



PHAROS UNIVERSITY IN ALEXANDRIA
FACULTY OF ENGINEERING
ARCHITECTURAL DEPARTMENT



Strengthening Alexandria Urban Fabric by planning urbanism's walkable area

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REAL CORP 2013:
PLANNING TIMES

Out Lines

Introduction

- General view
- Alexandria, Egypt

□ The case study

- Location
- History
- Architectural style
- Development project
- Traffic Analysis

□ Problem definition

□ New Proposal

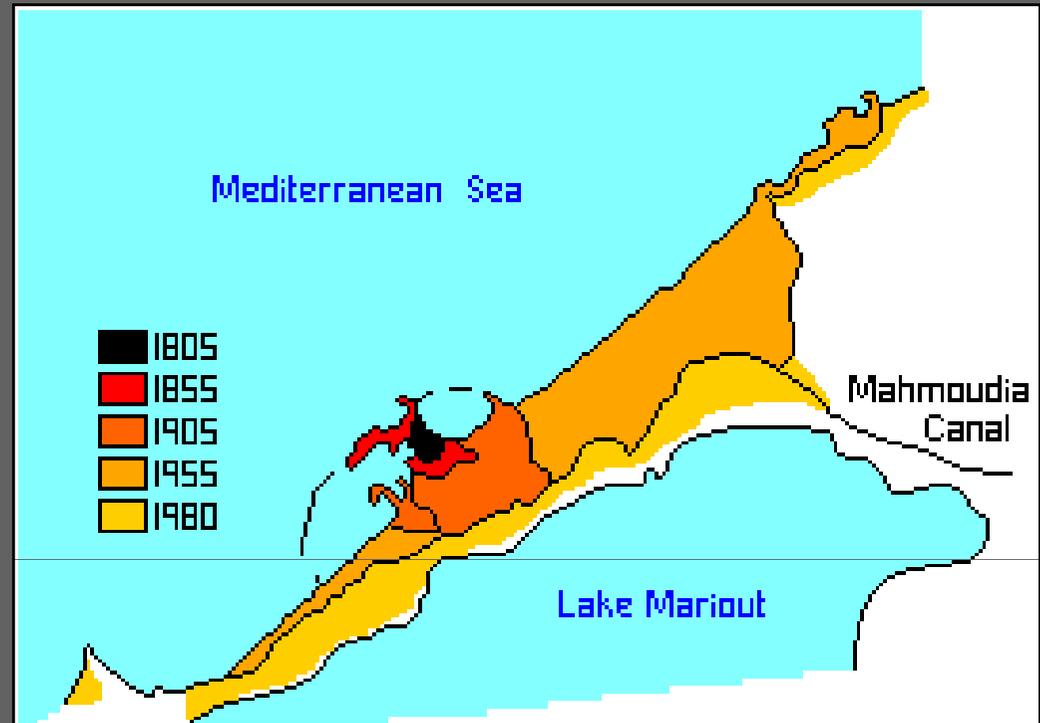
□ Conclusion



Introduction

Introduction

The rapid growth of towns and cities in the nineteenth century led to calls for parks to be provided for the health of factory workers and so it benefited society as well.



Alexandria from 1805 till 1980

Nowadays city of Alexandria has a very wide range of urban development projects, some of them has a major influence to the physical being of the city while others just have an interpretation to its characteristics.



Introduction

Alexandria, Egypt:

Alexandria witnessed a continuous urban growth from the beginning of the Mohammed Ali era (1805) up to the present time

Population is projected to become 5.4 million by 2015. Because of this, Alexandria is the second largest urban governorate in Egypt.

This enormous urban growth requires detection with a good management, planning to solve circulation and traffic problems especially in the city center.



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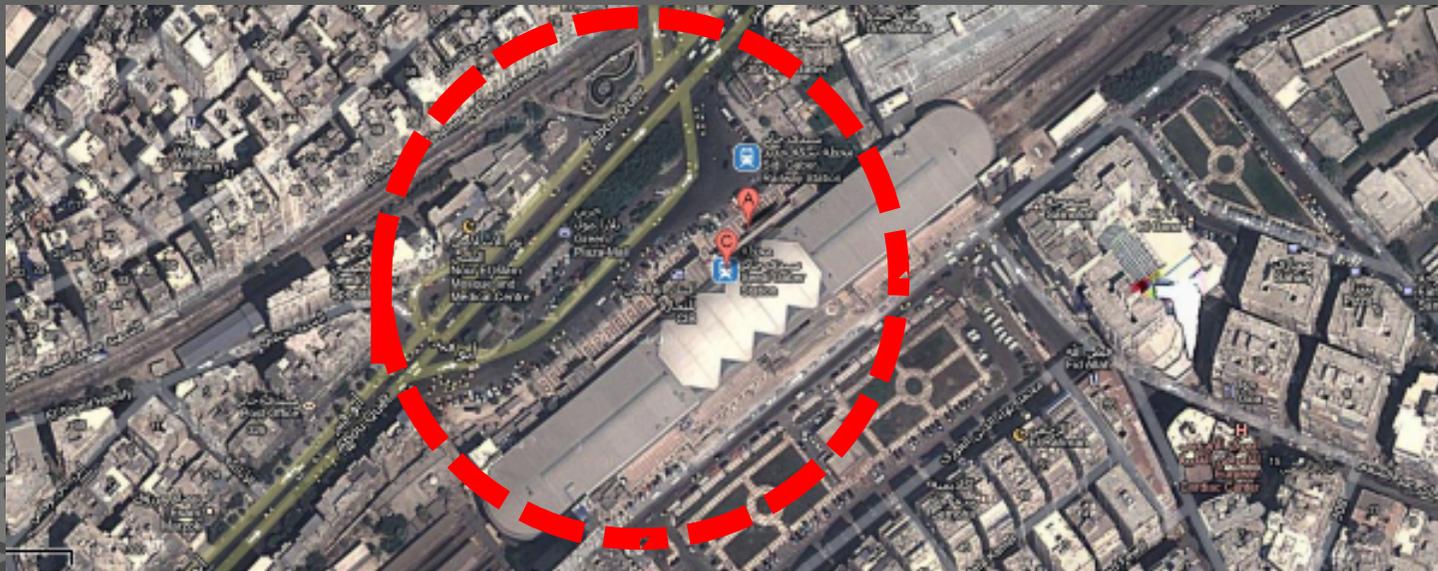


Location

CASE study SIDI GABER train station



Location : Egypt, Alexandria, Sidi Gaber (the Eastern District)



CASE study
SIDI GABER train station

History



Sidi Gaber Station 1930



The station of **Sidi Gaber** is the first railway line outside Europe, and the second in the world, started to create between the cities of Alexandria and Cairo in 1851

It serves travelers:

Between Alexandria & Cairo as well as other main cities in Egypt inside Alexandria going to and from Abu Kier district which is located east of Alexandria



Architectural style:

The famous train station building has a special architectural style and unique Dutch character building that was constructed instead of the traditional old wooden one, in 1948 and was built with **yellow brick**.

The station is distinguished with **a clock tower, and major map in front of it** showing the main streets of the city of Alexandria and the most important tourist attractions.



Development project

As of 2011, the station was developed, with the intent to turn old parts of the station into a railway museum, and include space for commercial or recreational services.



The development included the construction of a two story mall.

as well as a multi levels garage.



parking



shopping mall



Development project



CASE study
SIDI GABER train station



New façade



Traffic Analysis

CASE study
SIDI GABER train station



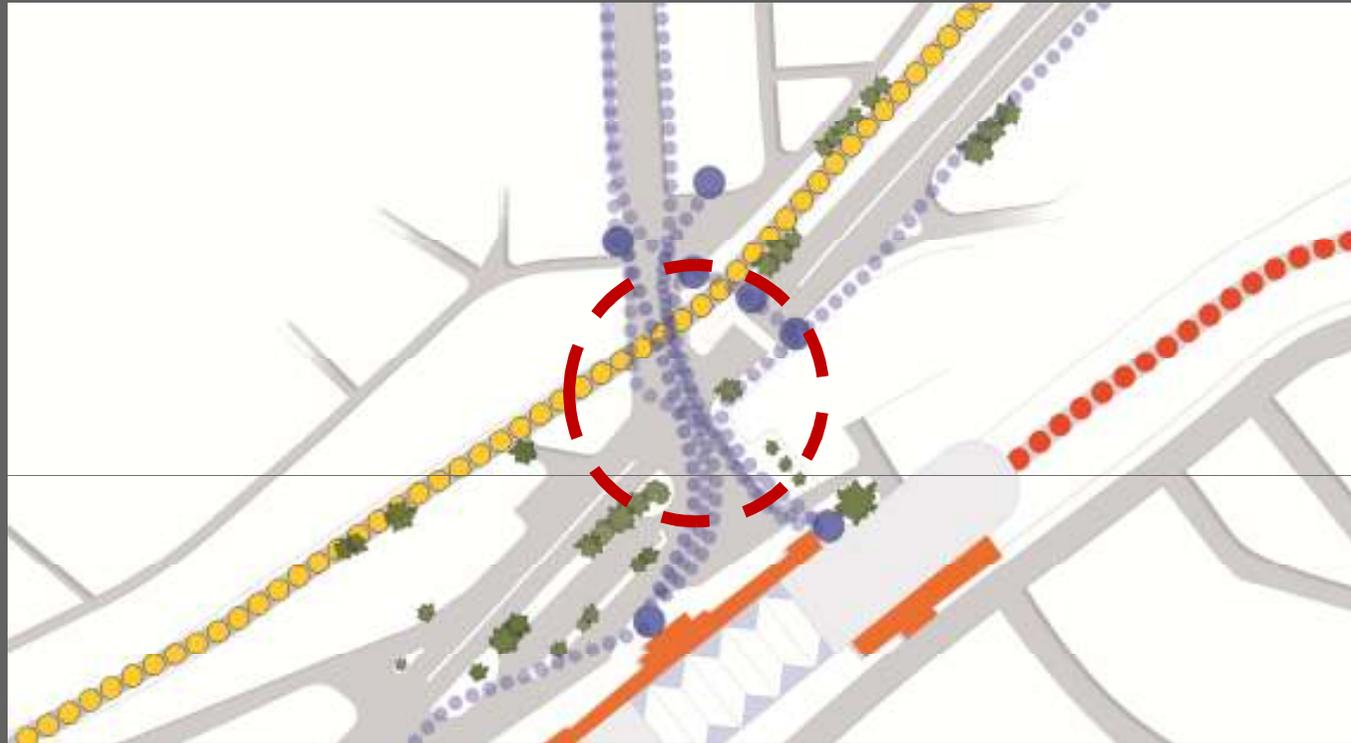
Traffic Analysis

Many directions of cars :

AHMED ISMAIL STREET

SIDI GABER STATION

EI HORREYAH STREET



Vehicles cross circulation



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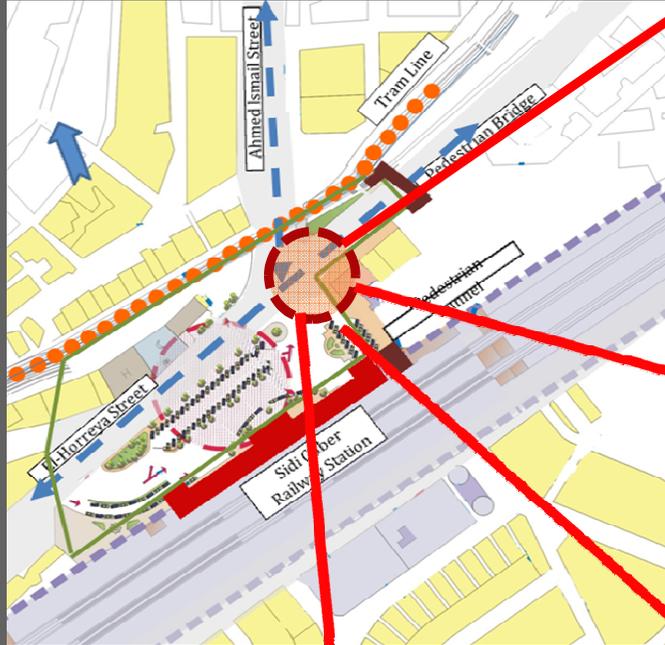
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CASE study
SIDI GABER train station

problem definition



Pedestrians usually cross the street from extremely critical access that is in conflict with vehicles traffic.



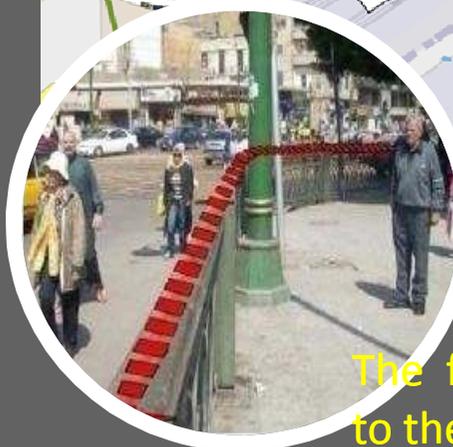
CASE study
SIDI GABER train station

problem definition



Different circulation flow of people going to and from station with an obvious disorder.

In order to change such behaviour, the local authority constructed a pedestrian bridge and escalators that in reality is not used by pedestrians



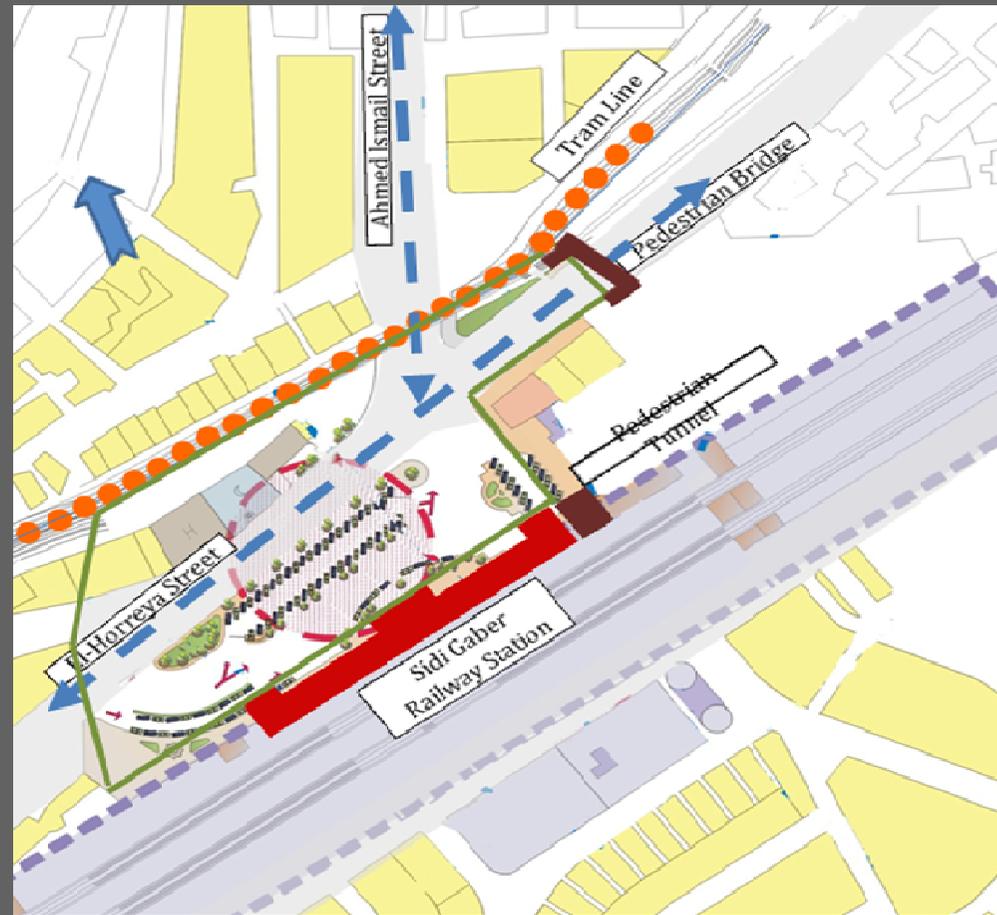
The fence which leading to the pedestrian bridge



CASE study
SIDI GABER train station

problem definition

Most of our urban spaces are not giving pedestrian movements the enough concern and that cause a mis-use problem.



With the new design of Sidi Gaber station project, the need for pedestrian walkable area becomes a must



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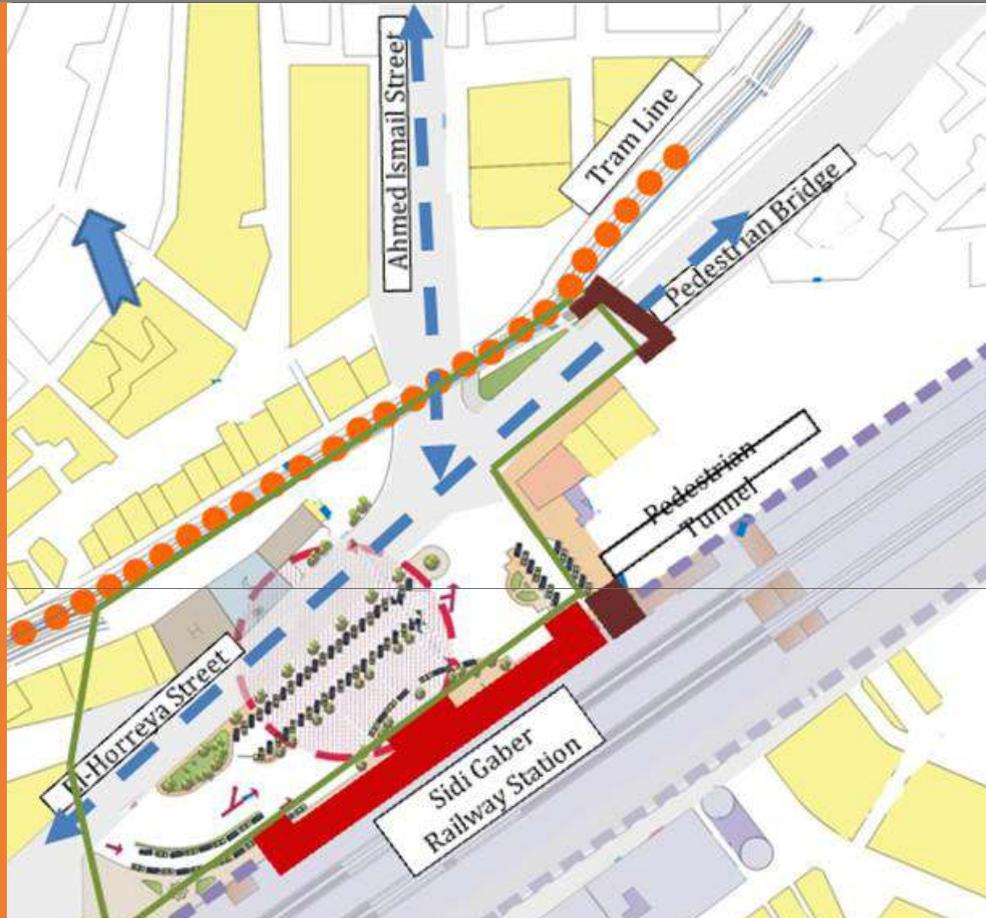
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CASE study
SIDI GABER train station

New Proposal



The new design of a plaza in front of the station relating it with the tram line on the other side and creating an urban public space will offer the urban quality to the place as well as solving the mess problem in this district.

New Proposal

CASE study
SIDI GABER train station



Creating a plaza outside the train station will allow people to walk or sit with maximum safety

raise the level of the tram as a monorail



Landing cars level in the way of Horreya street under the ground to minimize the traffic



Pedestrian paths



Remove microbus stop

Reduce traffic

Organize pedestrian paths .

Why ?



Pattern



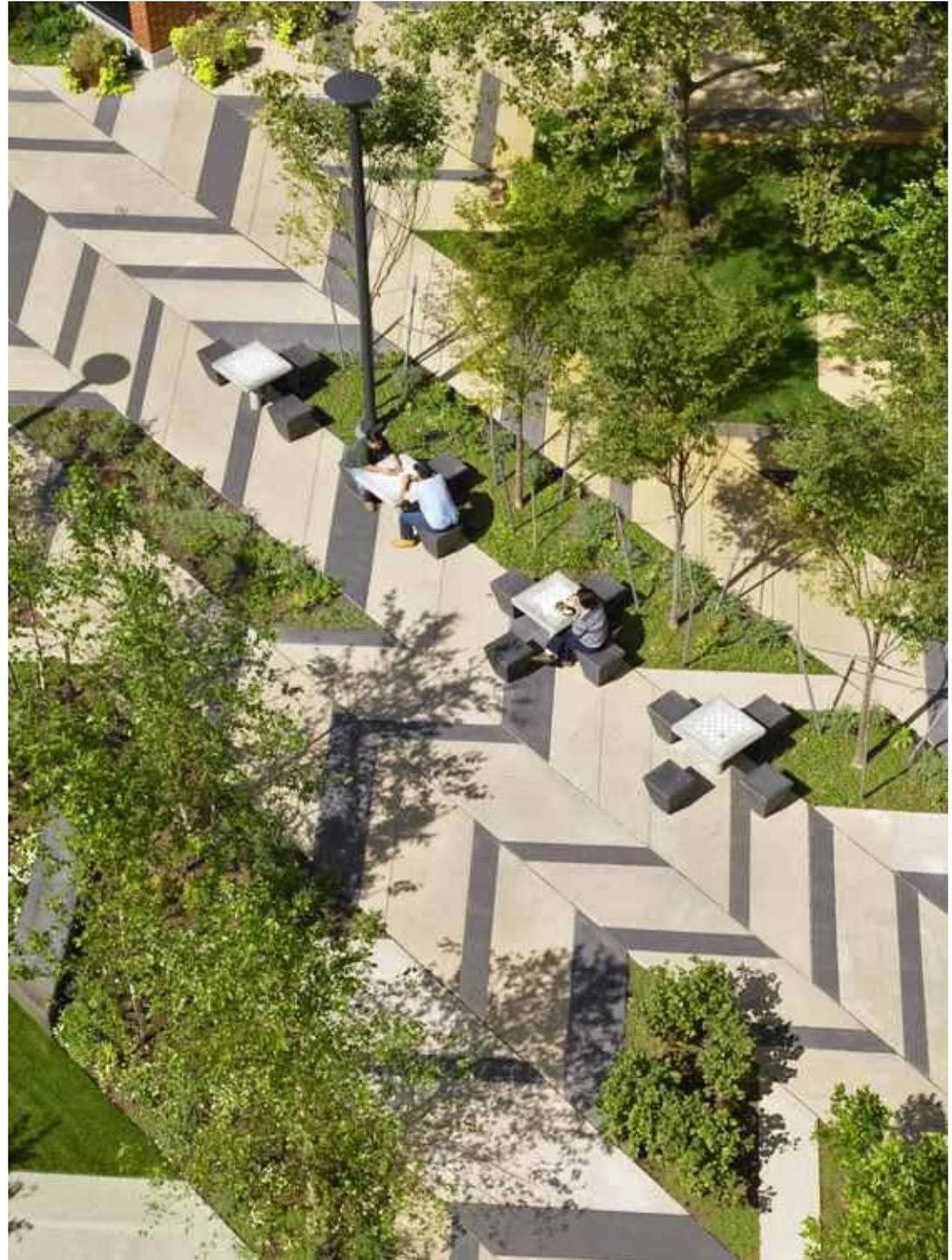
Does this floor pattern defines pedestrians circulation ?

Pattern

In such a central terminal, walkable paved grey spaces are required to develop the quality of the urban space outside the train station.

Using patterns and new materials in pavements can facilitate the direction of people path.

New Proposal



View

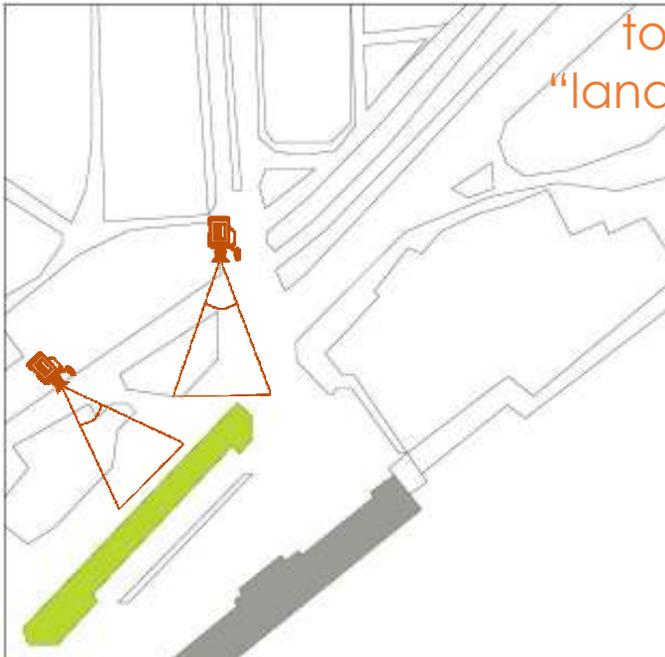


View from AHMED ISMAIL street

There is no clear view of the main façade and for the clock tower "landmark"



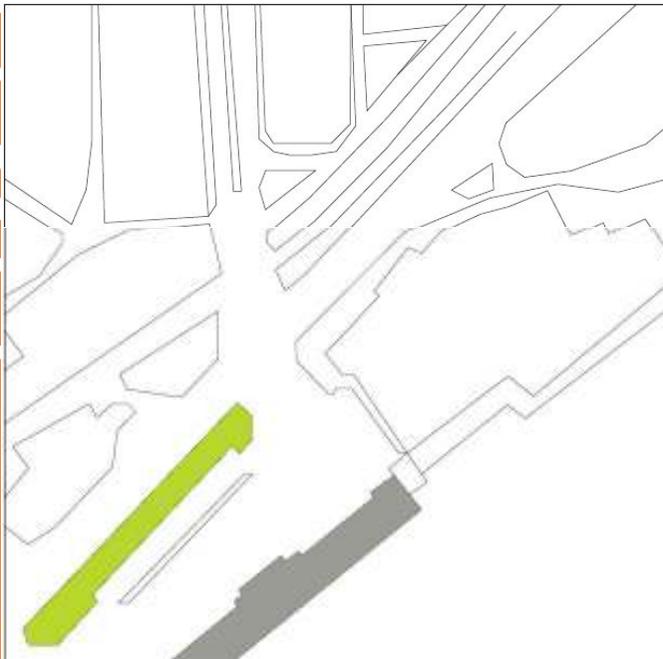
View from El Horreyah street



View

Provision of green spaces in this crowded area is a source of recreation to the residents specially Sidi Gaber Towers, which overlooks it directly.

So comfort and pleasure is provided for train station users and residents in the same time.



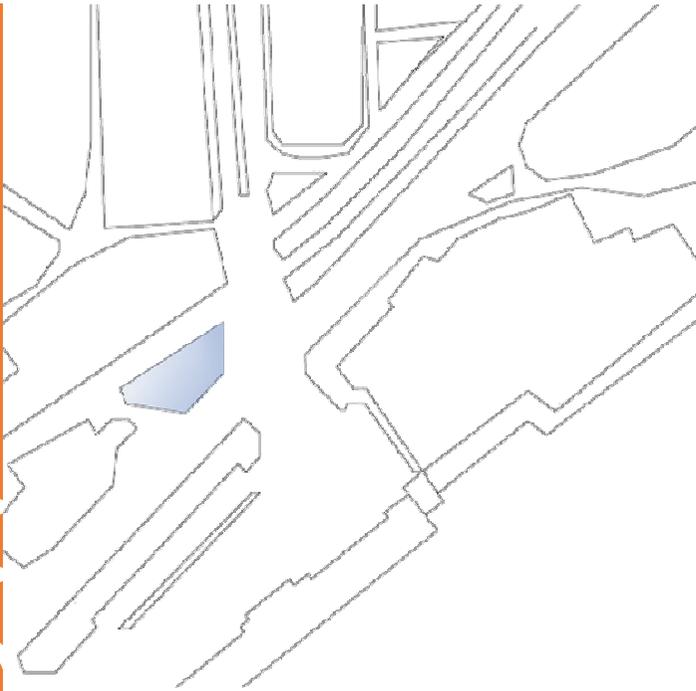
- Tree line
- Sidi gaber station

Must Choose new kind of landscape



Clear view of the main façade

View



Water element became a **garbage** place



Bad view



Repair



Street vendors



In the platform in front of the station, we see The presence of street vendors which creates mess and effects pedestrian circulation

Street vendors



Move to inside the new mall
of sidi gaber station

New Proposal

**EVALUATING SUSTAINABILITY PERFORMANCE
OF THE PROPOSED PROJECT**

New Proposal:

Protection	Traffic <ul style="list-style-type: none"> - protection against traffic accidents - pollution, fumes and noise - visibility 	Security <ul style="list-style-type: none"> - lived in / used - street life - street watchers - overlapping functions on spaces and time - overlapping functions in space and time
Comfort	Walking <ul style="list-style-type: none"> - room for walking comfortably - interesting layout for streets - interesting facades - good surfaces - no obstacles - good accessibility to key points - few footway interruption - convenient crossings - Access for everybody, ramps, elevators, etc. 	Staying <ul style="list-style-type: none"> - staying zones - good possibilities for sitting, view, sun , people to watch - good seats - good local climate - soft edges, inviting facades for resting - points of support for leaning - benches for resting - points of support for leaning
	Seeing, talking, hearing <ul style="list-style-type: none"> - reasonable seeing distances - free vistas - interesting views - good lighting (evening / night) - low noise level - bench arrangement - talks capes 	Activities and interaction <ul style="list-style-type: none"> - invitation to physical activities, play, and entertainment day and night and summer and winter
Enjoyment	Climate <u>Protection against</u> <ul style="list-style-type: none"> - wind / draft - rain / snow - cold / heat <u>possibilities for</u> <ul style="list-style-type: none"> - sun / shade - warmth / coolness - breeze / ventilation 	Aesthetic quality <ul style="list-style-type: none"> - good design and good detailing - views / vistas - trees, plants, water - clean streets and squares - good lighting quality - good materials - building scale dimensioned to the human scale

A number of issues affect the public spaces and the way we act when we are in the city.

New Proposal:

The role of open spaces to play within the neighborhood structure, to achieve sustainability goals and objectives, is formulated in **three key issues**;

- ✓ **Space management,**
- ✓ **Space function** (circulation of people and permeability),
- ✓ **the role of objects within space (sustainable landscape).**



**EVALUATING SUSTAINABILITY PERFORMANCE
OF THE PROPOSED PROJECT**

New Proposal:

		Sustainability Parameters	
Space Management	Encouraging sustainable lifestyles		X
	Making maximum use of existing features assets.		X
	Strengthening the sense of place		X
	Incorporating local or recycled materials		
	Encouraging community participation and involvement		X
	-Reducing inputs of non-renewable resources during construction and subsequent maintenance		
	Eliminating or reducing the use of herbicides and resources that affect other ecosystems		
	Encouraging habitat creation and native planting.		X
	Managing resources carefully.		



**EVALUATING SUSTAINABILITY PERFORMANCE
OF THE PROPOSED PROJECT**

New Proposal:

Space Function		
	reduce the level of car reliance,	X
	Effectiveness of public transport.	X
	Reduce the need to travel.	X
	Social benefits of increasing transport choice for all groups in the population.	X
	Enhancing local security and community.	X



EVALUATING SUSTAINABILITY PERFORMANCE OF THE PROPOSED PROJECT

Role of objects in Space	Return to original sources of inspiration, whether nature or culture.	x
	Respond to the site:	
	creating connections and themes (functional and perceptual as well as spatial) within and across sites while defining and delineating boundaries;	x
	• transforming site constraints into environmental opportunities;	x
	• Minimizing negative environmental impacts (including sensory as well as physical pollution);	x
	• maximizing positive impacts, off-site as well as internally.	x
	- Minimize inputs of materials and energy and maximize outputs of renewable and reusable resources.	
	Maximize resilience and dynamic stability in the :	
	• maximizing the diversity of landscape elements and the diversity of relationships between elements;	x
	Creating opportunities for the emergence of self- sustaining and self-regulating systems in the landscape.	x
	Create 'place' as distinct from merely manipulating space, in such a way that the design maximizes the potential for user Interaction with the environment.	x
	Make systems visible, which means making environmental processes apparent and celebrating them.	x
	Minimize maintenance.	
	Meet the varied recreation and leisure needs of users.	x
Involve local communities.	x	

New Proposal:

The role of open spaces to play within the neighborhood structure, to achieve sustainability goals and objectives, is formulated in **three key issues**;

- ✓ **Space management,** 66.5%
- ✓ **Space function** (circulation of people and permeability), 80%
- ✓ **the role of objects within space (sustainable landscape).** 85%



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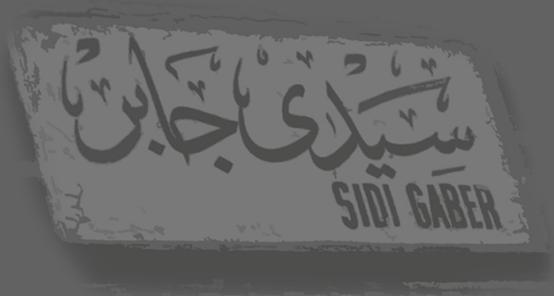
❑ Conclusion



Conclusion

CONCLUSION

- In Alexandria, we need to have a walkable areas especially in the center of the city and in crowded places.
- In the new sustainable planning of Alexandria city, the quality of the urban space is **equally important** with the efficient function of the space.
- The proposed research project is a trial to solve a major **visual and functional problem** at Sidi Gaber, a major terminal in Alexandria, is facing and will be elaborated with the new extension.



Conclusion

CONCLUSION

- The research discussed this **accurate solution**, especially with the high increase of population in the city.
- Once the mall at the train station will be opened a real traffic jam will occur in the center of the city.
- Also, the proposed solution **creates green and open sustainable spaces** and **provide walkable areas** which are the most important issues to be considered in Alexandria new planning to enhance the city urban pattern or the residents behavior and safety.

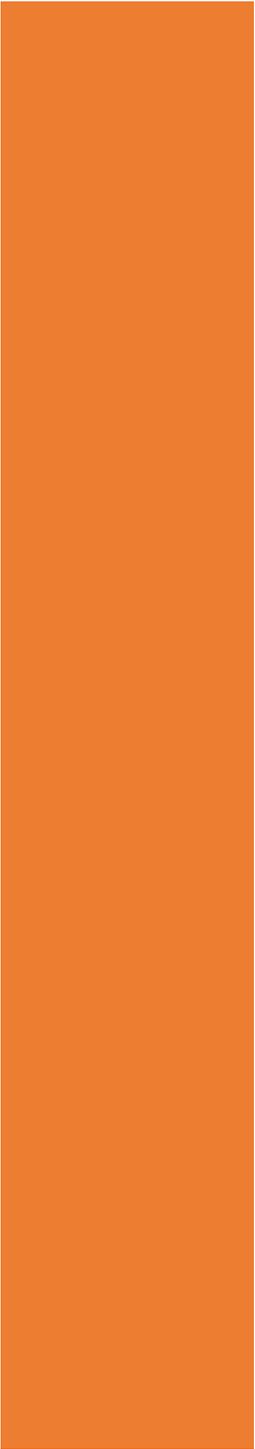


Conclusion

CONCLUSION

- Our urban design sustainable solutions of Public Urban spaces should consider life quality, health, safety and an inclusive environment for all.
- A city public spaces must be available and open to invite and include all people, having different activities and thereby ensuring variety and diversity.
- Well-designed cities inspire the people who live in them, while poorly designed ones cause bad behavior of their citizens





at least

“

We have modified our environment so radically that we must now modify ourselves to exist in this new environment

”

Norbert Wiener (1894 – 1964)
The originator of cybernetics

Thank you

