

THIRD TOURISM DEVELOPMENT PROJECT

SECONDARY CITIES REVITALIZATION STUDY

Karak

Detailed description of the  
city revitalisation program

Annex 1

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## 1. Executive summary

The main challenge that the historic core of Karak is facing is to recover its urban centrality and be revived with a new "social and economic mission" within its regional context.

Form a **social** point of view, the revived historic core must contribute to reconstruct social cohesion amongst the different social groups providing a common federating space for the entire population, where the cultural heritage is preserved and enhanced in both its symbolic and economic role, and urban space is improved for the benefit of residents and visitors.

From an **economic** point of view, the revived historic core will contribute to boost the existing tourism activities, which in Karak are concentrated mainly on the visit to the Castle, expanding the visitors' experience to include both the main commercial spine and a new heritage trail.

Form an **urban** point of view, the focus is on the improvement of the socio-urban fabric, the recovery of commercial centrality and the improvement of the urban environment as a high quality civil space, providing new socialization spaces and managing the conflict of proximity functions.

The project aims at achieving these objectives through a structured city revitalization program, that includes regulatory actions, physical actions and capacity building actions.

The most comprehensive actions of the program are concentrated on two urban structures. The first action is focused on the enhancement of the urban axis composed by the main commercial spine of Al Malik Al Husayn Street, the group of heritage buildings located at the south-western end, Al Mujamma Street, the new Castle Piazza and the Castle. The second development axis concerns the development of a new pedestrian path along the remains of fortification located on the south eastern edge of the historic core, providing a new pedestrian access along the remains of the city wall, connecting through an "heritage trail" the Ottoman School up to the Castle. Tightly related to this axis is the proposed redevelopment of the bus terminal area at the "bottom of the hill" to create the necessary public space and a pole of activities.

The new Karak historic core regulation will ensure the preservation of the significant characters and assets and the completion, with time, of the improvement of the public spaces.

Finally, to sustain the municipality and ensure its participation in the program, a specific capacity building action is envisaged.

ON THE RIGHT: AERIAL VIEW OF THE HISTORIC CORE OF KARAK





## 2. Scope of the program

### 2.1 KARAK

Karak is believed to have originated from the late Bronze or early Iron Age around 1,200 BC. Mentioned in the Old Testament as Kir Hareseth, Kir Heres and Kir of Moab, it was once the most important city of the Kingdom of Moab. The city is mentioned in the Old Testament in reference to the relations which existed between Mesha, King of Moab, and neighboring Israel and Judah, around 350 BC. While the Roman and Nabatean periods were not clearly registered, Karak regained its prominence during the Crusader period when the first phase of the modern castle was constructed. Originally known as Crac des Moabites or La Pierre du Desert, the fortifications were built by Payen, Lord of Karak and Shobak. The Castle formed the most eastern part of the then Latin Kingdom of Jerusalem, ruled by King Baldwin of Jerusalem. The Crusader period saw continuous clashes between the Christian forces and those of the emerging Moslem Arabs to control of the trade routes between Arabia and Syria. The clashes culminated in the Battle of Hittin in 1187 when Salah Eddin regained the Castle and City as well as establishing hegemony over the region. In 1264 Baybars and later Qalawun of Egypt added further towers to the Castle. These survived until in 1840 when, as a reprisal against the people of Karak, Ibrahim Pasha of Egypt in the course of war captured and destroyed much of the fortifications. The majority of urban Karak was leveled in the last century as a reprisal removing any clear traces of previous settlements or buildings. The modern Karak does not have an evident urban tradition apart from the Castle with its towers and city walls.

Nowadays, Karak appears as an historical urban settlement placed on top of a hill beside a landmark castle, whose form is largely related to its defensive function and topographical location. Karak is isolated from the surrounding settlements by its elevation and by a network of wadis which contribute to its character and form. Around the historic core, there are the surrounding settlements of Marj and Thallajah. New Karak farther to the east was included in the Municipality jurisdiction more recently.

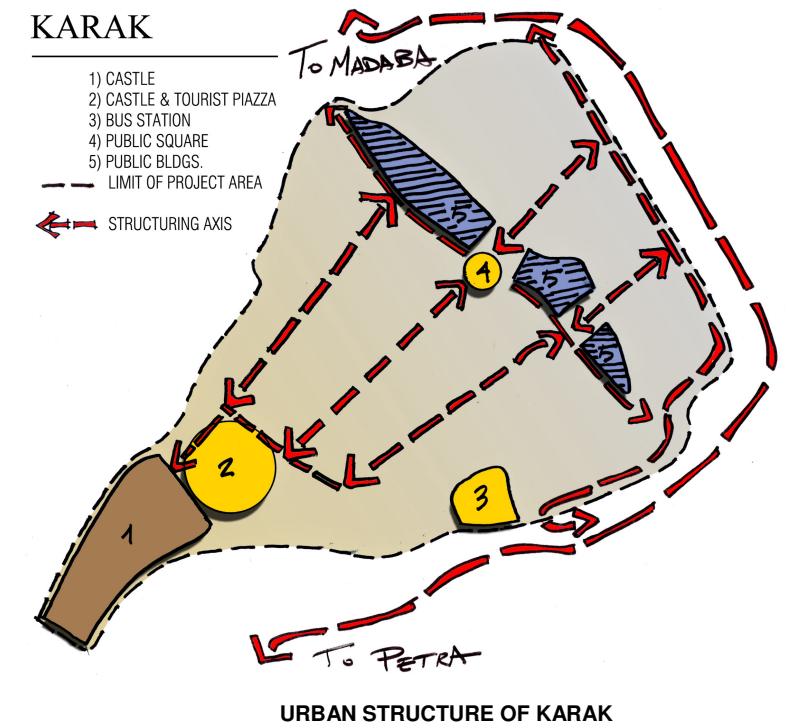


THE CASTLE WALL

The historic core is the commercial and governmental centre of the region and a market town to surrounding farms and villages. Its attraction as a centre is strong and this is reflected in the quality and variety of the services it provides.

The **urban form** of the settlement is well defined as an anthropomorphic scheme characterized by the castle acting as the generator (head) of a trident road layout (Al Qal'a Street, Al Malik Al Husayn Street and Al Khider Street). These elements concur in the definition of both the urban structure of the historical core (body), and the functional distribution of economic and social activities within the city. The **castle** is the chief point of interest to the visitor, covering a significant portion of the area of the historic core. It is a "typical Crusader construction with long dark, stone vaulted galleries lighted only by arrow slits from which large heavy arches lead off into other gloomy rooms". While the rich historical past of Karak is nowadays visible in the castle, the walls and the towers, below the city there are other archaeological endowments, presently inaccessible beneath the historical layers built on them. The different levels may include remains from the Moabite, Roman, Byzantine and Medieval periods.

**Karak Governorate**, which covers an area of 3,217 Km<sup>2</sup>, is located in the southern region of Jordan. Karak city, in Karak Sub-District within the Qasabat Karak District, is the main city in the Governorate and falls under the jurisdiction of the Greater Karak Municipality. In 2004 Karak counted a population of around 20 thousands and in the last decade experienced a demographic dynamic similar to the national level. Karak is characterized by a young population: around 50% are below 19 years and as such are school, college, or university students. The average annual household income of Karak Sub-District is just a little bit higher than the Governorate average; the poverty rate has declined in the last years by 10.52% from 1997.



PANORAMIC VIEW OF KARAK, WITH THE CASTLE







Only 37% of the 15+ years old population of Karak Governorate are **economically active**, (only 12% of the females). This low level of activity is related to the high presence of young and the lack of work among women (a half of the inactive are housewives). In addition, 29% of the population is employed, only 8% of the females. The three labour intensive sectors are the public and armed forces sector (22% of the employed), which is up to now the far more attracting for high-skilled young seeking for work, agriculture (14%) and the education sector (19.6%). Particularly, agricultural sector depends mostly on foreign labour, and similarly the construction sector.

**Unemployment rate** in Karak Governorate is 21.5% and has increased in the last 2 years. This indicates a growing employment problem; there is a mounting discouragement among the potential workers who have become tired of seeking work: 72% of the economically inactive persons believe there are no jobs around.

While on the national level in 2004 the economic system has been able to create jobs in tourism related sectors (such as hotels, restaurants, real estate and personal services), in Karak the situation has been much less dynamic. The employment in public administration and defence and education has slightly decreased, while other sectors such as commerce, hotels and restaurants have been distinguished by job shedding. Manufacturing and agriculture have experienced a constant increase in the employment of labour force.

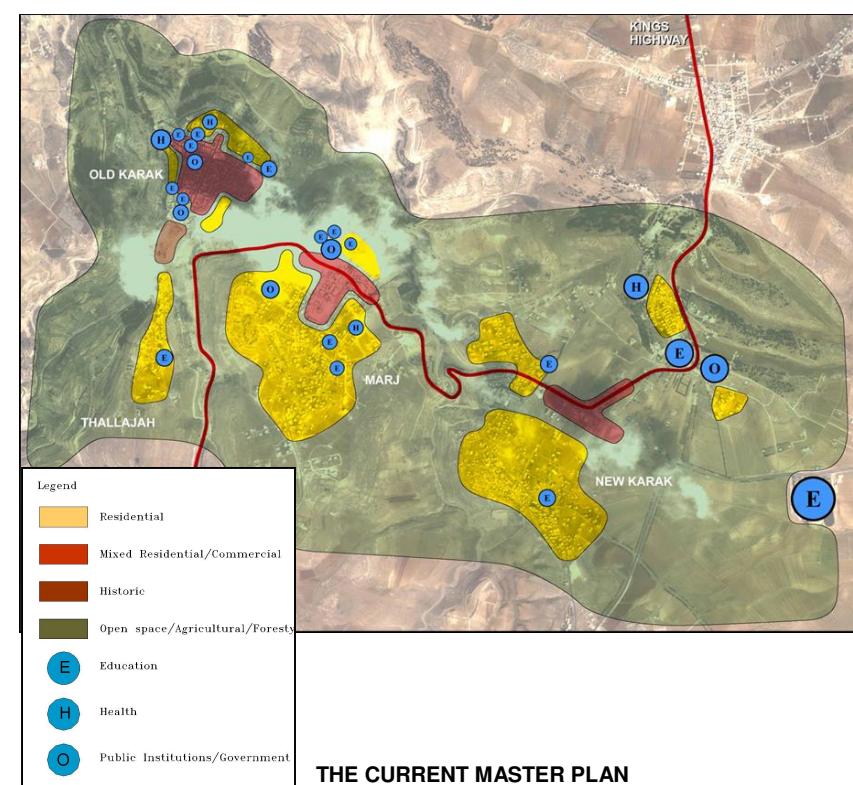
By the end of 2003 the Ministry of Labour has permitted 1,212 **foreign laborers** for work, 91% of them being Egyptians who work overall in agriculture, building and unskilled production.

The **private sector** is characterized by the small dimension of almost all establishments; around two third of the businesses are solely owned and half employ 2 or less employees. Services establishments have the biggest dimension and trade the smallest. 62% of businesses in Karak city are in the commercial trade sector. Shops being involved in similar professional activities or selling same products are often found in close proximity, thus lacking products variety as much as product quality. Handicrafts shops, which employ Jordanians from Karak itself, are minimal and mainly found around the Castle Plaza at the top of the Al-Qlaa Street. Even if located in the most tourist place, such shops market their products almost entirely among neighbors and proximate community.

The **informal sector** is mostly led by women in their twenties and thirties who run their operation by themselves and utilize skills gained through training or simply through the traditional way of life. For many of them, the home-based activity (with an average income of JD 45 per month) is the major income generator for the family or the individual and there is no other source of income. Finance is a major need of the informal sector; presently, seven institutions are offering micro-finance to approximately one thousand informal businesses. **NGOs and CBOs** play an important role in supporting the informal businesses and providing training and awareness raising, yet not all of them are motivated enough and community work is led by a few.

The **tourism sector** has a very limited development in Karak. Moreover, the number of visitors has declined over the past four years from nearly 133,000 tourists in 2000 down to 52,700 in 2003. This is a clear demonstration of the sensitivity of the tourism sector to political conditions, which, due to the Arab-Israeli conflict in Palestine and the Iraqi war, has

increased instability during the last four years. Tourism related facilities are very limited. There is only one tour agent and a few souvenir shops around the Castle Piazza and along King Hussein Street. Karak city has five classified restaurants, four classified hotels (54 rooms, 98 beds) and four unclassified hotels (47 rooms, 117 beds). It is easily understood that the economic benefits and the direct impact on employment are very limited. The tourism sector employs around a hundred persons; most workers are either from other parts of the country or non-Jordanians and most of them are males. Currently there are somewhat negative views regarding working in the tourism sector; this view is stronger amongst the older generations, particularly against the involvement of women. However, investors in tourism not only hold positive attitudes towards tourism development but also stress the need for such development and call for more responsive actions from the government. They succeeded in partnering with the public sector when Karak managed to adopt a unique mechanism for managing the Castle Piazza – in the form of The Karak Castle Piazza Management Committee.



Upon the approval of its **master plan** in 1999, the jurisdiction of Karak Municipality includes, besides the historic core, the rural villages within the areas of Marj and Thallajah. For the historic core, the plan identifies mainly commercial areas, while no direction is provided concerning residential areas. Currently, commercial activities are mostly found along the main streets, with dwellings located at the upper floors or in the outskirts. Commerce is the prevailing activity in the historic core, where it is concentrated, while in the surrounding villages only small shops are found. Commercial areas are concentrated around the Sahal Al-Din Square, where the main streets converge and the Umari Mosque (the most important mosque in town) is located. Schools (mainly located in

the north side of the city) and public services are distributed within the limited space availability of the historic core. Public buildings are located around Al-Dawa'er Street and in the area surrounding the castle, dramatically contributing to congest the vehicular traffic. To summarize, the historic core is divided into four main areas: the Castle and its immediate surroundings, the core commercial streets, the main bus station and the residential areas. In the Castle area, the functions are basically related to tourism and government.

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The decline of the historical centre, the degradation of its urban and residential fabric and the crisis of its functions of centrality are strongly related to the general **weakness of the municipal institution**. The institutional assessment has shown that the weakness of the municipal institution is manifested on several interdependent levels, including (a) urban planning and management; (b) management of public spaces and urban services; (c) promotion and enforcement of sanitary and public health rules; (d) absence of coordination between the municipality and the public utility companies; (e) weakness of human resources and qualification; (f) organizational weakness; (g) weakness of financial management and of revenues generated by the municipality; and (h) absence of mechanisms of accountability and of forms of participation of the local population and stakeholders.

The condition of the **municipal infrastructure** has revealed some shortcomings, mainly concerning the storm drainage network, the water system and the public lighting. There is only one **storm water drainage** line in the east part of the study perimeter, which drains to the nearby wadi. The existing drainage is not sufficient, and during rains the roads get flooded, especially in the eastern portion of the historic core and in the area near the bus station. The **water supply network**, built in 1986, is suffering from corrosion and from a high rate of leakage and loss. The historic core is completely served by the **public lighting** system, but the system is old and needs improvement. The present use of mercury vapor lamps contributes to the unsatisfactory standard of street lighting. The overall **traffic situation** is influenced by the characteristics of the street network and by the increasing density of vehicles. One major issue is related to the traffic of buses for local transport, that seem to prefer stopping into the historic core instead of using one of the two existing bus stations, thus increasing the difficulties of vehicular circulation.

## 2.2 KEY ISSUES

Nowadays, Karak has to face a number of key issues affecting its social and economic development. These key issues include:

- 1) **Substitution of population and residential pauperization.** The decay of residential fabrics forced a large part of the population to move to new outside residential areas. The population that succeeded includes immigrant workers (mainly Egyptians) and young couples from the surrounding villages. According to some estimations, original families are now less than 60% of resident population. A significant part of these families lives this situation as a condition of residential captivity.



- 2) **Change of commercial functions.** The commercial activities of the historic core changed to satisfy the needs of the surrounding villages, with an increase of banks, cheap clothes shops, furniture and white goods. On the other hand, higher quality shops, attracting the local families (namely middle-class), moved from the historic core to new outskirts.
- 3) **Conflict with proximity functions.** Given the lack of appropriate parking, the daily inflow of population arriving in Karak by car and, above all, by bus, increases traffic problems of the historic core. Bus parking in residential streets causes significant nuisance to resident population. The historic core is not livable enough; parking and traffic problems induce the residents to prefer the outside commercial settlements for their shopping. However, in the afternoon, after the departure of the external visitors, the historic core is no longer enlivened and turns into an inanimate and deserted space.
- 4) **Physical decay of the urban environment.** Urban space is affected by physical decay, traffic and parking congestion (with the resulting visual and acoustic pollution), lack of appropriate management and visual clutter. Urban fabrics are threatened by uncontrolled urban growth dissecting the traditional urban structures. In the historic core, the storm drainage network is largely insufficient, and during heavy rains the core streets are the only means to convey storm water. Visual clutter, particularly in the busiest commercial areas, is the result of physical decay of buildings and public spaces, presence of solid waste, uncontrolled signage and wires, traffic jams and uncontrolled parking.
- 5) **Threats to cultural heritage.** The built cultural heritage is threatened by lack of maintenance, neglect and encroachment; the heritage is further threatened by the lack of awareness of cultural values and of an effective legal protection framework. The remains of the ancient fortifications are in conditions of decay, and the Castle is threatened by unconcerned town-planning.
- 6) **Lack of socialization spaces** namely for the youth that form the majority of the population and that are lacking in cultural, educational and leisure activities.
- 7) **Decay and crisis of public spaces.** The main factors that affect the urban environment of Karak contribute to decrease the quality of the urban space and of the experience of the city for residents, visitors and tourists. The central public spaces are disappearing or are used by a few social groups, often by the poorest or less rooted in the community. The main bus station, an important interface of the core with the outside, is in a condition of decay that causes inconveniences and discomfort to local population and visitors. The recent realization of a peripheral bus station did not successfully address the issue traffic congestion whilst hampering the integration of the core within its region context.
- 8) **Economic stagnation.** The local economy is affected by a number of factors leading to economic stagnation. Existing tourist activities and assets remain underdeveloped, and Karak remains only a stop on the route from Amman to Petra. The potential assets in terms of human resources, skills and culture, remain largely under-utilized.

## 2.3 MAIN CONCEPT OF THE CITY REVITALIZATION PROGRAM

The main challenge that the historic core of Karak is facing is to recover its urban centrality and be revived with a new "social and economic mission" within its regional context.

Form a **social** point of view, the revived historic core must contribute to reconstruct social cohesion amongst the different social groups providing a common federating space for the entire population, where the cultural heritage is preserved and enhanced in both its symbolic and economic role, and urban space is improved for the benefit of residents and visitors.

From an **economic** point of view, the revived historic core will contribute to boost the existing tourism activities, which in Karak are concentrated mainly on the visit to the Castle, expanding the visitors' experience to include both the main commercial spine and a new heritage trail.



THE MAIN COMMERCIAL ROAD

Form an **urban** point of view, the focus is on the improvement of the socio-urban fabric, the recovery of commercial centrality and the improvement of the urban environment as a high quality civil space, providing new socialization spaces and managing the conflict of proximity functions.

The project aims at achieving this vision through a structured city revitalization program, that includes: (a) regulatory actions; (b) physical actions; and (c) capacity building actions.

## 2.4 DESCRIPTION OF THE PROGRAM

The **target area** of the CRP is the historic core of Karak. The perimeter is determined on the basis of the physical morphology, as the limit marked by the cliff, with an extension of approximately 56 hectares.

Within this perimeter, the most comprehensive actions of the program are concentrated on two urban structures.



The first action is focused on the enhancement of the urban axis composed by the **main commercial spine** of Al Malik Al Husayn Street, the group of heritage buildings located at the south-western end, Al Mu-jamma Street, the new Castle Piazza and the Castle. Having discarded, on the basis of the recent experiences, the hypothesis of complete pedestrianization of Al Malik Al Husayn Street as premature at this stage of urban rehabilitation, a pilot parking management plan (51 parking stalls) involving the use of parking meters has been developed.

The second development axis concerns the creation of a new pedestrian path along the remains of fortification located on the south eastern edge of the historic core, providing a new pedestrian access along the remains of the city wall, connecting, through an “**heritage trail**”, the Ottoman School up to the Castle. Through landscaping and appropriate restoration, this action will ensure the preservation and improvement of a portion of the historic core that lays in a condition of severe decay, and create a new quality urban space for residents and visitors.

These two actions will ensure high quality urban spaces for the benefit of the different social components, thus contributing to increase social cohesion. The new urban quality space will also increase the appreciation by the residents and the visitors of their experience of the city and will attract more visitors and tourists, thus contributing to boost the handicraft, trade and tourism related economic activities. The heritage trail will create also a new public outdoor space, that will cover an important deficiency of the core. It is assumed that new services will develop around this new axis, including cafes, restaurants and other forms of entertainment addressed to the youth and local population as well as to tourists.

Tightly related to this axis is the proposed **redevelopment of the bus terminal** area to create the necessary public space and a pole of activities. This action will include the development of a medium-size quality hotel, to improve the tourism facilities supply, and will complement the cultural attraction of the rehabilitated public space of the plaza in front of the Castle.

The overall **upgrading of the street network** and of the public space involves the entire perimeter. Using different weights of intervention, this action will mark the territory of the historic core as a quality urban space, but will be limited to the “horizontal” part of the space (public property). The approach of the city revitalization program to the upgrading of the public space is two-fold. The upgrading of the “horizontal” part, typically public property, is ensured by the direct intervention of the project that will fund and implement the overall up-grading of the street network and of the public space. The upgrading of the “vertical” part (i.e. the façades of the surrounding buildings) will be facilitated by the new regulatory framework that will ensure an appropriate level of quality and sustainability of all the building activities, within the perimeter. After adoption and enforcement of the new regulatory framework, all the building activities carried on within the perimeter will contribute to the achievement of a highest quality space.

The most significant actions will concentrate on Al Malik Al Husayn Street (main axis) and on other important streets such as Al Khider, Al Qal’a, Al Maydan, Al Malek Talal and Al Jami’Allumari Street.

While the physical actions described herein will have the most immediate impact on the city, the new **Karak Historic Core regulation** will operate in the background, gradually affecting all the aspects of the project

area, ensuring: (a) the preservation of cultural heritage; (b) the continuous improvement of the urban environment; and (c) a baseline continuation over time of the city revitalization process.

The new regulations are designed to govern the land use and the building activities to ensure that these respect and are compatible with the character of the city and to provide for the protection of cultural heritage.

Since the UNESCO Chart of Venice for Cultural Heritage Protection, the concept of cultural heritage has been increasingly widened. Today, the concept of heritage is no longer confined to “monuments” but also includes approaches, extensive sites and whole urban complexes for which the criteria are no longer just architectural merit but unity, universality and urban and spatial coherence deriving from the combination of a series of elements which may be of fairly little artistic value in themselves.

It has been recognized that the preservation of historical continuity in the environment is essential for the maintenance or creation of living conditions that enable humankind to discover its identity, to find its bearings both in the historical context and in its geographical setting in the broadest sense (physical, ethnical, etc.) and to acquire a sense of security amid social upheaval through having fully understood the changes occurring and thus being better equipped to control their effects.

One of the most disturbing factors in Karak urban environment is the visual clutter, particularly in the busiest commercial areas. Visual clutter could be the result of physical decay of buildings and public spaces, presence of solid waste, uncontrolled signage and wires, traffic jams and uncontrolled parking. The new regulation will contribute in keeping under control all these aspects, thus contributing to enhance the quality and livability of the urban environment within the perimeter.

Moreover, the continuous improvement of the urban environment will be further ensured by the specific norms concerning building rehabilitation works. The new regulation will keep under control the building rehabilitation and alteration activities of the private owners of buildings and will direct them in the direction of coherence with the overall city revitalization program.

Provided its institutional duties, Greater Karak Municipality has a central role to play in the city revitalization program. For this reason, a **capacity building** action is envisaged. This action includes the resources needed for the successful implementation of the city revitalization program, including the new Karak Historic Core Regulation.

As a result, it is expected that the improved municipal capacity will facilitate the launch and sustained continuation of the city revitalization process. Moreover, the new skills and management know-how gained by the Municipality within the context of the city revitalization program, targeted to the historic core, could be further expanded to cover the management of the whole city.

2.5 ECONOMIC SUMMARY

PROJECT ACTIONS		JD	US\$	%
K.01	Upgrading of the city core street network	1,913,394	2,700,621	31.16
K.01a	Rehabilitation of al Malk al Hussaym Street	151,246	213,473	2.46
K.01b	Rehabilitation of Salah Ad-din al Ayyubi Atreet	1,112,435	1,570,124	18.11
K.02	The new “heritage walk” along the eastern side of Karak	1,308,560	1,846,941	21.31
K.03	Redevelopment of the bus station	1,331,216	1,878,918	21.68
Capacity building			457,650	5.28
1 JD = US\$1,41				
Total cost of Karak CRP			8,667,727	100.00

OVERALL INVESTMENT COSTS BY ACTION

2.6 ACQUISITIONS

The acquisition of some lands/buildings, as described in the following table, is an essential pre-condition for the execution of the CRP. The Municipality will be responsible for the acquisitions within the deadline established by the implementation plan.

PROJECT ACTION	ACQUISITION OF	ESTIMATED COST
The upgrading of Salah Ad-din al Ayyubi Street	Land	500,000 JD
The new “heritage walk” along the eastern side of Karak	Buildings to be demolished	270,000 JD

SUMMARY OF ACQUISITIONS







### 3. The regulatory actions

#### 3.1 KARAK HISTORIC CORE REGULATION

##### RATIONALE AND MAIN OBJECTIVE

Historic city centers in Jordan are a resource that can strongly participate to the improvement of the living conditions of the local communities.

However, in most cases, very little perception of this valuable asset is registered. While the identification of the causes which created the conditions for lack of awareness from the socio economic point of view will be approached and discussed in the related sections of this study, the proposed building regulations are designed to regulate the building activities and ensure that these respect and are compatible with the historic character of Karak core city.

The regulation provides also for the protection of monuments, traditional buildings, green areas and open spaces (especially those that fit within a clearly identified archaeological/historical context) giving clear indications about the forms of intervention applicable to each context, the restrictions introduced and the level of protection to be achieved in the different cases.

Urban planning by means of zoning has been abandoned in these regulations to introduce an approach that more specifically focuses on the peculiar character of each and every component of the urban fabric. The regulation distinguishes between categories of buildings and categories of interventions accordingly. The empty urban areas (lands) that are relevant to the valorization of the urban fabric are also treated and regulated in this regulation since they are to be considered an integral part of the historic city centre.

The policies set by the regulations are especially designed to maintain and protect the traditional functions by consolidating the existing multi-functionality. In all cases where buildings have a clear commercial purpose, such as those lining the Al Malik Al Husayn Street, the regulatory policy confirms and reinforces this use through the rehabilitation of vacant or underused commercial structures.

Equally, the rehabilitation of residential buildings, mostly family houses, to be used as housing is strongly recommended in all cases where the original use was clearly residential.

The introduction/creation of alternative activities or the introduction of new or different functions is allowed by these regulations in the core city centre, provided that they are compatible with the characters of the traditional urban fabric. However, specific measures are indicated to dissuade or definitely forbid the introduction of activities that are clearly in conflict with the historic core characters or that, by introducing evident heavy changes, undermine the peculiar townscape of the core.

**The objective of the new Karak historic core regulation** is to ensure protection while fostering livability for the residents and visitors. In line with this principle, the new regulation gives relevance to rehabilitation activities aiming at improving the living conditions of the inhabitants inside their houses, while ensuring compatibility with the required level of respect for the general aesthetic of the historic city centre.

The new historic core regulation introduces a prescriptive framework where allowed building alterations must be coherent with the constructive techniques and the urban context.

Incentives to building recovery, upgrading, conservation (that could be provided in terms of reduced or spread payments of building taxes) are highly effective and educational in determining a tendency towards emulation.

It is expected that upon an inception phase of around three months from the beginning of the CRP execution, the **Cross-Departmental Municipal Unit** (CDMU) established in each city will be able to provide the services and monitoring action that are designed for. A complete documentation with detailed information on categories of buildings and categories of interventions permitted under the **Historic Core Regulations** will be submitted by the CDMU by the end of the first six months of activity.

In the case of projects requiring an urgent implementation (i.e.: emergency conservation, private initiatives, etc.) a detailed survey and study will be carried out by a private registered professional (on behalf of the landlord). However, this will be permitted only in the case of urgent needs for the use of a specific property, either land or building. The professional in charge must own a proved experience in city revitalization planning and in conservation. A specific study must be based on the guidelines provided in this study.

##### LEGAL FRAMEWORK

Since the principal law governing heritage protection in Jordan stipulates that only buildings erected before 1700 AD are protected, it is important to identify alternative measures to ensure a legal framework for the protection of Madaba's built heritage.

The Cities, Villages and Buildings Planning Law no. 79/1966 provides for the adoption of a master plan, and indicates that specific regulations can be adopted for built heritage. Under this law, the municipality must declare the Madaba historic centre (historic core) a protected area in which special urban planning regulations are to be applied.

Another possibility consists in promoting legislative change that would allow buildings built after 1700 AD to be classified as heritage and thus be protected with the approval of Interim Law No. 49/2003 for the Protection of Urban and Architectural Heritage.

Anyway, a new comprehensive legislation focusing on heritage also addressing the issues concerning urban revitalization is expected it will be introduced as a result of the currently ongoing debate at the various level of the Jordanian society. However, the time necessary for issuing and enforcing a new law would by far exceed any realistic timeframe for the implementation of the CRP.

This is why guidelines are provided in this study to allow the local authorities to bypass the lack of a specific legislation by avoiding overruling the instruments of regional and urban planning currently in use in Jordan but rather making the best use of them.

This will permit the local authorities to implement the CRP based on the current legislation without renouncing to the adoption of the currently highest international standards.

##### OBJECTIVES

- To identify the boundary of an action area (historic core) as a special conservation district with appropriate conservation and development control standards.
- To describe buildings or groups of buildings and urban areas to be protected, conserved or rehabilitated according to provisions that are specific for each building and work category.
- To set standards to be observed in the works of maintenance, restoration and improvements and conditions governing the new constructions.
- To introduce regulatory criteria for the improvement of public open spaces.
- To introduce regulatory criteria for the protection of the two most significant urban edges: the limit to the south-east and west of the Old City, immediately adjacent to the Castle and an extensive area along the northwestern edge defined by Al Malik Talal Street.
- To introduce regulatory criteria to moderate and restrict unsustainable types of development around the Castle and its slopes.
- To regulate all those "factors" that could cause visual clutter including: street signage; advertising and light signs of public and private activities; public lighting; urban furniture (public toilets, benches and others seats, telephone booths, garbage containers, clocks, automatic dispensers, etc.)
- To regulate all those "factors" that could cause visual clutter including: street signage; advertising and light signs of public and private activities; public lighting; urban furniture (public toilets, benches and others seats, telephone, booths, garbage containers, clocks, automatic dispensers, etc.)

##### DESCRIPTION

The new regulations will apply to a very specific portion of the territory referred to as the "historic core". The area corresponds with the Historic City centre of Karak.

The physical morphology helps to identify a logical perimeter as the topographic limit marked by the cliff that surrounds the core. Namely, the city core is delimited by Al Muntazzah Street and Al-Hizam Street to the north, the slope near Al Qal'a Street to the west, the Castle to the south, and Salah Ad-Din Al Ayyubi Street to the east. This perimeter thus encompasses the whole part of the urban fabric, which has been previously defined as the Old City of Karak.

The Old City is a reflection of an evolutionary process resulting in a tightly woven urban fabric and a mixed commercial and residential use,



which testify a lot of the origins of the built up area. The streets are organized on a grid pattern orientated north east to south west with another grid bisecting it at right angles. Within this grid there is an eclectic mix of residential, public and commercial land uses. Being the regional centre of the Governorate, the Old City has a large commercial core, which provides services to a large population.

The Castle is one of a limited number of historic assets within the Old City. Other heritage buildings are varied, few being more than 50 years old. Wide use of concrete as building material has been made. There are a limited number of traditional buildings constructed of stone and these are generally located close to the Castle.

While not ancient in appearance, the Old City does convey a feeling of antiquity with its form and structure. For this reason, changes to the buildings and to the urban volumes within the historic core must abide with the general criteria of conservation, integral recovery and comprehensive urban improvement.

Special attention will be paid to the peculiarities of the specific parts of the urban fabric, including: the Historic Archaeological evidences, the buildings, the open spaces and the infrastructural networks of historic, artistic and documentary interest

The new regulation focuses on modes of use and alteration of the buildings and related plots, and provides for specific urban and architectural prescriptions as well as implementation modalities for the city revitalization program actions.

### SUMMARY OF REGULATORY PROVISIONS

- **General provisions:** context of application; core boundary; definition and classification of buildings; action project areas; role of the CDMU.
- **Operative tools** for regulatory implementation: rules for permits and release modalities; categories of intervention.
- **Building use:** public spaces; architectural requirements; prescription for street furniture.

## 3.2 PARKING AND TRAFFIC MANAGEMENT

### PILOT PARKING METERS ACTION

The physical action K.01 - Upgrading of the street network - includes the realization of 51 new parking stalls along Al Malik Al Husayn Street, in order to improve the streetscape of Karak commercial core.

The new parking stalls will be managed by the Municipality as pilot payment parking through the provision of parking meter machines to be located within the parking stalls, with a ratio of one parking meter every two stalls. The Municipality will be the only authority in charge of the management of the parking stalls, and will therefore be responsible for enforcing the payment of the fee and for collecting the money from the machines.

In order to design a suitable management scenario for such an action, and to correctly estimate the revenues of such an activity for the Municipality, some preliminary assumptions have been made:

1) the payment timeframe will be from 6 a.m. to 10 p.m., thus the parking meters will be operational 16 hours each day. Parking after 10 in the evening will be free;

2) parking will be free on Friday and Saturday;

3) the parking fees will vary according to the time length of a car stop. According to available data, currently in Jordan parking fees rise from 0.25 to 0.75 JD; as for the King Talal Street new parking stalls the fee schedule would be as follows:

0.25 JD/hour	for the first hour
0.50 JD/hour	after the first hour
0.75 JD/hour	after the second hour

4) a monthly subscription of 15 JD would be available;

5) the parking stalls users will be divided into three different categories:

50% would be people coming to the city centre for shopping, thus they will occupy the parking for 1 hour on average;

30% would be people coming to the city centre not only for shopping reasons but also for business and to reach the public administration bureaux and will therefore occupy the parking for 3 hours on average;

20% would be the owners of the many commercial activities located in the commercial core, and they will occupy the parking for 8 hours a day on average each working day; most probably, those people will buy the monthly subscriptions in order to save their money without incurring into fines.

As shown by the following table according to the hypothesis above, each parking stall will be occupied by the same car for 3 hours on average, and the hourly fee paid by each user will amount to 0.43 US\$.

Users category	Parking average length	% of total users	Hourly fee	Average hourly fee
Shoppers	1 hour	50%	0.35	0.04
City center visitors	3 hours	30%	0.71	0.21
Shop-keepers (subscribers)	8 hours	20%	0.21	0.18
<b>Average</b>			<b>0.43</b>	

On the other side, with reference to the running costs that the Municipality would afford in order to manage the parking network, they will fall mainly under two items: personnel costs and maintenance costs.

As for personnel, considering that the 25 parking meters will function 16 hours per day, 4 public employees will be necessary in order to control and collect the money: 3 8-hour shift employees plus a supervisor. According to the cost estimates presented in Section 5 of this Annex as for the recruitment of personnel, an annual cost of 3,360 US\$ can be estimated for each public employee, thus resulting in a total cost of 13,440 US\$ per year for the personnel in charge of the management of the payment parking.

As for the maintenance, it has been estimated an annual cost of about 5,000 US\$ per year.

<b>Annual running costs</b>	<b>18,440</b>
Personnel (3 employees + 1 supervisor x 2,380 JD per year)	13,440
Maintenance	5,000

Given the above, it can be stated that the pilot payment parking action will result to be rather remunerative for Karak Municipality, since the financial breakeven of the action will be reached with only 21% of the parking stalls normally used.

Average hourly fee	0,43
Parking hours supplied yearly (16 hours/day X 51 parking stalls X 250 days)	204,000
Breakeven	42,835
<b>Parking stalls occupancy breakeven rate</b>	<b>21%</b>

This means that if the occupancy rate of the payment parking rises to 50%, the Municipality will gain almost 25,500 US\$ per year.

### TRAFFIC MANAGEMENT PROGRAM

In the medium term, a more comprehensive **traffic management program** is to be developed and enforced, to organize, administer, govern and rule the vehicular traffic within the historic core. The objectives of the traffic management plan will be:

- 1) to make the safest and most productive use of existing road-based transport system resources;
- 2) to adjust, adapt, manage and improve the existing transport system to meet specific objectives, including (but not limited to) the protection of the most sensible components of the urban environment;
- 3) to maximize the effectiveness of existing infrastructures, in order to avoid or minimize capital expenditures;
- 4) to improve traffic safety and protect the most vulnerable traffic components, such as pedestrians, bicycles and other non-motorized vehicles;
- 5) to reduce the impact of road traffic on the environment (i.e. to reduce pollution, noise, etc.).

The contents of the Traffic Management Program will include:

- 1) traffic regulation (junction canalizations; signing and lining; traffic signals; area traffic control; pedestrian facilities and street space management; facilities for bicycles and other non-motorized vehicles; bus priority);
- 2) demand management (parking management; control and pricing; traffic calming; pedestrian only zones);
- 3) road use and classification (functional classification of road networks; road use regulation);
- 4) road safety (institutional arrangements and practices; accident data collection and analysis and remedial engineering; enforcement and education; road user education, enforcement, including equipment and training).



## 4. Physical actions

### 4.1 K.01 - UPGRADING OF THE STREET NETWORK

#### ABSTRACT OF THE PROPOSED PROJECT

The project's objective is that of creating a new circulation pattern within the historical city core that will rationalize the allocation of spaces dedicated to vehicular and pedestrian traffic.

In particular, the project focuses on the solution of the following site-specific problems:

- The rationalization and beautification of the street sections of Al Malik Al Husayn Street and Al Mujamma' Street.
- The landscape enhancement of the street section of Salah Ad-Din Al Ayyubi Street (SEE SALAH AD-DIN AL AYYUBI STREET UPGRADING - SITE SPECIFIC ACTION).
- The rationalization and beautification of the Salah Ad-Din Al Ayyubi/Al-Madeenah street junction (SEE SALAH AD-DIN AL AYYUBI STREET UPGRADING - SITE SPECIFIC ACTION).

The project proposes different levels of intervention depending on the location of the different streets and their role within the overall circulation dynamics within the urban fabric. The project aims at creating an integrated network of pedestrian paths so as to allow for an overall upgrading of the urban environment and its quality of life.



VIEW FROM THE SALAH AD-DIN SQUARE TO THE AL MAIDAN ST

Above and below-grade infrastructural refurbishment will be provided in connection to the proposed road works including the provision of an efficient storm water drainage system.

Vehicular accessibility shall be maintained for the entire area.

The necessary rationalization of vehicular movement through the historic core will be accomplished through the development of an organic traffic management plan during the detailed design phase.

The enforcement of traffic regulations and the careful reshaping of the street sections with the provision wherever possible of wider sidewalks and street side parking stalls for private cars and for loading and unloading of commercial goods will be necessary contributions to the overall success of the project..

#### ASSESSMENT OF THE EXISTING INFRASTRUCTURAL SITUATION AND PROPOSED INTERVENTIONS

##### TRAFFIC

The historic core of Karak is completely taken over by the vehicular traffic and informal car parking and the overall physical conditions of the street network are generally rather precarious. Street sections are often too narrow to allow for the provision of efficient sidewalks and/or street side parking.

Although the existing volume of traffic on the internal road network is rather low, circulation during the morning and lunchtime peak periods, is characterized by queues and blockages primarily due to behavioral problems associated with private and public transport vehicles and with the delivery of commercial goods to the local commercial outlets.

Vehicle parking occurs on virtually all streets within the Old City and double parking is a common feature which severely infringes on the capacity of those internal roads to absorb and regulate the volume of traffic generated by every day commercial activity and tourist arrivals.

The lack of adequate sidewalk width, pedestrian priority areas and crossings increases the risk of accidents between vehicles and pedestrians and hampers the possibility of a safe and continuous pedestrian experience of the city.

Even if the city is served by two bus stations, one at the southern edge of the historic core for urban buses and another outside the central core, to east of the Mohabite Castle, for long distance connections, there is a large number of public transport services originating within the Old City and serving the surrounding villages. The majority of these services are unregulated mini buses which are major contributors to delays and congestion.

There is an evident problem concerning the enforcement of a correct use of the two bus terminals, so as to take proper advantage of the functional differentiation between urban and regional public transportation.

The rehabilitation of the central bus station (SEE ACTION...) and the

functional rehabilitation of the ancient East Gate Tunnel, together with the upgrading of the Salah Ad-Din Al Ayyubi Street and Al Madeenah Street as the vehicular eastern gateway to the Old City (SEE RELATED SITE SPECIFIC ACTION), will contribute to the solution of the problem by providing an easier and more pleasant pedestrian connection between the two bus stations whilst rationalizing the vehicular congestion around the central bus compound.

The project will cover the entire street pattern of the historic urban core.

Possible opposition from shop owners and car drivers to vehicular traffic restrictions is expected.



VIEW OF AL MALIK AL HUSAYN STR. & THE SALAH AD-DIN SQUARE

##### SOLID WASTE COLLECTION

The Municipality manages the collection of garbage and the street cleaning in an effective manner by using a combination of compactor trucks and small hand-drawn wheeled bins for narrow streets. Refuse from the wheeled bins is transferred to open trucks before being transported to the waste disposal site. The dump is 40 km away from Karak.

The present system appears satisfactory except for the age and condition of the equipment used to store the waste prior to collection.

##### STORM WATER DRAINAGE

There is only one storm water drainage line 450 mts. long, located in the eastern part of the study perimeter, which drains into the nearby Wadi. The existing drainage is nevertheless insufficient.







Consequently, during rainfall the roads in this area of the city core are often flooded. Likewise, the central bus station compound is another sensitive location in terms of storm water drainage shortcomings.

There is the need for a new 450 mt. long box culvert (1.5 x 1.5m) with branches (600 mm. and 900mm. diameter pipes) to compensate for the shortcomings of the existing system.

In the case of the bus station compound an additional new 350 mt. long, 900 mm. wide, reinforced concrete main is necessary. The line will be provided with an adequate number of side branches (600 mm. and 400 mm. diameter pipes).

#### WATER SUPPLY

Water supply is provided by the Ministry of Water and Irrigation (Water Authority)

The existing network, constructed in 1986, covers the entire historic core and has been suffering from corrosion and abundant leakage.

The main network lines are 80/100/150 mm. diameter steel and/or galvanized pipes with 50 mm. diameter galvanized branches and 25/12.5 mm. diameter galvanized house connections.

Because some of the house connections are laid above ground, they have been subjected to extensive damage or corrosion.

There is a need to rehabilitate the entire network using iron pipes for the main lines and polyethylene pipes for the branches and house connections (with the only exception of Al Malik Al Husayn Street whose main was recently substituted).

#### SEWAGE

The historic core is completely served by the existing network, which drains into the Karak treatment plant, located 2 km from the old city.

The network is in acceptable conditions and the maintenance is done on call by the water authority. The only necessary maintenance is the adjustment of manhole covers due to the new street profiles.

#### ELECTRICITY

The Jordan Electric Power Company supplies electricity to the city. The study perimeter/historic core is completely served by the network. Although electrical supply is regular and reliable the overhead distribution causes heavy visual pollution, particularly in the historic areas. There are frequent blackouts in winter.

#### PUBLIC LIGHTING

The historic core is completely served by the existing system which is none the less old and needs substantial upgrading.

The present use of mercury vapor lamps contributes to the unsatisfactory standard of street lighting. Changing to high-pressure sodium lamps for the main central urban areas would improve visibility and functional efficiency.

#### TELECOMMUNICATIONS

The study perimeter is completely covered by the Jordan Telecom net-

work.

### COST ASSESSMENT OF INFRASTRUCTURAL UPGRADING

#### STORM WATER DRAINAGE (EASTERN AREAS OF THE CITY CORE)

ITEM	Quantity	Unit Rate	Total (JD)
Box culvert 1.5 x 1.5 mt.	450 mts.	250 JD/mt.	112.500
900 mm. reinforced concrete pipes	220 mts.	150 JD/mt.	33.000
600 mm. reinforced concrete pipes	230 mts.	120 JD/mt.	27.600
<b>TOTAL</b>			<b>173.100</b>

#### STORM WATER DRAINAGE (CENTRAL BUS STATION)

ITEM	Quantity	Unit Rate	Total (JD)
900 mm. reinforced concrete pipes	250 mts.	150 JD/mt.	37.500
600 mm. reinforced concrete pipes	225 mts.	120 JD/mt.	27.000
600 mm. reinforced concrete pipes	400 mts.	100 JD/mt.	40.000
<b>TOTAL</b>			<b>104.500</b>
<b>FINAL COST</b>			<b>277.600 JD</b>

#### WATER SUPPLY

ITEM	Quantity	Unit Rate	Total (JD)
150 mm. Ductile Iron Pipe	1.200 mts.	40 JD/mt.	48.000
100 mm. Ductile Iron Pipe	3.500 mts.	35 JD/ mt.	122.500
63 mm. Polyethylene	10.000 mts.	20 JD/ mt.	200.000
House Connections	15.000 mts.	15 JD/ mt.	225.000
<b>TOTAL</b>			<b>595.500</b>

#### SEWAGE

ITEM	Quantity	Unit Rate	Total (JD)
Adjustment of man-holes.	150 (Number)	50 JD/each	7.500
<b>TOTAL</b>			<b>7.500</b>

**FINAL COST OF INFRASTRUCTURAL REFURBISHMENT: 880.600JD.**

### PROJECT RATIONALE AND MAIN OBJECTIVE

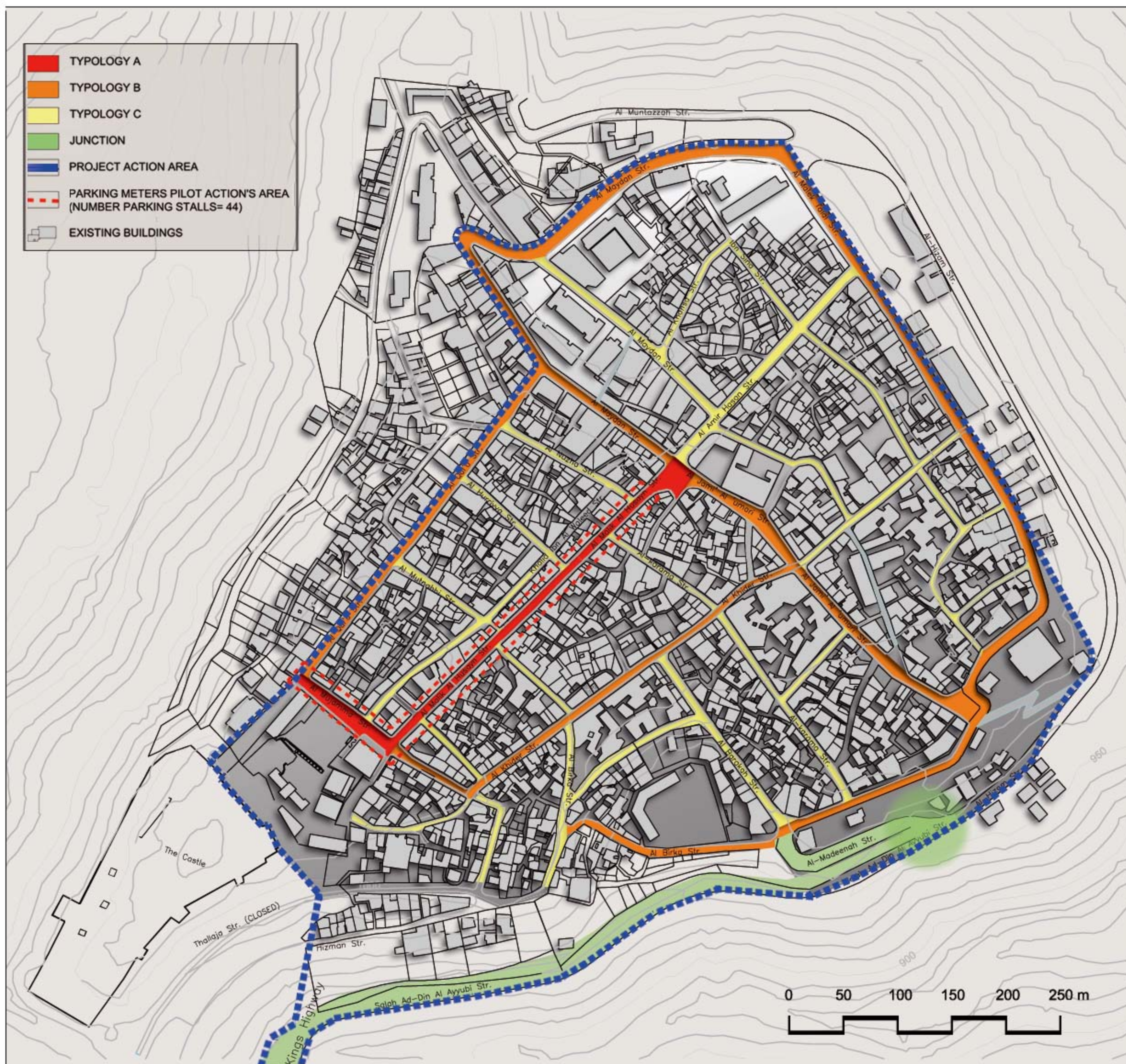
As a complement to the integral re-design of the main bus station and the creation of the new Eastern Heritage Trail, the improvement of the streetscape and circulation patterns will enhance livability and environmental conditions in the historic core, by making pedestrian movements safer and more pleasant.



VIEW OF AL KHIDER STR.











VIEW OF AL MALIK AL HUSSAYN ST. SQUARE



VIEW OF AL BIRKA STR. EAST SIDE OF THE BUS STATION

The principal project objectives are:

- Creation of a pattern of safe pedestrian paths, linking the different neighbourhoods and points of interest, in connection with the provision, wherever possible, of private and commercial street side parking facilities for visitors, residents and shopkeepers
- Re-design of the street sections in the city core, in order to improve the architectural and functional quality of the historic streetscape and the spatial continuity of the existing network of economic activities
- Reorganization of the vehicular circulation with the provision of speed reducing devices and other traffic regulation measures, according to the design and planning criteria of an organic traffic management plan to developed during the detailed design phase.
- Improvement of the streetscape and environment so as to create a pleasant walking and shopping experience for the local population and tourists.
- Provision of an efficient storm water drainage system.
- Refurbishment of damaged below-grade utilities.
- Awareness raising of the local population regarding the rehabilitation of building facades flanking the refurbished streets\_within the framework of the new historic core regulation.

Moreover, the action is focused on the solution of some site-specific issues that include:

- the rationalization and beautification of the street sections of Al Malik Al Husayn Street and Al Mujamma' Street.
- the landscape enhancement of the street section of Salah Ad-Din Al Ayyubi Street;
- the rationalization and beautification of the Salah Ad-Din Al Ayyubi/ Al-Madeenah street junction.

### PROJECT ELEMENTS

The project will provide the integral refurbishment of the street network of the historical core according to the following typological categories:

- 1) **Type A) PRIMARY STREETS (AL MALIK AL HUSAYN STR./AL MUJAMMA' STR.)**- These streets which form Karak's central spine and are directly connected with the Mohabite Castle and the newly renovated Castle Piazza will be provided with wider sidewalks (150 cm. minimum width) with 30 cm. curbs, new street lighting and street side parking for private and commercial vehicles, including parking stalls for handicapped and stalls for loading and unloading of commercial goods. Below and above grade infrastructural refurbishment will be provided. The existing basalt carriageway and sidewalk paving on Al Malik Al Husayn will be confirmed and prolonged onto Al Mujamma' Street. Street side planting of autochthonous tree species will be provided.
- 2) **Type B) SECONDARY STREETS** - All streets which provide strategic connections with the principal tourist and cultural assets of the city or which provide access to the major concentrations of urban

commercial activity. These streets will be provided, wherever possible, with wider sidewalks with 30 cm. curbs, new street lighting and street side parking for private and commercial vehicles, including parking stalls for handicapped and stalls for loading and unloading of commercial goods. Wherever necessary the streets will also be provided with storm water drainage mains, drains and traps within the framework of the overall infrastructural refurbishment. Street paving will be in bituminous asphalt, and sidewalk paving will be in modular concrete units with concrete curbs.

- 3) **Type C) TERTIARY STREETS** - All remaining streets. These street sections will be redesigned so as to allow for adequate storm water surface down flow towards nearby drains. These streets will be re-paved with bituminous asphalt and provided, if possible, with sidewalks and/or protection devices for pedestrian traffic. Existing street lighting will be refurbished and/or new overhead street lighting will be provided.

### PROJECT INTERVENTIONS

#### Type A) PRIMARY STREETS

The intervention will consist of:

- 1) Land preparation (excavations and filling, demolitions and removal of all non required elements and debris)
- 2) Carriageway and parking stalls cover with recuperated and/or new basalt modular elements
- 3) Sidewalks widening and re-paving with recuperated and/or new basalt modular elements (sidewalks 30 cm high).
- 4) Basalt sidewalk curbs, including special ramped pieces for handicapped access.
- 5) Refurbishment of damaged below-grade utilities (SEE DETAILED ASSESSMENT).
- 6) Public lighting refurbishment and/or provision of new lighting.
- 7) Street furniture (Garbage cans, street side seating)
- 8) Signage (horizontal and vertical)
- 9) Planting of autochthonous tree species including planting grills with agricultural soil

#### Type B) SECONDARY STREETS

The intervention will consist of:

- 1) Land preparation (excavations and filling, demolitions and removal of all non required elements and debris)
- 2) Carriageway and parking stalls cover with bituminous asphalt.
- 3) Sidewalks widening and re-paving with modular concrete unit (sidewalks 30 cm high).
- 4) Sidewalk curbs in modular concrete unit, including special ramped pieces for handicapped access.
- 5) Refurbishment of damaged below-grade utilities (SEE DETAILED ASSESSMENT).



- 6) Storm water drainage (WHEREVER NECESSARY/ SEE DETAILED ASSESSMENT) - The proposed storm water drainage network will comprise a combination of surface flows within the road cross section as well as, where necessary, a buried pipe network supported by gullies located at strategic points along the principal road network.
- 7) Public lighting refurbishment and/or provision of new lighting.
- 8) Street furniture (Garbage cans, street side seating)
- 9) Signage (horizontal and vertical)
- 10) Planting of autochthonous tree species including planting grills with agricultural soil

The intervention will consist of:

- 1) Land preparation (excavations and filling, demolitions and removal of all non required elements and debris)
- 2) Carriageway cover with bituminous asphalt
- 3) Sidewalk on the same level of the street with a protection with vertical elements in metal or natural stone (75 cm high, average distance: 1.5 mt.)
- 4) Surface sloping for storm water drainage within the framework of the overall refurbishment of damaged below-grade utilities (SEE DETAILED ASSESSMENT).
- 5) Public lighting refurbishment and/or provision of new lighting.
- 6) Street furniture (Garbage cans)
- 7) Signage (horizontal and vertical)

#### STAKEHOLDER CONSIDERATIONS

Most of the Karak central core population considers vehicular traffic as a major problem with regards to the possibility of outdoor social encounter. The original function of the suq as the traditional urban meeting place is no longer available due to the progressively decreasing areas reserved for pedestrians.

Street section refurbishments should be preventively discussed with local shop owners in order to avoid preconceived opposition and promote the positive commercial repercussions deriving from the overall upgrading of the urban environment.

#### FURTHER STUDIES NEEDED

- Institutional implementation and monitoring responsibilities and agreements.
- Extensive topographical surveys; archaeological surveys and excavations.
- Extensive detailed infrastructure and utility assessment
- Architectural surveys; structural surveys, analyses and assessments.
- Detailed traffic management plan.

- Detailed architectural and engineering design work.
- Careful phasing of the works so as to allow for the efficient operation of the streets during the course of the works.

#### COST ESTIMATES

##### A) WORKS

ROAD CONSTRUCTION:		
Type B (Total area Sq. Mts 22,470 X JD/sq.mt 16)	JD	359.520
Type C (Total area Sq. Mts 15,606 X JD/sq.mt 11)	JD	174.787
UTILITIES UPGRADING (see detailed cost estimate)	JD	847.600
TRAFFIC MANAGEMENT PLAN (lump sum)	JD	25.000
<b>TOTAL COST OF THE WORKS</b>	<b>JD</b>	<b>1.406.907</b>

##### B) ADDITIONAL PROVISIONS

b1) TECHNICAL EXPENSES		
Detailed design consultancy ( 8% of A )	JD	112.553
Construction supervision and management ( 8% of A )	JD	112.553
Topographical & archaeological surveys/specialistic investigations ( 5% of A )	JD	70.345
b2) CONTINGENCIES (15% of A)	JD	211.036
<b>TOTAL COST OF THE ADDITIONAL PROVISION</b>	<b>JD</b>	<b>506.487</b>

<b>FINAL ACTION PROJECT COST (A+B)</b>	<b>JD</b>	<b>1.913.394</b>
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#### AL MALIK AL HUSSAYM STREET UPGRADING

##### A) WORKS

ROAD CONSTRUCTION:		
Type A - Al Malk Al hussaym str. - Al Mujamma str. (Total area Sq. Mts 5,055 X JD/sq.mt 22)	JD	111.210
<b>TOTAL COST OF THE WORKS</b>	<b>JD</b>	<b>111.210</b>

##### B) ADDITIONAL PROVISIONS

b1) TECHNICAL EXPENSES		
Detailed design consultancy ( 8% of A )	JD	8.897
Construction supervision and management ( 8% of A )	JD	8.897
Topographical & archaeological surveys/specialistic investigations ( 5% of A )	JD	5.561
b2) CONTINGENCIES (15% of A)	JD	16.682
<b>TOTAL COST OF THE ADDITIONAL PROVISION</b>	<b>JD</b>	<b>40.036</b>

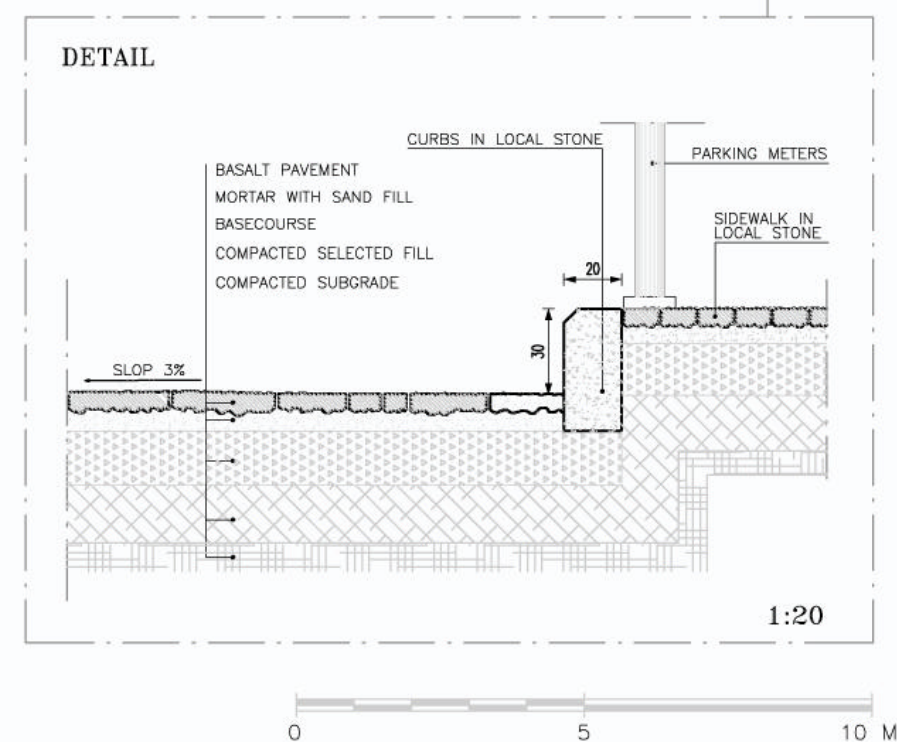
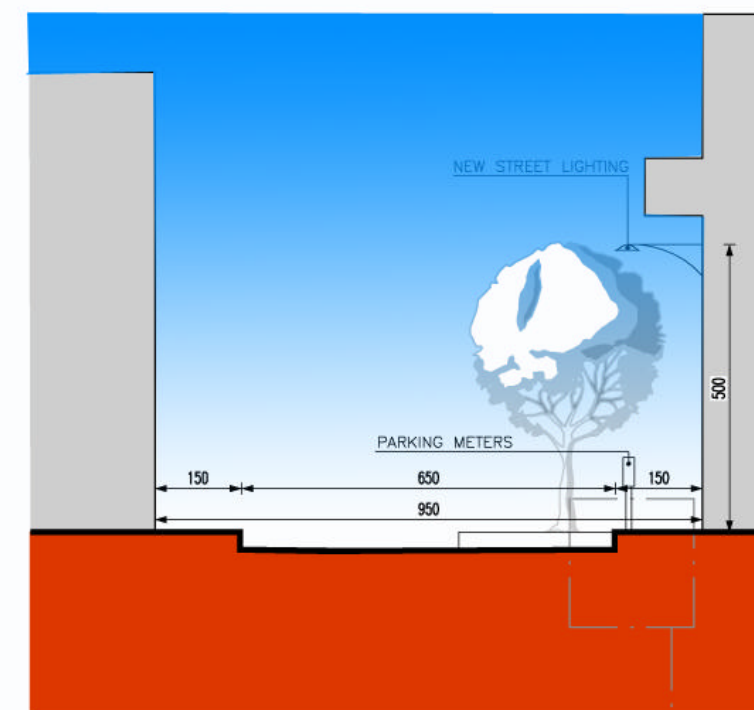
<b>FINAL ACTION PROJECT COST (A+B)</b>	<b>JD</b>	<b>151.246</b>
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#### PROJECT TIMING

The time allocated for the implementation of the action project is based on the following phasing:

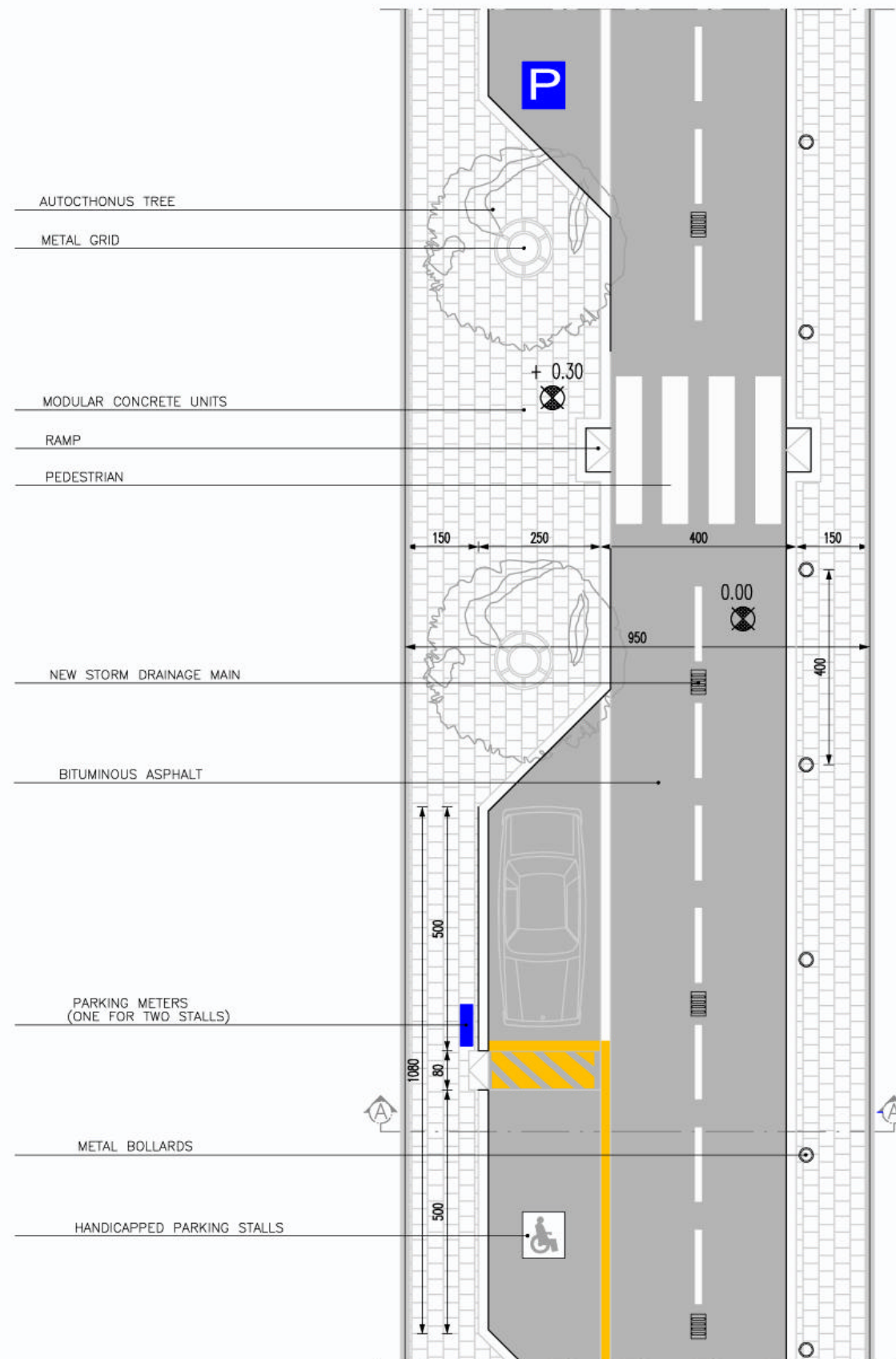
Design stage –	10 months
Work stage –	18 months
Total implementation time –	28 months



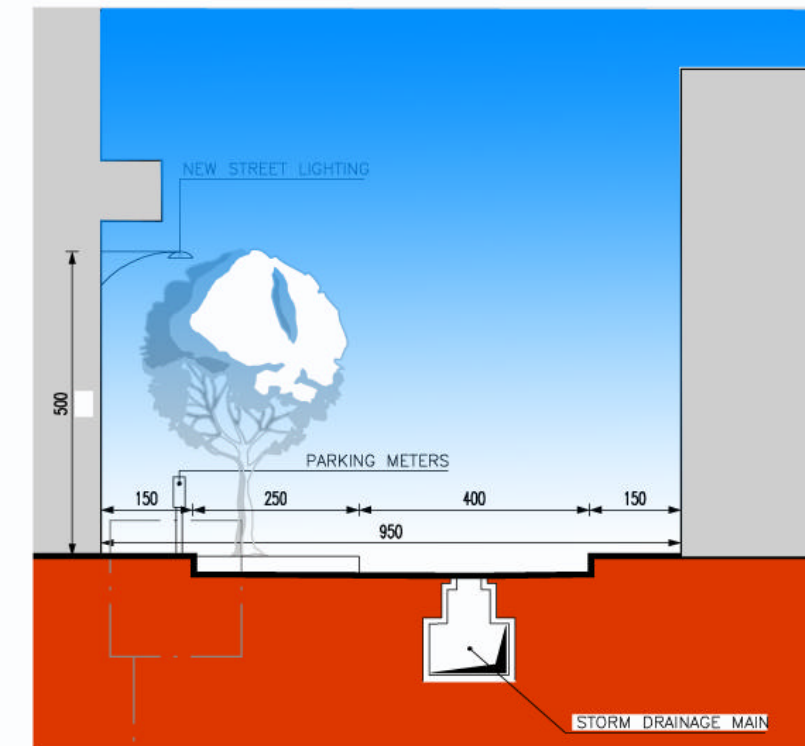




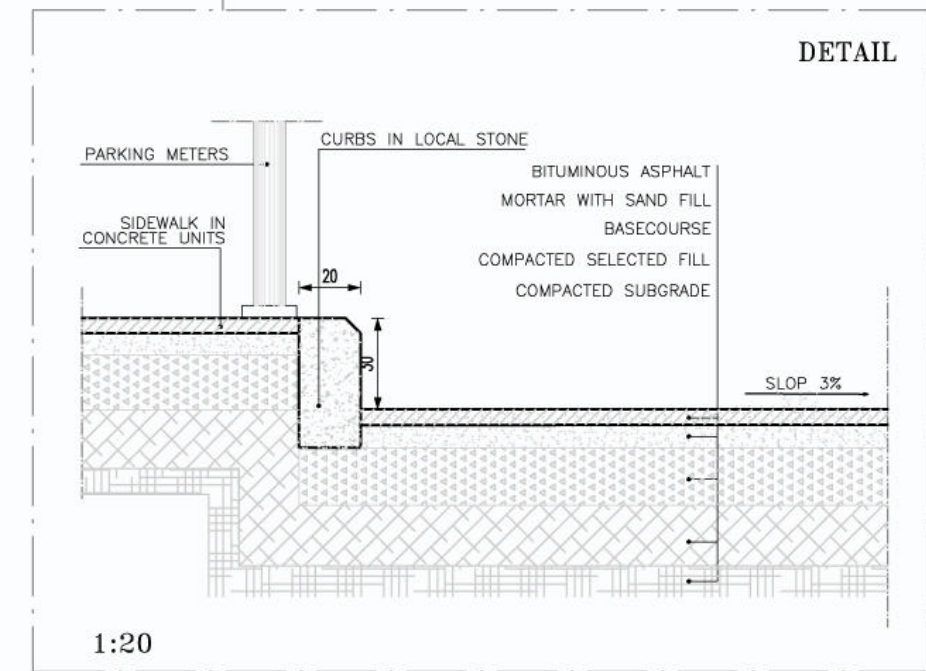
TYPOLGY B



## SECTION A - A



## DETAIL



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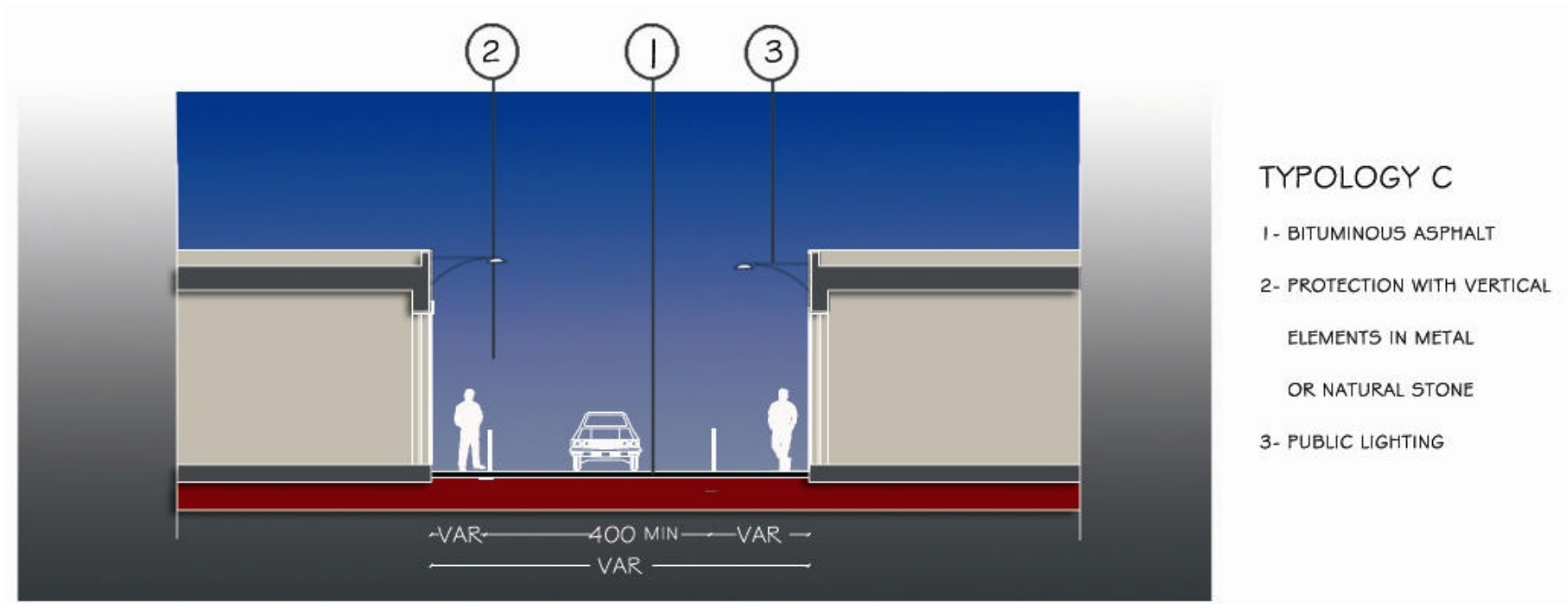




AL MUJAMMÀ STREET



AL JAMI AL UMARI STREET





## SITE SPECIFIC PROJECT

### THE LANDSCAPE ENHANCEMENT OF SALAH AD-DIN AL AYYUBI STREET

#### ABSTRACT OF THE PROPOSED PROJECT

The project's objective is that of upgrading the landscape characteristics of the Salah Ad-Din Al Ayyubi Street and its junction with the Al Madeenah Street so as to beautify the approach to the city from the East.

Salah Ad-Din Al Ayyubi Street and its junction with Al Madeenah Street interact with the new Heritage Trail and with the integral refurbishment of the main Bus Station, to form an integrated urban rehabilitation system involving the entire eastern boundary of historic Karak.

The project proposes the re-definition of the Salah Ad-Din Al Ayyubi Street section based on the provision of a continuous terraced planter, clad in local natural stone along the foot of the Old City's plateau. The planter will have sufficient depth to allow for the planting of autochthonous tree species so as to replicate the relatively recent planting which occurred on the opposite side of the street. The double row of trees flanking the street will enhance its role as an important approach to the Old City whilst providing at the same time a base-line "green filter" for Karak's eastern rocky slope.

The rationalization and beautification of the junction between Salah Ad-Din Al Ayyubi Street and Al Madeenah Street is based on the following morpho-typological criteria:

- Re-design of the Salah Ad-Din Al Ayyubi Street section so as to provide for a sidewalk paved with modular concrete units along the foot of the hill, in order to allow for a continuous, safe, pedestrian path linking the refurbished Main Bus Station to the new, regional one to the east of the historic core.
- Provision of a double, terraced stone-clad planter along the western border of Salah Ad-Din Al Ayyubi Street for the planting of autochthonous trees.
- Re-design of the Salah Ad-Din Al Ayyubi Street / Al Madeenah Street junction section so as to provide for a sidewalk paved with modular concrete units, surface sloping of the street pavement so as to favor storm water discharge into the surrounding agricultural soil, new street furnishings (garbage containers) and public lighting.
- Provision of a stone-clad planter/carriageway separator at Salah Ad-Din Al Ayyubi Street / Al Madeenah Street junction for the planting of decorative autochthonous greenery and trees.
- New horizontal and vertical signage.

#### PRESENT STATE AND USE

The eastern front of historic Karak is presently in a state of diffused decay. The functional chaos and the dramatic lack of urban décor of the main Bus Station compound, and the abusive buildings which infringe upon the morphological integrity of the city walls contribute to the perception of this area as Karak's "back exit".

Specifically speaking, the conditions of Salah Ad-Din Al Ayyubi Street carriage way is acceptable while the existing sidewalk and the exit of the East Tunnel is in urgent need of repair and upgrading.

#### PROJECT RATIONALE AND MAIN OBJECTIVES

Together with the overall urban rehabilitation of Karak's east front, the landscape enhancement of Salah Ad-Din Al Ayyubi Street and the beautification of its junction with Al Madeenah Street will improve livability and environmental conditions in the historic core, by providing a safer and more efficient connection between the Main Bus Station and the urban reality of the new suburban developments to the east including the new public park and the new bus station.

The principal project objectives are:

- Enhancement of the environmental and landscape characteristics of the eastern front of the Old City through the creation of a new, recognizable, integrated urban morphological system including the new Heritage Trail and the new refurbished Main Bus Station.
- Creation of a safe pedestrian path, linking the Old City to the existing public park, the new bus station and the eastern residential suburbs, including the rehabilitation of the exit of the restored Eastern Gate tunnel.
- Rationalization of the vehicular traffic flow within the framework of the detailed traffic management plan to be developed during the detailed design stage.
- Re-design and beautification of the Salah Ad-Din Al Ayyubi / Al Madeenah Street junction.

#### MAIN PROJECT ELEMENTS

The environmental upgrading of Salah Ad-Din Al Ayyubi Street is based on the interplay of the following project elements:

- Landscape rehabilitation of the eastern front of the Old City through the provision of continuous planting of autochthonous tree species along the foot of the Karak plateau and including all the necessary landscaping of the slope itself.
- Landscape and environmental rehabilitation of the eastern slope of the Karak plateau, including soil consolidation, land reshaping and greenery planting.
- Beautification of the Salah Ad-Din Al Ayyubi Street section through the provision of a continuous, double, stepped and stone clad planter; a continuous pedestrian sidewalk along the foot of the existing plateau and a new exit for the East Gate tunnel.
- Rationalization of the vehicular and pedestrian traffic flows

#### PROJECT INTERVENTIONS

The intervention will consist of:

- 8) Land preparation (excavations and filling, demolitions and removal of all non required elements and debris)
- 9) Refurbishment of below-grade utilities including the provision of an

efficient storm water drainage system (SEE DETAILED INFRASTRUCTURAL ASSESSMENT).

- 10) Al Madeenah Street carriageway cover with bituminous asphalt.
- 11) Al Madeenah Street carriageway surface sloping (and/or connection to the below-grade infrastructural network) of carriageway section so as to ensure proper storm water down flow to surrounding agricultural land.
- 12) Sidewalks widening and re-paving with modular concrete units..
- 13) Sidewalk curbs in local natural stone, including special ramped pieces for handicapped access.
- 14) East Tunnel exit on Salah Ad-Din Al Ayyubi Street paved in modular concrete elements contained by stone curbs.
- 15) Public lighting
- 16) Street furniture (garbage containers).
- 17) Signage (horizontal and vertical)
- 18) Planting of autochthonous tree and greenery species including planting grills with agricultural soil

#### TECHNICAL OPTION

Presently, vehicular traffic approaching Karak from the East is diverted from the Salah Ad-Din Al Ayyubi Street / Al Madeenah Street junction and obliged to circumnavigate the entire central core in order to enter into the city from the West on Al Maydan Street. The impossibility of penetrating the historic urban fabric from the East, together with the state of severe decay of the urban fabric in this area contribute to the perception of the city's eastern urban front as Karak's "back exit".

In order to properly enhance the urban significance of the project, a technical option envisaging the possibility of transforming the Salah Ad-Din Al Ayyubi Street / Al Madeenah Street junction into the vehicular eastern gateway to the Old City was developed (SEE TECHNICAL OPTION DRAWINGS).

The rationalization and beautification of the junction between Salah Ad-Din Al Ayyubi Street and Al Madeenah Street is, in this case, based on the following criteria:

- Functional upgrading and beautification of the Al Madeenah Street section through its transformation into a two-way street including the provision of new street lighting and furnishings so as to allow for vehicular access to the Old City from the east (OPTION TO BE VERIFIED W/TRAFFIC MANAGEMENT PLAN DURING DETAILED DESIGN PHASE).
- New horizontal and vertical signage, including a traffic light (IF CONFIRMED BY DETAILED TRAFFIC MANAGEMENT PLAN) at the actual road intersection, so as to ensure a safe and more efficient vehicular traffic flow regulation .

The feasibility of this option will have to be assessed within the framework of an organic traffic management plan to be developed during the detailed design phase.





PANORAMIC VIEW



VIEW OF THE SALAH AD-DIN STR.



## STAKEHOLDER CONSIDERATIONS

The eastern slope of the Karak plateau is private property, the Municipality will therefore have to expropriate the land prior to the implementation of the project (SEE COST ESTIMATE).

## FURTHER STUDIES NEEDED

- Institutional implementation and monitoring responsibilities and agreements.
- Topographical surveys; archaeological surveys and excavations.
- Detailed infrastructure and utility assessment
- Architectural surveys; structural surveys, analyses and assessments.
- Detailed botanical study for the landscaping of the Karak eastern slope.
- Detailed landscape, architectural and engineering design work.
- Careful phasing of the works so as to allow for the efficient operation of the streets during the course of the works.

## COST ESTIMATES

### A) WORKS

SALAH AD-DIN AL AYYUBI STREET - pedestrian paths (Total area Sq. Mts 940 X JD/sq.mt 30)	JD	28.200
SOFT LANDSCAPING (Total area Sq. Mts 17,000 X JD/sq.mt 20)	JD	340.000
Salah Ad-Din Al Ayyubi/ Al Madeenah Street junction (Total area Sq. Mts 3,070 X JD/sq.mt 16)	JD	49.120
UTILITIES UPGRADING - JUNCTION (see detailed cost estimate)	JD	33.000
<b>COST OF THE WORKS</b>	<b>JD</b>	<b>450.320</b>

### B) ADDITIONAL PROVISIONS

#### b1) TECHNICAL EXPENSES

Detailed design consultancy ( 8% of A )	JD	36.026
Construction supervision and management ( 8% of A )	JD	36.026
Topographical & archaeological surveys/specialistic investigations ( 5% of A )	JD	22.516

b2) CONTINGENCIES (15% of A)	JD	67.548
<b>COST OF THE ADDITIONAL PROVISION</b>	<b>JD</b>	<b>162.115</b>

<b>TOTAL ACTION PROJECT COST (A+B)</b>	<b>JD</b>	<b>612.435</b>
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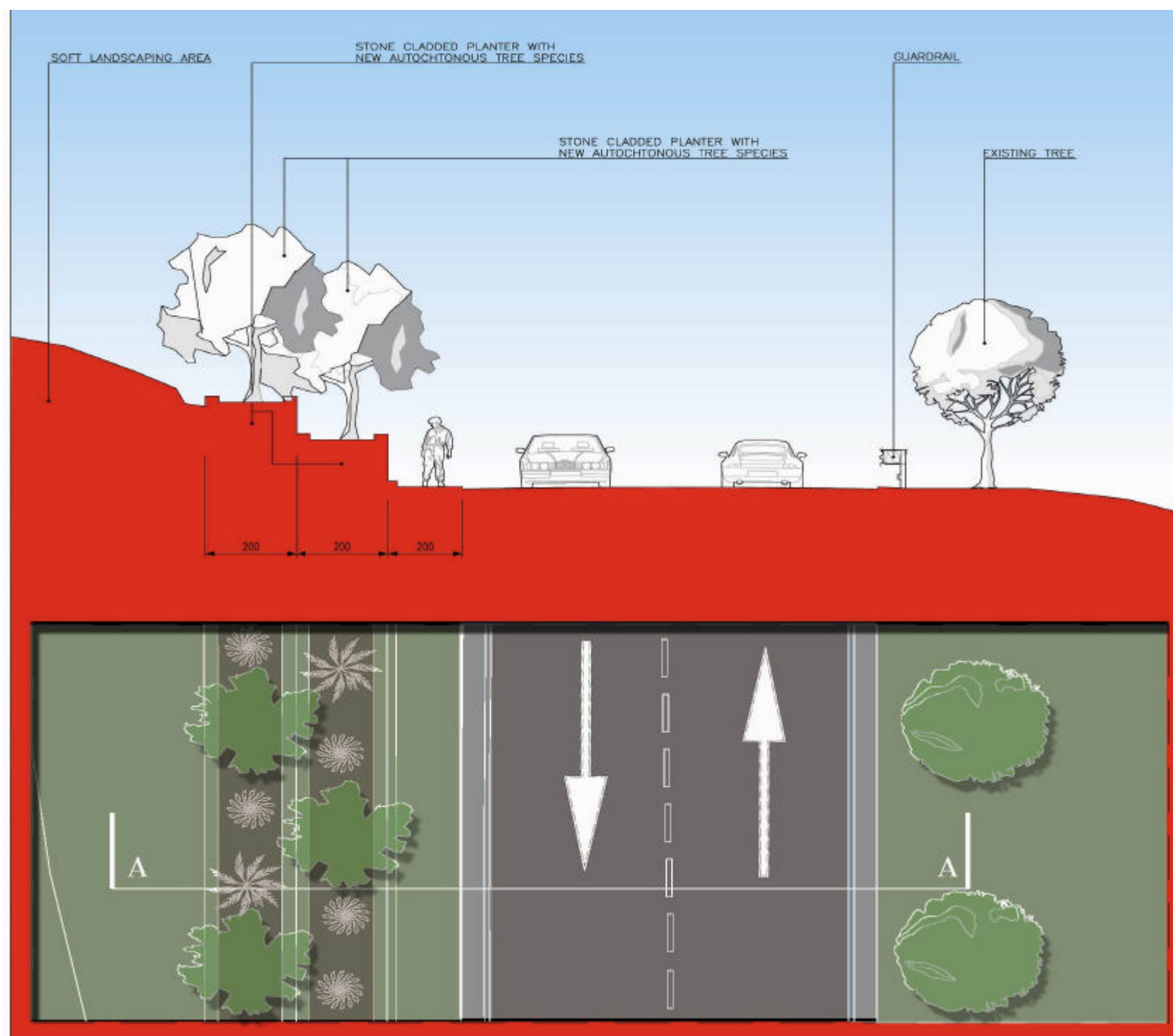
<b>C) LAND ACQUISITION ( Lump sum developed from local market analysis)</b>	<b>JD</b>	<b>500.000</b>
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<b>FINAL ACTION PROJECT COST (A+B+C)</b>	<b>JD</b>	<b>1.112.435</b>
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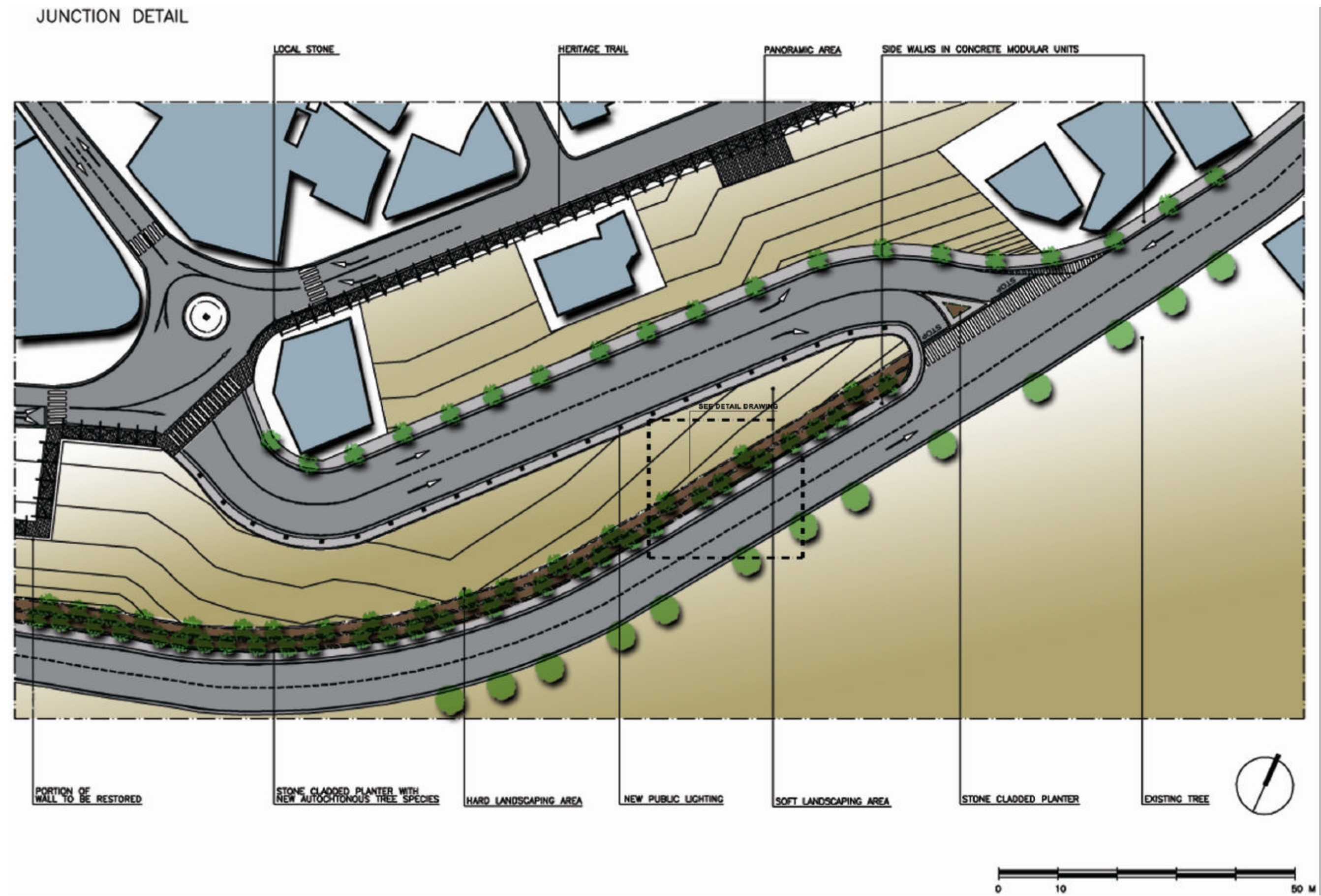
## PROJECT TIMING

The time allocated for the implementation of the action project is based on the following phasing:

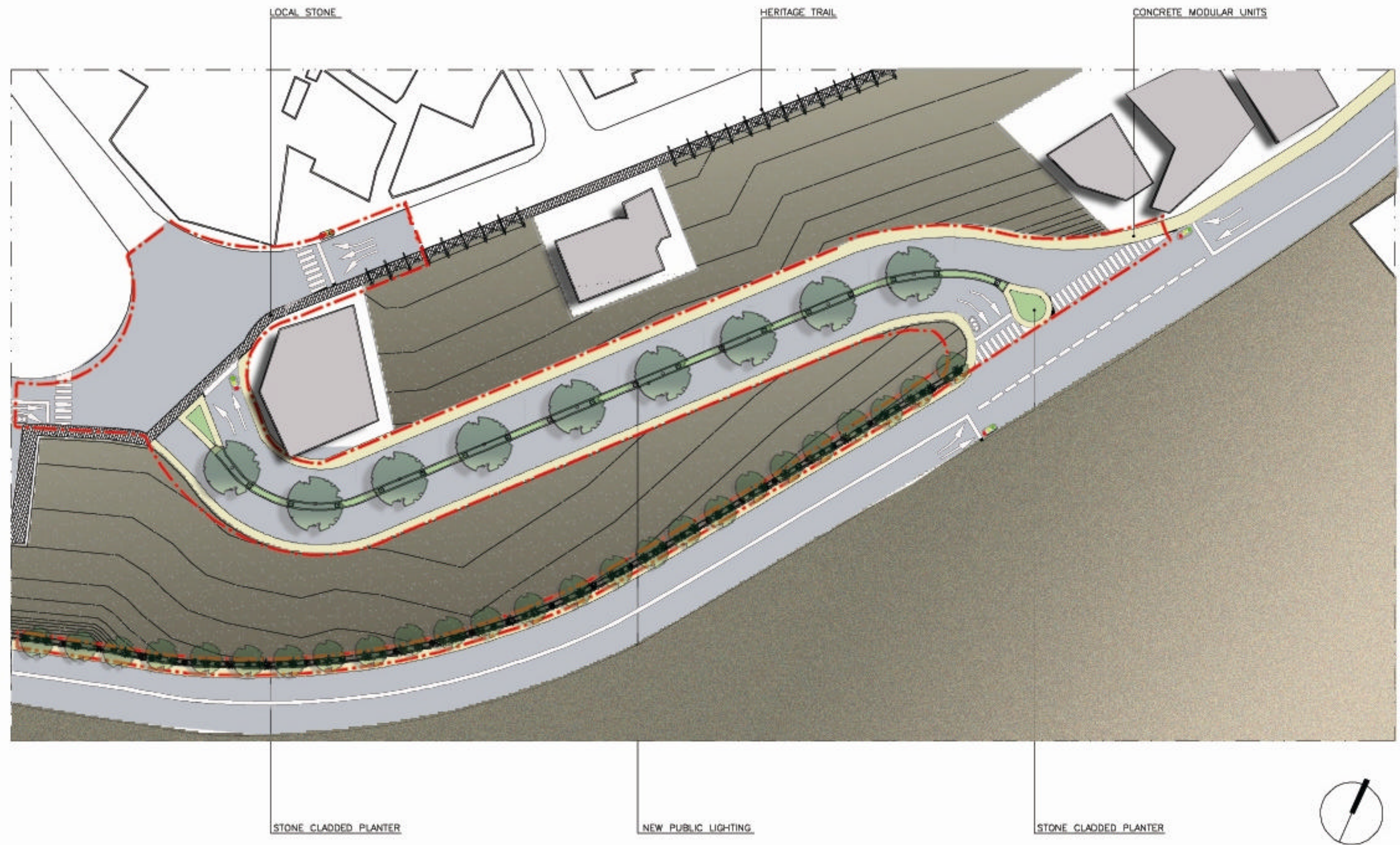
Design stage –	11 months
Work stage –	9 months
Total implementation time –	18 months











JUNCTION DETAIL

TECHNICAL OPTION TO BE VERIFIED  
THROUGH DETAIL MANAGEMENT PLAN



## 4.2 K.02 - THE NEW "HERITAGE TRAIL" ALONG THE EASTERN SIDE OF KARAK

### ABSTRACT OF THE PROPOSED PROJECT

The project aims at the creation of a new pedestrian path along the south eastern portion of the Old City wall linking the heritage Ottoman School to the renovated main Bus Station. The new Heritage Trail will then proceed flanking the two existing Mameluke towers in the direction of the Crusader Castle.

The new Heritage Trail will provide an alternative pedestrian approach to the Castle characterized by an outstanding panoramic view onto the surrounding landscape. At the same time, the Heritage Promenade will benefit from the planned development of the nearby, new hotel and shopping facilities within the compound of the renovated Central Bus Station.

The Heritage Trail will therefore establish itself as a primary, multifunctional, urban rehabilitation axis for the benefit of local residents and visitors alike.

The project proposes a panoramic protected pedestrian promenade enhancing the role of the newly renovated main Bus Station as an important enclave for urban social gathering whilst acting as the new gateway to the Old City.

The promenade will be characterized by a significant yet understated architectural intervention so as to infringe as little as possible on the visual integrity of the historical city walls.

In order to re-establish the visual and morphological integrity of the city wall, the intervention includes a financial provision for the expropriation and demolition of all abusive construction along the wall line.

The project includes the reconstruction of a demolished portion of the city walls to be designed and carried out during the detailed design phase.

The operation will be carried out following a careful assessment and analysis of the conditions of the existing remains.

The reconstruction of the wall will be carried out, wherever possible through *anastylosis* techniques (reconstruction using original components), or, where unavoidable, through the use of surface cladding with similar stone, dimensions and coursing applied to a technologically compatible yet modern static sub-structure.

Below and above-grade infrastructural refurbishment will be provided in connection to the proposed road works including the provision of an efficient storm water drainage system (SEE DETAILED INFRASTRUCTURAL ASSESSMENT).

### PRESENT STATE AND USE

The entire area pertaining to the Heritage Trail is presently in a state of severe decay. Several abusive constructions infringe on the integrity of the Old City Wall, often obstructing the view of the surrounding landscape. The wall line, which does not emerge above the existing road

and sidewalk level is often lacking adequate protection for pedestrians

The project site is characterized by a sequence of urban landmarks which, starting with the Ottoman School proceeds in the direction of the Castle, encountering the square Mameluke Tower in the vicinity of the main Bus Station, the round Mameluke Tower and finally the recently renovated Castle Piazza.

The stunning topography of the surrounding landscape is an ideal backdrop for a continuous urban promenade.

### PROJECT RATIONALE AND MAIN OBJECTIVE

As a complement to the integral re-design of the Main Bus Station and the overall improvement of the streetscape and circulation patterns, the proposed new Heritage Trail will enhance liveability and environmental conditions in the historic core by de-congesting the street trident formed by Al Qal'a Street, Al Malik Al Husayn Street and Al Kider Street.



VIEW OF THE AL BIRKA STR. TOWARDS THE MAMALUK TOWER

The principal project objectives are:

- Creation of a safe pedestrian path, linking the different architectural landmarks located along the south eastern boundary of the Old City.
- Introduction of a recognizable architectural sign testifying the city's will to upgrade the cityscape of an otherwise neglected area of the Old City and, at the same time, contribute in improving the experience of the city for visitors and tourists, by providing an alternate and more interesting approach to the Castle.
- Providing the necessary funding for the expropriation of the privately owned plots and the demolition of the private buildings located along the wall line.
- Complementing the integral renovation of the existing Bus Station as a significant enclave for social life within the confines of the Old City whilst supplying the residents with new outdoor leisure spaces.
- Awareness raising of the local population regarding the rehabilitation of building facades flanking or obstructing the new Heritage Trail.

It is assumed that new services will develop around this new axis, including cafes, restaurants and other forms of entertainment addressed to the youth and local population as well as to tourists.

Below-grade infrastructural refurbishment will be provided in connection to the proposed road works including the provision of an efficient storm water drainage system.

### MAIN PROJECT ELEMENTS

The design of the new Heritage Trail is based on the following criteria:

- Creation of an architecturally significant covered walkway which will enhance the symbolic significance and environmental quality of the connection between the urban poles of the Ottoman School and the Mohabite Castle.
- Implementation of a pilot project which will introduce both functional and formal solutions which will set quality standards for future urban rehabilitation initiatives within the historic city core.
- Creation of an urban promenade linking Karak's major historical urban landmarks and the proposed new Bus Station within the framework of a recognizable morphological pattern.

### PROJECT INTERVENTIONS

The intervention will consist of:

- Land preparation (excavations and filling, demolitions and removal of all non required elements and debris)
- Refurbishment of damaged below-grade utilities (SEE DETAILED ASSESSMENT).
- Continuous sidewalk paved with modular concrete elements including the provision of adequate surface sloping so as to allow storm water down flow to nearby storm water drainage system devices.
- Sidewalk curbs in local natural stone, including special ramped pieces for handicapped access.



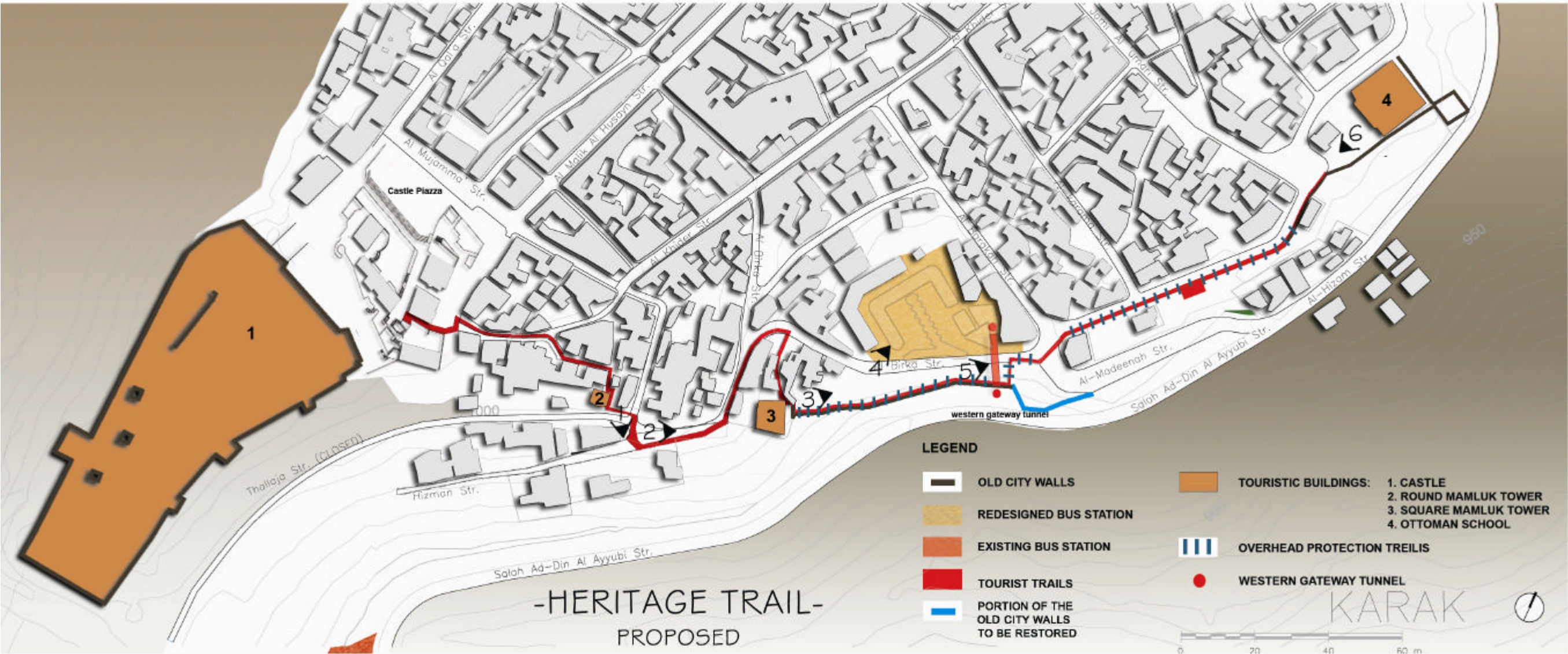


PHOTO 1



PHOTO 2



PHOTO 3



PHOTO 4



PHOTO 5



PHOTO 6



- Continuous overhead protection trellis for Heritage Trail. The trellis will be weather- treated teak wood construction with weatherproof, textile overhead protection. The architectural design of the trellis will re-propose the architectural language present in the re-design of the main Bus Station compound and will include natural stone seating facilities for visitors, natural stone planters, iron railings for pedestrian protection and street lighting
- Street furniture (Garbage cans)
- Planting of autochthonous tree species including planting grills with agricultural soil
- Signage (horizontal and vertical)

#### STAKEHOLDER CONSIDERATIONS

Expropriation and demolition of abusive construction along this portion of the city wall should be enforced.



VIEW OF THE EXISTING PEDESTRIAN PATH NEAR THE MAMALUK TOWER

Stakeholder opposition is expected on the part of the owners of the buildings abusively located along the Old City Walls.

#### FURTHER STUDIES NEEDED

- Institutional implementation and monitoring responsibilities and agreements.
- Extensive topographical surveys; archaeological surveys and excavations.
- Detailed infrastructure and utility assessment
- Architectural surveys.
- Extensive structural surveys, analyses and assessments of demolished portion of city wall.
- Detailed traffic management plan.

- Detailed architectural and engineering design work.
- Careful phasing of the works so as to allow for the efficient operation of the adjacent streets and Bus Station during the course of the works.



*Tower 5 before intervention*



*Tower 5 during intervention work*



*Tower 5 after completion of the intervention programme*

EXAMPLE OF THE HISTORICAL STONE WALL RESTORATION (AYYUBID CITY WALL - CAIRO)



COST ESTIMATES

A) WORKS

pedestrian paths (Total area Sq. Mts 2,200 X JD/sq.mt 30)	JD	66.000
HARD LANDSCAPE AND CANOPIES (Lump sum)	JD	80.000
SITE SPECIFIC ACTION: Ancient wall restoration (Lump sum)	JD	375.000
<b>COST OF THE WORKS</b>	<b>JD</b>	<b>521.000</b>

B) ADDITIONAL PROVISIONS

b1) TECHNICAL EXPENSES

Detailed design consultancy ( 8% of A )	JD	41.680
Construction supervision and management ( 8% of A )	JD	41.680
Topographical & archaeological surveys/specialistic investigations ( 5% of A )	JD	26.050

b2) CONTINGENCIES (15% of A)	JD	78.150
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<b>COST OF THE ADDITIONAL PROVISION</b>	<b>JD</b>	<b>187.560</b>
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<b>TOTAL ACTION PROJECT COST (A+B)</b>	<b>JD</b>	<b>708.560</b>
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<b>C) EXPROPRIATION OF INTRUSIVE BUILDINGS ( Lump sum)</b>	<b>JD</b>	<b>270.000</b>
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<b>D) DEMOLITION OF INTRUSIVE BUILDINGS ( Lump sum)</b>	<b>JD</b>	<b>30.000</b>
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<b>E) TRADITIONAL BUILDINGS REHABILITATION ( Lump sum)</b>	<b>JD</b>	<b>300.000</b>
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<b>FINAL ACTION PROJECT COST (A+B+C+D+E)</b>	<b>JD</b>	<b>1.308.560</b>
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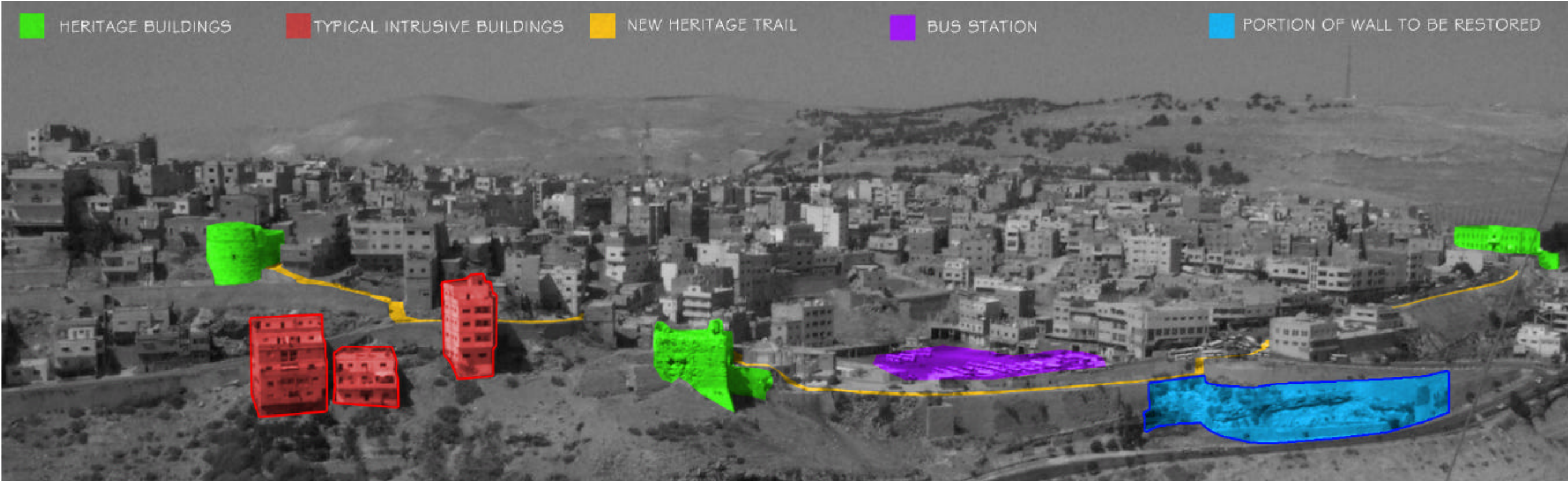
PROJECT TIMING

The time allocated for the implementation of the action project is based on the following phasing:

Design stage –	9 months
Work stage –	8 months
Total implementation time –	17 months



VIRTUAL VIEW OF THE NEW HERITAGE TRAIL





#### 4.3 K.03 - REDESIGN OF THE EXISTING BUS STATION

##### ABSTRACT OF THE PROPOSED PROJECT

The main bus station is located in the south east quadrant of the Old City, adjacent to Al Birka Street and close to Salah Al Din Al Ayyoubi Street. At present it accommodates most of the local and all the inter-city services to Karak. Increased economic and population growth in the Karak Municipality has resulted in greater movements of public transport into and through the Old City causing extensive city-wide congestion and the need to provide enhanced facilities for the main bus station.



PANORAMIC VIEW OF THE NEW PERIPHERAL BUS STATION

Congestion is not limited to the bus station itself, but extends along the approach roads leading to and from it. The parking of large numbers of buses in these areas causes danger to other road users especially if pedestrian.

The presence of a new peripheral bus station for regional through traffic enhances the role of the Main Bus Station as a gateway to the historic city core whilst emphasising the need for an integral redesign of the entire compound so as to create a new quality space on the eastern boundary of the walled city.

In order to properly enhance the significance of the Main Bus Station as the living, economic and social hub of the city, the project proposes the design and construction of new hotel and shopping facilities within the station compound.

The massing of the complex is designed so as to screen the external visibility of the station and at the same time provide a modern architectural landmark in direct visual contact with the surrounding natural landscape. The entire architectural complex will be reinforced concrete, post and beam construction, with local, natural stone cladding for external fa-

ades and ample perimeter glazing.

Entrance to the hotel facility is through a slightly raised, shaded "por-tico". Guest rooms and common areas will be equipped with soundproof glazing so for protection from outside noise. Each floor is provided with a panoramic terrace facing the surrounding landscape. The top floor volume is recessed so as to allow for a roof garden café and a vast terrace for leisure and entertainment. The hotel is connected to the nearby restaurant atop the shopping facility with a first floor (+5 mts), protected, suspended walkway bridging the bus carriageway. The hotel will be equipped and furnished so as to comply with European hotel performance standards.



VIEW OF THE EAST GATE TUNNEL ACCESS

The nearby ground floor shopping and ticket selling facility, is surmounted by the hotel's restaurant which is equipped with a roof top, protected, outdoor dining terrace.

The proximity of the Old Eastern Gate provides an opportunity to incorporate a valuable archaeological and historic feature into the new design, whilst providing a convenient direct pedestrian access to the station from the foot of the steep hill on which the Old City is located.

The project aims at an integral refurbishment of the existing bus station compound and the transformation of the related open air enclaves into quality spaces.

The project will include the rationalization of entrance and exit paths for pedestrians, private vehicles and buses, the provision of shaded stalls for buses equipped with seating facilities for passengers, decorative planting of autochthonous greeneries and trees and the provision of a perceptive screen for the existing mechanical and polluting activities which are located within the compound.

##### PRESENT STATE AND USE

The area occupied by the bus terminal is located in a panoramic position along the eastern boundary of the Old City and presents itself as a significant void within the historical urban fabric. The site is characterized by the presence of a series of single-storied volumes housing mechanical and polluting activities, and by the recently excavated Eastern Gate. The severe decay of the urban environment pertaining to the bus station compound reflects itself on the entire eastern cityscape.



VIEW OF THE BUS STATION

##### PROJECT RATIONALE AND MAIN OBJECTIVES

As a complement to the general improvement of the streetscape and circulation patterns of the city and the creation of the new heritage trail connecting the Ottoman School complex to the Crusader Castle, the transformation of the existing bus terminal into a quality space will create an architecturally significant presence along the eastern boundary of the Old City and a significant gateway to the historic core for the local visitors and tourists.

The principal project objectives are:

- Rationalization of the traffic flows to and from the bus station compound thus improving the accessibility to the historic core and its connection with the regional context. .
- Rehabilitation of a nodal area along the eastern boundary of the historic city core.
- Restoration of the ancient Eastern Gate as a pedestrian access to the Old City.



- Providing an outstanding architectural sign along the new Heritage Trail connecting the Ottoman School and the Crusader Castle.
- Providing a new enclave for local social encounter and leisure activities.
- Introducing new revenue creating activities for the Municipality (hotel/shopping facilities) for a possible public/private partnership. The partnership would be based on the possibility of private ownership and exploitation rights of the new facilities connected to private co-financing of the project works.
- to increase the supply of tourist facilities while increasing the number of beds available in Karak.

### MAIN PROJECT ELEMENTS

The project proposes the integral rehabilitation of the bus station compound according to the following criteria:

- Complete refurbishment of the existing bus terminal compound.

Restoration of the existing East Gate as a direct pedestrian access to the station from the Salh Ad-Din Al Ayyubi Street.

- Rationalization of vehicular traffic within the compound so as to allow the coexistence of the bus terminal and the existing car repair shops.
- Creation of a perceptive screen to hide the existing car repair shops and other polluting activities.
- Creation of parking facilities for private vehicles along the Al Birka Street.
- Re-design of the passenger bus parking facilities with the provision of shaded stalls and protected outdoor seating facilities.
- Re-design of the area coinciding with the exit of the Eastern Gate tunnel.
- Construction of a new multifunctional complex including the following components:
  - A six level, 40 double room hotel with a panoramic roof terrace café for a total of approximately 2.000 sq.mts.
  - A three level shopping and ticket selling facility with a restaurant and a covered, panoramic roof-top terrace for outdoor dining for a total of approximately 500 sq.mts (excluding roof top terrace).

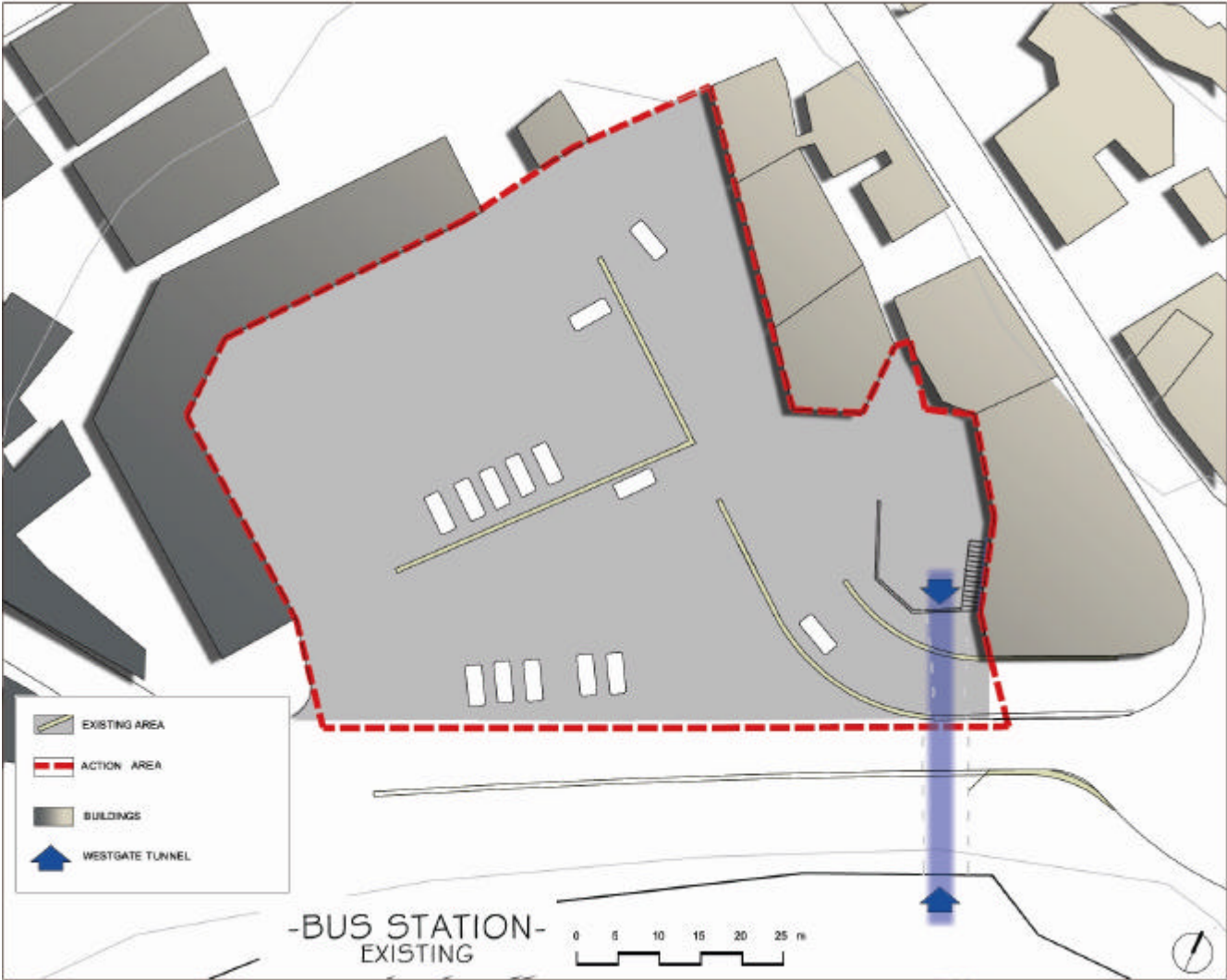


VIEW OF THE EXISTING POLLUTING ACTIVITIES



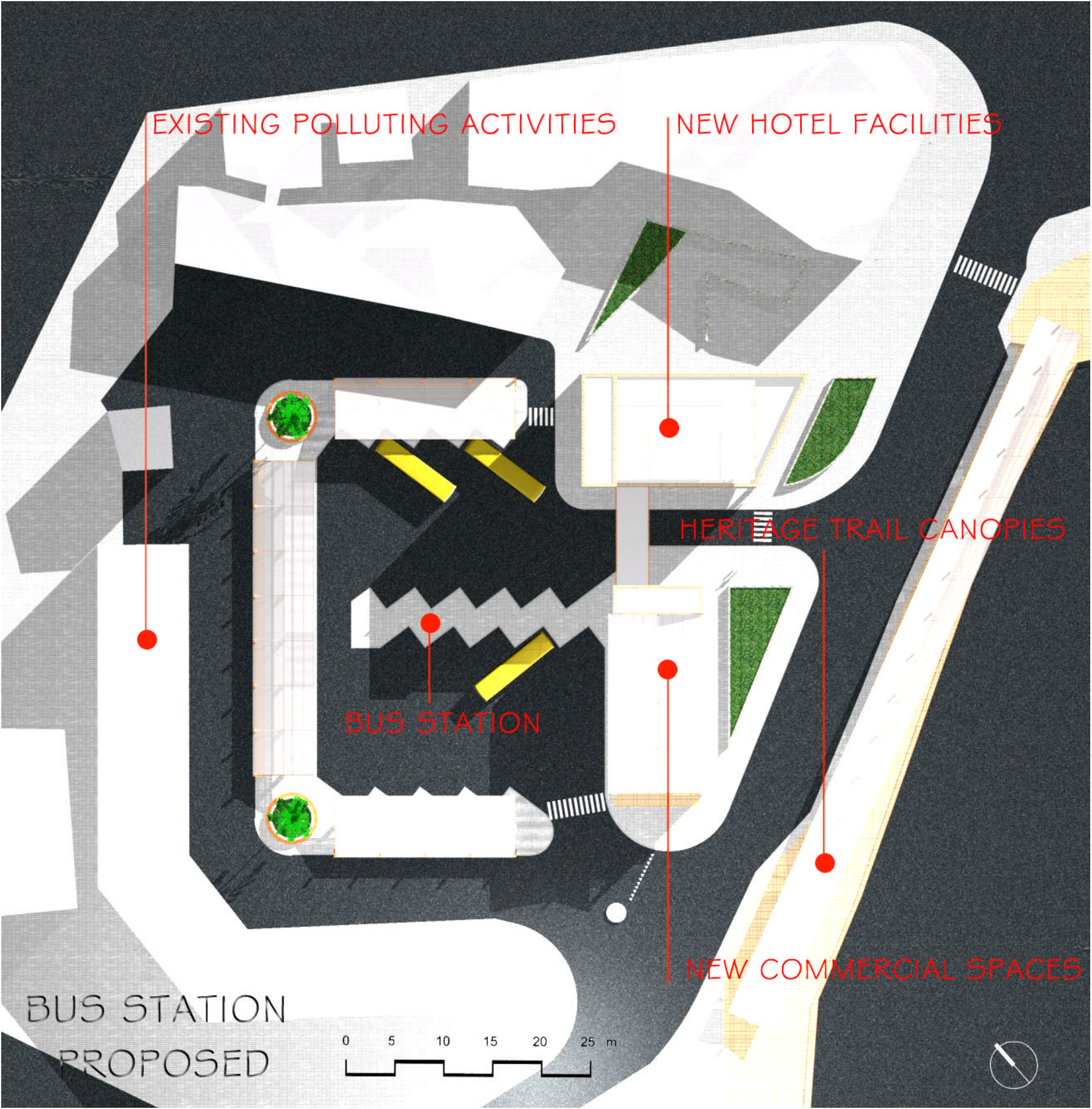
PANORAMIC VIEW OF THE EXISTING BUS STATION





PANORAMIC VIEW













VIEW OF THE NEW BUS STATION CANOPY





VIRTUAL VIEWS OF THE BUS STATION, THE NEW HOTEL AND COMMERCIAL FACILITIES AND THE HERITAGE TRAIL



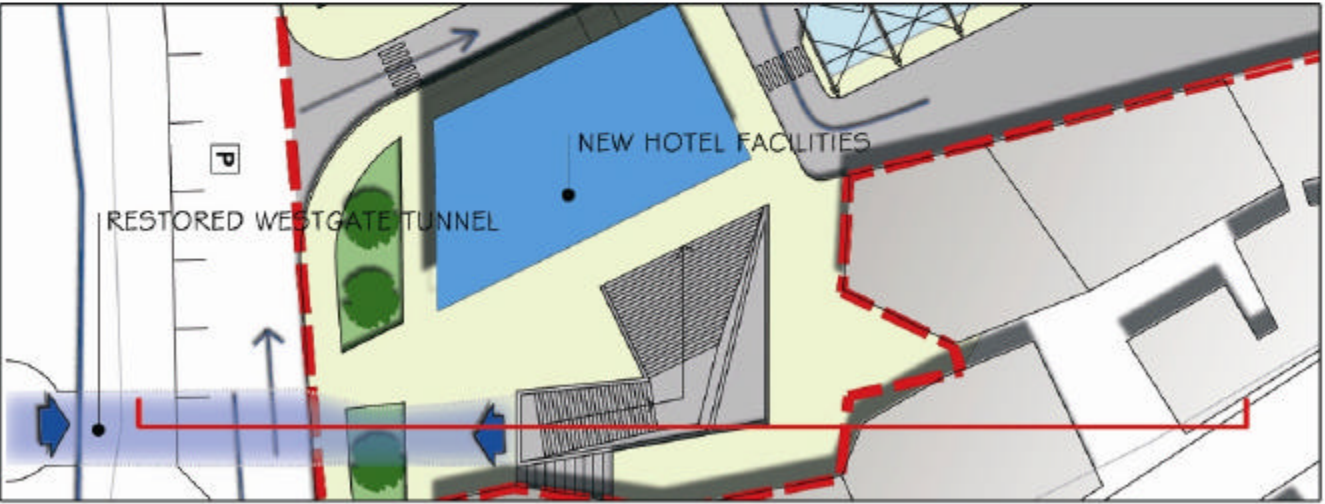
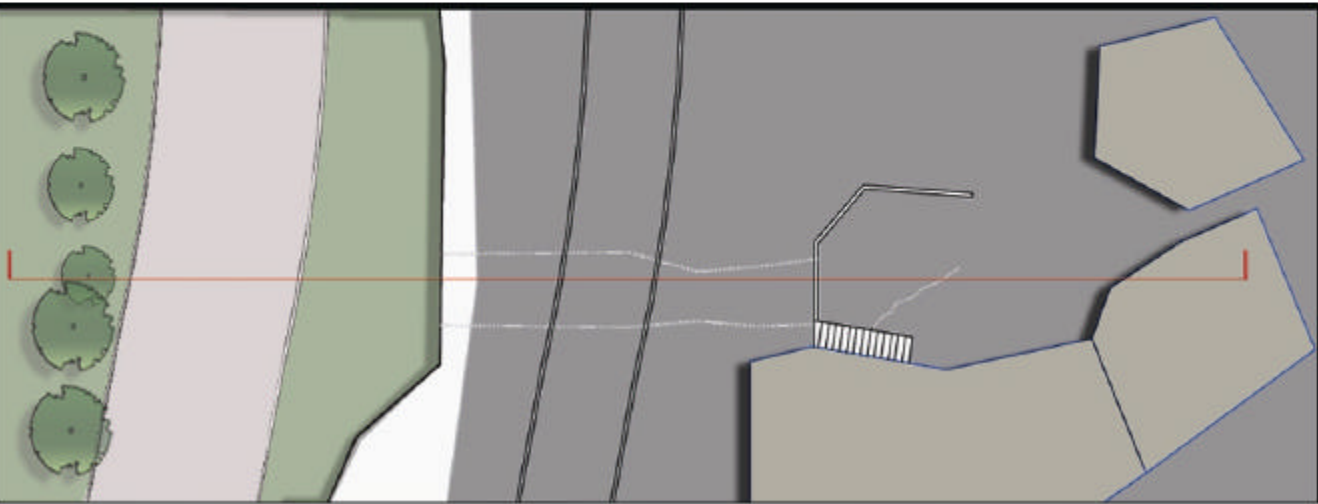
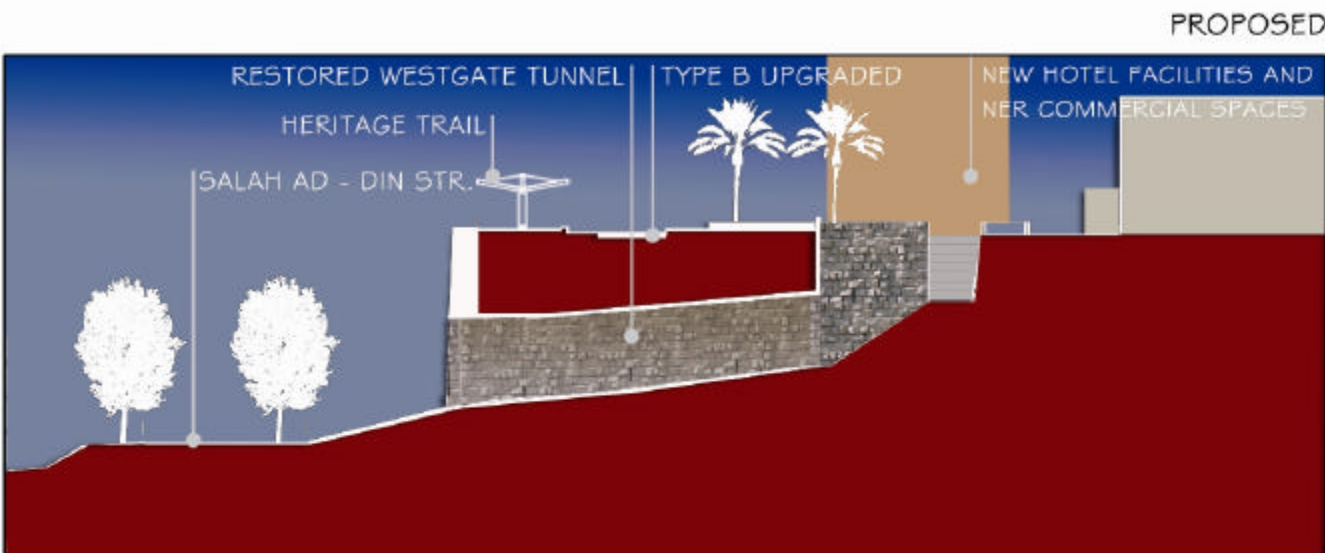
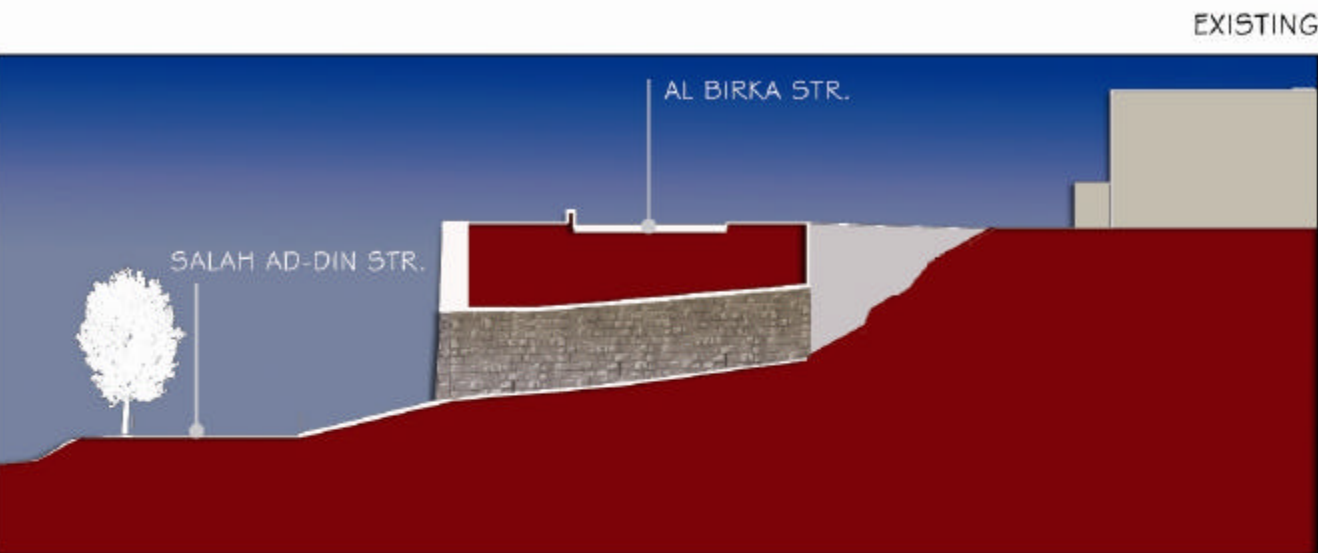




VIRTUAL VIEW FROM THE BACK OF THE BUS STATION



# BUS STATION - TUNNEL SECTION





## PROJECT INTERVENTIONS

The intervention will consist of:

- Land preparation (excavations and filling, demolitions and removal of all non required elements and debris )
- Refurbishment of damaged below-grade utilities (SEE DETAILED ASSESSMENT).
- Parking area and service road cover with bituminous asphalt.
- Sidewalks and bus stalls tiled with concrete modular units
- Concrete curb stones including special ramped pieces for handicapped access.
- Storm water drainage
- Signage (horizontal and vertical)
- New canopies for bus stalls. The stalls will be weather- treated teak wood construction with weatherproof textile overhead protection for easy maintenance and substitution. The stalls along the perimeter will include outdoor seating facilities for passengers, natural stone planters and weather-treated teak wood vertical trellises for the creation of "green walls" screening the car repair shops and other existing polluting activities.
- Planting of autochthonous trees and greeneries including planting grills with agricultural soil.
- Public lighting
- New street furniture (garbage cans)
- New architectural complex including a double level shopping and ticket selling facility (roughly 250 sq. mts. per floor) and a six storey hotel tower. The shopping facility will incorporate a roof top restaurant also serving the hotel facility, while the hotel tower is provided with a panoramic roof terrace café. The new complex will be reinforced concrete post and beam construction with local stone-cladded perimeter walls and ample glazing.

perimeter walls and ample glazing. Interior pavements will be in local natural stone modular units and partitions will be finished in plaster and wall paint. The overhead protection of the roof top restaurant within the shopping facility will be weather- treated teak wood construction with weatherproof textile overhead protection for easy maintenance and/or substitution.

- Integral rehabilitation of the East Gate pedestrian tunnel including:
  - the structural consolidation of the existing stone walls and vault.
  - new pavement and new access stairway tunnel integrally cladded in natural stone modular units.

## STAKEHOLDER CONSIDERATIONS

Implementation of efficient market investigation and promotion in order to activate private investment on the construction and management of the hotel and shopping facility.

Awareness raising among the local population will help the acceptance of the nuisance caused by construction and disruptions to both vehicular and pedestrian traffic.

## FURTHER STUDIES NEEDED

- Institutional promotion, implementation and monitoring responsibilities and agreements.
- Topographical surveys; archaeological surveys and excavations.
- Architectural surveys; structural surveys, analyses and assessments.
- Detailed infrastructure and utility assessment
- Detailed traffic management plan.
- Detailed architectural and engineering design work.
- Careful phasing of the works so as to allow for the efficient operation

of the bus terminal and car repair shops during the course of the works.



VIEW OF THE EAST GATE TUNNEL ACCESS FROM THE SALAH AL DIN AL AYYOUBI STR.



PANORAMIC VIEW OF THE BUS STATION



COST ESTIMATES

<b>A) WORKS</b>		
BUS PARKING AREAS (Total area Sq. Mts 4800 X JD/sq.mt 17)	JD	81.600
GREEN AREAS (Total area Sq. Mts 200 X JD/sq.mt 20)	JD	4.000
SPECIAL CANOPY STRUCTURES (Lump sum)	JD	100.000
REHABILITATION OF THE EASTERN GATEWAY TUNNEL (Lump sum)	JD	80.000
<b>TOTAL COST OF THE WORKS</b>	<b>JD</b>	<b>265.600</b>

<b>B) ADDITIONAL PROVISIONS</b>		
b1) TECHNICAL EXPENSES		
Detailed design consultancy ( 8% of A )	JD	21.248
Construction supervision and management ( 8% of A )	JD	21.248
Topographical & archaeological surveys/specialistic investigations ( 5% of A )	JD	13.280
b2) CONTINGENCIES (15% of A)	JD	39.840
<b>TOTAL COST OF THE ADDITIONAL PROVISION</b>	<b>JD</b>	<b>95.616</b>

<b>FINAL ACTION PROJECT COST (A+B)</b>	<b>JD</b>	<b>361.216</b>
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PRIVATE SECTOR : new hotel and commercial facilities

<b>A) WORKS</b>		
NEW BUILDING CONSTRUCTION (Total area Sq. Mts 2,500 X JD/sq.mt 200)	JD	500.000
INTERNAL FURNISHINGS (Total area Sq. Mts 2,500 X JD/sq.mt 120)	JD	300.000
<b>TOTAL COST OF THE WORKS</b>	<b>JD</b>	<b>800.000</b>

<b>B) ADDITIONAL PROVISIONS</b>		
b1) TECHNICAL EXPENSES		
Detailed design consultancy ( 8% of A )	JD	40.000
Construction supervision ( 5% of A )	JD	25.000
Construction site security ( 3% of A )	JD	15.000
Topographical & archaeological surveys/specialistic investigations ( 3% of A )	JD	15.000
b2) CONTINGENCIES (15% of A)	JD	75.000
<b>TOTAL COST OF THE ADDITIONAL PROVISION</b>	<b>JD</b>	<b>170.000</b>

<b>FINAL ACTION PROJECT COST (A+B)</b>	<b>JD</b>	<b>970.000</b>
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<b>TOTAL COST PUBLIC/PRIVATE PARTNERSHIP ACTION</b>	<b>JD</b>	<b>1.331.216</b>
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PROJECT TIMING

The time allocated for the implementation of the action project is based on the following phasing:

Design stage –	10 months
Work stage –	18 months
Total implementation time –	28 months



VIEW OF THE ACCESS TO THE NEW BUS STATION



4.4 COST SUMMARY OF THE PHISICAL ACTION

KARAK ACTION PROJECTS - COST SUMMARY								
PROJECT ACTIONS			COST OF WORKS & ADDITIONAL PROVISIONS	COST FOR DEMOLITIONS	COST FOR LAND ACQUISITIONS	PRIVATE SECTOR	TOTAL COST	
ALTERNATIVE A								
1	K.01: Upgrading of the street network.	JD	1.913.394				1.913.394	
2	K.01a: Al Malk Al hussaym str. upgrading	JD	151.246				151.246	
3	K.01b: the upgrading of salah ad-din al ayyubi street	JD	612.435		500.000		1.112.435	
4	K.02: The new “heritage walk” along the eastern side of Karak	JD	1.008.560	30.000	270.000		1.308.560	
5	K.03: The re-design of the existing bus station	JD	361.216			970.000	1.331.216	
TOTAL COST			JD	4.046.850	30.000	770.000	970.000	5.816.850



## 5. The capacity building actions

### 5.1 CONTEXT AND MAIN ISSUES

The decline of the historical centre, the degradation of its urban and residential fabric and the crisis of its functions of centrality are strongly related to the general weakness of the municipal institution.

Conversely, the success and the sustainability of the program of revitalization and development of the historical centre are strongly conditioned by the commitment and the capacity of the municipality, and by the improvement of its capacity to mobilize the local resources and to play its role effectively, in particular in the fields of urban planning and management, in the provision of urban services of better quality and in the social and economic development of the city.

The institutional assessment shows that the weakness of the municipal institution is manifested on several interdependent levels:

- **Urban planning and management:** the municipality has very low capacity to provide for structural and strategic planning and management, to determine in a suitable way the location of the various commercial and urban activities and to put in place and to enforce urban regulations for construction and use of public spaces. This situation has resulted in an anarchistic and uncontrolled urban development and in the degradation of the environment and urban fabric of the historical center in particular.

Thus, several problems could still be highlighted:

- **The weakness of competences and technical capacities** of the department of urban planning and management, which, at present, exists only in an embryonic state and has very few qualified and trained personnel;
- **The weakness in regulations:** Absence of regulations defining the commercial activities in the various urban zones and more particularly in the historical center; absence of regulations related to construction, modification or restoration of buildings in the historical center; weakness of the functions of control and application of regulations related to the use of public pathways and spaces, and to the construction and compliance with the rules of town planning;
- **The absence of information and essential data** starting from available and updated base cartography, concerning streets and roadway systems, urban infrastructure, commercial buildings and activities, existing constructions and their conformity with regulations, properties and their limits, existing utilities networks etc, in the historical center as well as in the other parts of the city.
- **The absence of technical tools** necessary for urban management and planning (data-processing tools, GIS, databases, etc.)
- **Weakness of the functions of management and maintenance of public spaces, and of the quality of urban services.** The sustainability of the program of urban revitalization requires the improvement of the level and the quality of urban services and the maintenance of public spaces (maintenance of storm drainage and sewer-

age, street lighting; better management of garbage collection and cleanliness of public spaces and places such as the road station and markets; better maintenance of the roadway system; improvement of traffic management and better control of the parking issue, control over signage and shop windows etc.)

- **Weakness of the capacities to promote and enforce the compliance with sanitary and public health rules.** At present, the municipality monitors and enforces the compliance with the sanitary regulations, in particular those related to the marketing of foodstuffs. However, the municipality does not have sufficiently qualified and trained personnel to assume this responsibility. Even though, this is an imperative to protect the health of the local population, it is still of primordial importance from the point of view of the development of the touristic potentials of the city.
- **Absence of coordination between the municipality and the public utility companies.** This problem manifests on multiple levels and undermines the effectiveness of the majority of municipal services. It is in particular the case of the companies of Water and Electricity, which, often, carry out work without any form of dialogue or coordination with the municipal departments.
- **The great weakness of human resources and qualification.** In spite of a significant overstaffing and of the fact that an important part of the expenditure is devoted to the staff expenses, the municipality is heavily handicapped by the very low qualification and training level of its personnel and their weak engagement in the duties requested of them.
  - The scarcity of technicians and of qualified personnel, of which all municipal departments and services suffer, constitutes today an obstacle for the organizational restructuring and improvement of the institutional capacities of the municipality. The new municipal professionals (primarily engineers) who were for their majority designated or detached by the Ministry of Municipal Affairs following the fusion of the municipalities have, undoubtedly, attenuated the problem without solving it because the majority of them were new graduates without experience.
 

In addition, the skills required for the management of historic cores and heritage buildings are very specific, and require trained architects and urban planners.

Moreover this problem is accentuated by the difficulty of retaining qualified personnel because of the low pay and the working environment, which is little motivating.
  - The large majority of the personnel consists of employees who have a very low qualification and training level. Moreover, having been often recruited on the basis of clientelism, the majority of these employees is little motivated and continues to see employment with the municipality as a source of income, which demands little or no return in terms of work and involvement.

Thus, the Mayor considers that the solution should combine the setting up of effective and adapted training schemes, the restructuring and reorganization of administration, the establishment of an equitable and transparent system of evaluation of competences and a follow-up of the work of employees including incentives, sanctions and dismissal.

- **An organizational problem.** To face the organizational weakness and the lack of coordination between the various services, the municipality started to set up plans for reorganization based on a general outline conceived by the Ministry of Municipal Affairs. However, the municipality considers that these plans remain insufficiently adapted to its needs and problems, and that it needs technical assistance based on specific analysis in order to be able to restructure and improve its services and functions.
- **Weakness of financial management and of revenues generated by the municipality.** The financial situation of the municipality improved during the last three years thanks to the increase in the revenues transferred by the State, to a better collection of revenues and local taxes, and to a better management of its expenditure. However, in spite of this effort, the financial situation remains marked by many weaknesses, particularly:
  - Weakness of financial resources in comparison to the expenditure and especially in comparison to the needs for improving the local services and for developing the municipal action, in particular in the field of management and town planning;
  - Very limited revenue autonomy. The decrease of the share of own revenues as a percentage of total revenues of the municipality (in spite of the increase of their absolute value) has strengthened the dependence of municipal financing on the governmental transfers;
  - Weak efficiency of the collection of municipal revenues: the collection of the majority of taxes and fees is still far from reaching the potential optimum level;
  - Weakness of the revenues generated by the income-generating projects;
  - Irregularities and variation in the revenues from year to year;
  - Low capital investment
  - Salaries and wages eat up a big part of the budget;
  - High payment on interests;

Without taking here into account the structural factors which determine municipal finances (fields of competences and definition of the rights of the municipalities as regards taxes, nature of the relationship between the municipal institution and the State, etc), and while limiting the discussion to taxes and revenues which the municipalities have currently the right to locally collect, one can underline sev-



eral problems which block the optimization of the resources and the improvement of the financial management of the municipality:

- Weakness of technical expertise and competences necessary for a good financial management;
- Absence of performing means and tools of management (computer tools) which would make it possible to improve to a significant degree the collection of taxes and fees and the management of municipal finances;
- Absence of a database and an information system allowing the identification of taxpayers, the evaluation and determination of taxes, fees and infringements which must be paid, and the monitoring of payments. It is the case for example of the Job Licensing tax, the revenues from planning and development, Fruits and vegetables fees, sign and announcement boards fees, car park fees, etc.;
- Low effectiveness of the procedures of evaluation of the Land and Building Tax (Musakafat) that the State currently collects for and in the name of the municipality, but which the municipality should take care of in the coming years. It should be stressed also that the optimization of the collection of this tax could not be done in the absence of a census and of a system of addressage of streets, buildings and land, and without the installation of a performing database and of procedures of evaluation and of collection;
- Weakness or inexistence of procedures for the control and monitoring of the process of collection of taxes and revenues;
- Lack of accountability mechanisms, low transparency of the procedures of evaluation and taxation, and inequality in the treatment of taxpayers because of clientelism;
- Insufficiency of the effectiveness and of the quality of services rendered by the municipality and consequently, of its "legitimacy" to impose the application of regulations and of payment of taxes.
- **The absence of mechanisms of accountability and of forms of participation of the local population and stakeholders.** The population currently has little information on the municipal actions and decisions and tends to perceive the municipality as a simple administration on which the citizens have little influence. This lack of participation and involvement of the population weaken in multiple ways the capacity of the municipality to co-produce with the users services of quality, to make them accept its decisions and its orientations, to make them respect the regulations and the standards of use of public services and spaces, and to obtain the approval and the collaboration of the local citizens in collecting municipal taxes. It also weakens the capacity of the municipality to continue to be the framework where the interests of and the rapports between the various social groups are negotiated and, consequently, to play its part in the construction and the reinforcement of social cohesion. However, the municipality recognizes the importance of this issue, in particular mobilizing the local resources necessary for the success and the sustainability of the program of urban revitalization, and therefore plans to set up local committees for consultation.

## 5.2 DESCRIPTION OF THE CAPACITY BUILDING ACTION

### GENERAL OBJECTIVE

The general objective the action aims at is improving the organizational and institutional capacity of the municipality in order (i) to play its role within the context of the City Revitalization Program, and to manage and preserve in a sustainable way the historical centre, (ii) to improve its performance in service delivery; and (iii) to play an increased role in the reinforcement of social cohesion, urban integration, and social and economic development of the city.

The actions of capacity building approached here are limited to those which are strictly related to the implementation of the program of revitalization of the historical center. However, the success of these actions in ensuring the sustainability of the objectives of the program of urban revitalization depends on their articulation with other general and transversal activities aiming at reinforcing the capacities of the various municipal departments in various fields on the totality of the municipal territory, in particular in the fields of planning and urban management, organization and management of personnel, budgetary and financial management, the mobilization of resources and the improvement of local taxes collection.

### SPECIFIC OBJECTIVES OF THE PROGRAM

- 1) Development of the technical and institutional capacity of the municipality to implement, monitor and ensure the sustainability of the core city revitalization plan, including the capacity building actions;
- 2) Strengthening the technical and institutional capacity of the municipality to enforce the new Historic Core Regulation, and to promote, assist, and monitor the conservation and the rehabilitation of the urban and architectural heritage;
- 3) Reinforcement of the institutional and organizational capacities of the municipality in urban planning and management, particularly in the historical core;
- 4) Improvement of the capacity of the municipality to provide urban services of better quality, in particular in the field of maintenance and management of urban public space of the historic core;
- 5) Improvement of the transparency and accountability of municipal management and reinforcement of the forms of participation of the population and local stakeholders.

The capacity building action plan for reinforcing the municipal capacities will be put in place, as much as possible, jointly by the four municipalities concerned (Madaba, Jarash, Salt and Karak). This will make it possible (i) to carry out an economy of scale and (ii) to institute a process of collaboration and transfer of competences between them.

## DESCRIPTION OF THE PROGRAM

### 1) Development of the technical and institutional capacity of the municipality to implement, monitor and ensure the sustainability of the core city revitalization plan, including the capacity building actions.

The efficient implementation and the sustainability of the core city revitalization plan require the **adoption of an organizational scheme and of an integrated transversal approach** that allows:

- To closely connect the urban physical actions with the institutional capacity building actions;
- To integrate the core city revitalization as well as the functions of urban planning and management of the historical center in a strategy aiming at the modernization of all municipal departments and the improvement of the service delivery over the totality of the municipal territory.

This approach could be achieved by **setting up a "cross-departmental municipal unit"** under the direct authority of the Mayor and with the participation of the chief of the "technical support unit" (see 2), the person in charge of the department of urban planning, as well as those in charge of the various municipal departments concerned with the provision of services.

This "cross-departmental municipal unit" would have the authority and the responsibility for supervising the implementation of the program of urban revitalization of the historical core and the municipal capacity building, including planning and urban management and the improvement of the quality and effectiveness of the municipal services.

In other words, this unit would materialize the concept of "**Administration de mission**" and would be in charge, by mobilizing and coordinating the various municipal departments and their actions in the historical core, of accomplishing the functions of:

- Coordination with the other institutional partners of: putting in place, monitoring and evaluation of the physical actions of the program of revitalization of the historical core;
- Setting up, monitoring and evaluation of the actions of capacity building;
- Identification or definition of the needs for scheduling, in terms of urban management, the provision of urban services in the historical center according to a timetable and a given level of quality;
- "Maîtrise d'ouvrage" or overall supervision of all actions aiming at improving the services as well as other actions and work related to the program of urban revitalization of the historical center,
- Monitoring and evaluation (including the definition of the criteria of performance) of the provision of services and the urban management of the historical center.

Admittedly, the "cross-departmental municipal unit" should focus initially on the revitalization of the historical center and its management. However, the transversal approach and the mobilization of all municipal departments will permit to make of this program of revitalization a ground



of experimentation and of building municipal capacities, so that the improvement of the services and urban management of the historical center could extend gradually to the totality of the territories of the city<sup>1</sup>.

## 2) Development of the technical and institutional capacity of the municipality to enforce the new Historic Core Regulation, and to promote, assist, and monitor the conservation and the rehabilitation of the urban and architectural heritage.

This can be translated into action through the **creation of a “technical support unit”** that will supervise the overall process and actions of conservation and restoration of the urban and the architectural heritage, and will achieve more particularly the following specific objectives:

- To facilitate the access to clear, correct and detailed information about the urban revitalization plan by the local community (information & communication action, publication of the new regulations related to the historical core on different supports including the Internet - this is particularly important for professionals like architects, town planners, etc.)
- To orient both beneficiaries and stakeholders in the interpretation/implementation of the core city revitalization plan regulations;
- To provide technical assistance to the lower income strata of the local communities in the identification, design, approval of projects for the recovery, conservation, and upgrading of historic buildings in the core city;
- To authorize/ deny building licenses and permits (i.e.: new constructions, old building restoration and conservation, demolitions) according to core city center regulatory discipline;
- To coordinate with both local and national institutions such as DOA, MOTA, etc. on matters that are in their specific institutional competences (i.e. Archaeological site protection and promotion; Heritage and Environmental protection, etc.)
- To monitor the implementation of all restoration, conservation, refurbishing and upgrading projects regarding the historic buildings stock;
- To work closely with the municipal urban planning department in order to improve the urban planning and management of the Historic Core;
- To participate actively in the effort to ensure a better coordination between municipal departments in order to improve the delivery of urban services in the historical core;
- To secure harmonization between actions targeting public spaces and properties and actions targeting private buildings (i.e.: streets, urban supplies networks, private buildings);
- To report irregularities and violations to rules and regulations concerning the core city revitalization to the local authorities responsible for the application of sanctions.

This technical support unit will consist of: 1 senior architect, 1 Architect Conservator; 1 Structural engineer specialized in building consolidation; and 3 Surveyors. The staff of this unit should be trained on the use of GIS.

## 3) Reinforcement of the institutional and organizational capacities of the municipality in urban planning and management, particularly in the historic core.

- Reinforcement of human resources of the department of town planning by employing professionals having technical expertise (1 architect specialized in urban planning/management and 1 GIS specialist who will work closely with the technical support unit );
- Staff training of this department;
- Equipping the municipality with the tools and technical instruments necessary for planning and urban management (data-processing tools, GIS, databases, aerial digital maps, etc.);
- Assisting the municipality in starting to collect information and essential data concerning the historic core and to organize them in the form of databases (cadastral data and land information system, inventory of and addressage of streets and buildings, and of commercial buildings and activities, data on existing constructions and their conformity with regulations, intelligent mapping and inventories of urban networks and infrastructures, etc.) These databases that will be built for the historical center could be enlarged thereafter to include the whole city.
- Mobilization of the resources and the competences of the different municipal departments in order to enforce the respect of regulations and to set up mechanisms of control to deal with violations (land use, zoning and building regulations; commercial activities regulations; signs and announcement boards, parking and use of pavements and public spaces, etc.)

## 4) Improving the capacity of the municipality to provide urban services of better quality, in particular in the field of maintenance and management of the urban space of the historical center.

- Reinforcement and improvement of the quality of maintenance of public spaces (maintenance of sanitary networks and drainage; street lighting; garbage collection and cleanliness of public spaces and places such as the road station and markets; maintenance of the street network; traffic road management, and control of parking - both free and paid, etc.) This improvement could be achieved through a four-level intervention:
  - Staff training;
  - Improvement of human resource management and setting up of evaluation and control procedures;
  - Implementation of information tools, monitoring and evaluation relating to urban services and to the functions of management and maintenance of public spaces.
- Setting up a mechanism of coordination and cooperation between the municipality and the public sector companies and the public utility providers, in particular the Water Authority and the Electricity Company for a better programming and organization of their work in the city, particularly in the historic core.
  - Creation, under the authority of the Governor, of a working group in order to reach and to set up a **formal agreement between the municipality and the public utility providers**. This

agreement should define the obligations and duties of each party and precise the conditions of intervention of these companies in the historic core and in the municipal territory, and the modalities of coordination with the municipal services.

## 5) Improvement and reinforcement of the forms of participation of the local population and stakeholders.

- Establish a local committee of consultation and follow-up of revitalization formed from local stakeholders (associations, representative of shopkeepers and traders...)

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<sup>1</sup> Another approach of “**territorial management**” would have been possible. But the risks, which it presented, made us prefer a transversal approach. That approach would have consisted of creating a “**municipal unit for specific management**” which would have had the responsibility of supervising the totality of the program of urban revitalization of the historical core.

Such a unit would have been given the responsibility of:

- The functions of coordination, with the other institutional partners, of the unit of the plan of revitalization of the historical core;
- The specific functions of applying the new regulation concerning the historical center, of the conservation and rehabilitation of the architectural and urban heritage;
- The functions of planning and urban management of the historical center;
- The definition of the needs in terms of urban services (maintenance, etc); the mobilization of the different municipal departments and the coordination of their interventions to ensure the supply of these services in the historical center according to a timetable and level of quality defined by this unit of management; the follow-up and the evaluation of the provision of services as well as all other work and interventions in the perimeter of the historical center.

In other words, this option would have led to a territorialisation of the municipal action and would have given to this “management unit of the historical center” a certain autonomy vis-à-vis the other municipal departments whose role, in the perimeter of the historical core, would have been limited to a role of execution.

This option presents several risks and disadvantages:

- It reduces the benefits in terms of capacity building of the plan of revitalization of the historical center, in particular the physical actions, insofar as it limits the role and the participation of the various municipal departments in putting in place these actions;
- The improvement of urban management and the quality of the municipal services in the historical center could be accompanied by a stagnation and even by a deterioration of the quality of these services in the other zones of the city.
- This approach could, consequently, create and reinforce urban fragmentation and the inequality of access to the municipal services of the populations of the various zones of the city.
- It could also create a gap and an inequality, in terms of means, capacity, and efficiency, between the unit in charge of the management of the historical center and the other municipal departments. Such a gap would inevitably result in internal tensions and conflicts, which would, in the long run, put at risk the sustainability of the improvement in the management and provision of services concerning the historical center.
- On the financial level, this option could not be sustained because the improvement of management and the municipal services supposes the reinforcement of the capacity for financial management and collection of revenues. However, the improvement in the collection of these revenues could neither be made nor accepted locally without the municipality improving the effectiveness and the quality of the services, which it renders to the whole of the population.



### 5.3 ESTIMATED COST OF CAPACITY BUILDING ACTIONS

The estimated cost takes into account:

- The economy of scale related to the coordinated realization of the actions for the four towns
- The collaboration and partnership with the CVDB in particular for the training and technical assistance
- The un-accounted for time-salary of the municipal staff participating in these actions

## RECRUITMENT OF PERSONNEL

Action	Objective	Modalities/Means	Schedule	Cost
Creation of a “technical support unit”	Development of the technical and institutional capacity of the municipality: <ul style="list-style-type: none"> <li>to enforce the new Historic Core Regulation;</li> <li>to promote, assist , and monitor the conservation and the rehabilitation of the urban and architectural heritage.</li> </ul>	Recruitment of <b>8 people:</b> <b>1 senior architect</b> <b>1 Architect conservator</b> <b>1 Structural engineer specialized in building consolidation</b> <b>3 Surveyors</b>	Year 1	3,360 US\$ per person per year
Reinforcement of capacities of the municipality in urban planning and management, particularly in the historic core.	<ul style="list-style-type: none"> <li>to ensure a better urban planning and management of the historic core.</li> </ul>	<b>1 architect specialized in urban planning/management</b> <b>1 GIS specialist</b>	Year 1	3,360 US\$ per person per year
<b>Total</b>		<b>8 people</b>		<b>134,400 US\$ (for the 5 years)</b>

## TRAINING

Action	Objective	Modalities/Mean	Nb of days for each municipality	Nb of days for 4 municipalities	Cost for each municipality
Training on : <ul style="list-style-type: none"> <li>• Historic Core Regulations</li> <li>• Conservation and restoration of historic buildings</li> </ul>	Development of the technical and institutional capacity of the municipality to <b>enforce the new Historic Core Regulations</b> , and to promote, assist and monitor the <b>conservation</b> and the <b>rehabilitation of the urban and architectural heritage</b> .	Training of <b>6 people</b> from the "Technical support unit" and/ or from the Urban planning department	15	15	15*1,800/4= <b>6,750 US\$</b>
Training on : <ul style="list-style-type: none"> <li>• The use of GIS and other tools (aerial digital maps, databases) for urban planning and management</li> </ul>	Reinforcement of the capacities of the municipality in <b>urban planning and management</b> , particularly in the historic core.	Training of <b>6 people</b> from the Technical support Unit and from the Urban Planning department	15	15	15*1,800/4= <b>6,750 US\$</b>
Training on the maintenance and management of urban services and spaces: <ul style="list-style-type: none"> <li>• Sanitary networks and drainage</li> <li>• Maintenance of the street network;</li> <li>• Traffic road management</li> </ul>	<b>Improving the capacity of the municipality to provide urban services of better quality, in particular in the field of maintenance and management of the urban space.</b>	Training of 6 to 9 people from different technical services <ul style="list-style-type: none"> <li>• 2 or 3 persons from Sanitary networks and drainage;</li> <li>• 2 or 3 from Maintenance of the street network;</li> <li>• 2 or 3 from Traffic road management</li> </ul>	15 (5 days for each service)	15	15*1,800/4= <b>6,750 US\$</b>
<b>Total</b>		<b>26 people</b>	<b>45</b>	<b>45</b>	<b>20,250 US\$</b>

NB: The training will be organized by group of people from the 4 municipalities (maximum 24 persons). The cost for each municipality is calculated on the basis of the number of days per group divided by 4. The cost of one day training is estimated, on average, at 1800 US\$ which includes:

- 1,300 US\$: trainer fees for the 1 international trainer + 1 local trainer (including preparation of the training materials, DSA and transport expenses)
- 150 US\$: training material
- 150 US\$: transportation and catering of the trainees
- 200 US\$: organization

## MUNICIPAL INFORMATION SYSTEM

Action	Objective	Modalities /Means	Schedule	Cost
“Adressage”	Improvement of urban planning and management of the historic core	Pilot operation for the Historic core including <ul style="list-style-type: none"> <li>• Surveys</li> <li>• Codification</li> <li>• Cartography</li> <li>• construction of a database</li> </ul>	Year 1	40,000 US\$
		Installation of signs with names of streets and buildings	Year 2	

## TECHNICAL ASSISTANCE

The training should be complemented by specific technical assistance of a limited duration. An assistance group, made up of consultants, could be established under the responsibility of the MOTA and in collaboration with the Ministry of Municipalities and the CVDV. Such a group could assist the four municipalities in:

- Enforcement of the new Historic Core Regulation
- Improvement of the urban management of the historic core
- Conception of the “Addressage”
- Setting up of indicators for the monitoring and evaluation of the urban service delivery

**Cost : 40,000 US\$**

## IN-KIND ASSISTANCE

- GIS tools for the department of Urban Planning and Technical Support Unit
- Software for the management of databases for the Technical Support Unit
- Plotter, printers, etc. digital camera, etc. (20,000)
- 10 Computers, printers for the Technical Support Unit ( $8 \times 10,000 + 2 \times 4,000$ )
- Satellite imagery and aerial cartography for the Technical Support Unit and the department of Urban Planning (7,000)

Partial renovation of the equipment at the fourth year.

**Cost : 223,000 US\$**

Total Cost for the municipality: 457,650 US\$
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