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MINISTRY OF TOURISM AND ANTIQUITIES  
THE HASHEMITE KINGDOM OF JORDAN

JAPAN INTERNATIONAL COOPERATION AGENCY  
(JICA)

THE STUDY  
ON  
THE TOURISM DEVELOPMENT PLAN IN THE HASHEMITE KINGDOM OF

# JORDAN

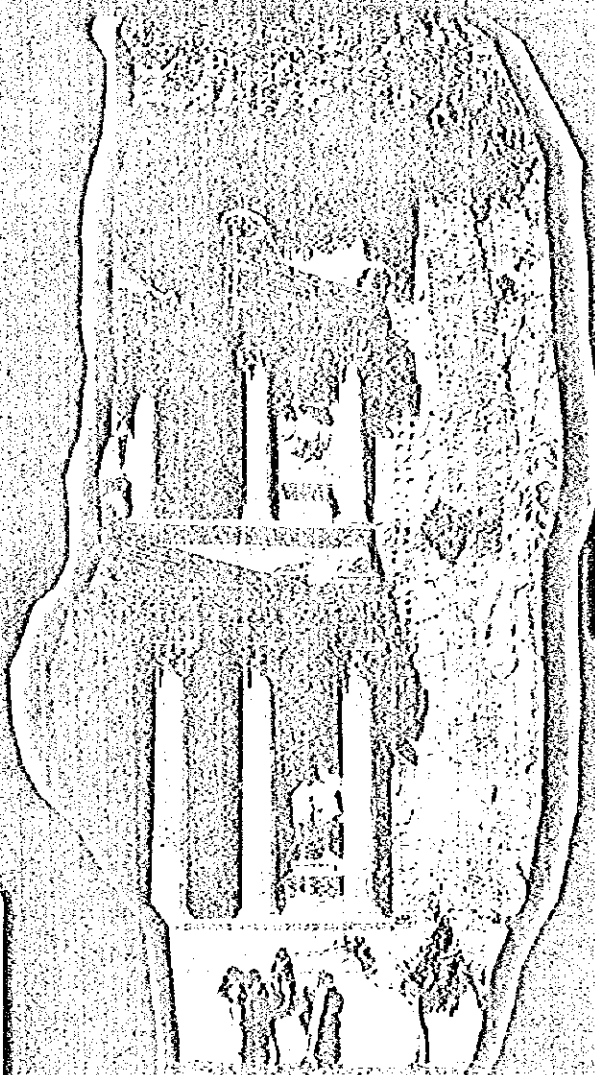
PART II  
DEVELOPMENT PLANS FOR PRIORITY AREAS

FINAL REPORT  
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FINAL REPORT PART II DEVELOPMENT PLANS FOR PRIORITY AREAS

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**Part I : National Tourism Development Strategy and Policy**  
**Volume 1 : Tourism Development**

**Jordan at a Glance**

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## Abbreviations

ARA	:	Aqaba Region Authority
BOT	:	Build, Operate and Transfer
CERM	:	Cultural Environment Resources Management
CIDA	:	Canadian International Development Agency
DOA	:	Department of Antiquities
DOE	:	Department of Environment (of the MMRAE)
EIA	:	Environmental Impact Assessment
EIB	:	European Investment Bank
EMTA	:	Eastern Mediterranean Tourism Association
GAM	:	Greater Amman Municipality
GCC	:	Gulf Cooperation Council
GDP	:	Gross Domestic Product
GEC	:	General Environment Corporation
GOJ	:	Government of Jordan
GTZ	:	Gesellschaft für Technische Zusammenarbeit
HQ	:	Headquarters
IDB	:	Industrial Development Bank
IEE	:	Initial Environmental Examination
ILO	:	International Labor Organization
JATA	:	Japan Association of Travel Agents
JD	:	Jordan Dinar(s)
JETT	:	Jordan Express Tourist Transport
JIC	:	Jordan Investment Corporation
JICA	:	Japan International Cooperation Agency
JTB	:	Jordan Tourism Board
JTB	:	Japan Travel Bureau
JTI	:	Jordan Tourism Investment
JVA	:	Jordan Valley Authority
MEMR	:	Ministry of Energy & Mineral Resources
MENA	:	Middle East and North Africa
MICE	:	Meeting, Incentive, Convention and Event
MIGA	:	Multilateral Investment Guarantee Agency
MIS/TDN	:	Management Information System/Tourism Data Network
MMRAE	:	Ministry of Municipal, Rural Affairs and Environment
MOA	:	Ministry of Agriculture

MOE	:	Ministry of Education
MOHE	:	Ministry of Higher Education
MOIT	:	Ministry of Industry and Trade
MOL	:	Ministry of Labor
MOP	:	Ministry of Planning
MOT	:	Ministry of Transport
MOTA	:	Ministry of Tourism and Antiquities
MPWH	:	Ministry of Public Works & Housing
MWIWA	:	Ministry of Water, Irrigation & Water Authority
NGO	:	Non Governmental Organization
NIC	:	National Information Center
OECF	:	Overseas Economic Cooperation Fund of Japan
QAIA	:	Queen Alia International Airport
RJ	:	Royal Jordanian Airlines
RSCN	:	Royal Society for the Conservation of Nature
SDC	:	Salt Development Corporation
SDF	:	Saudi Development Fund
SIT	:	Special Interest Tourism
SSC	:	Social Security Corporation
TCC	:	Telecommunications Corporation
TDA	:	Egyptian Tourism Development Authority
TID	:	Tourism Investment Development (of the SSC)
TOR	:	Terms of Reference
UNESCO	:	United Nations Educational Scientific and Cultural Organization
USAID	:	United States Agency for International Development
VTC	:	Vocational Training Corporation
WB	:	World Bank
WFO	:	World Tourism Organization

### CURRENCY EQUIVALENTS

(As of January 1996)

Currency Unit	=	Jordan Dinar (JD)
	=	1,000 fils
JD1.0	=	US\$1.41
US\$1.0	=	JD0.708

**PART II**  
**DEVELOPMENT PLANS FOR PRIORITY AREAS**

**Chapter 1.**

**Introduction**

## **Chapter 1. Introduction**

This report is Part II of the Final Report of the Study on the Tourism Development Plan in the Hashemite Kingdom of Jordan, which was carried out under a technical assistance project for the Kingdom of Jordan provided by the Japan International Cooperation Agency.

The Final Report consists of four volumes as follows:

**Executive Summary**

**Part I: National Tourism Development Policy and Strategy**

- Volume 1: Tourism Development
- Volume 2: Sectoral Development

**Part II: Development Plans for Priority Areas (in 1 volume)**

Tables of contents of the volumes other than this one are attached immediately after the table of contents of this volume for reference.

Part I describes the evaluation of the existing situation concerning tourism development in Jordan and the formulation of national tourism development strategy and policy, which was the result of the Phase I of the Study.

This volume for Part II describes the results of Phase II of the Study, which focused on developing plans for selected tourism development projects that best illustrate the direction of the Phase I Study, if implemented.

**PART II**  
**DEVELOPMENT PLANS FOR PRIORITY AREAS**

**Chapter 2.**

**Priority Tourism Development Areas**

1950-1951

1952-1953

## Chapter 2. Priority Tourism Development Areas

### 2.1 Criteria

#### (1) Selection Criteria

In order to identify those areas requiring priority attention to meet the objectives of the study the following criteria were used to evaluate each of the tourism zones. The criteria concentrate on the potential future situation rather than the present situation. Emphasis was placed on the short term potential reflecting the staged development strategy identified in Phase I Study. The criteria used in the evaluation are as follows:

##### a. Foreign exchange earning capability

The potential of the area to attract international tourists and thereby the generation of foreign exchange earnings (see Table 2.1.1);

##### b. Market expansion and diversification potential

The potential of the area to add to expand the existing and add to Jordan's attractions thus providing a firmer tourism base not solely dependent on a few historical monuments and sites;

##### c. Least public investment

The potential of the area to increase Jordan's foreign exchange earnings and widen its resource base without the need for significant public expenditure either directly by public sector initiatives or indirectly by substantial soft loans. This criteria is detrimental to rural areas with little or no history of tourism;

##### d. Local employment generation

The potential of the area to generate additional employment by the presence of trained personnel able to fill the available positions. This criteria also prejudices the rural area which may neither have the required numbers of unemployed nor the numbers who are suitably trained. To improve their situation a pool of trained labor must be established before it can be encouraged to supplement the labor force in the rural areas;

---

**e. Environmental capacity**

The potential capacity of the area to absorb tourists without detriment of the environment of the places visited, e.g. monuments, wildlife, etc.

**f. Attractiveness to international funding agencies**

The potential of the area to appeal to the majority of funding agencies by being high profile, with a high likelihood of success;

**g. Attractions to the private sector**

The potential of the area to attract the private sector investment. This incorporates an assessment of degree of risk as well as potential profitability. The private sector in Jordan is at a juvenile stage of development and needs to prove itself in the areas with less risk and to build up adequate reserves before it can be encouraged to pursue higher risk projects. This approach will initially be prejudicial to the rural areas; and

**h. Distance from the gateway**

the potential to attract visitors from all by the premier sites is a function of the distance from the point of entry. At present that is Amman and the bridge over the Jordan River. Later, Aqaba may develop as a major point of entry but this is unlikely to rival Amman within the scope of this project, i.e. before the year 2010.

**(2) The Importance of Petra**

All the areas will inevitably be overshadowed by Petra which is recognized by the international community as a site of unique historic importance but has captured the imagination of the world since its discovery by its portrayal, for example, in a number of popular films. Without Petra there is no tourism industry in Jordan; with Petra Jordan has a unique advantage which needs to be exploited for the entire country.

While the Study readily recognizes Petra's importance, it also recognizes its unique constraints for development due to its limited carrying capacity. Lack of conservation effort in the past and the absence of an integrated management of the site and its environs despite the sensitivity of the site to deterioration are serious problems. Significant funding is required and is being provided by the international community to attempt to rectify such problems. However, the site does not call for further additional major effort as its management and preservation are already the focus of much foreign interest and the implementation of the UNESCO plan will do



much to put the site on a firm footing which should enable the development of its tourist potential.

Petra has therefore been excluded from consideration as an area that can be evaluated on an equal basis with other areas.

**Table 2.1.1 Contribution of Foreign Exchange Earnings  
(2010 at Scenario C)**

		1. Tourist-nights share (%)	2. Tourist Receipts (US\$ Million)	3. Ranks
Northern T.R.	Irbid T.A.	0.6	30.4	8
	Ajlun - Jerash T.A.	1.0	50.6	7
Eastern T.R.	Mafraq - Zarqa T.A.	0.2	10.1	10
Central T.R.	Amman T.A.	48.0	2,428.8	1
Western T.R.	Balqa T.A.	1.5	75.9	6
	Madaba - Dead Sea T.A.	13.0	657.8	4
	Karak - Dead Sea T.A.	2.0	101.2	5
Southern T.R.	Tafila T.A.	0.2	10.1	10
	Petra - Shawbak T.A.	16.0	809.6	3
	Aqaba - Wadi Ram T.A.	17.5	885.5	2

Note: The above amounts of tourist dollars are one indication of strength of each area in terms of foreign exchange earnings based on the share of tourist bed-nights. But the above excludes day trip tourists and can not be the only indicator of area's strength in foreign exchange earning ability.

---

## 2.2 Selection of Priority Areas

### (1) Evaluation Results

Evaluation of tourism areas as defined before was carried out against each of the criteria described above. The results are shown in Figure 2.2.1.

Overall evaluation was made taking into account all of the criteria. Different criteria however can not be considered with the same weight. They differ depending on the interest of the party concerned. For example, the foreign exchange earning ability may carry the highest weight for the Ministry of Finance; but for the resident of a particular area the extent of local employment generation could be the highest concern. Such weighting is ultimately determined through the political process of the nation. The Study Team attempted to attach weights on each criteria as impartial as possible from the assumed view point of the central government. Assumed weights are shown below:

- Foreign Exchange Earning Ability:	10
- Market Expansion and Diversification Potential:	5
- Least Public Investment:	3
- Local Employment Generation:	4
- Environmental Robustness:	6
- Attractions to International Funding:	3
- Attractiveness to Private Sector:	5
- Distance from the Gateway:	3

For each criterion an area judged with the high appeal was given 5 points, the medium appeal 3 points and the low appeal 1 point. Weighted totals of scores were calculated for each tourism area. The resulting total scores were ranked in the descending order and the ranking of tourism areas was determined as shown in Figure 2.2.1.

Assessment of each area against each of the above criteria was made for the target year of 2000, since the exercise was meant for the selection of the priority areas for that target year. For a longer time horizon, evaluation score and consequent ranking would be different. For example, after the improvement of the Aqaba Airport to make it a fully international level airport, which can not be completed by 2000, Aqaba's position in ranking could be higher than that in the short run.

The above weights are obviously subjective. Discussions within the Government are needed to determine their appropriateness. However, minor changes would not change the resulting ranking of the areas. The ranking is shown below.

	Tourism Region	Tourism Area
<b>Primary Tourism Development Potential</b>		
1	Central	Amman
2	Northern	Madaba / Dead Sea
3	Western	Jerash / Ajlun
4	Western	Balqa
5	Western	Karak / Dead Sea
6	Southern	Aqaba / Wadi Ram
<b>Secondary Tourism Development Potential</b>		
7	Northern	Irbid
8	Southern	Tafila
9	Eastern	Zarqa/ Mafraq

The areas have been divided into those which offer immediate prospects for development and those which are likely to render measurable increase in tourism within the project period i.e. upto 2010, and those where the potential requires greater development and which could form the second phase of development. However, this will be dependent on a number of factors including the following:

- the success of the tourism development in the primary tourism potential areas;
- continuing improvements in regional peace;
- solutions to major tourism constraints, e.g. water supply, etc.

## **(2) Selection of the Priority Tourism Development Areas for Phase II**

In this Study, a limited number of areas are required to be selected at the end of Phase I and will be subject to more detailed study in Phase II. It is anticipated that some areas subject to the detailed study in Phase II would become a candidate for eventual funding by foreign countries. Therefore, for the selection of areas for the Phase II Study, additional criterion was also examined, that is, the suitability of candidate projects in the area as a subject of official assistance by a foreign country.

At least seven international or bilateral agencies have actively been involved in the development and conservation of the Petra area. It was therefore considered unsuitable for eventual assistance provision by additional foreign official agency.

The Jerash area is located within those areas to be excluded from the subject of further study in Phase II according to the initial agreement between the Government of Jordan and the Government of Japan.

The areas selected for further study in Phase II of this Study are therefore as follows:

- 1 Central Amman
- 2 Western Madaba / Dead Sea
- 4 Western Balqa
- 5 Western Karak / Dead Sea

Figure 2.2.1 Evaluation of Tourism Areas

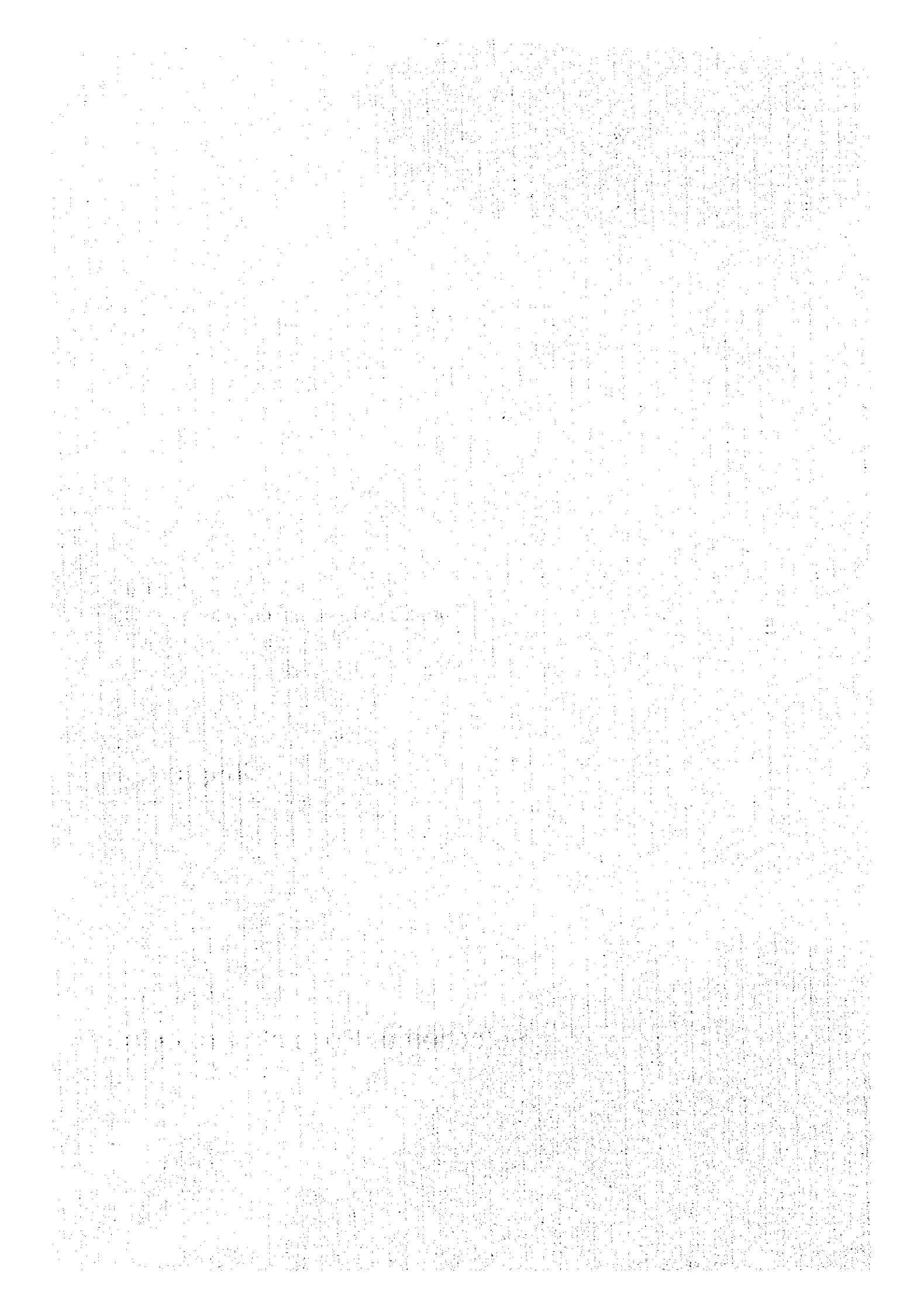
Tourism Region	Northern		Eastern	Central	Western			Southern		
Tourism Area	Irbid	Ajlun-Jerash	Zarqa-Mafraq	Amman	Balqa	Madaba-Dead Sea	Karak-Dead Sea	Tafila	Petra-Shawbak	Aqaba-Wadi Ram
Foreign Exchanger Earning (Weight) (10)										
Market Expansion and Diversification Potential (5)										
Least Public Investment (3)										
Local employment Generation (4)										
Environmental Capacity (6)										
Attractiveness to International Funding Agencies (3)										
Attractiveness to the Private Sector (5)										
Distance from the Gateway (3)										
Overall Score	105	149	45	183	147	149	143	67	171	139
Priority Rating	7	2	9	1	4	2	5	8	N/A	6

LEGEND: High 5 Medium 3 Low 1

**PART II**  
**DEVELOPMENT PLANS FOR PRIORITY AREAS**

**Chapter 3.**

**Selection of Possible Projects**



## Chapter 3. Selection of Possible Projects

A fair number of possible tourism development projects were identified through detailed field reconnaissance in the selected priority tourism development areas and discussions with concerned government officials. Figure 3.1.1 illustrates the locations of these projects. The following lists these possible projects classified into three categories: those to be implemented by the Government, those by the joint effort between the Government and the private sector, and those by the private sector.

### 3.1 Identification of Possible Projects

#### 3.1.1 Government Projects

##### (1) Low Interest Loan for Tourism Industry Enterprises

- Low interest loan or bank guarantee by government financial institution for private sector investment in tourism.

##### (2) Amman the Gateway

- Package of projects for upgrading attractions of urban tourism and facilities including:
  - \* Citadel Restoration - being done with USAID assistance
  - \* Downtown Tourist Street and Citadel Trail
  - \* Tourist Center
  - \* Bus Terminal Complex
  - \* Airport Beautification
  - \* Airport Access Road Beautification
- Feasibility study of urban light rail transit (underway by the Ministry of Transport)

##### (3) Model Tourism Site Preparation

- Preparation of tourism sites for accepting international tourists including:
  - \* Salt Old City
  - \* Fuhays

- 
- \* Wadi Sir & Iraq al Amir
  - \* Madaba City
  - \* Mount Nebo
  - \* Mukawir
  - \* Wadi Mujib
  - \* Rabba
  - \* Mazra'a
  - \* Karak Castle and City

**(4) National Museum**

- Establishment of the National Museum

**(5) Tourism Road Improvement Package**

- Package of road construction to boost tourism including:

- \* Ma'in - Dead Sea
- \* Ma'in - Mukawir
- \* Mukawir - Dead Sea

- Improvement of Border Facilities, Services, Accesses, and Connected Roads:

- \* King Hussein Bridge and Access Road
- \* King Abdulla Bridge and Access Road
- \* Prince Mohammad Bridge and Access Road
- \* Damiah Junction - Kofurhooda Highway
- \* North Shuna - South Shuna Highway
- \* Salt - South Shuna Highway

- Upgrading of the Dead Sea Highway and Mt. Nebo - Kafrein Road
- Road Safety Measures along the Dead Sea Highway

**(6) Improvement and Beautification of Access Roads and Parking Spaces at Tourist Sites**

- Beautification of access paths to selected tourist sites in order to give tourists a sense of arrival
- Improvement of access roads
- Provision of parking spaces



**(7) Tourism Infrastructure and Facility Improvement Package**

- Package of physical improvement work of selected tourism related infrastructure such as Dead Sea-Madaba Road and parking and resting facilities along the Dead Sea Highway.

**(8) Improvement of East-West Access to Karak**

- Upgrading of Karak - Qatrana Road
- Upgrading of Karak - Safi Road

**(9) Institutional Strengthening of Tourism Infrastructure Services**

- Strengthening of MOTA and Ministry of Municipal and Rural Affairs and Environment

**(10) Institutional Strengthening of Park and Site Management**

- Strengthening of park and site management at selected agencies including MOTA

**(11) Human Resources Development**

- Improvement of the Hotel Training College

**3.1.2 Government - Private Sector Cooperation Projects**

**(12) Amman International Tourism Center (World Trade Center)**

- Urban building complex of tourist service facilities, offices, and hotels of international class

**(13) Hijaz Railway**

- Upgrading of the Hijaz Railway as a major international tourist attraction

**(14) Festival and Special Event Projects**

- Performing art festivals under joint sponsorship of public and private sectors

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**(15) Dead Sea Coast Resort Town**

- Creation of a resort town at the Dead Sea coast with government investment in infrastructure and private sector investment in facilities. Planning work in progress
- Creation of an amusement and picnic park on a MOTA owned land of 12 ha

**(16) Jordan Valley Green Village**

- Creation of a holiday resort in the Jordan Valley

**Khirbet Sar Archaeological Park (West Of Amman)**

- Construction of a restaurant / hotel complex at this panoramic site with portal funding for continued excavation of the ancient temple adjacent.

**Yajouz Village Archaeological Park (north of Amman)**

- Development of a restaurant / hotel complex adjacent to this scenic site with private funding for continued excavation of this ancient Roman village.

**(17) Rift Valley Village Accommodation**

- the soft loan financing of the upgrading of private houses by their owners to accommodate eco tourists.

**3.1.3 Private Sector Projects**

**(18) Tourist Village**

- Tourist showcase and accommodation as exotic destination

**(19) Desert Horse and Camel Riding Course**

- Course or ranch

**(20) Dead Sea Cruise**

- Vessels and piers. Co-Terminal possible linked with the Ma'in Cable Car
- Introduction of excursion boats

**(21) Desert Ballooning and Sand Skiing**

- Site selection requires care

**(22) Traditional Song and Dance Troop**

- Regular performance is desired

**(23) Renovation of Ma'in Spa**

- Upgrading and expansion of the existing facilities with active marketing

**(24) Nomad's Village**

- Tourists can experience nomad's way of life

**(25) Hotels and Resorts**

- New hotels at selected sites (Amman, Airport, Dead Sea Coast, etc.),

**(26) Ma'in - Dead Sea Cable Car**

- A cable car connecting the Ma'in Spa and the Dead Sea through a scenic wadi.  
A plan by the Jordan Investment Corporation exists.

**(27) Private Hotel Training School**

- A privately-run hotel training school

**(28) Inns and Lodges**

- In the old sectors of Salt, Madaba and Karak

**(29) Soft Adventure Tour Operation**

- Along the Dead Sea Escarpment
- Through Wadi Mujib Reserve

**(30) Renovation of Old Buildings for Commercial Use (Salt, Madaba)**

- As restaurants, hotels or banquet use

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- For retail shops or other tourist services (banks, travel agencies, clubs)

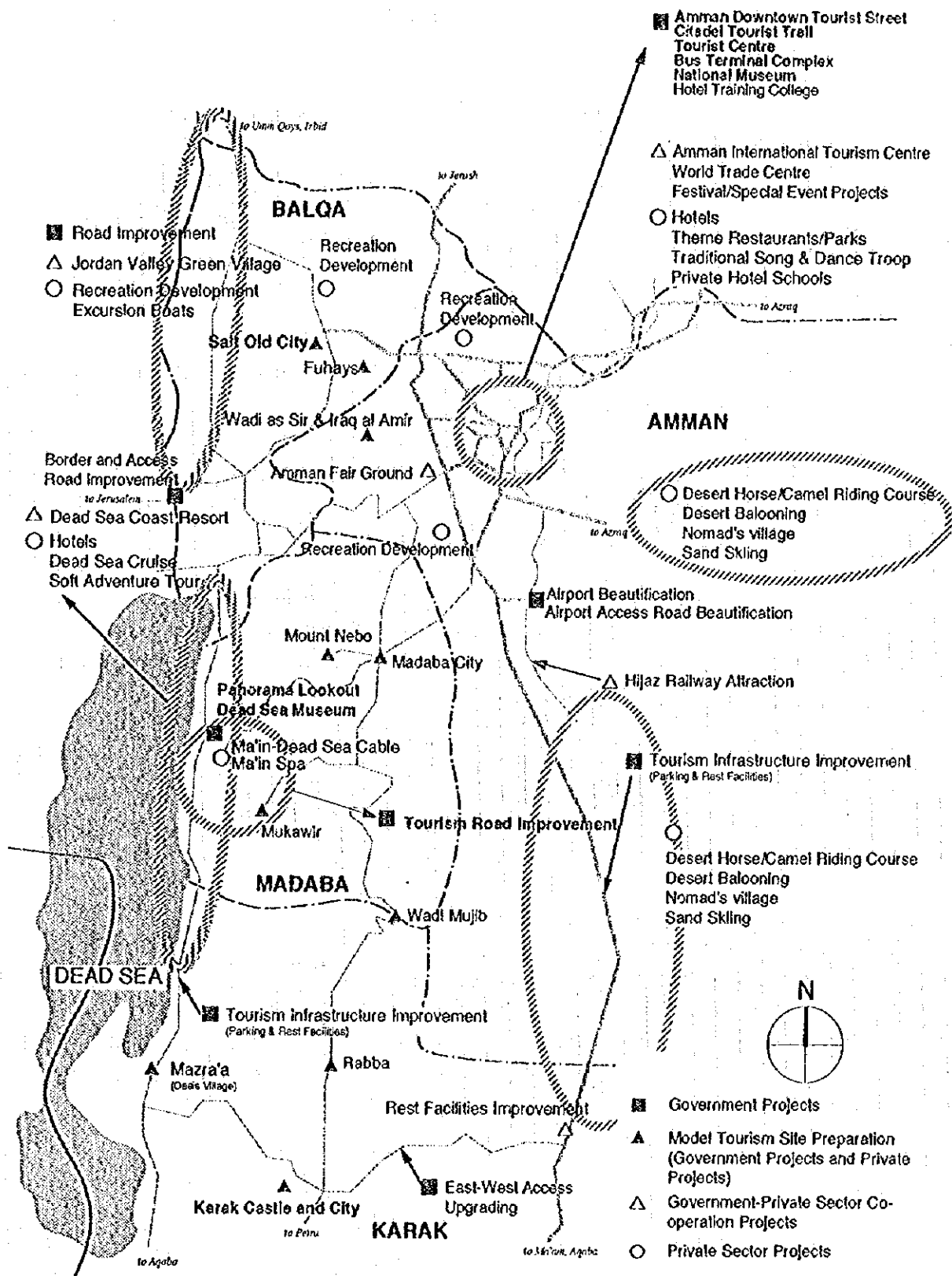
**(31) Introduction of Excursion Boats in Jordan River**

- Environmental impact assessment is a must

**(32) Lookout and Rest Facilities**

- Along the Ma'in - Ma'in Spa Road, etc.

Figure 3.1.1 Possible Projects in the Selected Areas



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### 3.2 Selection of Model Projects

The priority tourism areas of Amman, Balqa, Madaba/Dead Sea and Karak City were selected as part of Phase I work, as presented in Section 2.2. Subsequently detailed studies were carried out for selected projects to act as a model for subsequent tourism project planning work that could be followed in other tourism projects in Jordan.

Each of the projects has been examined and evaluated for their suitability as a model project. The following criteria were considered in their selection:

- 1) location in one of the priority zones.
- 2) characteristics which conform to the basic principles and the identified development strategies
- 3) implementation to strengthen Jordan's position in attaining strategic goals.
- 4) suitability for possible foreign financial assistance.

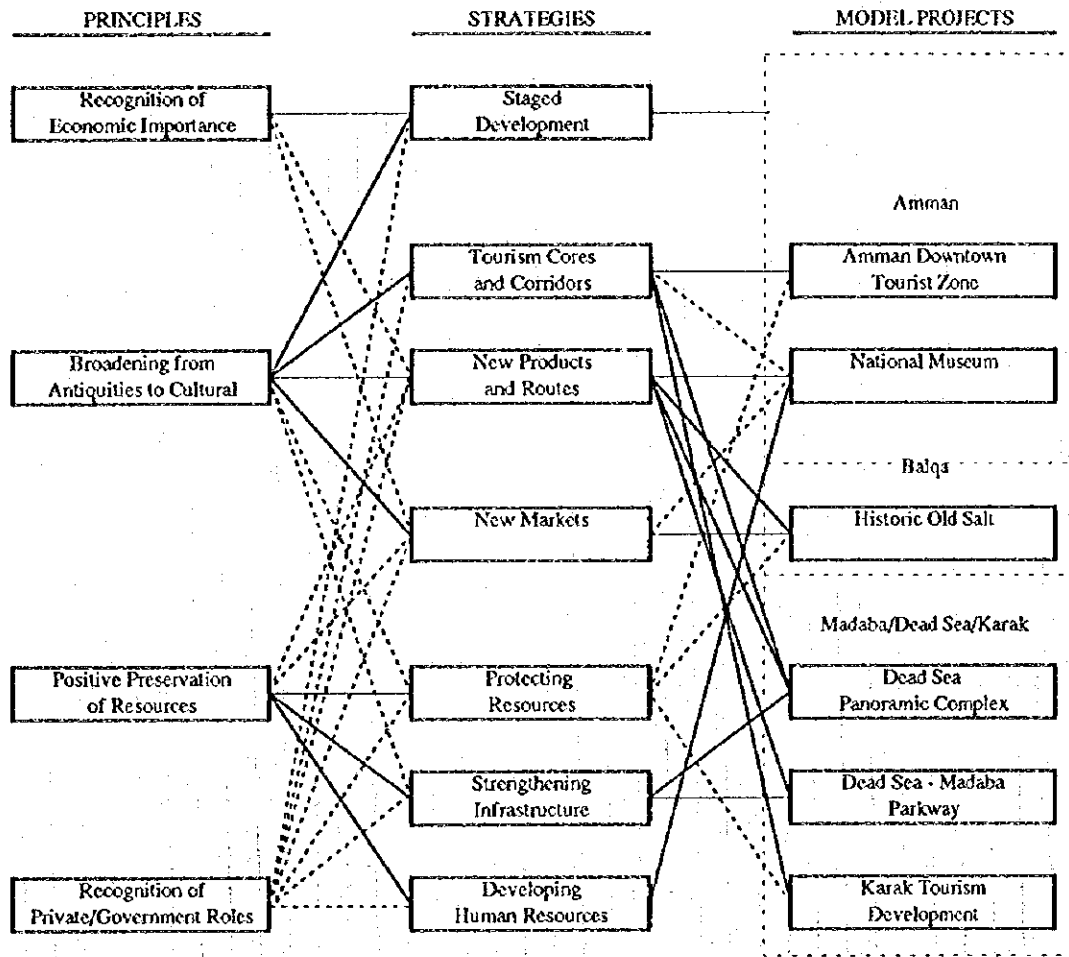
The last criterion was adopted in realization that the tourism sector development in Jordan could substantially benefit from foreign financial and technical assistance. This criterion biased the projects selected toward government-led projects rather than private sector oriented ones.

The following projects were chosen:

- a. Amman Downtown Tourist Zone (Project 2)
- b. National Museum (Project 4)
- c. Historic Old Salt (Project 3)
- d. Dead Sea Panoramic Complex (Project 7)
- e. Madaba - Dead Sea Parkway (Project 5)
- f. Karak Tourism Development (Project 3)

Project numbers as shown in the list of Section 3.1 are indicated in parentheses. Figure 3.2.1 illustrates how the selected projects are related to the principles and the strategies determined for the tourism development in Jordan.

**Figure 3.2.1 Tourism Development Principles, Strategies, and the Selected Model Projects**



**PART II**  
**DEVELOPMENT PLANS FOR PRIORITY AREAS**

**Chapter 4.**

**Plans of Model Projects**



## **Chapter 4. Plans of Model Projects**

The set of six model projects is explained in this chapter. All of this work is conceptual and schematic, and is the result of this Study Team's research to date. This information is provided for indicative purposes, to enable agencies to understand the key issues that they address, and to seriously consider the projects for further study, detailed design, funding, and implementation. All of the information is subject to change through further study that is normally undertaken in project appraisal procedures applied by appraisal teams. Their scale, components, overall cost, and even the locations can be modified as the concepts are examined through further study.

Each project was examined from a number of angles in addition to the design of the project itself, i.e. institutional issues including heritage conservation and community considerations, implementation structure, infrastructure requirements, and environmental implications, implementation plan, and economic evaluation.

A framework for implementation is indicated for each, based on the Study Team's knowledge of the administrative context in Jordan. Trends such as government streamlining, privatization and private sector development are currently under way in Jordan, so the administrative context itself is changing. Consequently, recommendations related to implementation of projects are also subject to change. Generally, implementation has been discussed in two parts, the first that of developing the project, and the second that of operating it once completed.

This chapter is divided into 6 sections, one for each project. Each section has been prepared in such a way that it can be read independent of the whole report. If an issue is common to more than one project, relevant discussions are therefore repeated in the sections concerned, so that one can obtain all the necessary information for a particular project from the section for the project.

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## **4.1 Amman Downtown Tourist Zone**

### **4.1.1 Concept and Rationale**

To transform the downtown area into the symbol of Amman by means of a package of mutually complementary small to medium size projects.

#### **(1) Objectives**

- To increase the appeal and attractiveness of Amman as a tourist destination;
- To create a focal core for tourist activities in Amman; and
- Eventually to enhance the position of Amman as the gateway for Jordanian tourism.

#### **(2) Rationale**

In present day international tourism, the existence of a tourist service core or gateway city is essential. For example, Nile River tourism and Pyramid tourism can not be supported without Cairo, where tourists spend the majority of their time and money, similarly Loire castles tourism can not be supported without Paris. Without a well developed core city with a tourist appeal of its own, it is difficult to increase the number of tourists or tourist receipts. By means of projects like this one, Amman can establish itself as a tourist destination in its own right and thus become a core. No other city in Jordan has sufficient level of concentration of services needed to become a tourist core. As Amman establishes itself as the core of Jordanian tourism, tourists can be induced to stay longer in Jordan and Jordan can capture a larger share of Middle East tourism market.

#### **(3) Related Projects**

The Citadel has been the subject of numerous archaeological excavation and restoration efforts. The British, Italian, Spanish, French, and Jordanians were active. The French will continue excavations. MOTA itself has been working an access road positioning, removal of army barracks, DOA storage rooms, removal of spoil heaps and continuous excavations.

USAID has initiated the Cultural and Environmental Resource Management (CERM) Project in 1995. A major component of the CERM Project is a comprehensive work on the Citadel to enhance its tourism value. The main subject area of the CERM Project is however limited within the boundary of the designated Citadel area. The combination of the CERM Project and the proposed Amman Downtown Tourist Zone Project will create a powerful tourist magnet in the center

of Amman by the restored Citadel on top of the hill, the newly created Tourist Zone at the foot of the hill, and the tourist trails connecting both.

A plan to utilize half the floor of Old Municipality Building as a Visitor Center is also being proposed for the year 1996 by CERM Project. If implemented this would be an integral part of the overall Downtown Tourist Zone concept presented in this report.

#### **4.1.2 Preliminary Plan**

##### **(1) Project Components**

###### **a. Creation of a Tourist Street**

A selected street (about 400 m long and 12 m wide) located at the foot of Citadel will be improved in order to promote more tourist facilities: stylish hotels, restaurants, souvenir shops, etc.

- Improving pavement, drainage, underground wiring, lighting and planting;
- Providing attractive street furniture (benches, shelters, rubbish bins, flower pots), signs and art works;
- Establishing guidelines for the structure of street: suitable building facade (material, color, design) and activities;
- Assisting the establishment of high standard souvenir shops, restaurants, cafes, and other tourist shops by means of incentives and guidance.

###### **b. Introduction of Tourist Trails**

Five major access routes connecting the Citadel to the Roman Theater and to the Downtown area have been identified. The work to be undertaken consists of the following elements:

###### **For all five access routes**

- Providing attractive tourist signs at appropriate intervals.

###### **For Lookout Access and East Access**

- Improving the pavement of stairways, water supply piping, drainage, lighting, street furniture, landscaping;
- Providing panorama boards explaining the view;
- Establishing guidelines for the structure of trails; suitable facade (material, color, design) and activities.

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**For vehicular access routes**

- Providing direction signs for vehicles.

**c. Renovation of Old Municipality as Amman Municipal Museum**

On completion of the New Municipality Complex and Library at Ras al Ain, a part of the old municipality building which at present contains the Library and District office will be renovated as Amman Municipal Museum. This will display the history of the capital city of Amman with historical photos, documents, maps, films and models. The intention is to attract both foreign tourists and local Jordanians. The work required includes the following:

- Full restoration and renovation of the old municipality building;
- Providing Amman Tourist Information Center (i.e. Component e.);
- Providing coach parking lots (5 to 10) behind;
- Providing an overpass pedestrian walk to the Tourist Street.

**d. Creation of a Tourist Bus Terminal**

A new bus terminal serving various destinations including tourist sites will be created through the improvement of the existing Raghadan bus and service taxi terminal. The work required is the upgrade of the existing terminal by addition of a pedestrian deck above and terminal building (approximately 6,000 sq.m of floor area). This will accommodate the following:

- all existing terminal administration facilities and shops for commuters;
- additional tourist facilities (ticket center, air line offices, transport information, etc.);
- a pedestrian overpass to Raghadan Access.

**e. Creation of a Modern Tourist Information Center**

Amman must have modern Tourist Information Centers at locations frequented by tourists. A Tourist Information Center can be included in either the renovated Old Municipality Building as proposed by the CERM Project, or the upgraded Raghadan Tourist Terminal. In the interim, a temporary Tourist Information Center must be provided as soon as possible in or near the Roman Theater area using one of shop arcades or kiosks which are owned by the Amman municipality. The facilities required are as follows:

**Temporary Tourist Information**

- 30 to 50 sq.m;

- adequate information equipment, material and brochures.

**Tourist Information Center in Amman Municipal Museum or Rhagadan Tourist Terminal**

- 200 to 300 sq.m;
- hotel reservation office, amenities, etc. in addition.

**f. Training of Managers and Workers**

The above facilities should be operated at an international standard and services should be provided at a level that does not fail tourists' expectations. Training of managers and workers is necessary and will be incorporated in the project as an important component. Overseas and domestic training of managers is desirable as well as domestic training of workers. Areas of training would include:

- urban facility planning;
- urban administration management;
- museum management;
- tourist service management;
- transport terminal management;
- tourist marketing; and
- tourist service practices.

Figure 4.1.1 Amman Downtown Tourist Zone Project Components

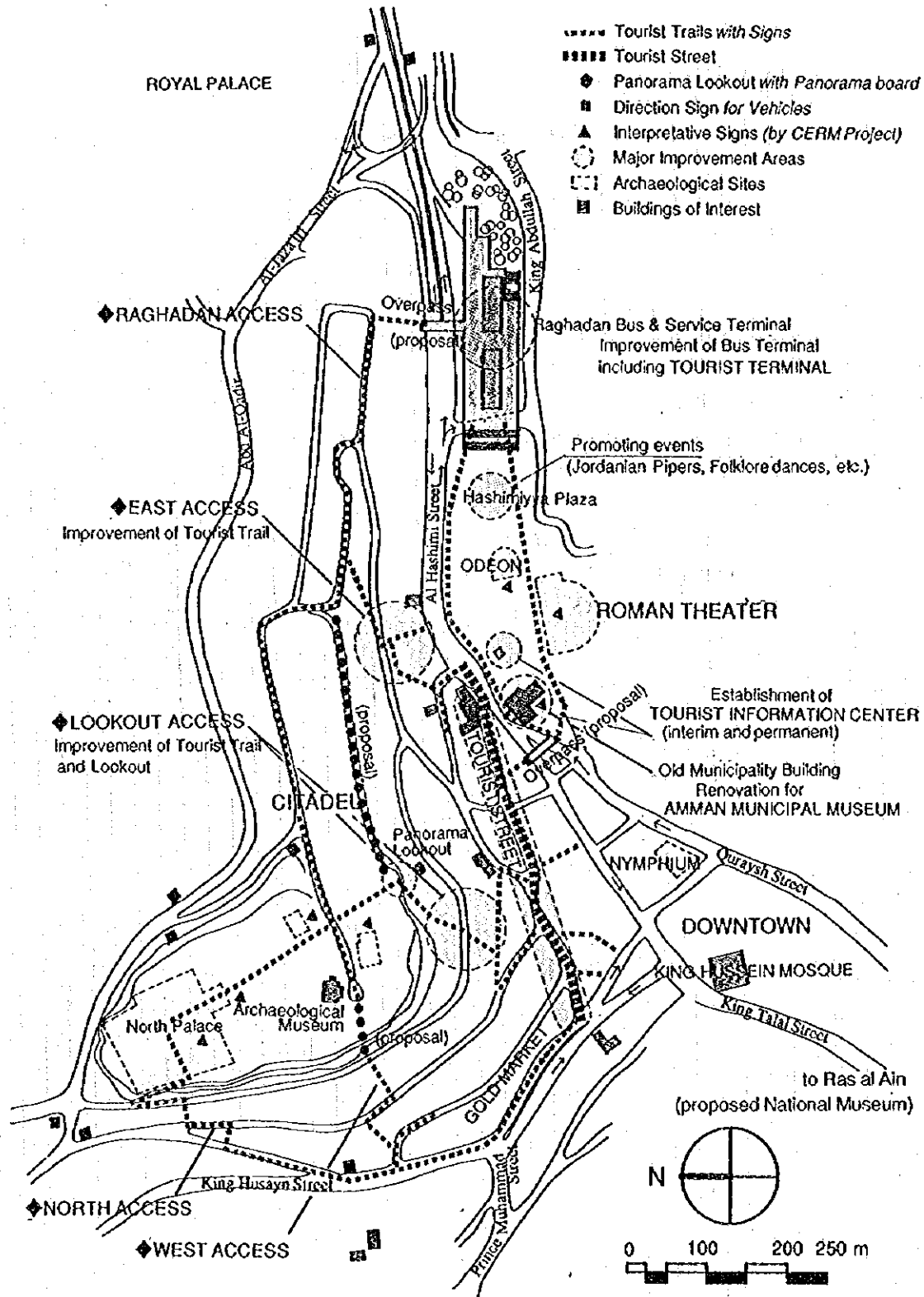


Figure 4.1.2 Amman Tourist Street

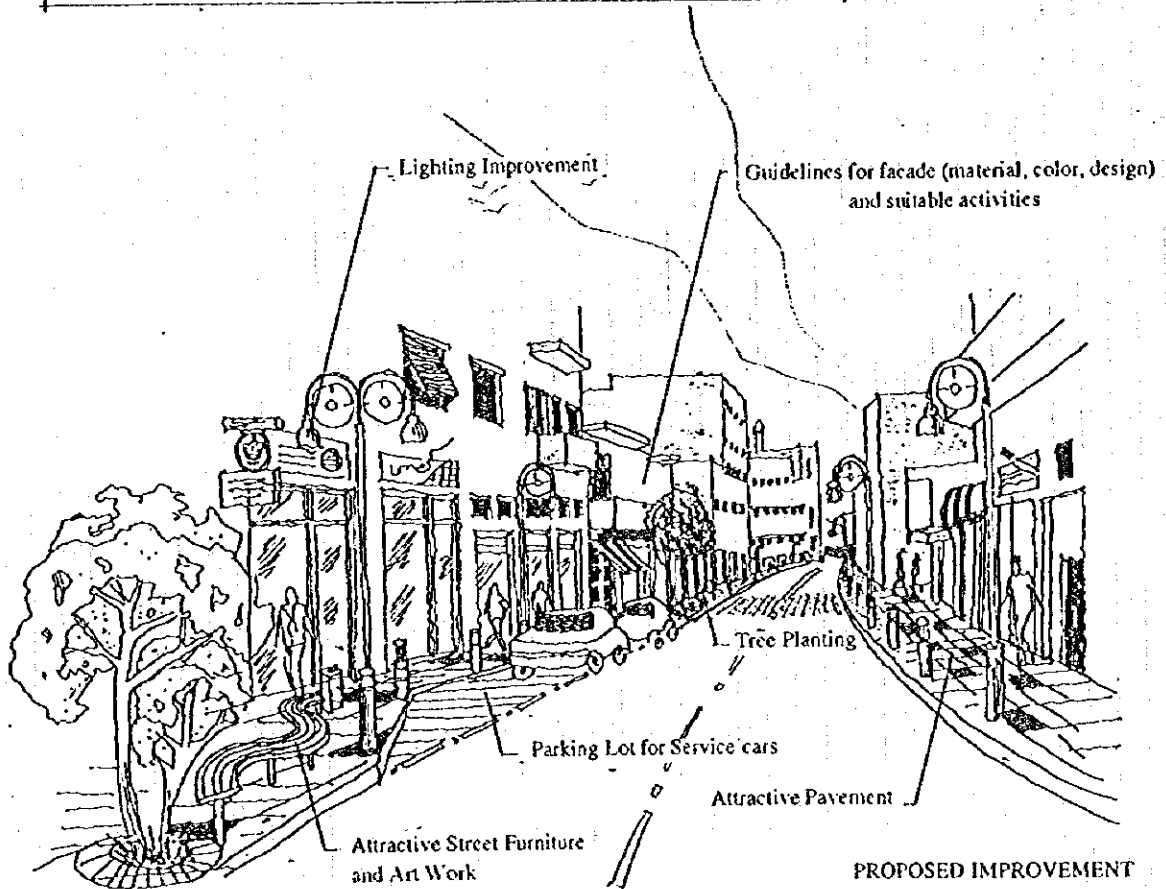
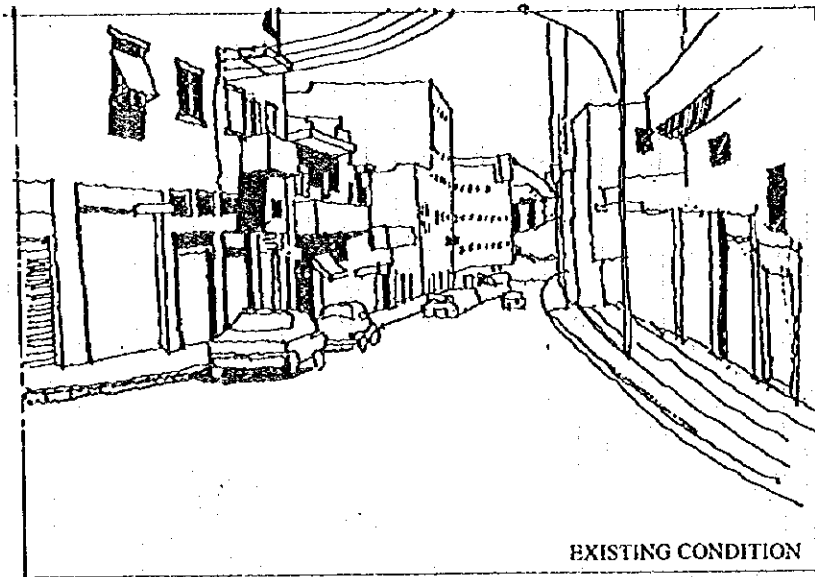
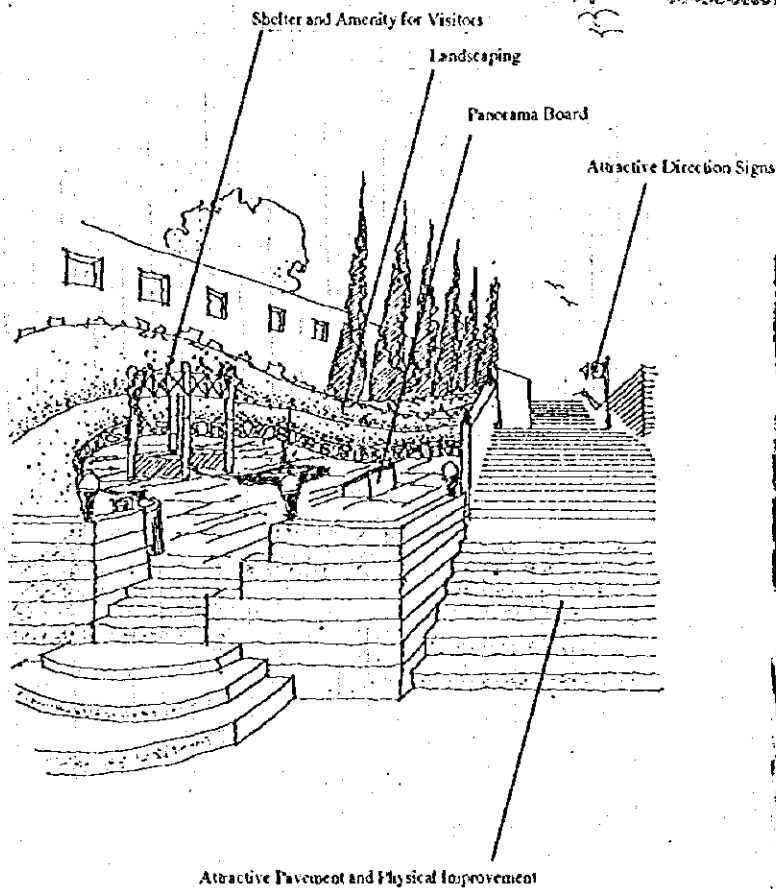
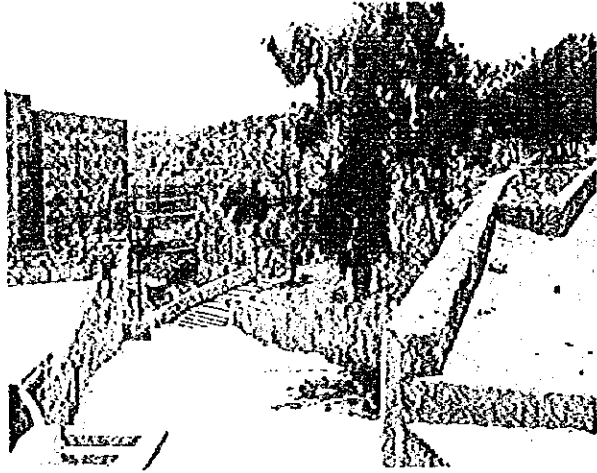


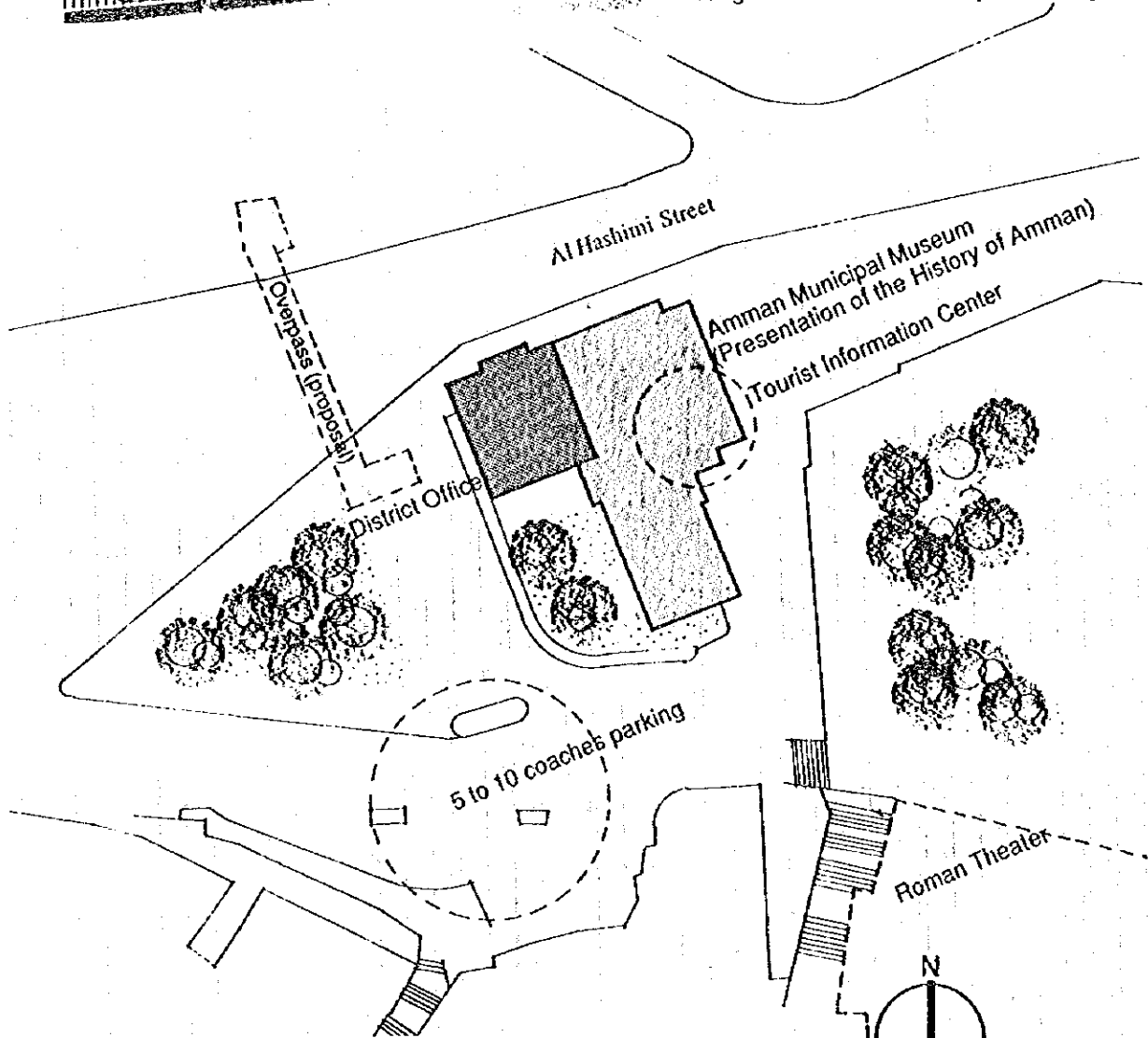
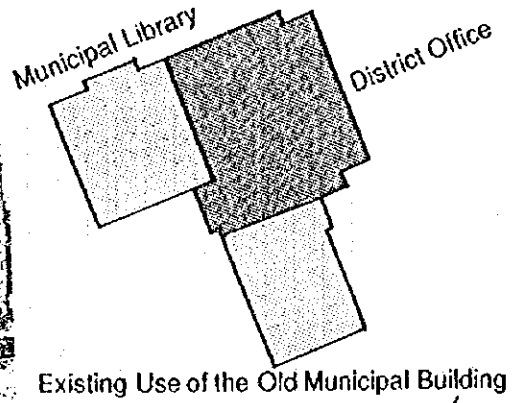
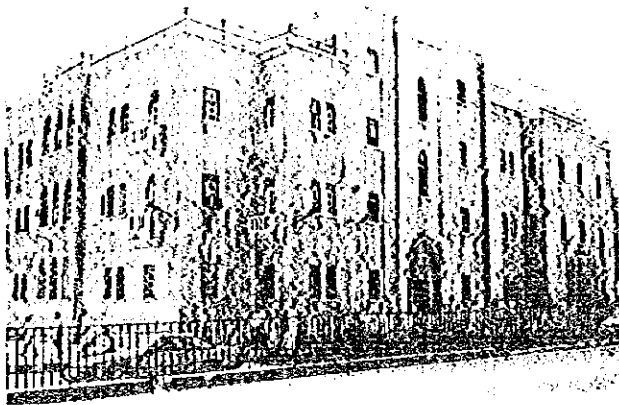
Figure 4.1.3 Amman Tourist Trail



Beautification of Tourist Trails

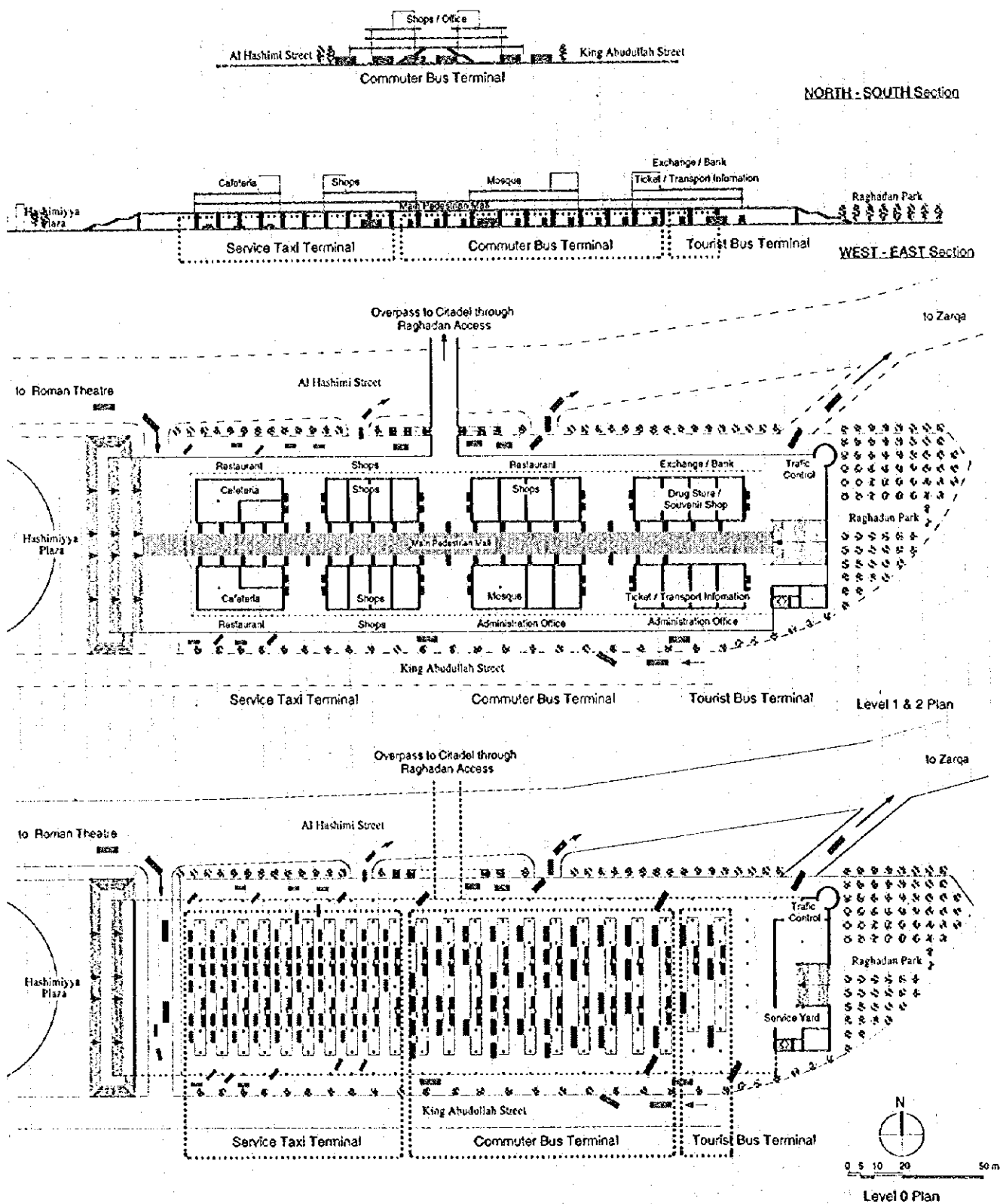


Figure 4.1.4 Amman Municipal Museum



1. Municipal Library moves to New Library
2. Restoration and renovation for District Office
3. District Office moves to former library section
4. Restoration and renovation for Amman Municipal Museum
5. Completion of renovation work

**Figure 4.1.5 Amman Tourist Bus Terminal**



## (2) Cost Estimates

Preliminary project cost estimates are shown as follows for the purpose of indicating the size of the project.

	Component	Cost US\$ million
a. Tourist Street	Planning and Design	0.3
	Construction	2.0
b. Tourist Trails	Planning and Design	0.3
	Construction	2.2
c. Animan Municipal Museum	Planning and Design	0.3
	Renovation and Equipment	2.0
d. Tourist Bus Terminal	Planning and Design	1.7
	Construction	11.0
e. Tourist Information Center	Equipment (Interim Use)	0.2
	Equipment (Permanent Use)	0.5
f. Training	Overseas Training	0.2
	Domestic Training	0.1
<b>Total</b>		<b>20.8</b>

## (3) Implementation Structure

### a. Project Development

#### Project Authorization

The project should be initiated with a clear authorization and statement of support from the Higher Council for Tourism. The project plan should state objectives, targets for public facility development plans, private, sector incentives and guidelines for streetscape and measures to attract tourists. It should be prepared by the Greater Animan Municipality (GAM) and MOTTA and should be undertaken in their joint names. Necessary legal authorizations must be obtained such as an approval of the Ministers Council and an approval of municipality council. It is necessary to design and launch the project with full public awareness.

#### Responsibilities

Responsible agencies for each project component are shown in Table 4.1.1. In fact, these components are independent of each other and could be repackaged or combined differently if administrative conditions so dictate.

#### General Role of the Municipality

Because the project includes major infrastructure and superstructure works, the role of the municipality is most important. It must implement the project's two anchor components, the Bus Terminal and the renovation of the Old Municipality Building.

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It is also, to implement the improvements to beautify the trails and streets, which will induce upgrading the opening of shops of tourists interest. It is also the important role of the municipality to get the understanding, agreement and consensus of residents, to lead them to participate the project.

#### **General role of MOTA**

As joint sponsor, MOTA has two levels of responsibility. The broader one requires its intervention in project foundations, since only MOTA can ensure that each component is designed with the interests of tourists in mind. It must work with other GOJ agencies and any foreigners that may participate. The more specific one relates to the streetscape improvements (tourist street and trails) and to the Tourist Information Center (both the interim and permanent ones). MOTA will have major responsibility for these components.

#### **Implementation Schemes for the Bus Terminal Complex**

This component would be implemented by GAM as the land belongs to it. There are a number of possible schemes for its implementation.

Option 1: the GAM builds and operates as the sole project owner or as a concession. Income would be derived from retail concessions and retail spaces, bus bays rental.

Option 2: A joint venture company between the GAM and a group of private investors is established, which acts as the project owner. This company develops and operates the facility.

The selection of the best scheme will depend largely on the financial feasibility of the project as viewed by the local investment community, and on the enabling legal frameworks for the private operator. In the formulation of this component, it is recommended that GAM seriously consider the feasibility and practicality of private funding.

**Table 4.1.1 Responsible Agencies for Implementing the Project**

Item	MOTA	GAM	Others
- Overall coordination	Jointly Responsible	Jointly Responsible	
- Improvement of Tourist Street and Tourist Trails	Secondary Responsibility (DOA)	Primary Responsibility	
- Renovation of Old Municipality Building		Primary Responsibility (Building Owner)	
- Amman Municipal Museum		Primary Responsibility	
- Tourist Information Center	Primary Responsibility (Operators)	Secondary Responsibility (Landlord)	
- Bus Terminal Improvement		Primary Responsibility (Landlord)	private sector.

Source: JICA Study Team

**b. Project Operation**

The various elements of the project could be operated by either the public or private sector as identified in Table 4.1.2.

**Table 4.1.2 Responsible Agencies for Operating the Project**

Item	MOTA	GAM	Others
Tourist Street		maintenance and management	
Tourist Trails		maintenance and management	
Old Municipality building	Visitor Center	maintenance and management	
Bus Terminal		sole management or joint venture maintenance and waste management	Option 1: contract out to a single management Option 2: indirect contract

Source: JICA Study Team

#### (4) Implementation Program

Amman Downtown Tourist Zone	96	97	98	99	2000	US\$ million
a. Tourist Street						2.3
b. Tourist Trails				District Office	Museum	2.5
c. Municipal Museum						2.3
d. Tourist Bus Terminal						12.7
e. Information Centre	Interim				Permanent	0.7
f. Training				Overseas	Domestic	0.3
Cost in US\$ million	0.9	1.8	8.8	7.8	1.5	20.8

B/D D/D Implementation

#### 4.1.3 Institutional Measures

##### (1) Heritage Conservation

A key objective of this project is to link the city's two landmark antiquities, the Citadel and Roman Theater, by upgrading the street infrastructure of the neighborhood in between so that downtown Amman can retain larger numbers of foreign tourists and generate added income from them. From the urban planning standpoint, the objective is revitalization of an under-utilized area through physical improvements to its infrastructure. Related future projects can focus on preservation of the area's architectural heritage through renovation of selected old buildings, restoration of facades, reuse of idle lots and buildings, and preservation of attractive block fronts. This project is intended to spur this kind of initiative that will bring about an economic rebirth for the area.

An immediate need is the development of a plan to guide private investment in commercial construction in this zone to avoid over building, or the erection of buildings that harm the context. An additional one is the adoption of pedestrian-friendly features in the zone (crosswalks, safety sidewalk, pedestrian streets, etc.) as its visitor population grows over the years. To meet these concerns in conjunction with architectural preservation, the Jordan Architectural Heritage Society (in formation), or proposed Jordan National Trust must have an active role in designating structures of exceptional value and in managing and encouraging further development in this sensitive area. Along with the GAM, these organization can designate a specific historic district giving authorities clear powers to plan and to steer investment in the area, to preserve the distinctiveness of the zone and improve its overall character. As commercial pressures build for denser development, a district development guidance will become necessary to shape a beautiful downtown area.

## **(2) Community Considerations**

Downtown Amman is undergoing major changes with residential use receding in favor of small scale commercial and light industrial use (workshops). This project will accelerate this trend, displacing low income occupants with new businesses; the result will be a denser pattern of development than at present, when the building capacity has a high vacancy factor. The population residing in this area will probably fall over time, and the income level of remaining inhabitants may rise. The project will result in a more efficient use of this downtown area reflected in rising occupancy in its buildings.

### **a. Income & Employment Generation**

The standard benefits related to international tourism will be achieved by this project in the following way. The immediate vicinity of the project will derive much of the economic benefit produced by the project since much of the incremental visitor-days and associated expenditure will be spent in this area. The employment profile of the neighborhood can be expected to change over time to include fewer manual labor occupations in favor of retail and other services oriented to high income consumers.

### **b. Welfare of Women**

No specific effect of the project upon the welfare of women has been identified. It will stimulate the creation of small businesses in the areas of food & beverage, for retailing and possibly the production of arts and crafts, in which women have a major role. It appears probable that a share of these small business entrepreneurs will be women themselves, and will also be employing women.

## **4.1.4 Infrastructure and Environment**

Relating infrastructure and environment were studied. Details are found in the Appendix 4.1.

### **Transportation**

Parking improvement plan and traffic engineering measures are needed.

### **Water Supply**

Tourists will have little effect.

### **Sewerage**

Piping improvements are needed.

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**Drainage**

Drainage culvert improvements are needed.

**Waste Management**

Improvement desired such as concealment of containers, attractive litter bins, etc.

**Initial Environmental Examination (IEE)**

IEE has been carried out. No need for EIA.

**4.1.5 Economic Evaluation****(1) Project Components**

This Project would consist of the following six components.

- (i) Tourist Street
- (ii) Tourist Trails
- (iii) Municipal Museum
- (iv) Tourist Bus Terminal
- (v) Information Center
- (vi) Training

**(2) Project Justification****a. Benefit**

Due to this Project, Amman area would become a more attractive tourist destination and become a strong international tourism core in Jordan and in the Middle East tourism market. This Projects would induce visitors to stay longer (generation of additional tourist nights) in Jordan.

Tourists as well as domestic citizens to Amman downtown would benefit by various information provided at either the part of the Amman Municipal Museum, which would be housed in the renovated Old Municipality Building, or the Tourist Bus Terminal, which would be a part of the improved existing Raghadan bus and service taxi terminal.

Many other forms of benefits would be realized by the Project. Private sector investments included by the Project may produce benefits as the much as benefit directly generated by the Project. Increased employment both in these projects and in service industries, such as food processing and small-scale enterprises can be expected. The avoidance of the environmental degradation taking place in some



areas could be considered as additional benefits. All of them however an extremely difficult to estimate.

The extra tourist-nights generated as a result of the Project increase the GDP and of Jordan.

In this study, the project benefits were conservatively measured in the form of net tourist expenditure for the additional tourist-nights within the related Tourism Area.

**b. Cost:**

Yearly maintenance costs of the public facilities such as Tourist Streets and Tourist Trails could be covered by the public funds, which would be provided by GOJ under its road or environmental maintenance program. The private sector would be responsible for constricting access roads to various public facilities within their developments, and thus no public investments would be required over the life of the Project. Actually, the least cost solution would be suitable for the financially and economically

**(3) Economic Analysis**

For the simplified calculation, project benefits are measured in the form of incremental expenditure borne by the projected number of accommodation arrivals within the related Tourism Area (Scenario B: moderate case).

It is assumed that roughly on average and at the most 1 % of tourist-nights of Amman Tourism Area between 1999 and 2000 and 3 % of those after the completion of all projects (2001) would be generated by the Project. A tourist was assumed to spend on average US 100 dollars net of any payments to foreign creditor for his additional overnight including his accommodation and other expenditure.

Number of tourist-nights estimated for the Amman Tourism Area are 2,962 thousand in 1995 3,757 thousand in 2000 and 5,562 thousand in the year 2010.

From the viewpoint of national economy, EIRR (Economic Internal Rate of Return) was calculated at 20.16 % for this project. The tabulation for the EIRR is shown below.

**Table 4.1.3 Cost and Benefit Stream of Amman Downtown Tourist Zone**

Year	Cost		Benefit				Total	Ben. - Cost
	Construction	Maintenance	Total	Additional tourist-nights	Established share (%)	Expenditure per person (US\$)		
1996	0.90	0.00	0.90	144,111	0.0	0	0.00	-0.90
1997	1.80	0.02	1.82	295,231	0.0	0	0.00	-1.82
1998	8.80	0.02	8.82	453,701	0.0	0	0.00	-8.82
1999	7.80	0.16	7.96	619,879	2.0	100	1.24	-6.72
2000	1.50	0.85	2.35	794,140	2.0	100	1.59	-0.76
2001		0.96	0.96	944,471	5.0	100	4.72	3.76
2002		0.96	0.96	1,100,817	5.0	100	5.50	4.54
2003		0.96	0.96	1,263,419	5.0	100	6.32	5.36
2004		0.96	0.96	1,432,527	5.0	100	7.16	6.20
2005		0.96	0.96	1,608,402	5.0	100	8.04	7.08
2006		0.96	0.96	1,791,314	5.0	100	8.96	8.00
2007		0.96	0.96	1,981,545	5.0	100	9.91	8.95
2008		0.96	0.96	2,179,388	5.0	100	10.90	9.94
2009		0.96	0.96	2,385,147	5.0	100	11.93	10.97
2010		0.96	0.96	2,599,140	5.0	100	13.00	12.04

EIRR= 20.16%

Note: Currency unit is US\$ million unless specified.

Source: JICA Study Team

## Appendix 4.1

### A. Transport

#### a. Existing Traffic Situation and Major Traffic Issues

##### **Raghadan Terminal**

Raghadan Terminal is one of the three public transport terminals in Amman. It is a departure point for service taxis, mini-buses and large buses to destinations in Amman and the suburbs.

Many buses and service taxis also park on local streets. Presumably because insufficient space is available within the existing terminal. Many avoid using both the buses and the terminal because of their cramped and unpleased conditions.

##### **Traffic Congestion on Hashimi Street**

Hashimi Street is one of the most congested roads in Amman of traffic for the following reasons:

- the high level of traffic (60,000 vehicles per day);
- the volume of pedestrians crossing the street. There is only one set of traffic signals and one pedestrian overpass in the zone. There is no fence at the median in the zone except in front of the library;
- a U-turn space at the junction of Al Hashimi Street and Quraysh street without traffic signal; and
- illegal parking.

The congestion and exhaust gas from vehicles render the area less attractive.

##### **Tourist Bus Parking Space at the Roman Theater**

Tourist buses stop at the west side of the municipality's library building; however this is a no parking area, tourists alighting here have to cross the fence bordering the pedestrian pass. There is enough space behind the library for over 10 vehicles to park. But the area is to all closed but civil utilities e.g. fire brigade.

##### **Citadel Area**

The entrance to the Citadel is a sharp curve on a slope. This makes access to the citadel difficult for large tourist buses which also disturb the flow of traffic. In the Citadel area, tourist vehicles park in front of the archaeological museum and along the road toward the residential quarter to the east. When there are many buses, this causes congestion.

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## **b. Requirements for Transport Facilities**

Parking space for a total of 10 to 20 buses and for around 100 cars will be required to accommodate the one million tourists expected to visit the zone annually by year 2000.

## **c. Proposed Tourist Transport System in the Zone**

A traffic and pedestrian master plan is required for the whole area. This plan should consider the following elements.

### **Parking for Tourists to the Roman Theater and Amman Museum**

Package tour buses should unload passengers behind the present municipality library or the future Amman Municipal Museum but park elsewhere, such as at nearby open spaces, at the eastern end of the Raghadan Terminal and/or along the King Abdullah Street.

At present, there is no parking space behind the building. Ideally, parking space will be provided at a separate location. Employees of the Museum and Jordanian visitors should be encouraged to use public transport by improving access from the near-by bus/taxi stops or terminals.

### **Parking for Tourists at the Citadel**

After archaeological excavation work has been completed parking areas on the road side east of the junction on the hill should be delineated and developed. Further parking spaces may be identified. (See Figure 4.1.7)

### **Tourist Bus Terminal**

A tourist bus terminal with related tourist service facilities should be integrated in the new terminal development.

## **d. Related Measures**

Measures to Alleviate Traffic Congestion in the Zone Especially in front of the Roman Theater

To improve the flow of pedestrians and vehicles, the following works are required:

- additional and synchronized traffic signals should be installed;
- pedestrian signals and road markings;

- more overpasses.
- fencing in the central reservation and along the sidewalks; and
- additional signals and channelisation by road marking to control U-turns.

Other possible measures include alteration of the existing one way system, promotion of utilization of the King Abdullah Street to mitigate the traffic of the Al Hashimi Street and in a long run a tunnel behind the Roman Theater to connect Quraysh Street and King Abdullah Street.

#### Measures to Alleviate Traffic Congestion at the Citadel Entrance

The junction should be improved in co-ordination with the conservation and excavation of the ruins.

#### Parking Areas

Overall parking analysis and planning work is required.

#### Possibility of a New Light Rail System

The preliminary report of the feasibility study for a new light rail system for the Ministry of Transport in 1995 proposes stations at Raghadan Interchange / Terminal and near the Roman Theater. Coordination and integration of the stations with the master plan of the area are essential.

Figure 4.1.6 Existing Traffic Situation in the Amman Downtown

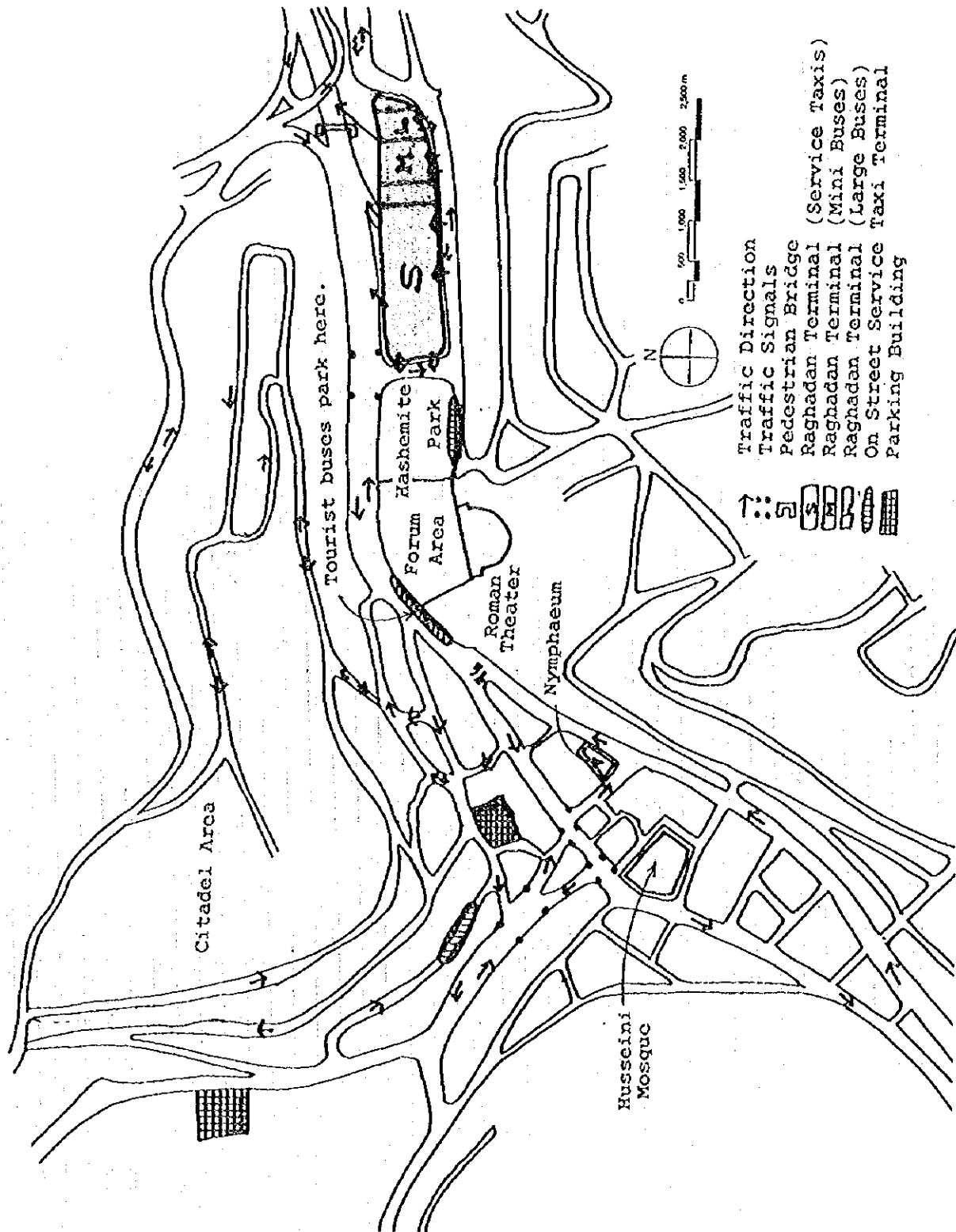
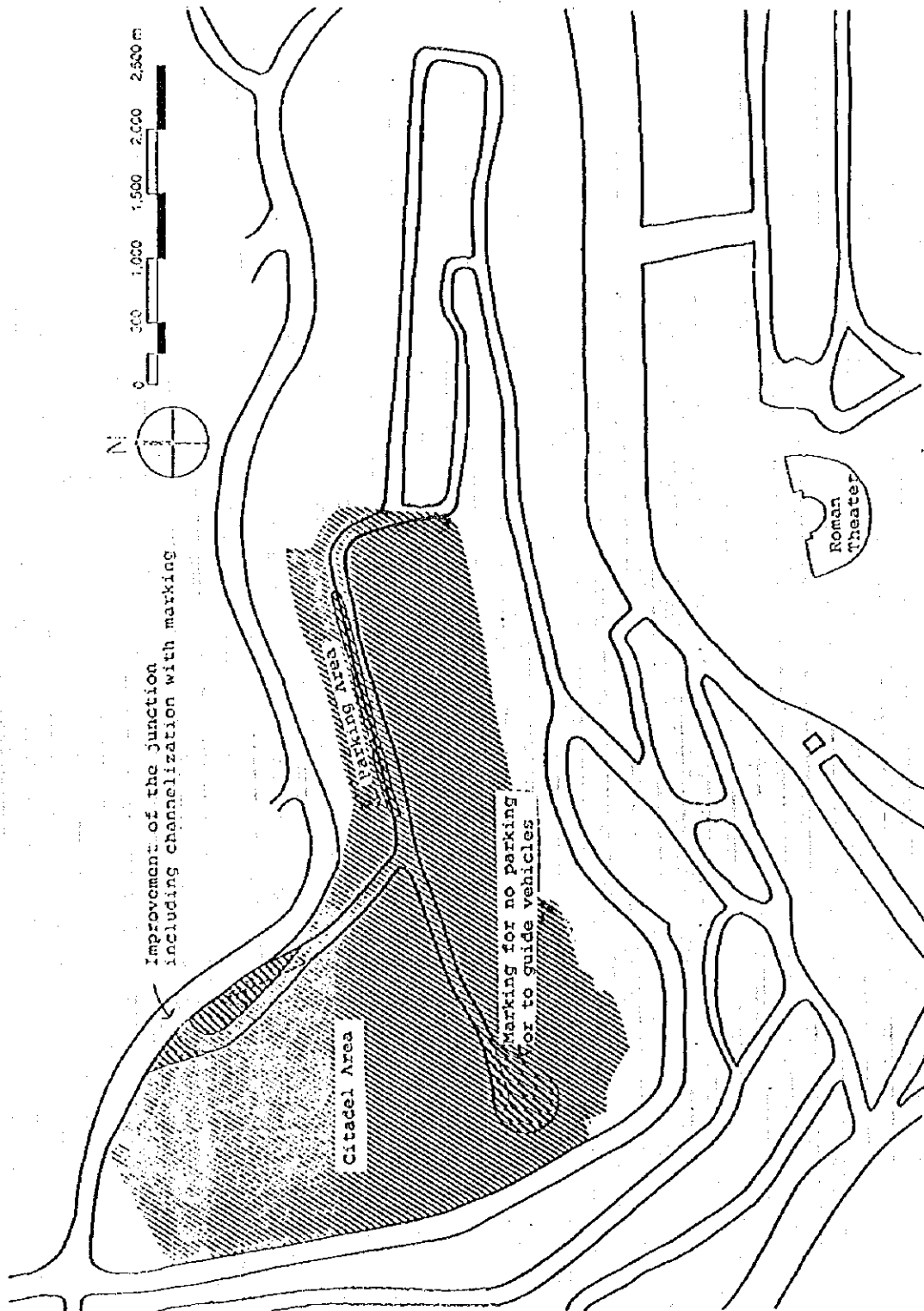


Figure 4.1.7 Proposed Traffic Improvement at Citadel Area



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## **B. Water Supply, Sewerage and Drainage**

### **a. Water supply**

The water consumption of tourists and of local inhabitants of Greater Amman in the year 2000 is estimated as follows (assuming a three day average tourist stay and daily water use of 400 liters/capita/day and 160 l/c/d for inhabitants).

- Tourists  $884,000 \times 400 \times 3 = 1.06 \text{ MCM}$
- Local inhabitants  $2,151,293 \times 160 \times 365 = 125.6 \text{ MCM}$

The water consumption of tourists amounts to 0.8% of local consumption and is therefore of little significance when compared to the area's overall needs.

The water supply network in the project area is almost 100% complete. However the supply of water is limited to two days a week especially in summer. The Water Authority of Jordan advises all buildings to have storage tanks. Therefore local recycling water for irrigation, industry and toilet flushing water, is unlikely to be adopted in this urban area where it is particularly important to provide continuous service to tourist facilities. The existing galvanized water supply pipes should be replaced with PVC ones and buried beneath the surface.

### **b. Sewerage**

The sewerage network for the Project area is 100% complete. In heavy rain, waste water flows down the road surface because flood water has been diverted into waste water pipes. This should be urgently rectified by connecting drainage pipes with the large pipes flowing into the drainage culvert.

### **c. Drainage**

A culvert large enough for urban drainage has already been constructed under the main roads of Quraysh and Street Amy Street, and an open channel partly connected with the River Zarqa (Figure 4.1.8). Serious problems are not likely to occur in the foreseeable future. In the long run, the drainage culverts located at a junction between Princess Basma Street and Al-Munim Riyad Street should be connected to avoid flooding in the project area.





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## **C. Waste Management**

### **a. General Waste Collection and Street Sweeping**

Waste generated in the down town areas by commercial and domestic properties is currently placed in 1.1.m<sup>3</sup> roadside containers for emptying by the Greater Amman Municipality (GAM) for subsequent disposal at the Rusyfa dump. The paved streets are kept remarkably clean by street sweepers.

The area generates approximately 5.5 t/d, of which 65% comes from domestic and commercial properties, 20% from the bus and service terminals and the remainder from the Hashemite Court and Roman Amphitheater. Any recycling is unofficial and occurs either from the containers or at the dump.

A significant constraint to the development of clean, pleasing walkways in the downtown area is the maintenance of an acceptable level of cleanliness. In order to achieve a higher standard of cleanliness the following is recommended:

- the provision of at least one hand guided, motorized, sweeping machine;
- the concealment of 1.1 m<sup>3</sup> containers in purpose built alcoves or behind screens made of local materials;
- the placing of attractive, easily emptied, floor mounted litter bins at regular intervals along the stairway. These would be emptied by hand by the street sweepers;
- the more regular distribution of containers so that they are closer to major users;
- the development of rear access to commercial premises especially at the bus station;
- the development of an elite force of laborers by marginally increasing their pay and by the supply of more distinguished protective clothing. These conditions will attract many applicants from whom the most conscientious can be selected;
- the equipping of street cleaners with waste collection trolleys in place of the existing untidy wheel barrows;
- the introduction of service quality control inspections; and
- the development of a priority sweeping schedule to ensure regular sweeping of sensitive areas.

### **b. Tourism Trails**

The waste from properties along the pathways is collected, usually on alternate days from outside those houses located on the main passages and stairways. However, these routes are unsightly because of the following:

- bags of rubbish placed at the door ways to houses on collection days;
- spillage from over filled bags and those ripped open by animals in search of food;
- bags of waste awaiting collection by the street sweepers;
- bags of waste secreted by householders in corners; and
- accumulated litter and dirt.

Although 43 street sweepers are assigned to the area in two 8 hours shifts these would appear to be insufficient to clear the waste that accumulates and on derelict land. This waste is not only visually intrusive but a potential health hazard. The least well maintained pathways appear to those closest to the Citadel and those where rubbish accumulates the stairways closest to the Amphitheater.

It is proposed that the collection and street sweeping system is modified as follows:

- those responsible for derelict land should be identified and required to remove all litter and waste. (Provision for this would already appear to be available under Public Health Law 1971);
- householders are made responsible for depositing of their waste in the 1.1 m<sup>3</sup> containers and for maintaining the cleanliness of their frontage onto the stairways. Provision for this would already appear to be available under the Public Health Law 1971. However, as an incentive the waste management fee currently paid by each household with the electricity bill could be waived for those living adjacent to the stairs. The removal of the responsibilities for waste collection will enable the street sweepers to transfer their efforts to street sweeping of the stairs and passageways;
- the locating of containers close to the downhill exit of the major passages and stairways;
- the encouragement of the re-inhabitation of properties along the stairways by families and by tourist related industries by appropriate planning control measures, demonstration projects, and fiscal incentives e.g. tax holidays, reduced taxes and soft loans.
- the removal of the buildings between the Citadel Wall and the adjacent Road. This measure has already been informally proposed by officers of the DOA in order to enhance the visual / amenity and archaeological value of the Citadel. It would also have the effect of removing those houses and paths which are least habitable and would clear the pathways most requiring upgrading; and
- consider the introduction of donkeys to assist in the transporting of collected litter from the pathways to the containers. With imagination and suitable livery these could be made an unusual tourist attraction.

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It is Essential that community leaders should be identified at the outset and their local knowledge used to refine the schemes and to encourage full participation by the community.

#### **c. Bus Terminal**

The existing bus depot is at present cleaned by a dedicated team of GAM sweepers who appear to also empty the range of litter receptacles provided by the many food vendors around the bus depot. In order to increase the level of cleanliness it is recommended that:

- the pedestrian areas are clearly demarcated and paved with smooth flooring;
- the vendors are made responsible, as part of their terms of their lease for disposing of the waste generated by their activities and for cleaning the area fronting their property;
- the operator of the bus station is made responsible for delivering waste to the landfill. The cost of this may be recovered through a variety of fiscal measures including rental of bus stands, shop spaces; and
- vehicle maintenance is prohibited on site.

The volume of waste is unlikely to increase significantly following the construction of the new bus station however it is anticipated that the increased number of tourists will generate a greater proportion of packaging material. This material which has a high calorific value, could be burnt in the incinerator proposed for the National Museum.

#### **d. Other Facilities**

The proposed Amman museum and tourist information center are expected to generate only small volumes of waste the collection of which may be incorporated within the existing waste collection rounds operated by GAM.

#### **e. Human Resources**

Human resource development for the waste management aspect of this project will be achieved through the training of existing government personnel and the holding of seminars for informing those in the private sector who may, in the future, be involved in waste management. The various seminars are identified in Table 4.1.4.

These seminars will have to be repeated at regular intervals as awareness of waste management issues increases in both the public and the private sectors and to ensure that new entrants to the industry are full aware of the principles and standards now

being required.

#### f. Operational Arrangements

The responsibility for the operation and maintenance of waste management is normally that of GAM. All components of this project could be included into their existing waste management procedures for this part of the city. However, there is a possibility for contracting portions of this work out to the private sector. This may be feasible in the case of the bus terminal where because of heavy vehicle traffic and intense pedestrian volume, special cleaning procedures may be optimal. An independent operating company could be appointed through competitive tenders, for a contract period not to exceed say five years. A legal framework for this would already appear to exist under the Rural Government Board Law (1955).

**Table 4.1.4 Waste Management Training**

Seminar Contents	Personnel
Public Sector Technical training in the planning, environmental implications and legal framework of waste collection and disposal (4 days)	relevant contact persons within: - the Ministries of Health, Municipalities Rural Affairs and Environment, Planning, Tourism, Water and Irrigation; - Environment Corporation - Natural Resources Authority - Department of antiquities - Jordan Valley Authority (as appropriate) - Aqaba Region Authority (as appropriate) - Managers responsible for waste management within the relevant municipality
Technical training in the operational and management procedures planning, environmental implications of waste collection and disposal (4 days)	
Awareness of waste management issues and their implications for tourism (1 day)	The Governor, Members of the Municipal Council and community leaders (as appropriate),
An introduction contract procedures for contracting out and concessions (2 days)	- relevant contact person within the Ministries of Finance and Supply - Managers responsible for waste management within the relevant municipality
Private Sector Potential Waste Management operators Contract persons within the Ministries of Finance Industry and trade, Municipalities and Rural Affairs (1 day)	opportunities for waste management operators in Jordan, contact arrangements and regulation
Potential developers and financiers of tourism facilities (1 day)	Planning objectives and requirements, standards and regulation

Source: JICA Study Team

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## **D. Initial Environmental Examination (IEE)**

### **a. Description of the Site**

The project site is the historic and commercial center of Amman. It is also including residences for low income households, and open spaces, specially on the steep slopes of the citadel hill (more than 50% gradient). The natural site is characterized by a plateau of 850 to 900m altitude, dissected by a complex system of deep valleys, called Wadi. The riverbed is at about 750m altitude. This low area is used as a natural corridor for traffic.

### **b. Main Environmental Issues of the Site**

- Nuisances generated by traffic conditions: Air pollution, water pollution by heavy rain, noise, and traffic congestion are major problems. Traffic has also generated hostile environment for pedestrians (difficulty of access, lack of safety).
- Water related problems: Irregularity of water supply, importance of water leakage, flooding of streets in heavy rain, leakage of wastewater in heavy rain.
- Waste related problems: Accumulation of litter and insufficient collection of waste occur regularly, particularly in passageways and stairways of the poor residential area within the project site. These are sources of insalubrity (children playing outside), and disamenity (visual landscape and odors).
- Amenities potential: The present land use has not taken into account the full potential which exists for urban amenities. Measures like protection and presentation of the historical landscape, greening of the bottom of the Wadi, conservation of the remarkable urban / natural morphology, and pedestrians access are all measures that could have been developed in order to take advantage of the amenities potential. The downtown landscape shows however an insufficient attention given to the visual impact of new buildings (bus terminal, big commercial / business complexes), and to the potential for improving the quality of the urban environment, due to the permitting of high buildings in the Wadi, the excessive density of the constructed area, the lack of green parks, and the priority given to the motorized traffic.
- Exposure to landslide: Steep slopes are subject to landslide according to factors like urbanization, rainfalls, and earthquakes. The Jofeh landslide, which occurred near the project site in 1980, is the most severe historical record of such disaster in the area in the last decades. Previous landslides were recorded

in 1952, 1967, and 1974.

### c. Sources of Impacts

The components of the project themselves cannot be considered as sources of negative effects on the environment. The reason is that each component will help to improve the living urban environment. An other reason is that these components basically do not change the physical conditions of the site. Possible sources of negative impacts are rather those induced by the operation of the project.

They are:

- Increased visitor volume
- Change in the traffic density and traffic pattern

These components are mentioned in Table 4.1.5, which is a checklist of the direct effects of the project components including the operation phase.

### d. Potential Impacts

#### Checklist and Ranking of Direct Impacts

Potential impacts of the project on the environment are summarized in Table 4.1.5. The table is a matrix of selected environmental items and components of the project. The global ranking is made in the last column.

- Definitions: In this table, population means life style, habits, and traditions of local people. Settlements means housing and housing pattern, or other infrastructure like buildings and roads. Social cohesion means cohesion in standards of living, mentality, and education.
- Ranking: Ranking of the effects of the project is only indicative and is made by summing up the items having effects according to a coefficient attributed to each component of the project. The coefficient is intended to reflect the relative importance in terms of potential source of impacts. Such coefficients have been attributed as follows:
  - Coefficient 1 for items that do not effect the city and are more specifically addressed to tourists
  - Coefficient 2 for items that affect the aesthetic of the city and concern also the living environment of people
  - Coefficient 3 for items subject to evolution in time and that could generate pressure on the people and the quality of environment

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Components coefficients are the following:

- Landscaping: 2
- Information: 1
- Urban services: 1
- Tourism: 2
- Frequentation by tourists: 3
- Tourism traffic: 3

The total ranking is classified as follows:

- Notable (I): between 3 and less or equal 6
- Significant (II): between 6 and less or equal 8
- Important (III): between 8 and less or equal 12

## Results

This table shows the expected important effects, which are essentially positive.

They are:

- Effects on amenities and living environment
- Effects on the economic activity

Significant potential negative impacts as shown in the table are limited to the following:

- Effects on local population (life style, habits, traditions)
- Effects on traffic conditions (and its induced effects on the quality of the living environment)

The range of potential issues could be summarized as follows:

- Effects on the community (cultural, social and economic gap between inhabitants and visitors, possible rise in prices of goods and land, and replacement of poor population by rich / cultivated population in the long term)
- Effects on resources consumption and management (water, electricity) and salubrity conditions (capacity of collection and treatment of solid waste and wastewater)
- Effects on the quality of the living environment (traffic conditions, air, noise, litter)



Table 4.1.5 Checklist of Positive or Negative Direct Effects

	Structure Components				Operation Components		Ranking of Effects
	Landscaping	Information	Services	Tourism	Visitors volume	Traffic Develop	
Land Use Settlements	E	-	-	-	E	-	Notable
Population	-	-	-	E	E	E	Significant
Economic Activity	E	-	E	E	E	E	Important
Traffic Conditions	-	-	-	E	E	E	Significant
Use of Resources	E	-	-	-	E	-	Notable
Solubility Sanitation	-	-	-	-	E	-	Notable
Social Cohesion	-	-	-	E	E	-	Notable
Health	-	-	-	-	-	E	Notable
Prices	E	-	-	-	-	-	Notable
Noise	-	-	-	E	-	E	Notable
Living Environment	E	-	E	E	E	E	Notable

E: effect      -: no effect or not relevant

**E. Environmental Management**

Significant environmental protection measures are those which relate to the involvement of communities, management of water, wastewater and solid waste, and management of traffic conditions.

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## 4.2 National Museum

### 4.2.1 Concept and Rationale

#### (1) Concept

This project proposes the establishment of a national museum for Jordan at a yet to be specified site at Ras al Ain in central Amman, for the purpose of presenting the history of Jordan and of the Middle East to Jordanians and foreigners alike. If developed to international standard, the museum would be a primary cultural resource for Jordan, a must for first time visitors to Jordan, and a popular attraction for repeat visitors. It will provide an orientation on Middle Eastern history in a vivid manner making use of modern interpretative technology not yet in use in Jordan. It will be a visit to be included in most Amman city tours. The museum will also be a unique symbol of pride for Jordanians of all faiths.

The periods to be covered in the exhibits will cover the full spectrum of Middle Eastern history. No final plan for the organization of exhibits yet exists, but the following list gives an indication of the variety of items that could be covered:

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Approach	Example
<b>Archaeological History</b>	
Chronological	Greco-Roman, Byzantine, Islamic, etc.
Thematic	The Development of Glass Making The City States Trade and Trading
Explanatory	Digging up the Past
<b>Environment</b>	
Descriptive	History and Beauty : the Story of the Rift Valley The Natural History of the Desert
Thematic	Adaptation for survival
<b>Cultural</b>	
Descriptive	The Mysterious Bedouin
Thematic	8,000 years of Changing Agriculture

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Source: JICA Study Team

#### (2) Rationale

##### a. Key Objectives

The project will generate two types of benefits, one economic, and one educational.

It is included in this National Tourism Plan because of its significant potential economic benefit.

- **Economic Benefit:** Income generation through increased average length of stay and foreign currency expenditure of international visitors to Amman.
- **Educational Benefit:** Appealing portrayal of the history and civilization of Jordan and the Middle East for the benefit of the entire population, including school children.

**b. Related Goals**

Several goals can also be met by this project. They support either or both of the above objectives in some way.

- **Cultural Resource:** The national museum will for the first time present a comprehensive story of the history and culture of the nation using multiple disciplines such as archaeology, anthropology, natural sciences, and religion among others.
- **Cultural Resource:** It can serve as the permanent home for extraordinary local objects of broad public interest such as the Petra Scrolls or royal treasures.
- **Cultural Resource:** It will be equipped to easily accommodate visiting exhibitions of extraordinary cultural interest such as the Dead Sea Scrolls, Egyptian Mummies, or the Crown Jewels of Sweden, etc.
- **Educational Resource:** It can serve as a learning center for students and professors in training in related disciplines (history, archaeology, anthropology, etc.) through use of its specialist facilities.
- **Urban Revitalization:** It will also act as a magnet drawing visitors from the tourist core of the Citadel / Roman Theater vicinity, westward along Quraysh and King Talal Streets, giving new economic vigor to the central market area of Old Amman (see Figure 4.2.2).
- **Urban Revitalization:** As part of Amman Civic Center, the museum will function as a catalyst for increased private investment in businesses in the surrounding neighborhoods, drawing high income tourists into the vicinity, and distributing them into the surrounding neighborhoods (Al Muhajireen area, Jebel Amman, Jebel an Nadhif, Jebel al Ashrafiyya).

- 
- **Institutional Strengthening:** It will serve as the logical home for the Royal Museum Institute (proposal) the main body for technology transfer of modern museum skills (curatorial, preservation, display) to this and other museums in Jordan.
  - **Museum Rationalization for Amman:** It can present an improved archaeological collection and make possible the removal of the existing archaeological museum atop the Citadel and possible consolidation of other collections.

### **(3) Background of the Project**

At present there is no specific project design, exact location, funding agency or project management unit existing to manage the creation of a museum. No other donor is working on this project. However, the Jordan National Museum Committee has existed for several years, to advance and is chaired by the Minister of Tourism. Its members include government officials and concerned private citizens. In July of 1995, a private committee member with the assistance of a foreign expert, prepared a preliminary concept, space program of 12,000 square meters building, timeline, budget and definition of training needs. This report together with the Committee's older work, and this model project proposal represent a good starting point for serious planning to begin, once a project management office is created for that purpose.

#### **4.2.2 Preliminary Plan**

##### **(1) Project Components**

###### **a. Museum Building**

National Museum of Jordan requires following elements of internationally recognized standard of museums.

###### **Visitor Services**

Adequate visitor services will be provided in accordance with visitor circulation; information and ticketing, cloak room, rest facilities, museum shop.

###### **Exhibition Halls**

Exhibition Halls must be designed according to the exhibition concept. Exhibition Halls are in general classified into Permanent Exhibition Halls, and Temporary and Special Exhibition Halls. Outdoor exhibition space are required in addition.

**Table 4.2.1 Composition of the National Museum**

Section	Major rooms	Area (sq.m)	Remark
Visitor Services (700 sq.m)	Entrance Hall	340	include Reception
	Cloak Room	40	
	Museum Shop	80	
	Cafeteria	140	include Kitchen
	Others	100	WC, Lounge, etc.
Exhibition Halls (1,800 sq.m)	Permanent	1,200	
	Temporary & Special	600	
	Outdoor	(1,000)	(excluded from floor area)
Collection Management (1,600 sq.m)	Unpacking	300	include Fumigation, etc.
	Collection Storage	900	
	Studio	60	include Darkroom
	Workshop	100	include Material Storage
	Others	40	Storage, WC, etc.
Research and Study (600 sq.m)	Researchers' Room	120	
	Library	200	
	Seminar Room	240	(150 p. capacity)
	Others	40	WC, etc.
Administration (320 sq.m)	Office	160	include Director Room
	Meeting Room	80	
	Security Office	40	
	Others	40	Copy Room, WC, etc.
Auxiliary Services (1,650 sq.m)	Circulation	1,200	(25 % of Net Area)
	M/E Machine Room	450	(7 % of Total Area)
<b>Total</b>		<b>6,670</b>	

Source: JICA Study Team

**Collection Management**

Collection management section will be made of following process: research and collecting, receiving, unpacking, cataloguing, preserving, measuring, photo recording, classification, collection storage and workshop for preparing exhibition. Sufficient storage must be provided. 50 % of exhibition area is a general standard.

**Research and Study**

Library, Researchers' rooms, seminar room will be provided. This section depends on the research and study activities of the museum and must be determined in accordance with the activities.

**Administration**

Administration for managing and maintaining the museum; management offices, meeting room, copy room and storage.

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### **Auxiliary Services**

Mechanical and electrical machine rooms, circulation, etc. are included in this section. Sufficient space must be provided for machine rooms as each section require specific air conditioning operation. The inclusion of an incinerator is also an option.

### **b. Human Resources**

Training of essential management and technical skills should be carried out to create a pool of skilled Jordanian professionals to launch and operate this project. Existing archaeology and anthropology related courses in Jordanian universities should be strengthened so that the following number of experts can be produced at least in the early stage of the operation of the museum.

- museum management
- exhibition design
- program planning
- conservation technology
- library science
- curatorial techniques

Training in donor countries should be actively pursued for any country offering training in advanced museum management skills and technology. Training in donor countries can be organized by the Department of Antiquities, the universities, the National Museum, and the proposed National Museums Institute. The National Museum in any case should be fully aware of the status of training of experts. Possible components of training in donor countries include:

- museum management	2-3 year course	2 persons
- exhibition design	1 year course	2 persons
- program planning	1 year course	2 persons
- conservation technology	1 year course	4 persons
- library science	1 year course	2 persons
- curatorial techniques	1 year course	2 persons

Supplementary seminars in Jordan by foreign experts should also be sought among donor countries.

Figure 4.2.1 National Museum Image Rendering

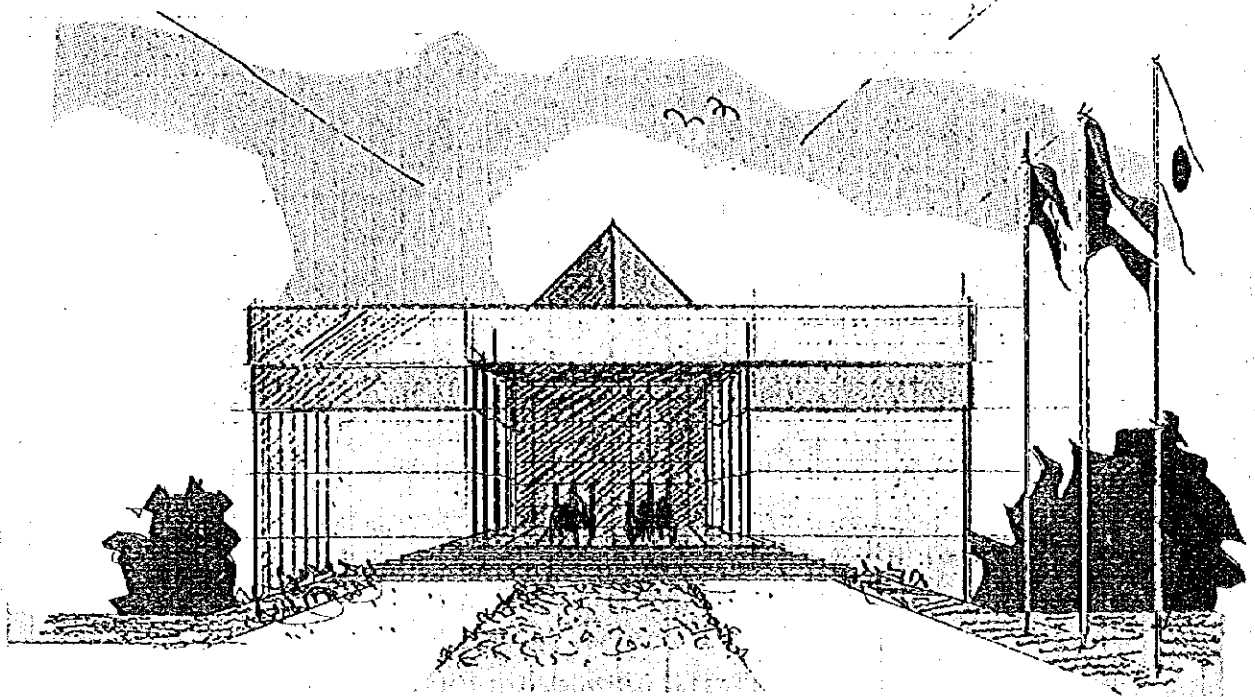


Figure 4.2.2 National Museum Location Map

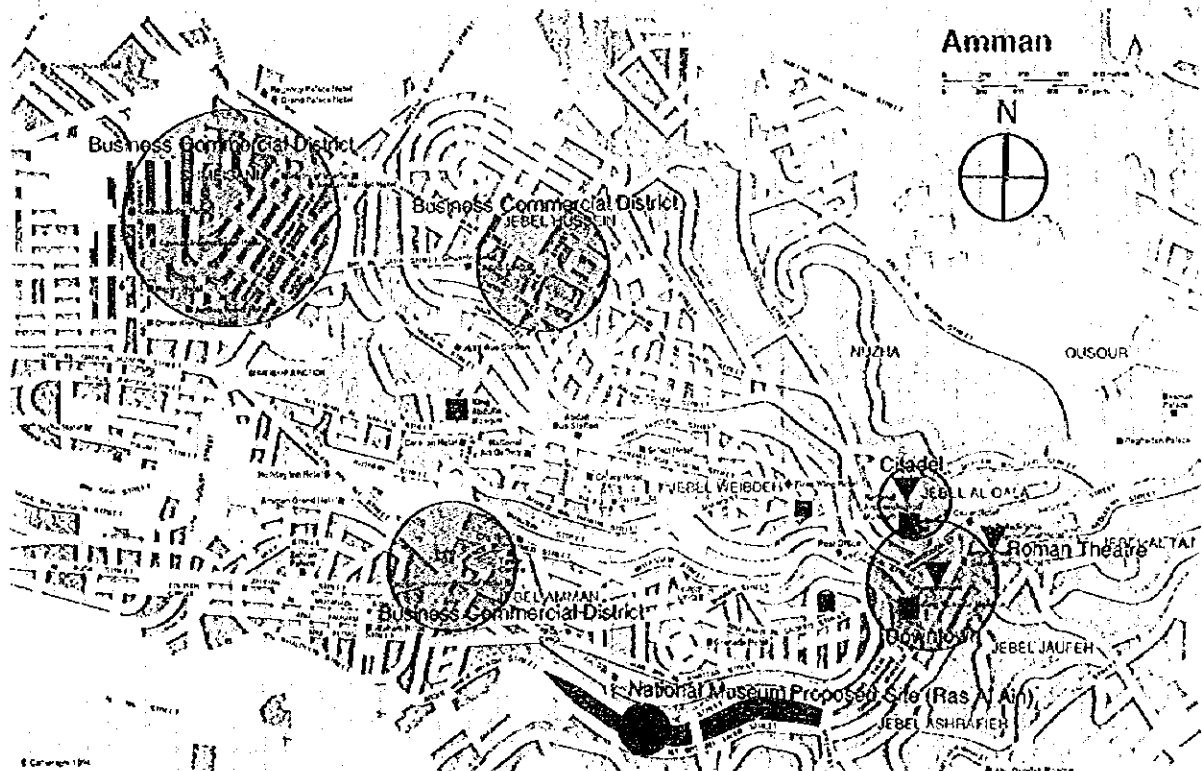


Figure 4.2.1 National Museum Image Rendering

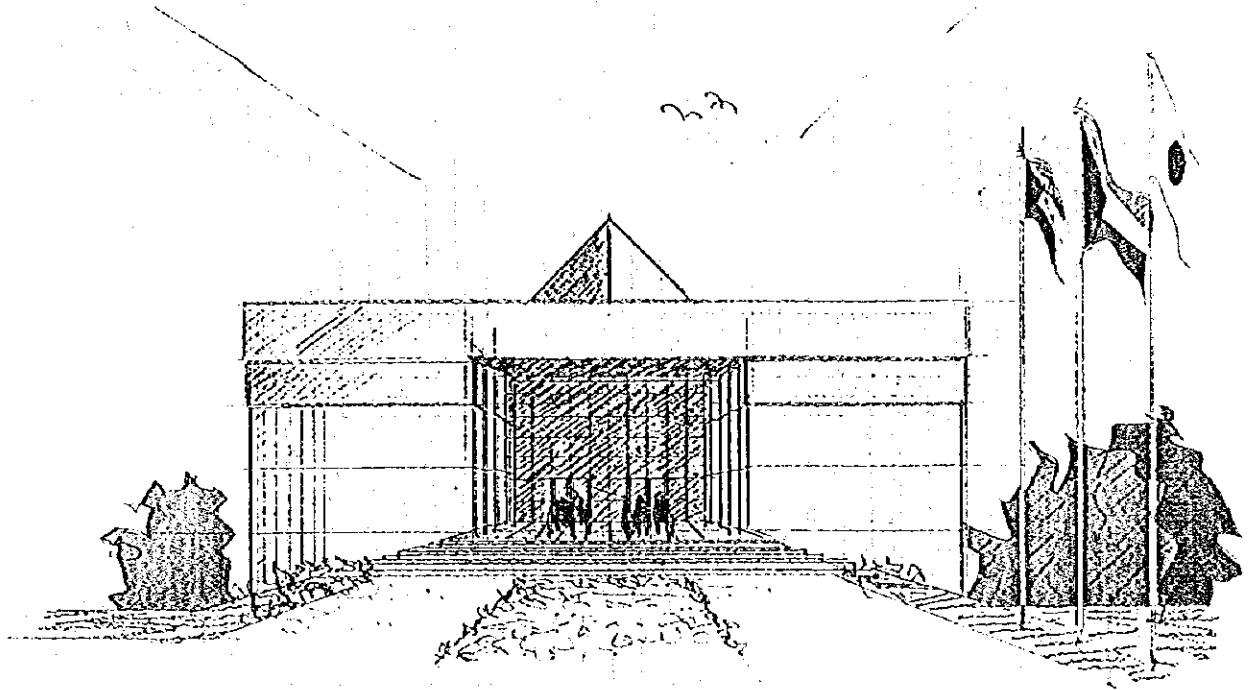


Figure 4.2.2 National Museum Location Map

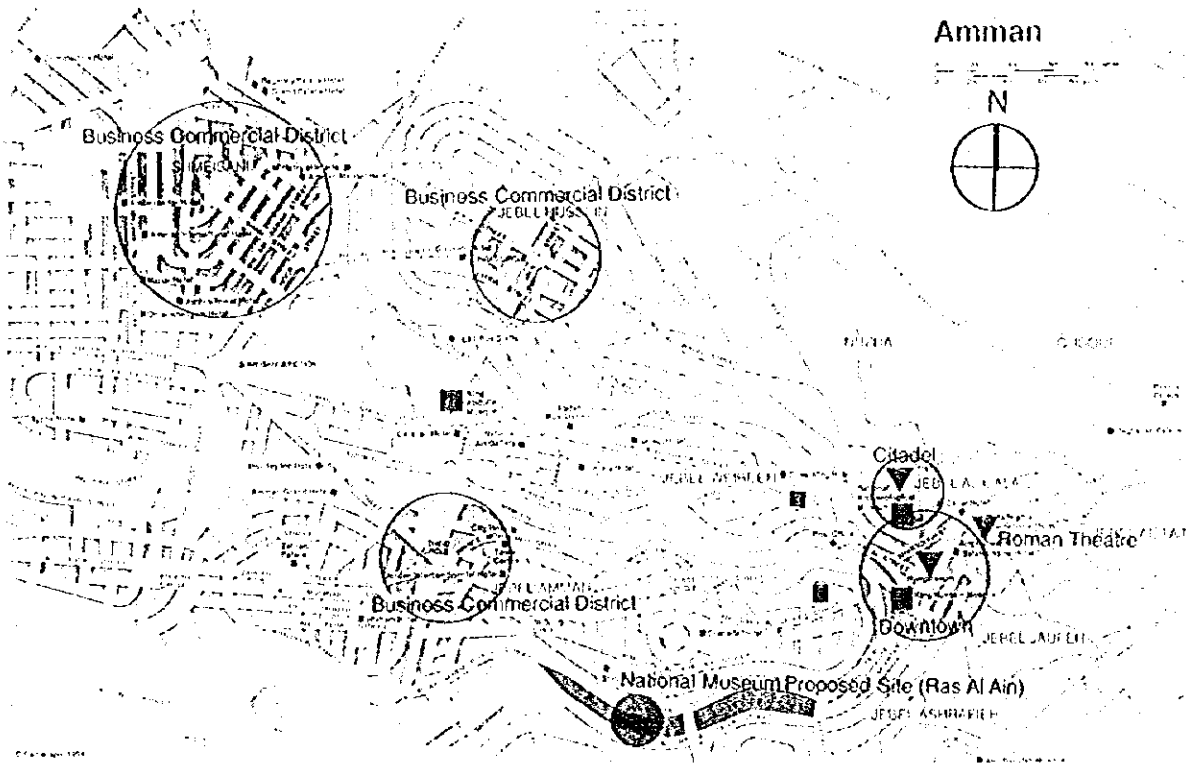
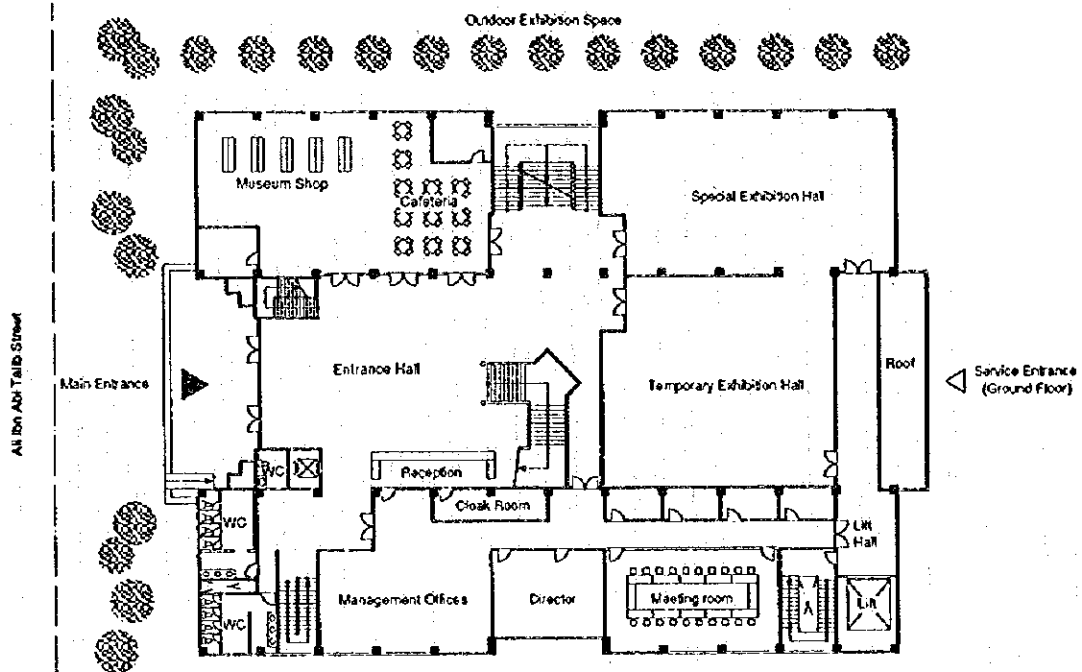
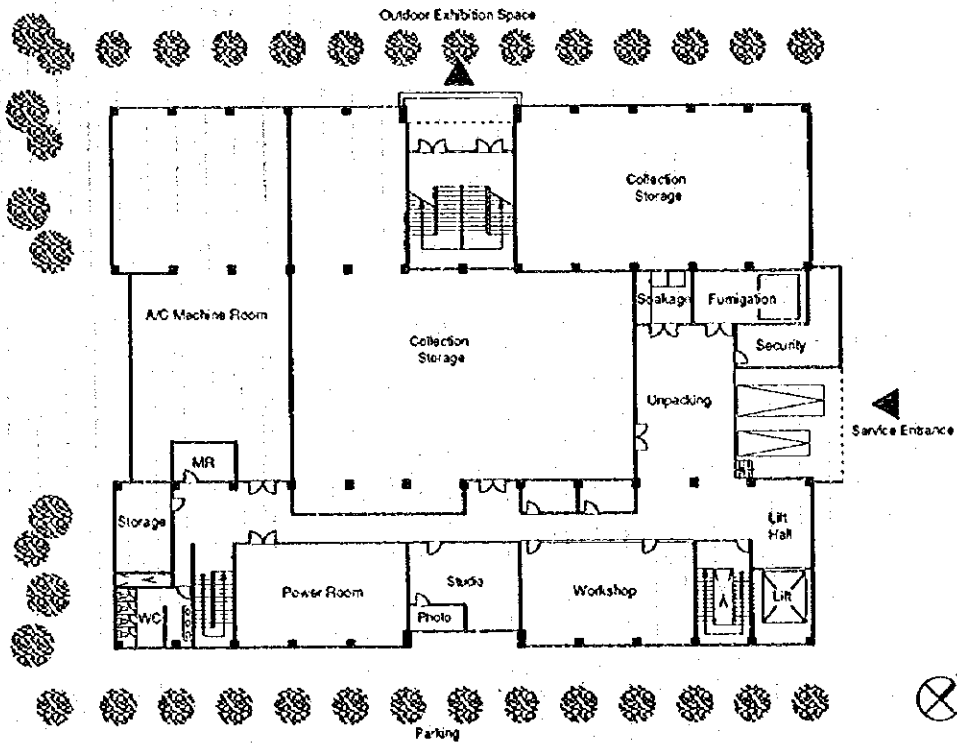




Figure 4.2.3 National Museum Preliminary Plan (1/3)

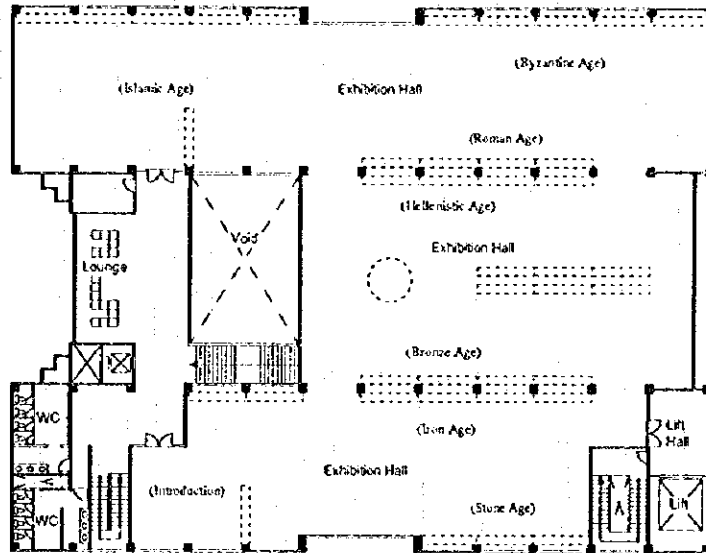


First Floor Plan

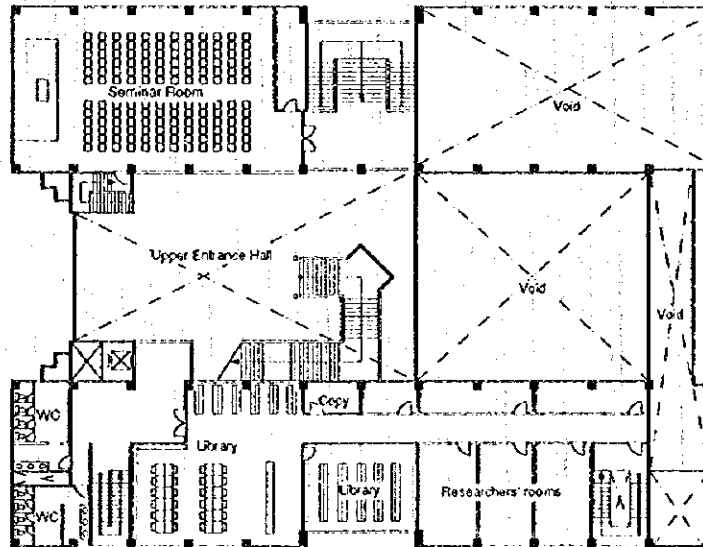


Ground Floor Plan

Figure 4.2.3 National Museum Preliminary Plan (2/3)

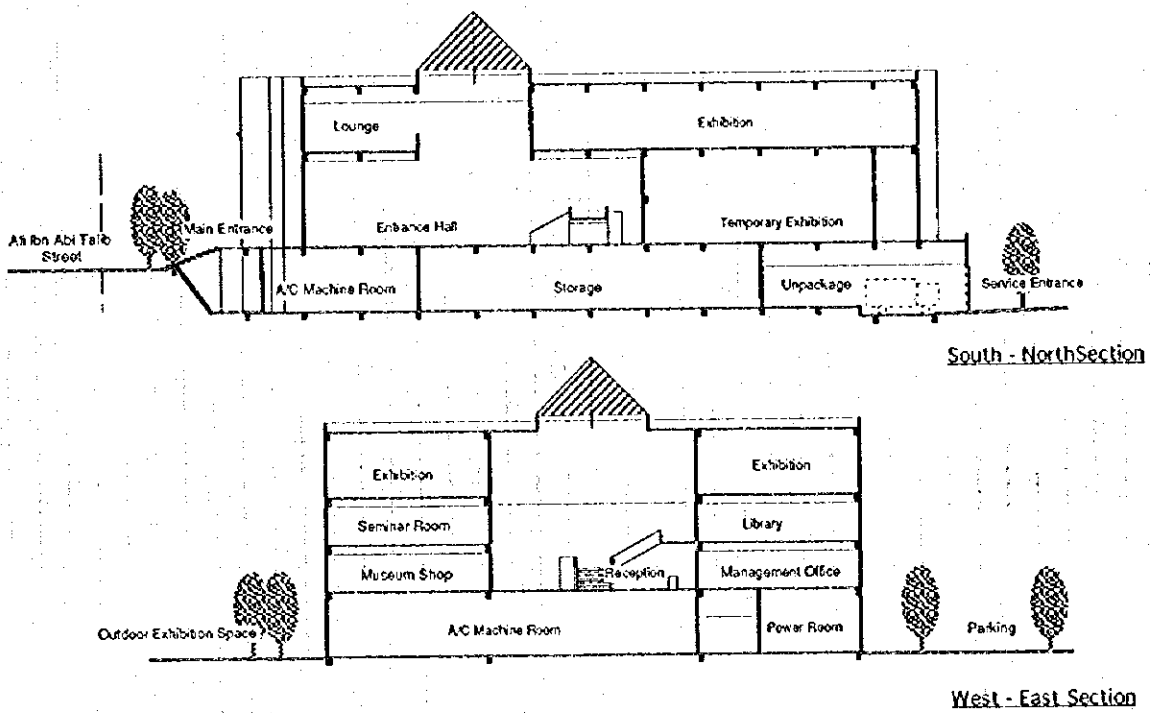


Second Floor Plan



Mezzanine Floor Plan

Figure 4.2.3 National Museum Preliminary Plan (3/3)



**(2) Cost Estimates**

Preliminary estimates are shown as follows for the purpose of indication of the size of the project.

Component	Cost US\$ million
a. Planning and Design	1.5
b. Building Construction (including landscape)	8.5
c. Furniture, Furbishing and Equipment	3.5
d. Human Resources Training	1.0
<b>Total</b>	<b>14.5</b>

**(3) Implementation Structure****a. Project Development**

For this project to be adequately defined for serious consideration by funding organizations, a clear planning framework for it is required. In this way, options to serious issues such as concept, budget, funding, site, size, foreign assistance and legal status, can be developed making possible high level decisions from 1997. It may be possible for this project to be funded by mid 1996 and realized by the year 2000 only if serious planning work starts now. The existing Jordan National Museum Committee has produced a planning document, and recently approved in principle the creation of an institute to launch the project. Additionally, MOTA, through the Department of Antiquities which already operates several museums, has full authority to undertake such a project (1988 Law No. 21, The Antiquities Law).

A sequence of steps in the planning process follows below. It is presented to illustrate the nature of the work to be accomplished by the institute as project manager.

April 96: Declaration of the Higher Council for Tourism or other high level council, of high project priority; clear commitment of resources (financial and in kind) by founders of the institute.

May 96: Appointment of a Project Manager (full time position) with limited support staff to manage the entire project.

August 96: Submission of a request to a foreign donor agency to assist in developing the strategic plan.

May 97: Start the examination of the strategic plan.

The strategic plan will contain a development strategy that is realistic, is acceptable to the Jordanian government, and acceptable also to one or more foreign sources of funding. It must specify:

- the site
- the program of the museum
- the preliminary design
- budget and finance
- management structure for development
- appropriate legal framework
- definition of the permanent museum institution or agency
- training requirements

Two other major issues for the museum institute must also be addressed during planning. One is whether the national museum should become the new home for the archaeological collection currently displayed in the museum atop the Citadel. If this collection is transferred, the Citadel museum can close, making the space available for other use. A second issue is how other museums around Jordan can benefit from the managerial and curatorial skills used on this first project (technology transfer). The national museum could house the headquarters for the national museums institute proposed in this Study, that could take on additional projects in Jordan once the national museum is under way.

#### b. Project Operation

The museum could be operated by the Department of Antiquities or by any body that it chooses to designate to operate it. It has clear authority from the Antiquities Law of 1988 to establish and operate museums. It may be possible for it to have a private participation and maintain all, or part, of the facility under a concession.

#### (4) Implementation Program

National Museum	96	97	98	99	2000	US\$ million
a. Building construction (F.F.E)						10.0
b. Human Resources				Training	Training	1.0
Cost in US\$ million		0.4	0.5	4.8	8.8	14.5

B/D   
 D/D   
 Implementation