



Ferdowsi University of Mashhad
Faculty of Architecture and Urbanism

Transit-Oriented Development (TOD)

Sa'di square, Mashhad, Iran

Green Path towards Socialization



Master Architectural Design Studio

Professors:

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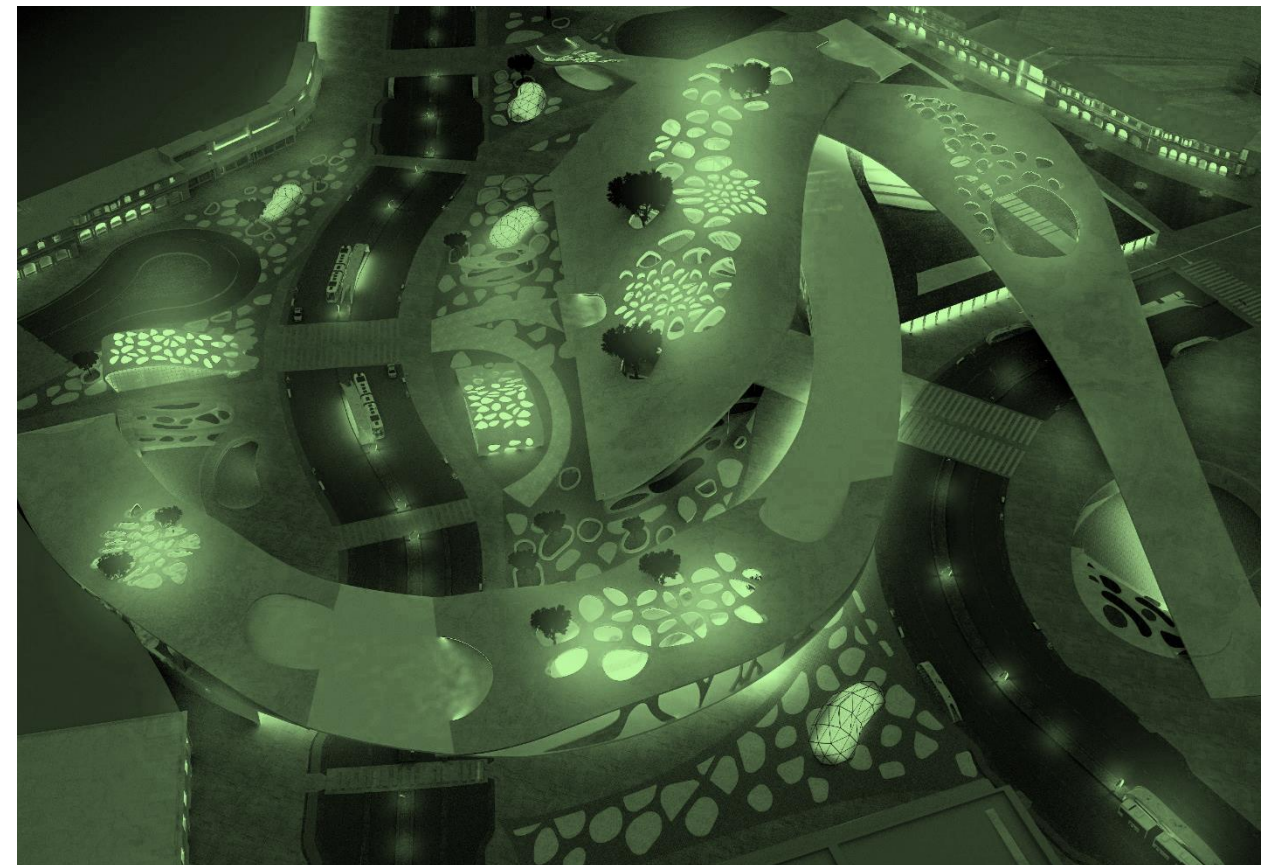
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Fall Semester (2022)



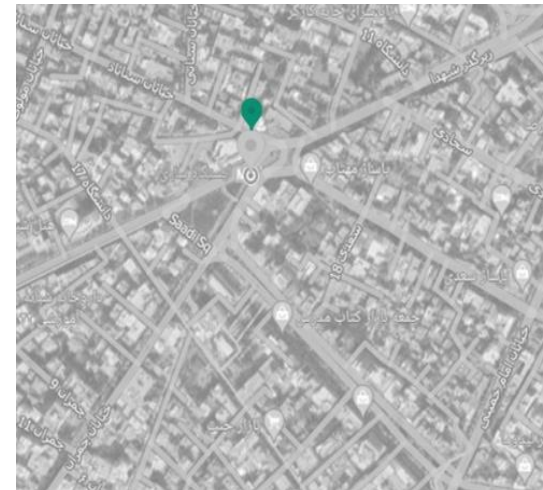
Introduction



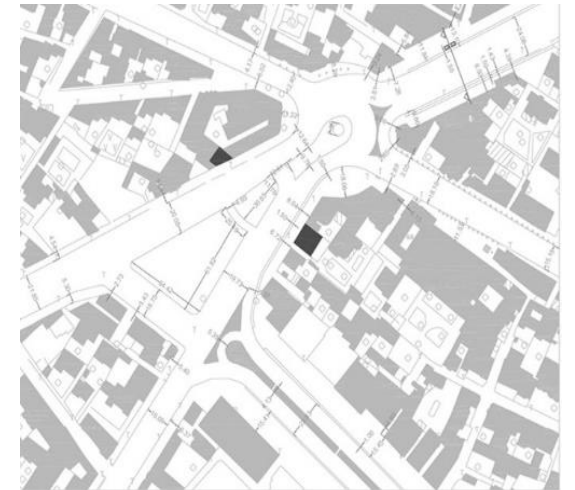
Iran



Mashhad



Sa'di square



Site



Bus stations



Metro stations



Routes



Green spaces



Transportation and accessibility

<p>Availability of public transport stations (metro & bus) near Sa'di square (approximately 180 meters)</p> <p>Availability of bike lane on Daneshgah street</p> <p>Having places for parking bikes and motorcycles</p> <p>Direct access through Daneshgah street to Shohada square</p>	<p>Strengths</p>
<p>Sa'di, Sanabad, Daneshgah, and Chamraan Streets are just in one direction</p> <p>Inadequacy of legibility due to streets in one direction</p> <p>Pedestrian Interference with bikes and motorcycles</p> <p>Not having bike lanes on Sa'di street and other commercial streets for the shopkeepers</p> <p>Discontinuous bicycle lanes</p> <p>Short width of Sa'di, Sanabad, and Chamraan street</p> <p>Not having a specific lane for buses</p> <p>Not having taxi stations near the square</p> <p>Inappropriate and nonstandard lane for sightless people</p> <p>Not having barriers between the bike lane and the street</p> <p>Not having barriers between the bike lane and the pedestrian</p>	<p>Weaknesses</p>
<p>Possibility of using bikes for the shopkeepers to reduce the traffic and air pollution</p>	<p>Opportunities</p>
<p>Possibility of heavy traffic imposed on Sa'di street from Shohada square</p> <p>Possibility of heavy traffic in some hours of the day</p> <p>security threats due to motorcycles passing in pedestrians and bike lane</p>	<p>Threats</p>

SWOT



Functional

<p>Having public parking on Modares street Having services such as cafés near the square Having diverse uses in the neighborhood (like fruit shops and bakeries) Behesht cultural center as an identity for the site</p>	<p>Strengths</p>
<p>Inadequate parking Inadequate green spaces Green fields without any usage Lack of identity of Sa'di square despite the Saraab neighborhood's antiquity Street vendors' presence in the pedestrian Having minimum metro stations around the square</p>	<p>Weaknesses</p>
<p>Opportunity of creating live and dynamic urban places in Daneshgah, Jannat and Modares street Potential of creating lively spaces due to gathering of people around metro station (especially youngsters) Possibility of changing some uses for creating mixed-use buildings(example: pars dormitory) Possibility of having the same uses in one complex</p>	<p>Opportunities</p>
<p>Possibility of safety and security threats because of lost spaces and also too many office buildings on Modares street</p>	<p>Threats</p>



Physical and Aesthetics	
<p>Appropriate width of Daneshgah street Having old trees and appropriate shadows in Daneshgah and Sanabad street Renewed pedestrian and neat boards for shops in Sa'di, Daneshgah, and Chamraan street</p>	Strengths
<p>Insufficient attention given to pedestrian ways in urban design Insufficient attention to disabled people Inadequate urban furniture Old furniture and seats in Sa'di, Modares, Chamraan, and Daneshgah street Inappropriate visual view of urban installations Visual disturbance of facades The low visual quality of the streets due to lost spaces and brownfields Invasion of shops' stairs in pedestrian Parking motorcycles in pedestrians and discharging shop goods in the streets and pedestrians which creates too much congestion</p>	Weaknesses
<p>Potential of designing high-quality spaces due to the width of paths Creating a desirable place around the green space near Sa'di street</p>	Opportunities
<p>Possibility of crowded places in Saudi streets because of the small blocks in this area</p>	Threats

SWOT Summary



The site is close to the Behesht cultural center, giving it an identity. There are diverse uses and different services in the neighborhood that can be taken as strengths. Youngsters gather in the area, especially metro stations and pedestrians which is an opportunity to improve pedestrians and gathering spaces for different groups and ages. There are green spaces that can be used though left vacant. Besides the strength and opportunities, weakly designed bikes and sightless's lanes need to be noticed. Few green spaces is also another concern. A place for street vendors needs to be thought of as well as furniture for pedestrians. Another negative point is lost spaces around the site which may cause safety and security threats for people. All in all the site has threats that can be changed to positive points.



Diverse uses



Lack of furniture



Bicycle lane



Behesht cultural center



Metro station



Lost spaces



Green fields

Goals



Environmental



- Designing green spaces
- Better quality of open spaces
- Protecting animals and plants diversity



Green spaces



Animals protection

Cultural & Social



- Creating diverse places for different groups and ages
- Creating places for socializing



places for socializing

Transportation



- Improving public transportation

Economic



- Enhancing local use in Sanabad street

Aesthetics



- Emplly a sense of movement and lightness
- View to the plants and greenery



Sense of movement and lightness

Strategies



Environmental

- ❑ Designing green path to socializing (from Sa'di street to Modares street and Behesht cultural center)
- ❑ Creating lots of green spaces in the plaza and neighborhood



Green path to socializing

Cultural & Social

- ❑ Improving frontages near Behesht cultural center



Jannat street



Frontage in front of behesht cultural center

Transportation

- ❑ Avoiding vehicle's within a distance from the plaza

Economic

- ❑ Having Mixed-use buildings

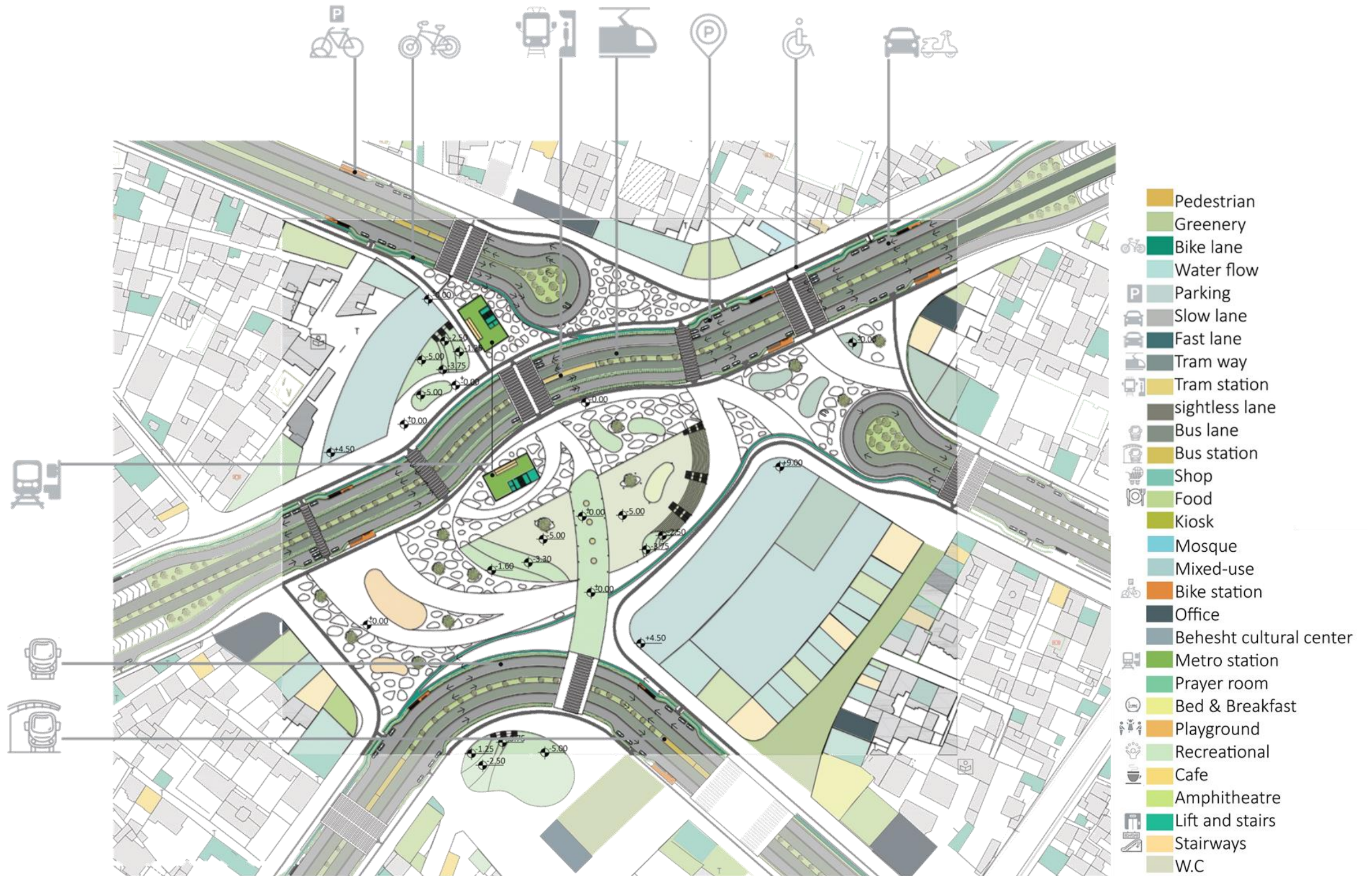
Aesthetics

- ❑ Using curvatures to imply a sense of movement and lightness



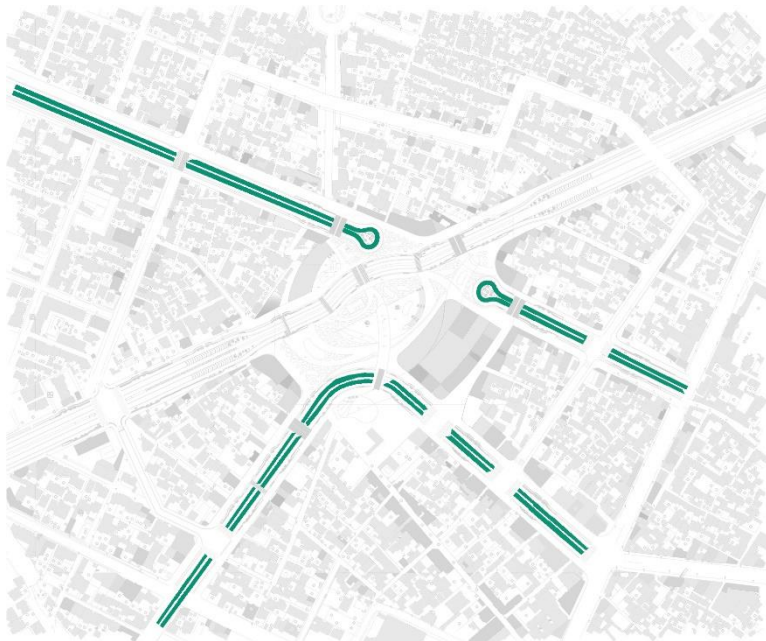
Using curvatures

Concept plan

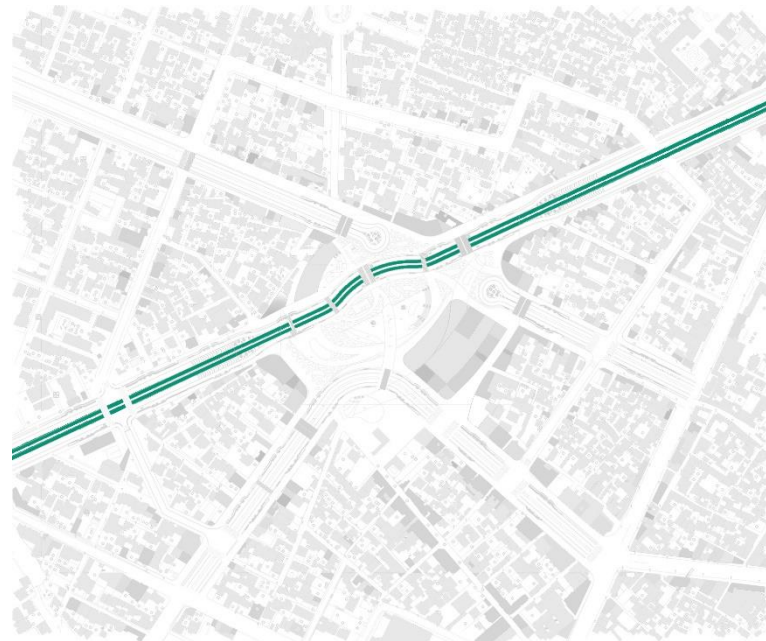


- Pedestrian
- Greenery
- Bike lane
- Water flow
- Parking
- Slow lane
- Fast lane
- Tram way
- Tram station
- sightless lane
- Bus lane
- Bus station
- Shop
- Food
- Kiosk
- Mosque
- Mixed-use
- Bike station
- Office
- Behesht cultural center
- Metro station
- Prayer room
- Bed & Breakfast
- Playground
- Recreational
- Cafe
- Amphitheatre
- Lift and stairs
- Stairways
- W.C

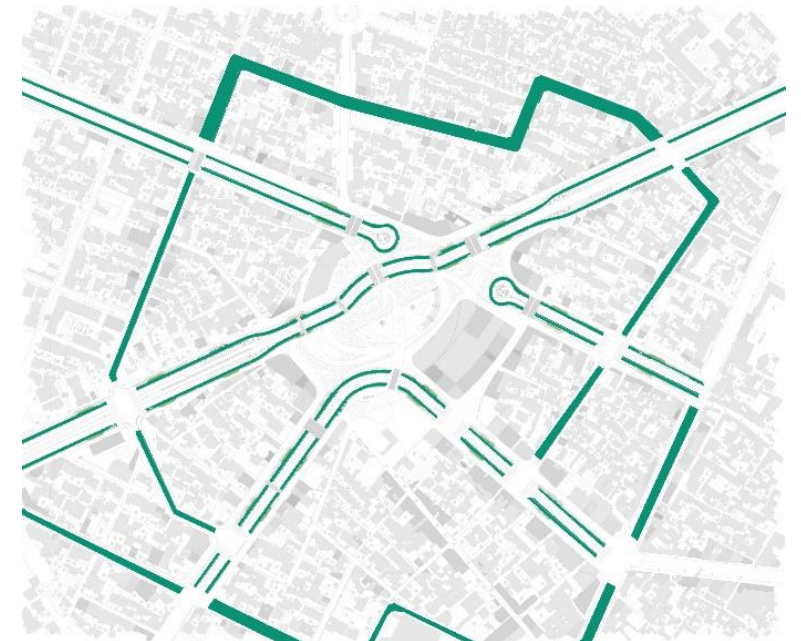
Layers on level 0.00



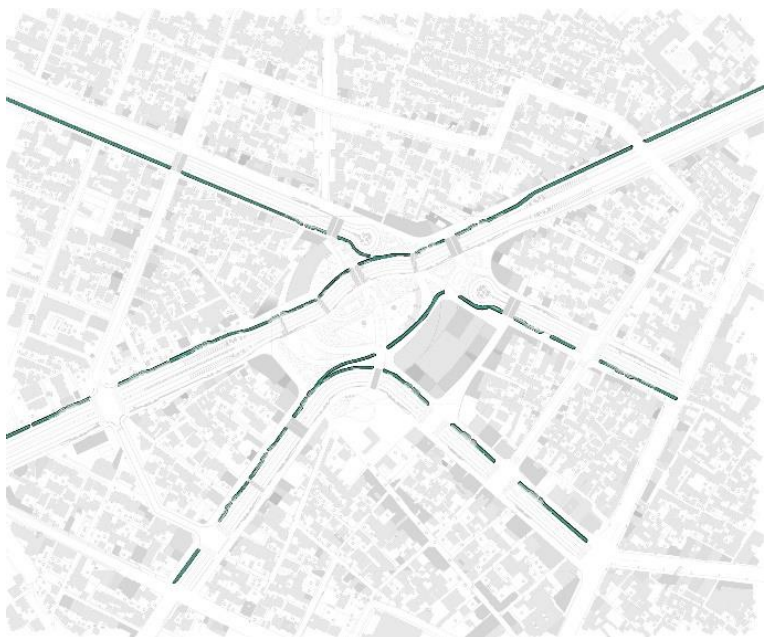
Bus lane



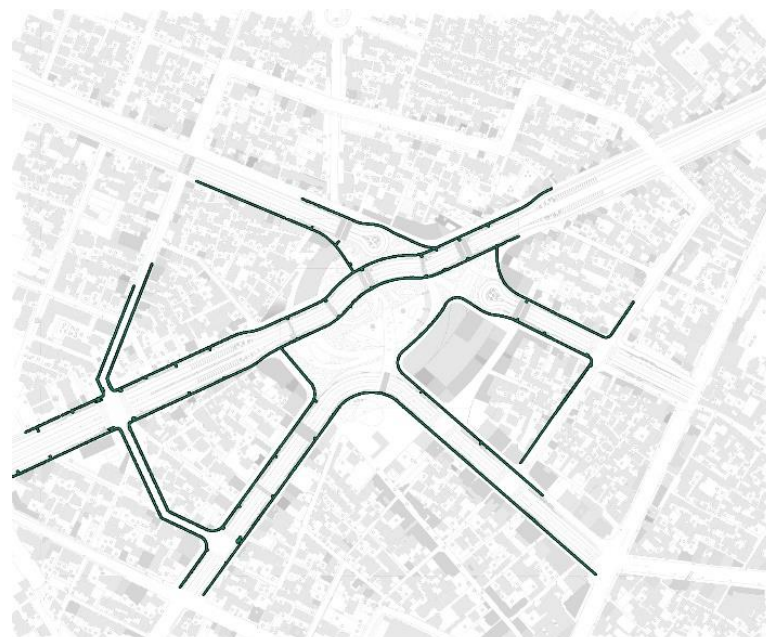
Tram way



Slow lane



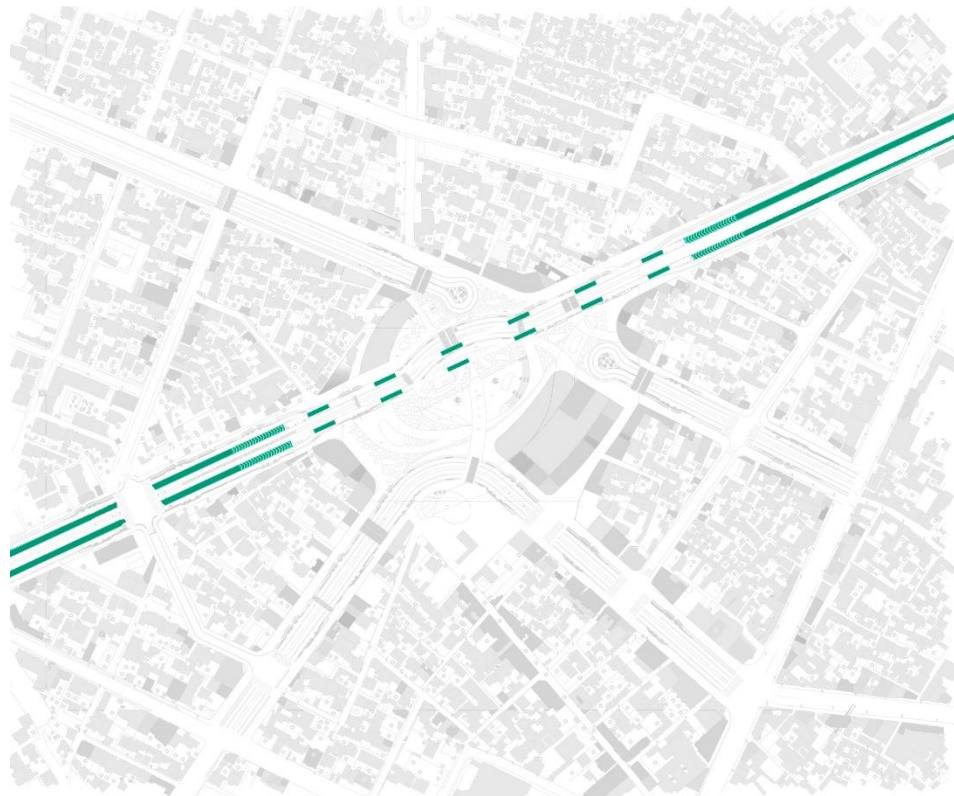
Bike lane



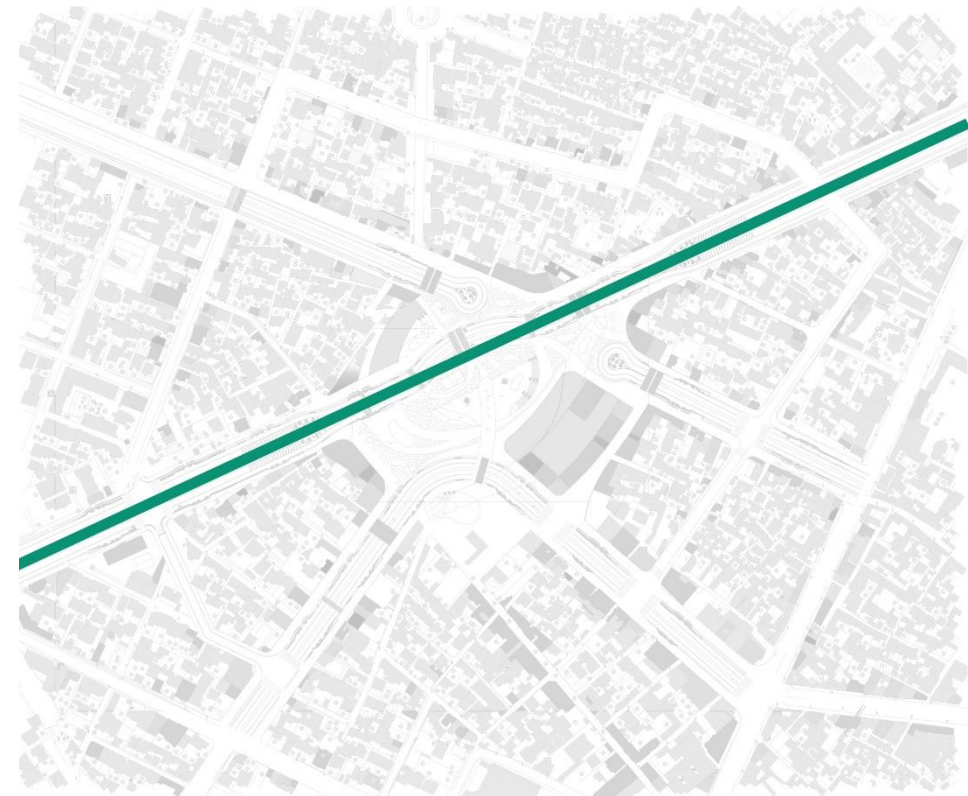
Sightless lane



Pedestrian

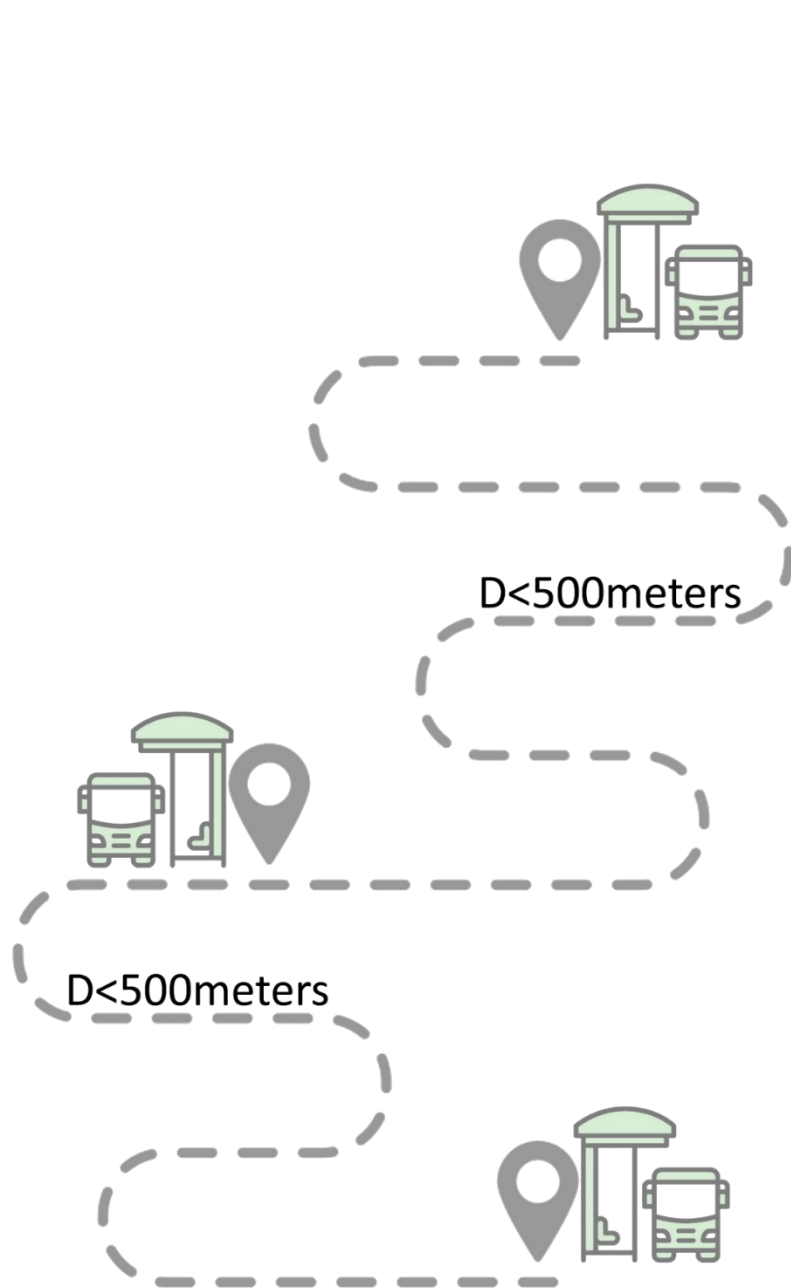


Fast lane

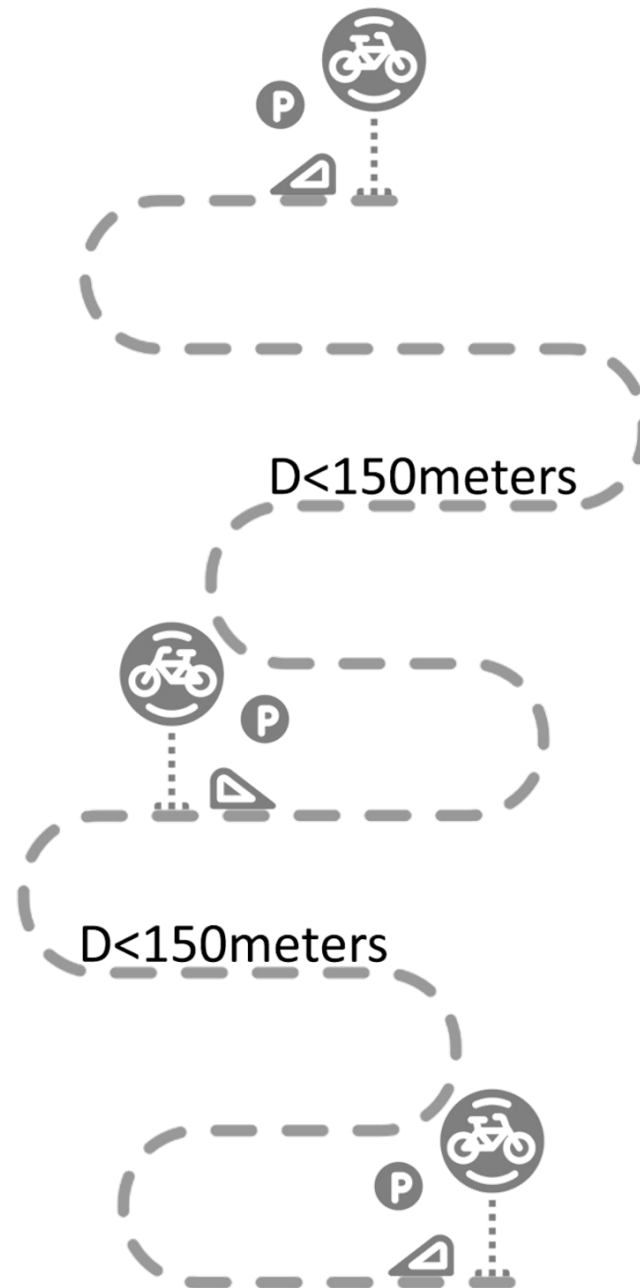


Metro

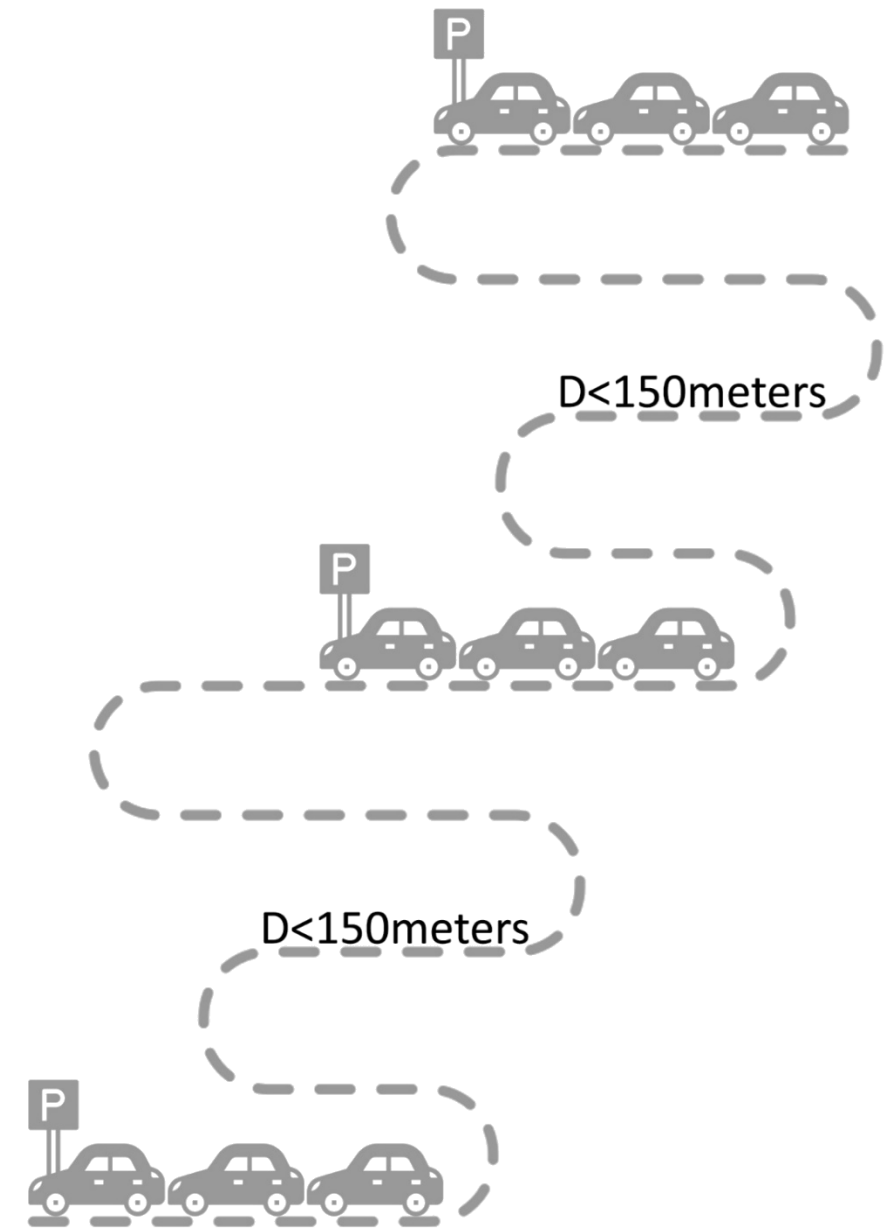
TOD principals considered in design process



Placement of public transport stations

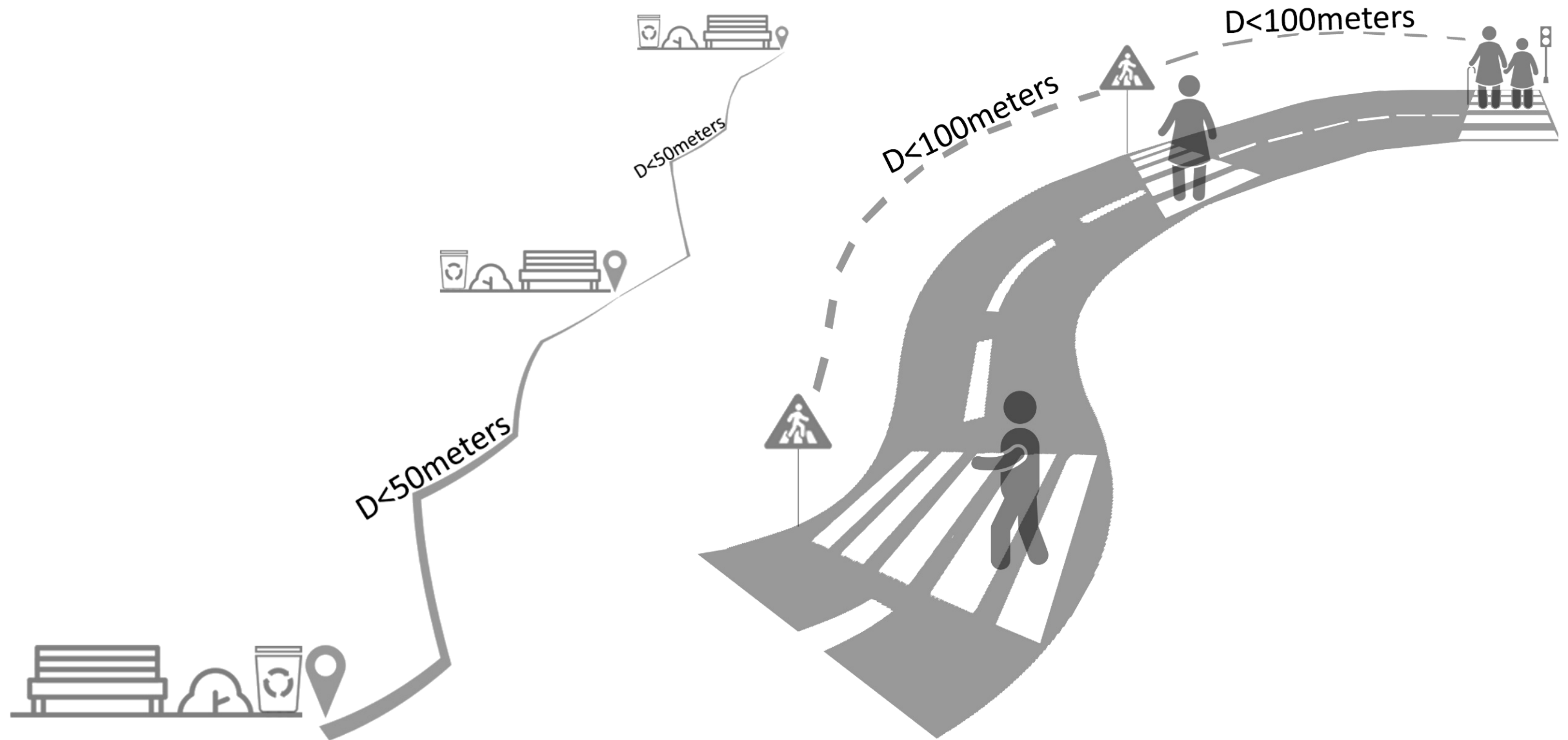


Placement of bike stations



Placement of 3 car parking in each lane

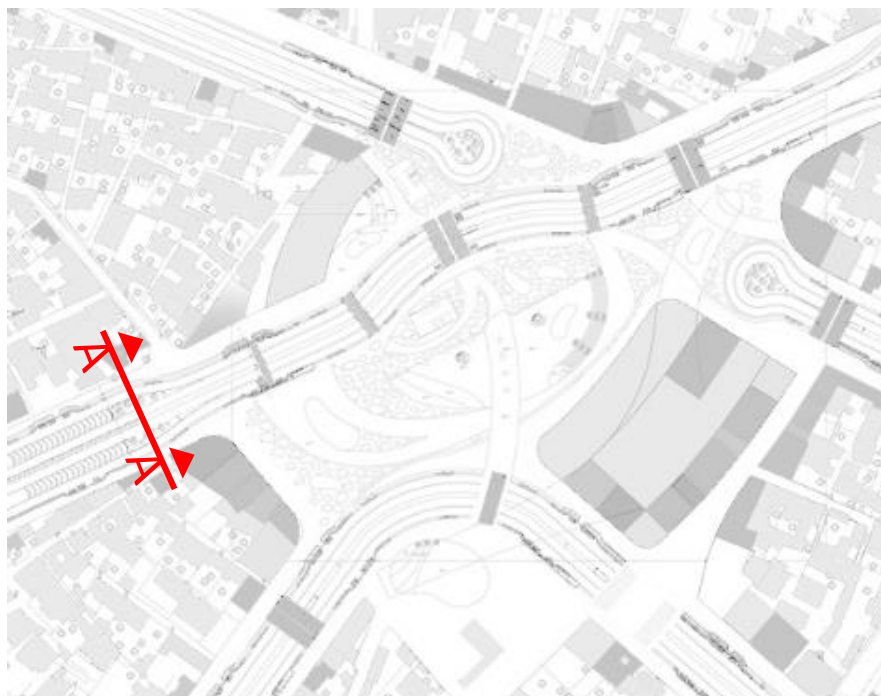
TOD principals considered in design process



Placement of benches and bins

Pedestrians crossing the street

Section A-A (Daneshgah St.)

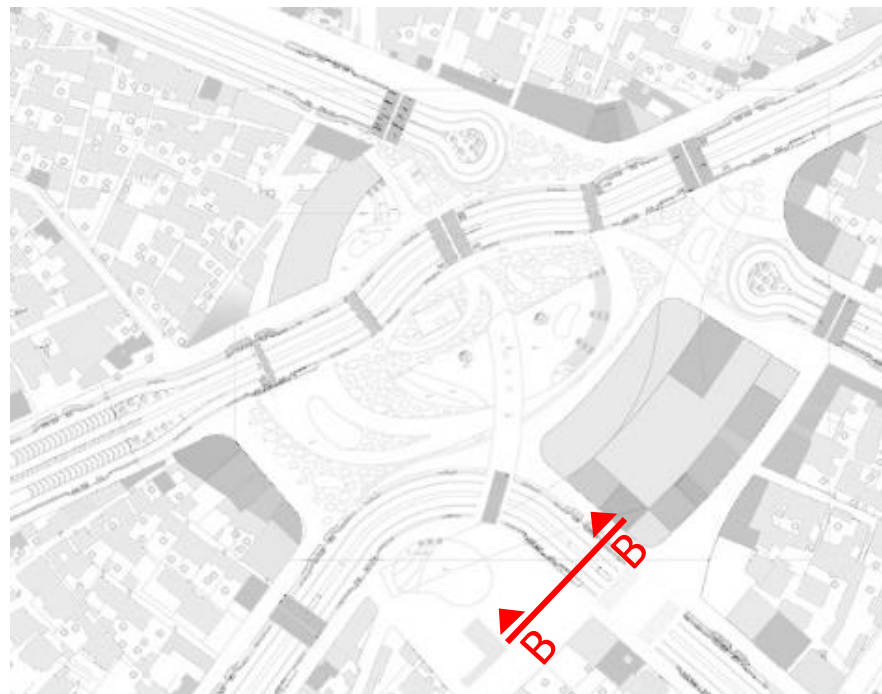


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- Shop

Section B-B (Modares St.)

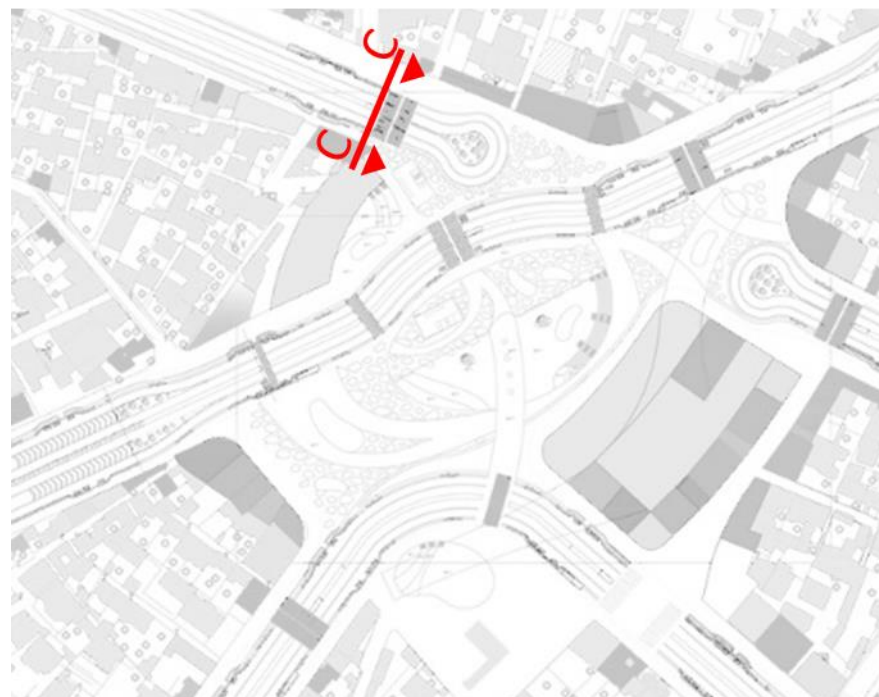
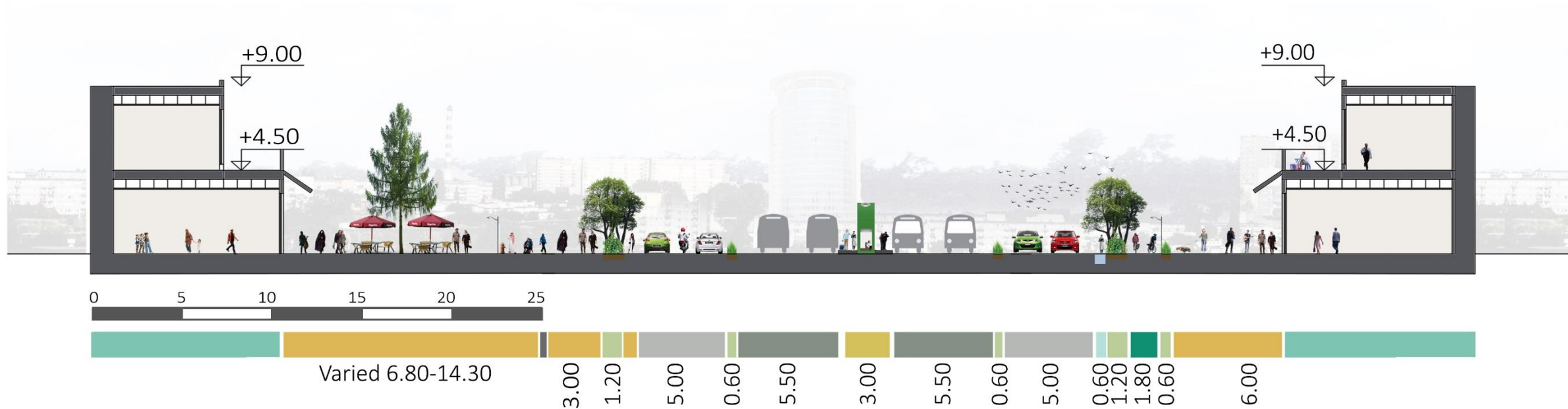


Area around Behesht cultural center 78.00



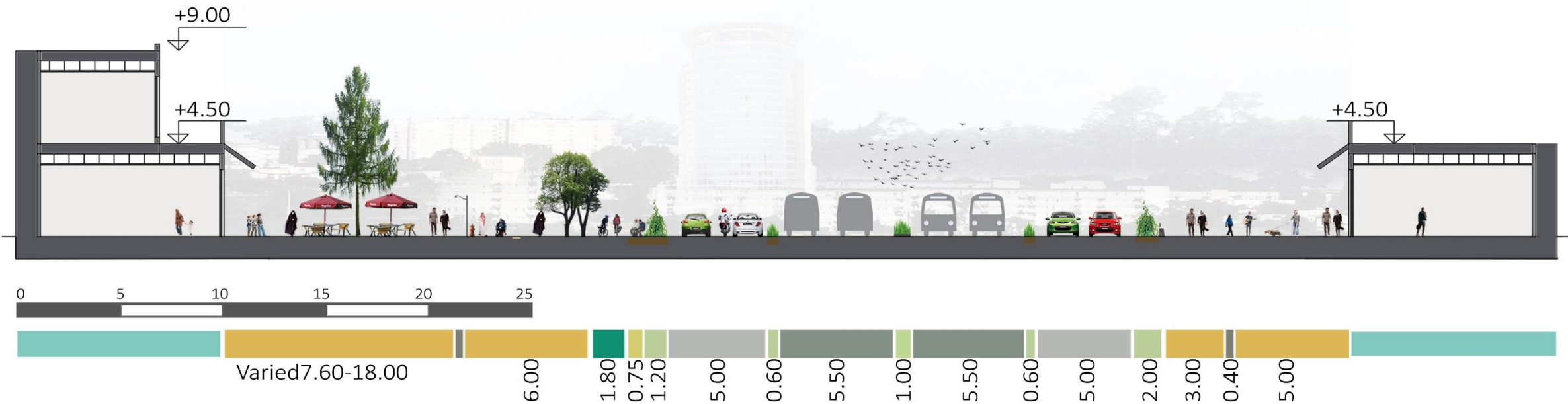
- Pedestrian
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- Fast lane
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- Bus lane
- Bus station
- Shop

Section C-C (Sanabad St.)



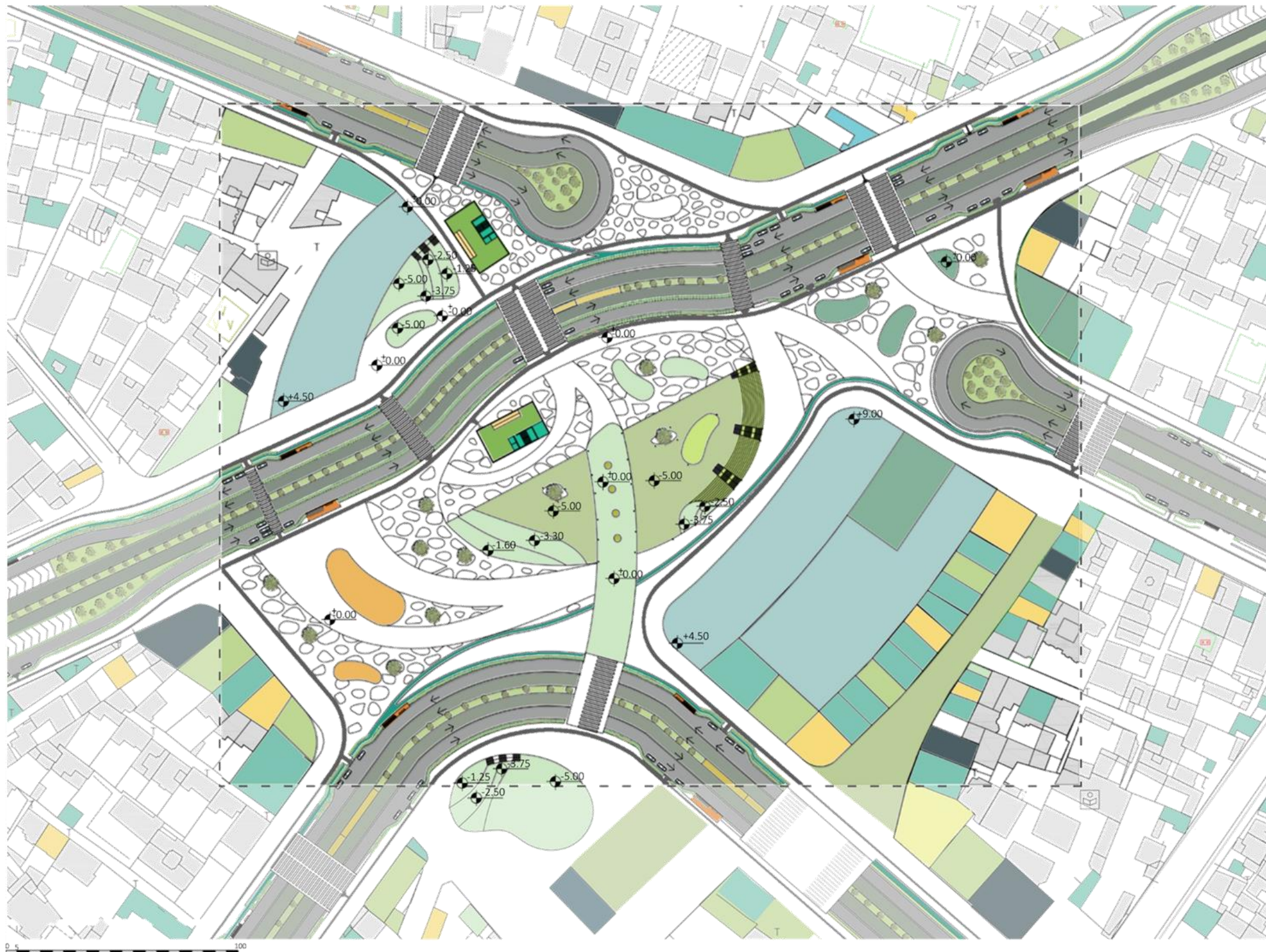
- Pedestrian
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- Bus lane
- Bus station
- Shop

Section D-D(Sa'di St.)



- Pedestrian
- Greenery
- Bike lane
- Water flow
- Parking
- Slow lane
- Fast lane
- Tram way
- Tram station
- sightless lane
- Bus lane
- Bus station
- Shop

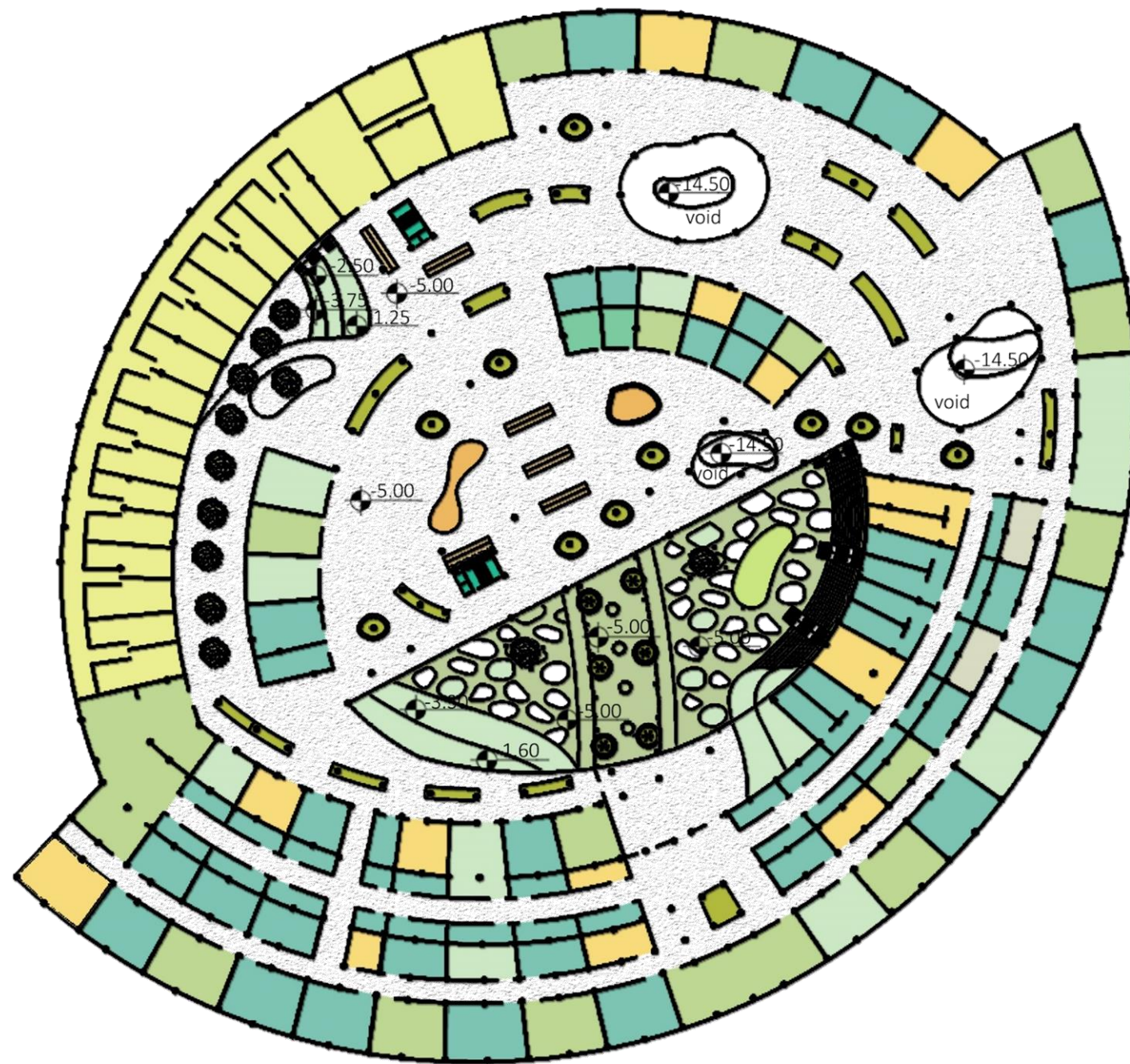
Master plan



- Pedestrian
- Greenery
- Bike lane
- Water flow
- Parking
- Slow lane
- Fast lane
- Tram way
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- Bus lane
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- Stairways
- W.C

Level 0.00

Plan

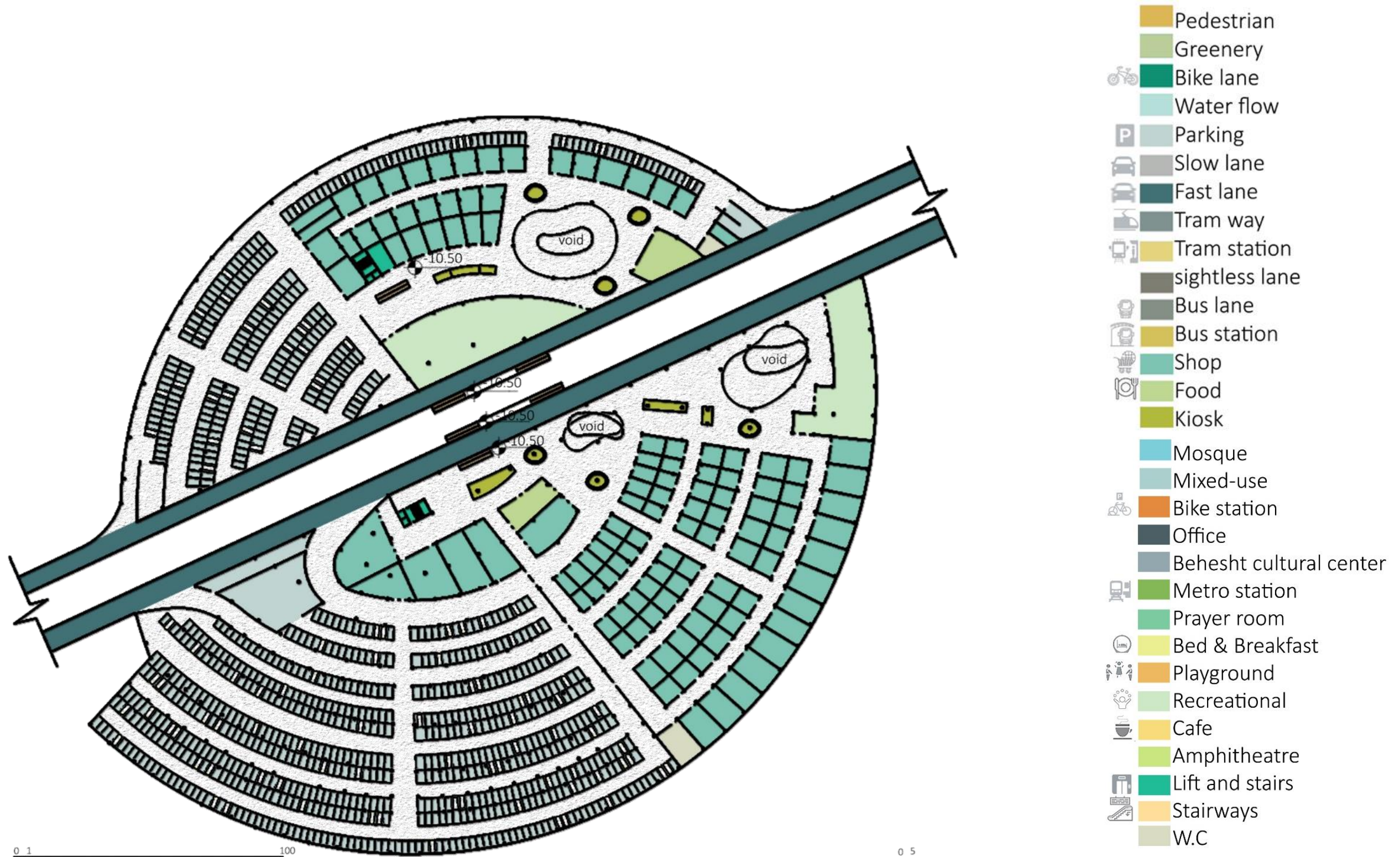


- Pedestrian
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Level -5.00

Plan



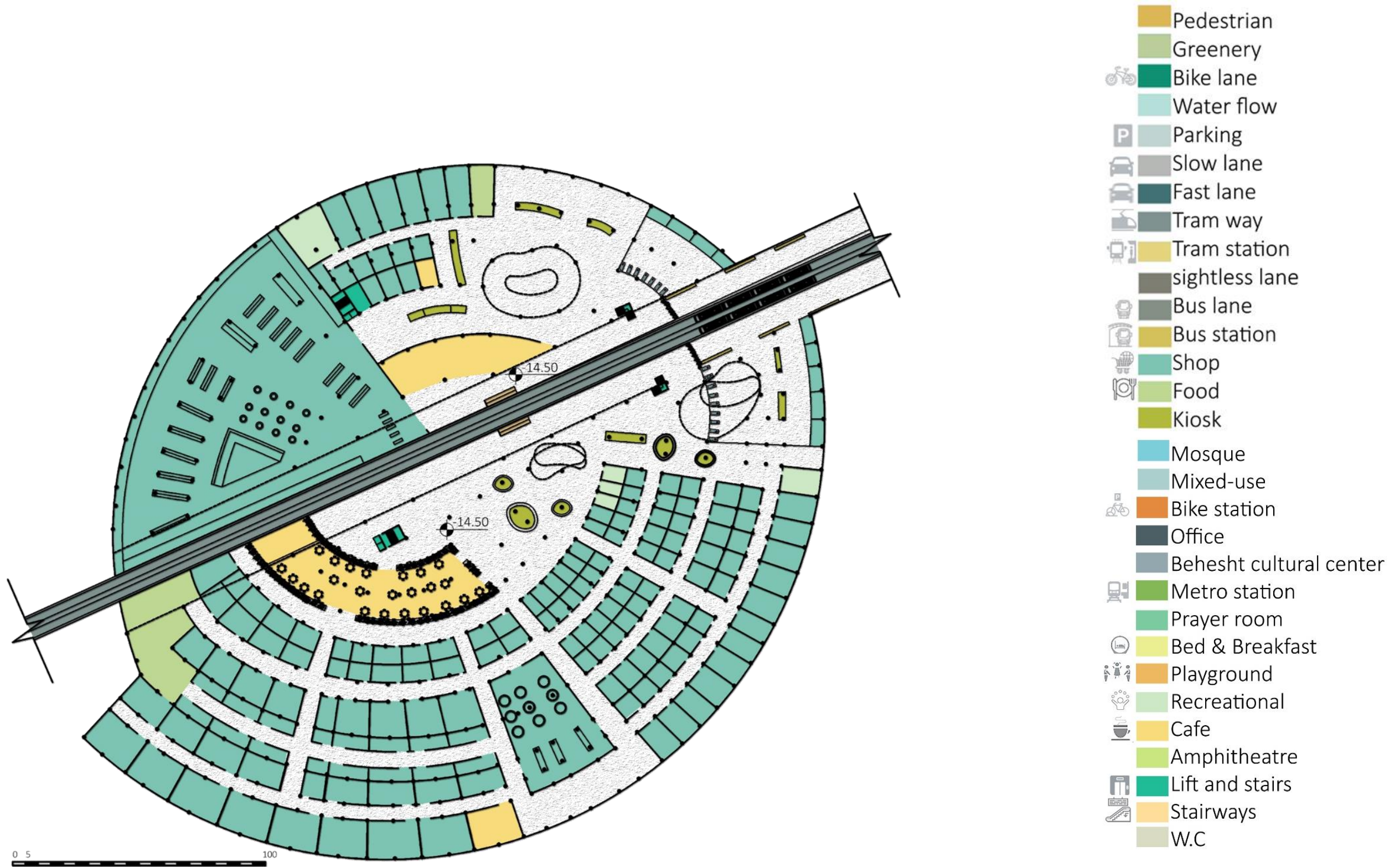
0 1 100

0 5

Level -10.50

- Pedestrian
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Plan



0 5 100

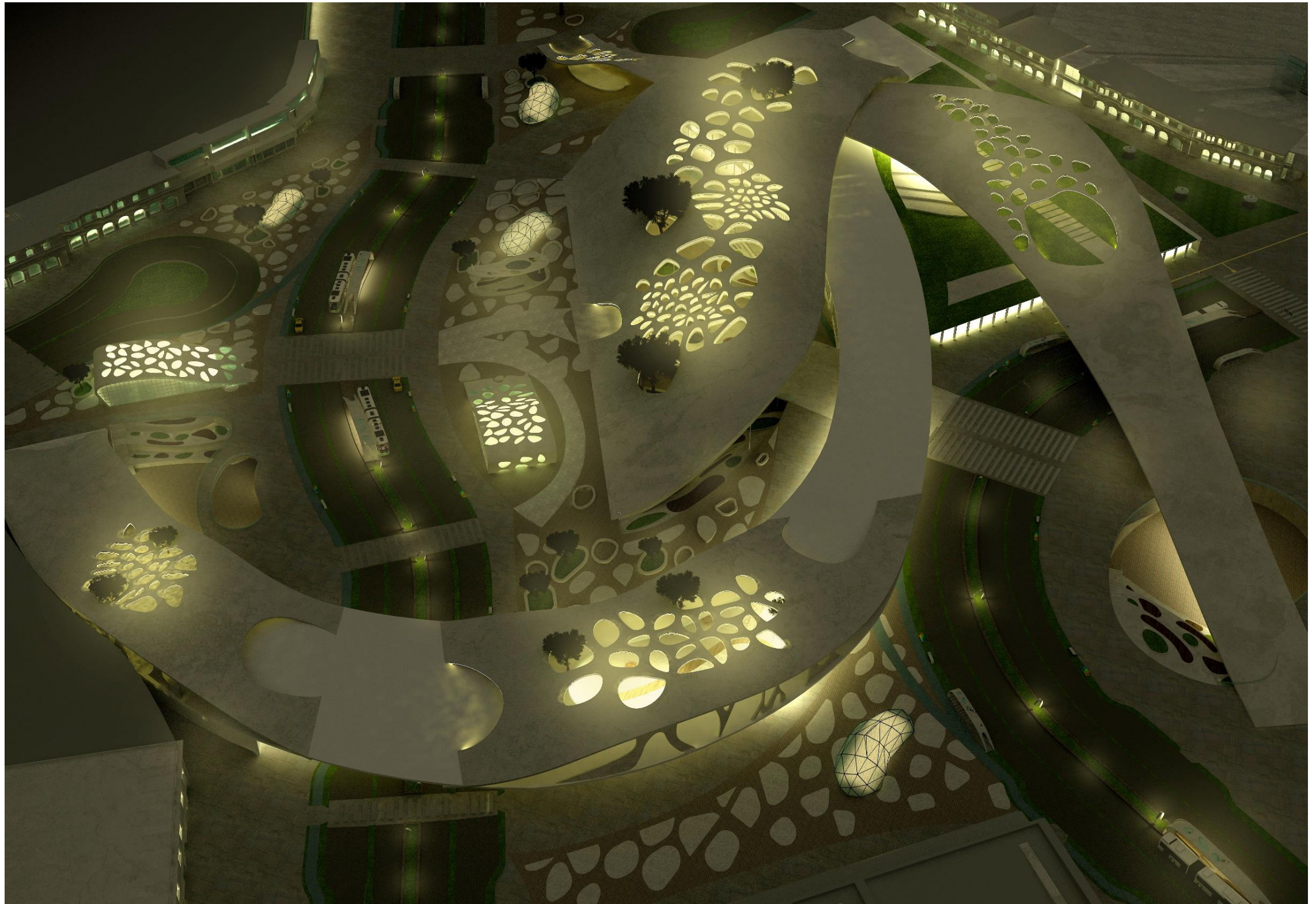
Level -14.50

Perspectives



Day view 1

Perspectives



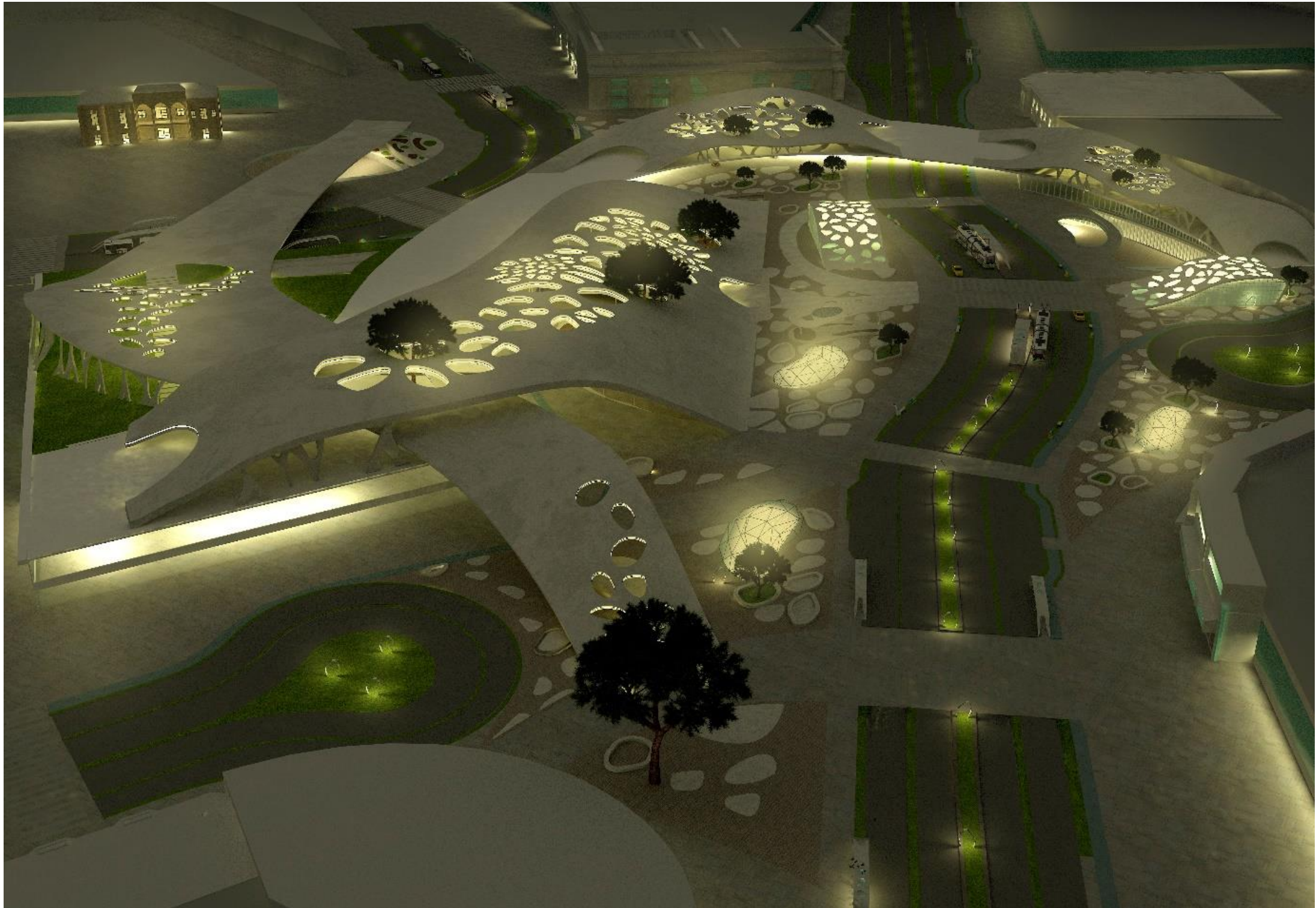
Night view 1

Perspectives



Day view 2

Perspectives

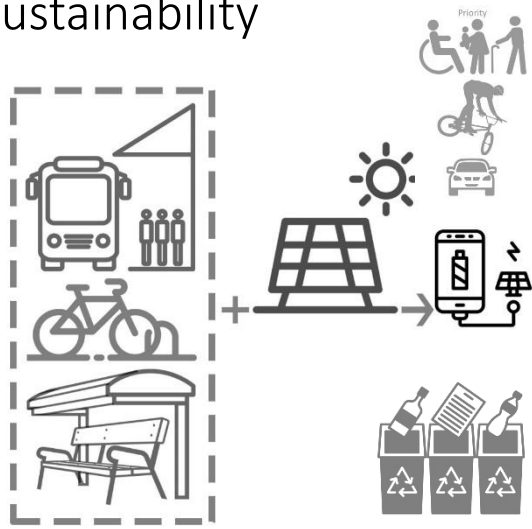


Night view 2

TOD Canvas



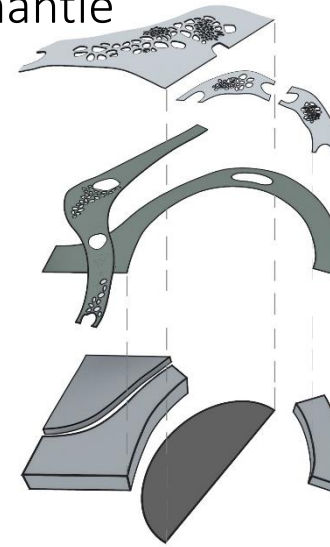
Sustainability



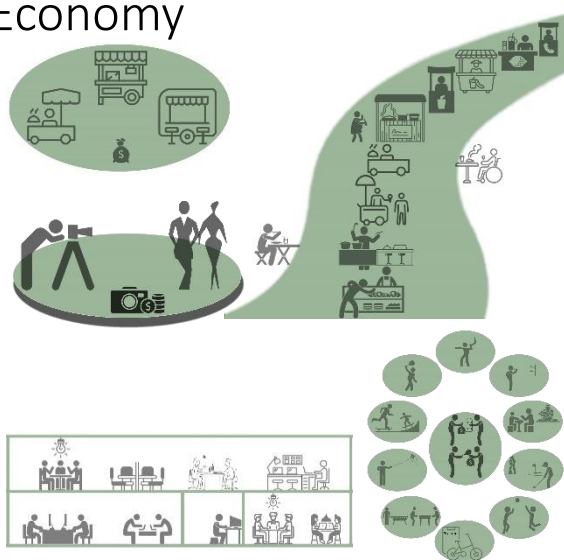
Cultural



Dismantle



Economy



Safety



Functional



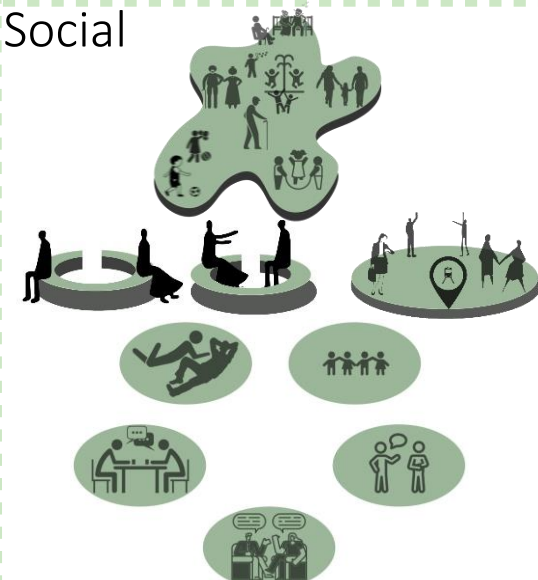
Environmental



Day/Night

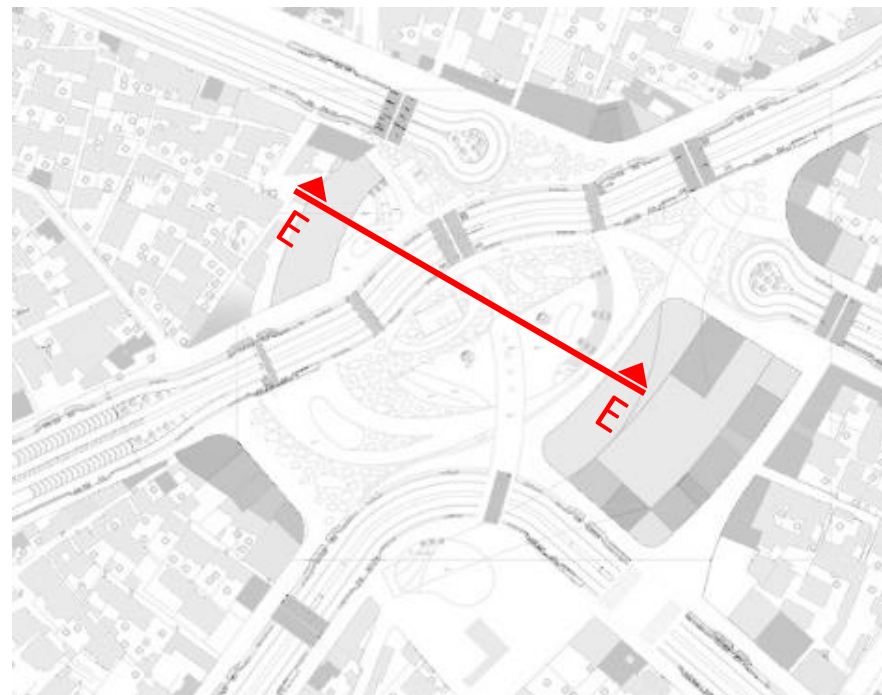
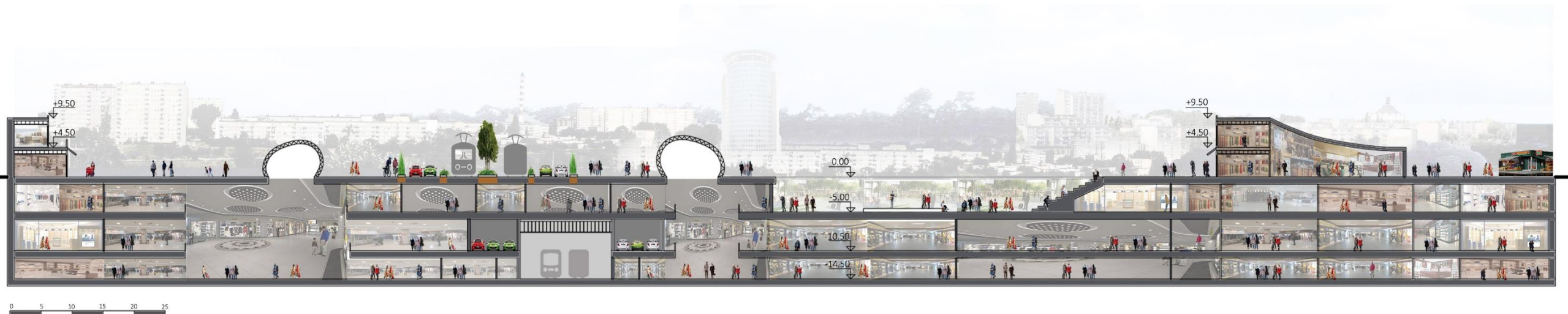


Social



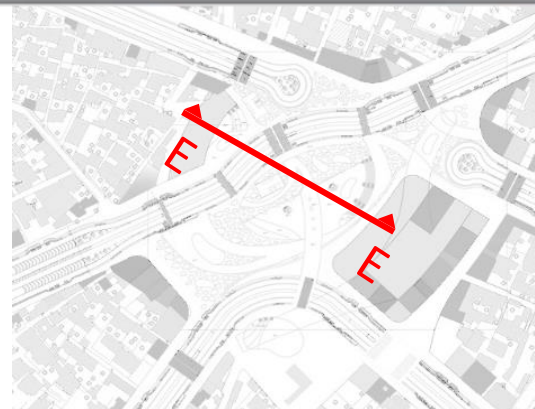
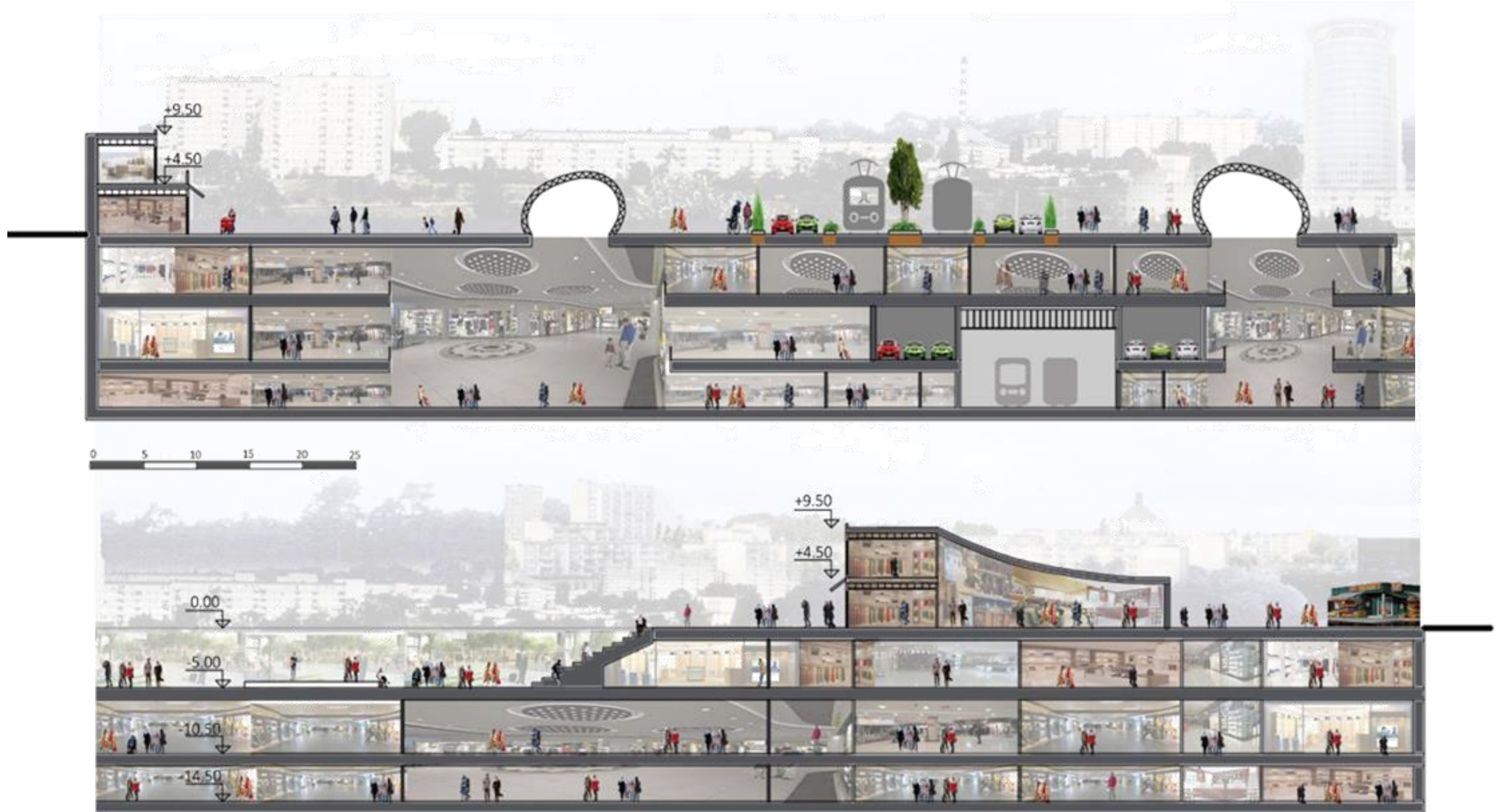
Architectural sections

Section E-E



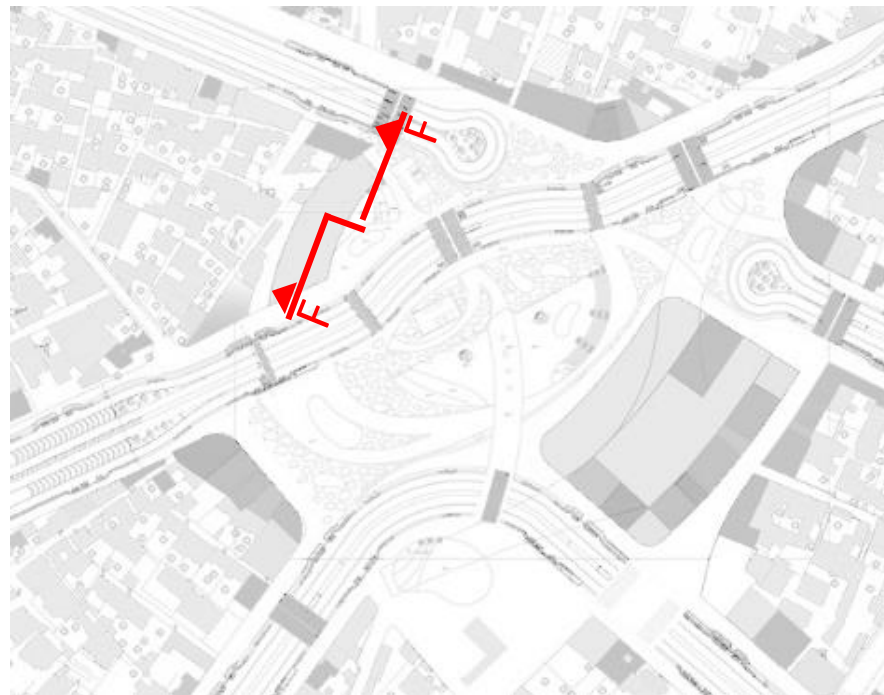
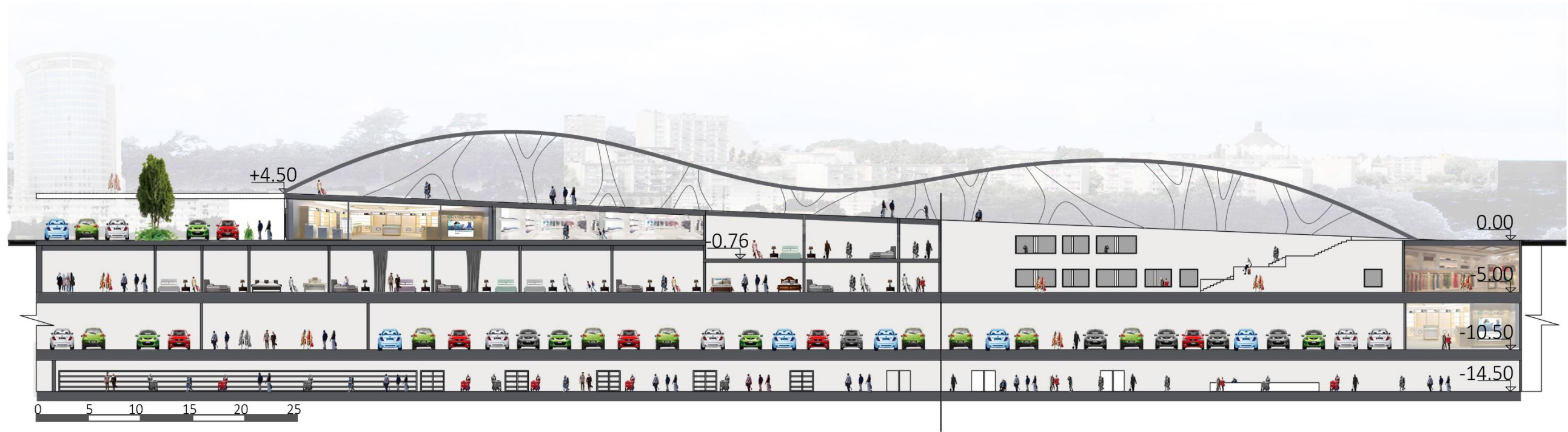
Architectural sections

Section E-E

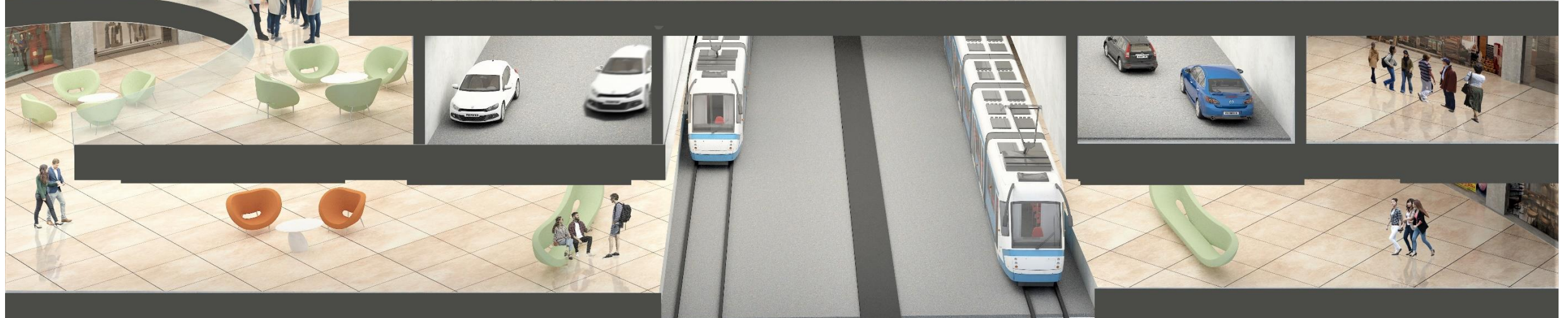


Architectural sections

Section F-F



Section-perspective





Social interaction of kids and elderly people in the playground



Social interactions



Food kiosks



View from Green path to Behesht cultural center

Perspectives



Frontages and green path

Perspectives



Livability of pedestrians by designing Frontages

Perspectives



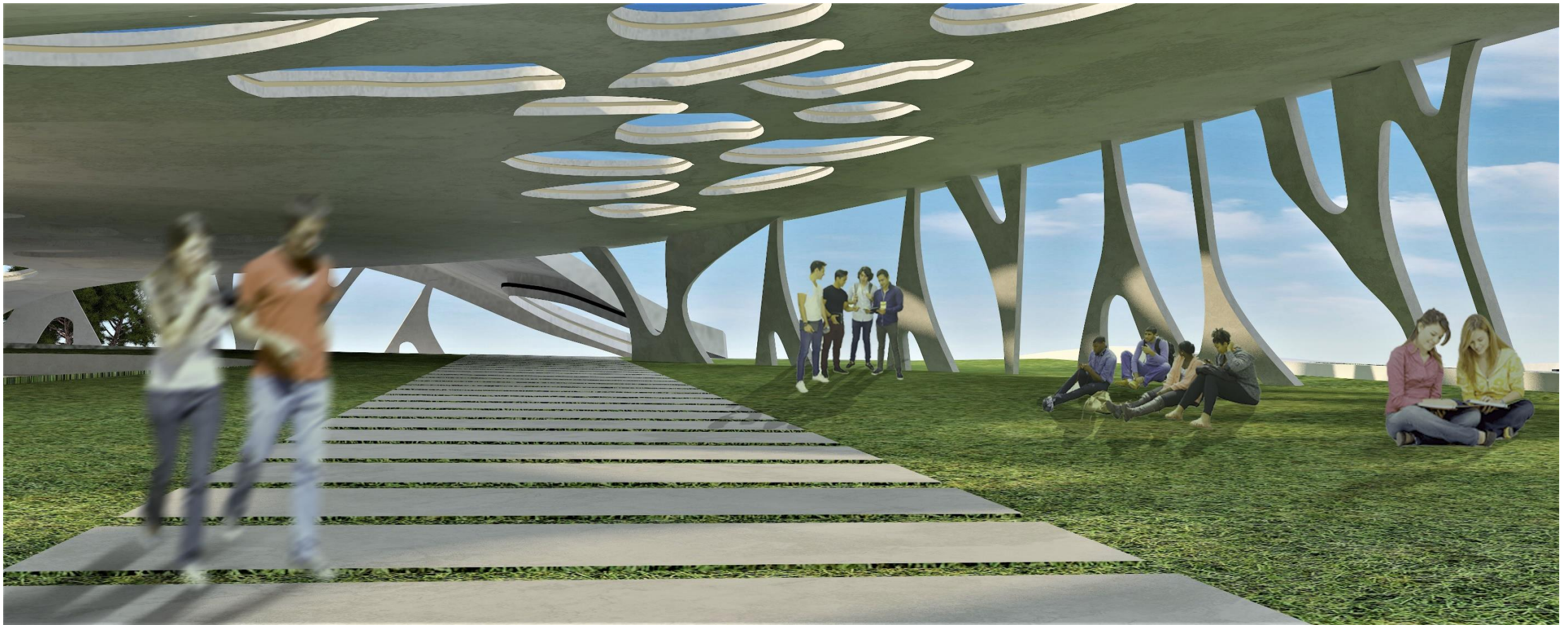
Livability of pedestrians by designing Frontages

Perspectives



Social interactions in the plaza

Perspectives



Green roof as a reading garden

Perspectives



View to Daneshgah street

Perspectives



Green roof

Perspectives



Mixed-use and metro station

Furniture design



Bus and tram stations

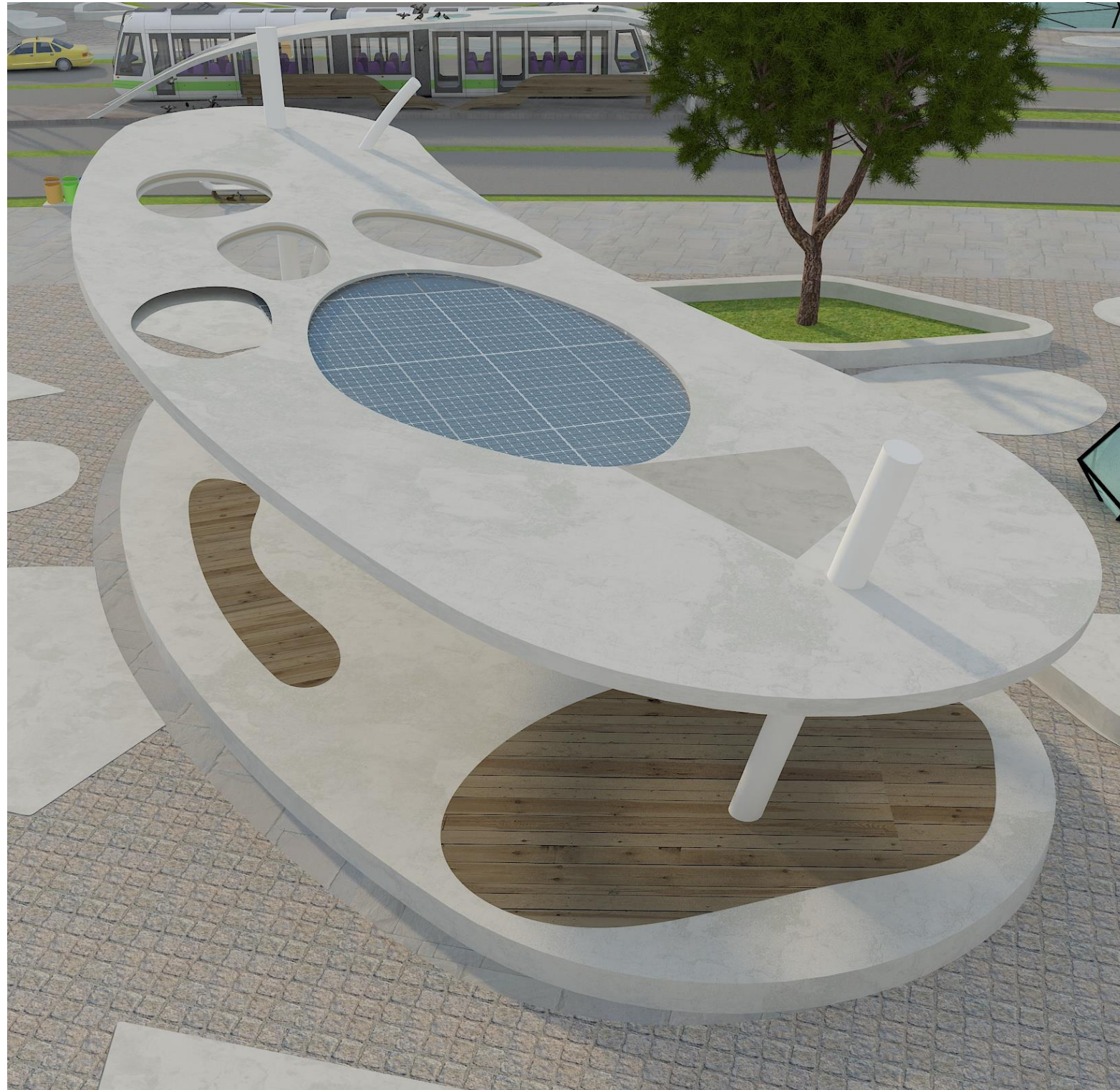


Station seats & Placement for advertising



Protecting animals

Furniture design



Sustainable seats

Furniture design



Furniture design

Furniture design

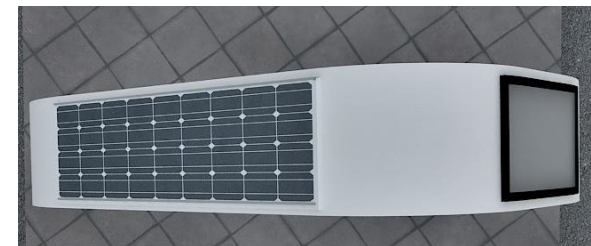
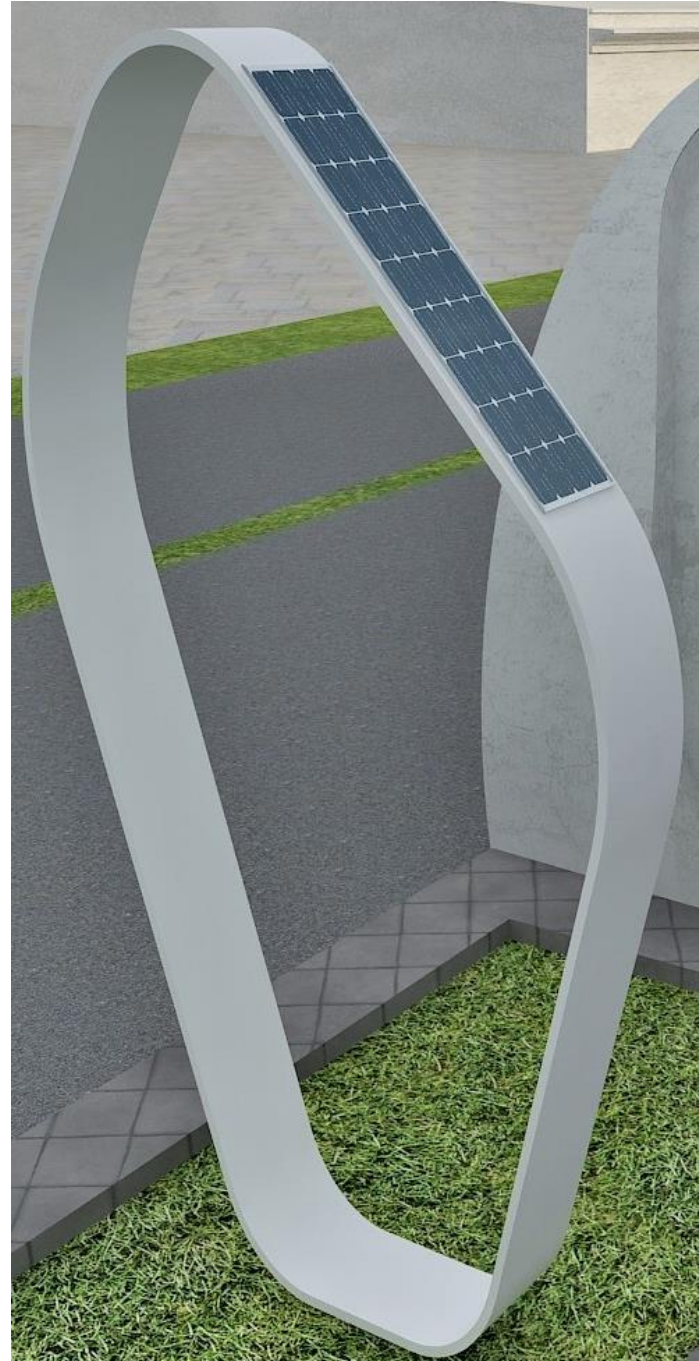


Furniture design



Especial voronoi bench

Furniture design



Sustainable lightings

The End