

AMERICAN UNIVERSITY OF BEIRUT

CONNECTING NEIGHBORHOODS THROUGH
CULTURALLY-LED OPEN SPACE NETWORKS: THE CASE
STUDY OF GHADIR, JOUNIEH

by
RONA HASSAN KOOBAYSSI

A thesis
submitted in partial fulfillment of the requirements
for the degree of Master in Urban Design
to the Department of Architecture and Design
of the Faculty of Engineering and Architecture
at the American University of Beirut

Beirut, Lebanon
April 2018

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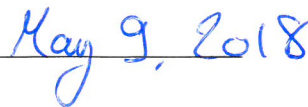
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ACKNOWLEDGMENTS

I want to thank the American University of Beirut for giving me the chance and means to continue this thesis. Special thanks to my advisor Dr. Yaser Abunnasr and all my professors for their time and devotion.

I would also like to thank my family members and my husband for supporting me all the way.

AN ABSTRACT OF THE THESIS OF

Rona Hassan Koobayssi for Master of Urban Design
Major: Urban Design

Title: Connecting Neighborhoods Through Culturally-Led Open Space Networks:
The Case Study of Ghadir, Jounieh

Vehicular dominated planning has caused major divisions between neighborhoods in cities around the world. This problem has become a major concern in urban design literature which has attempted to explain the reasons behind these disconnections, as well as the possible solutions to reconnect fragmented urban fabrics.

Based on Dupuy (1992 in Salingeros, 2003, p.7), "A city's life comes from its connectivity". This statement summarizes the main objective for the thesis which will be elaborated in the following proposition.

This thesis builds on three major tools that are explained in the literature: Open space networks, walkability, and cultural planning. In addition to literature, these tools are further explored in eight different case studies to understand the advantages and limitations of each.

Jounieh is a Lebanese coastal city that suffers from vehicular dominated planning. Today, Jounieh's neighborhoods are physically, visually and psychologically disconnected, hindering physical mobility and weakening the identity of the city. This disconnect has major implication on the available cultural resources which stops them from contributing to the daily life of Jounieh's residents. Based on Jounieh's assets and the concerns of its residents, this thesis proposes a strategy that would connect its fragmented neighborhoods and create a strong common urban identity that stretches beyond its municipal boundaries to achieve a more livable city to its residents and visitors.

The study aims to improve connectivity between detached neighborhoods in the city of Jounieh by introducing a walkable open space network that is culturally oriented.

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CHAPTER I

INTRODUCTION

Cities around the world have been facing physical disconnections and loss of urban identity due to vehicular dominated city planning causing physical divides between neighborhoods (Salingaros, 2003). Today's urban environments have inadequate interface between vehicles and pedestrians since governments tend to develop exclusively car cities. This is apparent when the road networks are built before anything else. As a result, highways and wide roads are replacing smaller streets and are destroying the smaller human friendly scale and the identity of neighborhoods. As cities and number of cars grow, small and intermediate scale roads are being widened, and today, a geometry of disconnecting edges is all that is left (Salingaros, 2003). However, a renewed attention to urban walkability and connectivity is apparent today, since researchers are concerned that car-dependent cities will not be sustainable in the future (Singh, 2015).

In order to overcome physical disconnections created by vehicular dominated city planning, many cities around the world have successfully utilized urban design tools to reconnect neighborhoods and create more livable cities. One of the major tools was creating open space networks that stretch between neighborhoods across physical disconnections. According to Ozdemir (2007), the major function of these networks is to sustain the structure, health, and quality of urban areas by allowing for unrestricted connections. The

major and most basic condition for successful networks is providing a walkable environment that encourages these connections to take place. In addition, the networks should provide destinations or nodes to create attraction points for mobility to take place. These nodes could be based on cultural needs, basic-daily needs, economic needs, or other functions (Ozdemir, 2007). This thesis aims to test these approaches in the city of Jounieh to overcome disconnections caused by vehicular dominated city planning.

In the early sixties, a major highway cut through Jounieh from north to south, dissecting the city into a mountainous zone and a coastal zone. Due to this highway, neighborhoods were functionally and physically separated. Today, Jounieh's neighborhoods are not only physically disconnected, but also visually and psychologically, hindering physical mobility and weakening the identity of the city. Based on this research, I found out that this disconnect has major implications on the available cultural resources rendering them obsolete and not contributing to the daily life of Jounieh's residents due to the inconveniency that comes with disconnection. Based on Jounieh's assets and the concerns of its residents, I started thinking about a strategy that would have the ability to connect its fragmented parts and create a strong common urban identity that stretches beyond its municipal boundaries to achieve a more livable city to its residents and attract more visitors. Jounieh is rich in cultural and public spaces, but these assets are not connected. All these assets form nodes that can function together in a walkable open space network that connects city neighborhoods.

Based on Dupuy (1992 in Salingeros, 2003, p.7), "A city's life comes from its connectivity". This statement summarizes the main premise for this thesis which will be elaborated in the following proposition.

1.1. Thesis proposal

The thesis will build on the literature of walkability and open space networks to develop an integrated urban design strategy for Jounieh. The aim is to reconnect its neighborhoods by using cultural assets within Jounieh as a catalyst to develop an open space network emphasizing walkability.

Walkability should not only be reinforced by constructing pedestrian bridges and accessible sidewalks, but also by creating new public functions and programs in both static and dynamic common spaces; in other words, developing a total walkable environment (Forsyth, 2015). The effect of these connections goes beyond beautification and seeks to enhance the city experience for its residents as well as achieve economic development by branding the city as a new cultural attraction locally and nationally.

With walkability as a mobility focus, a culturally-led open space network as an urban design strategy is proposed to explore the extent that neighborhoods can be stitched to overcome the infrastructural breaks across the city. This network will highlight existing but detached cultural assets as magnets and catalysts of activities within the network.

The city of Jounieh is rich with a variety of cultural assets that include educational, religious, physical, and historical/heritage assets; this richness constitutes a major opportunity. Therefore, the research proposition is as follows: **A culturally-led open space network will enhance and encourage walkability across Jounieh and improve connectivity across its neighborhoods.**

1.2. Objectives

The following objectives have been set for the study to guide the proposition:

- Create a network of green and walkable streets that connect neighborhoods based on sustainable design principles.
- Assess and propose new cultural activities in existing and proposed open spaces in Jounieh as well as in existing buildings that will act as attractors within the network.
- Re-imagine the streets as vital public spaces that serve the needs and priorities of the community and provide socializing spaces
- Reuse vacant and leftover properties in Jounieh
- Engage educational, religious and other cultural facilities in the open space network

1.3. Research significance

This study aims to improve connectivity between detached neighborhoods in the city of Jounieh by relying on a walkable open space network that is culturally oriented. The analysis in the following chapters will prove that such a study is needed to achieve a higher level of livability in Jounieh, in addition to creating a strong node that would attract visitors and create new economic opportunities in the city. Jounieh has never witnessed an attempt

to connect its neighborhoods beyond the heritage zone and the highway, therefore, this study will provide a new approach for Jounieh.

CHAPTER II

LITERATURE REVIEW

The theoretical framework was developed from a literature review that explores key themes in the study, as well as relevant case studies to understand how these themes have been applied. The theoretical framework will provide the theoretical basis for the proposed intervention. The literature review investigates open space networks, walkability, cultural planning, and identity to define the main design variables and constraints for the proposed project in Jounieh.

2.1. Open space networks

Life in a city relies on its matrix of connections since its built form either facilitates or hinders people's interactions and mobility, including their needs for transportation and leisure-time physical activities (Salingaros, 2003; Basset et. al, 2010). Urban mobility can be achieved when the city nodes are connected to one another; however, an important rule is to connect nodes with complementary, rather than similar, functions since little needs can be exchanged between nodes of the same functional characteristics (Salingaros, 1998).

According to Salingaros (2003), sustaining urban life requires a connected network of pedestrian urban spaces. The network of pedestrian paths should be anchored

with open urban spaces that act as nodes. In return, public open green spaces should be distributed in a city all the way down to small neighborhoods where children could play (Salingaros, 2003). Open green spaces are key to improve the quality of urban life. However, these spaces must be part of a networked system (Frazier & Bagchi-Sen, 2015). The function of open and green spaces fails in the urban environment if they are not well connected via a pedestrian network to form part of the urban fabric (Salingaros, 2003). When cities undergo irregular developments, the quantity and quality of open spaces become insufficient and disconnected. Re-connecting these spaces enhances urban landscape features as well as preserves the urban character and identity of the city (Kilicaslan, 2006).

Open space networks referred to as greenways, trail ways, and green networks are interconnected systems of open space patches and corridors that might include non-traditional spaces such as roadsides and gardens (Frazier & Bagchi-Sen, 2015). The ecological value of these networks is more important than individual sums of green spaces since they facilitate movement and create more livable cities (Frazier & Bagchi-Sen, 2015). According to Ozdemir (2007), multifunctional urban open spaces enhance the urban setting, improve public health and boost the quality of life for the citizens, in addition to creating places for leisure activities; these benefits are reinforced when they are connected in a diverse network, between areas of scenic, social, and cultural values of a city. Ozdemir (2007) explains that urban open space networks have crucial economic, ecological, and social functions and constitute an important component in the urban ecosystem. In the process of creating these open space networks, small parcels play a significant role in

connecting and expanding existing spaces, contrary to the long-held belief that only big parcels could contribute to these types of networks (Frazier & Bagchi-Sen, 2015).

When towns and villages grow into cities, their urban structures lose the initial small-scale connections; it is the intimate scale that creates strong connections between people and the city, and these connections can only occur on the pedestrian level. In these growing towns, some remnants of the old pedestrian networks could survive, giving the chance to revive them and bring the pedestrian networks back to life (Salingaros, 2003).

2.2. Walkability

A pedestrian-friendly city offers sensitive and intimate physical environments, which could compensate for the rigidity of the car-oriented cities. The experience of city life with visual excitement, physical movement, and interaction with other people creates a unique experience for pedestrians who retain an intimate memory of this interaction (Salingaros, 2003).

To create pedestrian-friendly cities, urban designers must address walkability. Walkability is defined as a concept that could be used to measure the degree to which an area is pedestrian friendly; it is a term that is used by designers and planners to design sustainable urban environments for communication, recreation, and transportation (Rafiemanzelat et. al, 2016). Walkability is the degree to which the physical environment is welcoming for people walking, living, buying, visiting, or hanging in an area (Burden, 2010 in Rafiemanzelat et. al, 2016). Planning for a walkable city is essential for promoting

a healthy public environment, creating sustainable neighborhoods, and enhancing the economy and social lives of the residents (Singh, 2015). In addition, the act of walking around one's neighborhood allows the residents to interact with their surroundings more often, which makes them feel that they are more connected to and responsible for enhancing their physical setting (Singh, 2015). According to numerous studies, walkability has a positive effect on public health and decreasing the level of social, economic, and environmental stress (Giles-Corti & Donovan, 2002; Handy et al, 2002; Pucher, & Dijkstra, 2003 ;Vojnovic et al, 2006 in Rafiemanzelat et. al, 2016).

Research through statistical analysis has shown that the walking behavior is directly related to the conditions of the built environment (Choi, 2012). The choice of walking as a mode of transportation is positively related to physical characteristics such as density of buildings, proximity, and land-use mix (Basset et. al, 2010). Ewing & Handy (2009, in Singh 2015 & Choi, 2012) distinguish between qualitative and quantitative characteristics of urban design qualities in a city that are related to walkability. The qualitative characteristics include *Imageability*, which is the quality of the space that makes it distinct and memorable, *Enclosure*, which is the degree to which paths and public spaces are visually defined by the built environment, *Human Scale* which refers to the qualities of physical elements that match the proportions of humans and their walking speed, and finally *Complexity* which refers to the visual complexity of a space. Whereas the quantitative elements of urban morphology are building orientation and setbacks, block length, building height and street enclosure, and building scale and variety (Singh 2015).

In another study, Adriana et. al (2017) have identified nine walkability categories:

- Connectivity, which is the degree to which the street network provides direct, short, and multiple connections towards different destinations.
- Density, which refers to the residential density in a neighborhood. Residential density is directly related to an increase in the number of pedestrians on the streets, thus encouraging walkability.
- Landuse, which refers to the diversity of landuses within an average of 800meters of walking distance from the residents. A variety of small businesses encourages walking in residential areas.
- Traffic safety, which refers to the infrastructure that provides safe crossings for pedestrians and cyclists using traffic-calming measures and providing safe places for walking.
- Surveillance, which is the degree of being able to watch streets from the inside of buildings, giving the sense of safety for pedestrians on the streets.
- Experience, which relates to providing a pleasant journey while walking on the street. This category relates to aesthetics, signage, slope, thermal comfort and others.
- Parking, which relates to the availability and location of parking spaces. The less parking spaces are available, the more people are encouraged to walk. In addition, necessary parking spaces should be hidden from pedestrian routes to create a more interesting walking experience.
- Availability of green spaces, along with their sizes, proximity, and ease of access from pedestrian routes.

- Community, which refers to the presence of spaces that encourage social interactions in a neighborhood.

According to Choi (2012), the results of studies that test neighborhood characteristics that are related to walking rates have concluded that neighborhood population density is the most consistent factor that correlates to walking, in addition to land-use mix, especially the proximity to shopping, work, and other non-residential land uses. In addition to basic features in the urban morphology, Choi (2012) has listed more detailed features that are positively related to walking rates. The list includes:

- Medium to high densely built environment that is related to high population
- Mixity of land-uses, especially small businesses
- Short to medium length blocks, avoiding large blocks that discourage walking
- Existence of transit routes to allow for direct connections
- Continuous sidewalks that are wide enough for couples
- Safe pedestrian crossings using traffic calming and appropriate infrastructure
- Appropriate buffering zones from traffic for safety reasons
- Street-oriented buildings to create continuity and interest on the pedestrian level
- Availability of comfortable and safe resting places

- Supportive commercial functions on ground level that encourages walking and creates interesting experiences
- Grid-like street networks to provide multiple and direct connections
- Existence of shading devices and trees for physical comfort
- No visible parking or dead spaces that discourage pedestrians from crossing
- Existence of open public spaces to create animated areas for socializing and spending time
- Availability of signage and special pavements to facilitate movement

According to Gehl (2010, in Singh, 2015), the treatment of the ground floors of buildings has a decisive influence on walkability: Pedestrians experience the lower floors closely, which means that "dead" uses such as parking garages, blank walls, banks and closed offices should be avoided on public streets and should be replaced by "soft edges" such as shops, large windows, displays, and interactive facades.

In addition, in "A Healthy City is an Active City: a physical activity planning guide" guidebook by Edwards & Tsouros (2008, in Choi, 2012), which is published by the World Health Organization's Regional Office for Europe, the following action strategies were proposed to encourage walking as a physical activity in cities:

- Including workplaces, shops, schools and healthcare facilities in close proximity to facilitate walking
- Provide access to seashore and other natural assets in the city

- Conserve and develop green spaces and provide incentives for vacant lots to be developed and give a portion of land to be included in an urban green network
- Provide visible and convenient stairs and signage to encourage people to take different pedestrian routes (Edwards & Tsouros, 2008 in Choi, 2012).

There have been recurrent characteristics throughout the discussed studies on walkability. For example, all studies stress on the importance of the built environment. Enclosure, direct connectivity, human-friendly scale, continuity of the urban fabric, and variety in landuses are among the desirable characteristics in a walkable environment. In addition, the availability of wide sidewalks, safe crossings, signage, resting places, green open spaces, and proximity to services and shopping areas can encourage more physical activities in the neighborhood. Last but not least, connecting a residential neighborhood to natural assets (such as river or seashore), reviving hidden routes and staircases, and providing incentives for private vacant lots to develop open and interactive spaces on the pedestrian levels are extremely important steps to create a walkable network in neighborhoods.

These recommendations will be a part of the theoretical framework for the design that will be proposed in the city of Jounieh in order to create a walkable open space network.

2.3. Cultural planning

Successful open space networks combine social and cultural values with the physical setting of the network. The definition of what could be considered as a cultural asset is different in each study. The following identifies what cultural assets are and explains how cultural planning connects to walkability and open space networks.

In an urban setting, cultural assets include educational facilities, religious and historic sites, meaningful places, and way of living that is specific to the area (Lee and Gilmore, 2012). According to the Economic Development Department of the city of Austin, Texas (2018), a cultural asset is anything that holds value due to its contribution to the community's creativity, knowledge, traditions, and vitality. Therefore, a cultural asset could be a place for creative practices, or places to express cultural identities. In addition, Professor Gibson (2018) from the Cultural Asset Mapping in Regional Australia explains that cultural assets could be either tangible (such as educational and cultural buildings, galleries, stadiums, parks, artwork, historic buildings...) or intangible (such as events, stories, collective memories...). An asset is considered cultural if it is powerful enough to encourage people to care about their place (Gibson, R., 2018). Some of the universal examples of cultural assets that are used in the processes of mapping based on Department of Culture, Media, and sports in England guidelines (2005) include the following: arts, crafts, fashion, design, and music centers; academic institutions and activities; playgrounds and children's play activities; heritage buildings, museums and artifacts; libraries, literature and publishing centers; architecture, landscape and archeology; parks, open spaces, habitats

and water environments; leisure, recreational and music venues; sports events and facilities; and last but not least touristic attractions and festivals (Lee and Gilmore, 2012).

Culture has a very important function to play because it strengthens the city's image and is widely used in place promotion. Culturally led urban development has started to emerge as a concept in urban planning literature from the late 1980s (Montgomery, 2003). According to Kunzmann (2004), city promotion campaigns today constitute mostly of culture in the form of urban history, architecture, cultural facilities and events. The trend of branding a city through culture is accelerating due to the increasing role of image-based strategies and the significance of cultural, leisure, and entertainment industries within the contemporary economy (Kunzmann, 2004). Cultural marketing could be realized by integrating cultural services into public areas and open space networks in cities (Ferreira, 2014).

Montgomery (2003) explains that it is necessary to create a network with strategically anchored cultural assets in order to achieve a successful cultural quarter in a city. The success of a cultural hub is indicated by the level of cultural activities in the area. To have good cultural activities, there should be a variety in the scales of cultural assets, with the majority being small and medium scale creative businesses. The most important target for lively cultural venues is the presence of complimentary day-time and night-time activities, to keep the zone active for the maximum amount of time (Montgomery, 1994). Based on Montgomery's successful cultural quarters mechanisms study, the following factors for the success of cultural zones can be deduced:

- Diversity of land uses

- Diversity in the scale and function of cultural assets and creative businesses
- Presence of strong evening economy such as cafe culture, restaurants, and nightclubs
- Access to educational facilities
- Availability of festivals and cultural events
- Availability of offices and workspaces for small new businesses
- Complimentary day-time and night-time activities
- Availability of a fine grain permeable urban fabric
- Legibility in urban form
- Active street frontages and walkable streets
- Existence of open meeting spaces and public spaces for events
- Protecting heritage and sense of identity in a place

2.4. Identity

A city's identity is often viewed in relation to the definition of its spatial elements (Sepe& Pitt, 2014). However, the identity of a place is not a simple tag that can be summarized and presented in a brief objective description; it is not static and unchangeable, but rather varies as circumstances and attitudes change. Moreover, in an increasingly complex society, overlapping definitions of place identity exist, both individual and collective (Sepe& Pitt, 2014). Rossi (1984 in Sepe& Pitt, 2014) states that the city itself is the collective memory of people, and that memory is linked with events and places. The city is therefore the 'locus' of collective memory.

Therefore, maintaining the identity of a city is a complex procedure, since it cannot rely merely on the maintenance of the original city form; it must include considerations of the social, economic and cultural processes required to successfully manage the evolution of cities and neighborhoods, allowing them to change and adapt to future conditions, while maintaining their spirit (Sepe& Pitt, 2014).

The desirability of a city is connected to its identity perception, which is the implied system of values of superiority or specialization compared to other places. A city's identity is closely related to its competitive positioning, necessary to attract investments and to facilitate processes of economic growth, environment quality, and social development(Anholt, 2007 in Parente, 2016).

Therefore, a city with a strong identity is a desirable city to visit and live in. However, maintaining this identity requires special attention to allow for adaptations and flexibility with time. One way to highlight the identity of a city is to create a walkable open

space network that connects its cultural assets and creates opportunities for human interactions, highlighting its social and physical identity.

2.5. Case studies

Many cities have adopted the strategies of open space networks and walkability at different scales to connect neighborhoods sustainably and reinforce their cultural identities. The following summary provides a snapshot at the analyzed case studies and lessons learnt.

An in-depth analysis is provided in Appendix 1.

These case studies illustrate applied or planned examples of walkable open space networks. The scale of the projects varies from neighborhood scale to city-scale, reaching inter-city and international connections. A total of 8 projects were analyzed, and these projects are located in western contexts. However, the analysis aims to deduce lessons that could be applied in the specific context of the disconnected neighborhoods in Jounieh, Lebanon.

PRIORITY PROJECTS



Figure 1. Mission District Streetscape Plan c(SF planning department, 2010)

In San Francisco, the Mission District Streetscape Plan (Fig. 1), initiated by the planning department, took a district scale to create a network of green streets that connects open spaces and improves walkability, aesthetics, and ecological sustainability of

neighborhoods (SF planning department, 2010). One of the goals was to develop a comprehensive public realm plan that reflects the different needs of the streets, which has led to re-conceptualizing these streets and transforming them into places where people could spend time in rather than pass by. To achieve these goals, community workshops were organized, which resulted in a master plan that reflected their needs. The project is now being implemented in a process according to priorities and will extend as long as there are needs to be met.

Another connective network was developed in Memphis, Tennessee between 2006 and 2015 (IOBI, 2014). The objective of this project was mainly to connect assets that lie east and west, which will lead to strengthening the city core and the introduction of cultural programs along the network. The main connective route was a bike lane, which is different from the first case in San Francisco. The main achievement in this project was the ability to engage the community in the process of planning and fundraising to make this project possible. This case study illustrates a collaboration between the community and the municipality to achieve commercial revitalization, strengthen the identity, create cycling infrastructure and provide platforms for arts in a community that suffers from disinvestments.

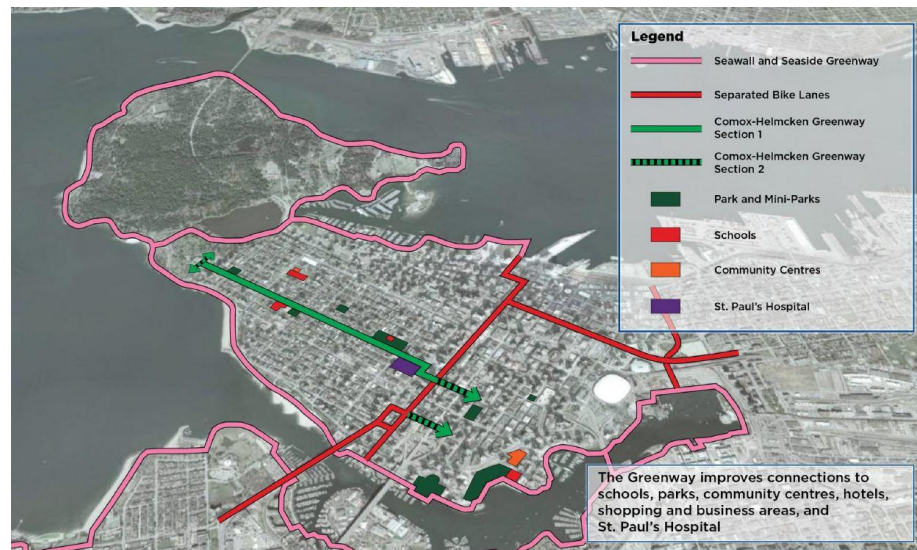


Figure 2. Vancouver connective network plan (Vancouver.ca, 2012)

In the city of Vancouver, the Transportation and Engineering Department initiated a connective network project in 2012 that incorporated a greenway to increase walking, cycling, and sustainable transport for all age groups (Fig.2)(Vancouver.ca, 2012). The cultural oriented greenway connects schools, community centers, parks, hotels, hospitals, and shopping districts. The planning was done in coordination with the public during workshops and open houses in order to incorporate the public's opinion in the final design.

In Halifax, Canada, the municipality initiated an open space network in 1998 on a smaller scale (Halifax Legacy Content, 2012). In this project, a linear network with accessible parks addressed evolving community needs and demographic changes. The aim was to provide recreational, environmental, transportation, and community identity benefits along with social and economic developments. The municipality wanted to improve existing open spaces and invest in new ones where gaps exist, including the local lake shores, while creating linear networks that connect them and address community needs and

transportation. Again, the municipality has organized design charettes with different focus groups in order to address the concerns of the community in the process. Another example in Canada has been planned in 2014 in York University, Ontario (Toronto.ca, 2014). In this project, the main aim was to connect the university campus to its surrounding areas, reaching the natural creek in a sustainable open space network. The layered network provides a diversity of places for recreation and connection.



Figure 3. Saarbrücken river front project (Lenhoff,2015)

In Europe, two relative case studies stand out. The first case study is in Saarbrücken, Germany where the municipality wanted to enhance accessibility in the city by creating livable and safe streets (Lenhoff, 2015). This approach was initiated in the early 1990s and is continuously being updated. Some major commercial streets were transformed into pedestrian-only streets; an international streetcar joined the city center to France. Pedestrian friendly streets replaced vehicular roads; and last but not least, the water front

along the forgotten river was transformed into a multifunctional open space (Fig.3). The process of design included successive meetings with the citizens.

The second European case study lies in Stroget, Copenhagen which was mainly a pedestrian network in the city (Global Designing Cities Initiative, 2018). The goal was to improve connectivity in the city center, provide an attractive environment, and revitalize the alley ways. Traffic was managed, sidewalks were redesigned, and street furniture was added. The main street was transformed into pedestrian-only gradually on 2 major phases, starting in year 1962. The result of this project has led to an increase of revenue for the shops and an increase in pedestrian activities.

No matter what the scale of the project is, open space networks are a major tool to improve accessibility and enhance urban livability. The lessons that could be deduced from the analyzed case studies in order to be applied in the case of Jounieh are:

- All successful projects have utilized existing assets that create nodes along open space networks.
- Streets are a major open space asset that should be incorporated into these networks.
- Leftover spaces and forgotten alleyway and connectors should also be incorporated into open space networks.
- The public plays a major role in these projects; the community should be deeply involved in the design process as well as in the implementation and funding processes.

- Urban design projects should be planned on both short and long terms in order to achieve the best results.
- Cultural identity is specific to each place and should be respected in urban design projects.
- Open space planning should extend beyond conventional parks to focus on an interconnected network that connects land and water, linear trails, corridors, special views, streets and roads.
- Existing educational buildings and other cultural facilities are key elements in open space networks.
- Open spaces that are included in the network could be privately owned while providing useful functions and an aesthetic element.
- Transforming a street into a pedestrian-only network should be incremental in nature and not a one-step project in order to give people time to change their habits.
- Activating spaces on forgotten assets such as water fronts and public squares revitalizes street life and economy.

To conclude, designing walkable open space networks that highlight the cultural aspects of cities and neighborhoods has been effectively utilized to connect neighborhoods and strengthen their cultural and urban identities. Such strategies can be introduced to the city of Jounieh to reconnect its neighborhoods. A culturally-led open space network in Jounieh will enhance walkability to ensure unrestricted mobility across the highway and in-between neighborhoods.

2.6. Theoretical framework

Lessons learnt: Theories		
Literature	Open space networks	Open space networks are important to improve the quality of urban life.
	Walkability	Planning for a walkable city ensures a healthy public environment and enhances the economy and social lives.
	Cultural planning	Cultural assets contribute to the community's creativity and knowledge and they strengthen the city's image.
	Identity	Maintaining the city's identity should adapt to future conditions and needs.
Lessons learnt: Implementation		
Case studies	Mission district San Francisco	Streets are the major features in open space networks.
	Mayfield heritage walk, Australia	Cultural identity is specific to each place and should be respected in urban design.
	Open space functional plan Halifax, Canada	Open space planning should go beyond conventional parks to connect water features, views, streets, trails...
	Open space network, York University, Ontario	Existing educational facilities and cultural assets should be highlighted in open space networks.
	Connectivity project Saarbrücken, Germany	Activating spaces on forgotten assets such as water-fronts and public squares revitalizes street life and economy.
	Pedestrian-only streets, Stroget, Copenhagen	Successful pedestrianization of streets should be incremental in nature to give time for change.
	The Hampline, Memphis, USA	Community engagement is key to realize urban design projects in planning and implementation phases.
	Comox-Helmcken Greenway Vancouver	A city-scale study should proceed neighborhood-scale interventions to provide strategic connections.

Table 1. Summary of the theoretical framework derived from the literature review and case studies

The literature review creates the theoretical base for this project which will utilize the tools of open space networks, walkability, and cultural planning to reconnect the neighborhoods in Jounieh and maintain its identity. The open space network will facilitate mobility between spaces, which will be further encouraged by the cultural anchors in the city. Walkability will be the main theme guiding the design, taking into consideration the steps discussed in the literature review to achieve the best walking experience in the city.

The discussed case studies provide additional information about these theories with the limitations and specificities that should be taken into consideration in each context. All case studies reinforce the importance of engaging the community in the design and implementation of these projects. They also highlight the importance of elements such as leftover spaces, streets, water fronts, educational facilities, and cultural assets in creating a continuous open space network. Another principle that should be considered is that big changes such as pedestrianization of vehicular streets should be done in steps to give some time for successful adaptation.

CHAPTER III

METHODOLOGY

The fieldwork methodology that is followed in this study aims to complement the literature review and case study-analysis and relate these concepts to the case study of Jounieh. The methods involve both qualitative and quantitative approaches to data collection, including non-participant observation, mapping (land-use, neighborhood characteristics, physical setting, connectivity, cultural assets, topography, land-property, street conditions...), documentation, online resources, gathering previously published projects and archives, and performing informal questionnaires with residents and visitors. The research starts with general characteristic-mapping and documentation on the city-scale, followed by detailed mapping and strategies on the level of links across the highway. This city-scale intervention is then followed by detailed mapping and questionnaires on the level of the neighborhood/intervention area, reaching a detailed design intervention and recommendations. The research thus follows an inductive process of thinking and organization (Data collection, analysis, design intervention).

3.1. Data collection

The data needed for this study is divided into 3 parts: Literature review and case studies, Spatial data, and Social data.

3.1.1. Literature review and case studies

This step has been done in the previous chapter (Chapter II). The reason behind the review and the case studies was to generate a theoretical framework and design principles based on theories and applied projects from different contexts.

3.1.2. Spatial data

Spatial data is needed to analyze the existing conditions of Jounieh on the city and neighborhood scales. The study requires the development of plans highlighting the assets that could support the design and the limitations that need to be resolved in Jounieh.

The following table shows a list of the needed data and their sources (Table 2).

Type of data	Source
Parcels, zoning, existing infrastructure	municipality of Jounieh
Morphology/ old parcels, evolvement of building activities, parcels, and infrastructural networks	Old aerial photos from Lebanese army
Topography	Local topographer or municipality engineer

Type of data	Source
Greenery/open spaces/building status	Through desktop analysis of aerial photos. Field verification
Land ownership and land use	Interviews with municipality members and residents
Inventory and Maps of cultural facilities and activities	Field visits and questionnaires
Street and sidewalk plan for area of focus	Filed visits and survey

Table 2. Type and source of spatial data that needs to be collected

3.1.3. Social data

In addition to physical and spatial data, this project has to consider people's opinions in the design intervention which should cater for their needs. In order to understand people's needs and their vision for the city of Jounieh, IRB approved informal interviews with residents and users were performed in the neighborhood where the urban design intervention would be performed.

The surveys are in the form of informal oral interviews with volunteers in the neighborhood where the intervention will take place. A sample of around 20 people of mixed gender and age were randomly chosen. Interviewees were met and asked for their participation in public places (streets) or in shops (shop owners). The surveys took around 15minutes of both open and closed-ended questions that relate to public space functionality

in Jounieh. It was explained that the survey was conducted for a thesis study at the American University of Beirut and that there is a need to study the existing state of public and cultural spaces and networks in Jounieh in order to design a proposal for a more functional network. It was also explained that no identifiers would be included in the survey since the information is not personal (no name, age, specific address, or any other identifiers). Participants were told that their participation is totally voluntary and that they could discontinue if they feel uncomfortable for any reason.

The questionnaire is an informal, oral interview. More details about the questions and location will be discussed later in the neighborhood scale analysis chapter (Chapter V).

3.2. Analysis

3.2.1. Spatial data analysis

After gathering the spatial data needed for the project, a mapping procedure highlighted existing opportunities in Jounieh. This took place by layering the gathered plans and conducting a visual inspection, followed by field verification. Vehicular and pedestrian connections across the highway were also highlighted to assess connectivity between mountainous and coastal zones. This assessment would inform the design strategy of the types of connections across the highway and the type of intervention needed.

3.2.2. Social data analysis

After the tabulation of the informal interviews, themes and patterns that have been repeated were highlighted. This allowed for the development of conclusions that informed

the design strategy. It also showed certain boundaries that were perceived by the residents and needed to be included in the challenges of the design.

This analysis also brings to the front new spaces and elements that are considered to be meaningful by the residents for holding certain collective memories that are specific for each neighborhood, and that otherwise could have been neglected in the analysis.

3.3. Design intervention

The spatial data was synthesized to define the constraints and opportunities for Jounieh. The design principles that were derived from the case studies were used to develop the concept design.

First, a general strategy was proposed on the level of the city of Jounieh, after which a specific zone was selected according to its strategic location and assets. The aim of the city-scale strategy is to reconnect all towns visually and physically across the highway. Neighborhoods will be connected together using an open space network by incorporating existing public spaces and left over lands (such as the left over public spaces, railway, private-public coordination...), and cultural assets as anchors. Afterwards, a neighborhood scale analysis was developed, followed by a detailed intervention targeting the problematic in the chosen location.

CHAPTER IV

CASE STUDY ANALYSIS

4.1. Introduction

Jounieh is a vibrant coastal city with a population of around 200,000 within its municipal boundaries. It lies 15 kilometers north of the capital Beirut (Fig. 4). Jounieh has been classified within the Metropolitan Region of Beirut and is considered as an extended suburb to Beirut which has therefore benefited from the capital's growth. Despite the overwhelming role of Beirut, Jounieh forms a major economic center for Metn and Keserwan in leisure, entertainment and consumption (Shopping, banking...) (ICMA, 2008).



Figure 4. Location of Jounieh on the edge of the daily commutable area to Beirut (Koobayssi, R, 2017)

The city of Jounieh is composed of four towns: Sarba, Ghadir, Sahel Alma and Haret Sakhr (Fig. 5). It is the largest urban center in the Caza of Keserwan and the largest coastal city in the Governorate of Mount Lebanon with a total area of around 7.7 square kilometers. It is also the administrative and regional center of the Keserwan Caza (ICMA, 2008).

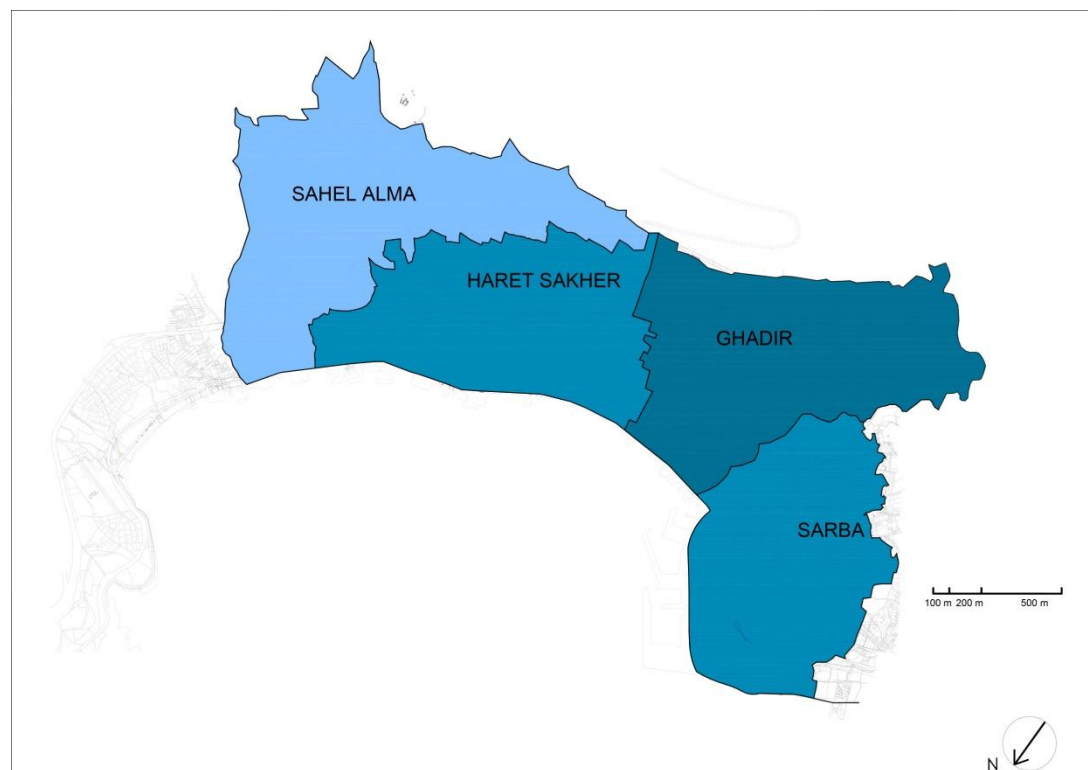


Figure 5. The 4 towns of Jounieh

The current city of Jounieh has evolved from separate villages that have merged together due to the construction boom, especially during the civil war that started in 1975 (Fig. 6 and Fig.7). One of the earlier connections between the mountain and the coast

existed between the village of Ghadir and the old port, which still exists today as a major local connector across the highway.

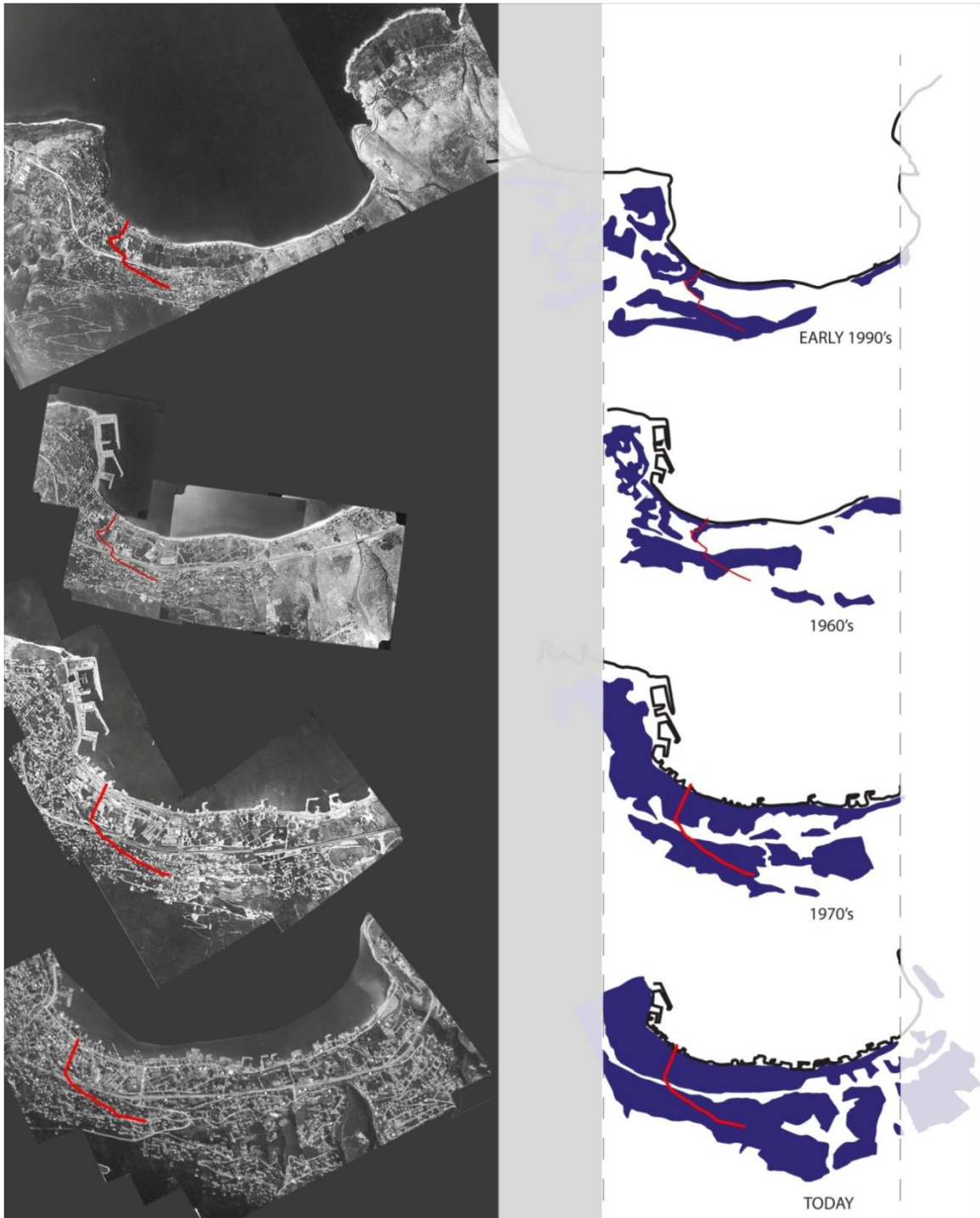


Figure 6. Jounieh's evolution since the beginning of the 20th century in plans and aerial photos (Aerial photos from municipality of Jounieh, diagram by Koobayssi, R., 2017)

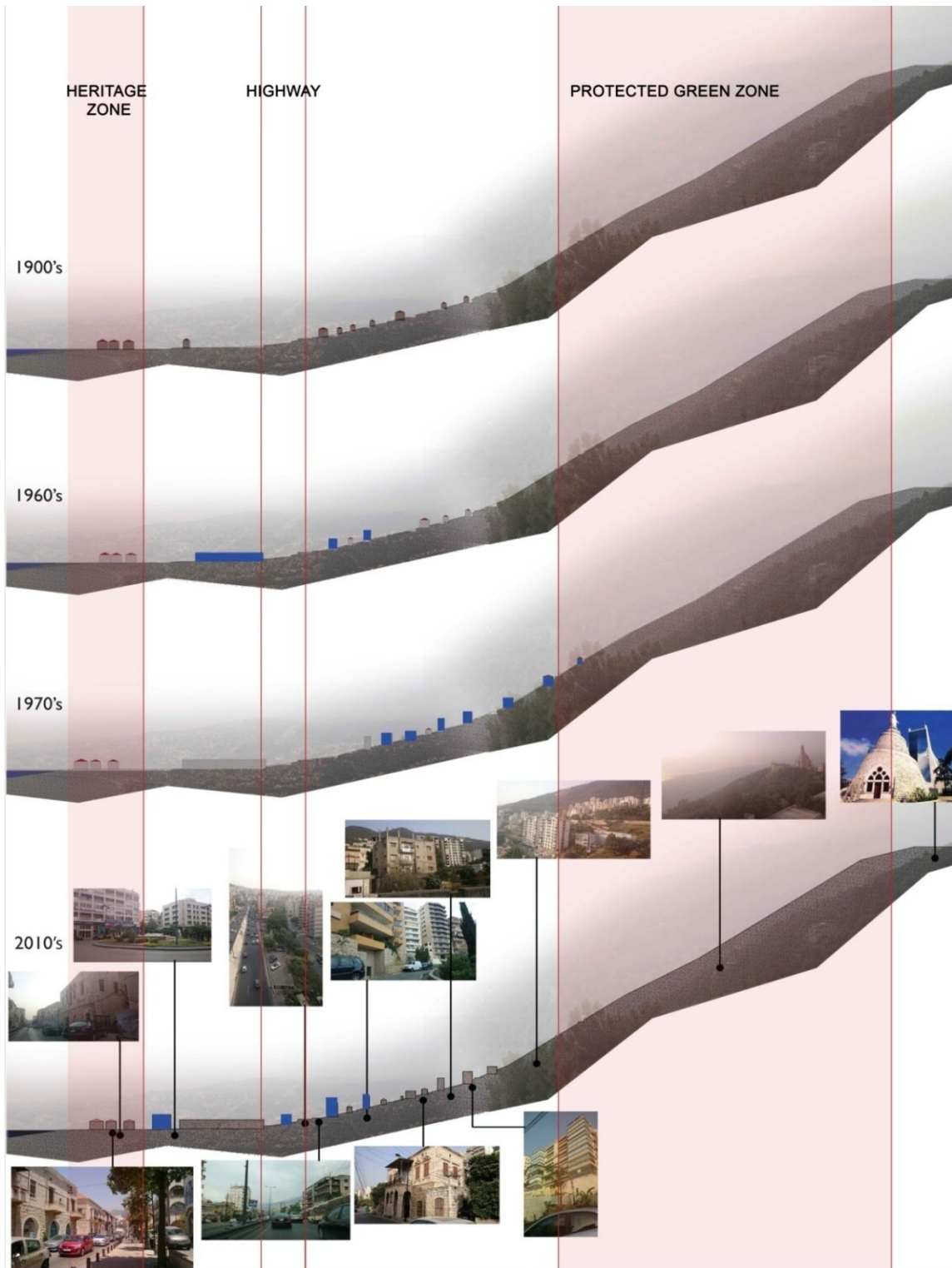


Figure 7. Jounieh's evolution since the beginning of the 20th century in sections (Koobayssi, R., 2017)

In addition to the natural sea bay, Jounieh lies on the base of Harissa mountains that constitute another natural asset, giving the city a unique character. The most noticeable characteristic of Jounieh is its topography (Fig. 8). The city is surrounded with a mountainous terrain where its lands steeply rise from sea level to more than 600 m in a 2 kilometers distance. This steep slope hinders connectivity between city parts. In addition to existing topographic difficulties, the highway further creates a cut between the mountainous and coastal parts of Jounieh, rendering the connection even harder.

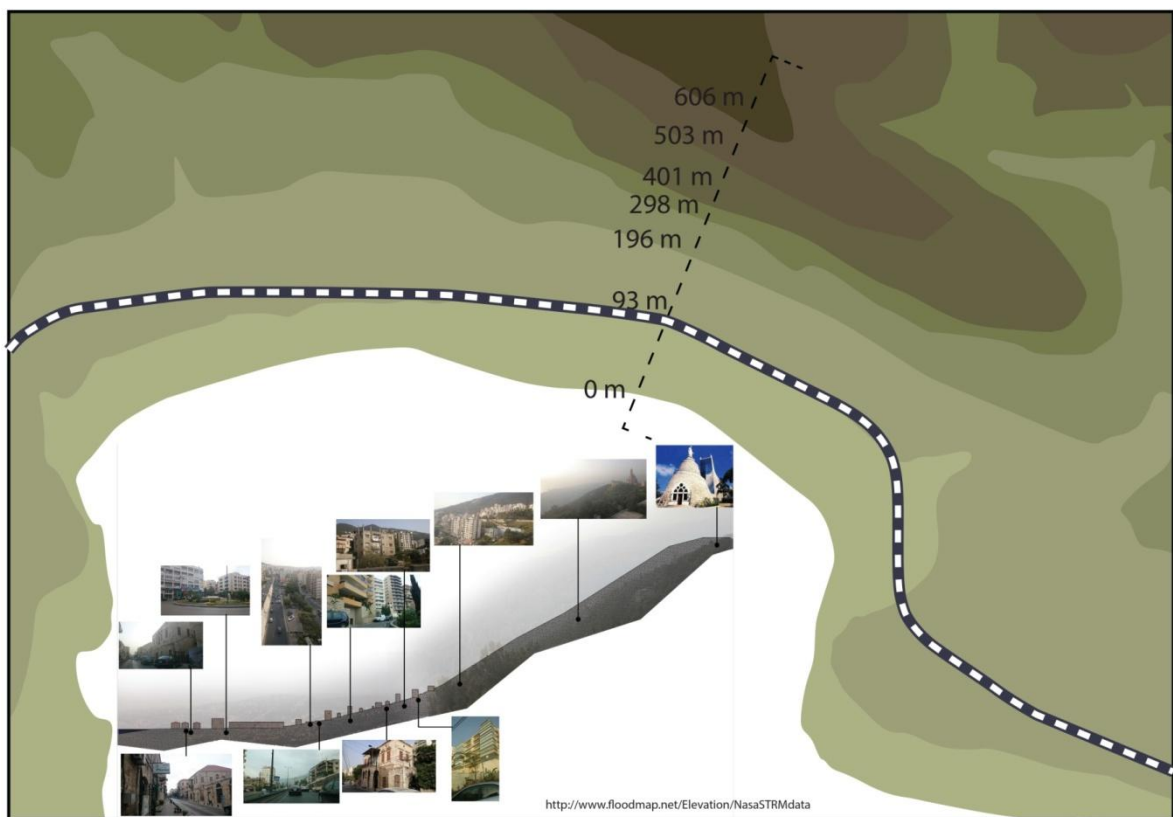


Figure 8. Jounieh's topography, plan and section (Topography from floodmap.net, diagram by Koobayssi, R., 2018)

Jounieh includes a renovated historic quarter. The historic quarter known as "Old Jounieh" now includes outdoor cafes and restaurants, boutiques, artisan shops, banks,

supermarkets and hotels of different categories. These attract different groups of people from within the city, not to mention local and international visitors. The Casino Du Liban is 2km away, Byblos at 10km, Beirut Airport is 20km, Harissa at 7km, Jeita Grotto at 8km, Tripoli at 50km and the Cedars of Lebanon at 100km. These assets place Jounieh at an advantage in regards to touristic opportunities due to its high potential in attracting visitors, which constitute the main asset to economy.

4.2. Economy

Jounieh's economy is highly dependent on its surrounding cities and villages as it relies on imports from all over the country especially Beirut to keep its economy afloat. Jounieh's main imports are as follows: retail from Beirut, vegetables and fruits from Nahr Ibrahim, Saida and Sour, industrial material from Zouk and furniture, glass and construction material from Tripoli. Furthermore, these goods are imported into the city by vehicles owned and operated by individuals who reside in Jounieh and its surroundings (ICMA, 2008).

Jounieh's commercial sector has evolved to include 91 restaurants, 21 pubs and nightclubs, 10 cafes, 6 marine resorts and health clubs, 2 amusement centers, 3 bars, 2 cinemas, 19 hotels and almost 5,275 retail shops (ICMA, 2008). However, interviews with shopkeepers revealed that less and less shoppers are visiting the Old Souk. The

competition is fierce from malls as well as the from mobile Syrian retailers who are selling good quality items cheaper with better access to the customer

Furthermore, in the Jounieh LED Strategy study, statistics revealed that the overall spirit of the retail sector is discouraged with 40% of the interviewed believing it will continue to decline and 65% not planning on expanding their business. The threats to the survival of the retail sector are lack of security and political stability, inflation, declining incomes and congestion(ICMA, 2008).

As for hotels, restaurants, bars/pubs and nightclubs, they have a stronger economic footprint catering to 53% out-of-city customers (hotel), 17.3% in and out-of-city customers (restaurants) and 77% out-of-city customers (resorts) compared to the retail sector which caters to 43% within the city, 31% regional customers and 9% out-of-country customers (ICMA, 2008).

The education field in Jounieh is also a strong component of the city's economy and structure. Jounieh has a relatively large university with approximately 7,000 students (Holy Spirit University of Kaslik, USEK), and 17 public or private schools with a total enrollment of nearly 10,000 students (tables 2,3 and 4). Faculty and support employees sum up to more than 1,150 people at the university. These numbers prove that the education sector creates a major contribution to Jounieh's economy. Mayor Juan-Antonio Hobeiche adds that Jounieh was a small fishing village before private schools started opening in and around the city. The education sector was responsible for attracting students from around Jounieh, which has contributed to the city's growth as a regional center (ICMA, 2008).

Category	Count
School	14
Technical Institutes	11
University	1
Total	22

International City/County Management Association (ICMA)
Information International SAL

73
Ref #: 145-186/June/07-08

Table 2. Number of institutions per educational sector (International City Management Association, 2008)

2006-2007	School	Students
Private	Sainte Famille	1106
	Lebanese German	320
	Ecole Centrale	2290
	Sainte Rita AM	130
	Sainte Rita PM	18
	Collège des Apotres	2481
	Our Lady (Saydeh)	820
	Holly Spirit Seminaries	15
	Paradis des Enfants	1063
Total Private Schools		8243
Public	Haret Sakhr Middle School	456
	Jounieh High School	396
	Ghadir Middle School	120
	New Sahel Aalma Middle School	98
	Sarba Public School	108
	George Frem Public School	218
Total Public Schools		1396
Total schools		9639

Table 3. Number of student enrolled in schools in Jounieh (International City Management Association, 2008)

Year	Number of USEK Students
2000 - 2001	4230
2001 - 2002	4374
2002 - 2003	4659
2003 - 2004	5460
2004 - 2005	6296
2005 - 2006	5949
2006 - 2007	6617

*International City/County Management Association (ICMA)
Information International SAL*

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Ref #: 145-186/June/07-08

Table 4. Number of students enrolled in USEK university (International City Management Association, 2008)

4.3. History of planning

The emergence of the city of Jounieh was around the old port (Old Mina zone), which gained significance in the late 19th century as souks and new professions came to town. In Fig. 9, Jounieh was still a small town close to the old port, with little to no urbanization in its surroundings.



Figure 9. Map of Jounieh 1914 (source is unknown)

The first planning efforts were made in 1958 when president Fouad Chehab allocated the architect and planner Michel Ecochard to set a master plan for the city. Ecochard presented a modernist and functionalist approach to planning (Verdeil, 2012). Some of the outcomes were the new zoning laws that transformed the historic port neighborhood into a commercial district with high exploitation ratio, leading to the demolition of many traditional buildings. However, building a new Serail, new Yacht port,

finishing Beirut-Tripoli highway, as well as the stadium and cable car transformed the city of Jounieh into a touristic hub.

In 1963 another planning effort was done by Jacques Liger-Belair that aimed at protecting heritage buildings as well as creating pedestrian routes towards the beach in the historic quarter. An example of how Belair treated these routes and the beach is shown in Fig. 10. The goal of these plans was to initiate cultural and maritime touristic activities in Jounieh.

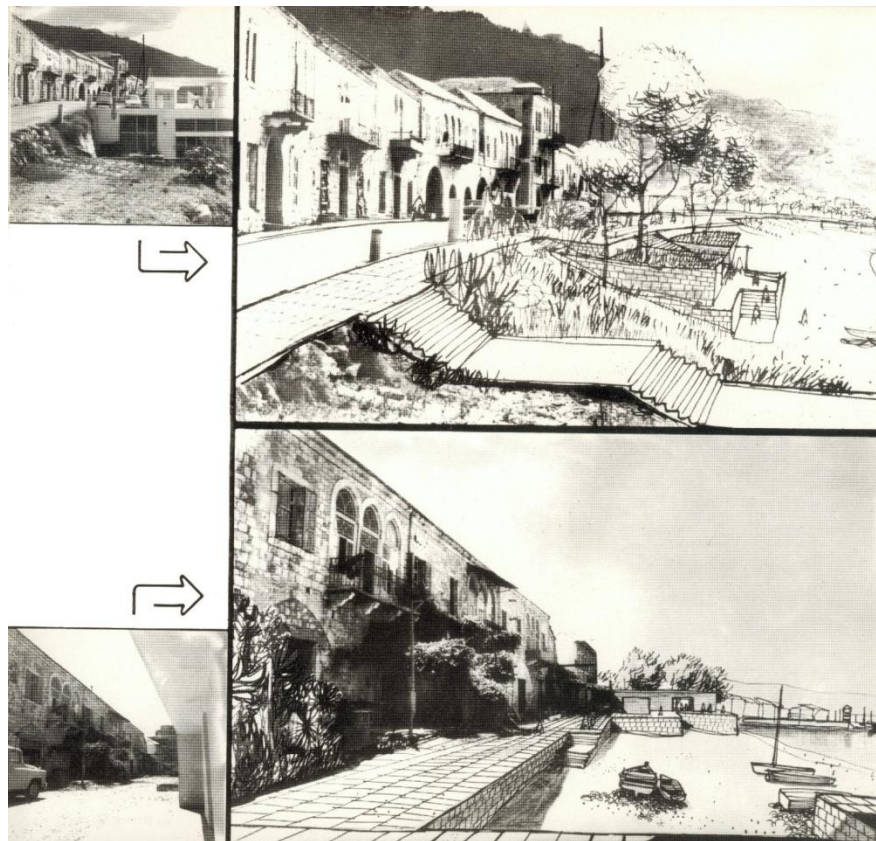


Figure 10. Sketches by Jacques Liger-Belair (source : Atelier Des Architectes Associés sarl)

However, it is the outbreak of the Lebanese civil war in 1975 that brought drastic changes to the urban form in Jounieh. Before the war, Jounieh's beach was a continuous

strip, relatively free from illegal privatizations (Fig. 11). During the war, Jounieh's economy reached its peak due to the influx of refugees from surrounding areas. Jounieh's port replaced Beirut's, and many universities and schools moved in. These unplanned economic and demographic changes led to irregular building activities as well as the total privatization of the public beach, as shown in Fig. 12. However, it is the period after the end of the war that led to a decline in Jounieh's economy. After Beirut regained its economic and administrative dominance, many businesses and refugees left Jounieh in a degraded economic state, with its chaotic built environment, deforested mountains, and no public beaches.

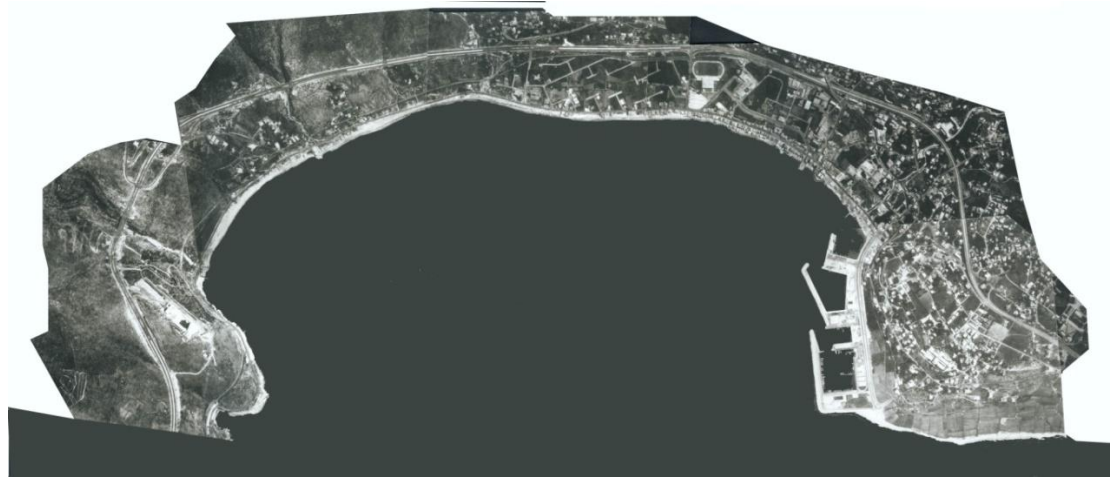


Figure 11. Jounieh bay before the civil war (source : Atelier Des Architectes Associés sarl)



Figure 12. Jounieh bay after the civil war with the encroachments on the public maritime domain (source: Atelier Des Architectes Associés sarl)

In 1995, a municipal decree classified the old coastal neighborhood in Jounieh as a historical landmark. This planning effort aimed at promoting economic growth and spreading heritage awareness.

Table 5 summarizes the main events that have led to the current form of the city of Jounieh, including the planning efforts and their effect on the city.

1780s	Jounieh had one port in its southern part, around which existed a few traditional houses in a neighborhood that was later named the Old Mina. The city of Jounieh had not yet formed	The city of Jounieh had not yet formed
1850s	The port became more important and new professions came to town, such as carpentry, tiling and other food industries. The traditional Wheat Souk was established.	Consequently, the neighborhood expanded in all directions
1880-90's	The old Serai (which is now the municipality building) was built in 1887. agriculture as well as banking and commerce were developed. In 1892, the railroad connected Jounieh to Maameltein.	Jounieh gained a central role on the residential and managerial levels.
1950's	Harissa forestation activities took place. Casino Du Liban was built.	Jounieh became a touristic destination.
1958	Ecochard Planning The new and old port neighborhoods were zoned as commercial districts with an increase in the exploitation factor to 3.	A big portion of the traditional Lebanese houses in the neighborhoods were demolished
1960's	New Serai was built Military and Yacht ports were built Beirut-Tripoli highway was finished Fouad Chehab Stadium and the Telepherique were built	Jounieh thrived as a touristic city.
1963	Jacques Liger-Belair study This study aimed at protecting heritage buildings as well as creating pedestrian routes towards the beach. The goal of these plans was to initiate cultural and maritime touristic activities in Jounieh.	Political circumstances stopped the project from being fully implemented
1975-90	During the civil war, Jounieh's economy reached its peak due to the influx of refugees from surrounding areas. Jounieh's port replaced Beirut's port, and many universities and schools moved in.	This led to irregular building activities as well as the privatization of the public beach.
1993	At the end of the war, refugees went back to their hometowns, leaving Jounieh in a degrading economic state, with its new chaotic built environment, deforested mountains, and zero public beaches.	Jounieh's economy started to decline
1995	In 1995, the ministry of culture issued a decree were 100 houses were classified as cultural buildings that should be protected. A study by AAA Architecture office and UNESCO was also conducted in order to protect the historic zone as well as the beach in Jounieh to create a touristic cultural city.	The historic zone was preserved and renovated.

Table 5. A summary of the major events in the history of planning of Jounieh(Koobayssi, R., 2017)

The uncontrolled building activities during and after the civil war, in addition to the introduction of the north-south highway that cut the city into hillside vs. coast have created a major disconnection between the neighborhoods in Jounieh. The loss of visual and physical connectivity in Jounieh were major elements that led to its fragmentation, in addition to a gradual decline in its urban identity.

All former studies have concentrated on the historic zone and old port area. Old and newly formed neighborhoods spanning on the hilly side of the highway were not targeted in any of the studies, nor did the neighborhoods around the historic center. Therefore, there is a need for a study that reaches outside this zone and reconnects Jounieh's neighborhoods together.

4.4. Cultural Assets

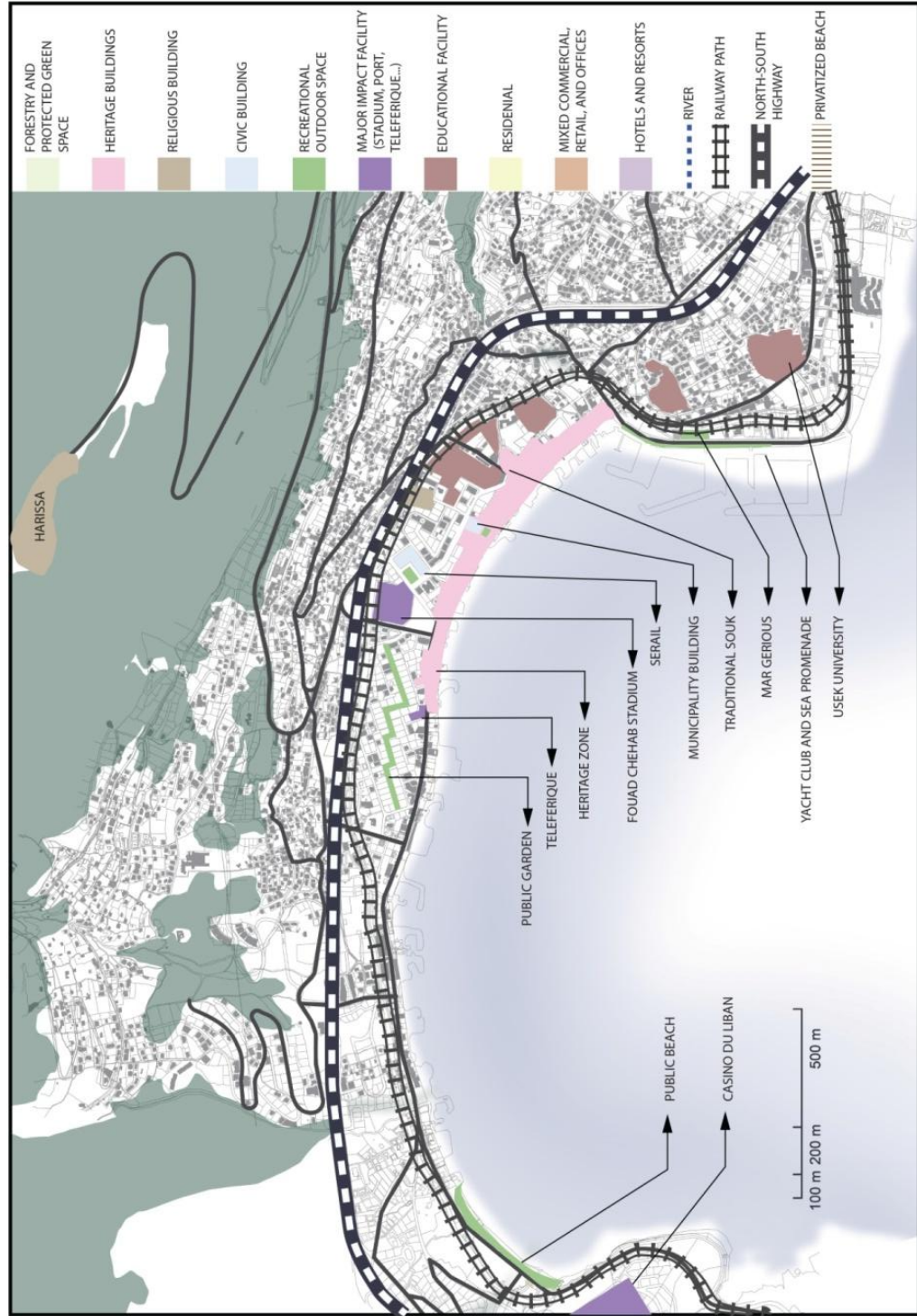


Figure 13. Jounieh's landmarks and cultural assets (Koobayssi, R., 2018)

There are several attraction points in Jounieh and its adjacent surroundings that create nodes across the city, attracting people from Jounieh and across Lebanon (Fig. 13). These nodes vary between leisure, touristic, religious, sports, traditional, and educational. This variety enriches the city's cultural identity. However, the weak connections across the highway and between neighborhoods and cultural nodes weaken this identity.

Some of these assets are but not restricted to : Casino Du Liban which houses a big theater and major events, Maamelteine public beach which is now closed due to safety reasons, Jounieh's public garden, car cable, Jounieh's unique heritage zone which is protected by law, Fouad Chehab stadium which houses national and international football games and sport events, the Serail and its public garden, the old municipality Ottoman building and its public garden, the traditional souks, Mar Gerious cave, Yacht club and sea promenade, along with the religious and educational buildings that are distributed through the city.

4.5. Stakeholders

In Jounieh, there are stakeholders of varying power and influence. The municipality, with a yearly budget of around 6,000,000\$ is directly responsible for decision making in Jounieh. It performs both administrative and technical duties in addition to the provision of services. The revenue mainly relies on the collection of taxes and issuance of permits. The technical duties include engineering works and planning activities for urban development. It is well established now that municipalities play an essential role in

promoting local economies and advancing decentralization. Therefore, it is essential to highlight municipalities' economic potential and responsibilities, with respect to the growth of the city (ICMA, 2008).

The municipality is highly associated with the big families who live there. Some of these families have electoral weight, and others have direct political representation via MPs. There are around 18,000 voters in Jounieh today, while it is estimated to have 200,000 citizens. This fact means that a small percentage of the citizens only could directly affect governance and decision making in Jounieh via voting, whereas the rest could only lobby for change without having direct means for change in the city.

The other direct stakeholder is the Maronite church. Being the Maronite hub, Jounieh and its surroundings directly fall under the influence of the church, especially Bkirki, which owns a significant percentage of the lands in Jounieh (Waqf), especially on the coast. The church not only influences Jounieh's decision-making as a land-owner, but also as a political power.

Along with the governmental actors, many NGOs actively work in Jounieh and Keserwan in the fields of environment and culture. Business owners, whether they live in Jounieh or not, are stakeholders of limited power in Jounieh, so are many of the residents who do not vote. Last but not least, tourists and visitors are also vital stakeholders that affect the economy of Jounieh, but have the least power in decision making.

The proposed project will most likely be spearheaded by the municipality with participation from all stakeholders. Funding would be obtained from tax collection, government, and grants from donors.

The variety of stakeholders in Jounieh makes gives opportunities for realizing urban projects .The municipality should be in charge of city scale projects, especially in managing public spaces and facilitating the process of obtaining needed space from property owners. The municipality could suggest systems of incentives to make the process possible. Property owners, especially the church, could also play an important role in contributing to decision making and providing land that is needed in urban projects. Political leaders are vital in decision making as well as providing funds, along with NGOs. Some stakeholders will be affected by the results of urban design projects, such as visitors and residents who do not have political representation and might be able to participate in the procedure and create pressure to push any project forward.

4.6. Challenges and Opportunities

Other than unplanned urbanization, many challenges face Jounieh today. One of the most important challenges is the highway that connects Beirut to North Lebanon, dividing Jounieh into a mountainous zone (to the east) and a coastal zone (to the west). This disconnection does not support pedestrian-friendly connections. The highway has caused severe changes to the city; the disconnection was not only physical, but also programmatic, which is also reinforced by the zoning law that protects the heritage zone next to the old port only and allows for high exploitation ratios in other areas that need protection. In addition, the city is witnessing an economic decline that has affected most businesses, especially retail and tourism(ICMA, 2008). Local shops do not have good selling records

and craftsmanship is almost disregarded. The number of tourists is also declining with time: most of the visitors seem to target night life only. Most importantly, as a result of these factors, Jounieh's cultural identity is declining and transforming into a mere transit city on the highway, especially now that many cities on the Lebanese coast are competing for cultural tourism (such as Byblos and Batroun). The once vibrant city is gradually transforming into another sub-center on the peripheries of greater Beirut.

On the other hand, Jounieh possesses many opportunities in the form of cultural assets. In addition to the architectural heritage in the traditional souks, there are many traditional houses up in the villages that are threatened by the zoning law. Jounieh also houses 25 major churches and 25 educational institutions, making it an educational and religious node. The expected flow of students into Jounieh within the next couple years is expected to help in reviving the tourism sector's restaurants, furnished apartments for students, resorts, cultural centers and others thus positively affecting the city as a whole (ICMA, 2008). Bkirki (the seat of Maronite church) and The Lady of Lebanon (Harissa) are also a few minutes away from Jounieh which reinforces the religious identity of the city for being a major pilgrimage area for national and international visitors. The city has a sports stadium, a public garden, corniche as well as other public spaces. The only cable car in Lebanon acts as an exceptional experience for tourists who would park their cars in the city and ride up through the forested mountain. Jounieh is also famous for its night life and restaurants, which attract visitors locally and from nearby cities.

Based on these challenges and opportunities, a general strategy for the city of Jounieh will be laid in order to improve walkability and connectivity across the city by providing a culturally-led open space network across the neighborhoods of Jounieh.

CHAPTER V

CITY-SCALE STRATEGY

There are 7 connections across the highway in Jounieh (4 bridges and 3 tunnels), 2 of which are the main vehicular entrances to the city (Fig. 14). The rest of the connections serve as local connectors of varying importance to local residents. Most of these connections give hierarchy to vehicles and are not pedestrian friendly. In this strategy, the gap between the mountainous and the coastal parts of the city will be bridged using existing connectors. The following diagrams will describe the characteristics of each of these links and their surroundings, along with the strategies that will best serve to connect the city across the highway and between the neighborhoods.

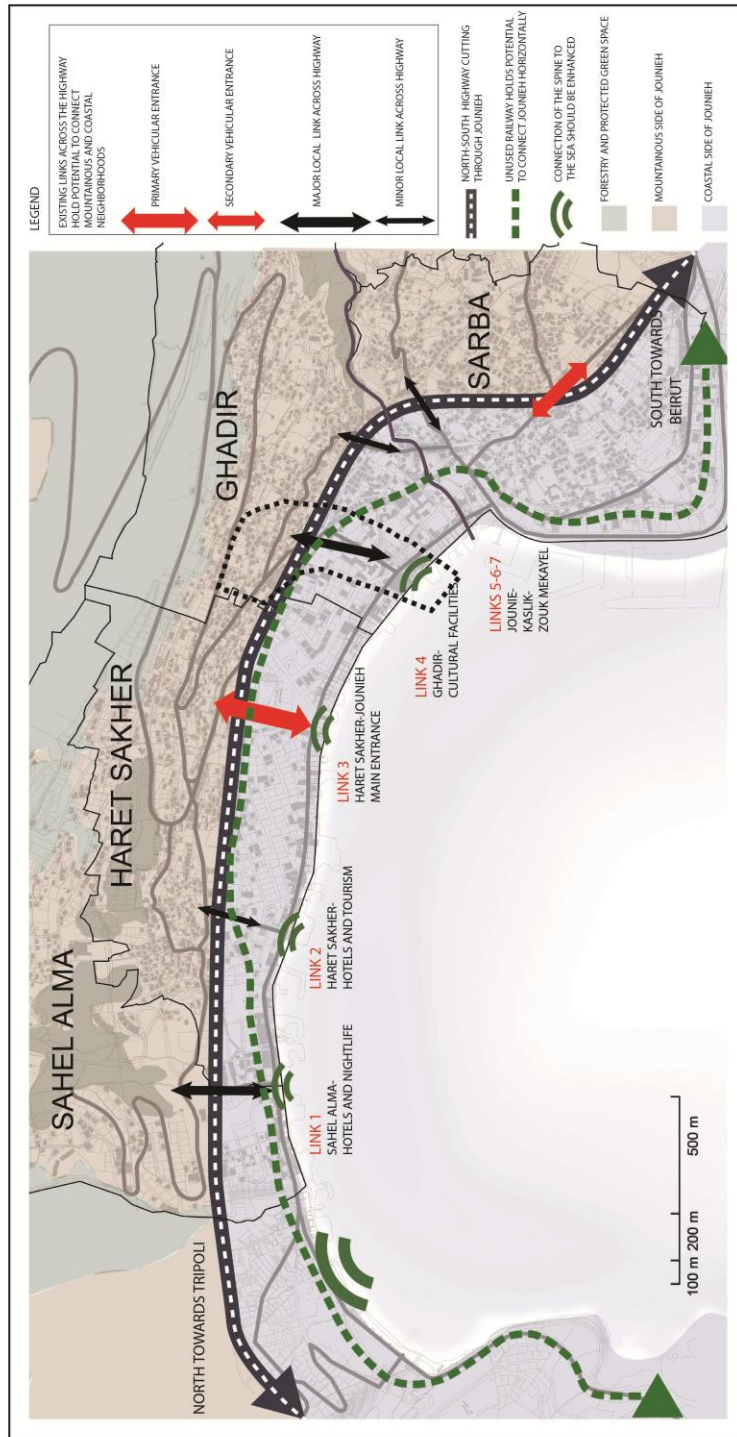


Figure 14. City scale connectivity strategy. This diagram shows the different types of existing links across the highway, along with the highway that Separates the mountainous and the coastal zones of Jounieh and the unused railroad (Koobayssi, R., 2018)

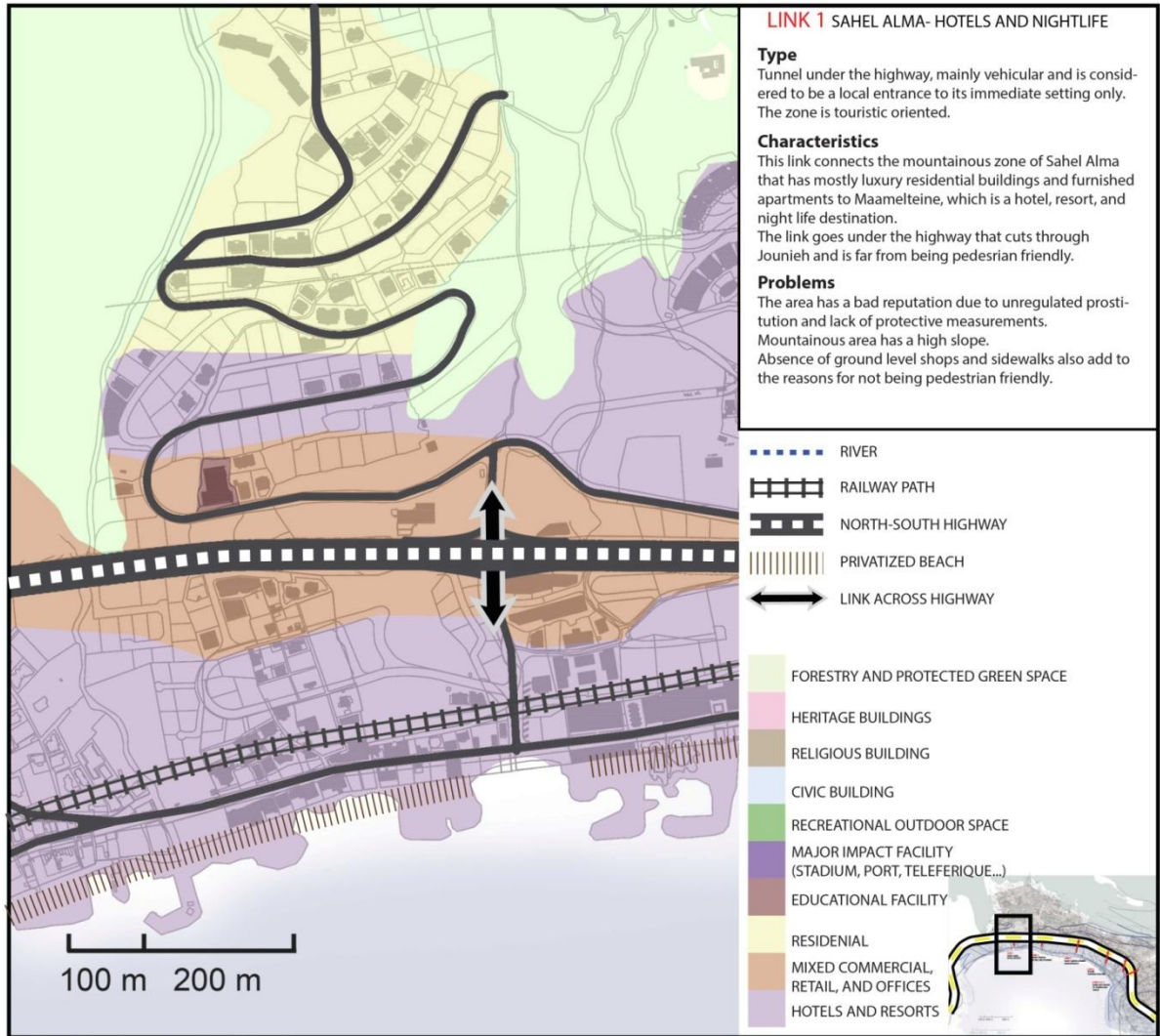


Figure 15. Link 1 characteristics and problems (Koobayssi, R., 2018)

The first link is a tunnel that connects Sahel Alma to Maamelteine (Fig. 15). This tunnel acts as a local vehicular connector. The zone in general attracts tourists due to night life activities and hotels. However, the unregulated activities prevent any type of connection to the rest of the city, thus transforming it into an obstacle that prevents the

residents of Jounieh from attending the only remaining public beach in Maamelteine (which is closed now due to the lack of control and security).

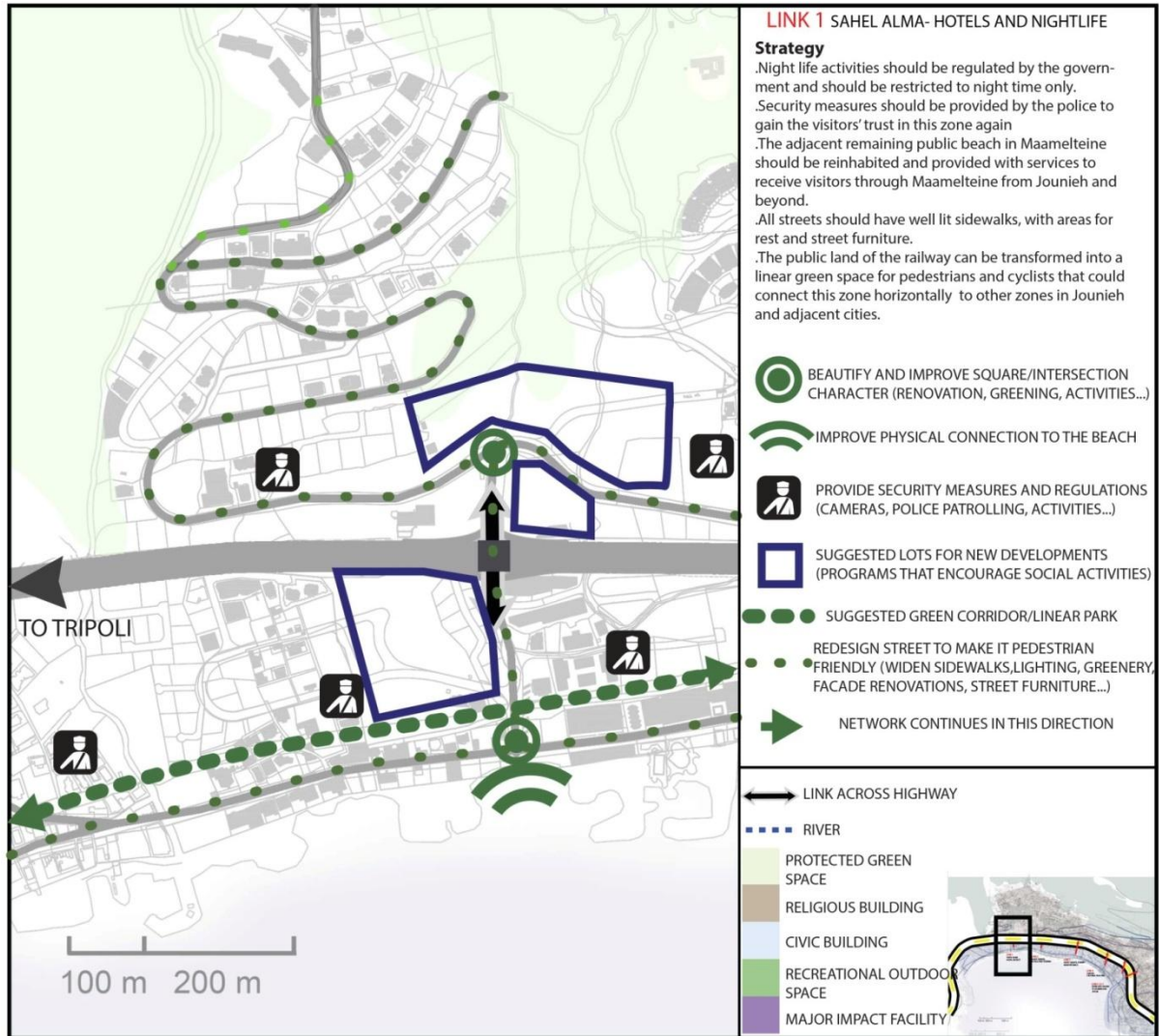


Figure 16. Link 1 strategy (Koobayssi, R., 2018)

The most important step to connect to other parts of Jounieh is to regulate night life activities and provide safety and security. Along with security, there is a strong need to encourage pedestrian activities by widening the sidewalks, lighting, greening, adding street furniture, and animating the ground floors by encouraging new cafes and shops to open on

the ground floors. In addition, the public beach should be open to the public to create an inviting public space at the end of the link, thus creating a public node that attracts residents and tourists. Last but not least, the railway could be transformed into a linear park that connects the city parts horizontally through pedestrian and cycling lanes (Fig. 16).

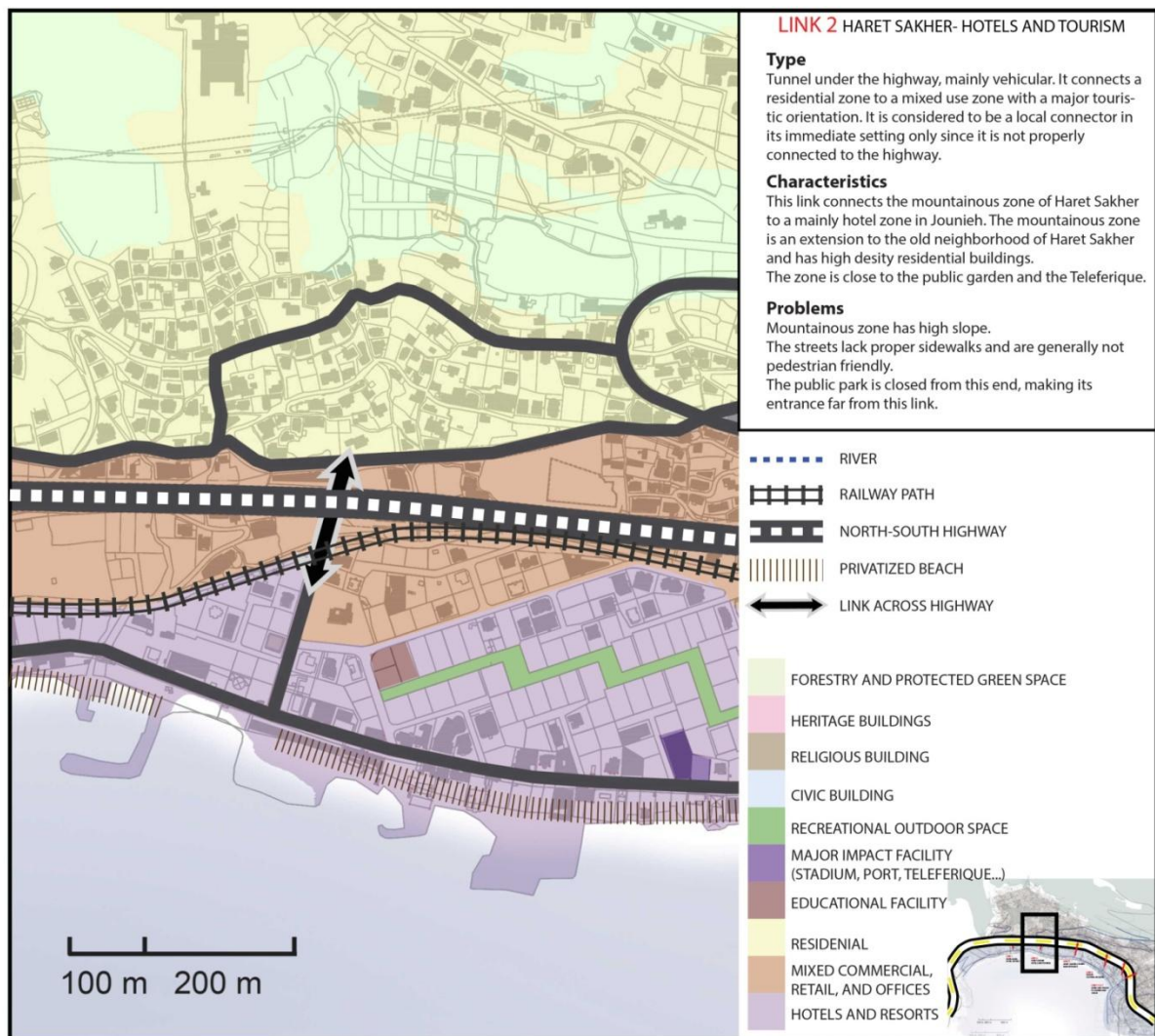


Figure 17. Link 2 characteristics and problems (Koobayssi, R., 2018)

The second link connects the new dense residential zone of Haret Sakher to the edge of the hotel zone (Fig. 17). This tunnel is a minor local link and is not pedestrian friendly. Although it is close to the public garden, the end of the garden is closed from this side. The beach at the end of the link is closed and unwelcoming.

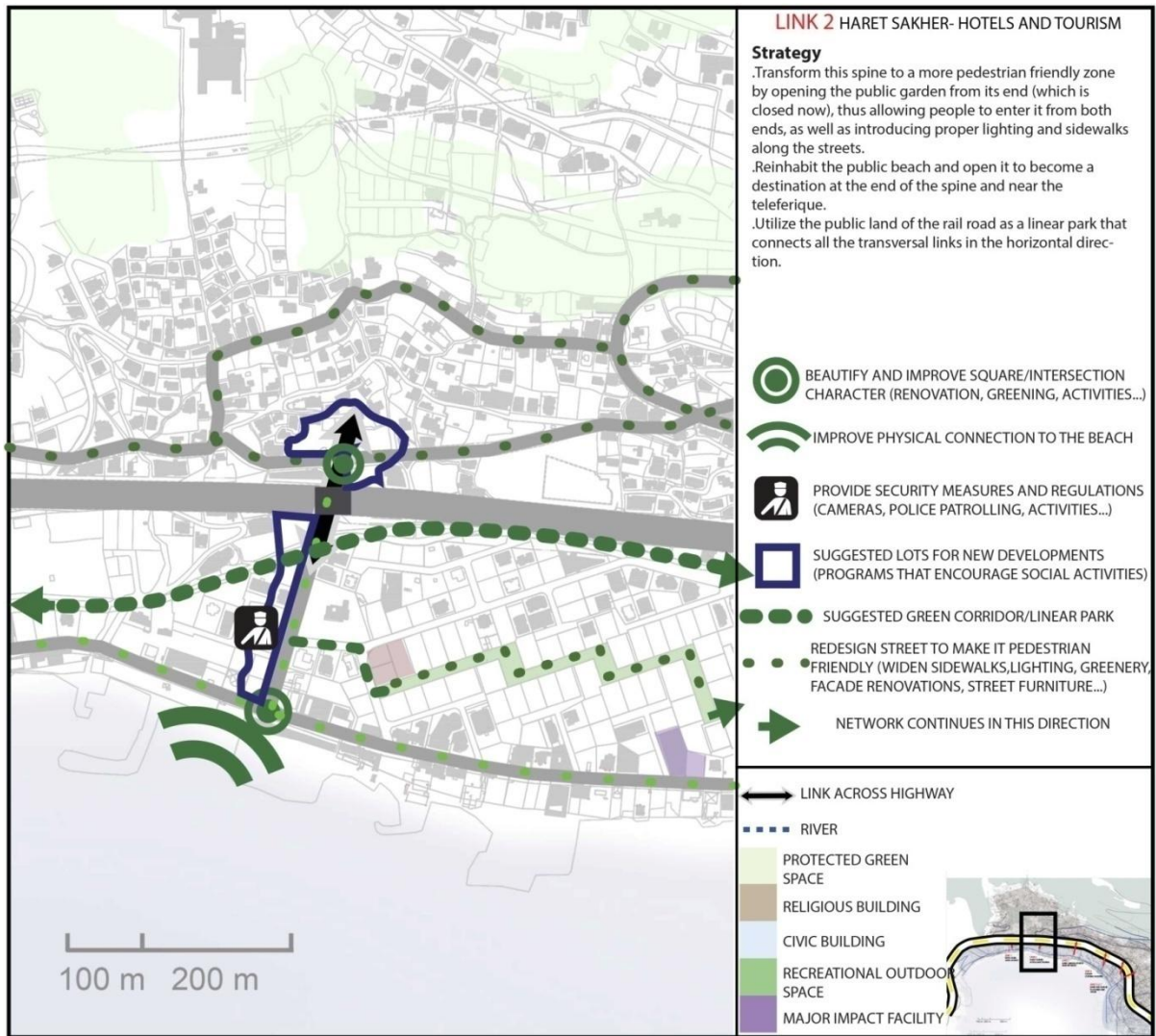


Figure 18. Link 2 Strategy (Koobayssi, R., 2018)

This link could become pedestrian friendly and more inviting by opening the public beach at the end of the spine and transforming it into an open public space that could

be visited by the residents who lack an open public space. Another step is to open the public garden from both sides, allowing for a dynamic movement across the streets. This is in addition to creating pedestrian friendly streets by tackling sidewalks, security, lighting, furniture, as well as encouraging new functions on the ground level, especially in new buildings, such as restaurants and shops that attract visitors and create a friendly environment. Finally, the railroad could be transformed to a linear park, as explained in the first link, to connect this zone to adjacent zones horizontally (Fig. 18).

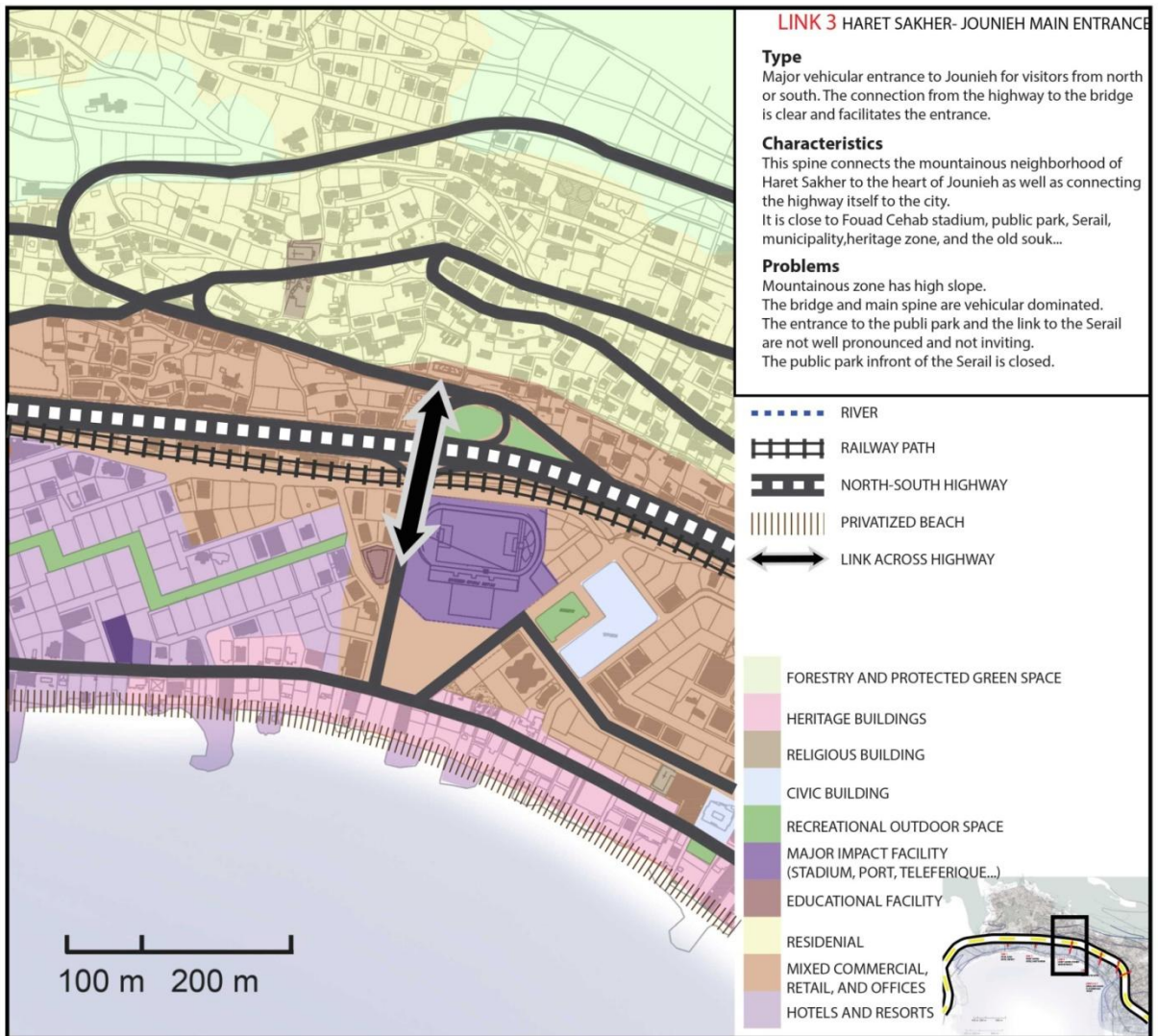


Figure 19. Link 3 characteristics and problems (Koobayssi, R., 2018)

This link acts as the major vehicular entrance to Jounieh from both sides of the highway (Fig. 19). It is the entrance to Fouad Chehab Stadium which stands as a major landmark. The bridge connects the mountainous and coastal parts of Haret Sakher. It is close to the public garden, the Serail, and the Cable car. The main problem is that this spine is not pedestrian friendly and that the public garden and the Serail are hidden. Another

major problem is the huge parking in front of the stadium that creates a dead zone along the spine.

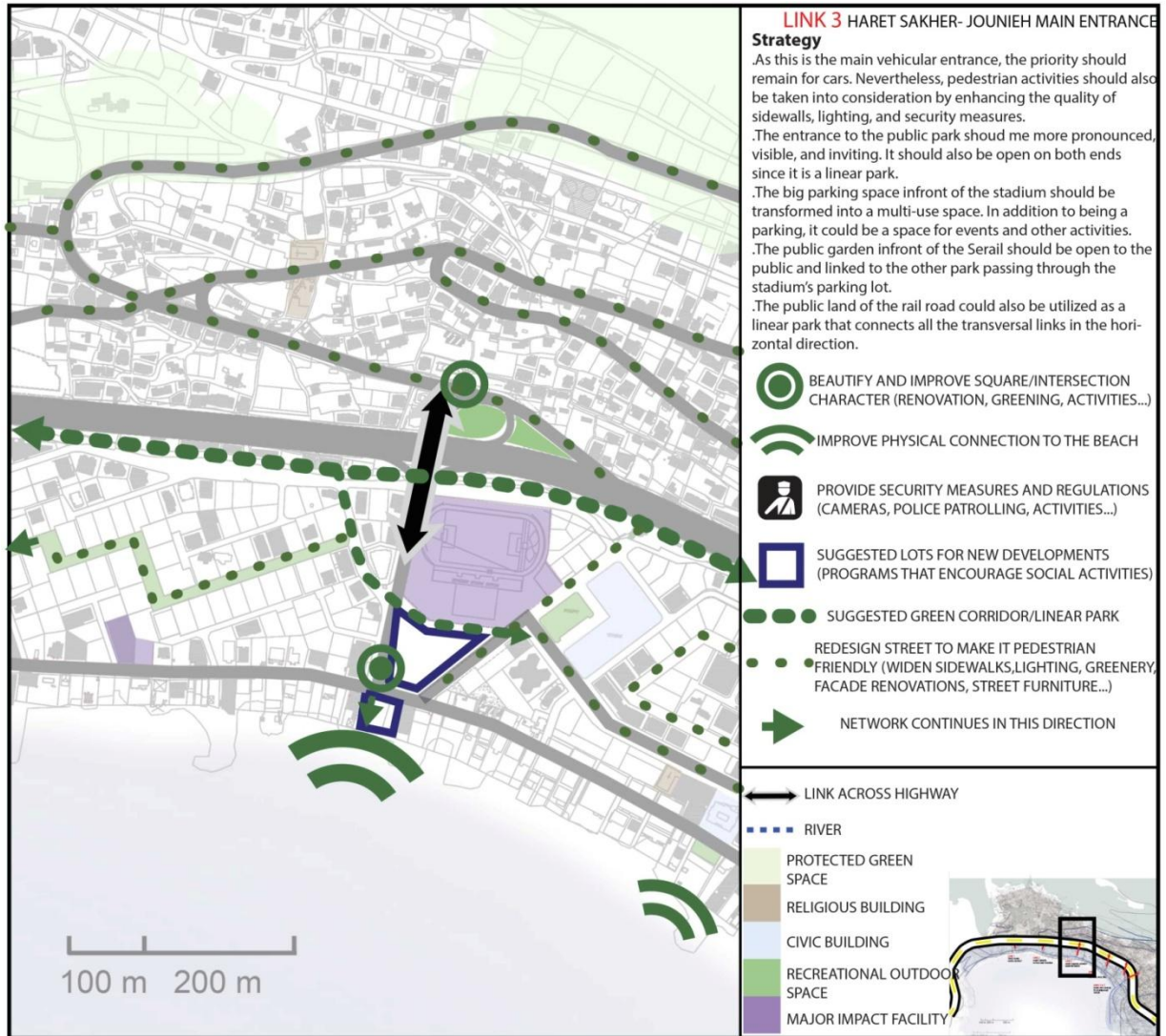


Figure 20. Link 3 strategy (Koobayssi, R., 2018)

Although this is a main vehicular link and should stay that way, it needs some work on its pedestrian qualities. The sidewalks need renovation, lighting, greening, and furnishing. In addition to that, the huge parking space could be transformed into an activity

area while still keeping the parking inside. A pedestrian path should be included between the stadium and the parking to connect the public park to the Serail (which has a closed public green space). A catching open space must also be created at the end of the link since this is the entrance to Jounieh, and the character of this street should be enhanced to become more welcoming and open to the public. Last but not least, the railroad that could be transformed to a linear park would connect this link horizontally to adjacent zones and links (Fig. 20).

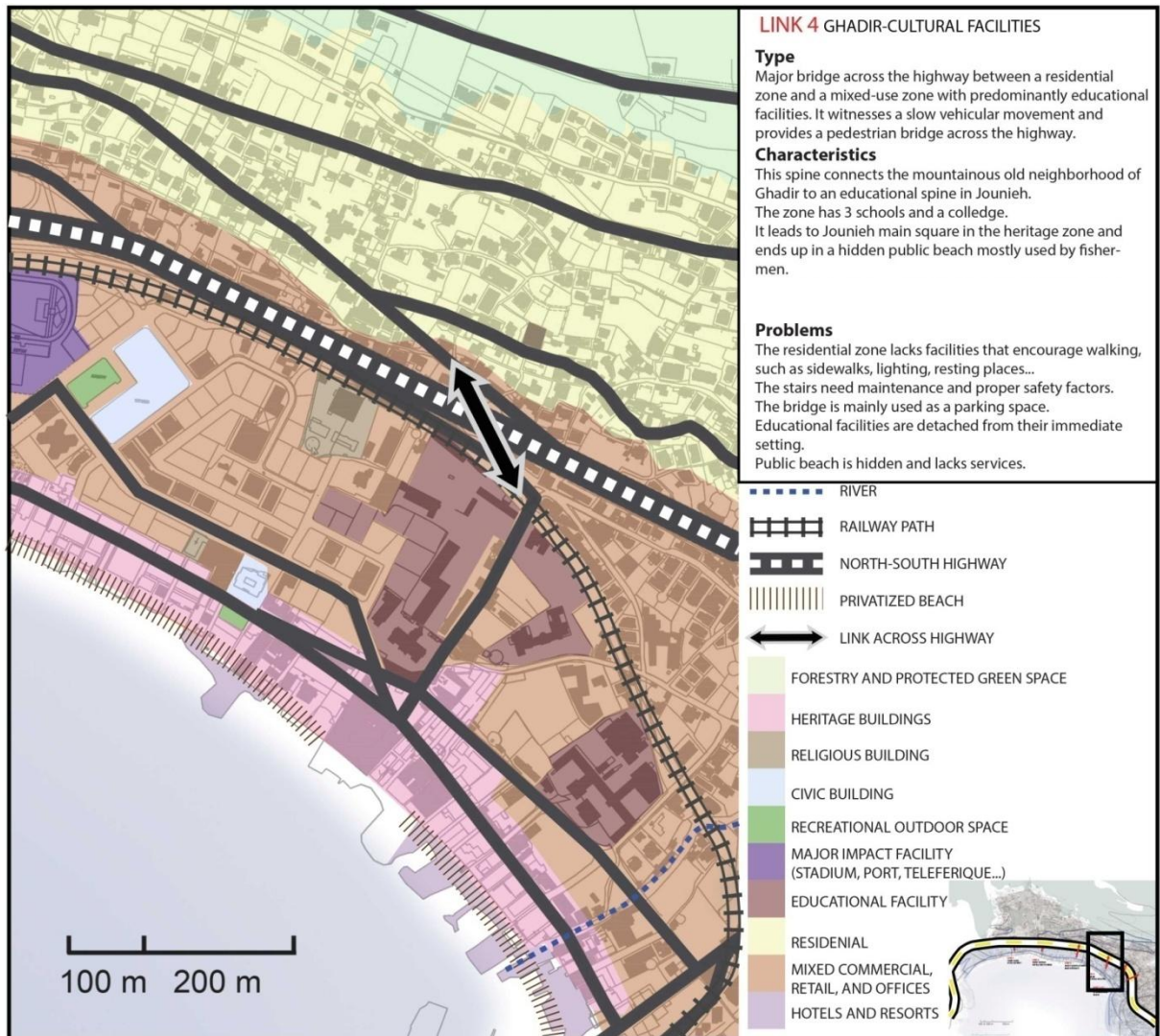


Figure 21. Link 4 characteristics and problems (Koobayssi, R., 2018)

This is one of the earliest connections between the mountain and the coast (Fig. 21). After the highway was built, this connection was raised into a bridge that has become a major local connector across the highway today. The bridge links the residential mountainous side of Ghadir to Jounieh square in the coastal part, passing through an institutional and educational zone. It has more than 6 educational institutions and one

medical center. It is close to the old municipality building and the heritage zone. Although this is a major local link, which means that it is used by residents to meet their daily needs, this link is not pedestrian friendly. This problem is due to the lack of sidewalks and facilities, in addition to the lack of activities in the educational zone.

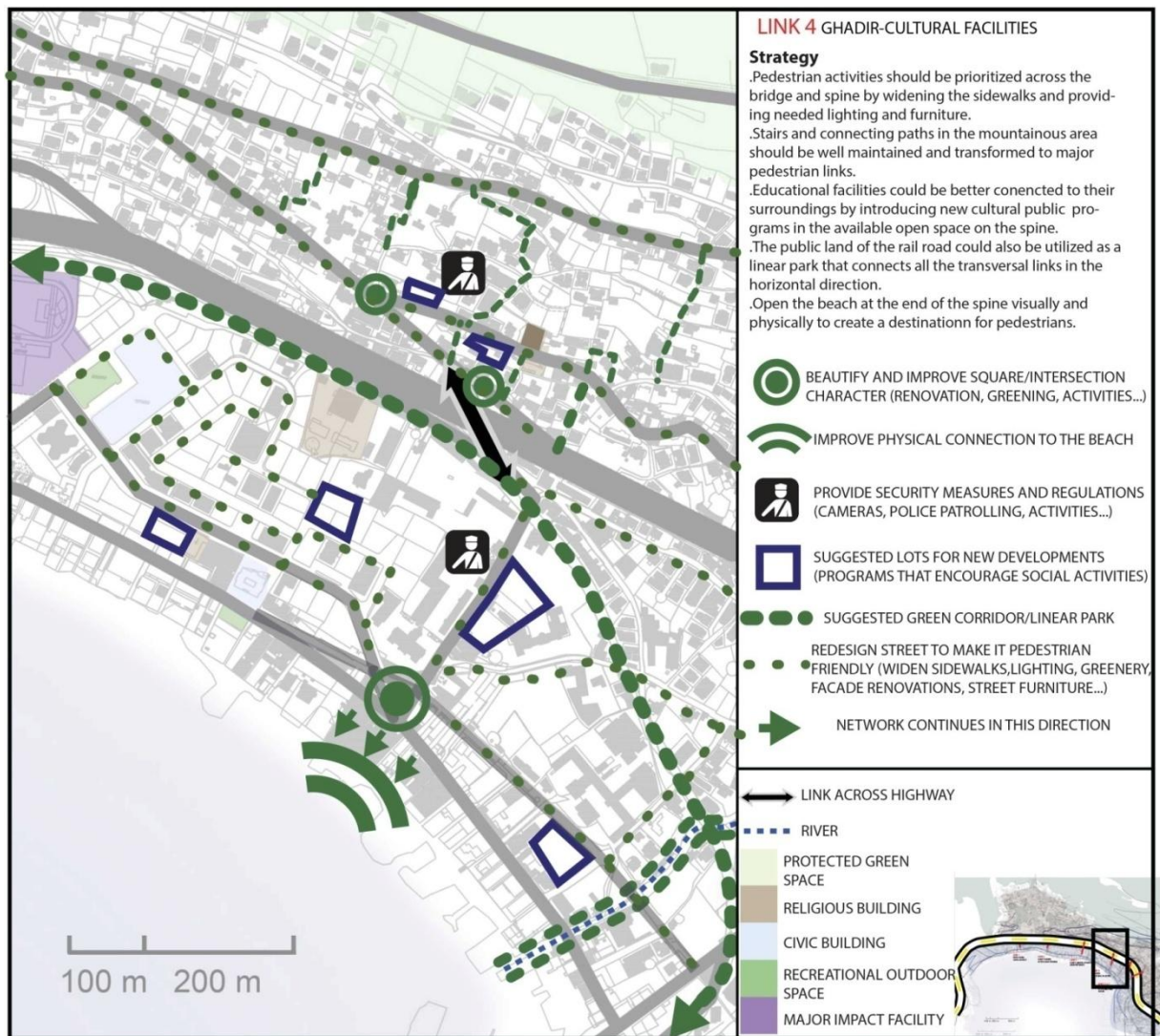


Figure 22. Link 4 strategy (Koobayssi, R., 2018)

The main strategy on this link is to prioritize pedestrian activities along the spine. In the mountainous zone, there are plenty of inaccessible pedestrian paths and stairs that should be open. In addition, all streets must have well-lit and maintained sidewalks, leading to an open public space on the beach. The educational facilities should be better connected to the urban fabric, especially during cultural events. The ground floor should be animated to create a friendly environment all day long. Last but not least, the railroad could connect the spine horizontally to the adjacent zones via green pedestrian and cycling paths (Fig. 22).

I chose this link to be my intervention area in the next section. My choice was based on the richness of this spine that connects an old residential neighborhood to Jounieh square across a dead educational zone, reaching a closed public beach. This variety in land-use and character, as well as the layering of different types of transportation along the spine makes it an ideal zone to propose a design intervention.

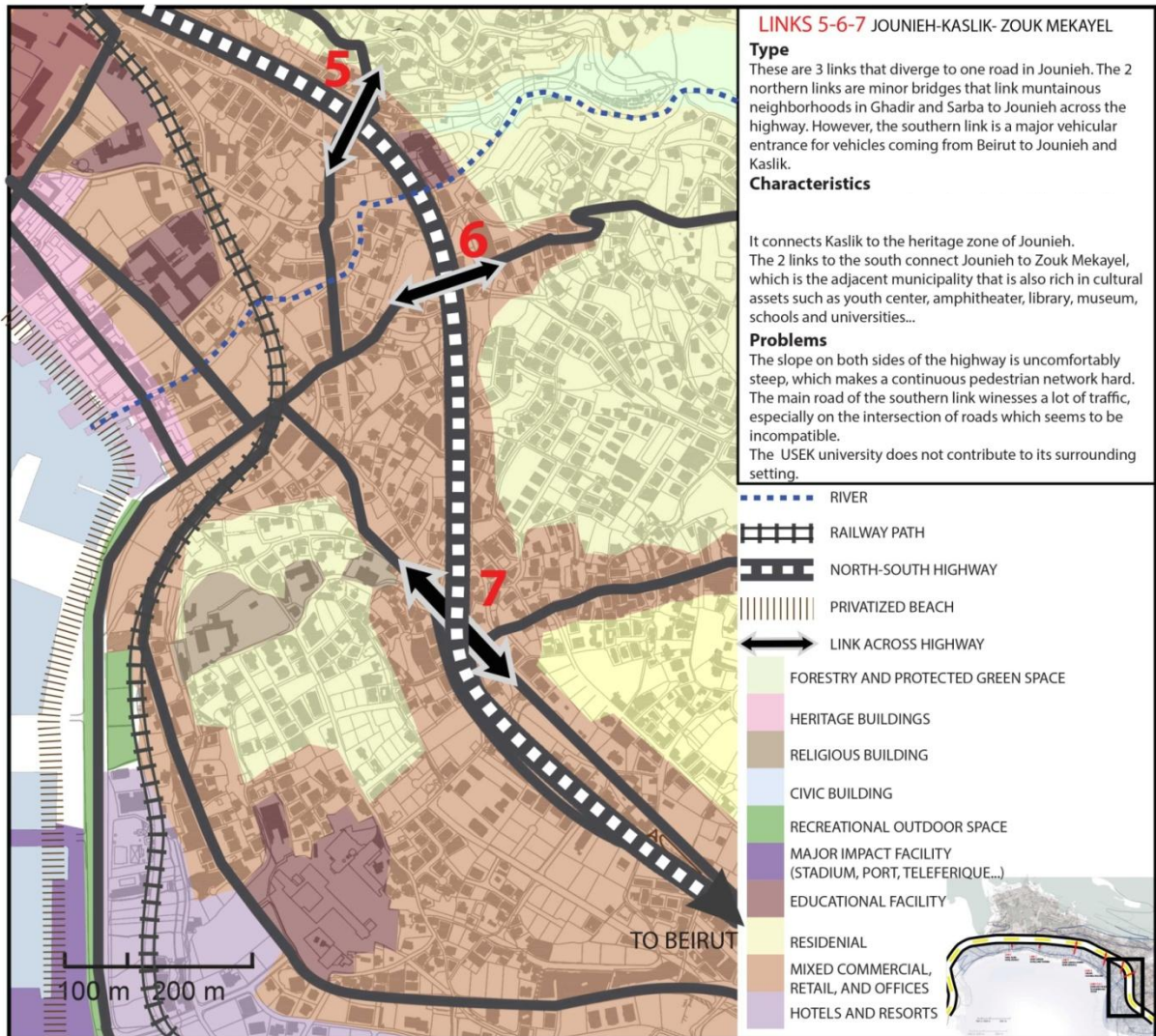


Figure 23. Links 5-6-7 characteristics and problems (Koobayssi, R., 2018)

Links 5 and 6 are 2 minor local connectors across the highway, used by local residents only. They connect mountainous Sarba to the coastal zone. However, link 7 is another major vehicular entrance, especially for vehicles coming from Beirut (Fig. 23). It also connects Jounieh to its adjacent municipality of Zouk Mekayel. This zone has strong slopes, preventing major pedestrian movements. In addition, the roads have heavy traffic

most of the time, especially on the intersection that is not designed to handle this number of daily commuters. The Holy Spirit University of Kaslik (USEK) which is a major local and national university, plays little role in its surroundings and is visually and physically disconnected. Last but not least, a polluted river passes through this zone, hidden and unapproachable in most of the cases.

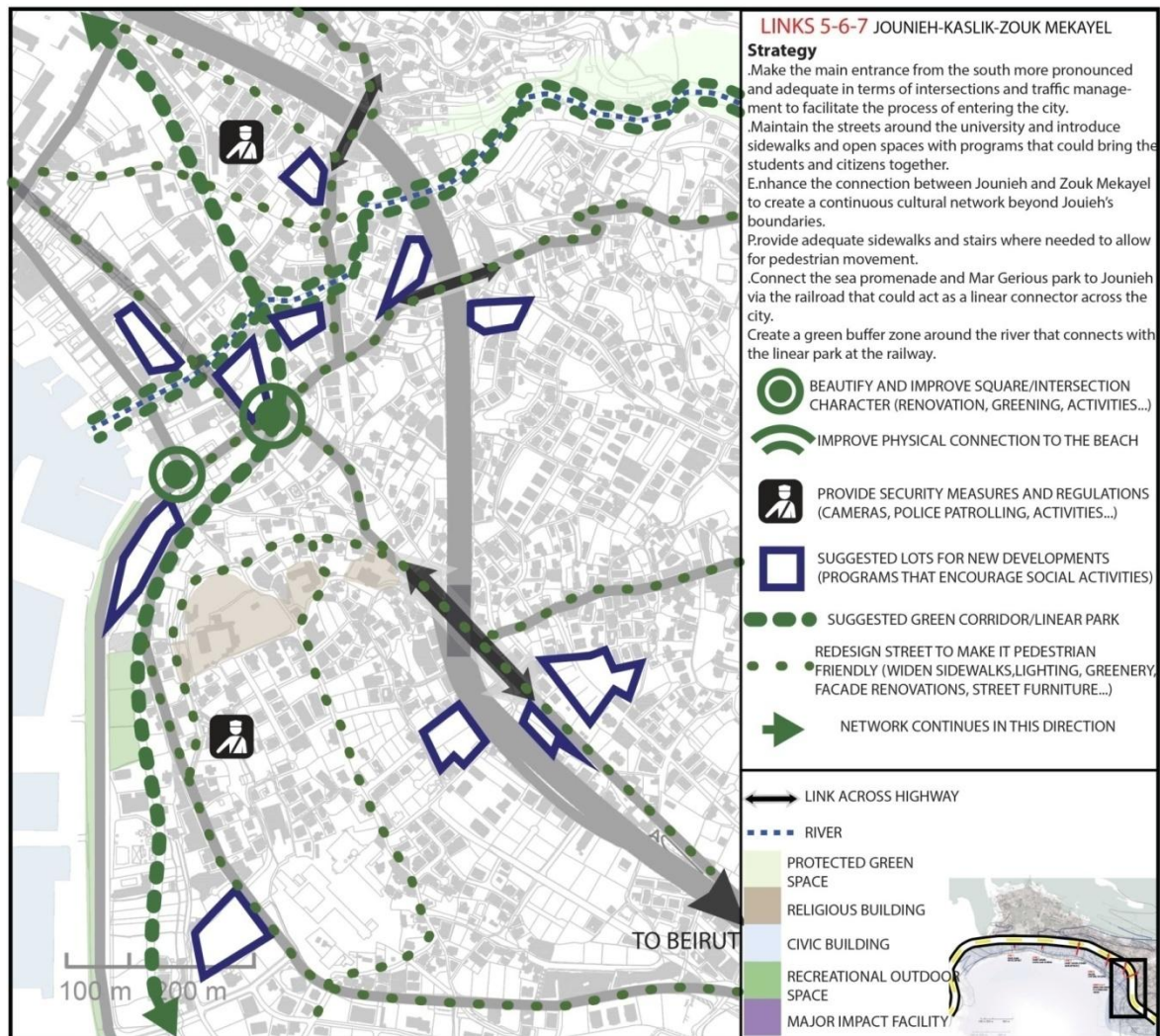


Figure 24. Links 5-6-7 strategies (Koobayssi, R., 2018)

First of all, the major vehicular entrance needs a traffic management plan and a renovation for the roads that connect to it to facilitate the process of entering the city. The streets connecting to the links and to the university must become more inviting for pedestrian use by widening the sidewalks and adding needed street furniture. New programs and land-uses should be encouraged around the links and next to the university by providing a system of incentives to encourage pedestrian activities. A green buffer zone should be created around the river, which in turn needs to be cleaned. This buffer zone could connect to the potential linear green space across the railroad, thus connecting this zone to other links horizontally (Fig. 24).

CHAPTER VI

NEIGHBORHOOD-SCALE ANALYSIS

6.1. Spatial data

My intervention area is the link between Ghadir and Jounieh square. This link, as discussed earlier, is rich in many layers: transportation hierarchy, character zones, land-use and others. These layers make it a good case to present a possible solution for connectivity. In addition, the zone has a potential to be transformed into a cultural hub and attraction center in Jounieh and beyond. In the next section, these layers will be mapped and analyzed to generate a synthesis map and a detailed strategy for the zone, followed by a design intervention.

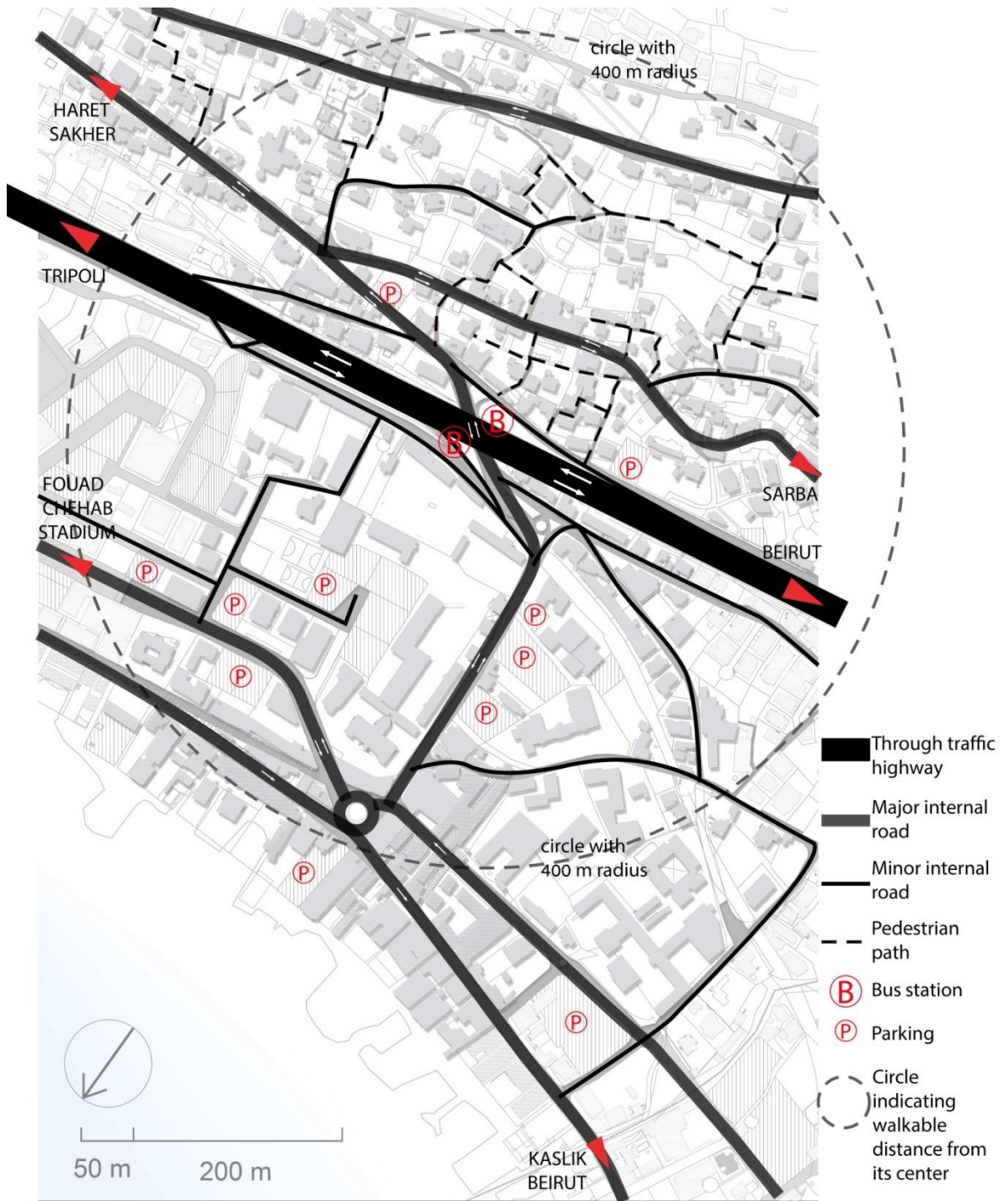


Figure 25. Transportation diagram (Koobayssi, R., 2018)

The major transportation element in this zone is the North-South highway that cuts through Jounieh (Fig. 26). The entrances from this highway to the neighborhoods are not major vehicular entrances and are usually used by the residents or people who work on this spine. There are bus stops on both sides of the highway under the bridge, with stairs that connect them to the bridge. The spine is almost independent from the highway and goes above it, providing an appropriate slow traffic local link across the highway. The mountainous zone has a relatively dense network of pedestrian paths and stairs that create a porous urban fabric, but these paths are not all open nor maintained.

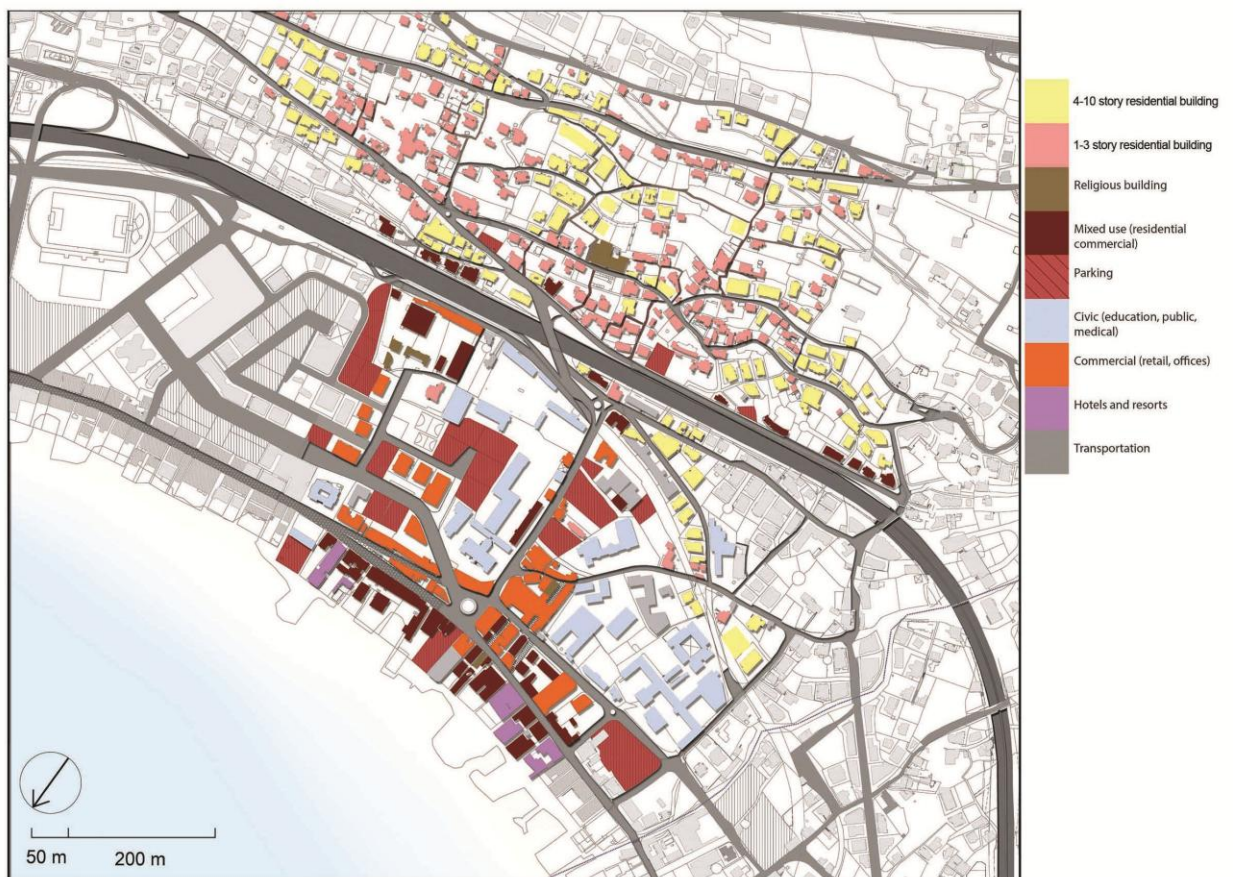


Figure 26. Land-use (Koobayssi, R., 2018)

Diversity is a major component to achieve walkability (Choi, 2012). The functions in this zone vary across neighborhoods (Fig. 26). Starting from the mountains, most of the buildings are residential. There exist some shops for daily needs such as bakeries, small minimarkets, vegetable shops... Bigger shops appear on the ground floor of buildings on the highway, while remaining mainly residential. Educational institutions dominate the zone between the coastal road and the highway, along with some banks and office buildings. Residential buildings also appear in the area to the south of the educational zone which was formerly connected to the mountainous area before the introduction of the highway. On the coastal road (which is a protected heritage zone today), many coffee shops and retail shops appear, including few remaining handcrafts and professions. Last but not least, many resorts and hotels appear on the beach, exploiting and privatizing its shores. This variety in functions across the streets creates complementing nodes which is a basic condition for a walkable network.



Figure 27. Cultural assets in Ghadir (Koobayssi, R., 2018)

As defined by the Economic Development Department of the city of Austin, Texas earlier, a cultural asset is anything that holds value due to its contribution to the community's creativity, knowledge, traditions, and vitality. The neighborhood of Ghadir houses 6 educational facilities which occupy a significant portion of land, along with other public and medical institutions (Fig. 27). This gives the area an educational-cultural identity that is very specific to this zone. Moreover, there are 2 churches; one in the mountainous zone and the other across the highway, in addition to other nearby churches that have historical importance. Churches serve as cultural facilities for being a gathering

space for people, especially in Ghadir whose residents still visit the church weekly. Churches in Jounieh also organize several religious festivals that bring together all of the citizens of Jounieh. The municipality building also adds to the cultural facilities since it hosts many cultural activities including festivals, seminars and exhibitions... For most visitors, the image of the heritage zone is at the heart of the identity of Jounieh. This image, along with the less popular image of similar houses in the mountainous zone, enrich the cultural identity of the city for citizens and visitors alike. Last but not least, the open portion of the beach also serves as a gathering space for fishing and leisure, adding to the opportunities in this zone. All of these assets serve as opportunities. Today, each asset stands alone, disconnected from other parts of the city which weakens its role in creating a well-connected urban fabric.



Figure 28. Character zone: Institutional/educational (Koobayssi, R., 2018)

The major character zone that is distinct about this link is the institutional and educational zone (Fig. 28). It lies in the middle of the spine, between the mountainous part and the coastal part. As much as this zone holds potential for the area, it also creates an obstacle due to its dead character, especially at night. The institutions are closed from the streets and do not offer any kind of visual and physical attraction for pedestrians. In addition, afterschools close, the street becomes totally empty and unfriendly.



Figure 29. Character zone: Privatized beach (Koobayssi, R., 2018)

This beach, along with most of the beaches in Jounieh, was privatized during the civil war (Fig. 29). However, there are some unused spaces in between. Although decree number 17621 protects the passages between buildings that lead to the open beach, most of these passages are closed today and used for private reasons. The beach holds a lot of potential to be transformed into an open public space, a space that most residents in Jounieh long to have today.



Figure 30. Character zone: Traditional buildings (Koobayssi, R., 2018)

Jounieh's heritage zone is one of the main characteristics that create Jounieh's identity. However, the traditional buildings are not exclusive to the protected heritage zone; there are similar buildings of a residential nature in the mountainous zone as well (Fig. 30). However, those are jeopardized by the building law and are slowly being replaced by new high-rise buildings.

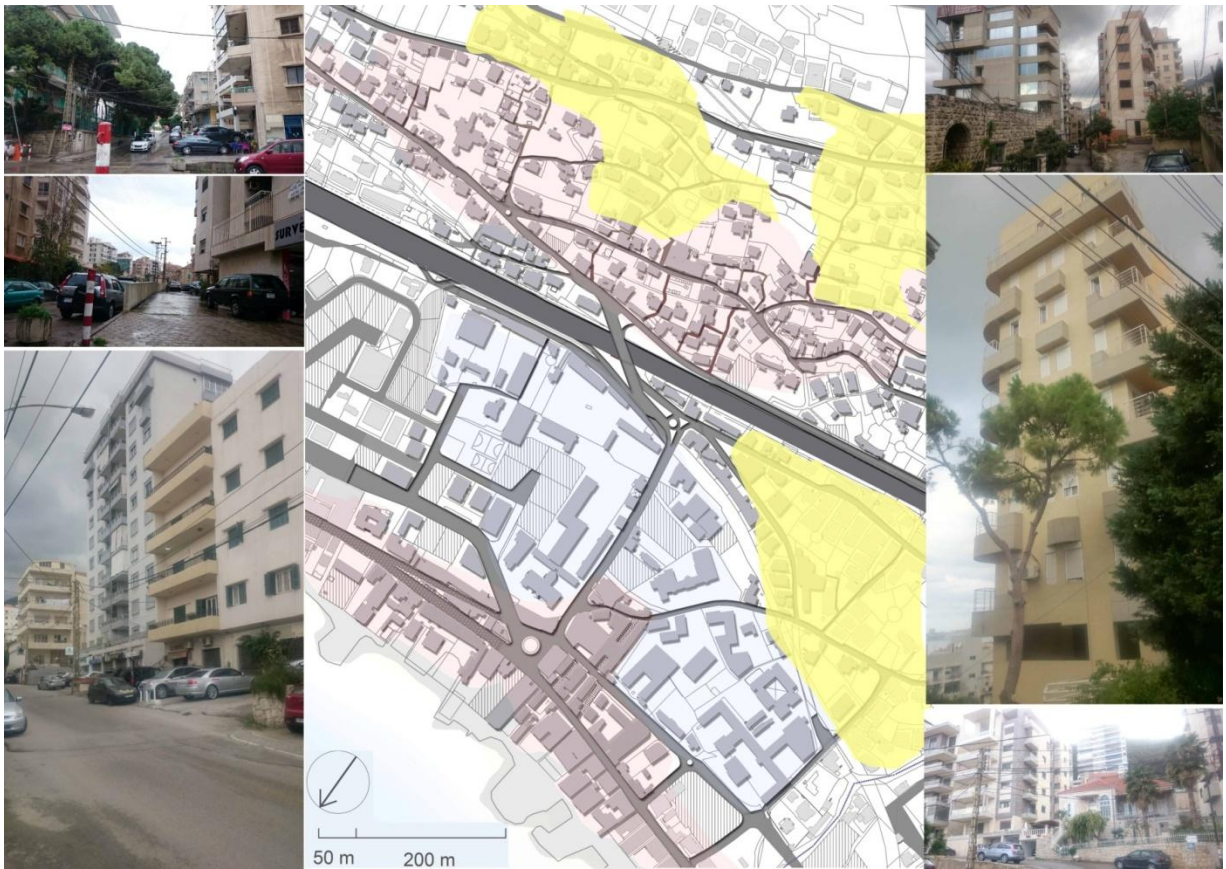


Figure 31. Character zone: New residential buildings (Koobayssi, R., 2018)

New residential neighborhoods have emerged in this zone (Fig. 31). These buildings are mostly high-rise with contemporary finishing. Some of these buildings are built and inhabited by relatives and family members, and others attract residents from outside the city who come to work in Jounieh. Many buildings are replacing older houses either for profit or for expansion needs(as the family grows).

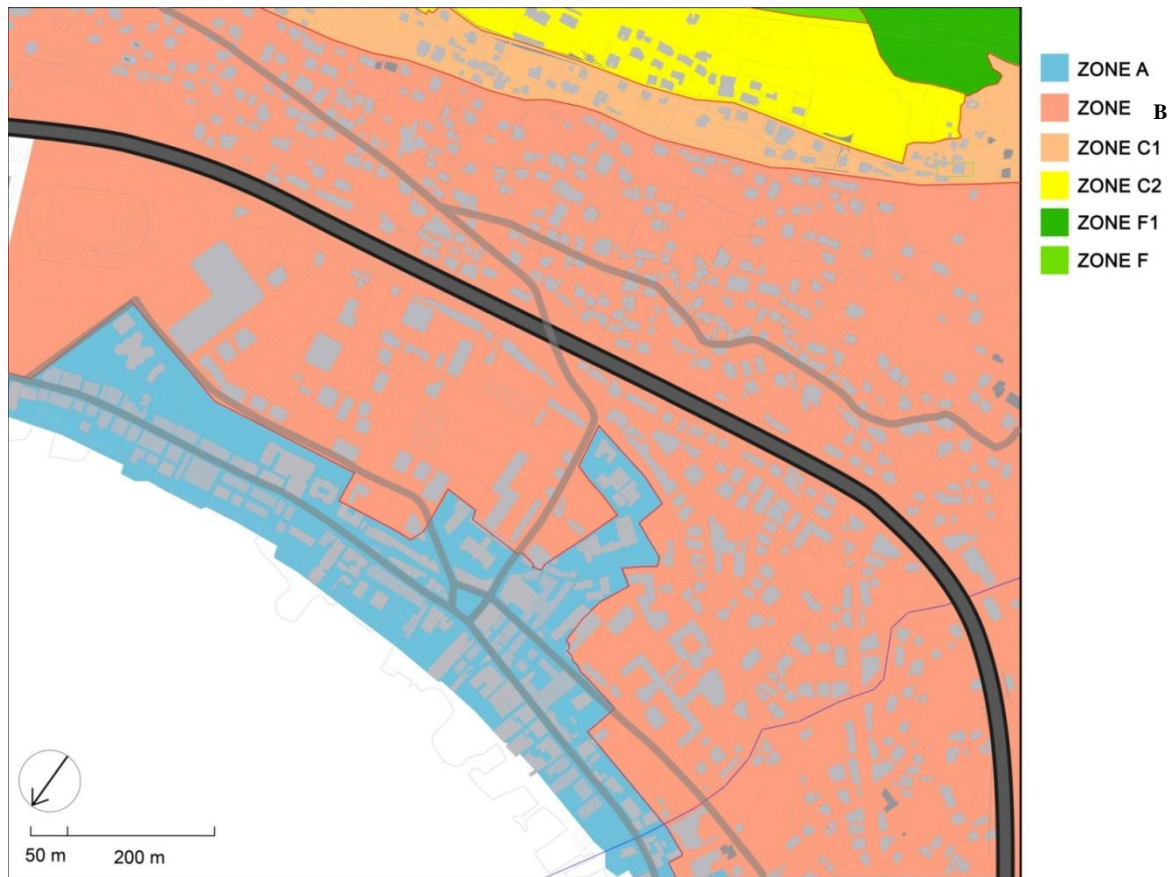


Figure 32. Zones as per the building law by the Directorate General of urban planning in Lebanon (Koobayssi, R., 2018)

The area is basically divided into 2 major zones, A and B (Fig. 321). Zone A is the protected heritage zone, while zone B is the zone with the highest exploitation ratio in Jounieh, stretching from the heritage zone, across the highway, and up the hills. The traditional houses in the mountainous zone fall under zone B, which puts them under the threat of being replaced by high-rise buildings.

ZONING LAW

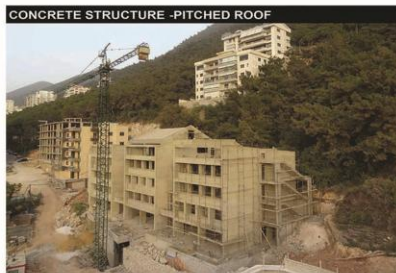
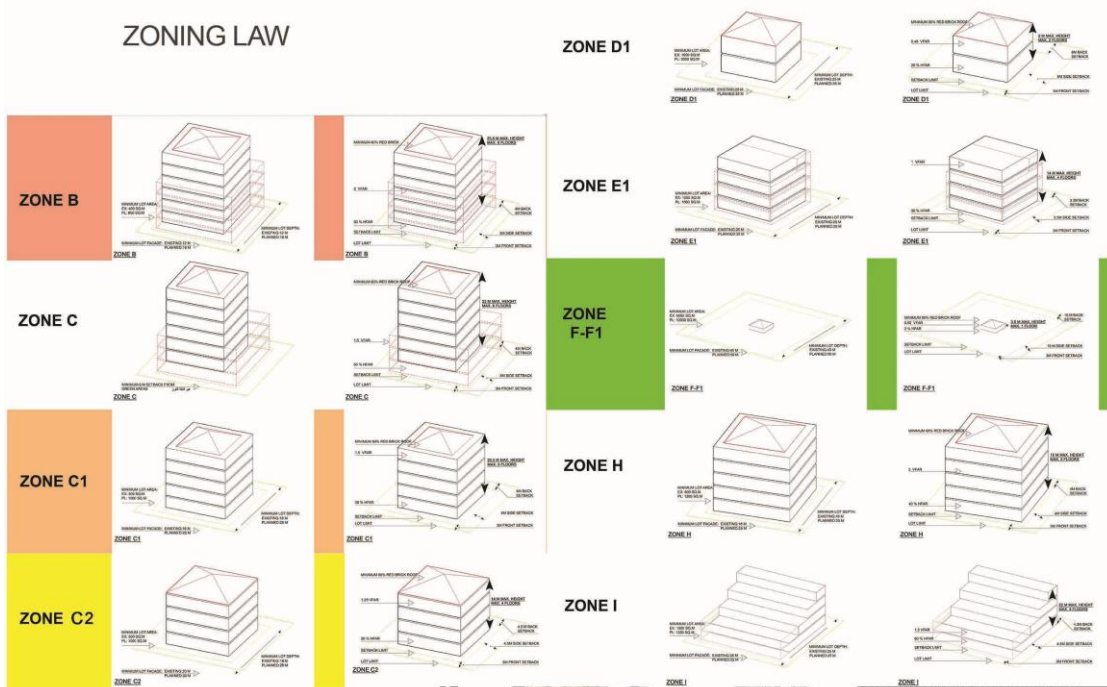


Figure 33. Illustration of the building law of the different zones (excluding the heritage zone). (Koobayssi, R., 2018)



Figure 34. Illustration of the special decree that protects zone A, which is the heritage zone (Koobayssi, R., 2018)

As shown in the diagrams above (Fig. 33 and Fig. 34), there is a huge gap between zone A and the adjacent zone B. This gap creates a visual disconnection that will grow stronger with time. In addition, Zone B covers the majority of the area, leaving no place for creating a unique character for Ghadir, which still looks and functions as a village, although its fabric is gradually being transformed into high-rise and dense urban fabric. Although this particular problem in Jounieh will not be addressed in the intervention, it is recommended that this law should be revisited to deal with each neighborhood and its specificities instead of generalizing and erasing all traces of identity in the built fabric.

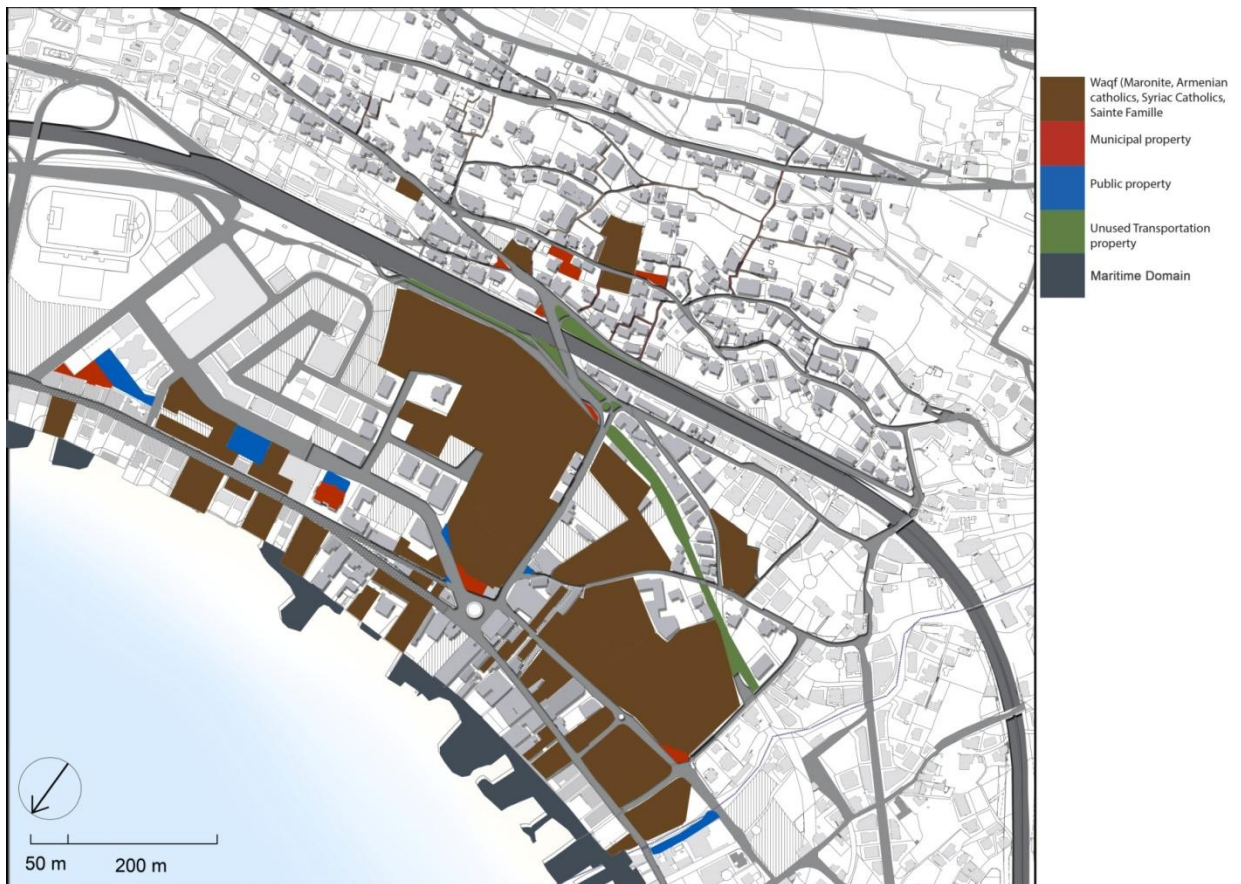


Figure 35. Land ownership (Koobayssi, R., 2018)

As shown in Fig. 35, a big portion of the lots is owned by Waqf. There are a few lots that are municipal and public properties. These lots present an opportunity since they are scattered across the transportation network. Last but not least, the main public land lies in the transportation network itself since the roads constitute a large percentage of the land, along with the unused railroad. These linear networks present the most important opportunity to create a walkable environment.

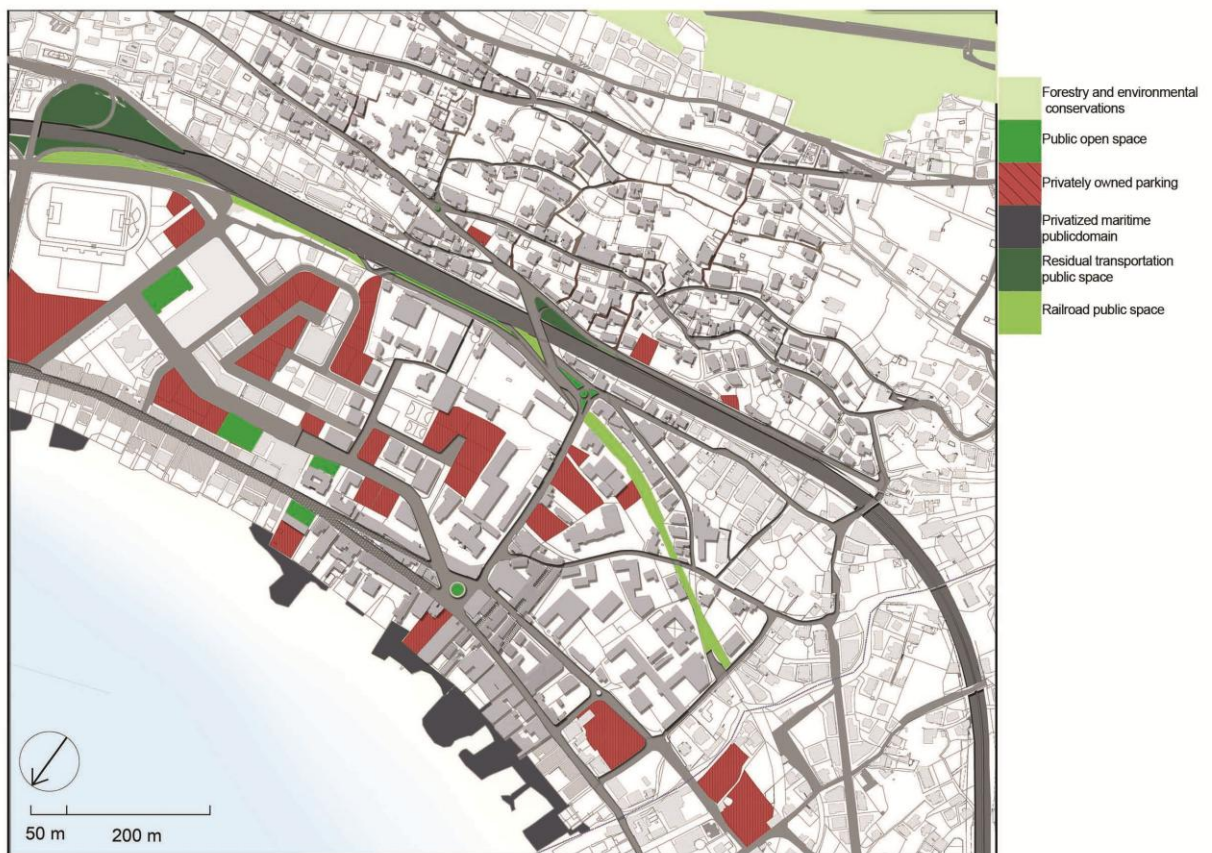


Figure 36. Accessible public and private open spaces (Koobayssi, R., 2018)

Most of the remaining open spaces in Jounieh are privately-owned public parking spaces (Fig. 36). There are only a few public gardens: a small park next to the municipality and a closed park next to Serail. However, there are many leftover spaces that belong to the transportation network (around the bridge, the railway, block corners...). Last but not least, the main spine in this zone leads to an unblocked passage to the beach. By law, the beach is maritime domain and should be open to the public. However, sea encroachments during the civil war have led to the privatization of this beach.

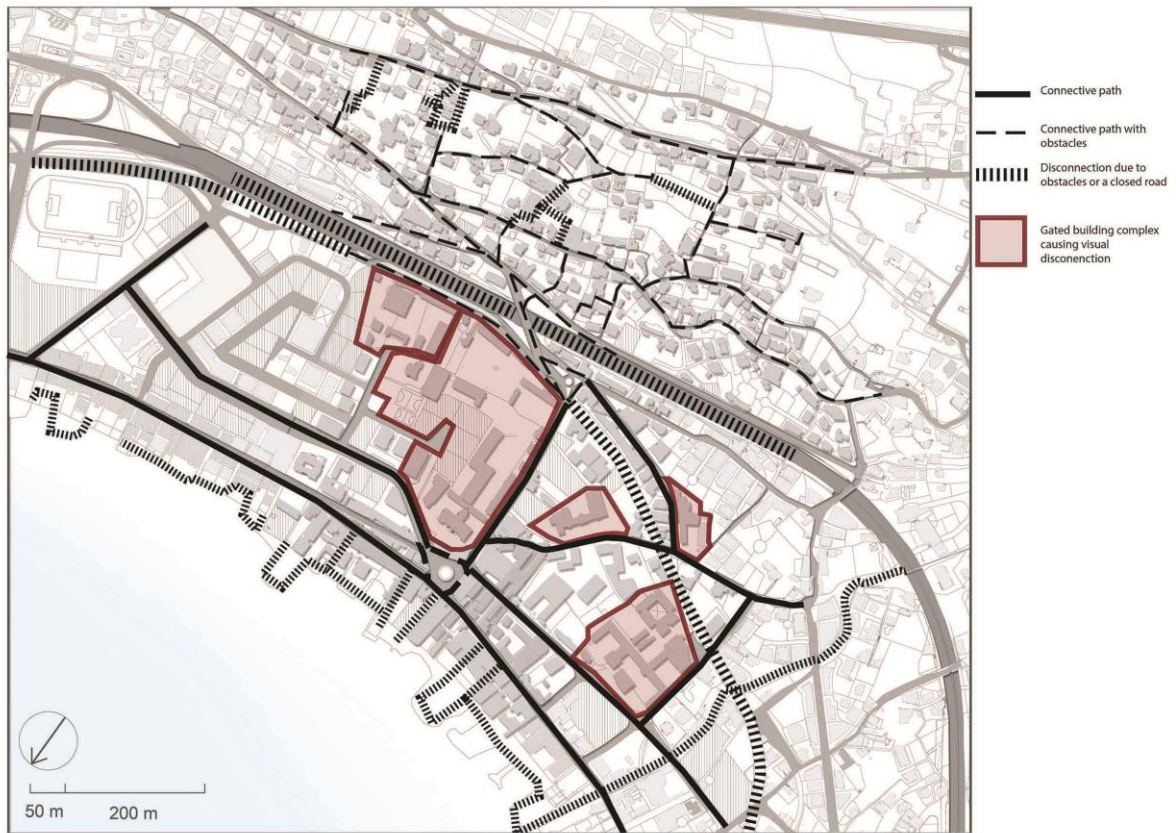


Figure 37. Connective and disconnective routes (Koobayssi, R., 2018)

The main problematic that will be addressed in this thesis is the disconnection between zones in Jounieh. The disconnection exists on many levels in this zone (Fig.37). First, the major disconnection occurs on the highway; it is almost impossible to walk across the highway without using the bridge. In this zone, the bridge does have stairs on both sides of the highway, facilitating the crossing. Other types of disconnections appear in the corridors and stairs that tie streets and neighborhoods in the mountainous zone or those that connect the main street to the beach in the coastal zone. According to citizens in Ghadir, those corridors have long played the role of ties that created a porous urban fabric, allowing people to move freely from one street to the other, leading to the beach, which is hardly

available today. There is also another form of disconnection that lies on the railway which is blocked and not safe for walking. The railway passes horizontally through the coastal zone, giving a chance to link all the neighborhoods together. This opportunity lies unused. Moreover, some of the streets present some obstacles, making them partially disconnective for pedestrians. These obstacles take the form of cars parking on both sides, garbage, uncomfortable slopes, or unsafe pedestrian passages. Visual disconnection is also important since it plays a role in isolating certain neighborhoods. The educational facilities and institutions create visual disconnection due to their high and long fences that surround them, creating isolation from adjacent streets.

6.2. Social data

In order to gain information about people's needs and preferences, I interviewed people from both sides of the highway. It was essential to collect this type of data to inform my design strategy and orient it towards people's needs. The reason why this process is divided into below and above the highway is basically to find out the differences regarding their recognition of disconnections across the network, in addition to acknowledging their needs.

A sample of 11 people were interviewed on both sides of the highway, making them 22 interviews in total. The set of questions was different in each zone, and they combined both, open and closed-ended questions. In the mountainous zone, the questions targeted mobility, needs, and special local interests, whereas in the coastal zone, the

questions were more about mobility issues. The interviews were informal in nature and the sample was chosen randomly, while trying to cover different age groups and genders. Most of the interviews took place inside shops, with owners or customers. However, some of them were with people walking on the streets, especially in the coastal zone and next to parking spaces. The data was collected in a total of 4 site visits, between 12:00 p.m and 4:00 p.m each. Each conversation took 10 to 15 minutes.

The first thing that I told the people I met was the fact that my interview serves my research as a student of the American University of Beirut (AUB). I explained a little about my project and stated that their participation is voluntary and would never affect them or their relation to AUB, and that no personal information or identifier will be recorded. After briefly explaining the purpose of my study and the importance of their opinions, most of the people whom I approached were cooperative. However, there were many who did not want to be involved.

In the mountainous zone of Ghadir, the questions were as follows:

- . What are the limits of your walking zone?
- . What places do you visit in Jounieh?
- . How do you go there? By car or walking? Where do you park?
- . How many cars do you have at home? Where do you usually drive? Where do you park?
- . What is missing in your neighborhood to make it more walkable?
(sidewalks, lighting, security, green areas...)

- . Are you interested in creating a network that connects you to Jounieh? Where would you like this network to lead? (public garden, souk, beach...)
- . Would you participate in cultural activities in Jounieh (exhibitions, open classes, sports, performances ...)?

For detailed information about the sample and answers, refer to appendix 1.

Whereas in the costal side (in the institutional and heritage zones), the questions were the following:

- . Where do you come from? How do you commute to Jounieh?
- . Why do you come here? How do you move inside Jounieh?
- . How can we make the city more walkable?

For detailed information about the sample and answers, refer to appendix 1.

The answers for these sets of questions were very informative and essential for my next step in the design intervention.



Figure 38. Results of interviews in the mountainous zone: walking distance and destinations (Koobayssi, R., 2018)

As a result of these interviews in the mountainous zone, I understood that most of the interviewees walk around their neighborhoods and to the church (Fig. 38). Some like to walk to Jounieh square to avoid traffic, whereas others prefer to use cars, especially females. All the participants visit Jounieh for shopping purposes. The majority also visits the public park or ATCL (promenade next to the Yacht Club) for a walk alone or with their families, and some take their children to school in Jounieh. More than half of the interviewees prefer to use their cars when they go to downtown Jounieh (6 to 7), whereas the others walk down the stairs in their neighborhoods as shortcuts to reach Jounieh. All the

interviewed women prefer to use their cars; they rarely walk there. Most of the families own more than 2 cars. The old houses do not have parking spaces, so they have to park on the streets, whereas the new residences have one or more parking spaces, which means that most of the times they have to park on the streets as well. Most interviewees agreed that their streets needed to be well maintained, cleaned, widened, free from obstacles, well-lit and secured. They also agreed that sidewalks are necessary for pedestrian activities, along with greening. Some of the other suggestions included beautification of the facades, assigning places for rest since the stairs can be hard to climb for the elderly, along with animation such as kids' playgrounds and others. All of the interviewees showed interest in the pedestrian network. They all agreed that it should be able to take them to Jounieh square and market. They also agreed that it should also reach a public place, whether it be the public garden, ATCL, or even further to Maamelteine beach. They welcomed the idea of being able to reach a public beach since they long to have such a place to visit with their families, but they doubted that this could ever be done in the real world. The participants explained that they usually participate in festivals and religious activities organized by the municipality, and most of them showed eagerness to participate in other types of cultural activities, with the coordination of the local schools and colleges. Only one of the interviewees has heard of the exhibitions that were performed in the municipality, and he had not attended. The participants explained that it would be more successful if the activities were performed by students so that their families would attend, and that these events should be well managed and advertised. Some showed doubt that cultural events could succeed in Jounieh.

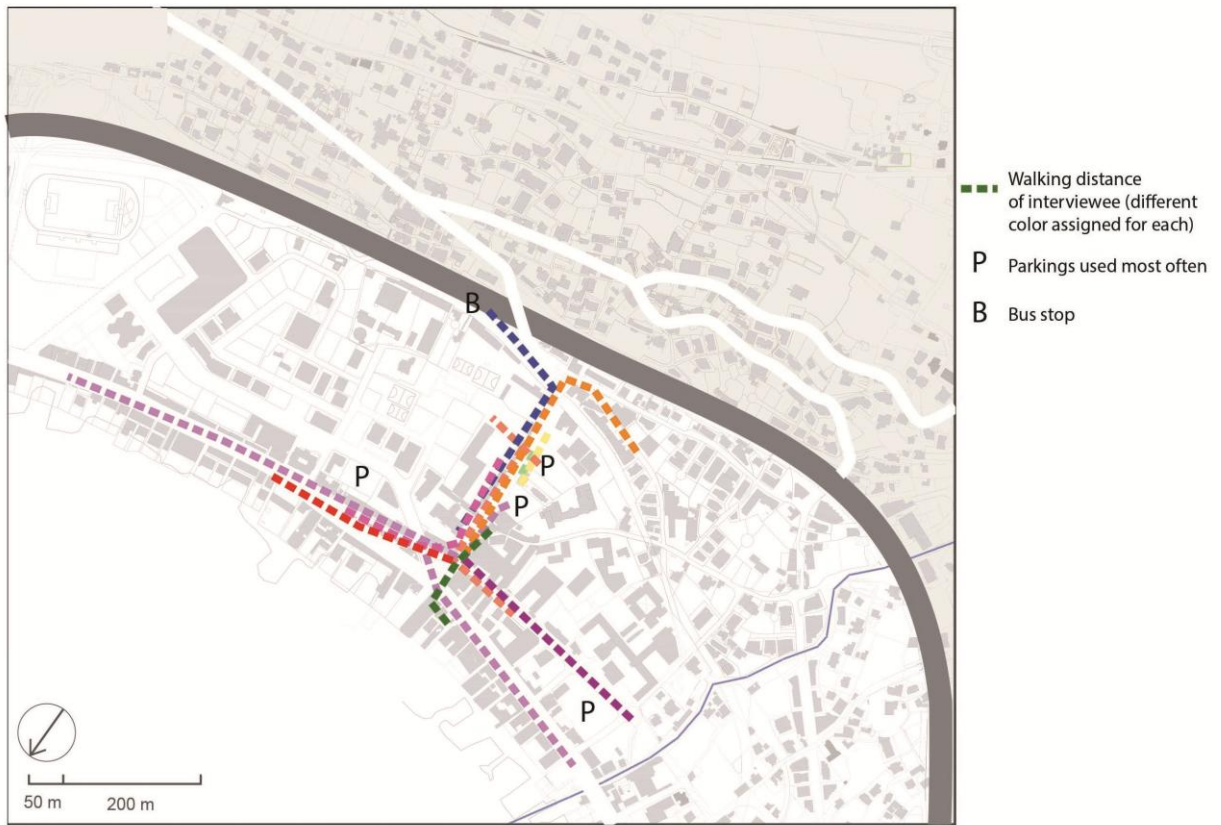


Figure 39. Results of interviews in the coastal zone: walking distance and parking locations (Koobayssi, R., 2018)

In the coastal zone, most people who come to area live in the neighboring villages and towns and come for work. They either own shops or are employees. Others come to finish some work in the banks, or to shop. Few people actually live in the same zone. Most of them come by car, only a few walk there, and only one comes by bus daily (Fig. 39). Car owners usually park in one of the big parking places on the street, and they walk around to meet their needs without having to take their cars during the day time. All of the interviewees agreed that the streets need to be renovated to encourage more pedestrian activities; they explained that the sidewalks were very small and full of obstacles. Most

importantly, many interviewees asserted that the spine under study is dead after 3:00 p.m, which is after all students leave their schools. Some of the reasons they suggested were that the municipality did not give much attention to maintain and animate the streets. The idea of opening the beach interested most of them who said that it would create a nice focal point for locals and visitors, especially during the events season where there is no open public space for gathering. Many interviewees compared Jounieh to Byblos and wished that the municipality could do similar efforts for enhancing the city.

A very important note is that during the interviews, I noticed that people who are in the mountainous zone do not regard the highway to be a huge obstacle, since they cross the bridge almost daily and they somehow got used to its existence. This conclusion was achieved after hearing them explain about the streets and neighborhoods without referring to the highway, and then by asking them directly about it. On the other hand, most of the people who were interviewed in the coastal zone saw the highway as a dead end and never needed to cross it.

CHAPTER VII

URBAN DESIGN INTERVENTION

7.1. Strategy

After the spatial and social analysis in the intervention zone, a synthesis map that summarized the most important notes from the analysis is produced (Fig. 40). After synthesizing the information, I started thinking of a strategy to meet the objectives (Fig. 41). I wanted to create a network that will connect neighborhoods in a culturally oriented open space design. The design had to deal with the concerns that were deduced from the interviews as well.

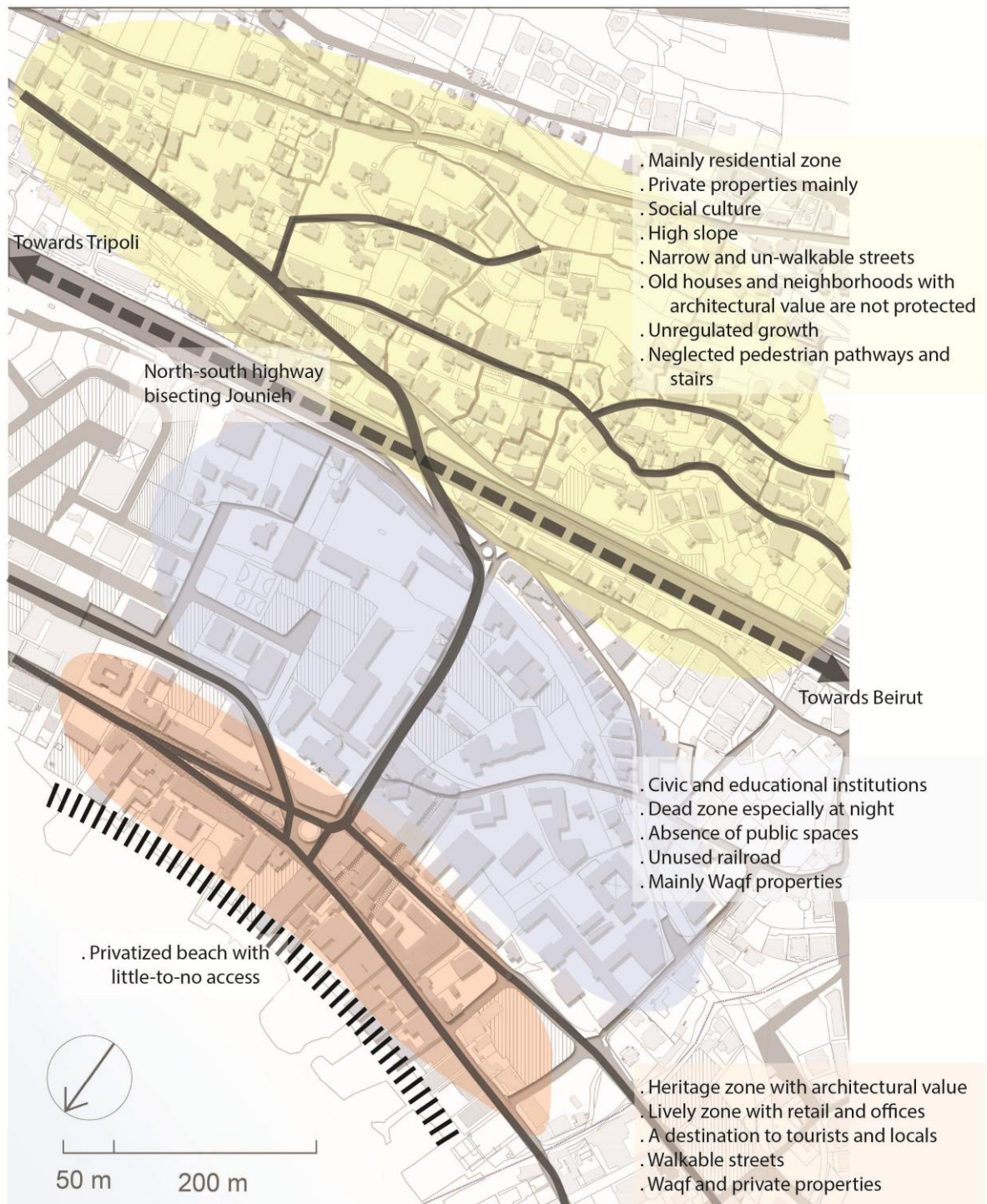


Figure 40. Synthesis map (Koobayssi, R., 2018)

The intervention area could be divided into 3 major zones, each with unique characteristics and problems (Fig. 40). The first zone is the mountainous part of Ghadir; it is mainly a residential area with mostly privately-owned properties. It has a socially cohesive community where family bonds are still dominant. The terrain has a relatively high slope, and most of its streets lack sidewalks and proper lighting. There are many old houses with architectural value that are threatened by the building law that has listed the area as a dense mixed-use zone, resulting in a non-integrated urban fabric. To allow for connection across the slopes, many passages and public stairs were provided a long time ago, most of which are unreachable today.

The second zone is the institutional/educational zone. It lies between the mountainous zone and the heritage coastal zone. It is separated from the first zone by the highway, and the only connection is via the bridge. This zone has 6 major educational institutions, a medical center, and more than 2 civic buildings. It is absent of open public spaces and is described as a dead zone due to the absence of activities on the street level. Most of the land is owned by different types of Waqf (Maronites, Armenian Catholics, Seriac Catholics, and Sainte Famille). The railroad passes through this zone, and its unused land is unreachable from the main spine.

The last zone is the heritage zone which lies directly on the coast. This zone is protected by the building laws that reinforces the architectural elements that give the area its identity in new buildings, while protecting the old buildings as well. However, some high-rise buildings were built during the civil war, disrupting the continuity of the urban fabric. Jounieh square lies in this zone, creating a node for residents above the highway. The streets are walkable; they have wide sidewalks, greenery, lighting, security, as well as

animation day and night. The zone is lively and is a destination locally and nationally. It houses many cafes and pubs, as well as resorts. Although it is adjacent to the sea, the pathways that lead to the beach are privatized, as well as the beach itself. Therefore, the main asset of this zone is actually hidden from the public, denying residents and visitors from their right to access the public beach.

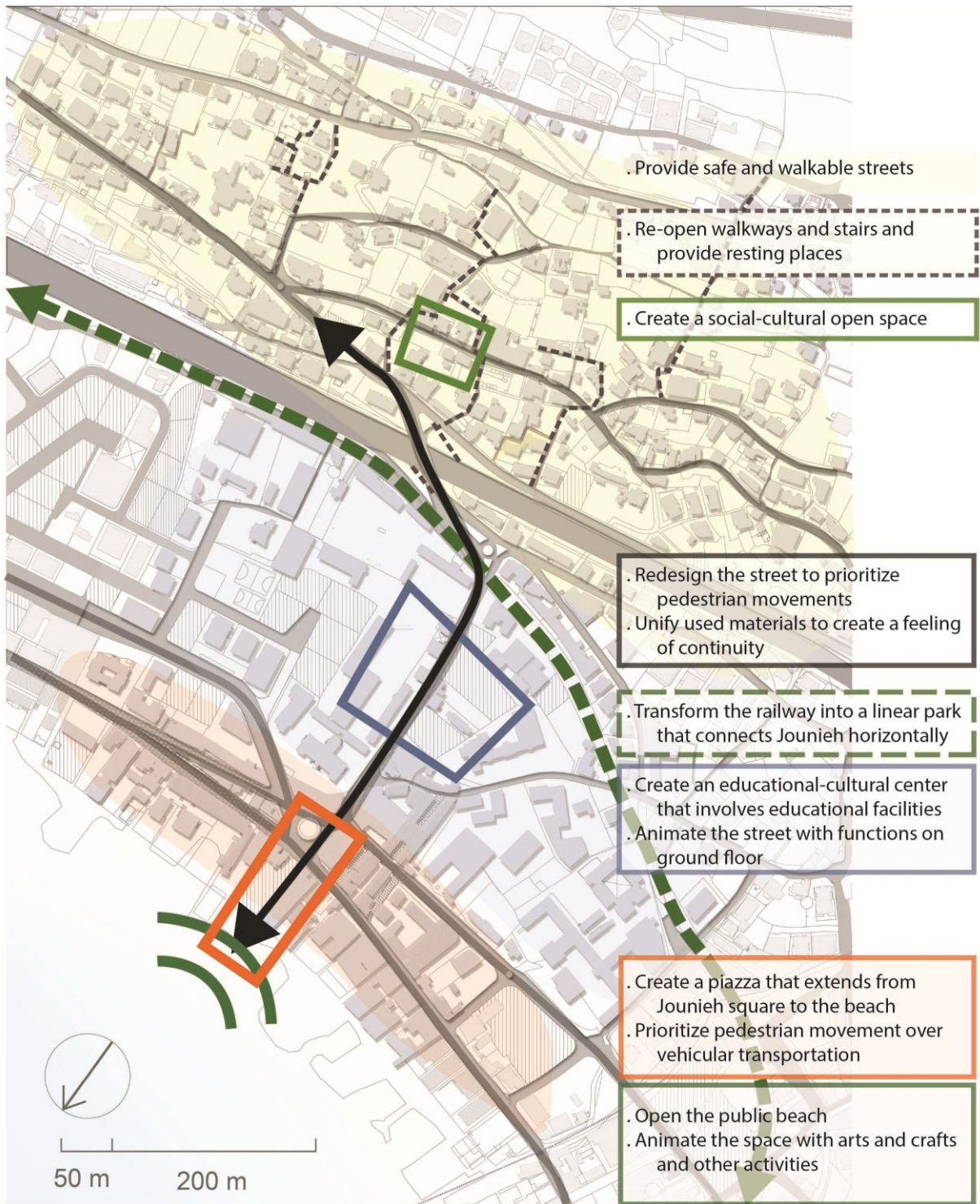


Figure 41. Strategy map (Koobayssi, R., 2018)

As a first step, each zone is addressed alone and dealt with its problems and unique assets, followed by the connection between the zones (Fig. 41).

In the mountainous zone, I wanted to celebrate the social culture and facilitate mobility. Therefore, I wanted to create an open space within a pedestrian network that revived the old paths and stairs. Providing an open green space for gathering and that could be reached on foot is essential for the neighborhood.

In the institutional zone, the main objective was to animate the street and create a pedestrian flow, while benefiting from the opportunity of transforming it into a cultural node. Creating mixed-use buildings in the heart of the zone with porous volumes and a cultural theme could bring back life to the spine and create a friendlier atmosphere for pedestrians. In addition, the railroad could link this zone to adjacent neighborhoods, reaching the sea promenade to the south, and the public garden and Maamelteine beach to the north and beyond. This horizontal connection could facilitate the mobility of pedestrians and cyclists towards their destinations in Jounieh.

In the heritage zone, there was a need to create a public node that could attract residents and tourists and tie the zones together. This public node should be opened towards the public beach to create an inviting open public space where many activities that celebrate the heritage and cultural identity of the zone could take place (arts and crafts, food culture, cultural events...).

Most importantly, the link across the highway should address the different layers of mobility (local vehicular, pedestrian, and the connection to the national highway). It should become a pedestrian-oriented bridge that links the zones to each other as well as to the highway and bus stops.



Figure 42. Catchment area for each zone (Koobayssi, R., 2018)

While dealing with each zone separately, the catchment area for each zone should be taken into consideration (Fig. 42). For example, the public space in the mountainous zone will mostly serve locals, and therefore should address their needs. However, the new cultural center in the institutional/educational zone has a bigger catchment area, serving

residents across the district since students and shop owners come from neighboring towns. Occasionally, this center might even have a bigger catchment area in case of hosting big cultural events. Last but not least, the heritage zone has the bigger catchment area already, attracting visitors from all over Lebanon and beyond. Therefore, this new open public space should be designed to serve this influx.

7.2. Design

In the next step, all the discussed strategies are translated into a physical plan. I want to make it clear that there is no one solution for the given intervention area; actually, there are many proposals that could target the defined problematic. In my proposal, I have chosen to discuss one detailed intervention that could be applied without the need for a relatively huge budget, nor the need to drastically change the physical environment. However- in addition to this proposal, there is a Step 2: As discussed in my case studies, most projects that target connection and pedestrianization take place gradually, this is why step 2 would be implemented after residents and visitors have accepted the initial changes and after they have started to alter their daily routines that are related to relying on walking more. The next step will take the pedestrianization initiative one step further to replace vehicular transportation in some routes. This proposal will make radical changes and will require a bigger effort and budget, which means that more stakeholders will be involved as well.



Figure 43. Design proposal- Step 1 (Koobayssi, R., 2018)



Figure 44. Zoom in plan, mountainous zone and bridge (Koobayssi, R., 2018)



Figure 45. Zoom in Plan, cultural and institutional zone (Koobayssi, R., 2018)



Figure 46. Zoom in plan, coastal zone and piazza (Koobayssi, R., 2018)

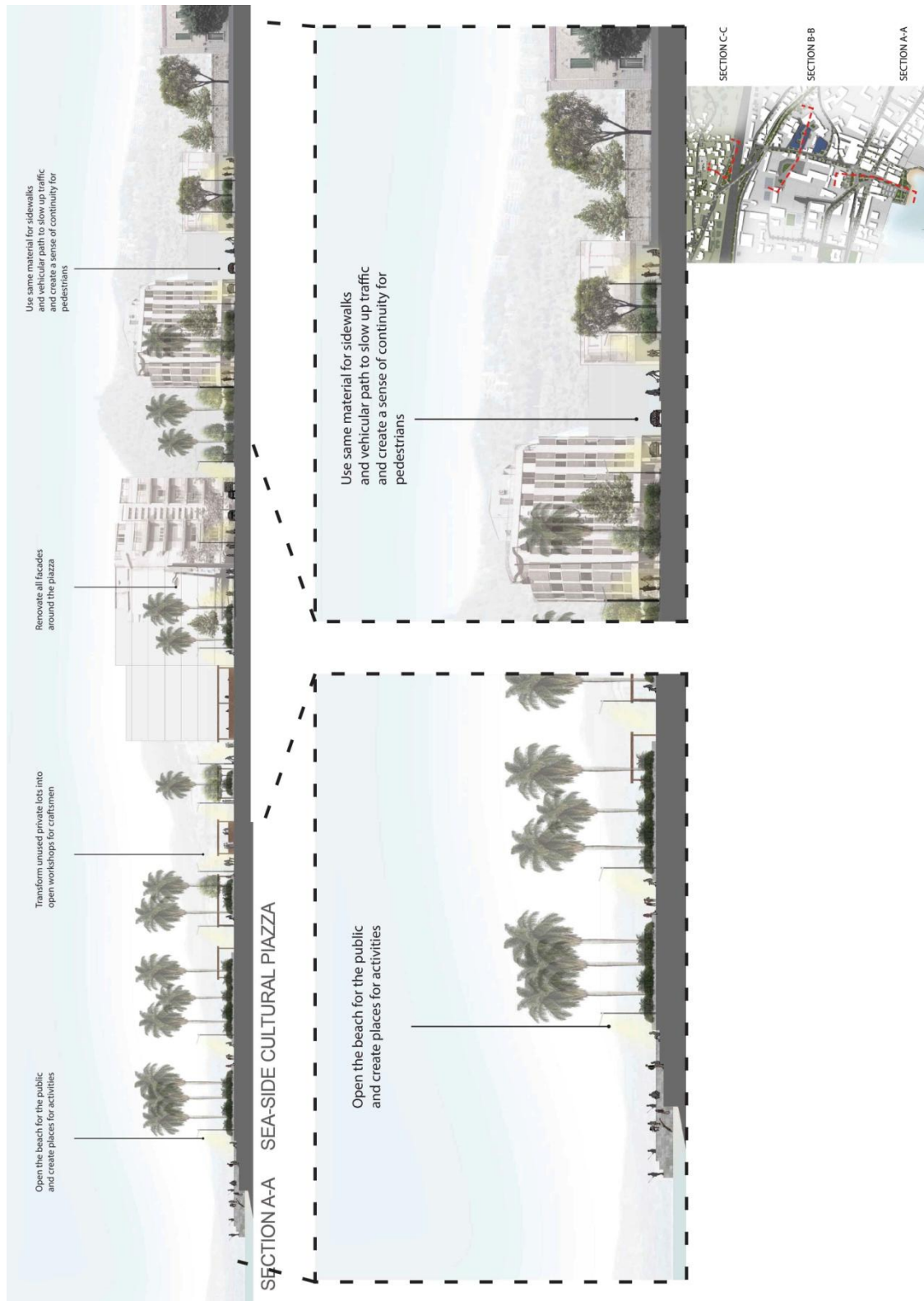


Figure 47. Detailed section A-A for the design proposal cutting through the piazza (Koobayssi, R., 2018)

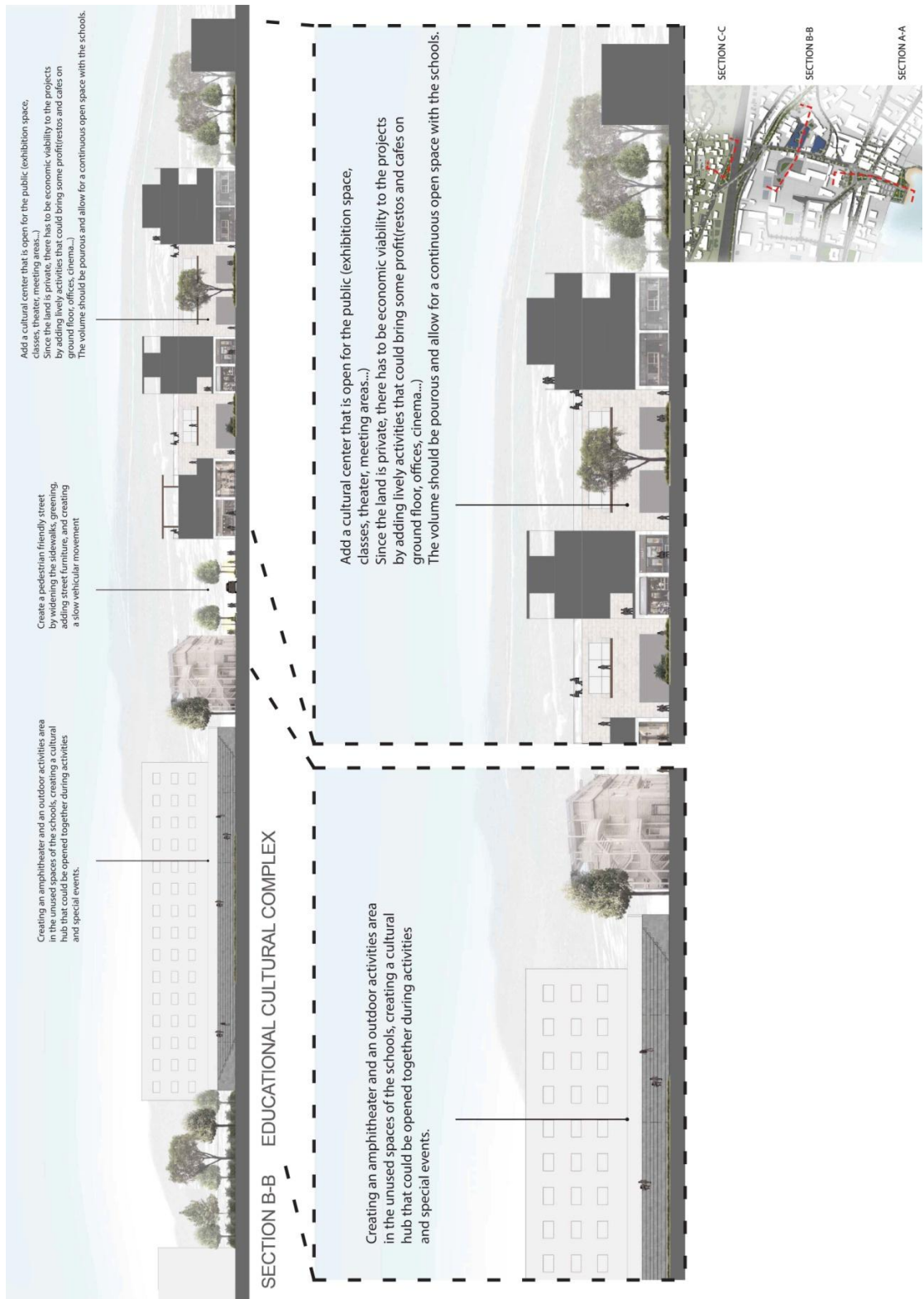


Figure 48. Detailed section B-B for the design proposal cutting through cultural zone (Koobayssi, R., 2018)

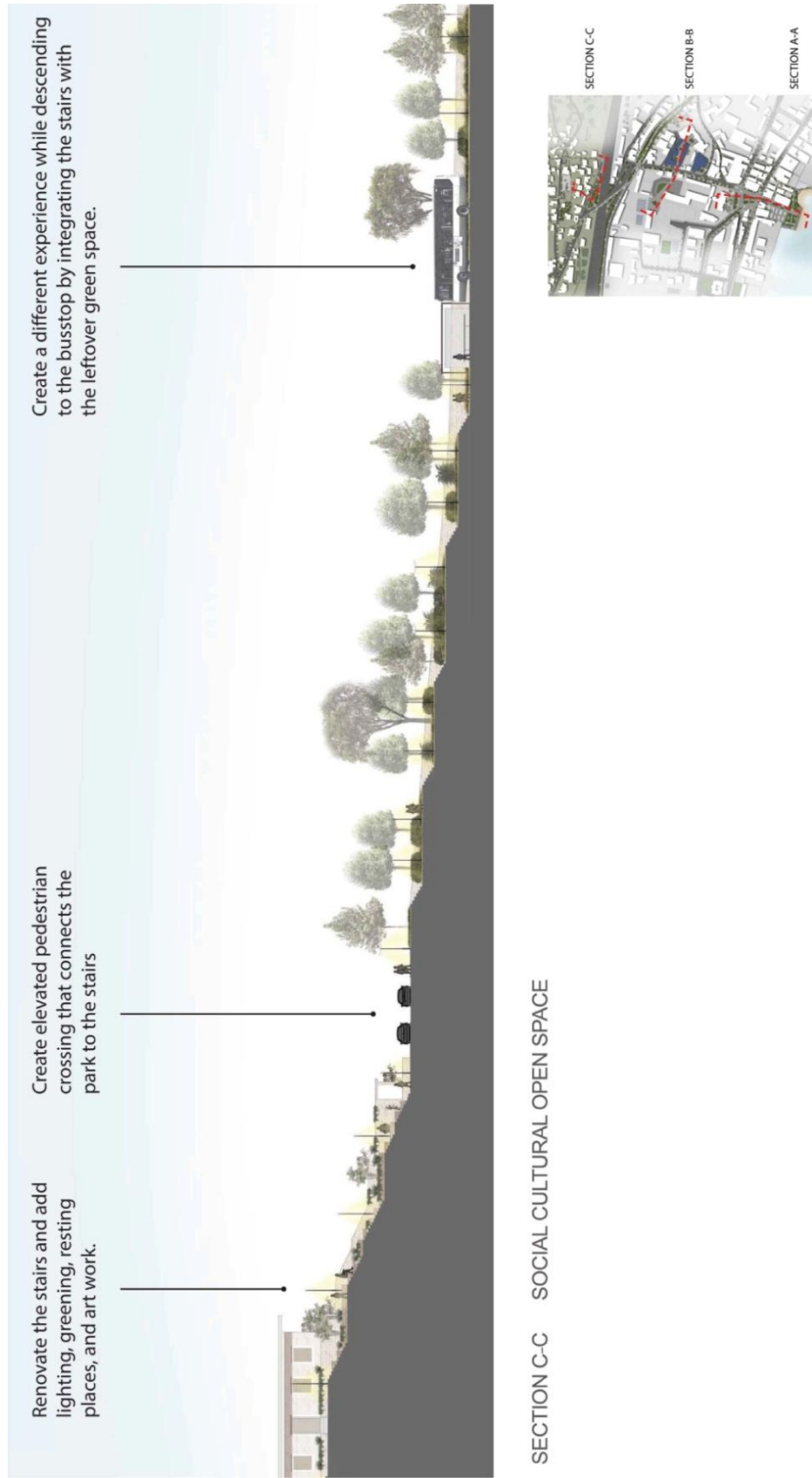


Figure 49. Detailed section C-C for the design proposal cutting through the mountainous zone(Koobayssi, R., 2018)

The main aim is to create a continuous network that has the same language, stretching from the mountainous zone to reach the public beach (Figures 42 to 49). In the mountainous zone, the intervention directly relates to the citizens' needs and requests. The roads are wider, providing adequate sidewalks with greenery, lighting, and street furniture. Parking spaces are organized and removed in the areas where they would block the pedestrian flow. Pedestrian routes are re-opened for the public; the stairs are renovated and resting areas are included in the new design, in addition to green areas where possible. The pedestrian routes are given the priority on intersections with the vehicular routes by raising the road to create wide speed bumps that connect routes together. These newly designed routes could also serve as dynamic areas where artwork could be exhibited, connecting the coastal and mountainous areas together. The major change occurs in the new public green space on a disregarded municipal lot. This green space is integrated in the pedestrian network and is transformed into leveled terraces that provide an outdoor community space.

The bridge, which now serves as a vehicular route and a parking space, is transformed into a pedestrian friendly bridge with a wide sidewalk. Most importantly, the stairs that connect the bridge to the highway are replaced by terraced green spaces. This step takes advantage of the residual transportation area and enhances the experience of reaching the bridge. The bus stops are renovated and adequate waiting areas are provided.

The pedestrian route continues from the bridge to the institutional/educational zone, intersecting the railroad. The railroad now serves as a linear park that connects Ghadir horizontally to adjacent neighborhoods and beyond, giving them the chance to reach Mar Gerious and the sea promenade next to the Yacht club south (which is a favored public space by the residents), and the public garden and Maamelteine beach north. This linear

park incorporates green outdoor spaces, a pedestrian route, and a biking lane that could extend beyond Jounieh to other cities.

In the institutional/educational zone, it was important to create a core that allows the educational institutions to be more involved and embedded in the surrounding urban fabric. I suggested to transfer the 2 parking lots that are privately owned into mixed use buildings with cultural programs. In order to make this option realistic, there has to be a win-win situation where the owners could generate profit, therefore, the buildings will incorporate shops and cafes in addition to exhibitions on the ground floor, as well as offices and probably residential floors above. The conditions that should be applied are the following: the volumes should be porous and inviting for public use, the ground floor should incorporate programs that attract users to animate the street all day long, and last but not least, the buildings should include programs that serve the public such as a library, community and meeting spaces, a youth center... In return, the municipality should provide incentives that relate to taxation exemption and procedures. This new center could host local and national cultural events. To allow for these events to take place, a bigger space should be provided, which could be obtained by connecting these centers to the open spaces in the schools. The open spaces could include an amphitheater and other multifunctional spaces that could benefit the students and could be used by the public during certain events.

At this stage, the main spine is still accessible by vehicles, but the pedestrians are given more space to move freely along the roads, while providing greenery, solar lighting, and resting places. Parking spaces are organized where available, and the parking lots that are transformed into cultural oriented multi-use centers will also provide underground parking spaces for visitors.

In the coastal zone, Jounieh square is transformed into a public piazza that continues to the beach. This transformation creates a public node that attracts not only local residents, but also national visitors to the area. The whole square is treated as the sidewalks, with raised floor to facilitate and encourage pedestrian movement. Slow traffic will not stop pedestrians from crossing the square to reach the beach. A publicly owned land, that is now occupied by a temporary supermarket, is transformed into a green area with resting places and a bus stop. The passages that connect the street to the beach, which are now privatized, will be opened and treated in the same manner as the sidewalks, reaching a public open space with terraces and green zones. Privately owned lots that now have temporary structures will be transformed into arts and crafts stands. These stands will provide a chance for decaying professions in Jounieh as well as attracting visitors and tourists.



Figure 50. Design proposal- Step 2 (Koobayssi, R., 2018)

After completing the first step, residents and visitors will gradually shift their daily routines and rely more on walking to reach their destinations in this zone. After being given enough time (which could extend to years), there will be a chance for a more radical transformation in the zone (Fig. 50). This decision would be taken in the right time, given that the first step is welcomed and accepted by users.

The institutional/educational zone houses 6 main schools, in addition to a French institute, a music center, a dormitory, a medical center, and other public and private institutions. This unique character gives the chance to create one major campus that holds all these institutions, as well as other new educational and cultural institutions. Since most of the land is owned by Waqf, the main stakeholders who will be involved will be the churches, as well as other private owners. This will transform the zone into a pedestrian campus that will attract students and investors to the area.

The other major intervention is the bridge will be also transformed into a pedestrian gate that announces the campus to the highway. The vehicular routes to and from the highway will become more pronounced and will provide an underground parking space on each side to allow visitors to reach the campus from the highway without the need to drive into the zone.

This bold intervention, as mentioned earlier, will require a big effort from many stakeholders, as well as a greater budget. However, it would transform the zone into a cultural/educational hub and create a big opportunity for the surrounding businesses.

CHAPTER VIII

CONCLUSION

This thesis is an attempt to reconnect the neighborhoods in Jounieh using urban design strategies of open space networks and walkability. The existing cultural and educational assets in the neighborhood of Ghadir were transformed into functional nodes that animate the network, connecting the mountainous and the coastal parts across the highway. To make the project realistic and doable, 2 stages were proposed to gradually transform the link into a pedestrian only street, a tactic followed by many case studies worldwide.

The neighborhood scale intervention could be considered to be a sample that should be repeated in all the links across the highway, as suggested in the city-scale strategy. The variety in the typology of the links across the highway will provide complimentary functions and services and will strengthen the connection further. Some of the links will provide inviting gateways to enter the city from the highway, whereas others (such as our case study) will prioritize local pedestrian connections. Together, these links will form a complete network that will overcome the disconnections due to vehicular dominated planning.

The pragmatic nature of this proposal means that it can be realized in phases. As proposed earlier, this project should be spearheaded by the municipality, with the participation of all stakeholders. The citizens of Jounieh have shown great will to form

neighborhood committees in the past, but most of the time these committees have had very limited power to make changes. However, the municipality has the ability to strengthen these committees by calling for weekly or monthly meetings to listen to what the citizens need and incorporate their suggestions in these projects. The committees' role also extends to the implementation processes where they could participate in enhancing their neighborhoods, especially in the residential zones. Furthermore, Jounieh's stakeholder analysis shows how powerful some of the big families in Jounieh are in decision making. This power could be transformed into an asset in this project, especially when it comes to public-private partnership, as in the case of the proposed cultural center and proposed arts and crafts center as well. In addition to the families and citizens, the vibrant economic sector of Jounieh and the merchants could also participate widely in the study and implementation of the project since the implementation will most probably boost the economy and the influx of visitors in Jounieh. These stakeholders could lead this intervention further to achieve a network that revives all the sectors in Jounieh. Last but not least, the church remains one of the most influential stakeholders due to the percentage of Waqf in Jounieh as well as its political role. Therefore, it should be closely engaged in the process to achieve the best results.

However, there were some limitations that need to be clarified in this study. First of all, community workshops and meetings were not performed due to the limitations of time and the procedures that would be needed to perform these workshops. Instead, 22 informal interviews were performed, which were also lacking in terms of inclusivity. In order to make this project successful and professional, meetings and workshops have to take place before major decisions are made. Second, land property and privatization are a

major problematic in Jounieh that need further study as well, especially regarding the beach that is totally privatized in Jounieh today. In this project, it is suggested that a part of the beach becomes open for the public. Opening the public beach again for citizens is a crucial step in Jounieh, however, the politics behind it might not be simple. In addition, all of the case studies listed in the study are in the *Global West*(USA, Canada, Europe, Australia). Although many lessons could be derived from these case studies, none of them have faced the problems of a developed country. Therefore, more case studies that have been done in contexts that are similar to Lebanon must be analyzed to extract even more valuable lessons in resolving context-specific problems.

Last but not least, this study did not propose a solution for the discussed construction law. As explained earlier in Chapter 6, the existing zoning law is outdated and will only increase the gap between the heritage zone and the adjacent neighborhoods since it does not take into consideration the existence of buildings with architectural value in the mountainous zone, nor does it allow for a smooth transition in the built form between the traditional zone (zone A) and the adjacent zone (zone B). Therefore, a more in-depth study and proposal should be performed in order to come up with a new construction law that facilitates this connection between neighborhoods and that protects the specificities of each neighborhood without transforming the city of Jounieh into detached zones with no identity.


APPENDICES

Appendix 1- Case studies

Case study 1

Case name	The mission district streetscape plan
Location	San Francisco

Case study Overview	
Typology (building, park, linear park, square, trail...)	Network planning
Project goals/objectives	<p>Create a network of green streets that connects open spaces and improves the walkability, aesthetics and ecological sustainability of the neighborhood</p> <p>Develop a comprehensive public realm plan that reflects the differing needs of streets based upon their predominant land use, role in the transportation network, and building scale on their way to an indoor or private destination.</p> <p>The neighborhood's streets could be greatly improved to be more supportive of pedestrian, bicycle, and transit use.</p> <p>The Mission's public realm could better serve as a center of the neighborhood's public life and social activity</p> <p>The streets could be re-conceptualized and re-designed to become places that people choose to tarry and spend time, rather than walk through</p>
Scale (neighborhood, city, national)	District

Case study Overview	
Site description-summary	<p>San Francisco’s Mission District is known for its diverse communities, compact mix of uses and activities, lively cultural and arts scene, and active, vibrant street life at all times of the day and night.</p> <p>The Mission is well-situated close to downtown San Francisco. It includes major transit lines and hubs including two of BART’s busiest stations and several of Muni’s most heavily-used lines, well-used open spaces such as Dolores Park and Garfield Square, and active commercial corridors on a connected street grid, including Mission Street, 24th Street, Valencia Street, and 16th Street. With this dense concentration of destinations and ease of access, the Mission District is both a major regional destination and a locally-serving community.</p>
Pictures/plans	<p>PRIORITY PROJECTS</p>  <p>MISSION DISTRICT STREETSCAPE PLAN San Francisco Planning Department</p>
Project catalyst	The Planning Department of San Francisco

Case study Overview	
Stage (under construction/finished/planned)	Continuous, never ending process
Stakeholders/partners	The Planning Department, California Department of Housing and Community Development, community of mission district Local residents and merchants, the City, and other interested community members San Francisco Municipal Transportation Agency San Francisco Planning Department the San Francisco County Transportation Authority
Budget	95,500,000 \$, in segments and on the long term, with each street costing between 1 and 2 millions.
Funding	California Department of Housing and Community Development Federal and state transportation funding; Proposition K local transportation sales tax dollars; Coordination of streetscape improvements with major transportation and utility infrastructure work; Eastern Neighborhoods development impact fees; In-kind developer contributions; Community-led improvements.

Intervention overview	
Method(s)	Community workshops were organized New design policies for the Mission District were drafted based on feedback from the workshops Projects were listed according to their priority Specific projects were deliberately designed Funding plans were studied, with all potential funders listed Community-led improvements were initiated

Intervention overview	
Maintenance (costs and arrangements)	<p>Care and maintenance of streetscape features is a shared responsibility between community members and the City. Technically, property owners are responsible for the maintenance and repair of street trees (except on selected streets) and sidewalks adjacent to their property. The City is responsible for roadway maintenance, traffic signals, street lights, and the like.</p> <p>There are numerous City resources to improve and maintain streetscapes available for residents as well, including: DPW Sidewalk Landscape Permit Community Challenge Grants SFPUC Watershed Stewardship Grants</p>
Feasibility (obstacles, unplanned circumstances)	Big scale projects need long time for implementation as well as huge budgets, both of which need planning.
Public engagement (Was the community involved in the design implementation, and the maintenances processes?)	The community was involved in 5 community workshops that formed the base for policy making and projects.
Success story (What changes did the project bring to the community? Were there any tangible variables? What does the community think about the success of the project?)	<p>A number of street projects and open spaces are already implemented and are being actively used.</p> <p>No indicators have been set to measure success, but the projects are mainly addressing people's needs, which means that each one of them is solving an existing problem.</p>
Lessons learnt	<p>It is better to have an integrated long-term plan than small detached short term plans</p> <p>Stakeholders should be directly involved in proposing plans that could be later transformed into policies to address the problems they face everyday</p> <p>It's not enough to create vision and designs to achieve and sustain a big project</p> <p>It requires the community and the City to work together to fund, build, and maintain these street improvements.</p>

Case study 2

Case name	Mayfield heritage walks
Location	Mayfield, New South Wales, Australia

Case study Overview	
Typology (building, park, linear park, square, trail...)	Thematic walking tours/heritage trails
Project goals/objectives	Urban re-imagining and economic development Achieving a positive image in the neighborhood Increasing local business awareness and performance Creating a sense of pride
Scale (neighborhood, city, national)	Suburb walking tour-local
Site description-summary	After being a semi-rural suburb and home to the business elite, a close steel plant was established which led to the migration of industrial workers. This gave the suburb an unattractive trait and it became directly related to low income, pollution, social disadvantage and economic decline. After, the steel plant was closed, new demographic changes were observed. Many traces of its romantic past remain in Mayfield physically and in the collective memory of its residents.
Pictures/plans	-
Project catalyst	NCC (Newcastle City Council) and MMC (Mayfield Main street Committee)

Case study Overview	
Stage (under construction/finished/planned)	Finished in 2003 New considerations to take the project a step further are being studied
Stakeholders/partners	NCC, MMC, local residents and local schools
Budget	-
Funding	NCC (Newcastle City Council)

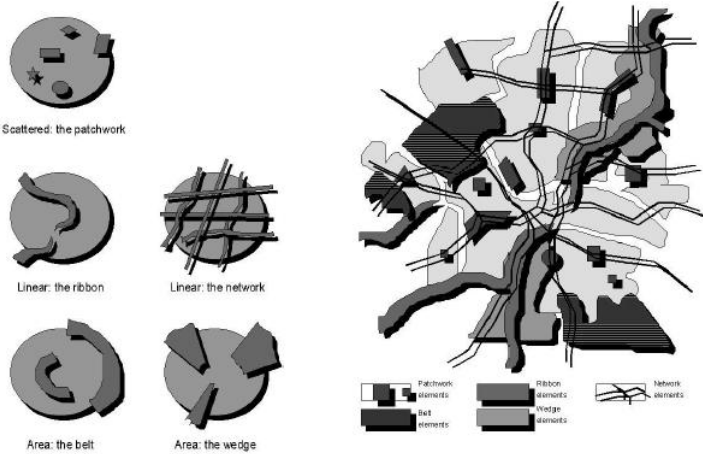
Intervention overview	
Method(s)	Assigning a research team Organizing community forum and workshops to uncover hidden vernacular stories Digging archives and publications Exploring the physical site to identify landscape features Linking the stories to the features and developing 2 heritage trails that will reflect the multiple layers of history Launching the tour through a heritage week and by the help of newspapers, radio stations, website, brochures in libraries and shops...
Maintenance (costs and arrangements)	
Feasibility (obstacles, unplanned circumstances)	It was hard to develop a criteria for the narratives There were many competing layers of history Sometimes there was lack of historical material Some histories had to be overlooked in favor of others (such as tensions and instability) There has to be a distinction between academic and contracted research (different goals)

Intervention overview	
Public engagement (Was the community involved in the design implementation, and the maintenances processes?)	<p>The public was engaged through:</p> <p>Workshops were held to hear the residents' stories and memories</p> <p>Students in local schools were asked to imagine the trails and express them through arts and drawing</p> <p>Local shops and libraries helped in marketing the trails through brochures</p>
Success story (What changes did the project bring to the community? Were there any tangible variables? What does the community think about the success of the project?)	<p>Many locals and people outside the city joined in the walking tour.</p> <p>Brochures were printed in 2000 copied and ran out in 6 months and had to be printed again.</p> <p>The project generated considerable interest in the suburb and contributed to the process of re-imaging.</p>
Lessons learnt	<p>Cultural identity is specific to the place and the people who live in it</p> <p>Not all the events that took place should be included in a cultural tour, some are better to be forgotten.</p> <p>A memory that is not connected to a physical aspect or object is hard to be highlighted or included in a cultural project</p>

Case study 3

Case name	Open Space Functional Plan
Location	Halifax, Nova Scotia, Canada

Case study Overview	
Typology (building, park, linear park, square, trail...)	Open space network
Project goals/objectives	<p>The system as a whole provides recreational, environmental, transportation and community identity benefits that translate into economic and social development value for the Municipality.</p> <p>Identify natural and urban corridor linkages and community networks to guide future development patterns and protect environmentally vulnerable lands and habitat; Improve existing open spaces and invest in new ones where deficiencies or gaps exist; Explore opportunities to develop and promote underutilized open spaces; Build accessible parks and linear networks to address evolving community needs and demographic and development trends, including the needs of children, youth and seniors; Proactively respond to developing communities and development projects by planning for an adequate amount, quality and character of open space; Establish an interconnected regional trails and linear parks network, including water routes and land-based trails; Develop a strategy for the retention of coastal and lake access and protection of watercourse buffers; Establish selection criteria and acquisition guidelines for investing in new open space; Establish sustainable natural open space and regional park management strategies; and Adopt policy direction to address competing demands for</p>

Case study Overview	
	open space lands and the protection of public parks.
Scale (neighborhood, city, national)	Municipal boundaries
Site description-summary	
Pictures/plans	 <p>Scattered: the patchwork</p> <p>Linear: the ribbon</p> <p>Linear: the network</p> <p>Area: the belt</p> <p>Area: the wedge</p> <p>Legend: Patchwork elements Belt elements Ribbon elements Wedge elements Network elements</p> <p>Löörzing, H. (1998). Design of urban open spaces: Bringing a piece of landscape into the city. Proceedings of the European Council of Landscape Architecture Schools Conference, Vienna, Austria.</p>
Project catalyst	Halifax regional municipality HRM Regional Municipal Planning
Stage (under construction/finished/plann ed)	Planning phase
Stakeholders/partners	Municipality and community
Budget	-

Case study Overview	
Funding	-

Intervention overview	
Method(s)	<p>The Open Space Plan will address areas where strategic and operational alignments can be made and where benefits can be maximized with respect to the distribution, function and quality of open space regionally and locally.</p> <p>A phased approach will be used to develop the Open Space Plan beginning with the Regional Centre during the fall and winter of 2011. Attempts will be made to align the planning process with the development of the Regional Centre Community Plan and Land Use By Law. Open space planning for the suburban and rural communities will begin in the spring of 2012. The entire HRM Open Space Functional Plan, consisting of three volumes, will be completed by the spring of 2013.</p>
Maintenance (costs and arrangements)	-
Feasibility	
Public engagement (Was the community involved in the design implementation, and the maintenances processes?)	A portion of the project budget has been allocated to augment the publicengagement process by focusing on methods such as design charettes, focus groups with children, youth and seniors, community walks, social media, and creative promotion.
Success story	

Intervention overview	
Lessons learnt	<p>Open space planning should go beyond conventional parks to focus on an interconnected network that includes land and water, linear trails and corridors, special views and image routes, and streets and roads.</p> <p>Open space plans should address strategic and operational alignments to maximize benefits.</p> <p>A portion of the project budget should be allocated for public engagement to achieve better results.</p>

Case study 4

Case name	Landscape and open space network
Location	York University, Southwest Precinct, Toronto, Ontario

Case study Overview	
Typology (building, park, linear park, square, trail...)	Open space network
Project goals/objectives	A complete network of open spaces will be developed by enhancing existing open spaces, creating new ones and ensuring connectivity between all open space assets. The layered network of landscapes and open spaces will extend through the site to provide a diversity of places for recreation, respite and natural functions.
Scale (neighborhood, city, national)	neighborhood
Site description-summary	The Black Creek Ravine is a fundamental component of the Secondary Plan area’s open space and natural heritage network and is a defining element of the York University campus. The ravine is aligned with the western edge of the Southwest Precinct and its associated landscape and features will see enhancement and growth in the long term. The ravine landscape will provide cues for landscape design and vegetation choices throughout the precinct area and especially in the adjacent proposed parkland.
Pictures/plans	<p>Figure 8: Open Space Network 22 YORK UNIVERSITY SOUTHWEST PRECINCT PLAN</p>


Case study Overview	
Project catalyst	municipality
Stage (under construction/finished/planned)	Planning stage
Stakeholders/partners	University student, community and municipality
Budget	-
Funding	-

Intervention overview	
Method(s)	<p>The open space network will build on the primary feature that defines the precinct, the Black Creek ravine and adjacent University open space. The qualities of the York campus will be extended into the precinct to enhance the sense of place, both in the creation of diverse new open spaces and the renewal of existing greens in the area west of Sentinel Road.</p> <p>Much like the York University core campus, the entire public realm will contribute to the open space network. Investments in street-scaping, the renewal of existing places and the creation of a variety of new open spaces will create a distinct identity for the precinct while ensuring that it retains its identity as part of the larger campus environment.</p>
Maintenance (costs and arrangements)	-
Feasibility (obstacles, unplanned circumstances)	-
Public engagement (Was the community involved in the design implementation, and the maintenances processes?)	Not yet

Intervention overview	
Success story	
Lessons learnt	<p>Always consider existing education facilities as an asset when trying to emphasize the character or identity of a place</p> <p>Open space does not have to be publicly owned to be included in the open space network, it can be privately owned while providing the public with aesthetic or even limited useful functions.</p> <p>Streets are a main feature for open space networks and can be utilized for different functions</p> <p>Sustainability can be addressed in land use, buildings and infrastructure, and even in open space landscaping and material options.</p>

Case study 5

Case name	Connectivity project
Location	Saarbrücken, Germany

Case study Overview	
Typology (building, park, linear park, square, trail...)	Pedestrian and open space network
Project goals/objectives	<p>Fostering sustainability through public transit</p> <p>Encouraging more cycling</p> <p>Enhancing accessibility in the city</p> <p>Create livable streets</p> <p>Enhance safety</p>
Scale (neighborhood, city, national)	City scale
Site description-summary	<p>Saarbrücken is a German city along the French border with a population of around 176,000 residents. Like most German cities, Saarbrücken's core is a mix of walkable streets, urban buildings, and historic sites. Despite this, city leaders and residents are concerned about the future connectivity, mobility, and livability of their city.</p>
Pictures/plans	
Project catalyst	municipality

Case study Overview	
Stage (under construction/finished/planned)	Never ending process
Stakeholders/partners	community and municipality, media
Budget	-
Funding	-

Intervention overview	
Method(s)	<p>Transforming major commercial streets into pedestrian-only streets</p> <p>Introducing an international streetcar that connects the city locally and internationally to France</p> <p>Introducing bike parking in public areas to encourage biking</p> <p>Designing a multi-modal water front on the long-forgotten river by renovating storefronts, updating lighting, upgrading accessibility, creating new green spaces and activating the neglected spaces on the river</p> <p>Creating a pedestrian friendly city by widening sidewalks, providing signage, creating underground tunnels, and encouraging more street cafes to open</p>
Feasibility (obstacles, unplanned circumstances)	-
Public engagement (Was the community involved in the design implementation, and the maintenances processes?)	Citizens were engaged in the process of planning via meetings in the municipality.
Success story	<p>23% of Saarbrückers commute on foot and that the streets are always filled with shoppers</p> <p>While the project was met with skepticism over costs and necessity, it was completed successfully and has brought new life—and connectivity—to the city's core.</p>

Intervention overview	
Lessons learnt	<p>Transforming the city into a pedestrian-friendly space is a gradual process and cannot be done in one step</p> <p>Improving public transportation is key to create pedestrian friendly streets</p> <p>Activating spaces on forgotten assets such as water features and public squares revitalizes street life and economy</p> <p>It is essential to provide a continuous walkable network to encourage street activities</p>

Case study 6

Case name	Pedestrian-only streets
Location	Stroget, Copenhagen

Case study Overview	
Typology (building, park, linear park, square, trail...)	Pedestrian network
Project goals/objectives	<p>Improve connectivity in the city center.</p> <p>Provide a high-quality and attractive environment.</p> <p>Create a space that supports businesses.</p> <p>Encourage a diverse range of people to live and spend time in the city center.</p> <p>Revitalize the city's forgotten alleyways by turning them into vibrant laneways.</p>
Scale (neighborhood, city, national)	neighborhood
Site description-summary	<p>Until 1962, all the streets and squares of central Copenhagen were used intensively for vehicle traffic and parking, and were under pressure from the rapidly growing fleet of private vehicles.</p> <p>The pedestrianization of Copenhagen began with the city's main street, Strøget, which was converted in 1962 as an experiment. The conversion of the 1.15 km-long main street into a pedestrian street was seen as a pioneering effort, which gave rise to much public debate before the street was converted. "Pedestrian streets will never work in Scandinavia" was one theory. "No cars means no customers and no customers means no business," said local business owners.</p> <p>Soon, Strøget proved to be a huge success, with businesses realizing that traffic-free environments provide increased financial revenue. MagasinTorv, the square by Nikolaj Church, and GråbrødreTorv were the first squares to be renovated.</p>

Case study Overview	
Pictures/plans	
Project catalyst	City of Copenhagen, StadsarkitektensDirektorat, StadsingeniørensDirektorat, BjørnNørgård.
Stage (under construction/finished/planned)	Done
Stakeholders/partners	City of Copenhagen, StadsarkitektensDirektorat, StadsingeniørensDirektorat, BjørnNørgård, business owners, citizens
Budget	-
Funding	-

Intervention overview	
Method(s)	Removal of all traffic from the street. Removal of curbs and sidewalks, addition of new paving. Consolidation of street furniture to facilitate pedestrian movement.
Maintenance (costs and arrangements)	-

Intervention overview	
Feasibility (obstacles, unplanned circumstances)	-
Public engagement (Was the community involved in the design implementation, and the maintenances processes?)	-
Success story	<p>Pedestrian volume increased by 35% in one year</p> <p>Pedestrian spaces increased by 600%</p> <p>Outdoor cafe seating increased by 81%</p>
Lessons learnt	<p>The successful pedestrianization of streets in Copenhagen is due to the incremental nature of change, giving people the time to change their patterns of driving and parking into patterns of cycling and using collective transport to access key destinations in the city—in addition to providing time to develop ways of using this newly available public space. This case study proved that pedestrian streets can increase revenue for local retailers.</p>

Case study 7

Case name	The Hampline
Location	Memphis, Tennessee, USA

Case study Overview	
Typology (building, park, linear park, square, trail...)	Connective network
Project goals/objectives	<p>Connect assets to the East and West of Binghampton to the strengthen the city's core</p> <p>Introduce biking as a connective method</p> <p>Introduce cultural programs to revitalize city center</p>
Scale (neighborhood, city, national)	City scale
Site description-summary	<p>Binghampton, nicknamed “The Hamp,” is today a neighborhood of about two square miles and 9,000 residents. The median income is \$26,000, and nearly 50% of residents have average household incomes below \$20,000. Of the residents, 35% live below the poverty level. In recent years, the neighborhood has suffered from 30% population decline, with a 10-14% vacancy for homes in the area.</p> <p>There are two active rail lines and an expressway with dangerous cross traffic.</p> <p>But the neighborhood is literally surrounded by assets. To the west are the famous Overton Park, Rhodes College, the Vollintine-Evergreen Greenline, Downtown Memphis and its historic Beale Street, and the beautiful Mississippi River. To the east are Shelby Farms Park, the Greenline Extension, the Wolf River Greenway, and thriving neighborhoods. The opportunity was that connecting these assets, through Binghampton, and several other neighborhoods, would strengthen Memphis’ urban core.</p>

Case study Overview

<p>Pictures/plans</p>	
<p>Project catalyst</p>	<p>City of Memphis, Community Development Council of Greater Memphis, the Livable Memphis, the Broad Avenue Arts District, and the Binghampton Development Corporation, and the owner of an anchor business, T Clifton Arts.</p>
<p>Stage (under construction/finished/planned)</p>	<p>Done</p>
<p>Stakeholders/partners</p>	<p>City of Memphis, business associations, citizens</p>
<p>Budget</p>	<p>4.5 million \$</p>
<p>Funding</p>	<p>Public and private funds</p>

Intervention overview

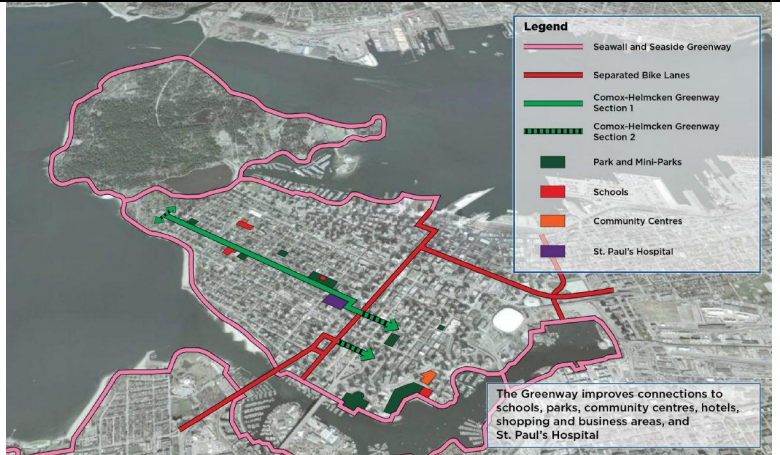
<p>Method(s)</p>	<p>Connecting the assets in the city through a safe bike lane Incorporating the community in the planning and fundraising processes Incorporating cultural activities along the lane in public areas to activate the city center</p>
<p>Maintenance (costs and arrangements)</p>	<p>-</p>

Intervention overview	
Feasibility (obstacles, unplanned circumstances)	-
Public engagement (Was the community involved in the design implementation, and the maintenances processes?)	The citizens and cycling advocates were engaged in the planning and fund-raising processes
Success story	<p>Today, Broad Avenue has more than 95% occupancy. Additional private funding has supported cultural amenities in the area, creative bus stops and an archway made of bicycles at the entrance of Overton Park.</p> <p>The Art Place America grant has enlivened the avenue to zumba, dancing and performance arts on weekends.</p> <p>All of this transforming the neighborhood nearly unrecognizable to its former self just five years ago.</p>
Lessons learnt	<p>Community engagement is key to realize connectivity projects, especially in providing funding</p> <p>Providing an open space network and animating public spaces can revitalize the city and encourage new businesses and attract more visitors and residents.</p>

Case study 8

Case name	Comox-Helmcken Greenway
Location	Vancouver

Case study Overview	
Typology (building, park, linear park, square, trail...)	Connective network
Project goals/objectives	Develop a greenway to increase walking, cycling, and public transporting for people of all ages Achieve zero fatalities
Scale (neighborhood, city, national)	City scale
Site description-summary	The Comox-Helmcken Greenway is part of the Transportation 2040 Plan's All Ages and Abilities Cycling Network. As part of the City Greenway and Regional Greenway network, the Greenway will connect Stanley Park to False Creek and provide an important east-west walking and cycling connection through the Downtown to compliment the Seawall and the network of downtown separated bike lanes. It will provide residents and visitors with a faster and more direct alternative to the very popular and often congested Seawall. In keeping with the project goals and objectives, the Greenway will connect four schools, one regional park, three neighbourhood parks, two mini-parks, and one community centre, as well as shopping areas, hotels, residential neighbourhoods and St. Paul's Hospital. Once completed, it will be easier for children to walk or cycle to school and more comfortable for seniors to walk, shop and be socially connected.

Case study Overview	
Pictures/plans	
Project catalyst	Transportation and Engineering Department of Vancouver
Stage (under construction/finished/planned)	Completed
Stakeholders/partners	Active Transportation Policy Council, Persons with Disabilities Advisory Committee, Seniors Advisory Committee and VSB Committee One , St. Paul’s Hospital (multiple stakeholders) , BC Ambulance and Vancouver Fire & Rescue Services ,Century Plaza, Coast Plaza & Wall Centre hotels ,WEBIA, DVBIA, Denman Mall and other businesses ,Vancouver Taxi Association ,Stanley Park Ecology Society ,Vancouver Board of Parks and Recreation ,Handi-Dart and TransLink ,Schools and PAC , West End Seniors Network, Centre for Hip health and Mobility (UBC and Vancouver Coastal Health), UBC School of Population and Public Health, Vancouver School Board, Trans Link, ICBC
Budget	-
Funding	-

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Intervention overview	
Method(s)	<p>Provide a greenway that connects 2 active streets in Vancouver, improving the connection to schools, parks, community centers, hotels, hospitals, and shopping districts</p> <p>Create one way vehicle streets to make streets more walkable</p> <p>Create cycling lanes</p> <p>Improve sidewalks, lighting, seating and socializing spaces, accessibility, greening and gardening.</p>
Maintenance (costs and arrangements)	-
Feasibility (obstacles, unplanned circumstances)	-
Public engagement (Was the community involved in the design implementation, and the maintenances processes?)	The planning stage was combined with public consultations including open houses, workshops and meetings with stakeholders and business owners.
Success story	For participants living on Comox Street, 57.4% of all their downtown trips included a segment on Comox Street. This increased by 9.1% after the Greenway improvements, representing 62.6% of all downtown trips.
Lessons learnt	<p>Developing a connective open space network is essential for a city's livability.</p> <p>Stakeholders and community members should be involved and prepared for changes in their neighborhoods</p> <p>a city-scale study should come before any pedestrianization decisions in order to provide a general transportation strategy and choose the most strategic connections.</p>

Appendix 2

Answers to the surveys in the mountainous zone.

1. What are the limits of your walking zone?

symbol	age	male	female	answer
1	70s	x		Next neighborhood HaretSakher and church (no ups and downs)
2	60s	x		Church and Downtown Jounieh (square)
3	60s		x	Church and neighborhood
4	50s	x		Neighborhood ad rarely downtown Jounieh (square)
5	40s	x		I don't walk
6	40s		x	I don't walk
7	30s	x		Sometimes downtown Jounieh (square)
8	30s		x	I don't walk
9	20s	x		Neighborhood and downtown Jounieh (square)
10	20s		x	Neighborhood
11	18	x		Downtown Jounieh (square)

2. What places do you visit in Jounieh?

symbol	age	male	female	answer
1	70s	x		Shops downtown Jounieh, sometimes public park
2	60s	x		Shops downtown Jounieh
3	60s		x	Shops and market downtown Jounieh
4	50s	x		Neighborhood ad rarely downtown Jounieh (square)
5	40s	x		Shops, market and school for kids
6	40s		x	Shops, market and school for kids
7	30s	x		Shops and market, ATCL
8	30s		x	Shops and market
9	20s	x		Jounieh square, ATCL
10	20s		x	Shops and market, ATCL
11	18	x		Jounieh square, ATCL

3. How do you go there? By car or walking? Where do you park?

symbol	age	male	female	answer
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symbol	age	male	female	answer
1	70s	x		Car, public parking
2	60s	x		Walking to avoid traffic, I use stairs as shortcuts
3	60s		x	Car, public parking
4	50s	x		Walking or car, I use stairs when I walk
5	40s	x		Car, public parking
6	40s		x	Car, public parking
7	30s	x		Walking or car depending on time during the day and weather, I use stairs when I walk
8	30s		x	Car, public parking, rarely do I walk to Jounieh
9	20s	x		Walking, I use stairs.
10	20s		x	Car, public parking
11	18	x		Walking, I use stairs.

4. How many cars do you have at home? Where do you usually drive? Where do you park?

symbol	age	male	female	answer
1	70s	x		2 cars, drive to market and everywhere else. We have parking in our building
2	60s	x		5 cars. We have parking in and next to our building. We drive to destinations in and outside Jounieh.
3	60s		x	2 cars, drive to market and everywhere else. We have parking in our building
4	50s	x		2 cars, in and outside Jounieh. We have parking for 1 car only.
5	40s	x		2 cars, in and outside Jounieh. We have parking for 1 car only, and we park the other on the street.
6	40s		x	2 cars, in and outside Jounieh. We have parking for 1 car only.
7	30s	x		2 cars, we drive inside and outside Jounieh. We have enough parking spaces in our building.
8	30s		x	3 cars, we drive to Jounieh mostly. We have 1 parking space only.
9	20s	x		1 car. We drive to far destinations only. We don't own a parking.
10	20s		x	2 cars, we drive inside and outside Jounieh. We have enough parking spaces in our building.
11	18	x		Parents have 2 cars. They drive me to school outside Jounieh.

5. What is missing in your neighborhood to make it more walkable? (sidewalks, lighting, security, green areas...)

symbol	age	male	female	answer
1	70s	x		Giving meaningful spaces that relate to the collective memories (He gave example about planting a tree in a gathering place in hay el Kharroubi), regulating parking spaces so that they do not block passages, lighting using solar power, maintenance, security measures, kids playgrounds (they used to exist before), providing good public transportation system on the highway to replace cars...
2	60s	x		Widening the roads to allow for pedestrian to pass, lighting and maintenance
3	60s		x	Lighting, widening the streets, sidewalks, security...
4	50s	x		Widening the streets, sidewalks, greening, garbage disposal, lighting...
5	40s	x		Planting trees, providing places for rest, lighting, cleaning the streets, disposing garbage.
6	40s		x	Lighting, security, sidewalks, removing cars that block the passages, greening, resting places...
7	30s	x		We do have a neighborhood group that reaches for the municipality to enhance our neighborhoods. But it stopped functioning due to the tight budget. I think we should widen streets, enhance lighting especially in narrow passages and stairs, provide places for rest, neighborhood beautification (facades and greening), security (especially now that there are many outsiders in the neighborhood)
8	30s		x	Lighting, cleaning the streets, removing cars from the sides of the streets, security.
9	20s	x		Widening the streets, provide other places for car parking to allow for sidewalks, lighting, planting trees, security...
10	20s		x	Beautification (facades, sidewalks, greening...), security, lighting.
11	18	x		Maintenance for stairs and streets, lighting, providing places for rest and gathering.

6. Are you interested in creating a network that connects you to Jounieh? Where would you like this network to lead? (public garden, souk, beach...)

symbol	age	male	female	answer
1	70s	x		Of course, I am. But I cannot climb stairs in my age. However, I think it should lead to the market, and maybe ATCL.
2	60s	x		Yes, it would be great if it reaches the public garden, the market, and ATCL. The beach? That would be like old days! I wish it could happen.
3	60s		x	Sure, the market is good. The beach would be too ambitious but great.
4	50s	x		Yes. Market and souk.
5	40s	x		It would be nice to have pedestrian access to Abilnasser street and Alshir! I drive to walk there! I used to walk to Maamelteine when I was very young, I wish I could walk there now, had it been a better place with a better reputation. I would like to reach the beach, I could go there with my family.
6	40s		x	I would like to walk to the market and somewhere the kids would enjoy. Maybe a place where there are playgrounds and activities.
7	30s	x		The network should reach the market and a public place that has some activities. It could go beyond to ATCL and the public garden.
8	30s		x	Yes, it would be great if it reaches the beach.
9	20s	x		It should reach the market and a public space.
10	20s		x	It should reach the market. The beach would be a great idea.
11	18	x		It should reach the market and a public space.

7. Would you participate in cultural activities in Jounieh (exhibitions, open classes, sports, performances ...)?

symbol	age	male	female	answer
1	70s	x		Yes, I would if there was something of interest to me.
2	60s	x		Yes, I would like to watch plays and performances by students for example.

symbol	age	male	female	answer
3	60s		x	We usually participate in the festivals that are organized by the municipality. It would be interesting to have more cultural activities.
4	50s	x		I might, if it was something that is worth it.
5	40s	x		The municipality organizes some events, especially on religious events and they do activities for kids (example: pubic garden). I think I would participate in cultural events, especially if my kids are part of it.
6	40s		x	I might participate if the activities took place at the weekends and if they were properly managed.
7	30s	x		To be honest, I am not sure that cultural events would work here. The municipality hosts some exhibitions and art work and very few people are interested. I don't know if it could be better managed. As far as I know people only participate in festivals and kids' activities.
8	30s		x	Yes, why not, this would add to our cultural identity.
9	20s	x		It depends, if it is well managed and interesting I would.
10	20s		x	No, I am not interested and I don't think that people would participate. I prefer shopping.
11	18	x		Yes, I like to watch plays and go to exhibitions. We only have religious activities here.

Appendix 3

Answers to the surveys in the coastal zone.

1. Where do you come from? How do you commute to Jounieh?

symbol	age	male	female	answer
1	50s	x		Beirut, I come by bus.
2	50s		x	I live in Ghadir(coastal side). I walk around.
3	40s		x	Harissa, I come by car.
4	40s	x		Ghadir, I walk here.
5	40s		x	Harissa, I come by car.
6	30s		x	I live next to Jounieh square. I walk around.
7	30s	x		I live in Harissa, I come by car.
8	30s	x		Beirut, I come by car.
9	30s	x		Beirut, i use the bus.
10	20s		x	Ghosta, I come by car.
11	20s		x	Beirut, I come by car.

2. Why do you come here? How do you move inside Jounieh?

symbol	age	male	female	answer
1	50s	x		I work in Jounieh. I walk around.
2	50s		x	I come to shop almost daily. I walk around.
3	40s		x	I work here. I park under the building and do not need to walk.
4	40s	x		I come to the bank. I come by car or walk.
5	40s		x	I work here. I park next to my shop and walk around.
6	30s		x	I live here temporarily. I walk around if I need anything.
7	30s	x		I come to the bank or to shop. I park my car and walk around.
8	30s	x		I own a shop. I park my car and walk around.
9	30s	x		I work here. I usually walk around.
10	20s		x	I come to shop. I park in the center and walk around.
11	20s		x	I come to shop. I walk around.

3. How can we make the city more walkable?

symbol	age	male	female	answer
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symbol	age	male	female	answer
1	50s	x		It is walkable but we need to widen the sidewalks.
2	50s		x	The sidewalks should be widened and lit all the time.
3	40s		x	Enhance the sidewalks and organize parking spaces.
4	40s	x		The roads and sidewalks need to be enhanced and lit. Street furniture should be added.
5	40s		x	Remove the park meter. Add green spaces and clean the streets. The street is dead and scary at night as well.
6	30s		x	Enhance the sidewalks.
7	30s	x		Enhance the sidewalks and greenery.
8	30s	x		They should animate the street since it is dead after 3 pm. Maybe we should also have a public space.
9	30s	x		Animate the dead street.
10	20s		x	Add green open spaces and enhance the sidewalks.
11	20s		x	Enhance sidewalks.

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