

Action Schedule - 1st Year

27th November 2008

| Activities | 1 | | | | 2 | | | | 3 | | | | 4 | | | | 5 | | | | 6 | | | | 7 | | | | 8 | | | | 9 | | | | 10 | | | | 11 | | | | 12 | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|---|---|----|---|---|---|----|--|--|--|
| | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | | | | |
| Laboratory Work | Upgrade existing database | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Upgrade existing exhibition materials | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Collection | Continue collection work for Traditional Life and Modern Jordan | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Continue restoration work for existing collections | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Restoration | Restore newly collected artifacts | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Continue conservation work for existing and new collections | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Conservation | Upgrade conservation techniques and equipment through Technical Cooperation Project by JICA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Upgrade | Upgrade existing exhibits and displays | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Carry out interviews and questionnaires to visitors regarding existing exhibition | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maintenance | Practice maintenance work for existing exhibition | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Check safety and security of exhibits and visitors, and modify display and barrier methods if necessary | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Renewal | Upgrade exhibition techniques through Technical Cooperation Project by JICA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Anniversary | Make ceremonial exhibition plan for 1st museum opening anniversary | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Prepare for 1st museum opening anniversary exhibition | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Special <i>(Once / Year)</i> | Make special exhibition plan for 5 years | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Activities | 1 | | | | 2 | | | | 3 | | | | 4 | | | | 5 | | | | 6 | | | | 7 | | | | 8 | | | | 9 | | | | 10 | | | | 11 | | | | 12 | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|---|---|----|---|---|---|----|--|--|--|
| | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | | | | |
| Themed (Several / Year) | Prepare for preliminary special exhibitions for 1st year | | | | | | | | | | | | | | | | Practice preliminary special exhibitions for 1st year, e.g. "Amman Downtown" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Make themed exhibition plan for 5 years | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Upgrade display devices and tools through Technical Cooperation Project by JICA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Seminars & Lectures | Make 5 year plan for seminars and lectures | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Prepare for preliminary seminars and lectures for 1st year | | | | | | | | | | | | | | | | Practice preliminary seminars and lectures for 1st year, e.g. "Archaeology and History" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | Prepare for 2nd year seminars and lectures | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Workshops | Upgrade education techniques through Technical Cooperation Project by JICA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Make 5 year plan for workshops for both adults and children | | | | | | | | | | | | | | | | Prepare for preliminary workshops for 1st year | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | Practice preliminary workshops for 1st year being linked with seminars and lectures | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mobile Museum | | | | | | | | | | | | | | | | | Prepare for 2nd year workshops | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Make 5 year plan for Mobile Museum | | | | | | | | | | | | | | | | Prepare preliminary Mobile Museum through Technical Cooperation Project by JICA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | Prepare education tools and materials necessary for Mobile Museum | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ceremonies | | | | | | | | | | | | | | | | | Make ceremonial event plan for 1st museum opening | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Activities | 1 | | | | 2 | | | | 3 | | | | 4 | | | | 5 | | | | 6 | | | | 7 | | | | 8 | | | | 9 | | | | 10 | | | | 11 | | | | 12 | | | |
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| | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| My Museum Campaign | Extend My Museum campaign to all over Jordan by linking campaign with Mobile Museum | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Extend Friend of Museum campaign to all over Jordan by linking campaign with Mobile Museum | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fundraising | Modify 5 year fundraising plan if necessary | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Extend fundraising activities to whole Arab area | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Marketing | Modify 5 year marketing plan if necessary | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Extend marketing activities to whole Arab area focusing on sponsorship and Knowledge Market | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Training | Practice training for new staff | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Train core staff with assistance of suitable organisations in Jordan, e.g. RSCN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cooperation | Upgrade cooperation programmes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Extend cooperation activities to academic institutes and universities in Jordan | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Activities | 1 | | | | 2 | | | | 3 | | | | 4 | | | | 5 | | | | 6 | | | | 7 | | | | 8 | | | | 9 | | | | 10 | | | | 11 | | | | 12 | | | |
|---------------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|---|---|---|---|---|---|---|---|---|---|---|----|---|---|---|----|---|---|---|----|---|---|---|
| | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| Guide Materials | Publish digital guide materials linked with digital guide system | | | | | | | | | | | | | | | | | | | | | | | | Prepare interactive guide materials using cutting-edge ICT | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| My Museum Campaign | Extend My Museum campaign to all over world by linking campaign with museum's website | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Friend of Museum | Extend Friend of Museum campaign to all over world by linking campaign with museum's website | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fundraising | Modify 5 year fundraising plan if necessary | | | | | | | | | | | | | | | | | | | | | | | | Extend fundraising activities to all over world | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Marketing | Modify 5 year marketing plan if necessary | | | | | | | | | | | | | | | | | | | | | | | | Extend marketing activities to all over world focusing on sponsorship and Knowledge Market | | | | | | | | | | | | | | | | | | | | | | | |
| Training | Upgrade training programmes | | | | | | | | | | | | | | | | | | | | | | | | Dispatch core staff to overseas organisations | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cooperation | Upgrade cooperation programmes | | | | | | | | | | | | | | | | | | | | | | | | Prepare self-training programmes using museum's LAN and Internet systems | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | Extend cooperation activities to museums, academic institutes and universities in world | | | | | | | | | | | | | | | | | | | | | | | |

Action Plan for Energy Saving

Energy Saving

The Electricity Fee and Boiler Fuel Fee account for over 90 % of the total running cost according to the Running Cost Analysis.

(refer to **2.2.13 Maintenance Costs**)

Preventive Inspection, Maintenance and Energy Management

A waste of energy is often caused due to unforeseeable wrong condition of the M/E system in addition to the maladjustment of the system and/or lack of perception to the system by management staff.

It is indispensable to establish the optimum condition of the system by searching into the cause of the wasting energy.

Preventive inspection against system failure through daily routine inspection and periodic inspection to the system contribute the provision of the energy saving indirectly.

The measurement by the Automatic Control and Central Monitoring System has been carried out to date with the aim of confirmation on the system, whether or not the object of the control runs safely and accurately or the room environment is maintained comfortably rather than the point of energy management.

However, reflecting on the energy saving, it is rather necessary to monitor the open angle of air dampers installed on the air ducts connected to the A/C equipment, the room temperature set prior to the system operation, measurement of chilled / hot water temperature and its flow than monitoring the status of the A/C equipment , either ON or OFF, or measurement of the room air temperature.

The main points of the preventive inspection and maintenance to be carried out and the appropriate inspection periods are shown in Table 2.1 for the building, and Table 2.2 (1) and (2) for mechanical and electrical equipment respectively.

Building Management & Automation System (BMS)**High efficient and effective use of energy**

By means of high efficient and effective use of energy for A/C system operation, there will be a strong possibility to save the Electricity Fee for the operation of Water Chillers in Summer Season and Boiler Fuel Fee for Winter Season which account for over 90 % of the total running cost.

The prerequisite condition to save energy for above heat source of the A/C system is to maintain best running condition making the most of the Building Management & Automation System installed in the National Museum Building.

After the completion of this system, the Contractor / Manufacturer shall regulate and adjust all sensors, control valves, dampers, etc., and place entire system into complete operating condition.

Complete instruction shall be given to the operating and maintenance personnel of the building for above purpose.

Table 2.1 Building Inspection and Maintenance System

| Part of Building | | Inspection Points | Inspection Period |
|------------------|---|--|-------------------------------------|
| Structure | Footing | 1. Crack, deform, damage and settlement 2. Settlement and floating of the building from the ground level. | 3 years |
| | Column, Girder, Wall, Floor, Roof, Balcony, Stair | Crack, deformation, damage, rust, erosion, deterioration of painting, and loosening of connection. | |
| Finish | Floor | 1. Crack, damage, fragmentation of surface, rust, erosion, abrasion, deterioration of paint, condensation in finishing materials. 2. Performance of waterproofing membrane. 3. Drainage of water exposed area. | 1 year |
| | Stairs | 1. Crack, damage, fragmentation of surface, rust, erosion, condensation, deterioration of paint, and rain leaking in finishing materials. 2. Deformation, damage or deterioration, and installation condition of non-slip. | 1 year |
| | Wall | 1. Crack, deformation, damage, fragmentation of surface, rust, erosion, condensation, deterioration of paint and rain leaking in finishing materials. 2. Crack, damage, and deterioration of sealant. 3. Deformation, rust, erosion or deterioration of paint and installation condition of metallic material. | Interior 3 years Exterior 1 year |

| | | | |
|--|---------------|--|-------------------------------------|
| | Door & Window | <ol style="list-style-type: none"> 1. Deformation, damage, abrasion, rust, erosion or deterioration of paint, and condition of working & installation. 2. Crack, deformation, damage, abrasion and deterioration of sealant & airtight material. | 1 year |
| | Ceiling | <ol style="list-style-type: none"> 1. Crack, deformation, damage, fragmentation of surface, rust, erosion, condensation, deterioration of paint, rain leaking and installation condition of finish. 2. Deformation, damage, rust, erosion or deterioration of paint and installation condition of curtain box & ceiling maintenance hatch. | Interior 3 years Exterior 1 year |
| | Roof | <ol style="list-style-type: none"> 1. Crack, damage, deterioration and surface fragmentation of finish & expansion joint 2. Crack, damage or fragmentation of surface, rust and installation condition of parapet & top rail. 3. Performance of waterproofing membrane. | 3 years |

Source: JICA DD Final Report, August 2000

Table 2.2 (1) Mechanical Inspection and Maintenance

| Building utilities | | Maintenance Item | Maintenance Period |
|--|---|--|--------------------|
| Boiler | Boiler | 1. Checks cracks, damage, rust or corrosion of boiler, accessories and burner. | 1 month |
| | | 2. Check operation and sludge inside of burner, blower and protective devices. | 1 year |
| | | 3. Water pressure test. | 1 year- |
| | Controller | 1. Check operation, damage, rust, temp. increase, noise and connection of cables. | 1 month |
| | Other devices | 1. Check damage, abrasion, rust, noise, abnormal vibration and leaks of water pump, water softener | 1 month |
| | | 2. Check level of lubricant. | 1 month- |
| | | 3. Check damage to chimney and air pressure. | 1 month- |
| | | 4. Check cracks, corrosion, sludge inside chimney. | 1 year |
| | | 5. Check damage, rust and sludge inside oil tank | 1 year |
| Chiller | Chiller unit | 1. Check cracks, damage, corrosion, rust and abrasion. | 1 year |
| | | 2. Check level of gas. | 1 year |
| | | 3. Check leakage of gas. | 1 year |
| | Controller | 4. Check operation of burner and protective devices. | 1 year- |
| | | 1. Check operation, damage, rust, temp. increase, noise and connection of cables. | 1 year |
| | Other devices | 2. Total operation test. | 1 year |
| | | 1. Check operation, damage, rust, temp. increase and noise. | 1 year |
| | Other devices | 2. Check level of lubricant. | 1 year |
| | | 3. Check cracks, damage, rust and condition of installation. | 1 year |
| Air conditioning and ventilation system | Air conditioning and ventilating devices | 1. Check damage, rust, corrosion, noise and abnormal vibration and condition of installation | 1 year |
| | | 2. Check noise and temp. increase, voltage of power unit. | 1 year |
| | Fan | 1. Check damage, rust, corrosion, noise and abnormal vibration. | 1 year |
| | | 2. Check bearings and shafts. | 1 year |
| | Controller | 1. Check operation, damage, rust, temp. increase, noise and connection of cables. | 1 year |
| | | 2. Check operation of controller and protective devices. | 1 year |
| | Pump | 1. Check damage, rust, corrosion, noise and abnormal vibration. | 1 year |
| 2. Check level of lubricant of bearings. | | 1 year- | |
| Duct accessories | 1. Check damage, rust, corrosion, noise and abnormal vibration. | 1 year | |
| | 2. Check operation of dumper. | 1 year | |
| Pipes, valves and traps | | 1. Check damage, rust and corrosion. | 1 year |
| | | 2. Check operation of valves and traps. | 1 year |
| | | 3. Check sludge inside traps. | 1 year |

| Building utilities | | Maintenance Item | Maintenance Period |
|-------------------------------|---------------------------|--|----------------------------|
| Water supply, drainage system | Water supply and drainage | 1. Check damage, rust, corrosion, noise and abnormal vibration. 2. Check lubrication of bearings. 3. Check operation of devices. | 1 year 1 year 1 year |
| | Pipes and valves | 1. Check damage, rust and corrosion. 2. Check operation of valves. | 1 year 1 year |

Source: JICA DD Final Report, August 2000

Table 2.2 (2) Electrical Inspection and Maintenance

| Building utilities | | Maintenance Item | Maintenance Period |
|---|------------------------------------|---|--------------------|
| Substation | Main Equipment | 1. Check condition of installation | 1 year |
| | | 2. Check cracks, damage, rust, temp. increase, noise and connection of cables. | 1 year |
| | | 3. Check damage, cracks, abrasion of movable parts and lubrication. | 1 year |
| 4. Check entire system | | 1 year | |
| 5. High voltage test of insulation oil. | | 6 years | |
| | Meters and gauges | 1. Check operation of alarm points and preset value | 1 year |
| | Relay | 1. Operation test | 1 year |
| Lighting and motor control system | Lighting and motor control devices | 1. Check damage inside distribution board, rust, temp. increase, noise and connection of cables. | 1 year |
| | | 2. Operation test | 1 year |
| | | 3. Operation test of protective devices. | 1 year |
| 4. Check damage, connection of cables, rust, temp. increase of outdoor lighting fixtures. | | 1 year | |
| | Feeder | 1. Check damage, rust and temp. increase. 2. Check condition of installation and damage or rust on supporting materials. | 1 year 1 year- |
| BMS system | Controller | 1. Check damage, rust, temp. increase, noise and connection of cables. | 1 year |
| | | 2. Check operation of control devices, indicators and meters. | 1 year |
| | Central processor | 1. Operation test. | 1 year |
| | Terminal and data logger | 1. Evaluate the records. | 1 year |
| | | 2. Operation of I/O devices. | 1 year |
| Lightning arrester | | 1. Check condition of air terminals, conductor and connection, damage, rust, etc. | 1 year |

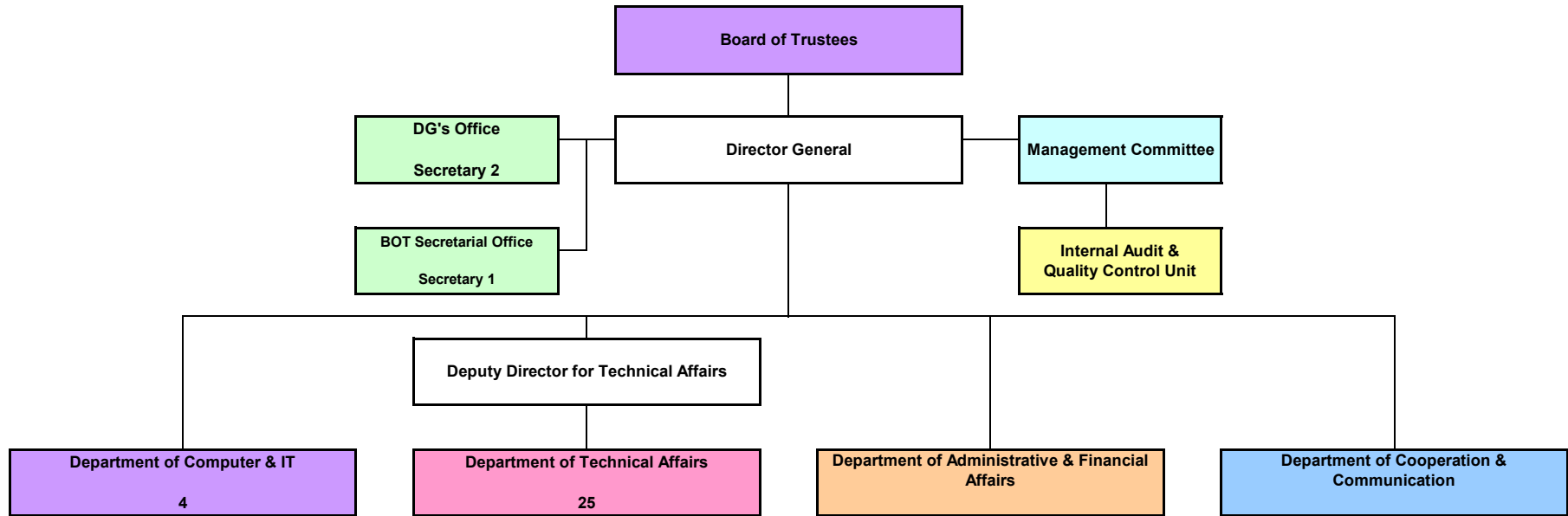
| Building utilities | Maintenance Item | Maintenance Period |
|-----------------------|---|--------------------|
| Outdoor wiring system | 1. Check cracks, damage, corrosion, condition and connection of cables. | 6 months |
| | 2. Check damage, corrosion of pipes and supporting materials. | 6 months |
| | 3. Check cracks, damage, level of lid of hand hole and manhole. | 6 months |
| | 4. Check deformation, damage and condition of hand hole and manhole. | 1 year |
| | 5. Operation test. | 1 year |

Source: JICA DD Final Report, August 2000

ORGANISATION CHART - A (3rd Year)

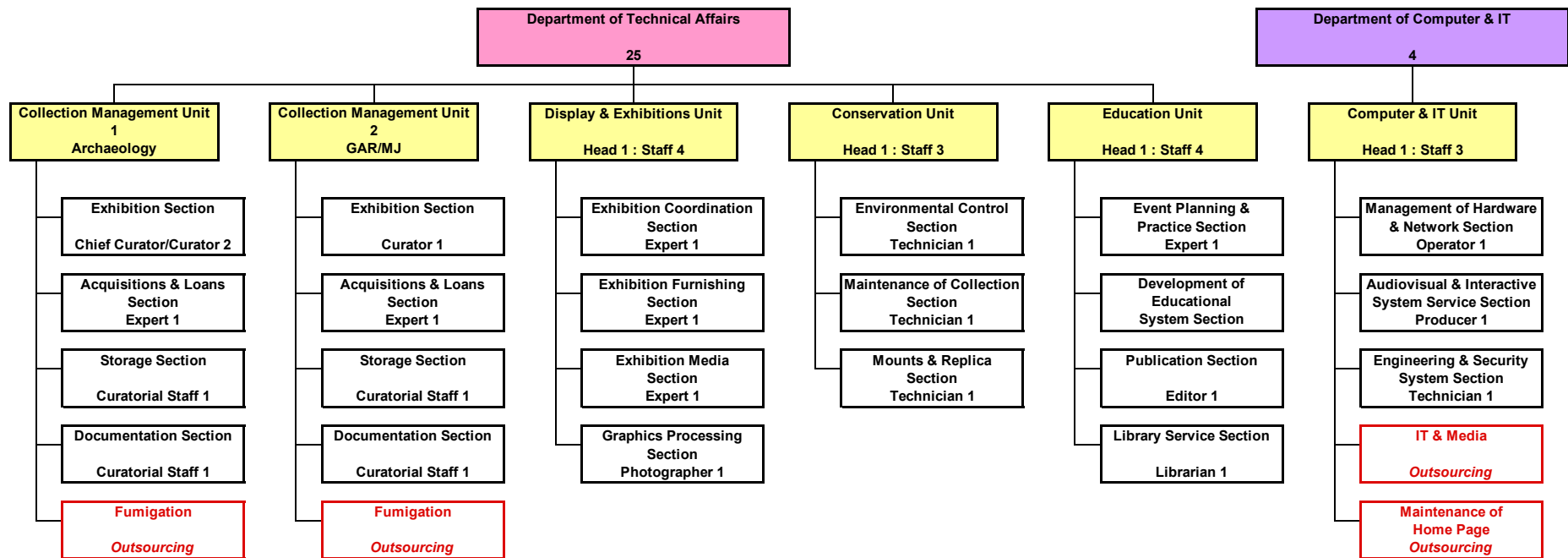
OVERALL ORGANISATION

4th December 2008



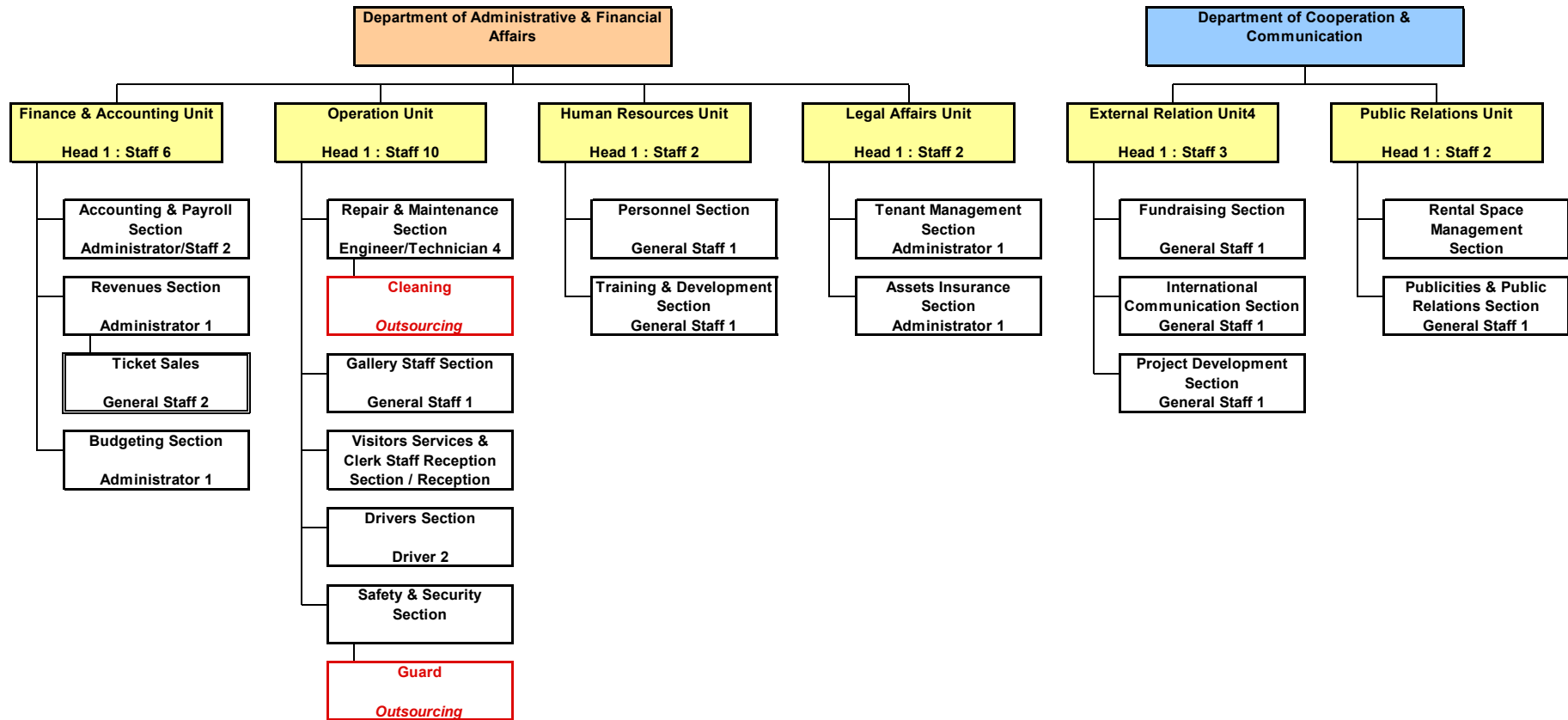
TECHNICAL DIVISION

20th November 2008



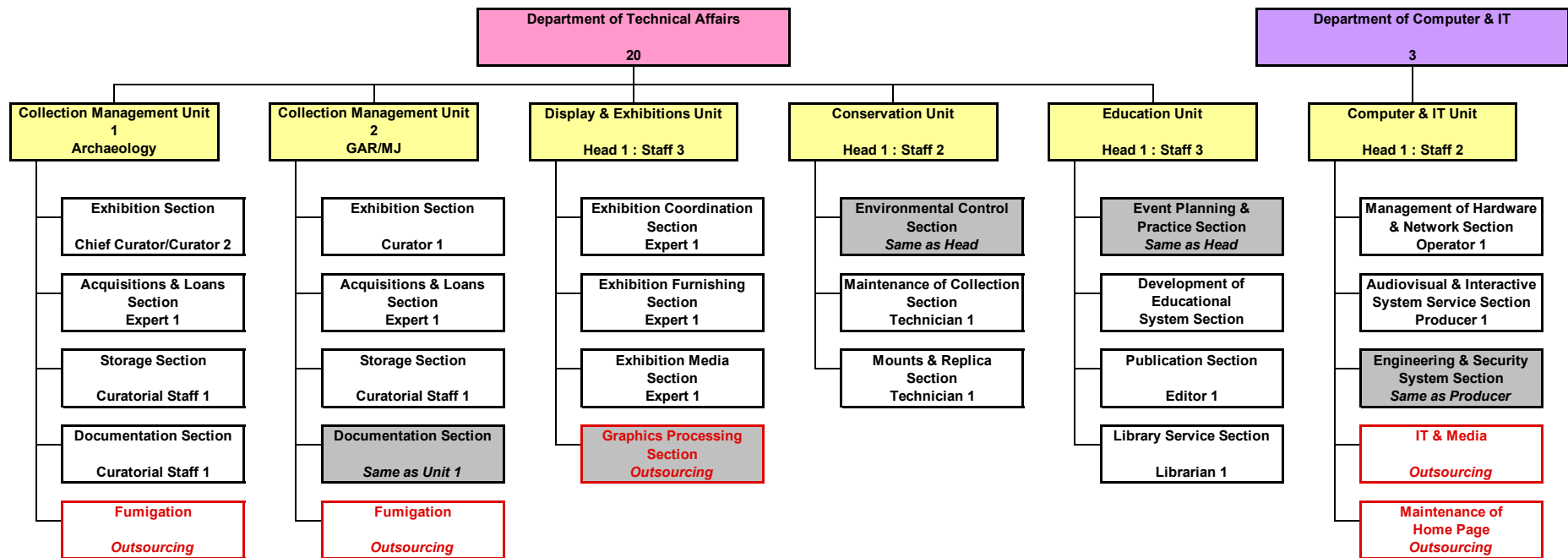
MANAGERIAL DIVISION

20th November 2008



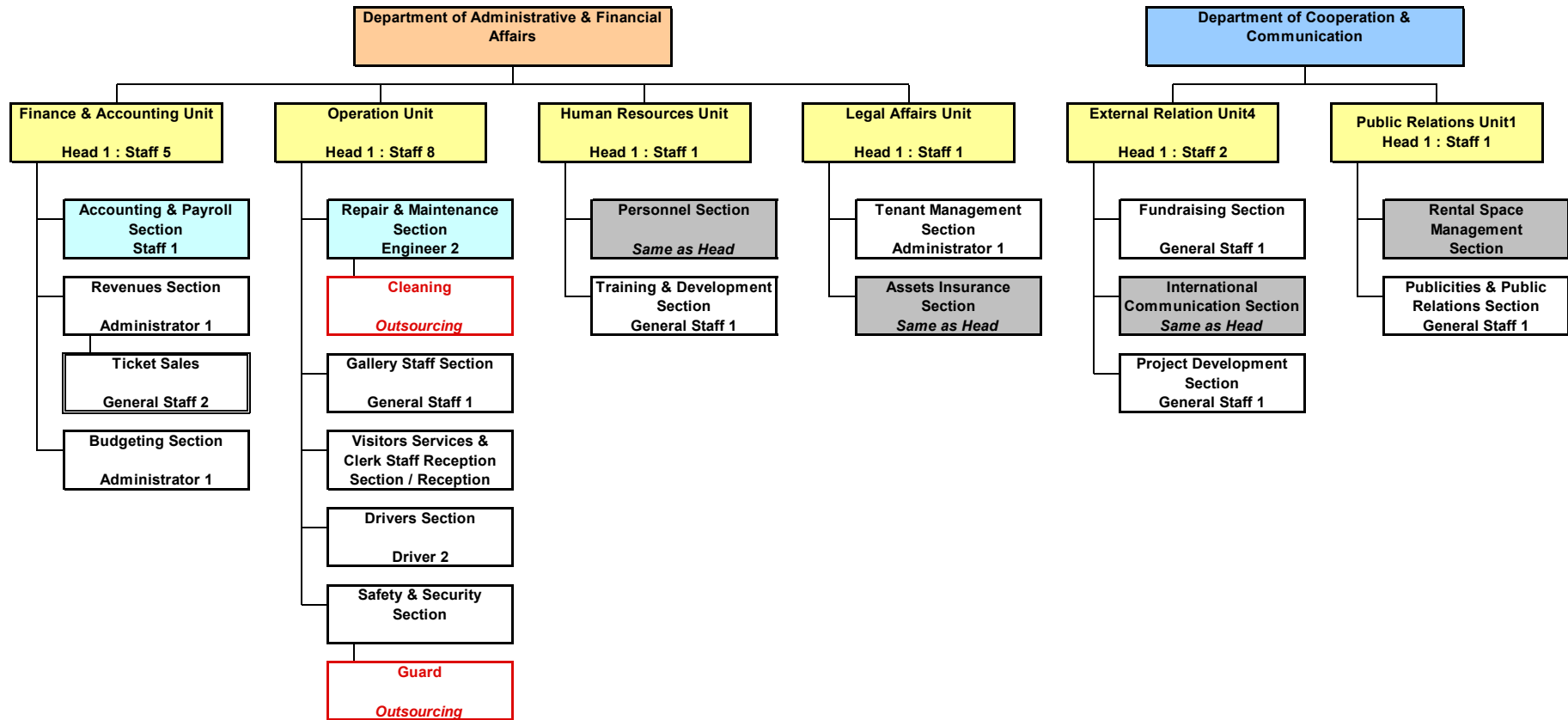
TECHNICAL DIVISION

20th November 2008



MANAGERIAL DIVISION

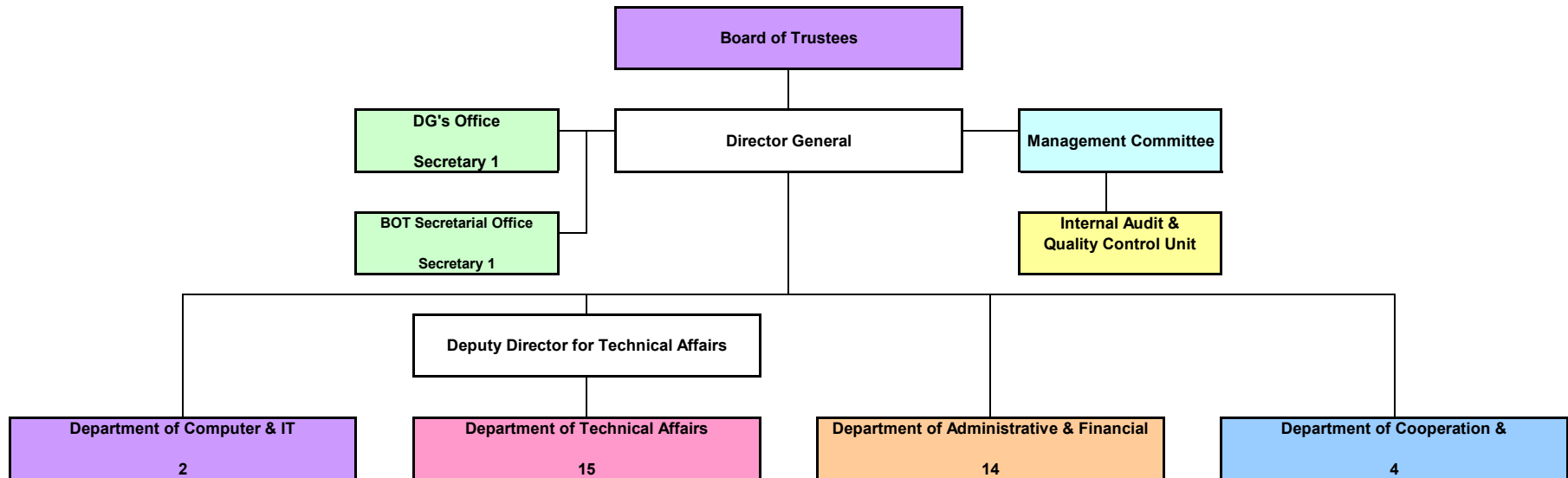
20th November 2008



ORGANISATION CHART - C (1st Year)

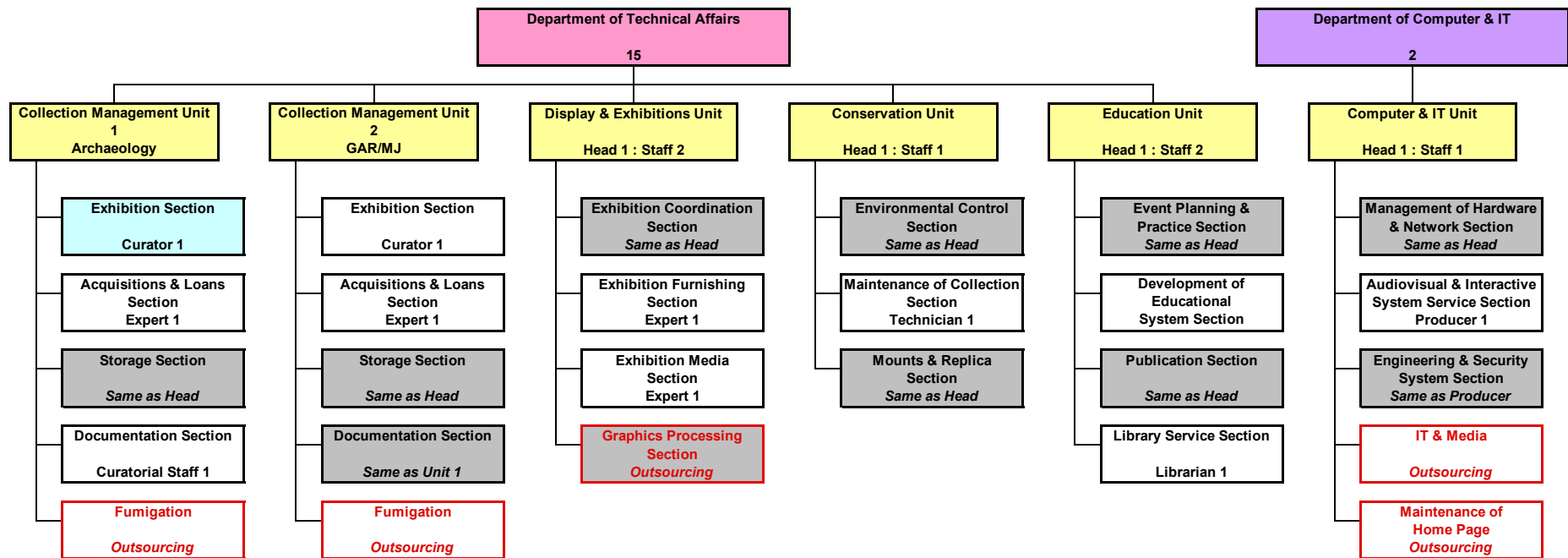
OVERALL ORGANISATION

4th December 2008



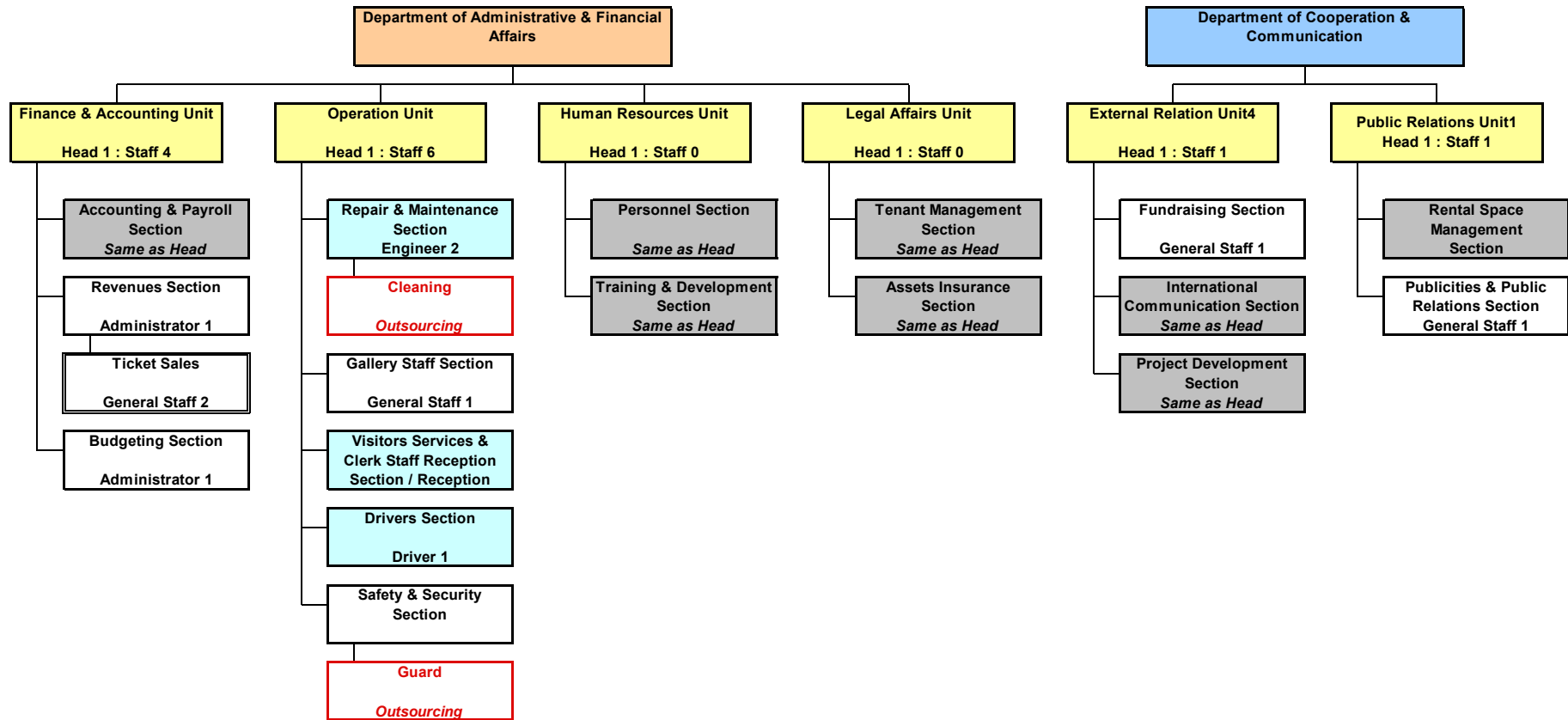
TECHNICAL DIVISION

20th November 2008



MANAGERIAL DIVISION

20th November 2008



PERSONNEL COSTS: A - 3rd Year
24th November 2008

| Title | No | Degree | Category | Basic Salary | Allowance | Others | Total/Month | Total/Year | Remarks |
|--|-----------|--------|----------|--------------|-----------|--------|-------------|----------------|-------------------------------|
| GRAND TOTAL | 65 | | | | | | | 667,884 | |
| DIRECTORS | 2 | | | | | | | 48,708 | |
| Director General | 1 | 1 | Senior | 1380 | 552 | 300 | 2232 | 26,784 | Management Allowance |
| Deputy Director for Technical Affairs | 1 | 1 | Special | 1180 | 472 | 175 | 1827 | 21,924 | Management Allowance |
| OFFICERS | 63 | | | | | | | 619,176 | |
| SECRETARIAT | 3 | | | | | | | 22,512 | |
| Secretary for DG's Office | 2 | 3 | A | 440 | 176 | 0 | 616 | 14,784 | Personal Allowance |
| Secretary for BOT Secretarial Office | 1 | 3 | A | 460 | 184 | 0 | 644 | 7,728 | Personal Allowance |
| DEPARTMENT OF TECHNICAL AFFAIRS | 25 | | | | | | | 259,380 | |
| Collection Management Unit 1 Archaeology | 6 | | | | | | | 63,540 | |
| Head of Collection Management Unit 1 Archaeology | 1 | 2 | B | 860 | 430 | 75 | 1365 | 16,380 | Section Supervision Allowance |
| Chief Curator for Exhibition Section | 1 | 3 | B | 560 | 280 | 0 | 840 | 10,080 | Personal Allowance |
| Curator for Exhibition Section | 1 | 3 | B | 580 | 290 | 0 | 870 | 10,440 | Personal Allowance |
| Expert for Acquisition & Loans Section | 1 | 3 | B | 580 | 290 | 0 | 870 | 10,440 | Personal Allowance |
| Curatorial Staff for Storage Section | 1 | 3 | A | 440 | 220 | 0 | 660 | 7,920 | Personal Allowance |
| Curatorial Staff for Documentation Section | 1 | 3 | A | 460 | 230 | 0 | 690 | 8,280 | Personal Allowance |
| Collection Management Unit 2 GAR/MJ | 5 | | | | | | | 50,580 | |
| Head of Collection Management Unit 2 GAR/MJ | 1 | 2 | A | 740 | 370 | 75 | 1185 | 14,220 | Section Supervision Allowance |
| Curator for Exhibition Section | 1 | 3 | B | 580 | 290 | 0 | 870 | 10,440 | Personal Allowance |
| Expert for Acquisition & Loans Section | 1 | 3 | B | 580 | 290 | 0 | 870 | 10,440 | Personal Allowance |
| Curatorial Staff for Storage Section | 1 | 3 | A | 440 | 220 | 0 | 660 | 7,920 | Personal Allowance |
| Curatorial Staff for Documentation Section | 1 | 3 | A | 420 | 210 | 0 | 630 | 7,560 | Personal Allowance |
| Display & Exhibitions Unit | 5 | | | | | | | 50,220 | |
| Head of Display & Exhibitions Unit | 1 | 2 | A | 740 | 370 | 75 | 1185 | 14,220 | Section Supervision Allowance |
| Expert for Exhibition Coordination Section | 1 | 3 | B | 540 | 270 | 0 | 810 | 9,720 | Personal Allowance |
| Expert for Exhibition Furnishing Section | 1 | 3 | B | 580 | 290 | 0 | 870 | 10,440 | Personal Allowance |
| Expert for Exhibition Media Section | 1 | 3 | A | 460 | 230 | 0 | 690 | 8,280 | Personal Allowance |
| Photographer for Graphic Processing Section | 1 | 3 | A | 420 | 210 | 0 | 630 | 7,560 | Personal Allowance |
| Conservation Unit | 4 | | | | | | | 44,100 | |
| Head of Conservation Unit | 1 | 2 | A | 740 | 370 | 75 | 1185 | 14,220 | Section Supervision Allowance |
| Technician for Environmental Control Section | 1 | 3 | B | 580 | 290 | 40 | 910 | 10,920 | Personal/Risk Allowance |
| Technician for Maintenance of Collection Section | 1 | 3 | B | 580 | 290 | 40 | 910 | 10,920 | Personal/Risk Allowance |
| Technician for Mounts & Replica Section | 1 | 3 | A | 420 | 210 | 40 | 670 | 8,040 | Personal/Risk Allowance |

PERSONNEL COSTS: A - 3rd Year
24th November 2008

| Title | No | Degree | Category | Basic Salary | Allowance | Others | Total/Month | Total/Year | Remarks |
|---|-----------|--------|----------|--------------|-----------|--------|-------------|----------------|--------------------------------------|
| Education Unit | 5 | | | | | | | 50,940 | |
| Head of Education Unit | 1 | 2 | A | 740 | 370 | 75 | 1185 | 14,220 | Section Supervision Allowance |
| Expert for Event Planning & Practice Section | 1 | 3 | B | 560 | 280 | 0 | 840 | 10,080 | Personal Allowance |
| Museum Teacher for Development of Educational System Section | 1 | 3 | B | 580 | 290 | 0 | 870 | 10,440 | Personal Allowance |
| Editor for Publication Section | 1 | 3 | A | 440 | 220 | 0 | 660 | 7,920 | Personal Allowance |
| Librarian for Library Service Section | 1 | 3 | A | 460 | 230 | 0 | 690 | 8,280 | Personal Allowance |
| | | | | | | | | | |
| DEPARTMENT OF ADMINISTRATIVE & FINANCIAL AFFAIRS | 24 | | | | | | | 233,160 | |
| | | | | | | | | | |
| Finance & Accounting Unit | 7 | | | | | | | 67,164 | |
| Head of Finance & Accounting Unit | 1 | 2 | B | 860 | 344 | 75 | 1279 | 15,348 | Section Supervision Allowance |
| Administrator for Accounting & Payroll Section | 1 | 3 | B | 580 | 232 | 50 | 862 | 10,344 | Personal Allowance/Risk Compensation |
| General Staff for Accounting & Payroll Section | 1 | 3 | A | 420 | 168 | 50 | 638 | 7,656 | Personal Allowance/Risk Compensation |
| Administrator for Revenues Section | 1 | 3 | B | 580 | 232 | 50 | 862 | 10,344 | Personal Allowance/Risk Compensation |
| General Staff for Ticket Sales | 2 | 4 | B | 355 | 142 | 50 | 547 | 13,128 | Personal Allowance/Risk Compensation |
| Administrator for Budgeting Section | 1 | 3 | B | 580 | 232 | 50 | 862 | 10,344 | Personal Allowance/Risk Compensation |
| Operation Unit | 11 | | | | | | | 106,068 | |
| Head of Operation Unit | 1 | 2 | B | 860 | 430 | 75 | 1365 | 16,380 | Section Supervision Allowance |
| Engineer for Repair & Maintenance Section | 2 | 3 | B | 580 | 290 | 50 | 920 | 22,080 | Personal/Risk Allowance |
| Technician for Repair & Management Section | 2 | 3 | A | 420 | 210 | 50 | 680 | 16,320 | Personal/Risk Allowance |
| General Staff for Gallery Staff Section | 1 | 3 | A | 460 | 184 | 0 | 644 | 7,728 | Personal Allowance |
| Reception Clerk for Visitors Services & Clerk Staff Reception Section | 2 | 3 | A | 450 | 180 | 0 | 630 | 15,120 | Personal Allowance |
| Driver for Drivers Section | 2 | 3 | A | 450 | 225 | 50 | 725 | 17,400 | Personal/Risk Allowance |
| Technician for Safety & Security Section | 1 | 3 | B | 580 | 290 | 50 | 920 | 11,040 | Personal/Risk Allowance |
| Human Resources Unit | 3 | | | | | | | 27,780 | |
| Head of Human Resources Unit | 1 | 2 | A | 740 | 296 | 75 | 1111 | 13,332 | Section Supervision Allowance |
| General Staff for Personnel Section | 1 | 3 | A | 420 | 168 | 0 | 588 | 7,056 | Personal Allowance |
| General Staff for Training & Development Section | 1 | 3 | A | 440 | 176 | 0 | 616 | 7,392 | Personal Allowance |
| Legal Affairs Unit | 3 | | | | | | | 32,148 | |
| Head of Legal Affairs Unit | 1 | 2 | A | 740 | 296 | 75 | 1111 | 13,332 | Section Supervision Allowance |
| Administrator for Tenant Management Section | 1 | 3 | B | 580 | 232 | 0 | 812 | 9,744 | Personal Allowance |
| Administrator for Assets Insurance Section | 1 | 3 | B | 540 | 216 | 0 | 756 | 9,072 | Personal Allowance |
| | | | | | | | | | |
| DEPARTMENT OF COOPERATION & COMMUNICATION | 7 | | | | | | | 63,624 | |
| | | | | | | | | | |
| External Relation Unit | 4 | | | | | | | 35,508 | |
| Head of External Relation Unit | 1 | 2 | A | 740 | 296 | 75 | 1111 | 13,332 | Section Supervision Allowance |
| General Staff for Fundraising Section | 1 | 3 | A | 460 | 184 | 0 | 644 | 7,728 | Personal Allowance |
| General Staff for International Communication Section | 1 | 3 | A | 420 | 168 | 0 | 588 | 7,056 | Personal Allowance |
| General Staff for Project Development Section | 1 | 3 | A | 440 | 176 | 0 | 616 | 7,392 | Personal Allowance |
| Public Relations Unit | 3 | | | | | | | 28,116 | |
| Head of Public Relations Unit | 1 | 2 | A | 740 | 296 | 75 | 1111 | 13,332 | Section Supervision Allowance |
| General Staff for Rental Space Management Section | 1 | 3 | A | 420 | 168 | 0 | 588 | 7,056 | Personal Allowance |
| General Staff for Publicities & Public Relations Section | 1 | 3 | A | 460 | 184 | 0 | 644 | 7,728 | Personal Allowance |

PERSONNEL COSTS: A - 3rd Year
24th November 2008

| Title | No | Degree | Category | Basic Salary | Allowance | Others | Total/Month | Total/Year | Remarks |
|---|----------|--------|----------|--------------|-----------|--------|-------------|---------------|-------------------------------|
| DEPARTMENT OF COMPUTER & IT | | | | | | | | | |
| | 4 | | | | | | | 40,500 | |
| Computer & IT Unit | | | | | | | | | |
| | 4 | | | | | | | 40,540 | |
| Head of Computer & It Unit | 1 | 2 | A | 740 | 410 | 75 | 1305 | 15,660 | Section Supervision Allowance |
| Operator for Management of Hardware & Network Section | 1 | 3 | A | 440 | 270 | 0 | 810 | 9,720 | Personal Allowance |
| Producer for Audiovisual & Interactive System Service Section | 1 | 3 | B | 580 | 210 | 0 | 630 | 7,580 | Personal Allowance |
| Technician for Engineering Security System Section | 1 | 3 | B | 540 | 210 | 0 | 630 | 7,580 | Personal Allowance |

PERSONNEL COSTS: B - 2nd Year
24th November 2008

| Title | No | Degree | Category | Basic Salary | Allowance | Others | Total/Month | Total/Year | Remarks |
|--|-----------|--------|----------|--------------|-----------|--------|-------------|----------------|-------------------------------|
| GRAND TOTAL | 51 | | | | | | | 544,140 | |
| DIRECTORS | 2 | | | | | | | 47,364 | |
| Director General | 1 | 1 | Senior | 1340 | 536 | 300 | 2176 | 26,112 | Management Allowance |
| Deputy Director for Technical Affairs | 1 | 1 | Special | 1140 | 456 | 175 | 1771 | 21,252 | Management Allowance |
| OFFICERS | 49 | | | | | | | 496,776 | |
| SECRETARIAT | 2 | | | | | | | 14,784 | |
| Secretary for DG's Office | 1 | 3 | A | 440 | 176 | 0 | 616 | 7,392 | Personal Allowance |
| Secretary for BOT Secretarial Office | 1 | 3 | A | 440 | 176 | 0 | 616 | 7,392 | Personal Allowance |
| DEPARTMENT OF TECHNICAL AFFAIRS | 20 | | | | | | | 208,140 | |
| Collection Management Unit 1 Archaeology | 6 | | | | | | | 61,380 | |
| Head of Collection Management Unit 1 Archaeology | 1 | 2 | B | 840 | 420 | 75 | 1335 | 16,020 | Section Supervision Allowance |
| Chief Curator for Exhibition Section | 1 | 3 | B | 540 | 270 | 0 | 810 | 9,720 | Personal Allowance |
| Curator for Exhibition Section | 1 | 3 | B | 560 | 280 | 0 | 840 | 10,080 | Personal Allowance |
| Expert for Acquisition & Loans Section | 1 | 3 | B | 560 | 280 | 0 | 840 | 10,080 | Personal Allowance |
| Curatorial Staff for Storage Section | 1 | 3 | A | 420 | 210 | 0 | 630 | 7,560 | Personal Allowance |
| Curatorial Staff for Documentation Section | 1 | 3 | A | 440 | 220 | 0 | 660 | 7,920 | Personal Allowance |
| Collection Management Unit 2 GAR/MJ | 4 | | | | | | | 41,400 | |
| Head of Collection Management Unit 2 GAR/MJ | 1 | 2 | A | 710 | 355 | 75 | 1140 | 13,680 | Section Supervision Allowance |
| Curator for Exhibition Section | 1 | 3 | B | 560 | 280 | 0 | 840 | 10,080 | Personal Allowance |
| Expert for Acquisition & Loans Section | 1 | 3 | B | 560 | 280 | 0 | 840 | 10,080 | Personal Allowance |
| Curatorial Staff for Storage Section | 1 | 3 | A | 420 | 210 | 0 | 630 | 7,560 | Personal Allowance |
| Curatorial Staff for Documentation Section | 0 | 3 | A | 440 | 220 | 0 | 660 | 0 | Personal Allowance |
| Display & Exhibitions Unit | 3 | | | | | | | 31,680 | |
| Head of Display & Exhibitions Unit | 1 | 2 | A | 710 | 355 | 75 | 1140 | 13,680 | Section Supervision Allowance |
| Expert for Exhibition Coordination Section | 0 | 3 | B | 560 | 280 | 0 | 840 | 0 | Personal Allowance |
| Expert for Exhibition Furnishing Section | 1 | 3 | B | 560 | 280 | 0 | 840 | 10,080 | Personal Allowance |
| Expert for Exhibition Media Section | 1 | 3 | A | 440 | 220 | 0 | 660 | 7,920 | Personal Allowance |
| Photographer for Graphic Processing Section | 0 | 3 | A | 440 | 220 | 0 | 660 | 0 | Personal Allowance |
| Conservation Unit | 3 | | | | | | | 34,440 | |
| Head of Conservation Unit | 1 | 2 | A | 710 | 355 | 75 | 1140 | 13,680 | Section Supervision Allowance |
| Technician for Environmental Control Section | 1 | 3 | B | 540 | 270 | 40 | 850 | 10,200 | Personal/Risk Allowance |
| Technician for Maintenance of Collection Section | 1 | 3 | B | 560 | 280 | 40 | 880 | 10,560 | Personal/Risk Allowance |
| Technician for Mounts & Replica Section | 0 | 3 | A | 440 | 220 | 40 | 700 | 0 | Personal/Risk Allowance |

PERSONNEL COSTS: B - 2nd Year
24th November 2008

| Title | No | Degree | Category | Basic Salary | Allowance | Others | Total/Month | Total/Year | Remarks |
|---|-----------|--------|----------|--------------|-----------|--------|-------------|----------------|--------------------------------------|
| Education Unit | 4 | | | | | | | 39,240 | |
| Head of Education Unit | 1 | 2 | A | 710 | 355 | 75 | 1140 | 13,680 | Section Supervision Allowance |
| Expert for Event Planning & Practice Section | 0 | 3 | B | 560 | 280 | 0 | 840 | 0 | Personal Allowance |
| Museum Teacher for Development of Educational System Section | 1 | 3 | B | 560 | 280 | 0 | 840 | 10,080 | Personal Allowance |
| Editor for Publication Section | 1 | 3 | A | 420 | 210 | 0 | 630 | 7,560 | Personal Allowance |
| Librarian for Library Service Section | 1 | 3 | A | 440 | 220 | 0 | 660 | 7,920 | Personal Allowance |
| | | | | | | | | | |
| DEPARTMENT OF ADMINISTRATIVE & FINANCIAL AFFAIRS | 19 | | | | | | | 185,856 | |
| | | | | | | | | | |
| Finance & Accounting Unit | 6 | | | | | | | 57,492 | |
| Head of Finance & Accounting Unit | 1 | 2 | B | 840 | 336 | 75 | 1251 | 15,012 | Section Supervision Allowance |
| Administrator for Accounting & Payroll Section | 1 | 3 | B | 540 | 216 | 50 | 806 | 9,672 | Personal Allowance/Risk Compensation |
| General Staff for Accounting & Payroll Section | 0 | 3 | A | 440 | 176 | 50 | 666 | 0 | Personal Allowance/Risk Compensation |
| Administrator for Revenues Section | 1 | 3 | B | 560 | 224 | 50 | 834 | 10,008 | Personal Allowance/Risk Compensation |
| General Staff for Ticket Sales | 2 | 4 | B | 345 | 138 | 50 | 533 | 12,792 | Personal Allowance/Risk Compensation |
| Administrator for Budgeting Section | 1 | 3 | B | 560 | 224 | 50 | 834 | 10,008 | Personal Allowance/Risk Compensation |
| Operation Unit | 9 | | | | | | | 86,580 | |
| Head of Operation Unit | 1 | 2 | B | 840 | 420 | 75 | 1335 | 16,020 | Section Supervision Allowance |
| Engineer for Repair & Maintenance Section | 2 | 3 | B | 560 | 280 | 50 | 890 | 21,360 | Personal/Risk Allowance |
| Technician for Repair & Management Section | 0 | 3 | A | 440 | 220 | 50 | 710 | 0 | Personal/Risk Allowance |
| General Staff for Gallery Staff Section | 1 | 3 | A | 440 | 176 | 0 | 616 | 7,392 | Personal Allowance |
| Reception Clerk for Visitors Services & Clerk Staff Reception Section | 2 | 3 | A | 430 | 172 | 0 | 602 | 14,448 | Personal Allowance |
| Driver for Drivers Section | 2 | 3 | A | 430 | 215 | 50 | 695 | 16,680 | Personal/Risk Allowance |
| Technician for Safety & Security Section | 1 | 3 | B | 560 | 280 | 50 | 890 | 10,680 | Personal/Risk Allowance |
| Human Resources Unit | 2 | | | | | | | 19,884 | |
| Head of Human Resources Unit | 1 | 2 | A | 710 | 284 | 75 | 1069 | 12,828 | Section Supervision Allowance |
| General Staff for Personnel Section | 0 | 3 | A | 440 | 176 | 0 | 616 | 0 | Personal Allowance |
| General Staff for Training & Development Section | 1 | 3 | A | 420 | 168 | 0 | 588 | 7,056 | Personal Allowance |
| Legal Affairs Unit | 2 | | | | | | | 21,900 | |
| Head of Legal Affairs Unit | 1 | 2 | A | 710 | 284 | 75 | 1069 | 12,828 | Section Supervision Allowance |
| Administrator for Tenant Management Section | 1 | 3 | B | 540 | 216 | 0 | 756 | 9,072 | Personal Allowance |
| Administrator for Assets Insurance Section | 0 | 3 | B | 560 | 224 | 0 | 784 | 0 | Personal Allowance |
| | | | | | | | | | |
| DEPARTMENT OF COOPERATION & COMMUNICATION | 5 | | | | | | | 47,496 | |
| | | | | | | | | | |
| External Relation Unit | 3 | | | | | | | 27,276 | |
| Head of External Relation Unit | 1 | 2 | A | 710 | 284 | 75 | 1069 | 12,828 | Section Supervision Allowance |
| General Staff for Fundraising Section | 1 | 3 | A | 440 | 176 | 0 | 616 | 7,392 | Personal Allowance |
| General Staff for International Communication Section | 0 | 3 | A | 440 | 176 | 0 | 616 | 0 | Personal Allowance |
| General Staff for Project Development Section | 1 | 3 | A | 420 | 168 | 0 | 588 | 7,056 | Personal Allowance |
| Public Relations Unit | 2 | | | | | | | 20,220 | |
| Head of Public Relations Unit | 1 | 2 | A | 710 | 284 | 75 | 1069 | 12,828 | Section Supervision Allowance |
| General Staff for Rental Space Management Section | 0 | 3 | A | 440 | 176 | 0 | 616 | 0 | Personal Allowance |
| General Staff for Publicities & Public Relations Section | 1 | 3 | A | 440 | 176 | 0 | 616 | 7,392 | Personal Allowance |

PERSONNEL COSTS: B - 2nd Year
24th November 2008

| Title | No | Degree | Category | Basic Salary | Allowance | Others | Total/Month | Total/Year | Remarks |
|---|----------|--------|----------|--------------|-----------|--------|-------------|---------------|-------------------------------|
| DEPARTMENT OF COMPUTER & IT | | | | | | | | | |
| | 3 | | | | | | | 40,500 | |
| Computer & IT Unit | | | | | | | | | |
| | 3 | | | | | | | 40,500 | |
| Head of Computer & It Unit | 1 | 2 | A | 710 | 410 | 75 | 1305 | 15,660 | Section Supervision Allowance |
| Operator for Management of Hardware & Network Section | 1 | 3 | A | 420 | 270 | 0 | 810 | 9,720 | Personal Allowance |
| Producer for Audiovisual & Interactive System Service Section | 1 | 3 | B | 560 | 210 | 0 | 630 | 7,560 | Personal Allowance |
| Technician for Engineering Security System Section | 0 | 3 | B | 560 | 210 | 0 | 630 | 7,560 | Personal Allowance |

PERSONNEL COSTS: C - 1st Year
24th November 2008

| Title | No | Degree | Category | Basic Salary | Allowance | Others | Total/Month | Total/Year | Remarks |
|--|-----------|--------|----------|--------------|-----------|--------|-------------|----------------|-------------------------------|
| GRAND TOTAL | 39 | | | | | | | 438,828 | |
| DIRECTORS | 2 | | | | | | | 46,020 | |
| Director General | 1 | 1 | Senior | 1300 | 520 | 300 | 2120 | 25,440 | Management Allowance |
| Deputy Director for Technical Affairs | 1 | 1 | Special | 1100 | 440 | 175 | 1715 | 20,580 | Management Allowance |
| OFFICERS | 37 | | | | | | | 392,808 | |
| SECRETARIAT | 2 | | | | | | | 14,112 | |
| Secretary for DG's Office | 1 | 3 | A | 420 | 168 | 0 | 588 | 7,056 | Personal Allowance |
| Secretary for BOT Secretarial Office | 1 | 3 | A | 420 | 168 | 0 | 588 | 7,056 | Personal Allowance |
| DEPARTMENT OF TECHNICAL AFFAIRS | 15 | | | | | | | 159,420 | |
| Collection Management Unit 1 Archaeology | 4 | | | | | | | 42,660 | |
| Head of Collection Management Unit 1 Archaeology | 1 | 2 | B | 820 | 410 | 75 | 1305 | 15,660 | Section Supervision Allowance |
| Chief Curator for Exhibition Section | 0 | 3 | B | 540 | 270 | 0 | 810 | 0 | Personal Allowance |
| Curator for Exhibition Section | 1 | 3 | B | 540 | 270 | 0 | 810 | 9,720 | Personal Allowance |
| Expert for Acquisition & Loans Section | 1 | 3 | B | 540 | 270 | 0 | 810 | 9,720 | Personal Allowance |
| Curatorial Staff for Storage Section | 0 | 3 | A | 420 | 210 | 0 | 630 | 0 | Personal Allowance |
| Curatorial Staff for Documentation Section | 1 | 3 | A | 420 | 210 | 0 | 630 | 7,560 | Personal Allowance |
| Collection Management Unit 2 GAR/MJ | 3 | | | | | | | 32,580 | |
| Head of Collection Management Unit 2 GAR/MJ | 1 | 2 | A | 680 | 340 | 75 | 1095 | 13,140 | Section Supervision Allowance |
| Curator for Exhibition Section | 1 | 3 | B | 540 | 270 | 0 | 810 | 9,720 | Personal Allowance |
| Expert for Acquisition & Loans Section | 1 | 3 | B | 540 | 270 | 0 | 810 | 9,720 | Personal Allowance |
| Curatorial Staff for Storage Section | 0 | 3 | A | 420 | 210 | 0 | 630 | 0 | Personal Allowance |
| Curatorial Staff for Documentation Section | 0 | 3 | A | 420 | 210 | 0 | 630 | 0 | Personal Allowance |
| Display & Exhibitions Unit | 3 | | | | | | | 30,420 | |
| Head of Display & Exhibitions Unit | 1 | 2 | A | 680 | 340 | 75 | 1095 | 13,140 | Section Supervision Allowance |
| Expert for Exhibition Coordination Section | 0 | 3 | B | 540 | 270 | 0 | 810 | 0 | Personal Allowance |
| Expert for Exhibition Furnishing Section | 1 | 3 | B | 540 | 270 | 0 | 810 | 9,720 | Personal Allowance |
| Expert for Exhibition Media Section | 1 | 3 | A | 420 | 210 | 0 | 630 | 7,560 | Personal Allowance |
| Photographer for Graphic Processing Section | 0 | 3 | A | 420 | 210 | 0 | 630 | 0 | Personal Allowance |
| Conservation Unit | 2 | | | | | | | 23,340 | |
| Head of Conservation Unit | 1 | 2 | A | 680 | 340 | 75 | 1095 | 13,140 | Section Supervision Allowance |
| Technician for Environmental Control Section | 0 | 3 | B | 540 | 270 | 40 | 850 | 0 | Personal/Risk Allowance |
| Technician for Maintenance of Collection Section | 1 | 3 | B | 540 | 270 | 40 | 850 | 10,200 | Personal/Risk Allowance |
| Technician for Mounts & Replica Section | 0 | 3 | A | 420 | 210 | 40 | 670 | 0 | Personal/Risk Allowance |

PERSONNEL COSTS: C - 1st Year
24th November 2008

| Title | No | Degree | Category | Basic Salary | Allowance | Others | Total/Month | Total/Year | Remarks |
|---|-----------|--------|----------|--------------|-----------|--------|-------------|----------------|--------------------------------------|
| Education Unit | 3 | | | | | | | 30,420 | |
| Head of Education Unit | 1 | 2 | A | 680 | 340 | 75 | 1095 | 13,140 | Section Supervision Allowance |
| Expert for Event Planning & Practice Section | 0 | 3 | B | 540 | 270 | 0 | 810 | 0 | Personal Allowance |
| Museum Teacher for Development of Educational System Section | 1 | 3 | B | 540 | 270 | 0 | 810 | 9,720 | Personal Allowance |
| Editor for Publication Section | 0 | 3 | A | 420 | 210 | 0 | 630 | 0 | Personal Allowance |
| Librarian for Library Service Section | 1 | 3 | A | 420 | 210 | 0 | 630 | 7,560 | Personal Allowance |
| | | | | | | | | | |
| DEPARTMENT OF ADMINISTRATIVE & FINANCIAL AFFAIRS | 14 | | | | | | | 140,016 | |
| | | | | | | | | | |
| Finance & Accounting Unit | 5 | | | | | | | 46,476 | |
| Head of Finance & Accounting Unit | 1 | 2 | B | 820 | 328 | 75 | 1223 | 14,676 | Section Supervision Allowance |
| Administrator for Accounting & Payroll Section | 0 | 3 | B | 540 | 216 | 50 | 806 | 0 | Personal Allowance/Risk Compensation |
| General Staff for Accounting & Payroll Section | 0 | 3 | A | 420 | 168 | 50 | 638 | 0 | Personal Allowance/Risk Compensation |
| Administrator for Revenues Section | 1 | 3 | B | 540 | 216 | 50 | 806 | 9,672 | Personal Allowance/Risk Compensation |
| General Staff for Ticket Sales | 2 | 4 | B | 335 | 134 | 50 | 519 | 12,456 | Personal Allowance/Risk Compensation |
| Administrator for Budgeting Section | 1 | 3 | B | 540 | 216 | 50 | 806 | 9,672 | Personal Allowance/Risk Compensation |
| Operation Unit | 7 | | | | | | | 68,892 | |
| Head of Operation Unit | 1 | 2 | B | 820 | 410 | 75 | 1305 | 15,660 | Section Supervision Allowance |
| Engineer for Repair & Maintenance Section | 2 | 3 | B | 540 | 270 | 50 | 860 | 20,640 | Personal/Risk Allowance |
| Technician for Repair & Management Section | 0 | 3 | A | 420 | 210 | 50 | 680 | 0 | Personal/Risk Allowance |
| General Staff for Gallery Staff Section | 1 | 3 | A | 420 | 168 | 0 | 588 | 7,056 | Personal Allowance |
| Reception Clerk for Visitors Services & Clerk Staff Reception Section | 1 | 3 | A | 420 | 168 | 0 | 588 | 7,056 | Personal Allowance |
| Driver for Drivers Section | 1 | 3 | A | 420 | 210 | 50 | 680 | 8,160 | Personal/Risk Allowance |
| Technician for Safety & Security Section | 1 | 3 | B | 540 | 270 | 50 | 860 | 10,320 | Personal/Risk Allowance |
| Human Resources Unit | 1 | | | | | | | 12,324 | |
| Head of Human Resources Unit | 1 | 2 | A | 680 | 272 | 75 | 1027 | 12,324 | Section Supervision Allowance |
| General Staff for Personnel Section | 0 | 3 | A | 420 | 168 | 0 | 588 | 0 | Personal Allowance |
| General Staff for Training & Development Section | 0 | 3 | A | 420 | 168 | 0 | 588 | 0 | Personal Allowance |
| Legal Affairs Unit | 1 | | | | | | | 12,324 | |
| Head of Legal Affairs Unit | 1 | 2 | A | 680 | 272 | 75 | 1027 | 12,324 | Section Supervision Allowance |
| Administrator for Tenant Management Section | 0 | 3 | B | 540 | 216 | 0 | 756 | 0 | Personal Allowance |
| Administrator for Assets Insurance Section | 0 | 3 | B | 540 | 216 | 0 | 756 | 0 | Personal Allowance |
| | | | | | | | | | |
| DEPARTMENT OF COOPERATION & COMMUNICATION | 4 | | | | | | | 38,760 | |
| | | | | | | | | | |
| External Relation Unit | 2 | | | | | | | 19,380 | |
| Head of External Relation Unit | 1 | 2 | A | 680 | 272 | 75 | 1027 | 12,324 | Section Supervision Allowance |
| General Staff for Fundraising Section | 1 | 3 | A | 420 | 168 | 0 | 588 | 7,056 | Personal Allowance |
| General Staff for International Communication Section | 0 | 3 | A | 420 | 168 | 0 | 588 | 0 | Personal Allowance |
| General Staff for Project Development Section | 0 | 3 | A | 420 | 168 | 0 | 588 | 0 | Personal Allowance |
| Public Relations Unit | 2 | | | | | | | 19,380 | |
| Head of Public Relations Unit | 1 | 2 | A | 680 | 272 | 75 | 1027 | 12,324 | Section Supervision Allowance |
| General Staff for Rental Space Management Section | 0 | 3 | A | 420 | 168 | 0 | 588 | 0 | Personal Allowance |
| General Staff for Publicities & Public Relations Section | 1 | 3 | A | 420 | 168 | 0 | 588 | 7,056 | Personal Allowance |

PERSONNEL COSTS: C - 1st Year
24th November 2008

| Title | No | Degree | Category | Basic Salary | Allowance | Others | Total/Month | Total/Year | Remarks |
|---|----------|--------|----------|--------------|-----------|--------|-------------|---------------|-------------------------------|
| DEPARTMENT OF COMPUTER & IT | | | | | | | | | |
| | 2 | | | | | | | 40,500 | |
| Computer & IT Unit | | | | | | | | | |
| | 2 | | | | | | | 40,500 | |
| Head of Computer & It Unit | 1 | 2 | A | 680 | 410 | 75 | 1305 | 15,660 | Section Supervision Allowance |
| Operator for Management of Hardware & Network Section | 0 | 3 | A | 420 | 270 | 0 | 810 | 9,720 | Personal Allowance |
| Producer for Audiovisual & Interactive System Service Section | 1 | 3 | B | 540 | 210 | 0 | 630 | 7,560 | Personal Allowance |
| Technician for Engineering Security System Section | 0 | 3 | B | 540 | 210 | 0 | 630 | 7,560 | Personal Allowance |

Maintenance Costs

12th November 2008

SAPI Team

1. Condition

1) Opening Hours

Summer Season: 10 hours/day

Winter Season: 10 hours/day

Opening/Closing Time may change in summer and winter.

2) Operation Hours

12 hours/day (*1 hour each before and after opening hours*)

3) Closing Day

1 day/week (*Monday or Tuesday*)

4) Annual Operation Days

52 weeks x 6 days/week = 312 days/year

5) Seasonal Operation

Summer Season: 4 months

June, July, August and September

Winter Season: 4 months

October, November, December and January

Intermediate Season: 4 months

February, March, April and May

6) Number of Staff

50 permanent staff

7) Number of Visitors

600,000 persons/year

600,000 persons / 312 days = 1,923 persons/day

1,900 persons/day in average

2. Electric Fee

1) Summer Season

Basic Fee (Subscription Fee)

$$17.675 \text{ JD/month} \times 4 \text{ months} = 71 \text{ JD} / 4 \text{ months} \text{ --- a}$$

Electric Charge

$$1,155 \text{ kW/hour} \times 10 \text{ hours/day} \times 26 \text{ days/month} \times 4 \text{ months} \\ = 1,201,200 \text{ kWh} / 4 \text{ months}$$

$$1,201,200 \text{ kWh} \times 0.085 \text{ JD/kWh} = 102,102 \text{ JD} / 4 \text{ months} \text{ --- b}$$

$$a + b = \mathbf{102,173 \text{ JD} / 4 \text{ months}} \text{ --- c}$$

2) Winter Season

Basic Fee (Subscription Fee)

$$17.675 \text{ JD/month} \times 4 \text{ months} = 71 \text{ JD} / 4 \text{ months} \text{ --- d}$$

Electric Charge

$$795 \text{ kW/hour} \times 10 \text{ hours/day} \times 26 \text{ days/month} \times 4 \text{ months} \\ = 826,800 \text{ kWh} / 4 \text{ months}$$

$$826,800 \text{ kWh} \times 0.085 \text{ JD/kWh} = 70,278 \text{ JD} / 4 \text{ months} \text{ --- e}$$

$$d + e = \mathbf{70,349 \text{ JD} / 4 \text{ months}} \text{ --- f}$$

3) Intermediate Season

Basic Fee (Subscription Fee)

$$17.675 \text{ JD/month} \times 4 \text{ months} = 71 \text{ JD} / 4 \text{ months} \text{ --- g}$$

Electric Charge

$$795 \text{ kW/hour} \times 10 \text{ hours/day} \times 26 \text{ days/month} \times 4 \text{ months} \\ = 826,800 \text{ kWh} / 4 \text{ months}$$

$$826,800 \text{ kWh} \times 0.085 \text{ JD/kWh} = 70,278 \text{ JD} / 4 \text{ months} \text{ --- h}$$

$$g + h = \mathbf{70,349 \text{ JD} / 4 \text{ months}} \text{ --- i}$$

| |
|---|
| $\mathbf{\text{Annual Electric Fee} = c+f+i = 242,871 \text{ JD/year}}$ |
|---|

Load Estimation

| Power Supply to: | Connected Load | Demand Factor | Maximum Demand Load | Remarks |
|-----------------------|----------------|---------------|---------------------|-----------|
| Exhibition Lighting | 164.61 KW | 80 % | 131.69KW | |
| Track Lighting | 50.00 KW | 80 % | 40.00KW | |
| Display lighting | 389.25KW | 60 % | 233.55KW | |
| Exhibition Equipment | | | | |
| (Sub-Total) | | | (405.24) | |
| General Lightings | 93.96KW | 50 % | 46.98KW | |
| General Socket Outlet | 73.70KW | 20 % | 14.74KW | |
| Chillers (Summer) | 450.00KW | 80 % | 360.00KW | |
| HVAC System | 400.02KW | 80 % | 320.02KW | |
| Plumbing Works | 12.75KW | 20 % | 2.55KW | |
| Elevators | 49.25KW | 10 % | 4.93KW | |
| (Sub-Total) | | | (749.22) | |
| Fire Fighting | 36.25KW | 0 % | 0 KW | |
| Total (Summer) | 1,719.79KW | | 1,154.46KW | (67.1 %) |
| Total (Winter) | 1,269.79KW | | 794.46KW | (62.5 %) |
| Total (Intermediate) | 1,269.79KW | | 794.46KW | (62.5 %) |

Transformer Capacity : 2x 1,000 kVA

Stand-by Generator : 350 kVA

3. Water Fee

Basic Fee

5.15 JD / 3 months

5.15 JD / 3 months x 4 = 21 JD/ year --- a

Water Charge

43 m³/day x 312 days = 13,416 m³/ year13,416 m³ x 1.0 JD/m³ = 13,416 JD/year --- b

Water for Irrigation

12 m³/day x 30 days/month x 7 months = 2,520 m³/ year2,520 m³ x 1.0JD/m³ = 2,520 JD/year --- c

| |
|--|
| Annual Water Fee = a+b+c = 15,957 JD/year |
|--|

Water Consumption

| | | Unit | Consumption] | Remarks |
|-------------|-----------------------|-----------------------------|----------------|---------------------------|
| Staff | 50 [ps] | 60 [l/ps]/day | 3,000 [l]/day | |
| Outsourcing | 22 [ps] | 60 [l/ps]/day | 1,320 [l]/day | |
| Visitor | 1,900 [ps] | 0.2 [l/ps]/day | 380 [l]/day | |
| Restaurant | 350 [m ²] | 110 [l/m ²]/day | 38,500 [l]/day | |
| Total | | | 42,720 [l]/day | = 43[m ³]/day |

Water for Irrigation

| | | Unit | Consumption] | Remarks |
|------------------|-------------------------|-----------------------------|----------------|---------------------------|
| Landscaping Area | 7,850 [m ²] | 1.5 [l/m ²]/day | 11,775 [l]/day | |
| Total | | | 11,775 [l]/day | = 12[m ³]/day |

4. Drainage Fee

Drainage Charge

$$13,416 \text{ m}^3 \times 0.56 \text{ JD/m}^3 = 7,513 \text{ JD/year}$$

| |
|--|
| Annual Drainage Fee = 7,513 JD/year |
|--|

5. Telephone Charge

Basic Fee

$$10 \text{ lines} \times 10.9 \text{ JD/line/month} = 109 \text{ JD/month}$$

$$109 \text{ JD/month} \times 12 \text{ months} = 1,308 \text{ JD/year --- a}$$

Telephone Charge

$$10 \text{ lines} \times 10 \text{ calls/day/line} \times 5 \text{ minutes/call} \times 312 \text{ days} \\ = 156,000 \text{ minutes/year}$$

City call

$$156,000 \text{ minutes/year} \times 50\% \times 0.003 \text{ JD/minute} \\ = 234 \text{ JD/year --- b}$$

Long Distance Call (Domestic)

$$156,000 \text{ minutes/year} \times 45\% \times 0.016 \text{ JD/minute} \\ = 1,123.2 \text{ JD/year --- c}$$

Overseas Call (e.g. to Japan)

$$156,000 \text{ minutes/year} \times 5\% \times 0.3 \text{ JD/minute}$$

$$= 2,340 \text{ JD/year} \quad \text{--- d}$$

| |
|--|
| Annual Telephone Charge = a+b+c+d = 5,005 JD/year |
|--|

6. Generator Fuel

Generator: 350 kVA

Fuel Consumption: 76 litre/hour

Power Failure (Service Interruption): 1 hour/month

Maintenance Operation: 0.5 hour/month

$$76 \text{ litre/hour} \times 1.5 \text{ hours/month} \times 12 \text{ months} = 1,368 \text{ litre/year}$$

$$0.315 \text{ JD/litre} \times 1,368 \text{ litres} = \mathbf{431 \text{ JD/year}}$$

| |
|--|
| Annual Generator Fuel Fee = 431 JD/year |
|--|

7. Boiler Fuel

$$\text{Mass of fuel} = 784 \text{ kw} / 0.8 \times 39,000 \text{ kw/kg/sec} = 0.025 \text{ kg/sec}$$

$$= 0.025 \text{ kg/sec} \times 60 \text{ seconds} \times 60 \text{ minutes} \times 10 \text{ hours} \times 26 \text{ days}$$

$$\times 4 \text{ months}$$

$$= 93,600 \text{ kg/year}$$

$$= 93,600 \text{ kg/year} / 0.874 \text{ specific gravity} = 107,094 \text{ litres/year}$$

$$= 107,094 \text{ litres} \times 0.8 \text{ JD/litre} = \mathbf{85,676 \text{ JD/year}}$$

| |
|--|
| Annual Boiler Fuel Fee = 85,676 JD/year |
|--|

Specification for Hot Water Boiler and Fuel

Capacity 490 [kW] x 2 sets = 980 [kW] Efficiency: 80 [%] 980 x 0.8 = 784 [kW]

Calorific value of the Fuel: 9.288 [kcal/kg] /860 [kcal/kw = 10.8 [kw/kg]

$$10.8 \text{ [kw/kg]} \times 60 \text{ [min/h]} \times 60 \text{ [sec/min]} = 39,000 \text{ [kw/kg/sec]}$$

Specific Gravity of the Fuel: 0.874 (for conversion from [kg] to [L])

8. Total Running Cost

| | |
|-------------------|------------------------|
| Electrical | JD 242,871 |
| Water | JD 15,957 |
| Drainage | JD 7,513 |
| Telephone | JD 5,005 |
| Generator | JD 431 |
| Boiler | JD 85,676 |
| Total | JD 357,453/year |

| Running Cost Analysis | | | | | | |
|---------------------------------------|-------|----------|-----------|-----------|--------|-------|
| Electricity | Water | Drainage | Telephone | Generator | Boiler | Total |
| 68 % | 4.4 % | 2.1 % | 1.4 % | 0.1 % | 24 % | 100 % |
| $JD357,453/9,233m^2 = 39 JD/m^2/year$ | | | | | | |

| Annual Inspection & Maintenance Schedule for M/E Installations | | | | | | | | | | | | | |
|--|------------------------------|---------|-------------|-------|------------|------------|-----------|------|-------------|------------|----------|----------|------------|
| M/E Installation | Times / Year | January | February | March | April | May | June | July | August | September | October | November | December |
| Civil | Irrigation System | 2 | | | Cleaning | | | | | Q'ty / Cng | | | |
| | Rain Water Drainage | 2 | | | Cleaning | | | | | Cleaning | | | |
| Plumbing | Domestic Cold Water Tank | 2 | | | Q'ty / Cng | | | | | Q'ty / Cng | | | |
| | City Water Booster Pumps | 2 | | | Gnrl. Insp | | | | | Gnrl. Insp | | | |
| | Water Supply System | 2 | | | Gnrl. Insp | | | | | Gnrl. Insp | | | |
| | Drainage System | 2 | | | Cleaning | | | | | Cleaning | | | |
| HVAC | Air Cool Water Chillers | 3 | | | | In Season | | | High Season | | | | Off Season |
| | Hot Water Boilers | 3 | High Season | | | Off Season | | | | | | | In Season |
| | FCUs | 2 | | | | Filter | | | | | | | Filter |
| | AHUs | 2 | | | | Filter | | | | | | | Filter |
| | Packaged Air-Conditioners | 2 | | | | | | | | | | | |
| | Fans | 2 | | | | | In Season | | | | | | In Season |
| | BMS | 2 | | | | Closed Day | | | | | Ofc Clsd | | |
| Electrical | Sub-Station | 1 | Closed Day | | | | | | | | | | |
| | Emergency Generator | 12 | Monthly | | | | | | | | | | |
| | Emergency Lighting | 1 | | | Batteries | | | | | | | | |
| | Exit Lightings | 1 | | | Batteries | | | | | | | | |
| | Public Address System | 1 | | | Fire Drill | | | | | | | | |
| Fire Services | Fire Water Tank | 2 | | | Cleaning | | | | | Gnrl. Insp | | | |
| | Fire Hose Reel System | 2 | | | Fire Drill | | | | | Gnrl. Insp | | | |
| | FM2000 Fire Fighting System | 2 | | | Fire Drill | | | | | Gnrl. Insp | | | |
| | Fire Alarm System | 2 | | | Fire Drill | | | | | Gnrl. Insp | | | |
| | Fire Extinguishers | 2 | | | Fire Drill | | | | | Gnrl. Insp | | | |
| Elevator | Periodical Safety Inspection | 24 | Fortnightly | | | | | | | | | | |

3rd December 2008

- Abbr: Q'ty Quality Control
 Cng Cleaning
 Gnrl Insp. General Inspection
 Filter Cleaning of Filters
 Batteries Measurements of Battery Voltage
 Closed Day Museum Closed Day
 Ofc Office

| Daily Daytime Routine Maintenance | | |
|-----------------------------------|------------------------------------|---------|
| Activity Description | Man-Day / 9,233m ² | |
| Management | Management Plan & Working Schedule | 0.5 |
| | Meeting & Periodical Report | |
| Operation | Operation, Monitoring & Record | 1.5 |
| | Operation of Central Control Panel | |
| Daily Inspection | Routine Inspection | 0.5 |
| | Inspection Record | |
| Sub-Total | | 2.5 |
| Repairing | Small Repairing Work | 1.0 |
| | Touch-Up & Fixing Up | |
| Total | | 3.5 → 4 |

Calculation Bases for Financial Plan

5th December 2008

SAPI Team

Two types of the Financial Plan, Optimistic and Pessimistic, are calculated on the basis of the following conditions:

1. General

It is expected that the National Museum should begin its practical activities from the beginning of 2010; even though the date of the Grand Opening is not yet fixed. Hence, the respective years mean the following calendar years:

| | |
|-----------------------|------|
| 1 st year: | 2010 |
| 2 nd year: | 2011 |
| 3 rd year: | 2012 |

The practical conditions of the National Museum as a “legal entity with financial and administrative independence”, stipulated in the Law of Antiquities, are not clarified in detail; hence, neither “Depreciation” nor “Taxes” is included in the Financial Plan.

2. Revenue

1) Admission Fees

- International Visitors to Permanent/Temporary Exhibitions

| | | |
|-----------------------|----------------|-------------------|
| 1 st year: | JD 3.0 (Adult) | JD 1.5 (Children) |
| 2 nd year: | JD 4.0 (Adult) | JD 2.0 (Children) |
| 3 rd year: | JD 5.0 (Adult) | JD 2.5 (Children) |

- Local Visitors to Permanent/Temporary Exhibitions

| | | |
|-----------------------|----------------|--------------------|
| 1 st year: | JD 0.5 (Adult) | JD 0.25 (Children) |
| 2 nd year: | JD 0.7 (Adult) | JD 0.35 (Children) |
| 3 rd year: | JD 1.0 (Adult) | JD 0.5 (Children) |

- Visitors to Events

| | | |
|-----------------------|----------------|--------------------|
| 1 st year: | JD 0.5 (Adult) | JD 0.25 (Children) |
| 2 nd year: | JD 0.7 (Adult) | JD 0.35 (Children) |
| 3 rd year: | JD 1.0 (Adult) | JD 0.5 (Children) |

2) Number of Visitors

The JICA TDMAP Study Team estimated the number of international tourists to Amman in 2007. Referring to the MOTA's current statistical data, the number of international visitors is re-estimated. According to the above data, it is expected that the incremental ratio per year will be around 7% from 2010 to 2012.

The estimated number of international tourists is as follows:

| | |
|-----------------------|---------|
| 1 st year: | 545,641 |
| 2 nd year: | 588,500 |
| 3 rd year: | 629,695 |

- International Visitors to Permanent Exhibitions

The number of international visitors (adult) is estimated on the assumption that 50% (optimistic) and 10% (pessimistic) of the international visitors to Amman will visit the Permanent Exhibitions. The JICA Study in 1998/99 estimated that 70% of the international visitors to Amman would visit the National Museum; however, this estimation seems to be too much optimistic.

The number of international visitors (children) is estimated on the assumption that 2% of the above adult international visitors will visit the Permanent Exhibitions.

- Local Visitors to Permanent Exhibitions

The number of local visitors (adult) is estimated on the assumption that 15% of the above adult international visitors will visit the Permanent Exhibitions.

The number of local visitors (children) is estimated on the assumption that 25% of the above adult local visitors will visit the Permanent Exhibitions.

- International Visitors to Temporary Exhibitions

The number of international visitors (adult) is estimated on the assumption that 5% of the adult international visitors to the Permanent Exhibitions will visit the Temporary Exhibitions.

The number of international visitors (children) is estimated on the assumption that 1% of the above adult international visitors will visit the Temporary Exhibitions.

- Local Visitors to Temporary Exhibitions

The number of local visitors (adult) is estimated on the assumption that 50% of the adult local visitors to the Permanent Exhibitions will visit the Temporary Exhibitions.

The number of local visitors (children) is estimated on the assumption that 20% of the above adult local visitors will visit the Temporary Exhibitions.

- Visitors to Events

The respective numbers of visitors to the events are expectations only.

3) Education

The respective incomes from the educational programmes are expectations only.

4) Promotion

The respective incomes from the promotional activities are expectations only.

5) Rent

The JICA Study in 1998/99 estimated the rent for the Museum Shop and Museum Restaurant would be JD 10/m²/year. Taking into account the current inflation rates, the above rent is re-estimated as follows:

| | |
|-----------------------|----------------------------|
| 1 st year: | JD 15/m ² /year |
| 2 nd year: | JD 16/m ² /year |
| 3 rd year: | JD 17/m ² /year |

6) Facilities Usage

The JICA Study in 1998/99 estimated the usage charge for the Seminar Room would be JD 200. Taking into account the current inflation rates as well as the marketability of a new facility in Amman, the above rent is re-estimated as well as the frequency of usage is estimated as follows:

| | | |
|-----------------------|--------|-------------------|
| 1 st year: | JD 200 | 25 occasions/year |
| 2 nd year: | JD 220 | 50 occasions/year |
| 3 rd year: | JD 240 | 75 occasions/year |

The usage charge for the "Makany" (My Space), which was called the "Hands-on History" before, is estimated taking it into account that the Makany is the space mainly for children's free and frequent use.

| | | |
|-----------------------|-------|-------------------|
| 1 st year: | JD 20 | 25 occasions/year |
| 2 nd year: | JD 22 | 50 occasions/year |
| 3 rd year: | JD 24 | 75 occasions/year |

The usage charge for the Internal Space, e.g. the Temporary Gallery, Orientation Hall, etc., is set as same as the one for the Seminar Room.

Taking into account the convenient location of the National Museum, the usage charge for the External Space, e.g. the Courtyard, Garden, etc., is set as half as the one for the Internal Space.

7) Sales

The respective incomes from the Sales are expectations only.

8) Government Support

The Government Support will be given for compensating the deficit; i.e. when the financial balance is in surplus, the Government Support may not be given.

9) Fund

The respective incomes from the Fundraising are expectations only.

10) Sponsorship

The respective incomes from the Sponsorship are expectations only.

3. Expenditures

1) Permanent Personnel

It is expected that the National Museum will accelerate its activities step-by-step. Furthermore, it is also presumed that the financial balance in the 1st financial year will not be abundant enough. Taking into account such conditions, the number of permanent staff is estimated as follows. The Organisation Charts and the Personnel Costs can be referred to for further details. The Personnel Costs are calculated in accordance with the Instructions on National Museum Personnel.

| | | | |
|-----------------------|--------------|--------------|-----------|
| 1 st year: | Directors: 2 | Officers: 37 | Total: 39 |
| 2 nd year: | Directors: 2 | Officers: 49 | Total: 51 |
| 3 rd year: | Directors: 2 | Officers: 63 | Total: 65 |

2) Outsourcing Personnel

Both guarding and cleaning workers will be outsourced throughout the respective financial years. In order to keep the National Museum safe and secure as well as clean, the necessary number of workers shall fully be assigned from the 1st year.

| | | | |
|--|------------|-------------|-----------|
| 1 st , 2 nd & 3 rd years: | Guards: 15 | Cleaners: 7 | Total: 22 |
|--|------------|-------------|-----------|

3) Activities Expenses

The Activities Expenses are proportionally allocated considering the necessity and importance of respective activities year by year.

4) Utilities

The SAPI Team has estimated that the running cost of utilities will be JD 357,453 per year. Considering the above number of permanent personnel that will be incremented year-by-year, the running costs of utilities are estimated as follows:

| | |
|-----------------------|--------------------|
| 1 st year: | 80% of JD 357,453 |
| 2 nd year: | 90% of JD 357,453 |
| 3 rd year: | 100% of JD 357,453 |

5) Maintenance

The maintenance costs are set at 20% of the running costs of utilities.

6) General

Considering the above number of permanent personnel that will be incremented year-by-year, the general costs are estimated as follows:

| | |
|-----------------------|-------------------------------|
| 1 st year: | 5% of the total expenditures |
| 2 nd year: | 7% of the total expenditures |
| 3 rd year: | 10% of the total expenditures |

Expenditures - 1st Year

Draft as of 5th December 2008

| Major Items | Sub Items | Ratio | Details | | JD per Year |
|---|-------------------------------|--|---|-----------|----------------|
| | | | Positions | Number | |
| Personnel Expenses | Permanent Personnel | | Directors | 2 | 46,020 |
| | | | Officers | 37 | 392,808 |
| | Outsourcing Personnel | | Guards | 15 | 10,200 |
| | | | Cleaners | 7 | 3,633 |
| Sub Total | | 45.8% | | 61 | 452,661 |
| Activities Expenses | Researches | 10.3% | Laboratory Work | | |
| | | | Site Work | | 15,000 |
| | | | Collaborative Work | | |
| | Collection & Conservation | 20.5% | Collection | | |
| | | | Restoration Conservation | | 30,000 |
| | Permanent Exhibitions | 5.5% | Upgrade | | |
| | | | Maintenance Renewal | | 8,000 |
| | Temporary Exhibitions | 15.8% | Ceremonial | | |
| | | | Special Themed | | 23,000 |
| | Education | 10.3% | Seminars & Lectures | | |
| Workshops Mobile Museum | | | | 15,000 | |
| Events | 9.6% | Ceremonies | | | |
| | | Performances Markets | | 14,000 | |
| Publication | 10.3% | Analogue Publication | | | |
| | | Digital Publication Guide Materials | | 15,000 | |
| Promotion | 9.6% | My Museum Campaign | | | |
| | | Friend of Museum Fundraising | | 14,000 | |
| Operation & Management | 8.2% | Marketing | | | |
| | | Training Cooperation | | 12,000 | |
| Sub Total | | 14.8% | | | 146,000 |
| Operation Expenses | Utilities | 80% of 357,453 | Electricity | | |
| | | | Water Drainage Telephone Generator Boiler | | 285,962 |
| | Maintenance | 20% of Utilities | Site | | |
| Building Facilities Equipment IT Maintenance Fumigation | | | | 57,192 | |
| General | | | | | |
| General | 5% of Total Expenditure | Office Supplies | | | |
| | | Insurance Miscellaneous | | 47,091 | |
| Sub Total | | 39.5% | | | 390,246 |
| Total | | | | | 988,907 |

Expenditures - 2nd Year

Draft as of 5th December 2008

| Major Items | Sub Items | Ratio | Details | | JD per Year |
|-------------------------------------|-------------------------------|--|---|-----------|------------------|
| | | | Positions | Number | |
| Personnel Expenses | Permanent Personnel | | Directors | 2 | 47,364 |
| | | | Officers | 49 | 496,776 |
| | Outsourcing Personnel | | Guards | 15 | 10,650 |
| | | | Cleaners | 7 | 3,731 |
| Sub Total | | 39.1% | | 73 | 558,521 |
| Activities Expenses | Researches | 5.1% | Laboratory Work | | |
| | | | Site Work | | 20,000 |
| | | | Collaborative Work | | |
| | Collection & Conservation | 10.3% | Collection | | |
| | | | Restoration Conservation | | 40,000 |
| | Permanent Exhibitions | 5.1% | Upgrade | | |
| | | | Maintenance Renewal | | 20,000 |
| | Temporary Exhibitions | 20.5% | Ceremonial | | |
| | | | Special Themed | | 80,000 |
| | Education | 15.4% | Seminars & Lectures | | |
| Workshops Mobile Museum | | | | 60,000 | |
| Events | 15.4% | Ceremonies | | | |
| | | Performances Markets | | 60,000 | |
| Publication | 10.3% | Analogue Publication | | | |
| | | Digital Publication Guide Materials | | 40,000 | |
| Promotion | 12.8% | My Museum Campaign | | | |
| | | Friend of Museum Fundraising | | 50,000 | |
| Operation & Management | 5.1% | Marketing | | | |
| | | Training Cooperation | | 20,000 | |
| Sub Total | | 27.3% | | | 390,000 |
| Operation Expenses | Utilities | 90% of 357,453 | Electricity | | |
| | | | Water Drainage Telephone Generator Boiler | | 321,708 |
| | Maintenance | 20% of Utilities | Site | | |
| Building Facilities Equipment | | | | 64,342 | |
| IT Maintenance Fumigation | | | | | |
| General | 7% of Total Expenditure | Office Supplies | | | |
| | | Insurance Miscellaneous | | 93,420 | |
| Sub Total | | 33.6% | | | 479,469 |
| Total | | | | | 1,427,990 |

Expenditures - 3rd Year

Draft as of 5th December 2008

| Major Items | Sub Items | Ratio | Details | | JD per Year |
|----------------------------|--------------------------------|---|--|-----------|------------------|
| | | | Positions | Number | |
| Personnel Expenses | Permanent Personnel | | Directors | 2 | 48,708 |
| | | | Officers | 63 | 619,176 |
| | Outsourcing Personnel | | Guards | 15 | 11,100 |
| | | | Cleaners | 7 | 3,829 |
| Sub Total | | 36.3% | | 87 | 682,813 |
| Activities Expenses | Researches | 7.5% | Laboratory Work | | |
| | | | Site Work | | 45,000 |
| | | | Collaborative Work | | |
| | Collection & Conservation | 7.5% | Collection | | |
| | | | Restoration Conservation | | 45,000 |
| | Permanent Exhibitions | 10.0% | Upgrade | | |
| | | | Maintenance Renewal | | 60,000 |
| | Temporary Exhibitions | 20.0% | Ceremonial | | |
| | | | Special Themed | | 120,000 |
| | Education | 15.0% | Seminars & Lectures | | |
| Workshops Mobile Museum | | | | 90,000 | |
| Events | 15.0% | Ceremonies | | | |
| | | Performances Markets | | 90,000 | |
| Publication | 10.0% | Analogue Publication | | | |
| | | Digital Publication Guide Materials | | 60,000 | |
| Promotion | 10.0% | My Museum Campaign | | | |
| | | Friend of Museum Fundraising | | 60,000 | |
| Operation & Management | 5.0% | Marketing | | | |
| | | Training Cooperation | | 30,000 | |
| Sub Total | | 31.9% | | | 600,000 |
| Operation Expenses | Utilities | 100% of 357,453 | Electricity | | |
| | | | Water | | |
| | | | Drainage Telephone Generator Boiler | | 357,453 |
| Maintenance | 20% of Utilities | Site | | | |
| | | Building | | | |
| | | Facilities | | | |
| | | Equipment IT Maintenance Fumigation | | 71,491 | |
| General | 10% of Total Expenditure | Office Supplies | | | |
| | | Insurance | | | |
| | | Miscellaneous | | 171,176 | |
| Sub Total | | 31.9% | | | 600,119 |
| Total | | | | | 1,882,932 |

Revenue - 1st Year (Optimistic)

5th December 2008

| Major Items | Sub Items | Ratio | Details | | | | JD per Year | Intl Tourists to Amman 545,641 |
|--|--------------------|--------------|---|----------------|----------------|----------------|----------------|-----------------------------------|
| | | | Exhibitions/Events | Visitor | JD | per Year | | |
| Operational Income | Admission Fees | | Permanent Exhibitions | Intl. Adult | 3.00 | 272,821 | 818,462 | 50% of 545,641 |
| | | | | Intl. Child | 1.50 | 5,456 | 8,185 | 2% of 272,821 |
| | | | | Local Adult | 0.50 | 40,923 | 20,462 | 15% of 272,821 |
| | | | | Local Child | 0.25 | 10,231 | 2,558 | 25% of 40,923 |
| | | | | 89.6% | | 329,431 | 849,665 | |
| | | | Temporary Exhibitions | Intl. Adult | 3.00 | 13,641 | 40,923 | 5% of 272,821 |
| | | | | Intl. Child | 1.50 | 136 | 205 | 1% of 13,641 |
| | | | | Local Adult | 0.50 | 20,462 | 10,231 | 50% of 40,923 |
| | | | | Local Child | 0.25 | 4,092 | 1,023 | 20% of 20,462 |
| | | | | 10.4% | | 38,331 | 52,382 | |
| | | 94.8% | | 367,762 | 902,047 | | | |
| | Events | Adult | 0.50 | 10,000 | 5,000 | | | |
| | | Child | 0.25 | 10,000 | 2,500 | | | |
| | | 5.2% | | 20,000 | 7,500 | | | |
| Sub Total | 98.9% | | | 387,762 | 909,547 | | | |
| Education | | | Symposia Seminars Lectures Workshops | | 5,000 | | | |
| Promotion | | | Loaning Publication Intellectual Properties | | 5,000 | | | |
| Sub Total | 1.1% | | | | 10,000 | | | |
| Sub Total | 92.9% | | | | 919,547 | | | |
| Managerial Income | Rent | | Museum Shop | 15 | 90 | 12 | 16,200 | |
| | | | Museum Café | 15 | 240 | 12 | 43,200 | |
| | Facilities Usage | | Seminar Room | 200 | | 25 | 5,000 | |
| | | | Makany | 20 | | 25 | 500 | |
| | | | Internal Spaces | 200 | | 2 | 400 | |
| | Sales | | External Spaces | 100 | | 1 | 100 | |
| Museum Goods Others | | | | | | | 0 | |
| Sub Total | 6.6% | | | | | 65,400 | | |
| Supportive Income | Government Support | | Central Budget | | | | 0 | |
| | Fund | | Endowment Donation | | | | 0 | |
| | Sponsorship | | Local International | | | | 5,000 | |
| Sub Total | 0.5% | | | | | 5,000 | | |
| Total | | | | | | 989,947 | | |
| Balance (Revenue - Expenditure) | | | | | | 1,040 | | |

Revenue - 1st Year (Pessimistic)

5th December 2008

| Major Items | Sub Items | Ratio | Details | | | | JD per Year | Intl Tourists to Amman 545,641 |
|--|--------------------|--------------|---|---------------|----------------|----------------|----------------|-----------------------------------|
| | | | Exhibitions/Events | Visitor | JD | per Year | | |
| Operational Income | Admission Fees | | Permanent Exhibitions | Intl. Adult | 3.00 | 54,564 | 163,692 | 10% of 545,641 |
| | | | | Intl. Child | 1.50 | 1,091 | 1,637 | 2% of 54,564 |
| | | | | Local Adult | 0.50 | 8,185 | 4,092 | 15% of 54,564 |
| | | | | Local Child | 0.25 | 2,046 | 512 | 25% of 8,185 |
| | | | | 89.6% | | 65,886 | 169,933 | |
| | | | Temporary Exhibitions | Intl. Adult | 3.00 | 2,728 | 8,185 | 5% of 54,564 |
| | | | | Intl. Child | 1.50 | 27 | 41 | 1% of 2,728 |
| | | | | Local Adult | 0.50 | 4,092 | 2,046 | 50% of 8,185 |
| | | | | Local Child | 0.25 | 818 | 205 | 20% of 4,092 |
| | | | | 10.4% | | 7,666 | 10,476 | |
| | | 78.6% | | 73,552 | 180,409 | | | |
| | Events | Adult | 0.50 | 10,000 | 5,000 | | | |
| | | Child | 0.25 | 10,000 | 2,500 | | | |
| | | 21.4% | | 20,000 | 7,500 | | | |
| Sub Total | 94.9% | | | 93,552 | 187,909 | | | |
| Education | | | Symposia Seminars Lectures Workshops | | 5,000 | | | |
| Promotion | | | Loaning Publication Intellectual Properties | | 5,000 | | | |
| Sub Total | 5.1% | | | | 10,000 | | | |
| Sub Total | 20.0% | | | | 197,909 | | | |
| Managerial Income | Rent | | Museum Shop | 15 | 90 | 12 | 16,200 | |
| | | | Museum Café | 15 | 240 | 12 | 43,200 | |
| | Facilities Usage | | Seminar Room | 200 | | 25 | 5,000 | |
| | | | Makany | 20 | | 25 | 500 | |
| | | | Internal Spaces | 200 | | 2 | 400 | |
| | Sales | | External Spaces | 100 | | 1 | 100 | |
| Museum Goods Others | | | | | | | 0 | |
| Sub Total | 6.6% | | | | 65,400 | | | |
| Supportive Income | Government Support | | Central Budget | | | | 720,597 | |
| | Fund | | Endowment Donation | | | | 0 | |
| | Sponsorship | | Local International | | | | 5,000 | |
| Sub Total | 73.4% | | | | | 725,597 | | |
| Total | | | | | | 988,906 | | |
| Balance (Revenue - Expenditure) | | | | | | 0 | | |

Revenue - 2nd Year (Optimistic)

5th December 2008

| Major Items | Sub Items | Ratio | Details | | | | JD per Year | Intl Tourists to Amman 588,500 |
|--|--------------------|--------------|---|------------------|------------------|------------------|------------------|-----------------------------------|
| | | | Exhibitions/Events | Visitor | JD | per Year | | |
| Operational Income | Admission Fees | | Permanent Exhibitions | Intl. Adult | 4.00 | 294,250 | 1,177,000 | 50% of 588,500 |
| | | | | Intl. Child | 2.00 | 5,885 | 11,770 | 2% of 294,250 |
| | | | | Local Adult | 0.70 | 44,138 | 30,896 | 15% of 294,250 |
| | | | | Local Child | 0.35 | 11,034 | 3,862 | 25% of 44,138 |
| | | | | 89.6% | | 355,307 | 1,223,528 | |
| | | | Temporary Exhibitions | Intl. Adult | 4.00 | 14,713 | 58,850 | 5% of 294,250 |
| | | | | Intl. Child | 2.00 | 147 | 294 | 1% of 14,713 |
| | | | | Local Adult | 0.70 | 22,069 | 15,448 | 50% of 44,138 |
| | | | | Local Child | 0.35 | 4,414 | 1,545 | 20% of 22,069 |
| | | | | 10.4% | | 41,342 | 76,137 | |
| | | 90.8% | | 396,649 | 1,299,665 | | | |
| | Events | Adult | 0.70 | 20,000 | 14,000 | | | |
| | | Child | 0.35 | 20,000 | 7,000 | | | |
| | | 9.2% | | 40,000 | 21,000 | | | |
| Sub Total | 98.8% | | 436,649 | 1,320,665 | | | | |
| Education | | | Symposia Seminars Lectures Workshops | 6,000 | | | | |
| Promotion | | | Loaning Publication Intellectual Properties | 10,000 | | | | |
| Sub Total | 1.2% | | | 16,000 | | | | |
| Sub Total | 93.2% | | | 1,336,665 | | | | |
| Managerial Income | Rent | | Museum Shop | 16 | 90 | 12 | 17,280 | |
| | | | Museum Café | 16 | 240 | 12 | 46,080 | |
| | Facilities Usage | | Seminar Room | 220 | | 50 | 11,000 | |
| | | | Makany | 22 | | 50 | 1,100 | |
| | | | Internal Spaces | 220 | | 4 | 880 | |
| | Sales | | External Spaces | 110 | | 2 | 220 | |
| Museum Goods Others | | | | | | | 1,000 | |
| Sub Total | 5.4% | | | | | 77,560 | | |
| Supportive Income | Government Support | | Central Budget | | | | 0 | |
| | Fund | | Endowment Donation | | | | 10,000 | |
| | Sponsorship | | Local International | | | | 10,000 | |
| Sub Total | 1.4% | | | | | 20,000 | | |
| Total | | | | | | 1,434,225 | | |
| Balance (Revenue - Expenditure) | | | | | | 6,235 | | |

Revenue - 2nd Year (Pessimistic)

5th December 2008

| Major Items | Sub Items | Ratio | Details | | | | JD per Year | Intl Tourists to Amman 588,500 |
|--|--------------------|--------------|---|----------------|------------------|---------------|----------------|-----------------------------------|
| | | | Exhibitions/Events | Visitor | JD | per Year | | |
| Operational Income | Admission Fees | | Permanent Exhibitions | Intl. Adult | 4.00 | 58,850 | 235,400 | 10% of 588,500 |
| | | | | Intl. Child | 2.00 | 1,177 | 2,354 | 2% of 58,850 |
| | | | | Local Adult | 0.70 | 8,828 | 6,179 | 15% of 58,850 |
| | | | | Local Child | 0.35 | 2,207 | 772 | 25% of 8,828 |
| | | | | 89.6% | | 71,061 | 244,706 | |
| | | | Temporary Exhibitions | Intl. Adult | 4.00 | 2,943 | 11,770 | 5% of 58,850 |
| | | | | Intl. Child | 2.00 | 29 | 59 | 1% of 2,943 |
| | | | | Local Adult | 0.70 | 4,414 | 3,090 | 50% of 8,828 |
| | | | | Local Child | 0.35 | 883 | 309 | 20% of 4,414 |
| | | | | 10.4% | | 8,268 | 15,227 | |
| | | 66.5% | | 79,330 | 259,933 | | | |
| | Events | Adult | 0.70 | 20,000 | 14,000 | | | |
| | | Child | 0.35 | 20,000 | 7,000 | | | |
| | | 33.5% | | 40,000 | 21,000 | | | |
| Sub Total | 94.6% | | | 119,330 | 280,933 | | | |
| Education | | | Symposia Seminars Lectures Workshops | | 6,000 | | | |
| Promotion | | | Loaning Publication Intellectual Properties | | 10,000 | | | |
| Sub Total | 5.4% | | | | 16,000 | | | |
| Sub Total | 20.8% | | | | 296,933 | | | |
| Managerial Income | Rent | | Museum Shop | 16 | 90 | 12 | 17,280 | |
| | | | Museum Café | 16 | 240 | 12 | 46,080 | |
| | Facilities Usage | | Seminar Room | 220 | | 50 | 11,000 | |
| | | | Makany | 22 | | 50 | 1,100 | |
| | | | Internal Spaces | 220 | | 4 | 880 | |
| | | | External Spaces | 110 | | 2 | 220 | |
| Sales | | | Museum Goods Others | | 1,000 | | | |
| Sub Total | 5.4% | | | | 77,560 | | | |
| Supportive Income | Government Support | | Central Budget | | | 1,033,497 | | |
| | Fund | | Endowment Donation | | | 10,000 | | |
| | Sponsorship | | Local International | | | 10,000 | | |
| Sub Total | 73.8% | | | | 1,053,497 | | | |
| Total | | | | | 1,427,990 | | | |
| Balance (Revenue - Expenditure) | | | | | 0 | | | |

Revenue - 3rd Year (Optimistic)

5th December 2008

| Major Items | Sub Items | Ratio | Details | | | | JD per Year | Intl Tourists to Amman 629,695 |
|--|--------------------|--------------|---|----------------|------------------|----------------|------------------|-----------------------------------|
| | | | Exhibitions/Events | Visitor | JD | per Year | | |
| Operational Income | Admission Fees | | Permanent Exhibitions | Intl. Adult | 5.00 | 314,848 | 1,574,238 | 50% of 629,695 |
| | | | | Intl. Child | 2.50 | 6,297 | 15,742 | 2% of 314,848 |
| | | | | Local Adult | 1.00 | 47,227 | 47,227 | 15% of 314,848 |
| | | | | Local Child | 0.50 | 11,807 | 5,903 | 25% of 47,227 |
| | | | | 89.6% | | 380,178 | 1,643,110 | |
| | | | Temporary Exhibitions | Intl. Adult | 5.00 | 15,742 | 78,712 | 5% of 314,848 |
| | | | | Intl. Child | 2.50 | 157 | 394 | 1% of 15,742 |
| | | | | Local Adult | 1.00 | 23,614 | 23,614 | 50% of 47,227 |
| | | | | Local Child | 0.50 | 4,723 | 2,361 | 20% of 23,614 |
| | | | | 10.4% | | 44,236 | 105,080 | |
| | | 87.6% | | 424,414 | 1,748,191 | | | |
| | Events | Adult | 1.00 | 30,000 | 30,000 | | | |
| | | Child | 0.50 | 30,000 | 15,000 | | | |
| | | 12.4% | | 60,000 | 45,000 | | | |
| Sub Total | 98.8% | | | 484,414 | 1,793,191 | | | |
| Education | | | Symposia Seminars Lectures Workshops | | 7,000 | | | |
| Promotion | | | Loaning Publication Intellectual Properties | | 15,000 | | | |
| Sub Total | 1.2% | | | | 22,000 | | | |
| Sub Total | 93.5% | | | | 1,815,191 | | | |
| Managerial Income | Rent | | Museum Shop | 17 | 90 | 12 | 18,360 | |
| | | | Museum Café | 17 | 240 | 12 | 48,960 | |
| | Facilities Usage | | Seminar Room | 240 | | 75 | 18,000 | |
| | | | Makany | 24 | | 75 | 1,800 | |
| | | | Internal Spaces | 240 | | 6 | 1,440 | |
| | | | External Spaces | 120 | | 4 | 480 | |
| Sales | | | Museum Goods Others | | 2,000 | | | |
| Sub Total | 4.7% | | | | 91,040 | | | |
| Supportive Income | Government Support | | Central Budget | | | 0 | | |
| | Fund | | Endowment Donation | | | 20,000 | | |
| | Sponsorship | | Local International | | | 15,000 | | |
| Sub Total | 1.8% | | | | 35,000 | | | |
| Total | | | | | 1,941,231 | | | |
| Balance (Revenue - Expenditure) | | | | | 58,298 | | | |

Revenue - 3rd Year (Pessimistic)

5th December 2008

| Major Items | Sub Items | Ratio | Details | | | | JD per Year | Intl Tourists to Amman 629,695 |
|--|--------------------|--------------|---|----------------|------------------|---------------|----------------|-----------------------------------|
| | | | Exhibitions/Events | Visitor | JD | per Year | | |
| Operational Income | Admission Fees | | Permanent Exhibitions | Intl. Adult | 5.00 | 62,970 | 314,848 | 10% of 629,695 |
| | | | | Intl. Child | 2.50 | 1,259 | 3,148 | 2% of 62,970 |
| | | | | Local Adult | 1.00 | 9,445 | 9,445 | 15% of 62,970 |
| | | | | Local Child | 0.50 | 2,361 | 1,181 | 25% of 9,445 |
| | | | | 89.6% | | 76,036 | 328,622 | |
| | | | Temporary Exhibitions | Intl. Adult | 5.00 | 3,148 | 15,742 | 5% of 62,970 |
| | | | | Intl. Child | 2.50 | 31 | 79 | 1% of 3,148 |
| | | | | Local Adult | 1.00 | 4,723 | 4,723 | 50% of 9,445 |
| | | | | Local Child | 0.50 | 945 | 472 | 20% of 4,723 |
| | | | | 10.4% | | 8,847 | 21,016 | |
| | | 58.6% | | 84,883 | 349,638 | | | |
| | Events | Adult | 1.00 | 30,000 | 30,000 | | | |
| | | Child | 0.50 | 30,000 | 15,000 | | | |
| | | 41.4% | | 60,000 | 45,000 | | | |
| Sub Total | 94.7% | | | 144,883 | 394,638 | | | |
| Education | | | Symposia Seminars Lectures Workshops | | 7,000 | | | |
| Promotion | | | Loaning Publication Intellectual Properties | | 15,000 | | | |
| Sub Total | 5.3% | | | | 22,000 | | | |
| Sub Total | 22.1% | | | | 416,638 | | | |
| Managerial Income | Rent | | Museum Shop | 17 | 90 | 12 | 18,360 | |
| | | | Museum Café | 17 | 240 | 12 | 48,960 | |
| | Facilities Usage | | Seminar Room | 240 | | 75 | 18,000 | |
| | | | Makany | 24 | | 75 | 1,800 | |
| | | | Internal Spaces | 240 | | 6 | 1,440 | |
| | Sales | | External Spaces | 120 | | 4 | 480 | |
| Museum Goods Others | | | | | | 2,000 | | |
| Sub Total | 4.8% | | | | 91,040 | | | |
| Supportive Income | Government Support | | Central Budget | | | 1,340,254 | | |
| | Fund | | Endowment Donation | | | 20,000 | | |
| | Sponsorship | | Local International | | | 15,000 | | |
| Sub Total | 73.0% | | | | 1,375,254 | | | |
| Total | | | | | 1,882,932 | | | |
| Balance (Revenue - Expenditure) | | | | | 0 | | | |

| | | | |
|-----------|---|--------|---|
| E. | Test Results, Final Inspection Record | 1-set | Refer to the attached list in detail. |
| F. | Complete Service Manuals Operating and Maintenance Manuals | 2-sets | Refer to the attached list in detail |
| G. | Certificate of the Training Session. (The Employer → The Contractor) | 1-copy | Refer to the attached sheet as "SPECIMEN" |

(2) Format of Hand-over Documents

Format A

As-Built Drawings

Refer to the Separate Volume Files for the following Contents:

| | | |
|----------------------|-----------------------|--------|
| Building Work | A1size bound drawings | 2 sets |
| | A3size bound drawings | 2 sets |

1-1 (A-series) Architectural**1-2 (S-series) Structural**

| | | |
|---------------------|-----------------------|--------|
| M&E Work | A1size bound drawings | 2 sets |
| | A3size bound drawings | 2 sets |

2-1 (M-series) Mechanical

- including:
- 1) External Mechanical Works (Site Plan)
 - 2) Drainage Layout & Schematic Diagram
 - 3) Fuel Layout & Schematic Diagram
 - 4) Rain Water Drainage Layout & Schematic Diagram
 - 5) Water Supply Layout & Schematic Diagram
 - 6) Fire Fighting Layout & Schematic Diagram
 - 7) HVAC Ducting Layout & Schematic Diagram
 - 8) HVAC Piping Layout & Schematic Diagram
 - 9) HVAC Control Diagram
 - 10) Mechanical Room Layout
 - 11) Boiler Room Layout
 - 12) BMS Schematic Diagram
 - 13) Schedules of Equipment

2-2 (E-series) Electrical

- including:
- 1) External Electrical Works (Site Plan)
 - 2) Sub-Station Layout
 - 3) Electrical Room Layout
 - 4) Emergency Generator Room Layout
 - 5) Power Riser Diagram
 - 6) Lighting Layout
 - 7) Exhibition Lighting Layout
 - 8) Lighting Fixtures Schedule
 - 9) Power Layout
 - 10) Exhibition Power Layout
 - 11) Distribution Board Schedule
 - 12) Dimming System Block Diagram
 - 13) Fire Alarm System Layout & Schematic Diagram
 - 14) Public Address System Layout & Schematic Diagram
 - 15) Telephone, Data System Layout & Schematic Diagram
 - 16) Access Control and CCTV System Layout & Schematic Diagram
 - 17) Lightning Protection Layout & Schematic Diagram

2-3 (EV-series) Elevator

- including:
- 1) Passenger Elevator (PE01) 750kg-60m/min.
 - 2) Service Elevator (SE01) 3,000kg-30m/min.
 - 3) Service Elevator (SE02) 2,000kg-30m/min.

Electronic Data (Compact Disc)

Note : Electronic Data for the above drawings are attached to the end of this file. 1 pc.

Format B

Shop Drawings

Refer to the Separate Volume Files for the following Contents:

| | | |
|----------------------|-----------------------|--------|
| Building Work | A1size bound drawings | 2 sets |
| | A3size bound drawings | 2 sets |

1-1 (A-series) Architectural**1-2 (S-series) Structural**

| | | |
|---------------------|-----------------------|--------|
| M&E Work | A1size bound drawings | 2 sets |
| | A3size bound drawings | 2 sets |

2-1 (M-series) Mechanical

- including:
- 1) External Mechanical Works (Site Plan)
 - 2) Drainage Layout & Schematic Diagram
 - 3) Fuel Layout & Schematic Diagram
 - 4) Rain Water Supply Layout & Schematic Diagram
 - 5) Water Drainage Layout & Schematic Diagram
 - 6) Fire Fighting Layout & Schematic Diagram
 - 7) HVAC Ducting Layout & Schematic Diagram
 - 8) HVAC Piping Layout & Schematic Diagram
 - 9) HVAC Control Diagram
 - 10) Mechanical Room Layout
 - 11) Boiler Room Layout
 - 12) BMS Schematic Diagram
 - 13) Schedules of Equipment

2-2 (E-series) Electrical

- including:
- 1) External Electrical Works (Site Plan)
 - 2) Sub-Station Layout
 - 3) Electrical Room Layout
 - 4) Emergency Generator Room Layout
 - 5) Power Riser Diagram
 - 6) Lighting Layout
 - 7) Exhibition Lighting Layout
 - 8) Lighting Fixtures Schedule
 - 9) Power Layout
 - 10) Exhibition Power Layout
 - 11) Distribution Board Schedule
 - 12) Dimming System Block Diagram
 - 13) Fire Alarm System Layout & Schematic Diagram
 - 14) Public Address System Layout & Schematic Diagram
 - 15) Telephone, Data System Layout & Schematic Diagram
 - 16) Access Control and CCTV System Layout & Schematic Diagram
 - 17) Lightning Protection Layout & Schematic Diagram

2-3 (EV-series) Elevator

- including:
- 1) Passenger Elevator (PE01) 750kg-60m/min.
 - 2) Service Elevator (SE01) 3,000kg-30m/min.
 - 3) Service Elevator (SE02) 2,000kg-30m/min.

Electronic Data (Compact Disc)

Note : Electronic Data for the above drawings are attached to the end of this file. 1 pc.

Format C

The Work Completion Photographs with Album

Refer to the Separate Volume Files for the following Contents:

- 1 Photo Album 1set
- 2 A2 size photo Panel 1set
- 3 Electronic Data (Compact Disc) 1pc

■ Photographer

| | |
|-------------|-----------------|
| Name | |
| Company | |
| Address | |
| Contact No. | Tel: |
| | Fax: |
| | E-mail Address: |

Format D1

Completion Certificate

Note: Attach a copy of the Completion Certificate issued by Hand-over Committee.

Format D2

Outline of the NM Building

SPECIMEN

1. Objectives of the Project

The objectives of this project are to establish a unique building to an international standard for the National Museum to serve as:

- A facility to present a comprehensive story of the nation's history and culture.
- An educational facility for school children from across the nation to learn their history and culture.
- A tourism facility to provide foreign visitors with an overview of Jordan.
- An urban recreation and entertainment facility for the nation
- A research and study base for academic scholars.
- A storage of the nation's rich historical and cultural collections.

2. Project Components

The major components included in this project are as follows:

Building

Total Area: 9,233m² consists of :

- Visitor Service
- Exhibition Gallery
- Collection Management (including storage)
- Research and Study (including lecture hall)
- Administration
- Auxiliary Services

Museum Equipment and Furniture

Museum Equipment, Furniture and Exhibition Materials

Outdoor Facilities

consists of :

- Landscaping area : 7,850 m²
- Entrance Plaza : 1,560 m²
- Parking lots area : 1,400 m²
- Outdoor Exhibition : 700 m²

Format D4 (1)

Fittings/Accessories and Spare Parts

| Item No. | Description | Q'ty | Unit | Remarks |
|----------|--|------|------|---------|
| | Building Work | | | |
| B-1 | Movable Furniture (if any) | | sets | |
| B-2 | Window Openers (if any) | | pcs | |
| B-3 | Spare Parts for Doors | | | |
| | 3-1 Cylinder Lock Set (various type) | | sets | |
| | 3-2 Indicator Lock Set (for Toilet) | | sets | |
| | 3-3 Pad Lock (if any) | | sets | |
| | 3-4 Sliding Latch for Toilet Booth Door | | sets | |
| | 3-5 Door Closers | | sets | |
| | 3-6 Hinges | | sets | |
| | 3-7 Door Handle | | sets | |
| B-4 | Hooks (Hangers) & Runners for Curtain (if any) | | pcs | |
| B-5 | Room Name Plate | | pcs | |
| | | | | |
| | | | | |
| | M/E Works | | | |
| M/E-1 | Manhole Cover opener (if any) | | sets | |
| M/E-2 | Hose Bibb key (if any) | | pcs | |
| M/E-3 | Telephone Handset | | sets | |
| M/E-4 | A/C Remote Controller | | pcs | |
| M/E-5 | Fire Extinguisher (Dry Powder) | | pcs | |
| M/E-6 | Fire Extinguisher (CO2) | | pcs | |
| M/E-7 | Spare Parts for M/E Works | | pcs | |
| | (refer to the Spare Parts List on next page) | | | |
| | | | | |
| | | | | |
| | | | | |

Format D4 (2)

Spare Parts List

| Item No. | Description | Q'ty | Unit | Manufacturer | Unit Price | Custody Time |
|----------|--------------------------------------|------|------|------------------|------------|--------------|
| | Electrical Works | | | | | |
| M/E-7-1 | Emergency Generator | | | | | |
| | Oil Filter | 4 | nos. | (Local Supplier) | JD 000,0 | 5 years |
| | Fuel Filter | 4 | nos. | (Local Supplier) | JD 000,0 | 5 years |
| | Air Element | 2 | nos. | (Local Supplier) | JD 000,0 | 5 years |
| | Anticorrosive Cartridge | 2 | nos. | (Local Supplier) | JD 000,0 | 5 years |
| | Fan Belt | 2 | nos. | (Local Supplier) | JD 000,0 | 5 years |
| | Standard Maintenance Tools | 1 | set | | JD 000,0 | 5 years |
| | | | | | | |
| M/E7-2 | Distribution Boards (DBs) | | | | | |
| | Indication Lamps (3 x 4 each colour) | 12 | pcs | | JD 000,0 | 5 years |
| | Fuses for Indication Lamps | 12 | pcs | | JD 000,0 | 5 years |
| | MCCB 3P&N 225Amp | 1 | pc | | JD 000,0 | 5 years |
| | MCCB 3P&N 200Amp | 1 | pc | | JD 000,0 | 5 years |
| | MCCB 3P&N 175Amp | 1 | pc | | JD 000,0 | 5 years |
| | MCCB 3P&N 125Amp | 1 | pc | | JD 000,0 | 5 years |
| | MCCB 3P&N 100Amp | 1 | pc | | JD 000,0 | 5 years |
| | MCCB 3P&N 80Amp | 1 | pc | | JD 000,0 | 5 years |
| | MCCB 3P&N 60Amp | 1 | pc | | JD 000,0 | 5 years |
| | MCCB 3P&N 40Amp | 1 | pc | | JD 000,0 | 5 years |
| | MCCB 3P&N 30Amp | 1 | pc | | JD 000,0 | 5 years |
| | MCCB 1P 40Amp | 2 | pcs | | JD 000,0 | 5 years |
| | MCCB 1P 20Amp | 4 | pcs | | JD 000,0 | 5 years |
| | MCCB 1P 15Amp | 4 | pcs | | JD 000,0 | 5 years |
| | | | | | | |
| M/E7-3 | Motor Control Centres (MCCs) | | | | | |
| | Indication Lamps (2 x 4 each colour) | 8 | pcs | | JD 000,0 | 5 years |
| | Fuses for Indication Lamps | 8 | pcs | | JD 000,0 | 5 years |
| | MCCB 3P 100Amp | 1 | pc | | JD 000,0 | 5 years |
| | MCCB 3P 60Amp | 1 | pc | | JD 000,0 | 5 years |
| | MCCB 3P 40Amp | 1 | pc | | JD 000,0 | 5 years |
| | MCCB 3P 30Amp | 1 | pc | | JD 000,0 | 5 years |
| | MCCB 3P 20Amp | 4 | pcs | | JD 000,0 | 5 years |
| | MCCB 3P 15Amp | 4 | pcs | | JD 000,0 | 5 years |
| | | | | | | |
| M/E7-3 | Lighting Fixture | | | | | |
| | 36w Fluorescent Tubes | 36 | pcs | (Local Supplier) | JD 000,0 | 5 years |
| | 18w Fluorescent Tubes | 24 | pcs | (Local Supplier) | JD 000,0 | 5 years |
| | 8w Fluorescent Tubes | 6 | pcs | (Local Supplier) | JD 000,0 | 5 years |
| | 42w Compact Fluorescent Lamps | 48 | pcs | (Local Supplier) | JD 000,0 | 5 years |
| | 26w Compact Fluorescent Lamps | 6 | pcs | (Local Supplier) | JD 000,0 | 5 years |
| | 18w Compact Fluorescent Lamps | 6 | pcs | (Local Supplier) | JD 000,0 | 5 years |
| | 13w Compact Fluorescent Lamps | 6 | pcs | (Local Supplier) | JD 000,0 | 5 years |
| | 9w Compact Fluorescent Lamps | 6 | pcs | (Local Supplier) | JD 000,0 | 5 years |
| | | | | | JD 000,0 | 5 years |

Note: Quantity is subject to the requirement under the Clause of "Spare Parts", Technical Specification for M/E Works.

Format D5

Finishing Material and Colour Scheme - Building : Interior and Exterior**Interior**

| Name of Rooms | Colour | | Material | Manufacturer | Country of Origin |
|-----------------------------|----------|-----|-------------------|--------------|-------------------|
| | Name | No. | | | |
| All Buildings | | | | | |
| Floor | | | | | |
| Tile : 12' x 12' | SPECIMEN | | (eg) Ceramic Tile | | |
| Tile : 4' x 4' | | | (eg) Ceramic Tile | | |
| Coating : on Cement Mortar | | | | | |
| Coating : on Wood | | | | | |
| Baseboard | | | | | |
| Tile : 12' x 12' (half cut) | | | (eg) Ceramic Tile | | |
| Coating : on Cement Mortar | | | | | |
| Coating : on Wood | | | | | |
| Wall & Column | | | | | |
| | | | | | |
| Ceiling | | | | | |
| | | | | | |
| Others | | | | | |
| Wooden Door | | | (eg) OP | | |
| Steel door | | | (eg) MP | | |
| Furniture | | | (eg) OP | | |
| Curtain Box (if any) | | | (eg) OP | | |
| Curtain Rail (if any) | | | SUS | | |
| | | | | | |

Exterior

| Name of Rooms | Colour | | Material | Manufacturer | Country of Origin |
|--------------------------------|--------------------------|-----|------------------|--------------|-------------------|
| | Name | No. | | | |
| All Buildings | | | | | |
| Wall / Column / Beam | | | (eg) EP | | |
| Attic & Eaves | | | (eg) OP | | |
| Skirting / h = 150 | | | Mortar | | |
| Window Frame (wood) | | | (eg) OP | | |
| Steel Door / Frame | | | (eg) MP | | |
| Roof | | | | | |
| | | | | | |
| Burglar Bar (window) | | | (eg) MP | | |
| Cat Walk (around the building) | (eg) Steel Trowel Finish | | Concrete | | |
| Concrete Pavement | (eg) Broom Finish | | Concrete | | |
| | | | | | |
| Steel Door | | | Steel | | |
| Glass for the above | | | Glass | | |
| Aluminum Window | | | Aluminum | | |
| Glass for the above | | | Glass | | |
| Burglar Bar (window) | | | Steel | | |
| Grating (Drain Gutter) | | | Galvanized Steel | | |
| Fence | | | Galvanized Steel | | |
| Flag Pole | | | Aluminum | | |
| | | | | | |

Format D6

Contact Numbers to Main and Sub-Contractors and Suppliers

| ■ Main Contractor | |
|--------------------------|--|
| Name | |
| Address | |
| Tel No. | |
| Fax No. | |
| E-mail Address | |
| Contact Person | Post (eg.) General Manager |

| ■ Sub-Contractor for Structure Work | |
|--|------|
| Name | |
| Address | |
| Tel No. | |
| Fax No. | |
| E-mail Address | |
| Contact Person | Post |

| ■ Sub-Contractor for Finishing Work | |
|--|------|
| Name | |
| Address | |
| Tel No. | |
| Fax No. | |
| E-mail Address | |
| Contact Person | Post |

| ■ Sub-Contractor for Mechanical Work | |
|---|------|
| Name | |
| Address | |
| Tel No. | |
| Fax No. | |
| E-mail Address | |
| Contact Person | Post |

| ■ Sub-Contractor for Electrical Work | |
|---|------|
| Name | |
| Address | |
| Tel No. | |
| Fax No. | |
| E-mail Address | |
| Contact Person | Post |

| ■ Sub-Contractor for Elevator Work | |
|---|------|
| Name | |
| Address | |
| Tel No. | |
| Fax No. | |
| E-mail Address | |
| Contact Person | Post |

Cooperating Companies under the above Sub-Contractor

| ■ Fire Alarm System | |
|---------------------|------|
| Name | |
| Address | |
| Tel No. | |
| Fax No. | |
| E-mail Address | |
| Contact Person | Post |

| ■ Fire Fighting System | |
|------------------------|------|
| Name | |
| Address | |
| Tel No. | |
| Fax No. | |
| E-mail Address | |
| Contact Person | Post |

| ■ Telephone and Data System | |
|-----------------------------|------|
| Name | |
| Address | |
| Tel No. | |
| Fax No. | |
| E-mail Address | |
| Contact Person | Post |

| ■ | |
|----------------|------|
| Name | |
| Address | |
| Tel No. | |
| Fax No. | |
| E-mail Address | |
| Contact Person | Post |

| ■ | |
|----------------|------|
| Name | |
| Address | |
| Tel No. | |
| Fax No. | |
| E-mail Address | |
| Contact Person | Post |

| ■ | |
|----------------|------|
| Name | |
| Address | |
| Tel No. | |
| Fax No. | |
| E-mail Address | |
| Contact Person | Post |

| ■ Material Supplier | | | |
|---------------------|-------------------------------|----------------|--|
| 1 | Material | Name | |
| | Concrete | Address | |
| | | Tel No. | |
| | | Fax No. | |
| | | E-mail Address | |
| | | Contact Person | |
| 2 | Material | Name | |
| | Reinforcement Steel- Bar | Address | |
| | | Tel No. | |
| | | Fax No. | |
| | | E-mail Address | |
| | | Contact Person | |
| 3 | Material | Name | |
| | Concrete Block Stone Block | Address | |
| | | Tel No. | |
| | | Fax No. | |
| | | E-mail Address | |
| | | Contact Person | |
| 4 | Material | Name | |
| | Structural Steel | Address | |
| | | Tel No. | |
| | | Fax No. | |
| | | E-mail Address | |
| | | Contact Person | |
| 5 | Material | Name | |
| | Roofing | Address | |
| | | Tel No. | |
| | | Fax No. | |
| | | E-mail Address | |
| | | Contact Person | |
| 6 | Material | Name | |
| | Steel Door w/ Glass | Address | |
| | | Tel No. | |
| | | Fax No. | |
| | | E-mail Address | |
| | | Contact Person | |
| 7 | Material | Name | |
| | Aluminum Window w/ Glass | Address | |
| | | Tel No. | |
| | | Fax No. | |
| | | E-mail Address | |
| | | Contact Person | |
| 8 | Material | Name | |
| | Wooden Door | Address | |
| | | Tel No. | |
| | | Fax No. | |
| | | E-mail Address | |
| | | Contact Person | |

Format D8

Meter Readings

Note: Attach a copy of the Meter Readings and the evidence of indebtedness for Water and Electricity to the Format D8 prove that 'the Contractor is not indebted to the authorities concerned for Water and Electricity Service Charge for construction use.

Format E

Test Results, Final Inspection Record

Note: Attach a copy of the Test Results and Final Inspection Record to the Format E .

Test Results**1. Civil & Structure**

- | | |
|--|--------|
| 1-1 Soil Compaction Test Result (if necessary) | 1 copy |
| 1-2 Concrete Compression Test and Field Test Results | 1 copy |

2. M/E Works**2-1 Mechanical Works**

- Water filling or smoke test to drainage pipe work.
- Drainage test of manholes.
- Measurement of air flow (velocity and air volume) at each diffuser.
- Vibration and noise check
- Functioning test
- BMS functioning test

2.2 Electrical

- Circuit voltage check
- Polarity check
- Insulation resistance test
- Earth resistance test
- Functioning test
- Sequence test to Emergency Generator, Main DB. and MCC.

Final Inspection Record**1. Inspection Results for the Work Completion by the Consultant and the Hand-over Committee.**

Attached:

2. Rectification Reports by the Contractor.

Attached:

Format F

Complete Service Manuals - Operating and Maintenance Manuals

Refer to the Separate Volume Files for the following Contents:

1. Maintenance Instructions **3 sets**

- 1.1 General Maintenance Instructions for the **Building Work**
- 1.2 General Maintenance Instructions for the **M/E Work**

2. Outline of the Instructions **3 sets**

2.1 Outline of the Diagram

Mechanical Work

- 2-1-1 Outline of Facilities
- 2-1-2 Water Supply Diagram
- 2-1-3 Drainage System Diagram
- 2-1-4 Rain Water Drainage Diagram
- 2-1-5 Fire Hose Reel System Diagram
- 2-1-6 FM2000 Fire Fighting Diagram
- 2-1-7 HVAC Piping Riser Diagram
- 2-1-8 HVAC Ducting Riser Diagram
- 2-1-9 HVAC Control Diagram
- 2-1-10 BMS Diagram

Electrical Work

- 2-1-11 Power Riser Diagram
- 2-1-12 Emergency Generator System
- 2-1-13 Telephone & Data System Riser Diagram
- 2-1-14 Public Address System Riser Diagram
- 2-1-15 Fire Alarm System Riser Diagram
- 2-1-16 Security, Access Control System Diagram
- 2-1-17 CCTV System Riser Diagram
- 2-1-18 Audio Visual System Diagram

2.2 Operating Diagram

Mechanical Work

- 2-2-1 Pump System
- 2-2-2 Fire Hose Reel System Diagram
- 2-2-3 FM2000 Fire Fighting Diagram
- 2-2-4 HVAC System
- 2-2-5 BMS Diagram

Electrical Work

- 2-2-6 Emergency Generator System
- 2-2-7 Telephone & Data System
- 2-2-8 Public Address System
- 2-2-9 Fire Alarm System
- 2-2-10 Security, Access Control System
- 2-2-11 CCTV System
- 2-2-12 Audio Visual System

3. Spare Parts List **3 sets**
3.1 M/E Spare Parts List

4. Full-Text Instructions **3 sets**

Mechanical Work

- 4.1 Pump System
- 4.2 Fire Hose Reel System
- 4.3 FM2000 Fire Fighting System
- 4.4 Air Cooled Water Chillers
- 4.5 Hot Water Boilers
- 4.6 Fan Coil Units
- 4.7 Air Handling Units
- 4.8 Package Roof Top Air Conditioner
- 4.9 Heat Recovery Wheels
- 4.10 VAV Terminal Boxes
- 4.11 BMS System

Electrical Work

- 4.12 Emergency Generator
- 4.13 Distribution Boards
- 4.14 Lighting Fixtures
- 4.15 Telephone & Data System
- 4.16 Public Address System
- 4.17 Fire Alarm System
- 4.18 Security, Access Control System
- 4.19 CCTV System
- 4.20 Audio Visual System



Re: Complete Service Manuals - Operating and Maintenance Manuals
for National Museum Sub-Project

I acknowledge receipt of the above Manuals and also received explanations about the following Items from the Contractor, JURONG-Synergy JV.

Building Work

- 1 The System of Master Keys.
- 2 The Lock System of the Doors installed at each room.
- 3 The method of unlock for the Toilet Doors and Toilet Partition Doors.
- 4 The location of the Emergency Exit.

Mechanical Installation

- 5 City Water System
- 6 Drainage System
- 7 Rain Water Drainage System
- 8 Fire Hose Reel System
- 9 Sanitary Ware
- 10 Laboratory Furniture
- 11 HVAC (Heating, Ventilation and Air-Conditioning System)
BMS (Building Management System)

Electrical Installation

- 12 Emergency Generator
- 13 Distribution Boards
- 14 Lighting Fixtures
- 15 Telephone & Data System
- 16 Public Address System
- 17 Fire Alarm System
- 18 Security, Access Control System
- 19 CCTV System
- 20 Audio Visual System

Name:
post (eg) Chief Engineer
Ministry of Public Works and Housing
Hashemite Kingdom of Jordan

Format G

Certificate of the Training Session

Note: Attach a copy of the Certificate of the Training Session issued by the Employer or Hand-over Committee to the Format G.

SPECIMEN

Re: Training session with regard to the Mechanical and Electrical Services
for National Museum Sub-Project

I hereby certify that a series of training session and practice with regard to the Electrical Mechanical System for the National Museum Sub-Project was held by the Contractor, Jurong-Synergy JV, in the presence of the maintenance staff of National Museum listed below on the following dates.

Date of Training and Practice :

People who were present :

The Employer : Ministry of Public Works and Housing (MPWH)
Mr. 'xxxx post (eg) Facilities Director

The Maintenance Team of National Museum
Mr. 'xxxx post (eg) Maintenance Engineer

The Consultant
Mr. 'xxxx post (eg) Resident Engineer

The Contractor
Mr. 'xxxx post (eg) Project Manager
post (eg) Chief Engineer for M/E Work

Name:
post (eg) Chief Engineer
Ministry of Public Works and Housing
Hashemite Kingdom of Jordan

(3) Operation & Management Plan

Facility Operation and Maintenance System

Although the facilities are designed with the concept of easy maintenance and operation, it is advisable to establish a system for efficient maintenance of the facilities taking into consideration of the following matters:

- 1) Technical staff responsible for maintenance and operation of facilities and equipment in each field shall be assigned before opening of the Museum.
- 2) Building Contractor shall give on-the-job training in operation, maintenance and inspection of facilities and equipment to the above technical staff, and at the same time provide instruction manuals on maintenance and operation.
- 3) Daily or weekly reports on maintenance and inspection of facilities and equipment shall be prepared by technical staff to make it easy to have a clear grasp of the status of the facilities. Also, a system for stock control of consumables and spare parts, and for efficient procurement of replacement parts shall be established.
- 4) Lists of suppliers who will take care of problems for facilities and equipment shall be clarified.
- 5) The operation agency of the National Museum shall prepare the budget for necessary maintenance and operation expenses and ensure effective and continuous use of the facilities and equipment.

Operation and Maintenance Plan

The activities for operating and maintaining the facilities are as shown below.

| | | | |
|-------|---|------------------|--|
| O & M | { | Daily O & M | - cleaning, operation, daily inspection |
| | | Periodical O & M | - periodical inspection/adjustment, minor repair |
| | | Emergency O & M | - emergency inspection, repair, renovation |

To establish an overall plan for operation and maintenance, especially for the periodical inspection/adjustment among the above activities, is essential to keep facilities operating in order as planned and to prolong the facilities life.

The inspection and maintenance system of the facilities is shown in **2.2.3 Action Plan** below.

In addition, special emphasis shall be placed on the following issues:

(1) Roof

Highly durable materials are selected for waterproofing of the roof. Periodical inspections and cleaning, however, are necessary to avoid water leaks.

Gutters and drainpipes, especially, shall be cleared twice a year since they are likely to

be filled with dust.

(2) Finishing Materials

When exterior materials have rusted, rust shall be removed and the metal shall be painted to prevent the spread of rust.

Rooms shall be kept well ventilated and the finished surfaces of rooms shall be kept clean to prevent from getting rusty and dirty.

Since floors finished with stone or terrazzo tiles are difficult to repair once scratched, extra care shall be taken when moving heavy objects on such floors.

Ceiling finish materials shall be handled very carefully since they are easily affected by shocks.

(3) Building Equipment

Building equipment shall be operated and inspected by mechanical or electrical engineers in accordance with the instructions listed in the instruction manuals.

When problems are found with equipment, its operation shall immediately be stopped to find out the cause, and remedial measures shall be taken to prevent the trouble from affecting other parts of the equipment.

Maintenance Manpower Required

| Daily Daytime Routine Maintenance | | National Museum Building |
|-----------------------------------|------------------------------------|-------------------------------|
| Activity Description | | Man-Day / 9,233m ² |
| Management | Mnagement Plan & Working Schedule | 0.5 |
| | Meeting & Periodical Report | |
| Operation | Operation, Monitoring & Record | 1.5 |
| | Operation of Central Control Panel | |
| Daily Inspection | Routine Inspection | 0.5 |
| | Inspection Record | |
| Sub-Total | | 2.5 |
| Repairing | Smalll Repairing Work | 1.0 |
| | Touch-Up & Fixing Up | |
| Total | | 3.5 → 4 |

Annual Inspection and Maintenance Schedule for M/E Installation

| Annual Inspection & Maintenance Schedule for M/E Installation National Museum Building | | | | | | | | | | | | | |
|--|-----------------------------|------------------------------|-------------|------------|------------|-----------|------|-------------|--------|------------|----------|------------|----------|
| M/E Installation | Times / Year | January | February | March | April | May | June | July | August | September | October | November | December |
| Civil | Irrigation System | 2 | | Cleaning | | | | | | Q'ty / Cng | | | |
| | Rain Water Drainage | 2 | | Cleaning | | | | | | Cleaning | | | |
| Plumbing | Domestic Cold Water Tank | 2 | | Q'ty / Cng | | | | | | Q'ty / Cng | | | |
| | City Water Booster Pumps | 2 | | Gnrl. Ispn | | | | | | Gnrl. Ispn | | | |
| | Water Supply System | 2 | | Gnrl. Ispn | | | | | | Gnrl. Ispn | | | |
| | Drainage System | 2 | | Cleaning | | | | | | Cleaning | | | |
| HVAC | Air Cool Water Chillers | 3 | | | In Season | | | High Season | | | | Off Season | |
| | Hot Water Boilers | 3 | High Season | | Off Season | | | | | | | In Season | |
| | FCUs | 2 | | | Filter | | | | | | | Filter | |
| | AHUs | 2 | | | Filter | | | | | | | Filter | |
| | Packaged Air-Conditioners | 2 | | | | | | | | | | | |
| | Fans | 2 | | | | In Season | | | | | | In Season | |
| | BMS | 2 | | | Closed Day | | | | | | Ofc Clsd | | |
| Electrical | Sub-Station | 1 | Closed Day | | | | | | | | | | |
| | Emergency Generator | 12 | | | | | | | | | | | |
| | Emergency Lighting | 1 | | | Batteries | | | | | | | | |
| | Exit Lightings | 1 | | | Batteries | | | | | | | | |
| | Public Address System | 1 | | | Fire Drill | | | | | | | | |
| Fire Services | Fire Water Tank | 2 | | Cleaning | | | | | | Gnrl. Ispn | | | |
| | Fire Hose Reel System | 2 | | | Fire Drill | | | | | Gnrl. Ispn | | | |
| | FM2000 Fire Fighting System | 2 | | | Fire Drill | | | | | Gnrl. Ispn | | | |
| | Fire Alarm System | 2 | | | Fire Drill | | | | | Gnrl. Ispn | | | |
| | Fire Extinguishers | 2 | | | Fire Drill | | | | | Gnrl. Ispn | | | |
| | Elevator | Periodical Safety Inspection | 24 | | | | | | | | | | |

SAPI Nov. 2008

- Abbr. Q'ty Quality Control
- Cng Cleaning
- Gnrl Ispn. General Inspection
- Filter Cleaning of Filters
- Batteries Measurements of Battery Volatage
- Closed Day Museum Closed Day

(4) Draft of Classified Advertisement, Maintenance Staff**DRAFT****Maintenance Staff Required**

NM
Logo
Mark

Arabic Wording
THE JORDAN MUSEUM

is seeking Electrical & Mechanical Engineers/Technicians to be based in Amman, Jordan who will serve as a Maintenance Staff on infrastructure of the newly constructed National Museum.

Primary Responsibilities :

- o Serve as the maintenance staff of the National Museum.
- o Carry out daily daytime routine maintenance including :
 - Operation, Monitoring and Record of Building Environment.
 - Operation of Central Control Panel.
 - Daily Routine Inspection & Record.
 - Small Repairing Work for Mechanical and/or Electrical Fixtures.
 - Management Plan and Working Schedule.
 - Meeting and Periodical Report

Required Qualifications/Skills:

- o Minimum 15 years (Engineer) and 10 years (Technician) relevant experience in the building maintenance or international construction field with the public or private sector clients.
- o Comprehensive understanding of building maintenance procedures & working knowledge of IEE , BSCP, NFPA (Electrical Engineer) and ASHRAE, NFPA (Mechanical Engineer).
- o English language fluency, written and oral communications skills, knowledge and experience with Arabic language and culture preferred
- o Excellent interpersonal skills, including diplomacy to welcome foreign visitors and capable of working both individually and as a part of a team

Candidates having the required qualifications, please send the CV to the following e-mail:

Executive_Secretary@jordanmuseum.jo

the deadline for receiving application is Sunday, 16th November, 2008.

(5) Site Inspection Report for M/E works

1. Site Inspection for M/E Works

1st Site Inspection on 20th Oct 2008 09:30~11:30 hrs.

2nd Site Inspection on 27th Oct 2008 10:00~12:00 hrs.

3rd Site Inspection on 28th Oct 2008 14:00~16:00 hrs.

4th Site Inspection on 29th Oct 2008 11:00~12:00 hrs.

The followings are observed and recorded during the site inspection to monitor current status of the construction progress by Mr. F. Kamon, a member of SAPI Team, accompanied by Site Engineer of PCI, Supervisor of the Main and Sub-Contractors, Jurong/Hiba.

1.1 Mechanical Works

Sanitary and Plumbing Work

- 1) Installation of Sanitary Fixtures is in progress.
- 2) Water incoming main has not been connected to the building. The system is not functional.

Fire Protection Installation

- 3) Installation of Fire Hose Reels and Fire Pumps were completed w/ pipe work.

HVAC System

- 4) Main HVAC equipment was installed in Mechanical Room on BF with main pipe work and duct work.

FM 2000 Fire Fighting System

- 5) FM2000 cabinet and activator were installed in Archive Room on BF and waiting simulation testing.

BMS

- 6) BMS (Building Management System) has not been installed yet.
 - Testing, Commissioning and Balancing to A/C system is unable to carry out in automatic mode without BMS.

1.2 Electrical Works

Sub-Station

- 7) JEPSCO Sub-Station (2nos. 1,000kVA Transformers (11kV/0.4kV) were energized in January, 2008.
- Main cables (8x630mm²-1C, XLPE/PVC cable) from the Sub-Station to the Main LT Switchboard were already energized and permanent power supply to the building is available.

LT Power Distribution System

- 8) Connection b/w Main and Sub-Main cables from Main Switchboard to each DBs and MCCs were almost completed.

Lighting Fixtures

- 9) Light tracks have not been installed yet at the Exhibition Halls.
- 10) High bay fittings "LUXLIFT" for the Main Entrance Lobby have not been delivered on site.

Switches and Socket Outlets

- 11) Installation of Wiring fixtures/devises is in progress.

Fire Alarm System

- 12) Cabling from each floor up to Control Room on G/F was finished.
- Fire Alarm Panel has not been installed yet.

Telephone and Data Network System

- 13) Cabling from each floor up to Control Room on G/F was finished.
- MDF (Main Distribution Frame) has not been installed yet.
 - Empty piping to accommodate Incoming Main cable has been laid.
 - Cabling of the Incoming Main which will be brought across from the opposite side of the road has not been done yet. (works by JTC)

Public Address System

- 14) Cabling from each floor up to Control Room on G/F was finished
- PA equipment has not been installed yet.

Security System

- 15) Cabling from each floor up to Control Room on G/F was finished
- CCTV monitoring equipment has not been installed yet.

Emergency Lighting and Exit Lighting

- 16) Emergency Lighting and Exit Light fixtures were installed

1.3 Elevator Installation

17) Three (3) elevators were erected and installed.

- Installation of Control Panel and wirings for floor control devices are in progress

2. Suggestions

2.1 The following Commissioning Test shall be carried out by the Contractor prior to the Engineer's Inspection.

Electrical Works

- Circuit voltage check
- Polarity check
- Insulation resistance test
- Earth resistance test
- Functioning test

Mechanical Works

- Water filling or smoke test to drainage pipe work.
- Drainage test of manholes.
- Measurement of air flow (velocity and air volume) at each diffusers
- Water pressure on each pipe work.
- Vibration and noise check.
- Functioning test

2.2 Energization, Commissioning and Balancing of A/C system and Fire Fighting System shall be commenced soonest since the site is already at the stage of final touch up.

2.3 Cleaning of HVAC equipment and Flushing pipe lines are required prior to hand-over.

2.4 Schedule of the Inspection by the authorities concerned, Civil Defense Authorities, shall be established to obtain building approvals.

3. Conclusion

As a result of the inspection, the Engineer confirms that the Mechanical and Electrical Works have been partially completed in light of the Contract Documents except the incomplete items as recorded above.

4. Notes Preventive and Periodical Maintenance of the building

For sustainable use of the building, the Employer is recommended to allocate the maintenance staff of NM building to enable them to implement essential maintenance activities upon completion and hand over by the Contractor.

**(6) Instruction / Training with regard to the Mechanical and Electrical Services
for National Museum Sub-Project**

Requirement under Volume-II SPECIFICATIONS

- ① **DIVISION 14 CONVEYING SYSTEM**
PART 1 : GENERAL
3.05 INTRUCTION AND MAINTENANCE (page 14100-15)

- ② **DIVISION 15 MECHANICAL WORKS**
SECTION : 1.00
GENERAL CONDITIONS/ REQUIREMENTS
1.11 TRAINING OF ENGINEERING STAFF (page M1-7)

- ③ **DIVISION 15 MECHANICAL WORKS**
SECTION : 12.00
12.2 PART 2 : BUILDING MANAGEMENT & AUTOMATION SYSTEM
12.1 GENERAL (page M12-21)

- ④ **DIVISION 16 ELECTRICAL WORKS**
SECTION : 16570
ARCHITECTURAL LIGHTING CONTROL SYSTEMS
(CENTRAL SYSTEM)
PART 1 : GENERAL
1.10 COMMISSIONING - C (page16570-3)

- ⑤ **DIVISION 16 ELECTRICAL WORKS**
SECTION : 16570
ARCHITECTURAL LIGHTING CONTROL SYSTEMS
(CENTRAL SYSTEM)
PART 1 : GENERAL
3.02 MANUFACTURERS' FIELD SERVICES (page16570-17)

Further Study required by NM

9th January 2009

SAPI Team

Further study required by Dr. Faris Nimry (Director General of NM) during SAPI WRAP-UP MEETING held on 12th November, Amman. --- Three (3) items as below:-

1. Replacement of the entrance door for Storage Area with air-tight type on BF.

Response

- (1) It is possible to replace the door with an air-tight type since the Storage Area on BF has an individual Air-conditioning system and no air-grille is required on the said door for return air.
- (2) However this replacement work involves hacking work on the existing concrete wall around the existing door in order to replace its door frame too.

2. Adoption of Light Duct System on 2nd Floor.

Response

It may not be said that it is impossible, however it is not practical at this stage with the following reasons:-

- (1) This work requires to provide new opening(s) on the reinforced concrete roof slab for natural light intake which needs the structure engineer's consultation.
- (2) The provision of the new opening(s) may need further structural reinforcement work around the opening(s)
- (3) This system is considered very effective from the electric energy savings point of view if the system is installed for the area or rooms without window which are unable to obtain natural day lighting to back up the general lighting such as for NM.
- (4) However, the aim to adopt this Light Duct System is not very clear whether or not to back up the general lighting system or display lighting system to NM whole area.
- (5) The ratio of the electric power consumption of the general lighting of NM is quite small, approx. 4% of total power consumption while power consumption of the display lighting is 36% and Air-conditioning system is 60% respectively.

- (6) Adoption of the new Light Duct System definitely requires a new design in consultation with the manufacturer of this system components taking into account of the roof structure reinforcement.

3. Installation of the Ultrasonic Rat Repulse (Repellent) Device

Response

- (1) It is practical to install the Ultrasonic Rat Repulse Devices in the Storage Area on BF.
- (2) Various types of the devices (mostly portable) are on the market.
The device generates wavelength 26 [kHz]~ 55 [kHz] ultrasonic which only rats can hear although hate to hear.
- (3) Output wavelength varies from 30 [kHz]~ 55 [kHz] or 30 [kHz]~ 65 [kHz] depend on the manufacturer's specification.
- (4) Output sound level of the one device is approx. 130 [dB] which covers 300 m²~ 500 m²
The Storage Area on BF of NM is approx. 1,200 m², therefore three (3) or four(4) sets of the devices will be required to protect whole storage area.
- (5) The device consume a very few electricity, 3[w]~5 [w] per a device, which costs JD1.00 per a device per a month (24hrs.)

TOR 2-3

To support the NM in set-up of the opening exhibition with advanced ideas according to the latest international standards, and to propose recommendations to develop the capability for conservation of exhibition objects (e.g. painted plasters, copper and iron materials and ivory and bone materials, etc).

1. Overview of the Work

The exhibition expert carried out the following work through site inspections and discussions with the Jordanian counterpart, i.e. the National Museum Team, and the Project Management Consultants:

- Review of current international-level exhibition techniques
- Review of the existing state of exhibition work
- Identification of problems and consideration of solutions
- Formulation of support plan for lighting and showcasing of exhibit layout

The exhibition/museum operations and management expert carried out the following work through site inspections and discussions with the Jordanian counterpart, i.e. the National Museum Team, and the Project Management Consultants:

- Review of the existing state of conservation technology
- Examination of National Museum's functions for conservation technology
- Formulation of a proposal on conservation technology for exhibit

The Concept, Sketch and Proposal were accepted by the Director General and Deputy Director for Technical Affairs of the National Museum on 7th December 2008.

2. Background Information on Outputs

1) Current international-level exhibition techniques

- General trends in exhibition techniques

A museum on a national level should have a clear policy on how to realise an attractive museum for visitors, and aim to become a primary place for visitors to obtain information and learn how to obtain further information by providing them with step-by-step guidance.

For example, the Science Museum in the United Kingdom introduces a variety of interactive devices and exhibition techniques focusing on enhancing the visitors' experience at the museum and reducing textual explanations to the minimum. This approach makes it possible for all visitors to have a valuable experience at the museum without being restricted by barriers caused by age or language differences.

The Musee de quai Branly in France also puts on exhibitions that can fully accentuate the beauty of the displayed objects to visitors without relying only on explanations of the exhibits. This exhibition technique is considerably different from existing exhibition techniques for ethnological materials.

- Information techniques

In particular, changes in techniques for giving information have produced outstanding results. Up until recently, graphic panels have mainly been used to provide explanation regarding exhibited materials; however, these days explanation by providing only textual information

has been decreasing. Instead, various other kinds of visitor support have become mainstream, e.g., audiovisual presentations, narrative guides, electronic information terminals, museum tours by curators or volunteers, and education programmes.

This trend also aims to cope with the needs of diversified visitors by providing explanation in various languages other than the mother tongue of the country, active provision of up-to-date information and flexible adaptation to individual understanding levels.

- Exhibitions for children

Up to now, museums have introduced hands-on exhibitions for younger generations; however, these days museums have begun to prepare special corners for children outside of ordinary exhibition galleries. In order to further cooperate with schools, museums are enhancing visitors' understanding by developing education programmes that utilise lecture spaces and exhibitions, and introduce explanatory guides.

Examples of these new trends can be seen at the Science Museum in the United Kingdom, the Deutsche Museum in Germany and La Villet in France.

2) Existing state of exhibition work

- Planning

The basic layout plan is fixed; however, the details have occasionally been modified at the request of the National Museum.

In particular, the layout plan of "Modern Jordan" has completely been changed. The National Museum staffs are currently carrying out the planning work for "Modern Jordan".

The lighting fixtures for chronological exhibitions have already been selected although the lighting planning has not yet been undertaken. The lighting fixtures for One-to-One Theatre exhibitions have not yet been selected.

- Progress

The overall exhibition work on the construction site as well as in the workshops has been considerably delayed.

The Contractor agreed to hand over both the building and the exhibitions to the Client by the end of December 2008; however, it seems to be very difficult for the Contractor to do so.

It is presumed by the mechanical & electrical expert that the building handover will probably be finished by the end of March at the earliest if both the Contractor and the Project Management Consultants work diligently on the site; however, it is still uncertain when the exhibition handover will be finished.

3) Problems regarding on-going work

- Reconstruction

The models reconstructed on the site are not in accordance with the historical investigations. For example, the shapes of the Roman columns, Nabataean columns and beams, and stonewall finishing of the Byzantine Church are different from the originals.

In spite of the fact that the National Museum has been requesting the Contractor as well as the Contractor to stop the on-going reconstruction work on the site, the Contractor has been continuing its work, asserting that the shop drawings and material samples were approved by the National Museum.

- Showcases

The assembly work on the showcases, which will be installed in the wall niche, has been slowly moving forward at the site.

The Project Management Consultants requested the Contractor to prepare a modified or final production schedule based on the actual progress of showcase production both in the workshops and at the site and submit it to the Consultants, but, the Contractor has not yet submitted the said schedule.

The exhibition expert has prepared a CAD sketch of the Petra Church Papyri showcase through discussions with the National Museum and the Project Management Consultants.

- Graphic panels

The Contractor has slowly been preparing the graphic panel texts and submitted them to the Project Management Consultants for their approval.

Considering that all the graphic panel texts must be reviewed and approved by the Higher Review Committee, the graphic panel texts should be completed as soon as possible.

- AV programme

The Contractor has not finished any of the AV scripts, the duration time for most of whose segments will be a maximum of three minutes. The duration time of the AV programme to be shown in the Orientation Hall will be maximum of five minutes, and the one shown in the Great Arab Renaissance hall will be a maximum of ten minutes.

4) Solutions to problems

- Schedule

It is imperative at first to fix the target dates for the building and exhibition handover and the museum opening, i.e., Invitation-Only Opening, Soft Opening and Grand Opening, and second, to make the fixed dates known to the National Museum staff and the workers on the site.

In order to ensure that the target dates are met, the Project Management Consultants should station their engineer at the site office as long as possible, throughout the working hours if possible.

- Reconstruction

It is of urgent importance for the historical investigation materials to be reconfirmed and the differences between the models and the materials rechecked.

In accordance with the contract, the Contractor should immediately appoint an expert on historical architecture to supervise the process and quality of the reconstruction work.

The National Museum expert(s) should periodically check the quality of the reconstructed models on the site as well as in the workshop.

- Showcases

The Contractor should submit the production schedule for the showcases to the National Museum through the Project Management Unit and Project Management Consultants as soon as possible.

- Graphic panels

The Contractor should increase the number of text writers, while the Project Management Consultants should appoint an expert who can review the submitted texts.

The National Museum should submit the texts reviewed by both the above-mentioned expert and National Museum to the Higher Review Committee in a step-by-step sequence, classifying the reviewed texts into several packages.

- AV Programmes

The Contractor should request the script writer who prepared the existing scripts, all of which are too long for AV programmes to be shown in a museum, to prepare shorter texts based on the existing ones, while the Project Management Consultants should appoint an expert who can review the submitted scripts.

The National Museum should submit the scripts reviewed by both the above-mentioned expert and National Museum to the Higher Review

Committee in a step-by-step sequence, classifying the reviewed scripts into several packages.

5) Support plan for exhibits layout

- Showcase

The exhibition expert prepared a CAD sketch of the Petra Church Papyri showcase through discussions with the National Museum. The CAD Sketch is attached hereto as an output.

- Lighting

The following items were confirmed through site inspections and discussions with the National Museum:

- Lighting fixtures installed for the building works
- Basic concepts for exhibition lighting, the proposed lighting plan and the list for selection of lighting fixtures
- Exhibition materials that need special care for conservation
- Confirmation of exhibition materials displayed in the Jordan Archaeological Museum at present, mainly focusing on the exhibits that will be displayed in the National Museum

The exhibition expert prepared samples of lighting plans for the following exhibits:

- Babylonian Church
- Roman Road
- Village House
- Saha
- Graphic panel in Roman Period

The lighting plan samples are attached to the Concept of Lighting Plan attached hereto as an output.

6) Conservation technology for Museum

- Control of temperature and humidity

The air conditioning system in the entire Exhibition Hall will be turned on during museum hours only, and the humidity of individual showcases will be controlled by silica gel.

A measurement device that can measure temperature and humidity at all times will be installed in showcases containing valuable materials and controlled by a computer.

- Lighting plan

Basic lighting in the Exhibition Hall will use a lighting duct. A halogen lamp (UV-cut type) will be used for spotlights.

Except for some showcases, most of the free-standing showcases will be lit by spotlights hung on the ceiling.

Maintenance lighting for the building will not be used.

- Seismic isolation device

A seismic isolation device will be attached to the showcase for “Ayn Ghazal Statues” only. There will be no other large materials that need special care for seismic isolation.

7) National Museum’s functions for conservation technology

It is expected that the National Museum will function as a centre for conservation and restoration all over Jordan. It will be a mission of the National Museum to transfer historically valuable materials in Jordan to the coming generations.

Jordan has a variety of museums to which large numbers of tourists visit every year; however, the existing state of exhibited materials is not satisfactory in general. Needless to say, conservation conditions in exhibition galleries have to be taken into account. The conservation and restoration of individual materials must be taken into account as soon as possible.

When the National Museum opens, the conservation and restoration of materials exhibited in the National Museum will be a major concern and activity of the museum; moreover, the National Museum will also be expected to support the conservation and restoration of materials exhibited and stored in the surrounding museums. This should result in increased collaboration among museums, the upgrading of conservation and restoration techniques and the development of human resources.

Conservation and restoration will focus not only on technical matters but also on enhancing people’s awareness of historical materials through recognition of the value of such materials.

8) Proposal on conservation technology for exhibits

- Conservation in the Exhibition Hall

In general, temperature in an exhibition gallery should be kept at around 20°C and humidity at between 50–55%; and large changes in temperature and humidity should be prevented.

- Conservation in storage rooms

As it is difficult for the exhibition expert to confirm the conditions in the storage facilities and since a proposal on the conservation of materials should be made together with the confirmation of building facilities, this proposal will be made afterwards.

- Conservation in the Kyushu National Museum, opened in 2005

In the exhibition gallery

The temperature is set at 26°C in summer and 22°C in winter, and the humidity is set at 55%RH throughout the year. The environment is controlled to keep the daily room temperature change within a maximum of 4°C and the daily room humidity change within a maximum of 7%, and the daily showcase temperature change within 3°C and the daily showcase humidity change within 2%. Further humidity control is done by placing humidity control devices in showcases.

In storage facilities

The temperature is set at 24°C in summer and 22°C in winter. The humidity is controlled in the respective storage rooms, which are separated according to the materials stored in them. The environment is controlled to keep the daily temperature change within a maximum of 1°C and the daily humidity change within a maximum of 5%. In addition, the humidity is naturally controlled by covering the storage walls with unvarnished wood.

On the basis of the above-mentioned fundamental considerations for upgrading conservation technology and in accordance with the request from the National Museum, the “Proposal on the Upgrading of Conservation Techniques for Museum Materials” was prepared. The Proposal consists of the following items:

- Basic Classification of Material Types
- Conservation Techniques for Respective Materials conserved inside
- Conservation Techniques for Respective Materials conserved outside

3. List of Outputs

The list of outputs regarding TOR 2-3 is as follows:

- 2-3-1 Concept of Lighting Plan
- 2-3-2 CAD Sketch of Petra Church Papyri Showcase
- 2-3-3 Proposal on the Upgrading of Conservation Techniques for Museum Materials

Concept of Lighting Plan

13th November 2008

SAPI Team

The overall lighting plan aims to offer visitors an impression of openness and welcome by keeping brightness rather than a traditional museum. In respect of the respective themes a lighting plan will be made taking into account the following lighting methods.

1. Chronological Flows

A lighting technique that shows a material in the best condition will be introduced.

1) Flat Material

A spotlight position shall carefully be planned in order not to make a shadow of the material. It is the best way to light a material from the front; however, if it is impossible, several spotlights can be used for the above purpose.

2) Three-dimensional Material

It is desirable to light the material diagonally. The position and number of spotlights will be judged in accordance with respective detailed conditions taking it into account that light sources will not affect visitors.

3) Fine Material

As it is necessary to set certain lighting brightness, a lighting plan shall carefully be made considering how to protect the material from the affect by surrounding spotlights.

2. One-to-One Theatres

As there are few real materials, a characteristic lighting plan can be made according to the respective theatre themes by emphasising shade and light.

3. Reconstruction Models

Spotlights with narrow lighting angles had better be used for emphasising the characteristics of respective models. The models shall be lit up on the higher positions than a visitor's eyelevel in order not to make it clear, the qualitative differences of finishing work.

By placing lighting fixtures in the recess of the model, the space will become three-dimensional. A lighting plan can be made in accordance with seasons or times that will set particular scenes, e.g. changing lighting brightness by using a timer).

As most of the lighting fixtures will be fixed to the lighting duct on the ceiling grid, it shall be considered not to make the glare. If necessary, a cap for glare cut shall be attached to some of the lighting fixture.

4. Maintenance

In order to keep easy and stable maintenance, the types of lighting fixture shall be reduced as much as possible.

It shall be considered to make it possible to use the same lighting fixture in the different corner of the Exhibition Hall. The type of spotlight using a lighting duct shall be reduced into around two except for special ones.

5. Reference and Sample

References to and samples of lighting plan are attached hereto as follows:

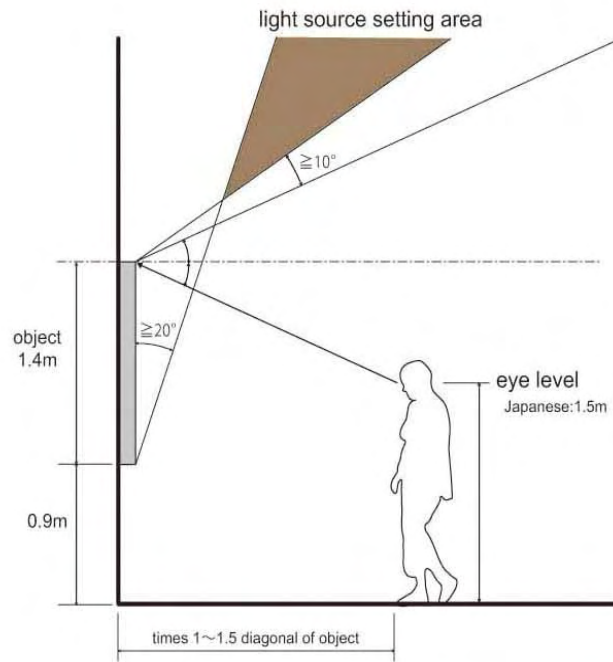
1) Reference

- To prevent glare
- Standard of illumination/colour temperature by some organisation

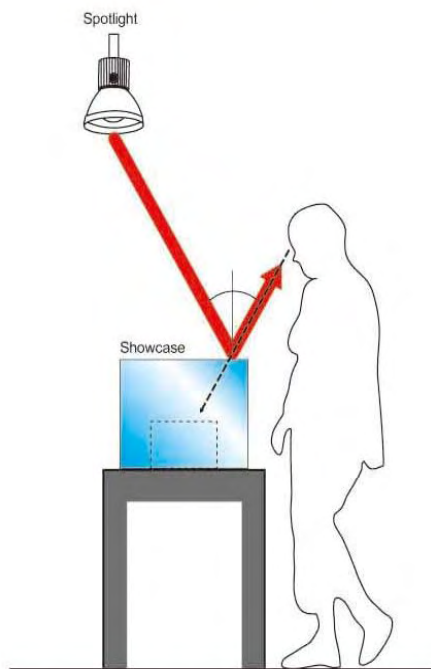
2) Sample

- Roman Road
- Byzantine Church
- Village House
- Saha

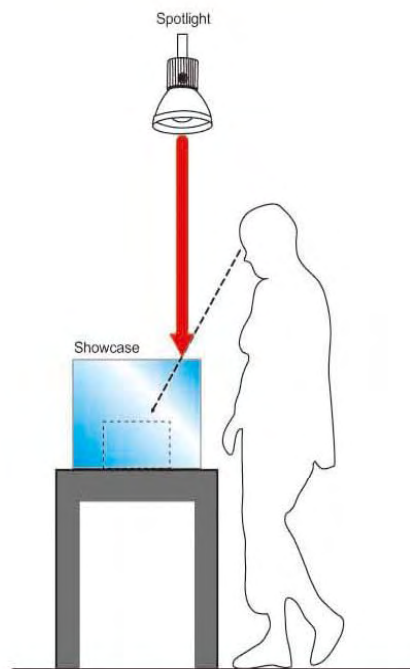
Reference 1. | To prevent a glare



Reflects to the glass



DON'T reflect to the glass



Reference 2. Standard of illumination /color temperature by some organizations

| | | JIS (JAPAN) 1979 | ICOM(FRANCE) international lighting review, Feb.1977 | IES (U.K.) international lighting review, Feb.1977 | IES(U.S.) IES Lighting Handbook,1987 |
|-----------------|---|---|--|--|--|
| delicate | Cloth, Water painting, Printing,Sketch, Wall paper, Drawing by muddy paints, Postage stamp, Manuscript copy, | 150~300 lx. *stuffed, specimen 75~150 lx. | 50 lx. *color temperature 2,900K | 50 lx. | 120,000 (lx·h/year) (50 lx.) |
| | Oil painting, Tempera painting, Skins, Ivory, Born, Wooden object, | 300~750 lx. | 150~180 lx. *color temperature 4,000K | 150 lx. | 180,000 (lx·h/year) (75 lx.) |
| not so delicate | Metal, Stone, Glass, Pottery, Stained glass, Enamel | 750~1,000 lx. | unlimit (but under. 300lx.) *color temperature 4,000~6,000K | unlimit * Actually restricted by the exhibition and the radiant heat | 200~500 lx. |

Reference 3. Exhibition cycle for conservation in The National Museum in Tokyo

| Material | Cycle |
|--|---------|
| Ukiyo-e Prints | 4 weeks |
| Printings | 4 weeks |
| Historical Documents | 8 weeks |
| Calligraphy | 8 weeks |
| Textiles | 8 weeks |
| Oil Paintings | 3months |
| Wooden sculptures | 3months |
| Lacquerware | 3months |
| Archeological artifacts (excluding special instances) | 1 year |

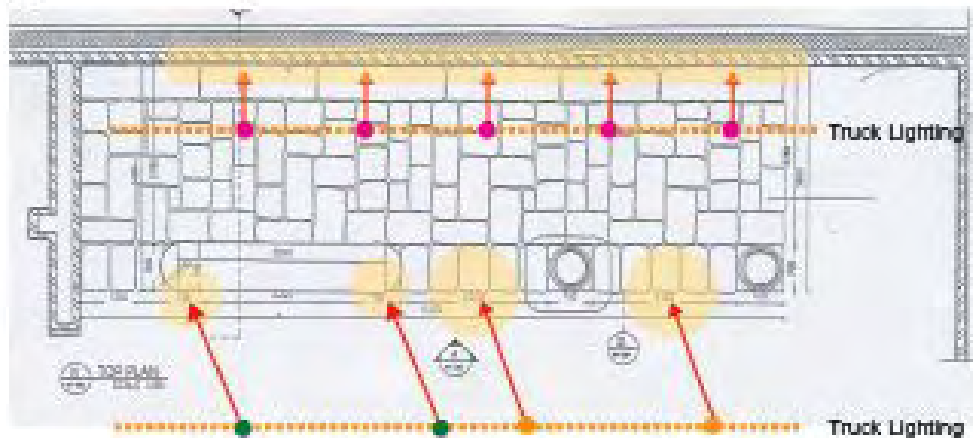
■ CONCEPT

The Roman columns will impressively lit up appealing to visitors as their eye catcher. In order to do so, spotlights with a narrow lighting angle will be set above the columns, and the details of the columns will be focused on producing their dignity.

The whole graphic panel will be lit up rising itself up by a wall wash type lighting fixtures or spotlights with a wide lighting angle dependant on pictures.

The circumstance into which visitors are naturally enticed will be provided by lighting up the floor before the columns.

■ PLAN



SCALE:1:100

- Case Type : TR1D (Wide)
- Case Type : TR1A (Narrow)
- Case Type : TR1C (Wall Wash)

■ IMAGE

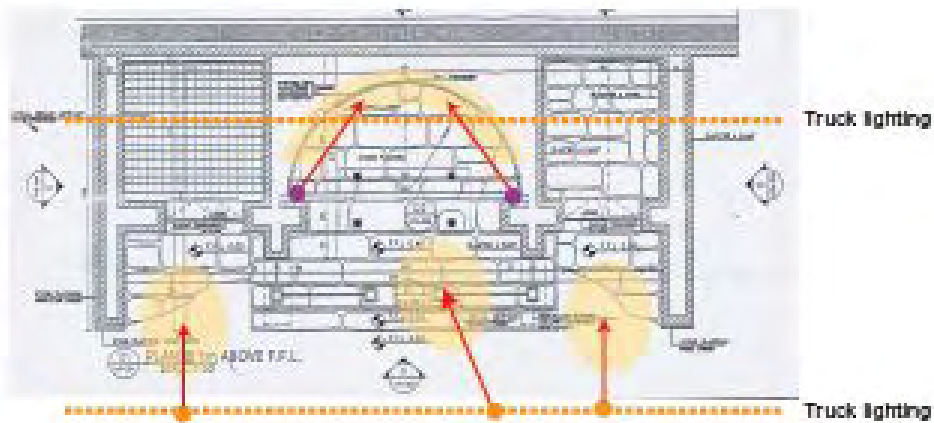


■ CONCEPT

The beautifulness and existence of the dome by lighting up the dome from the floor before the dome with soft light.

In order to make visitors recognise the steps in the middle and the exhibits on both sides, the front floor will be lit up.

■ PLAN



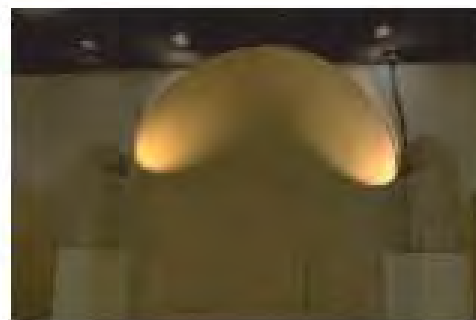
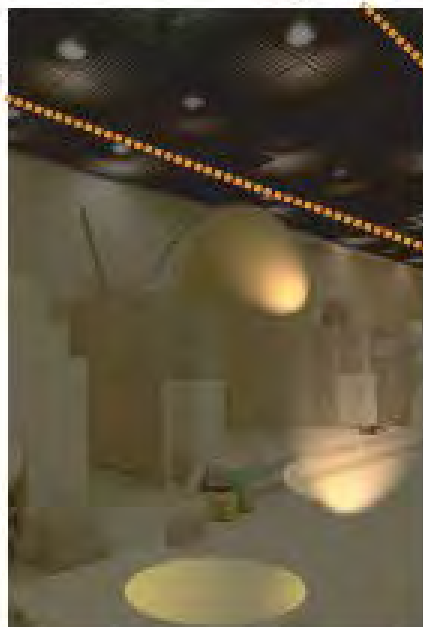
● Case Type : TR10

● Case Type :

■ IMAGE

Truck Lighting

Truck Lighting



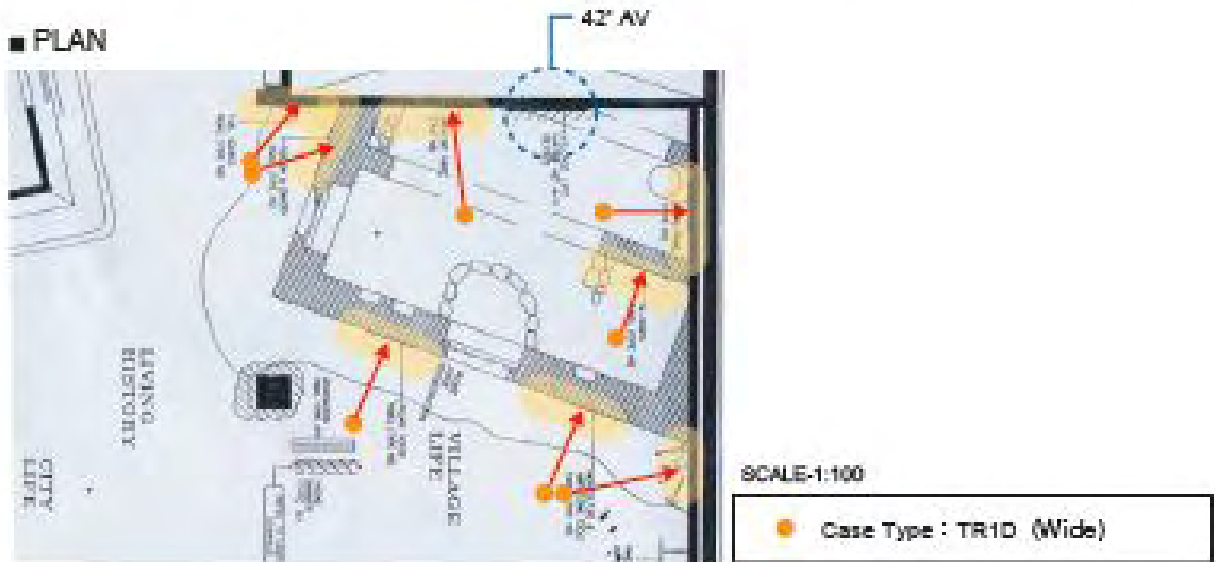
Reference Photo



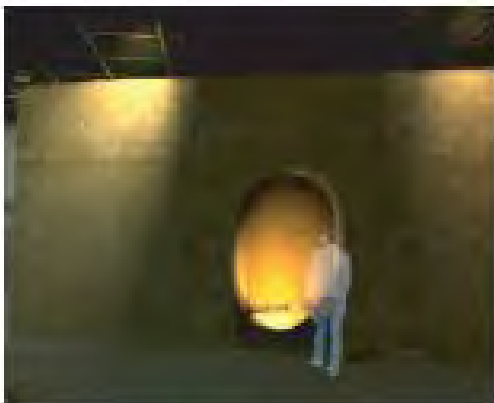
■ CNCEPT

It seems that the brightness will be satisfactory by lighting up the graphic panels on the wall. However, the whole Village House will be lit up giving visitors its deepness as much as possible. It will carefully be considered that the lighting will not affect the images of the AV device inside the Village House.

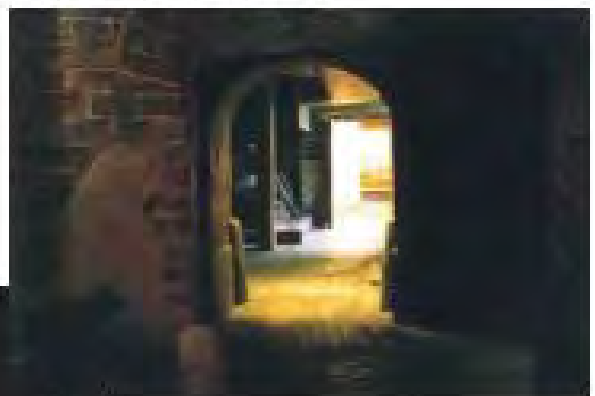
■ PLAN



■ IMAGE



■ REFERENCE PHOTO



■ CNCEPT

The front space of the SAHA will brightly be lit up. A spotlight will be set in the rear space of the SAHA for showing up the AV images.

The SAHA is usually brighter than the inside of the shops; however, in order to entice visitors to exhibits in the shops, the inside of the shops will be lit brighter.

As the Interactive Booth behind is rather difficult to be supervised, the said area will be lit comparatively brighter.

■ PLAN

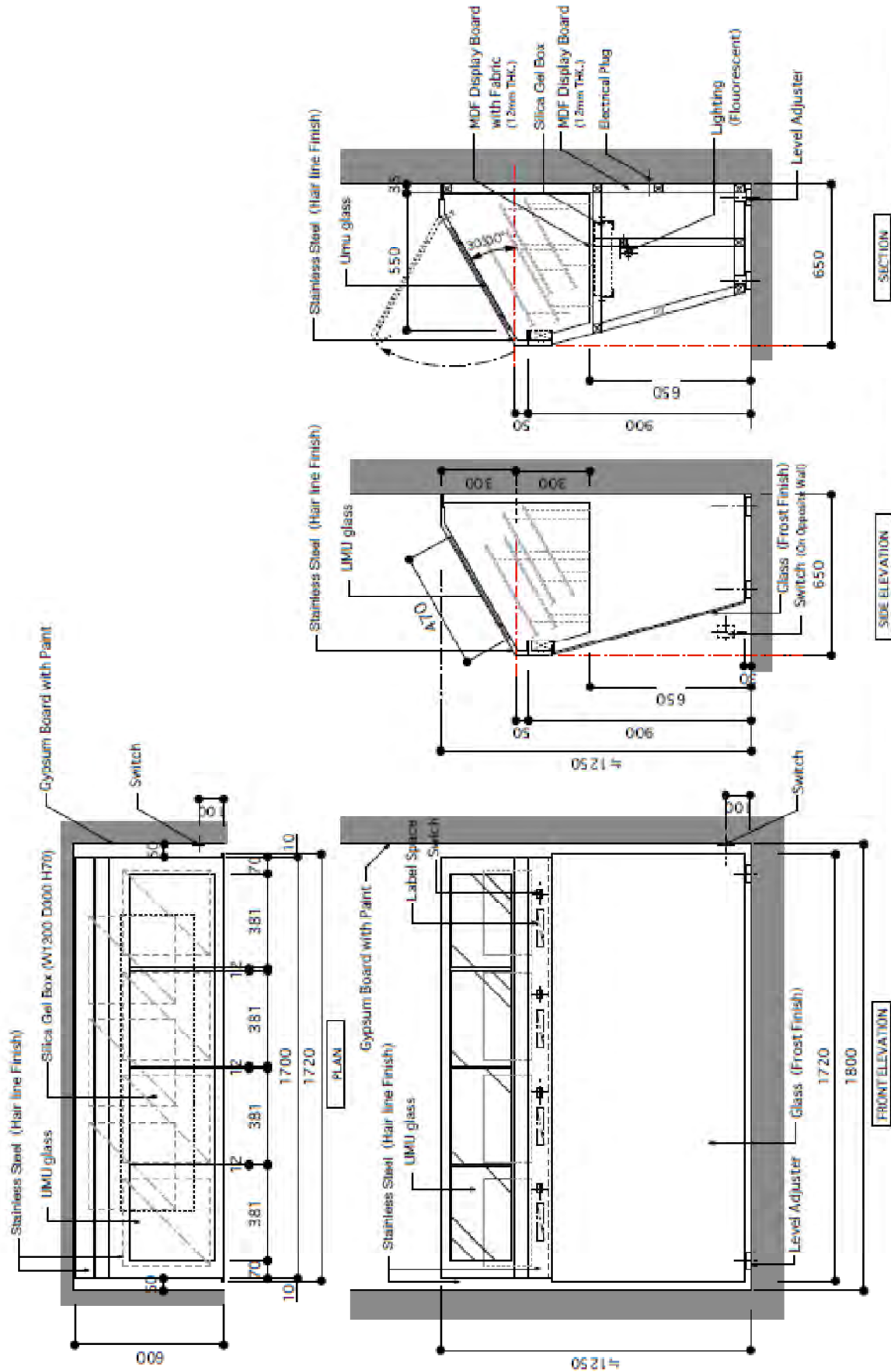


■ IMAGE



■ REFERENCE PHOTO





SECTION SIDE ELEVATION FRONT ELEVATION

Petra Church Papyn Showcase SCALE=1:20 12 Nov. 2008

Proposal on the Upgrading of Conservation Techniques for Museum Materials

5th December 2008
SAPI Team

1. Basic Classification of Material Types

1) Gradual Types of Materials conserved Inside

- Level 1: Raw Material
Materials not yet cleaned or unregistered
- Level 2: Registered Material
Materials registered in a registration ledger or card including database registration
- Level 3: Applied Material
 - Research Material: Materials that a curator provisionally conserves in a laboratory for their examination and research
 - Collection Material: Registered materials that are conserved in a storage of which conservation system is well maintained
 - Exhibition Material: Registered materials, including replicas, that are displayed in an exhibition room

2) Gradual Types of Materials conserved Outside

- Level 1: Raw Material
Materials on the site at an unexamined or unarranged level, or materials under examination and research; e.g. a ruin, historical building and modernisation heritage
- Level 2: Examination and Research Material:
Materials of which examination and research finished, and of which study report is already published; materials that are planned to publish in the future are excluded
- Level 3: Material designated as Academic or Cultural Asset
Materials designated by a national technical institute or local municipal institute; e.g. an important cultural property, special natural treasure, historic place of scenic beauty, historic park and so forth
Materials designated by an international technical institute; e.g. World Heritage
- Level 4: Material utilised for Tourism
Materials utilised at Level 1 or Level 2
Materials utilised at Level 3

2. Conservation Techniques for Respective Materials conserved Inside

1) Level 1: Raw Material

- Raw materials shall never be brought in a storage or laboratory directly, and cleaning and labelling before conservation shall be carried out in a pre-treatment room.
- Easy humidification shall be carried out by an internal humidifier dependent upon the existing conservation conditions of materials. Though provisional treatment for protection of insects or mould can be substituted by a large refrigerator, temperature and humidity shall carefully be controlled during the transfer of materials.
- Before transferring materials to a laboratory or storage, materials shall be kept in a container specialised for a museum, and discriminated between the registered or the unregistered.
- A pre-treatment room shall be air-conditioned throughout the day if possible.
- Heavy materials such as stone or steel can be placed directly on the floor of a pre-treatment room; however, light materials such as wood shall not be. The latter shall be kept on a cushion or duckboards.
- Cleaned materials, large or heavy ones in particular, shall be covered with a sheet for protecting dust. The material of sheet shall have good ventilation.
- The direct rays of the sun shall be shut down in order to avoid the deterioration of materials. It is preferable to use a lighting fixture special for art museum use that cuts ultraviolet rays.

Immediate Measures in the National Museum

- Materials that were collected by an excavation team or have a registration number of DOA (JA-00000) shall be given a new material registration number of the National Museum (NM-00000) at the time when the materials are transferred to the National Museum. However, the existing registration number (JA-00000) shall be kept in a ledger or database in order to inspect the history of materials.
- When a joint excavation with an international team is carried out, it is desirable to exchange information regarding the conservation handling with each other.
- The unarranged materials of traditional and modern history such as Hijaz Railway, which the national Museum now possesses, shall quickly be arranged, registered as modernisation heritage materials, and prepared for conservation.
- The materials of folklore and traditional and modern history, which have not yet been cleaned or registered, had better be safely and eternally be conserved according the respective importance; however, the placement of a curator, who is able to carry out investigation and research activities in this field, shall be prioritised. It is desirable to

safely restore the above materials even though there may not be such a curator at the time of the opening of the National Museum. It is desirable to introduce an entrusting system of research by a university expert such as an associate professor or lecturer, provide a researcher system of the National Museum consisting of part-time staff or volunteer researchers, and promote an arrangement and conservation activity as well as a research publication together with offering them the above folklore and traditional/modern history materials as their investigation/research material.

2) Level 2: Registered Material

- In principle materials shall be kept in storage.
- Materials shall be transferred under the direction of the Head of the Collection Management Unit or an equivalent person.
- The following materials shall be kept in specific storages respectively:
 - Materials that need to be kept in liquid such chemicals as alcohol, formalin and glycerine, e.g. an animal body and wooden work, shall be kept in storage with measures against smell and mould, an air conditioning system, a heavy load floor or anti-seismic structure.
 - Materials that need to be kept in normal room temperature, e.g. ceramics, pottery, glasswork, metal work and replica, shall be kept in storage with measures against mould, an air conditioning system, dark lighting and anti-seismic structure.
 - Materials that need temperature and humidity setting (average 25°C, below 40%), e.g. materials which need not special conservation such as animal or plant materials, earth ware, stone implements, stone statues and pieces of stone buildings, shall be kept in a storage with measures against insects and mould, an air conditioning system, dark lighting fixtures and anti-seismic structure.
 - Materials that need special setting (low temperature, middle or high temperature, dehumidification, humidification), e.g. pictures, photographs, films, maps, murals, scrolls, iron work, lacquer ware and clothes, shall be kept in a storage with measures against mould and insects, temperature and humidity setting devices, detecting alarms against set conditions, a 24-hour air conditioning system, dark lighting fixtures and anti-seismic structure.
- When materials have to be transferred from storage to other locations the deterioration of materials shall be prevented by thoroughly keeping and managing materials on the basis of the characteristics of the storage.
- It is desirable to provide storage with a doorway with double doors and an air curtain.
- The lost and theft of materials shall be protected by preparing a system to record transference of materials from and to a storage, e.g. name,

time, used block, fulfilling of security confirmation items and permanent storage.

- Users of a storage shall use footwear only for the storage
- The periodical test shall be carried out on the basis of a safety control manual for a fire protection system installed in storage.
- Curators or researchers shall periodically investigate the storage conditions of a storage of which they take charge based on a material ledger and material database, and shall carry out a spot check on the storage conditions.

Immediate Measures in the National Museum

- It is usual to basically conserve such materials in a container as vegetable remains, e.g. seeds, leaves, roots and stems, which are treated as archaeological materials, after the treatment of anti-septic and dryness; however, it is desirable to enclose acrylic resin for exhibition in order to protect the change of room temperature by lighting fixtures, etc. or decolourisation. Archaeological wooden materials, e.g. dugouts, etc., shall be conserved by directly enclosing resin into the materials or coating the surface with acrylic resin, taking account of the long-term conservation and exhibition of the materials.
- It is possible to conserve archaeological wooden materials, the whole or the part, which will not be exhibited, by glycerine liquid immersion in a vinyl-chloride large container with an airtight lid. As the container is heavy, it is desirable to conserve the materials in basement storage with good ventilation.
- Traditional clothes and folklore materials made of animal skin or vegetable fabric shall be stored in a wooden box with layers of anti-septic papers keeping dry conditions after doing careful fumigation.
- It is expected that materials related to the modern history and folklore, which will be conserved in specific temperature setting, will be Jordanian maps photographs and lithographs made by explorers in the 19th century, ones related to the Great Arab Revolt, traditional clothes, clothes and decorations related to the royal family, the Ottoman's swords and arms in the age of WWI.

Proposal on a Future Plan for the National Museum to work on

- By setting up the Research Team in charge of material conservation and storage management, such subjects as internal training for conservation techniques, reporting on the management conditions of the Storage and an implementation plan of humidification will be discussed.
- The Research Team will enhance the techniques and awareness regarding the conservation science by providing opportunities for lecturing by the experts in the field of conservation science, e.g. lighting, air conditioning, humidification, sanitary, insects or developers of tools for the conservation science.

- The Research Team will consist of several members from the Collection Management of Archaeology and GAR/MJ Units, display & Exhibition Unit and Conservation Unit.

3) Level 3: Applied Material

Fundamentally, it is desirable to follow the techniques and policies regarding the conservation and management of the Level 2 materials, and put the above basic policy through thoroughly.

a. Research Material

- Respective curators shall conserve and manage materials in their own responsibility.
- As for valuable materials, it shall be obliged to return them to a special storage, not leaving them in a laboratory, even during the period of research.
- The curators shall periodically report the research progress to the Collection Manager, and the report shall be kept on.

b. Collection Material

- The techniques and policies regarding the conservation and management of the Level 2 materials shall be followed.

c. Exhibition Material

- An “exhibition material ledger” linked with an exhibition database as well as an “exhibition material information sheet” shall be prepared together.
- The contents of the “exhibition material information sheet” are as follows:
 - Material Type A: Register number of material linked with the database
 - Material Type B: Real object, replica, visual image (photograph and video), explanation panel
 - Occupation Type: Museum (collection and donation), loans (deposit)
 - Material Condition A: Detailed material information before exhibition, colour information and existing condition of deterioration in particular
 - Material Condition B: Quality change information, including deterioration, appeared on a yearly level
 - Exhibition Environment of Material A: Physical (brightness) and scientific (temperature and humidity) conditions of an exhibition corner
 - Exhibition Environment of Material B: Structure of an exhibition case and physical/scientific conditions in side exhibition case
 - Exhibition Environment of Material C: Exhibition staff and management staff of materials
 - Maintenance and Management Environment of Material: Production year of replica, producer, guarantee period, existence of insurance
- Data regarding air conditioning management and yearly quality change in an exhibition gallery shall be monitored and recorded by installing an automatic recorder, and a review period shall be set.

- Exhibition materials shall be take care of from the viewpoint of conservation science, e.g. restoration, coating or change to a replica.
- Exhibition materials shall be laid out in harmony with lighting fixtures such as a ceiling light and spotlight taking into account the protection of deterioration by light and heat.
- A safety barrier or warning plate shall be installed for the safety control of visitors as well as exhibits.
- The installation of an ion air cleaner had better be examined with the aim to protect dust onto an exhibition material, except for a large material, that is not stored in an exhibition case.
- In order to clean, repair or renovate a large exhibition material, such as a one-to-one scale exhibition, or a diorama exhibition material, a museum had better be closed at the end day of every month other than a periodical closing day; however, all museum staff shall work as usual.
- The implementation of humidification by outsourcing contractor and its period, e.g. minimum 2 or 3 days per year, shall be set. A museum shall be closed during the humidification period, and the notice to visitors shall be made in advance.
- In case that the humidification gas may be exhausted to the outside according the type of humidifier, such as gas or mist, the implementation of humidification shall thoroughly be noticed to facilities and residents in the areas surrounding a museum.
- The outsourcing contractor for humidification shall supervise their implementation for 24 hours a day during the humidification period.

3. Conservation Techniques for Respective Materials conserved Outside

1) Level 1: Raw Material

- It is a principle to collect the existing data regarding conservation conditions of materials and conserve materials on the site by setting up an investigation team consisting of curators and technical researchers; however, the necessity to transfer materials shall also be studied in parallel.
- It is recommended that the National Museum should take the initiative in setting up of the investigation team, collecting data and conserving materials in cooperation with a variety of experts from research institutes or universities.
- It is recommended that excavated or reserved materials in an unexplored field should be kept as research and registered materials of the National Museum, and the National Museum should closely cooperate with the Department of Antiquities (DOA).

- It is expected that archaeological materials before AD 1750 will be controlled by DOA from now on; however, other archaeological materials after AD 1750 may be treated as an annex of the National Museum, a field museum.

2) Level 2: Examination and Research Material

- The conservation science method will be introduced for conserving materials, e.g. remains, historical buildings and modernisation heritages based on the principle to conserve them on the site; however, it is recommended that part of materials such as excavated and reserved ones should be kept as research and registered materials of the National Museum, and the National Museum should closely cooperate with DOA.
- Materials of which examination, research and report have been finished shall be conserved in the manner suitable to respective site by appropriately discriminating between the ones to be reproduced and conserved on the site and the ones to be kept in the museum.
- As for materials that are confirmed to conserve on the site, the National Museum shall establish a usage guidelines on utilisation and opening them including the future vision, and have a function to timely evaluate the usage process.
- As part of an immediate research and publication project, a chronological index of research outlines carried on the DOA Annual (ADAJ) shall be prepared, researches that are evaluated to have academic importance and the necessity of exhibition shall be visualised and kept in recording media such as DVD. If it is possible to make a series of them by re-editing them, they may be opened or sold as joint publications of DOA and the National Museum with the title of "The history of remains excavation in Jordan".

3) Level 3: Material designated as Academic or Cultural Asset

- a. Materials designated by a national technical institute or a local municipal institute
 - In cooperation with the designation institute, the National Museum shall indicate tangible guidelines on the basis of functions to evaluate the utilisation and conservation conditions and presumed risks regarding materials.
 - As for the implementation of restoration and conservation based on the guidelines, the implementation costs shall be borne by the designation institute, not by the National Museum.
- b. Materials designated by an international technical institute
 - In cooperation with the designation institute such as UNESCO institute, the National Museum shall indicate tangible guidelines on the basis of functions to evaluate the utilisation and conservation conditions and presumed risks regarding materials.
 - As for the implementation of restoration and conservation based on the guidelines, the implementation costs shall be borne by the Jordanian Government as the national patrimony. However, in implementing the

restoration and conservation, it will be ideal to incorporate the costs into the single-year or multi-year budget of the national Museum.

4) Level 4: Material utilised for Tourism

- a. Materials being utilised in the condition of Level 1 and Level 2
 - The conservation and utilisation policies stipulated in Level 1 and Level 2 shall be followed
 - As for the field to be opened newly, the discussions with the Department of Tourism (DOT) will be required.
- b. Materials being utilised in the condition of Level 3
 - The conservation and utilisation policies stipulated in Level 3 shall be followed.
 - As for the field to be opened newly, the discussions with DOT will be required.
 - The management of materials shall be planned and studied with the organisation that plans to utilise materials in the manner of an eco-museum in the future.

Proposal on a Future Plan for the National Museum to work on

- The National Museum will establish the “Technical Research and Development Authority regarding Conservation Science” (hereafter “Authority”), and train engineers and successors as well as develop skills.
- At the establishment of the Authority, discussions regarding the role of the Authority as a joint cooperation agency in the future shall be made keeping good coordination with the conservation science section of Yarmouk University and the laboratory of Hashemite University.
- The Authority will be positioned as an annex of the National Museum or a satellite (subsidiary) institute, and the activity results and techniques will be utilised for the conservation science of respective materials, the internal conservation type and the external conservation type.
- The staff of the National Museum and the Authority will exchange their research work with each other.
- In the future the National Museum will hold, in coordination with UNESCO, an international conference and symposium regarding the conservation and utilisation of remains, historical buildings and modernisation heritages, and the National Museum as well as the Authority will be the main venue. Additionally, the National Museum will present the existing and coming subjects regarding the conservation of remains and historical site in Jordan, and confirm the evaluation on an international level.
- The National Museum shall be a facility that offers a high level of museology in the country, aims to promote a project to be utilised for training a high-quality curator, and teach the museology, the National

Museum will be able to do this utilising the characteristics in the archaeological field, at universities or academic institutes.

- At the time of opening a museum, the National Museum shall call for the establishment of the “Association of Jordanian Museums” and the participation of other museums into the association with the aim to coordinate museums or academic institutes in Jordan, and realise pioneering action useful for the enhancement of museum staff in Jordan.

TOR 2-4

To identify an active role of the NM in strengthening the function of other museums in Jordan

1. Overview of the Work

Information regarding museums in Jordan was collected and analysed, as shown in the Outline of Museums in Jordan, and a proposal on the “Roles and Functions of the National Museum” was formulated based on the analysis.

The proposal on the “Roles and Functions of the National Museum” was accepted in its entirety by the Director General of the National Museum on 7th December 2008.

2. Background Information on Outputs

1) Summary of the analysis on Museums in Jordan

a) Types of Museums

Most museums in Jordan focus on archaeology, history and antiquities, except for the following museums:

b) Foundation

Most museums in Jordan were founded in the 1980s and 1990s as follows: An exception, the Jerash Archaeological Museum was founded earlier, in 1923.

c) Governance

The museums in Jordan can be classified into seven management categories as follows; the Department of Antiquities (DOA) and the Ministry of Tourism and Antiquities (MOTA) oversee most of the museums in Jordan.

d) Opening Hours/Days

Most museums in Jordan open daily. The Dead Sea Museum closes one day a year, the first day of “Eid” after “Ramadan”.

e) Entrance Fee

The entrance fee for most museums is free as follows: The Royal Automobile Museum has separate entrance fees for foreigners and locals. The Dead Sea Museum has separate fees for foreigners, local residents and students. The Haya Culture Centre has a separate “Membership Fee” and “School Fee”. The Fuheis Orthodox Museum requires only a donation for entrance. The Children’s Museum Jordan allows a “Group Fee”.

f) Number of Staff

Most museums in Jordan have staffs of from one to five members as follows: The Jordan Archaeological Museum has 20 staff, the Royal Automobile Museum 45 and the Children’s Museum Jordan 100.

2) Contents of the proposal

On the basis of the above-mentioned study, the “Roles and Functions of the National Museum” was prepared through discussions with the National Museum and is composed of the following items:

- Present Conditions of Museums in Jordan
- Position of National Museum
- Roles of National Museum
- Cooperative Functions between National Museum and Other Museums
- Research and Conservation
- Museology and Relevant Sciences
- Permanent and Temporary Exhibitions
- Educational and Cultural Programmes
- Operation and Management
- Staff Training
- Tourism Development

3. List of Outputs

The list of outputs regarding TOR 2-4 is as follows:

- 2-4-1 Outline of Museums in Jordan
- 2-4-2 Roles and Functions of National Museum

Outline of Museums in Jordan

10th November 2008
SAPI Team

1. Umm Qais

1) Umm Qais Archaeological Museum

- Type of Museum: Antiquities
- Founded: 1987
- Governance: Department of Antiquities
- Hours: 08:00 – 17:00 (daily)
- Entrance Fee: Free
- Number of Staff: 1

2. Irbid

1) Irbid Archaeological Museum

- Type of Museum: Archaeological
- Founded: 1966 (old) / 1999 (new)
- Governance: Department of Antiquities
- Hours: By appointment
- Entrance Fee: Free
- Number of Staff: 5

2) Museum of Jordan Heritage

- Type of Museum: Anthropological and Archaeological
- Founded: 1988
- Governance: Yarmouk University, Institute of Archaeology and Anthropology
- Hours: 08:00 – 17:00 (daily / university hours)
- Entrance Fee: Free
- Number of Staff: 6

3. Mafraq

1) Al al-Bayt University Museum

- Type of Museum: General
- Founded: 1995
- Governance: Al al-Bayt University
- Hours: 08:00 – 15:00 (university days and hours)
- Entrance Fee: Free
- Number of Staff: 1

2) Mafraq Archaeological Museum

- Type of Museum: Archaeological
- Founded: 1993
- Governance: Department of Antiquities
- Hours: 08:00 – 15:00 (closed Friday and Saturday)
- Entrance Fee: Free
- Number of Staff: 1

4. Ajlun

1) Ajlun Castle Museum

| | |
|--------------------|-------------------------------|
| ▪ Type of Museum: | Historical and Archaeological |
| ▪ Founded: | 1993 |
| ▪ Governance: | Department of Antiquities |
| ▪ Hours: | Daily during daylight hours |
| ▪ Entrance Fee: | JD 1 |
| ▪ Number of Staff: | 1 |

5. Jerash

1) Jerash Archaeological Museum

| | |
|--------------------|--------------------------------------|
| ▪ Type of Museum: | Archaeological |
| ▪ Founded: | 1923 |
| ▪ Governance: | Department of Antiquities |
| ▪ Hours: | 08:00 – 18:00 (daily) |
| ▪ Entrance Fee: | Free / JD 5 for entrance to the site |
| ▪ Number of Staff: | 6 |

6. Salt

1) Salt Archaeological Museum

| | |
|--------------------|---------------------------------|
| ▪ Type of Museum: | Archaeological |
| ▪ Founded: | 1983 / in present building 1987 |
| ▪ Governance: | Department of Antiquities |
| ▪ Hours: | 08:00 – 17:00 (daily) |
| ▪ Entrance Fee: | Free |
| ▪ Number of Staff: | 7 |

2) Salt Folklore Museum

| | |
|--------------------|---------------------------|
| ▪ Type of Museum: | Folklore |
| ▪ Founded: | 1987 |
| ▪ Governance: | Department of Antiquities |
| ▪ Hours: | 08:00 – 17:00 (daily) |
| ▪ Entrance Fee: | Free |
| ▪ Number of Staff: | 5 |

3) Schoolbook Museum

| | |
|--------------------|---|
| ▪ Type of Museum: | Books and Documents |
| ▪ Founded: | 1982 |
| ▪ Governance: | Al-Balqa University |
| ▪ Hours: | University days and hours: by appointment |
| ▪ Entrance Fee: | Free |
| ▪ Number of Staff: | 2 |

7. Amman

1) Archaeology Museum

| | |
|--------------------|--|
| ▪ Type of Museum: | Archaeological |
| ▪ Founded: | 1962 |
| ▪ Governance: | University of Jordan |
| ▪ Hours: | 08:00 – 17:00 (except Friday and Saturday) |
| ▪ Entrance Fee: | Free |
| ▪ Number of Staff: | 3 |

2) Darat Al Funun

| | |
|--------------------|---|
| ▪ Type of Museum: | Contemporary Art Centre |
| ▪ Founded: | 1993 |
| ▪ Governance: | Department of Antiquities |
| ▪ Hours: | Sunday – Wednesday 10:00 – 19:00 Closed Friday Thursday 10:00 – 20:00 |
| ▪ Entrance Fee: | Free |
| ▪ Number of Staff: | 12 |

3) Folklore Museum

| | |
|--------------------|---------------------------|
| ▪ Type of Museum: | Ethnographic and Folklore |
| ▪ Founded: | 1975 |
| ▪ Governance: | Department of Antiquities |
| ▪ Hours: | 08:00 – 17:00 (daily) |
| ▪ Entrance Fee: | JD 1 |
| ▪ Number of Staff: | 14 |

4) Geological Museum

| | |
|--------------------|--|
| ▪ Type of Museum: | Geology, Energy and Natural Resources |
| ▪ Founded: | 1989 |
| ▪ Governance: | Natural Resources Authority |
| ▪ Hours: | 07:30 – 14:30 (closed Friday and Saturday) |
| ▪ Entrance Fee: | Free |
| ▪ Number of Staff: | 3 |

5) Haya Culture Centre / Museum of Science

| | |
|--------------------|---|
| ▪ Type of Museum: | Science, Mobile Science and Planetarium |
| ▪ Founded: | 1985 Science Museum 1988 Mobile Museum 1993 Planetarium |
| ▪ Governance: | Private / Board of Directors |
| ▪ Hours: | 09:00 – 14:00 / 16:00 – 18:00 |
| ▪ Entrance Fee: | Membership Fee or School Fee |
| ▪ Number of Staff: | 7 |

6) Islamic Museum

- Type of Museum: Archaeological and Historical
- Founded: 1966
- Governance: Awqal
- Hours: 08:00 – 14:00
- Entrance Fee: Free
- Number of Staff: 1

7) Jordan Archaeological Museum

- Type of Museum: Archaeological
- Founded: 1951
- Governance: Department of Antiquities
- Hours: 08:00 – 17:00 (daily)
- Entrance Fee: JD 2
- Number of Staff: 20

8) Jordan National Gallery of Fine Arts

- Type of Museum: Contemporary Fine Art
- Founded: 1980
- Governance: Royal Society of Fine Arts
- Hours: 08:00 – 13:30 / 15:00 – 18:00 (closed Tuesday)
- Entrance Fee: JD 2
- Number of Staff: 6

9) Martyr's Museum

- Type of Museum: Military history
- Founded: 1977
- Governance: Government / Army
- Hours: 09:00 – 16:00 daily (except Saturday)
- Entrance Fee: Free
- Number of Staff: 2

10) Museum of Jordanian Postage

- Type of Museum: Philatelist
- Founded: 1979
- Governance: Ministry of Post and Communication
- Hours: 08:00 – 14:00 (closed Friday and holiday)
- Entrance Fee: Free
- Number of Staff: 1

11) Museum of Popular Traditions

- Type of Museum: Folklore and Archaeological
- Founded: 1971
- Governance: Department of Antiquities
- Hours: 08:00 – 17:00 (daily)
- Entrance Fee: JD 1
- Number of Staff: 5

12) Museum with No Frontiers

- Type of Museum: Virtual and Cyberspace
- Founded: 1995 with the European Commission
2000 Jordan Trail inaugurated
- Governance: Ministry of Culture and Department of Antiquities
- Hours: N/A
- Entrance Fee: N/A
- Number of Staff: 5

13) National Heritage Museum / University of Jordan

- Type of Museum: Folklore
- Founded: 1980
- Governance: University of Jordan
- Hours: 08:00 – 17:00 (closed Friday and Saturday)
- Entrance Fee: Free
- Number of Staff: 2

14) Numismatic Museum / Central Bank of Jordan

- Type of Museum: Numismatic
- Founded: 1988
- Governance: Central Bank of Jordan
- Hours: By appointment
- Entrance Fee: Free
- Number of Staff: 3

15) Sharif Hussein Bin Ali Museum

- Type of Museum: History
- Founded: 1999
- Governance: Government
- Hours: By appointment
- Entrance Fee: N/A
- Number of Staff: 1

16) Royal Automobile Museum

- Type of Museum: Automobile
- Founded: 2003
- Governance: Royal Court
- Hours: 10:00 – 19:00 (closed Tuesday)
- Entrance Fee: JD 1 (Jordanian/over 12)
Free (Jordanian/under 12)
JD 3 (non-resident/foreigner)
- Number of Staff: 45

17) Children's Museum Jordan

- Type of Museum: Children's well-being, education and development
- Founded: 2007
- Governance: NGO
- Hours: 09:00 – 18:00 (Saturday – Thursday)
10:00 – 19:00 (Friday)
Closed Tuesday
- Entrance Fee: Individuals JD 3
Group (over 10) JD 2
- Number of Staff: 100

8. Fuheis**1) Fuheis Orthodox Museum**

- Type of Museum: Religious and History
- Founded: 1993
- Governance: Orthodox Church
- Hours: By appointment
- Entrance Fee: Donation
- Number of Staff: 1

9. Madaba**1) Madaba Archaeological Museum**

- Type of Museum: Ethnographic, Archaeological and Old House
- Founded: 1974
- Governance: Ministry of Tourism and Antiquities
- Hours: 08:00 – 17:00 (daily)
- Entrance Fee: JD 3
- Number of Staff: 7

2) Madaba Folklore Museum

- Type of Museum: Ethnographic
- Founded: 1974
- Governance: Ministry of Tourism and Antiquities
- Hours: 08:00 – 17:00 (daily)
- Entrance Fee: JD 3
- Number of Staff: 7

10. Dead Sea

1) Dead Sea Museum

- Type of Museum: Geological, Ecological, Sociological and Dead Sea
- Founded: 2006
- Governance: Royal Society for Conservation of Nature
- Hours: 09:00 – 17:00 (summer)
09:00 – 16:00 (winter)
Closed on the first day of Eid (after Ramadan)
- Entrance Fee: JD 2 (foreigner)
JD 1 (Jordanian/Arab)
JD 0.5 (student)
- Number of Staff: 3

11. Karak

1) Karak Archaeological Museum

- Type of Museum: Archaeological
- Founded: 1980
- Governance: Department of Antiquities
- Hours: 08:00 – 17:00 (daily)
- Entrance Fee: Free / JD 1 for entrance to the site
- Number of Staff: 4

12. Mu'tah

1) Mu'tah University Museum

- Type of Museum: Archaeological
- Founded: 1981
- Governance: University of Mu'tah
- Hours: University hours / closed Friday and Saturday
- Entrance Fee: Free
- Number of Staff: 1

13. Mazar

1) Al-Mazar Museum

- Type of Museum: Archaeological
- Founded: 1968
- Governance: Awqal
- Hours: 08:00 – 15:00 (closed Friday)
- Entrance Fee: Free
- Number of Staff: N/A

14. Petra

1) Petra Archaeological Museum

- Type of Museum: Archaeological
- Founded: 1963
- Governance: Department of Antiquities
- Hours: 08:00 – 15:30 (daily / often closed Tuesday or Friday)
- Entrance Fee: Free / JD 20 for entrance to the site)
- Number of Staff: 4

2) Petra Forum Museum

- Type of Museum: Archaeological
- Founded: 1990's
- Governance: Department of Antiquities
- Hours: Open upon request
- Entrance Fee: Free
- Number of Staff: N/A

3) Petra Nabataean Museum / Wadi Musa

- Type of Museum: Archaeological
- Founded: 1994
- Governance: Department of Antiquities
- Hours: 08:00 – 15:30 (daily)
- Entrance Fee: Free / JD 20 for entrance to the site
- Number of Staff: 4

15. Ma'an

1) King Abdullah Museum

- Type of Museum: Historical and Archaeological
- Founded: 1994
- Governance: King Hussein University
- Hours: 08:00 – 17:00
- Entrance Fee: Free
- Number of Staff: 7

16. Aqaba

1) Aqaba Aquarium and Marine Science Station

- Type of Museum: Aquarium
- Founded: 1980
- Governance: University of Jordan and Yarmouk University
- Hours: 08:00 – 13:00 / 14:00 – 17:00 (closed Monday)
- Entrance Fee: JD 1
- Number of Staff: 1

2) Aqaba Archaeological Museum

- Type of Museum: Archaeological
- Founded: 1990
- Governance: Department of Antiquities
- Hours: 07:00 – 13:00 / 15:00 – 17:00 (daily)
- Entrance Fee: JD 1
- Number of Staff: 4

3) Museum of Sharif Hussein Bin Ali

- Type of Museum: Historical
- Founded: 1990
- Governance: Department of Antiquities
- Hours: 07:00 – 13:00 / 15:00 – 17:00 (daily)
- Entrance Fee: JD 1
- Number of Staff: 4

Roles and Functions of National Museum

22nd November 2008
SAPI Team

1. Present Conditions of Museums in Jordan

The present conditions of 49 museums, both public and private, were studied and are summarised as follows:

1) Type of Museum

Most museums in Jordan focus on archaeology, history and antiquities, except for the following museums:

- General
Al al-Bayt University Museum
- Anthropology
Museum of Jordan Heritage
- Folklore
Salt Folklore Museum / Folklore Museum / National Heritage Museum
- Books and Documents
Schoolbook Museum
- Contemporary Art
Darat Al Funun / Jordan National Gallery of Fine Arts
- Ethnography
Folklore Museum / Madaba Archaeological Museum / Madaba Folklore Museum
- Geology
Geological Museum / Dead Sea Museum
- Energy & Natural Resources
Geological Museum
- Science
Haya Culture Centre
- Military History
Martyr's Museum
- Philatelist
Museum of Jordanian Postage
- Virtual & Cyberspace
Museum with No Frontiers
- Numismatic
Numismatic Museum
- Automobile
Royal Automobile Museum
- Children
Children's Museum Jordan
- Religion
Fuheis Orthodox Museum
- Ecology
Dead Sea Museum
- Aquarium
Aqaba Aquarium and Marine Science Station

2) Foundation

Most museums in Jordan were founded in the 1980s and 1990s as follows:
The Jerash Archaeological Museum was founded exceptionally previously in 1923.

- 1920s: 1
- 1950s: 1
- 1960s: 4
- 1970s: 6
- 1980s: 13
- 1990s: 13
- 2000s: 3

3) Governance

The museums in Jordan can be classified into 7 management categories as follows; the Department of Antiquities (DOA), the Ministry of Tourism and Antiquities (MOTA), governs most of the museums in Jordan.

- Royal Court: 1
- Government: 5
- DOA/MOTA: 19
- University: 8
- NGO: 3
- Private Sector: 1
- Others (e.g. church): 4

4) Opening Hours/Days

Most museums in Jordan open daily as follows:
The Dead Sea Museum closes one day a year, the first day of "Eid" after "Ramadan".

- Opened daily: 21
- Closed 1 day/week: 7
- Closed 2 day/week: 5
- Opened by appointment/request: 5
- Opened during university hours: 2
- Closed 1 day/week & holidays: 1

5) Entrance Fee

The entrance fee of most museums is free as follows:
The entrance fee of the Royal Automobile Museum is separated into fees for foreigners and locals. The entrance fee of the Dead Sea Museum is separated into fees for foreigners, locals and students. The entrance fee of the Haya Culture Centre is separated into "Membership Fee" and "School Fee". The entrance to the Fuheis Orthodox Museum is by donation. The Children's Museum Jordan provides "Group Fee".

- Free: 28
- JD 1: 8
- JD 2: 2
- JD 3: 3

6) Number of Staff

The number of staff of most museums in Jordan is 1 or less than 5 as follows: The Jordan Archaeological Museum has 20 staff, the Royal Automobile Museum 45 and the Children's Museum Jordan 100.

- 1: 12
- 2: 3
- 3: 4
- 4: 5
- 5: 4
- 6 – 10: 8
- 11 – 20: 3
- 21 or more: 2

2. Position of National Museum

The National Museum shall be a hub of all museums in Jordan, both public and private. As the National Museum covers the whole history of Jordan from the prehistoric to modern periods as well as all the areas of Jordan, the National Museum shall represent all Jordanian museums towards the world.

3. Roles of National Museum

The National Museum shall take the leadership in upgrading the quality of museums in Jordan and encouraging the activities of museums in Jordan. In these days, all over the world, an active museum has been coming to one of the most attractive international tourist spot. Considering such a global tourism trend, the National Museum, in close cooperation with other museums in Jordan, shall play a main role of developing the overall tourism of Jordan.

4. Cooperative Functions between National Museum and Other Museums

The followings are tangible cooperative functions between the National Museum and other museums in Jordan:

1) Researches and Conservation

Researches in and conservation of artefacts that a museum will collect or has already collected are one of the most important museum activities. It is imperative for both National Museum and other museums in Jordan to collaborate with each other in those activities.

Both parties will carry out the following activities under the supervision of DOA or other relevant authorities such as RSCN:

- Exchange current and on-going information regarding researches and conservation on a daily basis.
- Hold an annual meeting for discussing research and conservation activities in Jordan at the National Museum.
- Hold an area session regarding researches and conservation, e.g. Syria, Lebanon, Iraq and Egypt, once two years at the National Museum.

- Hold an international conference regarding researches and conference, from all over the world, once four years at the National Museum.

2) Museology and Relevant Sciences

In general, the levels of museology and relevant sciences such as archaeology, history and exhibition technology is not sufficient at present. The National Museum shall, in cooperation with academic and scientific institutes in Jordan and the world, take the initiative in upgrading them through the above occasions.

3) Permanent and Temporary Exhibitions

So far there have been few activities among museums in Jordan to introduce activities of other museums in Jordan including their permanent exhibitions. At first the National Museum shall introduce the respective permanent exhibitions of other museum in Jordan to visitors, both local and international, by fully utilising their Website and printing materials. Then other museums in Jordan shall follow the National Museum under the supervision of DOA or other relevant authorities such as RSCN.

The National Museum has a sufficient space of the Temporary Gallery. By utilising the space, the National Museum will be able to hold respective exhibitions for other museums' collections in Jordan by loaning them temporarily. Vice versa, other museums in Jordan will be able to do the similar by utilising their respective spaces, either large or small.

4) Educational and Cultural Programmes

The Karak Archaeological Museum has been offering their own educational and cultural programmes to the people, students and children in the area focusing the traditional daily life techniques and arts and crafts techniques, as well as the Dead Sea Museum has also been offering the similar to visitors especially focusing on geology and natural resources in the Dead Sea area. The Historic Old Salt Museum will do the similar to the ones the Karak Archaeological Museum.

The National Museum has a plan to operate a mobile museum that will visit around all over Jordan with the essence of their exhibits for enhancing people's, students' and children's interests in and awareness of archaeology, history and culture of Jordan.

The mobile museum will be able to furthermore encourage the educational and cultural activities carried out by the Karak Archaeological Museum or the Dead Sea Museum, or to be carried out by the Historic Old Salt Museum. Furthermore, the mobile museum shall entice other museums in Jordan into carrying out their respective educational and cultural activities under the supervision of DOA.

5) Operation and Management

Legally as well as practically the National Museum aims to be an independent body, both financially and administratively.

All the museums in Jordan under the management of DOA has no rights at all to operate and manage their museums independently, neither financially nor administratively. From the viewpoint that the national institutes shall be governed under the unilateral conditions, it might be natural and rational; however, the fact that the main factor why the activities of museums in Jordan under the governance of DOA are so inert shall not be over looked.

The pragmatic and sustainable knowhow that the National Museum will obtain through their endeavours to be independent both financially and administratively shall jointly be possessed among other museums in Jordan through the above occasions described in the Section 1). Otherwise, museums in Jordan, except for a few private museums such as the Royal Automobile Museum, the Children's Museum, and so forth, will be unable to take off themselves from the existing situations.

In order to do the above, the DOA's full and flexible understanding of the future of museums in Jordan under DOA will be imperative.

6) Staff Training

Although the average competence of Jordanian staff of museums in Jordan is insufficient, there have been any training programmes in neither DOA nor other relevant institutes. The RSCN has been training their own staff or other trainees related to their own activities. For example, the staff of the Dead Sea Museum was trained along the training programme prepared by RSCN.

Considering such situations in Jordan, the National Museum shall set up their own training programmes for museum staff, and offer the opportunities for other museums in Jordan to train their staff in cooperation with DOA or RSCN through the above occasions in the Section 1) or other daily activities.

The examples of the Training Curricula are attached hereto.

7) Tourism Development

The respective areas and museums of Jordan have their own touristic attractiveness; however, in order to furthermore strengthen and develop the tourism market, of the international in particular, the areas and museums shall furthermore address to the tourism market, the international in particular, by networking themselves.

The National Museum, located in the heart of the downtown Amman, shall take the leadership in setting up such a tourism network as focusing on museum exhibitions and activities, and encouraging the tourism all over Jordan, both local and international.

In order to enhance the tourism promotion in Jordan, the National Museum shall set up a museum tourism network among other three museums constructed or renovated by TSDP (Tourism Sector Development Project) financed by the Japanese Government, e.g. the Karak Archaeological Museum, the Dead Sea Museum and the Historic Old Salt Museum. Suggestions on the tourism promotion will be followed in the later stage.