on Peachtree St. For example, when events are held on the site, the whole street will be a public space and traffic will be blocked. After the traffic block on Peachtree, the traffic on Andrew Young International Blvd. and John Portman Blvd. will increase. In this

situation, John Portman Blvd. and Andrew Young International Blvd. as the second level shifting street should create more vehicle lanes to solve the traffic problem in this area.

John Portman Blvd

Andrew Young International Blvd

Peachtree St

HYATT REGENCY ATLANTA

MALL AT PEACHTREE CENTER

WESTWOOD COLLEGE

HARD ROCK CAFE ATLANTA

HOOTERS

ALMA COONA

THE RITZ CARLTON ATLANTA

ELUS ST CAFE MARKET

ATLANTA CONVENTION CENTER AT AMERICANMART

INTERNATIONAL PEACH MART

THE WESTIN PEACHTREE PLAZA

MEDIA STATION OF PEACHTREE CENTER

COURTHOUSE ATLANTA DOWNTOWN

RESURANCE INN ATLANTA DOWNTOWN

RESURANCE INN ATLANTA DOWNTOWN



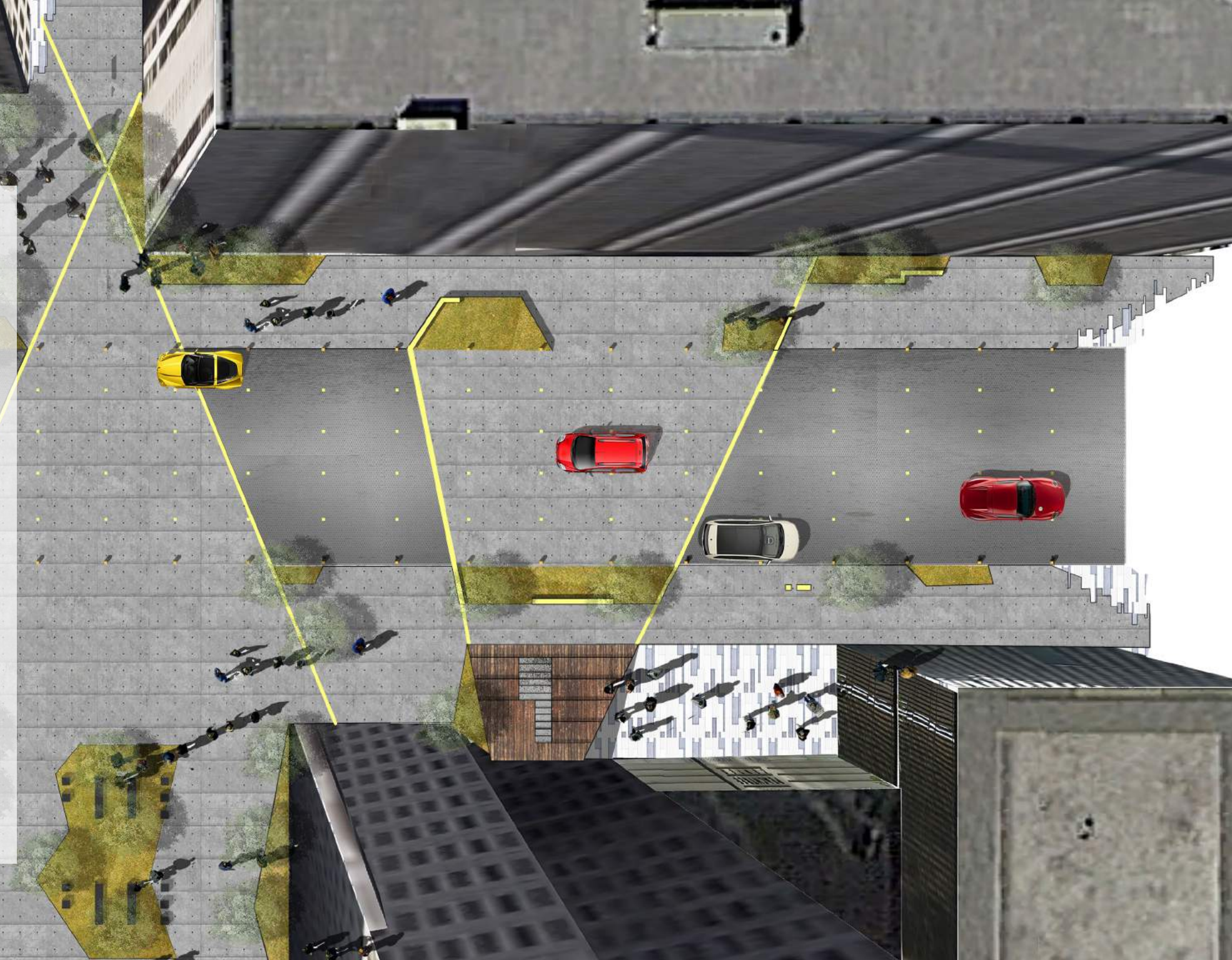
## SHIFTING STREET

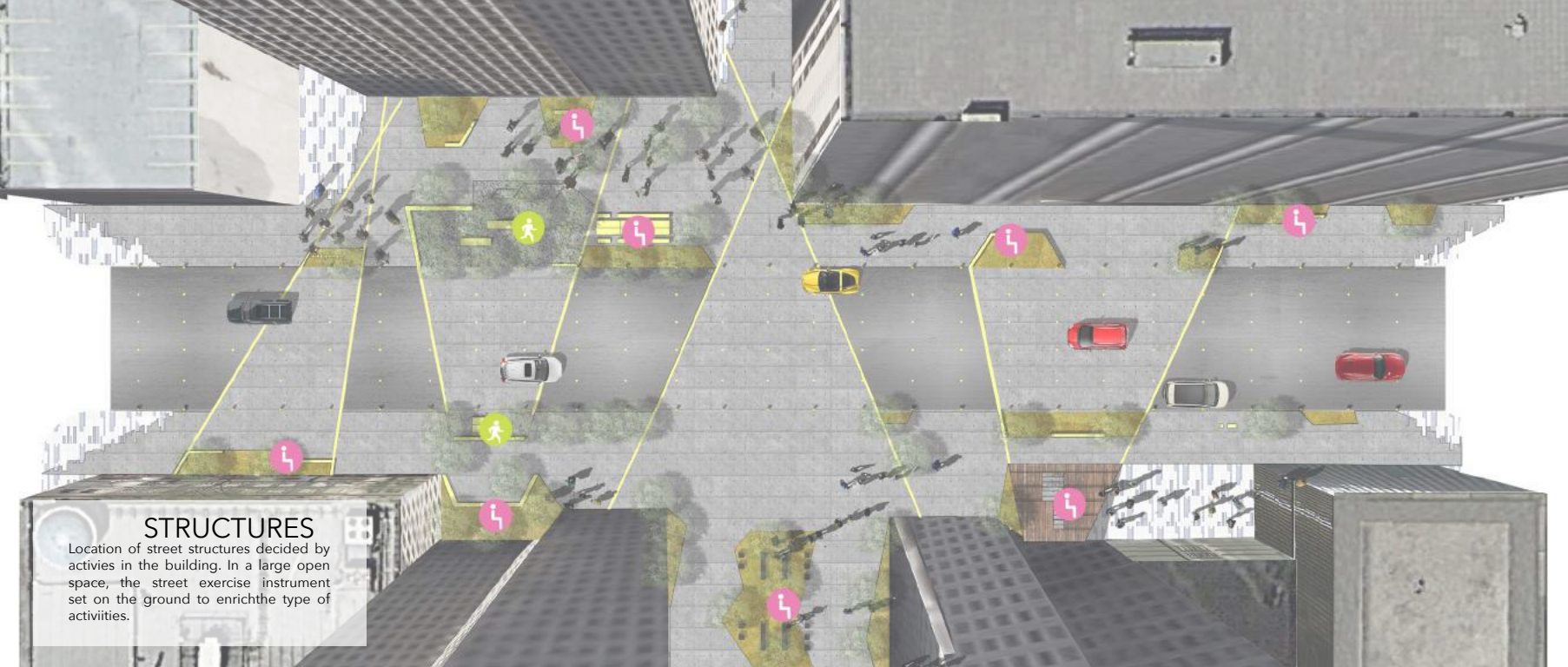
To change the experience and function on Peachtree St., multiple strategies apply on the site.

The pavement used to divide the space on the ground also makes the connection between the pedestrian on both sides. Also, the solar roadway makes it possible for some parts of vehicle lanes that can change the color on the ground. This would depend directly on the people activities.

As for the vegetation, the trees are not planted in a line along the street. In the street exercise area, the trees are planted densely to change the people's experience and create a semi-private place for exercise. For the drivers, the trees shape the street as the facade. When people drive through the street, the changing viewshed also changes the feelings of drivers.

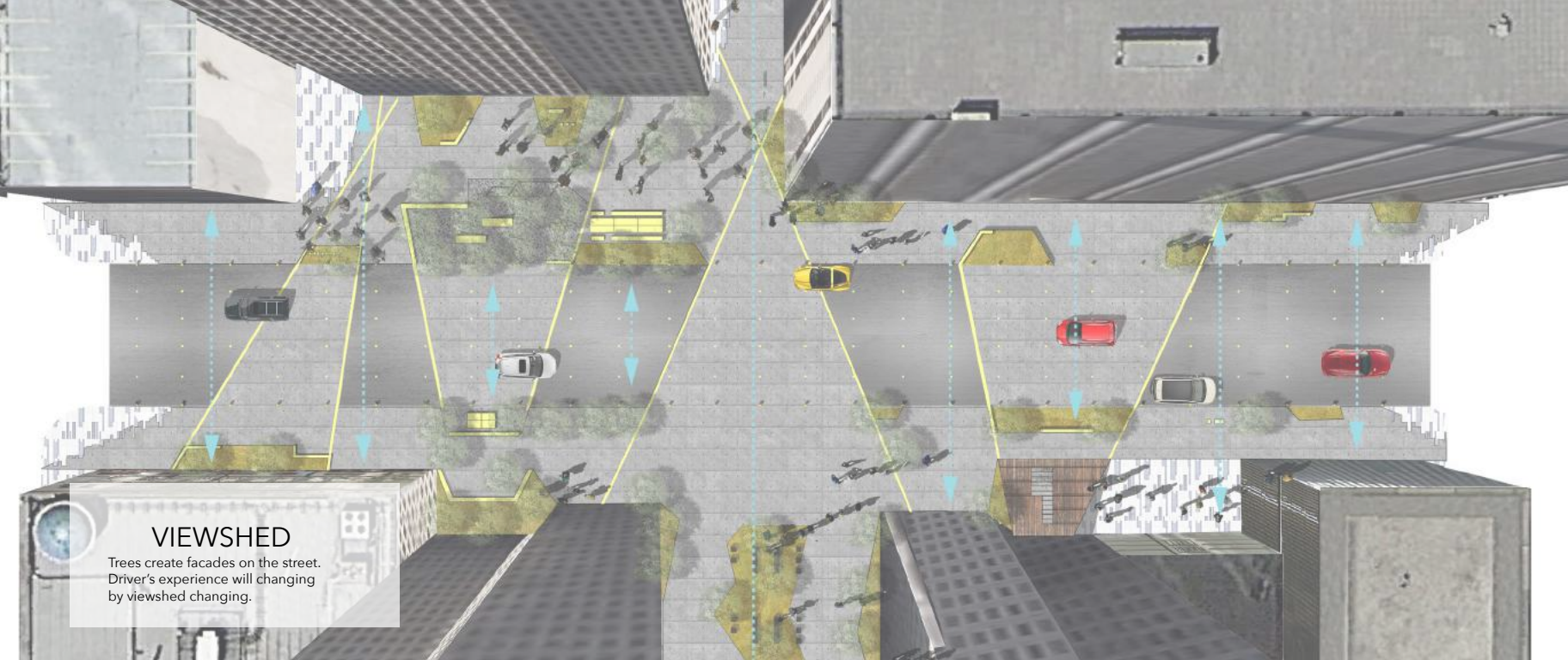
At last, the bollards on the street can rise up and fall down to shape the street form and manage the space to provide more opportunities for activities. The bollard shifting can associate with the solar roadway and build the different experiences in different situation.





### STRUCTURES

Location of street structures decided by activities in the building. In a large open space, the street exercise instrument set on the ground to enrich the type of activities.



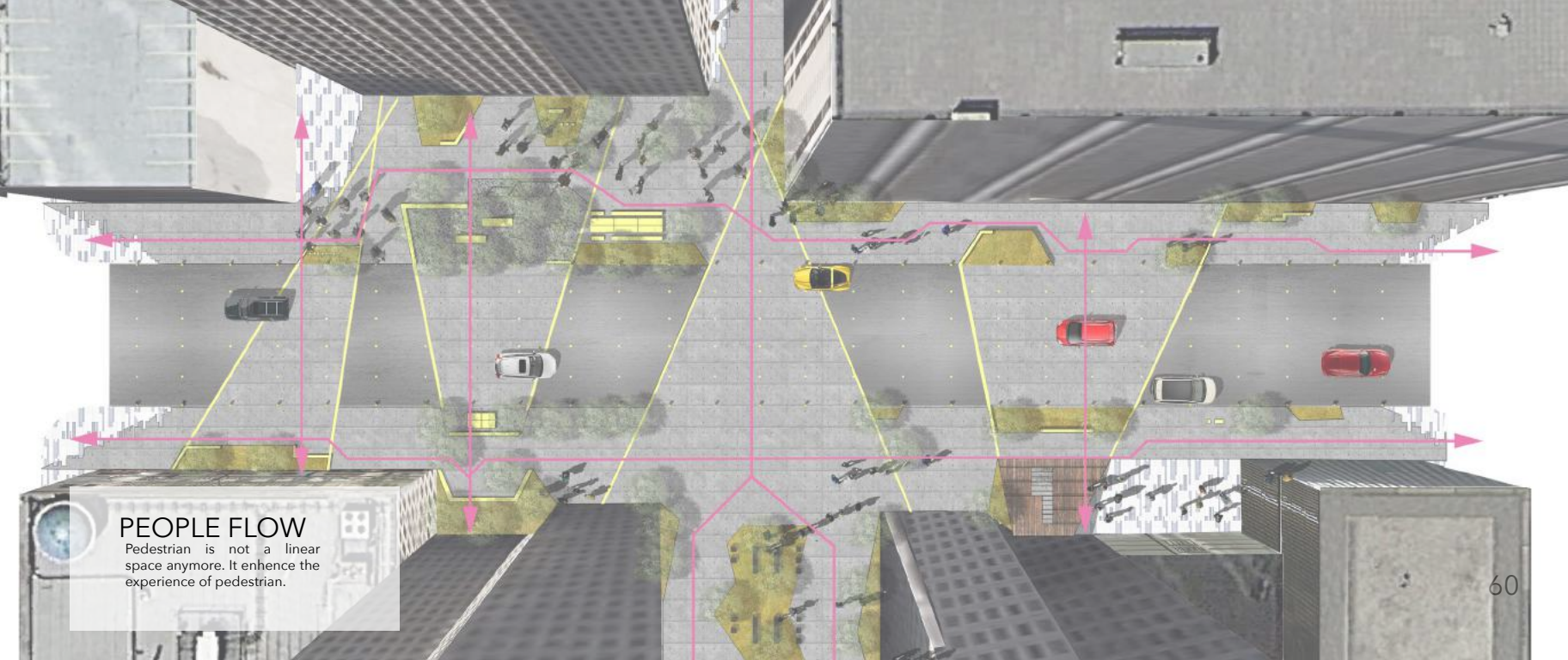
### VIEWSHED

Trees create facades on the street. Driver's experience will change by viewshed changing.



### CONNECTIONS

The pavement on the ground connect the pedestrian together and turn the street to a place.



### PEOPLE FLOW

Pedestrian is not a linear space anymore. It enhance the experience of pedestrian.



In the design, the street space divides into many small parts that differ by the material and activities.



In the normal mode, the shifting street has no difference compared with the normal street. Both sides is pedestrian and the vehicle lanes in the middle of way. Each side provide the seats for people and the terrace just like a harbor for the people who want to find a place to have a rest.



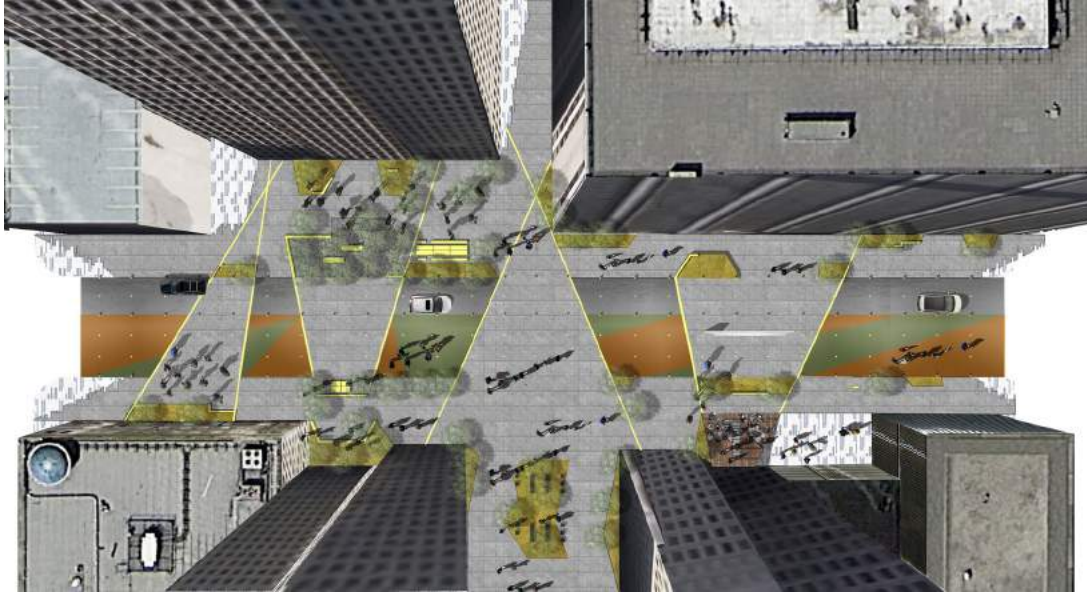




When the traffic volume is decreasing, the major target user changing from the vehicle to the people. In this situation, the bollards can reshape the street with a bike lane or jogging track so that exercisers can enjoy their morning or weekends in the downtown rather than running in a gym. This space on both sides could be also enlarge the pedestrian when the people flow is heavy. For example, in the summer, the restaurant can provide more outside seats for guests without blocking the whole pedestrian.







Sometime, there will be some street events on the Peachtree St. In this situation, the street just keeps a very low traffic volume and provides more space for a larger group activities. For instance, the terrace on the pedestrian can change to amphitheater or open theater at night. The residents form this neighborhood can watch a movie or a street performance on the street.









In the proposal, The street could shut down on the weekends for holding larger events like a concert or open market. In this situation, the bollards on the intersections can pump up and block the traffic. The whole space of right of way changes to a public space just for the people. People can arrange the activities on the street and have an extraordinary experience.





## 4. REFLECTIONS

Over the past hundreds years, the design has been a gradual but significant shift in the way that people understand the street. A functional and solid street model has replaced by a sharing, dynamic and safe street model. Applying this theory for designing a street at Peachtree Street in Atlanta in order to develop the street in a multi-functional and energetic way to meet the challenges and demands of future.

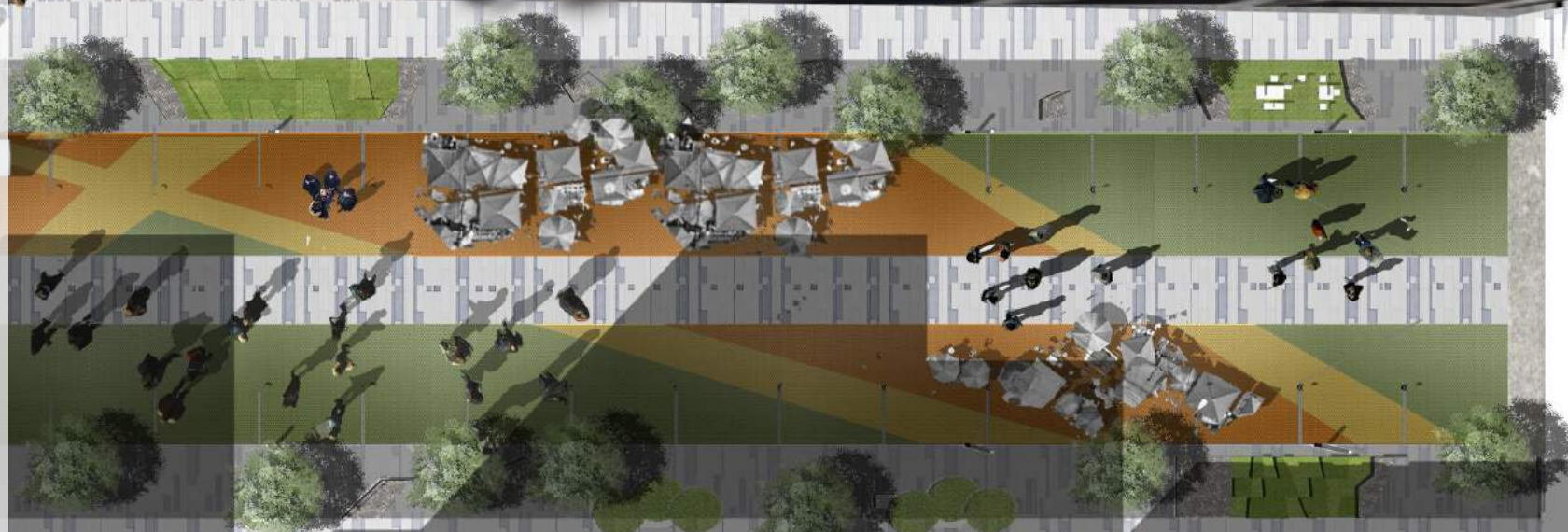
The biggest achievement of this research is the realization that the street form should be dynamic and flexible that means street can change the form to adapt and meet

the different needs in different situations. It will enable future designs to be richer, thicker, and more complex.

Functions of street and experiences were the primary shifting design moves within this thesis. However, some limitation of the project still exist. In this thesis research, all graphics and texts developed in two semesters. So the understanding of the theory and project are still not strong enough. For example, This thesis is focused on the critical thinking on the design, there is still not strong enough on the planning and systematical thinking.

Additionally, this design approach needs more practice. The design just base on a theoretical feasibility. It still need pushing further and into reality.

In conclusion, nowadays crowded city, this thesis looks throughout the value of the street in a shifting mode, which is able to enhance the experience and develop a multi-functional space on the street is important to the future of street design.



## BIBLIOGRAPHY

Ashihara, Yoshinobu. *The Aesthetic Townscape*. Cambridge: MIT, 1983.

Chen, Qi. "Automobile Dynamics in Visual Perception and Construction of Street Landscape." *Hundred Schools in Art* 137th ser. 02 (2014): 251-52.

Gehl, Jan. *Life between Buildings: Using Public Space*. New York: Van Nostrand Reinhold, 1987.

Jacobs, Jane. *The Death and Life of Great American Cities: Orig. Publ. 1961*. New York: Vintage, 1992.

National Association of City Transportation Officials. *NACTO Urban Street Design Guide: Overview*. New York: Island, 2012.

"UPC Initiatives." Abu Dhabi Urban Planning Council. Abu Dhabi Urban Planning Council, 2011.

Zhang, Wenying. *Pocket Park--Oasis Away from the Bustle High Density City*. *Chinese Landscape Architecture*. Vol. 04, 2007. 47-53.

"A Main Street Revitalization for Little Rock." *Regional & Urban Design*. AIA, 2014.

Massengale, John. *Montague Street design : the secret to great cities and towns*. Hoboken, New Jersey : John Wiley & Sons, Inc. 2014,

Ashihara, Yoshinobu. *Exterior Design in Architecture*. Toronto: Van Nostrand Reinhold, 1981

Burton, Elizabeth, and Lynne Mitchell. *Inclusive Urban Design: Streets for Life*. Oxford: Architectural, 2006.

History Atlanta, <http://historyatlanta.com>

Nasar, Jack L, Yurdakul, A. *Patterns of behavior in urban public spaces*, *Journal of Architectural and Planning Research*, 1990

Yerba Buena Street life plan, <http://www.ybcbd.org/yerba-buena-street-life-plan/>, 2011

Colin, D, Buchanan, *Traffic in Towns*, UK Ministry of Transport , 1963

J·Barnett. *Urban Design As Public Policy Architecture Record Books*, 1974

Lynch, Kevin. *The Image of the City*. Cambridge, MA: MIT, 1960.

Sims, Josh. *100 Ideas That Changed Street Style*. Laurence King, 2014

Rob Methorst, *Shared Space: Safe or Dangerous?*, <http://www.pedbikeinfo.org/cms/downloads/Shared%20Space%20-%20eng.pdf> 2007

Rob Methorst, *Pedestrians' Quality Needs - a conceptual framework*, *Adviesdienst Verkeer en Vervoer*, 2007

Carol Thomas, *Shared Surface Street Design: Report of focus groups held in Holland*, *Guide Dogs*, 2006

## IMAGE CITATION

Figure on P4 <http://agile-city.com/wp-content/uploads/2015/02/PARKingDay0091.jpg>

Figure on P6 John Donegan <http://www.abc.net.au/news/image/5626172-3x2-700x467.jpg>

Figure on P8 Stephanie Jung [http://www.cooph.com/imgservice/0001/1/950/fileadmin/upload\\_media/stories/stephjung/COOPH\\_Stephanie\\_Jungclosingtime.jpg](http://www.cooph.com/imgservice/0001/1/950/fileadmin/upload_media/stories/stephjung/COOPH_Stephanie_Jungclosingtime.jpg)

Figure on P15 left <https://www.t.u-tokyo.ac.jp/tpage/public/2003/1027.html>

Figure on P15 middle [http://www.wikiwand.com/de/Hans\\_Monderman](http://www.wikiwand.com/de/Hans_Monderman)

Figure on P15 right [http://www.connectcathays.org.uk/index.php/Colin\\_Buchanan](http://www.connectcathays.org.uk/index.php/Colin_Buchanan)

Figure on P18 Scan from Traffic of towns

Figure on P20 New Road, Brighton by Gehl Architects <https://ciudadespensantes.files.wordpress.com/2014/12/new-road-2.jpg>

Figure on P25 left <http://freepages.genealogy.rootsweb.ancestry.com/~wb4kdi/Military%20Service/Confederates/Atlanta/03466.jpg>

Figure on P25 right <http://s3.amazonaws.com/ghostsofdc/wp-content/uploads/sites/8/2015/07/27221132/3c34707u.jpg>

Figure on P26 left [http://atlantatimemachine.com/images/Celebration\\_of\\_the\\_first\\_VJ\\_Day\\_1945\\_AJCP144-065l.jpg](http://atlantatimemachine.com/images/Celebration_of_the_first_VJ_Day_1945_AJCP144-065l.jpg)

Figure on P26 right left [https://cdn2.vox-cdn.com/thumbor/hu83yB7QYtLUoJiZ7Zmk1dFcUws=/0x31:600x369/1600x900/cdn0.vox-cdn.com/uploads/chorus\\_image/image/47959969/15-1219a.0.gif](https://cdn2.vox-cdn.com/thumbor/hu83yB7QYtLUoJiZ7Zmk1dFcUws=/0x31:600x369/1600x900/cdn0.vox-cdn.com/uploads/chorus_image/image/47959969/15-1219a.0.gif)

Figure on P31-34 <https://www.asla.org/2014awards/199.html>

Figure on P35-38 <https://www.asla.org/2014awards/581.html>

P40 <http://gellersworldtravel.blogspot.com/2013/07/vauban-freiburgs-first-model.html>

YUNING ZHAO  
MASTER OF LANDSCAPE ARCHITECTURE  
AUBURN UNIVERSITY  
2016