AL-MUNTADA AL-ISLAMI NATIONAL HEADQUARTERS ABUJA - NIGERIA: THE EVOLUTION OF ISLAMIC ARCHITECTURE IN NIGERIA

BY

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SEPTEMBER, 19991

DECLARATION

I do hereby declare that this thesis entitled "Al-Muntada Al-Islami NATIONAL HEADQUARTERS ABUJA - NIGERIA: THE EVOLUTION OF ISLAMIC ARCHITECTURE IN NIGERIA" is entirely my own research efforts. It has not been accepted in any previous application for the award of the degree of Masters of Science (M.Sc.) in Architecture by Ahmadu Bello University, Zaria.

All sources of information are dully and specifically acknowledged by means of references.

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CERTIFICATION

This Project/Thesis/Dissertation entitled: "Al-Muntada Al-Islami NATIONAL HEAD QUARTERS ABUJA – NIGERIA: THE EVOLUTION OF ISLAMIC ARCHITECTURE IN NIGERIA" by **DANJUMA IBRAHIM NKWENTI** meets the regulations governing the award of the degree of Masters of Science in Architecture of Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literary presentation.

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Dean, Postgraduate School	30/10/01 Date

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DEDICATION

This Thesis is dedicated to:

The All Mighty Allah who bestowed me with the faculties of perception and intuitions for ventures in the intellectual domain.

My humble parents, Mallam Hamadiko and Adama, who provided me with tender guidance and the urge to look at humanity with warm and affection.

My brothers and sisters who saw value in intellectual pursuits and supported my quest for the ultimate.

The course of architecture and those who sustain it.

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ABSTRACT

Architecture in its varied forms and limitless dimensions has been over the course of time and still, exerts an un-ebbing demand on both designer and user. The demand is for compliance with culture on the one hand and the ever growing 'high-tech' of modern life on the other. Alongside these dipoles, there is the demand for consistency and ease of use from the human's thermoregulatory mechanism, so that at any given moment, life would be lived without any undue stress. Be that stress from the feeling of alienation or adverse thermal conditions.

The above aspects therefore translate to cultural factors and milieu within which architecture must prevail. Thus identifying and harnessing the various entities that make or mar an architectural compliance with a given environment, culture and users becomes the more important in developing a scheme. In that regard, it was possible to investigate the genesis of Islamic architecture and trace its evolution in the Nigerian context Thereby, bringing out a synthesised design that invariably reflects both the inspiration and aspirations of its users, inspite of their diverse background.

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CHAPTER ONE

INTRODUCTION

1.1 PREAMBLE:

When a vast number of people is brought together, there is the possibility of inclusive or exclusive pursuit, which may mar or enhance the image of the city.

Abuja's development as a new Federal Capital attracts both local and international organisations as well as individuals. In this early stage of its development, when everything is in a State of a flux, there is the need for a guided development process, that will advert in advance, the chaos that is associated with most urban setups. Like in most developing cities, non-governmental organisations are striving to ensure a continuous and balanced growth both at personal and community levels.

Al-muntada Al-Islami, being one of these organisations is set to contribute its own quota in the development of the Federal Capital Territory.

1.2 111STOR1CAL BACKGROUND

Al-muntada Al-Islami (The Islamic Forum) is a non-profit Saudi based organisation with offices in some major cities and towns around the world including Africa, Britain and the United States of America It was founded in Britain in 1406 AH/1985 by some dedicated Saudi Students.

It has as a principal aim.

The propagation of the Islamic Culture.

And as objectives:

The training of the Muslim Ummah Relieving poverty within the Muslim Community.

Provision of facilities for recreation or other leisure time occupation within the sphere of social welfare.

Thus to enhance these objectives, the organisation sees to the following:

Establishment of multipurpose Islamic Centre and Conventional Schools

Organisation of short courses, workshops, camping, seminars, and conferences on various issues of Islamic interest.

Establishment of media houses and production of media consumable.

1.3 PROBLEM DEFINITION

"All forms, including urban form is perceived culturally, that meaning in architecture is transactional between cultural intentions and the object of perception."[1]

True as this may be the marrying of culture and form is usually a matter of convenience conducted in give and take parity. However, in practice, this is rather illusive. Chiefly because the nature of the project and its location, often more than not outweigh that balance. The case of a corporate headquarters, often obliged to exhibit an international character with all its polite aggressiveness, has as a matter of habit been picked by both cultural avant-gardes and environmentalists as brutal and culturally debasing.

Thus the headquarters of the Al-muntada Al-Islami, belonging to a particular cultural class other than that in which it is to be sited; and at the same time possessing an international character, (that of Islamic architecture) entails a delicate maneuvering is

[1] **Norberg S.C. (1994): In W.B. Qurix, History of Architecture lecture notes (B Sc III)ABU Zaria**

required to give it location acceptance. The intention of this project is not only to sort out that balance within the various defining parameters of form, culture and international image vis-a-vis the local background; a tentative step forward would be made to investigate whether an architecture can be corporate and still be Islamic' with a timeless flare.

1.4 MOTIVATION:

Utopianism, perhaps more than any other factor regularly overrides an architect's perception of a project. The more complex, the more challenging a project, the more interesting it is to most architects. The

choice of this project has some parallel and reflects a long held interest of the author. It is that of working with multi-functional spaces and diverse architectural entities under a single canopy. For this project, it is an additional chance to give a spiritual dimension to an architecture that is timeless.

1.5 AIM AND OBJECTIVES:

The principal aim of the project is to produce an architectural entity that would provide:

A conducive atmosphere for the collection and dissemination of information as well as ideologies through collective exchange or individual research.

An administrative structure for the organisation's activities within the national territory.

Hospice accommodation for itinerant scholars and their like, desirous of a conducive overnight stay.

The objectives are:

- Assess the underlying principles of Islamic architecture, especially as applied to offices and corporate buildings in an era wherein 'high-tech' architecture seems the order of the day.
- Make a particular statement that will find acceptance in its own light, yet accepted by its own right.
- Enable further research to be pursued by kin-minded scholars or give critics a chance to exercise their intellectual prowess.

1.6 SCOPE OF STUDY

The scope of the project is based on theoretical models for similar projects and dictated to a large extent by the brief's requirements. Basically, aspects of Islamic architecture have been studied, particularly those of relevance to the project. Though no indept analysis of the psychophysical background has been carried out, the evolutionary trend has been largely followed. Comparisons have been made to that of corporate architecture and elements of both schools have been adopted to form a unique entity, which this project sets out to reflect. This will be further defined in the various components, which include:

- An office complex
- A library unit
- Dining and allied facilities
- A conference theater
- A mosque
- Training units
- Back up and other facilities

1.7 METHODOLOGY OF STUDY

The particular nature of the project predetermines the pattern to be followed; namely;

- Review of related literature on the various aspects of the project
- Review of similar projects
- Focus interview with sponsors and a sample of end users
- Collection and analysis of site data
- Intellectual analysis and consultation with experts
- Intuitive decisions and personal initiatives where ever the need arose.
- Checking out and refining decisions taken tentatively.

1.8 CONSTRAINTS AND LIMITATIONS:

The main constraints so far encountered have been time and finance to get to the sources of relevant data for the project. Administrative bottlenecks have also featured prominently as setback for the pursuit of data.

As limitations perhaps the bylaws of the Federal Capital Territory should be sited as a factor that has limited or restricted the author's freedom of architectural articulation within the given site. The nature and size of the selected site also has some natural harnesses. Its closeness to a ravine and built up neighbourhood has some bearing in the final outcomes.

CHAPTER TWO

ISLAMIC ARCHITECTURE IN CONTEXT

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CHAPTER TWO

ISLAMIC ARCHITECTURE IN CONTEXT

2.1 DEFINITIONS:

The term `architecture' has quite a number of what one might call a definition. Depending on the level of specialty or professional sphere. According to the Oxford advanced learner's dictionary it is the "art and science of designing and constructing buildings; or the design or style of a building or buildings."[2] The Architects Registration Council of Nigeria (ARCON), takes a more technical approach to the definition. In section 13, referring to a standard and acceptable definition (from the amended Decrees), it states:

Architecture is "The art and science in theory and practice of design, erection, commissioning, maintenance and management and coordination of allied professional inputs thereto of buildings, or part thereof and the layout and master plan of such building or group of buildings forming a comprehensive institution, establishment or neighbourhood as well as any other organised space, enclosed or opened, required for human and other activities."[3] The term architecture is further classified into subgroupings and various styles. Amongst which is the term, ISLAMIC ARCHITECTURE. As this forms the base and raison d'être of this study, a number `attempted' definitions will now be closely analysed for a possible synthesized definition.

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[2] Cowie,A.C.(Ed) (1989): Oxford Advanced Learners Dictionary, oxford University Press,oxford (Britain),p51

[3] Majoroh, O.C. (1992) THE ARCHITECTURAL PROFESSION… In NIA Oyo State Chapter,Lecture Series Vol.1 p12

ISLAMIC ARCHITECTURE:

By now, it would have been thought that the definition of what constitutes `Islamic Architecture' is settled. Far from that. Scholars are still divided on the exact wordings as well as the concept. At best we can get a number of explanations which more or less revolve around a central theme. This is not surprising, given that most of the writers on the subject are either concerned with one aspect of Islamic architecture or simply give it a passing reference in a broader frame of architectural styles. Besides this, majorities of the writers are Westerners who differ somewhat in their opinion, as opposed to a growing crop of Arab Scholars. The following examples illustrate the diversity of the scholarly thoughts:

- "Islamic architecture at its best, and its most `Islamic', is truly a negation of architecture as conceived in Europe..." - ***Ernest Grube***
- Islamic architecture results from "... a Complexity of combined factors such as religious, political, social, cultural, spiritual and economic..." - ***Abou- Esh, A.***
- Islamic architecture is "the product of a religion rather than a country ... and exhibited local divergence in treatment and detail ... An architectural continuity that ran parallel with the history of Western architecture from the second country BC." - ***Sir Bannister, F.***
- "The architecture of the Islamic world throughout history adapted and responded to different cultures and existing traditions of buildings without weakening the spiritual essence which was its source of inspiration..." - ***Ernst Grube***

From the foregone, it would seem that a common theme prevails - the Islamic culture. Therefore, an abstract definition of Islamic Architecture will be as follows:

"Islamic Architecture is that which uses basic forms and spaces common to Islam, in deriving functional concepts."

Probably, this would seem froth with connotations that are not readily explicit. However, as a definition, it serves its purpose. The explanation of which would be apparent by the end of this chapter.

2.2 HISTORICAL BACKGROUND

Islamic architecture, unlike other styles that evolved or metamorphosed from their predecessors is a fusion of inherent styles that were dominant during its inception in the early 6th century. To be able to appreciate its evolution, it is necessary to fine-tune the historical frame that provided its diverse component and hence, a directional trends.

According to Sir Bannister Fletcher, the development of a distinctive Islamic architecture was a feature of expansion of Islam into Syria and Iraq, Egypt, the Maghreb and Spain in the period following the death of the prophet. Islamic architecture from the early Syrian period was rapidly characterised by sophisticated construction techniques in a variety of materials, marble and stone, brick and tiles, wood, plaster and metal and by rich and elaborate decoration. These developments however were limited to Asia, Persia, the Maghreb and the immediate environs.

Sessanid Persia, at the end of the 6th Century covered the entire Arabian Peninsular and extended from the Aral Sea to the Indian Ocean, as well as from the Mediterranean to the Indus. These diverse regions were to provide the springboard for developing architectural character that resulted from the growth and spread of the Islamic

culture. According to Sir Bannister Fletcher, this culture concentricity did much to unify the philosophies of the Islamic peoples, to govern their way of life and to unify their architecture. Further on, he asserted that, the synthesis of the styles of the many conquered peoples under the impact of one philosophy and one religion in the many different circumstances of the first four centuries of Islam, was a cultural achievement of which only one facet is an architecture fundamentally centered upon worship.

The architectural evolution followed from the various regional influences that were encountered in the first waves of ideological expansion. There are three main arms of these waves that essentially influenced the evolution of Islamic architecture. The first was a flow in the Northeast directions towards the Tigris and Euphrates basin, where the Sessanian Empire was sacked in 641 and much later Jerusalem. However, an attempt at the Capital of the Byzantine Capital - Constantinople met a stiff resistance. Thus, the movement towards the Northwest was checked, but not without the assimilation of Syria. The Westward expedition saw the fall of Egypt (640) the coast lands of the Mediterranean and further up into the Iberian Peninsular (761). The third and final arm was towards the Southeast direction, into the Iranian Plateau, Central Asia and eventually China.

This first waves of expedition was carried out under the Umayyad Caliphate whose headquarters was at Palestine. This caliphate was highly Hellenistic. As a result, the first century of Islam is said to have been imbued with Byzantine overtones, deriving much of its architectural inspiration from the vigorous Hellenism of Syria, Palestine and Lower Egypt. However, the Caliphate of the Abbasids, that overcame the Umayyads in 750 set a new trend of influences. The Abbasids first settled in Northern Mesopotamia, then the city of Peace (now Kadhimain near Baghdad) in 762 and finally, Samara in 832. Their reign of over 62 years began to diminish towards the end of the 9th Century. Their

provinces saw the rise of the Seljuk and Zenid dynasties in Central Asia and Afghanistan. In Egypt and Syria there was the rise of the Fatimid and the Tulunid dynasties. The architectural trend under these somewhat less prominent dynasties further evolved into regional varieties, though keeping a Central theme. In the Iberian Peninsular, the surviving Prince of the Umayyads - Abdul Rahaman I, following the Abbasids take over in Asia Minor, continued propagating the Hellenistic trend of Islamic architecture. It is this rulership that was responsible for the great Mosque at Cordoba (785 - 990). The architecture was otherwise referred to as `Mozarabic'. Much later, another remarkable structure, the Alhambra (Granada, 1339 - 90) was erected under the Nasrids dynasty - a remnant of the Umayyads that survived the Christians up to 1492. In-between however, from 1031 - 1118, when the Umayyads gradually lost their influence and eventually lost out to the Christians, the Almoravids moved up North from the Western Sudan. A local dynasty under their lordship - the Humids, built a palace at Toledo (1050). Elsewhere, in Egypt, the Mamluks overthrew the Fatimids and established a long rule, up to 1517 when the Ottomans outstead them. The Ottomans also defeated the Timurids in 1400, whose reign had been the main architectural patron during the 14$^{Th.}$ Century. The Ottomans had a great and vast rule, after capturing Constantinople in 1453. Their influence went as far as Vienna, Crimea, Egypt and the Hejaz, as well as the Barbary Coast. Two other great dynasties, the Safavids of Persia (whose influence went as far afield as Southern Russia) and the Moghuls whose dominance extended into northern and northwestern became prominent. These three dynasties continued influencing the evolving architectural style of the Islamic world, up to the turn of the century. The nineteenth and twentieth centuries saw the fostering of trade between various regions of the Islamic and non-Islamic worlds. Thus, trade routes greatly influenced further synthesis of the architectural styles.

Increasing global mobility and migration have resulted in the establishment of isolated Islamic communities in a good number of countries across the world. Most interestingly, the identity of the communities has been more or less preserved.

2.3 FORM AND SPACE

Both form and space are closely interwoven concepts that lend credence and distinction to an architectural style. The fact that form delimits space and space engenders form outlines the inherent relationship between the two concepts.

Generally, the perception of form depends largely on the intensity and direction of light. These two influence the perception of form. Thus, forms characterised by varying patterns, texture, colour and compositional massing will invariably be perceived under a fixed condition, such as a frozen scenario. Otherwise, it becomes a complex dynamics of luminous interplay of shades and shadows. And with every changing perspective of the observer, there is a new state of awareness. It is this last aspect that Islamic architecture seems to capitalise on, in the creation of some of its devastating and breath-taken master pieces. To achieve these, a number of architectural components and devices were carefully manipulated in a never-ending and sometimes illusive abstraction. In his study of the Mamluks architecture of Egypt (late 15th C and early 16th C), Abou -Esh (1955) noted that a variety of abstraction and techniques common to medieval architecture were employed to achieve startling effects. In the case of form, the following obtained:

DOMINATION

There was often an accentuated or an apparent dominant central or focal idea in the composition.

DUALITY AND COMPETITION.

This was characterised by a subdivision of the outside openings into double similar arches, which seem to split and weaken the unity of an arcade. There was also the avoidance in the interior design of Leewans equal in size or height.

UNITY IN UNIFORMITY AND VARIETY

Equally repeated ***mashrabeeyehs*** with similar patterns or textures give the effects of unity in Uniformity otherwise, when the patterns or textures are varied, then there is the effect of unity in variety.

COHERENCE

This was achieved by the provision of aesthetic potentials that evoke a sense of delight and satisfaction, as a result of the adaptation of geometric projections of elevations with respect to each other or that of different materials, colours, textures and lighting effects.

The above aspects are contained within or contain the fundamental components of Islamic architecture, which are domes, arches, vaults and columns.

DOMES

Domes are convex roofs of various geometrical forms. Examples of which include:

- HEMISPHERICAL (Dome of the Rock C. 684 Jerusalem)
- SAUCER (Santa Sophia, 532-537 Istanbul Turkey)
- POLYHEDRAL (Florence Cathedral, 1420-1436 Italy)
- ONION (St. Basils Cathedral, 1555 - 1561 Moscow)

ARCHES

Arches are curved structures that are used to bridge spans and support the load of upper structures. Examples include:

- HORSESHOE (MOORISH); (Great Mosque Cordoba, 785)
- BASKET (Semi elliptical); (Palatine Chapel, Aix-la Chapelle 790-798)
- TUDOR (Tower of London 1086 - 1097)
- LANCET (Westminster Abbey, London 1503-1519)
- TREFOIL (Beverley Minister, Yorkshire, C. 1300)

VAULTS

Vaults are simply translations of one or more arch profiles in order to generate a roof or a ceiling. Examples include:

- BARREL (This is a roof resulting from a single semi circular arch).
- GROIN (This results from the intersection of two barrel vaults).
- RIB (This is simple a grain reinforced by ribs)
- FAN (This is a rib vault, with the ribs radiating from the springing point.)

Another feature, which is common in Islamic architecture, is the minaret. The origin and evolution of the minaret follows closely on the influences resulting from the Ottoman, Moghul and Moorish activities in the respective regions. Originally, use was made of the palm tree, to extend prayer call to the faithfuls. Then, with the assimilation and conversion of Churches such as the St. Sophia, the bell towers were found to be ideally suited to the purpose. However, a number of variations, ranging from the Moorish Square (or Polygonal) form, the medium- range circular form of the Moghul and the slender circular long range of the Ottomans predominate current practices.

Forms in their own context do not determine the character and psychophysiology of any given space. These complex issues, particularly, one that must be given a spiritual dimension must draw from an assortment of physical and abstract composition. This abstraction is a direct consequence of capturing and portraying the intangible in all relevant areas of a design. According to Abou-Esh, the intangible results from the following Islamic norms:

- Respect for neighbours' privacy.
- Materialistic description of paradise in the Qur'an.
- Natural appealing elements (gardens, fountains, rich covering materials and bright ornamental colours) and sky reflected in the middle court fountain.
- Influence of luxury, usury and pleasures of life.
- Prohibition of figurative shapes or forms.

That said, the whole setup of any complex entails the organisation of multi-functional rooms around a courtyard and or roof terraces. The central element of this organisation is the changing perspective as movement progresses along any chosen axis. Ernst Grube is of the opinion that, typical of Islamic architecture, "there is no attempt to collect

numerous spaces and volumes within one great envelope whose facades then describe a single mass. Each component stands identified in its own right and is expressed as part of a sequence of linked structures. The Coordination and Articulation of the individual components together supply the prime discipline..." Elsewhere, he asserted that, "One of the most striking features of Islamic architectural monument is their focus on the enclosed space, on the inside as opposed to the outside, the facade or the general exterior articulation of a building". Further more, "Enclosed space, defined by walls, arcades and vaults, is the most important element of Islamic architecture ... most decoration (with the notable exception of the dome and the entrance portal) is reserved for the articulation and embellishment of the interior. Decoration in Islamic architecture, ... appears to be the creation of non-tectonic values, the dissolution of all those elements that in other architectural traditions emphasize the structure, the balance and counter-balance of loads and stresses - the actual mechanics of a building."

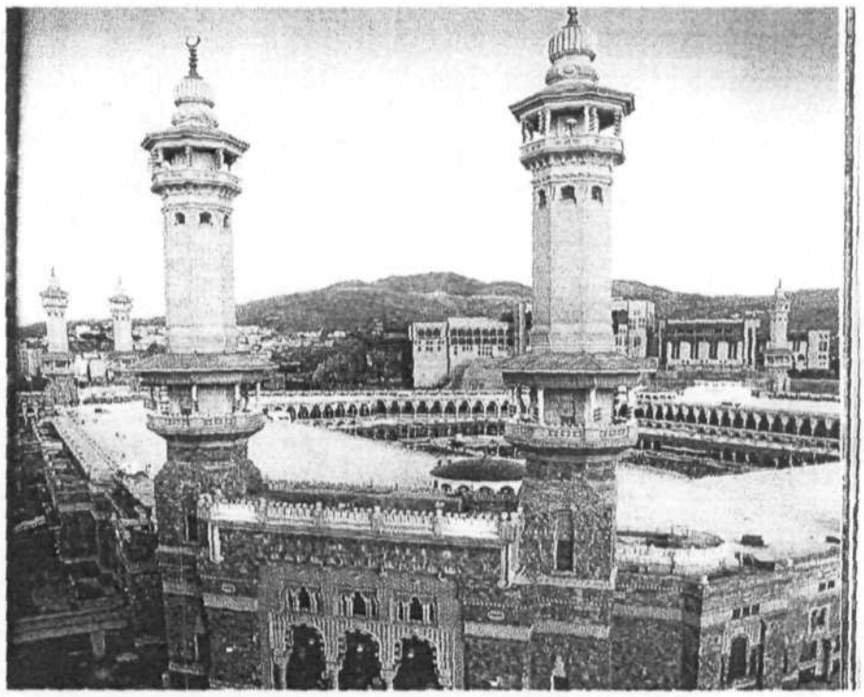
The nature of decoration is captured in the following lines by Daula Jones; "Islamic art is an art not so much of form as of decorative themes that occur both in architecture and in the applied arts, independently of materials, scale and technique. There is never one type of decoration for one type of building or object; on the contrary, there are decorative principles that are pan-Islamic and applicable to all types of buildings and objects at all times ... The layers of surface decoration are increased and the complexity of visual effects enriched by the use of carpets and cushions, which often reflect the same decorative schemes as those found on walls and ceilings. Floors and ceiling contribute to the fluidity of space by the nature of their decoration..." The elements of decoration he proposed, include: Calligraphy, Geometry, Floral patterns and Figures and Animals; though the last item's inclusion is not only debatable, but highly restricted if not out rightly forbidden.

2.4 CURRENT TRENDS

The evolution of Islamic architecture through the ages has been infused with diverse cultural overtones and undertones. Yet in major cities of the world, it is unmistakable and more so, continue to shape the culture of the peoples in direct contact with it. Increasing mobility and near-standardization or its internationalization has seen the dawn of our times. Projects in as far afield as the Americas, Australia, the Balkans Africa and South Asia share a common architectural spirit though with slight and sometimes overwhelming difference in local dialection. Sometimes, this has gone to an extent of almost tipping the scale, as noted by Garry Martin. "Oil wealth, along with social and political change, have threatened Islamic culture and traditions. This identity crisis is readily apparent in architectural design." Ronald Lewcock has also voiced a similar opinion, asserting that, "... too often in the Islamic world, the international style has been taken as a synonym for progress, as a sign that a country has 'arrived'." However, there is a major effort on the part of governments, developers and individuals to address the situation.

Notable examples of this effort can be seen in the works of currently executed mosque such as the two holy Mosques at Makkah and Medina. The Makkah mosque has witness its 11th and most glamorous expansion under the Custodian of the Two Holy Mosques - King Fahd ibn `Abdul al-Aziz, from 1988 - 1995. The exterior facade is quite modern by all Islamic standards. The composition is made of black marbles intercepted by horizontal bands of engraved white marbles. Fenestrations are framed in recessed white patterned marbles as well. The inner court, hemmed by two tiers of upper floors is

executed equally in fine mixture of brown and white marbles. The galleries are delimited by series of pointed arches derived from the Ottoman styles. (See plate 1)

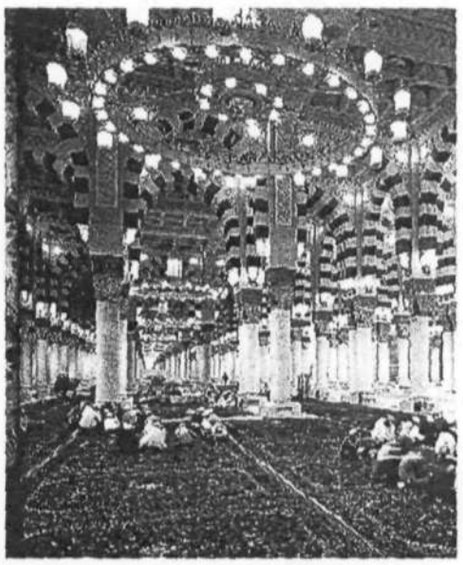


Source: Peter Sanders –ARAMCO WORLD 1999

PLATE - 1: Exterior View of Holy Mosque at Makkah

The Madinnah mosque on the other hand witnessed its 9th extension. The facade is executed in fine white marble with coloured horizontal bands running through the upper parts. The fenestrations are recessed and framed by protruding pointed arches, composed of a mixture of white and black marbles. The interior is composed of a number of courts, twenty-seven of which are under 15m-diameter sliding domes, two of which are shaded by square, umbrella-like awnings that blossom automatically in sunlight. The interior spaces

as well as the framing of the courtyards are lavishly decorated with Corinthian `orders' gilded at the upper portion. Pointed arches in a mixture of white and black marbles link the tops of the `orders'. The rest of the interior is complimented with a magnificent lighting scheme emanating from chandeliers and wall brackets. (See plate2).



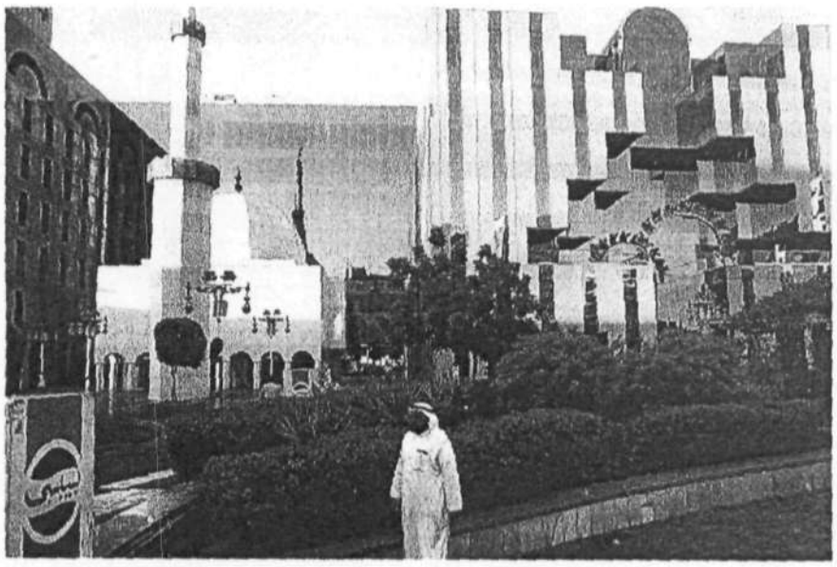
Source: Peter Sanders -ARAMCO WORLD 1999

Plate –2: Interior view of the Holy Mosque at Madinnah

Elsewhere, similar achievements can be seen blossoming. In Morocco, the King Hassan Mosque captures much Connotation and emphases of the new spirit in Mosque Construction.

On the individual front, quite a good number of projects can be seen flourishing in the Middle East. The following scenario captures the essence of the growing trend in the urban landscape of Jeddah (Saudi Arabia). The Mosque to the right stands out

undiminishingly amount giant towers. The cultural hybrid of styles draws from Moghul India, Mamluk Egypt and Post-modernism (See plate 3).



Source: Peter Sanders –ARAMCO WORLD-1999

PLATE 3: URBANSCAPE OF JEDDAH (Saudi Arabia)

2.5 CONCLUSION

The foregone analysis so far has tried to capture some of the essence of Islamic architecture - the genesis, the synthesis of forms and amalgamation of styles. To that effect, Ernst Grube, acknowledges that "Islamic architecture is distinctly different from non-Islamic architecture, and must be interpreted as one of the many emanations of the spirit of Islam ... The interpretation of it as a whole as well as the understanding of its specific parts can only be successful and meaningful if seen against the background of

Islam as a cultural, religious and political phenomenon." Two deductions can be derived from the above assertion. The first is that a concise picture can be established as to what Islamic architecture is all about. Simply put, it is a composition other than what is obtained in the West. It embodies the non-directional plan, the formulation of specific forms, endless repetition of individual units, continuous spatial flow and the continuous merging of functions. The second and perhaps most crucial deduction is that there has been a deviation from the spirit of the architectural concepts. In this regards, a number of concerns have been raised by both Rifat Chadirji and Abdul Wahid el-Wakil. Chadirji is of the opinion that 'function', which relied heavily on structure, as the genesis of plan was not deterministic or inevitable. Thus, he advocated for the intensification of plastic exploration whose roots are clearly closer to the native culture. Similarly El-Wakil thinks that the spirit has gone out of contemporary architecture as a result of interference from the professional corp. Therefore, for any meaningful and successful revitalization of Islamic architecture, the cultural roots must be harnessed and imbued with a spiritual dimension.

REFERENCES

1. Abou-Esh, I.M. (1955): DESIGN CONCEPTS OF ISLAMIC ARCHITECTURE, Ain-Shams University, Cairo (Egypt)

2. El-Darwish, A. (1980): *COMPATIBILITY OF INTERNATIONAL DEVELOPMENT AND ISLAMIC HOUSING.* In the Agar Khan Series on Islamic Architecture, Massachusetts Press, Boston. (U.S.A)

3. Ernst J.G. (1978): WHAT *IS ISLAMIC ARCHITECTURE?* In Mitchell, G. (Ed) ARCHITECTURE OF HE ISLAMIC WORLD, World of Islam Festival, London (U.K)

4. Fletcher, B. (1987): A HISTORY OF ARCHITECTURE, Oxford University Press, London. (U.K)

5. Lewcock, R. (1986): *REFLECTIONS ON CURRENT ARCHITECTURE IN ISLAM,* In the Agar Khan Series on Islamic Architecture, Massachusetts Press, Boston (U.S.A)

6. Noakes, G. (1999): *THE SERVANTS OF GOD'S HOUSE,* In Robert Aarndt (Ed), ARAMCO WORLD, Saudi Arabian Oil Company (Saudi Aramco) Dhahran. (Saudi Arabia)

CHAPTER THREE

CASE STUDIES

3.1 INTRODUCTION

3.2 SELECTED CASES

3.3 ISLAMIC CENTRE OF NORTH AMERICA

3.4 ONERSOL NIAMEY (NIGER)

3.5 AHMET HULUSI EFENDI COMPLEX

3.6 ISLAMIC FOUNDATION HQ-KANO

3.7 ISLAMIC TRUST OF NIGERIA HQ-ZARIA

3.8 AREWA HOUSE KADUNA

3.9 CONCLUSION

REFERENCES

- ISLAMIC FOUNDATION HQ (KANO)
- ISLAMIC TRUST OF NIGERIA HQ (ZARIA)
- AREWA HOUSE COMPLEX (KADUNA)

The analysis focuses on the following key aspects:

- HISTORICAL BACKGROUND OF THE PROJECT
- LOCATION OF THE PROJECT
- CLIENT/USER
- PROJECT ARCHITECTS
- SCOPE OF THE PROJECT
- PROJECT APPRAISALS

3.3 ISLAMIC CENTRE OF NORTH AMERICA (1975)

ARCHITECTS: Gulzer Haider (Carlton Univ. Ottawa Canada)

CLIENT: Muslim Students Association of USA and Canada

HISTORICAL BACKGROUND

The center was established by a joint concession of the Muslim Students Association of the United States and Canada (Al-Ittihad al-Talabatil Muslimeen fil-Wibujat al Muttahida Wa Kanada) in 1975. The principal aim was the centralisation of the numerous activities of the Association.

LOCATION

The complex is located within plain field, Indiana United States of America, and covers a land area of 84 acres.

SCOPE OF PROJECT:

The complex covers a comprehensive number of functions, which include:

- A Mosque of capacity - 500; for both male and female worshippers (25%)
- A library complex, comprising 100,000 volumes
- An office complex with storage facilities.
- An Educational/day care center
- Cabins and dormitories 500 itinerants
- Staff housing (7 families)
- Recreation and outdoor facilities.

PROJECT APPRAISALS:

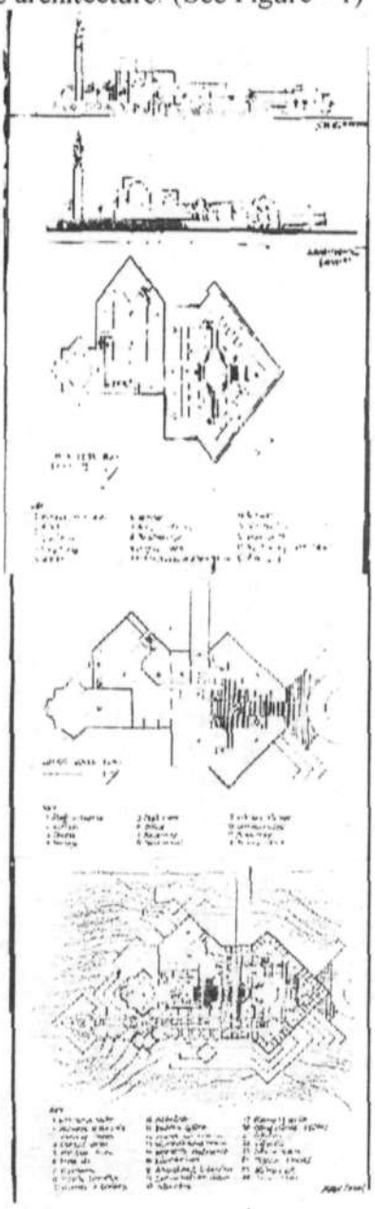
MERITS

- The project demonstrates an effective use of site
- The concept is well adapted to Islamic principles and aspirations.
- There is a commendable use of courtyard.

DEMERITS

- The elevations are generally flat and uncharacteristic

- The single minaret in the complex is rather isolated, belying the general composition of Islamic architecture. (See Figure - 1)



Source: Hanga B. -M Sc Arch Thesis ABU 1990

Figure 1: ISLAMIC CENTER OF NORTH AMERICA

3.4 ONERSOL NIAMEY (NIGER)

ARCHITECTS: Laszlo Mester de Parajd (1981)

CLIENT: Prof. A. Moumouni (Director ONESOL)

HISTORICAL BACKGROUND:

The project was conceived and developed as a model of self-reliance in terms of style, materials and energy consciousness. The principal aim of the project being research into energy, with particular emphasis on solar energy. Thus provision was made for all aspects of the research.

LOCATION:

The complex is located within Niamey the capital of Niger Republic.

SCOPE OF PROJECT:

The complex has a limited number of functions, which include:

- Physical facilities to house research development and fabrication
- Administrative units
- Documentation and research units
- Staff residence

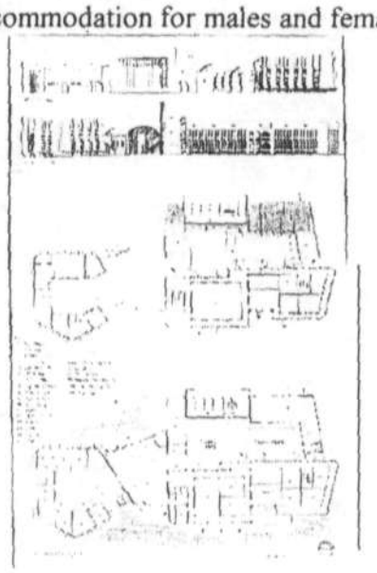
PROJECT APPRAISALS:

MERITS

- The complex is executed using indigenous architecture and local materials, thus cutting cost substantially.
- The design is energy conscious with naturally ventilated structure.
- The layout is well thought out, thereby providing ease of use and economy of movement.

DEMERITS

- In the context of Islamic architecture, there is a problem with the location of and separation of toilets within the complex.
- There is no distinct accommodation for males and females. (See Figure-2.)



SOURCE: Laszlo Mester deParajd-MIMAR13.1984

Figure 2: ONERSOL COMPLEX-NIAMEY (PLANS &ELEVATIONS)

3.5 AHMET HULUSI EFENDI COMPLEX

ARCHITECTS: Anonymous

CLIENTS: anonymous

HISTORICAL BACKGROUND

The project's conception is centered on the need to develop the Etimesgut Mosque (Ankara) at a larger scale, to address the growing need of its community. However, the project, designed in 1981 was unbuilt as of 1984.

LOCATION:

The project was initially proposed for Ankara (Turkey), but could have been a prototype for other candidate sites.

SCOPE OF PROJECT:

The complex was designed for the following:

- A Mosque
- A Conference hall
- Educational facilities
- Workshops
- Dormitories

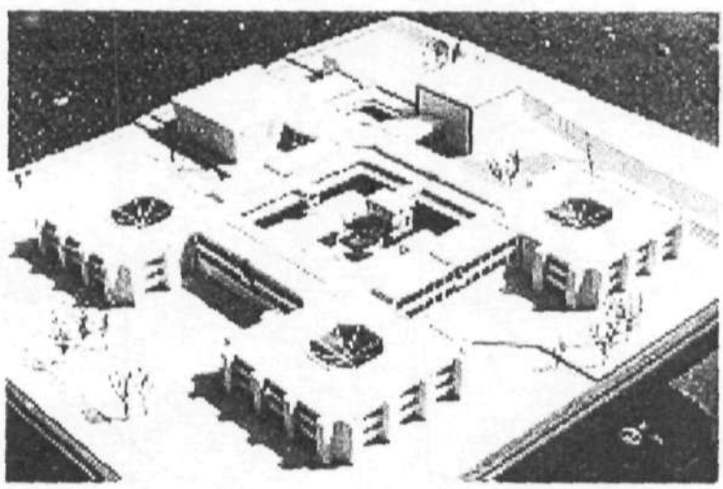
PROJECT APPRAISALS:

MERITS

- The project's conception demonstrates a marked unity in diversity.
- The use of interconnected courts puts it within the frame of Islamic architecture.
- The lighting effects within the mosque's interior are highly innovative.
- There is an overall functionality in the location of spaces

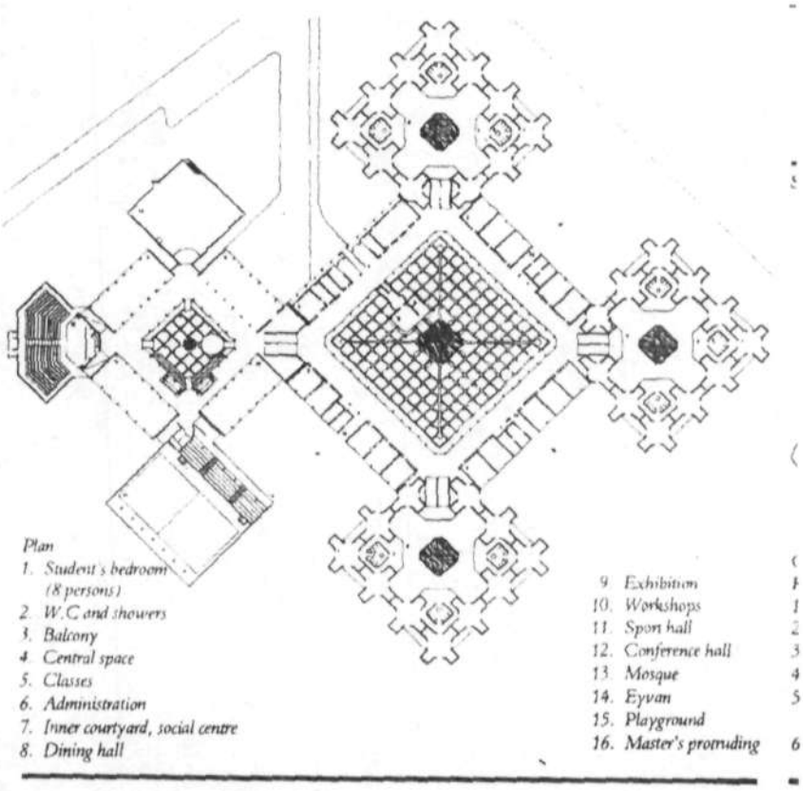
DEMERITS

- There is the lack of Islamic symbolism in form or character.
- There is rigidity in form that may hamper future expansion.
- The architectural scheme is more of modern architecture than Islamic (see Plate 4 &figure.3)
-



Source: Anonymous-MIMAR 13.1984

PLATE 4: AHMET HULUSI COMPLEX (MODEL)



Source: Anonymous-MIMAR 13.1984

FIGURE 3:AHMET HULUSI COMPMEX (PLAN VIEW)

3.6 ISLAMIC FOUNDATION KANO

ARCHITECTS: Descon Nig Ltd Zoo Road Kano

CLIENT/USER: Islamic Foundation/Generality of Kano City Ummah and Environs.

HISTORICAL BACKGROUND

The Islamic foundation (Kano) is a private organisation established in 1981 for the promotion of unity and understanding between Muslims as well as between Muslims and other fellow citizens. It is also for enhancement of the understanding of Islam and the propagation of its teachings and practice.

LOCATION:

The project is located along Zaria road in the outskirts of Kano City, opposite the Audu Bako Secretariat.

SCOPE OF PROJECT:

The project, whose first phase has already been implemented, was designed for:

- An Administrative block
- A Bookshop
- A primary/secondary school.
- A Mosque complex
- A Health clinic

The following components are yet to be developed:

- A cultural center
- An office tower
- A Conference Center
- A number of residential flats
- An Imam's Residence
- A Library complex
- A Shopping complex/warehouse

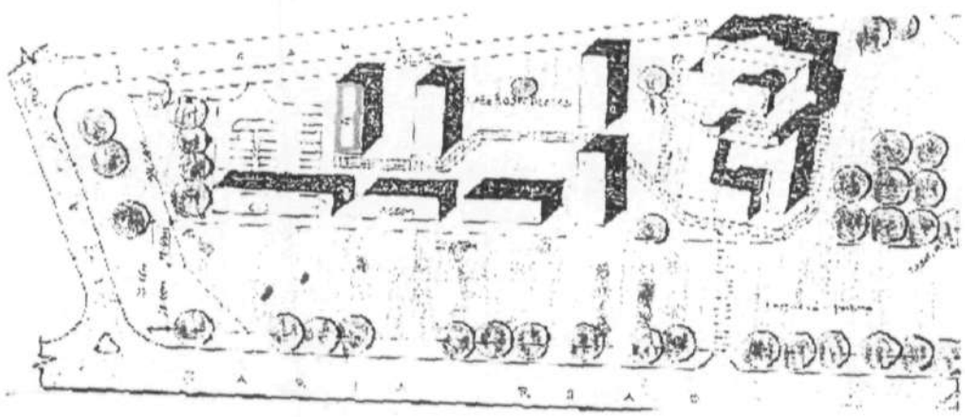
PROJECT APPRAISALS:

MERITS

- The design demonstrates an effective separation of Units within the site boundary.
- There is an adequate buffer zone from the major road.
- The Mosque depicts fine characteristics of an Islamic architecture.

DEMERITS

- The overall concept and form, apart from the mosque are not related to Islamic architecture.
- The mosque is rather dominant and over-emphasized.
- The administrative block is not distinguishable from the classroom blocks.
- Site drainage is not adequately attended to
- Security on the site is not properly planned. (See figure-4 and plates 5,6 &7).



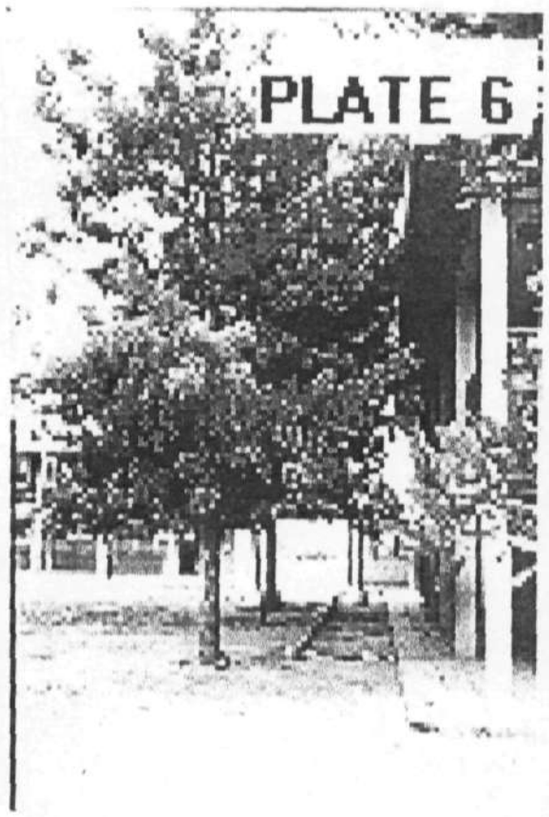
Source: Hangar, B. M.Sc. Arch-ABU 1990

Figure 4: SITE LAYOUT (Islamic foundation Kano)

The administrative Block is marked blue, to the top-left of the SITE PLAN.

The mosque is the giant structure to the right of the SITE PLAN







PATE 5: View towards the Mosque (top left)

PLATE 6: View towards the CLASSROOM Block (right)

PLATE 7: View towards the Administrative Block (bottom left)

3.7 ISLAMIC TRUST OF NIGERIA H.Q (ZARIA)

ARCHITECTS: Environmental Design Consultants (EDC)
No 5 Airport Road Kano.

CLIENT: ISLAMIC TRUST OF NIG (ITN)

HISTORICAL BACKGROUND

ITN was established in the 1970s in order to Coordinate Islamic activities in the various centers of learning in the then Kaduna State.

A design proposal tailored towards the centralization and effective coordination of various activities was made in 1984. Though unbuilt, it depicts a more than average administrative structure. At present the site is being developed by a different consultant.

SCOPE OF PROJECT:

The project was designed to include:

- A mosque complex
- An administrative block
- A library complex
- A Bookshop unit
- A Hostel complex/staff housing

PROJECT APPRAISALS:

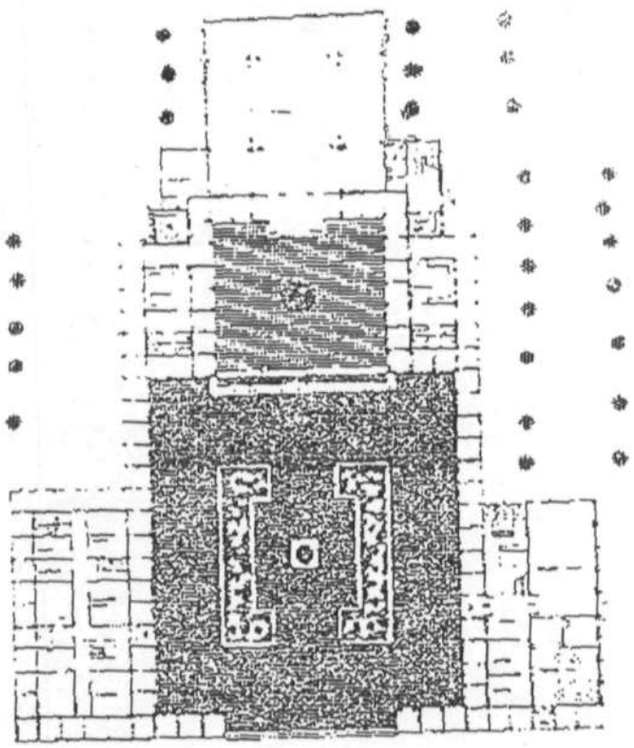
MERITS

- The concept provided for a central unit comprising all major functions
- The main unit is strategically located
- There is a judicious use of courtyards.
- The mosque complex makes a conscious attempt at portraying the general trend of Islamic architecture. (Moghul influences)

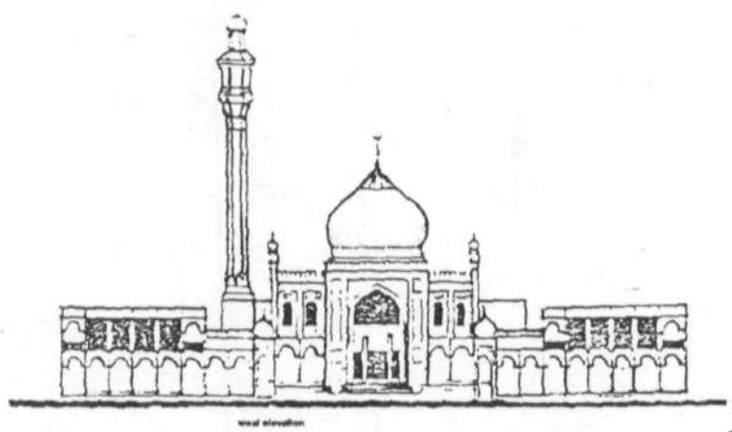
DEMERITS

- The complete separation of the main unit from the hostels/staff quarters shows some segmentation in planning
- The approach to the complex is not direct. Thus, may not explicitly guide visitors to the complex.
- The Architectural styles are not harmonized and regional tendencies are completely absent, or neglected.

The drawings below, (Figure- 5) show the layout of the main unit and the elevation of the main approach.



PLAN VIEW



APPROACH ELEVATION

Source: HANGAR, B. M.Sc. Arch-ABU, 1990

FIGURE 5: ISLAMIC CENTER ZARIA

3.8 AREWA HOUSE (KADUNA)

ARCHITECTS: HOME DEVELOPMENT LTD (KADUNA)

CLIENT: KADUNA STATE/A.B.U, ZARIA

LOCATION: The project is located along Ali Akilu Road Kaduna.

HISTORICAL BACKGROUND

The project was initiated in 1989, with the objective of it serving as a Research Center and Museum of International Repute, and as a legacy of the premiership of the former Northern States.

PROJECT SCOPE:

The fully implemented scheme, comprise:

- A Museum Complex/Galleries
- A Conference Hall/Auditorium for 350 prs
- An office complex
- A library complex/Archives (30,000/20,000) Vol.
- A documentation and conservation unit
- A resource center for replica and modeling
- And audio visual unit
- Technical areas
- Work Room and Spacing
- - Restaurant (80 people)

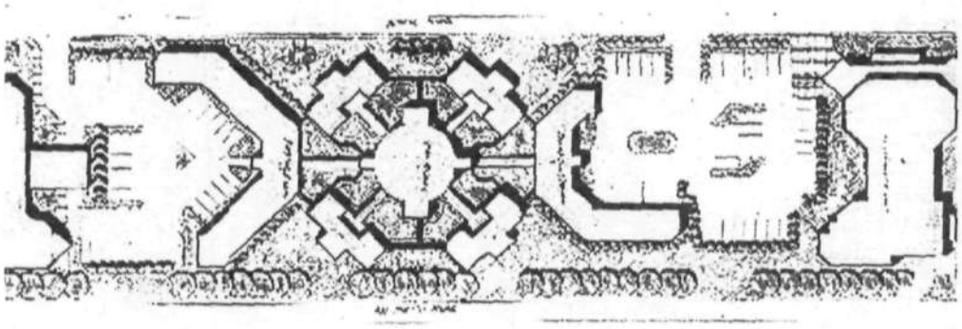
PROJECT APPRAISALS:

MERITS

- There is an effective distribution of activity areas within the complex.
- There is a judicious use of courtyards
- The project exhibits an appreciable attempt at a regional expression of forms.
- There is a good attempt at landscaping.
- The adjoining Sultan Bello Mosque compliments the scheme and helps accentuate the Islamic background of the layout, though with some noticeable contrast.

DEMERITS

- The individual units are rather scattered within the complex
- The buildings in the foreground are rather squatted, thereby diminishing their character.
- The architectural finishes are not appropriate, especially in the interior spaces (see Figure and Plates 8 & 9).



Source: Home development (Nig) Ltd-AREWA HOUSE, 1984

FIGURE 6: SITE LAYOUT (SHOWING THE NEW WING)



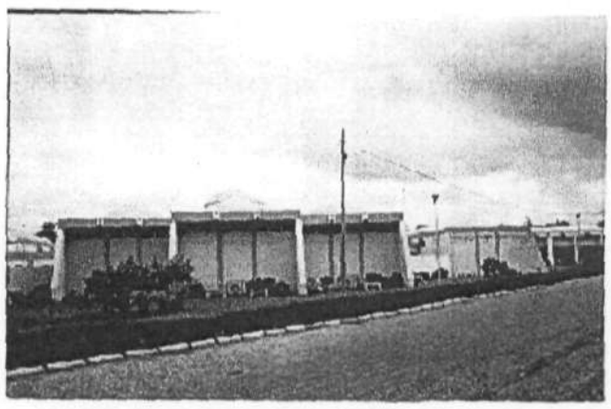


PLATE 8: View of the Complex from Ali Akilu Road (left)

PLATE 9: View of the Complex from Internal Road (right)

3.9 CONCLUSION

The above cases that served as a comparative and formative background to the ongoing project have all tended to show major shortcomings rather than strong potential for emulation. However, the individual components that have been well treated, will no doubt serve as a springboard in the current pursuit. Of note is the use of passive energy in the ONERSOL Project, the inculcation of a spiritual dimension in the case of the Islamic Center of North America and the Regional Tendency shown in the AREWA HOUSE project.

REFERENCES:

Home Development (1989): Design Report on the Design of Sardauna Museum and Satellite Galleries, Arewa House (Kaduna).

Hangar, H.B. (1990): In Search of Traditional Identity in Islamic Architecture M.Sc. Thesis (Arch), ABU Zaria

Mimar 13. (1984): Architecture in Development, concept Media, Singapore 1024

CHAPTER - FOUR

THE EVOLUTION OF ISLAMIC ARCHITECTURE IN NIGERIA

4.1 INTRODUCTION

4.2 HISTORICAL BACKGROUND

4.3 REGIONAL INFLUENCES

4.4 CURRENT TRENDS

4.5 CONCLUSION

CHAPTER - FOUR

THE EVOLUTION OF ISLAMIC ARCHITECTURE IN NIGERIA

1.1 INTRODUCTION

Both historical and geological studies have been active within the nineteenth and twentieth centuries in West Africa. However, little attention has been given to the evolution of architectural styles. Even where attempts were made to document the architecture of the continent, it was either hastily done or in some cases dismissed as non-architecture. With the exception of Susan Denyer and A.H. Leary, studies in this area are rear and far between, particularly when it comes to Islamic architecture in Nigeria. It would seem that apart from contradiction in terms, the path of the trend, from its genesis in Madinnah, to the Nigerian territory is not only long and tortuous, but equally difficult to exonerate. However, an attempt has been made to piece together, the various dimensions that will permit a global, as well as local picture to be created. Hence, the Historical backgrounds. Regional influences and current trends have been carefully scrutinised to generate the general mechanism of the evolution.

4.2 HISTORICAL BACKGROUND

In an earlier part of the current project, the genesis of the Islamic architecture was identified as having diverse influences. Of particular note were those of the Ottomans, the Moghuls and the Moores. These three influences are central to what is obtainable today in the Nigerian national territory.

The Nigerian national territory is a landmass extending from lat. (4° – 14°) N and long (5°-15°) E. The country is bounded to the North by NIGER Republic, to the South by the Atlantic Ocean. To the West, it is bounded by BENIN Republic and to the East by the Republic of CAMEROON. The populations is made up of over two hundred earthnic groupings among which are Hausa, Yoruba and Ibos. These three main subgroups play a major rule in shaping changes in all sphere of the national life. However, as Islam and Islamic architecture are concerned, the role played by the Hausas dates back to the pre-Islamic eras, Trans- Sahara trade, the formation of the Sudanic empires and later, the activities of Uthman dan Fodio and subsequent scholars. To understand how vital the Hausas were, it is necessary to look at the historical perspective that engendered them. "According to Susan Denyer, `Hausaland is the name given to a cluster of states which grew up around several of those towns North of the Niger-Benue Confluence'. In contrast, Ahmed (1988) writes that `It is an area lying South of the Sahara and West of the Sudan, characterised generally by Savannah climate, soils and vegetation"[4] Further, we note that "Each Hausa town attracted a heterogeneous collection of inhabitants, Merchants from North Africa and neighbouring settlements... The political and spatial foci of these towns were the Emir's palaces, the market places and the Central Mosques."[5]

[4] M.D. Ahmed (1992): History of Architecture Lecture Notes (B.Sc. I) Dept.of Architecture-A.B.U Zaria

[5] M.D. Ahmed (1992): Ditto 4.

The above quotations capture the mood during the early Islamic period, dating from the 14th C. onwards. Prior to that, however, the original settlers were Negro - Africans called the Maguzawa - Culturally hunters and idol worshippers. In about 1000 AD, larger groups of people, probably from Asia Minor penetrated Africa. They overpowered the Maguzawa, resulting into an assimilated culture, of a ruling caste or class of people otherwise termed the Hausa or Hobe. A second wave of movement from the areas around the Fouta Djellon Mountains in the West, brought in the Fulanis, whose empire (first three decades of the Nineteenth Centuries) completely engulfed the Hausa States.

Throughout the turbulent history of the `Sudan', beginning with the Almoravids' sacking of Ghana in 1240, Islam played a central role in the rise and fall of Empires and States, notably: Mali (1224-1473), Songhai (1375-1591), Hausa (C.1350-1830) and Fulani (1804-1820).

Two other factors are worth mentioning here, because of the influence they had on the architecture of the `Sudan' and of Nigeria in particular.

The first is that, Islam was first brought into Hausaland from Kanem (12th - 13th C), as a result of a diversion of trade route in the Niger region, "into Hausaland via the Tripoli - Ghadamese - Ghat-Air route"[6]. The second is the Moroccan, conquest of the sub region in 1595, under Sultan Al-Mansur. These two influences generated not only Scholarly exchanges, but cultural as well. Among which is the building character of the region.

[6] Boahem A. (1982): A History of West Africa, longman group (London etc.)

4.3 REGIONAL INFLUENCES

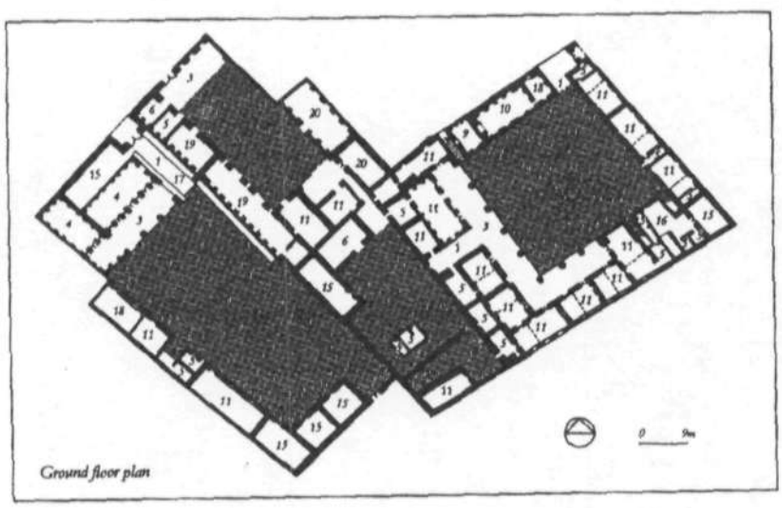
The cultural impacts that resulted from wars of subjugation and commercial activities are two factors, without which the evolution of Islamic architecture in the sub region and in Nigeria would be quite difficult to trace.

The best track, which by now has been universal in comprehending and assessing the evolutionary trend, is the Mosque. Beginning with the prophets' house, a simple structure that served both as a residence and worshipping premises, a great variety evolved during the early and mid eras of the spread of the faith.

The case of West Africa and of Nigeria, though deriving directly from the Ottomans (along trade routes with Egypt) and the Moores (along trade routes and domination from Morocco) exhibited a rich variety of local building techniques. To begin with, the architectural style that is commonly referred to as '***Hausa Traditional Architecture***', can be traced to West Africa, the Maghreb, Southern Spain and as far a place as Kuwait.

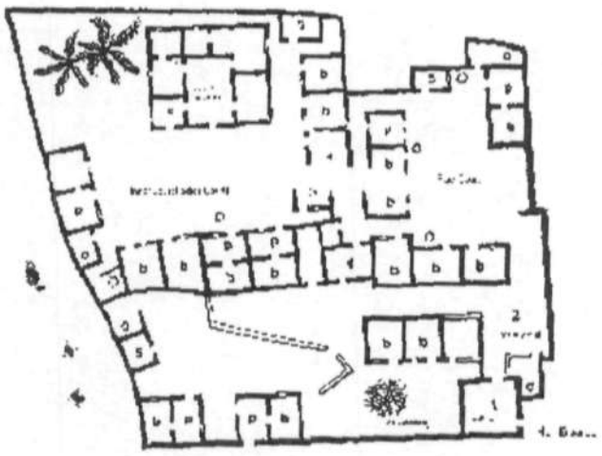
The main feature of the architecture is the use of materials and construction techniques. Because of a common reference latitude, climate and vegetation are almost the same. Therefore, a natural consequence for the use of mud or baked earth for construction. The buildings are characterised by flat roofs or domes, with projecting eaves. In the case of the Kuwaiti and Maghrebian houses, the facades and surface finishes, all bear evidences of the architecture that evolved to what is today known as '***Hausa Traditional Architecture***'. For instance, the flat roofs with projecting spouts for draining the roof are all the same without any variation in either the Kuwaiti or the Maghrebian Construction.

Additionally, the layout of a typical compound shows a concept employing multiple courtyards. (Though courtyards are remotely associated with early Persian designs, they now form an integral part of Islamic architecture.) The concept is a common feature in what can be called an Islamic house, particularly in Northern Nigeria. Figure-7 shows a typical layout of the Kuwaiti houses, while figure-8 depicts a similar layout in the environs of Zaria City. The elevations and courtyard details are almost the same, though in the Kuwaiti houses (Plate - 10) the influence is more of Moghul India, while the Maghrebian houses (Plate -11) tend to exhibit Moorish flares and in some cases with an air of Ancient Greek, notably of Crete and Attaca. The detailing of the arches at the entrances as well as those defining the internal courts all emphasis the regional variation. A some what similar pattern is exhibited by the two houses in Zaria City.(Plates 12 &13)



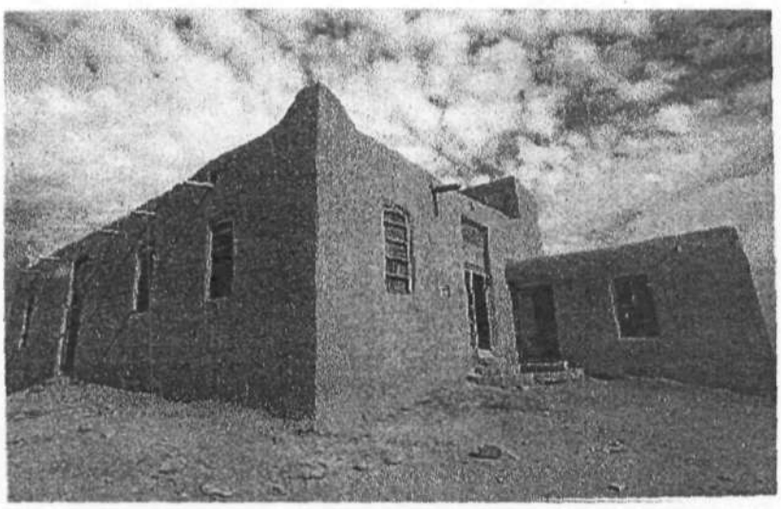
Source: Huda Al-Bahar –Mimar 13,1984

Figure-7: Plan view of the Al-bader House



Source: H. T. Sa'ad – Habitat II, 1996

Figure – 8: Plan View of a Hausa Compound in Zaria



Source: Hudar Al-Bhar –Mimar 13,1984

PlATE –10 : Approach of the Sheikh's palace on Failaka Island, Kuwait

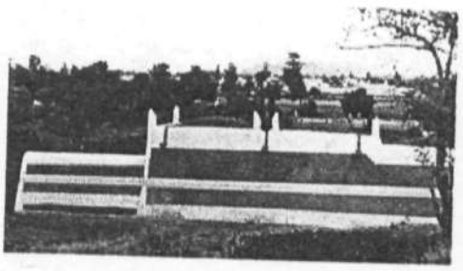


Source : Pierre Joly and Vera Cardot –Mimar 13,1984

PLATE - 11: Approach to a Djerba peasant's dwelling, Tunisia



Source: H. T. Sa'ad – Habitat II,1996



Source: A. W. Urquhart – Planned Urban Lanscapes of N. Nig

PlATE – 12 : Approach to a compound in Zaria (left)

PLATE-13 : Exterior View of a compound in Zaria (right)

However, as pointed out earlier on, the main harmonizing development of Islamic architecture to date remains the mosque. Regional variations, nonetheless, persisted over the whole period of its evolution until quite recently. In the West African sub region, notable examples can be seen in the mosques of AGADEZ (Great Mosque, 16th-19th C)

KANO (Friday Mosque 15th-19th C), ZARIA (Friday Mosque 19th). All the mosques of the West African sub region exhibit a common characteristic, showing influences along the line of North African and Kuwaiti traditional houses. However, the NAMOU, (Friday Mosque 18th-19th C), Guinea, was entirely constructed of a vernacular tradition. The conical thatched structure is massive giving it a dominant appearance. Aside from the square-plan sanctuary, all else is rudimentary; reminiscent of the pre settled Fulani huts.

4.4 CURRENT TRENDS

The evolutionary trends that have led to various Islamic architectural developments in the West African sub region and eventually the Nigerian national territory show somewhat a common characteristic. There is therefore, a marked influence on the regional style. In fact, during the colonial era and the decades that preceded it, a good number of public buildings in the West African sub region and the Maghreb were tailored along the evolving Islamic architectural style. Notable examples of these can be found in the law courts, Segou-Mali 1930's. The entrance foyer is embellished with four Moorish arches on classical columns. The Bank of Rome building, Tripoli, Libya (Alessandro Limongelli - 1930's), also show the use domes, segmental arches and classical columns. Of particular note is the use of plain surfaces, intercepted by horizontal band and framed fenestration.

A later generation of styles that has come to be known as Hausa traditional architecture, can be seen in the design of the magnificent palaces of the former northern states. Notable examples can be found in the Emirates of Sokoto, Ilorin, Kano (See Plate -14) and Zaria (See Plate 15).

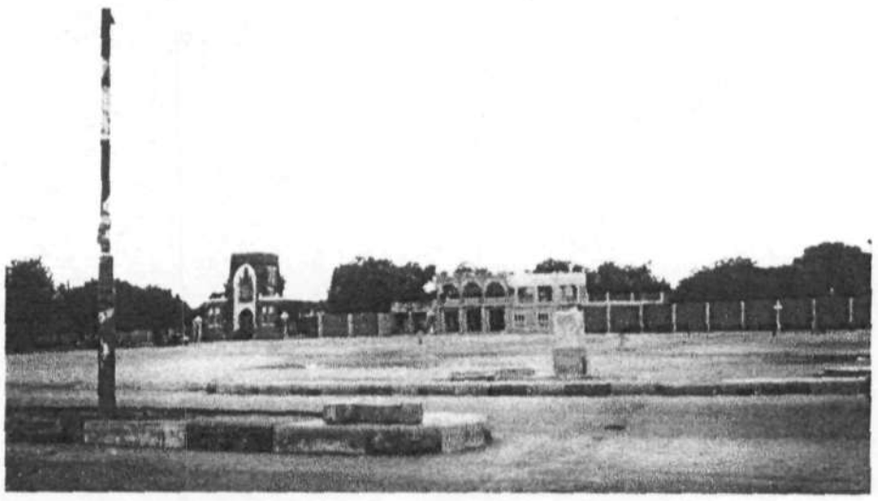


PLATE –14 : Approach of the Emir's Palace Kano



PLATE –15: Approach of the Emir's palace Zaria

The main impact though remains on the domain of mosque architecture. The range development in this area has progressed from when mosques were modeled along traditional concept, through those that exhibited either Christian or Brazilian influences, such as the Ansar-Ud-deen Mosque Abeokuta, and the Ali Balogun Mosque Lagos.

However, by the turn of the 20th C, the international character had almost completely taken over the national territory. An example can be seen in the Ilorin Central Mosque of the C.1960's that depicts Ottoman minarets, two tier domes and Romanesque arches.

Nowadays, the evolving trend can be observed in the remodeled Zaria Friday Mosque. It was enlarged sometimes in 1978 to include large polygonal minarets, and other features that are now common place (see Plate - 16). In similar manner, the Friday Mosque Kano (Plate -17), the Sultan below Mosque Kaduna (Plate - 18) and the National Mosque Abuja (Plate - 19), all show a mixture of the international vocabulary.



PLATE –16: Zaria Friday Mosque



PLATE –17: Kano Friday Mosque



PLATE-18: Sultan Bello Mosque, Kaduna

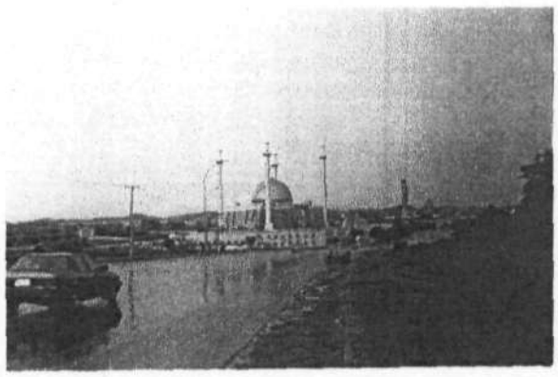


PLATE-19: National Mosque Abuja

However, the advent of modern architecture, has tended to pool buildings that are not strictly Islamic in usage or of origin in character into a new class. This is common in the former North of the Nigerian National Territory. The first of such structures were developed by colonialist administrators. Notable examples can be seen in the Native Authority (N. A.) Offices that were made up of a hybrid of 'modern' and indigenous styles. The Zaria Native Authority (N. A.) Office (Plate - 20) shows a prototype of such designs. A combination of a series of arches, deep verandahs and 'soro' roofs were carefully integrated with modern glazed windows and pointed stone structural walling.

A similar, but advanced undertaking can be seen in the Katsina State House of Assembly (Deen Arc, 1992). The court wing of the recently renovated Lugard Hall (Mrs. G. Carpa-Contractors, 1951) shows an elaborate use of domes typical of North Africa. In a somewhat, traditional approach, the Kano State Government House reflects derivatives of Moorish motifs (see Plate – 21).



PLATE –20: Zaria Native Authority Office



PLATE –21: Lugard Hall ,Kaduna

The lesser and not so pronounced influences, unlike, the foregone categories are noticeable in para-governmental organizations such as the Arewa Hotels. They make extensive use of arches and domes in the entrance lobbies and facades, to reflect aspects of Islamic architecture. Examples can be found in the Sokoto Hotel (A. F. Partnership, 1991 - 1992) and the Hamdala Hotel Banquet Hall (Peadamb Nigeria Ltd., 1997). The N.N.D.C., Head Office along Ali Akilu Road - Kaduna, the Bank of the North Headquarters building Kaduna, share similar entrance situation treatment. They are both generously treated to arch - entrance lobby and classical columns. The Habib Bank, off Ali Akilu Road, however, marks a radical departure. Though the composition is made up of arches, classical columns and a dome, the overall effect is outstandingly postmodern (see Plate - 22).

The Arewa House Complex is another dimension. The complex embodies what the renowned historian and commentator Professor Ali Mazrui once termed a triple heritage. Its composition makes a delightful combination of courtyards, arches and domes. It integrates office, conference halls and museums. The exterior is executed in modern materials.

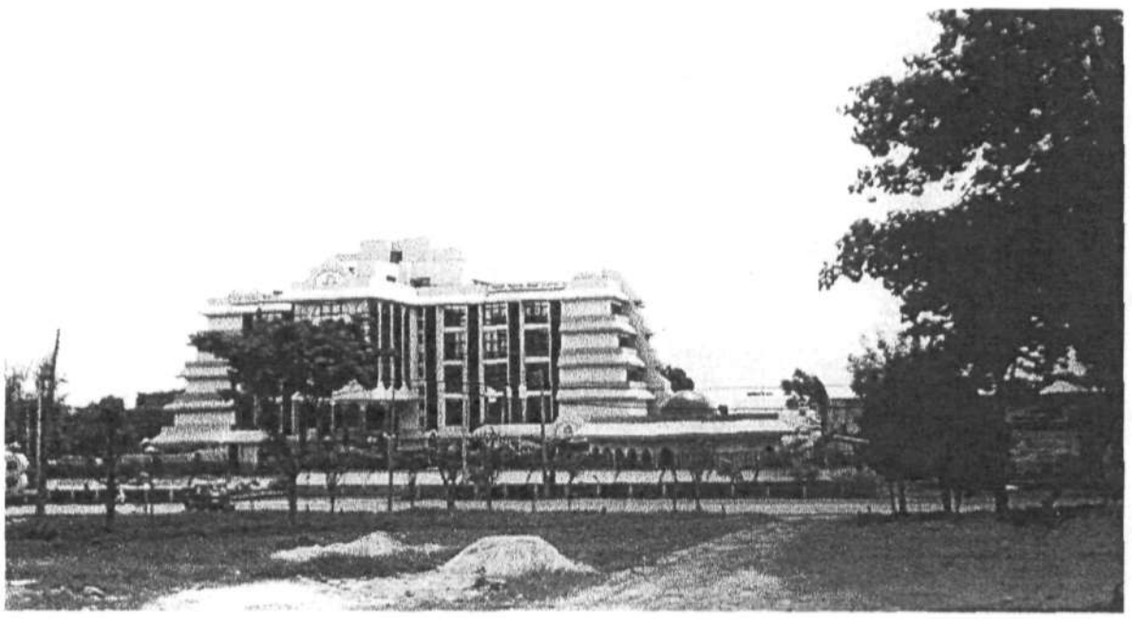


PLATE –22: Habib Bank, Kaduna

4.5 CONCLUSIONS

The inherence of change and innovation in architecture runs parallel with cultural metamorphosis and social assimilation. Islamic architecture, from its inception in the early Madinnah period to the current global nature, has been both receptive and innovative. Today, though occasional regional variations are common; there is standardization that can be noticed. This is though limited to Mosque constructions.

In the West African sub region and particularly parts of northern Nigeria, the wave of change was generated by merchants, wars of subjugation and presently by constant movement, and voluntary assimilation.

So far the evolutionary trend has depicted three major sub-grouping of Islamic architecture. The first is the development along purely traditional lines. In this category, mention can be made of Emir palaces of the former northern states. The second is characterised by hybrid developments such as the Arewa House Complex. The third and final sub-grouping is the development along purely modern lines. In this category, note can be made of para-governmental offices and banks.

Whatever, the case, the evolution of Islamic architecture in Nigeria has met and assimilated cultures and styles. In the cause of time, it has become the watershed of many non related ventures so much so that, it is at times confused with modern architecture, whose vernacular is clearly discernible.

REFERENCES

Al-Buhar, H. (1984) : *TRADITIONAL KUWAITI HOUSES*, in Khan, H. (ed), MIMAR13- Architecture in Development,Concept Media, Singapore

Danjuma, I.N. (1998): *THE INFLUENCE OF ISLAMIC ARCHITECTURE ON MODERN ARCHITECTURE IN NORTHERN NIGERIA*, A seminar paper presented to the Dept. of Arch., ABU, Zaria.

Joly, p. & Cardot V. (1984): *WHITE SILHOUTTES OF DJERBA*, in Khan,h. (ed), MIMAR 13- Architecture in Development, Concept Media, Singapore

Leary, A. (1998) : *THE DEVELOPMENT OF ISLAMIC ARCHITECTURE IN WEST AFRICA*. In Mitchell G. (ed): Architecture of the Islamic World, World of Islam Festival, London

Saad, H. T. & Ogunsusi, V. (1996): *UNITY IN DIVERSITY, CONTINUITY IN CHANGE*: The Traditional Architecture of Nigeria, A.B.U. Press, Zaria

Urquhart, A. W. (1976): PLANNED LANDSCAPES OF NORTHERN NIGERIA, A.B.U. Press, Zaria

CHAPTER FIVE

STUDY AREA

5.1 INTRODUCTION

5.2 SITE LOCATION

5.3 RELEVANT DATA

5.4 CLIMATOLOGY

5.5 SITE ANALYSIS (PHYSIOGRAPHY)

5.6 PLANNING REGULATIONS

5.7 CONCLUSION

REFERENCES

salient features. It is a near obligation for anyone directly or indirectly related to the development of a site, to carryout a detail micro-climatic analysis of the site and to compare it against the general macroclimate. Then and only then can the historical and other aspects of the site be logically interpreted and synthesized for the design purpose. In that respect, the site for the current project will be subjected to the various analyses that should yield a conducive and feasible result.

5.4 CLIMATOLOGY

This is a terminology that applies to the over-riding climatic conditions in the given area and comprises; rainfall; wind patterns relative humidity and sunshine hours.

5.4.1 Rainfall

Rainy season is experienced on the site between April and September, with a concentration in three or four month (180-190) days. The peak of about 350mm is recorded in August and September. There is therefore need for drainage to handle large volume of rapid run- offs. Exterior finishes and roofs should also be capable of withstanding the adverse effects.

5.4.2 Wind Patterns

The climate of the Federal Capital Territory (F.C.T) is dominated by two major air masses. The NorthEast trade winds originating from the Sahara desert are associated with the dry season. The South West trade winds originating from the Atlantic Ocean, are cool and moisture laden. These winds otherwise known as the Tropical Maritimes are responsible for the wet season. There are also frequent occurrences of `squall lines'

resulting in RainStorms. These originate from the Jos Plateau, travelling in an East-West direction, usually during late afternoons at the beginning and end of the rainy seasons. Intense relief rains are also frequent, as a result of convection activities around the Abuja Inselbergs.

There is therefore need for both structural and other methods for the protection of structures on site.

5.4.3 Relative Humidity

The frequency of rain and concentration at particular periods of the year results in increased humidity. The maximum ranges between (50 - 95)%, occurring at 0700 hours and 1400 hours. During the dry season, humidity is lowest, at 20%.

As the highest range far exceeds the required limit for thermal comfort, there is need for proper ventilation.

5.4.4 Sunshine Hours

Sunshine hours are dependent on the cloud cover. During the rainy season, the minimum is recorded in August when rainfall is intense and almost continuous. The highest amount occurs during the dry season when rains are minimal. An average of (2500-3500) hours is recorded for the Federal Capital Territory (F.C.T). This therefore implies that there has to be a conscious attempt at excluding harmful radiation that may result from either direct or reflected incidence.

5.4.5 Temperature

The range of temperatures within the Federal Capital Territory (F.C.T) fluctuates with the seasons. Highest temperatures occur during the dry season when there are few clouds, with a diurnal range of 17°C. Diurnal annual range is much lower at no more than 7°C (July and August).

5.5 PHYSIOGRAPHY

The term physiography applies to the general physical characteristic of the site. It embodies concepts such as access, topography geology, soil and vegetation among others.

5.5.1 Access

Access to the site is uniquely from the secondary road bordering the northWestern part. However, there is the possibility of creating a second access from the SouthEast.

5.5.2 Topography

The topography of the site is detailed out under the constituent aspects of vegetation, Geology and Soil type.

5.5.3 Geology

The location of the site within the North East part of the Federal Capital Territory (F.C.T), endows it with a terrain characterised by plains of metamorphic sedimentary rocks, including the biotite granite (Coarse) prophysitic, which are large elliptical intrusive masses. These are generally found in Zuma, Bwari and Aso hills as well as in the form of

outcrops on the Gwagwa plains. The nature of these rocks does not point to any engineering problem, likely to occur on the site during the earth-working phase.

5.5.4 Soil

Results from tests concluded within the environs of the site show a characteristic of well-drained and deep underlayer resulting from magnetite and granitic guise, with varying depth. There is a potential of suitability in terms of land use vis-à-vis texture, erodibility, drainage and runoffs.

5.5.5 Vegetation

The Federal Capital Territory (F.C.T) is generally characterised by parkland Savannah, comprising shrubs and grass cover, in somewhat sporadic settings. Patches of dense growth are common, a number of which are found on the project site. A delicate maneuver will be required to establish and maintain an ecological balance, during and after the construction processes.

5.5.6 Noise

The project site is relatively quite, however, a number of adjacent facilities, including road networks are likely to be potential sources of noise. Both active and passive control mechanisms will be employed to provide the desirable acoustics for each functional space.

5.5.7 Site Views

The site commands lofty and imposing views from the NorthWest (the Central Mosque), the West (N.T.A. Headquarters) and the South West (FCD Secretariat and Ministry). It will be mandatory to provide pleasing aesthetics in the facades oriented to those views as well as provide a panoramic view towards those prominent land marks.

5.5.8 Existing Services

There are public mains running on two borders of the site. Sewer lines are located to the West, while underground-trunk electrical mains and water mains run along the NorthWest borders. Neighbouring facilities already enjoy telecommunication services. Thus, the existing services are likely to adequately satisfy the need of the site.

5.6 PLANNING REGULATIONS

The site is zoned to a medium height, medium density mixed use (Residential/ Institutional) area. As a result, the planning requirements are: -

- Set backs: A minimum of (Front = 6m, Sides = 4m, Back = 4)
- Height: A maximum of (5-7) floors
- Site coverage: A maximum of 60%.

5.7 CONCLUSION

The location of the site and inherent conditions will enable a feasible and ideal location for the intended project. Giving visitors and staff, ease of accessibility and feeling of commuting with nature.

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REFERENCES

Abubakar, D. A. (1998): FEDERAL HOUSING AUTHORITY HQTRS –ABUJA : Site Constriants as Architectural Design Parameters, M. Sc. Thesis (arch), Dept. of Architecture, A.B.U. Zaria

Emrys et al (1978): *THE ATLAS OF WORLD GEOGRAPHY,* Heinneman, London

Obatomi, O. (1997): SUMMIT OIL TOWER –ABUJA: Problem of Mixed –use Design in Highrise Buildings, M. Sc. Thesis (Arch). Dept. of Architecture, A.B.U. Zaria

Ogunsote. O.O. (1991): INTRODUCTION TO BUILDING CLIMATOLOGY (A Basic Course ForArchitecture Students), A.B.U. Press, Zaria

The Abuja Master Plan (1978)

TheAbuja Planning Guidelines (1997)

CHAPTER SIX

DESIGN REPORT

6.1 INTRODUCTION

6.2 DESIGN BRIEF

6.3 DESIGN CONCEPT

6.4 FORM CONCEPT

6.5 STRUCTURAL CONCEPT

6.6 SITE CONCEPT

6.7 SITE PLAN

6.8 FLOOR PLANS

6.9 ELEVATIONS

6.10 SERVICES

6.11 CONSTRUCTION TECHNIQUES

6.12 FINISHES

6.13 MAINTENANCE

6.14 CONCLUSION

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CHAPTER SIX

DESIGN REPORT

6.1 INTRODUCTION

The initiation of any project that must be carried to a logical conclusion requires among others, a careful documentation of processes and procedures. This becomes most essential when the majority of means of transmission and translation are via graphics. Therefore, to serve as a general guide to the various tasks involved, the project reports must always provide written descriptions of all aspects. Because the present project comprises a valuable number of technicalities, it is necessary to give such written descriptions especially where the processes and procedures or nature of final products are not readily descendible from the graphic presentations.

6.2 DESIGN BRIEF

The current project is an attempt at providing a conducive and viable accommodation for an organisation with a special character. The brief was therefore developed along the range of requirement requested by the organisation. However, to meet the requirement of an M Sc thesis, the scope was enlarged to include features whose use and raison d'être were not immediately apparent to the sponsors.

The following components list out the main areas comprised within the complex.

- Administration
- Library

- Cafeteria
- Mosque
- Media production unit
- Conference Theatre
- Backup facilities.

Thus, the brief was developed along axioms governing the above items and the site.

6.3 DESIGN CONCEPT

The design concept was developed along two principal themes. The first considers the unity of the creator as a central and dominant whole, around whom creations are diversified. However, grouped under a parity or duality. This last item is taken to signify masculinity and femininity as well as the present and the hereafter. Thus, the plan is developed around a central core, an infinite whole. The surrounding distribution of creation, represented by four circlic segments are rotated and grouped in two abstractions of the worldly aspects of life and that of the hereafter. One of which stands for worship and related issues. The other stands for enhancement of the humankind and related issues. The two aspects are therefore directly linked to the dominant centre. A further organisation, yielded the plan (see Figure - 9).

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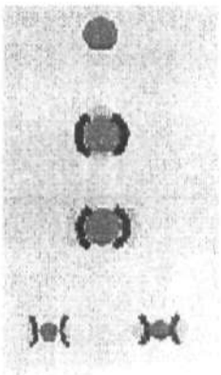


FIGURE-9: Design Concept

6.4 FORM CONCEPT

The form concept, is developed around a Qur'anic Theme - ISRAH AL-MI'RAJ (The prophetic journey to the highest heaven).

Taking up the plan configuration, the seven heavens are represented by a towering mass. Adjacent to it the two committal aspects of life are raised. Thus, the tower of purity is manifested to symbolise spiritual and moral attainment. Along side, which must prosper human relations, goodness to parents, kinsmen and strangers in want. The same theme exploits justice and respect for human life, protection of orphans, probity in all dealings and avoidance of arrogance. Building on the above aspects, there thus arise the need to philosophy the design towards a modern Islamic architecture, based on rational regional elements that can portray the evolution of Islamic architecture into a contemporary corporate vocabulary. The above considerations were translated into Environmental Sensitivity, Morphological Integrity and Symbolic Clarity (See Figure-10).

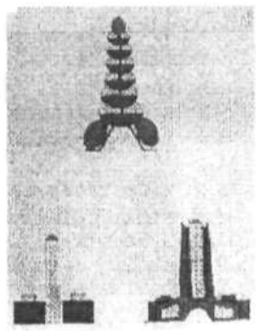


Figure-10: Form Concept

6.5 STRUCTURAL CONCEPT

The structural concept is developed around two principal carrying elements. Two giant inclined piers are used to support an arched roof from which the floors are suspended. This approach frees the ground floor or main lobby of any columns, giving very wide latitude of open space. In the Mosque wing, a hexadome is used, to achieve a wide prayer hall without any interior supports. Similarly, the auditorium is conceived around portal frames that allow for an interior free of columns (See Figure - 11). The concepts are based on those developed for the Hongkong and Shanghai Bank, and that of the Embankment place, London.

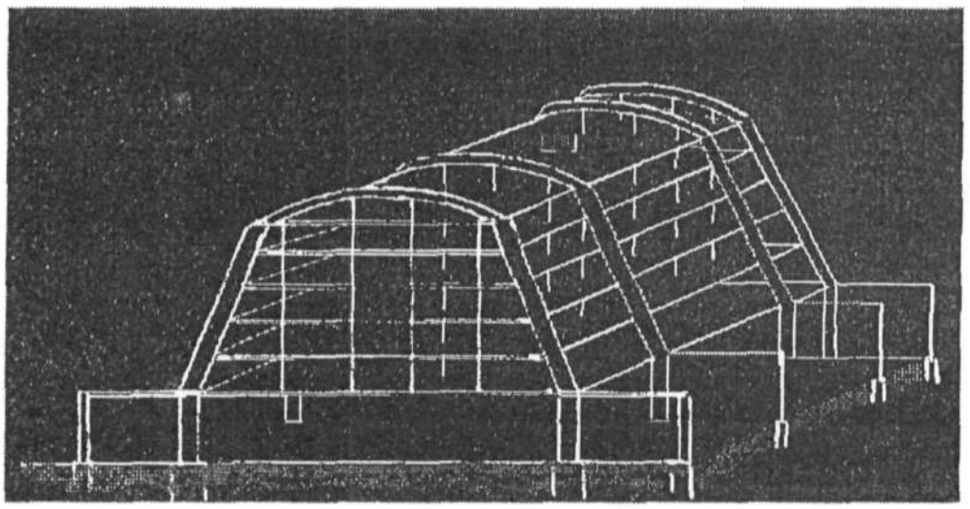


Figure- 11: Structural Concept

6.6 SITE CONCEPT

The site concept is developed based on two crucial aspects - the orientation towards Makkah and the site features. Relative to the main entrance, the parking and vehicular circulations are located. Pedestrian circulation is provided to link all major units of the concept and carefully separated from vehicular circulation. Next to the parking is the main building, followed by Training facilities, backup and Games. A relaxation Garden occupies the slope towards the raving. To the back a Residence for management is proposed with a separate entrance.

The overall concept is such as to enable the complex to function with minimum effort, yet secure and airy (see Figure – 12).

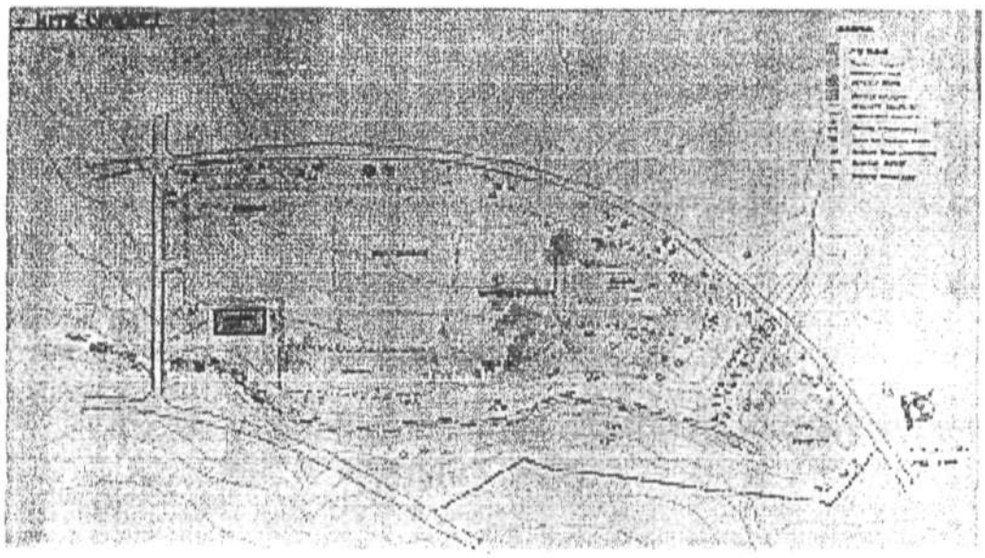


Figure-12: Site Concept

6.7 SITE PLAN

The site plan is an immediate consequence of the site concept. A definite plan gives the location of parking areas close to the main entrance, from where access to the auditorium is close. A system of vehicular circulation extends to the kitchen bay, a drop off point in front of the main entrance and access to the training unit and back-up facilities. The existing facility on the site is integrated and balanced off with an entrance gatehouse. The main building is oriented such as to avoid the negative effect of the site gradient.

6.8 FLOOR PLANS

The floor plans are developed with respect to the functional requirement of each unit

6.8.1 Ground Floor

The ground floor is used as unifying factor for the various units. It exploits the free flow and infinity of spaces typical of Islamic architecture. A series of vistas and courtyards flow out into gardens.

The function units include; main lobby, to the left of which is the conference theatre, television studio and cafeteria to the right is the Mosque library and general store.

6.8.2 First Floor

The first floor is a natural progression of the ground floor, with the exception that it embodies some of the most essential functions of the complex. The first floor of the main complex is essentially the mezzanine floor from where the main lobby can be sighted. Otherwise, it is a circulation space. The wings comprise spaces for the library, the language laboratory, the print media, the Mosque gallery and technical control unit for the TV Production. It is linked to the auditorium as well.

6.8.3 Second – Fifth Floors

These are standard floors, comprising offices, stores, waiting areas/reception and toilets. They are accessed through the lift hall or staircases.

6.8.4 Sixth Floor

The sixth floor is uniquely for management. It comprises two main offices for the Director General and the Secretary. It also accommodates the Conference hall and Coffee room.

6.9 ELEVATIONS

The elevations are conceived to reflect the corporate nature of Islamic architecture in a regional vernacular. The approach elevation depicts messing around the central tower, with traditional arches and fenestration at the podium level. The wings are treated in like manner.

The rear elevation follows a similar treatment. The left and right side elevations are treated with slight variation at the tower level. Due to solar orientation, they are provided with horizontal elements. The podium level is minimised, in terms of fenestration. However, an overall balance is established throughout the composition.

6.10 SERVICES

The range of services within the complex is arranged and delivered through a combination of horizontal trucking and ducting. The tower is served through a main core. Plumbing and drainage are effectuated within the service core.

Major supplies are tapped off from the mains running along the main entrance. The site drainage and wastewater are directed towards the main sewer line close to the ravine adjacent the site.

6.11 CONSTRUCTION TECHNIQUES

The construction technique is in-situ reinforced concrete for all supporting elements. These constitute the frame of the structure, which is filled up with light masonry elements. The floors are all prefabricated in pre-stressed concrete. The floor beams are done in similar manner. Reinforced Concrete hangers are used to suspend the floors from the roof. The jointing are carried out with in-situ concrete. The rest of the components are built in using manufacturer's specifications.

6.12 FINISHES

The finishes chosen for the complex are based on their aesthetic value, weatherbility and relevance to the overall scheme.

The external masonry walls are to be of weathered plastering, finished in texcote paints. All fenestration will be provided with latticework steel in arabesque style.

Some specific area of the walls, particularly at the front and the interior of the Mosque will be treated with Calligraphy and Qur'anic Script. The interior areas, especially the main lobby will be treated in arabesque as well, making it the main focal area.

Landscape elements and planting are provided within and the immediate premises of the building. The general character will be to emulate Islamic gardens and courtyards.

6.13 MAINTENANCE

The need for maintenance is recognised to be of prime importance in the life span of any structure. As such, the complex is design with planned maintenance in mind. This

is done through selective choice of materials and construction processes. However, routine maintenance is not left out. Provision is made for external cleaning of walls and fenestration as well as floors and roofs. Services check up and expansion or modifications are allowed. This will ensure that the structures remain optimum throughout their life span.

6.14 CONCLUSION

The details of all concepts, characteristics and procedures for the development and construction of the complex have been enumerated. This is intended to be a guide towards an effective performance, as well as highlighting the various salient aspects that could not be conveyed by the graphics medium.

REFERENCES

Andreas, C. P. (ed.), (1987): Architectural Design (Profile 70), Academic Group Limited.

Bovay, (Jr.) H. E. (Ed)(1981): Handbook of Mechanical and Electrical Systems For Buildings McGraw-Hill Book Company, New York.

Konrad, G (1972): Contemporary Architectural Design Vol.5, Butter worth and Company, London.

Mc Partland, J. F (1968): How to Design Electrical Systems McGraw-Hill, New York.

Nervi, P. L. (1965): Aesthetics and Technology in Building, Cambridge, Massachusetts Harvard University press.

Wiseman, C. (1990) : I.M. Pei : A Profile in American Architecture, Editions Temmile, Schaffhausen, Switzerland

The presidency of Islamic researches, Ifta, Call and Guidance (AH 1410 /1990): THE HOLY QUR'AN:English Translation of the Meaning and Commentary, King Fahd Holy Qur'an printing Complex, Al-Madina Al-Munawarah, Saudi Arabia

CHAPTER SEVEN

SUMMARY, CONCLUSION AND RECOMMENDATION

7.1 SUMMARY

7.2 CONCLUSION

7.3 RECOMMENDATION

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CHAPTER SEVEN

SUMMARY, CONCLUSION AND RECOMMENDATION

7.1 SUMMARY

The development of the current project has necessitated a number of historical backgrounds to be examined. Of particular significance has been the inception and evolution of Islamic architecture. Its course has been traced from the early Madinnah period, through the Umayyads the Abbasids the Mamluks the moors Ottomans and the Moghuls. The various influences have been noted as well as the current trends in some key regions of the world. Notable examples have been drawn from Spain and Saudi Arabia.

Case studies at both national and internal levels have revealed some intricacies parting to the subject matter. Apart from diversities and vernacular differentiations the unifying factors can be made in the area of religious institutions. However, some shortcomings have been noted as regard the genuine spirit of Islamic architecture. Some institutions have been studied based on their relevance to elements of the project.

The evolution of Islamic architecture in Nigeria has been traced back to influences from wars of subjugation and voluntary assimilation in the West African sub region, in the early periods. New trends however are brought about by movements, migration and the International Culture.

The study area has revealed favourable factors that can assist the development and performance of the complex under consideration. Though some negative factors were noticed, their impact has been accommodated by the appropriate design parameters.

Finally the design concept has been translated into a fully functional complex. The elements of the complex have been formulated in terms of materials finishes, construction processes as well as maintenance. The various traffic patterns on site have been identified and provided for. Landscaping and outdoor areas characteristic of the scheme have been initiated.

7.2 CONCLUSION

The study of an evolutionary trend for the Islamic architecture in Nigeria has yielded positive insights into the development of the Al-Muntada Al-Islami Complex. Though, three main aspects of subgroupings have been identified, no major effort has been made to adhere to one type. Instead, a careful blend has been pursued. The objective of which has been to give the complex and international image within a regional context. The whole complex has been developed to allow for ease of construction at an affordable cost yet without a sacrifice to aesthetics or functionality.

7.3 RECOMMENDATIONS

A successful venture such as that proposed for the Al-Muntada Al-Islamic National Headquarters requires a careful and closely follow-up. In which case it is recommended that:

- Appropriate management scheme be put in place to see to the implementation of the project.
- Reliable and tested contractors/subcontractors be chosen for the execution of the project.
- Initial funding should make allowance for fluctuations and inflations that are likely to occur during the course of the project.
- Because of the introduction of some not too common elements in the complex, a careful and dedicated supervision is required of particular importance is the execution of arabesque and Calligraphy decorations.
- In order to avoid dis-functionalily, architectural specifications should be strictly adhered to.

As regards the development of Islamic architecture in Nigeria, it has been noticed that the notion is not quite clear and people, including scholars are likely to be against or for concepts that are at best fussy. Unless a detailed groundwork is done, many upcoming generations are likely to be misled or misguided. As such, it is recommended that:

- An appropriate understanding of the subject be given priority in the schools of architecture.
- Explicit audiovisual presentations should be made available to the public.
- An appropriate documentation of historical structures be made for posterity.
- Occasional exhibitions/lectures be held to integrate the scholarly world with that of experts and the general public.

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BIBLIOGRAPHY

AL-FARUQL, I. R (1982): Tauhid: Its Implications for Thought and Life, Wyncote, Kuala Lumpur.

AMINU, B. A. (1989); Highland Bank LTD. Head Office Yola. (An Architectural Proposal); Unpublished M. Sc. Thesis, Ahmadu Bello University, Zaria.

ANDREAS, C. P. (1987); Architectural Design (Profile 70) Academic Group LTD.

ARNHEIM, R. (1977). The Dynamics of Architectural Form: University Of California Press Berkeley.

BABA-GIREI, J. (1977). National Islamic Centre Abuja, Unpublished M.Sc. Thesis, Ahmadu Bello University, Zaria.

BELLO, U. M. (1987), Islamic Centre Yola, Unpublished M.Sc. Thesis, Ahmadu Bello University, Zaria.

BOVAY, JR. H. E. (ED) (1981), Handbook of Mechanical and Electrical Systems For Buildings, McGraw - Hill Book Co., New York.

BRAVMANN, R. A. (1974): Islam and Tribal Art in West Africa, Cambridge University Press, Cambridge.

BURGOYNE, M. H. (1987): Mamluk Jerusalem: An Architectural Study, World Of Islam Festival, London.

CHING, F. D. K. (1979): Architecture: Form, Space and Order Van Nostrand, New York.

DANGIWA, A. M. (1987): Nigerian Supreme Council for Islamic Affairs Headquarters Abuja. Unpublished M.Sc. Thesis Ahmadu Bello University, Zaria.

DECHIARA AND CALLENDER (1990): Time-Saver Standards for Building Types: McGraw-Hill Book Co. (Int.Ed.), Singapore.

DENYER, S. (1978); African Traditional Architecture Longman and Heinemann, London.

DOI A. R. I. (1972): (The Cardinal Principles of Islam Islamic Publication Bureau, Lagos.

ENCYCLOPAEDIA of Islam (1960): London and Leiden.

ERNST, N. (1990): Architect's Data, Granada (2nd Int. English Ed.) New York.

FATHY, H. (1973): Architecture for the Poor, University of Chicago Press, Chicago.

FLETCHER, B. (1975): A History of Architecture, London.

GEARY, J. (Ed.) (1998): The New Age of Discovery, In Time Magazine, Time Warner, New York.

GNIADZIK, J. S. (1984): Structure Systems in Architecture A.B.U., Press Zaria.

GRUBE, E. J. (1978): What is Islamic Architecture in Mitchell, G. (Ed): Architecture of the Islamic World, World of Islam Festival, London.

HAIDER, G. (1985): 'Utopianism and Islamic Ideals' Inquiry 2 3(9).

HEINO, E. (1977): Structure Systems' Deutsche Verlags Abstalt (4th Ed.) Stuttgart.

JONAS, L. (1980): Garden and Courtyard in Islam, Thames and Hudson, London.

KICKLIGHTER, C. E. (1984): Architecture Residential Drawing and Design, Good heart - Willcox Illinois.

KONRAD, G. (1972); Contemporary Architectural Design Vol.5 Butter Worth and Co., London.

LETERTRE AND RENAUD, (1978): Travaux de Maconnerie et Finitions, Foucher, Paris.

McPARTLAND, J. F (1968): How to Design Electrical Systems, McGraw-Hill, New York.

MUMFORD L. (1975): Architecture as a Home for Man, Architectural Record, New York.

NASR, S. H. (1975): Islam and the Plight of Modern Man, Longman, London.

NERVI, P. L. (1965): Aesthetics and Technology in Building, Cambridge, Massachusetts, Harvard University Press, Boston.

SEELEY, I. H. (1980): Building Technology, Macmillan (2nd Ed.) London.

SARDAR, Z. (1984): Islamic Futures. The Shape of Ideas to Come, Mansell, London.

YAKAWU, D. U. M. (1982): National Islamic Centre Abuja, Unpublished M.Sc. Thesis, Ahmadu Bello University, Zaria.

APPENDEX

DESIGN PROPOSAL

SITE ANALYSIS

SITE PLAN

GROUND FLOOR

FIRST FLOOR

SECOND- FIFTH FLOORS

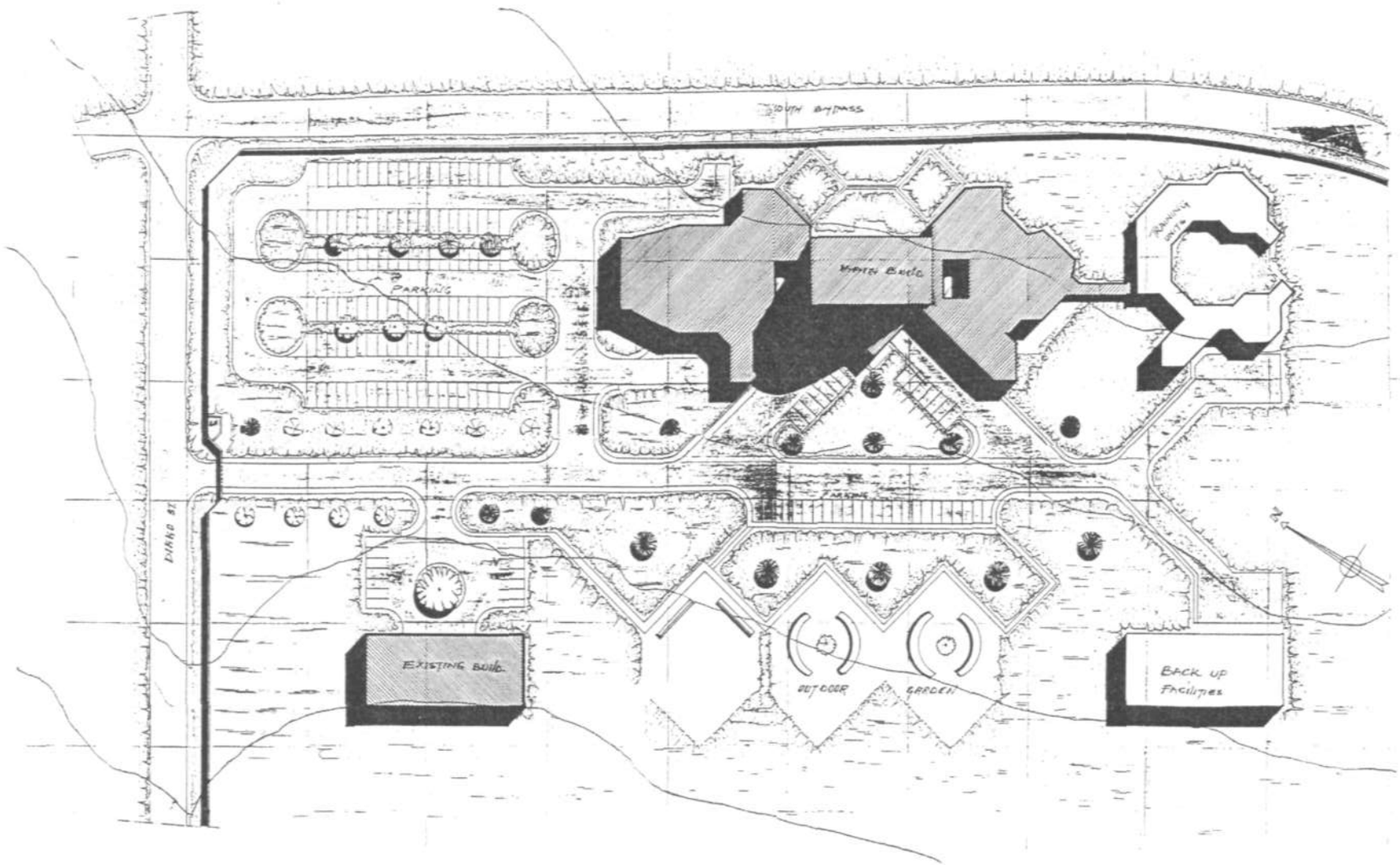
SIXTH FLOOR/ROOF

SECTIONS

ELEVATIONS

PERSPECTIVES

SITE PLAN

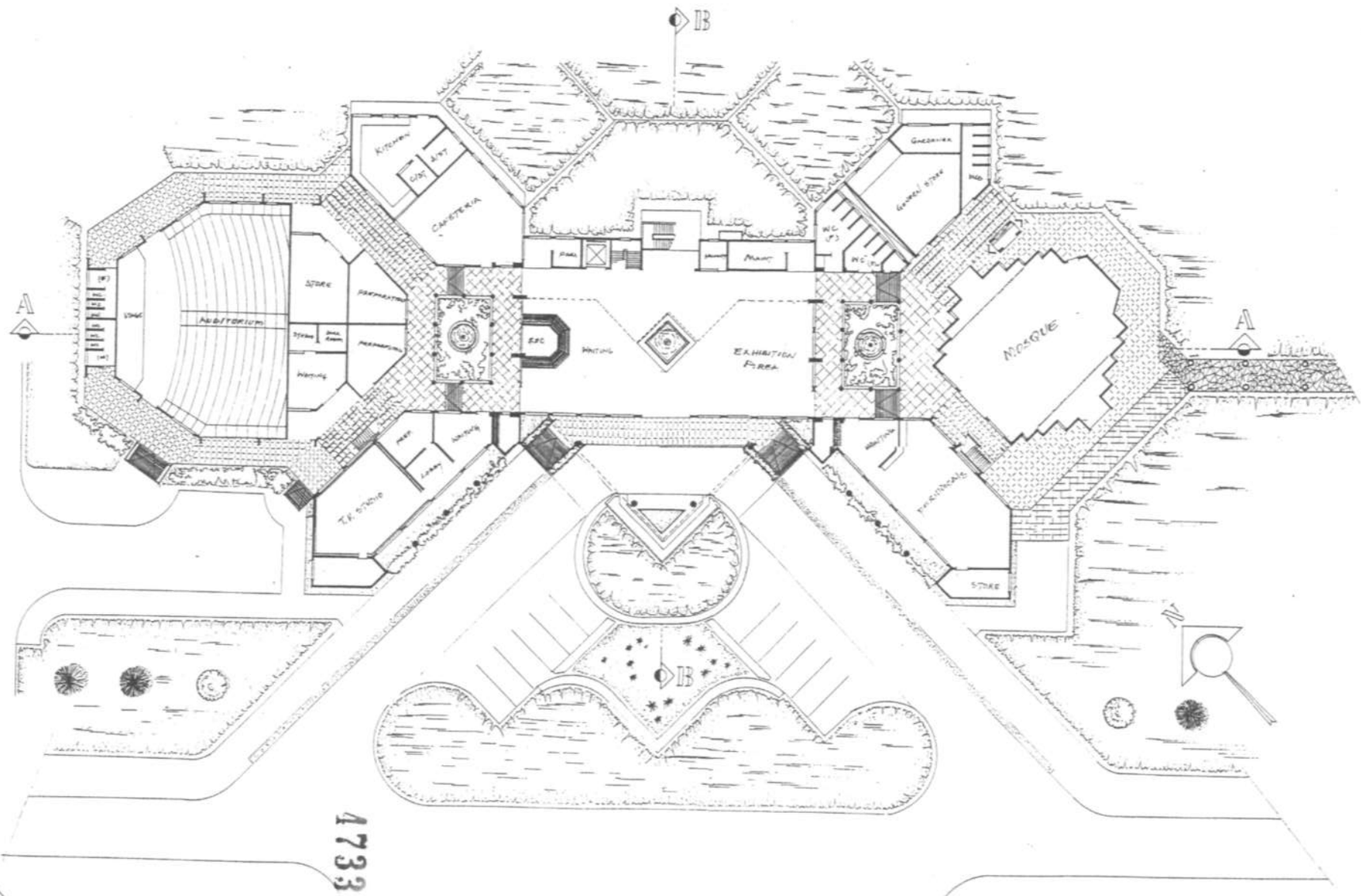


AL-muntada AL-Islami NATIONAL H.Q.

THESIS

SANJUNDA LA
ABDULKARIM MASJID

● GROUND FLOOR



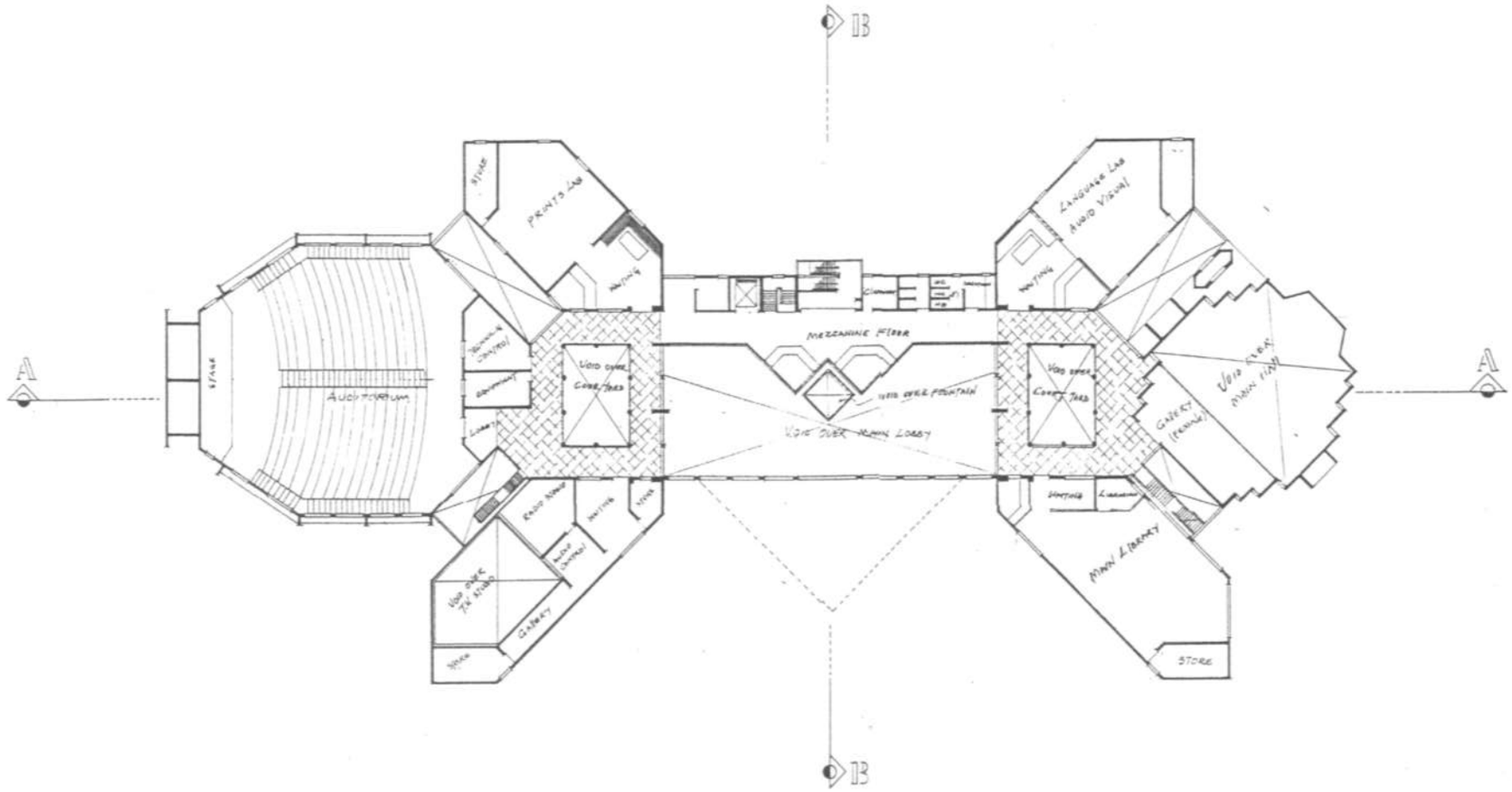
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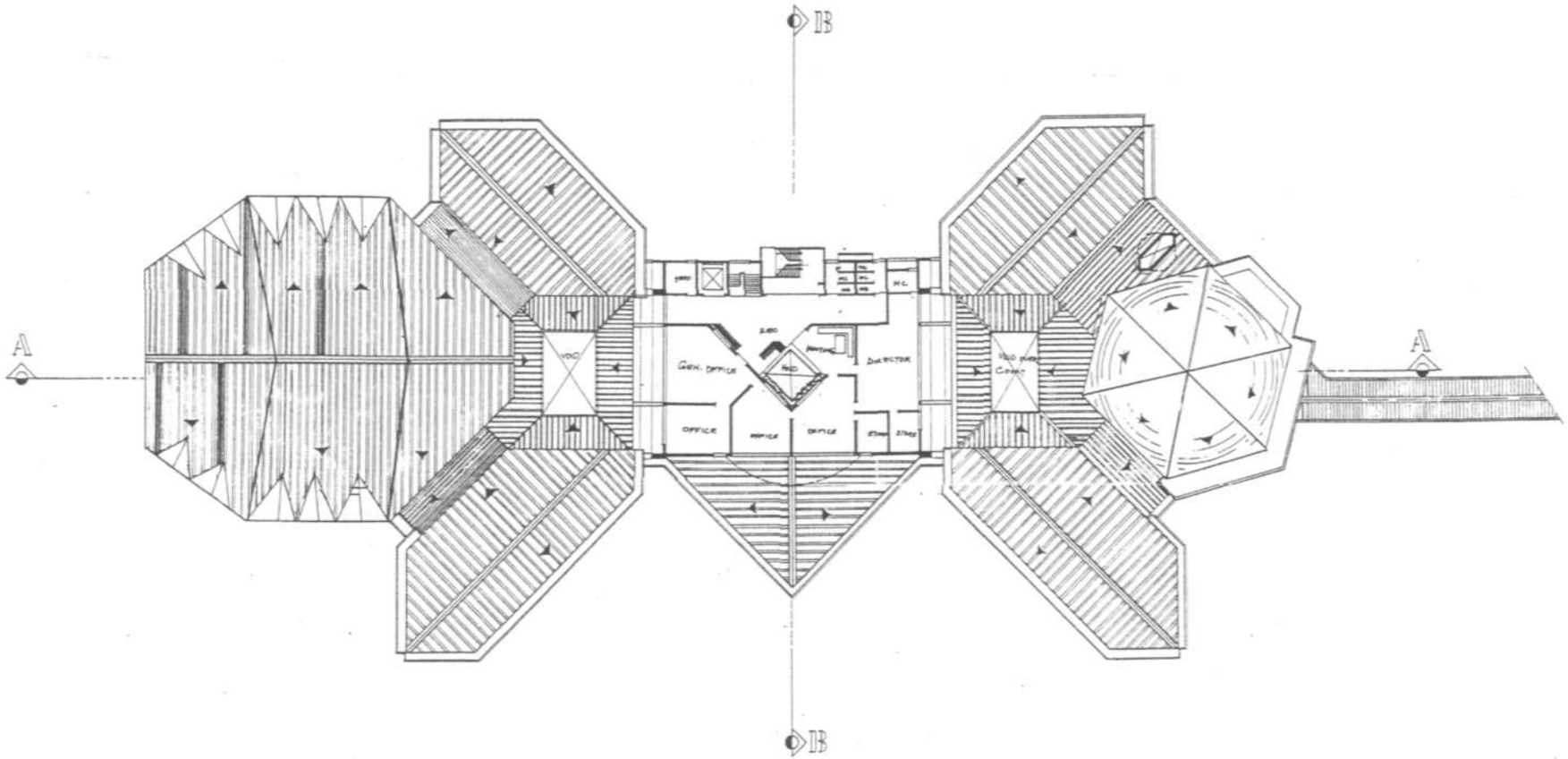
• FIRST FLOOR



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MADDALARIA, MARCH 1998 (PAINTER)

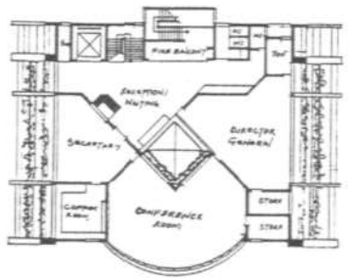
• SECOND - FIFTH FLOOR



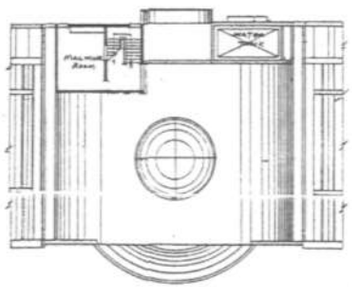
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• SIXTH FLOOR / ROOF PLAN

A



A

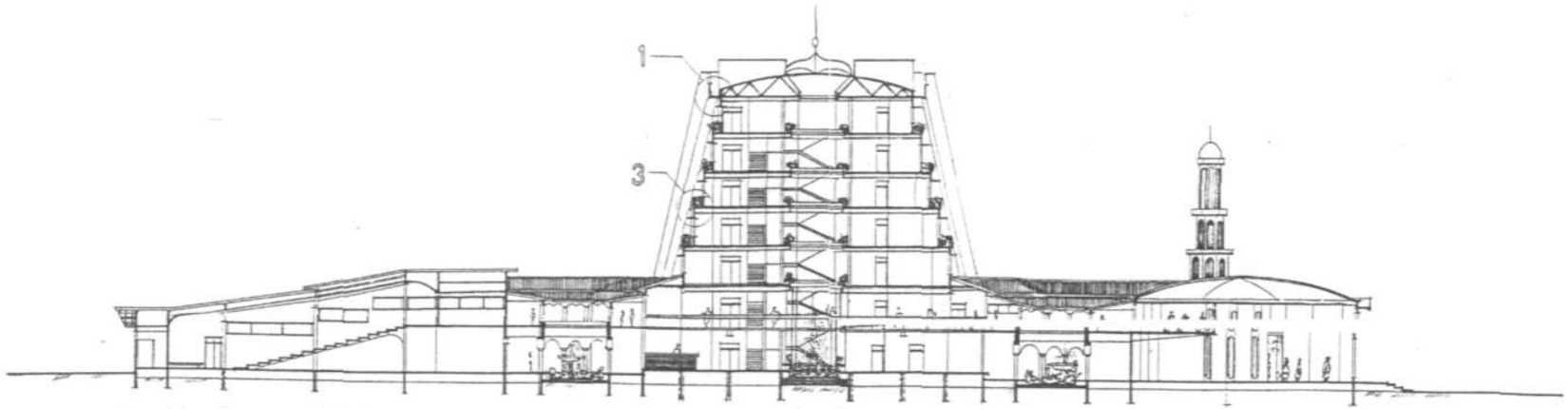


A

• Sixth Floor

• Roof

• SECTIONS



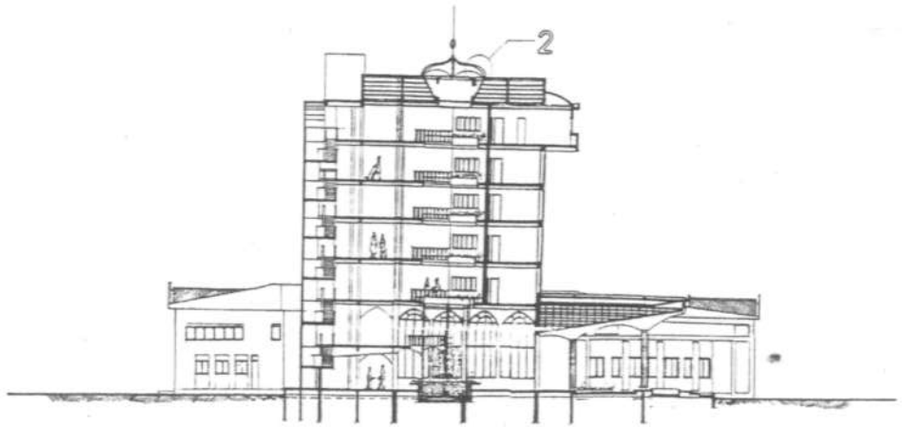
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THESIS
SANGUNDA D.N.
ABDURRAHIM MASUD (MENTOR)
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1998

- **SECTIONS**



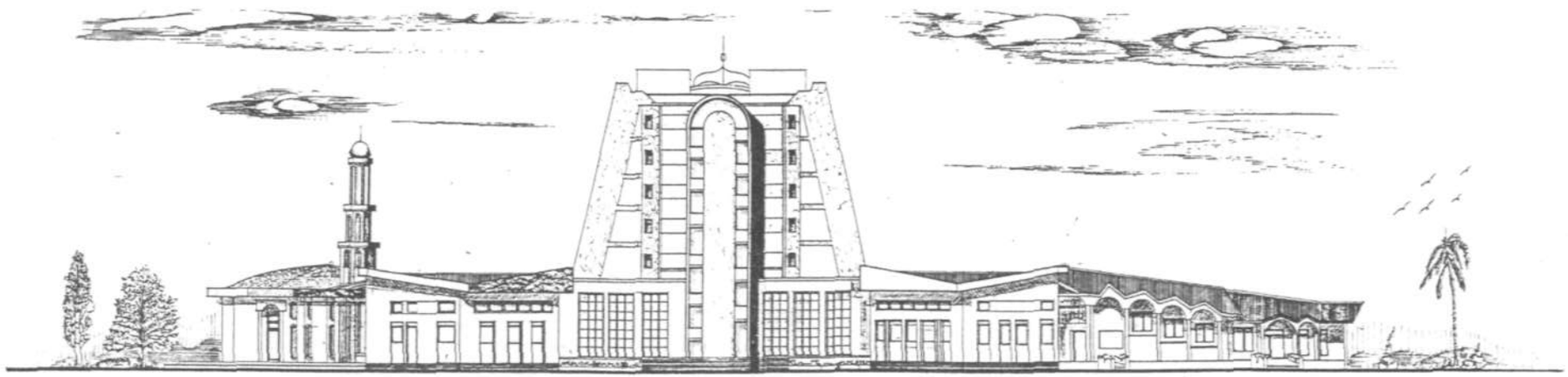
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ELEVATIONS



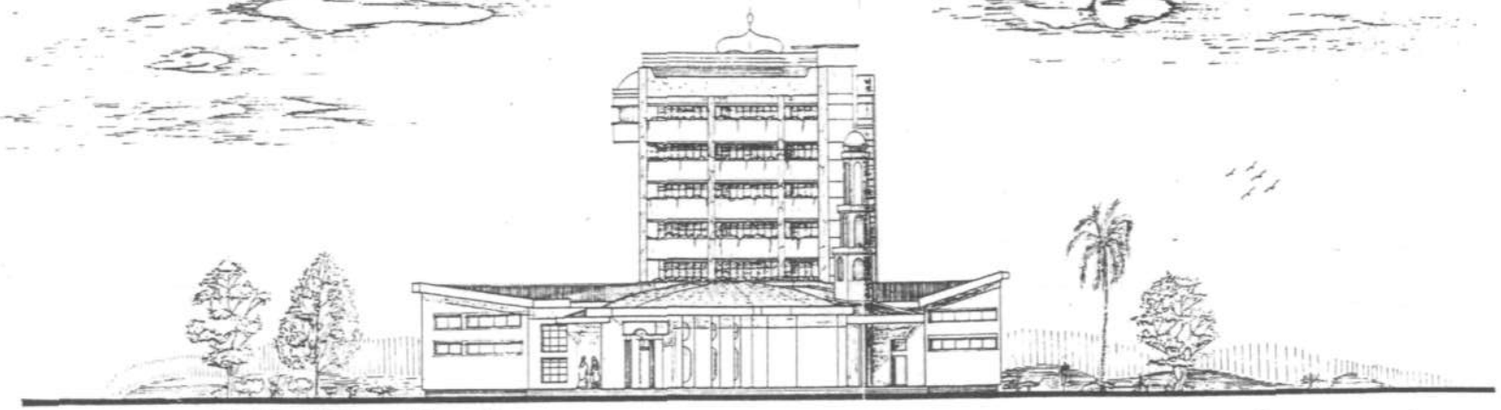
○ Approach Elevation



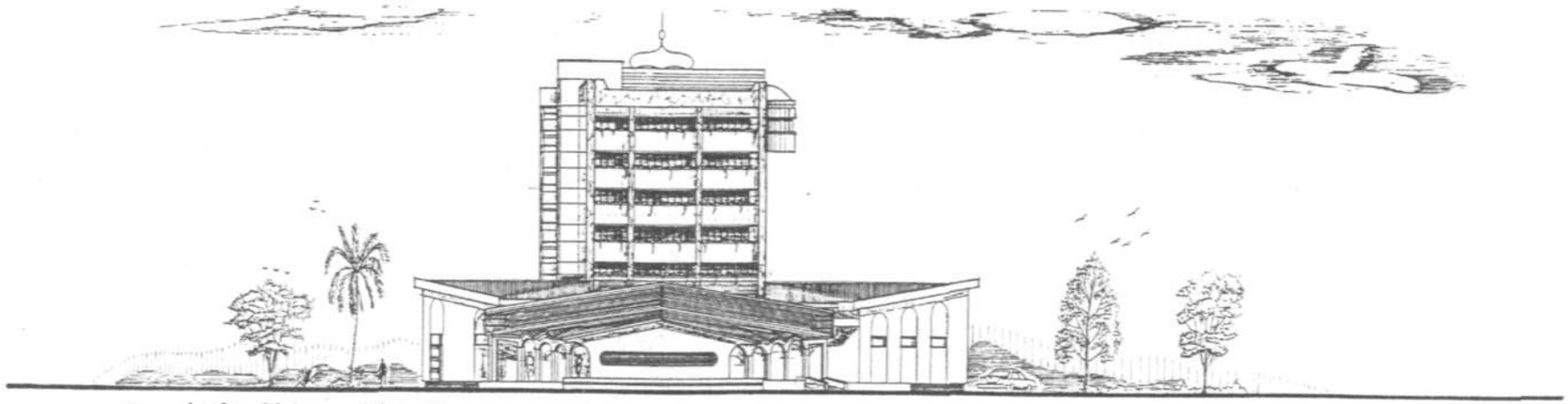
● Rear Elevation

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• ELEVATIONS



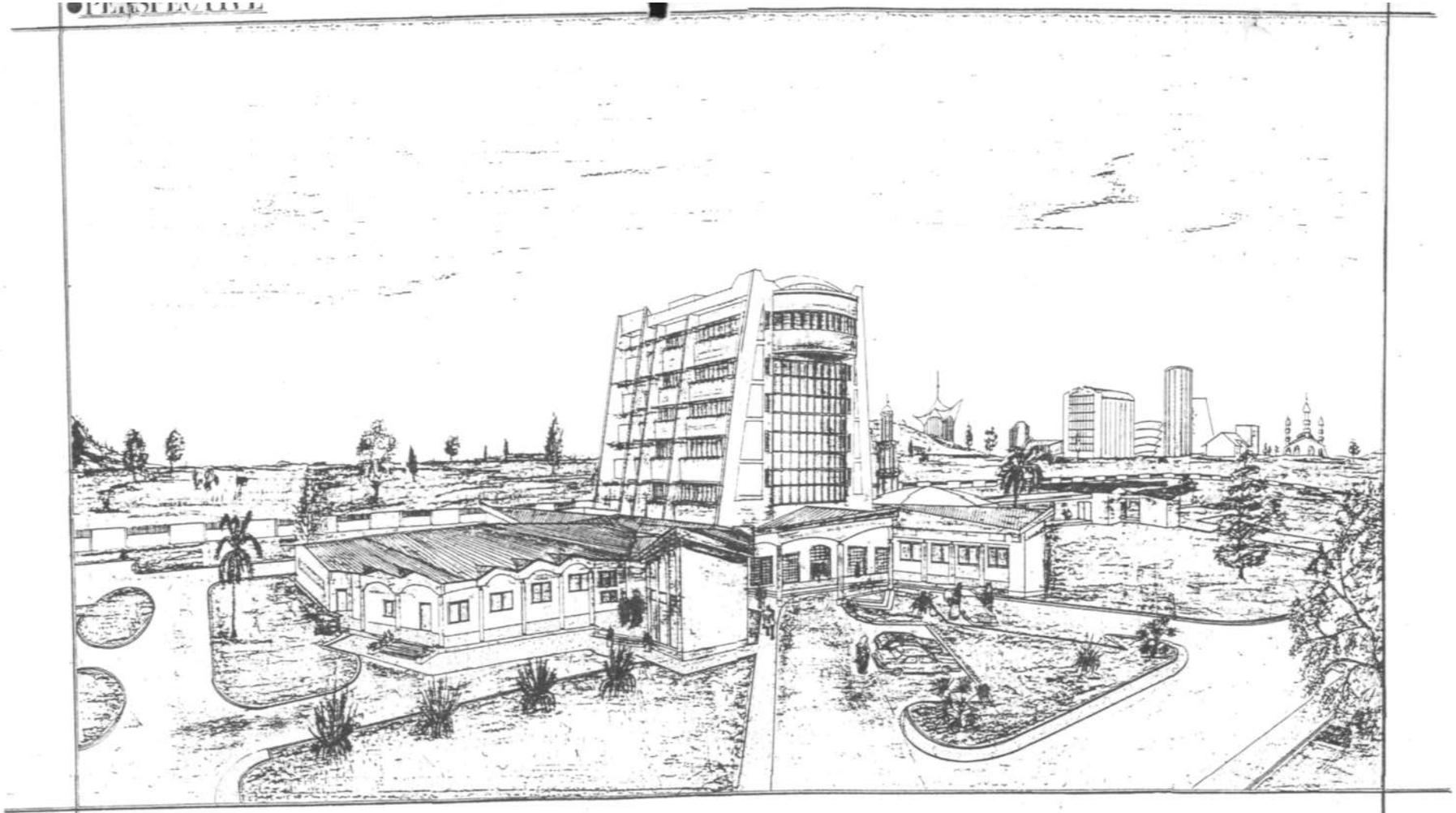
• Right-Side Elevation



• Left-Side Elevation

Al-muntada Al-Islami NATIONAL HO THESIS

PERSPECTIVE



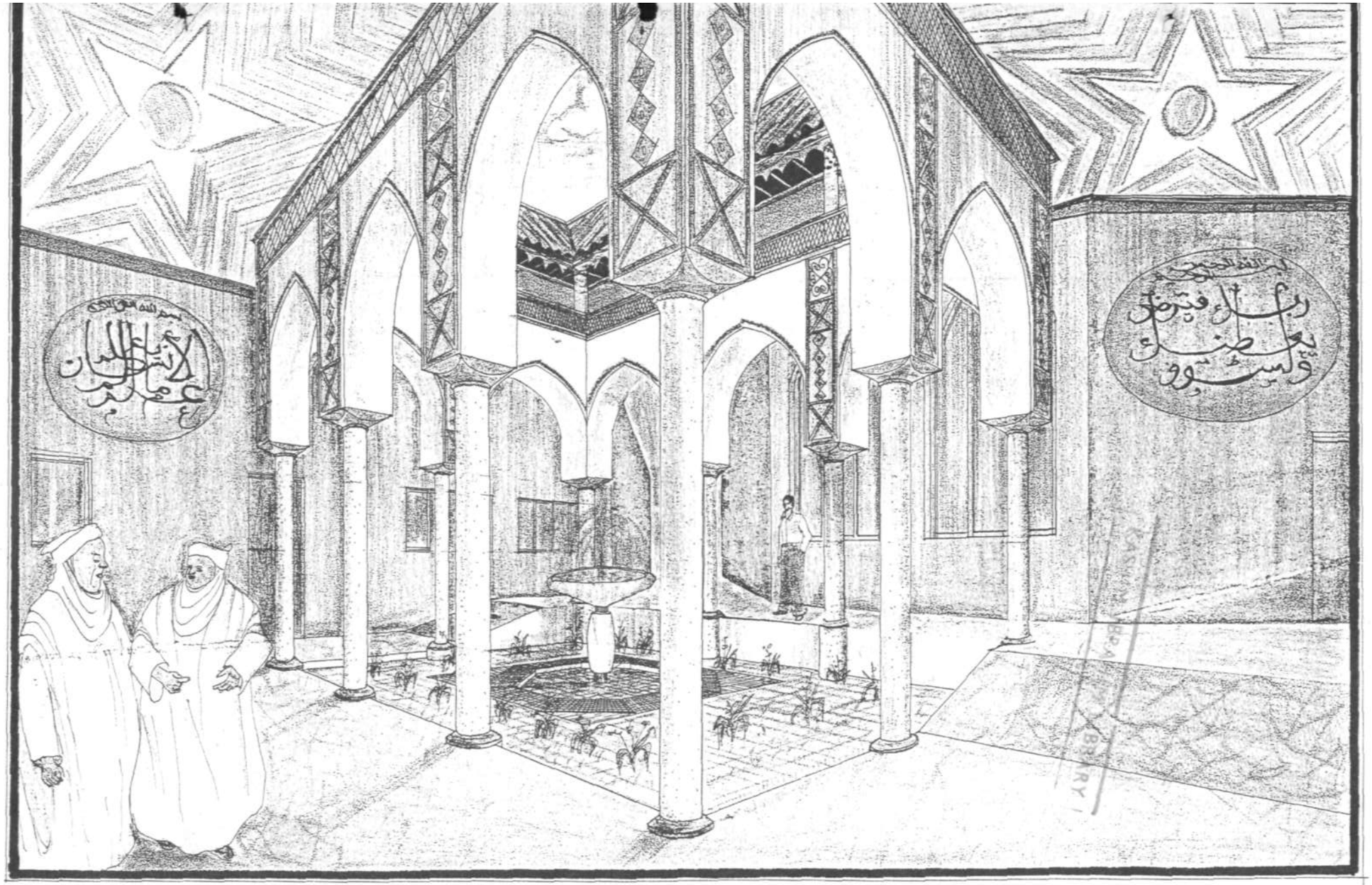
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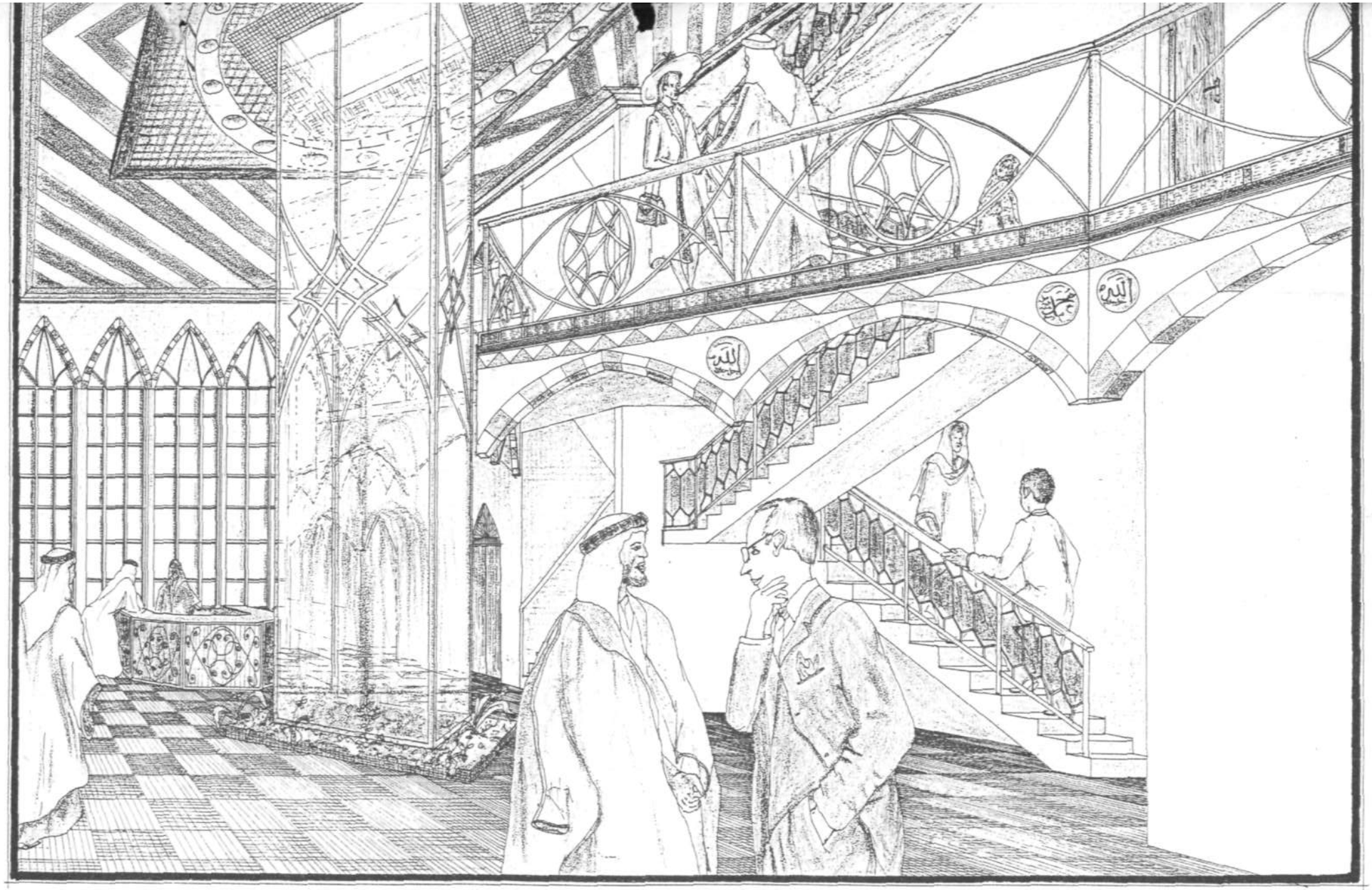
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ABDURRAHIM MAS'UD (MANTAP) 1996

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● PERSPECTIVE OF COURTYARD (left)



● PERSPECTIVE OF MAIN LOBBY



PERSPECTIVE OF MOSQUE CORR.



● PERSPECTIVE OF MOSQUE CORR.