

Architecture should not be regarded as shelter but rather as the environment that surrounds us. (Ishigami)

## Urban Structure/ The Grid plan

As we mentioned earlier, this area has a chaotic characteristic both visually and programmatically. As our first step, we added an organizing layer, a grid, to inject a logical order into the area. The grid is a structure that extends in all directions and to infinity. Therefore, through time, it can spread its order to other parts of the city, connect different sections, and be modified, and planned.

We started by putting a 5\*5 grid on the whole territory to organize it. All urban furniture, lights, paths, etc; will be located on the site based on this grid.

## Garden-city/squares

This vast open area/ Square is characterless and does not offer anything to people to connect to or come back for more. On the other hand, the whole area is almost car-free and for pedestrians, but the lack of shadow, shelter, and places to seat keeps people close to the edges and near buildings, and the middle is almost empty. It is also a fact that squares around the globe have lost their importance and function in the cities. Today, people express their feelings on social media (the new square figure). They start a Twitter storm regarding a problem, post and bold a hashtag, and do most of the things that happened in the squares before, online. And when it is time to gather in person to protest, people come to the streets, and there is no obligation to gather in a square. In some cases, like Iran, now in the time of the "Woman, life, freedom revolution", it is not safe to gather in the old and famous squares cause the suppression forces are waiting for you, so you will either be arrested or shot.

So the squares are no longer places with political importance for people gatherings, and while they are part of the urban fabric, they have lost their function but exist in their physical form.

We turned this almost empty area into a garden in the middle of the city, trying to give this form a new function. In the middle of every 5\*5 square, we put a tree. At least 550 trees, were added to just Svoboda square and Demokratsia square. This garden not only adds a new atmosphere and quality to the city center but also will reduce air pollution, reduce the heat island effect, makes it possible to make new communities and develop connections, creates shadows, and absorbs the rainwater.

This garden has different zones; a playground for children, Basketball/volleyball fields, a grassy area for sitting as a small-scale event space, and a floating square with a walkable fountain in the middle.

This square is to be a checkpoint and help people with the direction. It also is a new landmark within the area.

## Urban furniture

The lighting elements are 50\*50 cm, embedded in the floor and on the 5\*5 m Grid nodes. This design makes it possible to have proper lighting in all areas while reducing visual pollution and keeping the garden more natural.

The restaurants, cafes, and stores on the "25-ti Septemvri" now share linear and circular benches and tables in front of them. This new layout keeps the stores from spreading their various types of chairs, tables, and pergolas to the streets, which leads to visual and physical chaos.

A billboard is also a new object within the area. Instead of many stands that are places for putting up posters, we designed a digital billboard or a physical collage of digital billboards in different sizes. It can also gather people to watch football or inform them of news, and it can be updated and changed as soon as needed.

## The garden and its benefits

Cities across the globe are seeing rising temperatures, in part, as a result of the Urban Heat Island (UHI) effect. This phenomenon is largely due to urban infrastructure like roads, buildings, and sidewalks re-emitting heat at night that they absorbed throughout the day. Now, more than ever, we need to start bringing Nature's valuable, cooling powerhouse into our cities. With this in mind, we decided to revitalize this part of the city by turning it into a Garden-city. We believe bringing a new tangible characteristic into this city center can add new values to the city.

- Trees improve air quality by intercepting particulate matter and absorbing gaseous pollutants (NO<sub>2</sub>, SO<sub>2</sub>, and O<sub>3</sub>). They also help reduce atmospheric CO<sub>2</sub> levels by capturing and storing it.
- Healthy trees can increase surrounding property values by 2-10%.<sup>2</sup> Apartments and homes located near a park have even higher values.
- Evapotranspiration and shade that trees provide help to cool down buildings and reduce the need for air conditioning, which then decreases energy consumption. Using less energy = direct costs savings for building owners and resource savings for the community.
- Large scale vegetated areas can be as much as 9°F cooler than non-green city centers.<sup>2, 11</sup> Various functions of trees, such as their evaporative cooling effect, help to reduce urban heat island (UHI) effect and heat stress-related illness and fatalities.
- Trees provide significant storm water retention benefits by intercepting and absorbing rainfall and by increasing the ability of soil to store water. Large trees intercept over 2,000 gallons of rainfall annually.

### Implementation:

- It is recommended that first we start by removing all the movable objects including the pergolas, benches, tables, etc.
- Removing the pavement implementing the infrastructure and leveling the surface
- Implementing the new paving, with additional gardens and lighting and the floating square
- Implementing the newly designed areas like recreational and playground
- Planting the trees
- Implementing the urban furniture