

البحري
EST. 1979

RETHINKING BICYCLE CITIES

وسط البلد
EST. 1863

INTRODUCTION TO URBAN DESIGN



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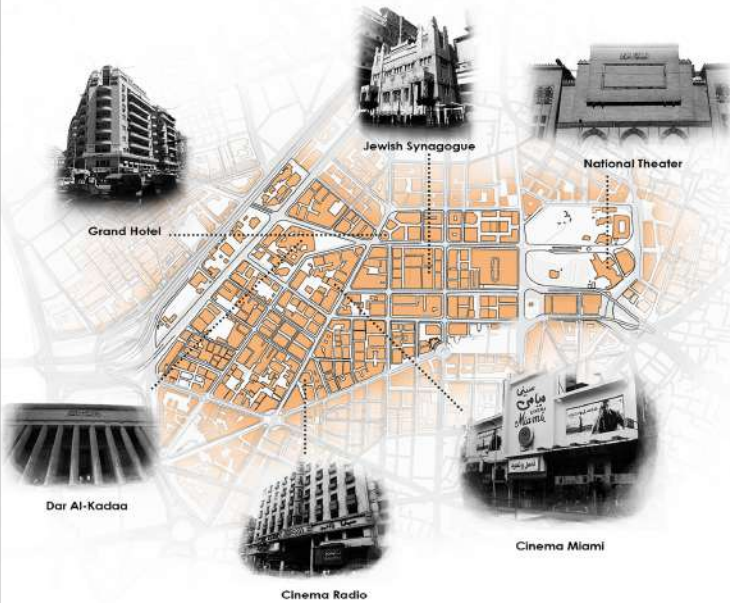
Historical Background

1

Historical timeline



DOWNTOWN



Historical Timeline



1863

An order to build Downtown Cairo like European countries (Paris) was made.

Al Attaba Square was made. Opera House and The National Theater were built.

1869



1872

Azbkya Garden opened.

Al Ahlya Insurance building was built.

1900



Dar El Kadaa was built.

1937

Central bank was built.

1961

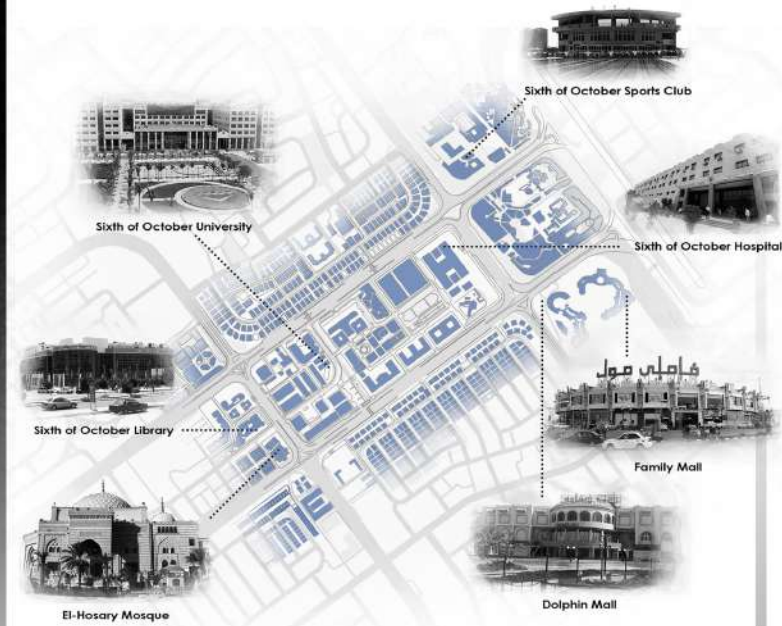


Urban Downtown

El Khedive Ismail gave an order to build downtown Cairo 1863 modeled after Paris to look like modern European cities, built on the **Classic Urban Theory**. It was built on a radial model with integration between spaces. There is a predominance of Pedestrians.



AL-HOSSARY



Historical Timeline



1978

Creation of Sixth of October City.

District two, three, and four were added.

1985



1990

District one added.

Tourist area was added.

1995



1996

Several educational institutions were established. (6 of October, MSA, MUST)

6 of October City was stated as a Governorate.

2008



2011

Later it was restated as city belonging to Giza Governorate.

Suburban 6th of October City

6th of October City was established in 1979 and was based on Le Corbusier's model of a **Modern City**. The city is car dependent, has disconnected public space and all functions of living, working and recreation and segregated.

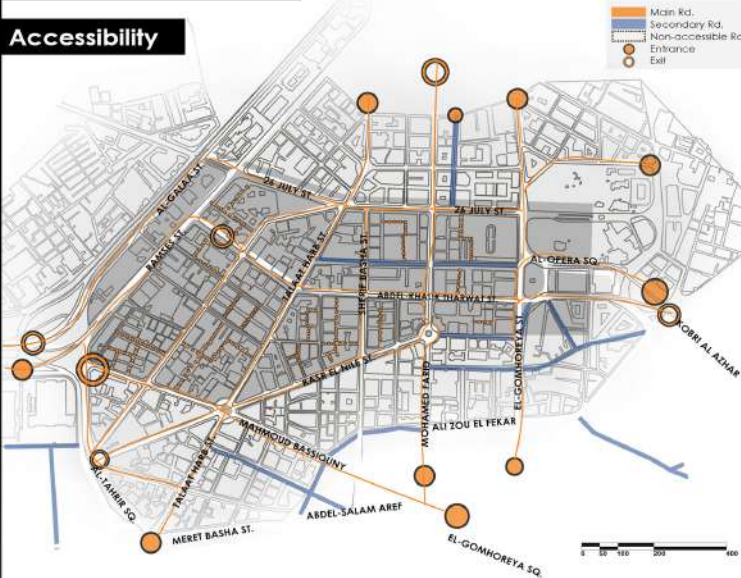


Accessibility

2 Accessibility, Permeability & Squares

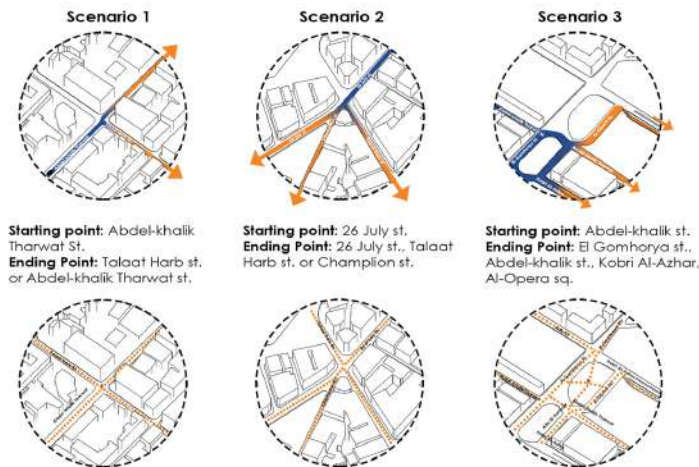
DOWNTOWN

Accessibility



This area in Downtown has many entrances and exits from different streets.

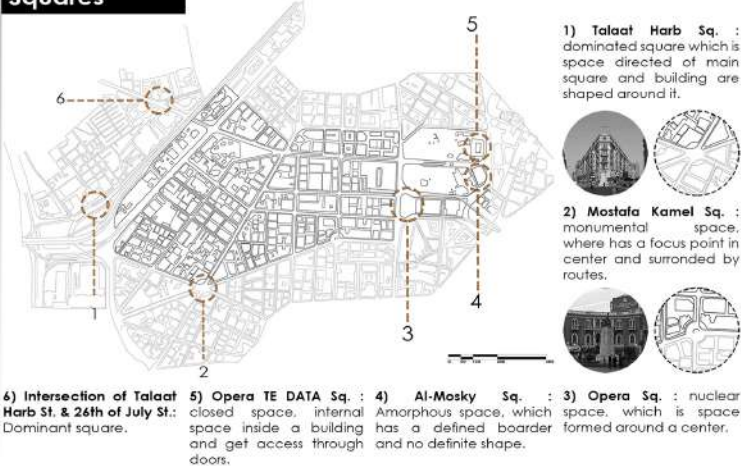
Permeability



Conclusion

Downtown is an accessible city that any vehicle can enter and exit very easily from different streets. This characteristic is reflected in the urban fabric of the area. From the scenarios, we can see that anyone can reach any place very easily by walking or by a vehicle because of the many accessed streets. This area in Downtown is a walkable area.

Squares

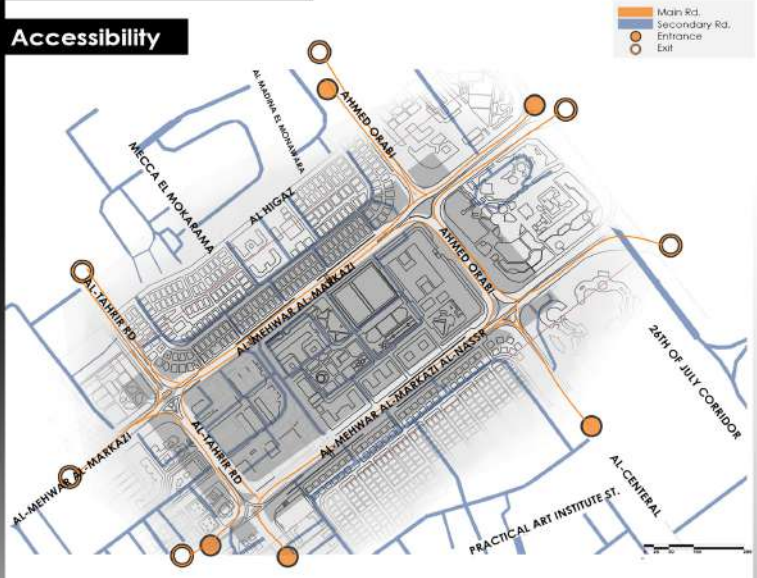


Conclusion

Different types of squares that reflects the various usage of every type as some are in closed building and some are dominant squares and some are nuclear.

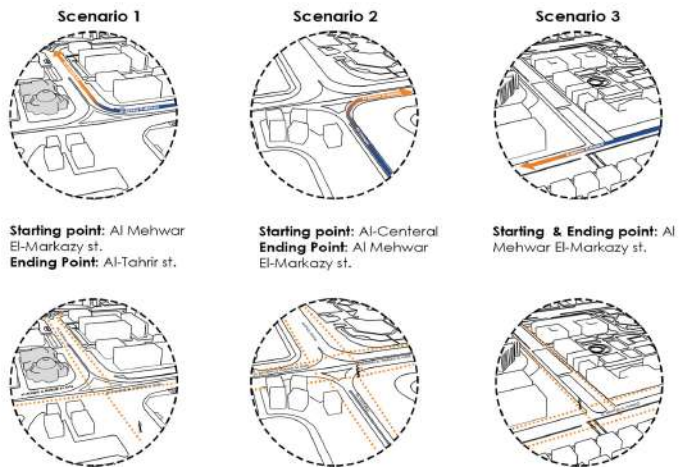
AL-HOSSARY

Accessibility



This area in Al-Hossary has limited entrances and exits.

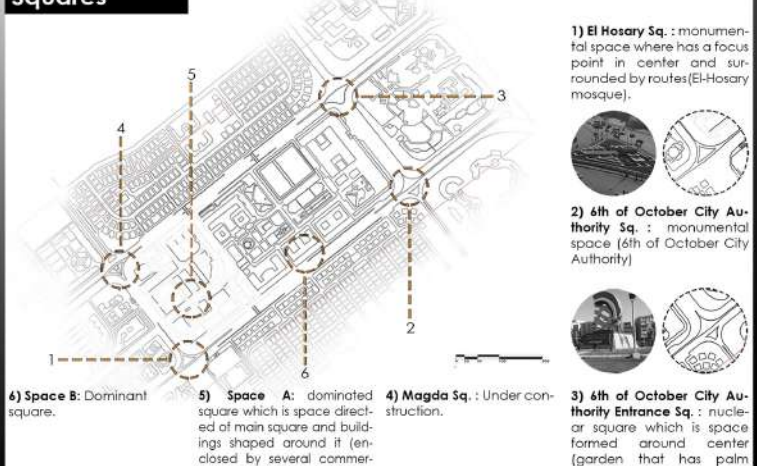
Permeability



Conclusion

Al-Hossary has limited entrances and exits that can limit the accessibility. This is reflected on the urban fabric as the area is more dispersed unlike Downtown. The scenarios show that one street has an one and only exit, so it's hard for vehicles to reach a place as well as it's hard for people to pass the street. This area in Al-Hossary is more of a mobile area.

Squares



Conclusion

Various types of squares that include mostly monumental and dominant as the closed space squares are rarely seen through the site.

Analysis Maps

3 Landuse, Landuse Diversity, Edges & Districts

DOWNTOWN

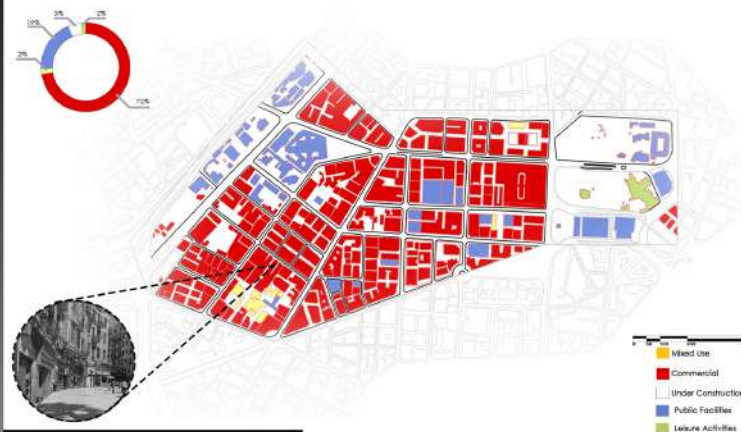
Landuse



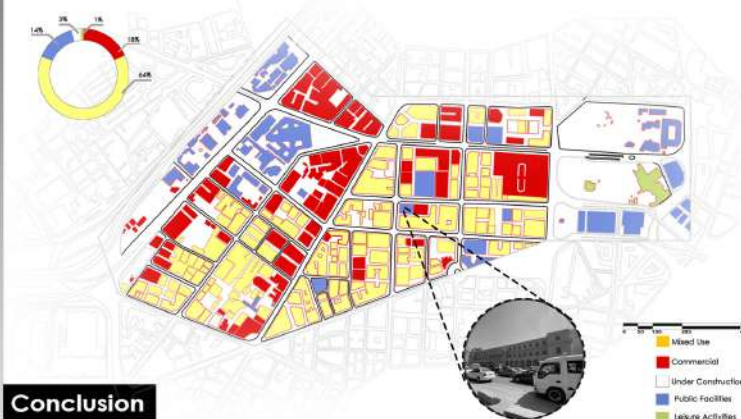
Conclusion

The landuse here is divided as every category (residential, commercial, public facilities) is isolated for a better efficiency of each on its own serving each other while also providing some advantages for residential area like less noise and more privacy unlike downtown.

Landuse Diversity - Ground



Landuse Diversity - First

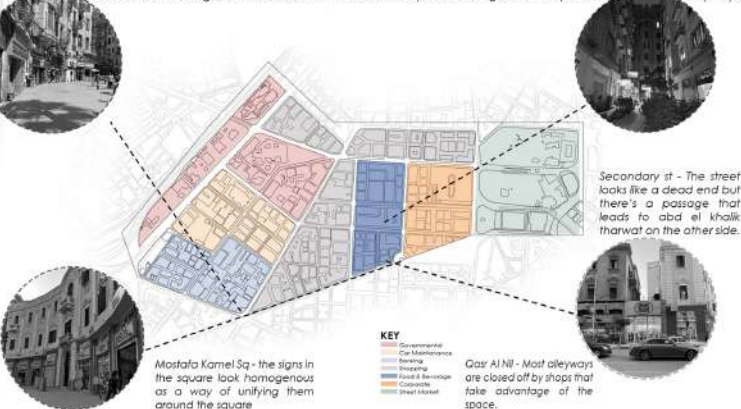


Conclusion

Most of the buildings are mixed use building, first and second floors commercial while the rest is residential providing some perks for the residents such as safety and security while this also may cause crowded sidewalks in some areas causing inconvenience for the locals.

Edges and Districts

In downtown, the areas are divided into zones depending on the type of buildings, but people usually give directions using the streets not districts. The edges of the streets are well defined by the buildings, and are permeable to the alleyways.



AL-HOSSARY

Landuse



Conclusion

Most of the buildings are mixed use building, first and second floors commercial while the rest is residential providing some perks for the residents such as safety and security while this also may cause crowded sidewalks in some areas causing inconvenience for the locals.

Landuse Diversity - Ground



Landuse Diversity - First

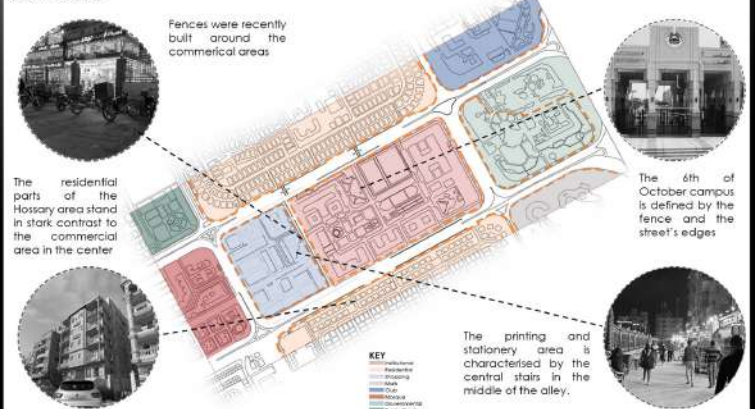


Conclusion

The landuse here is divided as every category (residential, commercial, public facilities) is isolated for a better efficiency of each on its own serving each other while also providing some advantages for residential area like less noise and more privacy unlike downtown.

Edges and Districts

The edges and districts in Hossary are very well-defined, where a person can clearly see where the commercial ends and residential starts.

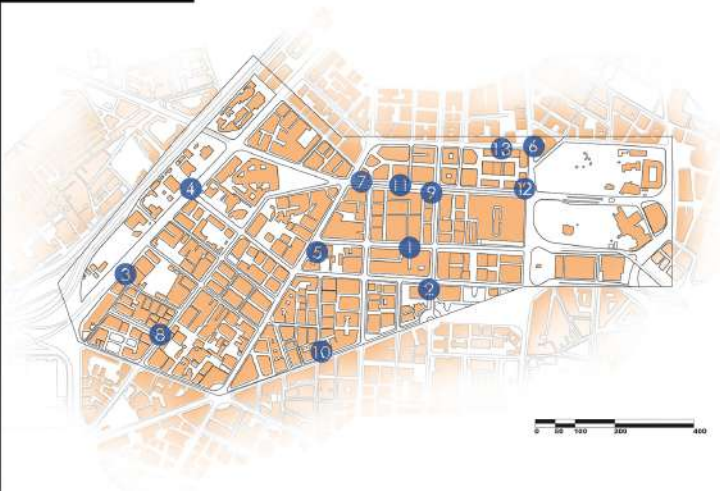


Visual Analysis

4 Street furniture, Paths, Nodes & Integration

DOWNTOWN

Street furniture

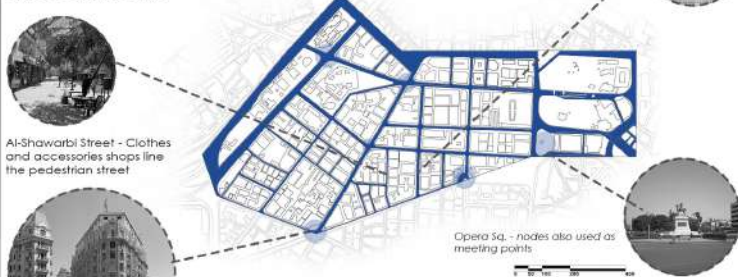


The downtown shows the direction towards a walkable area and that is shown by providing street furniture that enhances pedestrian experience.



Paths

The streets in downtown Cairo are more pedestrian friendly as certain corridors are closed off for pedestrians only.



Nodes

There are plenty of nodes and they're all close together since lots of people get around on foot. The radial grid makes it easy to navigate.

Integration

Volumetric Character

Visual Character

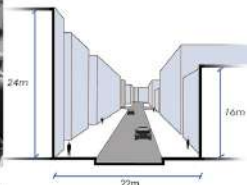
Social and Functional Character



-Proportions and relationships
-Pattern and rhyme
-Rhythm



-Active Frontage
-Iconography and visual cues to functionality



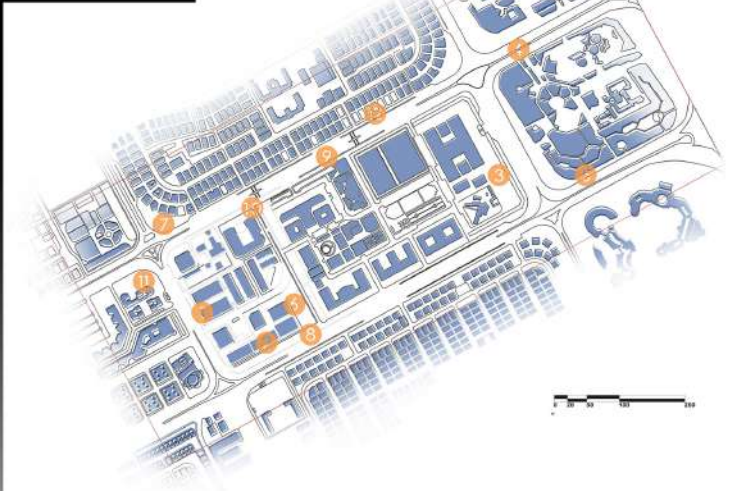
-Size and massing
-Building scale
-Pattern and rhythm

Conclusion

The site character and identity is present throughout the whole area as it can be seen in the buildings visual aesthetic.

AL-HOSSARY

Street furniture

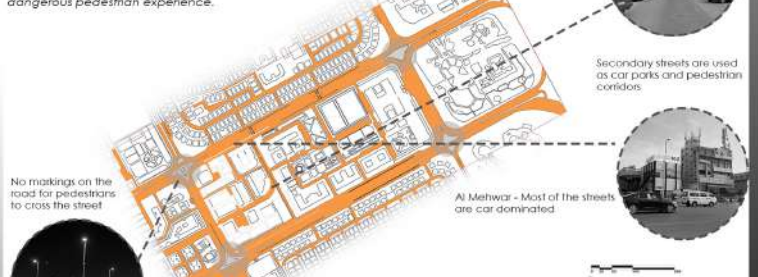


The furniture here at some parts shows a proper planning for street furniture but most of the streets shows poor planning as most of furniture doesn't serve pedestrian circulation.



Paths

The paths in Hossary are mostly car-dominated, but there are areas closed off for pedestrians in the complexes in the center. The separation between the two is very blurry though, which leads to a dangerous pedestrian experience.



Nodes

The nodes in Hossary are larger in scale compared to downtown, and farther apart as they are meant as a distribution point for vehicles and not pedestrians.

Integration

Volumetric Character

Visual Character

Social and Functional Character



-Size and massing
-Building scale
-Pattern and rhythm

-Proportions and relationships

-Active Frontage
-Iconography and visual cues to functionality



Conclusion

The area's visual elements of space are not designed to be pedestrian friendly as the city is more of a car dominated area lacking visual identity and decorations of each building.

DOWNTOWN

Unbuilt spaces

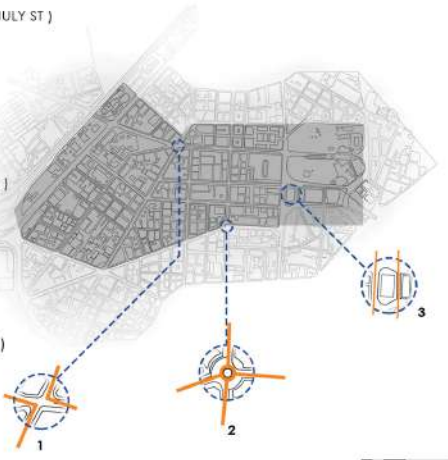
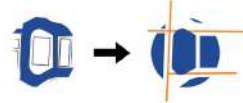
1) Node one (TALATT HARB WITH 26 OF JULY ST)



2) Node two (MOSTAFA KAMEL SQUARE)



3) Node three (AL OPERA SQUARE)



Conclusion

Depends on the connection between the nodes, consist of three types (spiral node, rectangular node, triangular node).

Building form

Types based of building function and requirements:

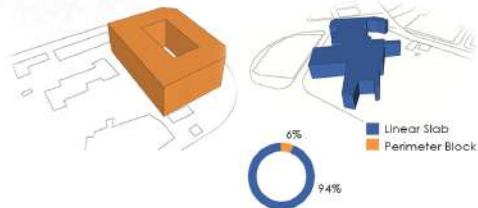
1- Linear Slabs:

Most of the buildings in Downtown are considered linear slab due to their heights made to achieve a variety of mixed use: commercial for ground floor and administration offices.

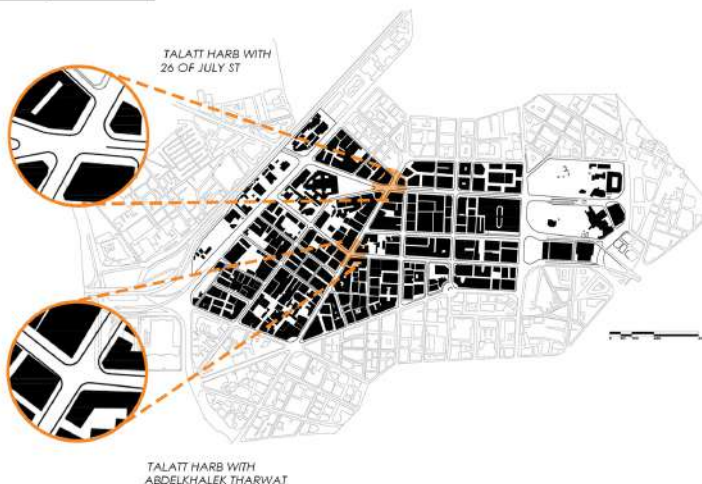


2- Perimeter Block:

Few buildings are perimeter block made according to the function of the building or to their large their footprint.



Block pattern



Conclusion

Mainly parallel to street design that depend on the connection between the main squares and secondary nodes.

AL-HOSSARY

Unbuilt spaces

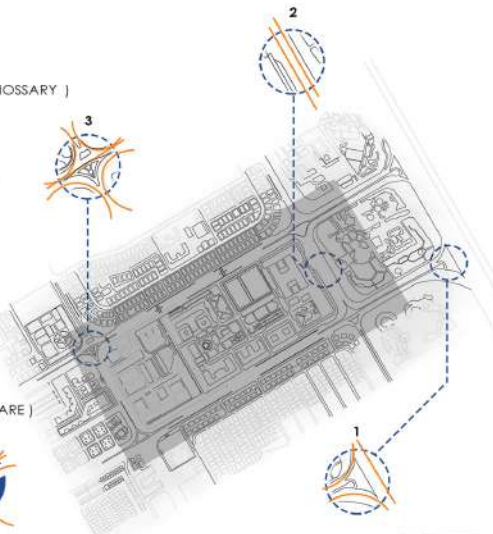
1) Node one (26 OF JULY WITH HOSSARY)



2) Node two (AHMED ORABI)



3) Node three (EL HOSSARY SQUARE)



Conclusion

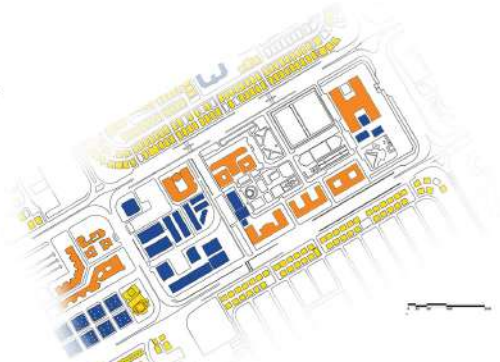
Depend on main roads and secondary roads, consist mainly with grid and one way movement.

Building form

Types based on human activities:

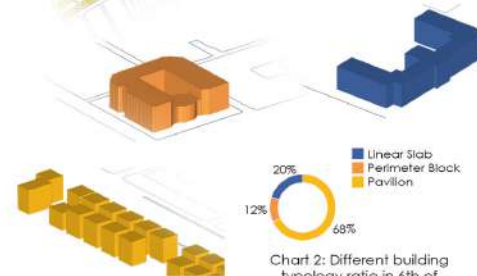
1- Linear Slabs:

Most of the buildings in 6th of October are considered linear slab due to their uses as residential units and some are mixed use. (commercial & residential)



2- Perimeter Block:

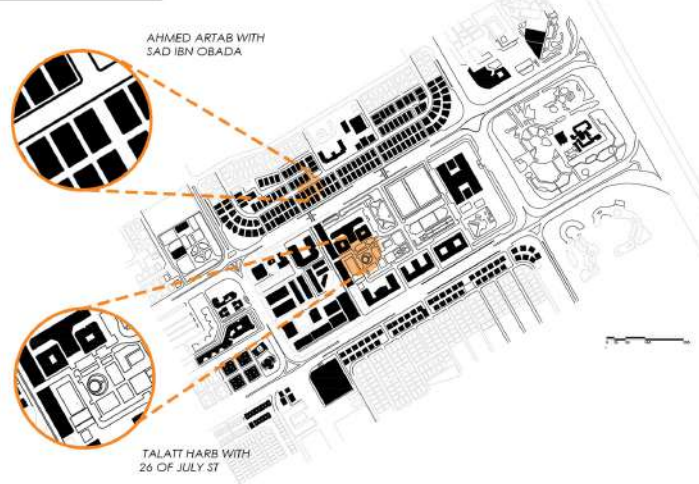
Few buildings are perimeter block made according to the function of the building or to the buildings large footprint; for example, the university or commercial buildings.



3- Pavilion:

Almost no Pavilion buildings in Downtown.

Block Pattern



Conclusion

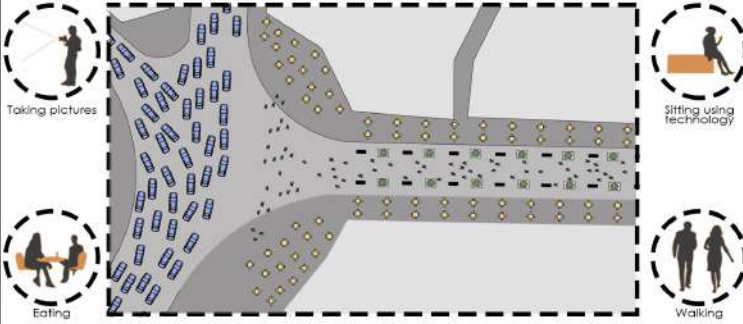
Mainly designed on a grid with spacing and depend on the main & secondary roads accessibility.



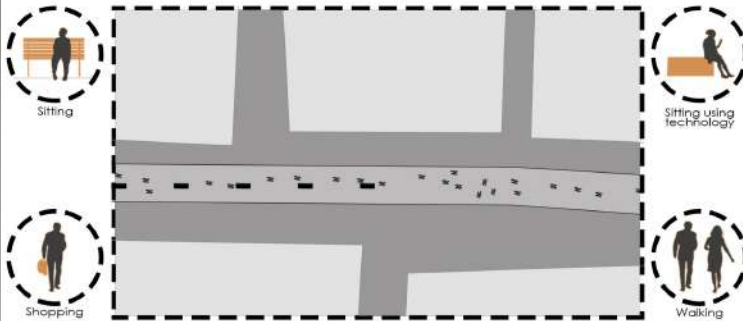
DOWNTOWN

Human Activity

1. Al Alfi St.



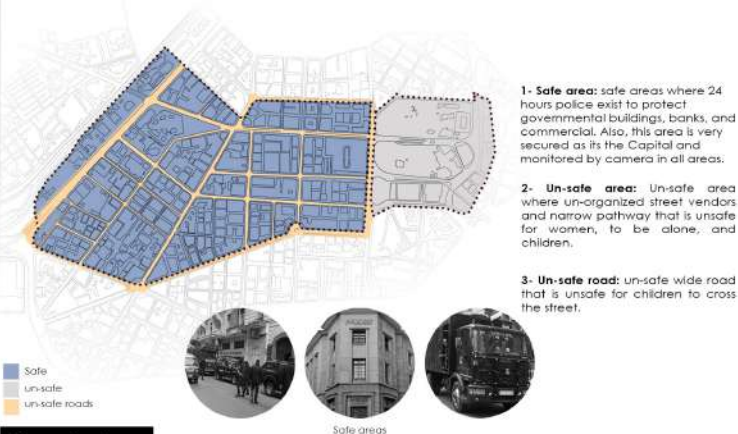
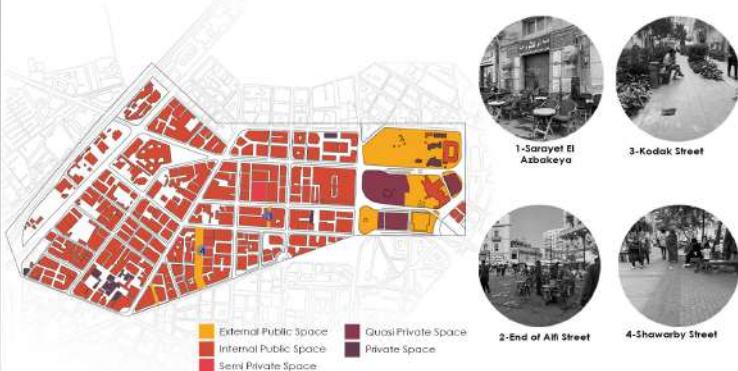
2. Al Shawarby St.



Conclusion

Due to traffic problems and the increase of population number on the area this cause the conversion of pedestrian street to be occupied by street vendors and this could cause lack of human spaces all over the area.

Space Control and Public Space Activities



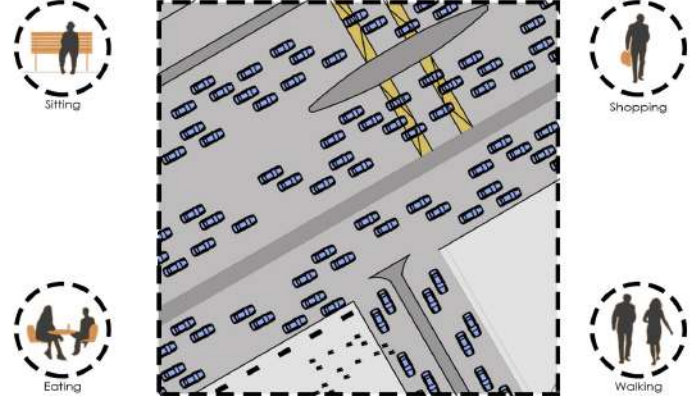
Conclusion

Local markets are not safe for women; narrow pathways encourage harassment, while other areas are safe due to the presence of police and surveillance cameras. Roads aren't safe for children to cross the road.

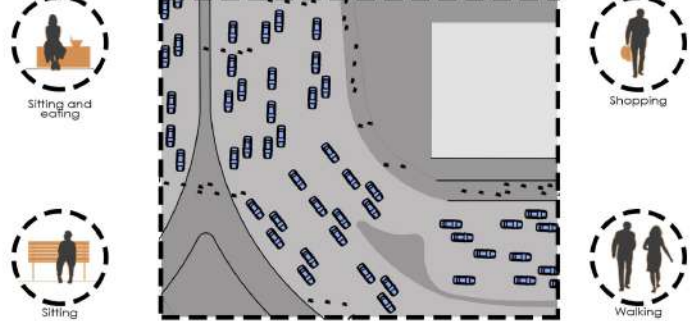
AL-HOSSARY

Human Activity

1. Al Abd



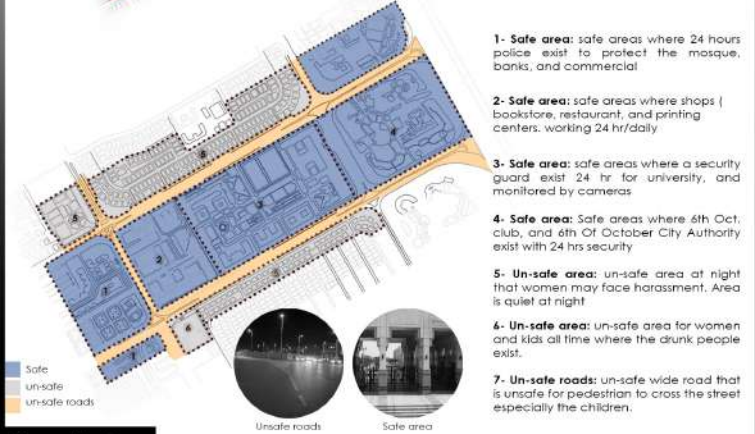
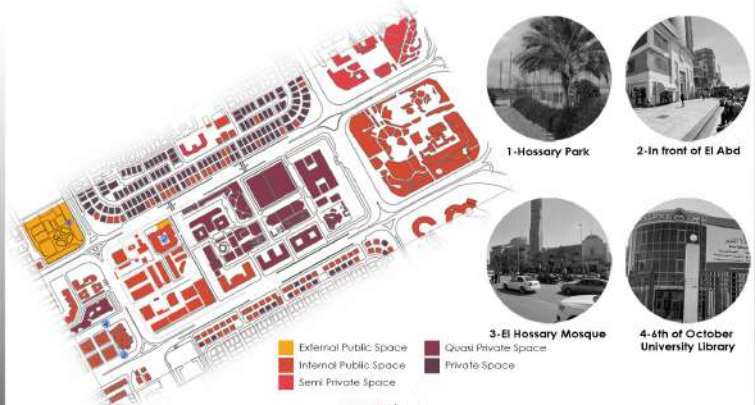
2. Al Hossary Sq.



Conclusion

Due to the traffic of main streets that covers most of the area and this could be reflected on the social activity on this site and cause spontaneous behavior all over the main streets due to the lack of pedestrian area.

Space Control and Public Space Activities



Conclusion

Many of the residential areas are un safe, as residents stay at home due to having no activity at night so it's not safe for women, where there is movement in commercial areas 24 hours, so it's safe. The roads are wide so it's not safe to cross them.



DOWNTOWN

- Street network and accessibility good as there is a clear hierarchy
- Variety of street furniture catering to pedestrians

- Has many intersections compared to Hossary that only has main nodes
- Different landmarks like statues and unique buildings to identify specific areas

- Urban canyon as streets are narrow and buildings throw shade
- Linear slabs allow people to interact with the surrounding buildings

AL-HOSSARY

- Districts are clear and defined
- Landuse diversity attracts different types of people's needs

- Landuse has mixed uses in buildings and commercial places which cater for people's needs
- Block patterns are designed on a grid for vehicles

- Buildings are mostly in a very good condition
- Street sections decrease chances of traffic jams which encourages the use of vehicles

DOWNTOWN

- No defining edges to create contrast between different areas
- Older buildings more likely to fail or collapse

- Districts not architecturally defined, making it difficult to give directions to a person not familiar with the place
- Increased chance of traffic jams due to traffic lights and narrow streets

- Land use is sporadic - no specific use is restricted to a certain area or district
- Spread of informal markets affects the socioeconomic structure of the area

AL-HOSSARY

- There is no historical background in Al-Hossary
- Limited unbuilt spaces

- Building form provides no interaction of people
- There's not enough street furniture

- Squares are not open for moving around freely
- Most streets to building ratios provide a weak sense of enclosure, discouraging people to walk

SWOT

DOWNTOWN

- Presence of Tahrir Square makes it a very central spot in Cairo
- Proximity to 6th of October bridge connects it to the rest of the surrounding areas very easily

- Presence of the museum attracts lots of tourists to the area
- Radial grid creates spaces that allow for many different activities

AL-HOSSARY

- 26 July Bridge is a great opportunity in the street accessibility in Al-Hossary
- Landmarks are mostly present in buildings, which makes it easier for commercial uses

- Edges are more defined therefore it can be clearly distributed
- Facade designs make it possible for one to express what they want (eclecticism)

DOWNTOWN

- Increase in population number reflected in diversity of commercial shops
- Governmental buildings in the area makes security very high and sometimes restricting

- Residential districts around the commercial areas
- Traffic jams in surrounding highways directly affect the area

AL-HOSSARY

- Residential districts around commercial area
- The presence of kitchens of the restaurants inside mixed use buildings

- Haphazardly moving people and vehicles together
- Highway roads are present beside the site area



Concept Statement

Our main concept is to integrate **smart technology** with **sustainability** enhancing people's lives for a healthier future and an **inclusive** one.



DOWNTOWN

Aims:

Our aim is creating a **sustainable city** designed considering social, economic, and environmental factors. It will be dedicated to minimizing the required inputs of energy so that we can reduce output of heat, greenhouse gases and air pollution for a greener, healthier city

Objectives:

- Adding shaded bicycle lanes
- Adding public transportation
- More pedestrian friendly spaces with greenery and better street furniture
- Smart and sustainable street components: smart benches / smart trash / kinetic energy pads / street free Wi-Fi / renewable energy sources
- Healthier air quality by encouraging of bicycling and walking through the area
- safer mobility to make it easier for citizens to move around in the city by foot or by bike
- Sustainable transport, incorporates three elements: fuel economy, electrification, pedal power



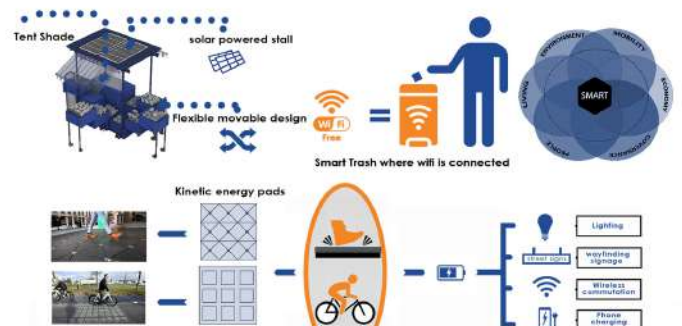
AL-HOSSARY

Aims:

Our aim is enhancing the social daily life by creating a more **connected and inclusive city** considering the small-scale urban design choices that can influence individuals' interactions with one another.

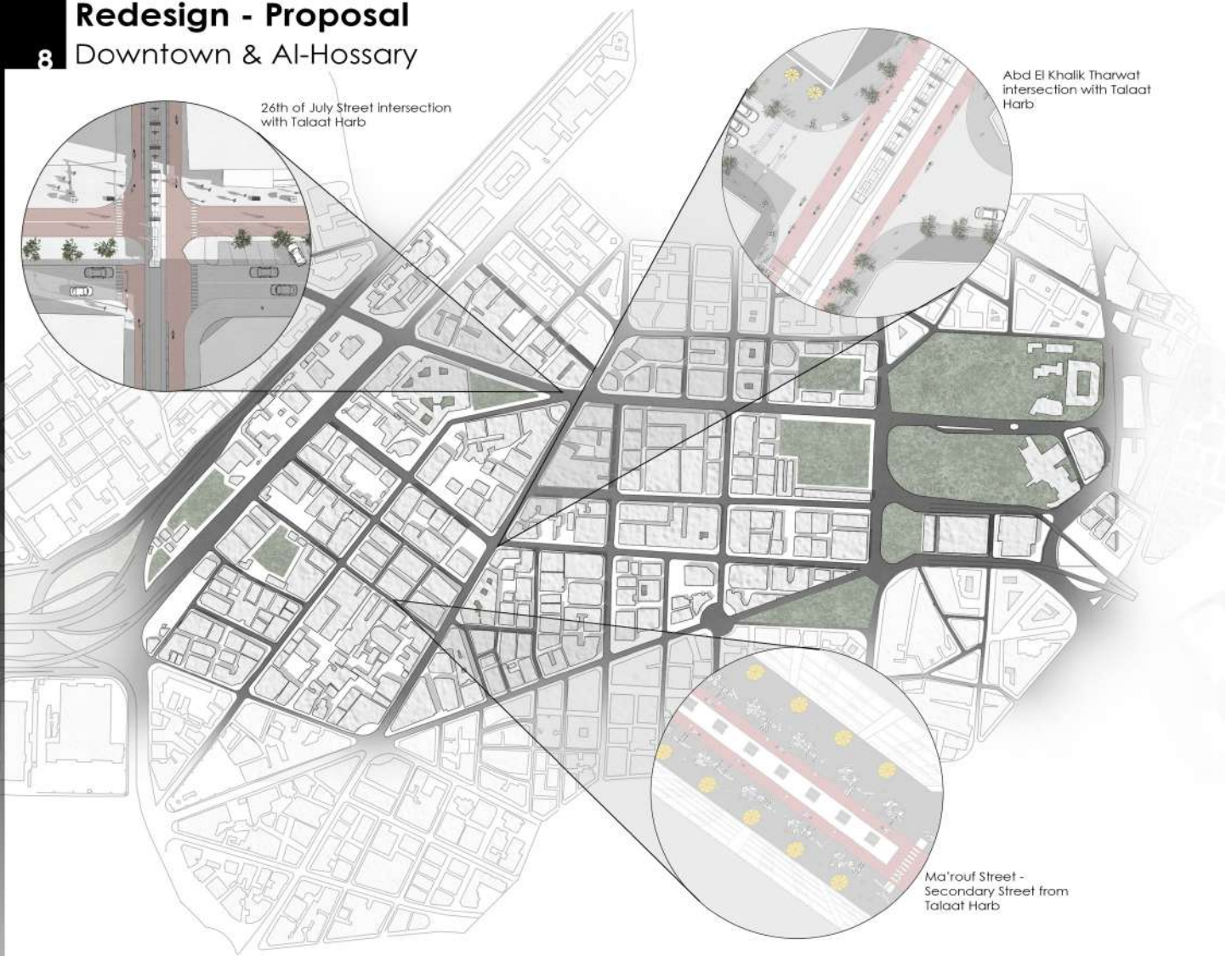
Objectives:

- Adding wide pedestrian sidewalks with stalls
- Adding affordable public transportation
- Smart and sustainable street components: smart benches / smart trash / kinetic energy pads / street free Wi-Fi / renewable energy sources
- More pedestrian friendly spaces with greenery and better street furniture
- Adding shaded bicycle lanes
- Optimizing services efficiency
- Smart living involving using technology to get closer to citizens needs

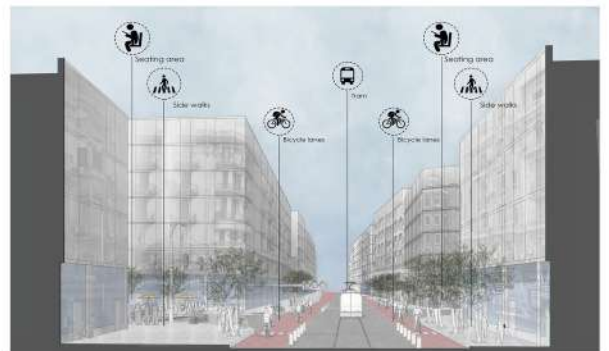


Redesign - Proposal

8 Downtown & Al-Hossary



Abd El Khalik Tharwat intersection with Talaat Harb



26th of July Street intersection with Talaat Harb

An architectural rendering of a city intersection. A tram with a white body and green accents is crossing the intersection from left to right. The street is paved with grey asphalt and has a red-paved pedestrian crossing area. Pedestrians are walking on the sidewalks, and several cars are parked or moving. The background features tall, modern buildings with glass facades and older, multi-story buildings with arched windows. The scene is brightly lit, suggesting daytime.

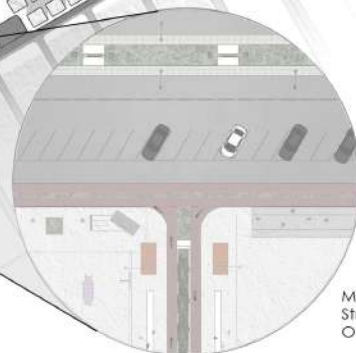
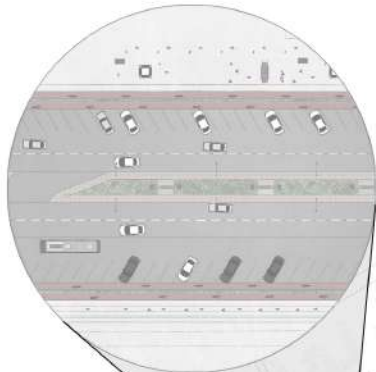
Ma'rouf Street - Secondary Street from Talad Harb



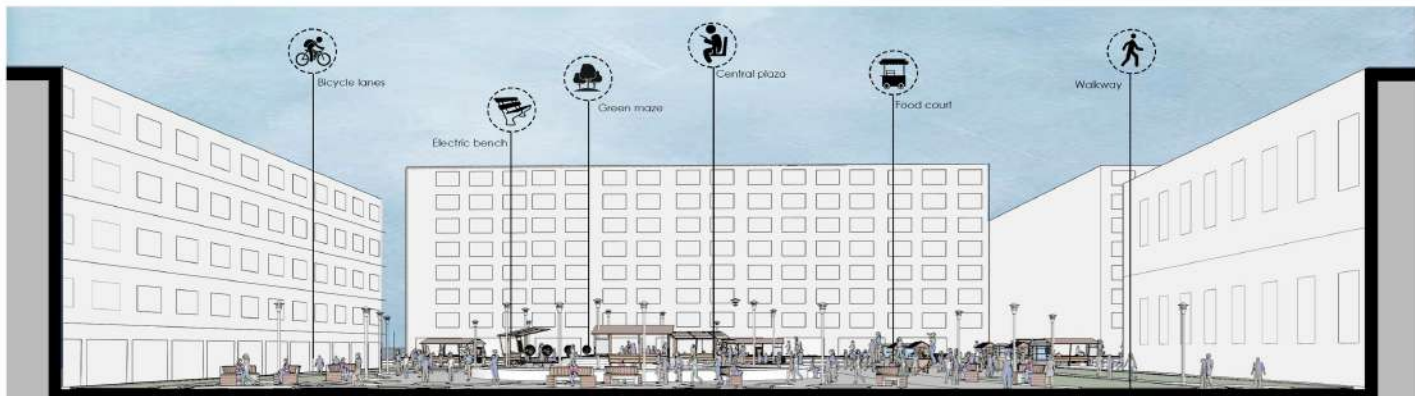


Mehwar Al-Markazi Street

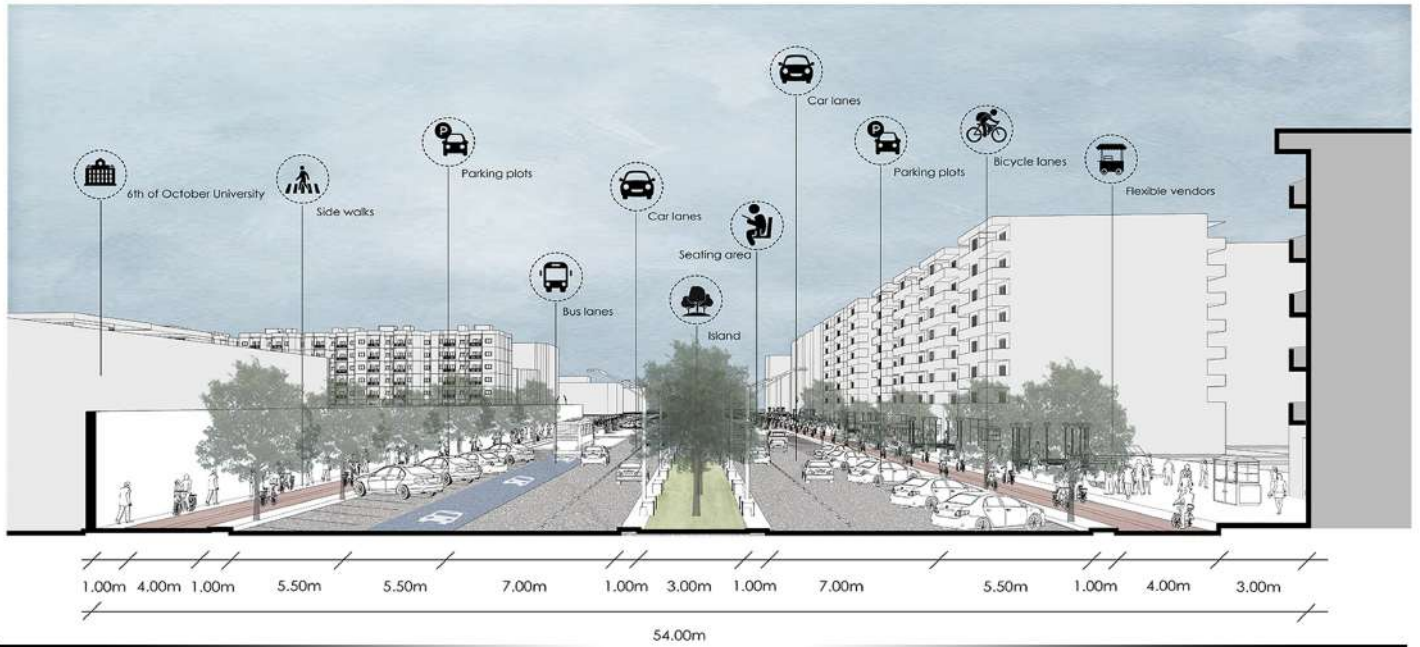
Public Area - Tahrir Street



Mehwar Al-Markazi Street with 6th of October University



Mehwar Al-Markazi Street



Mehwar Al-Markazi Street with 6th of October University

