



Kurdistan Regional Government
Ministry of Higher Education and Scientific Research
Sulaimani Polytechnic University
Engineering Technical collage
City planning Department

U r b a n D e s i g n

Urban Design *Kani Iaskan*

Perpetrated by:

Bryar Jamil Awrahman

Didar Qadr Rasull

Rabar Jamal Abdalla

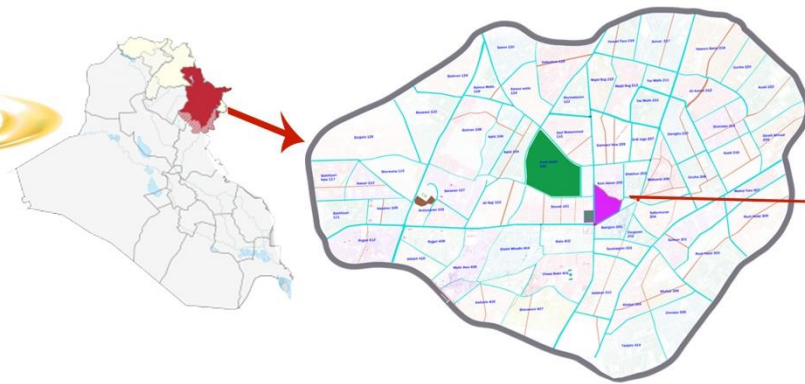
Lava Anwar Mhamad

Supervisor:

Dr.Rozhen Kamal Mohammed

URBAN DESIGN PROJECT KANI ASKAN DISTRICT

Site Analysis



Map of Kani askan according to iraq and slemani map



Site Topography

Highest point 840 m

Lowest point 820 m

Kani askan district located at the middle of suleymani

Area 160 000 M²

SPATIAL DEVELOPMENT



spatial development

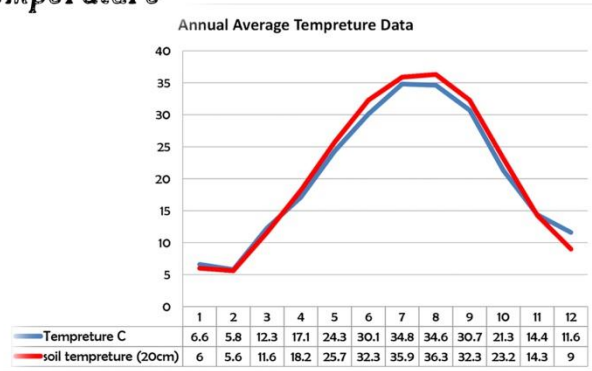
- first stage
- second stage
- third stage
- fourth stage

climate analysis

Climate : is the long-term average of weather, typically averaged over a period of 30 years. Some of the meteorological variables that are commonly measured are temperature, humidity, atmospheric pressure, wind, and precipitation.

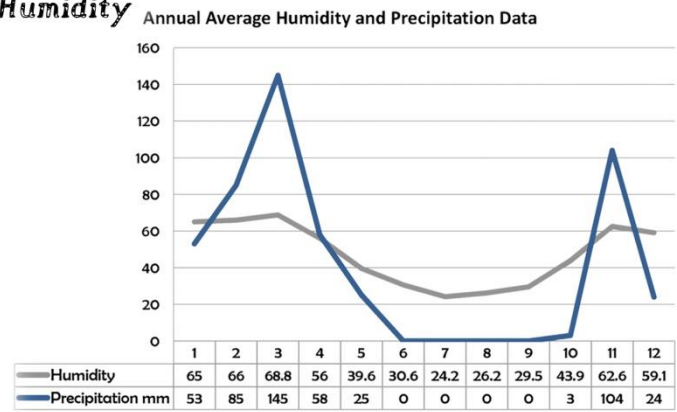
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Temperature

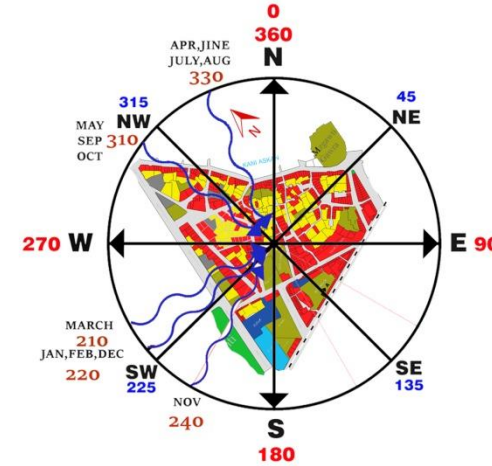


Temperature : is a degree of hotness or coldness the can be measured using a thermometer.

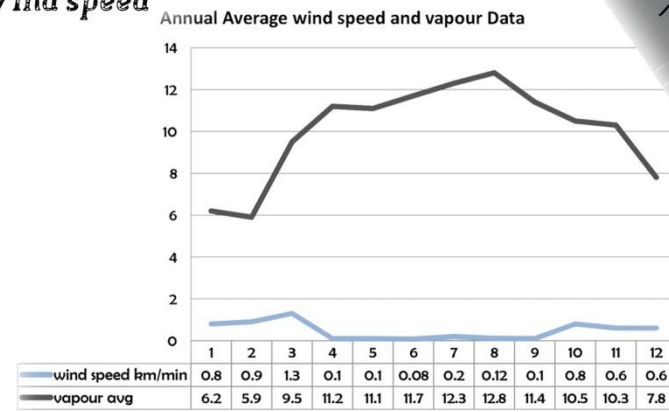
Humidity



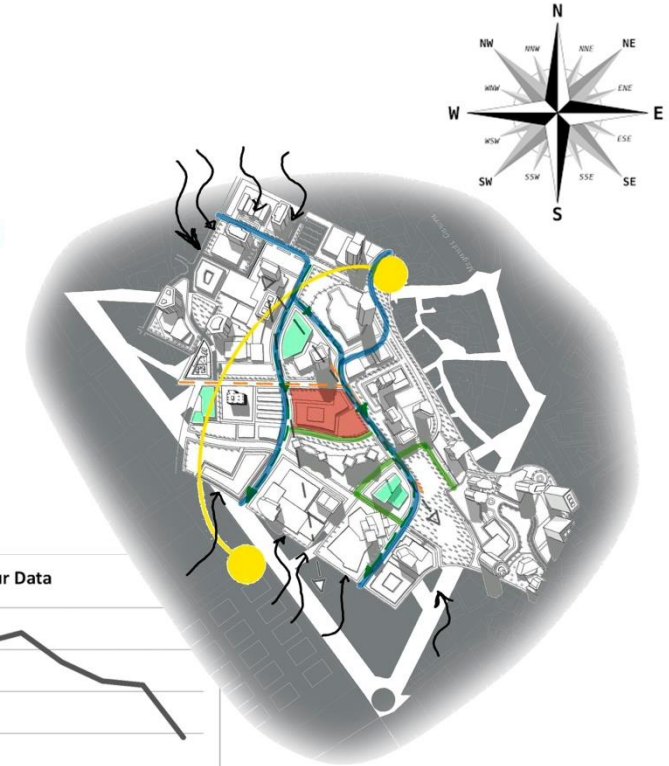
Humidity : is the amount of water vapor in the air. If there is a lot of water vapor in the air, the humidity will be high



Wind speed

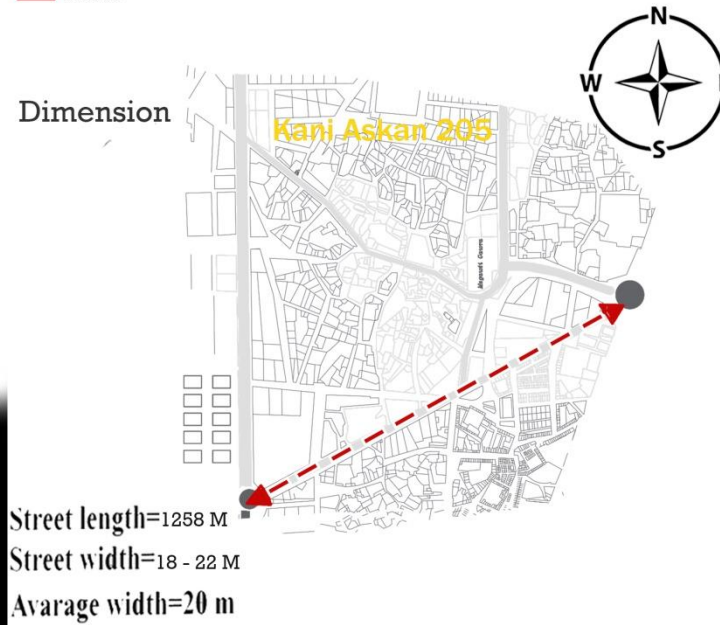
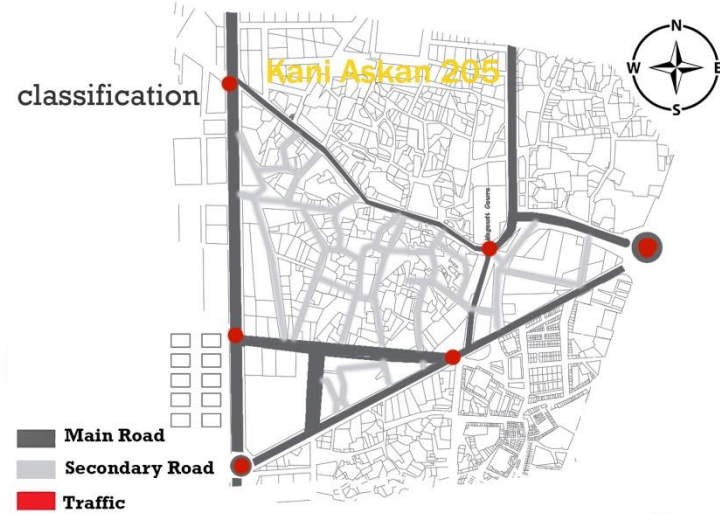


Wind speed : is the speed of the weather related air movement from one place to the next , The highest wind speed ever measured on earth,by miles per hour,

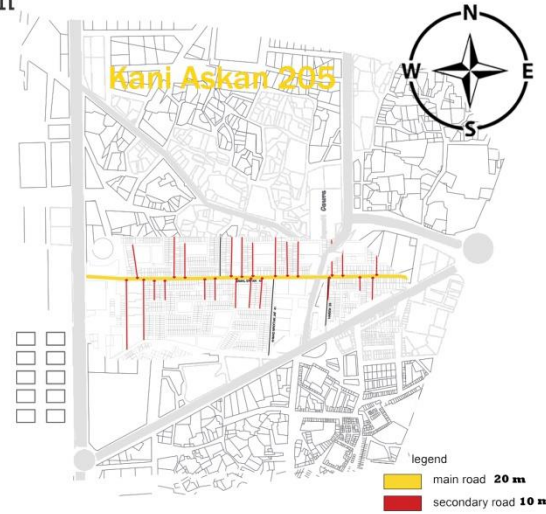


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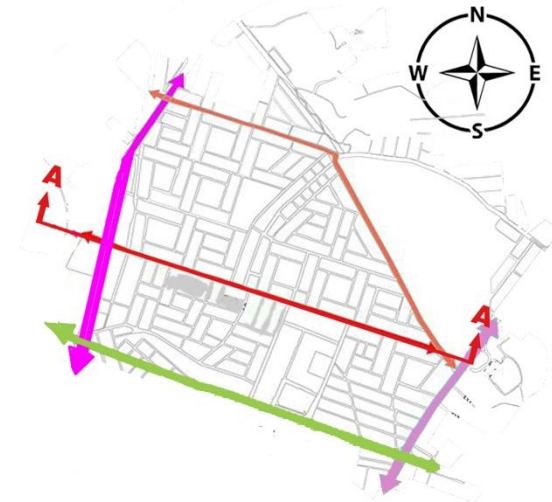
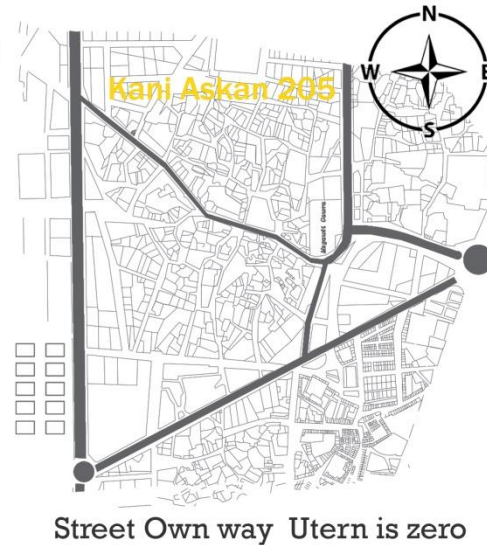
Transportation



width



U-Turns

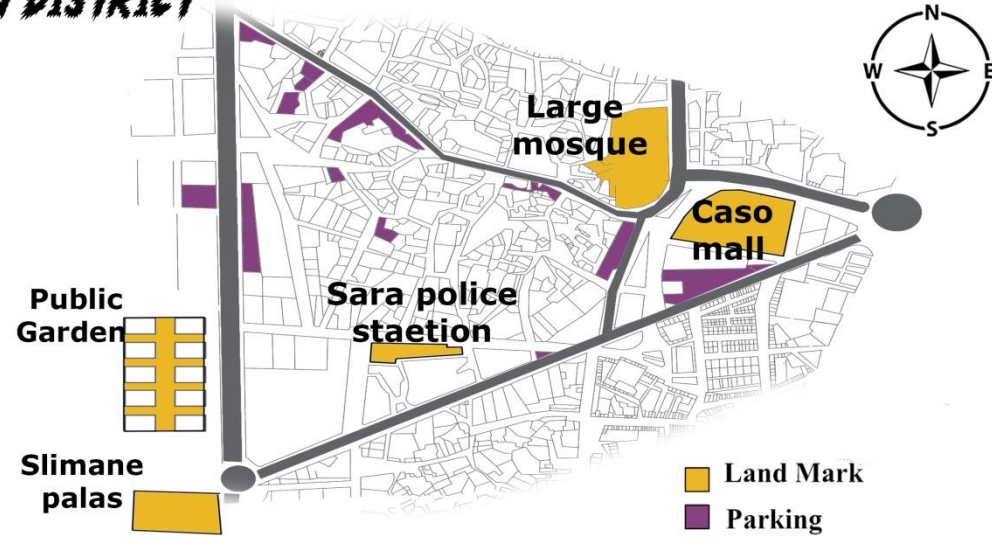


Jamal Irfan street profile

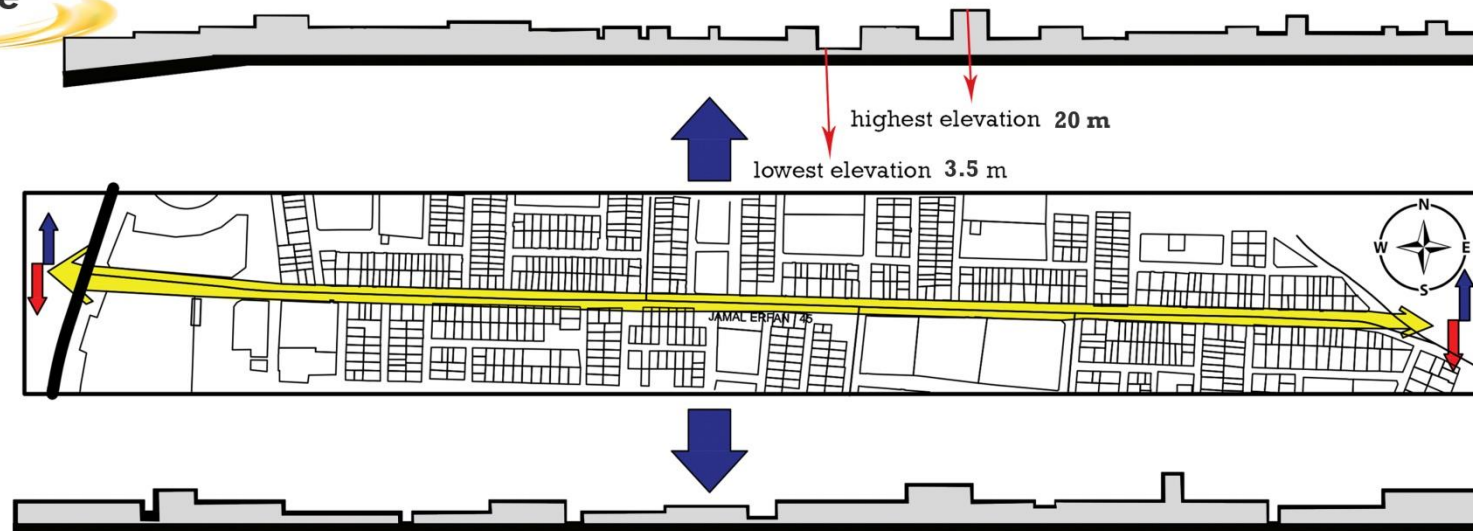
SECTION A-A

URBAN DESIGN PROJECT KANI ASKAN DISTRICT

Land Mark



Skyline

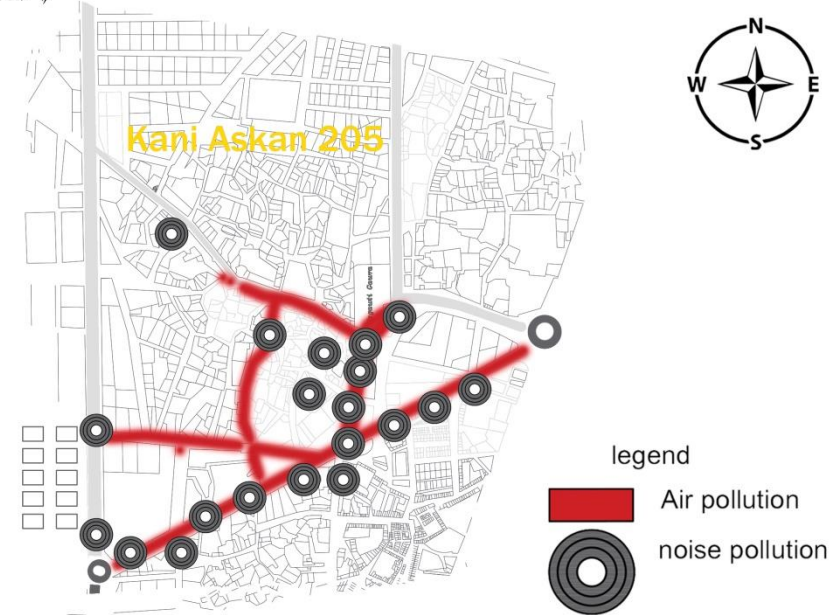


URBAN DESIGN PROJECT KANI ASKAN DISTRICT

pollution

POLLUTION AND NOISE

THE POLLUTION OF CASE STUDY ARE DETERMINED ACCORDING TO DENSITY AND OVERCROWDED AREAS ESPECIALLY AREAS WITH COMMERCIAL PURPOSES OR THE INSTITUTE MADE A LOT OF OVERCROWING LEADING TO NOISE IN THE SURROUNDING AREA. THE RESIDENTIAL ARE BORED WITH THIS SITUATION AND ALSO SLIMANI PALAS TRAFFIC FLOW MADE A LOT OF CONGESTION AND AIR POLLUTION. HUGE NUMBER OF CAR FLOW MADE AIR POLLUTION.



Visual Pollution

pedestrian path movement problem

1. texture



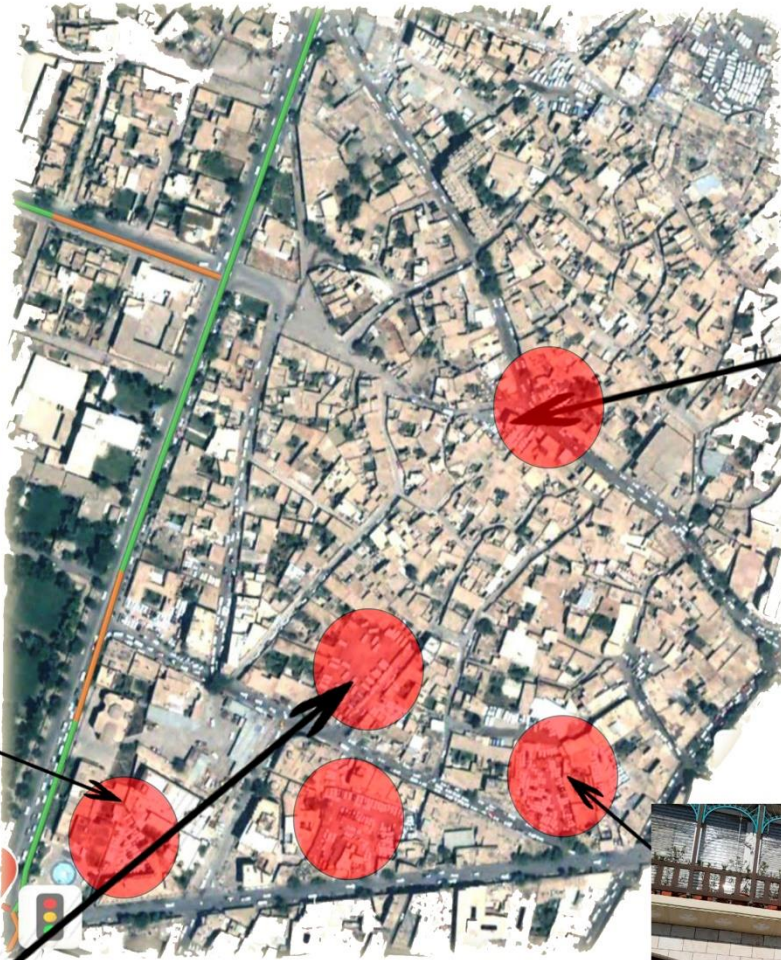
2. leveling problems



In Kaniskan district we noticed a lot of textures and leveling problems which was a boring feeling for the users there, this condition is referred as visual pollution.

URBAN DESIGN PROJECT KANI ASKAN DISTRICT

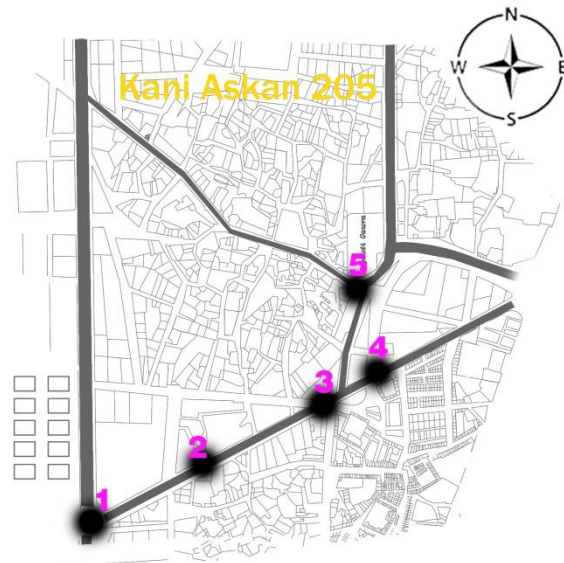
parking space



URBAN DESIGN PROJECT KANI ASKAN DISTRICT

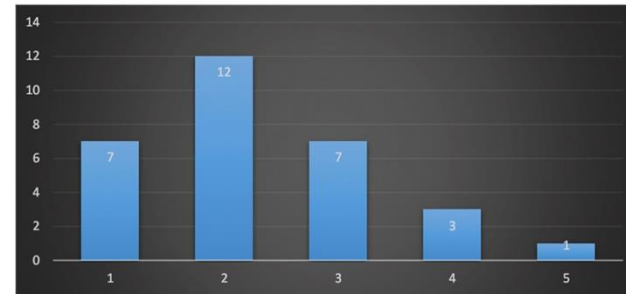
Questionnaire

COLLECTING DATA TO CLARIFY TRAFFIC FLOW
making questionnaire about road safety



Are you feeling these possible to walking

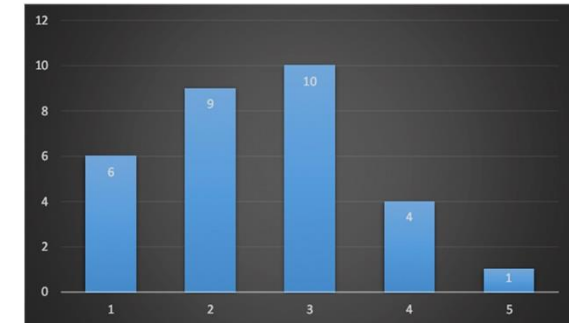
1.(very unsafe), 2.(unsafe), 3(neutral), 4. (safe), 5. (very safe)



Answer to walkability feeling

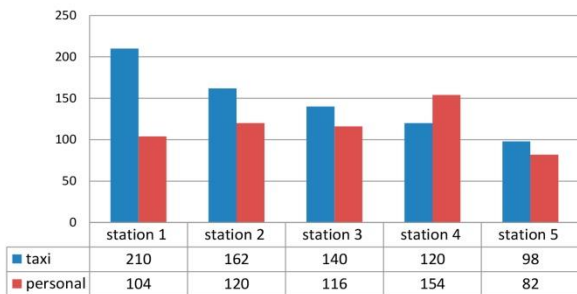
Feeling safe at cross

1.(very unsafe), 2.(unsafe), 3(neutral), 4. (safe), 5. (very safe)

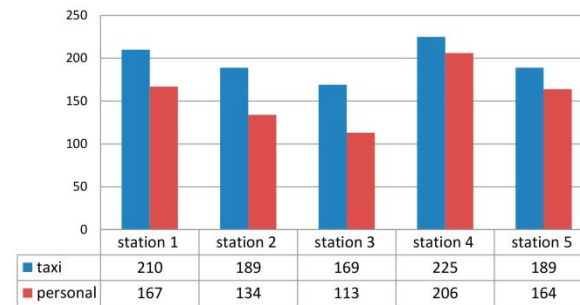


Answer to feeling safe when walking on salm street

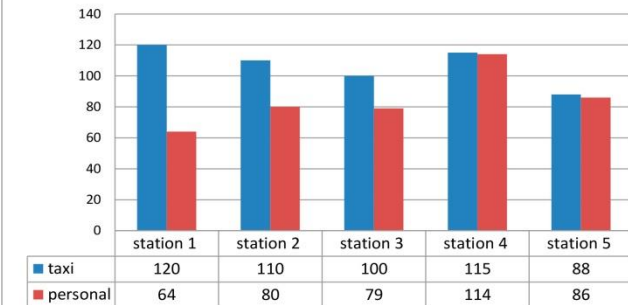
8:30 - 9:00 AM



4:30 - 5:00 PM



11:30 - 11:59 AM



land use

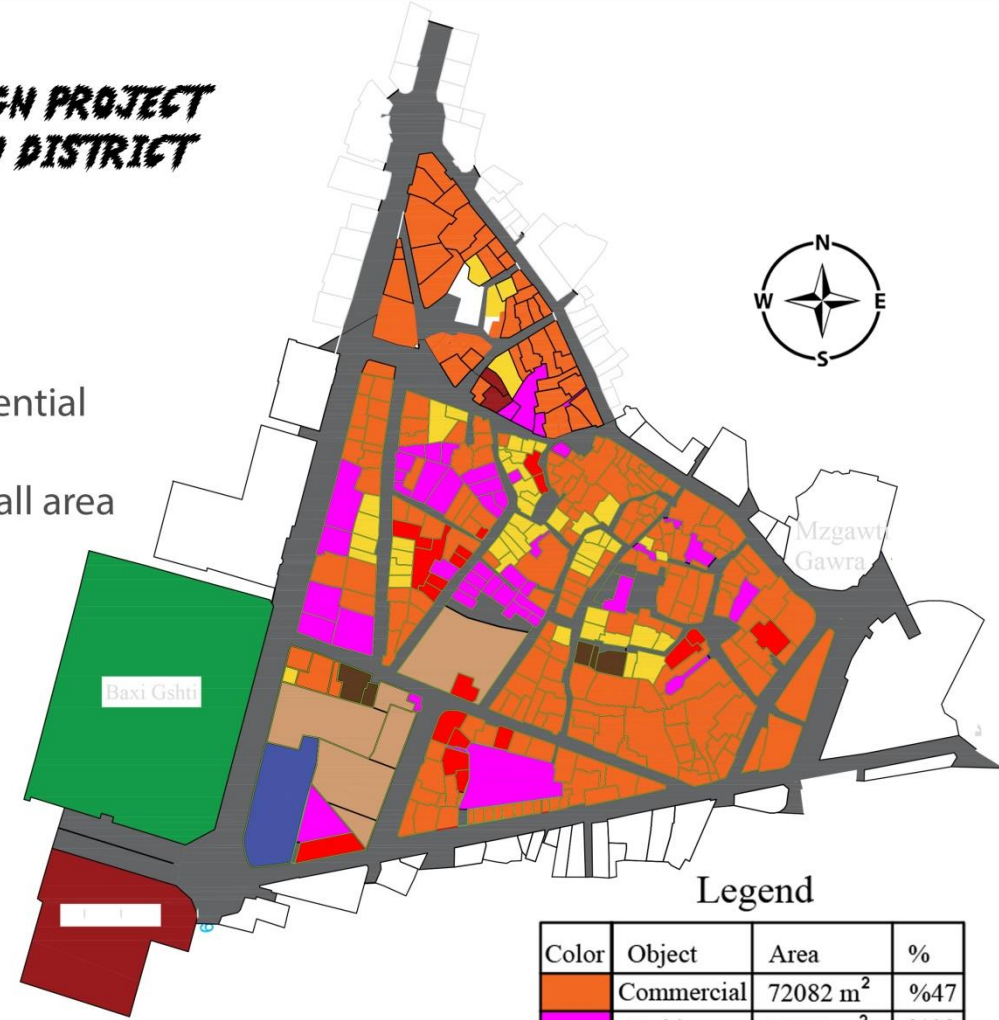
URBAN DESIGN PROJECT KANI ASKAN DISTRICT

Problems

mixing activities within the street such as residential and commercial
accumulation of government buildings in a small area
unavailability of green spaces

Solutions

- 1-Separating all services from (Salm)street for example all shopping services are being in the same location, and when people come to (Caso mall)
- 2-In the Re-design of (Salm) street green area must be increased.
- 3-Need to away housings of from (sara police station, and this street use as commercial street.



Legend

Color	Object	Area	%
Orange	Commercial	72082 m ²	%47
Pink	Parking	15831 m ²	%10
Brown	Infrastructure	12377 m ²	%08
Blue	Education	3871 m ²	%03
Yellow	Residential	10033 m ²	%07
Dark Brown	Religion	2923 m ²	%02
Red	Mix	5111 m ²	%03
Grey	Circulation	29485 m ²	%20
Green	Green Area	00.00 m ²	%0.0
Total Area		152 500 m ²	%100

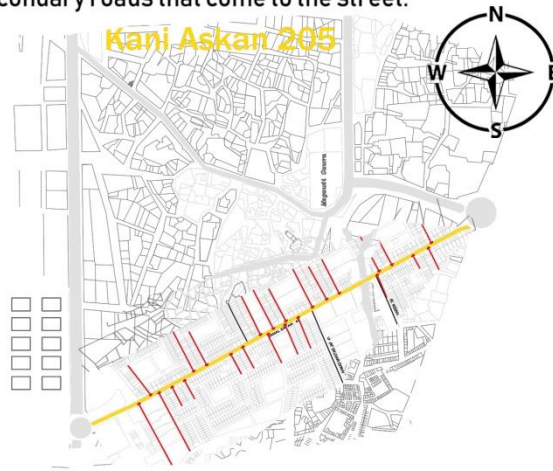
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TRANSPORTION

PROBLEMS

Salm Street is (1258 M) long and (20M) wide And it has many problems

1- The street has a high congestion Because of a mixed land use and a lot of secondary roads that come to the street.



2- Generally the quality of roads and pavements are poor.



3- there is no public transport.

4- some sidewalks are too narrow for pedestrian and pavement obstructions and it's too dirty.



5- lack of safety passing space for pedestrian.



URBAN DESIGN PROJECT KANI ASKAN DISTRICT

TRANSPORTION

PROBLEMS

6- Different level of pavements with no respect to disable.



7- there is no traffic signs.

8- lack of street lighting.

9- Irregular on street parking with no respect to traffic regulations.



URBAN DESIGN PROJECT KANI ASKAN DISTRICT



Electric system

- 1- Old electric network system .
- 2- Inefficient electric distribution system using a lot of voltage by consumer .
- 3- Availability of a lot of electric cables and mixing with internet and telephone cable .
- 4- Ugly scene of mixing cables .



Water supply

- 1- Unavailability of sufficient amount of water to each unit .
- 2- Because of a lot of topography differences in residential area different amount of water supplied to houses .
- 3- Un controlled water supply system .

IT service

- 1- Exceed number of communication companies .
- 2- Difference in prices .
- 3- Uncontrolled internet networks by government
- 4- Availability of a lot of internet and telephone cables .



Sewerage system

- 1- Inefficient sewerage system that provided tens years ago .
- 2- Old system used concrete pipes .
- 3- Small size of inlets and pipes .
- 4- Un leveling in manholes and road .



URBAN DESIGN PROJECT KANI ASKAN DISTRICT

POLLUTION

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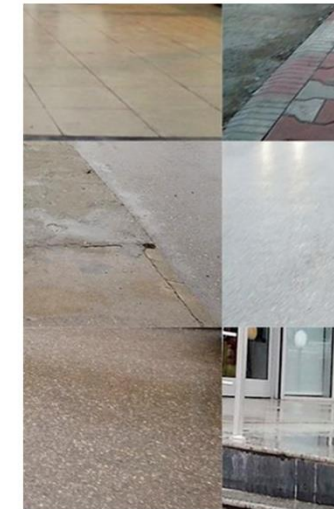
VISUAL POLLUTION

pedestrian path movement problem

1. texture



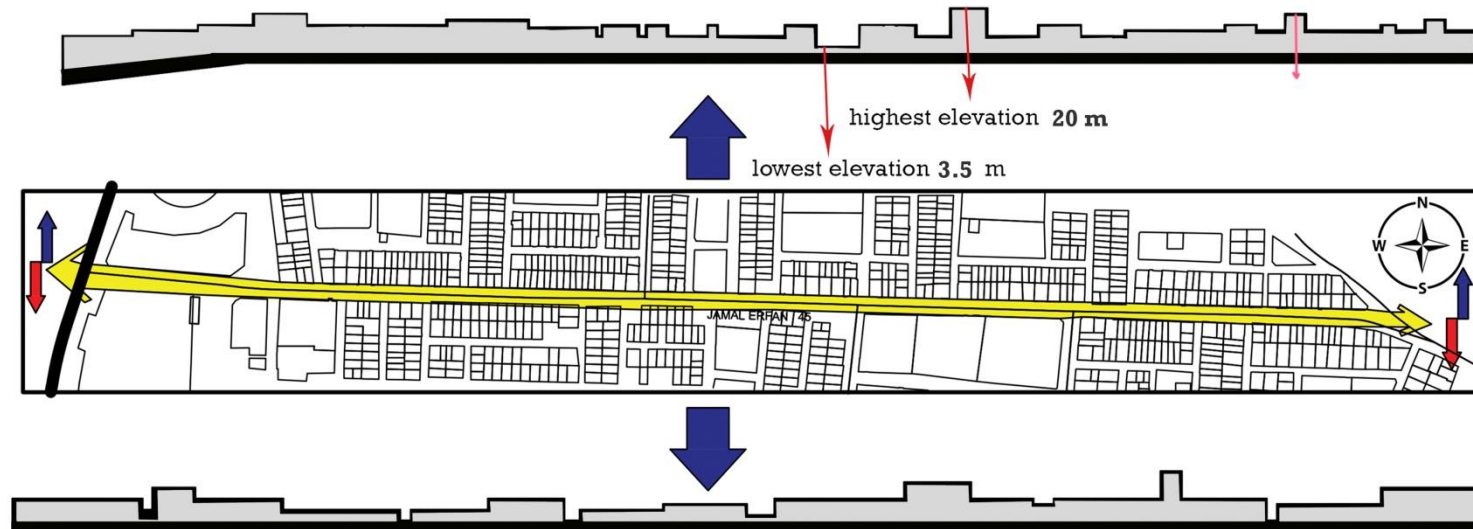
2. leveling problems



URBAN DESIGN PROJECT KANI ASKAN DISTRICT

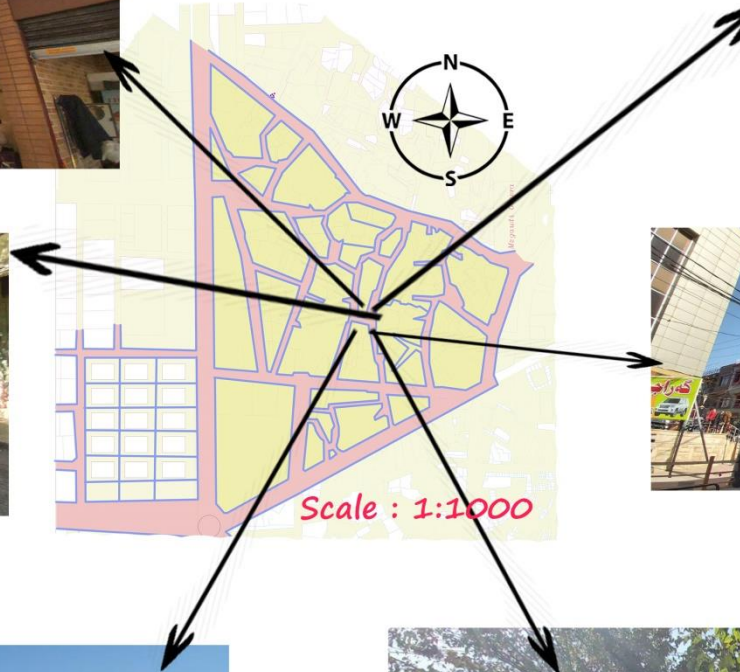
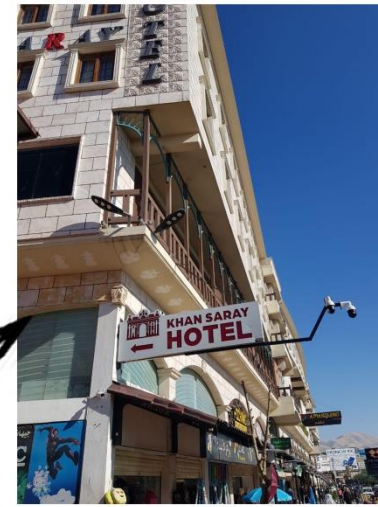
SKYLINE

Generally the Skyline of kaniaskan is not uniform height this makes a bad , scene of area so in redesigning we have to enforce the new buildings to be not more than three floors within salm street



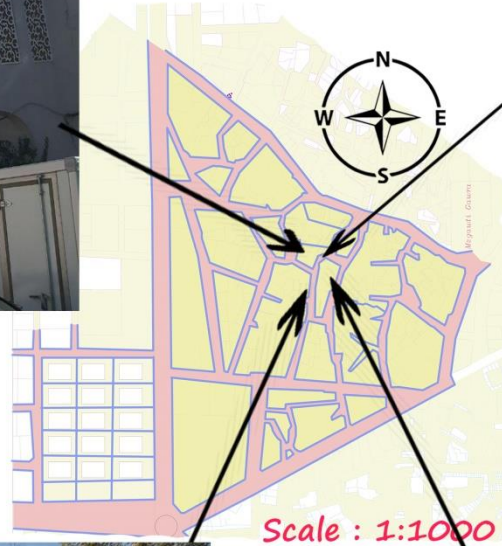
VIEWS FROM THE SITE

URBAN DESIGN PROJECT KANI ASKAN DISTRICT



VIEWS INTO THE SITE

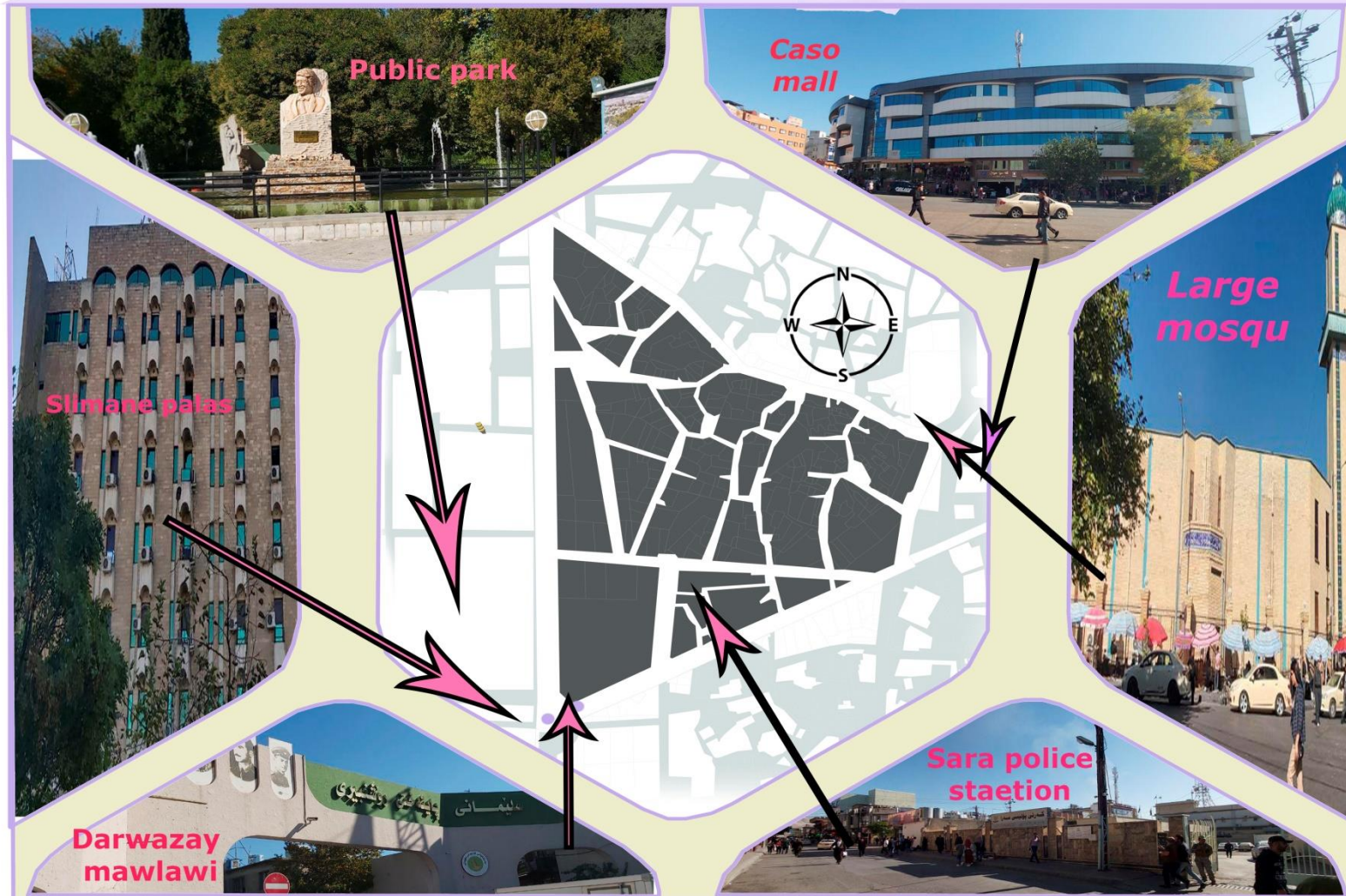
URBAN DESIGN PROJECT KANI ASKAN DISTRICT



Land Mark

URBAN DESIGN PROJECT
KANI ASKAN DISTRICT

LANDMARK





URBAN DESIGN PROJECT KANI ASKAN DISTRICT

Strength

- 1- *It has an important role in economic development, specially commercially.*
- 2- *Several hotels being in that place for tourists to stay in.*
- 3- *The district is in the center of the city, therefore it's easy to get to from all the parts of the city.*
- 4- *It's a suitable place for selling products that are made in Kurdistan, and handmade products.*

Weakness

- 1- The area being too crowded and having a lot of load on it because being a commercial district.
- 2- A lot of residential areas became a parking place for cars in a randomly type of way.
- 3- Most of streets and roadways are too narrow and this makes a problem for passing, especially cars.
- 4- Most of stores being too old, and too close to each other made the place feel so much more crowded that it is.

Opportunity

- 1- It provides job opportunities for people.
- 2- It could become an important district and having an important role in economic and commercial development for the city.

Threat

- 1- This commercial development in this place made a threat to Kaneskan district to erased completely as one of the old districts in the city.
- 2- Decreasing the amount of residential areas
- 3- Increasing the amount of stores and commercial buildings.
- 4- Not having enough services.

Conclusion

After collecting data and analysing kaniaskan district and salm road we concluded , that there was a lot of traffic jam during different times of the day despite of transportation there was a visual pollution in using different textures taht was boring to the users,and because of a lot of existing cars there may occur air pollution

Strategy

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Green wall

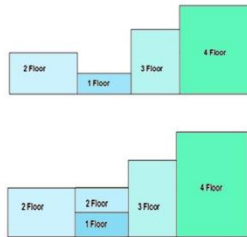
To mitigate this undesired effect of building , we have to pay attention for proper material selection for building in the street as well as the entire city , and here we have selected several suitable material and strategy for our climate.

Building detail elevations and colors

About the building in redevelopment, we are according the building skyline and elevations of building and number of floors that we are decided to change the building that 1 for to 2 floor to achieve the correct the views and skyline of the street views to the surrounding more suitable building high flow line

Building colors, we choose the cool colors and painted the light colors that suitable for our

Countries that had a large degree of temperature heat which reflect to the sun and heat.



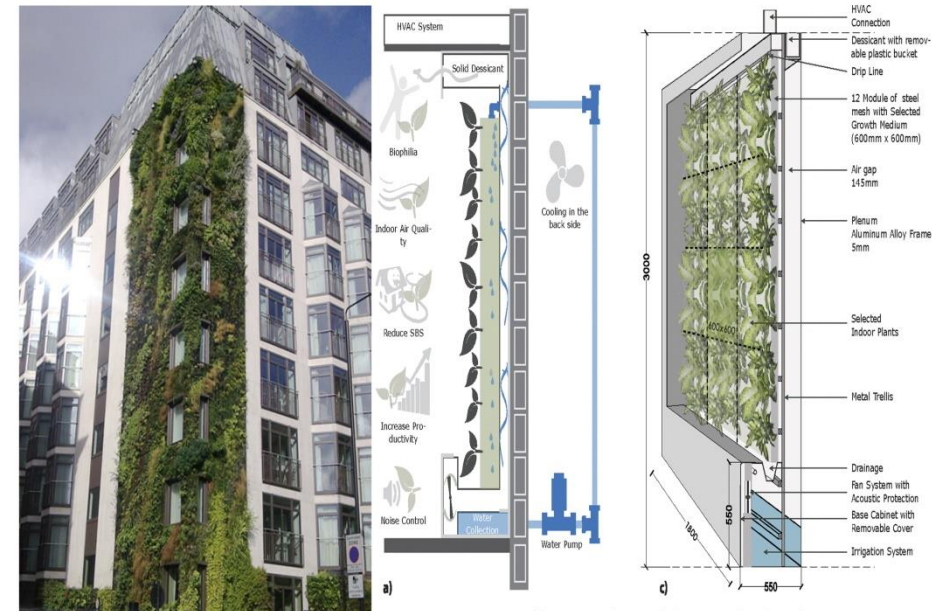
12 Panel Colors



4 Trim Colors



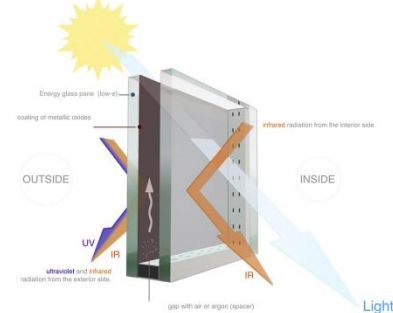
Green wall Materials have the biggest effect on a building's overall environmental impact. They are also responsible for most of the heat loss from a house. Walls can have from a low to a very high energy embodiment, You might also want to consider the breath ability of the walls as breathable walls can help to offset the highs and lows of humidity caused by modern living, helping to promote a healthy internal environment



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Solar Window

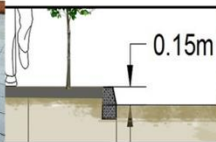
"A solar panel is a flat construction resembling a window, built with technology that allows it to passively harvest the heat of the sun or create electricity from its energy through photovoltaic



Sidewalk material and detail

according to our city situations of environment and social behaviors and duration of more period and walkable material we are choose the gray brake road texture to the sidewalk

The sidewalk elevations are about 15cm it based to more useful to all adult peoples and more walkable



Street furniture

The most furniture that the site needed to the street we are installed in new design is about light lamp, camera, tell box



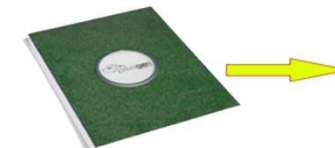
Traffic signals

the traffic signs that is more important to street more safe and as guidance for peoples and vehicles at the street



Footfall harvesting

People visits this street more than many other streets, so we can get some benefits and positive aspects from this by setting footfall harvesting in the street, this when people walk on these parts, this will generate power for the street.



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Green roof

Most of building roof is just the structure of building and left without proper treatment which have hazardous effect on the environment and to mitigate this negative effect of roof of building is the strategy of green roof which is the use of the space of a building to grow plants which have several advantage for the building as well as the



Lighting

Establishing LED Lighting in the street, this type of Lighting reduces the consumption of electricity and cost. Basically, there is not any enough lighting in this street, so if we decide to set light we must establish LED Lights.



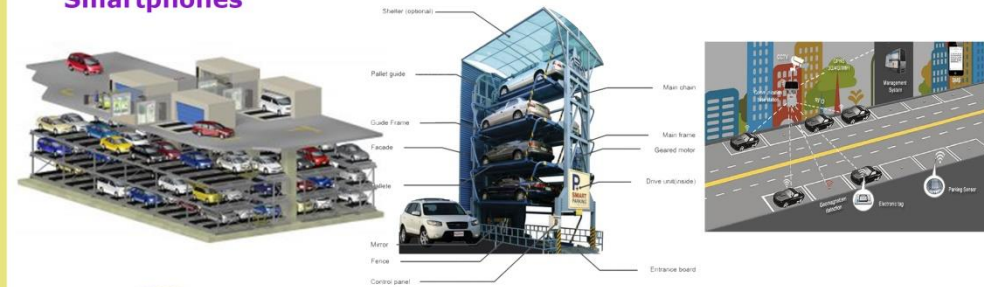
How Fast Park work

Fast Park uses magnetic sensors installed in each parking space to accurately detect the presence of vehicles. Sensor information is sent to the gateways wirelessly. The gateways then aggregate the data from several Sensors and send it to the database servers. Fast Park locates vacant parking spaces using a sensorial network and then sends the information

To drivers via smart phone apps or electronic street panels.

- Drivers will be able to save time and fuel, reducing traffic and CO2 emissions

- Motorists using the Fast Park mobile app will be able to pay the parking meter from their Smartphones



Underground electricity line

The wires makes an ugly and uncomfortable view for this street, so putting these wires into underground will make a better view and more efficient.



URBAN DESIGN PROJECT KANI ASKAN DISTRICT

FIRST Proposal DESIGN

Here We Prepared Three Proposed Design In Each Proposal We Focused On One Solution Especcialy Circulation Because Of Direct Impact On All Sectors , Whenever Solving Transportation And Road Width Directly We Solve Other Problems

IN FIRST PROPOSAL WE FOCUSED ON SALM STREET TO DESIGN THE ROAD AND OTHER INFRASTRUCTURES
MAIN SOLUTIONS IN OUR DESIGN WE CONSIDERED

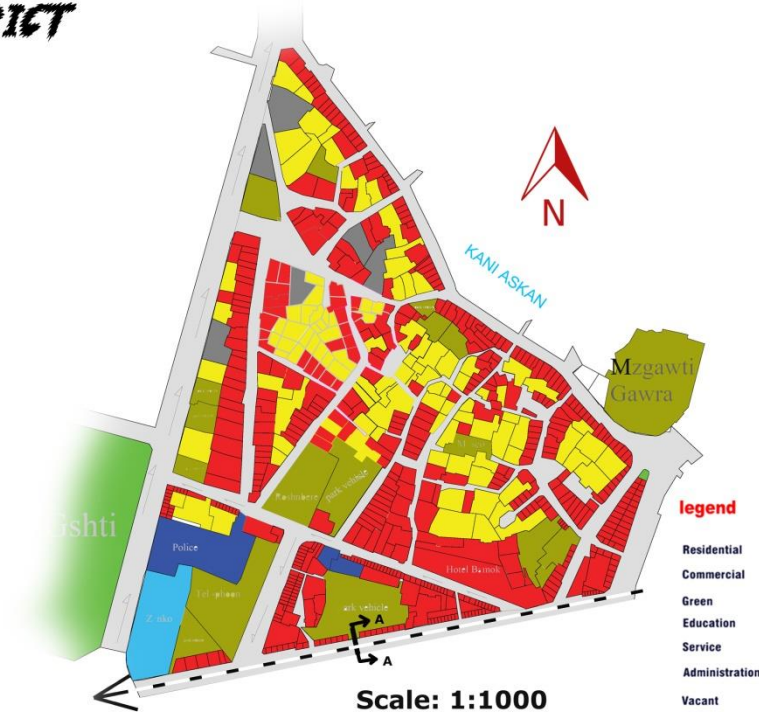
- 1-WALKABILITY
- 2-PARKING
- 3-BICYCLE LANE
- 4-MAKING ONE-WAY ONE-LANE TRAFFIC
- 5-WIDENING PEDESTRIAN LANE
- 6-MAKING PADESTRIAN ROADS SAME LEVEL AND SAME TEXTURE AVOIDING VISUAL POLLUTION
- 7-ADDING GREEN BELT BETWEEN TRAFFIC AND PEDESTRIAN



BICYCLE LANE

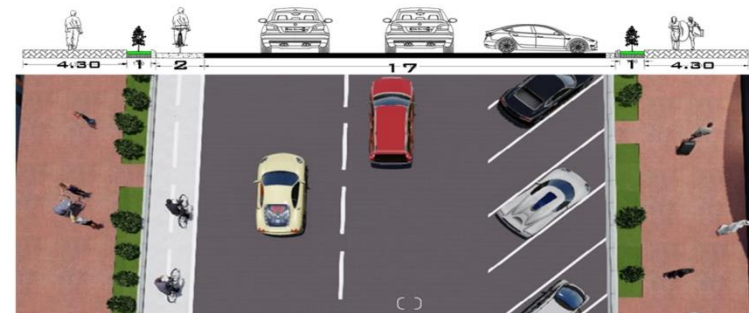


ZEBRA LANE FOR SAFETY AND PASSING MORE COMFORTABLE



legend

- Residential
- Commercial
- Green
- Education
- Service
- Administration
- Vacant



Section A - A Scale 1:200

MAKING DIRECTION ONE WAY TWO LANETO AVOID TRAFFIC JAM AND DRIVING MORE COMFORTABLY

URBAN DESIGN PROJECT KANI ASKAN DISTRICT

SOCIAL INTERACTION

constructiong public park at the center of jamal erfane street to increase social interaction and increasing walkability

STREET LIGHTING

ESTABLISHING pv PANELS FOR STREET LIGHTS TO BE SUSTAINABLE IN ENERGY SONSUMPTION

WATER SUPPLY

- 1- Rehabilitation of water supply network in the district .
- 2- Setting water meter to each house to control usage of water .

SUSTAINABILITY

municiplaity must enforce new buildings to establish green roof with their design to increase greenery

COLOR

using contrasting colors as much as possible in exterior design of new buildings to more attractive and give sensitivity to the street

LANDMARK

building a monument as a sign to culcture for slemani to attract more people from outside and become a landmark for jamal erfane at the same time become attractive for tourist and give identity to place



ON STREET PARKING ALONG THE ROAD



MAKING ALL TEXTURES SAME AND AVOID LEVELING OF PEDESTRIAN PATH

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Second Proposal Design

As we know mawlawi Street has a good and enough width to establish Tram and pedestrian. This can be called city noise and overcrowding absorber, also its very environmental friendly

Transportation

- 1- Establishing road alignments to avoid congestion and provide more comfortability.
- 2- Increase using public transport bus.
- 3- Establishing zebra lane for pedestrian safety.
- 4- Establishing traffic signs.
- 5- Establishing traffic light in conflict points.
- 6- making parallel on street parking

Water Supply

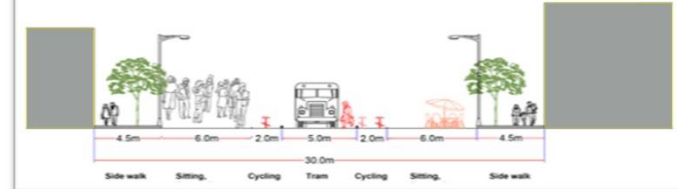
In provide quality of pipe that arrive water to each unit establishing water meter to provide to each unit 24hours

Electric system

Electric cables to underground converting under pavements and give it a different color from the main pavement to provide an ease maintenance.

IT system

Cables to underground converting under pavements and give it a different color from the main pavement to provide an ease maintenance.



Section A - A Scale 1:200



Perspective 1



Third Proposal Design

*Mixing all Activities , Removing features
and reducing dominance of vehicles*



Benefits of sharing space in land use:

- 1- Increase accessibility by mixing activities.
- 2- we can create recreation area through sharing space.



Social benefits

- 1-Increasing social integration.
- 2-can create a higher work opportunity.
- 3-all ages can use the street.

Pollution benefits

- 1-Reducing air and noise pollution because of reducing private cars and increasing public transport.
- 2-improve the air quality because of increasing green area.
- 3- Avoiding visual pollution through using the same materials along the roads and pavements.

URBAN DESIGN PROJECT KANI ASKAN DISTRICT

Sustainability

- 1-Using photo voltaic to street lighting.
- 2- Using green roof to the buildings to increase the ratio of green area and make the place more attractive.

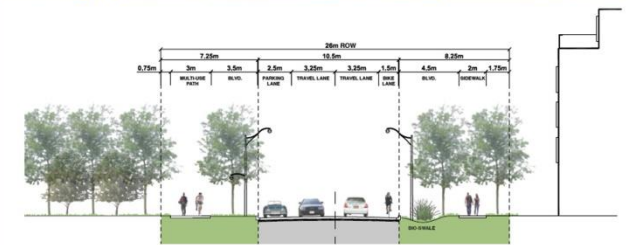


- 3- Using sustainable colors for building exteriors.
For example (light colors reflect a higher sun heat through the summer).and can cause to avoid visual pollution.



Benefits of sharing space in transportation:

- 1- Improve public transport.
- 2- Avoiding leveling in the street.
- 3-Improve the quality of street materials.
- 4- Using materials such as (BR-tone or stone) to reduce speed of vehicles and provide comfortability for pedestrian.
- 5- Mixing pavements and roads (separating them only by lanes).
- 6-Avoid congestion, because sharing space leads to increase using public transport and reduce using private cars.
- 7- Improving safety for road users especially for pedestrian.
- 8- Increasing walkability and Easy to use by disables.



Infrastructure :

Electricity:

- 1-Setting all cables to underground.
- 2- Using photo voltaic to street lighting and using voltaic meter to each unit (16 ampere to each unit and to each floor) to control using of electricity.



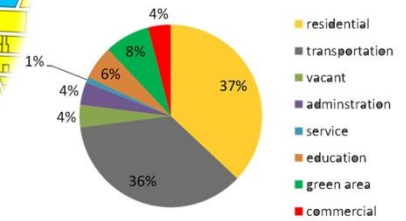
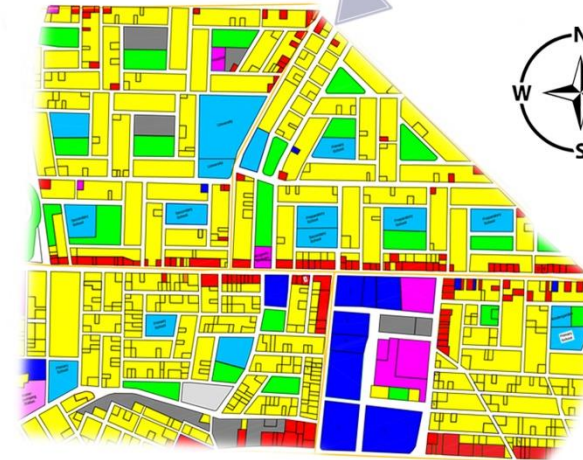
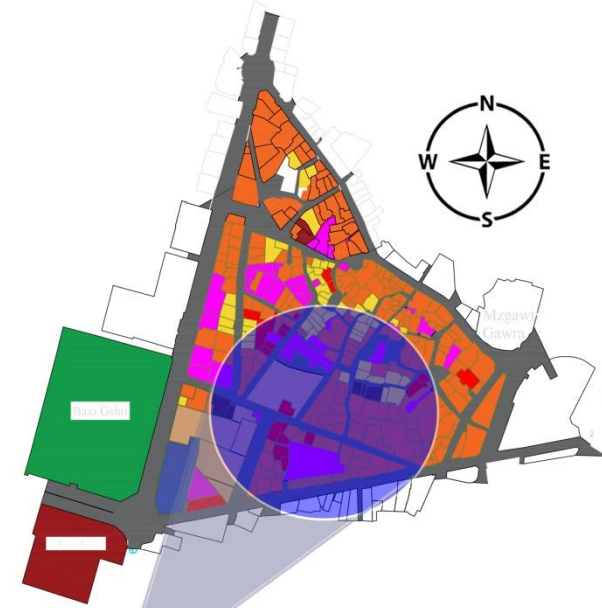
Water Supply

- 1-Setting water meter in each house to control water usage.



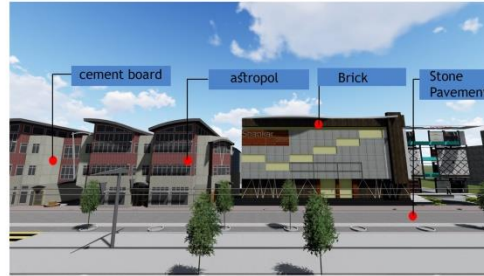
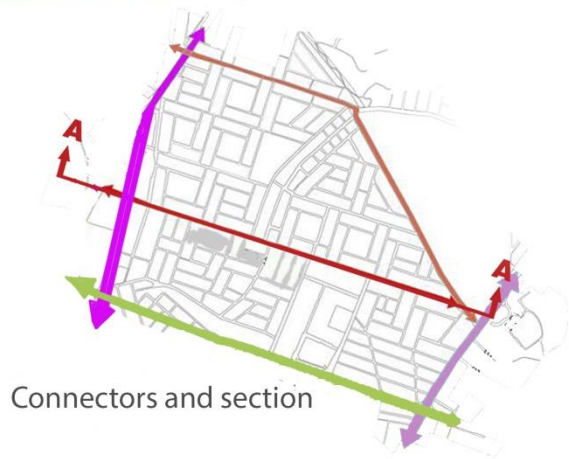
URBAN DESIGN PROJECT KANI ASKAN DISTRICT

Final Proposed Design



URBAN DESIGN PROJECT KANI ASKAN DISTRICT

Final Proposed Design





Thank you