

An-Najah National University  
Faculty of Graduate Studies

**Landscaping of Palestinian Cities' Entrances  
(The Case Study of the Western Entrance of Nablus City)**

By  
Fida I. Yaseen

Supervisors  
Dr. Ziad Sinan  
Dr. Sameer Abu Eisheh

Submitted in Partial Fulfillment of the Requirements for the Degree of  
Master of Science in Urban and Regional Planning, Faculty of Graduate  
Studies, at An-Najah National University, Nablus, Palestine

2002  
10/6/2002

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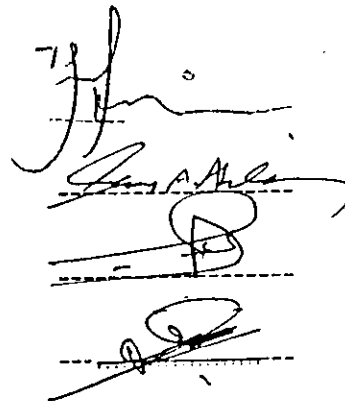
Supervisors  
Dr. Ziad Sinan  
Dr. Sameer Abu Eisheh

This Thesis was defended successfully on February 2002 and Approved by

**Committee Members**

1. Assist. Prof. Dr. Ziad Senan
2. Assoc. Prof. Dr. Sameer Abu Eisheh
3. Assist. Prof. Dr. Ali Abdelhamid
4. Assist. Prof. Dr. Jamal Amro

**Signature**



# **THE LANDSCAPING OF PALESTINIAN CITIES' ENTRANCES (The Case Study of the Western Entrance of Nablus City)**

## **ABSTRACT**

The main aim of this study is to understand the idea of the city entrance within the planning and design processes of the city. In addition, this study aims at determining the main landscape elements which form the city entrance as well as analyzing the interrelationships between these elements on one side and with the users on the other side.

While trying to achieve these aims, certain contemporary theories & concepts explaining the context, formation, and characteristics of the city entrances as well as dealing with the major problems facing these entrances are discussed and being adopted in this study when necessary.

The case study is the Western Entrance of Nablus City. This entrance is analyzed in this thesis using the available data and information. Landscape Assessment approach used in this study as a method of research. The research methods used consist of both desk studies from literature and any written information and fieldwork by observations, questionnaires and interviews.

## ACKNOWLEDGMENTS

During the period over which this study has been conducted, many people have helped, either directly or indirectly. It is difficult to mention each by name, some, however need special mention.

First of all, I would like to express my grateful thanks to my supervisor Dr. Ziad Senan in his guidance and understanding. He helped me very much in managing the process and in lending his experiential and intellectual insight into the subject matter.

My great thanks to Dr. Samer Abu Eishah for his great assistance, valuable contribution and help for supplying me the needed data.

I am fully thankful to Dr. Ali Abdelhamid who did his best to help me both through giving his instructions and providing me with the necessary data source. He is always ready and never hesitates for any help.

I was lucky to work with them all and to benefit from their experiences.

I will never forget to thank my colleagues and friends from the Urban and Regional Planning Center and from the Ministry of Local Work, Mr. Ihab Hijazi and Mr. Ibrahim AL-Hamouz who helped me too much in the computer work and in providing me the necessary information and documents.

I should not forget the students of the Department of Architecture who helped me in the fieldwork especially Awni Shihab, the student in the fourth year of Architecture, who worked very well in the distribution of the questionnaire, exposing himself to dangers caused by the current military situation of the area.

My grate thanks to Mr. Zakaria from the Palestinian Telecommunication company for his help in the statistical analysis SPSS.

Finally, I owe my respect and appreciation to my family especially my mother, sisters and brothers, and to my best friend Sahira Bleibleh for their emotional support and encouragement.

At last, my deepest gratitude must go to my husband, Mahmoud, who shared me the hopes, the dreams and the fears during this period. Indeed, his understanding, encouragement and companionship made the boring and tiring time enjoyable. He used to busy himself in order to encourage me to do my work. My love to my Kid, Zaid, whom was forced to undergo my stress and fatigue through all the thesis process.

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# CHAPTER ONE

## INTRODUCTION

### **1.1 Background**

Landscape refers primarily to the visual appearance of the land, including its shape, form and colors. The landscape is not a purely visual phenomenon, but relies closely to physiography and history. In addition to the scenic or visual dimension of the landscape, there is a whole range of other dimensions, including natural geographic aspects as geology, topography, soil, ecology and archeology (MOPIC, 1996).

The landscape is not simply a rural phenomenon. It compasses the whole of our external environment, whether within villages, towns, cities or in the countryside. The patterns and textures of the buildings, streets, open spaces and trees, and their interrelationship within the built environment, is an equally important part of wide landscape heritage (Institute of Environmental Assessment and The Landscape Institute, 1995).

Landscape has a fundamental importance and value in almost every where; in cities, villages, districts, suburbs.....etc. However, it gains an additional value when combines with cities' entrances, because of its significant role

in giving a good (or bad) impression about the city. Well-developed and organized landscape of city's entrances is reflected on the accessibility and attractiveness of the city, as well as its ability to encourage more visitors and customers. This in turn will be reflected on the economy of the city and the country as a whole.

Then what is the city entrance? Actually there are different types of cities' entrances. The differentiation of these entrances is mostly related to the geographic location and topographic features of cities and their connections with the surrounding areas. For example, there may be entrances through streets, rivers or airways. In other words, there are different gates of the city: land gate, water gate and air gate.

Lynch in his book "the image of the city" defined cities' edges as linear elements, which are the boundaries between two kinds of areas (Lynch, 1959). He indicated that the edges are often paths as well. Where this was so, and where the ordinary observer was not shut off from moving on the path, (as he is on the central artery for example), then the circulation image seemed to be the dominant one. The element was usually pictured as a path, reinforced by boundary characteristics. A high-speed artery may not necessarily be the best way of visually delimiting a central district.

This study is concerned much with the land entrances (gates) as well, which suites the actual setting of the case study area.

The city entrance considered in this study is along the main street or the main road, which connects the major cities in the West Bank governorates together. This entrance is determined by the proposed municipal boundary of the city. This determination of the entrance will be explained in details in Chapter (5) later.

The built environment has two dimensions: one related to the physical characteristics and the other related to the quality of these elements. Also, the landscape of cities' entrances deals with two important dimensions: physical and quality. While the physical dimension is related to natural and human elements, the quality dimension is related to the visual quality of the elements of the landscape of the cities' entrances.

## **1.2 The Problem**

In general, entrances of cities are facing several problems. While some of these problems are due to the location of the city, most of them are related to the absence of appropriate planning and development policies. In some cases, these problems could be linked with the political, social and economic conditions.

Some entrances suffer from the allocation of industrial and manufacturing activities. Others may face the problem of unauthorized or squatter housing development. Some entrances may have environmental problems (pollution, noise, smell, etc.) due to the allocation of solid waste disposal sites.

In the case of Palestine, in addition to the above-mentioned problems, cities' entrances are facing a significant and unique problem. This problem is caused by the Israeli occupation of the Palestinian territories for several decades, which resulted in the haphazard and uncontrolled development of cities in the absence of proper planning schemes. Consequently, cities' entrances as well as other city elements were facing several environmental, planning, visual, etc. problems. Moreover, due to the Israeli political orders in terms of the confiscation of land for the expansion and development of Israeli settlements, all Palestinian cities suffered from the lack of land for appropriate development and efficient provision of land uses. This in turn was reflected on cities' entrances, which also suffered from such condition and the resulted problems. Furthermore, the Israeli occupation resulted in the formation of the "refugee camps" in almost every Palestinian City either inside the cities and/or along the entrances to these cities.



In addition to the above listed problems, there are planning, organizational and administrative problems, architectural problem, landscape problems, environmental problems and transportation problems see Chapter (5).

In this sense, there is a threat of a loss of the image of Palestinian Cities' Entrances. And there is an urgent need for good management planning and development for these entrances in order to maintain that image.

In the face of the above mentioned problems, in its different scales (at the international scale, and regional scale and the local scale), planners, architects, landscapers and decision makers find themselves ill-equipped for making decisions regarding the use of the concept of cities' entrances. But, in spite of these problems, it is still possible to have cities with good entrances because cities' entrances consist of different landscape elements which planners, decision makers and architects can develop or improve.

### **1.3 Objectives of the Study**

In general, this study aims at developing a basic understanding of cities' entrances in Palestine as active, enjoyable, attractive, safe and health places to travel through, live or rest in. particularly, the study aims at achieving the following objectives:

1. To highlight the conceptual framework of cities' entrances.
2. To identify the characteristics of the landscape elements of cities' entrances.
3. To develop a major outline for obtaining a public image of the city entrance which reflects the city itself.
4. To establish a conceptual basis for the planning and design of cities' entrances.

In order to attain these aims and objectives, existing concepts, approaches, models and theories explaining the nature and characteristics of the landscape elements of cities' entrances are used and tested when it is necessary.

## **1.4 Methodology**

This research adapted the exploratory orientation relying on concerned qualitative approaches with analysis of some quantitative data. In the search for the features that define the City Entrance, this study uses the inductive argument. The purpose was to reach the aim of this research, which is not only to define and analyze the landscape elements of cities' entrances, but also to elaborate other elements that can help to relate the concept of the city entrance and its image, as presented in Figure (1.1).

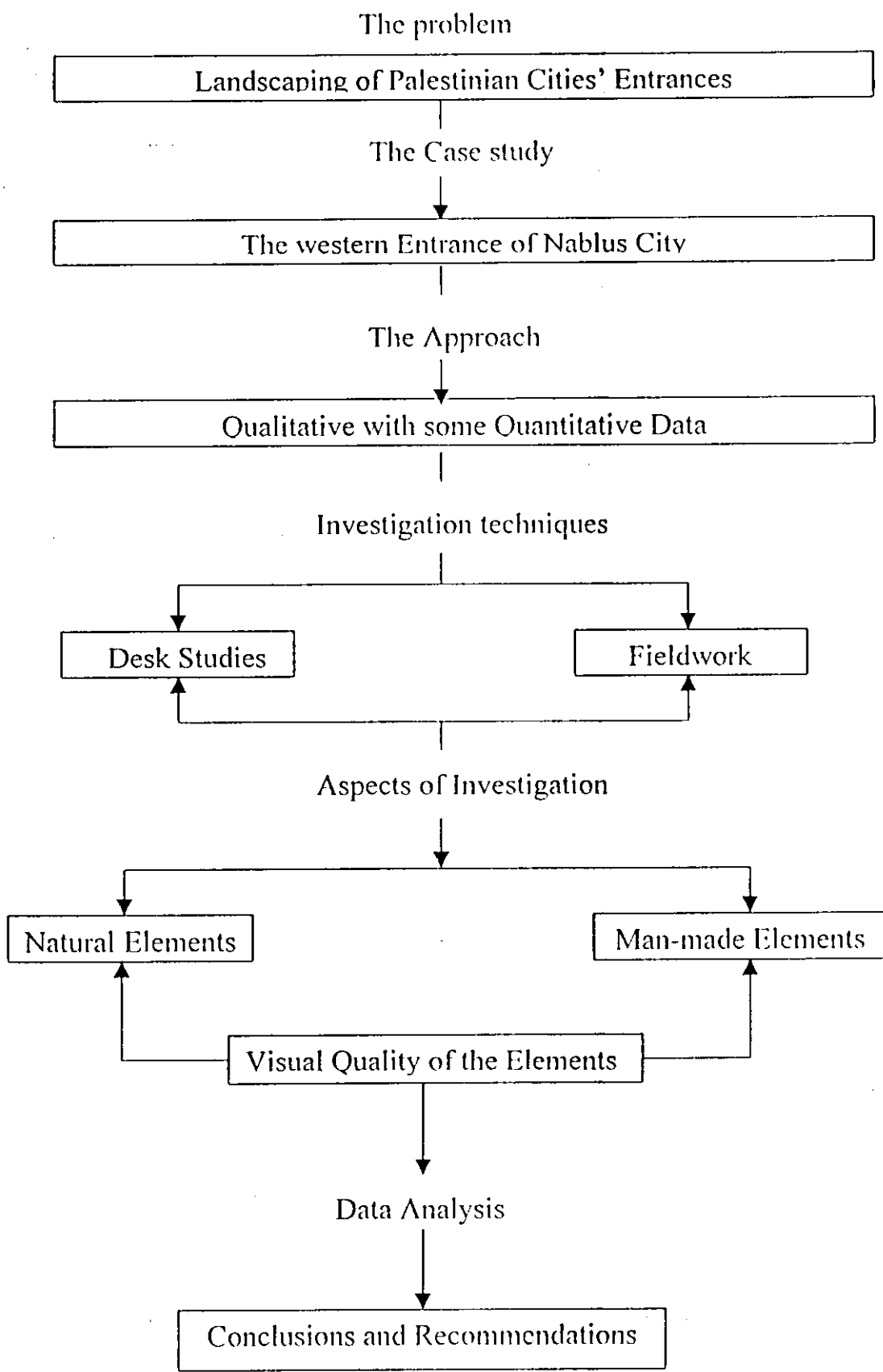


Figure (1.1): The Research Methodology and the Procedure for Investigation

For the reason of in-depth investigation and accuracy, a case study is employed. The Western Entrance of Nablus City has been chosen. This particular entrance has been selected because of its significant location as the joining gate from the west and the north to the middle and the south of the West Bank Governorates, as well as the variations of the elements constituting this particular entrance.

The strategy for investigation is to start from the general towards the specific; from defining the problem of Palestinian cities' entrances' in general and then highlighting the case study of the Western Entrance of Nablus City in specific and in more detailed. For this purpose, the landscape elements of the study area are divided into three categories for investigations: natural elements, Man-made elements and visual quality of the elements.

Regarding the data collection, multiple-research techniques are applied because of the complexity and specialty of the question of the research, which direct the process of investigation. Secondary information had been derived from what is called "Desk Studies Techniques" such desk studies consist of literature, aerial photographs, and existing and proposed maps.

Primary information relevant to the study was obtained by fieldwork techniques. These include observations, interviews, field surveys and questionnaires conducted as a method for measuring the different images do people have and the different elements that help in processing this image. This examines the three aspects that formulate the city entrance, the natural, man-made and visual elements, thoroughly in this research.

This is, in brief, an overview of the research methodology, of which a full discussion is presented deeply later in this study.

## **1.5 Structure of the Study**

Based on the above-illustrated methodology, this thesis is composed of seven chapters.

The first chapter serves as an introduction. Ideas and arguments, which provided the basis for this study, are presented. It reviews the research methodology adopted during the fieldwork for investigation the study area.

In Chapter Two, approaches and concepts for sustainable development of landscape elements of cities' entrances are reviewed and studied. This

chapter discusses the characteristics of different landscape elements of cities' entrances.

Subsequently, Chapter Three discusses the conceptual approaches and models for landscape and environmental assessment studies. It explains different methods and concepts for landscape development.

Chapter Four presents the research methods adopted in the research. It explains the approach to the study, the strategy for investigations, the techniques adopted for collecting information and the analysis strategy and the difficulties that faced the researcher during the fieldwork.

In Chapter Five the actual settings and the study area is explained. This section introduces the problem of the research in Palestinian cities' entrances in general. In addition, it concentrates on the Western Entrance of Nablus City through discussing and analysing the different existing elements of this entrance.

Consequently, Chapter Six analyzes the results of the fieldwork investigation. It discusses the research findings of the study area, the Western Entrance of Nablus City.

Finally, Chapter Seven presents recommendations and design proposals regarding the image of cities' entrances and the development of the elements which form the city entrance, which may guide the professionals in landscape planning and architecture process.

**CHAPTER TWO**  
**A REVIEW OF SUSTAINABLE DEVELOPMENT  
OF LANDSCAPE ELEMENTS OF CITIES' ENTRANCES/  
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**CHAPTER TWO**  
**A REVIEW OF SUSTAINABLE DEVELOPMENT OF  
LANDSCAPE ELEMENTS OF CITIES' ENTRANCES/  
APPROACHES AND CONCEPTS**

## **2.1 Introduction**

Cities' entrances are of significant importance since they have a great role in providing the first impression about the city and reflecting the accessibility to the city. MOPIC, (1999) defined landscape as the visual interpretation of the physical environment of man, which is divided into natural and man-made elements.

Turner, 1998 indicated in this field that any external effects that influence the environment are known as **environmental impacts**. But distinction can be made between two sub-categories of environmental impacts: **Landscape impacts**; which are changes to the fabric, character and quality of the landscape as a result of development, and **Visual impacts**; which form a subset of landscape impacts, relate solely to changes in available views of the landscape.

Accordingly, a determination of landscape elements of cities' entrances to be studied, can be considered as follows:

(1) Natural elements

(2) Man- made elements

(3) Visual quality of the elements

This chapter will explain these elements in details in order to achieve cities' entrances of sustainable development landscape.

## **2.2 Natural Elements**

Turner (1998) considered natural landscape quality as a public good, because no body can charge for it. When somebody benefits from landscape, this does not reduce the opportunity for somebody else to benefit from it. No body can charge for fresh air, beautiful views access to public space and listening to birds or the presence of hedgehogs (Turner, 1998).

Cities' entrances can be considered as resources of public goods, of which natural elements form the significant portion.

Environmental objectives are of vital concern to the community at large; they reach beyond the interests of private landowners and private land- users. So, any development of cities' entrances must consist of deep study of these natural elements. These natural elements can be divided as follows:

(1) Topographical characteristics

- (2) Water and soil characteristics
- (3) Air characteristics
- (4) Ecological characteristics

### **2.2.1 Topographical Characteristics**

New settlements tended to conceal or destroy the landform of cities. We have found it easy to adjust land-shape for various purposes such as buildings, streets and highways, enormous volumes of earth are moved from site to site.

Actually, the landform should be a feature to be exploited in urban renewal. Landscape planners should seek out landform, just as Michel Angelo looked at a block of marble and saw a statue concealed within it. Birmingham City, in the middle of England, has a significant landform, which is substantially concealed by buildings. In such places the old landform awaits rediscovery, like buried treasure (Turner, 1998).

Topographical characteristic was very important in historic cities and sometimes it was the reason to create some others. Nowadays, topography is very essential in the development of cities and should be utilized in a right manner to be a helpful tool in the work of planners and landscapers.

Therefore, when speaking about developing cities' entrances the topographical or landform characteristics remain very important features to be studied and analyzed.

Topography is, sometimes, regarded as an obstacle against development, and other times regarded as a helpful tool. For example, the proper fitting of the highway in a very steep land is very difficult. But, using some structural elements in the implementation, in addition to use vegetation, forestry will enrich the process.

AASHTO (1991) discussed the possibility of using natural topography or slope as a helpful feature in the design process. For example, Steep topography or natural slope of the land gives a chance when designing highways and streets in the city entrances to use right-of-way widths and grades to provide variation in roadside slopes or create natural appearing berms for screening or traffic noise attenuation.

As a result, before any development for the city entrances we must have maps showing the state of the existing topography in order to "indicate areas for protection, excavation and deposition".

### 2.2.2 Water Characteristics

Water management is an essential aspect in the development of cities' entrances. If it is not managed well, it will cause hazards upon people (users), and may make the city entrance suffering from various problems. In turn may change the entrance to another access. While good water management at cities' entrances could be a resource for outdoor recreation, which is considered an attractive element and this increases the recreational potential of the entrance.

Water at cities' entrances, physically, can be divided by two ways: according to its existence and according to its quality. Water according to its existence of two types: first, **ground water** such as springs and wells. Second, **surface water** such as rivers, streams, lakes etc. Water according to its quality is either **rainwater** or **wastewater**.

Rainwater and wastewater at cities' entrances must be managed well. For example, Turner (1998) discussed the importance of rainwater management. He mentioned specific planning principles, which give more potential for creation. However, wastewater when mismanaged, known to pose substantial present or potential hazard to human health or the environment. As well as, it

is considered a major resource for air pollution and it affects the useful groundwater.

The importance of water management of any city's entrances appears obviously in transportation facilities, which are considered one of the most important and vital facilities in the city entrance. AASHTO, (1991) indicates that drainage is considered an essential element in the design construction and maintenance of any transportation project. Drainage can affect the structural integrity or safety of a facility as well as the environmental quality of surrounding areas.

However, water should be managed well in general and especially at cities' entrances. There are several design mechanisms to manage water in relationship to transportation facilities. AASHTO, (1991) defined two important mechanism: first, vegetated drainage courses. Second, stormwater management.

### **2.2.3 Air Characteristics**

Air pollution is very critical in the development of cities' entrances. Good and clean air helps to form the first impression about the city.

“Stuttgart’s air plan is the most famous example of a citywide climate plan. Because of its valley location, the city suffers from temperature inversions, which place a “ceiling” over the valley and trap polluted air. It becomes hotter in summer and colder in winter. Climatological studies revealed that the vegetated hills around the city were reservoirs of cooler, fresher air. Building control regulations were used to protect the hills from urbanization. A radial open space system was planned to function as a network of flow channels, ducting cool fresh air downhill to break the thermal ceiling over the city center. Air management can make places healthier and more comfortable. The air quality requirements of open space vary according to climate and season” (Turner, 1998).

There are certain activities that affect the air characteristics. Some sustain and affect positively, others pollute the atmosphere. Noise is part of air pollution. Traffic noise pollution must be taken into consideration when developing cities’ entrances, especially if there is high transportation shrinkage at the city entrance.

There are a variety of measures that can be used to reduce traffic noise AASHTO 1991, mentioned different methods for such noise management. For example, depressing the roadway provides a cut section to help screen noise from nearby residents. On occasion it is possible to shift the roadway

alignment away from a noise-sensitive site. Vegetation is usually not a viable method of reducing noise unless it is dense, high, and wide. A buffer strip of vegetation to screen the highway from human receptors can provide a psychological value if an outright noise reduction is not possible. Noise barriers, usually located along the highway right-of-way, serve to reduce traffic noise to adjacent properties. They can be an important element in highway design where homes and other noise sensitive properties are close to the right-of-way. In many situations, noise barriers are the only viable solution to noise impact. Noise barriers can be constructed as freestanding walls of wood, concrete, metal, building stone, brick, block, an earth berm, or combinations of materials. It is the designer's responsibility to design a barrier with structural integrity of proper height and location, and to consider such factors as drainage, safety, costs, aesthetics and maintenance. Views from the community and motorist must be considered.

#### **2.2.4 Ecological Characteristics**

Every new project in the development process of cities' entrances affects ecological characteristics. For instance, converting natural environments to highway uses results in a loss of wildlife habitat and loss of native vegetation and replaces it with less complex plant communities.



AASHTO (1991) suggested one of the most important areas, which are affected by this development, what called "unique farmlands that are used for production of specific high-value food.

In Palestinian situation, the unique farmlands which could be lost because of the implementation of highways or streets at cities entrances are "the olive farms", which produce olives and olive oil being the most important aspects in the local landscape in Palestine.

If a proposed project will impact olive farmlands, where a significant amount of farmland would be converted to highway use, then in order to protect this wealth (olive farmlands). According to (AASHTO1991) these alternatives are as follows:

- 1- Alternative alignments that would not convert farmland.
- 2-Alternative alignments that would convert either smaller areas of olive farmland or other farmland that have a lower relative value.
- 3- Minimum shoulder width.
- 4- Concrete median barriers in lieu of wide medians.

## 2.3 Man-made Elements

Man in general affects landscape too much through his facilities in living. Sometimes the features done by man may have positive effects on natural landscape and help to increase the existing qualities, but sometimes man cause a major negative or damaged effect upon the landscape.

Therefore, the physical elements or features of the landscape, which are made by man, can be called man-made elements of the landscape. These man-made elements affect the visual quality either positively or negatively.

The man-made elements of the landscape of cities' entrances are either elements from the past, which are any historical and archeological features, or nowadays elements: which can be transportation projects or different buildings of different uses.

The man-made elements of the landscape of the cities' entrances can be summarized in three main features:

- (1) Transportation facilities
- (2) Historical and archeological features
- (3) The existing land use

## **2.3.1 Transportation Facilities**

Transportation projects are the most important facilities, which affect the landscape in general, especially at the entrance or gate of any city. The highway itself at that point (and in general) is considered as a major element of the landscape.

The highway should be compatible and well integrated with its surroundings. Visual impact is an important issue. Safety, function, economy, environmental compatibility and aesthetics are important elements of the highway especially at cities' entrances or gates.

When speaking about transportation or highways somebody can deal with many components, which form the highway. According to AASHTO (1991) these components are as follows:

### **2.3.1.1 Alignment and Profile**

The visual compatibility between the highway and its environment is largely dependent on the design of alignment and profile. The views and vistas created by skillful design often form the first and lasting impression of the city. Careful coordination of alignment and profile with the natural topography may enhance the scenic beauty of the area.

### 2.3.1.2 Cross Section

The cross section determines the relationship of roadside to the pavement and to other components of the highway, such as walls, drainage facilities etc. The design of the cross section affects right-of-way requirements, drainage, revegetation, aesthetics, noise and local air quality.

The highway may be depressed through visually sensitive areas, such as residential zones, historical areas and urban centers. Depressing the highway allows open views and reduced noise impacts for the retaining walls. The highway may also be elevated on a solid embankment. Elevated highway creates a visual barrier that may or may not be desirable. When the highway alignment follows the boundaries of varying land uses, such a barrier could be an improvement. For example, an elevated profile may be used to separate industrial development from residential areas. Elevated highway also might be a good solution in highly urban situations where land values are high and the space under the structure can be developed. It is also a solution in visually or ecologically sensitive areas where the view or free circulation is important, and where a depressed profile is impossible.

### **2.3.1.3 Roadside**

The goal for any transportation corridor landscaping is to create a facility that is aesthetic in overall form and detail. Such a highway is often more economical to maintain more than any other corridors which receive an ornamental landscape treatment.

The roadside is often the space for environmental mitigation activities. In many areas, the roadside acts as an important habitat for both flora and fauna. Archeological sites within the right-of-way may require special preservation efforts. Comply with environmental regulations, it is often necessary to protect particular scenic resources, such as trees, rock outcroppings, unique farmlands or certain views.

### **2.3.1.4 Median**

The important function of the median is to provide a safe separation of opposing lanes of traffic. Medians should be as wide, flat, and free of fixed obstacles as circumstances permit. Wide medians often permit the preservation of natural features or simply provide visual relief to a wide expanse of pavement. They also allow space for future roadway widening for more or additional activities or facilities. The addition of extra facilities consumes much of the existing median, so when this occurs, a barrier of one sort or another is usually required. Usually a wide median may not be possible

due to economic or environmental reasons. Shrubs and ground covers should not be allowed to compromise the function of the median or of safety barriers. If a barrier is required, shrubs should be planted behind the barrier.

New tree planting in the median is generally discouraged unless safety barriers exist or the width of the median exceeds 80 feet (AASHTO, 1991). Existing tree or any other high scenic object can be preserved with a wide median, a split alignment or safety barriers. On low-speed roads and highways trees should not be planted in median dividers unless the dividers are curbed and sufficiently wide. Since the median is a difficult area to work in, plants should be selected that can tolerate minimum care and that can naturally restore themselves if damaged by vehicles.

#### **2.3.1.5 Planting**

Vegetation is the most appropriate covering for all exposed earth surfaces on roadsides and medians. Vegetation benefits the motorists and others in terms of safety, economy, comfort and pleasure.

There are two general classes of vegetation: turf, such as grasses and the taller growing kinds consisting primarily of woody plants, which are shrubs and trees. Woody plants create a three-dimensional effect in landscape and require special design considerations. Where possible, the retention of desirable

natural existing growth is extremely important and requires consideration early in design.

Planting is important along highways on existing alignments because of restricted right-of-way and adjacent development. The highway offers opportunities for planting under a wide variety of conditions that require careful consideration by the landscape architect. The landscape architect should create a planting design in accordance with the requirements of the highway. Plantings' composition should be pleasing and coordinated with the total highway environment with safety being the most important consideration.

Design and choice of plant materials vary considerably from arid to humid areas. Rural locations may only require supplementing existing growth with small sized new plants and planting for special functions while the urban and suburban highway and thus cities' entrances may require extensive plantings with larger sized plants. Using wildflowers in the landscape of the roadway at cities' entrances, of course need a design. In designing wildlife flower landscapes environmental conditions are as important as color, texture and line. Hardy drought-resistant wildflower and other native plants, that are indigenous to the area to be landscaped and grow there naturally, are the ones to use. They can require less maintenance and help preserve our water supply.

At cities' entrances, motorists should be able to view complete pictures and changing scenes in scale with the travel speed. Widely spaced plantings as individual trees or shrubs create a spotty and disturbing effect. Massed plantings are the form and texture of the landscape viewed at highway speeds. Tree planting should be set back from the traveled lanes, not only for safety, but also to insure spatial continuity and the strong visual effect of a wide turf area between pavement and plantings. The plants used must be capable of growing relatively well with minimum maintenance to serve their purpose under the particular highway conditions that may be encountered. Planting plans should indicate type of adjacent land use, topographic features. They should be presented on drawings separate from the highway construction plans, and they should be clear and easily understood.

Planting of roadways can be used for different purposes. AASHTO, 1991 defined specific functions of roadway's planting such as: planting for traffic safety, for environmental mitigation and for aesthetics.

Planting the roadway for Traffic Safety is related to the most dangerous aspects, which are the headlight glare and psychological considerations. Blinded vision due to glare can be a cause of accidents, this problem appears obviously from service road and parking areas, either at or near the area of the



city entrance. Thus, shrub plantings may reduce glare and in turn help maintain nighttime sight conditions. These plantings can be relatively close to the pavement. The plants must be dense, twiggy of sufficient height to perform their functions.

Furthermore, long driving with no change of eye focus, which may have bad psychological effects on the driver, for instance it may lull him. So, plantings can be used to help to change the views seen by the driver and then to please him and give him a good image or impression about the city that he is about to enter.

As well as, planting the roadway may be used for environmental purposes. Although plants absorb and scatter sound waves to a small degree, but they can be used to reduce noise by causing psychological effect. When it is not possible or feasible to use barriers or other actual means of attention, planting may reduce human annoyance and awareness of the problem by screening the noise source from view. However, plantings can be used to protect wildlife. Roadsides are important for wildlife habitat. They can provide food in the form for example of berries.

### 2.3.2 Historical & Archeological Features

Over the years, many historical and archeological sites have been distributed by man's activities. These sites could have great economic value for tourism as an element for sustainable development in any country. This concern resulted in providing legislation for the protection of these sites, which would be affected by construction of developing projects.

The existing of archeological or historical features in any city will give it exceptional importance as well as its entrance. However, the city entrance in which one or more of these historical sites are existing has more importance and quality and needs careful studies and consideration through any development and planning process.

Planners should consider archaeological and historical preservation requirements regarded the city entrance early in the planning process. Identifying archaeological or historical impacts early in the process allows more time and opportunity for coordination, negotiation, and engineering value.

In Palestine, cultural heritage is one of the most important historical and geographical components. It is important not only at the national, but also on

the international level. "More than 6000 sites, most of them unexcavated, can be found in the West Bank and Gaza Governorates representing a wide spectrum of historical cultures in Palestine" (Emergency Natural Recourses Protection Plan, 1999). Any future plans for the development of Palestinian cities and thus their entrances must take into consideration the locations of these special sites, which need special consideration in the planning process.

### 2.3.3 Existing Land Use

The development of any area, in general, needs a deep study of the use of land and buildings in that area, which is the most important element in both design and implementation phases.

Therefore, the development of cities' entrances should take into consideration the neighboring area as well as the adjacent buildings such as residential, commercial, recreational and industrial. Taking into account the architectural style particularly that of special importance or value, is also an advantage in the development plan.

Christopher Alexander (1977) argued, that each building project must relate to neighboring patterns (Turner, 1998). "When you build something you cannot merely build it in isolation from the adjacent environment. You must

also repair the world around it, and within it. So the larger world at that one place becomes more coherent, and more whole, and the thing which you make takes its place in the web of nature, as you make it" (Turner, 1998).

As a result, any proposed project within the developing process of cities' entrances should take care the existing land and buildings' use, in order to avoid potential impacts or to minimize them.

## **2.4 Visual Quality of the Elements**

It may be difficult to define visual quality or scenic quality. One can say that visual quality is the thing, which causes pleasure, happiness and attraction to something. The visual quality of city entrance is the most important element, which plays a great role in forming the image of the city. Although scenic quality is regarded emotional, it is related very much to physical elements. It can be considered the result or the translation of physical elements; good physical elements mean high visual quality and visa versa.

Therefore, when speaking about visual quality of the city entrance means the evaluation of the physical conditions of the different elements, either natural or man-made, which form the city entrance. The method used to obtain visual evaluation of the main physical components can be seen in details in the item

(2.4.3) later in this chapter. However, this evaluation needs taking into consideration every physical element, which may affect the visual quality.

For example, one of the most important facilities of cities' entrances is transportation facility. This facility may cause a great impact on the visual quality of the city entrance if not managed well, because the visual quality of the road or the highway at a city entrance has an important role in forming the impression about the city in the eyes of the visitors.

AASHTO (1991) defined certain physical elements, which have a strong impact on the visual quality of the highway such as structures, different hardware elements as well as roadway plantings.

Structures are considered long-lasting and often massive elements. Thus, it is important to pay special attention to structure aesthetics. Structure aesthetics do not mean ornamentation or decoration. It means that attention is given to scale, proportion, form, line, texture, color and other principles of art and architecture, as well as pure function.

Examples for road structures, which affect visual quality of the road, are sound walls or retaining walls. They should be designed to parallel the roadway profile, not the natural ground at line. If they cannot parallel the road

profile, the two profiles should at least be coordinated for the most harmonious blend. Portions of the wall may have to be higher than the minimum height required for noise attenuation to avoid tiny steps or sags in the line. Attention must be given to the fact that the wall is viewed at an oblique angle and usually at high speeds by motorists. Attention to textures and colors can improve the visual quality of a sound wall. A typical aesthetic and objective is to reduce the apparent height of a wall by horizontal treatments. The appearance of walls can be softened by using Planting.

Hardware elements of the roadway, which include signs, lighting, fences and barriers require aesthetic considerations. Their design and placement should be carefully considered. Electrical power and telephone cables should be installed underground whenever feasible. Luminaries and signs should be placed to avoid conflicts with trees. In areas of special scenic beauty, hardwares should be of exceptional visual quality to reflect the uniqueness and specialty of an area.

Another element that can be used and may have a positive role in the visual quality of the road and then the visual quality of city entrance is public art, especially when appropriately placed. Artworks can enhance user experience and benefit the community. Art should not distract motorists or present a physical hazard to pedestrians or others.

### 2.4.1 The Importance of Visual Quality

The public nature and visual importance of the facilities given in the city entrance makes it essential for these facilities to exhibit good visual quality. Planners consider visual impacts (both positive and negative) in the development process.

The visual effects of any project strongly affect the community acceptance of the project. These effects are seen both in views from the project (as seen by project users), and views of the project (as seen by project neighbors):

- The importance of the first has been recognized, for example, by the recreational use of highways. Researchers have also shown that the view from the road is the basis for our mental image of our every day environment. So, communities are rightly concerned about the visual character of their transportation portals: the first impressions do count.

- Systematic consideration of views of the projects, as seen by project neighbors, is more recent. Particularly, in urban and suburban areas, there may be many "eyes per mile" near an existing or proposed transportation facility. If existing views are very high in quality or are valued by large numbers of people, the visual benefits accrued by the persons who would use the facility. In such cases, the facility must be carefully planned to ensure that

pleasing vistas travelers are not developed at the expense of views from surroundings areas.

#### **2.4.2 Policy Support for Visual Quality**

There should be, in all communities, specific policy to maintain or support visual quality. A variety of national policies direct different communities to conserve existing visual resources that are high in quality and to enhance the built environment by good project planning and design.

For example, in America, the Historic Preservation Act of 1966 directs all federal agencies to account for the effects of proposed projects on historic resources. Coverage of the visual effects of transportation projects was further broadened in 1966 by Section 4 (f) of the U.S. Department of Transportation Act, this section declares a national policy to preserve, where possible, “the natural beauty of countryside and public parks and recreation lands, wildlife and waterfowl refuges, and historic Sites.” (AASHTO, 1991). And The National Environmental Policy Act of 1969 (NEPA) in USA applied environmental awareness policies to all types of federally supported projects and all types of project settings.



In Palestine, (MOPIC) in 1998-1999 took the initiative to prepare an Emergency Natural Protection Plan for the West Bank Governorates and Gaza Strip. This plan is intended to be a first step towards sustainable use of Palestinian natural resources and towards sustainable development in general, and it aims to protect natural resources as well as the natural and cultural environment of the West Bank Governorates from environmentally harmful development projects and programs. As part of the preparations of the plan, special studies had been conducted on and certain publications were produced. Among these publications were "Landscape Assessment of the West Bank Governorates" (MOPIC, 1999). And "Endangered Cultural and Heritage Sites in the West Bank Governorates"(MOPIC, 1999). The first book considered the Landscape as " the visual interpretation of the physical environment of man ". This assessment of the Existing landscape is considered as the beginning for a Palestinian Landscape Act. The second book was an assessment of cultural and heritage sites, which would be the first step for a Palestinian Preservation Act.

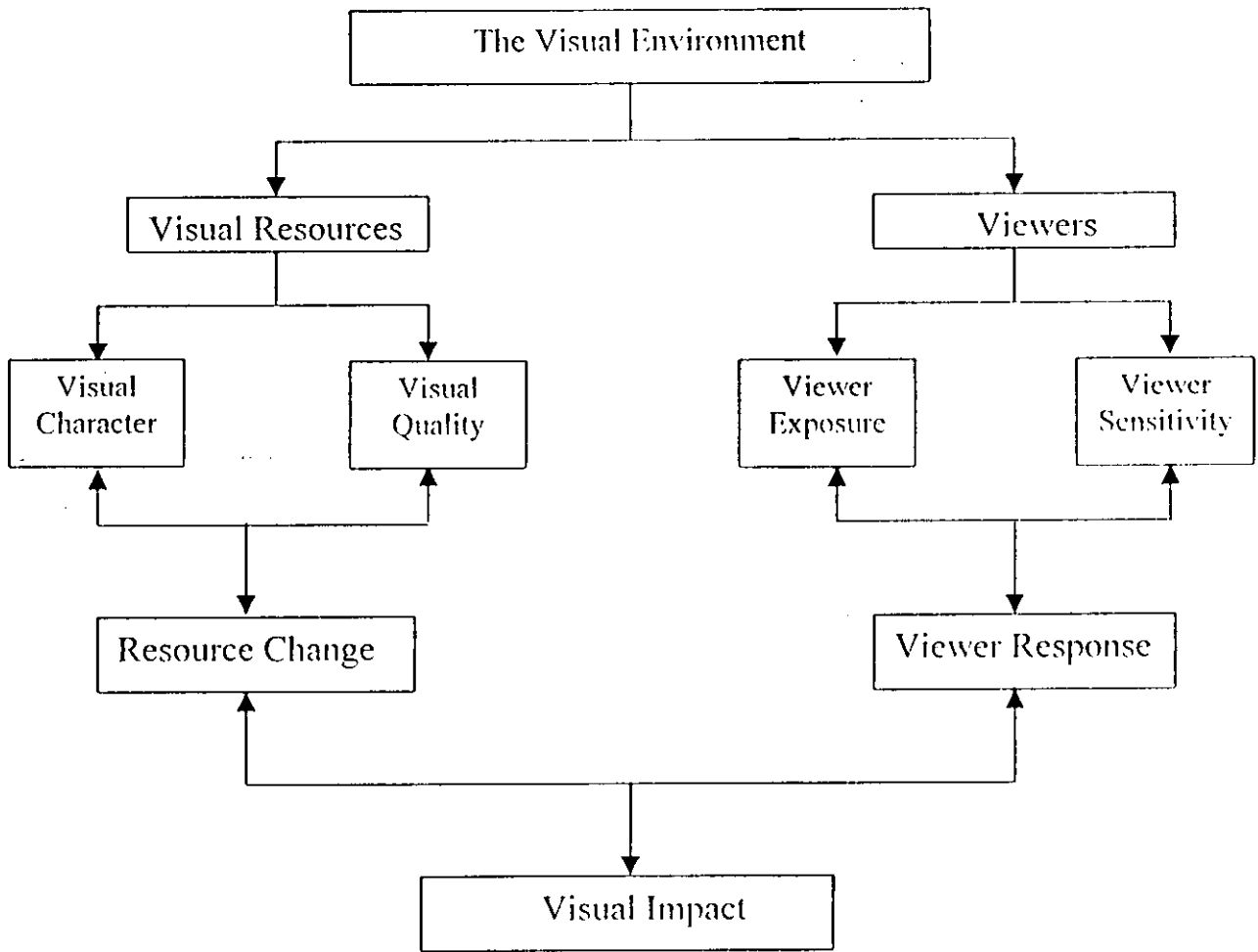
### **2.4.3 Visual Resources Assessment and Management**

One may think that mapping scenic resources is more difficult than mapping other natural resources. Many people believe that " Beauty is in the eye of the beholder" which makes scenic mapping impossible. However, there is a

surprising fact that many researchers discovered that there is a high degree of consensus about Scenic Quality Assessment (SQA) feasibility (Turner, 1998).

In the USA, several federal agencies have developed formal systems for Visual Resources Management (VRM). In brief, VRM is a systematic approach for assessing visual resources in a project area and then using the assessment finding to help make management decisions on the project. VRM can be an important link between planning and detailed projects design, and can go far to ensure adequate consideration and response to public concerns over the visual effects of projects (AASHTO, 1991).

We can benefit from the American experience of VRM, to make suitable assessment for visual resources at the entrances of cities in order to take appropriate decisions in the development of such entrances. Visual experience is comprised of both visual resources and viewer response. A project, such as a building or highway, causes visual resource change that can be objectively measured. Viewer response to this change, although subjective, usually displays broad patterns of consensus. Thus, visual impacts comprise both the landscape change and viewer response to that change (See Figure (2.1) bellow).



**Figure (2.1): Visual Experience (Source: AASHTO, 1991)**

Assessment of scenic (visual) quality is sometimes described as landscape evaluation or visual evaluation. These terms are misleading. Most people think of landscape as a geographical term, so that an evaluation would have to include functional and biological in addition to aesthetic characteristics. The term “visual evaluation” has two drawbacks. First, it implies a smaller scale

of concern than "scenic". Second, it refers more to perception than to appraisal.

On the other hand, in UK there are guidelines for "landscape assessment" meaning scenic assessment (Countryside Commission, 1987), and for "landscape and visual impact assessment" which includes other types of landscape impact (Landscape Institute & Institute of Environmental Assessment, 1995), and (Turner, 1998).

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Visual or scenic quality assessment consists of two tasks: **inventory** and **valuation**.

-**The inventory** maps and catalogues the components of the landscape. When cataloguing the wider landscape, the units will be more topographical: hills, valleys, streams, farmsteads, sea clefs and so forth. This landscape cataloguing will show the overlap with units defined for different purposes because maps showing non-overlapping units. The landscape units may be defined as follows:

- (1) Natural areas: These will result from natural process, geology, soils...etc.
- (2) Man-influenced areas: these will be both modern (arable land, grazing land, forestry, housing, and industry) and historic (ancient settlements, farms).

(3) Viewshed areas: these may be defined by ridgelines, woodlands, buildings etc. The area within a Viewshed can be computed with a GIS program and mapped as a Zone of Visual Influence (ZVI), (Turner, 1998). This Viewshed is the geographic area from which the project will be seen and is a useful tool for identifying the view that the project may actually change. Viewshed mapping can go far to dispel exaggerated community fears over the impacts of a particular project by establishing the physical limits of project visibility.

-**Scenic evaluation** should be carried out when units have been defined (when viewshed areas are defined). As with the task of definition, there should be desk studies and field studies. But, after experience, it is found that the estimation of scenic quality can be made from maps.

“For example, if there is a steep mountain beside a lake with a fringe of trees along a sandy shore, the natural scenic quality is likely to be high. If there is dense urban development around a castle, the historic scenic quality is likely to be high. If there is a large area of suburban housing with a repetitive geometrical pattern, the place is likely to be dull. If there is a uniform road pattern through an industrial area, it is likely to be ugly. These observations lead to the conclusion that although beauty may be subjective (in the eye of the beholder) it is possible to base good predictions of scenic quality on

objective criteria: slope, elevation, vegetation, water, geology, age of buildings and other artifacts. These elements can be included in a landscape inventory" (Turner, 1998).

On a higher level, people experience the visual environment as an integrated whole, not as a series of separate objects. Visual understanding of the environment is based on the visual character of landscape components and their relationship to each other. Descriptive assessments of visual character are based on defined attributes, which carry no implications of value in themselves. There are at least two broad levels of such attributes, which can be termed as **pattern elements** and **pattern character**.

**Pattern elements** are primary visual attributes of objects in the landscape, including form, line, color, and texture. The visual relationships among these simple pattern elements create secondary visual attributes, both of individual objects of whole landscapes.

These higher level attributes can be termed **pattern character** and include dominance, scale, diversity, and continuity. By assessing the existing visual character of an area in terms of pattern elements and pattern character, it is possible to identify the extent to which the visual character of a transportation

facility will exhibit visual contrast with the landscape or its converse, visual compatibility.

There are several useful approaches to the evaluation of visual quality. **First:** This approach is to survey the visual preferences of public viewer groups. **Second,** used by the U.S. Forest Service and the Bureau of Land Management, looks to the regional landscape for specific indicators of high visual quality, such as water bodies or dramatic rock faces. High visual quality is postulated of those landscape that most clearly or dramatically exhibit the natural process characteristics of the region. A **Third:** it is to evaluate the visual quality looks for indicators concerned with visual relationships rather than with landscaped components. Evaluative appraisals are judgments of relative visual quality of specific resource or landscapes, based, unlike visual preferences, on implicit or explicit criteria. These criteria are usually derived from research studies in which they have proven to be effective indicators of broad public judgment of visual quality.

To understand and predict viewer response to the appearance of a project, one must know something about the viewers who will see the project and the aspects of the visual environment to which they are likely to respond. Vision is an active sense. We generally have a reason for looking at the landscape and what we see is conditioned by what we are looking for. Physical

conditions also influence perception; as speed increases lateral vision declines and sight tends to be confined along the forward line of travel. Viewshed mapping can help to categorize viewer groups by identifying their physical location, the number of people in each group, and the duration of their view. All of these factors help to determine viewer exposure.

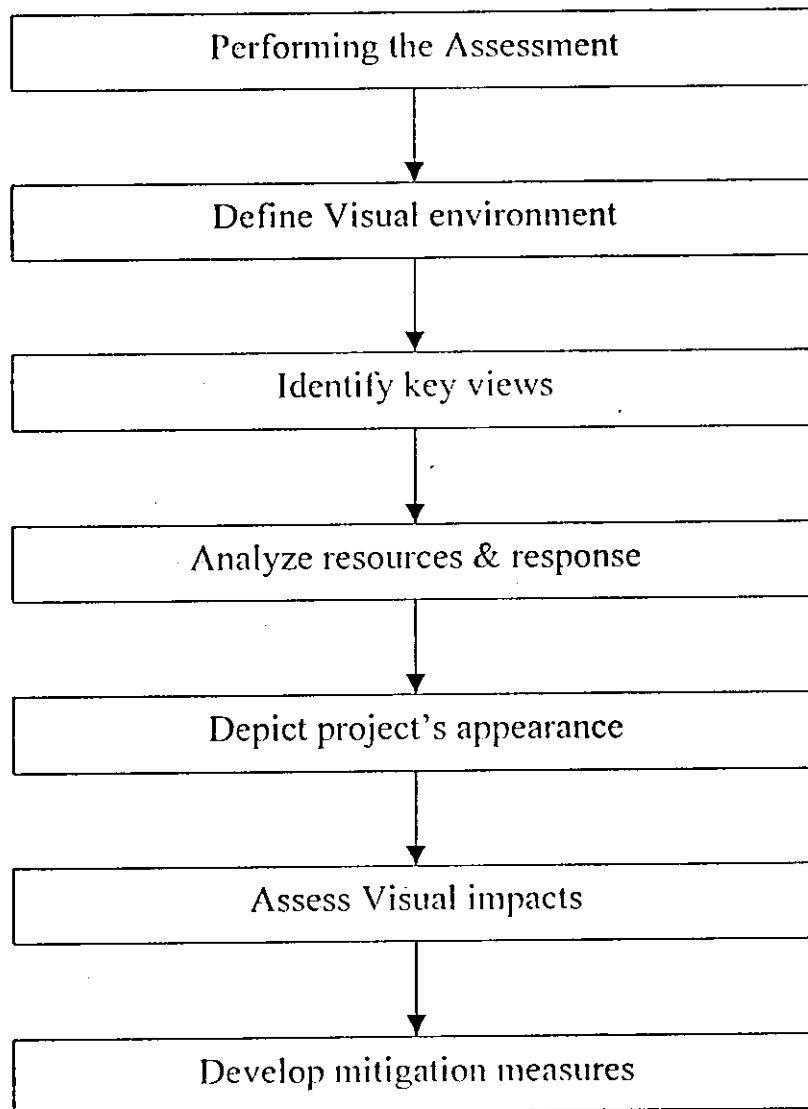
The receptivity of different viewer groups to the visual environment and its component is varied. This variable receptivity is called viewer sensitivity and strongly affects visual perception and the subjective evaluation of that perception. Viewer expectation regarding particular landscapes plays a major role in view sensitivity. These expectations are closely related to the types of activities in which viewers are engaged. The principal land use at a specific observer viewpoint can be used as an indicator of viewer sensitivity. Generally, persons engaged in recreation are the most sensitive to visual amenity, followed closely by persons in residential areas. Travelers can be considered moderate in viewer sensitivity, while persons located at commercial or industrial land use sites may be relatively insensitive to visual considerations.

#### **2.4.4 Visual Assessment Processes**

A number of government agencies have developed visual assessment processes or systems that are tailored to their specific authorizing legislation



and management responsibilities. The systems developed by the U.S. Forest Service and the Bureau of Land Management are among the best known examples of such agency-specific visual assessment processes. The generalized process, diagrammed in Figure (2.2) below, can provide a framework for almost any visual assessment.



**Figure (2.2): Visual Assessment Process (Source: AASHTO, 1991)**

As illustrated in this Figure, **the first step** in any visual assessment is to define the physical limits of the affected visual environment by mapping the project viewshed. It is often useful to subdivide this viewshed into a series of visual distinct landscape units that serve as an analytical framework for locating visual effects, comparing alternatives and identifying appropriate visual mitigation measures.

Consequently, **the next step** is to identify key views to display alternative and assess impacts. Generally choose views that represent the range of resources within the visual environment of the project, including at least one view for each visual assessment unit. Also, choose views that represent major viewer groups, including highway users and neighbors.

**Next**, it is necessary to depict the appearance of the project, in order to determine its visual effects. Too often, project proponents try to conjure up this appearance with words or rely on an “artist’s concept” prepared to show the project’s best side. This type of approach may work in a sales campaign, but is not appropriate for projects requiring full environmental disclosure and may arouse suspicion and distrust among members of the public.

**With visual simulation in hand, the next step** is to assess the impacts of project alternatives by comparing the “before and after” appearance of key

views. In order to make good study for the appearance of key views, it is may needed to what called “image maps” and “skyline plans”. Image maps are a good way of representing the features, which compose of our mental images of particular project. The image maps show the paths, edges, nodes, districts and landmarks. Skyline plans deal with the representation of scenery on the third dimension; the height.

**If the project would impose adverse visual impacts, the final step is to develop mitigation measures to reduce or offset those impacts. It should be clear that the appropriate way to test effectiveness of the mitigation measures is to add them to the visual simulations that disclosed the impacts in the first (AASHITO, 1991).**

## **2.5 Conclusion**

As discussed earlier in this chapter, There are three important elements, which form the city entrance:

- (1) Natural elements.
- (2) Man-made elements.
- (3) Visual Quality elements.

These main elements are strongly with each other. Sometimes one element is considered as a result of good conditions of the others. For example, good natural and man-made elements will produce good visual elements or high scenic quality. Man-made elements are affected by natural elements; some times they oppose them or go with them. On the other hand, man-made elements affect positively or negatively natural elements and this will in turn affect visual quality of the area.

The development in one element will impact the development, either positively or negatively, of the other. For example, the land use of the area may have a new pattern such as recreational potentials as a result of good physical elements or the development in man made elements like existing historical or archeological features or steep mountains with green land cover.

The above consideration of the elements of the landscape of the cities' entrances neglects two important aspects: the social and the political aspects. These both aspects are considered as very important and sensitive. They may form the most difficult threats, which oppose both the development and the planning processes.

Therefore, one must take into account all the possible aspects that affect the development plans.

**CHAPTER THREE**  
**A REVIEW OF CONCEPTUAL MODELES AND APPROACHIES FOR  
LANDSCAPE AND ENVIRONMENTAL ASSESSMENT STUDIES**

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**CHAPTER THREE**  
**A REVIEW OF CONCEPTUAL MODELES AND APPROACHES  
FOR LANDSCAPE AND ENVIRONMENTAL ASSESSMENT  
STUDIES**

This chapter aims to provide an overview of different methods and concepts which form approaches and strategies for landscape planning.

We'll discuss the following three approaches:

1. Landscape assessment studies.
  - Landscape and Visual Impact Assessment
2. Landscape planning methods.
  - Ecological Planning Method
3. Landscape Planning Concepts
  - Greenbelt concept.
  - Greenway concept.

### **3.1 Landscape Assessment Studies**

Many conceptual approaches and concepts have been developed for landscape assessment studies. In this chapter, we'll deal with one approach, which is defined by The Institute of Environmental Assessment and The Landscape Institute, UK (1995). This approach is called "the Landscape and Visual Impact Assessment".

### **3.1.1 Landscape and Visual Impact Assessment**

The “Institute of Environmental Assessment and The Landscape Institute, UK” (1995 ) determined the assessment process in order to achieve accurate information through the following steps:

- **Description of the development**
- **Baseline studies**
- **Mitigation**

#### **3.1.1.1 Description of the development**

The value of a description of a proposed development is frequently underestimated. It can make an important contribution to the credibility and effectiveness of the study.

The description should focus upon factual explanation of the basic design elements, such as: access, layout, buildings, structures, ground modeling and planting, in so far as they affect landscape and visual resources.

There are specific important steps that must be followed in this stage, such as:

### **-Consideration of alternatives:**

Within the general project description at the beginning of the study, project alternatives should be explored. Although not at present a formal requirement of the Environmental Assessment (EA) regulations, this is likely to assume growing importance in future with moves toward sustainable development. There are several types of alternatives that can and should be explored for every project. These include different:

- Locations, sites and alignment.
- Size, scale of development.
- Site layouts, access and servicing arrangements.
- Scheme design and process.

The benefit of exploring alternatives is that they often offer the best scope for effective impact mitigation, especially in relation to landscape and visual impacts. For example, if there are serious landscape constraints associated with a particular site, the selection of alternative location may be the only solution.

Depending on the type of study that is being prepared and the stage reached in the assessment process, more than one project alternative may be taken forward comparative assessment, and hence more than one detailed project description will be required. The most common example is in the



transportation field where route option appraisals are frequently undertaken before a decision is made upon a preferred route for which a more detailed assessment will be carried out.

**- Stages in the project life cycle:**

It is recognized that projects characteristics and hence sources of impact, will vary through time.

Information Requirements: for each stage in the project life cycle, similar types of data are needed to assist in landscape and visual impact predictions.

Both qualitative and quantitative data are required including;

1. Form (including shape, bulk, pattern, orientation, complexity and symmetry;
2. Materials (including layout, scale, style, distinctiveness);
3. Program and duration of key site activities; Site areas under different uses;
4. Physical dimensions of major plant, buildings and structures;
5. Volumes of materials;
6. Numbers of scheme components such as houses and parking spaces;
7. Movements of plant, materials and workforce.

In addition, it is often difficult to provide accurate and complete information on all these varied aspects of a development. Nonetheless, the importance of

such information cannot be over stressed, as it is foundation for all impact predictions. Where key data on project characteristics are lacking, there may be a need to make explicit assumptions as to what will happen, based upon the “worst case situation”.

**- Off-site and indirect impacts:**

Finally, neither the project description nor subsequent stages of the assessment should neglect off-site and indirect impacts.

For example, alterations to the drainage regime the vicinity of the site could result in changes to the vegetative cover and a consequent change to the landscape character, such impacts should be assessed.

Indirect impacts of development should also be acknowledged. Examples include pressure for housing development associated with a large new industry and increased recreational activity following improvements to access.

### **3.1.1.2 Baseline studies**

The initial step in any landscape and visual impact assessment is to review the existing landscape and visual resource: this process results in a baseline report. It is important to bear in mind that baseline conditions are not static.

The landscape may be changing for reasons unrelated to the development itself. Hence, the baseline studies should look not only at existing landscape conditions, but also at the landscape dynamic. And should take in to account of any landscape management strategy or guidelines that exist or in preparation.

The purpose of baseline studies is to record and analyze the existing character, quality enhancement potential and sensitivity of the landscape and visual resources. This will require description, classification and evaluation of these resources:

1. Description: is the process of collecting and presenting information about landscape and visual resources in a systematic manner.
2. Classification: is the more analytical activity whereby landscape resources, in particular, are sorted into units of distinct and recognizable character.
3. Evaluation: means attaching a (non-monetary) value to a given landscape or visual resource, by reference to specified criteria.

The primary aim of the scoping stage is to identify key issues and constraints. The baseline studies for landscape and visual impact assessment include three successive stages: desk study, field survey and analysis.

## Stage One: Desk Study

It is essential to briefly visit the site and review existing map and written data about the development site or area. As a minimum, the baseline studies should extend to cover the whole of the area from which the development is visible and usually the wider landscape context. Useful resources may include:

- Current and historical ordnance survey and other maps.
- Geology, soils and land use maps, hydrological survey.
- Aerial photographs.
- Structure and local plans showing landscape designations and other relevant planning policies (including associated survey and issues reports)
- Informal-planning documents such as countryside strategies and other conservation interests within the area.

In particular, the desk study should explore:

- Patterns and scale of landform land cover and built development, which give guidance on the general landscape character of the surrounding areas.
- Any special values that may apply, notably national landscape designations such as conservation areas, and any historical and cultural associations.
- Specific potential receptors of landscape and visual impact, which may include important components of the landscape, as well as residents, visitors, travelers through the area and other groups of viewers.

## Stage Two: Field Survey

The desk study should provide a sound basis for subsequent field survey work. For instance, it may define draft landscape character areas around the development identify the principal viewpoints, and highlight sensitive receptors. All these findings will require confirmation in the field, particularly in an urban fringe setting, where map and even air photograph data may well be out-of-date.

In relation to landscape character, Countryside Commission in UK gives detailed guidance includes techniques for field survey and assessment (see Appendix (3.1)). The survey form permits recording of both objective description and subjective impressions of the landscape, as well as details of landscape condition and trends for change. After completion of the fieldwork, a classification of the landscape into units of common character can be prepared through a process of analysis.

The approximate visibility of the development should be determined through topographic analysis, either manually or by computer. Principal viewpoints within the study area should also be identified. Both public and private viewpoints are relevant. As in the survey of landscape character, both objective description and subjective impressions should be recorded. Use of a field survey form such as that recommended by the countryside commission

may again be helpful and a comprehensive photographic record from principal viewpoints should support the visual survey.

Lastly, the field survey should identify and address specific sensitive receptors. These may include landscape elements and features that may be directly affected by the development, as well as receptors, the field survey should record topographic, geological and drainage features; woodland, tree and hedgerow cover; land use, field boundaries and artifacts; archeological, historic and cultural features; access and right of way. In the case of visual receptors the types of viewers affected, an estimate of their numbers, or whether they are few or many, duration of viewing, and potential seasonal screening effects should be noted.

### **Stage Three: Analysis**

Finally, upon completion of the desk study and field survey work, the results should be analyzed and written up. A clear distinction must be made between first: the description and assessment of the individual elements or features of a landscape and their importance, and second: the synthesized character of distinctive area.

The baseline studies section should cover the following aspects of the landscape and visual resource:

### **1. Scale and character:**

The analysis of the fieldwork should include a concise description of the existing character of the landscape. This description should review the physical and human influences that affect landscape. It should identify the landscape's distinctive elements, features and their spatial organization and should be clearly illustrated by photographs or often the character description will include a classification of the landscape into distinctive character area or types, usually based on variations in landform and landcover. This classification should reflect all aspects of landscape character, from the scenic or visual through to archeology, history, ecology, and built environment and cultural associations.

### **2. Condition and importance:**

Qualitative analysis requires an assessment to be made of landscape condition as well as a judgment regarding its importance in the sense of aesthetic or cultural value. The analysis should draw upon both desk study and field survey work and should be fully supported by both illustrations and documentary evidence.

### **3. Sensitivity:**

The overall sensitivity of the landscape and visual environment to the type of development envisaged must be done.

By analyzing the general pattern of landscape character and quality, the detailed distribution of landscape and visual receptors, and the extent to which these factors will be tolerant of change and the principal sensitivities and constraints upon development will become apparent. Often these constraints can be summarized in map or plan form.

#### **4. Change or enhancement potential:**

Analysis of character, condition, and sensitivity to change should together provide indicators to the potential for landscape enhancement. For example, it should be possible to identify:

- Those landscapes which exhibit a strong character and sense of place or have many features that are notable, for example, their scenic, historical or ecological interest.
- Those landscapes where individual elements of features have suffered decline, but where there is still scope to restore the typical character or aspects of it.
- Those landscapes where the overall character has been significantly altered, so that reconstruction or even creation of a new landscape is required.

However, this analysis can give general guidance as to where, and how new development can sensitively be accommodated in the landscape.



## **5. Visual analysis:**

Following the field survey, the extent to which the existing site is visible from surrounding area can be confirmed and presented on a plan, identifying specific elements, such as landform, buildings or vegetation, which may interrupt, filter or otherwise influence views. The locations of principal viewpoints should also be mapped and these existing views illustrated by photographs or sketches or both with annotations, which describe any important characteristics that might be of relevance to the assessment of impact or design of mitigation.

By the end of the baseline studies, it should be possible to advise, in landscape and visual terms, on the development's acceptability in principle and its preferred siting, layout and design.

### **3.1.1.3 Mitigation**

Mitigation should not be an after thought, nor something that is applied to the final scheme design. Mitigation only serves to mask what would otherwise be an unacceptable design, rather than dealing with the underlying problems.

Mitigation should be appropriate, adequate and enforceable in the long term.

Mitigation is a design skill, which should start at the very inception of a project with the analysis of environmental opportunities and constraints. It should be used to adapt and modify the development to take account of these factors, and hence achieve the best environmental fit.

Environmental enhancement should be a primary objective for every landscape and visual impact assessment. Enhancement is closely linked to mitigation, but explores the scope for a development project to contribute positively to the landscape of the development site and its wider setting. Enhancement may take many forms, including better management, or restoration of historic landscapes, habitats and other valued features; measures to conserve and improve the attractiveness of town centers; and creation of new landscape, habitat and recreational areas. In this way environmental enhancement can make a very real contribution to sustainable development.

Successful mitigation must be affective, appropriate and feasible, to increase the effectiveness of mitigation, there are many simple principles, such as:

- A- Mitigation measures should be designed to suit the existing landscape character and needs of the locality.
- B- All significant adverse impacts should be considered for mitigation.
- C- Care should be taken to mitigate significant impacts occurring at all stages in the project life cycle.

D- It should be recognized that many mitigation measures, especially planting are not immediately effective.

### **- Strategies for Mitigation**

The ideal strategy for mitigation is avoidance. If this is not possible, alternative strategies of reduction, remediation and compensation may each be explored.

Avoidance of impact through careful siting, planning and design should first be considered. For example, the route of a major highway is usually sufficiently flexible to avoid the most important landscape constraints. Where the need for the road is great, and the environmental constraints intense, highway design standards may need to be adapted to suit the environmental conditions.

After considering impact avoidance, the reduction of any remaining conflict with environmental constraints is the next priority, which means attention to layout and to site levels. Setting a development into the ground can often help it to be absorbed into the landscape. It can also screen low level visual "clutter" such as parking, outdoor storage and working area. By using landform and ground modeling to screen the lower portion of tall structures,

the human eye is much less able to judge their size. New woodland or other planting provided it is of sufficient size, will often reinforce the beneficial effects of good site layout and will assist integration with the landform. However, it should be remembered that new landscape features might be visually intrusive if poorly designed. Stark, geometric earth bunding, often used for noise amelioration next to highways, is an example of an unsympathetic landscape treatment that could be improved with more space and gentle grading.

Mitigation measures that rely solely on what is commonly termed "landscaping" to remedy the impacts of an otherwise fixed scheme are unlikely to succeed. Remediation should be seen as part of the overall process of avoiding and reducing adverse impacts. Nevertheless, the sympathetic treatment of external areas, particularly where this employs sustainable tree planting, will soften the effects of buildings in most circumstances and may bring about a general improvement in the local environment.

#### **- Available measures for mitigation**

In areas of high environmental sensitivity, development with unacceptable environmental consequences may not be permitted on these grounds alone. Therefore, it is important that skill and initiative for such locations is

employed to find an acceptable form of development by systematic impact mitigation. The most common measures for effective mitigation are as follows:

- A- Location and site: these measures should be among the first measures considered if landscape, visual and other environmental constraints associated with a particular site prove to be significant.
- B- Setting and layout: through careful attention to site layout, even significant environmental constraints can be successfully accommodated. For example, areas of existing woodland may be incorporated into the essential public open space provision for a major new housing development.
- C- Choice of site level: landscape is three-dimensional; as well as care with siting and layout, there is also scope for mitigation in the careful choice of site level or vertical alignment.
- D- Appropriate form, materials and design of built structures: many buildings and structures cannot be screened; nor is it always desirable or practicable. In these circumstances, the design of the structures themselves and their color treatment and textual finishes, should be considered in such a way that they fit comfortably with their surroundings.
- E- Ground modeling: ground modeling may be undertaken where the natural landform or site levels do not give optimum screening effect. It should be borne in mind that major earth-works in themselves may create adverse

landscape and visual impact, and care should be taken to ensure that new landform looks natural and appears as an integral part of the landscape.

**F- Planting:** in particular, structural planting can help to integrate a development with its surroundings, and can soften harsh buildings and structures. Where possible, it should be appropriate to the landscape reflecting local species and be of national provenance. Advance planting and where appropriate, off-site planting, offer special potential for effective mitigation.

## **3.2 Landscape Planning Methods**

Different methods have been developed in order to obtain effective solutions for landscape planning problems. According to (Steine, 1991) the Ecological Planning Method is one of the most important methods used in this field.

### **3.2.1 Ecological Planning Method**

According to Thawaba (1998), and Steine (1991), ecological planning method can be defined as it is the use of biophysical and socio-cultural information to suggest opportunities and constraints for decision making about the use of landscape. It is primarily a procedure for studying the biophysical and socio-cultural systems of a place to reveal where a specific land use may be best practiced.

Thawaba (1998) also stated that the central principle of this theory explained by Arthur Johnson is as follows:

The fittest environment for any organism, artifact, natural and social ecosystem, is that environment which provides the energy needed to sustain the health or well being of the organism, artifact, ecosystem. Such an approach is not limited by scale. It may be applied to locating plants within a garden as well as to the development of nation.

Thawaba (1998) mentioned that concerning this approach, Ahern commented that much of focus of contemporary landscape planning relates to the dynamic and impacts of the expanding global megalopolis. According to Ahern, much landscape planning since the 1960's has been a form of "constraint-based exclusionary planning", based largely on the work of McHarg (1969). In this defensive form of planning, resources are assessed and protected according to their intrinsic value. While this planning approach has been successful in many respects, it has proven to be ineffective in preventing landscape fragmentation.

A conceptual consensus is emerging from the dialogue between ecologists and landscape planner, suggesting that future landscape be spatially structured by a "patch and corridor" spatial concept which includes corridors and

stepping stones to connect isolated patches and thus help to counter the effects of fragmentation. This spatial concept represents a departure from conventional "constraint-based landscape planning" in that (a) employs offensive strategies to counter landscape degradation, and (b) it emphasizes spatial connectivity in the landscape. This concept is based primarily on ecological research involving the survival of wildlife species in fragmented landscapes. While this "patch and corridor" concept has already been adopted at a policy level in many countries, there is little agreement on any specific scientific bases for this type of planning, nor for the integration of other land uses within the patch and corridor concept. In remote areas of the world it may be possible to implement patch and corridor plans solely intended for the protection of biotic resources. In the developed landscapes of the world, this is not possible, or appropriate.

### **3.3 Landscape Planning Concepts**

Several concepts had been developed in this field. But this study will focus on two important concepts, which are Green Belt and Greenway Concepts.

#### **3.3.1 Green Belt Concept**

Thawaba (1998), mentioned that Brayant determined that greenbelt could perform a variety of functions: e.g. shaping the urban form and urban



containment, maintenance of the agricultural land resource, preservation of the rural character of the countryside and providing recreational opportunities for urban residents.

According to Thawaba, an example of greenbelt concept, is the greenbelt of Ottawa. Taylor (1995) said that the form and intent of the Ottawa greenbelt was similar to the "belt of green" concept as proposed by Ebenezer Howard and as subsequently developed surrounding London and other communities in England. The final boundaries for the greenbelt reflected Gerber's vision of urban form. Although fragments of natural areas were included, natural systems did not provide the framework or define the shape of the greenbelt. The specific purposes of the Ottawa greenbelt were: first, the greenbelt was intended to prevent further urban sprawl and to protect adjacent agricultural lands from being developed. Second, the greenbelt was intended to provide a reserve of building sites for further government and public institutional use, once the central area of Ottawa was built up. The greenbelt was intended to place a "practical and economic" limit on the growth of the Capital by confining development to an area that could be provided with municipal services at a reasonable cost.

Taylor (1995) explained about Ottawa greenbelt that the greenbelt has existed since its inception. Rezoning of developable municipal land to a federal land

reserve designation was not acceptable to local governments in a period of rapid growth and rising land prices. The greenbelt influenced adjacent urban form, but has been ineffective in controlling urban growth outside the greenbelt. During the 1970's and 1980's, increasing growth pressures resulted in the expansion of three satellite communities immediately adjacent to the outer limits of the greenbelt. The political boundary for the greenbelt imposed on the region did not respond to ecological systems. The ecological principle of maintaining connectivity by providing spatially continuous corridors was not employed in the Ottawa greenbelt. Although a comprehensive system of continuous pedestrian and vehicular routes was incorporated into Gerber's original design, greenbelt has resulted in isolation of natural, recreational and industrial land uses within its boundaries and within the greater region.

From this perspective about greenbelt concept, Bryant (1982) said that greenbelt wedges as opposed to greenbelts would seem to have much to offer since development pressures can be channeled into axial patterns along the main axes of communication into the concentrated built up areas. Thus room for growth would exist while wedges of countryside alternate with the urban zones. Suggestions that the Ottawa greenbelt be turned into a series of wedges (greenways) reflect this partly.

### 3.3.2 Greenway Concept

The greenway concept defined greenways as networks of land containing linear elements that are planned, designed and managed for multiple purposes including ecological, recreational, cultural, aesthetic, or other purposes compatible with the concept of sustainable land use Ahern (1995) and Thawaba (1998).

Ahern addressed five key ideas to the greenways definition.

First, the spatial configuration of greenways is primarily linear, which offers distinct advantages in terms of movement and transport of materials, species or nutrients. This is perhaps the most significant spatial characteristic of greenways, and certainly one, which distinguishes greenways from other landscape planning concepts.

Secondly, linkage is a key greenway characteristic that defines the greenway and relates it to the larger landscape context, often the multiple scale level.

One of the main arguments for greenways is that when a system is linked, it may acquire the synergistic properties of a network.

Thirdly, greenways are multifunctional, based on an assumed or negotiated spatial and functional compatibility of certain uses. The decision made on

greenway goals should reflect social and cultural values and perceptions, as well as those of environmental protection.

Fourthly, the greenway strategy is consistent with the concept of sustainable development, in that it is based on an assumed complementarity between nature protection and economic development. Greenways are not only for protection of nature, other human uses of the landscape are recognized and legitimized, and a balance between resources use and protection is attempted.

Finally, greenways represent a distinct spatial strategy based on the particular characteristics and advantages of integrated linear systems. Greenways should be considered as a complement to comprehensive landscape and physical planning, not a replacement.

Greenways have the potential to provide a visible structure and legibility to landscape. Greenway planning, as a form of regional scale design, may have a profound impact on the physical and spatial character of the landscape. When a greenway produces a strong pattern and form in the landscape, certain natural features and processes may become more visible and legible.

### 3.5 Conclusion

As mentioned in this chapter, that there are several approaches for landscape assessment studies.

This thesis depends mainly upon the "Landscape and Visual Impact assessment" approach, as well as some effects from the "Greenway" concept.

The selection of "Landscape and Visual Impact Assessment" approach is due to different reasons:

- (1) It is the most suitable approach to the case study area. This is sustained by an earlier case study in the Palestinian Governorates, held by the Ministry of Planning and International Cooperation (MOPIC) within its project "the Emergency Natural Resources Protection Plan, Landscape Assessment of the West Bank Governorates" in 1999.
- (2) Relating to Chapter two of this study, which determines the landscape elements of cities' entrances, this approach helps to define the different elements of cities' entrances: both the natural/physical elements and man-made elements as well as the visual quality of the elements.
- (3) The "Landscape Assessment" concept helps to define the different characteristics of the main landscape elements of cities' entrances: it defines the distinguished elements; the disturbing elements and the

missing elements of the natural/physical and man-made elements regarding the visual quality of these elements.

Moreover, the selection of "Greenway" concept is mainly because of different reasons;

- (1) The spatial configuration of Greenway concept is linear, which is fit to the linear definition of the concept of city entrance.
- (2) Greenways are multifunctional, which is proper to cities' entrances. Although multi functional, they are linkaged.
- (3) Because Greenway strategy is consistent with the concept of sustainable development, this is integrated with the concept of the development of cities' entrances. Thus greenway concept helps to achieve sustainable development for cities' entrances.

Obviously, when speaking about the reasons for the selection of the two above concepts of landscape assessment studies regarding cities' entrances reasons for not selecting the other concepts can not be neglected. The ecological concept is not limited, which makes it unsuitable for the limited cities' entrances. Although the Greenbelt approach performs a variety of functions, it includes fragments of natural areas. The natural systems do not provide the framework.

Thus, this study will be a combination between the“ Landscape and Visual Impact assessment” approach and Greenway concepts approach.

## **CHAPTER FOUR**

### **RESEARCH METHODS**

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## CHAPTER FOUR RESEARCH METHODS

### 4.1 Prologue

This study aims to identify the landscape elements of the cities' entrances that formulate people's images of the landscape in general and the landscape of the cities' entrances in particular. As well as, it clarifies the characteristics of these elements, which affect the image of the cities' entrances. Moreover, This study tries to study the way that different people view and accept cities' entrances.

There are many aspects in the investigation process of the elements of the cities' entrances. Part of these aspects depends on natural/physical elements; another part is man-made elements; and the third is related to the visual quality of the elements regarding people's image, their acceptance, the meaning of beauty and the attractiveness of cities' entrances. While the first two can be examined and justified through analyzing and dimensioning the road or the street of the city entrance and its environment, which may form the built environment and the open environment through desk study technique, the third part is not so easy in processing. It will be examined through performing interviews, questionnaires, general investigations and specific observations through field survey technique. Therefore, the approaches and methodologies of the research are to be adjusted to suit different sides of the problem in order to cover all the aspects.

Once the objectives have been determined and the theoretical basis of the study has been conceptualized, the following task is to examine how the data is collected from the case study area in order to achieve the objectives and to answer the questions raised.

The discussion of the fieldwork, which is conducted in the Western Entrance of Nablus City, the case study, including the approach, the strategy and the methods, will be examined. There will be a description and a justification of the methodological approach used to collect the information during the fieldwork. Starting with a brief discussion, evaluated the study approach, then determined the strategy for investigation. And after that the research methods that have been used to collect the information and the techniques used for analysis is introduced. Finally, a short brief of the difficulties, which faced the researcher during the fieldwork, is presented.

## **4.2 The Research Approach**

In environmental studies, the methods and the techniques are varied and numerous. However, the choice of any research method depends on what the investigator wants to know, the specific problems and the type of results desired (Zeisel, 1981). To study environmental meaning, Honikman (1976) identified

three criteria: the physical characteristic criterion, the personal criterion and, the whole environment criterion (Senan, 1993).

This research adapted the third criterion, the whole environment criterion. So, in trying to specify the elements of the landscape of cities' entrances, we have to set the different aspects of cities' entrances, which are: the natural, the man-made as well as the quality or the visual aspects that rely to the perception and images which reflect the personal factors. This implies that if we wish to understand the interaction between man and environment, we must consider both as whole total entities.

Low (1987) in her discussion on the development of the qualitative methods in research, pointed out the conceptualization used by Moore and Howell (1985) in adapting qualitative and quantitative methods in environmental researches:

"From their comprehensive discussion emerges an image of the environmental design research as a field that includes qualitative methodologies, but that relies on research and data generated by quantitative methods characteristics of the psychological and social sciences. They suggest the qualitative methodologies need to be clarified and explicated and that anthropological and historical technique should be added to the qualitative repertoire of design applications" (Low, 1972:279), as presented in (Senan, 1993).

In general, the orientation of this study is exploratory and relies mainly on qualitative approach, but at the same time it will evaluate some quantitative data (Senan, 1993).

### 4.3 The Strategy for Investigation

The main step in the methodology is the selection of the case study as a way of probing into specific situations and circumstances of the subject under investigation. In this study, the Western Entrance of Nablus City is chosen for investigation within this study, different research techniques are employed to investigate different aspects of cities' entrances and the relationship with these aspects with people's image of the city entrance.

The fieldwork has been performed between April-2001 and July-2001. The investigation focuses on these main issues: the main elements of the landscape of the city entrance, the users' image of the city entrance and their different needs. The different distinguished elements that share in determining the image are character, attention, and the scenic quality of the city entrance. At the same time, the different disadvantages or disturbing elements of the city entrance elements which need deep solutions to improve the city entrance.

For the purpose of this research, the Western Entrance of Nablus City will be investigated through natural/physical elements of this particular entrance, the man-made elements and the visual quality of these elements.

Accordingly, there will be two levels of investigations:

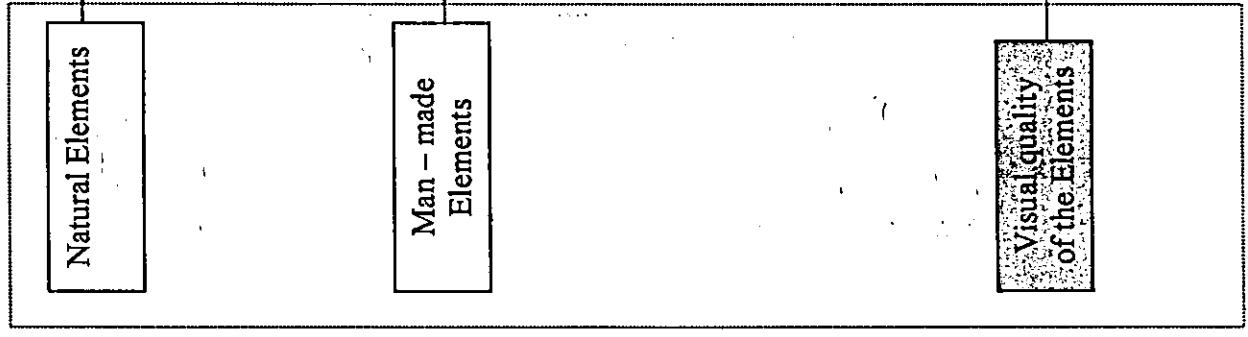
**The first** is related to surveying, dimensioning and analyzing the existing natural and man-made elements, which both could be physically investigated. The investigation for these two types of the existing elements should be through the desk studies and fieldwork techniques (as presented in Figure 4.1).

**The second** deals with the visual quality of the elements of the city entrance, which is related to the personal images, which people believe towards the city entrance, and how the city entrance could be beautiful and attractive to the users. This approach of investigation depends mostly on the fieldwork while some predictions could be done from the desk studies (see Figure 4.1).

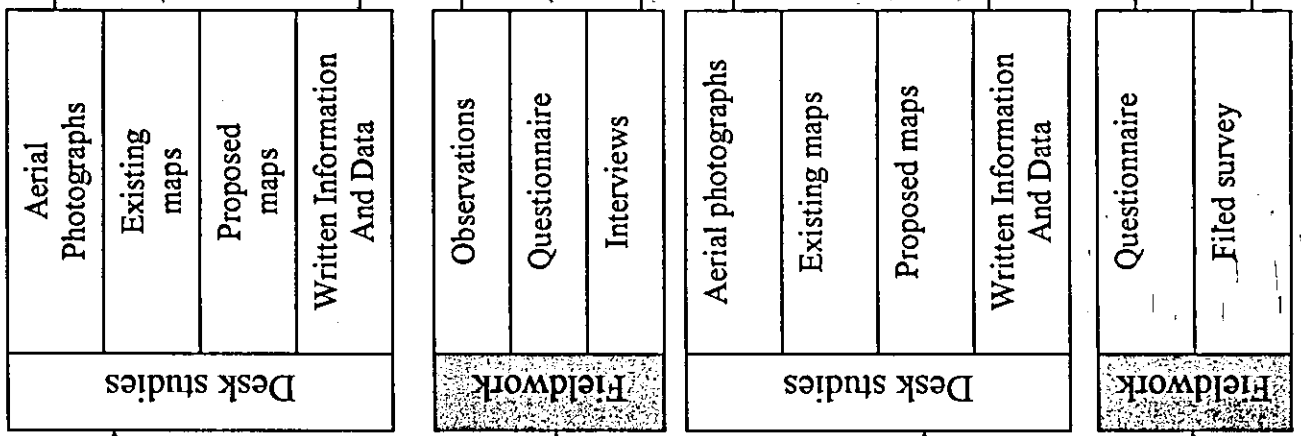
#### **4.4 Investigating the Western Entrance of Nablus City**

The Western Entrance of Nablus City is chosen to be a case study. The study area is determined along the main road from the intersection with the road to Qusin village, and to Wadi At-Tuffah in Nablus City at the intersection of Haifa, Yafa and Tunis streets. The selection of this entrance was based on different criteria depending on its characteristics, and on its relation with Nablus City and other cities in Palestine. More details about the selection of the study area will be mentioned in Chapter Five later.

**Landscaping of Palestinian cities' entrances**



**Methods**



**Objectives**

- Specify the case study
- Specify the real condition
- Specify different buildings and functions.
- Specify the different elements of the physical environment
- Specify the different elements and activities.
- Specify the real conditions of the problems and the traffic flow.
- Specify distinguished physical elements and specify disturbing elements and needs of the users
- Expectations and ambitions, the importance of the main road.
- Predictions of the visual quality, beauty and attraction from the given physical data.
- The influence of different physical elements. People's image of city endurance to set real needs & expectations
- To set the different scenic aspects like color texture harmony in order to classify the study area into sob areas according to its visual quality

**Findings**

Identify the characteristics of the different elements of the study area.

Setout distinguished elements, disturbing elements and missing elements. These elements to be protected improved or developed

People's image of the city endurance

Different sub-areas according to scenic quality

The investigation of the city entrance means the investigation of the main road as well as the environment of the same main road along both sides. This environment consists of the built environment, the buildings, and the open environment, the open areas and the green areas.

So, the investigation of the study area consists of the main road, the buildings whatever their functions, and the open areas along the tow sides of this main road. The depth of the area along each side depends upon the primary fields of vision that affect the different users of this entrance, see Appendix (4.1). Most users recognize the study area when they are in vehicles, either while driving or travelling. In order to make users read signals and signs and enjoy the colors and shapes of the surrounding environment. The depth of the study area, along the both sides of the main road, is determined by the wider field of fairly vision extending about (10-12) degrees around the centerline of the eye, (see Appendix (4.1)).

The investigation process, as mentioned earlier in this study, depends on the main landscape aspects: natural, man-made and the quality of the elements.

The techniques of investigation that will be depending on the landscape assessment procedure (see Chapter Three). This technique consists of desk studies and fieldwork for each of the main aspects.

#### **4.4.1 Desk Studies**

Desk studies according to the Institute of Environmental Assessment and Landscape Institute, UK (1995), include all written data and information including mapping. So, in the study area desk studies depend on the recent aerial photographs, existing and proposed master plans and written data and information from literature and national institutions and experts.

#### **4.4.2 Fieldwork**

The study area is composed of a variety of elements. This variation was the reason for using different fieldwork techniques.

The field techniques employed in the investigation of the study area are observations, interviews with key figures, distribution of questionnaire, and field survey.

##### **4.4.2.1 Observations**

In order to understand the situation in a holistic perspective, to see things as they are and to be open and inductive in approach, physical observations had been carried.



Patton (1990) highlighted the importance of data collected through observations. He wrote: "the purpose of observational data is to describe the setting that was observed, the activities that took place in that setting, the people who participated in those activities, and the meaning of what was observed from the perspectives of those observed. The description must be factual, accurate, and thorough without being cluttered by irrelevant and trivia" (Patton, 1990:202) as presented in (Senan, 1993).

Observations could be carried out in different ways. Bechtel and Zeisel (1987) stratified the observer into four categories: a naïve observer, a participant observer, a hidden observer and a professional observer. The approach adopted in this study was professional observation in which the researcher specified the elements to be observed and the feature to be studied (Senan, 1993).

Observations for the study area concerned with the collection of information through inspecting the physical characteristics. There are many techniques for gathering observational data including participant's observations, field observations, qualitative observations and field research (Patton, 1990) and (Senan, 1993).

This thesis adopted the direct observations in which the study area is divided into certain elements to be observed. The observations' techniques are achieved through photographs and taking notes by written checklists. The observations are held out for determining the distinguished and the disturbing physical elements, determining the physical condition of the main road and its spatial structure.

The shortest checklist for observations is as follows:

(1) Physical factors:

- Geology
- Landform
- Drainage
- Water
- Air
- Ecology
- Vegetation

(2) Man-made factors:

- Archaeology
- Landscape history
- Land use

-Building and settlements

-The main road

The information gained through these observations are presented on maps for analyzing the study area.

#### **4.4.2.2 Interviews**

The fieldwork starts by interviewing the key figures who either have knowledge of the subject or whose occupation is related to the development or planning of cities and streets. Part of the interviewees are people who share in a way or another in making decisions regarding city planning and streets planning. The purpose of these interviews is to try to define the city entrance; to distinguish elements which form the city entrance; to highlight the real problems of the Western Entrance of Nablus City, and put future expectations of this entrance with some proposed solutions for the existing problems. The number of the interviewees, which have been conducted, is (14). These all are arranged in advance (See Appendix (4.2)).

To understand the people's image of the city entrance; to know their needs and perceptions; to identify, according to the users, the distinguished, the disturbing and the missing elements; and to know how do people consider the

city entrance is attractive or not, people are asked to express their different images. Prepared questionnaires are distributed among the users of the Western Entrance of Nablus City.

The questionnaire is composed of two sections. The first is the biography of the respondent, and the second contains of different questions about the physical elements of the Western Entrance of Nablus City and the people's opinions about the visual quality of this entrance. These questions are prepared in subjective answers. The questionnaire is presented in Appendix (4.2).

The sample was taken randomly but stratified. This approach of sample selection was in order to gain a balanced distribution of different users of the case study. This variation of the users of the study area with their different backgrounds affects the interrelationship between respondents and this entrance of Nablus City. The sample consists of four different groups of people or users with total number of (131). These groups are as follows: The visitors to Nablus City, the residents in the study area, the workers in the study area and the drivers along the study area.

The visitors cover 50% of the sample size, with a number of (65) questionnaires, because this group has many people and are more different in

their backgrounds. So it is considered the largest group of the users of the study area.

The second group according to its size is "the drivers" who are taxis and busses drivers. This group is most familiar with the study area, and it covers 20% of the sample size. There are (26) questionnaires for the drivers.

Finally, the sample contains 15% for the residents and 15% for the workers, with (20) questionnaires for each group. The residents can be classified into two subgroups: the residents of the study area who are living in Beit Eba village, which forms two thirds of the total area of the study area; the residents in the study area but living within the boundaries of Nablus City, which forms one third of the total area of the study area. Taking 5% of the population of each area, (13) questionnaires were distributed on a randomly stratified sample of the residents of Beit Eba, forming (2/3) of the total number of the questionnaires for the residents. And (7) questionnaires were distributed for the residents of the part related to Nablus City forming (1/3) of the number of questionnaires for the residents.

The workers in the study area are either in the commercial stores along the study area, or the workers in the factories of the study area. These factories are stone factories, furniture, wood factories and quarrying. For each group,

there are (5) questionnaires with a total number of (20) questionnaires for the workers group.

The distribution of the questionnaire is carried out with the help of students from the Department of Architecture of An-Najah National University in Nablus City.

In order to deal with the questionnaire in an easy and accurate manner, it was translated into Arabic.

Finally a software program called Statistical Package for Social Sciences (SPSS) is obtained to point out the elements which had been most frequently mentioned or featuring the different images for the observers of this entrance.

#### **4.4.2.3 Field Survey**

According to the Institute of Environment assessment and the Landscape Institute (1995), field survey technique used especially just to investigate the visual quality of the elements of the study area. Desk studies just give some predictions about the visual quality.

For the purpose of the field survey, it is useful to define certain factors for the survey process. According to the Institute of Environment assessment and the Landscape Institute (1995), the shortest checklist of the aesthetic factors include the following:

(1) Visual such as:

-Proportion

-Scale

-Enclosure/refuge

-Prospect

-Texture

-Color

-Views/vistas

(2) Other Sense Such as:

-Sounds

-Smells

-Tastes

-Touch

The study area can be classified into different character areas (see Chapter Three) which help in evaluation, these are:

(1) The Main Road which includes:

- The paved area
- The sidewalks and medians
- The planting in the road

(2) The Environment which includes:

A- The built environment including:

- Residential buildings
- Factories
- Commercial buildings
- Workshops
- Mixed use commercial/residential buildings
- Mixed use industrial/residential buildings

B- Open environment including:

- Green areas
- Damaged green areas
- Open space

The first step in this process is the survey form, so a structured survey form for this purpose is presented in Appendix (4.3).



After that, the study area is divided into (8) equal zones, nearly each one has an intersection of the main road with local road. This division is for making the survey easy and accurate. Each zone of the eight zones is divided into a northern sub-area and a southern sub-area, according to the main road. This is because the desk studies and observations give information that the northern and southern sides of the main road are different but each one has nearly the same characteristics.

The next step is filling the survey forms for each of the divided areas, (see Chapter Six and the related Appendix).

Finally, the evaluation of the data or information obtained by these forms (as illustrated below).

#### **4.4.3 Analysis Strategy**

After collecting the information from questionnaires, interviewers, observations and field survey, the data is coded in order to be analyzed. Computer program named "Statistical Package for Social Science" (SPSS) is used for data analysis. It is a statistical analytical software that includes a lot of modules used to test and analyze data in any field of science, especially for social science, and test various hypotheses upon which the research is built.

The background of the analysis will depend upon the “Strength, Weakness, Opportunities and Threats (SWOT)” theory, as follows:

-Strength, which will be defined through the determination of the distinguished elements.

-Weakness, which will be defined through the determination of the disturbing elements.

-Opportunities, which are identified through the needs of people and their perceptions by determining the opportunities for adding new elements or organizing existing ones.

-Threats, which are defined through the determination of difficulties, such as those related to natural elements or to the current situation, which is usually imposed on any development plans.

For the analysis of the field survey and to obtain the visual quality of the study area is classified into three categories:

- (1) Visually protected areas, which are of the highest quality and fulfil (8-10) positive criteria from the field survey form (see Appendix (6.6)).
- (2) Visually improved areas, which fulfil (4-7) positive criteria from the field survey form (see Appendix (6.6)).
- (3) Visually developed areas, which fulfil (1-3) positive criteria from the field survey form (see Appendix (6.6)).

#### 4.4.4 Difficulties in Processing Fieldwork

There are always problems facing fieldwork. These problems vary according to the difference of the places of fieldwork.

One problem facing the researcher in the fieldwork is that people needed explanations about the research subject and sometimes giving examples in order to imagine the elements of their environment.

Collecting some documents such as aerial photographs of the study area was so difficult especially from Nablus Municipality, because the municipality spent much money for getting these documents, and they can't give them easily for anybody, as said by the officials of the municipality.

As it is mentioned above, every place of research has its difficulties, but research in Palestine, especially in the West Bank, has its own difficulties because of the political situation due to the Israeli occupation. The uprising (Al-Aqsa Intifada) makes it so difficult to reach the study area, because of the Israeli military closure to Palestinian cities. The main way to the study area was closed by large concrete blocks and piles of soil and sand which forced the researcher to travel through many other ways and sometimes to walk on feet long distances to pass by these blocks. This is under the atmosphere of

fear from facing the Israeli soldiers or settlers who may shoot without any reason or previous warning.<sup>1</sup>

On the other hand, this Israeli strategy of military closure for Palestinian areas, transfer temporarily the entrances of the Palestinian main cities. This means that the entrances of Nablus City from other cities were transferred to be along nearly local roads, which may not be asphalted, or through the fields. Sometimes, people, who come from the north (for example from Jenin City), they enter Nablus City from the eastern entrance.

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## CHAPTER FIVE

### THE ACTUAL SETTING/THE STUDY AREA

#### 5.1 Introduction

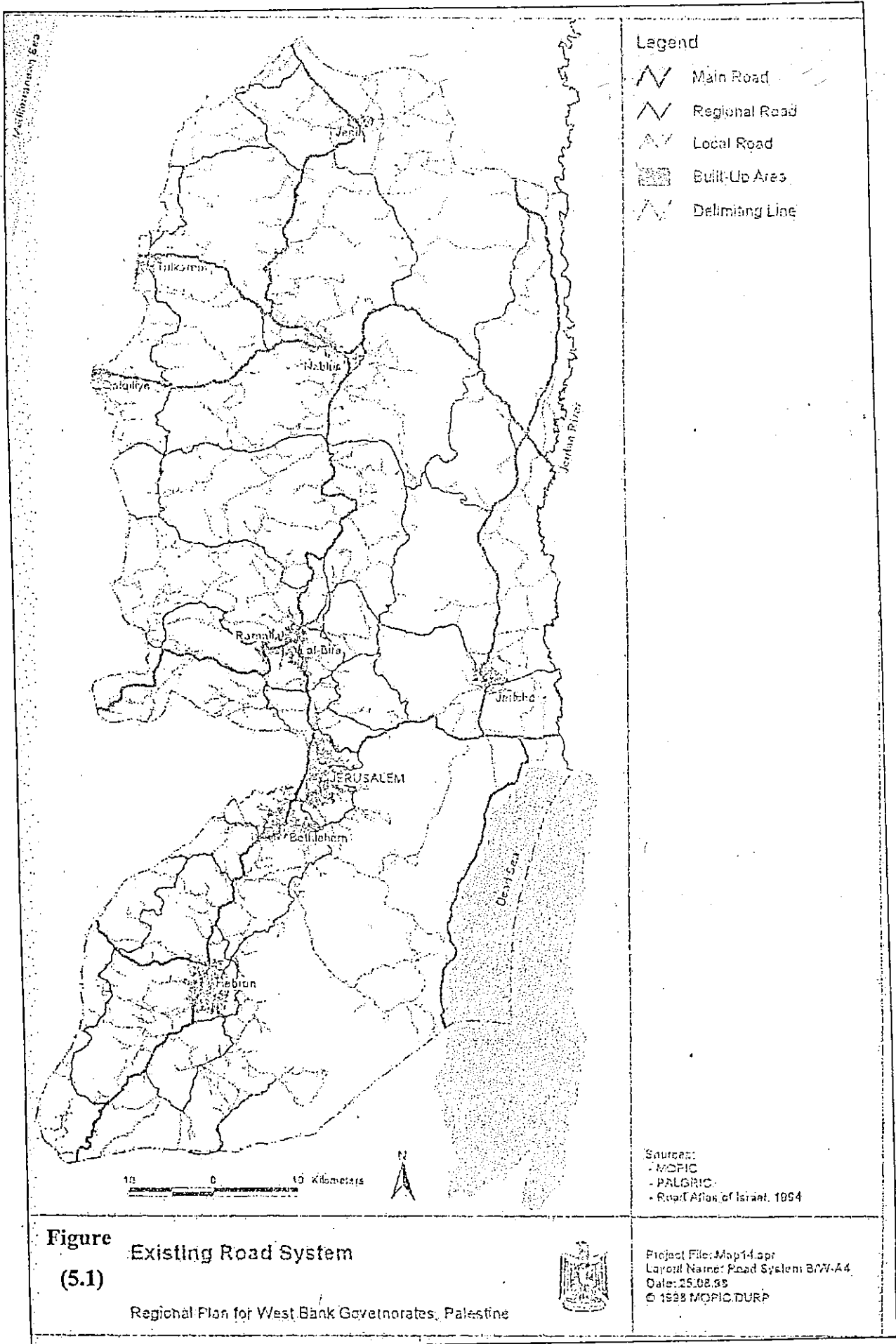
West Bank consists of different important cities according to their different geographical, historical and political characteristics. These major nine cities are distributed in the northern governorates, which include Jenin, Tulkarem, Qalqiliya and Nablus, in the middle governorates including Jerusalem, Ramallah and Al-Bireh, and in the southern governorates, which include Bethlehem and Hebron. This is in addition to Jericho city, which is located in the east area of the middle part of the West Bank.

These main cities are connected with each other and with different villages around by a network of roads, which are main roads, regional roads or local roads as presented in Figure (5.1).

“Main roads connect cities and towns and carry mainly through traffic. Regional roads connect towns and large villages and serve mainly intra-regional traffic. Local access roads connect villages on the local level and collect traffic from villages to main and regional roads”, (MOPIC, 1998).

A city entrance is one of the most important elements of the city structure. It gives the first impression about the city to the visitors and reflects its image and the accessibility to it.

Palestinian cities constitute a distinct example for the need of the development of city's entrances. The entrances of Palestinian cities suffer from actual



problems. If these entrances are kept not developed, the Palestinian cities will lose their image. This can be obviously understood by Lynch's consideration of the edges of the city among the elements, besides landmarks and nodes, which form the image of the city (Lynch, 1959).

As defined earlier in this study, the city entrance is located along the main road (or main roads), which connects the city with other main cities, as determined by the municipal boundary of the city. So, the city may have several entrances, but the main entrance/s is related to the main road/s connecting the city with the surroundings. For example, Jenin City has one main entrance to the south of the city along the main road, which connects it with Nablus City. Tulkarm City has also one main entrance along the main road to Nablus City, while Nablus City has four main entrances along the four main roads, which connect it with the main cities of Tulkarm, Qalqilya, Ramallah, and Jericho as illustrated in Figure (5.1).

The entrances of Palestinian cities suffer from different problems, such as:

1. Distorted natural lands, for example by industries like quarrying and solid waste disposal, etc.
2. Urban sprawl: As cities spread out, the unique character of urban and rural areas are destroyed, especially when the city entrance is located in an area partially out of the municipal boundary which in turn produces an organizational and administrative problem.



3. Organizational and administrative problem: in which the area of the city entrance is out of the municipal boundary that controlled by the Israeli occupation. This implies that there are many constraints facing any development.
4. Mixed architectural style: Buildings of cities' entrances are usually of different architectural style, which cause what is called "Architectural Salad" or "Architectural Pollution".
5. Noise and air pollution: The environmental pollution in Palestinian cities' entrances in general is caused by the existing of industrial activities along these entrances.
6. High shrinkage in transportation: Generally, this problem relates to the unsuitable physical condition of the roads.

Moreover, Palestinian cities are suffering from a unique political problem, which is related to the existing of Israeli settlements and the network of bypass roads connecting these settlements. This network of bypass roads destroys every thing in its way, serving only the settlements. Therefore, the network of roads connecting Palestinian cities becomes divided, discontinuous, difficult and long to travel through. Moreover, Palestinian roads suffer from lack of land for development and expansion.

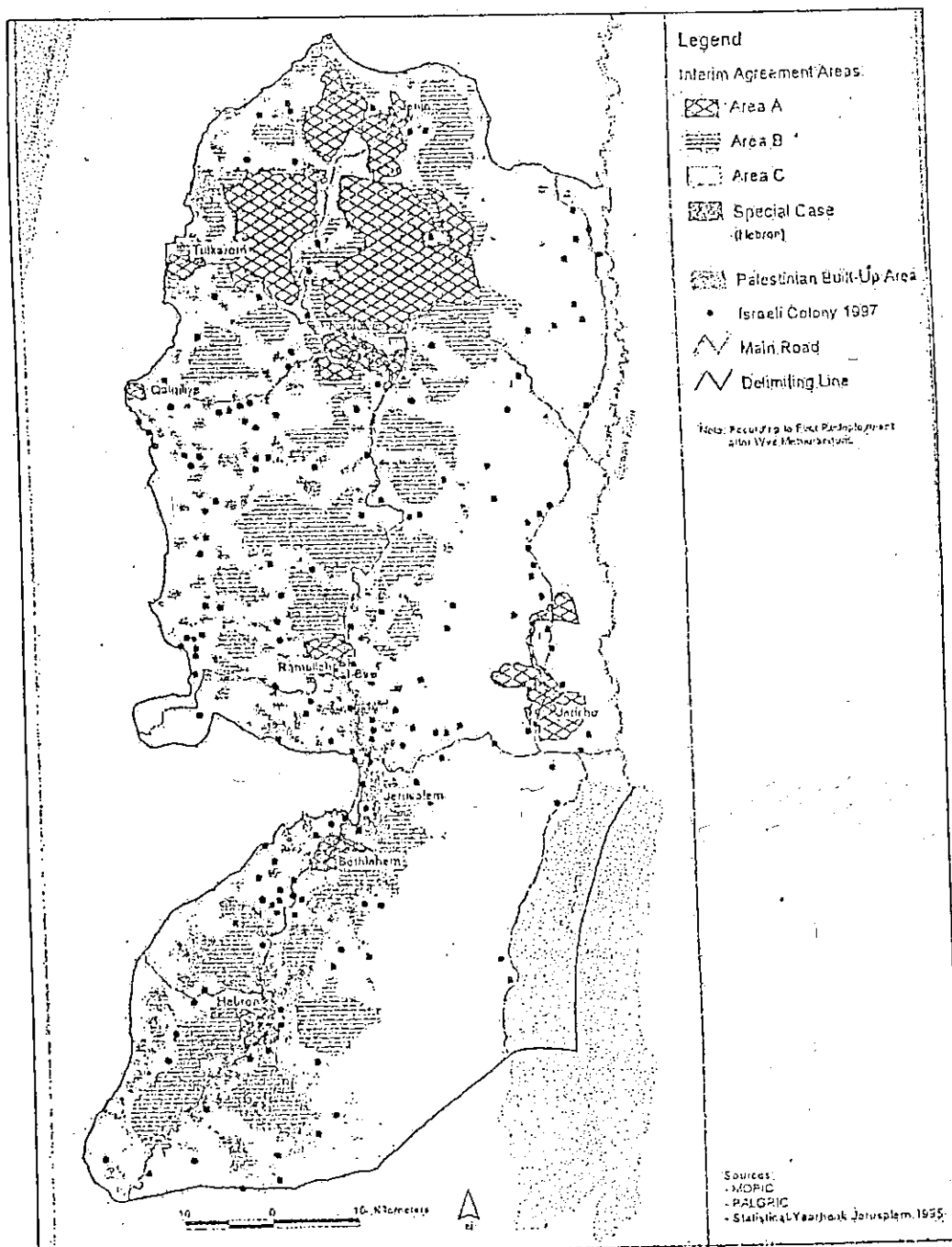
Another aspect of the Palestinian unique political problem is also caused by the political divisions of land into A, B, and C zones, based on civil/security control

which makes parts of Palestinian areas out of full Palestinian control especially zone C see Figure (5.2).

## 5.2 Nablus City/Historical and Geographical Background

Nablus City is chosen to be the case study area in this research. It occupies an important geographical position. It lies on the main road, which extends from Safad and Nazareth in the north to Hebron in the south. It is also considered as a main center of transportation from where several roads extend and reach to all directions. Nablus City is connected with other cities and villages in the governorate by a good network of transportation connecting it with Jenin in the north, Tulkarm and Qalqiliya in the west, Ramallah in the south and Jordan Valley in the east. Nablus City also has a significant economic role; it is considered one of the most important industrial centers as well as an important commercial center in Palestine as a whole and in its region in particular (Encyclopedia Palestine).

Nablus City is selected in this research because of its location and role as the center for the northern governorates of West Bank Figure (5.3). It has a strategic position, which makes it the connection point between northern cities of the West Bank with the middle and the southern cities. That is, when somebody

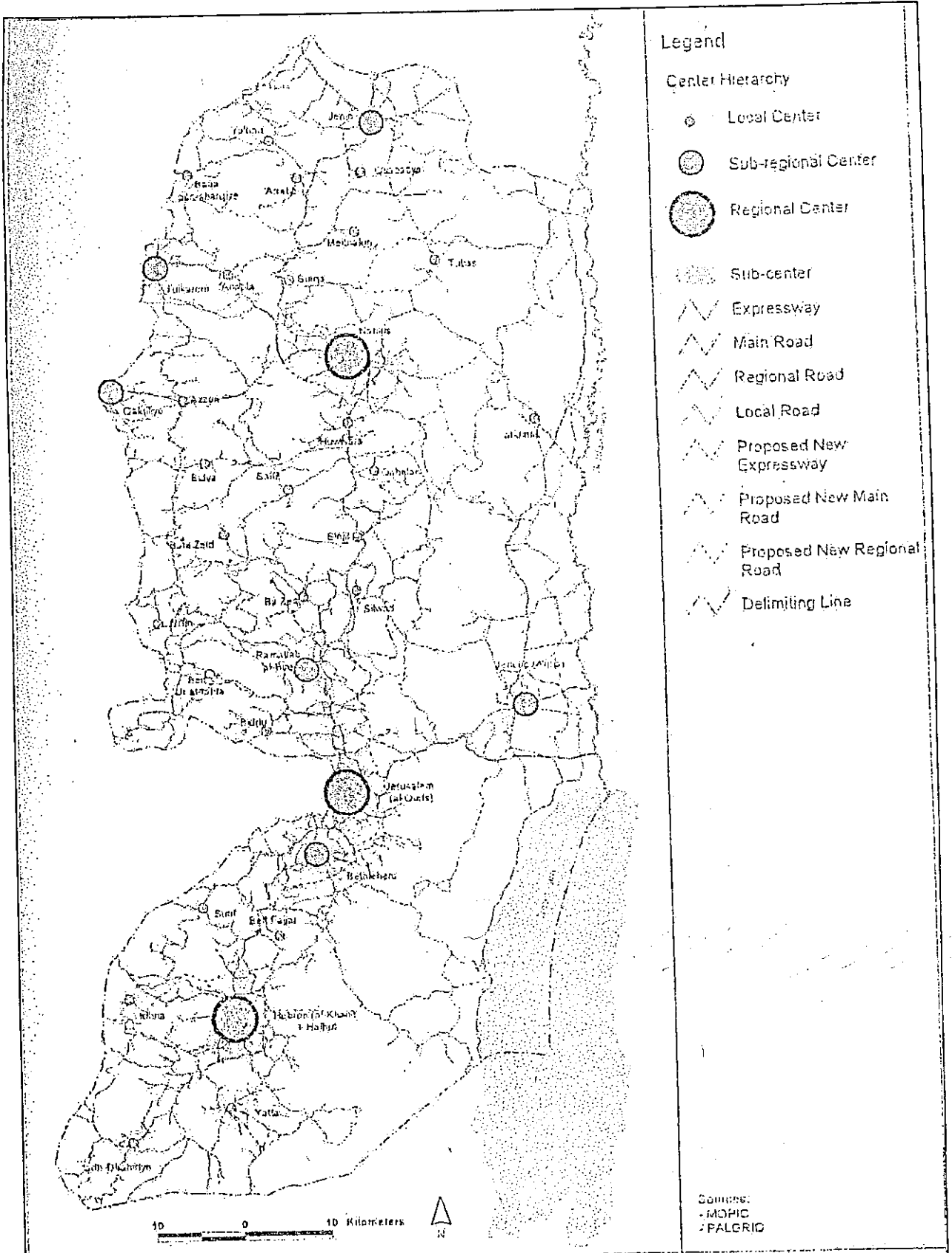


**Figure (5.2)** Interim Agreement Areas  
West Bank Governorates

National Policies for Physical Development, Palestine



Project File: NPPD.apr  
Layout Name: Map01  
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**Figure (5.3) Proposed Road Network in Relation to the Center Structure West Bank Governorates**

National Policies for Physical Development, Palestine



Project File: NPPD.aor  
Layout Name: Map17  
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wants to travel from Jenin, Tulkarm and Qalqiliya cities to Ramallah or Jerusalem or Beithlehem or Hebron, he should pass through Nablus City.

Nablus City has four main entrances through the main roads, which connect it with Tulkarem and Jenin, Qalqiliye, Ramallah and Jericho or Jordan valley (see Figure (5.1)).

The Western Entrance of Nablus City is studied in detail in this research. This entrance connects Nablus City with Tulkarem and Jenin Cities. It is determined along the main road from the intersection of the local road to Qusin village with the main road to Wadi At-Tuffah in Nablus City at the intersection of Haifa, Yafa and Tunis streets. This area consists of two parts: one is outside the municipal boundary of Nablus City, which is part of Beit Eba village, and the other is inside (see Figure (5.4)).

As mentioned earlier in this research, the city entrance is determined by the municipal boundary. However, the entrance under studying extends to comprise part that is inside the municipal boundary for the purpose of integration, which helps to develop this entrance effectively.

This area is selected for different reasons: it is considered the main entrance to Nablus city from the northern and the western cities and villages, also this entrance is the gateway, which connects the north with the south. In addition, this entrance can be an example or a model for other cities entrances. It has

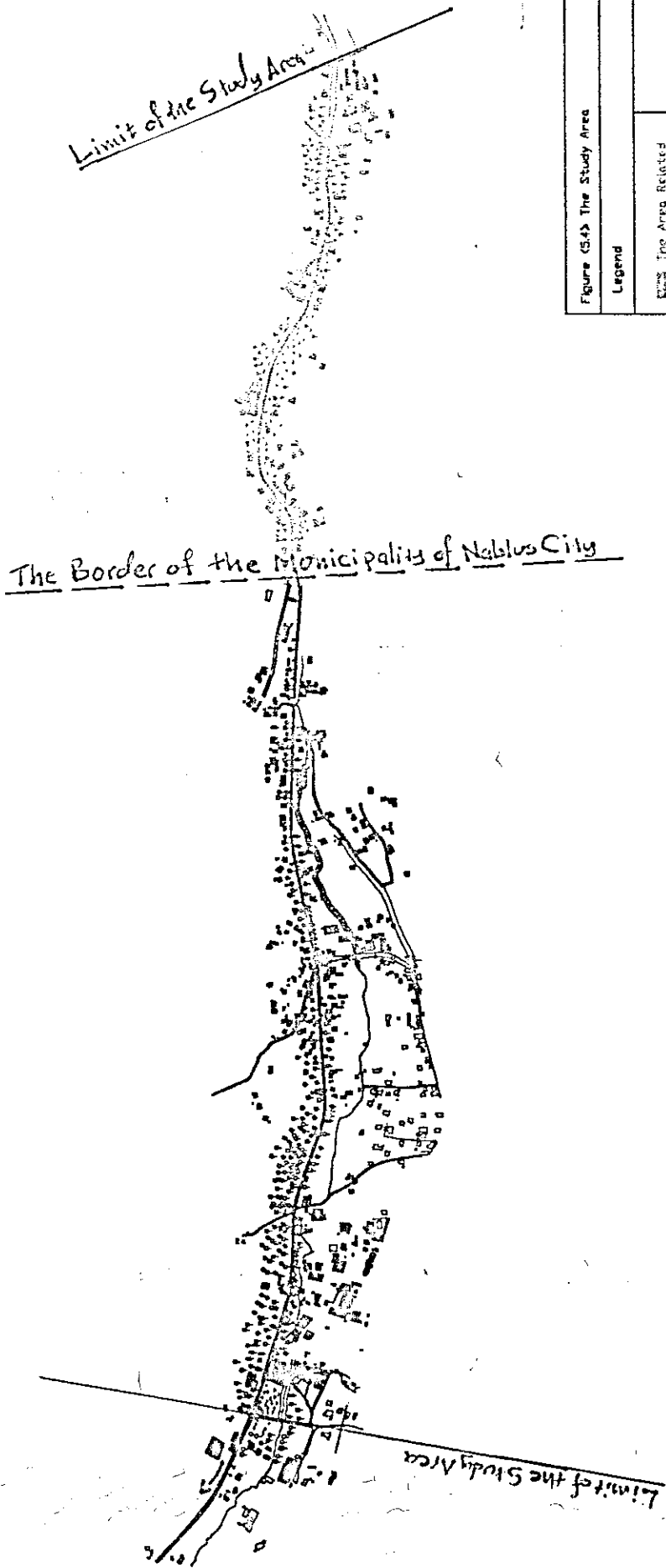




Figure (5.4) The Study Area

Legend

-  The Area Related to the Municipality of Nablus City.
-  The Area Related to Beit Eba Village Council.



different elements, which enrich the research. And because of familiarity, the researcher is one of the every day visitors to Nablus City through this entrance.

In this chapter, a study and analysis of the landscape elements of this entrance is presented, which include natural/physical elements, man-made elements, and visual quality of the elements.

### **5.3 Natural Elements**

Natural landscape characteristics of the Western Entrance of Nablus City can be studied by an analytical review of the existing natural aspects. The main natural aspects of the landscape elements of the study area are determined by:

1. Topographical Characteristics
2. Water Characteristics
3. Air characteristics
4. Ecological Characteristics

In the following pages these aspects are discussed deeply, and the advantages and disadvantages of the existing natural characteristics are highlighted.

#### **5.3.1 Topographical Characteristics**

The topographical maps show that the study area lies along a valley surrounded by heights in the south and north. This valley known as "Wadi At-

Tuffah" within the boundary of the municipality of Nablus City and "Wadi Zaimer" out of the municipal boundary. The northern edge of the study area is characterized by steep slope, while the southern edge is with gentle slope as presented in Figure (5.5).

### 5.3.2 Water Characteristics

The study area is located in a non-sensitive zone according to land classification based on water sensitivity (MOPIC, 1998) as illustrated in Figure (5.6). Water characteristics in the study area consist of two types: **surface water and ground water**. Each of these is briefly pictured bellow.

(1) **Surface water** is represented by the "Wadi" or Chatchment, which is "Wadi At-Tuffah" or "Wadi Zaimer". The water flows in this Wadi is of poor quality. It is mixed of rainwater during wintertime and wastewater from Nablus City (See pictures no. (1,2)) bellow.

The study area is considered to have high mean annual rainfall.

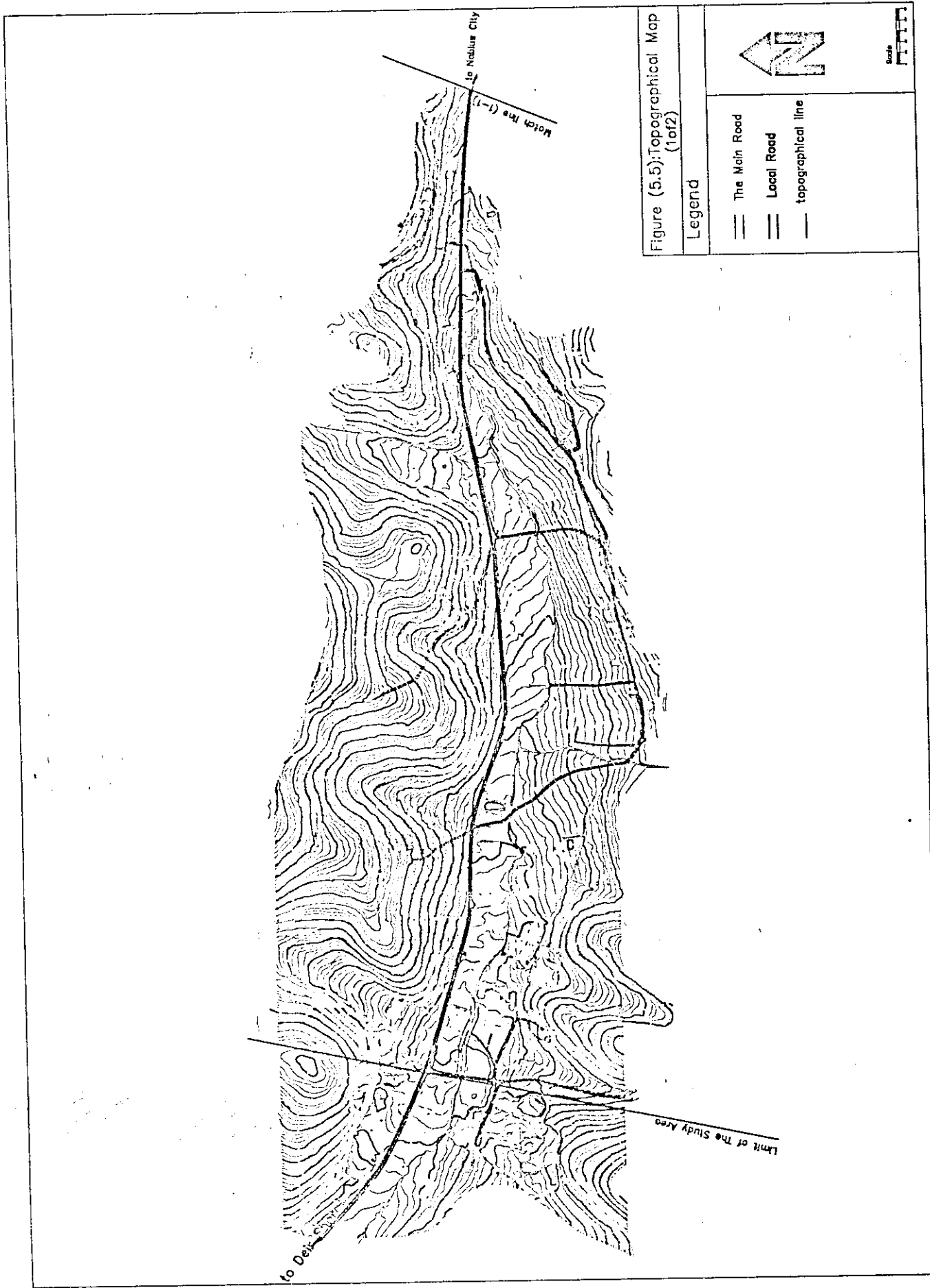


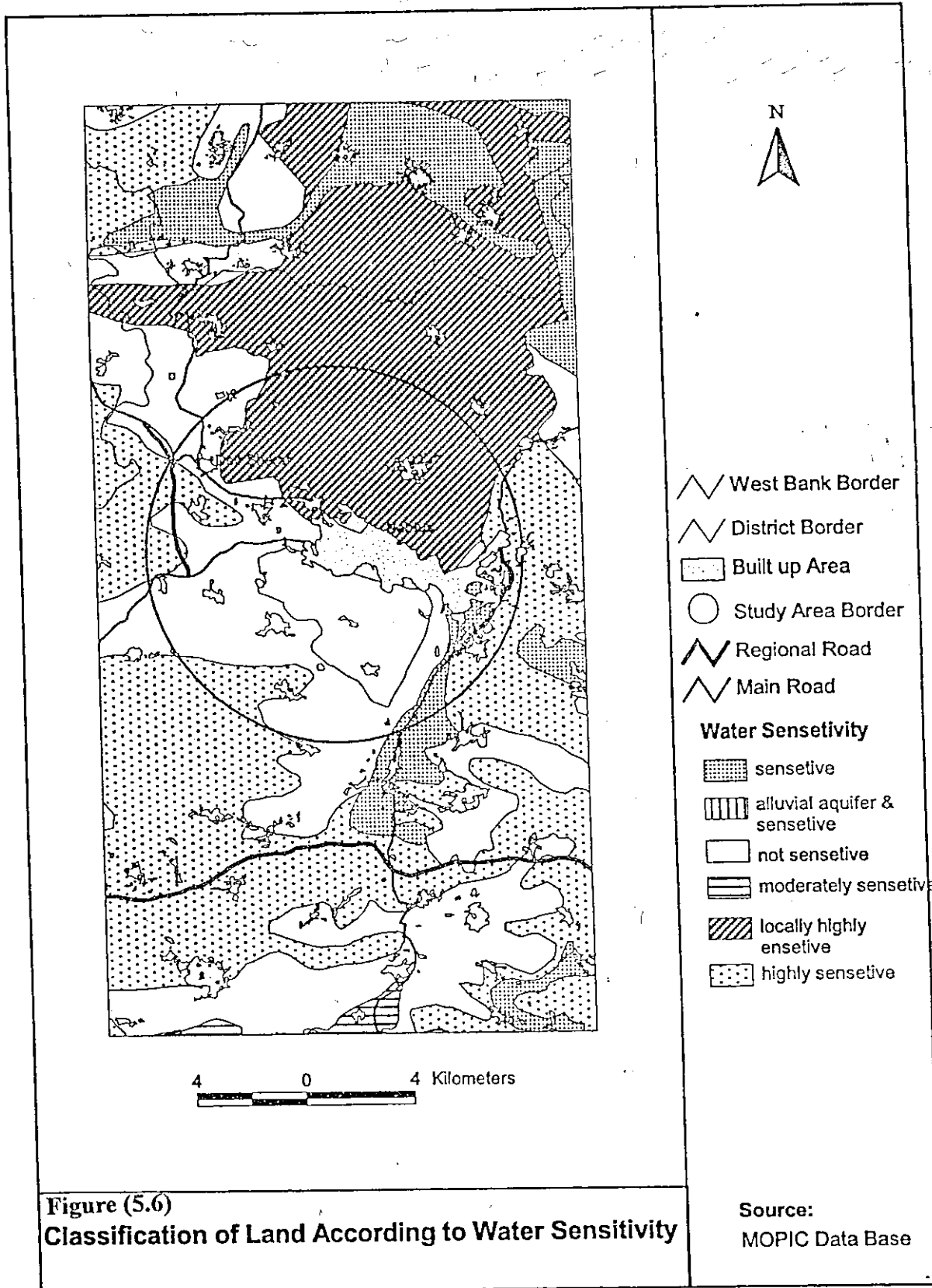
Picture no. (1)  
The drainage flow

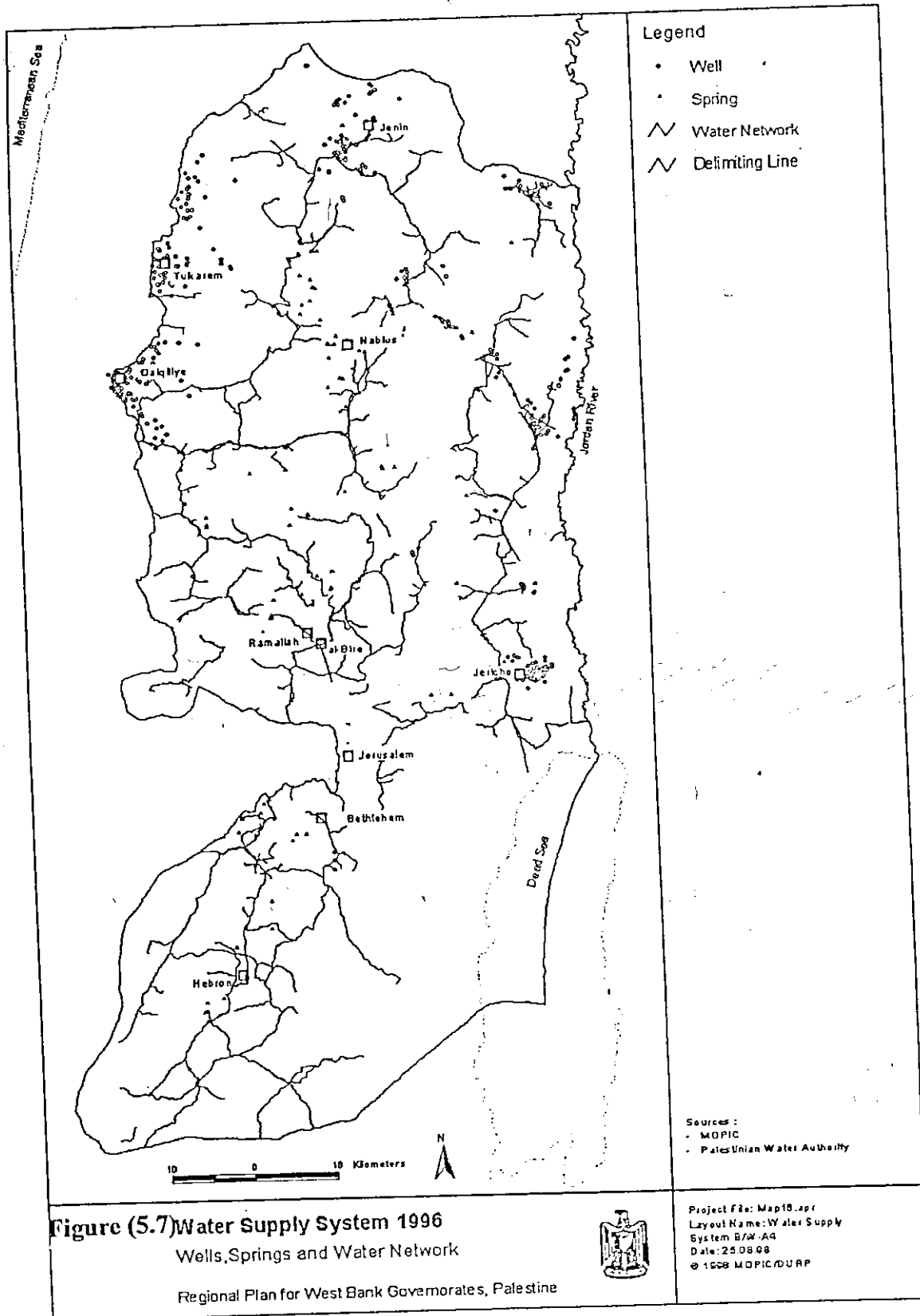


Picture no. (2)  
Poor stormwater or  
rainwater treatment.









### 5.3.3 Air Characteristics

Air characteristics of the study area are generally affected by the **existing industrial activities and transportation facilities.**

According to **the industrial activities**, as seen from “the land use map” presented in Figure (5.10), most of the existing industrial activities are: stone cutting quarries, bricks factories, stone cutting factories stone crushing in addition to some wood and furniture factories.

The main environmental impacts of these activities are air pollution and dust emissions, wastewater generation and related soil and groundwater contamination. Close to quarries, air is polluted by large amounts of particulates. The particulates are harmful to respiratory systems and generate a layer of dust on the surrounding land and vegetation. Most affected are the workers at the site and the nearby residents (Ministry of Environmental Affairs, 1999). Table of Appendix (5.4) shows the types of industries with their associated environmental impacts.

It must be taken into account that the most pollutant in the study area which is emitted during the production process in the stone crushing and stone

processing factories is dust particulates. This dust affects the surrounding areas and villages and it may reach Nablus City by the wind in the area.

The table in Appendix (5.5) shows the ambient dust concentration according to the distance from emission sites (METAP and HIID, 1999).

Obviously, this dust affects the general health of the people in the receptor communities, Appendix (5.6) shows the percentage change of health impacts according to dust pollutants in the study area (METAP and HIID, 1999).

According to transportation facilities, The main pollutants emitted to the air from transportation are nitrogen oxides, hydrocarbons, carbon monoxide, sulphur dioxide and particulate matters and lead. Each of these emitted gases has its own effect on human and the environment (Ministry of Environmental Affairs, 1999).

In addition to the above pollutants, transportation facilities are considered one of the most important resources of noise pollution (see section 5.4.1 transportation facilities).

### **5.3.4 Ecological Characteristics**

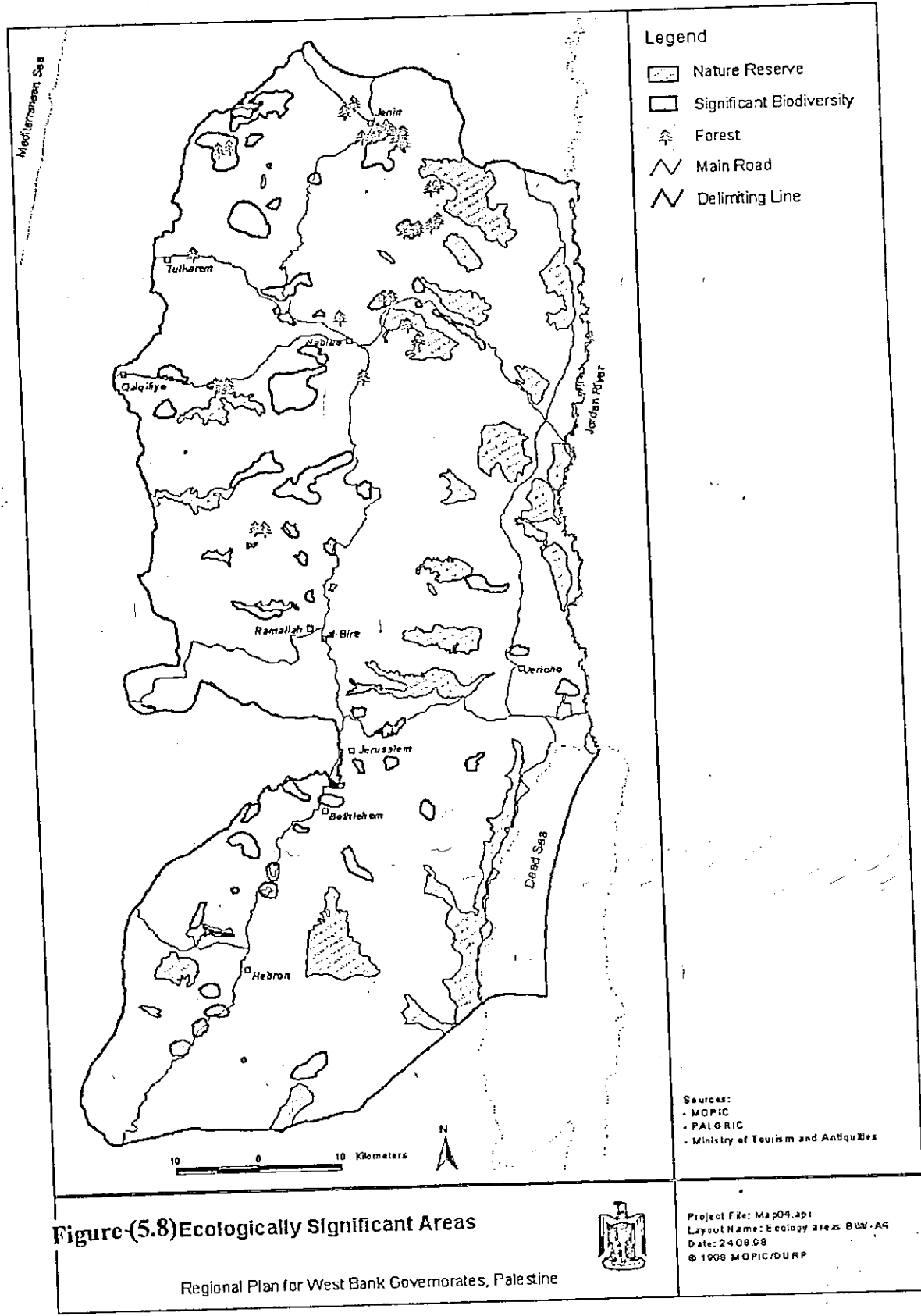
Certain parts or areas of the study area are classified as significant biodiversity and forest (collection of trees) according to MOPIC studies and classification of ecologically significant areas in 1998, (See Appendix (5.6) and Figure (5.8). These areas can be seen within the cone of vision of the users of the study area, which give it additional importance.

The vegetation cover of the northern edge of the study area consists of almond, cupressus trees as well as olive trees which give the area special importance in the ecologically significant areas assessment (see Figure 5.11).

The vegetation cover of the southern edge of the study area is of limited area compared with the northern edge. Trees especially olive trees are very few because they are damaged by industrial works in the area and the construction of new buildings (see Figure 5.11).

### **5.4 Man-made Elements**

The man-made elements include transportation facilities, historical and archeological features as well as land use characteristics.



**Figure-(5.8) Ecologically Significant Areas**

Regional Plan for West Bank Governorates, Palestine



### 5.4.1 Transportation Facilities

The only transportation system in Palestine is road based. Roads in the study area are in two types: First; the main road, and second; local roads branched from the main road which connect Qusin, Beit Eba and Zawata villages. This study deals specifically with the main road in the study area, which is the main access to Nablus City from the West.

This main road will be studied through the following two approaches:

**First:** the existing physical situation of the main road (qualitative direction).

**Second:** statistical data, which gives enough information about the existing road capacity and level of service (quantitative approach).

The width of the road pavement is variable. It is wider in the sector within the boundary of Nablus Municipality. The average width of the paved area of the road is between 7 to 10 meters. Sometimes, within the boundary of Nablus City Municipality, it reaches to 15m. The condition of the paved area is poor, especially outside the boundary of Nablus City Municipality (see Figure 5.9).

There are no sidewalks, however, parallel to the road along the two sides, there are unpaved-leveled areas (shoulders) with average width approximately one meter. These unpaved areas became a place for dumping solid waste, or



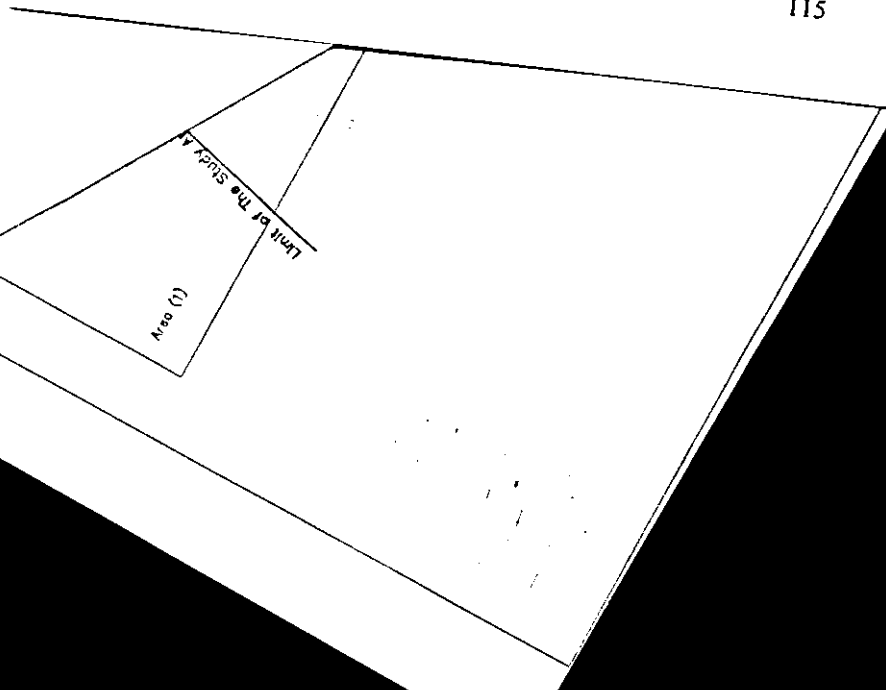
storage places for the factories, and the commercial buildings and the workshops located along the two sides of the main road, (see Figure 5.9).

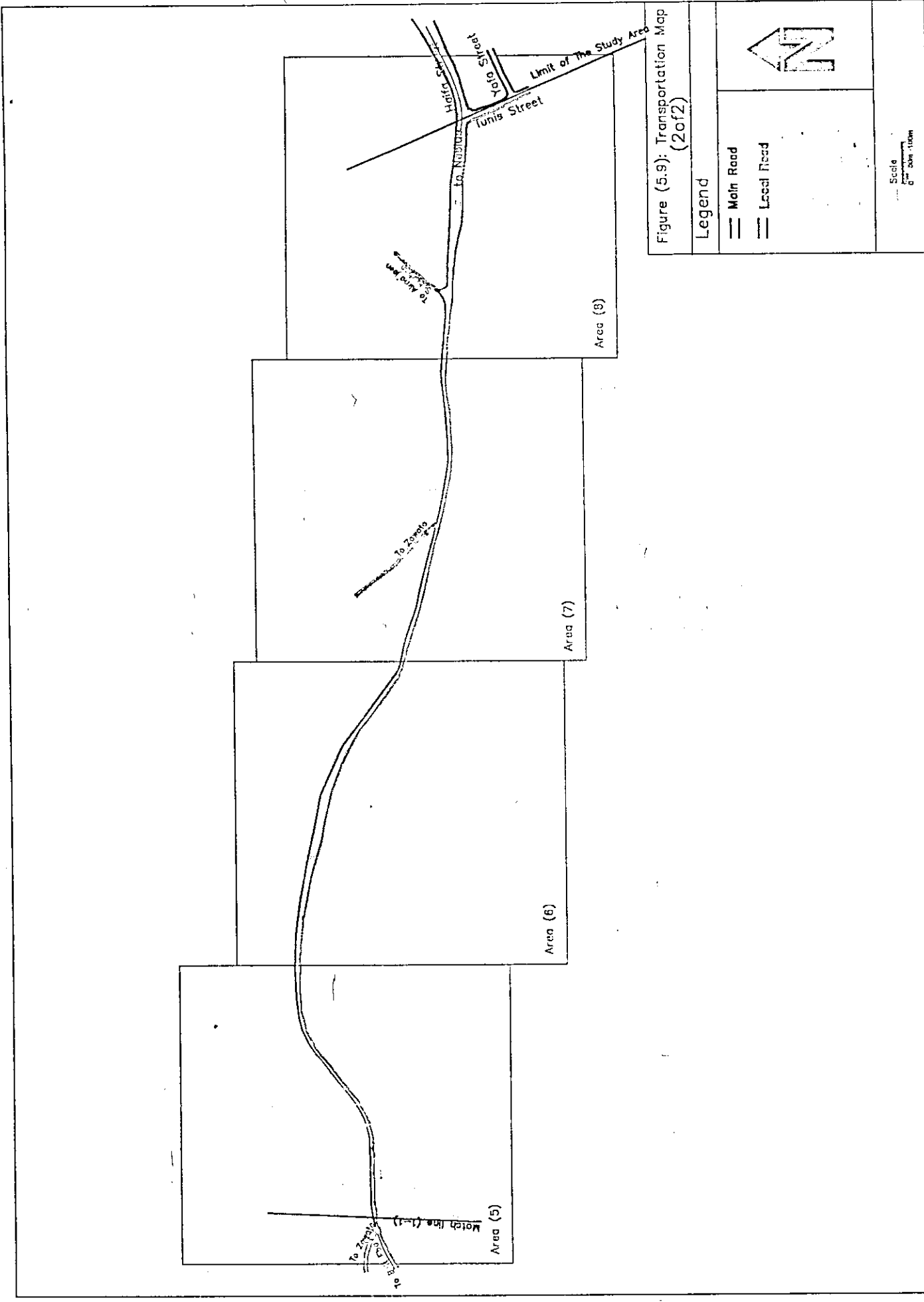
On the other hand, there is a project for Nablus City Municipality for the construction of the sidewalks, but this is just within the sector within the boundary of the Municipality. At the eastern end of the study area, the Municipality began to implement this project.

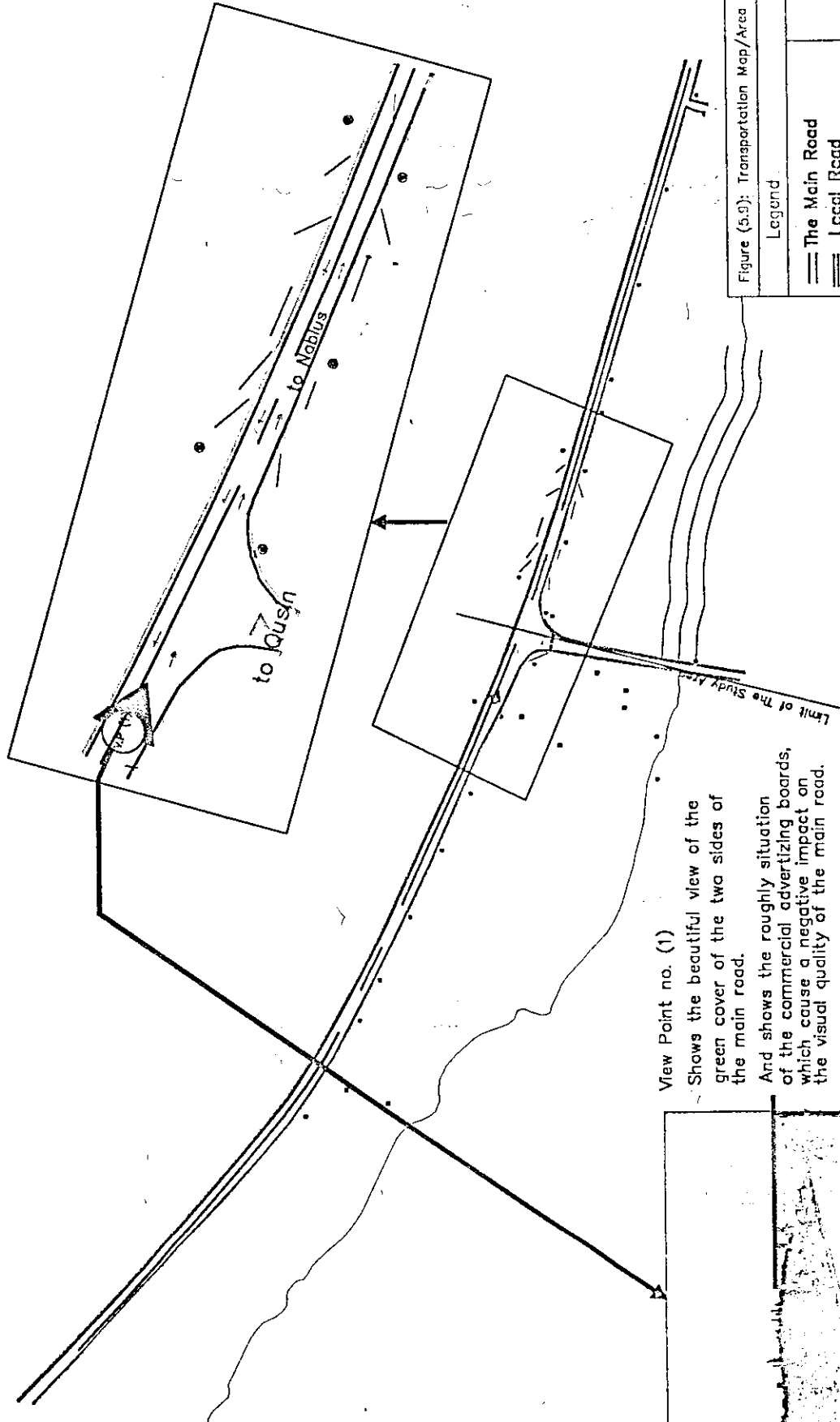
The two directions of road are not separated by a median, there is no marking on the road like the centerline and the edge lines. There is a lack of important traffic signs along the whole main road (see Figure 5.9).

The alignment of the road is suitable, integrated with the topography of the area along the valley surrounded by the height lands to the north and south.

The intersections of the main road with the local roads in the study area are very dangerous. This is because there is no islands or even any traffic sign at these points. This causes several accidents especially at the first intersection with Zawata Local Road (See Figure 5.16). This makes people living there to construct "speed breakers" and later they plan to close this local road at that intersection as a tool to force Nablus City Municipality to solve their problems.







View Point no. (1)

Shows the beautiful view of the green cover of the two sides of the main road.

And shows the roughly situation of the commercial advertizing boards, which cause a negative impact on the visual quality of the main road.

And also shows the poor condition the pavement of the main road.

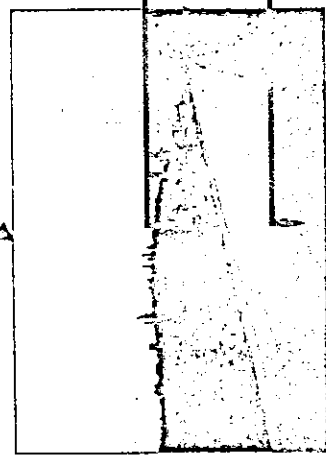
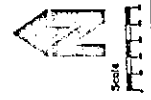


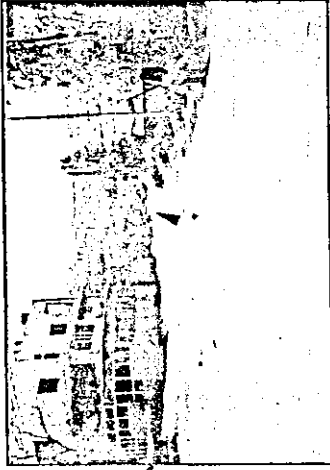
Figure (5.9): Transportation Map/Area (1)

Legend

- The Main Road
- Local Road
- The Shoulder edge
- Direction of flow
- Commercial Advertizing Board
- Electrical Pole
- Wadi Zaimer



View Point no.(9)



Shows the intersection of the main road with the local road which leads to Beit Eba Village

View Point no.(8)



Shows the unpaved sides which became a place for dumping solid waste

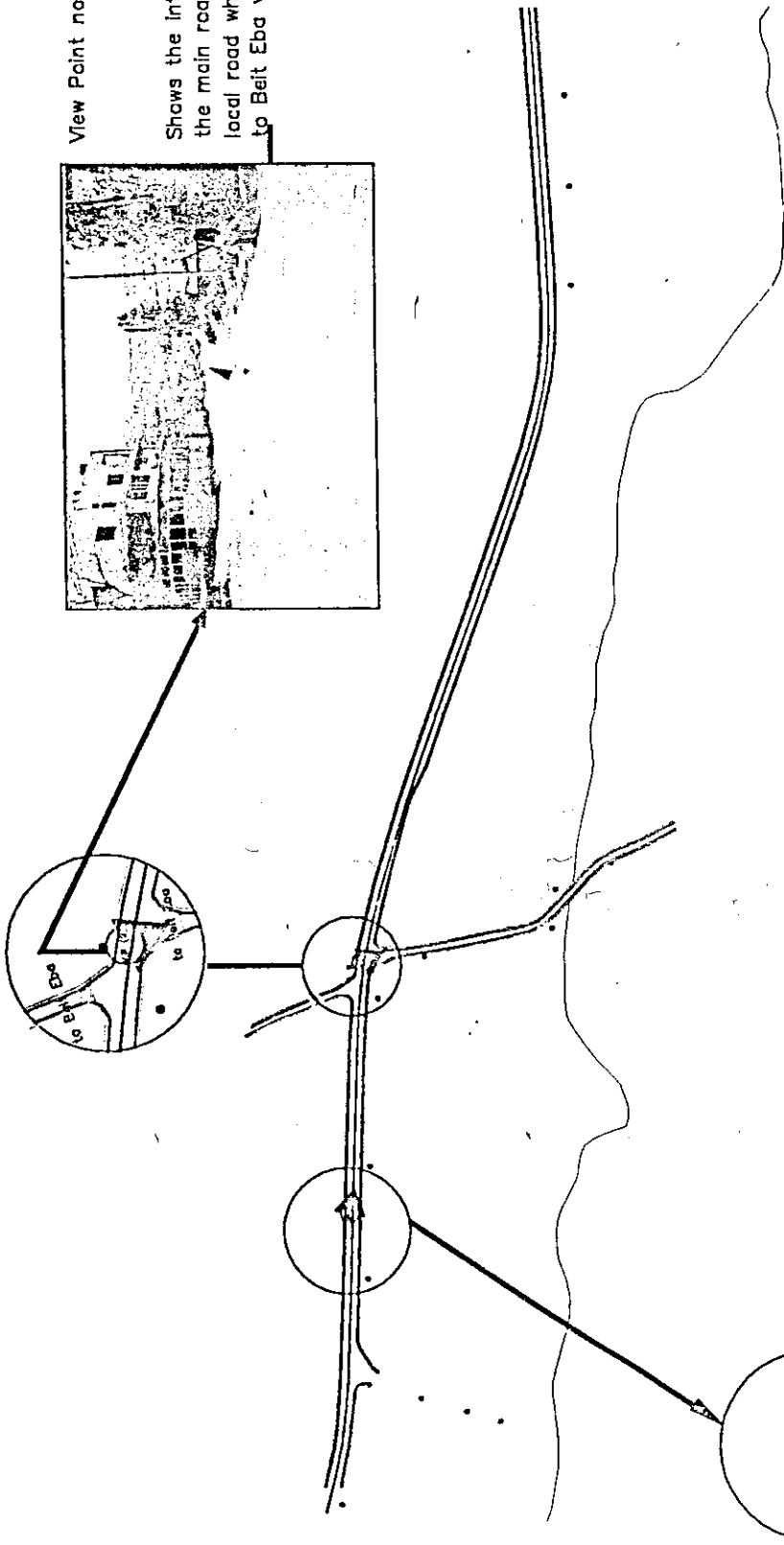


Figure (5.9): Transportation Map/Area (2)

Legend

- The Main Road
- Local Road
- The Shoulder edge
- Direction of flow
- Commercial Advertising Board
- Electrical Pole
- Wadi Zaimer



Scale  
1:10000

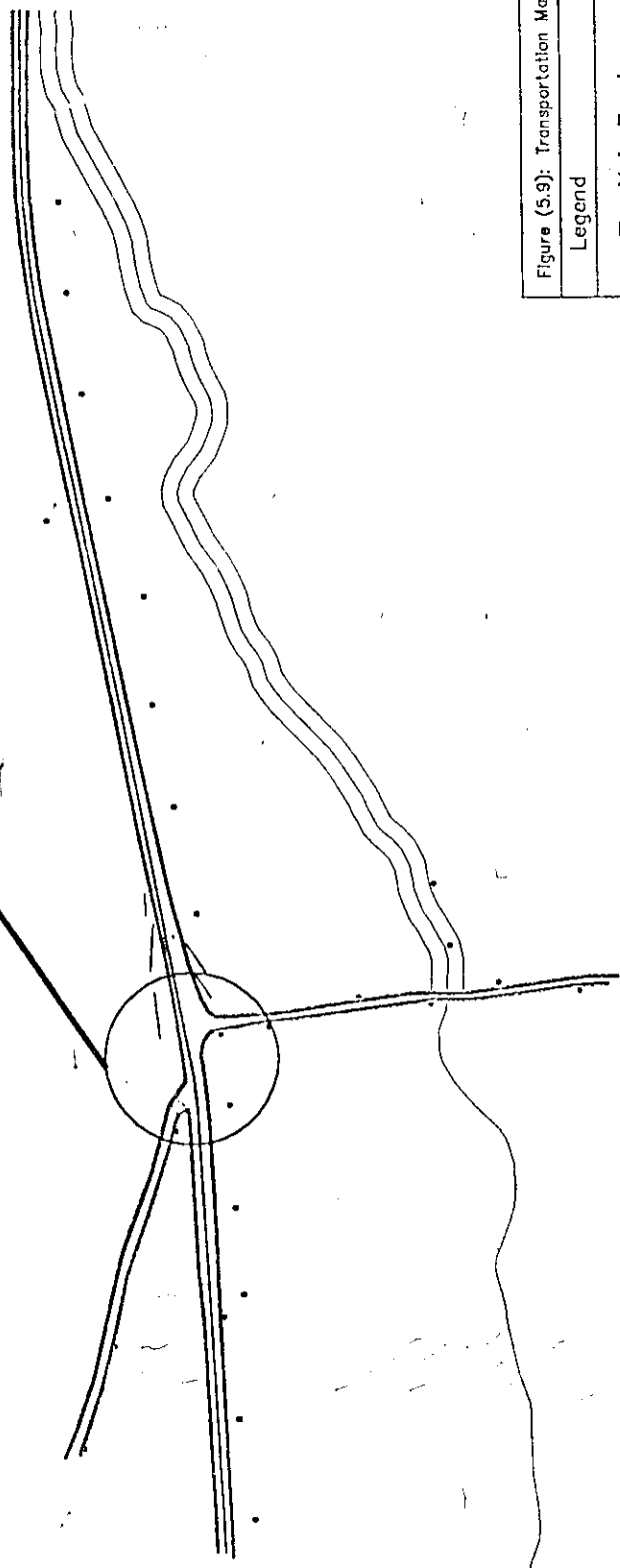
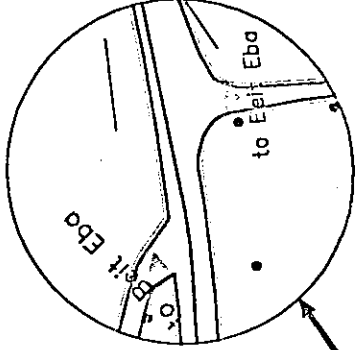
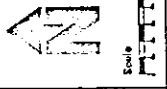


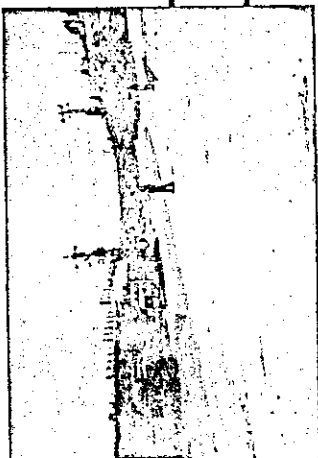
Figure (5.9): Transportation Map/Area (3)

Legend

- The Main Road
- Local Road
- The Shoulder edge
- Direction of flow
- Commercial Advertising Board
- Electrical Pole
- Wadi Zaimer



View Point no.(10)



Shows the intersection of the main road with the local road which leads to Zawata village.

It also shows the unpaved sides, which became as a store for some workshops and a place for dumping solid waste.

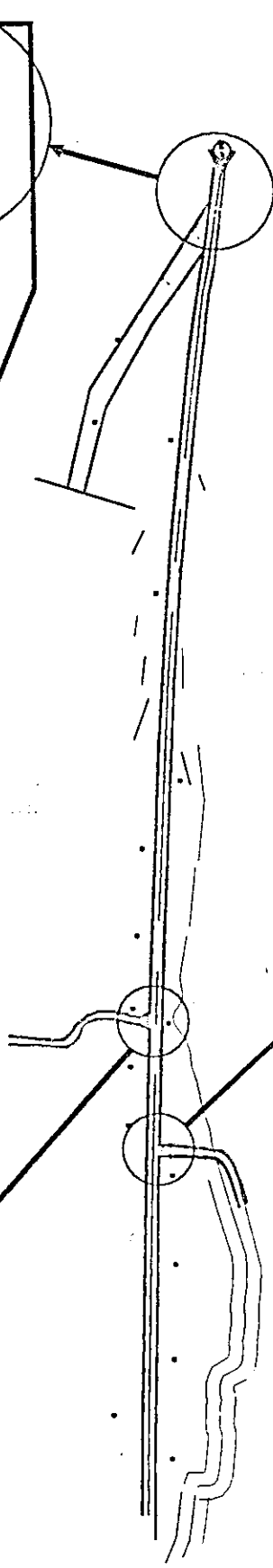
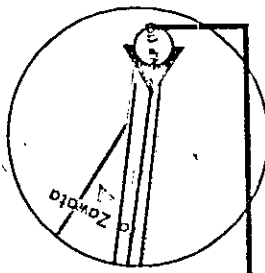
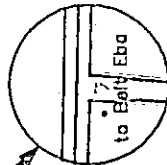
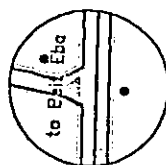


Figure (5.9): Transportation Map/Area (4)

Legend

- The Main Road
- Local Road
- The Shoulder edge
- Direction of flow
- Commercial Advertising Board
- Electrical Pole
- Wadi Zaimer



View point no. (11)



Shows the intersection between the main road and the local road to Zowata village. This intersection without important traffic signs which makes it very dangerous and many accidents happen their.

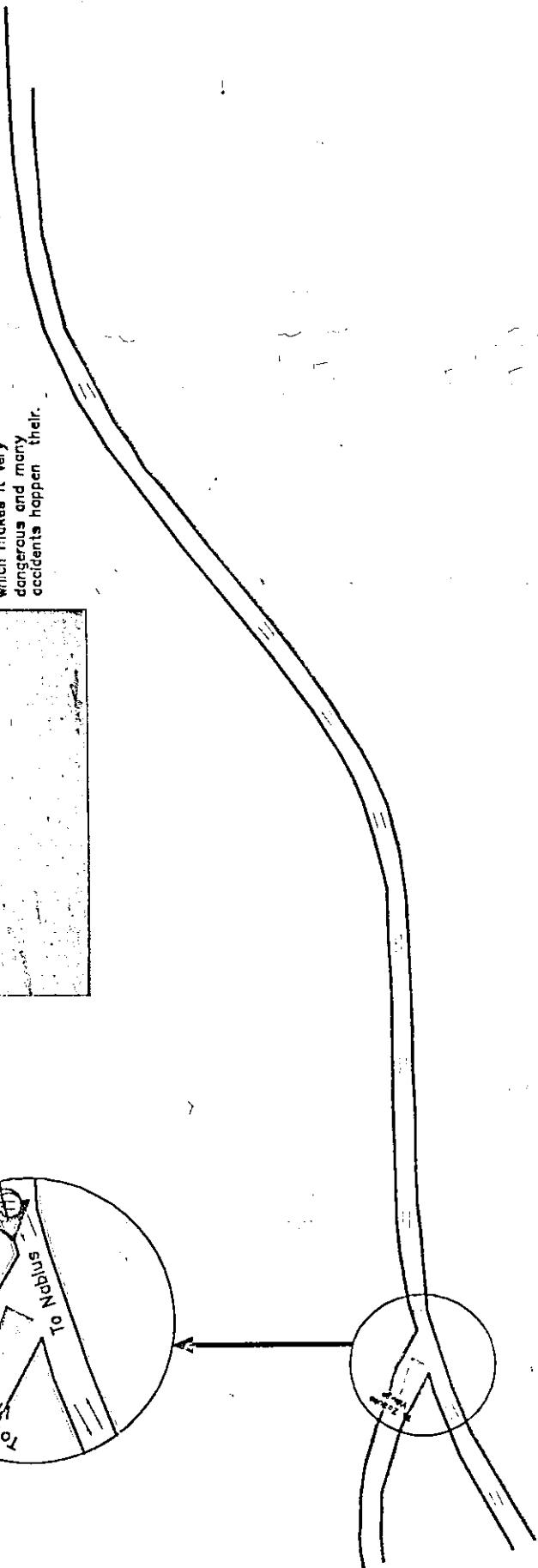
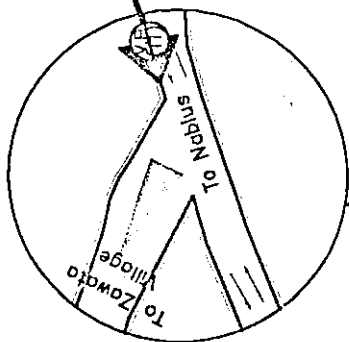
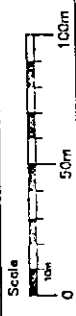
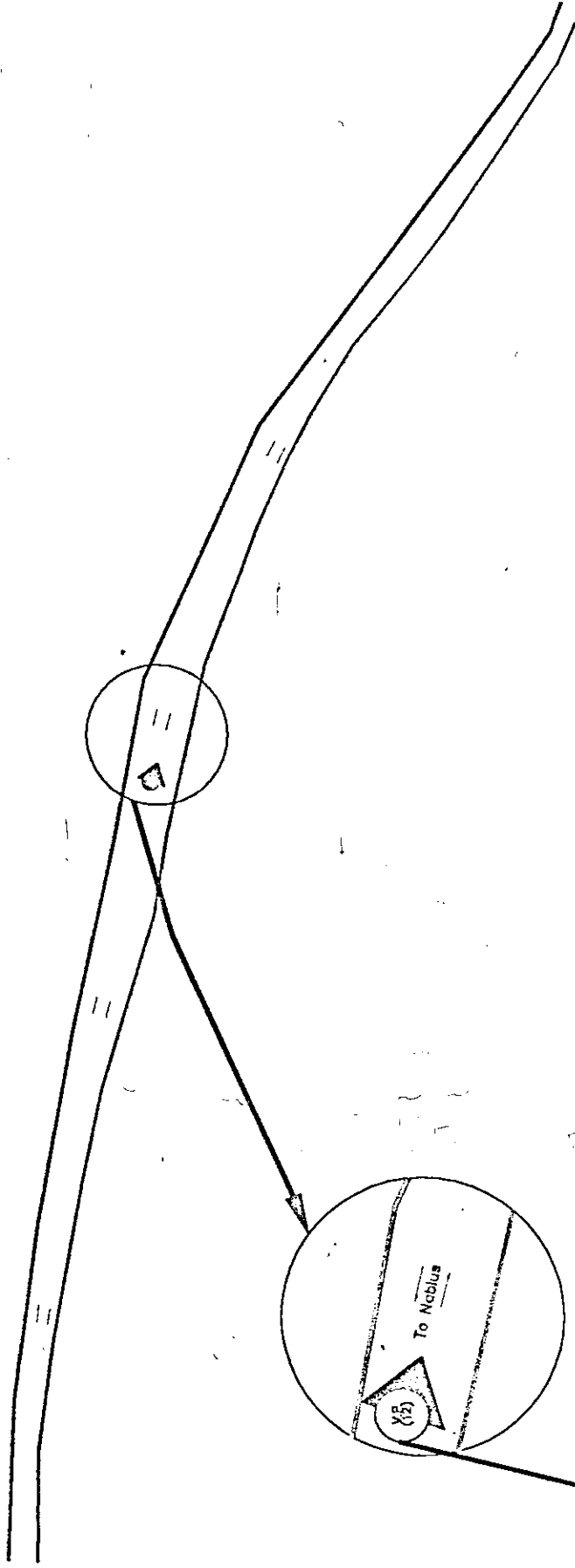


Figure (5.9): Transportation Map/Area (5)

Legend

- == Main Road
- == Local Road
- == Two direction





View point no. (12)

Shows a general view of the main road with the unpaved sides and the residential/commercial buildings along its sides

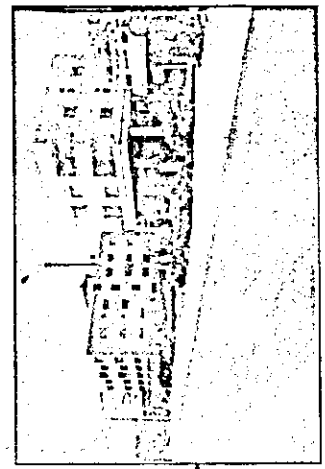



Figure (5.9): Transportation Map/Area (6)

**Legend**

- == Main Road
- Local Road
- Two direction
- The unpaved sides



Scale  
 0 50m 100m



View point no. (13)

Shows the second intersection between the main road and the local road to Zawata village. This intersection has a very sharp angle, and it is not controlled by the needed traffic signs, therefore this intersection is considered very dangerous.

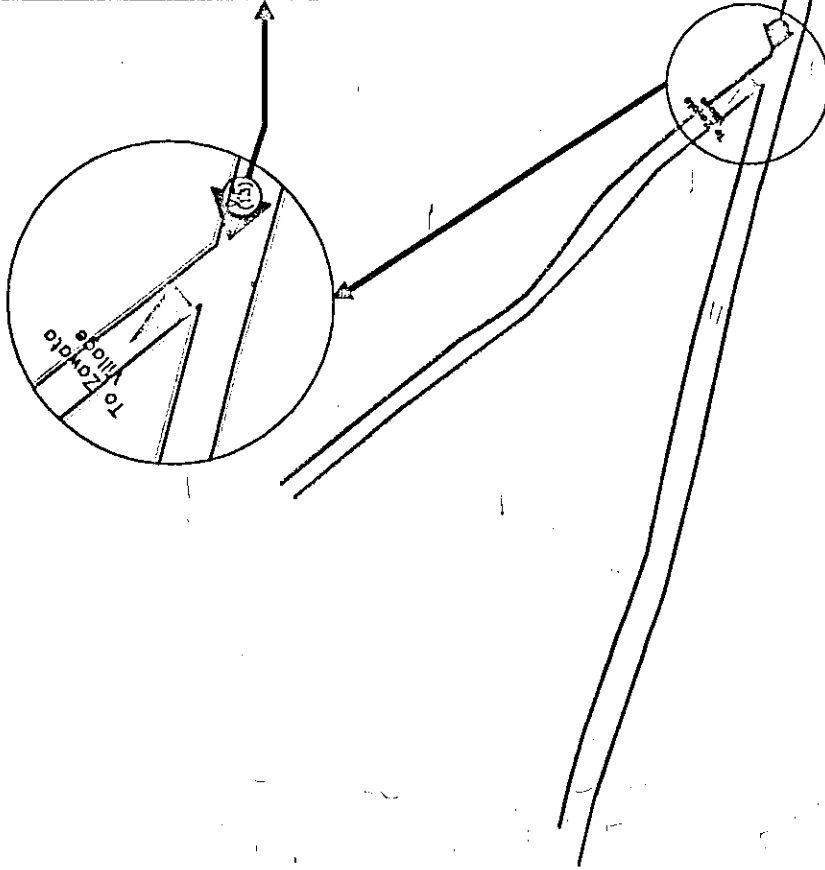


Figure (5.9): Transportation Map/Area (7)

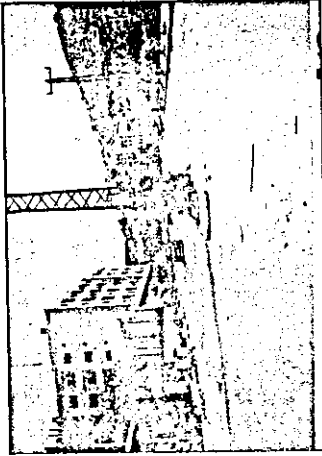
Legend

- == Main Road
- Local Road
- ⇄ Two direction
- The unpaved sidus



View point no. (14)

Shows the intersection of the main road with Heifa and Tunis Streets.  
At this intersection the road becomes wider and it is divided into four lanes, two in each direction, with median in the middle. This median is partially planted.



View point no. (15)

Shows the intersection of the main road with the local road to Al-Ma'jeen suburban area.

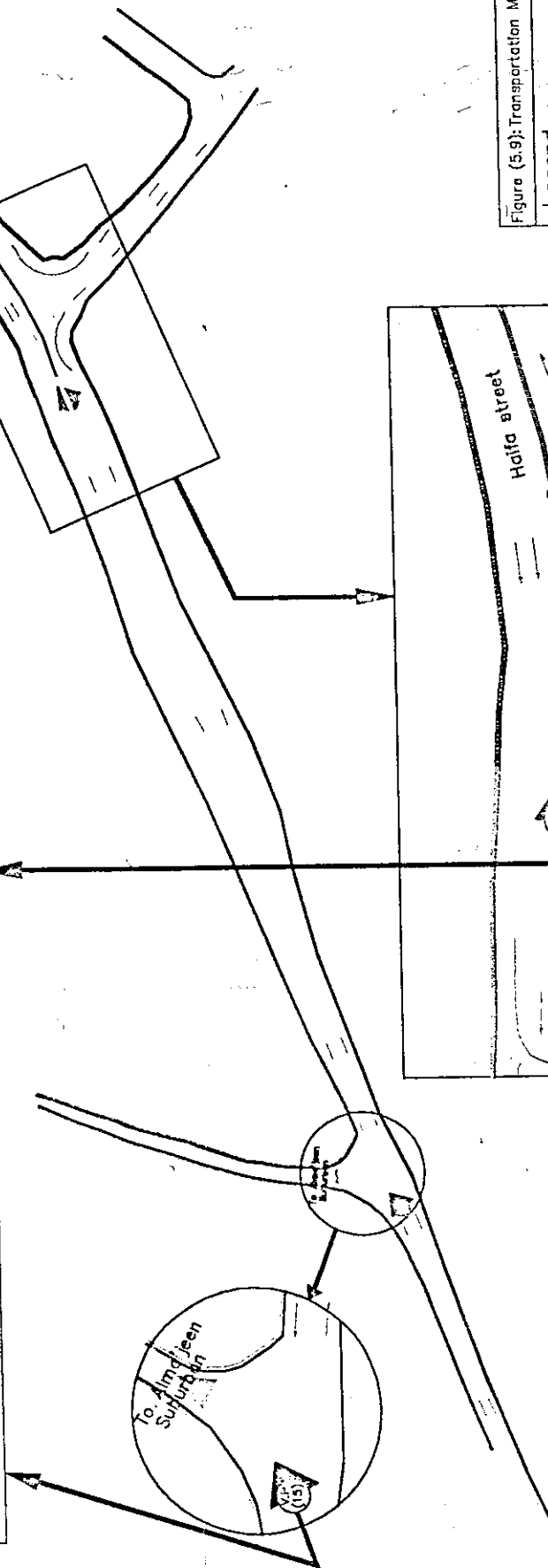
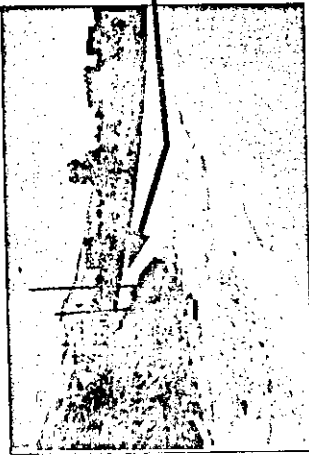
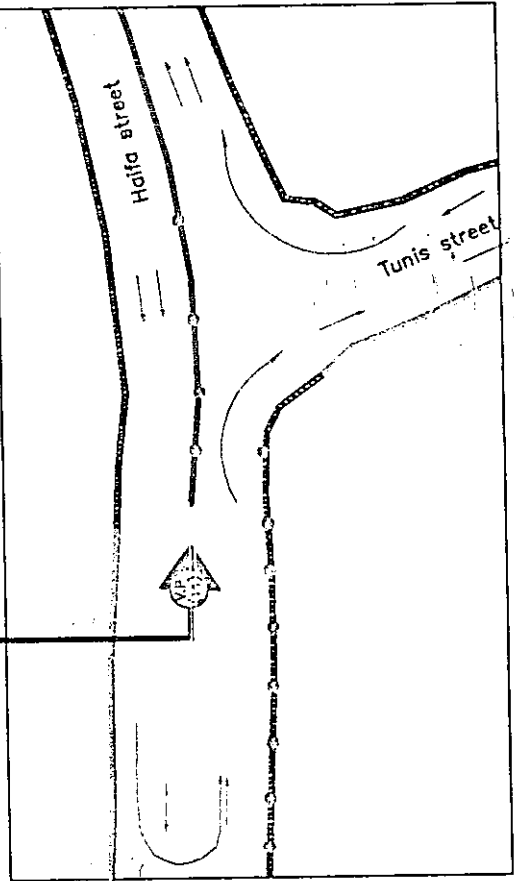
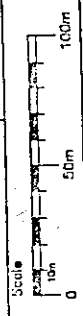


Figure (5.9): Transportation Map/Area (8)

Legend

- Main Road
- Local Road
- The median
- The side walk
- The unpaved side



There is no vegetation specifically planted for the road, except the vegetation one notices in the area beside the road along the two sides.

Along the two sides of the road one can see many advertising boards situated in a random way (See Figure 5.9).

### **Second: Traffic volume and LOS analysis**

The question is, at what level of service this main road operates during peak periods under the existing conditions?

The answer to this question can be determined by comparing the actual flow rate to the capacity. In addition service flow rates can be computed for each LOS. The table in Appendix (5.7), shows 12-hour counts for the vehicles travelling on this main road according to certain classifications (which includes: Passenger Cars (PC), Busses (B) and Trucks (T)) (Universal Group, 1999). Such data is needed in the calculations to determine the level of service of the main road.

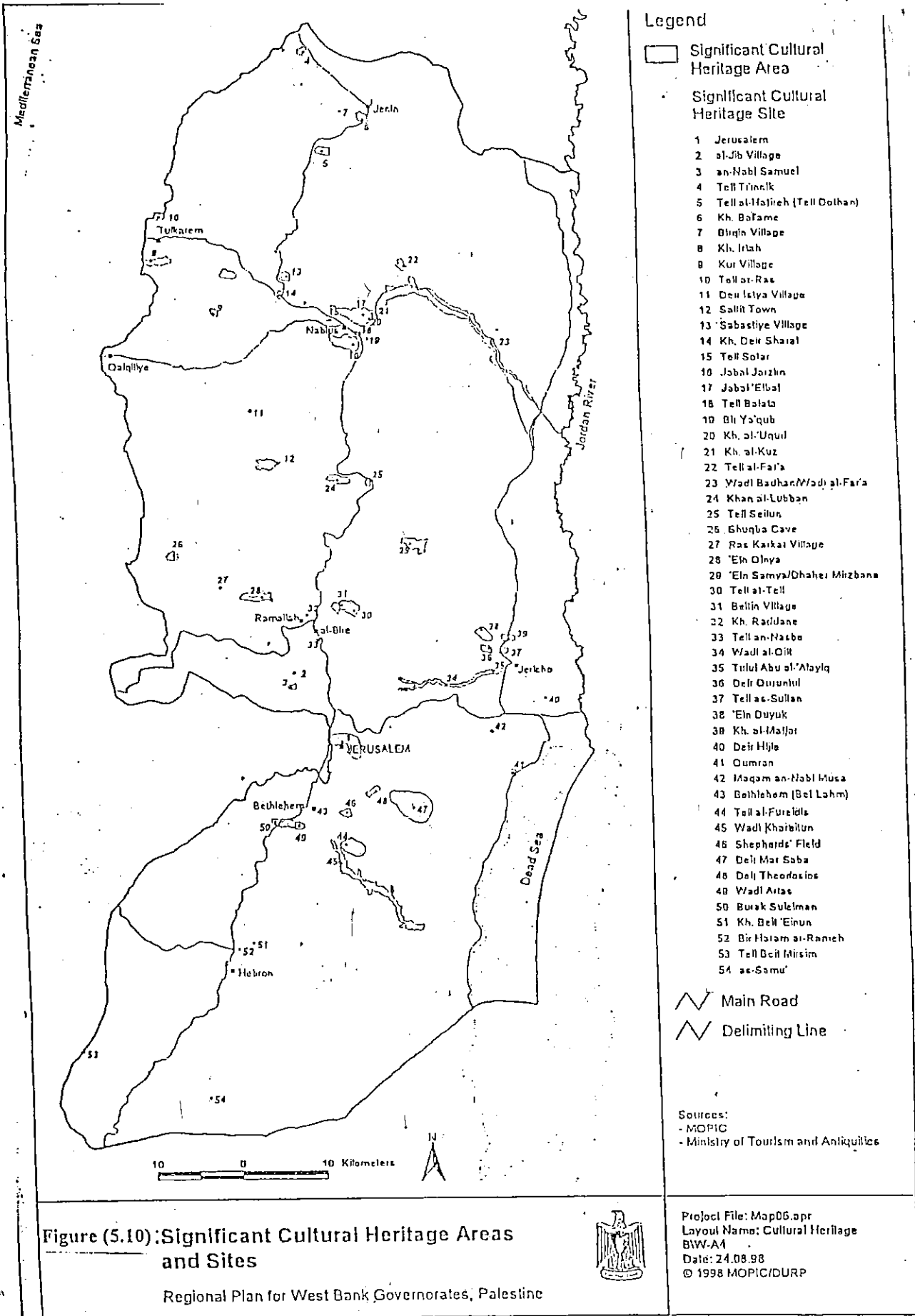
For the current flow rate of (899 vph), as compared to service flow rates, it is noticed that it is higher than the service flow rate for LOS C (613 vph), but less than the service flow rate for LOS D (910 vph), as presented in Appendix 5.8). Thus, the level of service for this main road is D, which means that the level of service is very poor or bad. The level of service varies from (A) the

best to (F) the worst. It is expected that only in four years, the level of service will reach F due to the increase in traffic volume.

#### **5.4.2 Historical and Archeological Features**

Nablus City in general has about (11) important archeological sites (MOPIC, 1999) See Figure (5.10). the study area is considered the way of the visitors to cultural sites in both directions. This means that the tours that come from Ramallah or Jerusalem wanted Sabastiye must travel from this western entrance of Nablus City. In the opposite direction, visitors who come from the west wanted the cultural sites in Nablus or even in Jerusalem and Ramallah must also travel through this entrance of Nablus City also. Especially, Jabal Jerzim in Nablus has special religious importance for the Samaritans Group. This situation gives the study area a special importance

Moreover, one of the important archeological sites which is "Tell Sofar" as seen in Figure (5.10) is situated beside the study area, this increases the importance and the sensitivity of the study area.



**Figure (5.10): Significant Cultural Heritage Areas and Sites**

Regional Plan for West Bank Governorates, Palestine



### 5.4.3 Existing Land Use /Architectural Characteristics

The study area is of a mixed land use. It has residential, commercial and industrial zones, and one specific recreational area land use along the area is presented in Figure (5.11).

Some uses, especially residential, had been existing in the area earlier before the construction of the main road. These residential zones are of two types:

**First:** The extension of Nablus city within the city boundary. This zone is not purely residential but rather mixed such that the ground floor is commercial and the above floors are residential.

**Second:** Residential areas of rural origin (Beit Eba and Zawata villages), which became the suburbs of Nablus City.

It is worth to mention that among the important reasons for the development of these two types of residential areas is the existence of the main road itself, which sustains the extension of Nablus City in this direction and the transferring of Zawata and Beit Eba villages into suburbs.

In addition, this road affected the development of other zones, such as the industrial (factories) and commercial land use in the area.

**View Point no. (1)**  
Shows an existing quarry and how it destroys the green cover and causes air pollution by the greates amount of dust.



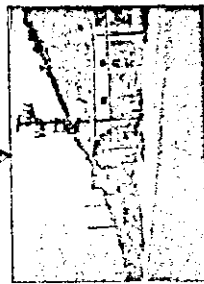
**View Point no. (2)**  
Shows the architectural style of the residential buildings of the study area



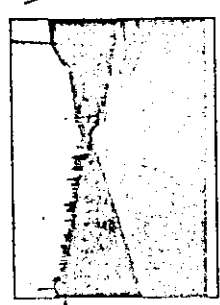
**View Point no. (3)**  
Shows the architectural style of the residential buildings of the study area



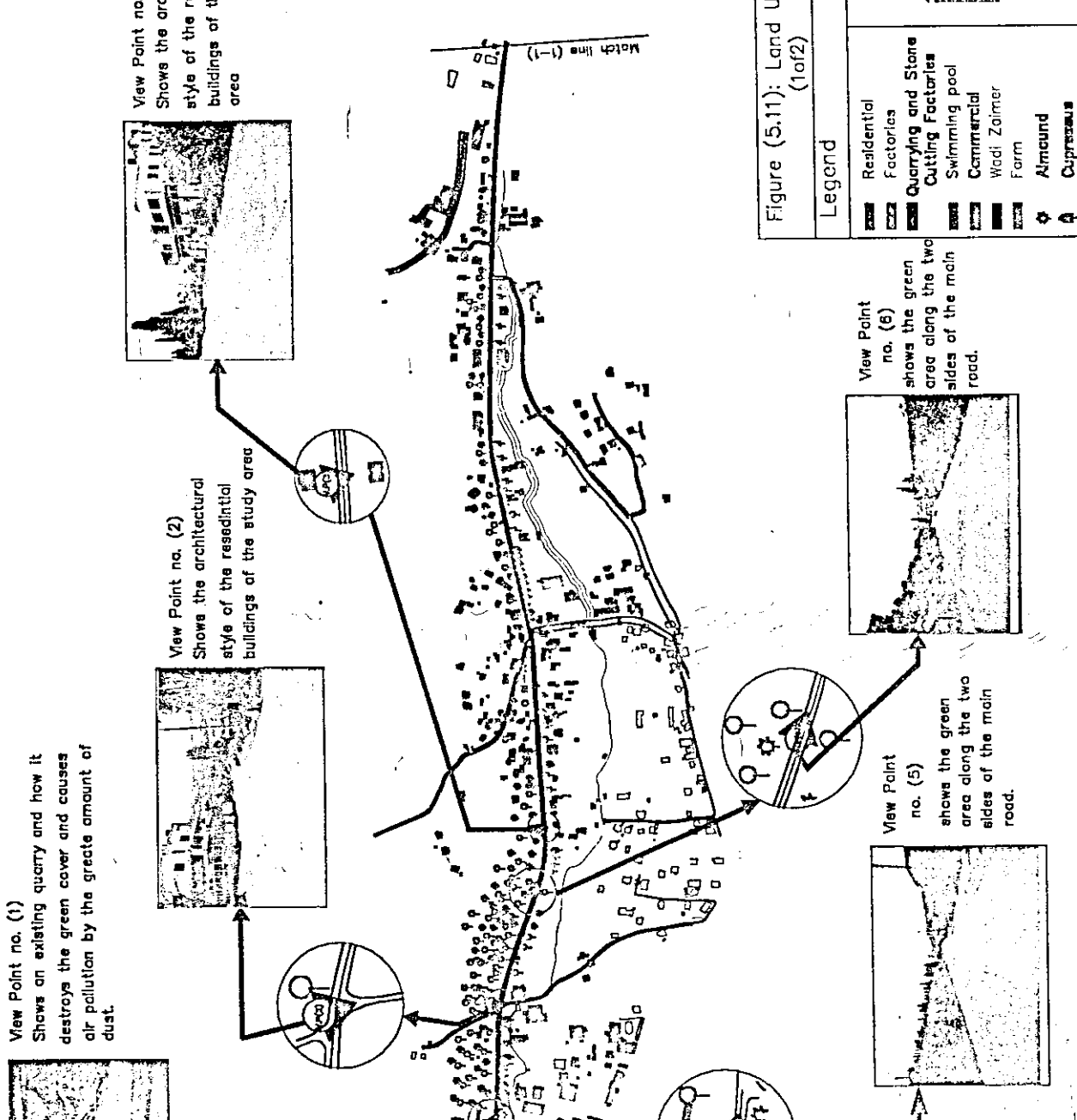
**View Point no. (4)**  
shows a general view of the quarry.



**View Point no. (5)**  
shows the green area along the two sides of the main road.



**View Point no. (6)**  
shows the green area along the two sides of the main road.



**Figure (5.11): Land Use Map (1of2)**

**Legend**

	Residential
	Factories
	Quarrying and Stone Cutting Factories
	Swimming pool
	Commercial
	Wadi Zalmer
	Farm
	Almond
	Cupressus
	Olive



Scale

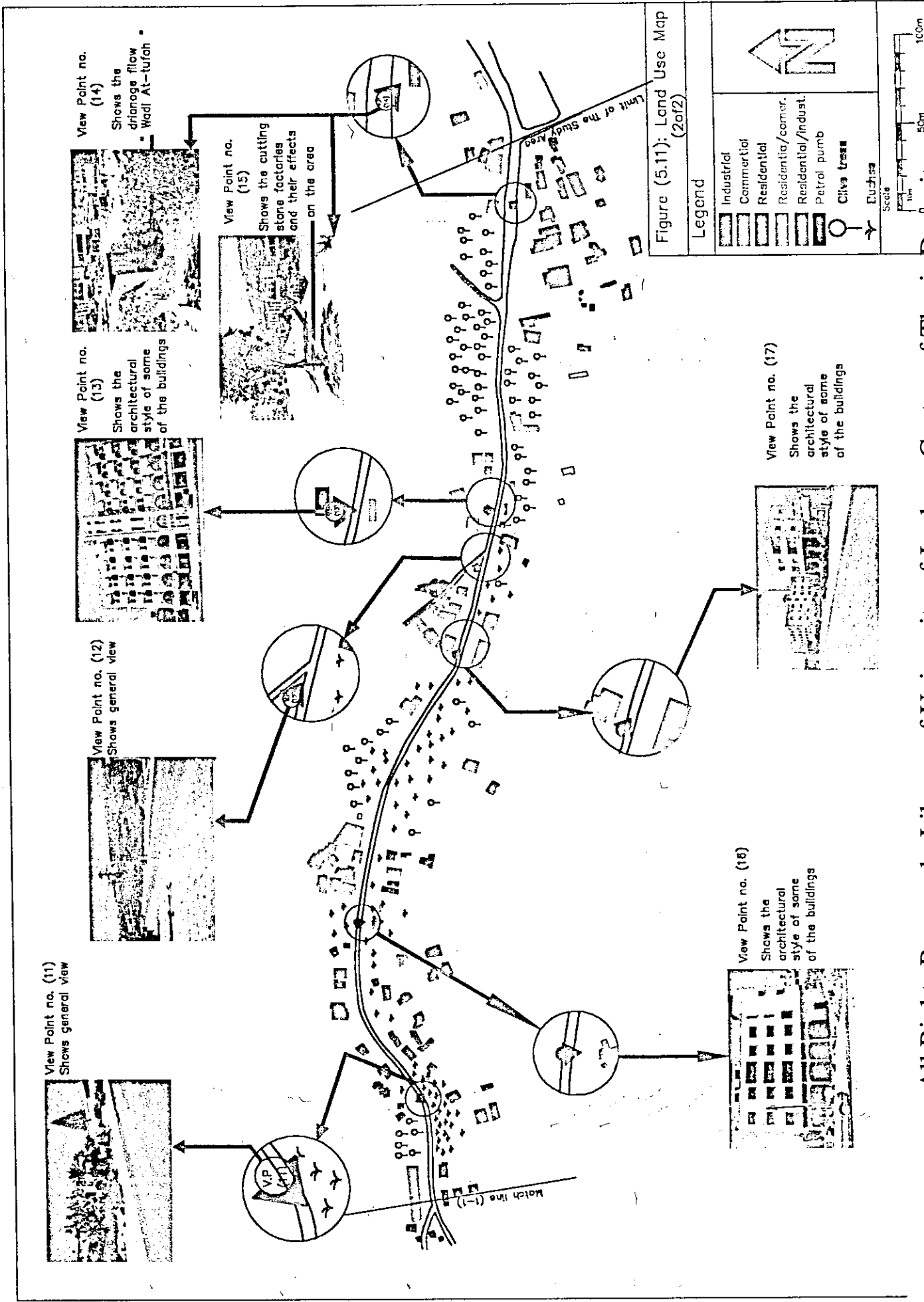


Figure (5.11): Land Use Map (2af2)

Legend

- Industrial
- Commercial
- Residential
- Residential/commercial
- Residential/Industrial
- Petrol pump
- Olive trees
- Eucalyptus





The Buildings of the study area have no specific architectural style (see Figure (5.11)). They are built of Stone, Brick or Concrete with average height between one to three floors. But some of the buildings within Nablus City municipal boundary are of five stories (see Figures (5.12) and (5.13)).

#### **5.4.4 Proposed Land Use**

The proposed land use of the study area can be studied with reference to the master plans of Beit Eba village and Nablus City.

The Master Plan of Beit Eba village shows enhancement towards the existing multi use of the study area. This enhancement appears in specifying different use zones putting in mind the existing situation see Figure (5.14).

As seen in this master plan, the area, which has a large collection of factories, has been determined to be an industrial zone. Beside the industrial zone along the southern side of the road, a multi-use zone has been determined. On the opposite side, a commercial zone of large galleries and a residential zone of type (B) has been determined. Facing the industrials zone and beside it along the northern side of the road a is determined (see the Master Plan of Beit Eba village).

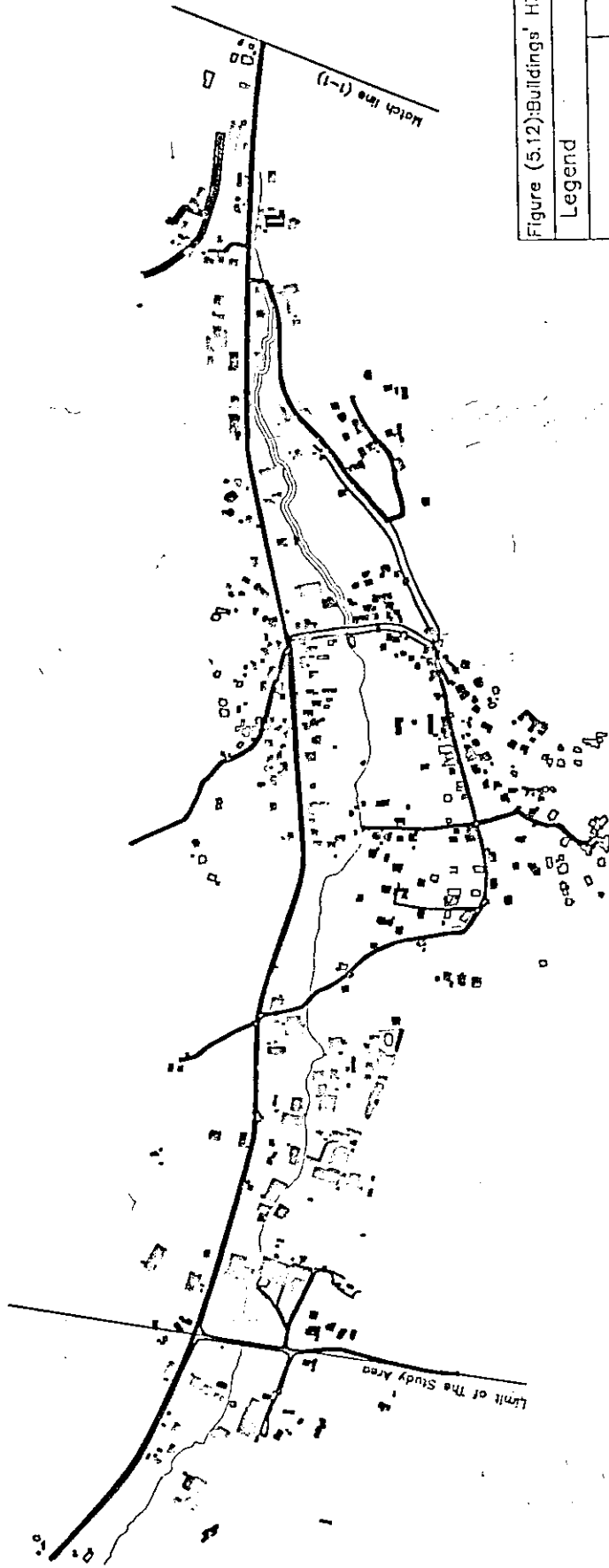





Figure (5.12): Buildings' Height Map

Legend

-  One Floor
-  Two Floors
-  Three Floors



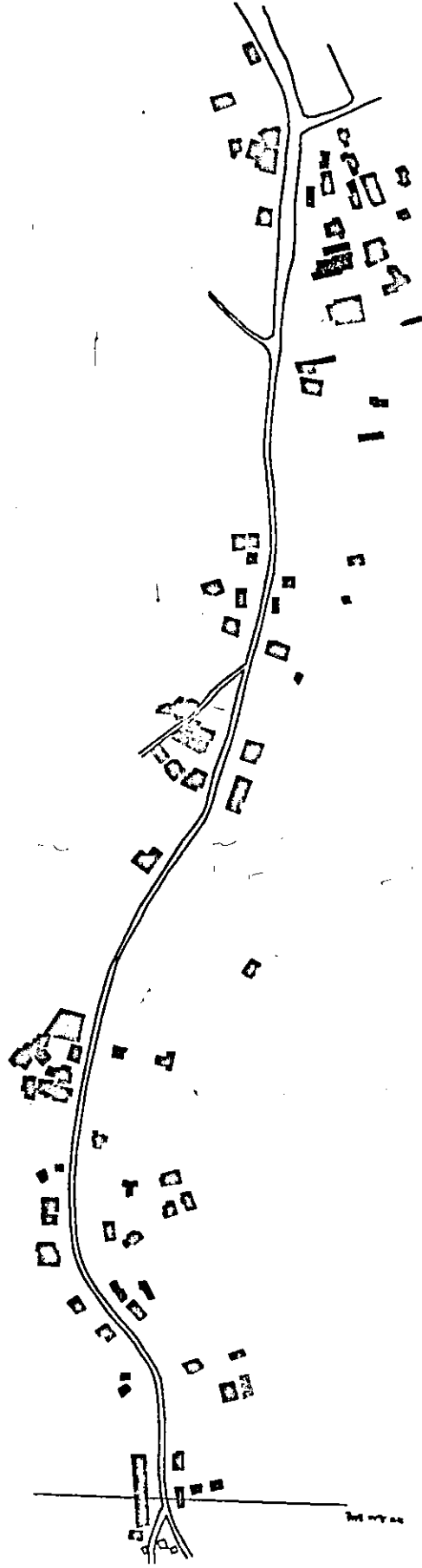


Figure C12x Buildings' Heights Map

Legend

- One Floor
- Three Floors
- Four Floors
- Five Floors
- Basement

Scale

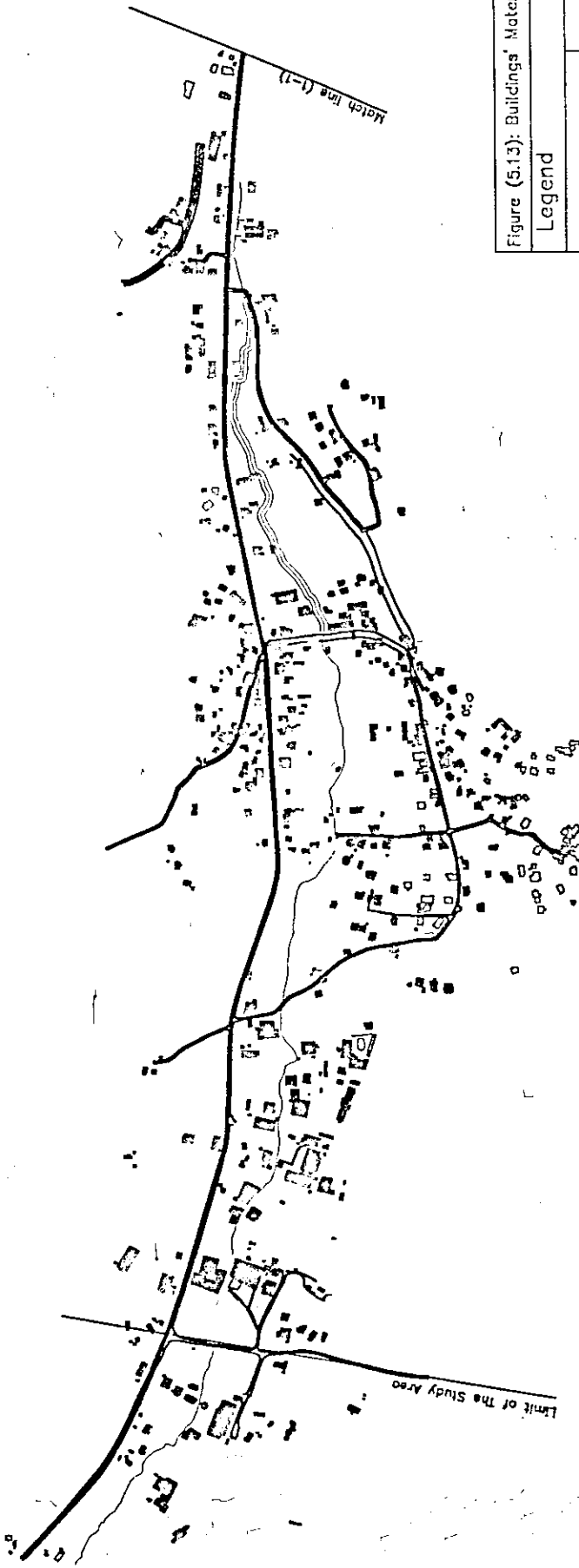



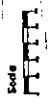
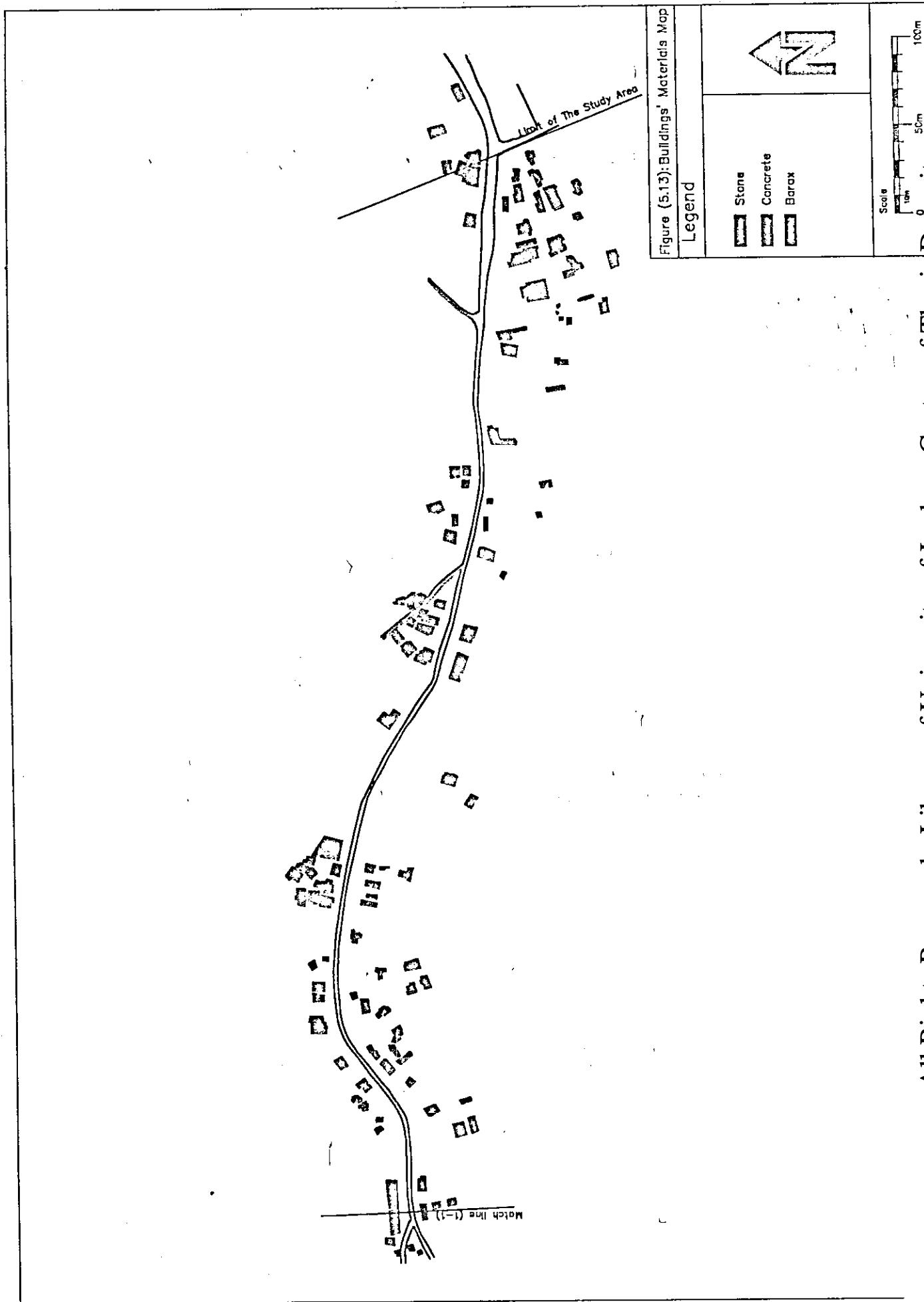


Figure (5.13): Buildings' Materials Map

Legend

-  Concrete or Bricks
-  Stone
-  Parox
























Jordanian National Authority  
MOG  
Planning Department

Figure(5.14)  
Master plan of BeitEba

Legend

- Project border 
- Proposed road 
- Existing road 
- Pedestrian 
- Residential area A 
- Residential area B 
- Residential area C
- Old city 
- Private residential area 
- Agricultural area 
- Public area 
- Commercial corridor 
- Industrial area 
- Potential industrial area 
- Multi purpos area 
- Commercial stores 
- Cemetery 
- Parks 
- Open green area 
- Undeveloped detailed project 

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This classification was highly stuck to the existing situation in order to make a more realistic plan, which facilitate its implementation.

However, there was no need to put the industrial zone within the residential areas which will reuse it in various due to air pollution, water pollution, sound pollution as well as visual pollution and traffic pollution. Another solution should be tried to deal with this serious problem. On the other hand, determining a commercial area of large galleries is a good approach in this master plan, but the location is not appropriate.

With respect to the residential areas, it should not be just of type (B) in order to save enough open and green areas.

One of the most important comments or weakness of the master plan of the study area is the lack of green areas or open areas in the study area (see the Master Plan of Beit Eba Village Figure (5.14)).

The proposed land use of the sector of the study area, which is within the boundary of the Municipality of Nablus City, is presented in the Master Plan of Nablus City (see Figure (5.15)).

This master plan does not integrate with the existing situation. Along the southern side of the study area there is a parking area, while the northern part is type (B) residential area without any details for these parking areas. There



**Figure (5.15):**The master plan of Nablius city



are no commercial zones in this master plan proposed in the study area, despite the fact that the commercial activities are most important in this area.

## 5.5 Visual Quality of the Elements

In order to evaluate the visual or quality characteristics, the study area should be discussed through desk studies and field studies.

Desk studies consist of studying maps; documents and any other written information, from such materials “objective criteria” could be derived. The question whether the visual quality or beauty can be evaluated by objective criteria or not.

As Turner (1995) mentioned, “ a surprisingly accurate estimate of scenic quality can be made from maps. This leads to the conclusion that, although beauty may be subjective (in the eye of the beholder) it is possible to base good predictions of scenic quality on objective criteria: slope, elevation, vegetation, water, geology, age of buildings and other artifacts. For example, if there is a steep mountain beside a lake with a fringe of trees along a sandy shore, the natural scenic quality is likely to be high. If there is a large area of suburban housing with a repetitive geometrical pattern, the place is likely to

be dull. If there is a uniform road pattern through an industrial area, it is likely to be ugly”.

From the existing maps of the study area, which include the topographical maps and the land use maps, the study area can be considered to consist of two separated linear edges parallel to the main road. Along each edge there are different land uses; residential, commercial and industrial, which are in the northern edge are less than the southern edge. In addition, vegetated areas in the northern edge, are more than those in the south, and in the south there is the flow of the wastewater “Wadi Zaimer”. So, we can predict that the scenic quality of the northern edge is less than that for the southern edge. Also as seen from the topographical map the southern edge is steeper, (See land use map and topographical map).

Field studies for the evaluation of the scenic quality of the study area will be discussed in Chapter Six later.

## 5.6 Conclusion

To sum up, the study area can be considered to have good elements, which help in any further development plan. At the same time, this area suffers from many different problems. These advantages (good elements) and

disadvantages (problems) are mostly related to the major landscape elements of this area; the natural/physical elements, the man-made elements and the visual quality of these elements.

The natural/physical advantages are mainly related to the topographical characteristics of the study area. The valley and heights along the two sides give beautiful scenic views and enrich the site by gathering rainfall water in the valley. Although rainfall water in the study area is considered of high average, it is lost through the same "Wadi" because of being mixed with wastewater. On the other hand, this may cause contamination to the ground water. The study area is classified as a non water sensitive zone because existing water resources are limited and of poor quality.

The significant ecological characteristics in the study area are also related to topography. The northern side is steeper than the southern while certain zones of which are classified to have significant biodiversity areas and the steep slope in the north oppose the buildings' spread out. This gives great advantages to land cover to be in large areas and to be preserved.

Man-made advantages are limited in the study area. They are directly connected with human activities. Commercial activities along the two sides of the study area, in general, form most of these advantages. Actually, man-made elements in the area are the major causes for different problems or disadvantages, which the study area suffers from.

The existing mixed-land use of residential, commercial and industrial zones, is the cause for environmental, planning, and visual problems, which affect negatively the natural landscape resources like land cover (trees, green areas), water and ecological sources. The most obvious example is “Wadi At-Tuffah” and Wadi Zaimer” which are polluted by wastewater from residential and industrial buildings.

Comparatively, transportation facilities in the study area have fewer disadvantages than other man-made elements. The location of the existing main road is integrated with the topography, which gives a guarantee for this main road. However, problems are resulted from the unsuited physical conditions, lack of sidewalks and proper traffic control devices, limited capacity and lack of safety considerations.

In order to highlight the advantages and disadvantages of the elements of the study area, and then to evaluate its visual quality, a detailed analysis and evaluation of the layout of the study area is presented in the next chapter.

**CHAPTER SIX**  
**ANALYSIS AND EVALUATION OF THE LANDSCAPE ELEMENTS OF  
THE WESTERN ENTRANCE OF NABLUS CITY**

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## CHAPTER SIX

# ANALYSIS AND EVALUATION OF THE LANDSCAPE ELEMENTS OF THE WESTERN ENTRANCE OF NABLUS CITY

### 6.1 Introduction

The city entrance has a major role in forming the image of the city. The landscape elements, which form the main character areas of the city entrance, have a strong effect upon the people's image towards cities' entrances.

This chapter investigates the main landscape elements, which form the main character areas, the main road and its environment, of the Western Entrance of Nablus City. It analyzes the layout of these elements and the users' needs and expectations. It will define the strength, weakness, opportunities and threats of the landscape elements of the study area, so that principles for the development and design process can be figured out and justified. It will discuss the visual quality of the different landscape elements, and highlight the relationship between visual qualities and physical elements: natural and man-made of the study area. Finally a conclusion of an approach for further development of the study area will be defined in this chapter.

In this study, peoples have been asked to express themselves through their different attitudes toward cities' entrances. Table (6.1) shows different

Table ( 6.1 ) : Sample distribution		
Category	Selection	Count
Gender	Male	119
	Female	26
Marital Status	Married	81
	Single	61
	Other	3
Occupation	House wife	8
	student	29
	worker	16
	employee	55
	other	19
	Driver	18
Education	Less than High school	26
	High school	35
	community college	20
	university	46
	MA	12
	PH.D	6
Place of residence	Nablus	37
	BeitEba	32
	Tulkarm	36
	Jenin	42
Category	Selection	Mean
Age	male	33
	female	30

characteristics of the respondents according to their gender, age, marital status, occupation, level of education and place of residence. The sample covers different groups according to age, gender, occupation and level of education. In order to cover the different perceptions and views of the users in the study area.

The average age of the respondents is 32 years. Most of the respondents are males 82% because the drivers and workers sub-groups of the selected sample are males. About 38% of the respondents are employees and 20% are students.

This means that about 58% are daily travelers through the study area, which gives more accuracy in the proposed ideas and solutions.

In the following sections of this chapter, the landscape elements of the study area are analyzed and evaluated according to well known ("SWOT" Strength, Weakness, Opportunities, and Threats) approach.

## **6.2 Strength of the Landscape Elements**

Strength of the Western Entrance of Nablus City can be realized by measuring distinguished elements of this entrance. In addition to observations, the distributed questionnaire discusses several aspects regarding strength of the Western Entrance of Nablus City as presented in Appendix (6.1).



Observations determine existing distinguished landscape elements of the western Entrance of Nablus City as follows:

1. Location
2. Topographical Characteristics along the two sides.
3. Open and Agricultural areas, in specific parts of the study area.
4. Commercial Activities along the two sides.

These distinguished elements are related to both natural and man-made elements according to the main aspects of the landscape elements of the study area.

In order to make people express how they perceive cities' entrances, multi choice elements are included in the questionnaire so that they can choose one or more or even define additional elements.

From the results of the questionnaire, while the respondents define the above elements to be distinguished in the study area, new other elements were added. As illustrated in Table (6.2), the existing commercial activities are considered to be the most distinguished element (around 20% of the respondents). On the other hand, the physical conditions of the existing road are considered to be the less distinguished element (around 4% of the elements).

In another way, according to the main landscape elements of the study area, (68%) of the respondents consider man-made elements as distinguished

<b>Table (6.2): Distinguished Elements of the Western Entrance of Nablus City</b>		
<b>Category</b>	<b>Value</b>	<b>Ratio</b>
Commercial Activity	92	19.5%
Industrial Activity	82	17.4%
Location	72	15.3%
Building with their architectural style	66	14.0%
Accessibility	62	13.1%
Green & agricultural Areas	49	10.4%
Topographical characteristics along the two sides	32	6.8%
Physical condition of he road	17	3.6%
<b>Total</b>	<b>472</b>	<b>100.0%</b>

elements, while the rest (32%) consider natural elements as presented in Table (6.2).

As noticed from the results above (Table 6.2), the respondents define additional elements to be considered as distinguished, such as industrial activities, existing buildings and architectural style, the physical conditions of the road, and accessibility. However, this is opposite to the researcher's observations. These results are distributed according to the respondents' characteristics and according to the main aspects of the landscape elements of the study area as presented in Tables (6.3), (6.4) and (6.5) bellow.

Different people have various perceptions towards different things and places. Accordingly, what seems interesting for some people is not of the same importance for others. This will help to explain the obtained results.

When comparing the tables presented bellow, the most distinguished elements of the study area vary according to the respondents themselves. For example, according to people who visit Nablus City everyday, the most distinguished elements in the study area are the existing commercial activities, (Table 6.3), while those who visit Nablus once a week consider the existing buildings and architectural style the most distinguished, (Table 6.3).

**Table (6.3) : Distinguished Elements of the Western Entrance of Nablus City and Their Analysis According to Frequency of Visits to NablusCity**

Category	How often you go to Nablus City						Total	Ratio
	Every Day	Three times a week	Once a week	Others	Total	Ratio		
Commercial Activity	65	0	8	65	138	19.7%		
Industrial Activity	61	0	7	61	129	18.4%		
Location	45	1	8	46	100	14.2%		
Building with their architectural style	44	0	10	44	98	14.0%		
Accessibility	45	0	4	45	94	13.4%		
Green & agricultural Areas	34	0	5	34	73	10.4%		
Topographical characteristics along the two sides	21	0	3	21	45	6.4%		
Physical condition of he road	12	0	1	12	25	3.6%		
<b>Total</b>	<b>327</b>	<b>1</b>	<b>46</b>	<b>328</b>	<b>702</b>	<b>100.0%</b>		

**Table ( 6.4 ) : Distinguished Elements of the Western Entrance of Nablius City and Their Analysis According to Respondents Occupation**

Category	Occupation								Total	Ratio
	House Wife	Student	Worker	Employee	Driver	Other	Total	Ratio		
Commercial Activity	5	17	10	30	13	15	90	19.2%		
Industrial Activity	6	16	13	25	12	13	85	18.2%		
Location	5	14	5	29	12	6	71	15.2%		
Building with their architectural style	3	13	8	23	11	6	64	13.7%		
Accessibility	4	14	7	23	6	8	62	13.2%		
Green & agricultural Areas	2	8	4	20	9	5	48	10.3%		
Topographical characteristics along the two sides	2	3	3	13	7	3	31	6.6%		
Physical condition of he road	1	2	0	8	4	2	17	3.6%		
<b>Total</b>	<b>28</b>	<b>87</b>	<b>50</b>	<b>171</b>	<b>74</b>	<b>58</b>	<b>468</b>	<b>100.0%</b>		

**Table ( 6.5 ) : Distinguished Elements of the Western Entrance of Nablius City and Their Analysis According to Respondent's Level of Education**

Category	Level of Education							Total	Ratio
	Less than Secondary	H.S	Community College	University	MA	P.h.D	Total		
Commercial Activity	14	25	13	31	4	3	90	19.2%	
Industrial Activity	12	20	14	27	2	5	80	17.1%	
Location	7	15	18	27	5	1	73	15.6%	
Accessibility	9	18	10	23	5	2	67	14.3%	
Building with their architectural style	12	13	13	21	3	1	63	13.4%	
Green & agricultural Areas	6	14	6	16	3	3	48	10.2%	
Topographical characteristics along the two sides	4	6	5	11	4	1	31	6.6%	
Physical condition of he road	1	6	1	6	1	2	17	3.6%	
<b>Total</b>	<b>65</b>	<b>117</b>	<b>80</b>	<b>162</b>	<b>27</b>	<b>18</b>	<b>469</b>	<b>100.0%</b>	

The most distinguished elements in the study area also vary according to people's occupations. Employees who form the most portion of the respondents (38%), select the commercial activities to be the most distinguished in the study area, while the workers who are just (11%) of the respondents, determine the existing industrial activities as the most distinguished elements. One can obviously conclude that workers emotionally select their works to be the most distinguished element in the area. But this doesn't take big matter because workers do not have a big number of the respondents. However, people who have University Degrees, and form the largest portion of the sample (32%), select the commercial activities as the most distinguished, (see Tables 6.1, 6.4 and 6.5).

On the other hand, according to the main aspects of the landscape elements of the study area, the different groups of the respondents select distinguished elements from both man-made and natural. However, most of these groups select man-made elements to be distinguished, see Appendix (6.1).

In order to highlight various characteristics of the landscape elements of the Western Entrance of Nablus City, and parallel to the questionnaire methodology, interviews with key figures are conducted. These are persons who are in positions that affect the characteristics of any city entrance in general and the Western Entrance of Nablus City in particular.

During the interviews, defining distinguished landscape elements of the city entrance depends on the backgrounds of the interviewees themselves. Most of them assured that existing green areas and commercial activities are distinguished see Appendix (6.1). Some of them indicated the distinguished location of the Western Entrance of Nablus City, and pointed out the oldness of this entrance that has been acting as an entrance to Nablus City for (70-80) years ago, see Appendix (6.1).

Therefore, it can be concluded from the results above that the distinguished elements of the Western Entrance of Nablus City are the same as those defined earlier through the researcher's observations including:

1. Location.
2. Topographical Characteristics along the two sides.
3. Open and Agricultural areas, in specific parts of the study area.
4. Commercial Activities along the two sides.

The most distinguished elements in the study area are the commercial activities, which must be taken into considerations through any proposed solutions and design process. In addition, the most distinguished element in the study area is man-made, which means that natural elements lost their advantages through man-made activities. This makes natural features of the study area are not pure, which must be taken into consideration in order to minimize man's effects as much as possible.

### 6.3 Weakness of the Landscape Elements

Weakness of the landscape elements of the Western Entrance of Nablus City can be determined by measuring the disturbing elements of this entrance.

The observations and the questionnaire are used in order to highlight and measure such existing disturbing elements.

According to observations, the disturbing elements in the area are as the following:

1. Congestion of vehicles
2. Different types of vehicles (according to their sizes and uses) on the road
3. Not enough traffic signing
4. The unsuitable width of the road
5. lack of pedestrian safety
6. Narrow cone of vision
7. Roughly advertising boards
8. Multi function or different land use
9. Industrial activities
10. The drainage flow (Wadi Zaimer)

The results of the structured questionnaire show a consistency among the respondents towards the consideration of the items above as negative or disturbing elements of the study area. Also, it measures relatively the degree of



the disturbance of each item according to the percentage of the selections of different groups of the respondents. These results are varied according to the variations of the respondents themselves, see Appendix (6.2).

The respondents' selections of the disturbing elements of the Western Entrance of Nablus City are can be summarized as follows:

There is 19% of the respondents who referred to lack of pedestrian safety, (17%) to existing industrial activities, and (16.6%) to congestion of vehicles. (16%) pointed out the existing multifunction or different land use of the study area as one of the disturbing elements, while (11%) complained the existing of different sizes of vehicles on the main road as one of the disadvantages. Comparatively (10%) referred to the unsuitable width of the main road, and (9.4%) to the commercial activities as among the disturbing elements see Table (6.6). These results are distributed according to respondents' characteristics as presented in table's (6.7), (6.8), (6.9) and (6.10) bellow.

According to these results, various selections or perceptions of different groups of the respondents regarding disturbing elements of the study area are noticed.

A deep analysis and comparison among the data in the tables above will lead and emphasize the fact that different people have different perceptions.

<b>Table (6.6) : Disturbing Elements of the Western Entrance of Nablus City</b>		
<b>Category</b>	<b>Frequencies</b>	
	<b>Value</b>	<b>Ratio</b>
Lack of Pedestrian safety	109	19.0%
Industrial activities	100	17.4%
Traffic Congestion	95	16.6%
Multi-function or different landuse	94	16.4%
Travelling of different types of Vehicles on the road	64	11.1%
Unsuitable width of the road	58	10.1%
Commercial activities	54	9.4%
<b>Total</b>	<b>574</b>	<b>100.0%</b>

For example, people who are living in Jenin city, who form the majority of the respondents (29%), indicate that traffic congestion as the most disturbing element in the study area. While, people who are living in Beit Eba, with (22%) of the respondents, select the unsuitable width of the road to be the most disturbing element. Accordingly, this could be considered logic, because people in Beit Eba are mostly pedestrians on the road of the study area and they usually cross the road from one side to another, because the road divides the village into two parts north and south. Therefore, they are the most people who are suffering from this problem. This is being emphasized when it is noticed that the second disturbing element according to these people is the lack of pedestrian safety, see Tables (6.1) and (6.7).

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This differentiation of the selections regarding negative elements of the study area can be also noticed according to different occupations and levels of education of the respondents, as presented in Tables (6.8) and (6.9).

The most disturbing element in the study area according to the responding employees who form the majority of the sample (38%) is the congestion of vehicles. While the most disturbing thing according to people who have University Degrees, who form (32%) of the respondents, is the lack of pedestrian safety. But people who have Ph.D. Degrees select commercial activities to be the most disturbing elements in the study area, which absolutely differs from the whole results and also the researcher's observations. Although

<b>Table (6.7) : Disturbing Elements of the Western Entrance of Nablus City according to Respondent's Place of Residence</b>					
<b>Category</b>	<b>Place of residence</b>				
	<b>Nablus</b>	<b>BeitEba</b>	<b>Tulkarem</b>	<b>Jenin</b>	<b>Total</b>
Traffic Congestion	20.9%	20.9%	25.3%	33.0%	100.0%
Travelling of different types of Vehicles on the road	25.0%	25.0%	26.6%	23.4%	100.0%
Unsuitable width of the road	18.0%	34.4%	24.6%	23.0%	100.0%
Lack of Pedestrian safety	20.2%	26.6%	23.9%	29.4%	100.0%
Multi-function or different landuse	21.3%	22.3%	24.5%	31.9%	100.0%
Commercial activities	25.9%	22.2%	29.6%	22.2%	100.0%
Industrial activities	23.0%	22.0%	24.0%	31.0%	100.0%

**Table (6.8) : Disturbing Elements of the Western Entrance of Nablus City According to Respondent's Occupation**

what elements of this entrance you think that they are disturbing	Occupation					
	House wife	Student	Worker	Employee	Driver	Other
Traffic Congestion	7.4%	14.7%	10.5%	43.2%	16.8%	7.4%
Travelling of different types of Vehicles on the road	6.3%	20.3%	7.8%	32.8%	18.8%	14.1%
Unsuitable width of the road	5.2%	13.8%	10.3%	37.9%	17.2%	15.5%
Lack of Pedestrian safety	5.6%	20.4%	10.2%	36.1%	13.9%	13.9%
Multi-function or different landuse	5.4%	18.3%	10.8%	37.6%	15.1%	12.9%
Commercial activities	5.6%	14.8%	9.3%	38.9%	20.4%	11.1%
Industrial activities	6.2%	19.6%	10.3%	38.1%	16.5%	9.3%
man made	34	101	57	216	94	67
Ratio	6.0%	17.8%	10.0%	38.0%	16.5%	11.8%

**Table (6.9) : Disturbing Elements of the Western Entrance of Nablus City According to Respondent's level of Education**

Category	Level of Education				
	Less than Secondary	H.S	Community College	University	P.h.D
Traffic Congestion	14.7%	21.1%	15.8%	34.7%	5.3%
Travelling of different types of Vehicles on the road	15.6%	21.9%	15.6%	31.3%	7.8%
Unsuitable width of the road	13.8%	22.4%	13.8%	34.5%	6.9%
Lack of Pedestrian safety	14.8%	26.9%	15.7%	32.4%	4.6%
Multi-function or different landuse	14.4%	26.7%	17.8%	27.8%	5.6%
Commercial activities	14.8%	18.5%	16.7%	31.5%	9.3%
Industrial activities	16.0%	23.0%	18.0%	33.0%	5.0%
Man made	85	133	93	183	41
Ratio	14.9%	23.4%	16.3%	32.2%	7.2%

these people are just (4%) of the sample, most of them are in sensitive and effective positions of the community, therefore their perceptions and selections must be taken into consideration later on.

According to the respondents' number of visits to Nablus City, which indicates their familiarity to the study area, as familiarity increases the respondents' attentions and interests towards specific elements increase, Table (6.10). For example, according to people who visit Nablus city once a week, the most disturbing element is the multifunction of the study area, while people who visit Nablus every day select the lack of pedestrian safety to be the most disturbing. However, those people who mention that the multifunction is the most disturbing thing don't define exactly what functions cause the disturbance. Comparatively people who are most familiar to the area, the every day visitors, select exact item (the lack of pedestrian safety) as the disturbing thing.

However, it is worth to point out that all disturbing elements, according to the results from the distributed questionnaires, are man-made elements. This means that man is the destroying element in the study area, thus people in general through their unmanaged activities are the causes of the existing scratching in the study area.

Interviews with key figures define disturbing elements or problems of the Western Entrance of Nablus City in different ways according to the

<b>Table (6.10) : Disturbing Elements of the Western Entrance of Nablus City According to Frequency of Vistis to Nablus City</b>				
<b>Category</b>	<b>How often you go to Nablus city</b>			
	<b>Every Day</b>	<b>Three times a week</b>	<b>Once a week</b>	<b>Others</b>
Traffic Congestion	69.1%	2.1%	9.6%	19.1%
Travelling of different types of Vehicles on the road	69.8%	1.6%	9.5%	19.0%
Unsuitable width of the road	68.4%	3.5%	8.8%	19.3%
Lack of Pedestrian safety	72.5%	2.8%	10.1%	14.7%
Multi-function or different landuse	70.2%	2.1%	10.6%	17.0%
Commercial activities	64.2%	1.9%	11.3%	22.6%
Industrial activities	71.4%	1.0%	11.2%	16.3%
<b>Man made</b>	<b>397</b>	<b>12</b>	<b>58</b>	<b>101</b>
<b>Ratio</b>	<b>69.9%</b>	<b>2.1%</b>	<b>10.2%</b>	<b>17.8%</b>

differentiation of interviewees themselves. Most of them indicated the existing industrial activities and the drainage flow through Wadi Zeimer as the most disturbing things. Others mentioned organizational problems resulted from the lack of cooperation between different responsible institutions, while some others emphasized problems related to unsuitable physical conditions of the road, lack of pedestrian safety, the pollution problem and the problem of rainwater which run on the main road during Winter, see Appendix (6.2).

From the results above, one can conclude that respondents' reactions towards existing disturbing elements are not the same. This make it so difficult for the researcher to classify the existing disturbing landscape elements of the Western Entrance of Nablus City according to the degree of disturbance, from the high to the low, in order to give priorities for the design process. This is because the level of disturbance varies according to the variation of people's perceptions, uses and feelings of the study area.

But this conclusion is opposite to those ideas, which have been built up by the researcher through observations. Thus observations showed that the most disturbing elements of the study area are first, the industrial activities presented by different factories; second, the drainage flow; third, is the roughly multi-functions; and finally problems related to physical conditions of the road and the existing of different sizes of vehicles on the road. All these disturbing elements are man-made, which is similar to those results obtained by the questionnaire.



Therefore, this research will deal with all mentioned elements as disturbing in the same degree of consideration through building up proposals and solutions, because they are as a whole the causes of the problem of the study area. Detailed recommendations and solutions regarding these elements will be presented in the next chapter (Chapter Seven).

#### **6.4 Opportunities of the Landscape Elements of the Study Area**

The Western Entrance of Nablus City has different landscape elements, which are classified into distinguished or disturbing.

Distinguished elements are those positive or good landscape elements, which actually strengthen the study area. While disturbing elements are the negative landscape elements, which cause the problem of the study area, and really weaken the study area as discussed before in this chapter.

However, there are still elements, which can be improved or strengthened, which are not negative or disturbing absolutely, and may have the opportunity to be positive in the landscape context of the entrance of the city.

Opportunities of the landscape elements of the Western Entrance of Nablus City can be measured by determining elements which can be improved as well as negative elements of which their impacts upon the study area can be removed.

### 6.4.1 Improved Elements

The Observations and questionnaire are used in order to determine these improved elements. Through accurate observations, the researcher could define the improved elements of the study area in order to highlight existing opportunities as follows:

1. Green and Agricultural areas
2. Drainage flow through Wad Zaimer
3. The roughly advertising boards along the main road.
4. Multifunction or mixed land use
5. The physical condition of the road

The reasons behind the selection of such elements can be explained as such:

#### **1.Green and Agricultural Areas:**

Most of the agricultural areas concerned are planted by trees; olive, almond, copressus trees. These trees are mostly dry, and covered by large amount of dusts, soil suffers from erosion and liquid wastes. These areas in general are minimized because of the mentioned problems.

In spite of these problems, these areas still have the opportunities to be strengthened and transformed into attractive elements. This is related to organizational and development laws. Therefore, these areas have the most advantage tool for improvement as parts of these areas have been classified as

forests or significant biodiversity according to the study of MOPIC in 1998, see Figure (5.10).

## **2. Wadi Zaimer With Its Drainage Flow**

The problem of this Wadi is the open drainage water. But there is an opportunity to solve this problem by making wastewater as underground system drainage. In addition, if rainwater are gathered by different system , this Wadi would be the most attractive element of the study area .

## **3. The Roughly Advertising Boards Along The Main Road**

This element can be made most attractive in the study area through organizational laws that define design, form, material and all characteristics of these boards, as well as management and regulations.

## **4. Multi-function or Mixed Land Use**

The problem of this aspect is related to the roughly multi-function. There are certain opportunities to manage land and buildings' use to solve this problem.

## **5. The Physical Condition of the Road**

The location, alignment of the road give great opportunities to solve problems resulted from its physical conditions. For example, the location, alignment, and the environment (built up and open space) of the road give important

opportunities to solve physical problems of the road, such as, width of sidewalks, medians,. etc.

On the other hand, according to the main aspects of the landscape elements of the study area, some of these improvable elements are considered natural and others are man-made.

In this study, peoples are asked about improvable landscape elements of the study area through the questionnaire. The consistency between respondents and the researcher towards the improvable elements as presented in Appendix (6.3). Meanwhile, respondents add new elements to be considered as improvable such as commercial activities. This means that existing commercial activities are not enough and they should be improved as presented in table (6.11).

(27%) of the respondents select green and agricultural areas as improvable elements of the study area, while (20%) of the users refer to multifunction. (18%) select Wadi Zaimer as improvable elements, and nearly (11%) select both the roughly advertising boards and commercial activities to be disturbing.

These figures are distributed according to the differentiation of respondents' characteristics and according to the main aspects of the landscape elements of the study area, as presented in tables (6.12), (6.13), (6.14) and (6.15).

Table(6.11) Improved landscape Elements of the Western Entrance of Nablus City		
Category	Frequencies	
	Value	Ratio
Commercial activities	43	11.3%
The roughly advertising boards along the road	40	10.5%
The drainage flow in Wadi Zaimer	70	18.3%
Multi-function or Different landuse	77	20.2%
Physical conditions of the road	48	12.6%
Green & agricultural areas	102	26.7%
other	2	0.5%
Total	382	100.0%

The different groups of respondents define improvable elements as follows:

People who live in Jenin, who are the majority of the respondents according to place of residence, (29%) select the commercial activities to be the most improvable elements, see tables (6.1) and (6.12). This selection is related to the fact that Nablus' City is considered as a commercial center for such people. So, when improvements done to existing commercial activities in the Entrance area of the city, this will be an advantage for these people instead of going to the city center or the C.B.D, which is crowded and far away.

However, according to the level of education, most of the respondents who have university degrees and form (32%) of the respondents, Table (6.1), select the green and agricultural areas as the most improvable element, Table (6.13). While employees are the largest group of the respondents according to their occupations, with (38%), they select the existing roughly advertising boards along the road as the most improvable elements, Table (6.14). This selection seems to be integrated with their usual general interests. According to respondents' familiarity to the study area, every day users select nearly both the green and agricultural areas and the physical conditions of the road as the most improvable elements Table (6.15).

It must be noticed here that these improved elements which are determined by the different groups of the respondents are either man-made or natural elements.

**Table (6.12) : Improved Landscape Elements of the Western Entrance of Nablus City and Their Analysis According to Place of Residence**

Category	Place of Residence					Total
	Nablus	BeitEba	Tulkarem	Jenin	Total	
Natural	23	25	23	31	102	
other	16	23	17	24	80	
Man made	16	17	17	28	78	
Man made	17	17	13	23	70	
Man made	13	14	9	12	48	
Man made	7	9	9	17	42	
Man made	9	9	9	13	40	
Man made	85	96	79	118	460	
Natural	7	9	9	17	818	
Total without others	92	105	88	135	1556	
Man made Ratio	92.4%	91.4%	89.8%	87.4%		
Natural Ratio	7.6%	8.6%	10.2%	12.6%		

**Table (6.13) : Improved Landscape Elements of the Western Entrance of Nablus City According to People's Levels of Education**

Category	Level of Education						Total
	Less than Secondary	H.S	Community College	University	MA	P.h.D	
Commercial Activity	11.6%	30.2%	14.0%	30.2%	11.6%	2.3%	100.0%
The roughly advertising boards along the road	14.6%	39.6%	12.5%	20.8%	6.3%	6.3%	100.0%
The drainage flow wadi zaimer	18.3%	28.2%	14.1%	26.8%	8.5%	4.2%	100.0%
Multifunctional or Different land use	15.5%	26.8%	14.1%	29.6%	9.9%	4.2%	100.0%
Physical condition of the road	18.8%	27.1%	16.7%	29.2%	4.2%	4.2%	100.0%
Green areas & agricultural area	17.9%	21.1%	15.8%	33.7%	7.4%	4.2%	100.0%
Other	0.0%	0.0%	0.0%	50.0%	0.0%	50.0%	100.0%

**Table (6.14) : Improved Landscape Elements of the Western Entrance of Nablus City According to People's Occupations**

Category	Occupation						Total
	House wife	Student	Worker	Employee	Driver	Other	
Commercial Activities	4.7%	16.3%	11.6%	41.9%	7.0%	18.6%	100.0%
The roughly advertising boards along the road	2.7%	13.5%	8.1%	45.9%	10.8%	18.9%	100.0%
The drainage flow on Wwadi Zaimer	5.8%	13.0%	13.0%	40.6%	8.7%	18.8%	100.0%
Multi-function or Different landuse	3.9%	14.5%	9.2%	44.7%	10.5%	17.1%	100.0%
physical conditions of the road	4.3%	19.1%	8.5%	31.9%	17.0%	19.1%	100.0%
green & agricultural areas	6.1%	18.2%	10.1%	39.4%	12.1%	14.1%	100.0%
other	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%

**Table (6.15) : Improved Landscape Elements of the Western Entrance of Nablus City and Their Analysis According to Frequency of Visits to Nablus City**

Category	Every Day	Three times a week	Once a week	Others	Total
	Commercial Activity	62.8%	4.7%	11.6%	20.9%
The roughly advertising boards along the road	65.0%	2.5%	15.0%	17.5%	100.0%
The drainage flow wadi zaimer	62.9%	4.3%	12.9%	20.0%	100.0%
Multifunctional or Different land use	61.0%	3.9%	11.7%	23.4%	100.0%
Physical condition of the road	67.4%	4.3%	8.7%	19.6%	100.0%
Green areas & agricultural area	67.3%	3.0%	10.9%	18.8%	100.0%
Other	0.0%	0.0%	0.0%	100.0%	100.0%
Man Made	243	14	44	77	378
Ratio	64.3%	3.7%	11.6%	20.4%	100.0%



However, the different groups define man-made elements to be the most improvable elements, as presented in Tables (6.12), (6.13), (6.14) and (6.15).

Therefore, different determinations of respondents towards improved elements make it difficult for the researcher to classify these elements according to priorities in the development process of the studied entrance. But it is emphasized that all the elements indicated to be improvable ones should be taken into considerations through any further development and redesign process.

#### **6.4.2 Removed Elements**

Questionnaire results show the elements, which the respondents suggested to remove, as illustrated in table (6.16). 26% of the respondents indicated that the drainage flow through Wadi Zaimer must be removed, while 23% of them mentioned that the industrial activities must be removed. Elements suggested to be removed as related to respondents' characteristics are presented in Appendix (6.4).

Researcher's observations indicate that the most important elements, which must be removed or transferred to other places, are the industrial sites, specifically these include stone factories and workshops for mending cars and cars spare parts.

<b>Table(6.16) : Removed landscape Elements of the Western Entrance of Nablus City</b>		
<b>Category</b>	<b>Frequencies</b>	
	<b>Value</b>	<b>Ratio</b>
The drainage flow in Wadi Zaimer	124	26.2%
Industrial activities	107	22.6%
The roughly advertising boards along the road	93	19.6%
green & agricultural areas	84	17.7%
Commercial activities	41	8.6%
Physical conditions of the road	25	5.3%
Total	474	100.0%

## 6.5 Threats of the Landscape Elements of the Study Area

There are different landscape elements in the layout of the study area. Some are considered distinguished, which form the strength of existing landscape elements. Others are considered disturbing which form the weakness of the elements. While some elements are neither absolutely distinguished nor absolutely disturbing, these can be improved or removed in any development process. These elements are considered as the opportunities for the elements of the study area.

Thus the problem of the study area does not result from the existence of negative or disturbing elements alone, but it results also because of the shortage of some existing elements or because of the absence of some important others. These all are considered as missing elements, which must be added. These missing elements form the threats of the study area.

Deep repeatedly observations held by the researcher lead to the following determinations of landscape missing elements of the Western Entrance of Nablus city, which in turn help to define threats facing this study area:

1. Additional green spaces with suitable areas.
2. Good and suitable planting of the main road, and the construction of suitable sidewalks and medians according to main standards and needs.

3. Additional commercial activities

4. Appropriate system or strategy for commercial advertising boards, which could help to make these boards as attractive elements in the study area.

Noticed, all these above-mentioned elements are man-made elements.

In addition to observations, users of the study area are asked in the questionnaire to define missing landscape elements of the study area.

Results of the questionnaire emphasize that the same elements which are defined by observations above as missing elements of the study area, besides, they define new others. As shown in Table (6.17), these results are:

35% of the respondents select suitable planting of the main road to be among the missing elements of the study area. 26% of the users define additional industrial activities as missing elements, 21% of the respondents mention that additional commercial activities as missing elements, and (18%) mention that there are no appropriate system or strategy for commercial advertising boards.

All elements defined by the respondents as missing landscape elements are considered as man-made elements.

However, the results of the questionnaire regarding respondents' definitions of missing elements are varied according to people's backgrounds especially when classification concern the most important elements which must be added. These results according to people's characteristics are presented in Appendix (6.4).

<b>Table (6.17 ) : Missing Elements of the Western Entrance of Nablus City</b>		
<b>Category</b>	<b>Frequencies</b>	
	<b>Value</b>	<b>Ratio</b>
Additional Commercial activities	<b>74</b>	<b>20.8%</b>
Additional Industrial Activities	<b>93</b>	<b>26.2%</b>
Roughly advertising boards along the road	<b>63</b>	<b>17.7%</b>
Good & suitable Planting of the road & suitable Median & side	<b>125</b>	<b>35.2%</b>
<b>Total</b>	<b>355</b>	<b>100.0%</b>

For example, according to respondents' occupation, the most important landscape elements, which must be added, are additional commercial activities, because they are selected to be the most missing elements by employees who form the largest group of the respondents, about 38%. But the most important missing elements according to people's levels of education is determined by people who have university degrees, forming (32%) of the respondents, select "good and suitable planting of the road and construction of suitable sidewalks and medians according to standards and needs" to be the most missing elements. While the most missing elements according to people's places of residence are defined by Jenin's residents, who form (29%) of the respondents, select "good and suitable planting of the road and construction of suitable sidewalks and medians according standards and needs" to be the most missing elements. According to respondents familiarity towards the study area, people who visit Nablus every day select "suitable system or strategy for commercial advertising boards" to be the most important missing. While those who visit Nablus once a week select additional commercial activities to be the most missing elements in the study area, see tables (6.18), (6.19), (6.20) and (6.21).

Therefore, missing elements, which are defined by the respondents through the questionnaire results, as well as the researcher's observations, should be all taken into consideration in any development plan for the Western Entrance of Nablus City.

**Table ( 6.18 ) : Missing Landscape elements of the Western Entrance of Nablus City and Their Analysis According to People's Occupation**

Category	House wife	Student	Worker	Employee	Driver	Other	Total
Additional Commercial activities	4.9%	15.9%	13.4%	39.0%	14.6%	12.2%	100.0%
Additional Industrial Activities	6.5%	21.7%	10.9%	34.8%	10.9%	15.2%	100.0%
Roughly advertising boards along the road	4.8%	22.6%	11.3%	27.4%	21.0%	12.9%	100.0%
Good & suitable Planting of the road & suitable Median & side	4.8%	21.8%	9.7%	37.9%	12.9%	12.9%	100.0%
<b>Man Made</b>	<b>19</b>	<b>74</b>	<b>40</b>	<b>128</b>	<b>51</b>	<b>48</b>	<b>360</b>
<b>Ratio</b>	<b>5.3%</b>	<b>20.6%</b>	<b>11.1%</b>	<b>35.6%</b>	<b>14.2%</b>	<b>13.3%</b>	<b>100.0%</b>

**Table (6.19) : Missing Landscape Elements of the Western Entrance of Nablus City and Their Analysis According to People's Level of Education**

Category	Less than Secondary	H.S	Community College	University	MA	P.h.D	Total
Additional Commercial activities	19%	30%	18%	23%	8%	3%	100%
Additional Industrial Activities	17%	26%	17%	29%	7%	3%	100%
Roughly advertising boards along the road	23%	24%	15%	29%	8%	2%	100%
Good & suitable Planting of the road & suitable Median & side	17%	25%	14%	34%	6%	4%	100%
<b>Man Made</b>	<b>66</b>	<b>94</b>	<b>56</b>	<b>105</b>	<b>25</b>	<b>11</b>	<b>357</b>
<b>Ratio</b>	<b>18%</b>	<b>26%</b>	<b>16%</b>	<b>29%</b>	<b>7%</b>	<b>3%</b>	<b>100%</b>

**Table ( 6.20 ) : Missing Landscape Elements of the Western Entrance of Nablus City and Their Analysis According to People's Place of Residence**

Category	Nablus	BeitEba	Tulkarem	Jenin	Total
Additional Commercial activities	28.4%	25.7%	21.6%	24.3%	100.0%
Additional Industrial Activities	23.7%	23.7%	24.7%	28.0%	100.0%
Roughly advertising boards along the road	25.4%	23.8%	25.4%	25.4%	100.0%
Good & suitable Planting of the road & suitable Median & side	24.0%	21.6%	24.8%	29.6%	100.0%
<b>Man Made</b>	<b>89</b>	<b>83</b>	<b>86</b>	<b>97</b>	<b>355</b>
<b>Ratio</b>	<b>25.1%</b>	<b>23.4%</b>	<b>24.2%</b>	<b>27.3%</b>	<b>100.0%</b>

**Table 6.21 : Missing Landscape Elements of the Western Entrance of Nablus City according to People's Frequency of Visits to Nablus City**

Category	Every Day	Three times a week	Once a week	Others	Total
Additional Commercial activities	75.0%	0.0%	9.7%	15.3%	100.0%
Additional Industrial Activities	67.0%	3.3%	11.0%	18.7%	100.0%
Roughly advertising boards along the road	81.0%	0.0%	6.3%	12.7%	100.0%
Good & suitable Planting of the road & suitable Median & side	68.3%	2.5%	8.3%	20.8%	100.0%
<b>Man Made</b>	<b>248</b>	<b>6</b>	<b>31</b>	<b>61</b>	<b>346</b>
<b>Ratio</b>	<b>71.7%</b>	<b>1.7%</b>	<b>9.0%</b>	<b>17.6%</b>	<b>100.0%</b>



## 6.6 Visual Analysis of the Study Area

The Western Entrance of Nablus City, the study area, is analyzed through the consideration of the landscape elements of the two major categories: the natural and man-made elements. It was possible through observations and questionnaire to determine strength, weakness, opportunities and threats of these landscape elements. However, visual quality of the elements can be analyzed through observations by using field survey technique. It is difficult to determine or define or even discuss visual quality of the study area using questionnaires, because the users of the study area are composed of different groups of different backgrounds and characteristics. This differentiation makes it so difficult to obtain a specific evaluation of visual quality of the study area, because each of the respondents will consider his own view only. In addition, uniqueness of the subject of this study makes it difficult for people to understand exactly questions related to visual quality. But some evaluations for visual qualities of the elements of the study area can be taken from the evaluation of physical elements: good or positive landscape physical elements, means good or high level of visual quality. The most positive physical elements, means the highest quality elements. The number of good physical elements with highest frequency means the highest quality.

Thus distinguished elements mean high level of visual quality, and zones of the study area, which include distinguished elements, mean that these zones are of high visual quality. Similarly, improved elements of the study area are related to moderate level of visual quality, while disturbing elements are related to low level of visual quality.

### 6.6.1 Visual Field-Survey Analysis

Analysis of physical characteristics of the landscape elements of the study area gives an idea about visual quality. But to perform accurate visual analysis, certain criteria is to be identified in order to set a basis for comparison among the elements in order to determine their quality. For example, distinguished elements give an idea about good visual quality, but visual criteria needed to evaluate the degree of such distinction.

Visual field survey is performed to evaluate the visual quality of the study area. According to The Institute of Environment Assessment and the Landscape Institute, 1995, an aesthetic checklist is determined, and a survey form is filled for each sub-area of the eight zones, as identified in detail in Chapter Four of this study, see Appendix (6.6). Results of the field survey are presented in Appendix (6.6).

According to the criteria defined earlier in Chapter Four of this study, the eight zones that comprise the study area will be classified as follows:

to number of fulfilled positive items of which each zone obtained. This classification is as follows:

1. Zones or sub-areas obtain (8-10) positive criteria from the aesthetic field-survey form, Appendix (6.6), will be considered as visually protected areas, and actually they are of high level of visual quality.

From the table in appendix (6.6), there are no protected zones, which means that there are no areas of the study area of high visual quality.

2. Zones or sub-areas, which obtain (4-7) positive criteria, Appendix (6.6), will be considered as visually improved areas. This means that landscape elements in these zones can be improved to obtain a city entrance of high quality, which means that these zones are of moderate visual quality. The table in Appendix (6.6) shows different sub-areas which are considered visually improved zones or with moderate visual quality. These sub-areas are presented in Figure (6.1).

3. Zones or sub-areas, which obtain (1-3) positive criteria from the aesthetic field-survey form, Appendix (6.6), will be considered as visually developed areas. This means that these areas are of low visual quality, and need development by adding elements, which will increase the visual quality of these zones. From the table in Appendix (6.6), there are different developed zones of the study area, as presented in Figure (6.1).

## 6.7 Conclusion

The main results, which are drawn from this chapter, can be divided into three types:

1. Regarding the Natural/Physical Landscape elements of the city entrance.
2. Regarding the Man-made Landscape elements of the city entrance.
3. Concerning the Visual Quality of the landscape elements and thus of the city entrance.

For natural/physical and man-made landscape elements, the findings can be categorized into distinguished landscape elements, disturbing, improved, removed and missing landscape elements. These groups of landscape elements participate in away or another in forming the main characteristics of the city entrance. Distinguished elements form the strength of the city entrance, disturbing elements form weakness of the city entrance, while improved and removed elements form (represent) the opportunities for development of the city entrance, and missing elements represent threats facing development of the city entrance.

However, it can be concluded that distinguished landscape elements of the Western Entrance of Nablus City can be defined as follows:

1. The location, which is a valley setting

2. The topographical characteristics of the areas along the two sides of the road
3. Agricultural areas planted by olive trees and some areas are planted by different trees of olive or almond
4. Commercial activities along the two sides of the road, mainly in the form of large shops of furniture, curtains, or electrical items shops

Disturbing landscape elements of the study area can be summarized in the following items:

1. Elements related to transportation facilities such as: traffic congestion, the existence of different types of vehicles on the road, unsuitable width of the road and lack of pedestrian safety
2. Multi-function or mixed land use
3. Industrial activities
4. The drainage flow through Wadi Zaimer
5. Roughly advertising boards

Improved landscape elements of the study area are as follows:

1. Green and agricultural areas
2. The drainage flow through Wadi Zaimer
3. The roughly advertising boards
4. Multifunction
5. The physical conditions of the road
6. Commercial activities

Removed landscape elements of the study area are:

Industrial activities concerning stones factories and cars workshops

Missing landscape elements of the study area are:

1. Additional green areas
2. Suitable system or strategy for commercial advertising boards
3. Suitable planting of the road
4. Suitable sidewalks and medians and signing
5. Additional suitable commercial activities

It is noticed that some distinguished elements are considered natural elements while others are man-made, but the most distinguished ones according to the questionnaire results are man-made elements, which are mainly commercial activities. The same is applied to improved elements, which are both natural and man-made, but the most improvable elements are man-made, while the disturbing, removed and missing elements are considered as man-made.

This means that the study area is very active according to people activities, while man has a great effect upon the area through his different activities. Man's effects are positive when they are managed, and negative when they are not.

On the other hand, since the study area is full of people's activities, natural landscape resources begin to decrease to the degree that they are threatened to be lost.

It is worth here to mention that some elements are considered distinguished and improved at the same time, such as commercial activities. This is because of the differentiation of the respondents, each person answers according to his own point of view of the subject. Because the existence of these elements themselves are considered attractive to the study area while their sizes, areas and characteristics are not enough to achieve good visual quality and good image of the city entrance, so they need improvement.

Regarding visual qualities of the study area, they are mostly related to good conditions of existing natural and man-made landscape elements. Obviously, distinguished elements contribute positively to visual quality, while for disturbing elements: some, which have negative effects upon visual quality, must be removed, and others can be used to increase visual quality by improving. While the absence of some others (missing elements) affect negatively upon visual quality of the city entrance. Therefore, the sub-area, which has large number of distinguished elements, can be considered of high visual quality and visa versa.

Regarding the main aspects of the landscape elements of the study area, and the main characteristics of these elements, and in accordance with "The Landscape and Visual Impact Assessment" and "Greenway" approaches for landscape and environmental assessment studies of the western Entrance of Nablus City. Three

categories of landscape elements must be classified, in order to achieve high visual qualities. These categories are:

1. Protected Landscape Elements
2. Improved Landscape elements
3. Developed Landscape Elements



**CHAPTER SEVEN**  
**PLAN PROPOSALS AND RECOMMENDATIONS**

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## CHAPTER SEVEN

### PLAN PROPOSALS AND RECOMMENDATIONS

#### 7.1 Introduction

This study was promoted by two main concerns. Firstly, the dramatic physical situation of the entrances of Palestinian cities which threaten the loss of the image of Palestinian cities' entrances. This required identifying the features that reflect the image of the city entrance in order to make people aware of the situation and participate to reflect strong image of Palestinian cities' entrances. Secondly, the visual quality of the physical situation of Palestinian Cities' Entrances and its role in achieving Palestinian cities' entrances with strong image.

The aim is to develop an understanding about the concept of the city entrance. The idea is to point out the main components, which represent the high quality of the city entrance, and to develop an approach to planning process, which reflects the image of cities' entrances.

Nonetheless, the intention is not only to provide principles and guidelines, but also to gain insights about the way of seeing the main landscape components of the city entrance in order to develop awareness between people. Therefore, the starting point has been taken is to understand the existing situation in order to

develop a framework which facilitates the treatment in the future regarding the concept of cities' entrances.

## 7.2 Review of the Study

Through the investigation performed in this study, the concept of the city entrance as an open environment consists of different landscape components was central and considered as a basis for clarification and analysis. With this understanding, the interpretation of the concept of the city entrance was constructed according to the main landscape aspects, which form the city entrance.

The theoretical perspective of this study has been discussed in Chapter Two, which discusses the main landscape aspects (natural elements and man-made elements) and the visual quality of the elements. Therefore, each environment contains distinctive objects or elements that reflect its uniqueness. On the other hand Chapter Three discusses different landscape approaches in the concept of landscape assessment studies which fit the concept of the city entrance.

In order to explain and understand a particular situation, it is necessary to apply this understanding within the circumstances in relation to specific people and place.

The case study, which has been chosen, is the Western Entrance of Nablus City is presented in Chapter Five. This chapter examined the study area by investigating the main landscape elements. These elements that form the city entrance are divided into physical elements: natural and man-made, and the visual quality of the elements which is non-physical aspect. For the physical/natural elements, the study was for the topographical characteristics, water characteristics, air characteristics and ecological characteristics of the study area; while the man-made elements include the transportation facilities, historical features, existing land use and proposed land use. For the non-physical aspects, they are related to the visual quality of the elements. Which means the attractiveness of the different elements and people's perception, in addition to the influence of the physical characteristics of the elements on people's perception as well as the visual quality of the city entrance. It was noticeable that the none-physical aspects, the visual quality, are related to the good conditions of the physical aspects: natural or man-made.

This final chapter concludes the study. It points out the research findings in the case study. Recommendations for raising the quality of the Western Entrance of Nablus City are also identified. In addition an approach for the design process for the city entrance is defined.

### 7.3 The Research Findings

The previous chapters show that people are using cities' entrances as places of outdoor spaces, which reflect or identify the city. Users of the Western Entrance of Nablus City, the case study, feel interrelationship with this entrance. This relationship is characterized through passing, working or living in this entrance.

The Western Entrance of Nablus City consists of two main character areas: the main road and its environment; the built environment and the open environment. The components of these character areas are divided into three main landscape aspects: the natural and man-made elements and the visual quality of these elements. The first two aspects are considered the physical attributes they are related to physical elements either natural physical elements or those physical elements made by man through his usage of the study area. Thus the character areas are: the main road and the built environment resulted from man-made landscape elements, while part of the open environment is natural and the other is man-made through planting agriculture and landscaping.

The visual quality of the elements related to the quality of the city entrance, related to people's evaluation of physical (natural or man-made) components of the city entrance, and related to the image of the city entrance that people feel.

Consequently, physical and quality aspects are overlapping and pierce one another.

The sequence of the investigation and analysis in this study started by identifying natural/physical and man-made landscape elements. After that, determining strength, weakness, opportunities, and threats of the physical: natural and man-made components. This determination by defining distinguished, disturbing improved, removed and missing landscape elements of the study area.

Then moved to determine the visual quality that establishes accordingly. The "Landscape and Visual Impact Assessment" approach has been obtained to help in this determination.

Therefore, it is found that physical: natural and man-made elements are very related to the level of performance the city entrance offers, and affect the level of acceptance and image of the city people have as well.

### **7.3.1 Physical/ Natural and Man-made Elements**

The fabric of the Western Entrance of Nablus city, as mentioned before, is made up of the following main character areas: the main road, the built environment and the open environment. The main road and the built environment are the

combination of man-made components, while parts of the open environment are natural and others are man-made components.

Through the analysis of the layout of the components of these character areas, it could be possible to determine strength, weakness, opportunities and threats of these elements to help in any further development.

It is found that the main road of the study area requires certain specifications and needs different physical adjustment to suit its function as a main road in the city entrance, the element that is responsible for mobility and connection. However, the built environment is a combination of different buildings of different styles and different functions, which cause the roughly multi-function of the area. Therefore, the elements, which form built environment, need different solutions.

Open spaces, which are either natural spaces or open agricultural areas planted by users are threatened by pollution, dust, buildings' expansion the thing, which force towards a specific plan for development.

According to the findings of this study and based on observations, interviews and people questioning, in order to raise the performance level of the Western Entrance of Nablus City, there are suggestions to solve the physical problems.

Man-made and natural landscape elements of the Western Entrance of Nablus City must be classified into three types: protected elements, improved elements and developed elements. The protected elements are those elements, which are defined from fieldwork as distinguished elements. Improved elements are those which determined by fieldwork as disturbing elements but still could be modified by improvement processes or even by removing.

Finally developed elements are those elements, which are absent or not enough in the study area. These elements are defined in the fieldwork as missing landscape elements.

### **7.3.2 Visual Quality**

The spatial structure of the city-entrance is very related to the arrangement of its physical elements. The landscape elements of the city entrance are considered the basic inputs of its image. Therefore, they must be of good characteristics and arranged in a certain pattern together to provide a strong image. Thus the visual quality of the city entrance can be recognized if it has identifiable and grouped elements arrangement.

The Western Entrance of Nablus City is formed of different landscape components or elements. These elements are arranged roughly. Consequently the image of this city entrance is no defined. However, the "Greenway" concept



for the development of this entrance is recommended, because it is suitable for arranging different elements or functions in a way which improves the image of this entrance and raises the visual quality.

Moreover, the visual quality of the city entrance is considered the evaluation of the physical components of this entrance. High value elements mean high quality atmosphere of the city entrance. The visual analysis done in this study using visual survey technique considers the "Landscape and Visual Impact Assessment" approach. It gives an idea about the evaluation of the elements, which form the city entrance. Improved or developed visual areas presented in Appendix (6.6) just give an idea about the sub-areas of the study area where good landscape elements or high value elements are existing.

Thus, the aim is to gain integrated landscape elements of the city entrance of high visual quality to achieve visual unity and individual identity or image of the city entrance. A considerable thought has to be given to planning and the design process of cities entrances in order to have cities entrances with no confusion, balanced distribution of the landscape elements, and rich in visual appearance. Based on the two facts that, first: the interrelationship between physical elements and people's perception, and second: modifying some physical elements or adding others, will raise the quality of the city entrance.

## **7.4 Principles for Landscape Solutions of the Different Landscape Components of the Western Entrance of Nablus City**

In the previous chapters, the various factors affecting the layout of the city entrance, the landscape components of its main character areas, and people's perception were studied and highlighted. This was in order to establish a framework of a strategy to deal with the physical layout of the city entrance taking into account the concept of the visual quality of the city entrance and its image. In order to achieve that, two approaches for landscape studies are recommended to help in formulating the suitable strategy. These two concepts are "Landscape and Visual Impact Assessment", and "Greenway Concept".

This strategy is summarized by classifying the landscape elements which form the studied entrance into the following three categories:

- (1) Protected landscape elements
- (2) Improved landscape elements
- (3) Developed landscape elements

The following are several principles to achieve protection, improvement and development for the different elements. These principles are derived from the findings of this research.

### **7.4.1 Principles for Protection**

The findings of the fieldwork of this research help in determining the elements to be protected in the Western Entrance of Nablus City, which are considered as distinguished landscape elements. These elements are:

- (1) Location
- (2) Topographical characteristics along the two sides of the main road
- (3) Open and agricultural areas
- (4) Commercial activities along the two sides

The following presentation identifies three principles for protection

#### **Principle One: Site Protection**

The study area is distinguished by its location with its topographical characteristics. The study area has a valley setting. The main road lies along the valley. The area is surrounded by hills along the two sides and the slope of these hills increases gently towards north and south.

This location must be protected by regulations and organizational laws for new buildings to be integrated with the site, and to imply as less digging as possible.

Any upgrading for the main road should be integrated with the topography along the valley.

### **Principle Two: Keeping Agricultural Areas**

Certain agricultural areas, which are planted specially by olive trees and orchards, must be protected from the spread out of buildings through building regulations in order to prevent these areas from being lost. For example, by preventing any construction in these areas parallel with compensating strategy for the need of additional buildings by additional floors for buildings which are of two-floor height to be three-floor height.

### **Principle Three: Commercial Activities Protection**

Commercial activities, which are furniture, curtain and cloth galleries must be protected.

In order to do this, regulations defining and determining the kind of the commodities must be legislated. This can be achieved, for example, by connecting the buildings' licenses with the kind of the commercial usage, these regulations must prevent the owners from changing their businesses.

#### 7.4.2 Principles for Improvement

The fieldwork of this research led to the determination of landscape elements within the study area, which should be improved. These elements are summarized as follows:

- (1) Green and agricultural areas
- (2) Wadi Zeimer and the drainage flow
- (3) The roughly advertising boards along the main road
- (4) Multi-function or different land use
- (5) The physical condition of the road and transportation features

Improvement concerned in this research can be achieved by improving specific disturbing elements and removing others. As well as the definition of the elements, which should be removed or transferred, is related certainly to the existing industrial activities concerning stone factories and cars' workshops.

The following presentation identifies six principles for improvement

##### **Principle one: Upgrading Physical Conditions, Traffic Control and Pedestrian Safety of the Main Road**

By realizing the important role the main road has at the city entrance, upgrading the main road will mean positive influences on the city entrance. The scale of the main road must be upgraded to suite its function.

It was noticed through the investigation of the study area that, the main road of the Western Entrance of Nablus City has high traffic volumes compared to its capacity. So, the capacity should be increased, mainly by increasing the dimensions of the road to better serve the traffic volume, see Figure (7.1) bellow.

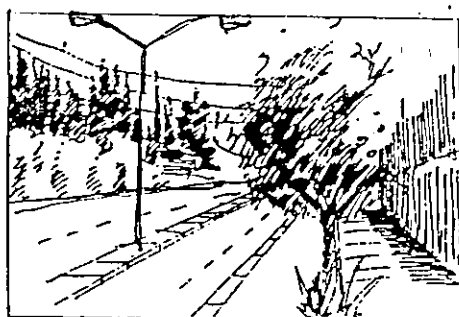
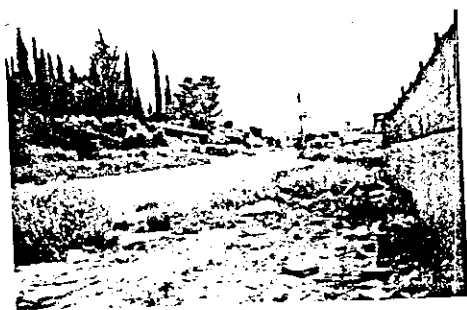


Figure (7.1): Upgrading the dimensions and physical conditions of the main road.

In addition, fieldwork showed that there are different sizes and types of vehicles that use the studied main road. In order to solve this problem, there aren't any other alternatives, at least nowadays, except upgrading the existing main road to be two directions with two lanes in each one, in order to accept the large number of vehicles.

In order to gain a well and efficient main road, traffic control devices have to be used. Traffic signs and pavement marking especially at intersections are to be

installed, in order to reduce traffic hazards and better warn guide traffic are recommended. These proper signing and pavement marking must be identified to be used in accordance to a comprehensive traffic engineering process.

However, recommended signs must include signs for traffic services as well as guidance signs about the boundary of each residential area, as presented in Figure (7.2).

In order to increase pedestrian safety on the road, in addition to the above organizational rules, traffic lights plus pedestrian crossing must be installed especially at the most dangerous locations, which are the intersections with the village accesses to Beit Eba and Zawata villages. In addition, a determination of vehicle speeds on the different sectors of this main road must be obtained, see Figure (7.2).

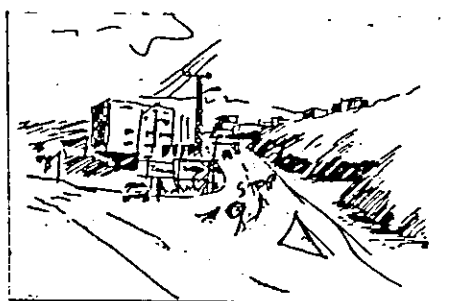


Figure (7.2): Upgrading the intersections by using paving marking and traffic as well as information signs

## Principle Two: Organizing Commercial Advertising Techniques

The Western Entrance of Nablus City is considered as the western gate of the city. This study has different commercial advertising boards distributed in a random way and sometimes they are being as visual obstacles.

A specific strategy or system regarding commercial advertising process must be operated. This system must be determined within the organizing regulations of the area. It should define different ways for advertising, and should define the physical characteristics of the boards used for this purpose. This strategy should deal also with the details of these boards concerning height, color, material, lighting and orientation. This helps to improve these boards to be a distinguished attractive element of the city entrance. Figure (7.3) bellow shows two proposed solutions for existing advertising boards.

In addition, the subject of these advertising boards must be carefully selected, they must not just commercial products, and they may include specific places like restaurants, hotels, and historical sites to give information about these important places for tourism. In addition, information in the form of guiding maps for the main roads, main parts and famous places can be placed on advertising boards.



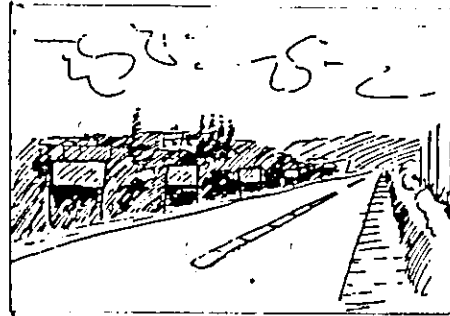
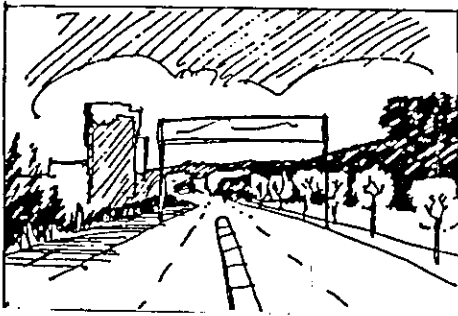
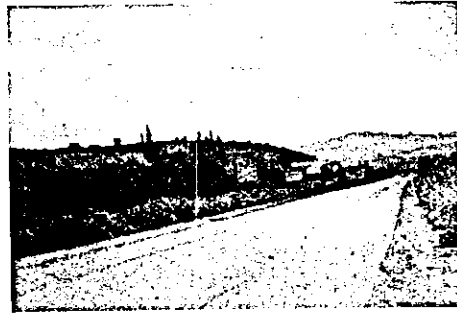


Figure (7.3): Two proposed solutions for commercial advertising boards

**Principle Three: Strategies for Enhancing and Improving Existing Green and Agricultural area.**

Green areas of the study area are so specific, and they began to be lost because of the different impacts from other elements, such as industrial activities, and the spread out of the buildings.

These areas are considered the lungs of the study area specially because the area begins to be crowded. So, we must protect these lungs, and improve existing

situations. Improvement of these green areas must be the responsibility of related institution, such as Ministry of Agriculture or the Ministry of Natural Resources. These areas must be improved by cleaning the land from wastes and the dry plants, fencing these areas with suitable fences, encourages people for planting trees and using a program for seasonally cutting dry parts, as presented in Figure (7.4).

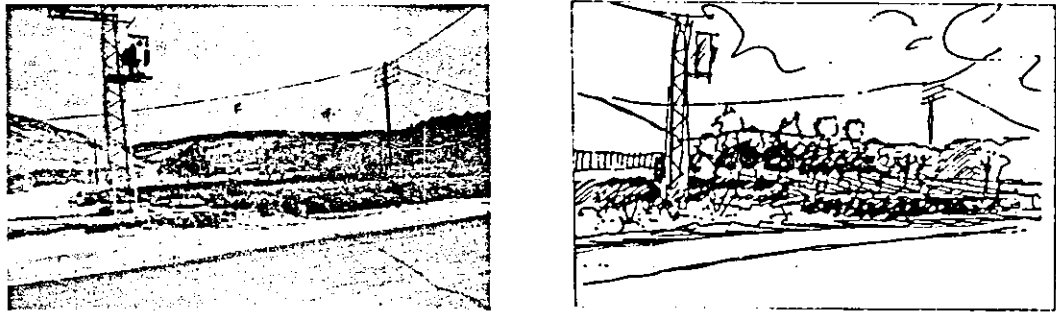


Figure (7.4): Improvement of existing green areas

In addition, building strategies in this area must determine a specific percentage of the built area to be green open space. However, the improvement or removing of other disturbing elements will help to improve these green areas.

#### **Principle Four: Organizing Existing Multi-function or Different Land Use**

Multifunction itself does not make the location disadvantaged, but roughness of this different land use is disturbing. In order to organize existing multi-function

of the study area, the concept of "Greenway" approach will help to achieve this purpose. This approach keeps the area multifunctional but linkage with a linear consequence, which appropriate effectively to the concept of the City-Entrance.

Organizing land use must be through legeslating and enforming building regulations and rules in the study area. The purpose is to gain different functions such as residential and commercial, as well as open green areas.

Residential areas must be of type (B) in the sector of the study area within the boundary of Nablus Municipality, and type (A) in the area out of the boundary of Nablus Municipality. Type (B) residential areas should be of certain special rules as related to the percentage of open area to keep enough green open spaces.

Commercial areas should be local commercial in order to keep enough area for the main road and to avoid crowdness. In addition, they must be in the form of large shops or large stores or show rooms or exhibition areas of furniture, cloth and curtains as presented in Figure (7.5).

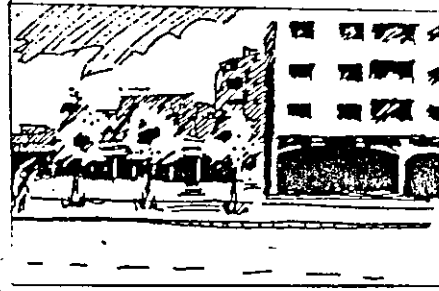


Figure (7.5): Organizing existing commercial activities

In the proposed land use, it is forbidden to give a license for any industries or workshops, except certain simple workshops related to the large stores to show a traditional job, for example soap manufacturing and straw handcrafts.

### **Principle Five: Recommended Drainage System for the Drainage Flow with Different ideas for Useful Use of Wadi Zeimer**

Findings of the fieldwork investigation showed that the drainage flow through Wadi Zeimer is the most disturbing element, which causes different problems of the study area. It damages the land and green areas, it causes air and water pollution, and it causes the spread of dangerous insects.

On the other hand, this element (Wadi Zeimer) can be too much attractive by solving the problem of the wastewater.

To achieve this, an underground drainage system is recommended and then it can be connected with a treatment plant to reuse this water in agricultural purposes. However, it is worth to be mentioned that, the Municipality of Nablus City has a proposed project for the drainage system and a refinery station in Deir Sharaf, but this project is still in the stage of looking for suitable funding. Because it costs too much money and the Municipality of Nablus City can't do this work alone, see Figure (7.6).



Figure (7.6): Recommended underground drainage system and its good effects on the area

rainwater in Winter in the area can be gathered and flow in the Wadi for agricultural. Once the drainage problem is solved, then the Wadi must be cleaned and then or recreational purposes.

## Principle six: Removing or Transferring Specific Elements

Improvement of the study area or its components included removing specific elements, which are absolutely disturbing and cause different problems. These elements to be removed are determined through the findings of the fieldwork to be the industrial activities especially the stone cutting factories and car repair workshops. It is recommended to transfer stone cutting industries to the industrial zone, which proposed to the east of Nablus City, see Figure (7.7).

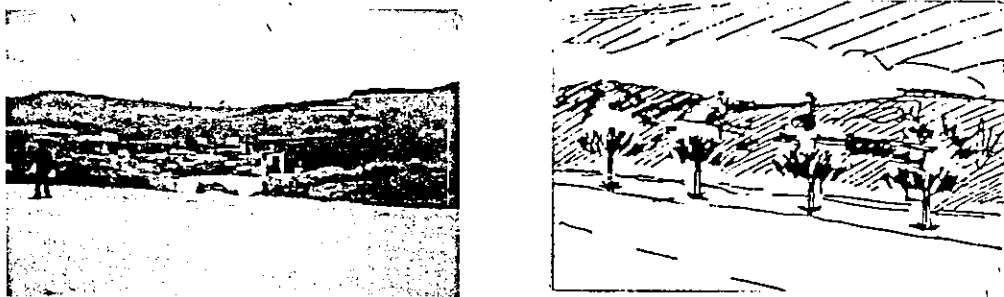


Figure (7.7): Removing stone cutting factories and planting the area with olive trees, which raise the quality of the area.

Regarding quarries their existence is connected with the source of stone. These factories must be given by a specific period of time to keep working in quarrying, but after that they must stop. During such a period, they must follow special regulations and rules regarding machine specifications such as filtering. They must have a specific private access from the main road, with suitable distance from the main road. Trees must be used to screen these quarrying off from the main road and to assist in the air filtering process in the region.

After the period licensed for these quarries, they must stop working and improve their places by using different landscape techniques, see Figures (7.8) and (7.9), For example transferring their places to public gardens or rests. However, workshops must be removed to another suitable places in the city.

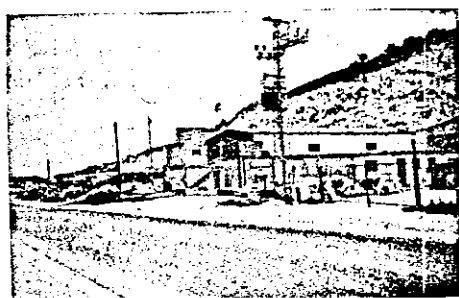


Figure (7.8): After finishing the period licensed for the quarrying, its place could be planted to get back its lost quality.

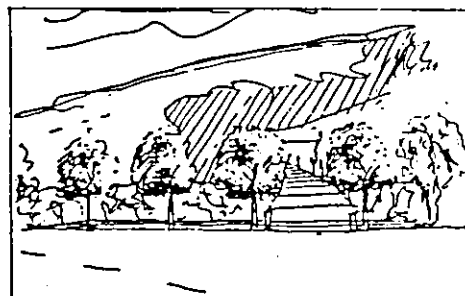
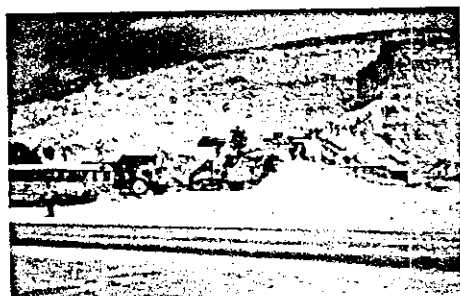


Figure (7.9): Screening the quarrying by trees and define one access from the road.

### 7.4.3 Principles for Development

Development concerned in this research is by adding elements, which identified as missing or not enough landscape elements. These elements are determined through fieldwork as follows:

- (1) Additional Green Areas
- (2) Additional commercial activities

- (3) Suitable planting of the main road and construction of suitable sidewalks and medians.

The following are the principles for adding missing elements

### **Principle One: Additional Green Areas**

Green spaces are of special importance in the concept of the city entrance. They must be sufficient in areas and qualities. Existing green areas located along the Western Entrance of Nablus City are not enough and destroyed, the size of these areas is decreasing because of the different factors regarding impacting them.

As mentioned earlier in this chapter, green spaces must be protected and improved, as well as increased by adding additional green areas. Adding new green areas must be through a comprehensive planning process, by defining specific areas as green areas, not just open spaces or public services. Because comprehensive plans usually define specific areas as open spaces or public services which may suddenly be transferred into parking areas or schools or any other public buildings. The result will be that no green areas will be presented any more. Therefore these green areas must be defined early in the comprehensive plan.



The main road has no planting along it. The trees, which are seen along this entrance, are those within the agricultural or open areas. Therefore, sidewalks and medians of the main road must be planted by evergreen trees with the consideration of their places, heights, and their growing in order not to make visual obstacles. Trees will shade the road and give it a sensitive atmosphere, which contributes positively to the visual quality of this city-entrance.

The fieldwork investigation concluded that the main road has no sidewalks and medians, which contributes to confusion of drivers or pedestrians and the possibility for road accidents.

Therefore, sidewalks of suitable dimensions and materials, as well as suitable medians to separate between the two directions one of the road, with two lanes in each, are recommended to be constructed according to standards and specifications. Taking into consideration their visual appearance in order to be positive elements in the process of good city entrance image of high visual quality, see Figure (7.1).

#### **7.4.4 Principles for Increasing Visual Quality**

Visual quality of the city entrance depends upon the physical characteristics of its landscape components. In another word, it is the evaluation of the physical elements, which form the city entrance. The eyes constantly seek out visual

information about the spaces which people are moving through. When a rational order in the elements with a suitable pattern can not be perceived then the view becomes frightened and confused. In order to increase the visual quality of the city entrance, different criteria should be taken into consideration; which is suggested to include:

- (1) Control over heights of buildings to protect the skyline seen along the two sides of the main road.
- (2) Control over the materials of buildings along the two sides of the main road in order to keep texture of the area harmonious, keeping in mind the relationship with colors wanted to be seen in the city entrance.
- (3) Develop legislations and regulations regarding architectural typology In order to keep the unity.
- (4) Providing diversity of activity in balance distribution so as to obtain a homogenous diversity of both open space and built space.
- (5) Control over the visual impact of any transportation facilities used in the main road or any hardware elements, in order to keep the city entrance with its three different character areas (the main road, built environment, and open environment) homogenous and integrated.
- (6) Improve visual quality by using rich visual elements which help to achieve strong image of the city entrance, such as memorial sculptures,

fountains...etc. taking into consideration their places, materials, design and all their physical characteristics.

(7) All the criteria mentioned above depend upon one basic and most important question, which is: How you want the city entrance to look? And what image it would reflect? The concept of this image determines the different ways which planners, developers, landscapers and decision-makers should obtain. Figure (7.10) bellow shows three ideas to raise the visual quality of the Western Entrance of Nablus City.

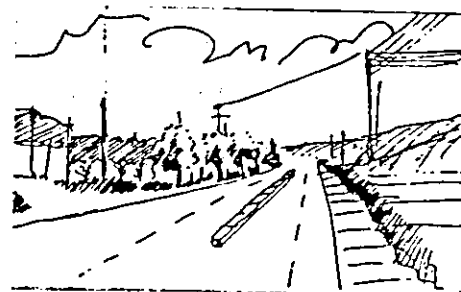
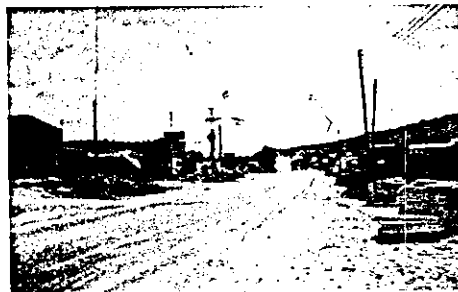
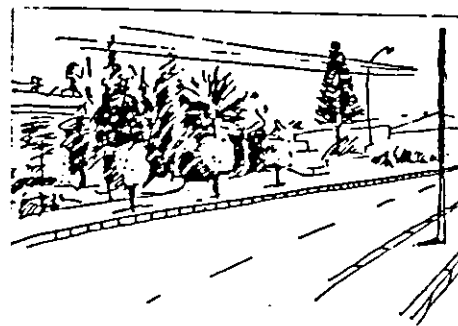
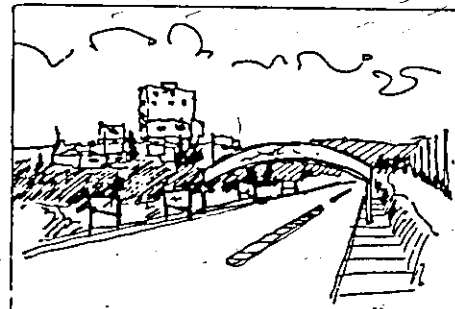
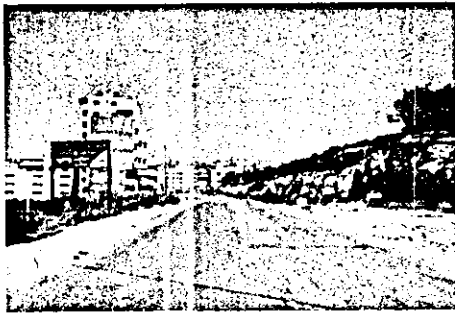


Figure (7.10): Three treatments for the Western Entrance of Nablus City to increase its visual quality

#### 7.4.5 General Principles

To obtain suitable solutions for the problems, which the Western Entrance of Nablus City suffers from, general principles are recommended. These principles are regarding important general issues, which the fieldwork identified to be dealt with.

The findings of the fieldwork, especially the interviews, showed that different agencies or institutions, which are responsible for the study area, have no coordination among them, this creates obstacles for any development plans. Therefore, principles for coordination between different agencies must be taken into consideration in any proposed plan.

In addition the results of the fieldwork indicate that people or users of the study area are asked to participate in any proposed plan regarding the study area. This cause a gap between any proposed plan and the people who benefit from it. This means that solutions would only be just plans on paper, which might not be well implemented. So, any proposed plans for the Western Entrance of Nablus City should include a component on public participation.

The study area is exposed to many different impacts, which make any development proposals also opposed to be changed according to future impacts.

Thus any proposed solutions for the study area must take into consideration the possibility of future adjustment.

The following are the principles in order to solve certain general problems:

### **Principle One: Coordination Between All Working Agencies**

The Municipality of Nablus City and the Village Council of Beit Eba village are the both main agencies, which are responsible for the Western Entrance of Nablus City. Besides, there are other different departments or agencies which the study area is part of their responsibility, such as Ministry of Public Work, Ministry of Transportation, Ministry of Environmental Affairs.

In order to achieve a comprehensive and suitable development plan of the study area, there must be a plan for coordination between the different responsible agencies. This plan includes formation of a committee whose members represent the different responsible agencies.

### **Principle Two: People's Participation**

People are considered the judge of the quality and efficiency of any city entrance. Thus, the absence of people's participation in the development of the

planning process means that the design process will depend on studies made by responsible agencies with no attention to the people real needs and requirements. During the fieldwork process of this research, people were asked to express the strength, weakness, opportunities, and threats of the landscape components of the Western Entrance of Nablus City. Accordingly, many elements along this entrance were justified.

Therefore, in order to reach an effective implementation for proposed solutions, it is recommended to take into consideration public participation in the different stages of the development process.

### **Principle Three: The Possibility of Future Adjustment**

Planning and architectural design should keep space to accommodate the city entrance according to the changes in users needs and requirements and according to any possible impacts. The principles that could help in defining the city entrance, its main components and its quality have been discussed early in this chapter.

To sum, developing the city entrance, with distinctive quality elements involves principles, which consider the main landscape components, which form the city entrance and people interaction. It has to do with understanding the main aspects of the landscape components. This should be performed taking into

consideration natural/physical and man-made elements as well as the visual quality of the elements. It also involves a variety and choice that evolve the interaction between people and the city entrance, in order to raise their perception towards their cities' entrances.

## **7.5 Towards an Approach to Plan City Entrance Image**

The concept of the city entrance is a new expression in contemporary planning and design process. It is new not just in our country or the Middle East, but it is also new in other developed countries.

Usually, the planning process is insensitive to the concept of the city entrance regarding the whole physical landscape elements which form the city entrance.

The point can be seen clearly that no comprehensive thought of the sequence of the work is followed. For example professionals design facilities without regarding the specifications of the context.

The design process considers each part or area of the city entrance individually without regarding the other parts or the interrelationship among them. Such as professionals design of transportation facilities without any consideration to specifications of the context, or people's needs and expectations. When planners or designers work on the built environment they neglect its influence on open environment as well as the on road.

It is worth to be mentioned here that it is impractical to study every individual's needs, but a list of physical environmental needs applicable to people may be developed.

In other words, in order to reach the desired quality and the preferable image of the city entrance, a thorough study for all physical elements and their visual quality and people needs and expectations have to be prepared in advance.

This study also implies that the role of planners and designers is not to create a work that reflects modernization. Rather, to reflect the essential aspects of all its users. This will lead to the conclusion that both people and planners should play a complementary role in achieving a good city-entrance. In order to do this effectively, it is essential that people should have the knowledge to be able to form conception of the desired city entrance.

However, at first, an understanding of the city entrance and the main character areas, which form it, is needed. Then, an analysis of the main components of these character areas by determining their strength, weakness, opportunities, and threats, as well as their visual quality. This is to be related to people's needs and expectations and the way people are likely to adapt different spaces of the city



entrance to express their image of the city entrance as another input of design process.

In this sense, to obtain good physical environment of the city-entrance with high visual quality, design and planning process should consider the followings:

1. The main character areas, which form the city entrance: the street or the road and its characteristics, the environment of the road (built environment and open environment), its development, arrangement and functioning.
2. The main physical components, which form the city entrance, their characteristics, visual qualities and the relationship between physical qualities and visual qualities.
3. The significant elements contributing to the strength, weakness, opportunities and threats of the city-entrance.
4. People needs and expectations according to their different social and cultural characteristics.
5. Protecting, improving or providing essential facilities and accessories for different users of the city entrance. To make the city-entrance more accessible and acceptable with its own identity.

The interpretation of all these points will provide a basis for the information and insights related to the image of the city entrance. Which form the basis for planning and design process.

To sum, in order to gain a strong image of the city entrance, it is important that the main character areas, which form the city entrance, are not seen in isolation, each must be dealt as a part of a comprehensive context.

## 7.6 A Recommended Design Process

The design process arising from this study suggests that physical landscape elements (natural and man-made, as well as the visual qualities of these elements) are the components of the city entrance. Each component can be considered as part of the total image of the city entrance, which helps the planner to identify the positive and negative aspects and to improve them to reach an optimum solution. The aim of this process as Donald Berlyne asserted: "is to seek unity in the midst of diversity or order in the midst of complexity", (cited in P.Smith 1987, Senan 1993). In this sense, the planner must discover the principal means to ensure the image of city entrance.

Therefore, in order to develop a city entrance reflecting an image of the city, the planner and designer can consider three strategies First, the understanding of people's needs and expectations. Second, the identification of the components of the city entrance. Third, the participation of people in design processes.

After identifying the components that represent the image of the city entrance, the task of the planner then is to decide how these components will be utilized in the design process. There are different constraints, which determine the design process such as function, technology, economy, etc. Therefore, to reach an optimum solution, one will go through a long and complex process, in which there are different variables that have to be satisfied. From this study it is concluded that it could be more practical to concentrate on some of the components at the expense of others depending on their importance and hierarchy as well as dealing with this hierarchy in stages to complete the final process.

From the discussion above, it is concluded that there is a need to improve the professional's practice in planning and design process in order to have a good image of the city entrance. In this sense, the function, distribution and characteristics of the elements along the city entrance ought to be inspired by awareness and consciousness of their image and quality.

Some recommendations that can be developed to achieve a strong image of cities' entrances include:

- (1) Recognize the distinguished and disturbing elements and their distribution along the city entrance. This should include existing and proposed design.
- (2) Identify the type of elements that represent the quality of the city entrance and retain them in similar designs.

- (3) Develop a plan to protect distinguished elements, which attracted attention, and to improve disturbing elements in order to strengthen the visual quality of the city entrance.
- (4) Establish local committees in order to obtain implementation and organizational framework. This involves building regulations, organizations and administrations in addition to decision makers and academic people.
- (5) Strengthen the relationship between the existing elements and the proposed ones; the new elements should fit in harmony with old ones and the whole context in order to keep the unity and continuing of the place.
- (6) Respond to people's different backgrounds in the spatial organization of the city entrance. This includes deep social studies of the communities which the city entrance may include, because this gives information about their needs, perceptions and how they understand or realize visual quality.
- (7) Provide balanced distribution of the various elements of the spatial context of the city entrance. This distribution regarding to priorities in development in different stages.

However it is clear that this approach requires that the professionals should play a role different from their conventional role in planning and design process. The starting point of this approach requires that participants should have an awareness of the identity of the city entrance and its main characteristics. If it is

approached with this awareness, it will be possible to achieve the desired quality for the city-entrance image and characteristics and to emphasize its potentials.

## 7.7 Further Research

Recommendations from this research suggest the importance of the concept of the city entrance in planning process. The issues related to this subject are wide and varied and this research can be considered only as one step, which has specific objectives and limitations. Therefore, some issues are considered beyond its scope and need further investigation.

In this research, the concentration was on one of the main entrances of Nablus City, which is the Western Entrance. Further research could focus on other main entrances of Nablus City, such as the Northeast Entrance, the Southeast Entrance or the Southwest Entrance.

Bearing in mind, that there is a real project, which is being under implementation which, is Jenin-Nablus Highway. This project begins from the Northeast of Nablus City ends at Jenin Entrance towards Nablus city. It is the chance here to adapt the research method arised in this reasearch on this real case in order to design the two gates to the both cities (Nablus and Jenin), which form the two terminal points of the proposed highway.

In such adaptation, the setting of each of these two entrances must be considered. This differentiation includes different characteristics of the landscape components, which form the main character areas of these entrances that are the highway and its environment: built environment and open environment., the work in these two entrances includes design of new categories more than adaptation of existing, but harmony and integration must be obtained between new designed elements and existing elements.

The first step is to determine the landscape components or elements: the natural and man-made elements, and the visual quality of these elements. Then defining the different characteristics of these components to justify distinguished and disturbing elements. This must lead to determination of the landscape elements, which represent the quality of the place.

Acknowledgement of the site leads to the conclusion that natural elements of the Northeast Entrance of Nablus City represented by "Wadi Al-Badan" are of special importance and represent the visual quality of the place. Therefore, the design process should include different strategies. It is indicated here that the designed image of the Northeast Entrance of Nablus City must be different from that of the Western Entrance, because of the availability of different main components and their associated characteristics.

However they must be integrated because they are the different "Gates" of the same city.

Palestinian cities are of different locations and importance. This research investigates the change of the city entrance image to the location and the physical characteristics of the city concerned relating to the commercial, political and historical aspects. Although Palestinian cities have different importance, but they suffer from the same main problems.

In this sense, further researches could concentrate only on the main shared problems of the different Palestinian cities in order to put a general policy to solve these problems, and in order to define the different images of the cities entrances these Palestinian cities could have. Therefore, possible direction for further research could include the entrances of the other Palestinian cities.

Another important aspect that needs further research is to develop techniques and methods which enable professionals to determine different components and requirements of cities entrances in order to reach different design approaches for the concept of cities entrances of high visual quality or strong image.

For the case study (the Western Entrance of Nablus City), it was noted the lack of information regarding the different components of the city entrance. During

this study several ideas were developed for future researches where investigate on the concept of the city entrance could be extended. A partial list of these could include:

- (1) Document and index information about the characteristics of the components of the city entrance.
- (2) Investigate the image of the entrance of villages and towns as a parallel of this study.
- (3) Conduct similar fieldwork in other cities' entrances, which allow testing the results of this study.

## 7.8 Concluding Remarks

Throughout this study, the underlying theme has been the city entrance and the image it features. The proceeding discussions suggest that the concept of the city entrance of strong image and high visual quality not to be determined by utilitarian factors. Rather, it is a product of an approach, which respects and involves the characteristics of both the environment and users. In this sense, the comprehensive thought of the concept of the city entrance is not a problem-solving one, but it is a comprehensive approach to provide the city entrance with unique features and characteristics and thus a unique image.

The outcome of this study is of interesting importance to professionals and people of the case study and any other place. It consists of five main points;



First, it provides information about the image of the Western Entrance of Nablus City. Second, it clarifies the role of each landscape element within the context of the Western Entrance of Nablus City towards the visual quality of this entrance of Nablus City. Third, it defines the different landscape components that represent the city entrance of strong image. Fourth, it develops a theoretical understanding to the concept of the city-entrance. Fifth, it explains a way to consider the concept of the city entrance in planning and architecture practices.

In conclusion, the concept of the city entrance of high visual quality and strong image, in particular in Palestine, demands more critical investigation and attention, and this study could be treated as a step forward.

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# APPENDICES

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## Appendix (4.1): Primary Fields of Vision Regarding the Users of the Western

### Entrance of Nablus city

The information content of the cue is measured in "bits." The low end of the scale (0-1 bit) indicates simple braking reactions; the high end (5-6 bits) a complex hazard-avoidance reaction.

Clearly, driver perception-reaction time varies with a number of complex factors. In general, it increases with

- Age
- Fatigue
- Complexity of cue or task
- Physical impairments
- Presence of alcohol or drugs

The last item is of critical importance. Alcohol or drugs are a factor in an overwhelming proportion of traffic fatalities and other accidents. One reason for this is the rapid deterioration of perception-reaction time in the presence of these substances. A fully drunk driver is an obvious hazard; a driver who has had several drinks and is not visibly impaired is a less obvious hazard. Such a driver is generally unaware that his or her perception-reaction time may be three or more times what it is normally. From Equation (3-1), this translates linearly to a similar increase in perception-reaction distance. Thus, the driver proceeds to drive normally but is in great danger in any situation requiring the full quickness of normal reaction.

The American Association of State Highway and Transportation Officials recommends the use of a 2.5-sec perception-reaction time in computations involving stopping or braking reactions [2].

#### B. Visual Acuity and Driving

It is obvious that a driver must be able to see in order to drive. Beyond this simple statement, however, the relationships between visual acuity and driving are not readily specified.

The principal problem is that drivers are normally tested for *static visual acuity*—the ability to see stationary objects and legend messages. This basic acuity measure is not necessarily the one that most dramatically affects the driving task. Other measures, such as dynamic visual acuity, depth perception, glare recovery, and peripheral vision may be more important. They are not, however, normally tested. Moreover, their relationship to driving performance is not well established. One reason is that drivers often are aware of their deficiencies in these measures and compensate for them. Drivers with poor glare recovery times, for example, will drive slower and more cautiously at night.

Figure 3-3 illustrates the three primary fields of vision that affect the driving task. The field of *clear* or *acute vision*, in which character and legend messages may be discerned, extends only 3 to 5 degrees around the centerline of the eye.

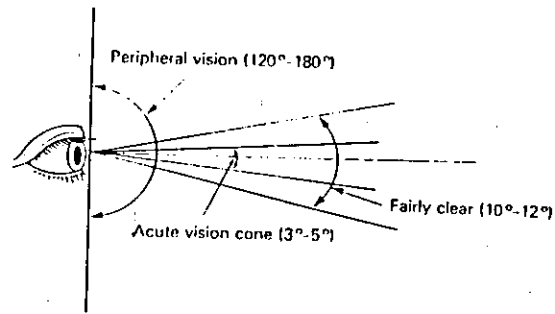


FIGURE 3-3 Fields of vision.

A wider field of *fairly clear* vision, extending about 10 to 12 degrees around the centerline of the eye, provides for recognition of shape and color but not specific legend.

The field of *peripheral vision* for most people extends 120 to 180 degrees around the centerline of the eye. In this range, neither color nor shape can be discerned. Drivers use peripheral vision to recognize the presence of objects moving through the peripheral field. Studies have shown that peripheral vision is a critical factor in drivers' estimation of speed [3].

The fields of vision are important factors to consider in the placement of signs, signals, and other control devices. Signs, for example, will have to be read within the 3- to 5-degree clear-vision field. Their placement and design should allow this to occur without forcing drivers to divert their vision from the roadway ahead.

The fact that color and shape can be discerned in a wider field is also important. The design of signs, signals, and markings relies heavily on the use of color and shape in consistent codes. Few drivers, for example, read the legend on a STOP sign. Its unique shape (octagon) and color (red) make it instantly recognizable.

Early studies of sign colors and legends determined that white lettering on a blue background was the easiest for most drivers to discern, followed by white lettering on a green background. This discovery led to a change in the design of signs away from the black-on-white format that had been used previously.

The white-on-green design is used only for directional guidance. Drivers not seeking such guidance can ignore such signs, while those requiring guidance may specifically seek them out. In these and many other ways, drivers may make use of the 10- to 12-degree cone of vision, even though they cannot read legends beyond 3 to 5 degrees.

#### C. Other Driver Characteristics

The influence of other driver characteristics, such as hearing, on the driving task is not well understood. Deaf drivers are not restricted, and statistics do not

# Appendix (4.2): The Questionnaire that has been Distributed in the Western Entrance of Nablus City, and the checklist used in the key figures interviews

## Questionnaire Form

An-Najah National University  
Faculty of Graduate Studies  
Department of Urban and Regional Planning

Questionnaire no. ( )  
Date:.....  
Time:.....

### Introduction

My name is Fida I. Yaseen. I am doing my MA studying in Urban and Regional Planning at An-Najah National University. In my research I am studying The Landscaping of Cities' Entrances, and Nablus City's Western Entrance as a case study. This entrance is defined to be along the main road between Qusin intersection to Wadi Attufah (to Hiafa, Yafa and tunis streets' intersection) in Nablus City. I would like to ask you some questions about the elements of this Entrance, for the purpose of the research.

The objectives from this questionnaire will be to determine the role or the influence of natural and man-made elements, as well as the visual elements on the city's Entrance.

These informations will be used in my MA research. These informations will clarify the strong and weak elements of the city Entrance. This will help to have accurate landscape assessment and then sustainable development.

I do greatly appreciate your time and cooperation, and thank you very much.

The Researcher  
Fida I. Yaseen

### Biography

- (1) Age.....
- (2) Gender                    (.....) Male                    (.....) Female
- (3) Marital status            (.....) Married                    (.....)Not married                    (.....) others, specify...
- (4) Occupation:
  - 1. (.....) House wife
  - 2. (.....) Student
  - 3. (.....) Worker
  - 4. (.....) Employee
  - 5. Others,specify.....
- (5) Level of education:
  - 1. (.....) Bellow secondary stage
  - 2. (.....) General Secondary Certificate
  - 3. (.....) Community College
  - 4. (.....) University
  - 5. (.....) MA
  - 6. (.....) P.H.D
- (6) Place of residence:
  - 1. (.....) Nablus
  - 2. (.....) Beit Eba
  - 3. (.....) Tulkarim
  - 4. (.....) Jenin

(6) (7) (8) (9) (10)

(12) In your view, what elements of this entrance, you think that they are disturbing?

1. (.....) Congestion of vehicles.
2. (.....) The travelling of different types of vehicles on the road: big and small vehicles
3. (.....) Not enough traffic signing.
4. (.....) The unsuitable width of the road.
5. (.....) Lack of pedestrian safety.
6. (.....) Narrow cone of vision.
7. (.....) The roughly advertising boards which sometimes hide the view behind them and sometimes cause distortion effect on the views of the entrance
8. (.....) Multifunction or different land use.
9. (.....) Commercial activities
10. (.....) Industrial activities.
11. (.....) Location.
12. (.....) The drainage flow "Wadi Zaimer"

(13) In your view, do you think that the road is adapted to the topography of the area?

(.....)Yes (.....) No

If the answer is yes, how can we make it adapted, specify.....  
.....  
.....

(14) In your view, do you think that the width of the road is suitable?

(.....)Yes (.....) No

(15) In your view, do you think that the traffic volume on this road is:

(.....) High (.....) Moderate (.....) Low

(16) In your view, do you think that the road has good storm water drainage especially in winter:

(.....)Yes (.....) No

(17) The condition of the road pavement is:

(.....) Bad (.....) Good (.....) Very good

(18) Do you think that there is any dangerous for pedestrians on this road?

(.....)Yes (.....) No

If Yes, Specify where.....  
.....

And what are your suggestions to increase safety for pedestrians:

1. Making Zebra lines at specific locations
2. Adding traffic lights
3. Widen the sidewalks
4. Limiting speeds on the road
5. Construction of pedestrians bridges
6. Construction of tunnels for pedestrians
7. Others, specify.....  
.....

(19) Do you think that this road "as it is" is suitable to form the entrance of Nablus City?

(.....)Yes (.....) No

If the answer is no, what are your suggestions to make it suitable:

1. Transfer its alignment



2. Widen it
3. Construction of suitable sidewalks
4. Improvement of the pavement
5. Limiting the types and size of the vehicles traveling along this road
6. Construction of suitable medians
7. Planting the road
8. Using traffic lights at specific areas
9. Others, specify.....

(20) Do you shut the window of the vehicle when you reach the area of this entrance?

(.....)Yes (.....) No

If yes, because of;

1. Bad smell
2. Dust
3. Noise
4. Others, specify.....

(21) Do you suffer from glare while you are travelling along this entrance?

(.....)Yes (.....) No

(22) Is the light at night enough along this entrance?

(.....)Yes (.....) No

(23) Describe your feelings while you are crossing this entrance:

1. (.....) Pleased Why.....
2. (.....) Unpleased Why.....
3. (.....) Neutral

**Part Two**

(24) Do you think that the scenic quality of this entrance "as it is" is:

1. (.....) Low
2. (.....) Medium
3. (.....) High

(25) In your view, what elements of this entrance should be removed, in order to increase its quality?

For example:

1. Commercial activities
2. Industrial activities
3. The roughly advertising boards along the road
4. The drainage flow Wadi Zaimer
5. Multifunction or different land use
6. The physical condition of the road like: the width, the pavement condition.....etc.
7. Green areas and agricultural areas
8. Others, specify.....

(26) In your view, what elements of this entrance should be strengthened and improved in order to increase its quality?

For example:

1. Commercial activities
2. Industrial activities
3. The roughly advertising boards along the road
4. The drainage flow Wadi Zaimer
5. Multifunction or different land use
6. The physical condition of the road like: the width, the pavement condition.....etc.
7. Green areas and agricultural areas
8. Others, specify.....

(27) In your view, what elements missing which should be added to this entrance, in order to increase its quality?

For example:

1. Additional commercial activities
2. Additional industrial activities
3. The roughly advertising boards along the road, in a way helps to give the information in a beautiful way which attract people to look for the things, materials or the places which are the subject of the advertising, this is with the accurate selection of the subjects, design and locations of these boards.
4. Good and suitable planting of the road, as well as the construction of suitable medians and sidewalks
5. Additional green areas and agricultural areas
6. Others, specify.....

.....

.....

.....

.....

.....

### Interview Key Figures

An-Najah National University  
 Faculty of Graduate Studies  
 Department of Urban and Regional Planning

Interview no.( )  
 Date:.....  
 Time:.....

#### Introduction

My name is Fida I. Yaseen. I am doing my MA studying in Urban and Regional Planning at An-Najah National University. In my research I am studying The Landscaping of Cities' Entrances, and Nablus City's Western Entrance as a case study. This Entrance is defined to be on the main road between Qusin intersection to Wadi Attufah, (to Hiafa, Yafa and Tunis street intersection) in Nablus City. I would like to ask you some questions about the elements of this Entrance, for the purpose of the research.

The objectives from this interview will be to determine the role or the influence of natural and man-made elements, as well as the visual elements on the city's Entrance.

These informations will be used in my MA research. These informations will clarify the strong and weak elements of the city Entrance. This will help to have accurate landscape assessment and then sustainable development.

I do greatly appreciate your time and cooperation, and thank you very much.

The Researcher  
 Fida I. Yaseen

#### Biography

- (1) Name:.....
- (2) Age: .....
- (3) Sex                      Male(.....)                      Female(.....)
- (4) Occupation:
  6. (.....) Politician
  7. (.....) Mayer
  8. (.....) Decision Maker
  9. (.....) Planner
  10. (.....) Architect

- 11. (.....) Engineer
- 12. (.....) Lecturer
- 13. Others,specify.....

(5) How can we identify the city entrance?

.....

.....

.....

.....

.....

(6) What distinguished elements which form the City Entrance?

.....

.....

.....

.....

.....

(7) What are the distinguished elements in Nablus Western Entrance?

.....

.....

.....

.....

.....

(8) What are the problems of Nablus Western Entrance?

.....

.....

.....

.....

.....

(9) In your view, what should be done to enhance Nablus Western Entrance development?

.....

.....

.....

.....

.....

(10) In your view, what should be done to reduce disturbing elements' effects in Nablus Western Entrance?

.....

.....

.....

.....

.....

(11) In your view, what should be done to improve Nablus Western Entrance in particular and other cities' entrances in general?

.....  
.....  
.....  
.....  
.....

(12) Would you like to add some thing?

.....  
.....  
.....  
.....  
.....

## Appendix (4.3): Aesthetic Field-Survey Form

### Survey Form (area # )

#### Aesthetic Factors (North)

Circle those factors that apply

Balance	Harmonious +	Balanced +	discordant	chaotic
Scale	intimate	Small +	Medium +	large
Enclosure	confined	enclosed	Open +	exposed
Texture	Smooth +	textured	rough	very rough
Color	monochrome	muted	Colorful +	garish
Diversity	uniform	Simple +	Diverse +	complex
Unity	Unified +	interrupted	fragmented	chaotic
Form	straight	angular	Curved +	sinuous
Pleasure	offensive	unpleasant	Pleasant +	Beautiful +
Stimulus	boring	Bland +	Interesting +	Invigorating +

#### Aesthetic Factors (South)

Circle those factors that apply

Balance	Harmonious +	Balanced +	discordant	chaotic
Scale	intimate	Small +	Medium +	large
Enclosure	confined	enclosed	Open +	exposed
Texture	Smooth +	textured	rough	very rough
Color	monochrome	muted	Colorful +	garish
Diversity	uniform	Simple +	Diverse +	complex
Unity	Unified +	interrupted	fragmented	chaotic
Form	straight	angular	Curved +	sinuous
Pleasure	offensive	unpleasant	Pleasant +	Beautiful +
Stimulus	boring	Bland +	Interesting +	Invigorating +

## Appendix (5.1): Types of Industries with their Associated Environmental Impacts

Type of industry	Major types of wastes being generated and the associated environmental and health impacts
Quarrying, stone crushing and stone processing	are the largest generators of liquid and solid waste along with air born pollutants. Most are located in residential and agricultural areas. Large amounts of dust and particulate solids create harmful conditions for public health. The dust severely damages the agricultural lands and the natural ecosystem.
Charcoal	is mainly located in Jenin district nearby residential areas, creating very bad living conditions and having a severe impact on public health. Black spots from the coal residue cover fertile land, whereas olive trees and wheat crops are destroyed.
Leather tanning	Tanneries use large amounts of chemicals, such as arsenic, chrome, sulphuric acid and salt. The wastewater is disposed untreated in the wastewater network. All wastes, liquid and solid, are discharged or disposed in open areas without pre-treatment.
Textile dyeing	The effluent contains high concentrations of ionic substances, organic colour and reactive dyestuffs.
Food and beverage	'Factories' ranging from very small to large. The wastewater contains very high concentrations of BOD, which may create problems for treatment units.
Olive mills	Olive production is an important factor within Palestinian economy and community lifestyle. The wastewater has a high level of both BOD and acid, which will disturb treatment units and pollute groundwater.
Chemical and plastic	Includes production of pharmaceuticals, detergents, paints, adhesives, etc... ; involving quite often a process of mixing of chemicals. Pollutants from these industries may be solid, liquid or gaseous..
Metal processing	The most polluting factories are electroplating, metal finishing and casting industries. Some units use rubber tires and vehicle oil as a fuel in the furnace. The particulate solids and toxic compounds emitted may contribute to serious health problems.

**Appendix (5.2): Physical, chemical and biological characteristics of wastewater**

Characteristics	Sources
<b>PHYSICAL PROPERTIES</b>	
Colour	Domestic and industrial wastes, natural decay of organic materials
Odour	Decomposing Wastewater, industrial wastes
Solids	Domestic water supply, domestic and industrial wastes, soil erosion, inflow infiltration
Temperature	Domestic and industrial wastes
<b>CHEMICAL CONSTITUENTS:</b>	
<b>Organic:</b>	
Carbohydrates	Domestic, commercial and industrial waste
Fats, oils and grease	Domestic, commercial and industrial waste
Pesticides	Agricultural wastes
Phenols	Domestic, commercial and industrial waste
Proteins	Domestic, commercial and industrial waste
Pesticides, herbicides, insecticides	Domestic, commercial and industrial waste
Surfactants	Domestic, commercial and industrial waste
Volatile organic compounds	Domestic, commercial and industrial waste
Other	Natural decay of organic materials
<b>Inorganic:</b>	
Alkalinity	Domestic wastes, domestic water supply, ground water infiltration
Chlorides	Domestic wastes, domestic water supply, ground water infiltration
Heavy Metals	Industrial wastes
Nitrogen	Domestic and agricultural wastes
PH	Domestic, Commercial and industrial wastes, natural runoff
Sulphur	Domestic, commercial and industrial wastes
<b>BIOLOGICAL CONSTITUENTS:</b>	
Animals	Open watercourses and treatment plants
Plants	Open watercourses and treatment plants
<b>Protists:</b>	
Eubacteria	Domestic wastes, surface water infiltration, treatments plants
Archaeobacteria	Domestic wastes, surface water infiltration, treatment plants
Viruses	Domestic wastes

Appendix (5.3): Pathogenic organisms potentially present in untreated domestic wastewater

Organism	Disease	Remarks
<b>Bacteria:</b>		
Escherichia coli	Gastro-enteritis	Diarrhea
Legionella	Legionellosis	Acute respiratory illness
Pneumophila		Small intestine
Salmonella typhi	Typhoid fever	Food poisoning
Salmonella (1700 spp.)	Salmonellosis	Bacillary dysentery, extremely heavy diarrhea and dehydration
Shigella (4 spp.)	Shigellosis, Cholera	Diarrhea
Yersinia enterocolitica	Yersinosis	
<b>Viruses:</b>		
Adenovirus (31 types)	Respiratory disease	
Enteroviruses (67 types, e.g. polio, echo and coxsackie viruses)	Gastro/enteritis, heart anomalies, meningitis	
Hepatitis A	Infectious hepatitis	Jaundice, fever
Norwalk agent	Gastro-enteritis	Vomiting
Reovirus	Gastro-enteritis	
Rotavirus	Gastro-enteritis	
<b>Protozoa:</b>		
Balantidium coli	Balantidiasis	Diarrhoea, dysentery
Cryptosporidium		Diarrhoea
<b>Helminths:</b>		
Ascaris lumbricoides	Ascariasis	Roundworm infestation
Enterobius vermicularis	Enterobiasis	Pinworm
Fasciola	Fascioliasis	Sheep liver fluke
Hymenolepis nana	Hymenolepsis	Dwarf tapeworm
Taenia saginata	Taeniasis	Beef tapeworm
T. Solium	Taeniasis	Pork tapeworm
Trichuris trichiura	Trichuriasis	Whip worm



Appendix (5.4): Dust concentration in the receptor zone

	Dust concentration (ug/m <sup>3</sup> )	
	July 17 <sup>th</sup>	August 15 <sup>th</sup>
Measurement points		
<b>A- Within the quarries</b>		
Abu Sjpisja – crisjomg area	500	800
Abu Shousha – extraction zone	900	1500
Habash	1500	1380
Arandi	600	1200
Aloul	4500	600
<b>B- Up to 1 km from quarries</b>		
200 meters east Abu Shousha	350	700
Western Deir Sharaf	400	770
Inside Deir Sharaf	600	760
Deir Sharaf School- North West	450	830
Deir Sharaf – North East	500	780
Eastern Deir Sharaf	500	760
Quoseen village	350	670
100 meters east of Habash Q.	700	950
300 meters north of Sal'ous Q.	500	800
150 meters east of Arandi Q.	700	1440
Swimming pool-500 meters south east the quarries	600	730
800 meters east of quarries	500	770
Inside Beit Iba – highest point	700	1420
Inside Beit Iba – high area	600	820
Inside Beit Iba – low area	500	760
<b>C- 1 to 3 km away from quarries</b>		
Aluminum factory	600	760
Beit Iba north	600	750
<b>D- More than 3 km away from quarries</b>		
West Nablus – B Wazan	250	760
West Nablus – Rozana	200	750
West Nablus – Southern mountain	180	350
South Nablus – Mt. Jerzim	180	430
Nablus – city center	150	230
Nablus – east	220	250
Till village	150	300

## Appendix (5.5): Cost estimate of health risks from the stone-crushers

Health risks associated with stone-crushers are determined by the types of pollutants emitted during the production process. As mentioned earlier, the main pollutants emitted are dust particulates. The potential range of health consequences associated with such particulates includes the following:

- Premature mortality
- Respiratory hospital admissions (RHA)
- Emergency room visits (ERV)
- Restricted activity days (RAD)
- Lower respiratory illness (LRI)
- Respiratory symptoms (RS)
- Chronic bronchitis
- Asthma attacks

The severity of all these health disorders is directly related to the concentration of particulates in ambient air, which is often expressed in dose-response coefficients, i.e. annual health toll per  $1 \text{ ug/m}^3$  change in particulate concentration.

Based on epidemiological studies conducted under a wide range of environmental, climatic, demographic and geographic conditions, it was observed that the above-mentioned health consequences increased by different percentages per  $10 \text{ ug/m}^3$  increase in  $\text{PM}_{10}$  (the Table bellow).

Percentage change of health impacts  
 $10 \text{ ug/m}^3$  change in  $\text{PM}_{10}$  concentration

Health impact	% change per $10 \text{ ug/m}^3$ change in $\text{PM}_{10}$ concentration
Mortality	1
Rha	0.8
ERV	1
RAD	1-5
LRI	3
Asthma attacks	3
RS	0.7
Chronic bronchitis	10-25

Source: Richard Wilson & John D. Spengler, Particulates in Qur Air: Concentrations and Health Effects.

## **Appendix (5.6): Ecologically significant Areas (MOPIC Classification)**

### **Existing situation:**

The West Bank Governorates of Palestine as a part of the eastern Mediterranean region in West Asia, constitutes one of the most complicated ecosystems in the world. It comprises plants and animals from most of the Old World and even North America. In addition to prolonged influence of human activity, several other factors account for the development of rich biodiversity (species diversity, genetic diversity, and habitat variation). Such factors include extreme geomorphologic, topographical, lithologic, edaphic and climatic heterogeneity. This applies in particular to the floristic bio-diversity and to the number of indigenous native species, which have been enumerated to exceed 2 500 taxa, many of which are of global importance (MOPIC 1996C). Map 4 shows the most important categories of ecologically sensitive areas of West Bank: nature reserves, areas comprising significant bio-diversity and forests (collection of trees).

### **Main Threats and Problems**

The natural resources and ecologically significant areas are limited and vulnerable to land use impact in the small region of the West Bank. One example is the increasing soil erosion due to plant cover destruction and urban expansion, which has resulted in continuous deterioration of the natural resources.

The increase of population and expansion in industrial, housing, tourism, transportation, and trade sectors are expected to intensify. In some parts of the West Bank Governorates, extraction of more than the safe limit of ground water has led to deterioration of water quality and increased salinity, while ploughing of marginal lands and overgrazing have led to desertification in other parts. Misuse of pesticides, fertilizers, and other agricultural inputs, and soil pollution from plastic wastes and use of wastewater in agriculture, have also negatively affected bio-diversity in the area.

**Appendix (5.7): 12 – Hour Classification Counts (Deir Sharaf Intersection – Eastern Leg )**

Direction Time	Eastbound				Westbound				Two-Way			
	P.C	B.	Tr.	Total	P.C	B.	Tr.	Total	P.C	B.	Tr.	Total
4:00-4:15	91	10	19	120	104	2	10	116	195	12	29	236
4:15-4:30	86	4	14	104	107	2	7	116	193	6	21	220
4:30-4:45	70	3	8	81	93	5	11	109	163	8	19	190
4:45-5:00	62	4	8	74	80	4	14	98	142	8	22	172
5:00-5:15	95	6	7	108	67	24	6	97	162	30	13	205
5:15-5:30	83	1	10	94	57	3	6	66	140	4	16	160
5:30-5:45	76	5	8	89	53	0	4	57	129	5	12	146
5:45-6:00	55	1	6	62	69	7	5	81	124	8	11	143
6:00-6:15	69	1	8	78	59	0	3	62	128	1	11	140
6:15-6:30	51	0	3	54	61	0	5	66	112	0	8	120
6:30-6:45	47	0	5	52	45	1	6	52	92	1	11	104
6:45-7:00	40	0	7	47	43	2	4	49	83	2	11	96
7:00-7:15	49	0	4	53	49	2	2	53	98	2	6	106
7:15-7:30	24	3	4	31	35	0	1	36	59	3	5	67
7:30-7:45	33	0	4	37	36	0	1	37	69	0	5	74
7:45-8:00	15	0	0	15	25	1	1	27	40	1	1	42
8:00-8:15	31	1	1	33	38	0	2	40	69	1	3	73
8:15-8:30	26	0	5	31	31	0	1	32	57	0	6	63
8:30-8:45	23	0	2	25	10	0	0	10	33	0	2	35
8:45-9:00	22	0	3	25	21	1	0	22	43	1	3	47
9:00-9:15	19	0	1	20	27	0	1	28	46	0	2	48
9:15-9:30	19	0	0	19	17	0	1	18	36	0	1	37
9:30-9:45	17	0	0	17	9	2	0	11	26	2	0	28
9:45-10:00	14	0	0	14	13	1	0	14	27	1	0	28
10:00-10:15	12	0	0	12	16	0	2	18	28	0	2	30
10:15-10:30	12	0	0	12	10	0	1	11	22	0	1	23
10:30-10:45	14	0	0	14	9	0	0	9	23	0	0	23
10:45-11:00	10	0	0	11	15	1	2	18	25	1	3	29
11:00-11:15	9	1	0	10	5	0	1	6	14	1	1	16
11:15-11:30	2	0	0	2	4	0	0	4	6	0	0	6
11:30-11:45	0	0	0	0	4	0	1	5	4	0	1	5
11:45-12:00	6	0	1	7	1	0	0	1	7	0	1	8
12:00-12:15	1	0	0	1	10	0	1	11	11	0	1	12
12:15-12:30	4	0	0	4	5	0	0	5	9	0	0	9
12:30-12:45	1	0	0	1	3	0	0	3	4	0	0	4
12:45-1:00	1	0	1	2	1	0	0	1	2	0	1	3
1:00-1:15	5	0	2	7	3	0	1	4	8	0	3	11
1:15-1:30	3	0	1	4	2	0	0	2	5	0	1	6
1:30-1:45	2	0	0	2	1	0	0	1	3	0	0	3
1:45-2:00	1	0	1	2	0	0	0	0	1	0	1	2
2:00-2:15	4	0	2	6	0	0	1	1	4	0	3	7
2:15-2:30	6	0	0	6	0	0	1	1	6	0	1	7
2:30-2:45	1	0	1	2	0	0	2	2	1	0	3	4
2:45-3:00	3	0	1	4	0	0	1	1	3	0	2	5
3:00-3:15	1	0	1	2	1	0	1	2	2	0	2	4
3:15-3:30	2	0	0	2	2	0	2	4	4	0	2	6
3:30-3:45	9	0	3	12	3	0	3	6	12	0	6	18
3:45-4:00	8	0	0	8	5	0	1	6	13	0	1	14
4:00-4:15	9	1	2	12	6	1	1	8	15	2	3	20

Direction	Eastbound				Westbound				Two-Way			
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## **Selection Criteria for Significant Areas**

The classification of ecologically significant areas in the West Bank has taken their value, importance, sensitivity, and vulnerability into account. The main criteria used for deciding on the extent to which areas are Ecologically Highly Significant are listed below; see MOPIC 1996B and C.

- The habitats or biological communities are considered exceptional.
- The area contains an ecosystem with limited representation.
- The area has an unusually high diversity of biological communities or species.
- The area provides natural habitat for indigenous species (plants and/or animals) that are rare or endangered.
- The area is a key lynch pin or a watershed with ramifications for adjacent areas.

Other factors and principles that were taken into consideration in the classification include:

- Distance from human settlements;
- Presence of major aquifers or surface water resources;
- Northern facing slopes which, as compared with south facing slopes, have lower evaporation than precipitation, thus higher plant biomass and numbers of species;
- Forested areas, which provide important ecological niches and habitats for flora and fauna, especially old-native forested areas; under arid and semi-arid conditions, forest trees provide suitable ecological grounds for the appearance and survival of short-vulnerable grasses and other annuals;
- Cliff bases, which are important as habitats for flora and fauna;
- Terraced areas, which are important in providing micro-climate and preventing erosion, specially uncultivated terraces;

## **Conclusions**

Identified ecologically significant areas should be recognized and protected from encroaching built-up areas and development. Identified areas will be included in the protection proposals of the Regional Plan.

Time	P.C	B.	Tr.	Total	P.C	B.	Tr.	Total	P.C	B.	Tr.	Total
4:15-4:30	16	2	2	20	6	0	4	10	22	2	6	30
4:30-4:45	16	0	1	17	9	2	5	16	25	2	6	33
4:45-5:00	18	0	5	23	13	3	0	16	31	3	5	39
5:00-5:15	12	1	1	14	18	3	2	23	30	4	3	37
5:15-5:30	24	1	0	25	32	2	5	39	56	3	5	64
5:30-5:45	27	2	1	30	31	0	0	31	58	2	1	61
5:45-6:00	47	1	0	48	39	3	1	43	86	4	1	91
6:00-6:15	44	1	2	47	50	5	6	61	94	6	8	108
6:15-6:30	66	5	1	72	42	0	6	48	108	5	7	120
6:30-6:45	66	3	5	74	46	0	10	56	112	3	15	130
6:45-7:00	75	4	5	84	32	1	9	42	107	5	14	126
7:00-7:15	82	4	5	91	70	0	13	83	152	4	18	174
7:15-7:30	96	7	6	109	66	0	7	73	162	7	13	182
7:30-7:45	86	7	5	98	70	1	5	76	156	8	10	174
7:45-8:00	93	6	8	107	81	2	6	89	174	8	14	196
8:00-8:15	87	9	12	108	56	4	18	78	143	13	30	186
8:15-8:30	66	4	9	97	49	1	12	62	115	5	21	141
8:30-8:45	83	5	13	101	51	2	15	68	134	7	28	169
8:45-9:00	73	1	16	90	45	1	9	55	118	2	25	145
9:00-9:15	58	3	10	71	30	1	10	41	88	4	20	112
9:15-9:30	67	1	16	84	40	2	19	61	107	3	35	145
9:30-9:45	61	2	14	77	53	5	14	72	114	7	28	149
9:45-10:00	66	0	9	75	55	3	17	75	121	3	26	150
10:00-10:15	64	5	12	81	49	4	18	71	113	9	30	152
10:15-10:30	48	0	13	61	53	2	18	73	101	2	31	134
10:30-10:45	51	7	23	81	52	8	15	75	103	15	38	156
10:45-11:00	77	3	11	91	49	3	17	69	126	6	28	160
11:00-11:15	60	2	18	80	54	6	13	73	114	8	31	153
11:15-11:30	56	3	16	75	57	3	8	68	113	6	24	143
11:30-11:45	69	5	15	89	66	5	11	82	135	10	26	171
11:45-12:00	46	3	14	63	59	5	17	81	105	8	31	144
12:00-12:15	51	5	12	68	44	3	8	55	95	8	20	123
12:15-12:30	57	1	12	70	63	0	16	79	120	1	28	149
12:30-12:45	50	1	18	69	52	4	15	71	102	5	33	140
12:45-1:00	74	2	14	90	48	2	11	61	122	4	25	151
1:00-1:15	45	1	13	59	45	2	17	64	90	3	30	123
1:15-1:30	53	1	11	65	65	4	15	84	118	5	26	149
1:30-1:45	70	3	16	89	78	4	13	95	148	7	29	184
1:45-2:00	68	6	16	90	41	4	12	57	109	10	28	147
2:00-2:15	82	1	23	106	60	2	12	74	142	3	35	180
2:15-2:30	92	4	14	110	85	0	10	95	177	4	24	205
2:30-2:45	91	6	15	112	93	1	20	114	184	7	35	226
2:45-3:00	82	8	11	101	105	4	15	124	187	12	26	225
3:00-3:15	83	3	11	97	64	1	10	75	147	4	21	172
3:15-3:30	75	4	8	87	81	3	11	95	156	7	19	182
3:30-3:45	73	2	9	84	94	2	10	106	167	4	19	190
3:45-4:00	73	4	11	88	100	4	16	120	173	8	27	208
Total	4162	190	626	4978	3796	176	634	4606	7958	366	1260	9584
%	83,6%	3,8%	12,6%	100,0%	82,4%	3,8%	13,8%	100,0%	83,0%	3,8%	13,1%	100,0%

## Appendix (5.7):

### The Calculations to Determine the Level Of Service of the Main Road of the Western Entrance of Nablus City:

#### Description:

It is a two-lane main road, carries a peak hour volume of 836 vph.

- (a) Roadway Characteristics: 12-ft Lanes, 4-ft Shoulders, Rolling Terrain, 20% no passing zones.
- (b) Traffic Characteristics: 51/49 directional split, 14% trucks, no recreational vehicles, 3% busses, 83% passenger cars.

#### Solution:

$$\begin{aligned} \text{The actual flow rate } v &= V/PHF = (\text{Peak Hour Volume}/PHF) \\ &= 836/0.93 \\ &= 899 \text{ vph} \end{aligned}$$

Service Flow Rates, computed by this equation:

$$Sf_i = 2,8000 * (V/C) * I * F_d * F_w * F_{h_v}$$

$$F_{h_v} = 1 / [1 + P_t (E_t - 1) + P_r (E_r - 1) + P_b (E_b - 1)]$$

Where:

$V/C = 0.10$  for LOS A,  $0.23$  for LOS B,  $0.39$  for LOS C,  $0.57$  for LOS D and  $0.94$  for LOS E, table (8-1).

$F_d = 1$  (50/50 split) table (8-4)

$F_w = 0.92$  for LOS A-D, and  $0.97$  for LOS E, table (8-5)

$P_t = 0.14$  (given)

$P_b = 0.03$  (given)

$E_t = 4$  for LOS A,  $5$  for LOS B and C,  $5$  for LOS D and E, table (8-6)

$E_b = 3$  for LOS A,  $3.40$  for LOS B and C,  $2.9$  for LOS D and E, table (8-6)

Then:

$$F_{h_v} (\text{LOS A}) = 1 / [1 + 0.14(4-1) + 0.03(3-1)] = 0.68$$

$$F_{h_v} (\text{LOS B, C}) = 1 / [1 + 0.14(5-1) + 0.03(3.4-1)] = 0.61$$

$$F_{h_v} (\text{LOS D, E}) = 1 / [1 + 0.14(5-1) + 0.03(2.9-1)] = 0.62$$

$$SF A = 2,800 * 0.10 * 1 * 0.92 * 0.68 = 175 \text{ vph}$$

$$SF B = 2,800 * 0.23 * 1 * 0.92 * 0.61 = 361 \text{ vph}$$

$$SF C = 2,800 * 0.39 * 1 * 0.92 * 0.61 = 613 \text{ vph}$$

$$SF D = 2,800 * 0.57 * 1 * 0.92 * 0.62 = 910 \text{ vph}$$

$$SF E = 2,800 * 0.94 * 1 * 0.97 * 0.62 = 1583 \text{ vph}$$

**Appendix (6.1): Distinguished Landscape elements of the Western Entrance of Nablus City in the fieldwork and their analysis according to gender, marital status, occupation, level of education, place of residence, and number of visits to Nablus City.**

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what element of this entrance you think that they are distinguished according to gender

Appendix ( 6.1) : Distinguish element of the western entrance of nablus city and their analysis according to gender

what element of this entrance you think that they are distinguished	gender		
	male	female	
Green & agricultural Areas	44	4	48 10.4%
Building with their architectural style	56	8	64 13.9%
Topographical characteristics along the two sides	27	4	31 6.7%
Location	57	13	70 15.2%
Industrial Activity	65	15	80 17.3%
Commercial Activity	73	17	90 19.5%
Physical condition of he road	16	1	17 3.7%
Accessibility	54	8	62 13.4%
			462

what element of this entrance you think that they are distinguished	gender	
	male	female
Man made	56	8
Man made	65	15
Man made	73	17
Man made	16	1
Man made	54	8
Natural	44	4
Natural	27	4
Natural	57	13

what element of this entrance you think that they are distinguished	gender	
	male	female
Man made	264	49
Natural	128	21

what element of this entrance you think that they are distinguished	gender	
	male	female
Green & agricultural Areas	91.7%	8.3%
Building with their architectural style	87.5%	12.5%
Topographical characteristics along the two sides	87.1%	12.9%
Location	81.4%	18.6%
Industrial Activity	81.3%	18.8%
Commercial Activity	81.1%	18.9%
Physical condition of he road	94.1%	5.9%
Accessibility	87.1%	12.9%

**Appendix ( 6.1) : Distinguish element of the western entrance of nablus city and their analysis according to Marital Status**

what element of this entrance you think that they are distinguished	Marital Status				
	married	Single	other		
Green & agricultural Areas	29	18	1	48	10.9%
Building with their architectural style	40	23	1	64	14.5%
Topographical characteristics along the two sides	22	8	1	31	7.0%
Location	42	27	1	70	15.9%
Industrial Activity	43	34	3	80	18.1%
Commercial Activity	49	18	2	69	15.6%
Physical condition of he road	12	5	0	17	3.9%
Accessibility	30	31	1	62	14.1%
				441	

what element of this entrance you think that they are distinguished	Marital Status		
	married	Single	other
Man made	40	23	1
Man made	43	34	3
Man made	49	18	2
Man made	12	5	0
Man made	30	31	1
Natural	29	18	1
Natural	22	8	1
Natural	42	27	1

what element of this entrance you think that they are distinguished	Marital Status		
	married	Single	other
Man made	174	111	7
Natural	93	53	3

what element of this entrance you think that they are distinguished	Marital Status		
	married	Single	other
Green & agricultural Areas	60.4%	37.5%	2.1%
Building with their architectural style	62.5%	35.9%	1.6%
Topographical characteristics along the two sides	71.0%	25.8%	3.2%
Location	60.0%	38.6%	1.4%
Industrial Activity	53.8%	42.5%	3.8%
Commercial Activity	71.0%	26.1%	2.9%
Physical condition of he road	70.6%	29.4%	0.0%
Accessibility	48.4%	50.0%	1.6%

Appendix ( 6.1 ) : Distinguish element of the western entrance of nabius city and their analysis according to Occupation

what element of this entrance you think that they are distinguished	Occupation					
	House wife	student	worker	Employee	other	Driver
Man made	3	13	8	23	6	11
Man made	6	16	13	25	13	12
Man made	5	17	10	30	15	13
Man made	1	2	0	8	2	4
Man made	4	14	7	23	8	6
Natural	2	8	4	20	5	9
Natural	2	3	3	13	3	7
Natural	5	14	5	29	6	12

what element of this entrance you think that they are distinguished	Occupation					
	House wife	student	worker	Employee	other	Driver
Man made	19	62	38	109	44	46
Natural	9	25	12	62	14	28

what element of this entrance you think that they are distinguished	Occupation					
	House wife	student	worker	Employee	other	Driver
Green & agricultural Areas	4.2%	16.7%	8.3%	41.7%	10.4%	18.8%
Building with their architectural style	4.7%	20.3%	12.5%	35.9%	9.4%	17.2%
Topographical characteristics along the two sides	6.5%	9.7%	9.7%	41.9%	9.7%	22.6%
Location	7.0%	19.7%	7.0%	40.8%	8.5%	16.9%
Industrial Activity	7.1%	18.8%	15.3%	29.4%	15.3%	14.1%
Commercial Activity	5.6%	18.9%	11.1%	33.3%	16.7%	14.4%
Physical condition of he road	5.9%	11.8%	0.0%	47.1%	11.8%	23.5%
Accessibility	6.5%	22.6%	11.3%	37.1%	12.9%	9.7%

Appendix ( 6.1) : Distinguish element of the western entrance of nablus city and their analysis according to respondents Level o their analysis according to respondents Level of education

what element of this entrance you think that they are distinguished	Less than Secondary	Level of education				
		H.S	Community College	University	MA	P.H.D
Man made	12	13	13	21	3	1
Man made	12	20	14	27	2	5
Man made	14	25	13	31	4	3
Man made	1	6	1	6	1	2
Man made	9	18	10	23	5	2
Natural	6	14	6	16	3	3
Natural	4	6	5	11	4	1
Natural	7	15	18	27	5	1

what element of this entrance you think that they are distinguished	Less than Secondary	Level of education				
		H.S	Community College	University	MA	P.H.D
Man made	48	82	51	108	15	13
Natural	17	35	29	54	12	5

what element of this entrance you think that they are distinguished	Less than Secondary	Level of education				
		H.S	Community College	University	MA	P.H.D
Green & agricultural Areas	12.5%	29.2%	12.5%	33.3%	6.3%	6.3%
Building with their architectural style	19.0%	20.6%	20.6%	33.3%	4.8%	1.6%
Topographical characteristics along the two sides	12.9%	19.4%	16.1%	35.5%	12.9%	3.2%
Location	9.6%	20.5%	24.7%	37.0%	6.8%	1.4%
Industrial Activity	15.0%	25.0%	17.5%	33.8%	2.5%	6.3%
Commercial Activity	15.6%	27.8%	14.4%	34.4%	4.4%	3.3%
Physical condition of he road	5.9%	35.3%	5.9%	35.3%	5.9%	11.8%
Accessibility	13.4%	26.9%	14.9%	34.3%	7.5%	3.0%

Appendix ( 6.1) : Distinguish element of the western entrance of nablus city and their analysis according to Place of residence

what element of this entrance you think that they are distinguished	Place of residence					
	Nablus	BeitEba	Tulkarem	Jenin		
Green & agricultural Areas	9	10	15	15	49	10.4%
Building with their architectural style	13	15	22	16	66	14.0%
Topographical characteristics along the two sides	7	6	10	9	32	6.8%
Location	10	18	23	21	72	15.3%
Industrial Activity	19	23	19	21	82	17.4%
Commercial Activity	21	22	24	25	92	19.5%
Physical condition of he road	2	4	5	6	17	3.6%
Accessibility	14	12	16	19	61	13.0%

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what element of this entrance you think that they are distinguished	Place of residence			
	Nablus	BeitEba	Tulkarem	Jenin
Man made	13	15	22	16
Man made	19	23	19	21
Man made	21	22	24	25
Man made	2	4	5	6
Man made	14	12	16	19
Natural	9	10	15	15
Natural	7	6	10	9
Natural	10	18	23	21

what element of this entrance you think that they are distinguished	Place of residence			
	Nablus	BeitEba	Tulkarem	Jenin
Man made	69	76	86	87
Natural	26	34	48	45

what element of this entrance you think that they are distinguished	Place of residence			
	Nablus	BeitEba	Tulkarem	Jenin
Green & agricultural Areas	18.4%	20.4%	30.6%	30.6%
Building with their architectural style	19.7%	22.7%	33.3%	24.2%
Topographical characteristics along the two sides	21.9%	18.8%	31.3%	28.1%
Location	13.9%	25.0%	31.9%	29.2%
Industrial Activity	23.2%	28.0%	23.2%	25.6%
Commercial Activity	22.8%	23.9%	26.1%	27.2%
Physical condition of he road	11.8%	23.5%	29.4%	35.3%
Accessibility	23.0%	19.7%	26.2%	31.1%

**Appendix ( 6.1 ) : Distinguish element of the western entrance of nablus city and their analysis according to Number of visits to nablus city**

what element of this entrance you think that they are distinguished	How often you go to Nablus city			
	Every Day	Three times a week	Once a week	others
Man made	44		10	44
Man made	61		7	61
Man made	65		8	65
Man made	12		1	12
Man made	45		4	45
Natural	34		5	34
Natural	21		3	21
Natural	45	1	8	46

what element of this entrance you think that they are distinguished	How often you go to Nablus city			
	Every Day	Three times a week	Once a week	others
Man made	227	0	30	227
Natural	100	1	16	101

what element of this entrance you think that they are distinguished	How often you go to Nablus city			
	Every Day	Three times a week	Once a week	others
Green & agricultural Areas	46.6%	0.0%	6.8%	46.6%
Building with their architectural style	44.9%	0.0%	10.2%	44.9%
Topographical characteristics along the two sides	46.7%	0.0%	6.7%	46.7%
Location	45.0%	1.0%	8.0%	46.0%
Industrial Activity	47.3%	0.0%	5.4%	47.3%
Commercial Activity	47.1%	0.0%	5.8%	47.1%
Physical condition of he road	48.0%	0.0%	4.0%	48.0%
Accessibility	47.9%	0.0%	4.3%	47.9%

**Appendix (6.2): Disturbing Landscape elements of the Western Entrance of Nablus City in the fieldwork and their analysis according to gender, marital status, occupation, level of education, place of residence, and number of visits to Nablus City.**

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Appendix (6.2)

what elements of this entrance you think that they are disturbing	gender	
	male	female
Congestion of Vehicles	77	18
Travelling of different types of Vehicles in the road	54	10
Unsuitable width of the road	46	12
Lack of Pedestrian safety	90	18
Multifunction or different land use	79	14
Commercial activity	45	9
Industrial Activity	84	16



Appendix (6.2)

what elements of this entrance you think that they are disturbing	Marital Status		
	married	Single	other
Congestion of Vehicles	61	33	1
Travelling of different types of Vehicles in the road	37	25	2
Unsuitable width of the road	40	16	2
Lack of Pedestrian safety	63	44	1
Multifunction or different land use	55	37	1
Commercial activity	34	19	1
Industrial Activity	61	41	1

Appendix (6.2)

What elements of this entrance you think that they are disturbing	Level of education						Total	Ratio
	Less than Secondary	H.S	Community College	University	MA	P.H.D		
Congestion of Vehicles	14	20	15	33	8	5	95	16.7%
Travelling of different types of Vehicles in the road	10	14	10	20	5	5	64	11.2%
Unswitabile width of the road	8	13	8	20	5	4	58	10.2%
Lack of Padesrian safty	16	29	17	35	6	5	108	19.0%
Multifunction or diffrent land use	13	24	16	25	7	5	90	15.8%
Commercial activity	8	10	9	17	5	5	54	9.5%
Industrial Activity	16	23	18	33	5	5	100	17.6%
							569	

Appendix (6.2)

what elements of this entrance you think that they are disturbing	Place of residence				
	Nablus	BeitEba	Tulkarem	Jenin	
Congestion of Vehicles	19	19	23	30	91
Travelling of different types of Vehicles in the road	16	16	17	15	64
Unsuitable width of the road	11	21	15	14	61
Lack of Pedestrian safety	22	29	26	32	109
Multifunction or different land use	20	21	23	30	94
Commercial activity	14	12	16	12	54
Industrial Activity	23	22	24	31	100
	125	140	144	164	

**Appendix (6.3): Improved Landscape elements of the Western Entrance of Nablus City in the fieldwork and their analysis according to gender, marital status, occupation, level of education, place of residence, and number of visits to Nablus City.**

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**Appendix (6.2) : Disturbing elements of the western entrance of Nablus city and their analysis according to gender , marital status, occupation , level of education , place of residence and number of visits to nablus**

what elements of this entrance you think that they are disturbing	How often you go to Nablus city					
	Every Day	Three times a week	Once a week	others		
Congestion of Vehicles	65	2	9	18	94	16.5%
Travelling of different types of Vehicles in the road	44	1	6	12	63	11.1%
Unsuitable width of the road	39	2	5	11	57	10.0%
Lack of Pedestrian safety	79	3	11	16	109	19.2%
Multifunction or different land use	66	2	10	16	94	16.5%
Commercial activity	34	1	6	12	53	9.3%
Industrial Activity	70	1	11	16	98	17.3%
					568	

Appendix (6.3) : improved landscape element of the western entrance of nablus city and their analysis according to gender

what element of this entrance should be strengthen and improved in order to	gender		
	male	female	
Commercial Activity	16	5	21 5.4%
the roughly advertising boards along the road	25	3	28 7.2%
the drainage flow wadi zaimer	62	8	70 18.0%
Multifunctional or Different land use	66	10	76 19.5%
physical condition of the road	84	7	91 23.4%
green areas & agricultural area	83	18	101 26.0%
other	1	1	2 0.5%
			389

what element of this entrance should be strengthen and improved in order to	gender		
	male	female	
Commercial Activity	76.2%	23.8%	
the roughly advertising boards along the road	89.3%	10.7%	
the drainage flow wadi zaimer	88.6%	11.4%	
Multifunctional or Different land use	86.8%	13.2%	
physical condition of the road	92.3%	7.7%	
green areas & agricultural area	82.2%	17.8%	
other	50.0%	50.0%	

Appendix (6.3) : improved landscape element of the western entrance of nablus city and their analysis according to gender

	gender		
	male	female	
Man made	16	5	
Man made	25	3	
Man made	62	8	
Man made	66	10	
Man made	84	7	
Natural	83	18	
other	67	13	
Man made	253	33	
Natural	83	18	
Total without others	336	51	
Man made Ratio	75.3%	64.7%	
Natural Ratio	24.7%	35.3%	

Appendix (6.3) : improved landscape element of the western entrance of nablus city and their analysis according to Marital Status

what element of this entrance should be strengthened and improved in order to	Marital Status			
	married	Single	other	
Commercial Activity	29	12	2	43
the roughly advertising boards along the road	14	17	2	33
the drainage flow wadi zaimer	42	25	3	70
Multifunctional or Different land use	47	26	3	76
physical condition of the road	31	16	1	48
green areas & agricultural area	57	42	2	101
other	0	2	0	2
				373

what element of this entrance should be strengthened and improved in order to	Marital Status		
	married	Single	other
Commercial Activity	67.4%	27.9%	4.7%
the roughly advertising boards along the road	42.4%	51.5%	6.1%
the drainage flow wadi zaimer	60.0%	35.7%	4.3%
Multifunctional or Different land use	61.8%	34.2%	3.9%
physical condition of the road	64.6%	33.3%	2.1%
green areas & agricultural area	56.4%	41.6%	2.0%
other	0.0%	100.0%	0.0%

Appendix (6.3) : improved landscape element of the western entrance of nablus city and their analysis according to Marital Status

	Marital Status		
	married	Single	other
Man made	29	12	2
Man made	14	17	2
Man made	42	25	3
Man made	47	26	3
Man made	31	16	1
Natural	57	42	2
other	43	35	2
Man made	163	96	11
Natural	57	42	2
Total without others	220	138	13
Man made Ratio	74.1%	69.6%	84.6%
Natural Ratio	25.9%	30.4%	15.4%

threats2  
table2

Appendix (6.3) : improved landscape element of the western entrance of nablus city and their analysis according to respondent occupation

what element of this entrance should be strengthen and improved in order to increas its quality	Occupation				
	House wife	student	worker	Employee	Driver
Commercial Activity	2	7	5	18	3
the roghly advertising boards along the road	1	5	3	17	4
the drainage flow wadi zaimer	4	9	9	28	6
Multifunctional or Differnt land use	3	11	7	34	8
physical condition of the road	2	9	4	15	8
green areas & agricultural area	6	18	10	39	12
other	0	0	0	2	0
					373

what element of this entrance should be strengthen and improved in order to increas its quality	Occupation				
	House wife	student	worker	Employee	Driver
Commercial Activity	4.7%	16.3%	11.6%	41.9%	7.0%
the roghly advertising boards along the road	2.7%	13.5%	8.1%	45.9%	10.8%
the drainage flow wadi zaimer	5.8%	13.0%	13.0%	40.6%	8.7%
Multifunctional or Differnt land use	3.9%	14.5%	9.2%	44.7%	10.5%
physical condition of the road	4.3%	19.1%	8.5%	31.9%	17.0%
green areas & agricultural area	6.1%	18.2%	10.1%	39.4%	14.1%
other	0.0%	0.0%	0.0%	100.0%	0.0%

Appendix (6.3) : improved landscape element of the western entrance of nablus city and their analysis according to respondent occupation

House wife	Occupation				
	student	worker	Employee	other	Driver
Man made	7	5	18	8	3
Man made	5	3	17	7	4
Man made	9	9	28	13	6
Man made	11	7	34	13	8
Man made	9	4	15	9	8
Natural	18	10	39	14	12
other	17	7	31	11	10

Table (6.14) : improved landscape element of the western entrance of nablus city and their analysis according to respondent occupation

Man made	12	41	28	112	50	29
Natural	6	18	10	39	14	12
Total without others	18	59	38	151	64	41
Man made Ratio	66.7%	69.5%	73.7%	74.2%	78.1%	70.7%
Natural Ratio	33.3%	30.5%	26.3%	25.8%	21.9%	29.3%

threats2  
table3



Appendix (6.3) : improved landscape element of the western entrance of nabulus city and their analysis according to respondent Level of education

what element of this entrance should be strengthen and improved in order to increas its quality	Level of education			
	H.S	Community College	University	P.H.D
Commercial Activity	13	6	13	5
the roghly advertising boards along the road	19	6	10	3
the drainage flow wadi zaimer	20	10	19	6
Multifunctional or Different land use	19	10	21	7
physical condition of the road	13	8	14	2
green areas & agricultural area	20	15	32	7
other	0	0	1	0
				43
				48
				71
				71
				48
				95
				2
				0.5%
				378

what element of this entrance should be strengthen and improved in order to increas its quality	Level of education			
	H.S	Community College	University	P.H.D
Commercial Activity	30.2%	14.0%	30.2%	11.6%
the roghly advertising boards along the road	39.6%	12.5%	20.8%	6.3%
the drainage flow wadi zaimer	28.2%	14.1%	26.8%	8.5%
Multifunctional or Different land use	26.8%	14.1%	29.6%	9.9%
physical condition of the road	18.8%	16.7%	29.2%	4.2%
green areas & agricultural area	17.9%	15.8%	33.7%	7.4%
other	0.0%	0.0%	50.0%	0.0%
				2.3%
				6.3%
				4.2%
				4.2%
				4.2%
				50.0%

Appendix (6.3) : improved landscape element of the western entrance of nabulus city and their analysis according to respondent Level of education

Man made	Level of education			
	Less than Secondary	H.S	Community College	P.H.D
Man made	5	13	6	1
Man made	7	19	6	3
Man made	13	20	10	3
Man made	11	19	10	3
Man made	9	13	8	2
Natural	17	20	15	7
other	12	20	12	4
				5
				13
				3
				6
				7
				2
				4
				6

Appendix (6.3) : improved landscape element of the western entrance of nabulus city and their analysis according to respondent Level of education

Man made	Level of education			
	Less than Secondary	H.S	Community College	P.H.D
Man made	45	84	40	23
Natural	17	20	15	7
Total without others	62	104	55	30
Man made Ratio	72.6%	80.8%	72.7%	76.7%
Natural Ratio	27.4%	19.2%	27.3%	23.3%
				70.6%
				29.4%
				75.0%
				25.0%

Appendix (6.3)

what element of this entrance should be strengthened and improved in order to increase its quality	Place of residence				
	Nablus	BeitEba	Tulkarem	Jenin	
Commercial Activity	7	9	9	17	42
the roughly advertising boards along the road	9	9	9	13	40
the drainage flow wadi zaimer	17	17	13	23	70
Multifunctional or Different land use	16	17	17	28	78
physical condition of the road	13	14	9	12	48
green areas & agricultural area	23	25	23	31	102
other	1	0	0	1	2

11.0%  
10.5%  
18.3%  
20.4%  
12.6%  
26.7%  
0.5%

382

what element of this entrance should be strengthened and improved in order to increase its quality	Place of residence				
	Nablus	BeitEba	Tulkarem	Jenin	
Commercial Activity	16.7%	21.4%	21.4%	40.5%	
the roughly advertising boards along the road	22.5%	22.5%	22.5%	32.5%	
the drainage flow wadi zaimer	24.3%	24.3%	18.6%	32.9%	
Multifunctional or Different land use	20.5%	21.8%	21.8%	35.9%	
physical condition of the road	27.1%	29.2%	18.8%	25.0%	
green areas & agricultural area	22.5%	24.5%	22.5%	30.4%	
other	50.0%	0.0%	0.0%	50.0%	

threats2  
table5

Appendix (6.3 )

what element of this entrance should be strengthened and improved in order to increas its quality

	How often you visit Nablus city				others	Total	Percentage
	Every Day	Three times a week	Once a week	others			
Commercial Activity	27	2	5	9	43	11.4%	
the roughly advertising boards along the road	26	1	6	7	40	10.6%	
the drainage flow wadi zaimer	44	3	9	14	70	18.5%	
Multifunctional or Different land use	47	3	9	18	77	20.4%	
physical condition of the road	31	2	4	9	46	12.2%	
green areas & agricultural area	68	3	11	19	101	26.7%	
other	0	0	0	1	1	0.3%	
					378		

**Appendix (6.4): Removed Landscape elements of the Western Entrance of Nablus City in the fieldwork and their analysis according to gender, marital status, occupation, level of education, place of residence, and number of visits to Nablus City.**

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Appendix (6.4) : removed landscape element of the western entrance of nablus city and their analysis according to gender

what element of this entrance should be removed in order to increase its quality	gender		
	male	female	
Commercial Activity	33	8	41 8.8%
Industrial Activities	90	16	106 22.8%
the roughly advertising boards along the road	75	17	92 19.8%
the drainage flow wadi zaimer	101	22	123 26.5%
physical condition of the road	19	6	25 5.4%
green areas & agricultural area	67	10	77 16.6%

464

what element of this entrance should be removed in order to increase its quality	gender		
	male	female	
Commercial Activity	80.5%	19.5%	
Industrial Activities	84.9%	15.1%	
the roughly advertising boards along the road	81.5%	18.5%	
the drainage flow wadi zaimer	82.1%	17.9%	
physical condition of the road	76.0%	24.0%	
green areas & agricultural area	87.0%	13.0%	

what element of this entrance should be removed in order to increase its quality	gender		
	male	female	
Man Made	33	8	
Man Made	90	16	
Man Made	75	17	
Man Made	101	22	
Man Made	19	6	
Natural	67	10	
Man Made	318	69	
Natural	67	10	
	385	79	
	82.6%	87.3%	
	17.4%	12.7%	

threats1  
table1



Appendix (6.4) : removed landscape element of the western entrance of nabulus city and their analysis according to Occupation

what element of this entrance should be removed in order to increase its quality	Occupation					
	House wife	student	worker	Employee	other	Driver
Commercial Activity	3	9	5	18	1	5
Industrial Activities	6	18	12	43	15	14
the roughly advertising boards along the road	4	23	8	30	15	12
the drainage flow wadi zaimer	6	27	12	45	17	16
physical condition of the road	2	8	3	8	1	3
green areas & agricultural area	3	13	6	34	13	13
						41
						108
						92
						123
						25
						82
						471

what element of this entrance should be removed in order to increase its quality	Occupation					
	House wife	student	worker	Employee	other	Driver
Commercial Activity	7.3%	22.0%	12.2%	43.9%	2.4%	12.2%
Industrial Activities	5.6%	16.7%	11.1%	39.8%	13.9%	13.0%
the roughly advertising boards along the road	4.3%	25.0%	8.7%	32.6%	16.3%	13.0%
the drainage flow wadi zaimer	4.9%	22.0%	9.8%	36.6%	13.8%	13.0%
physical condition of the road	8.0%	32.0%	12.0%	32.0%	4.0%	12.0%
green areas & agricultural area	3.7%	15.9%	7.3%	41.5%	15.9%	15.9%

what element of this entrance should be removed in order to increase its quality	Occupation					
	House wife	student	worker	Employee	other	Driver
Man Made	3	9	5	18	1	5
Man Made	6	18	12	43	15	14
Man Made	4	23	8	30	15	12
Man Made	6	27	12	45	17	16
Man Made	2	8	3	8	1	3
Natural	3	13	6	34	13	13
Man Made	21	85	40	144	49	50
Natural	3	13	6	34	13	13
	24	98	46	178	62	63
	87.5%	86.7%	87.0%	80.9%	79.0%	79.4%
	12.5%	13.3%	13.0%	19.1%	21.0%	20.6%

threats1  
table3

Appendix (6.4) : removed landscape element of the western entrance of nabius city and their analysis according to Level of education

what element of this entrance should be removed in order to increase its quality	Level of education		P.H.D
	Less than Secondary	H.S	
Commercial Activity	4	11	41
Industrial Activities	15	28	106
the roughly advertising boards along the road	10	27	92
the drainage flow wadi zaimer	19	34	123
physical condition of the road	2	7	25
green areas & agricultural area	14	20	82
			469

what element of this entrance should be removed in order to increase its quality	Level of education		P.H.D
	Less than Secondary	H.S	
Commercial Activity	9.8%	26.8%	2.4%
Industrial Activities	14.2%	26.4%	3.8%
the roughly advertising boards along the road	10.9%	29.3%	4.3%
the drainage flow wadi zaimer	15.4%	27.6%	3.3%
physical condition of the road	8.0%	28.0%	0.0%
green areas & agricultural area	17.1%	24.4%	4.9%

what element of this entrance should be removed in order to increase its quality	Level of education		P.H.D
	Less than Secondary	H.S	
Man Made	4	11	1
Man Made	15	28	4
Man Made	10	27	4
Man Made	19	34	4
Man Made	2	7	0
Natural	14	20	4
Man Made	50	107	13
Natural	14	20	4
	64	127	17
	78.1%	84.3%	76.5%
	21.9%	15.7%	23.5%



Appendix (6.4) : removed landscape element of the western entrance of nabulus city and their analysis according to Place of residence

what element of this entrance should be removed in order to increase its quality	Place of residence			
	Nablus	BeitEba	Tulkarem	Jenin
Commercial Activity	5	6	14	16
Industrial Activities	26	9	24	32
the roughly advertising boards along the road	18	23	23	28
the drainage flow wadi zaimer	26	30	32	36
physical condition of the road	3	3	8	11
green areas & agricultural area	21	21	20	22

41 9.0%  
91 19.9%  
92 20.1%  
124 27.1%  
25 5.5%  
84 18.4%

457

what element of this entrance should be removed in order to increase its quality	Place of residence			
	Nablus	BeitEba	Tulkarem	Jenin
Commercial Activity	12.2%	14.6%	34.1%	39.0%
Industrial Activities	28.6%	9.9%	26.4%	35.2%
the roughly advertising boards along the road	19.6%	25.0%	25.0%	30.4%
the drainage flow wadi zaimer	21.0%	24.2%	25.8%	29.0%
physical condition of the road	12.0%	12.0%	32.0%	44.0%
green areas & agricultural area	25.0%	25.0%	23.8%	26.2%

what element of this entrance should be removed in order to increase its quality	Place of residence			
	Nablus	BeitEba	Tulkarem	Jenin
Man Made	5	6	14	16
Man Made	26	9	24	32
Man Made	18	23	23	28
Man Made	26	30	32	36
Man Made	3	3	8	11
Natural	21	21	20	22
Man Made	78	71	101	123
Natural	21	21	20	22
Total	99	92	121	145
	78.8%	77.2%	83.5%	84.8%
	21.2%	22.8%	16.5%	15.2%

threats1  
table5

Appendix (6.4) : removed landscape element of the western entrance of nablus city and their analysis according to Number of visits

what element of this entrance should be removed in order to increase its quality	how often you visit nablus city				Total	%
	Every Day	Three times a week	Once a week	others		
Commercial Activity	23	0	6	11	40	8.8%
Industrial Activities	72	2	7	20	101	22.2%
the roughly advertising boards along the road	67	3	8	13	91	20.0%
the drainage flow wadi zaimer	82	2	13	24	121	26.6%
physical condition of the road	16	0	3	6	25	5.5%
green areas & agricultural area	51	2	8	16	77	16.9%
					455	

	Three times a week				Total	%
	Every Day	week	Once a week	others		
Commercial Activity	57.5%	0.0%	15.0%	27.5%		
Industrial Activities	71.3%	2.0%	6.9%	19.8%		
the roughly advertising boards along the road	73.6%	3.3%	8.8%	14.3%		
the drainage flow wadi zaimer	67.8%	1.7%	10.7%	19.8%		
physical condition of the road	64.0%	0.0%	12.0%	24.0%		
green areas & agricultural area	66.2%	2.6%	10.4%	20.8%		
Man Made Ratio	311	9	45	90	455	
	68.4%	2.0%	9.9%	19.8%		

threats1  
table (6)

**Appendix (6.5): Missing Landscape elements of the Western Entrance of Nablus City in the fieldwork and their analysis according to gender, marital status, occupation, level of education, place of residence, and number of visits to Nablus City.**

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Appendix (6.5) : Percentage of Missing landscape element of the western entrance of nablus city and their analysis according to gender

what element missing which should be added to this entrance , in order to increase its quality	gender		
	male	female	
Additional Comercial activities	66	7	73 20.8%
Additional Industrial Activities	79	13	92 26.2%
Roughly advertising boards along the road	55	7	62 17.7%
Good & suitable Planting of the road & suitable Median & side	103	21	124 35.3%
			351

Ratios	male	female
Additional Comercial activities	90.4%	9.6%
Additional Industrial Activities	85.9%	14.1%
Roughly advertising boards along the road	88.7%	11.3%
Good & suitable Planting of the road & suitable Median & side	83.1%	16.9%

Man Made	303	48	351
Ratio	86.3%	13.7%	

threats3  
table1

**Appendix (6.5) : Percentage of Missing landscape element of the western entrance of nablus city and their analysis according to Marital Status**

what element missing which should be added to this entrance , in order to increase its quality	Marital Status		
	married	Single	other
Additional Comercial activities	42	30	1 73 20.8%
Additional Industrial Activities	53	37	2 92 26.2%
Roughly advertising boards along the road	36	25	1 62 17.7%
Good & suitable Planting of the road & suitable Median & side	70	51	3 124 35.3%
			351

	married	Single	other
Additional Comercial activities	57.5%	41.1%	1.4%
Additional Industrial Activities	57.6%	40.2%	2.2%
Roughly advertising boards along the road	58.1%	40.3%	1.6%
Good & suitable Planting of the road & suitable Median & side	56.5%	41.1%	2.4%

Man Made	201	143	7 351
Ratio	57.3%	40.7%	2.0%

threats3  
table(2)

**Appendix (6.5) : Percentage of Missing landscape element of the western entrance of nablus city and their analysis according to people Occupation**

what element missing which should be added to this entrance , in order to increase its quality	Occupation							Driver	%
	House wife	student	worker	Employee	other				
Additional Comercial activities	4	13	11	32	10	12	82	22.8%	
Additional Industrial Activities	6	20	10	32	14	10	92	25.6%	
Roughly advertising boards along the road	3	14	7	17	8	13	62	17.2%	
Good & suitable Planting of the road & suitable Median & side	6	27	12	47	16	16	124	34.4%	
							360		

threats3  
table (3)

**Appendix (6.5) : Percentage of Missing landscape element of the western entrance of nablius city and their analysis according to people Level of education**

What element missing which should be added to this entrance , in order to increase its quality	Level of education						
	Less than Secondary	H.S	Community College	University	MA	P.H.D	
Additional Commercial activities	15	24	14	18	6	2	79
Additional Industrial Activities	16	24	16	27	6	3	92
Roughly advertising boards along the road	14	15	9	18	5	1	62
Good & suitable Planting of the road & suitable Median & side	21	31	17	42	8	5	124
							357

threats3  
table (4)

**Appendix (6.5) : Percentage of Missing landscape element of the western entrance of nablus city and their analysis according to people Place of residence**

what element missing which should be added to this entrance , in order to increase its quality	Place of residence					
	Nablus	BeitEba	Tulkarem	Jenin		
Additional Comercial activities	21	19	16	18	74	20.8%
Additional Industrial Activities	22	22	23	26	93	26.2%
Roughly advertising boards along the road	16	15	16	16	63	17.7%
Good & suitable Planting of the road & suitable Median & side	30	27	31	37	125	35.2%
					355	

threats3  
table (5)



**Appendix (6.5) : Percentage of Missing landscape element of the western entrance of nablus city and their analysis according to Number of visits to nablus city**

what element missing which should be added to this entrance, in order to increase its quality	How often you visit Nablus city				72	20.8%
	Every Day	Three times a week	Once a week	others		
Additional Comercial activities	54	0	7	11	91	26.3%
Additional Industrial Activities	61	3	10	17	63	18.2%
Roughly advertising boards along the road	51	0	4	8	120	34.7%
Good & suitable Planting of the road & suitable Median & side	82	3	10	25	346	

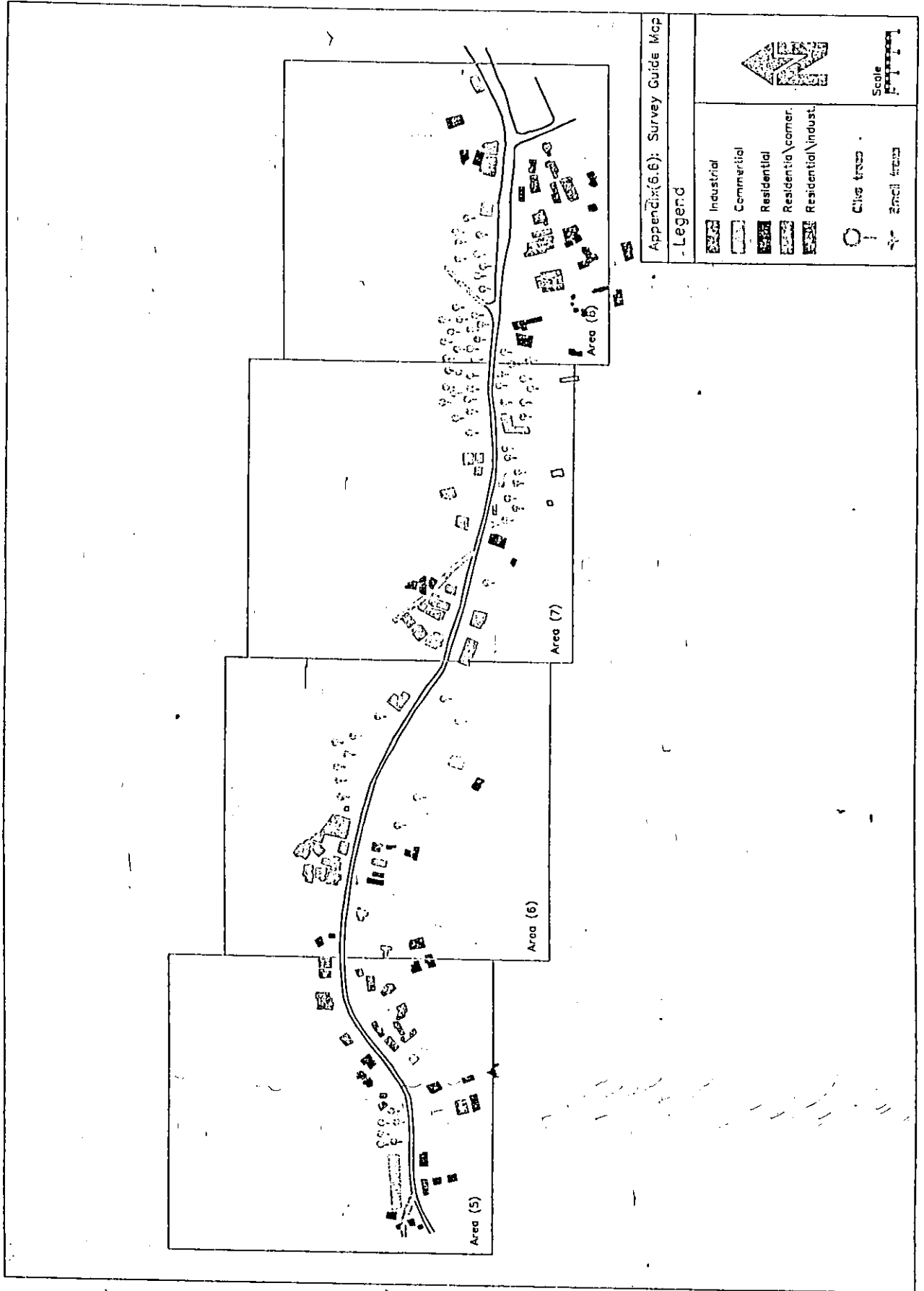
	How often you visit Nablus city				346
	Every Day	Three times a week	Once a week	others	
Additional Comercial activities	75.0%	0.0%	9.7%	15.3%	
Additional Industrial Activities	67.0%	3.3%	11.0%	18.7%	
Roughly advertising boards along the road	81.0%	0.0%	6.3%	12.7%	
Good & suitable Planting of the road & suitable Median & side	68.3%	2.5%	8.3%	20.8%	

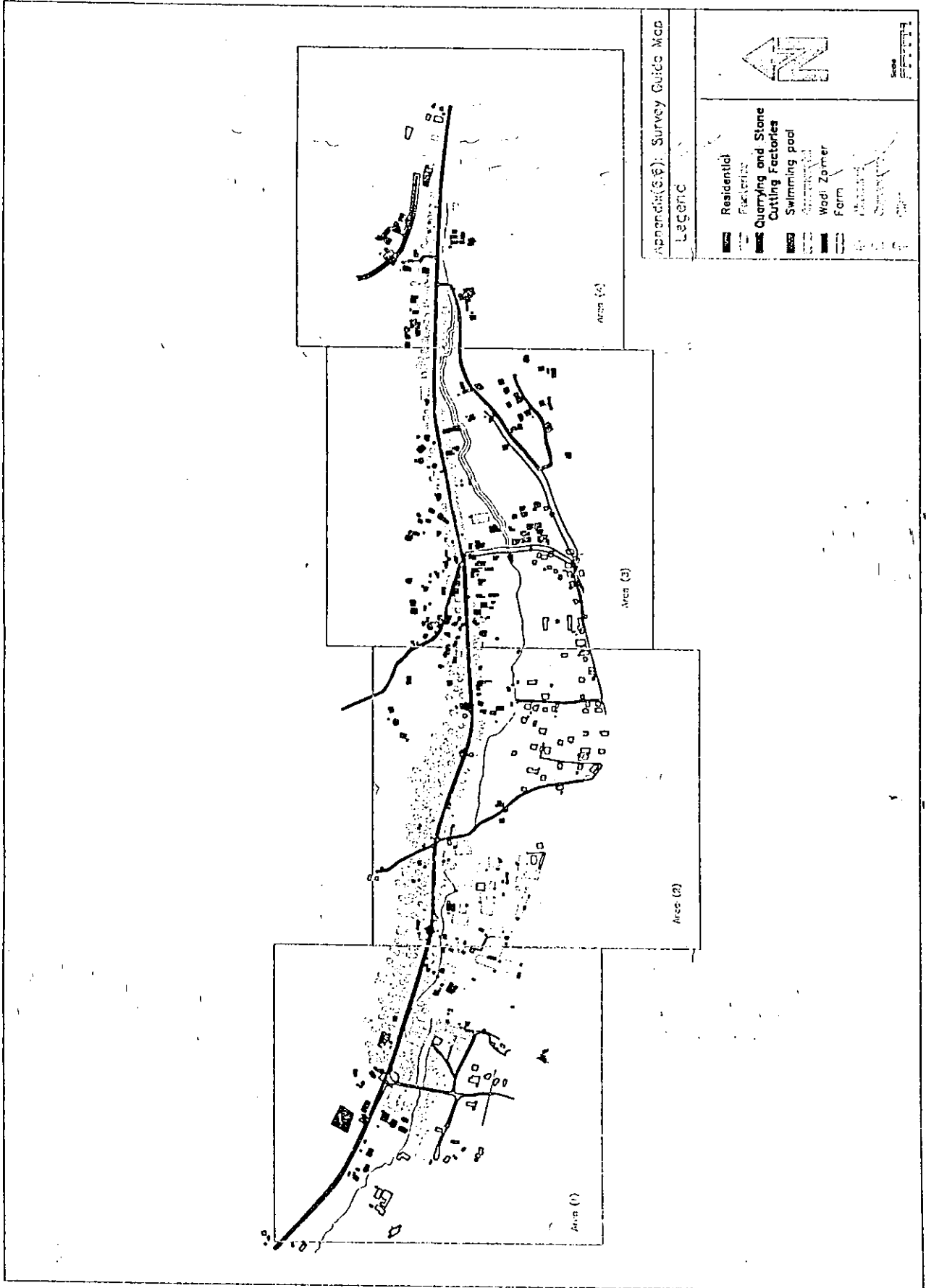
Man Made	248	6	31	61	346
Ratio	71.7%	1.7%	9.0%	17.6%	

threats3  
table (6)

## Appendix (6.6): Results of Field-Survey for Aesthetic Characteristics

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## Survey Form (area # 1)

### Aesthetic Factors (North)

Circle those factors that apply

Balance	Harmonious +	Balanced +	discordant	chaotic
Scale	intimate	Small +	Medium +	large
Enclosure	confined	enclosed	Open +	exposed
Texture	Smooth +	textured	rough	very rough
Color	monochrome	muted	Colorful +	garish
Diversity	uniform	Simple +	Diverse +	complex
Unity	Unified +	interrupted	fragmented	chaotic
Form	straight	angular	Curved +	sinuous
Pleasure	offensive	unpleasant	Pleasant +	Beautiful +
Stimulus	boring	Bland +	Interesting +	Invigorating +

### Aesthetic Factors (South)

Circle those factors that apply

Balance	Harmonious +	Balanced +	discordant	chaotic
Scale	intimate	Small +	Medium +	large
Enclosure	confined	enclosed	Open +	exposed
Texture	Smooth +	textured	rough	very rough
Color	monochrome	muted	Colorful +	garish
Diversity	uniform	Simple +	Diverse +	complex
Unity	Unified +	interrupted	fragmented	chaotic
Form	straight	angular	Curved +	sinuous
Pleasure	offensive	unpleasant	Pleasant +	Beautiful +
Stimulus	boring	Bland +	Interesting +	Invigorating +

## Survey Form (area # 2)

### Aesthetic Factors (North)

Circle those factors that apply

Balance	Harmonious +	Balanced +	discordant	chaotic
Scale	intimate	Small +	Medium +	large
Enclosure	confined	enclosed	Open +	exposed
Texture	Smooth +	textured	rough	very rough
Color	monochrome	muted	Colorful +	garish
Diversity	uniform	Simple +	Diverse +	complex
Unity	Unified +	interrupted	fragmented	chaotic
Form	straight	angular	Curved +	sinuous
Pleasure	offensive	unpleasant	Pleasant +	Beautiful +
Stimulus	boring	Bland +	Interesting +	Invigorating +

### Aesthetic Factors (South)

Circle those factors that apply

Balance	Harmonious +	Balanced +	discordant	chaotic
Scale	intimate	Small +	Medium +	large
Enclosure	confined	enclosed	Open +	exposed
Texture	Smooth +	textured	rough	very rough
Color	monochrome	muted	Colorful +	garish
Diversity	uniform	Simple +	Diverse +	complex
Unity	Unified +	interrupted	fragmented	chaotic
Form	straight	angular	Curved +	sinuous
Pleasure	offensive	unpleasant	Pleasant +	Beautiful +
Stimulus	boring	Bland +	Interesting +	Invigorating +

### Survey Form (area # 3)

#### Aesthetic Factors (North)

Circle those factors that apply

Balance	Harmonious +	Balanced +	discordant	chaotic
Scale	intimate	Small +	Medium +	large
Enclosure	confined	enclosed	Open +	exposed
Texture	Smooth +	textured	rough	very rough
Color	monochrome	muted	Colorful +	garish
Diversity	uniform	Simple +	Diverse +	complex
Unity	Unified +	interrupted	fragmented	chaotic
Form	straight	angular	Curved +	sinuous
Pleasure	offensive	unpleasant	Pleasant +	Beautiful +
Stimulus	boring	Bland +	Interesting +	Invigorating +

#### Aesthetic Factors (South)

Circle those factors that apply

Balance	Harmonious +	Balanced +	discordant	chaotic
Scale	intimate	Small +	Medium +	large
Enclosure	confined	enclosed	Open +	exposed
Texture	Smooth +	textured	rough	very rough
Color	monochrome	muted	Colorful +	garish
Diversity	uniform	Simple +	Diverse +	complex
Unity	Unified +	interrupted	fragmented	chaotic
Form	straight	angular	Curved +	sinuous
Pleasure	offensive	unpleasant	Pleasant +	Beautiful +
Stimulus	boring	Bland +	Interesting +	Invigorating +

## Survey Form (area # 4)

### Aesthetic Factors (North)

Circle those factors that apply

Balance	Harmonious +	Balanced +	discordant	chaotic
Scale	intimate	Small +	Medium +	large
Enclosure	confined	enclosed	Open +	exposed
Texture	Smooth +	textured	rough	very rough
Color	monochrome	muted	Colorful +	garish
Diversity	uniform	Simple +	Diverse +	complex
Unity	Unified +	interrupted	fragmented	chaotic
Form	straight	angular	Curved +	sinuous
Pleasure	offensive	unpleasant	Pleasant +	Beautiful +
Stimulus	boring	Bland +	Interesting +	Invigorating +

### Aesthetic Factors (South)

Circle those factors that apply

Balance	Harmonious +	Balanced +	discordant	chaotic
Scale	intimate	Small +	Medium +	large
Enclosure	confined	enclosed	Open +	exposed
Texture	Smooth +	textured	rough	very rough
Color	monochrome	muted	Colorful +	garish
Diversity	uniform	Simple +	Diverse +	complex
Unity	Unified +	interrupted	fragmented	chaotic
Form	straight	angular	Curved +	sinuous
Pleasure	offensive	unpleasant	Pleasant +	Beautiful +
Stimulus	boring	Bland +	Interesting +	Invigorating +



## Survey Form (area # 5)

### Aesthetic Factors (North)

Circle those factors that apply

Balance	Harmonious +	Balanced +	discordant	chaotic
Scale	intimate	Small +	Medium +	large
Enclosure	confined	enclosed	Open +	exposed
Texture	Smooth +	textured	rough	very rough
Color	monochrome	muted	Colorful +	garish
Diversity	uniform	Simple +	Diverse +	complex
Unity	Unified +	interrupted	fragmented	chaotic
Form	straight	angular	Curved +	sinuous
Pleasure	offensive	unpleasant	Pleasant +	Beautiful +
Stimulus	boring	Bland +	Interesting +	Invigorating +

### Aesthetic Factors (South)

Circle those factors that apply

Balance	Harmonious +	Balanced +	discordant	chaotic
Scale	intimate	Small +	Medium +	large
Enclosure	confined	enclosed	Open +	exposed
Texture	Smooth +	textured	rough	very rough
Color	monochrome	muted	Colorful +	garish
Diversity	uniform	Simple +	Diverse +	complex
Unity	Unified +	interrupted	fragmented	chaotic
Form	straight	angular	Curved +	sinuous
Pleasure	offensive	unpleasant	Pleasant +	Beautiful +
Stimulus	boring	Bland +	Interesting +	Invigorating +

## Survey Form (area # 6)

### Aesthetic Factors (North)

Circle those factors that apply

Balance	Harmonious +	Balanced +	discordant	chaotic
Scale	intimate	Small +	Medium +	large
Enclosure	confined	enclosed	Open +	exposed
Texture	Smooth +	textured	rough	very rough
Color	monochrome	muted	Colorful +	garish
Diversity	uniform	Simple +	Diverse +	complex
Unity	Unified +	interrupted	fragmented	chaotic
Form	straight	angular	Curved +	sinuous
Pleasure	offensive	unpleasant	Pleasant +	Beautiful +
Stimulus	boring	Bland +	Interesting +	Invigorating +

### Aesthetic Factors (South)

Circle those factors that apply

Balance	Harmonious +	Balanced +	discordant	chaotic
Scale	intimate	Small +	Medium +	large
Enclosure	confined	enclosed	Open +	exposed
Texture	Smooth +	textured	rough	very rough
Color	monochrome	muted	Colorful +	garish
Diversity	uniform	Simple +	Diverse +	complex
Unity	Unified +	interrupted	fragmented	chaotic
Form	straight	angular	Curved +	sinuous
Pleasure	offensive	unpleasant	Pleasant +	Beautiful +
Stimulus	boring	Bland +	Interesting +	Invigorating +

## Survey Form (area # 7)

### Aesthetic Factors (North)

Circle those factors that apply

Balance	Harmonious +	Balanced +	discordant	chaotic
Scale	intimate	Small +	Medium +	large
Enclosure	confined	enclosed	Open +	exposed
Texture	Smooth +	textured	rough	very rough
Color	monochrome	muted	Colorful +	garish
Diversity	uniform	Simple +	Diverse +	complex
Unity	Unified +	interrupted	fragmented	chaotic
Form	straight	angular	Curved +	sinuous
Pleasure	offensive	unpleasant	Pleasant +	Beautiful +
Stimulus	boring	Bland +	Interesting +	Invigorating +

### Aesthetic Factors (South)

Circle those factors that apply

Balance	Harmonious +	Balanced +	discordant	chaotic
Scale	intimate	Small +	Medium +	large
Enclosure	confined	enclosed	Open +	exposed
Texture	Smooth +	textured	rough	very rough
Color	monochrome	muted	Colorful +	garish
Diversity	uniform	Simple +	Diverse +	complex
Unity	Unified +	interrupted	fragmented	chaotic
Form	straight	angular	Curved +	sinuous
Pleasure	offensive	unpleasant	Pleasant +	Beautiful +
Stimulus	boring	Bland +	Interesting +	Invigorating +

## Survey Form (area # 8)

### Aesthetic Factors (North)

Circle those factors that apply

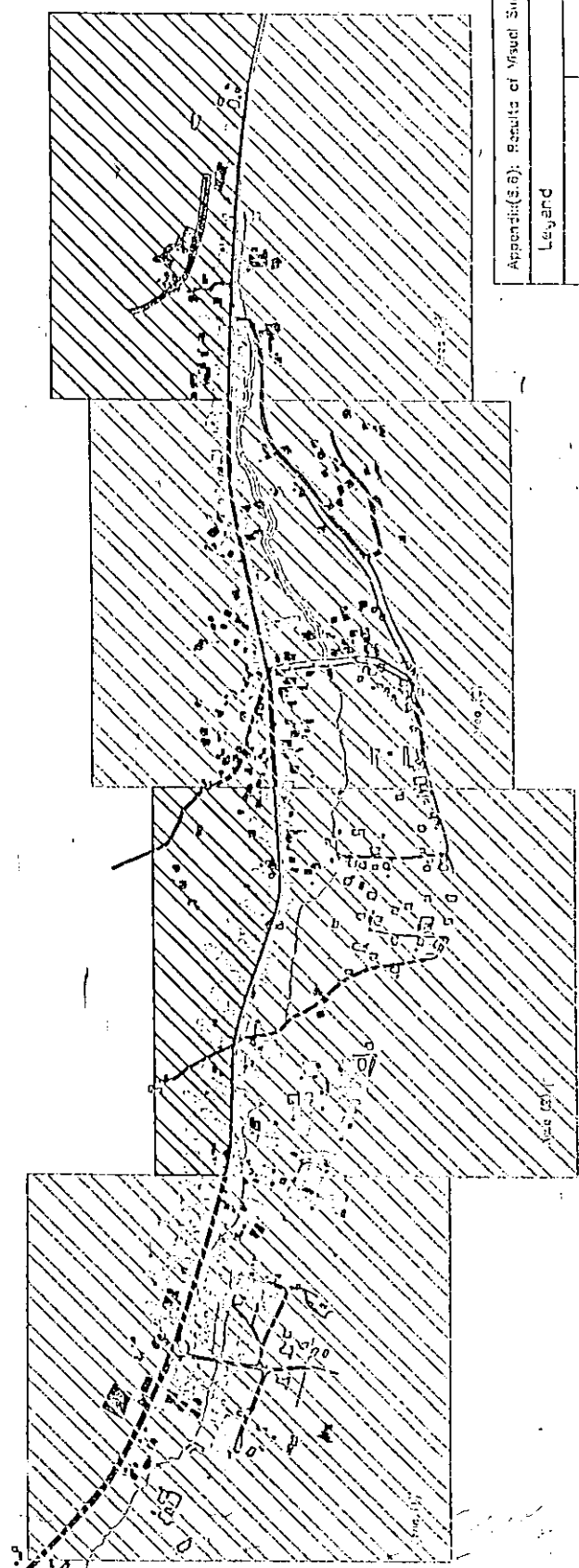
Balance	Harmonious +	Balanced +	discordant	chaotic
Scale	intimate	Small +	Medium +	large
Enclosure	confined	enclosed	Open +	exposed
Texture	Smooth +	textured	rough	very rough
Color	monochrome	muted	Colorful +	garish
Diversity	uniform	Simple +	Diverse +	complex
Unity	Unified +	interrupted	fragmented	chaotic
Form	straight	angular	Curved +	sinuous
Pleasure	offensive	unpleasant	Pleasant +	Beautiful +
Stimulus	boring	Bland +	Interesting +	Invigorating +

### Aesthetic Factors (South)

Circle those factors that apply



Balance	Harmonious +	Balanced +	discordant	chaotic
Scale	intimate	Small +	Medium +	large
Enclosure	confined	enclosed	Open +	exposed
Texture	Smooth +	textured	rough	very rough
Color	monochrome	muted	Colorful +	garish
Diversity	uniform	Simple +	Diverse +	complex
Unity	Unified +	interrupted	fragmented	chaotic
Form	straight	angular	Curved +	sinuous
Pleasure	offensive	unpleasant	Pleasant +	Beautiful +
Stimulus	boring	Bland +	Interesting +	Invigorating +

Area No	1		2		3		4		5		6		7		8	
	N	S	N	S	N	S	N	S	N	S	N	S	N	S	N	S
Number of fullfil possitive items	3	2	7	2	2	2	6	2	3	4	7	6	7	2	7	1



Appendix (3.6): Results of Visual Survey

Legend

-  Visually Improved Area
-  Visually Degraded Area



Scale  
0 100 200 Feet

## تنسيق مداخل المدن الفلسطينية (حالة دراسية مدخل مدينة نابلس الغربي)

إن الهدف الرئيسي من هذه الرسالة هو فهم فكرة مدخل المدينة من خلال عملية التخطيط والتصميم لها، وتهدف هذه الرسالة إلى تحديد عناصر التنسيق التي تشكل مدخل المدينة، وكذلك تحليل العلاقات المتداخلة بين هذه العناصر من جهة وبين مستخدميها من جهة أخرى.

ومن خلال محاولة تحقيق هذه الأهداف فإن بعض النظريات المحددة والمبادئ التي توضح المحتوى والتركيب وسمات مدخل المدينة والتعامل مع المشاكل الرئيسية التي تواجهها هذه المداخل سيتم مناقشتها وتبنيها في هذه الدراسة حسب الضرورة.

إن الحالة الدراسية المدخل الغربي لمدينة نابلس سيتم تحليله في هذه الأطروحة بناء على المعلومات والمعطيات المتوفرة.

سيتم في هذه الدراسة استخدام مدخل التنسيق كوسيلة للبحث، إن أساليب البحث المستخدمة في هذه الأطروحة تعتمد على معلومات مكتوبة ومدونة تخص الموضوع وكذلك على العمل الميداني الذي يقوم على الملاحظة والاستبيان والمقابلات.

وبناء على تحليلنا ومناقشتنا لهذه الدراسة فان الفكرة الجديدة في التخطيط التنسيقي الذي يتعلق بمدخل المدينة سوف يساعد على التعامل مع العديد من المشاكل القائمة في منطقة الدراسة لمدينة نابلس وكذلك المشاكل التي تواجهها مداخل المدن الفلسطينية الأخرى.

وبناء على ذلك فان الاختلاف في الاهتمامات سوف تختفي عندما يتم إعداد خطط شاملة لمداخل المدن، حيث إن هذه الخطط سوف تضع المصلحة العامة على راس أولوياتها.