Evolving Religious Islamic Architecture;

An Analysis of Sacred Spaces in Muslim and Non-Muslim Countries

by

Ansam A. Al-Neaimy

A thesis submitted to the Faculty of Graduate Study of

The University of Manitoba

In partial fulfillment of the requirements of the degree of

MASTER OF ARCHITECTURE

Department of Architecture

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ABSTRACT

An abstract of the thesis of Ansam Al-Neaimy for the Master of Architecture presented November 29, 2006.

Title: Evolving Religious Islamic Architecture; an Analysis of Sacred Spaces in Muslim and Non-Muslim Countries

Many intellectuals, researchers and writers studied contemporary and traditional Masjids but hardly any tried to link between the two and create a new model; a hybrid one.

The purpose of this study to create an example that will be recognize and acknowledge in our globe a Masjid that brings together traditional Masjid in Muslim countries to the contemporary one in the non-Muslim countries, a model that not only put inconsideration the unchangeable elements as a religion obligations but goes beyond that looking for Architectural elements; And that will happen first, by presenting each prototype (traditional and contemporary) individually then showing what makes each one unique in itself and how each could impact the other. Second, by finding new archetype that has characters from both and can satisfy the needs of the community.

Two major examples have been used to refer to the diversity and unity between traditional (The Prophetic in Medina - Saudi Arabia) and contemporary Masjid (ISNA in Indiana – USA.). Adding to it a third one (The Grant Masjid in Manitoba – Canada) to be the hybrid Masjid or missing link between these two .

ACKNOWLEDGMENT

I would like to express my gratitude to all those who gave me the possibility to complete this thesis.

I am deeply indebted to my advisor Professor Clarice Kramer from the University Of Manitoba- Department Of Architecture, external advisor Professor Dr. Elizabeth Alexandrian from the Faculty of Arts – Religion Department and my examiners Professor Tijan Roshko from the Interior Department and professor Mark Neveu from the Architecture Department whose help, stimulating suggestions and encouragement helped me in all the time of research for and writing of this thesis.

Especially, I would like to give my special thanks to my dad Dr. Abdulkader Alshikly, mom Susan Ismail for their continues supplication and encouragement and to my husband Dr. Wameed Hassan whose patient love enabled me to complete this work

Table of Contents

Introduction

The religion of Islam began with the message that The Prophet Mohammed received from the Angel Gabriel in 622 C. E. Before that event, the Arab people had lived divided into three different groups of believers. One group followed the teachings of Judaism; the second followed the teachings of Christ, and the third group worshiped idols. Makkah was the city renowned for a massing these idols, which were locked inside the Ka'bah (large square structure to which thousands of Muslims makes pilgrimage to every year). Makkah was a busy town and many travelers who visited there to worship idols, although the influx of worshippers translated to clashes and arguments between people of different tribes and ideologies. Thus Islam, emerging from this multi-religion and multi-paradigm environment, helped bring peace and understanding into the lives of the Arab people.

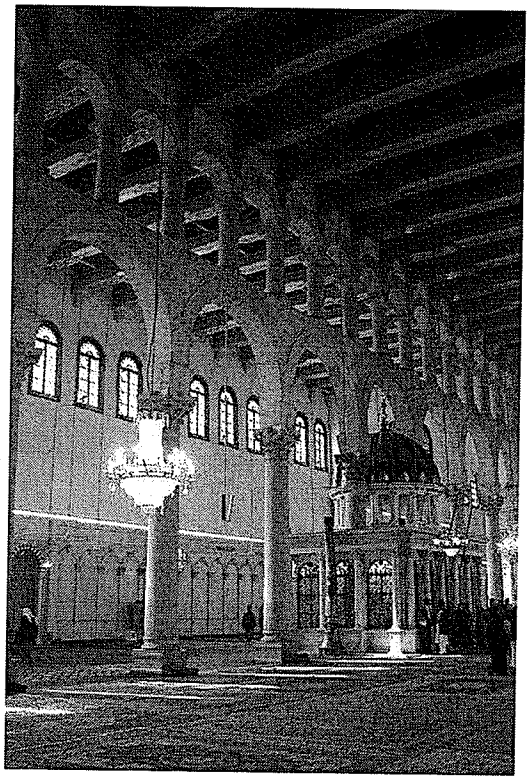
Islam is considered to be the latest in the hierarchy of the three monotheistic religions, with respect to the order in which these three (Judaism, Christianity and Islam) religions were declared. It is a continuation of previous teachings, as Muslims believe in the prophets that came before, its dawn which are found in the teachings of Judaism and Christianity.

In Islam, Friday is the week's holy day, or Sabbath On Fridays, the noon prayer is prayed in congregation in the Masjid and is called Jumu`ah (Friday Congregational) Prayer. It is called so because it encourages the gathering of people to worship one God and submit oneself to Him only. The Prophet Muhammad said "The Salat in congregation is twenty seven times superior in degrees to the Salat offered by a person a lone"[i]

0.1. Spiritual significance

The Masjid [22] is the gathering place where Muslims [29] pray. (Translated as *Masjid* in English; with the root from the Arabic word *Sajada* meaning to bow). The Masjid stands as one of the most important structures in Islamic architecture dating back to the time of The Prophet Mohammed. Its long lasting and deep-rooted role is evident through the consistent, generally unchanging design repeated in Masjids throughout the world.

The Masjid originated when Islam was established as a religion, The Prophet Mohammed needed to a place to deliver his teachings. This place would need to be clean and protected from the climate and wild life, and neutral/open to all (not belonging to anybody). For this reason it was termed a House of God and was used to teach the words of God, the Arabic language (the language of Qur'an), and the Hadith. Its core was to make visitors feel their inner self was at rest, able to learn, and to respect humans, nature and the surroundings. In this place the teachings of Islam could flourish in the hearts of the followers.



(1) The Great Masjid in Damascus- Syria

The first Masjids, built during the time of the Umayyad [42], (661-750 A.D.) were decorated and orientated in an attractive way so as to draw the attention of worshippers and non-worshippers alike. Their designers, and the societies that built them, wanted to prove their intelligence and capability through the building of striking and inspiring creations. However, from a more fundamental standpoint, these early Masjids were built first and foremost for worshipping. The names and identities of those who designed and

built them were never made known, and their work remained anonymous, as seeking recognition was not important. From a very early date, the physical manifestation of a Masjid - its form, massing, etc- was clearly an important factor, even if not openly sanctioned as a form of individual or popular artistic expression. Aesthetics, and the role it played in Islamic religious architecture, were a product of many factors.

In Islam, the stories about the life of The Prophet (The Prophet Mohammed) are recorded as Hadith [8]. One such Hadith reports the following:

> During the time of The Prophet during his prayers he noticed an ornate cushion in front of him. Upon seeing this he asked his wife to remove the cushion because it was distracting him from his prayers. [ii]

This passage demonstrates the conflict that has arisen over the role of ornamentation in Islamic religious structures. Some worshipers in the community hold that because the Masjid is a place of worship of a specific higher being, Allah [3], then it should be decorated with the most expensive and beautiful designs and materials. Others ascribe to a more fundamental view, as demonstrated in the Hadith above, that modesty is more useful in a structure dedicated to prayer, contemplation and learning. The intention of the Masjid was not one of a museum or a piece of art, and The Prophet himself wanted very simple design elements in an open concept. This opinion is consistent with the position of Islam as a religion that teaches the essence of being human and growing spiritually – delving into deeper themes than the surface-deep human ability to impress through fanciful design.

0.2. Practical significance

This split in opinion over the degree of ornamentation a Masjid should exhibit, and the amount of attention it should call to itself, now spans the globe. As Muslim populations increase and spread throughout the world, Masjid design and construction goes with them. As these

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0.2. Practical significance

This split in opinion over the degree of ornamentation a Masjid should exhibit, and the amount of attention it should call to itself, now spans the globe. As Muslim populations increase and spread throughout the world, Masjid design and construction goes with them. As these migrating communities leave the strongholds of the Muslim world, the effects of the religious teachings may eventually diminish as time and space dissolves traditional ties. Furthermore, immersed in new worlds, societies and communities, Muslims and the Masjids they construct, may reflect new influences. For Muslim immigrants living in new communities where they are the minority, as is the case in many Western nations; financial constraints are just one factor that can challenge the building of a Masjid. Compounding this may be the issue of context, with Masjids in non-Muslim communities struggling to define a relationship with the surrounding architectural landscape – one of strip malls, suburbs, downtowns of steel and glass towers, and everything in between. Moreover, Muslims in traditionally non-Muslim areas could simply be trying to establish basic places of worship that can provide a haven of peace and tranquility (as in the same way a church does for Christians) from a high-paced and highly developed world: a world that is at odds with their spiritual well-being. Therefore, while some Masjids may grow ever-increasingly distant to the true, humble intention behind their existence, others may return to an uncomplicated design that is seen not to detract from the role of worship.

0.3. Objectives

In general, it would appear that two streams exist with Masjid design today—traditional designs that follow precedents from the earliest days of Islam to the later; and

reinterpretive works which permit some freedom to designers within slightly flexible boundaries. I am proposing that perhaps, somewhere in between these, there exists something else, a kind of hybrid Masjid that is neither a direct reproduction of tradition, nor a completely novel entity. In this hybrid Masjid, context and aesthetics are only two of the many factors that work upon it. Inevitably, the complexity of life in the modern world - changing social norms, globalization, cultural and spiritual renaissances/collapses, are other factors influencing Masjid design in ways we may not even realize. My goal in this thesis will be to investigate this phenomenon and the possibility of the emergence of 'hybrid 'Masjid

0.4. Methods and Procedures

We will start by studying the era before Islam and how this era effected and shaped the foundation of Masjid design. The roots of this building typology will be traced through different civilizations including the Egyptian, Mesopotamian, Greek, Roman, and Sassanian societies which all contain beginning points that can be traced into manifestation in a Masjid. From there I will carry on to analysis of traditional Masjids existing in Muslim countries and will clarify the fundamental elements that define each and every Masjid. I will show that certain elements are present globally, whether a Masjid was built hundreds of years or mere months ago. I will also reveal how other elements are arbitrary and changeable. It is these 'changeable' elements that I believe define one Masjid from another, and which are giving rise to new streams of Masjid design. Continuing on, my search will focus in on contemporary Masjids – those in Muslim and non- Muslim countries, with an eye to identify elements that depart from tradition. To

these, I will offer speculation on any special factors I find that differentiate them from traditional Masjids in Muslim countries.

0.5. Conclusion

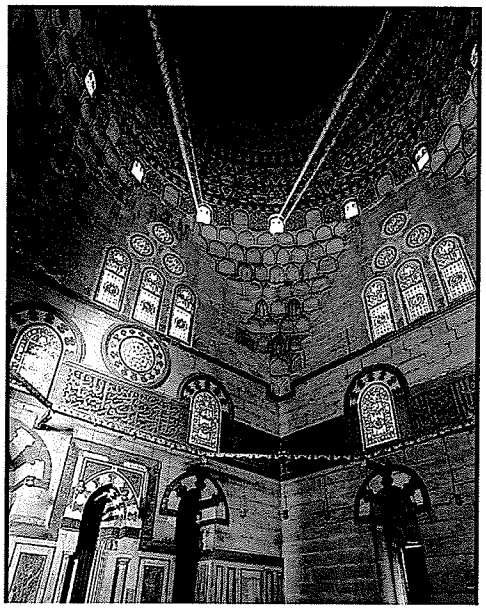
Finally, I will discuss the 'hybrid' Masjid with existing examples as well as speculation about the phenomenon in general. To what extent can a 'hybrid' Masjid differ from a traditional one? How are they received, both in Muslim and non-Muslim countries? How do they serve their function vs. traditional Masjids? These are just some of the issues I will explore in this topic of vital concern and dearness to Muslim communities the world over.

Chapter One

What is the Role of History in Islamic [11] Religious Architecture?

1.1. The roots of Islamic Religious Architecture

There were not many significant buildings in Arab lands before the dawn of organized Islamic religion. Unlike the ancient Egyptian, Greek and Roman civilizations, there was a lack of monuments to unify the Arab tribes. Therefore, as these tribes began communing and organizing themselves into what became the practice of Islam, they adopted and assimilated building typologies and elements they had seen in various lands. The elements of a Masjid, then, became dictated by worship practises, social, economical and climatic considerations, as well as educational goals passed down by preceding civilizations. The evolution and adoption of these elements can be followed through history from pre-Islamic times until the present. Many different examples from these eras provide evidence of this lineage, especially those that played a role in the development of architecture, in a direct or indirect way. Identifying the ancestry of certain core elements of Masjid design will demonstrate how embedded some of these ideas were, speaking to their ingrained cultural and social importance. Of special focus will be Islamic architecture and arts, especially during its formative stages.

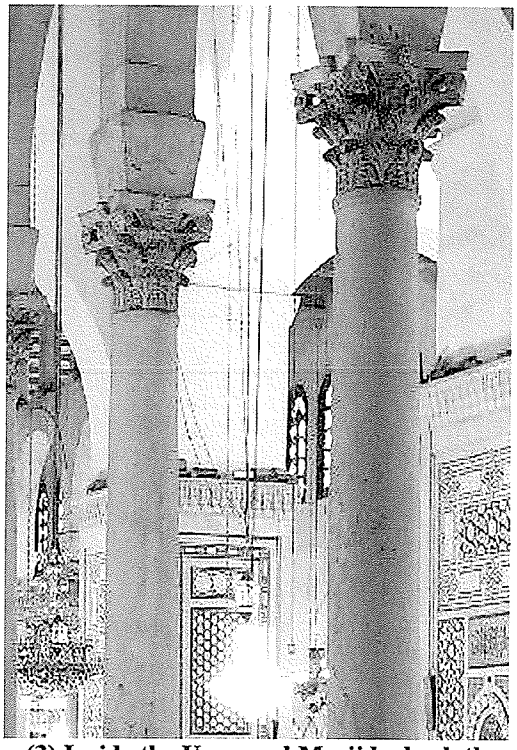


(2) Sultan Barquq Masjid, Cairo, Egypt

1.1.1. Pre-Islamic Civilizations

A) Ancient Egypt (2700 BCE)

Ancient Egypt, with its Pharaohs and great architectural history, is a good illustration of the way in which designers could manifest a community's needs. While the needs for survival, shelter and comfort, came before religious beliefs and climatic conditions, both were served in religious architecture of the era. We also find that the Egyptians' architectural work took great advantage of, and went to great lengths, to preserve nature.



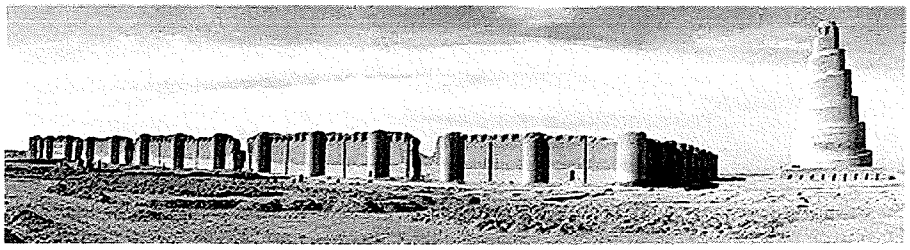
(3) Inside the Umayyad Masjid, check the lotus pillars

The architecture of The Great Pyramids carefully controls light, especially the rays of the sun. For example, the temple entrances are oriented so as to permit the sun rays to reach inside the holy sacrosanct only twice a day, once as the sun rises and once as it sets. Furthermore, Egyptian architects used natural lighting to illuminate the funeral path for the Unas Pyramid in Sakkara. Its floor, ceiling and walls are made of bright white limestone, with tunnel-like dimensions 2.6 metres wide, 3 metres high, and 700 metres long. The path is completely enclosed except for a narrow 6-centimeter-wide opening in the roof, which spans the length of the path, allowing sunlight to fall directly on the glossy stone floor and reflect off the side walls[3].

The extant to which Egyptian architects took nature into consideration is evident in their alignment of elements of their architecture with celestial and solar patterns (which feature significantly in ancient Egyptian religion and philosophy) whilst the earthly realm was depicted through pillars adorned with flowers and plants found in the Nile valley[4]. Such details eventually carried the names of the very plant life they represented, such as the papyrus, lotus and palm pillars, each attributed to the leaves of the plants they came from. These elements where transferred to Masjid design as can be seen in figure 2 (light) figure 3 (landscape).

B) Mesopotamia (3500 BCE)

Mesopotamia's boundaries extended a distance of 900 km. from the Armenian Hills down to where the Tigris and Euphrates spring, to the Arab Gulf which ended in the city of Ur[5]. It survived from the time of Hammurabi until the present, with architecture and art distinguished by many characteristics that have been proven to be determined by nature and the climate.



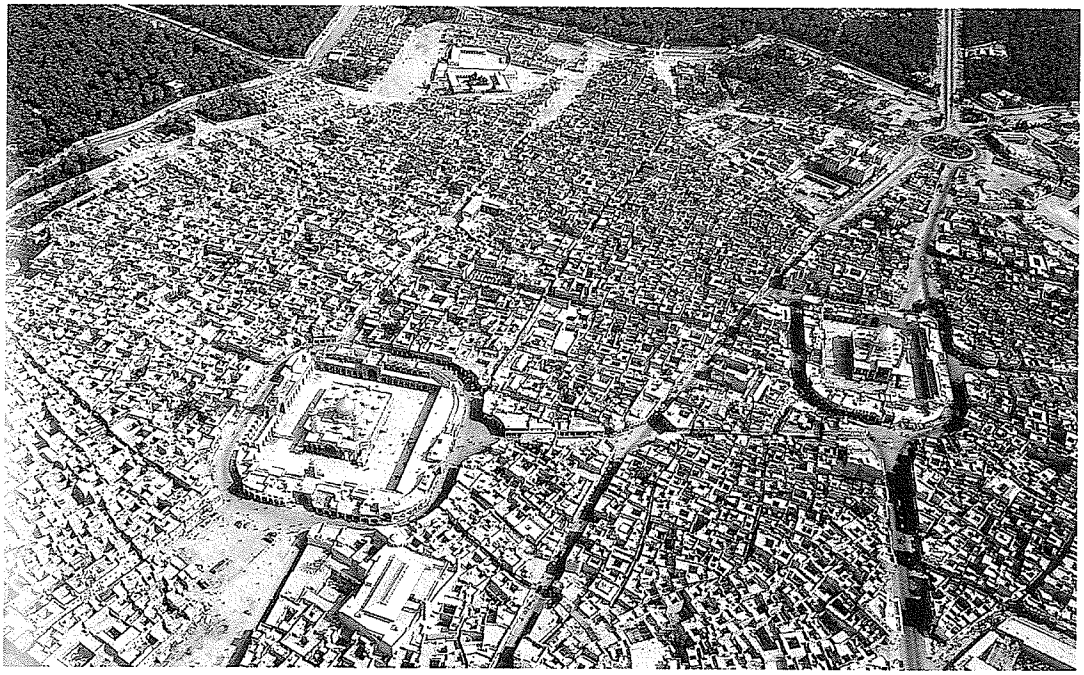
(4) Samara Masjid and Minaret in Samara- Iraq

One such aspect was the rareness of forests which had the result of minimizing the use of wooden roofs. Instead, arches and domes from baked bricks became common place. This feature can be traced from the Mesopotamians through the Suasion and

Byzantine, into the domes of traditional Islamic religious architecture. Another interesting building typology initiated by the Mesopotamian civilization is the Ziggurat[6].

These stepped temples were shaped like a tower and were designed to contain many small levels. On the interior, the walls slope in on each other, creating a kind of pyramidal amphitheatre. This form is still reincarnated in some Masjid design

C) Ancient Greece (600-500 BC)



(5) Kerbala Masjid in Najaf, Iraq

The Greek era holds the origin of architecture and planning theories from which the west takes its philosophic frame. This includes arithmetic and geographic content that generated the framework from which Greek cities were planned, which in turn, were inherited from ancient Egypt[7]. The careful planning of cities arose from recommendations by doctors that cities should be planned so that sun could enter each building, after Hippocrates stated that this could be possible if streets were perpendicular to each other. This way the city would be well-ventilated with sun reaching every home. This infamous

'web planning', originated by the Greek engineer "Hippodamos" (500 B.C.), follows in the footsteps of the engineers of Alexander the Great[8]. The grid pattern remains today, and is consistent and compatible with planning guidelines for Masjid settings. Of course, a Masjid being built in the previously developed area must conform to the present surrounding buildings. Thus, in this situation the grid pattern will not exist, rather a form representing organic development, the natural growth pattern of City Street and building, will be present.

Most of Ancient Greece's buildings featured an inside courtyard of some kind. Often the courtyard was surrounded by pillars, as common in structures in Olynthus and Delos. However, some plans were distinguished by rectangular living halls carried by two pillars, which then opened onto a courtyard. The courtyard was the centre of the Greek house, around which all elements were gathered. The nature of this design also imparts qualities like passive ventilation and the existence of hidden architecture. From the time of the Umayyad until present, this practice can be seen in the courtyard design of Masjids.[9]

D) The Roman Civilization (900 BC)

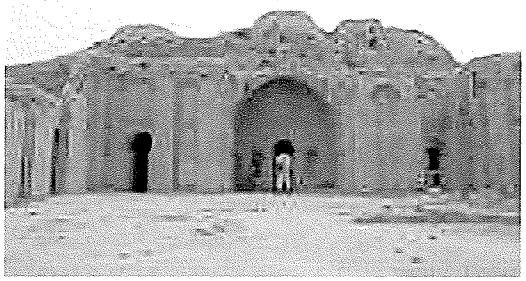
The Romans inherited the Etruscan arts[10], which came from Asia. Their occupation of modern-day Italy began in the ninth century B.C., in which they began to influence the west through what they had borrowed from the East. The use of domes and arches, which originally stemmed from those found in Mesopotamian art, as well as hanger roofs and oriented walls with coloured drawings (Frescos), were inherited from the Etruscans' stay in Asia. Additionally, elements of traditional Eastern architecture were

imported from Syria after the Etruscans invaded that region. The many important related features of Roman architecture include[11]:

- The use of the classical orders (inherited from the Greeks); Ionic, Doric and Corinthian columns, with slight adjustments to proportions, etc. to produce a more 'elegant' style
- Houses in Mesopotamia, with all windows and doors opening onto an interior court, with no exterior windows
- The use of arches and domes instead of wooden roofs, as was common in Ancient Greece, and before that Mesopotamia (via the Etruscans)
- The creation of accurately engraved stones, due to early use of metal joints.
- Later the development of a new kind of mortar, like cement, composed of volcano sand mixed with stone particles or marble putty with lime. This allowed for moulds of hardened clay to be used to form building walls.

E) The Sassanian Civilization (224-651 CE)

Persia, originally composed of the area that is now modern-day Iran, Afghanistan and Baluchistan, was the realm of Sassanian architecture. Affected by Mesopotamian art from the West, and ancient Persian art from the East, the Sassanians' art was the last stage in the Persian arts (The Egomania[a] and Parthia). Somewhat of a composite art, it incorporated elements and forms



(6) Firuzabad Palace, Sassanian Civilization

[a] Self Glorying, Obsessive preoccupation with the self

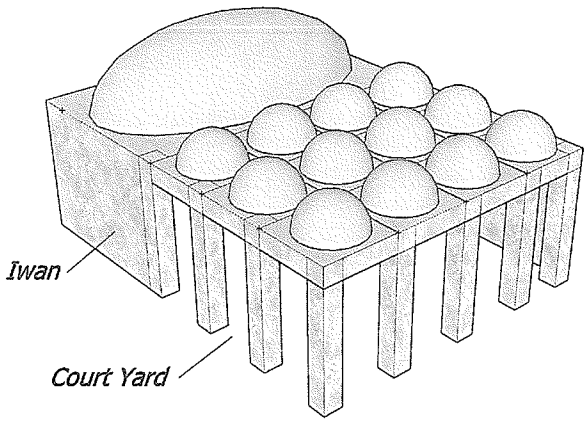
inherited from conquered nations including Babel, Assyrian and Egypt to create its own style.

Sassanian art reached its peak in the fourth century. Kisra Iwan [13], the first palace in the city of Madda'an is one of the most important palaces of antiquity, built with bricks and featuring a massive, Vaulted Iwan.

The Sassanians excelled in building huge domes covering wide areas such as the one found in the Firozabad palace. The palace contains a tall, deep Iwan and opens onto a courtyard featuring 12 halls covered with domes (see side sketch). In the centre of the building stand 3 square halls covered with domes, each with a height of 23 meters and a diameter of 12 meters.

In general, the Sassanian tradition is considered continuous with the traditions of ancient Iraqi art, which is evidenced in the use of stone in wall construction, baked brick for arches, vaults and domes, and houses based on a courtyard plan.

These elements found in homes and other buildings became incorporated into the Masjids that they built.



A sketch of the Firozabad Palace domes, Courtyard and Iwans

1.2 Formal Styles of Islamic Architecture

The architectural content of the early Islamic civilization can be divided into three styles. Each was formed through an evolutionary process by which inhabitants of varying

areas converted to early Islam, incorporating pre-dating customs and norms with the new religion.

A) The Byzantine-Arabic Style

This style is a derivative of the Byzantine style, created as the Byzantine mixed with Eastern (Syrian and Sassanians) or Greek and Roman influences. This style is present in the formative stages of Arabic architecture, in the period between the 7-11th century A.D. This style can be further categorized according to the regions and countries that generated sub-styles: Syrian, Egyptian, African and Sicilian, whilst these categorises fall under Byzantine –Arabic style there is still significant variation between each other. For example The Dome of The Rock (Syrian) in Jerusalem is Byzantine–Arabic yet very different from the Quairawan Masjid, (African) in Algeria, which is also Byzantine-Arabic[12].

B) The Pure Arabic Style

There are two different styles that fall under this category, The first one appeared in Egypt between the 10th and 15th centuries, and peaked in the Qaetbae Masjid (1468 A.B.). This Arabic style holds Byzantine roots, but evolved over 800 years to become a pure Arabic style with distinctly creative forms. The second one appeared in Andalusia and again includes buildings that feature Byzantine roots, but melded with Arabic influences. The only surviving buildings displaying this style today are in Ishbelia and Grenada.

C) The Mixed Arabic Style

The Spanish-Arabic Style is a mix of Christian and Arabic architecture. Found in southern Spain and many of the Tarantella.[13]

The Persian-Arabic Style includes buildings built in Persian countries after their populace converted to Islam, especially the Isfahan Masjid, a Persian style building with Arabic elements.

The Hindu-Persian-Arabic Style (Maghoul style in India) evolved during the time of the Maghoul Sultan in India. Like the Taj Mahal and many of the Indian Masjids, the Persian effects played a role in the style of these buildings instead of the Arab one which was common.[14]

By looking at these civilizations we can see that Islamic architecture had a good foundation on which it could be built. It has taken some of these design elements quite literally whilst taken other elements and transformed them to serve its own needs whilst staying true to the religious belief of which it was born. For example fountains were common place features in pre-Islamic architecture yet were incorporated in to Masjid design as places for Ablution (1). Also Minarets (25), used for the call to prayer in Masjid, mimics the steeple in churches. As Islam developed, a distinct flavour was desired to distinguish structures dedicated to this new religion from others. As stated earlier, with so much inheriting and welding, many elements were still closely associated with other civilizations and societies. The first structure considered to be distinctly Islamic is the Noble Ka'bah (17) in Makkah (20). Although it was a simple building, it was the only structure of any fame with a special role for Arab tribes. The Ka'bah was so highly revered that to imitate it was sacrilege. It was said by The Quraish (Makkah's ruling tribe) '...Square a house for either death or life,' after Hammed Bin Zoheer built the first square dwelling in Makkah. Hence from that point on homes built in Arab lands were rounded. The sacredness of the Ka'bah also meant it was not common practice to build near it and

buildings built in proximity were carefully monitored. For example, Sheba Bin Othman was charged with the duty to demolish any house built carefully overlooking the Ka'bah.

Beyond the Ka'bah the pioneering works of the ancient Arab civilizations arts and architecture have been largely demolished, including *Ad* and *Thamood*[41] (in *Hadhramout,* Yemen) mentioned in the Holy Qur'an [33], the monastery in Petra from the Nabataea period (500 B.C.-106 A.B, present day Jordan), and *Hader* city, located in Iraq. Many famous civilizations, like those in Yemen, constructed great structures. The city of Mareb's [23] dam was considered a quintessential work from the eighth century B.C. but it too was eventually destroyed. Subsequent to these structures, we find a lack of any significant architecture that can be speculated to be the result of the nomadic nature and evidence of conflict between tribes.

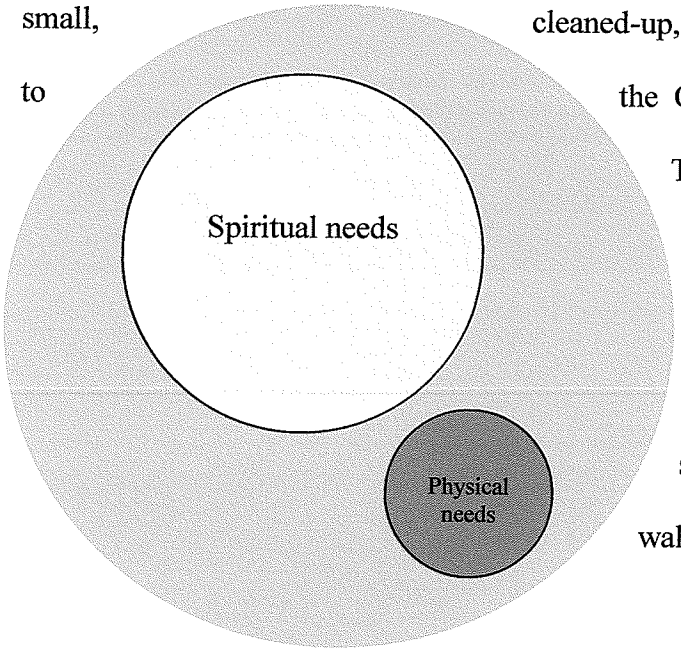
From these historical summarize we can see the functional and aesthetical changeable elements which later came to influence Masjid design

Chapter Two:

The role of the environment on the evolution of Islamic Arts and Architecture

2.1 Foundations of Masjids

Masjids are the houses of Allah for Muslims, their temples; their Masjids; their place of worship. A Masjid in its most simple form could be explained as a mass, big or small, cleaned-up, flattened and sanitized, then oriented to the Qiblah [32] and specified for praying. This mass could be fenced in or open, could be laid with pebbles, clean straw mats or expensive rugs. It could be a massive, dramatic structure with richly embellished walls, ceilings, domes and Minarets, or



Traditional Masjids in Muslim countries

it could be very modest building with no distinctive features. Regardless, a Masjid is a sacred place with an individual appearance, with none any more prestigious or humble than the next (see figure 1 & 2).

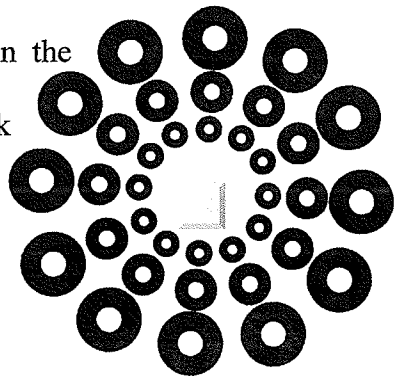
Islamic buildings throughout the Muslim world demonstrate great variety in shapes, sizes, and varied architectural elements. However, the underlying force unifying the substances and essences of Islamic architecture is religion. The Masjid provides a strong and direct example for the understanding of the principles of unity and variety in

this matter. The Masjid has a religious program with definite functional elements related to worship. Such functions lead to unity in program and architectural elements, which are constant because they are based on the 'rules' from one source.

2.2 Principal Factors that Influenced and Formed Traditional Masjids

At the inception of Islam, the goal was to build a Muslim society unified under one God. Muslims at that time (622 AD) were simple and their life was very difficult. The only precedent for most architecture was The Prophetic Masjid (The Prophet's Masjid in Medina in Saudi Arabia, *see page 36 for a detailed description of the layout and direction of this Masjid*), the first Masjid which was built in 622 A.D. in the city of Al-Medina. It featured clay walls with a ceiling of palm trunks. This structure is the precedent from which every Masjid is built. Today, Masjids vary in style and design from one region to another and from one style to another, yet all ascribe to the certain primary, unchangeable elements found in The Prophetic Masjid. The following brief description, essentially the definition of a traditional Masjid, outlines four core elements that must be present in every Masjid, as exhibited in The Prophetic precedent. Any elements falling outside these categories are in the realm of variation[15].

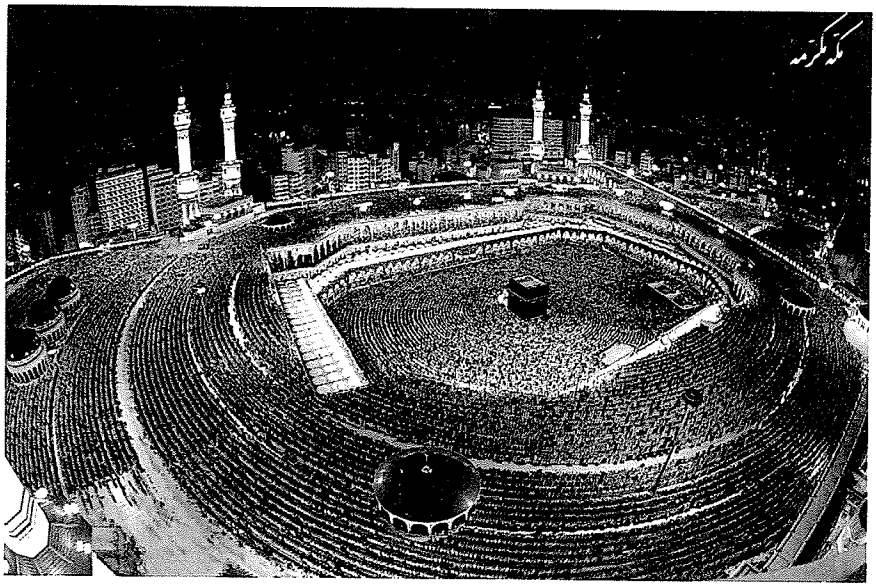
A) The Qiblah (Wall): This is the main wall in the prayer hall which is oriented to the Noble Ka'bah. A mark in the wall, usually near the centre, indicates the place where the Imam [(10)] (orator) stands in front of it. This spot



The Yellow square represent Mecca and the other circles represent the Masjids around the world

may look like a door or arch drawn on the wall, or a hollow Mihrab (prayer niche). A Masjid may have more then one Mihrab.

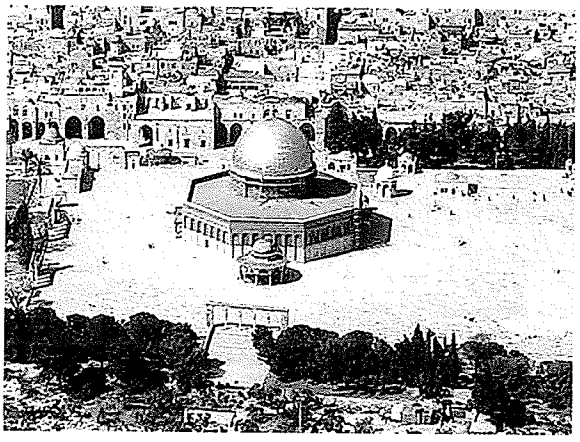
Since the direction of the Qiblah (direction to which Muslims must face when praying) is an unchangeable element in Masjid architecture, it follows that each Masjid, in any part of the world, is part of the diameter of a circle that encompasses the globe and has at its centre the Noble Ka'bah.



(7) The Noble Ka'bah and The Holy Masjid

According to this, the Qiblah wall is the most important element in any Masjid.

In turn, the Qiblah's direction has a direct effect in deriving the structure's floor plan. The Noble Ka'bah is the direction to which the Qiblah must be facing for the Masjid's occupants. Incidentally, Muslims who are praying in close proximity to the Ka'bah should be facing the Ka'bah itself no matter which side of the Ka'bah they are standing on.

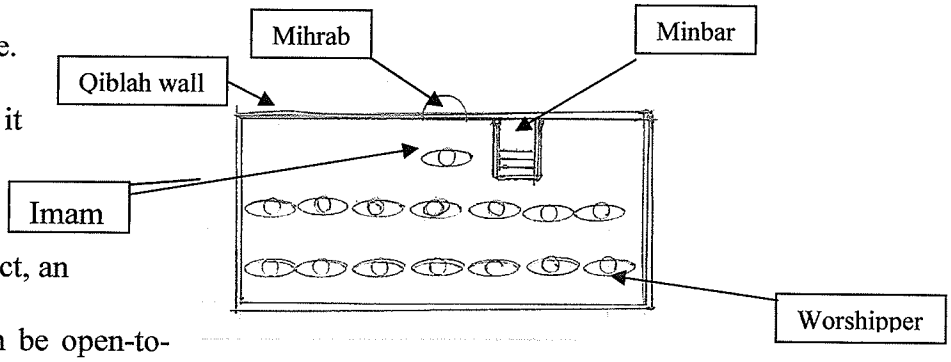


(8) The Dome of the Rock reference for octagonal and circular shape incorporated as an element of the Masjid

To accommodate this arrangement, it was derived that the circular or octagonal forms worked best. Therefore, the Noble Ka'bah is in the center of the shape, and it is the best plan for the Holy Masjid and will allow people to pray facing the Ka'bah itself. The circular and octagonal shapes also lend themselves to pilgrimage movements, which occur in a circular motion following around the Ka'bah. These shapes have thus become symbolic in nature so circular and octagonal shapes are for other Masjids- even the ones located in Makkah - the direction of the prayer lane (rows in which people stand when in prayer) should be parallel to the Qiblah wall. This means the Qiblah is itself facing Noble Makkah where the Holy Ka'bah is located. The reader should be reminded here that the Ka'bah was already in existence prior to the advent of Masjid.

A rectangular plan, where the Qiblah wall represents the longitudinal side of the rectangle, is a suitable plan for any Masjid any place on earth. This arrangement creates a stretch for the first prayer lanes, which, according to The Prophet's statements, have priority[16] over the second prayer lanes, etc. Therefore, it can be seen that the setting of the Qiblah wall in the proper direction has a profound effect in a Masjid's architecture.

B) The Sahen [36] (Open Court): This is the second element which defined The Prophetic example. Much like it sounds, the open court is in fact, an open court. It can be open-to-air or have a roof, can



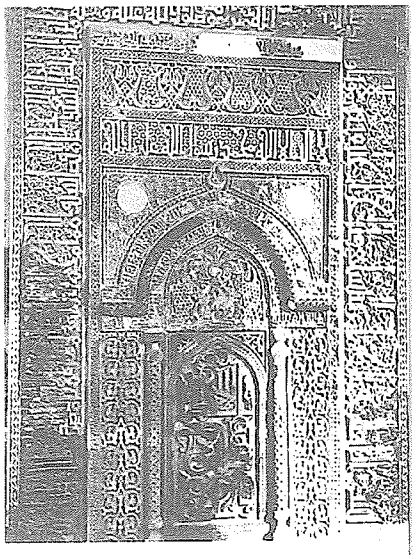
A sketch showing the location of the Mihrab, Qiblah wall, Imam, worshippers and Minbar

have a tiled floor or a fountain or pond; it could be planted with bitter oranges to give shade and sweet smells (as is common in the Andalusia Masjids). Smells can also be combined to create a medley of scents, as is common in the Turkish and Iranian Masjids where numerous flower beds can be smelled.

C) The Riwaq [35] (Roofed Portico): This element is connected to the open court, often surrounding it on one, two, three or even four sides. It consists of roofed hallways, with the biggest and most important of which is the prayer hall (or the Qiblah). The appearance of this element, e.g. the way it is roofed, etc. differs according to time, place and style.

D) Mihrabs and Minbar [26] (Pulpit):

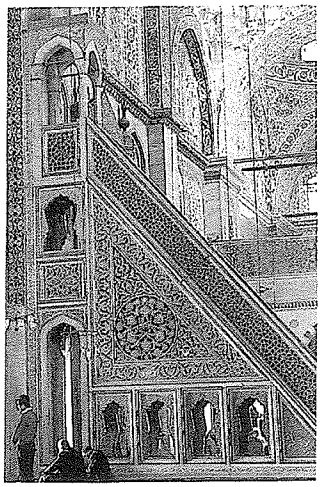
The Mihrab is a central architectural element for a Masjid, and considered one of the most important ornaments in the history of Islamic art and architecture. Before the advent of the Mihrab, worshippers faced the problem of congestion in small spaces because the Imam stood alone in the first row for prayer (which is required for leading the prayer congregation). Lead to too much wasted space. To overcome this problem, the hollow mihrabs were created so that the Imam could situate himself on the edge of the space; and still have room in front of him to bend over and kneel for prayer. A secondary role of the Mihrab to serve as an acoustic device, reflect the sound of the Imam's voice when verbalizing certain points in the prayer which are important for the worshippers to hear as both



(9) The Mihrab of Al-Afdal in the Masjid of Ibn Tulun, Cairo

indices of the commencing portions of prayer and the words of the actual prayers. Finally, the Mihrab must also point to the Qiblah direction and make the second Athan (prayer call) immediately before starting the prayer. The relationship between the Minbar and Mihrabs in Masjids is close and direct. Al Zarkashi[17] states that it is imperative that the Minbar, from the perspective of the Imam when facing the worshipers, is to the left of the Mihrab, and on the right side of the worshippers if they face the Qiblah. The Mihrab is a hollow or niche in the Qiblah wall. Its first use can be traced back to the hollow Mihrab constructed in the era of Omar Abdul Aziz (91 Hijri [(15)]-709 AC), during the renovation of The Prophetic Masjid[18].

There are two kinds of Mihrabs: Flat or Hollow. An example of a flat Mihrab is the Dome of the Rock Mihrab in the underground cave. A hollow Mihrab is one with a half circle void, with the oldest example in Egypt -- the Mihrab of the Ibn Tulun Masjid. Many different materials can be used in the building of a Mihrab, including stone, marble, ceramic, mosaic, wood, etc. to make the ornamental elements. Some Mihrabs are fixed in place in the Qiblah wall, such as the wooden Jawhar Alsakly Mihrab, while others are moveable, like the one in the Lady Ruqiah Masjid from the Fatimid period, (now housed in the Islamic Art Museum in Cairo). There may be more than one Mihrab in a Qiblah wall, with some used to emphasize the Qiblah direction.



(10) The Minbar in the Blue Masjid, Turkey (17th Century) made of wood

A Minbar is a raised platform accessed by stairs devoted to orator. He may stand or sit upon the Minbar, usually only on Fridays, Eids [7] and special occasions. It can be fixed or moveable, as is common in Moroccan Masjids.

Minbars are commonly constructed of wood, marble or stone. The oldest known wooden Minbar in Arab lands is the Al Quairawan Masjid's Minbar The oldest surviving marble Minbar was found in the Al kadhery Masjid in Egypt, which is now preserved in an Islamic Museum.

Additional elements were added to this repertoire later in the evolution of Islamic Religious architecture. The first two remain in the category of functional elements used in worship Following these are ornamental elements commonly found in most Masjids.

A) The Minaret and the Ablution Fountain

1-The Minaret

This was not a fundamental element in Masjid construction originally; the oldest example of it being incorporated into a Masjid comes from Albalathry Zaed bin Abeh Muawiya's leader in Iraq, who built a Minaret from stone for the Basra Masjid (455-672 A.D.). Built of stone, this introductory Minaret was soon repeated in many different shapes, locations and numbers.

2-The Ablution fountain

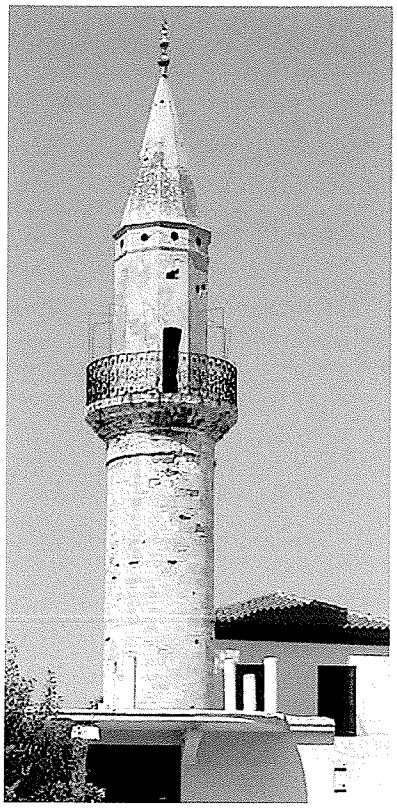
This was a later addition to Masjid design. Its absence from Masjid during the time of The Prophet and the First Caliph [6] (Abu Baker) is attributed to the fact that in those

(11) The Ablution area in the Masjid Selimiye Camii Turkey, 1569

times Muslims attended the Masjid already having performed the Ablution.

B) The Me'athna [19] (Minaret) and Domes.

Athan [2] is the announcement used to call for prayer and to announce a pilgrimage (Hajj). The Me'athna and Minaret (light house) are names for the places from such announcements are made. With regional similarities, Me'athnas appears in many different Islamic countries. There are no rules or standards for locating the Me'athna in a Masjid - it could be a part of the main structure, such as those in Damascus, Quairawan and Cordova; or it could be a separate element placed apart but in proximity to the Masjid.



(12) A Turkish minaret style

The oldest Me'athna in the Islamic World still preserves its original shape despite some changes. It was established by Oqba Bin Nafea between 50-55 H (672-677AC) in the Al Quairawan Masjid[19].

The Me'athnas appeared in the early period of Islam (Umayyad Dynasty), was square shaped and resembled Syrian Church towers. In Iraq and in Persian countries, they took on a cylindrical shape, sometimes spiral with a staircase running around it on the exterior. In Egypt, the Me'athna was often a blend of the two styles, where a square base was topped with an octagonal shape. Turkish-Ottoman Me'athens featured elegant

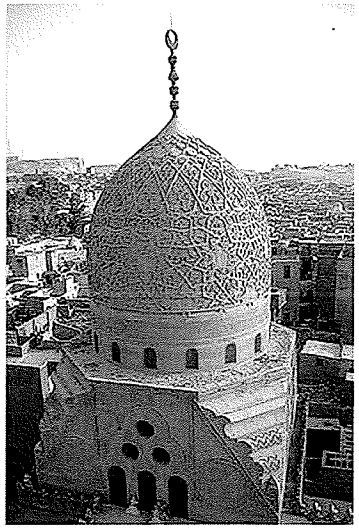
aesthetics with straight columns ending in a cone that resembled a pencil head.

The dome is a round structure featuring a concave interior and convex exterior.

(13) The oldest Me'athna in Islamic history in the Great Masjid of Quairawan, Tunis

It is a special shape used to form the roof of many buildings throughout the ages, with examples present in Mesopotamian and Far East civilizations' Byzantium, the Rome, etc. The use of domes in Islamic architecture developed out of special circumstances: it wasn't only an environmental, climatic or structural solution, but also a conscious aesthetic device.

The dome symbolizes the sky above the worshippers, as the ceiling of a Masjid displays a symbolic image of what the Arabs saw in the desert, a wide and circular sky above them. Therefore the dome is used in Islamic architecture in a unique and marked way, with each civilization's approach differing from the previous.

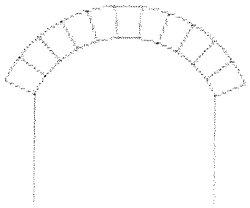


(14) The Tomb of Qaitbay in Cairo

The Al-Aqsa Masjid in Jerusalem, built in 72 H (694 CE), is considered the oldest example of a dome in the history of Islamic architecture, yet the first real use of a dome in a Masjid was in the front and in top of Mihrabs to emphasize their prestige and importance. Examples include the Umayyad Masjid in Damascus (132-133H) (754-755

AC), the Al Aqsa Masjid in Jerusalem (163H) (795 AC)[20]. Additionally, domes were used to cover tombs although The Prophet's statements forbade building on graves and covering them[21].

Domes take on different shapes and featured different ornaments. Some had sphere, egg, onion, or pyramid shapes, with or without ribs. Although many structural approaches were used to transform a square plan to a circle; domes provide the best opportunity to do this by merging with the rest of the structure on the inside. The most famous and beautiful include those outside the tombs of Qaitbay and Bersaby.



(15) Segmental Arch

C) Columns and Arches

The column is what supports the roof or the wall. In the early period of Islamic architecture the date palm trunk was used as the precedent for a column, as can be seen in The Prophetic Masjid· Later on Muslims used Hellenic, Roman and Byzantine-influenced columns, and later developed uniquely Islamic designs inspired by Islamic art.

(16) Wooden columns

From an architectural perspective, a column contains three fundamental parts[22].

These are the base, body and crown (capital). The most common columns featured cylindrical bodies, which grew in sophistication as time went

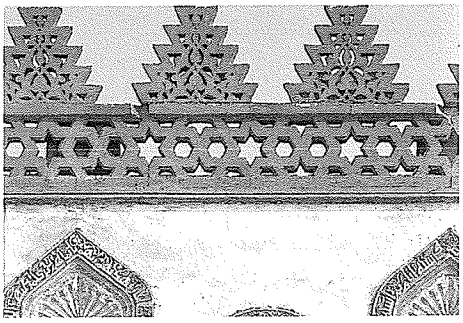
on. Eventually ribbed shafts with octagonal or spiral sections emerged. One elaborate Ottoman style featured a column with a concave zigzag body, looking like diamonds. As for the crowns Muslims created different kinds, including the pomegranate with circular, octagonal, flipped missing head triangle, or bell sections, and ornaments of leaves, Muqarnas or bails. The base came to look like a flipped bell shape[23].

The arch is an architectural element with a curved shape that spans from one or more base to another. Usually formed at the building's opening or surrounding it, arches are often made of stone or brick.

Islam architecture contains many kinds of arches, as many as twelve kinds, with each region in the Islamic Empire displaying a certain type. In the beginning, the half circle one was common but later on, the pointed, horseshoe, segmental and lobed arches became integrated to varying degrees across all regions.

D) Machicolations and Muqarnas [(29)] (Stalactites)

Machicolations are considered original elements for defence in architecture, and take the form of 'fences' atop castles and towers. They are composed of tightly bonded stones atop battlement walls which help to protect occupants and defenders from attack. Each ornament that appears to be atop a building or Minbar is termed a Machicolat



(17) Al-Azhar Masjid in Cairo, the picture shows a machicolation that was famous in the Ayyubid dynasty

Traditionally, Machicolation crowned many entrances of buildings before Islam migrated to the lands of the Sassanians and Roman architecture.

It was first used in Islamic architecture in the Eastern Al Hira Palace. In lay terms, Machicolation was often referred to as 'the brides' due to its close resemblance to an abstract human form joining hands and legs (as in the Ibn Tulun Masjid Machicolation). Machicolation takes many shapes, with the most famous one being 'teethed', like the one in the Al Azhar Masjid· Machicolation was most popular in the Ayyubid and Mamluk dynasty, but was also known to exist in earlier times, as evidenced by the oldest example of Machicolation, the Sinjer Al Jawli Madrassa in Egypt[24]. In the mid fifteen century, Machicolation began to take on the negative shape (empty or void space) opposite to the positive shape (the solid). This can be seen in the Zen Al Den Yahiya in Polak Masjid in Cairo.

Muqarnas are also considered a contribution of Islamic architecture, often arranged in a group to resemble a beehive. These are used as ornament in decorating below the machicolations façade, in Me'athna, and at the joints of walls and ceilings. They are also used as structural elements in column capitals and in the transferring of square plan to circular ones covered by a dome. Therefore Muqarnas function as ornament, pivotal to the control of light and shade, but they also have a structural role. Muqarnas are named according to their shape and source; with different types including the Egyptian, Shamy, Alpo, triangle and falling down stalactite. This term gains its name from its resemblance to the ceiling of a cave, dripping with lime formations as in the English term Stalactites.

The architectural elements used in the design of Masjids are many, and cannot all be included in the discussion here. However, an outline of the most prominent features has been given, with examples to clarify the idea of diversity in unity frame. This idea of

diversity also touches the aspect of ornamentation, including things abstract, inherited or copied from other civilizations, etc. This whole works toward verifying the pedigree of ornamental elements in Islamic art, as either geometric or planar. This gains importance when one considers the placement of Arabic/Quranic Calligraphy, especially the writing of the Quranic verses on the Masjid walls. Other, non-core elements, remains open to interpretation and are influenced by the environment they are in. Hence variation in things like external appearance, engineering, or the use of different materials or styles is possible from one country to another.

2.3. Other Factors Informing the Design of a Masjid

Beyond these core elements, other fundamental religious, social, and civil guidelines apply to the ways in which a Masjid should be located, approached and used. Religious law dictates/guides certain human behaviour. Physical structures often are manipulated to control this behaviour, meaning all aspects of the design are to be carefully planned in order to achieve the desired results. Masjids are no exception to this rule, and indeed everything from location, to orientation, to materials is carefully chosen. Traditionally, before construction could even begin, the site of a Masjid was selected with the utmost scrutiny. Ease of access was of prime importance in days when worshippers had only horses or their feet to rely on for transportation. Accordingly, Masjids were located in the centre of the city, easily accessible by all.

The layout and orientation of a Masjid was also outlined by the four unchangeable elements the origins of which came from the Holy Qur'an and Hadith. For example, the direction of the Qiblah in a Masjid and the respect that must be shown to it are governing

design factors. In Middle Asia, the main rooms of a Masjid' including living rooms, had a Mihrab in their West walls (the Noble Ka'bah direction). As a side note, it is interesting that the direction of the direction of the Qibla is so respected that Muslims are forbidden from sleeping with their feet facing the Ka'bah, and no toilets can face this direction either.

Going from the macro to the micro, one of the most intimate elements of a Masjid is not fixed, although its effect on the use of space and personal activity is paramount. The prayer mat, used for individual worship, carries a minimum dimension of 3' x5'. This space is allotted to each mat, and not only has an affect on the overall dimension of the prayer hall, but outlines the area each worshipper requires in order to complete their prayer. By taking this dimension into consideration, a determination of the total number of worshippers able to attend the prayer hall Sahen can be calculated. It also plays a factor in the overall space and arrangement of the Masjid as a complex.

Another example of these governing design factors of religion is the rules for privacy in the Islam teachings. Not only is the body of women covered, but it must be kept separate from men in certain structures, leading to the need for separation between rooms used by each group. Therefore, many Islamic designs include gender specific rooms and halls.

2.4. Regional variations in climate and material use

Although the elements of a Masjid are outlined by The Prophetic example, differences in region, climate, topography, etc. had decided influences on Masjid construction within the Islamic world. Spread widely on the world map, encompassing a

vast range of regions with an equally vast range of climates, (See Map A & B) many adaptations due to local environment were inevitable.

Islamic countries are located within the following climatic zones[25]:

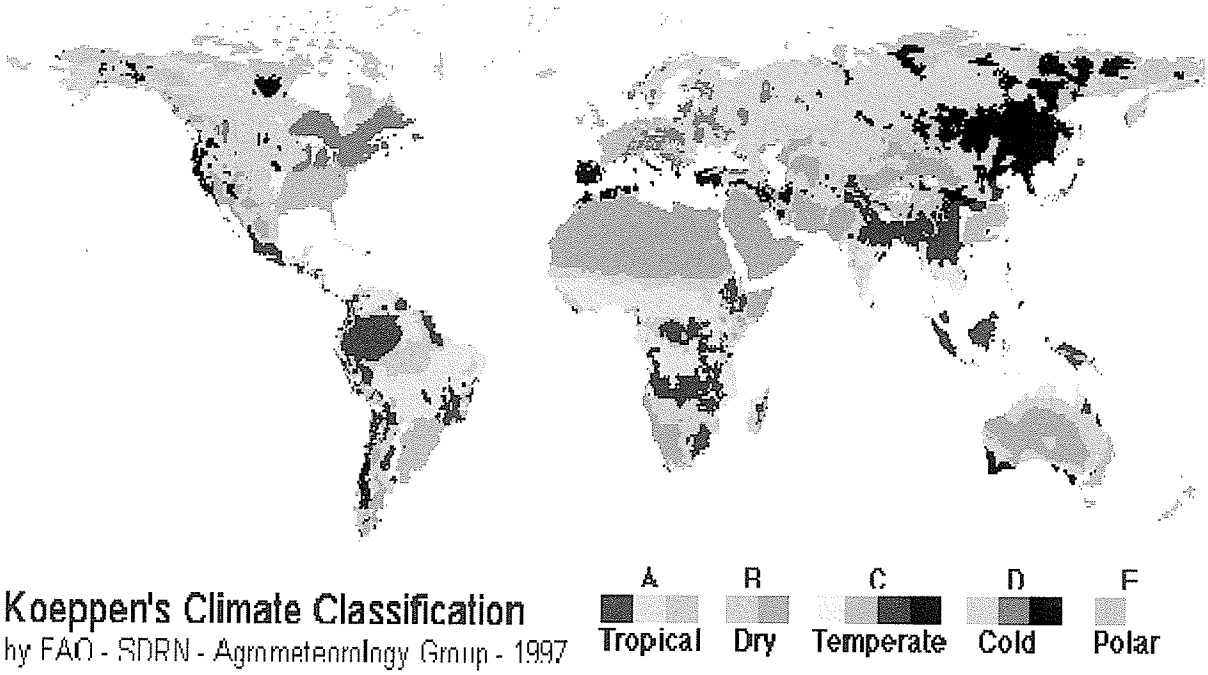
a. The cold climate (Arctic)

b. The mild climate

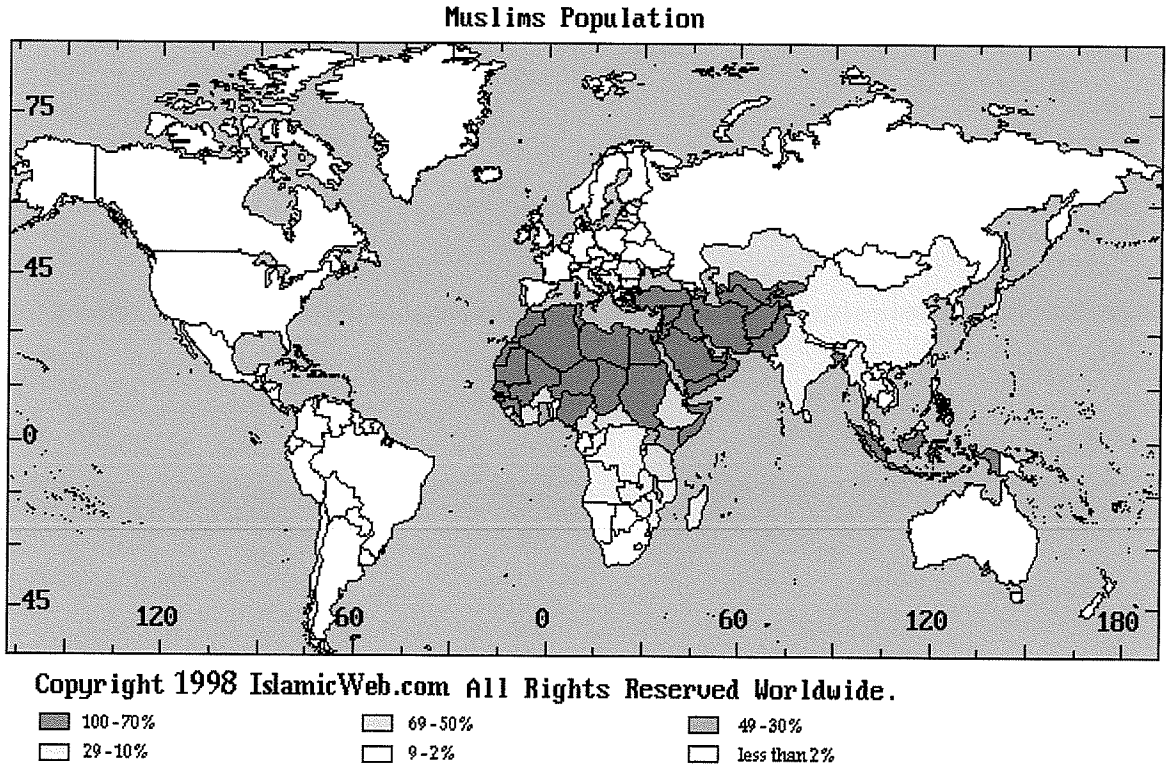
c. The hot dry climate

d. The hot moist climate

Traditionally, Muslim builders preferred using local materials for ease of availability and suitability for the specific climate. The first lands known to the Muslims featured hot, sunny climates.


Koeppen's Climate Classification
by FAO - SDRN - Agrometeorology Group - 1997
A
Tropical
B
Dry
C
Temperate
D
Cold
E
Polar

Map A


Muslims Population
75
45
0
45
120
60
0
60
120
180
Copyright 1998 IslamicWeb.com All Rights Reserved Worldwide.
100-70%
69-50%
49-30%
29-10%
9-2%
less than 2%

Map B

Consequently, materials were chosen for their passive abilities, especially insulating against heat. The following is a discussion of the most common materials, their reason for use, and the kinds of styles they were commonly found in.

Adobe brick: This was carefully chosen, consisting of clay or sand mixed with water and plant fibres to make a strong bonding agent. Adobe is commonly used in hot, dry areas where rain is rare, but can be found in moderately rainy areas if a roof and proper foundation drainage are constructed to protect the walls. Adobe can also be protected by sealant asphalt paint. Adobe brick is considered one of the best materials for heating insulation. An example of its use is in the walls of The Prophetic Masjid

Baked brick: This is considered one of the most important materials used in Islamic architecture, especially in Egypt, Iraq, Iran and the Arabic western countries. In these places wood and stone were not plentiful, but the sand used in the bricks was. Baked brick is a versatile material that can be used for many components of a building, including walls, shoulders, domes, vaults, etc. In many cases the creation of a thick depth translates to good heat insulation for interior spaces. Examples of Islamic architecture using this material include the Nasser Allah Masjid and Alnemery Masjid in Egypt.

Stone: Considered a strong material in architecture for many centuries, stone was often used in widths of 50 centimetres. and often wider, and known for its fair insulation properties. Limestone, with its light colour, reflects sunlight yet transfers heat slowly, meaning heat can be released for up to 15 hours following its absorption. This means interior spaces will be cool during the day, and warm in night. Stone has been used in the construction of many Minarets, including the Minaret for the Great Masjid in Haran, built

(744-750 C.E.). Later, stone became a hallmark material in Ottoman and Mamluk buildings.

Wood: Wood, a rare material in most areas of the Muslim world, is reserved for use in special works. Timbers can be found in flat roofs, or even in domes. One example is the Aqsa Masjid in Jerusalem, built of two layers of wood, with the exterior layer covered with metal sheets to reflect the sunlight and to protect the interior. The delicate interior of the dome features patterns and paintings from the sun-rays, and maintains a space between the exterior of the dome so as to permit ventilation.

Plaster & lime: This material is found in many Middle Eastern countries, including Iran. It can resist higher temperatures, as well as high levels of humidity. Plaster and lime is used in the Mashrabiyyas (oriels).

2.5. Masjid Evolution in the Varied Muslim worlds

The fact that the design of Masjids has remained consistent, generally not changing, since the time of The Prophet Mohammed, attests to the fact of their strong adherence to ancient principles. This is represented in the presence of "the unity in design" between Masjids throughout Muslim countries, with the core elements always present. However, some variety has emerged; a result of buildings erected in different countries, with differing societies, environments, cultural conditions.

Regional styles developed under the larger umbrella of Islamic Architecture, such as Tulanih, Fatimid, Moroccan, Seljuk in (Iran, Turkistan and Iraq) or Mamluk in (Egypt and Syria) or Indian-Manghuls in (India and Afghanistan) or Sufarids in (Iran and Karsan) or Turkish-Ottoman in (Asia, Balkan, East Europe, Egypt, Saudi Arabia and

Syria). Islamic Architecture in Muslim countries became a blend of differences and distinctions with powerful governing and unifying elements.

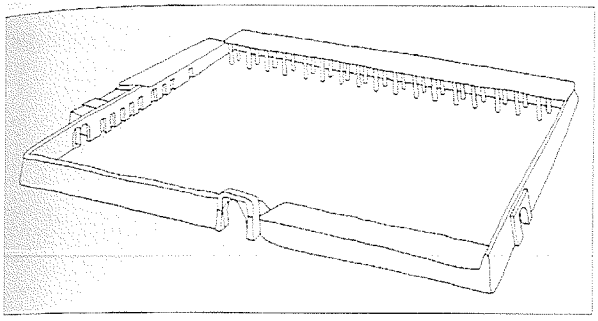
The feature of unity, which is derived from a Masjid's Architectural program, reflects the fundamental elements. This feature is expressed by French intellectual Rouge Garode who said,

> "Personally, when I see the magnificence of Islamic Art I feel that one man built it pushed by his belief in one God. From the Great Masjid in Cordova to the Mosaics Masjids in Telmasan, and from Ibn Tulun in Cairo to the luxurious Istanbul Masjids."[26]

Although it has been discussed that unity in design from one Masjid to another is important, it cannot be denied that variation in designing Masjids occurs through the use of different architectural elements. Differing types and styles of the design process led to divisions according to design character (qualities), functional elements, building materials and techniques, etc. Hence the following styles emerged:[27] [28]

A) The Prophetic Example

Similar to The Prophetic Masjid in final shape, this features an open court surrounded by four porticos, the largest and most dominant being the Qiblah. Each portico contains tiles parallel to the Qiblah wall, divided by lines of arcades carried by columns, a roof of wood and entrances from all sides except the Qiblah wall. There are Minarets in each of four corners, and the general image



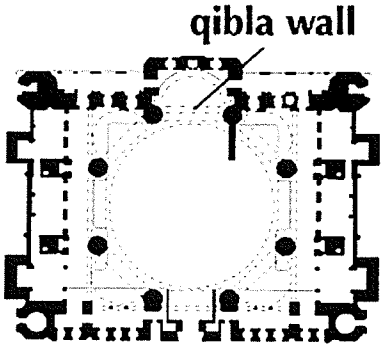
Prophetic example

for the interior space is alluding to that of a forest of columns. For this reason this example is often referred to as 'the Masjid that has a central Court'.

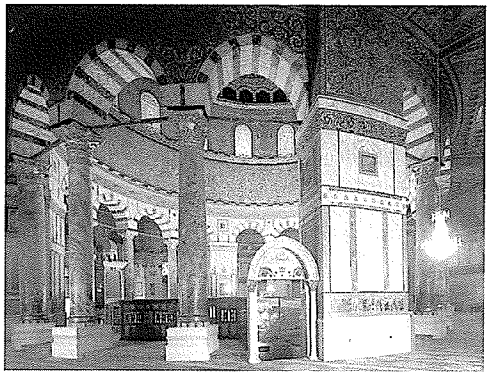
B) The Transept Example (Corridor partition)

Similar to The Prophetic example, this style differs with its Qiblah portico parted to form a type of transept. Here, a partition splits the portico in the middle and hub of the Qiblah, with a roof higher than the Qiblah portico to provide space for (clerestory) fenestration to lighten the corridor.

This style was developed to make tiles vertical on the Qiblah wall. The Qiblah portico was locked from the court side with doors or walls for climatic reasons. Often a dome is added in the middle or end of the corridor.



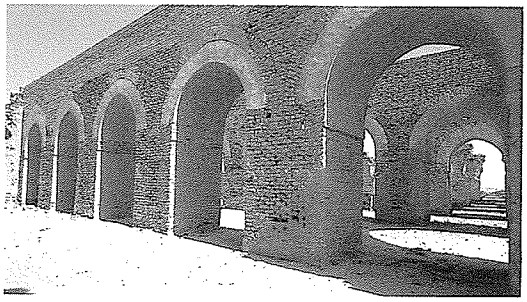
The Transept Example (Corridor partition) plan



(18) Al-Aqsa Masjid in Jerusalem

C) The Structural Buttress Example

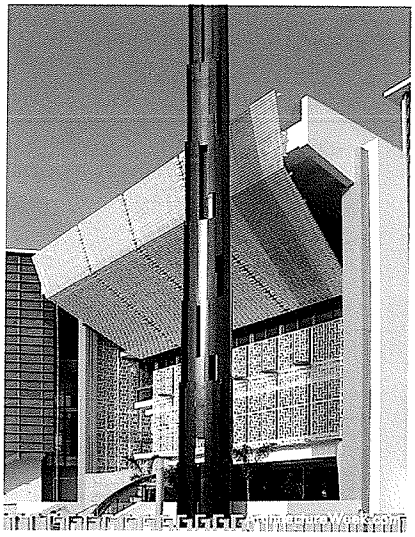
Similar to The Prophetic example, this style does not contain any columns in the porticos. The columns disappear permanently from the porticos and are replaced with structural buttresses built of brick or stone. Sometimes the arches are carried parallel to the walls, and all of them feature Minarets, although usually only one outside the Masjid separate from it.



(19) Abe Dalf Masjid in Samara, Iraq

D) The Upstairs Masjids

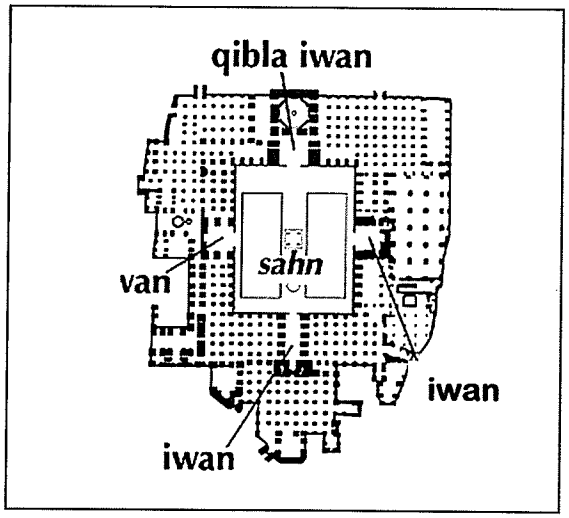
Upstairs Masjids feature, as their names suggest, a Masjid located in the upper level (second or higher floor). Worshippers access it via outside stairs, while the main floor is used for commercial purposes, with generated revenues used to maintain the Masjid.



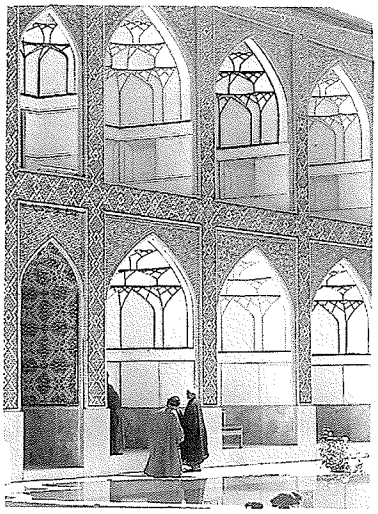
(20) The Assyafaah Masjid in Singapore

E) Iwans Examples

In this example the porticos with columns and arcades disappeared all together. The design instead contains a square or rectangular open court surrounded by two, three or four sides. and (a large three-sided room with a dome, and the fourth side open to the hall) open onto the court, the biggest being the Qiblah Iwan.



Iwans Examples plan

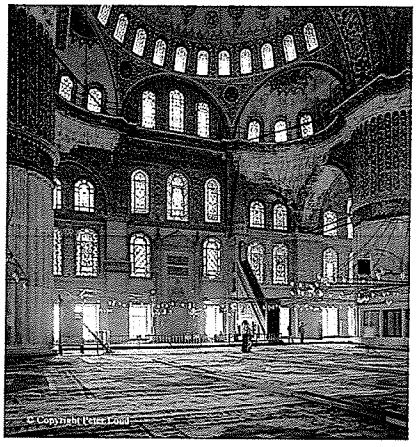


(21) Madar-I Shah Masjid in Isfahan, Iran

Each Iwan is covered with a full or half dome carried on triangles, corner gaps or Muqarnas. Usually there is an ablution Fountain, pond, etc. in the middle of the court, and the entrance may be angled (twisted) once or many times.

F) The Dominion Dome Example

The Dominion Dome Example appeared in Ottoman architecture, with a design that does not stem from The Prophetic example. Instead of a rectangular open court surrounded with porticos from four directions, the width of three porticos is minimized to one tile less each, covered by small domes on squares, and the Qiblah portico becomes a big empty space covered with a big high dome in the centre resting upon four large sphere triangles on four huge columns. This dome is supported by a group of half domes and small domes, an idea taken from Hagia Sophia. For climatic reasons related to the rains of Turkey and Andalusia, the domes provide excellent



(22) The Blue Masjid in Turkey

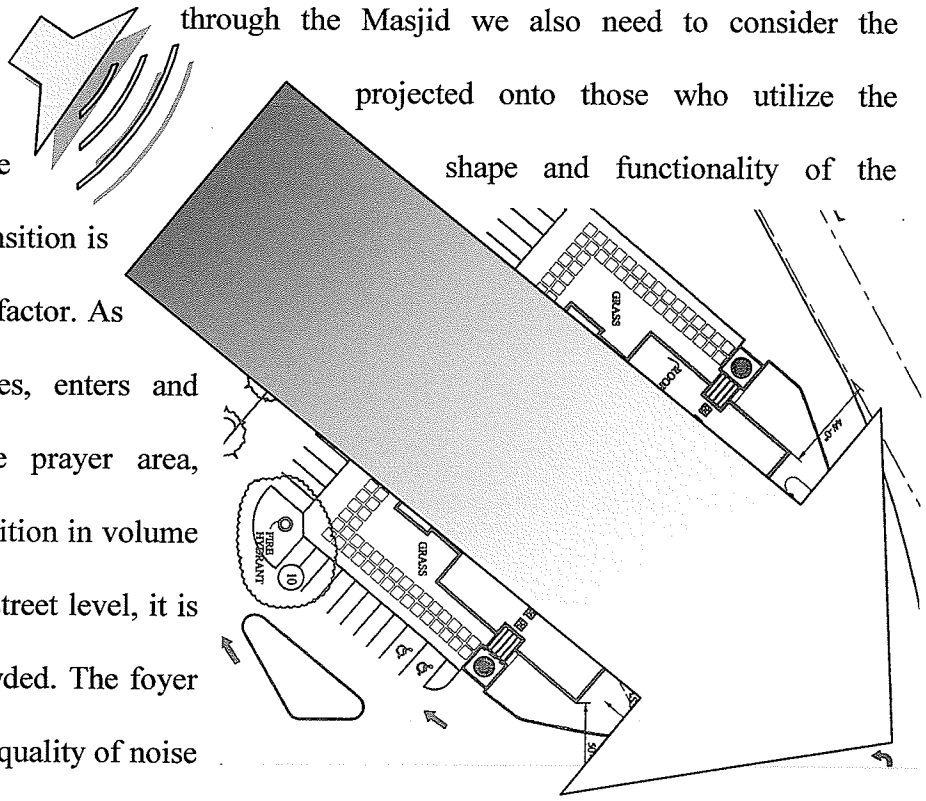
drainage for the Masjid's roof.

From these points we can see the elements that are important and necessary for designing a Masjid. The principle factors were discussed in addition to other outlying principles that have and still do influence the design of a Masjid. But as we progress on to discussing contemporary Masjids and Masjids in non-Muslim countries we will see how the principle factors remain unchanged, but other elements are lost or changed to suit the needs of ever changing communities and environments.

2.6. What are the Spiritual and didactic qualities that we find in y Masjid?

2.6.1. Sound and acoustic

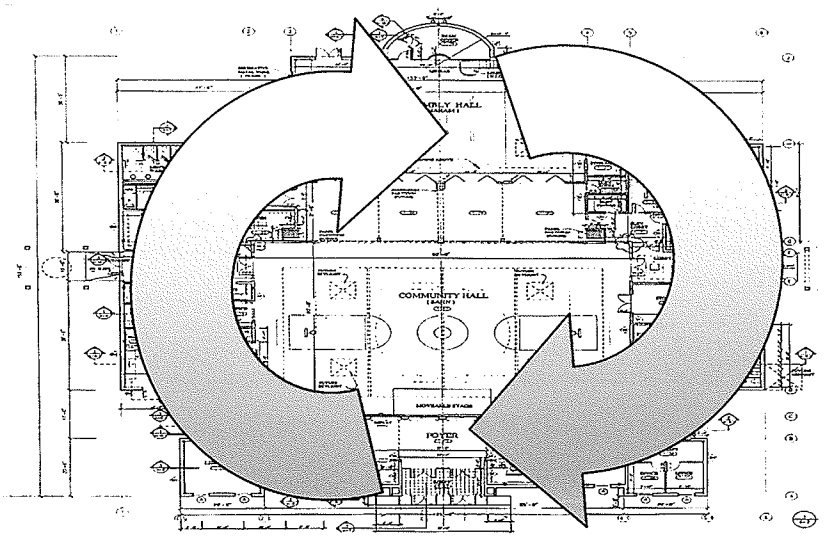
As we travel through the Masjid we also need to consider the influence that is projected onto those who utilize the building, through the shape and functionality of the building. Sound transition is one such important factor. As a person approaches, enters and moves towards the prayer area, there is a large transition in volume and quality. At the street level, it is very noisy and crowded. The foyer is also noisy but the quality of noise has changed from mixed and mechanical to that of mixed and social. In the courtyard, which is a semi- private and semi-public area, the noise becomes more focused on the

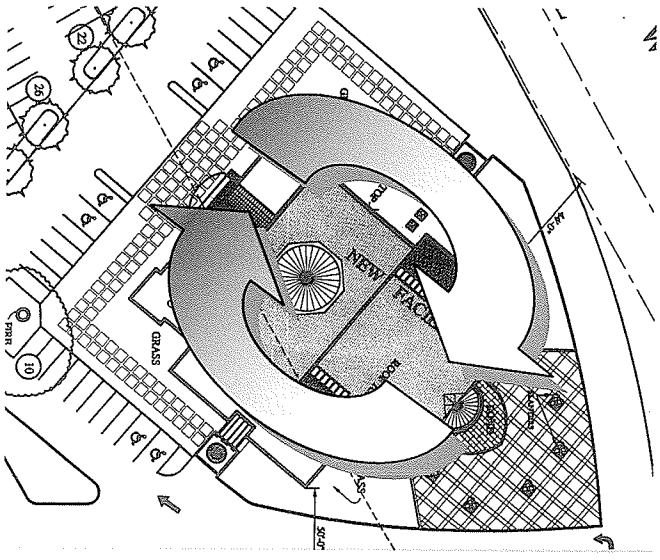


activity that is being performed there and specifically in each of the rooms surrounding the courtyard. Finally, as one move into the prayer hall, which is a fully private area, we reach a quite and entirely focused noise level which is reflective of spiritual quietness.

2.6.2 Movement and Social integration

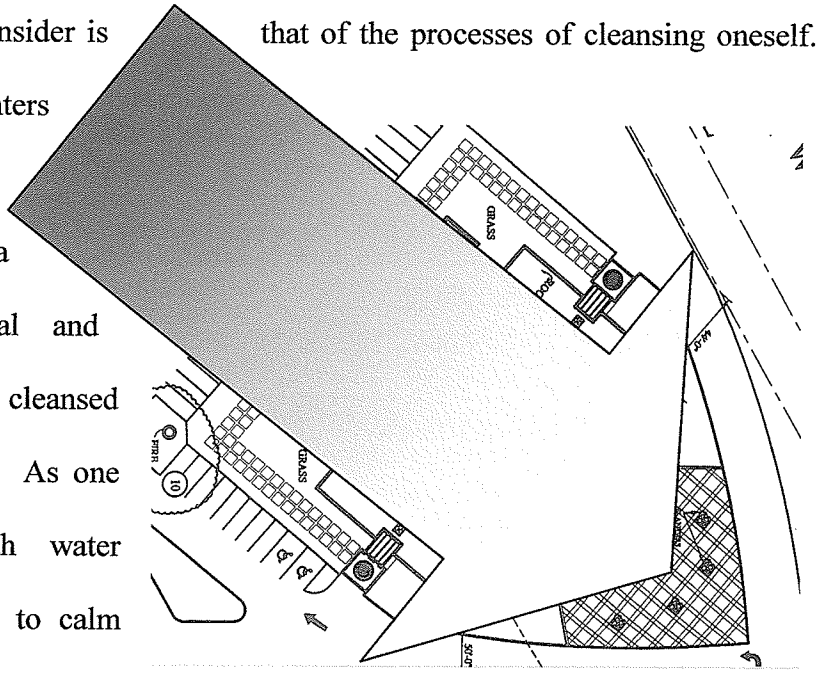
Movement through the Masjid also follows a pattern but one that is circular in nature. Movement from the outside and into the Masjid is typically of a faster pace. As one moves into the areas of activity and into the prayer hall, movement slows down to almost complete static once inside the prayer hall. After prayer and as one leaves the prayer hall, passes back through the Masjid and on the way moves out of the spiritual stage and begins to socialize with those who are around them the pace of the movement increases once again. This blends perfectly with the social interaction between the users and the visitors.





2.6.3. Cleansing

The last one to consider is that of the processes of cleansing oneself. When the worshipper enters the building, he/she brings with him/herself a world of both physical and spiritual dirt that is cleansed through both dimensions. As one physically cleanses with water (ablution) one also starts to calm down and mentally prepare for the prayer. So in both ways, one becomes cleansed in progress from the outside to towards the prayer hall.

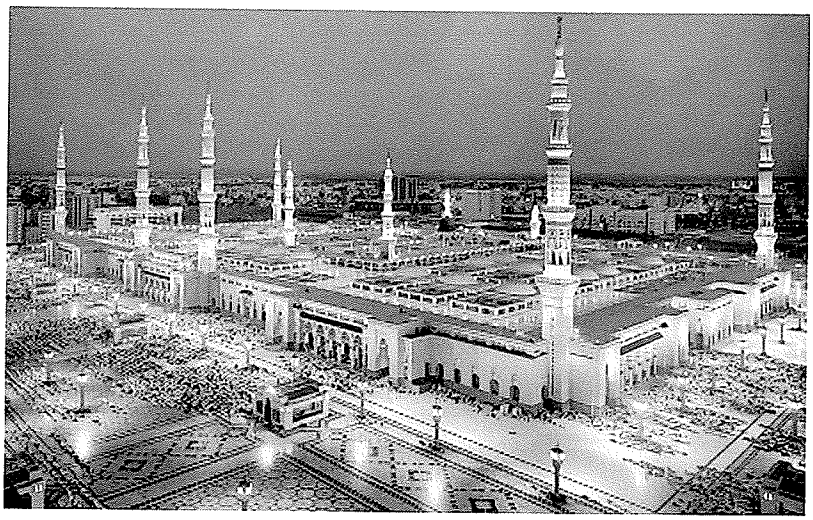


Chapter Three:

Contemporary Masjids

Comparing Masjids in Muslim Countries to those in Non-Muslim Countries

The Prophet's Holy Masjid. It serves as the precedent for Masjids the world over, and is located in the Holy City of Madinah (Al Madinah [19] Al Munawwarah),



(23) The Prophet Masjid in Al-Medina, Saudi Arabia

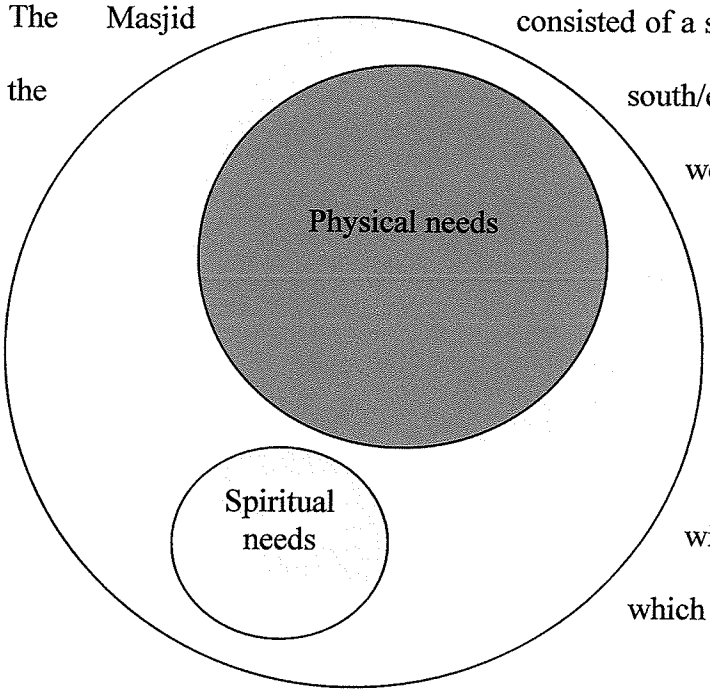
a pilgrimage city second only to the Holy City of Makkah. . According to Islamic tradition, when The Prophet Muhammad, peace is upon him, and his followers migrated to Makkah in 622 AD, (making what is referred to as the Hijri[b]), his first act on arrival in the Holy City of Madinah was to locate a suitable piece of land for the enclosure that was to become his Holy Masjid. The Masjid was erected as a combined effort by all the Muslim followers of The Prophet, and its basic design is said to have survived ever since as a model for all subsequent Masjids. *(See page 38 for complete description).*

The Masjid was situated next to but not part of The Prophet's house , and consisted of a square enclosure of thirty by thirty-five meters, built with palm tree trunks

[b] The Prophet had to migrate to Madinah because the Makkah people did not want neither him nor his followers while in the same time Madinah people were most of them convert to Islam so they asked him to settle there.

and mud walls. It was accessed through three doors, The Mercy door *"Bab* [4] *Rahmah* [34]" to the south, Gerbil door *"Bab Jibril"* to the west and Women's door *"Bab al-Nisa* [31]" to the east. Within this enclosure, The Prophet created a shaded area to the south called the shed roof "*Suffrat* [38]" and aligned the prayer space facing north towards Jerusalem. After the revelation of Surat [40] al- Baqara [5][c], the Qiblah direction was set to the south in order to face Masjid al-Haram, or, the Ka'bah in the city of Makkah. Ten years later, the Masjid was doubled in size to accommodate the increasing number of Muslims.

The Masjid consisted of a square courtyard with two rooms in the south/east. The first communal prayers were held in this courtyard. For the comfort of the worshipers a portico made of palm trunks and branches was built on the north side of the courtyard, together with a smaller one with a shed roof which gave shelter to visitors who sometimes spent the night there.



Contemporary Masjid in Non-muslim Countries

The Suffrat also served as a place for deliberations on community affairs; hence to this day the Masjid has retained its multivalent role as the place of prayer, social activities and political debate. The Masjid' at that time, did not have a Minbar but its history shows that it was added during The Prophet's life, for he used to address the congregation while leaning on a pillar of the Masjid. Eventually, after many years, a wooden pulpit, "Minbar"

[c] Surat Al- Baqara is the second Surat in the Holy Qur'an

with three steps was provided, and he would sit on the third step, so establishing the practice of using the Minbar for delivering the Friday orations.

The third Caliph, Uthman Bin Afan, rebuilt the Masjid in 649–50 AD, using stone to replace the early wooden structure, and the site was later expanded greatly by the Umayyad Caliph al-Walid in 707 AD. The great fire of 1256 AD, however, destroyed much of the early structure and the oldest parts of the Masjid standing today reflect successive waves of Ottoman building[29].

3.1 Traditional Masjids

Following the precedent set by the Prophetic Masjid, traditional Masjids are either planned on a new site or in an area already planned to contain civil buildings, etc. Therefore, when Muslims plan a city, the first structure they start to build is a Masjid. Close to this, or even attached to the Masjid, is the Imam's (religious leader) house. Finally, houses can be planned around the Masjid which must face the Qiblah direction; the houses are situated parallel to the Qiblah direction, and form a grid. This method of planning has been found to be a healthier way to allow air and sunlight to pass through all houses equally. It also allows worshipers to easily access the Masjid from different directions, considering the Masjid is often centred in the middle of the city. Therefore, in general, a Muslim city appears square or rectangular, facing the direction of Makkah.

However, as Masjids began being built in areas already developed, the challenge of aligning the interior spaces with the Qiblah direction arose. Muslim builders and designers always respect the existing buildings, and prefer not to demolish them in order to suit the construction of the Masjid. Typically, they direct the entrance to work with the

existing surroundings, then request future development to face the Qiblah direction. This is considered to have an important social effect. Physically to demolish or not to demolish a structure and space of development will directly affect the point of view of those who witness such an event. If Muslims demolish something that existed previously, only to replace it with something new, symbolizes that Muslims do not appreciate what existed before and want to impose a new way of thinking and belief system. If, however, instead of demolishing what was there, they are to work with the surroundings and conform to what presently exists, it will symbolize a belief that Islam does not dismiss what was already in existence and that in fact, Islam is trying to compliment and improve what existed there before. An example of this the Hagia Sophia Masjid in Istanbul which was originally built as a church and later converted to a Masjid.

The visual effect a Masjid has on its surrounding is also important. The difference between the irregular exterior spaces of streets and houses, full with life and energy, contrasts with the regular simply planned courtyard and Sahen surrounding the Masjid. This element features narrow spaces so that when one enters the Sahen they can see a large, well-lit space at the end. This demonstrates the contrast between the inside and the outside, with the tight, directed spaces of the Sahen and the open, airy, flowing spaces found elsewhere.

Economic considerations are very important, as Masjids are usually built in areas where land prices are affordable. Because of the practice of the five daily Salat [37] in the Masjid, Muslims prefer to live in proximity to it. Therefore, if a new Masjid is eracted, many members of the congregation will choose to buy or build homes close to the Masjid.

In addition, due to an agreeable climate in most Muslim countries, common elements such as open courts are common, where people spend some time between sunset prayer "Mughreb [28]" and night prayer "Ishaa [12]". If the time between the two prayers is short, it is preferable for worshiper to enjoy some fresh air in hot months, etc. The open court also provides light to the surrounding Iwans. As expected, court sizes decrease in extreme cold/hot climates.

3.2 Contemporary Masjids in Non- Muslim Countries

Masjids serve as symbolic statements of the Muslim presence in the West. Be they distinct or plain, they are built by communities for everyday use, and are usually found in capitals or other larger centres. Such major projects are often funded and commissioned by diplomatic or other leading overseas representatives of Muslim states. The buildings serve as important manifestations of common identity for a diverse group with different origins and backgrounds living within a foreign and non-Islamic cultural context. In this sense major Islamic centers fulfill the role of ambassadors of Muslim countries even more than do their official representative buildings, the embassies, due to their visual presence and everyday use *(Refer the chart in page 54).*

Masjid construction outside of Muslim countries started to take shape in the 1950s, coinciding with the establishment of independent states in the Islamic world. With the rise of nationalism came a growing sense of an 'Islamic identity' which began to be expressed in the 1960s in a large number of state-sponsored and other major Masjids built by governments as symbols of Islamic nationhood, such as the King Faisal Masjid in Islamabad.

The First examples of Masjids built in a nation with a minority Islamic population occurred in England in 1889, after a trickling of Islamic immigration took place. The Masjids in Woking and Surrey were founded by Shah Jehan Begum, and were inspired by the Taj Mahal. By the 1950s and 1960s a 'second wave' of Muslim immigrants arrived in Europe and North America, expressing their presence by building the structures central to their cultural and spiritual lives - Masjids. Today Masjids can be found the world over, as immigration increases and globalization brings new ways of life into everyone's home.

These Masjids, considered to be built in 'foreign cultural settings' by traditionalists, are usually characterized by three tendencies:

A. The design is tempered by the specific context, modified in response to pressures (i.e.: building codes, environmental design, visual integration) from the local non-Muslim community or by local regulations and laws.

B. The design makes references back to regional Islamic tradition, especially in earlier examples, with the external architectural form being influenced in most instances by a single dominant style from a particular country or region depending on who is financing, leading or designing the project. In this sense, the design may reflect the self-identity and aspirations of the group that takes the initiative in the project (i.e. a Masjid built and used primarily from an Iraqi immigrant community will hearken back to known designs from their homeland). The internal layout or plan generally follows that of the external architecture. However, internal ornamentation is quite frequently eclectic and inspired by a potpourri of styles that often has no direct connection with external form. While the outside must be made to fit into a non-Muslim cultural context, the inside may

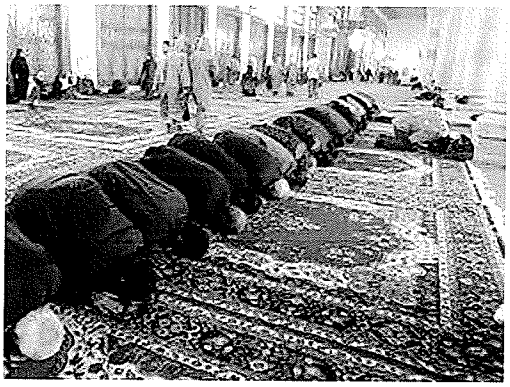
be exuberantly decorated with characteristic Islamic ornament in order to emphasize the fact that space belongs to Muslims.

C. Since the 1980s, there has been a conscious search for a contemporary architectural expression that attempts to achieve some kind of synthesis of traditional principles and modern forms. Of the significant number of such Masjids and Islamic centers built in Europe and North America many of the earliest examples were directly based on a historical Islamic model, a few were modernist in nature, and the later ones attempted to achieve some kind of synthesis between the two.

Today, the function and use of a Masjid follows closely the role it did upon its foundations. Below is an outline of the function of a Masjid, which although rooted in tradition, is considered contemporary due to the improvisations of time and changes from technology.

1. Prayers

Muslims are commanded to offer prayer (*Salat*) when they reach age ten, five times a day: before sunrise (*fajr*), at midday (*dhuhr*), in the afternoon (*asr*), at sunset (*maghrib*), and in the evening (*isha'a*). Although Muslims are not required to offer prayer inside a Masjid, it is considered more virtuous to do so in congregation at a Masjid.



(24) Male Muslims performing prayer

In addition to holding the five ordinary daily prayers, Masjids hold *Salatul jumu'ah* (Friday prayers). While the ordinary daily prayers can be performed at any location, it is required that all men who have attained the required age (ten years). "Friday prayer is obligatory on every Muslim man who is adult,

healthy, and free. It should not be missed unless there is a real excuse. Allah Almighty says in the Qur'an:

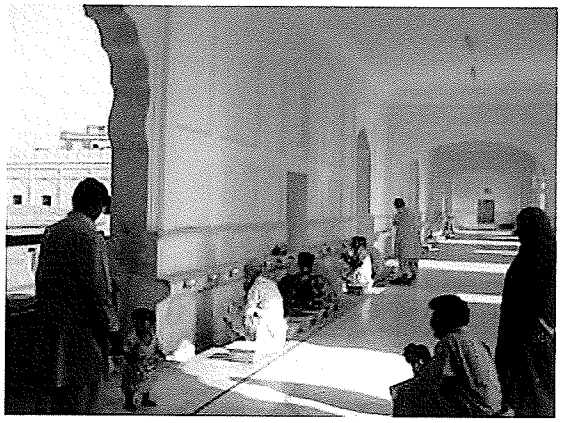
> "O you who believe when the call for Friday prayer is given then hurry to the remembrance of Allah and leave all business. This is better for you, if you know."(Al-Jumu'ah:9) The Prophet, peace and blessings be upon him, is reported to have said, "Those who neglect three Friday prayers without any excuse may have their hearts sealed with hypocrisy."

During the month of Ramadan, tarawih prayers are usually offered in major Masjids. These prayers, which can last for up to two hours each night, result in the entire Qur'an being recited within the holy month. Other special prayers offered at the Masjid include the *Salat ul janazah* (funeral prayers) and Eid prayers offered in commemoration of the two Islamic festivals, Eid ul-Fitr and Eid al-Adha. Both the funeral and Eid prayers are traditionally held outdoors in a large courtyard. Some Masjids, especially those in less favorable climates, will offer Eid prayers indoors in the same location as the five daily prayers. However, funeral prayers may not be held in the same location as the daily prayers, and thus they are held outside or in another area regardless of the climate.

Before the five required daily prayers, a Mu'athen [27] calls the worshippers to prayer from the Minaret. Although, the *athan* (call to prayer) is not required, nearly every Masjid practices it as it is a recommended practice, or Sunnah [39], of The Prophet Muhammad. Nevertheless, because of the lack of Minarets in western countries couple with the fact that calla to Islamic prayer are not common practice in predominantly Christian communities; many Masjids will have the athan called inside the Masjid.

2. Other functions

Masjids are not meant solely for the purpose of prayer. Masjids are also community centers, places where Muslims are able to gather for social activities. During Ramadan, Masjids will host dinners, called *iftars* [9], where Muslims can break their fasts. Large Masjids will often host dinners and other events where politicians and important Islamic scholars are invited to speak.



(25) People washing before praying at the Badshahi Masjid in Lahore

Many Masjids will offer classes for those interested in learning more about Islam; Arabic and Quranic recitation classes are commonplace at Masjids outside Arabic-speaking countries. Full-time schools for students in elementary school, and sometimes in high school, can be found at some Masjids in countries where Muslims are not the majority and students are unable to get an Islamic education in state-funded schools. Some Masjids will even have recreational facilities, such as basketball courts or playgrounds, medical facilities, and community outreach programs to help promote the Masjid as a place where the community can come together.

3. Physical Appearance of Masjids

Because prayer must be preceded by ritual purification, Masjids often have Ablution fountains or other facilities for washing in their entries or courtyards. Although traditional Masjids often feature a freestanding building in the center of a courtyard to

ritualize and celebrate this activity, worshippers at very small Masjids often have to use restrooms to perform their Ablutions.

Because cleanliness is very important inside the Masjid and in Muslim life, nearly all Masjids prohibit worshippers from entering the carpeted prayer hall with shoes on. Thus, foyers with shelves to put shoes and racks to hold coats are commonplace among Masjids.

(26) Women performing prayer behind the divider

The main prayer hall has no furniture. Unlike in most other places of worship, images of spiritual figures, or other animals cannot be found in Masjids as Islam prohibits the association of other figures with God. Instead, Masjids will often have Arabic calligraphy and verses from the Qur'an on the walls (which in itself has artistic qualities and through the years has come and be an art form of it). Masjids generally have at least one large dome over the center of the prayer area. Very large Masjids will also have a forest of columns arranged in a grid pattern throughout the prayer area. Most Masjids will have at least one Minaret' or tall spire, from which the Mu'athen issues the call to prayer. Larger Masjids will have two or more Minarets simply for appearance.

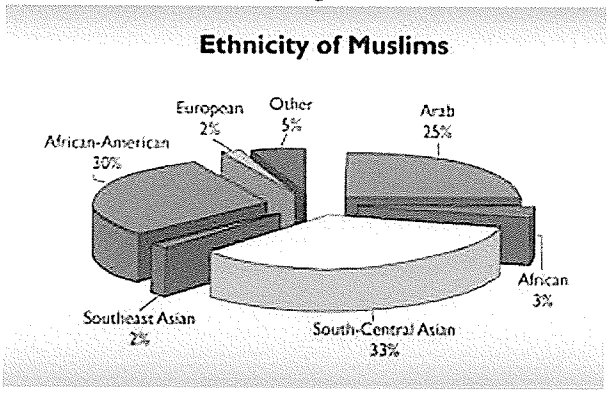
4. Men and women in the Masjid

Masjids around the world deal with gender separation within each Masjid in various ways. Masjids in Muslim-majority countries tend to adhere to stricter gender

separation rules. Meanwhile, Masjids with smaller congregations and Masjids in countries where Muslims are a small minority will tend to allow greater mixing of the sexes. However, at nearly every Masjid around the world, gender separation is visibly present. The audio/visual circuit system used to allow women to listen and see the lecture.

3.3. Masjids in Non-Muslim Countries

Although Masjids exist in many nations all over the globe, for the sake of discussion only American and Canadian examples will be used here. These countries, younger than others and with booming construction trades, possess many newly constructed Masjids. In the United States more than 2000 Masjids and Islamic centers currently exist[30], although fewer than 100 were actually designed as Masjids. Instead, most Islamic congregations began in previously constructed buildings - fire stations, theaters, warehouses, churches and shops, and were subsequently converted. Additionally, most of the 100 purposefully built Masjids were constructed between 1997 and 1999, a notable fact in light of the situation facing American-Muslims in the first half of the twentieth century. Lack of funds and other factors hampered American-Muslim efforts of erecting Masjids by professional architects. However, after 1965, with the first large-scale influx of Muslims from various countries coming to the U.S., Masjids began to be built for the sole purpose of ministering to the Muslim community as houses of worship and community centers.



(27) Muslims ethnicity in North America

3.3.1. Elements of a Masjid in a Non-Muslim country

Design goals for Masjids vary between structures in Non-Muslim countries. Some are designed to represent a definite and visible link to tradition, while others interpret tradition more loosely and create a form that is not strictly controlled by convention. The great variety of religious diversity and ethnicity among Muslims today is reflected in the variety of building design and organization. Increasingly, non-Muslim designers in non-Muslim countries are being entrusted with the task of designing these quintessential, sacred structures. Cultural, religious, educational, and perceptive gaps arise, especially in the weary, post-9/11-North American society, and arguably traditional Masjid architectural style in North America is waning. At least, from a visual perspective, the exterior appearance of a Masjid is being influenced in this environment which greatly differs from the cultural and religious perspective found in the cradles of Islam. In general, whether designed by Muslims or not, Masjids can be divided into three streams that speak of their connection to aesthetic and religious convention. The use of these three streams is also emphasized by the photographer and chronicler of Masjid architecture, Dr. Omar Khalidi, a senior research scholar at the Aga Khan Program in Islamic Architecture at the Massachusetts Institute of Technology in Cambridge.

He explains the three types of Masjid architecture that now flourish in the United States:

A. The Transplanted Stream. This stream is a direct importing of a style common in the homeland of Muslim immigrants. Little is changed in the way of aesthetics and ornamentation, and the Masjid is constructed almost directly as it would be

in the motherland. The Islamic center in Washington, D.C. is an example of this, displaying the Mamluk style, a traditional style for Masjids seen in Cairo containing Turkish and Andalusia ornament.

B. The Reinterpretive Stream. This stream also looks to Muslim precedents for its design, although it is modified by the conditions of its North American environment. Therefore traditional Islamic Masjid design standards are used, tempered by factors of the chosen location. An example of this is the Islamic Center in Manhattan, designed by Skidmore Owings, Merrill institution and partners 1991 to serve Muslims living in New York.

C. The Innovative Stream. This stream does not depend on traditional forms in Islamic architecture, rather chooses to create a new architectural language that interprets the unity in Islamic religion linking Muslims all around the world. An example of this is the Islamic Center in Albuquerque, New Mexico, a contemporary, non-descript structure.

The issue of building Masjids without any specific precedents in new, foreign lands has led to the examination of the climatic and social effects in Western society. Inevitably, some of these effects result from non-Muslim education and societal view toward Masjid and Islamic religion in general. There is no doubt that Masjid architecture represents unfamiliar architecture in these societies, for example the visual features of Masjid architecture in America face unfamiliar environment with its own visual and historical dictionary and roots. Responding to that, the Masjid architecture is a product of

the American environment and society, marked by different religion and educational examples. Although a Masjid must take a certain form and dimension dictated by the Prophetic example and given ritualistic role, the exterior must still be blended in to match/conform to the environment surrounding it i.e. the Masjid should not be designed in a way that will stand out starkly from its environment.

Western society's construction laws and conventions vary greatly from those in Islamic society. Faith aside, differences can be identified in the way cities are planned, inhabitants move about, daily routines, customs, etc. Religious structures are influenced much more by technicalities than divine order, with many conditions such as accessibility, fire resistance and safety, heating/cooling, parking, etc. requirements that all have to be met aside from aesthetics. Combined with licenses and permits, religious buildings take longer to build, requiring individuals, groups and architects wanting to build a Masjid to have a decent working knowledge of these procedures.

Regarding the Muslims view toward a Masjid in Western society in general, at least from the functional side, this is different from the Muslims' view in the Muslim world. In non-Muslim countries, some services become combined into the program of the Masjid so that it becomes not only a place for worship, but also a place to meet, and socialize. Therefore, often a western Masjid must accommodate educational and social functions. It then becomes rational that the planning of a Masjid or Islamic centre should include different services and supplements, including Islamic schools, libraries, multi-purpose halls, and leisure facilities to be used for school, gatherings, seminars, conferences, symposiums, and weekly Islamic programs. They can also include amenities such as an exhibit space, a day care/nursery, residential quarters for the school caretaker,

the Imam, and visiting scholars; a kitchen and dinning room to cater to the center's daily use and for special functions, or places to sell food products, especially meat and poultry slaughtered according to Islamic law - all of which may or may not be available to Muslims in Non-Muslim communities. Such a shift in the use of Masjids in non-Muslim countries indicates that the definition/function of a Masjid is shifting from that servicing spirituality alone, to that one of supporter of the social framework of Muslims.

Climate is also a factor that changes from one area to another, with Masjids covering the globe, each responds to the mercy of the local environment. Consequently, in hot regions we find Masjids centered around open courts, allowing families to pass breezy nights and hot days. In cold regions we find closed courts, smaller windows, and the use of materials to retain heat to make the place warmer. In rainy areas sloped roofs are constructed to direct rain away from the structure and protect it. There are many different treatments to suit each region and its climate, therefore the envelope of a Masjid can take many forms and shapes. But always, the basic requirements are consistent as given in The Prophetic Masjid or with the other elements considered changeable. Another important element to consider when designing a Masjid is the skyline as a metaphor of unity of heaven and earth. In Muslim countries the Masjid plays a dominating visual role because the dome often towers high above all the other buildings in its vicinity. Such an element demonstrates the visual impact that the Masjid has as well as the naturally inferred spiritual one. In contrast we see that in North America Masjids do not generally alter the skyline as they are often buildings that were already built to blend in with the skyline. Of course newly built Masjids do have a tendency to stand out for the same reasons as do Masjids built in Muslim countries.

3.4. Special Factors of Masjid design in Non-Muslim countries: Gender and space

The role and effect of gender is quintessential in Islamic Religion. As a female Muslim, I learned my religion from the Holy Qur'an and The Prophet Mohammed's statements *"Hadith"*. In the Qur'an, Allah said that men and women share equals rights and duties, but have different responsibilities. The Qur'an says,

"And for women are rights over men similar to those of men over women" (2:226)

In *Hadith* as mentioned above, The Prophet Mohammed never omits women from attending the Masjids, and in prophetic times there was indeed prayer in one hall where men made the first lines, then male adolescents, then women, girls and children. In a way, male adolescents played the role of divider between men and women, and women were allowed to leave before men because they had only one entrance/exit. With increases in numbers of Muslims, there was a need for two entrances/exits, resulting in two separate Ablution areas - one for males and other for females.

This separation of genders continues today, although it remains a controversial debate, with positions varying from area to area, and congregation to congregation. Some Muslims believe that females should not attend the Masjids, feeling it is better for women to perform prayer at home. Others point out that The Prophet Mohammed did not prohibit women from coming to Masjids for performing and learning Islam. For this reasons some Masjids (is it in North America or the Islamic world) do not have private spaces for female worship, while others do.

Most Muslim females who were born or raised outside of North America and later immigrated there, did not attended Masjids back home the way they do in their adoptive

countries. Masjid back home meant a place for worshiping only, or a place to memorize, learn and recite the Qur'an. In North America, however, Masjids can be much more than places of worship. They not only act as a place for performing prayer, but also a place for women to socialize, meet new people, learn about Islam as a religion, etc. Sometimes, there are other needs which require more private and closed places. For example, women with small children may wish to listen to a lecture beside women with no children. Each needs a place in the Masjid to function as a daycare or nursery room, which still connects them to the lecture through live-feed audio/visual access.

My experience in Canada, over the nine-year duration I have lived here, has taken me to almost every province. In my travels I preformed prayers in many different Masjids, with the common arrangement being a hall divided in two by partitions, (one for men, and the other for women) but permitting the women to hear the Imam's lecture while keeping their privacy. Sometimes the halls were on different levels, with the females in a separate hall on an upper or lower level. When this is not the case, and the entire collection of worshippers occupying the same open hall, the men stand at the front, followed by male adolescents, with women, children and girls in the rear. Sometimes, one hall is even separated by fixed or mobile partitions.

Through my experience I came to enjoy performing *Salat* (prayer) the most in a private women's hall were I could sit or even lay down without strangers observing me. Part of being a female Muslim is the belief that a woman's body is private and confidential. You can share some of it with other females or blood relatives, or all of it with your partner (husband). Similarly, the same rules occur for male Muslims. For this reason, most women prefer to have their own place were they chat, meet and discuss inner

and outer matters freely, which a Masjid can accommodate. Masjids in North America, as mentioned earlier, are a place also to meet new and old people and to feel a sense of belonging in a Muslim Community. As one female Egyptian-Muslim said, "...the only time I feel contact with Muslims is when I meet my friends or when I go to the Masjids and feel I am a part of group or community".

Therefore, Masjid design must often exceed the basic tenements given in traditional structures. The idea of copying and transplanting traditional architectural elements, such as Me'athna, domes, arches, etc. must meet a deeper vision inspired by the spirit and principles of Islam. Additionally, the design must not conflict with Islamic standards, even when new technologies have been adopted. Ultimately, Masjids in non-Muslim countries may serve Muslims – but they are also part of a larger, multi-cultural society that must be relevant to everyone.

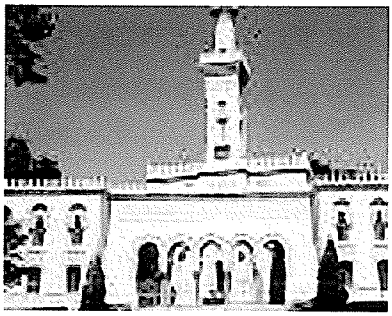
Chapter Four

(Program and Cultural Role)

Contemporary Masjids in Non-Muslim Countries

In North America, unlike long-established Muslim societies, a majority of Masjids are buildings originally constructed for other purposes- abandoned churches, Masonic lodges, fire stations, funeral homes, theaters, warehouses, shops, etc. A survey conducted in 1992-95 showed that of the nearly one thousand Masjids and Islamic centers in the United States, fewer than one hundred were originally designed as Masjids[31]. For the purpose of this thesis, however, we will be concerned only with those structures specifically designed and erected as Masjids and their relationship to the subject of identity.

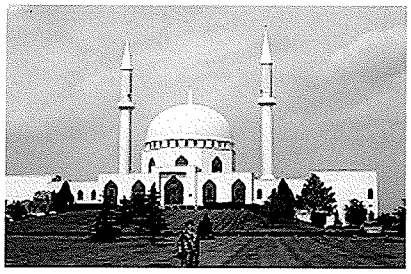
Although a Muslim presence in North America has been documented for at least a century, liberalization of American immigration laws in 1965 led to the first large-scale influx of Muslims from many different countries. Simultaneously, the conversion to Islam of Americans, especially of African Americans, vastly increased the Muslim population in the United States. In fact Islam is the second largest religious group after Christians (The growth rate of Islam, according to the U.S. Center for World Mission, at 2.9% is higher than the 2.6% growth rate of the world's population. Thus, the percentage of Muslims in the world is growing on the order of 0.6% per year).



(28) Islamic Cultural Center, Washington DC

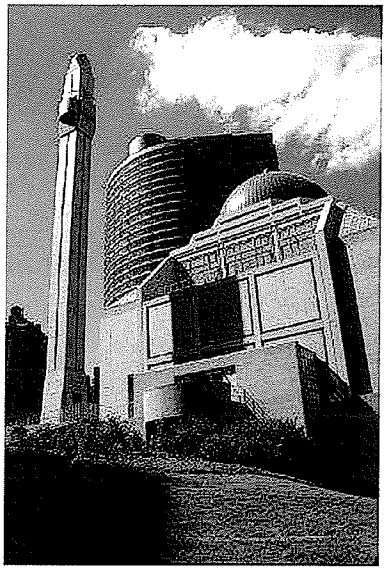
Lack of funds prevented the earliest Muslim immigrants from constructing Masjids; most of them in any case did not come to the United States to settle permanently.

Their primary purpose was economic. Then a number of nondescript structures were built as Masjids in Highland Park, Michigan (1919), Michigan City, Indiana (1924), Cedar Rapids, Iowa (1925), Ross, North Dakota (1926), Quincy, Massachusetts (1930), and Sacramento, California (1941). Many of these were multipurpose structures used as cultural or community centers. For example, the Albanian Cultural Center, Arab Banner Society, Indian/Pakistani Muslim Association, etc. were not simply Masjids, but rather came to incorporate many other functions. They had a room for prayer, but they also served as clubs, with a social hall for weddings and parties, and a basement for bingo games. [32]Although Masjid design had been developing over a period of fourteen centuries it was still certainly an architectural novelty in North America and most of the Western world. The thematic and visual characteristics of Masjid architecture in North America had, therefore, to deal with an alien environment - one that had its own deeply embedded historical and visual vocabulary. The architectural characteristics of these North American Masjids were in some conflict with their context, a result of both religious and cultural factors. While the building had to respond to its own inner formal cultural and functional



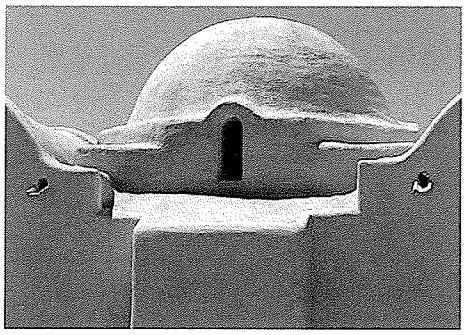
(29) Islamic Center of Greater Toledo, Ohio

(30) The Islamic Center of Charleston, West Virginia



(31) The Islamic Cultural Center in Manhattan

determinants, it could not ignore its regional setting. The stylistic features of the more elaborate Masjids built over the last few decades vary considerably, but one of three themes turn up in the aesthetic content of all of them. Some are the result of traditional design wholly transplanted from Islamic lands: examples are the Islamic Cultural Center in Washington, D.C. (1957); the Islamic Center of Toledo, Ohio (1983); the Islamic Center of Charleston, West Virginia, and any number of smaller Masjids which reflect a transplanted notion of a traditional Masjid.



(32) Dar al-Islam Masjid in Abiquiu, New Mexico

Others represent a reinterpretation of tradition, sometimes combined with elements of American architecture. Examples are the Islamic Cultural Center in Manhattan (1991) The building's link with traditional Masjid architecture, however, goes deeper than subtle references through geometry, or the obvious use of architectural icons and calligraphy.

As Islamic architectural historian Oleg Grabar pointed out, SOM's (Skidmore, Owings, Merrill) drawings for the final design of the Masjid (Islamic Cultural Center, Washington DC) were quite reasonably within the conventional Ottoman tradition. The SOM reference to the Ottoman Masjid type also inspired the skylights in the roof corners and the patterned glass in the upper walls, which bathed the prayer area with light. The stepped, pendentive-like beams at the corners of the middle part, in addition to their structural role in supporting the dome, help visually to connect the trusses to the dome,

(33) Masjid Jonesboro, Arkansas, USA

thus allowing a smooth transition between the square plan and the circular dome. This inspiration from traditional structural and esthetic systems seems to unify the middle and upper parts of the interior of the Masjid.

Although the dome is used as a traditional form, it is effectively and successfully expressed in a contemporary language; Dar al-Islam Masjid in Abiquiu, New Mexico (1981), and the Masjid in Jonesboro, Arkansas. Still others are entirely innovative. Examples of these are the Islamic Society of North America headquarters in Plainfield, Indiana (1979), the Islamic Center of Albuquerque, New Mexico (1991), the Islamic Center of Edmond, Oklahoma (1992), and the Islamic Center of Evansville, Indiana (1992).

Most of these structures also do not operate strictly as places of worship alone, but rather as Islamic centers with facilities for a variety of activities: an Islamic school on Sunday, library, conference center, bookshop, kitchen, social hall, recreational facilities, residential apartments, and sometime even a funeral home. In this context the role of the architect is to bring back the past, the familiar, to make the users of the building feel at home, and to reinterpret its vocabulary in everyday language which can be easily understood. In post-modern America this is the language of the commercial strip, with the result that the clients and their architects consider with pride the "capturing the essential symbols of Islamic architecture."[33] But these same symbols (minarets, domes, arches) have been found throughout America in Masonic temples, gambling casinos, Shriner halls, vaudeville theaters, and restaurants. For example, In the 1920s an American aviator and millionaire named Glenn Curtiss designed a city outside Miami, called Opa Locka. To satisfy his visions of Arabia and the Orient every major building in it had a dome and a minaret! It provided a fantastic setting to an otherwise sandy area that Americans thought

looked like the Arabian Desert. Similar architectural fantasies have since turned up in Hollywood productions and in Disneyland.

Masjids and Islamic centers that try to replicate the original Masjids of the Islamic world lack both the qualities and materials of traditional architecture. The distorted expressions of many of these buildings - their garish colors and use of prefabricated industrial materials - all deny the authenticity of the old monuments they aspire to imitate. Their generally crude aesthetics are also related to the low esteem in which a professional architect is held among American Muslims. Since the cost of re-creating a monumental Masjid is beyond the financial means of the community, the clients will settle for a rough replica that any architect can provide simply by referring to photographs. As the Pakistani-Canadian architect Gulzar Haidar explains:

> "When Muslim groups set out to build an Islamic center or a Masjid, they consider professional architectural services quite redundant. An architect is 'not needed' because 'he does not know what a Masjid looks like,' and 'we need only a few drawings for fund raising' and 'later' any draughtsman under an engineer's advice can draw them up for a building permit."

Therefore, results are frequently imitative and unimaginative buildings passing for 'authentic' Islamic architecture that can be found throughout North America from coast to coast.

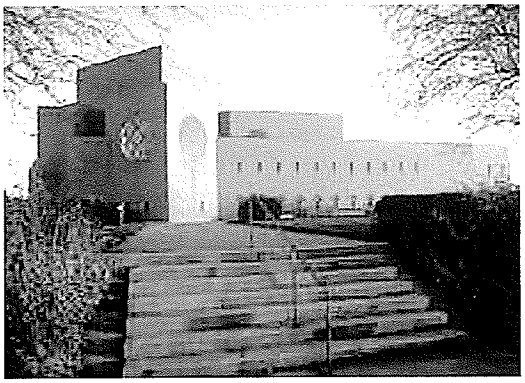
In the cases of transplanted Masjids, the design simply depends on some feature such as a dome or minaret to provide the Islamic affinity. Masjids that have attempted a reinterpretation of the traditional Masjid architecture in American landscape have had mixed results, such as the Islamic Cultural Center of Manhattan (ICC) designed by Skidmore, Owings and Merrill (SOM).

A decisive departure from both the approach of transplanting traditional architecture and the approach of modern reinterpretation can be found in the designs of two architects: Gulzar Haidar, a Pakistani-Canadian and Bart Prince, an American.

Their projects represent the innovative, the creative, and the unprecedented Masjid. Advocating design that is 'environmental,' 'morphological' and 'semiotic,' Haidar's view is that Islamic architecture should be expressive and understandable to all. It should employ a form language which invokes in immigrant Muslims a sense of belonging in their present and hope in their future. To the indigenous Muslims it should represent a linkage with Muslims from other parts of the world and should underscore the universality and unity of Islam. To the new Muslim, this architecture should invoke confidence in their new belief. To non-Muslims it should take the form of clearly identifiable buildings which are inviting and open, or at least not secretive, closed or forbidding.

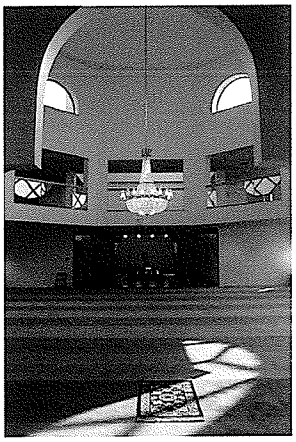
In order to undertake an in-depth analysis of the issues surrounding contemporary Masjids in Non-Muslim countries, the following two case studies are provided.

Case Study # 1: The ISNA Islamic Center



(34) The Islamic Society of North America in Plainfield, Indians

The Islamic Society of North America (ISNA) headquarters in Plainfield, Indiana. Were designed by Gulizar Haidar. In 1979, the Muslim Students Association of the United States and Canada (MSA), the parent organization of the Islamic Society of North America (ISNA), decided to consolidate its numerous activities by establishing a headquarters in Plainfield. Haidar was hired to design the building complex, with detailed construction documents prepared by the associated architect Mukhter Khalil, an Indian Muslim. The headquarter complex was never totally completed, although a Masjid, library, and some office space was. Despite this, in early 1996, plans were afoot to move the ISNA offices to Washington, D.C.



(35) Inside ASNA

Haidar's task was to design a complex on an 84-acre (34-hectare) site, with a program to include a Masjid for up to 500 worshipers, a research library, and offices. His solution is based on the square and its subdivisions, and consists of brick on a steel frame. The three components of the complex - the Masjid, the library and the office block, form a unified scheme in which the Masjid and the office block are placed on an axis and the

library is located on an axis perpendicular to the first axis. The complex was set amidst elaborate landscaping with a formal front plaza. Of the architecture and its symbolism, Haidar says:

> A Masjid is a space celebrating man's servitude to God. The office building is an arena of work for Islam and its society in North America. The library is a research facility upholding the Qur'anic ideal that only through knowledge, intellect, and contemplative thought does man ascend to higher levels of belief and action."

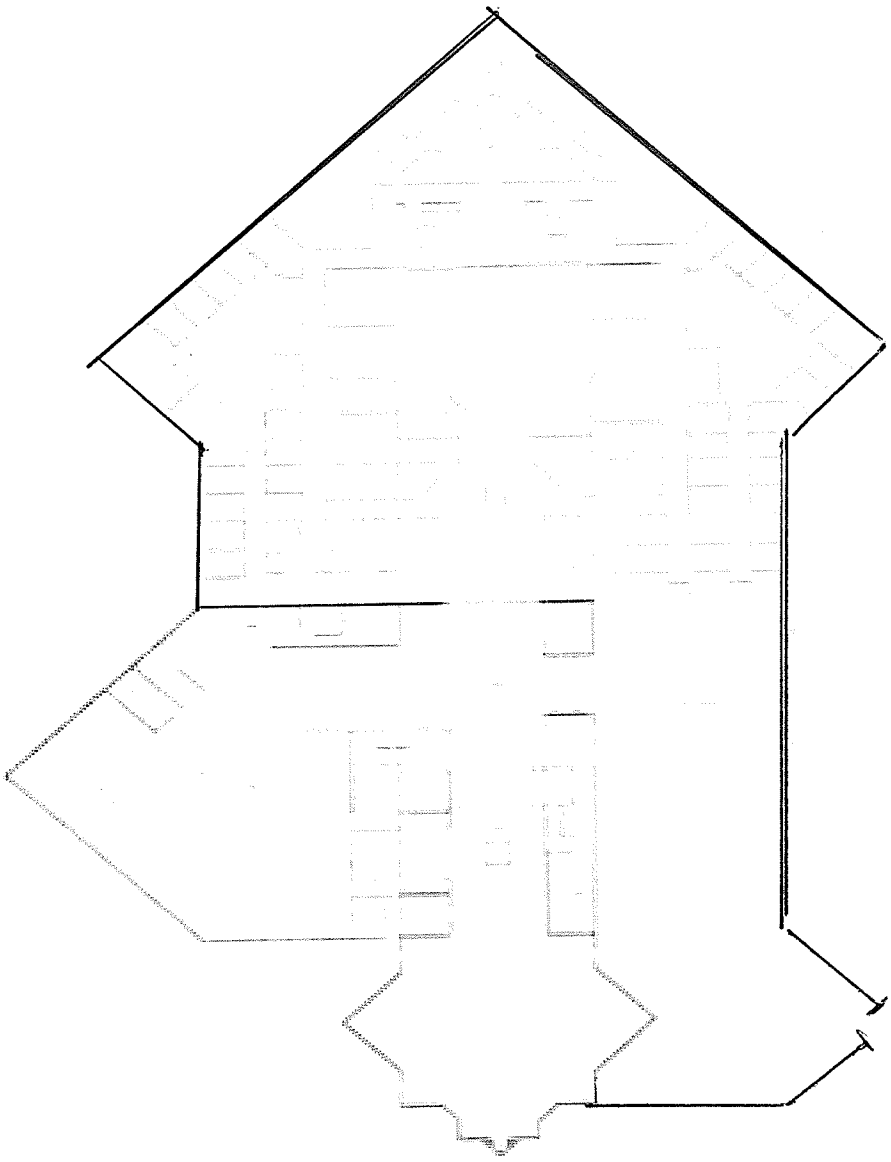
The ISNA Masjid has an austere contemporary character that is entirely without iconic references to traditional Islamic architecture. This type of austerity is often referred to as "Hidden Architecture", meaning the solid walls of the exterior give little clue as to what is inside the building and narrow, vertically slit-like windows add to the building's sense of impenetrability. This is in contrast to the large dome in the Masjid hidden behind the high walls and parapets, which comes as a pleasant surprise as one ventures from outside to the inside of the building. Haidar justifies this contrast between outside and inside as embodying two of the ninety-nine beautiful names of God: al-Batin (the hidden) and al-Thahir (the manifest). He sees these attributes of God as "of special interest to architects in pursuit of the silent eloquence of space and the quintessential presence of form." Through his experience of Islamic architecture he became very intrigued by these divine attributes:

> "And in all the beautiful names of God, I searched for a special wisdom to guide the designer who must create but not confront, offer but not attack, and express profoundness in a language understandable and pleasing to the listener. ... I chose to distinguish the exterior from the interior. I chose to veil the Masjid."

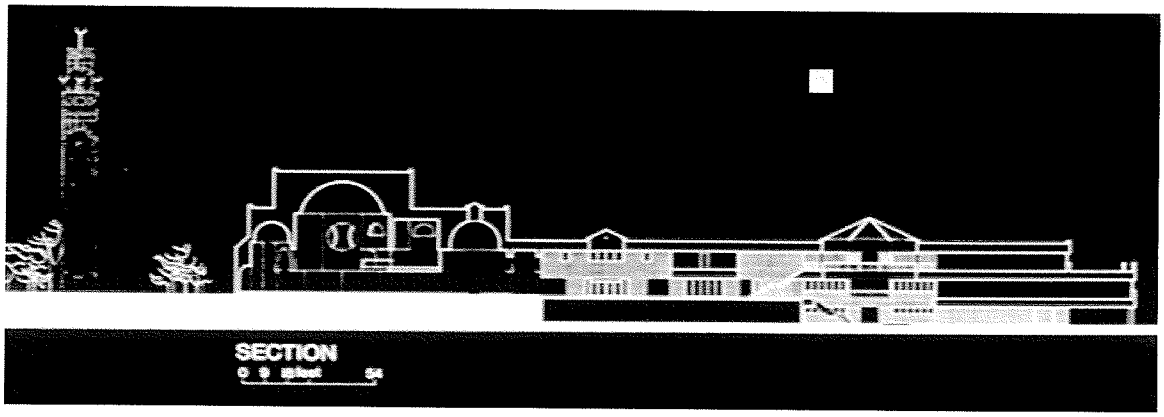
According to Haidar, the ISNA Masjid addresses itself to Muslims through the concept of the al-Thahir and al-Batin, through mystical geometry, and particularly through the cubic form of the Masjid as a subliminal reminder of the Ka'ba, the symbol of

unity. He relates his decision to contrast the inside and the outside to the context of Muslims being in a minority living in a predominantly non-Islamic America. He sees this contrast as symbolic of the fact that Islam in this country is restricted to a private matter of faith rather than a predominant religion as is the case in much of the Islamic world. "If the dome is symbolic of the esoteric and the divine, and the cube that of the esoteric and of the Earth, then we consider it a befitting gesture to make the dome internally manifests and externally veiled." Moreover, the exterior of the building, its choice of materials, details, and fenestration is intended by Haidar to be "sympathetic to North American indigenous architecture rather than any historic or modernized Islamic style." The architectural character of the ISNA Masjid reflects the architect's fascination with the mystical interpretation of Islamic architecture. The adoption of abstract geometry in the building can be seen as Haidar's search for universal architectural solutions, with which he can identify as a Muslim, because of the roots of these solutions in Islamic architectural tradition. This architectural character may also be viewed as an attempt at addressing complex cross-cultural issues, and the difficult question of expressing identity through form without having to resort to traditional imagery which does not appeal to his modern design sensibilities. Many would regard Haidar as working within the prevalent architectural thinking to which he was exposed in North America, particularly in the work of Louis Kahn. The ISNA headquarters is one of the significant examples of Islamic centers in America; it is regrettable that it was unable to flourish in the Midwest due no doubt to a lack of a significant Muslim population in the area for whom it could serve as a focal point. Coherence comes instead from a shared attempt to create an organically integral architecture that rethinks the possibilities of geometry, space, structure, and

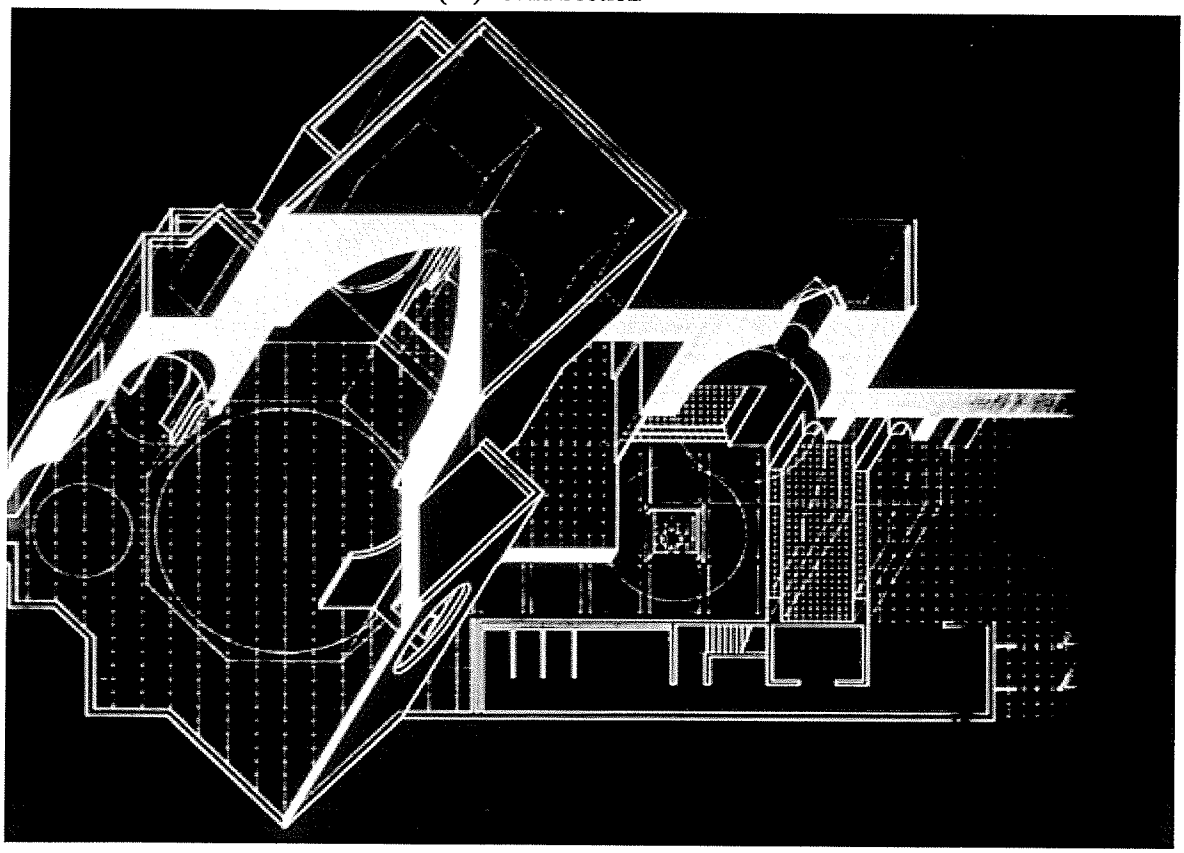
material with housing for seven families, as well as recreational and outdoor facilities. This ambitious project was, however, not fully realized; only the Masjid facilities (but not the proposed freestanding minaret) and the library have been built.



(36) ISNA plan

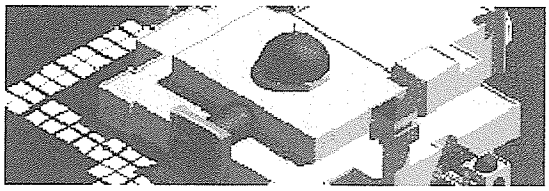


(37) ISNA Section



(38) ISNA Vignette

Case Study # 2: The Manitoba Winnipeg, Manitoba Islamic Center, 2445 Waverly St.



MIA Masjid

As an example of the development of Muslim communities in non-Muslim countries, that of the Muslim community in Manitoba will be summarized. This summary shows how the growth of the community leads to both physical structural developments and the structural development of the hierarchy of the community both of which influence each other directly.

The History of Manitoba Muslims

Date	Development
Early 1900s-1950s	First Muslim immigrants arrive in Manitoba from Eastern Europe, the Caribbean Islands, and Lebanon.
1950s-60s	Groups of Indo-Pakistani & Arab Immigrants begin studying and settling in Manitoba
1966	Sunday Noon (Dhur) Prayer held regularly in the basement of one of the houses of the Muslims in Manitoba. There was approximately twenty five families in total at the time.
1967	Muslims in Winnipeg form a group later to become the MIA
1967-1971	As the population of Muslims increased the Sunday

	noon prayers was moved to the Unitarian church.
1969	Manitoba Islamic Association (MIA) legally incorporated
1969	Fundraising for 1st Masjid begins
1971-1974	The Sunday noon prayer is moved from the Unitarian church to the international centre.
1972	Obligatory Friday prayers (Juma'a) begins at the university of Manitoba
1974-1975	Building of 1st Masjid begins
1975	Completion of MIA Masjid in August of that year
1976	The weekend Islamic school starts running consistently
1980	Annual summer camps begin as an institution
1980s	Change in Canadian immigration policy facilitates influx of large numbers of Muslim immigrants from various countries
1982	Arrival of many Somali immigrants and refugees
1984	Influx of Afghani refugees into the community
1985-86	MIA invites first imam of Masjid, imam Tahir Aderonmu
1989	Arrival of Bosnian & Kurdish refugees into the community
1990	First annual educational conference begins being held
1990-91	Muslim youth council (MYC) formed
1991	A feasibility study of new Muslim community center
1991	Statistics Canada report on Muslims in Manitoba to be ~3,525

1994	Imam Muhammad Safi leaves Manitoba after over 2yrs of service
1995	1st in North America training program for Muslim social workers
1994	Establishment of Takaful fund (to help needy people in the community)
1996	Al-Hijrah Islamic school begins
1997	Educational retreat was held
1998	MIA helps organize 1st Canadian conference on faith and media
1999	Establishment of Manitoba Muslim Newsletter
1999	MIA reports that the number of Muslims in Manitoba is +5000
2000	Arrival of Sheikh Hosni as Imam of the MIA Masjid
1999-2003	Expansion of community and Islamic activities with regular prayers and Friday prayers at various venues, including both the university of Winnipeg & Manitoba, Health Sciences centre, Islamic Education foundation, Pakistan Association centre and MIA Masjid
2003	The formal opening of the Islamic institute of Manitoba (IIIM) and also the construction of the new land for new community centre

This Centre began its construction in May 2003, and is expected to be completed bin the fall/winter of 2006. Central Canadian Structures Ltd. (the design was draw by a drafter and approves by a certify architect) undertook the design and construction of the building, which would encompass a 12 acre site. The program was to include a Masjid for up to 800 worshipers, school, senior housing, commercial plaza to be used as revenue for the complex, research library, recreational area and other facilities. The construction was divided to three phases. At present, work completed includes the construction of phase one, which is 20,000 square feet composed of two levels of the complex. The first level hold a prayer/gathering hall, library, offices, computer labs and classrooms, a recreational area, a kitchen with dry and wet areas and washrooms. The second floor holds a prayer hall for women and a nursery rooms. The structure occupancy load is 881 persons.

The desire for this complex came from Winnipeg's Muslim community. In 1991 a survey was used to gauge members' choices for a site of the proposed complex. The majority choose Waverly, a new and affluent south Winnipeg neighbourhood because they believed this area would have the most potential in the future. Community members were also asked questions such as, *'What do you want to see in this complex?'* (I.e. what kind of activities), and *'Do you want a newly constructed building?'* Based on their responses, the Masjid/land committee decided upon a site. After the land was acquired tenders were put out for phase one. The committee chose the above company for the construction based on the quality of their design, but the design aspect was collaboration between the committee, the community survey and the company, which met on a daily basis until they finalized an acceptable design.

4.1. Layout and Design Principles of the Manitoba Islamic Association Masjid

In order to begin to understand the setting and design of the Manitoba Islamic Association Masjid, we will take a descriptive journey through the building starting from the East entrance. At any point it may be helpful to refer to the blueprint of the main floor plan of the Masjid.

East Entrance, This entrance is designated at the 'women's entrance' because it provides direct access to the women's washroom and ablution area, via the cloakroom. Directly inside the entrance are the cloakroom, shoe racks, and mechanical room, and beyond this the women's area. The cloakroom also provides access to the lobby, from where stairs are located leading to the second floor women's Mezzanine.

Women's Mezzanine, This features a rectangular prayer hall specifically for females. The south facing wall has windows that open onto the gym area in the rear of the building. On this mezzanine there are also two multipurpose rooms; one on the east and one on west side. Also on the west side are stairs that go down to the main floor.

Main Floor Lobby, This principal lobby provides access to both the prayer hall and the men's washroom/ablution area. It also provides access to the men's cloakroom and shoe racks on the western side of the building, which in turn acts as a thoroughfare to the western Entrance of the building. Stairs to the upper floor are also located here.

West Entrance, There is a corridor that runs to the south end of the building and houses multiple storage rooms along the way (janitorial room, fridge/freezer rooms, and dry food storage). This corridor ends at the kitchen in the southwest corner of the building.

Gym, The kitchen opens into the Gym/community hall/Sahn area which is a large centrally positioned, open space and accounts for a large portion of the building. On the east side of the gym there is an equipment storage area. There is also a connection to the East entrance lobby. There is also access an ancillary set of men's and women's washrooms, which in this case, do not have ablution areas. The gym's south wall separates it from the main foyer of the building.

Main South foyer, this is the main entrance to the building, which features glass doors. The entry opens onto the lobby, which in turn becomes the foyer. Above the lobby area is an elevated roof in the shape of a cylinder cut lengthwise. Cloak rooms and shoe racks exist on both sides of the foyer, and the east side holds an educational store, two offices, and a reception area. On the west side of the foyer is a meeting room and a library. The wall that separates the foyer from the gym will be designated as a Display wall.

Classrooms/Gathering Space, The north boundary of the gym is not defined by a wall but by folding doors that open into this rectangular space directly below the women's prayer section. This can be used for both prayer and other activities and can be closed off on both the gym side as well as the assembly hall side to create four individual rooms.

North Assembly hall, the assembly hall is a large open space similar to that of the gym (double volume ceilings). The North wall is the Qibla wall, with the Mihrab for the Imam located at the centre. Directly behind the Mihrab is the Imam's office which is accessed via a door to the right hand side of the Mihrab. Above the Mihrab is an opening in the wall for future inclusion of an audio/video projection panel. The mechanics of this projection will be housed behind this wall above the Imam's office.

4.2. Critique of the design of the Manitoba Islamic Association Masjid

North East Quarter: Women's cloakroom/shoe storage, washrooms, and ablution area, The cloakroom and shoe racks are located at an ideal location - close to the east entrance - which is important since the first activity for worshippers when entering the Masjid is to remove their coats and shoes. Since the main purpose for coming to the Masjid is for prayer, it is also logical that proceeding from the cloakroom area we move directly into the washroom and ablution area. Having these areas in sequence provides a natural flow of traffic through this quarter of the building.

Women's Mezzanine The women's prayer area (which can be either just above the designated area or both above and in the space directly below) can be utilized in different ways according to a woman's preference (for level of privacy during prayer). For those women who prefer complete privacy or who have children, the women's mezzanine, accessible by both stairs and an elevator, works well. These women will still be able to see the Imam both during prayer and any sermons on the projection screen. Those who do not require much privacy can pray in the area directly below the mezzanine (behind the men). Also, when the congregation is larger and there are more women who prefer complete privacy than there is room in the women's mezzanine, the collapsible doors that separate the assembly hall from the area below the women's mezzanine can be closed. However, these doors are not sound proof and so activities in one room will disturb those in the adjacent rooms.

Assembly Hall/Prayer Hall While it is nice to have a double volume room, with respect to heating/cooling/lighting, it is more practical for a double volume room to be part of a smaller space such as in entrances/foyers/lobbies. Since the prayer area needs to

be a larger space, it would have been better to have a lower roof or split the area into two levels. With respect to heating and cooling there is also an issue of the fire emergency exits which are part of the Qibla wall and are not isolated from the main space. These doors will be an immediate concern specifically for heat loss during the cold months.

Imam's Office The first problem that arises from the design of the room is its size. The Imam typically uses his office for the purpose of counseling/advising community members in privacy. The current size/design does not provide enough room comfortably for more than two people in addition to the Imam. If the room was built as a rectangle/square as opposed to a half-circle there would be no waste of space and the dome could still be maintained on top of this room. There is no symbolic reasoning for designing a room of this shape that is not very functional (at most, semicircles and domes have strong connotations with Islamic architecture despite the fact that they didn't exist in Masjids during the time of the Prophet). The main purpose for such a design was for continuity of the shape of the Mihrab behind which the room is based.

North West Quarter This area houses the men's washrooms, ablution area, cloakroom, and shoe racks. This is almost a mirror image of the North East Quarter and thus the layout is considered to be good.

South West Quarter – Storage rooms, Freezer/Fridge rooms, Kitchen, and two offices, this area has adequately provided space for food storage and preparation that needs to be prepared according to Islamic codes (Halal [14] food). The Kitchen also has a service door which will be used for delivery of goods/perishable items that are used in food preparation/service. Unfortunately there has been extra space allocated for two offices and a second cloakroom which would be redundant since there are office spaces in

the south section of the building and ample room for coats in the first cloakroom. These areas could have been designate as either one large office for multipurpose use or as storage.

South Face/Foyer Overall the design of this area has been well done in that this area serves both Muslim and non-Muslim visitors. There is a library, meeting room, education store and reception to the main offices all of which are not restricted with respect to gender separation. With an open and welcoming foyer to guests and visitor friendly common space, this provides a unique feature that is not often found in religious buildings. Most religious buildings are isolated in that there are no spaces to welcome guests and those who do not typically frequent the building.

4.3. Safety Codes & Accessibility

The first distinguishing characteristic of this Masjid when we compare it to the historical architectural design of Masjids is that of the adherence to modern local safety codes and occupancy laws. Today, in almost every country, safety and accessibility codes are in place to protect those who will accommodate and work around the building. As a side note, it is interesting to note that there were 'codes' in effect during the time of The Prophet but subsequently were forgotten over time. *(See Introduction and Chapter One)* Examples of these codes include the requirement of the Masjid to be built in a location that has good air circulation (tested by placing a piece of meat in a locations and leaving to rot[34], the areas where the meat took longer to rot were considered ideal for building a Masjid). Also, the Masjid was required to be built away from noisy locations, washrooms, and bakeries (excessive creation of dust ashes).and was not allowed to be build on top of

grave yards, beside that The Prophet always emphasized for everyone to be creative in easing a building's function. For example, in one anecdote, a lady came to The Prophet and said she had a carpenter son who could make a Mimber in order ease his delivery of ceremonies. In another story, a person suggested using oil lamps to use in the Masjid at night. With the building of this Masjid, aside from meeting the basic requirements, the following points illustrate not only the compliance of these codes, but also how in fact these minimums are superseded.

Accessibility

Elevators are required in all multi-storey public buildings. Here, an elevator joins the main floor to the Women's Mezzanine area, which can also be accessed throughout the fire escape door located in the adjacent stairwell. Additionally, each of the main entrances have doors that are passable by persons requiring the use of a wheelchair. Each of the main entrances is located on a different side of the building thus providing equitable access to each section of the building and meeting standards for means of egress.

One of the drawbacks to consideration of accessibility is the designation of the East Entrance for women and the West Entrance for men. It can be seen that the mechanical room is actually located next to the women's entrance. In the event that is necessary for someone to provide service to the mechanical room, it will become an inconvenience for women since service people are usually of the male sex. In addition, the kitchen is located closest to the men's section and as such will make it harder for women who typically are the ones who will be using the kitchen to access it. When

putting together the layout, and taking these two points into consideration, it may have been better to switch the designation of the East and West entrances.

Fire & Safety

There are more fire escape doors than the minimum requirement, locations of which include the Imam's office, the stairwells, kitchen, and Main Prayer Hall.A sprinkler system exists in the event of a fire and smoke detectors are located throughout the building.

Environmental Considerations

A solar collector is in consideration to be installed on the north side of the building, facing south.Composting toilets were going to be installed however due to funding limitations this was not implemented. A compost heap will be placed on the grounds of the Masjid to reduce waste and to use the compost in landscaping.

4.4. Analyzing the Incorporation of Requirements for a Masjid

Unity is a very important aspect in designing a Masjid because it reflects the structure of the community - one God one community. A Masjid can be designed with symmetry to give us unity in design, but within that symmetry there can be diversity in functionality (in much the same way that Islam promotes unity but at the same time recognizes and supports diversity from one person to the next, from one culture to another). Also designing the building in such a way as to direct movement in a certain direction (i.e. when you remove your jackets and shoes, you naturally move into the next area for ablution and of from there, move into the next area which is for prayer) encourages people to gather and perform Salat and in general to come together. The lack of large pieces of furniture also directs the occupants to do one thing as a whole rather

than split people up into groups each performing different activities in the main prayer spaces.

If we look at the general form of the Masjid we can see there are large structural parallels with traditional Masjids. Traditional Masjids, as discussed earlier (Intro. & Ch. 1) were built with large open central courtyards which were surrounded by enclosed spaces that were used when the weather was not favorable. The MIA (Manitoba Islamic Association) Masjid also has one large central hall which is surrounded by smaller rooms; however the structure has been modified from original Masjids in that the central hall is a covered space rather than an open space.

In the Qur'an it is stated that if a man wishes to speak with a woman, conversing must occur through a partition[d]. The design of the MIA Masjid has incorporated removable partitions into the structure that can be closed or opened according to the necessity or lack thereof of the activity. We also find that it is a necessity for a believer to have ablution prior to performing prayer[35]. In this design there are spaces designated specifically for this purpose.

The direction of the Qibla is also an important religious requirement that should be taken into consideration in the building of a Masjid. The building of the MIA Masjid has been set up so that the wall which is to face the Qibla is in fact facing the true Qibla.

In Hadith[36] we find that there are more blessings upon a person if they are to pray in congregation rather than alone. As such we find large open spaces incorporated to encourage this. Another thing that can be found in Hadith is regarding the beautifying/upgrading of the Masjid[37]. While it is encouraged to build Masjids that are of

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[d] Quran Surat Al-Nur, Chapter 18, verse 31

good value and beauty, it is not encouraged as much on the inside of the Masjid as it can act as a form of distraction from the main purpose of attending.

The design of the MIA Masjid has also been able to incorporate the idea of combining sacred with mundane through the placement of areas in a continuum that does not detract from the sacredness of the Masjid. The south side of the building has spaces that can be used for both guests and Muslims. This area of the building does not have the capability to be used for prayer. As we move to the central section of the building, again we have a space that can accessed and visited by both visitors and Muslims (the gym) however this space can also be converted into an extension of the Prayer Hall if necessary. The north part of the building, which constitutes the Prayer Hall and the areas to prepare for prayer, is solely for sacred use and thus has restricted use. So it can be seen that as a person moves from the south to the north end of the building, one passes through a continuum which begins with the mundane and ends in the sacred; a reflection upon the journey one takes spiritually both for prayer and through life.

While all of the above reflects religious necessity, the MIA Masjid has also been able to incorporate the idea of multiculturalism. There are no design aspects to be found that are reflective of one culture or another. This negates the presence of one specific group of people. While there are design elements that are reflective of Islam, the colors used inside the Masjid are of modern and attractive taste (with the exception of the Prayer Hall which is neutral so as to not be distracting) and as such provides a feeling to visitors that is not foreign and therefore inviting.

Exterior Design

Any building can be categorized into one of the following four groups:[38]

A) Dominant Visual Effect – The features of the building make it such that it dominates the surroundings, and is very clear what the purpose of the building is *e.g. the Taj Mahal, Shopping Malls*

B) Control Visual Effect – Not as significant as the dominant visual effect, and brings to attention its surroundings at the same time.

C) Significant Visual Effect – These buildings usually have one or two features that signify what the purpose of the building is, but the building itself does not dominate the surroundings.

D) Dissolve Visual Effect – The building blends in completely with its surroundings and does not draw attention to it. The purpose of the building cannot be distinguished based on its structural design alone.

Most traditional Masjids fall into a combination of the dominant and control visual effect categories, whilst small Masjids built in North America tend to be of the dissolve visual effect category. The MIA Masjid has tried to become something of a compromise between these two extremes. Whilst the original design of the Masjid calls for a Minaret, a large Dome, exterior wall design all of which would place the Masjid into the dominant category, as yet the Minaret and the Dome have not been built and may not be for some time. There are, however, some features that would identify the building as a Masjid and the large size of the building would place this Masjid somewhere between the two extremes. It is considered to be a control visual building

4.5. Architectural aims of the MIA Masjid

The MIA drafter, Jeff Hickaway, spent much time traveling across North America and time researching the current trends and designs in Masjids. From his research he compiled a working design that would be representative of the many different aspects and cultural backgrounds of the researched Masjids, and tried to create something that would work harmoniously, a reflection of the diverse backgrounds of Muslims in Winnipeg.

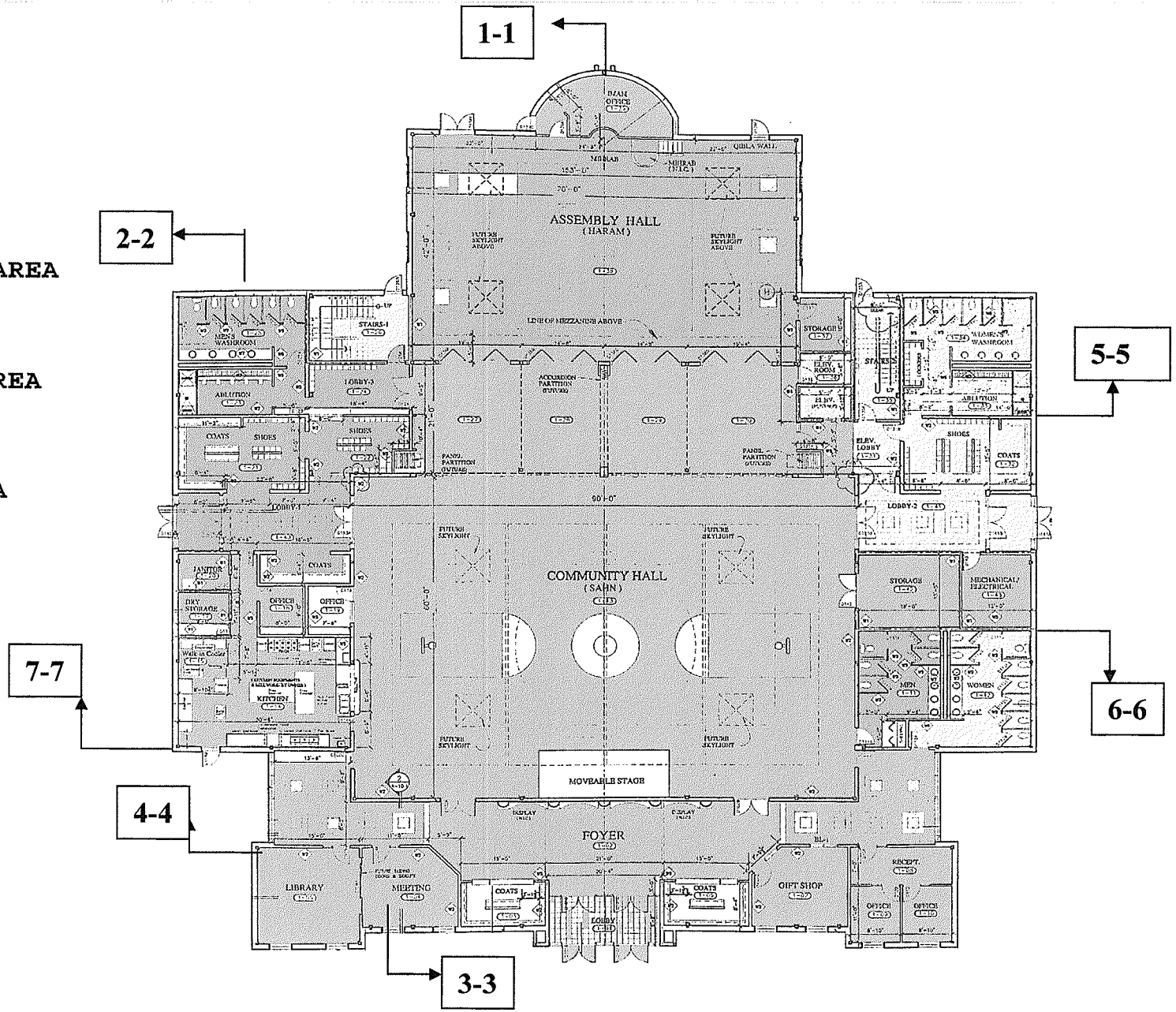
On the façade we see elements taken from design that is originally found in Isfahan, Iran, Egyptian stalactite embellishments as found in the Azhar Masjid, and a dominant dome, which is one of the most traditional elements of a Masjid. While most of the façade of the building has strong traditional elements, some elements, such as the main floor windows, incorporate a North American strip-mall architectural design. The landscaping of the grounds on which the Masjid is being built is directed towards the Qibla, as is the building itself.

Internally we find a completely different theme. Design elements/colour schemes used inside the Masjid are more contemporary and neutral. There are no design elements that are highly suggestive of a Masjid. So, in comparison to the ISNA Masjid, we have a completely opposite approach to design.

HYBRID AREA

WOMEN AREA

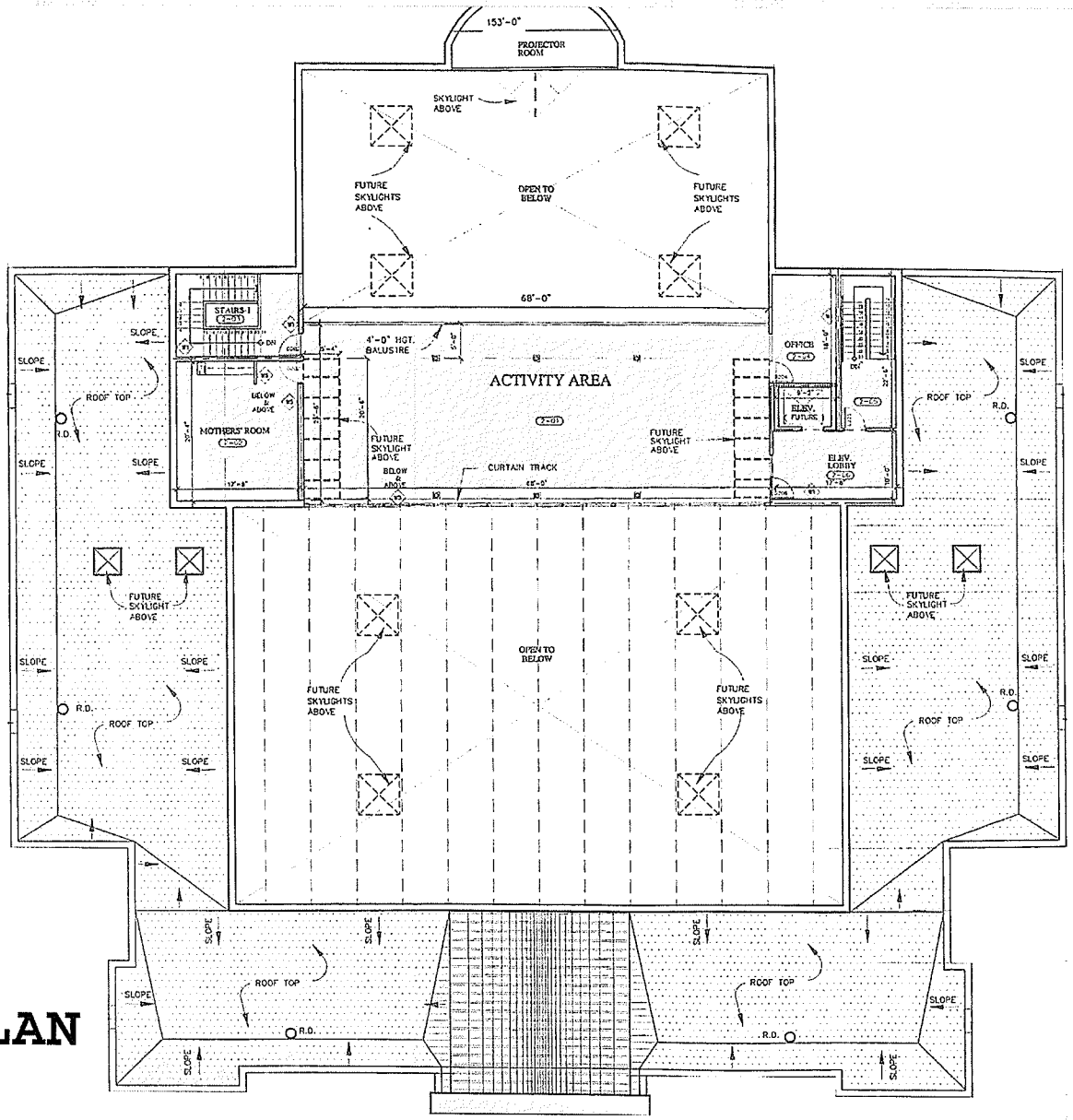
MEN AREA



MAIN FLOOR

Al- Neaimy 89

WOMEN AREA



MEZZANINE PLAN

4.6. Factors that inform/influence Masjid design in Non-Muslim countries

There are many techniques one can follow in designing a Masjid in a non-Muslim environment. The points in each of the following categories should be reviewed when considering the design of a Masjid; Spiritual, Architectural, Cultural, Functional, Economical, Environmental, and Realistic value.

4.6.1. Spiritual

The architecture must express unity in existence: one God, one truth, one existence. The architecture must express the prophetic tradition and Islamic law as its path: the framework for functional programming. As a building for expression of one faith, conversely, it must conform to the expression of ideas that are inherent in religious belief and the interpretations of this faith by its followers.

4.6.2. Spiritual/Architectural

The architecture must express the Qur'an and its message, to give identity to the structure and separate it from other buildings. The Qur'an should be used as an interpretive guide for the design.

4.6.3. Functional

The structure and form must accommodate religious activities such as ablution, prayer, Friday congregation, and should be treated with the utmost care preserved and reinforced through the architecture. Very basically there are fundamental requirements that should be met when preparing for, during, and after prayer, and as such, when building a place designed specifically for this purpose these requirements should be factored in. The design must be functional to serve the needs of those ho use it other wise it will become a nice but non-functional space.

The sacred and mundane are to be integrated through continuity and juxtaposition, yet differentiated by the character of space and form. For example, architecture should ensure that it is an act of conscious will to step inside a Masjid, as compared to, for example walking from the library stacks to the reading area. Also, the Masjid should play the role of communication between both Muslim and non Muslim society and it should be open in certain areas to everybody by the virtue of having a public place. Areas like the library, recreational areas, the plaza, and halls should be open to all. A semi-private place should also exist were people who have a spiked interest to learn more can join; for example, non-Muslims can participate in Arabic classes or attend religious lectures. Finally, there must of course be a private place for Muslims to perform prayer

4.6.4. Cultural

The architecture should be expressive and understandable to all; it should employ a formal language that evokes a sense of belonging for immigrant Muslims and a linkage with Muslims from other parts of the world. It should underscore the universality and unity of Islam. To non-Muslims it should take the form of clearly identifiable buildings that are inviting and open, or at least not secretive, closed or forbidding. The design on the outside should incorporate some signs of religion for example the almost universal symbol of a dome, minaret, arches, will give some sense of belonging. Yet the architect has to be careful not to specify a style or color. He/she has to be neutral so as to attract Muslims from different backgrounds. Inside the building should be more modern in style and color and even to some extent, in function especially with the areas that are open to the public.

4.6.5. Economical

The architecture should exhibit a sense of economy of architectural means and generosity of Islamic-humanistic ends. There should be nothing, whether functional or symbolic, without a purpose. It should not be temperamental or capricious. Islam as a religion discourages waste and excess spending. We always reminded not to leave the faucet running. Besides Masjid is a religious building. It is a religion that teaches modesty, charity, and spreading of wealth. For a Masjid to be embellished with ornate, expensive, and elaborate furnishings would be contradictory to the basic teachings in Islam. It is however a place that people naturally love to preserve and keep in the best of conditions; there is an element of pride. This is more so apparent in tourist communities and as such they can become novelties that tourists, who are not familiar with Islam, flock to see (for example in Istanbul). So to build a Masjid that will remain true to the basic teachings would mean building something quite removed from the traditional concept and designs in Masjid that we typically see in predominantly Muslim countries.

4.6.6. Environmental

The architecture should be ecologically appropriate; embellished and reinforced by the natural context, energy-conserving and climatically sensible, I don't think there is an architect who would disagree with me about the best thing to use for constructing a building is using a local material, yes it is a challenge to use outside material and a lot of architects played a great role in manipulating it. We also need to think about Islam as a religion that constantly reminds its followers that they are part of nature in a universe that one God has created. This then, should also be incorporated into the design. As noted in

the above point, many traditionally built Masjids were designed to be amazing and beautiful pieces of art which do not actually blend in with the natural surroundings. They become stark buildings that can be seen from miles away. Yet at the same time, these elaborate designs and beautiful art work that is typically seen in both the external and internal design is reflective of the idea that nature is itself highly elaborate and intricate in its deign. They are reminders to followers of the power and presence of God. The other aspect of blending in with nature is not just the visual but also the literal impact the presence of the building will have. As such it should be expected that structure should be one that is kind to the environment. This element of the discussion however, seems to be more so a product of our times and not something that was taken into consideration during the building of earlier Masjids. In a time when global warming and environmental consequences are at the forefront of people's minds, it is almost a necessity for the impact that the building will have on the ecology to be taken into consideration.

4.6.7. Structural

The architecture should be technologically appropriate in terms of the choice of materials and techniques of construction

4.6.8. Realism

In the choice of architectural motifs, the design should in no way reinforce the erroneous as found in the mythology of Near Eastern "Islamic" exotics such as found in the "Thousand and One Nights" Novel[c]

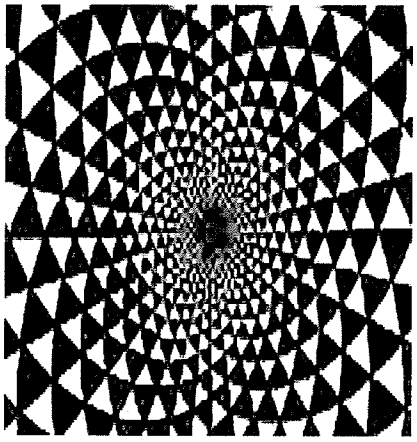
[c] A novel talks about Jens and myth stories

. Chapter Five

(Tradition and Future)

5.1. Personal reflection

A-Childhood



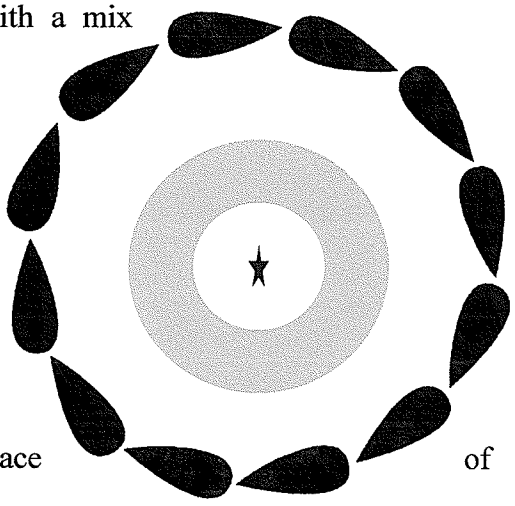
Blue dot present me and the surround present the religion and my knowledge about it

I was born into a family that was also born into Islam but did not practice the religion. So in my mind, the Masjid was a place where old people used to go to see each other and spend some spiritual and religious ("quality time") time for themselves before they passed away. As a result I did not know many things about Islam except that which were taught in school. And what were taught in school were some interpretations of things written in the Holy Qur'an and traditions of the Prophet.

B-Religion lost

Most people in Muslim countries live with a mix between their Culture and Religion

Unfortunately in many cases, cultural identity surpasses religious identity. If something happened in life where we were posed with a dilemma, we didn't ask God for guidance.



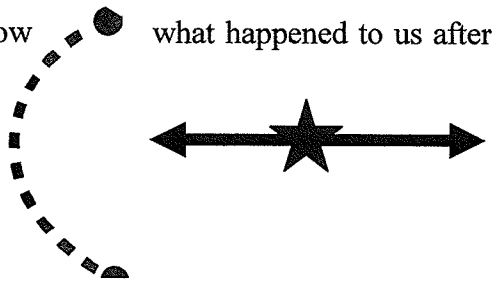
The star represents me and the donut circle is the community then the broken circle is my religion

It was more common to go to the burial place of a religious scholar and ask for their guidance. This practice is considered profanity in Islam and

is not an acceptable practice yet it is culturally allowed. I had visited many such places in my childhood with my grandmother and would admire the decorations and chandeliers made from gold. I used to believe that paradise would look like this.

C- Adolescence

At the age of 12, a close member of our family passed away which became my first exposure to deal with the death of a loved one. I started to question our existence and why we were placed on the earth. I wanted to know what happened to us after we die. It was at this point that I started to pray thinking that it will save me from Hell. Since no-one in my family really knew Islam properly I began a journey of looking for another faith. I studied Hinduism, Buddhism, Christianity, and Judaism.



The star represents me and the two direction line represents my approach toward/backward from the religion and the arch is the religion

I read the Old Testament and the New Testament, and any thing that was within my reach. In a way I was lucky because my father was a professor of Law and as a non-religious person had a large library with book s of all subjects except for Islam.

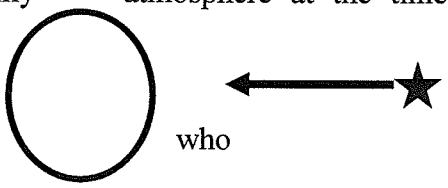
During my journey I made friends with people of all different faiths who helped me to understand their faiths. However some of the beliefs I found to be orthodox and I had problems with their ideas. Because of this I stuck to Islam.

As I explored more I found that some women chose to wear a scarf to cover their hair but I was afraid to approach them and ask them about it. I reached a stage of hesitation.

D- Adulthood

I would consider the years I spent in University and working, to be years of adulthood. I began to practice prayer on a daily basis and I would visit Masjids during Eid prayers. I had a few friends who knew Islam very well and would advise me to practice it in the proper way so I took my thinking to the next stage. I revisited my thinking about Heaven and Hell and what I could do to achieve one rather than the other.

Unfortunately, the government, social and family atmosphere at the time was not a good influence for learning about Islam.

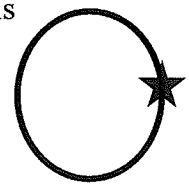


In this stage am approaching the religion with small steps

It was a challenge to search and find people who followed the right path; people who depended on the Holy Qur'an and the Prophets statements rather than culture to dictate their life practices. Here I started to approach Islam in very slow, deliberate, and confused steps. I would ask myself, am I on the right path? Yes, I was sure about that but I couldn't be sure if I was on the right approach.

E– Wife

My husband was a gift from God to answer my spiritual needs. He is a religious man who is not strict. The way he was raised in combination with his knowledge of



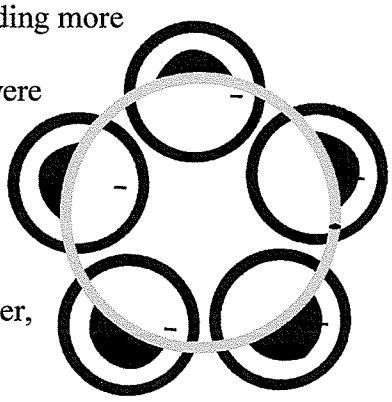
Here were I become more involve in the religion having a strong base to establish a rigid knowledge

Islam was they key for opening many doors to the questions that nobody before could answer for me. He introduced me to a different community were I could be a student and learn how to control the inner Ansam.

I began to learn more about Islam and how magnificent the religion is. I started to look at people on one level rather than as rich and poor. The Masjid became a place where I became close to God, not for expressing my admiration of the place. I stopped looking at the gold decorations and in fact I would ask those people who run the Masjid to donate the excessive ornament to the poor.

F– Motherhood

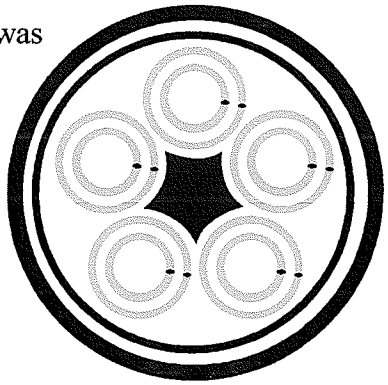
The idea of having more children is that that of adding more responsibility to your life. Both my husband and I were thrilled to have children and to be able to teach them Islam in the right and modest way, not in the same way that we were raised. I take them regularly to their Eid prayer, Friday prayers, and now they know more about Islam than I knew at their age.



The orange circle represents me and the black circles refer to my children and the yellow one are the knowledge they get from me and the sociaty

G- Immigrants

When I immigrated to Canada, the first thing I wanted to do was to meet with people who speak Arabic because I wasn't comfortable enough to be speaking English regularly. By meeting with Arabic speaking people I was introduced to Muslim community Centers and Masjids and once we became more comfortable with our English speaking skills we started to look for a place closer to home where we could practice our religion.



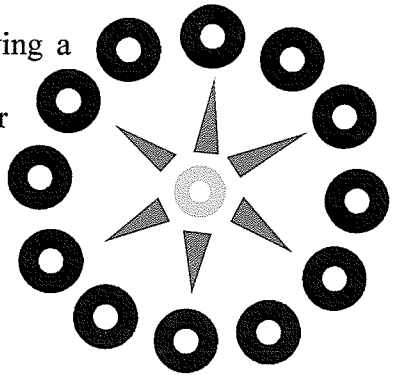
The blue star represents me and the orange circles represent the family then the outside circle is the religion

The things that really surprised us were that the external facades were very different to what we were used to. Most of the places we found were more like a large mass with an abstract form that was used to represent the dome. Typically they were not real domes and some places did not even have one. Usually these places were distinguishable only because they had signs on the buildings and on the inside there would be a large prayer space with dividers to separate the men and the women.

We also found large halls that were not used for prayer. This was something that were not familiar with but later found out that these spaces were used for events such as weddings, Iftars, and fundraising events. Also, since public schools did not teach Arabic or Islam, the Masjid was playing this role too.

H– Professional

I had never been able to digest the idea of having a hall or a gym in the Masjid, or using the basement as a prayer hall. The Masjid is still a sacred place and should not stoop to accommodate leisurely and recreational needs. In my opinion such a thing is a crime because I don't believe someone, as in the case of having a prayer hall in the basement, should be able to walk over the area in which you are praying. This can ruin your spiritual experience.



The orange circle represent me and the family, the purple arrows refer to the aspects of religion (the needs and requirements) the finally the black circle is Islam as a religion

However after integrating with non-Muslims these strict ideas/principles began to melt and blend with a more moderate approach because I realized that there are certain needs that do have to be addressed. These needs can be met in the Masjid without conflicting with the religious requirements and

fundamentals of the Masjid. For example, it is possible to have a gym contained within the Masjid, but only if it is not contained in within the main prayer hall area. If there happens to be larger number of people for prayer (like during Eids) then the extra space of the gym can be utilized.

Religion has bow become my way of living with everything that is my surroundings. He feeling of belonging to a group give a sense of identity and I able to play a role within that group which helps the women of the community to become more active; something that is not commonly seen in Masjids back home. I have become a stronger Muslim woman because of the role that he Masjid plays in a non-Muslim community.

5.2. An Islamic City versus Islamic Architecture: Is there a difference?

In her article titled "The Islamic City – Historic myth", Janet Abu Lughod discusses and argues the success of an Islamic designed city. In her opinion an Islamic design city is one which embodies these three elements: distinction between the Muslim and outsider, the segregation of the sexes, and a legal system" building code". She spends a great deal of time discussing the design and the social life that is held within cities (Specifically those in Arabic and dominantly Muslim countries), and how this was once successful but in today's world cannot be so. So points out that nowadays, people need more space, roads need to be wider, the female members of the family are playing more prominent roles in society and thus, the old design of small enclosed and private spaces no longer support today's social networking and lifestyle. The author, however, fails to recognize a stark difference between what is Islamic design and what is cultural design. Whilst Islam happens to share traits and elements which are common to some of the cultures where

Islam has been brought to practice that does not identify Islam as belonging to any particular culture. For example Arabic people are by nature of their culture generous people, but at the same time Islam also teaches generosity. Yet Islam itself is still exclusive from culture. In effect it is actually not possible to design a city in an Islamic way as Islam does not dictate how houses should be built or how towns or cities should be laid out. The only reference points for designing structures in Islam are those that have been discussed in this thesis, and that is in relation to building a Masjid. How people choose to build their homes and their cities is at the discretion of those who would inhabit it. Therefore any lack or assimilation and inability to adapt to today's lifestyle is as a result of the inability of those governing the cities to implement change adaptation that is at one with present day advances.

5.3. What is the relationship between A traditional Masjid and A Contemporary Masjid in Non-Muslim countries?

(39) The Malay Nusantara Masiid

Architecture can be said to be the most non violent form of expression of faith, thinking, intellect, and culture and it serves as a great platform from which to promote Islamic Architecture and Islamic art. In Canada, We live in a multicultural society where we interact and develop our identity on which architecture can also have a strong influence. From this then it is important to look at what may be considered the most prominent part of a Masjid. In my opinion the most important/prominent part of the Masjid is the dome. Because it represents one of the Holy Ayah (verse) of Qur'an: "Lo! We are Allah's and lo! Unto him we are returning."(2 surat: 156 aya). This verse acknowledges that we are all united and all belong to the same

universe. In much the same way, the dome begins with a single point from which it spreads out to cover the whole Masjid, an expression of unity for Muslims. Based on this, I would have to say that Islamic values are still strongly expressed by current architecture.

With regards to the dome, many Architects still interpret its presence in Masjids as a necessity; a kind of sanctified religious object. This is however untrue, according to what we know from the time of the Prophet. In fact, the Prophet's Masjid was built during his time without a dome. Also, anyone who understands basic values in building structure would be aware that a dome is simply a necessary spanning system when it comes to masonry architecture and mud construction. This is because stone and mud are weak in tension and therefore cannot span long distances in the form of beams. Muslims accepted the dome concept as a spanning system and in fact Sinan[i] made it his lifelong pursuit to build bigger and bigger domes for his self glorification. We can also look at other spanning systems used in Masjids in other countries. For example, the Malay Nusantara Masjid (Malay, Indonesia) does not have a dome but is instead composed of a three- or two-tiered pyramidal roof because the vernacular material was timber. The dome was later introduced by colonialists in Malaysia during the late 19th and early 20th century as Masjids was built according to more Classical and Western eclectic styles. The same is also true for the use of the arch. Therefore, from a design point-of-view, the dome is not a necessary component

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[i] Mimar Koca Sinan, the "Great Architect Sinan", was born in Anatolia, Turkey in 1489. Drafted as a soldier into the Ottoman royal house in 1512, he quickly advanced from Calvary officer to construction officer. As construction officer he built bridges and fortifications. In 1538 he was appointed Architect of the Abode of Felicity. During his career Sinan built hundreds of buildings including Masjids, palaces, harems, chapels, tombs, schools, almshouses, madrassahs, caravan series, granaries, fountains, aqueducts and hospitals. Of this diverse group of works, his Masjids have been most influential. For his Masjids, Sinan adopted the design of the Hagia Sophia to create a building in which the central dome would appear weightless and in which the interior surfaces would appear bathed in light. He used buttressing on the exterior of his buildings to open the interiors. He often designed his Masjids as part of complex comprising schools, baths, guesthouses, and hospitals.
Generally considered the greatest of all Ottoman architects, Sinan's career spanned fifty years. His great Masjids are the archetypal image of Turkish Ottoman architecture. Sinan died in Istanbul, Turkey in 1588.

since it has no religious basis, yet from an architectural point of view, it was a structural necessity at a time when there was no understanding of trusses or portal frames. The role of the dome can be broken down into three categories a) Architectural – the representation of the sky b) Religious – representation unity and infinity c) Functional – the necessity of solid construction and acoustic performance.

Conversely, in the early 20th century, building styles and formal elements from the Islamic world provided the stimulus for architectural development in Europe and North America. Architects such as Walter Gropius and Le Corbusier then discovered the attraction of applying Eastern form reduction (as the buildings of Sinan or medieval architecture of the Maghreb) to their concept of modern architecture.

The prophet's Masjid in Medina didn't have a dome, and indeed domes and minarets were not mentioned in the Quran and Hadith. Therefore, spiritually speaking, the dome, and the minaret play in traditional Masjids is subsidiary. However, when Muslims think about building a Masjid, they picture both of them (dome and minaret) although they are not a necessary element, especially in North America where minarets (that function as the place from where the call for prayer is announced) is not used due to the issue of acoustics in an urban setting and sound codes. Also, building a dome is costly and typically, Muslim communities in Western society depend heavily on individual and community funds to build Masjids.

This table illustrates the differences and commonalties between traditional and contemporary Masjids:

	TRADITIONAL	CONTEMPORARY
STRUCTURE	- All Masjids, beginning with The Prophetic example, until present, have retained the use of a courtyard as a prayer hall, Qiblah wall (Mihrab), Platform (Mimber) and roofed portico.	- Minarets were added in different shapes and sizes to some Masjids, but are not present in every Masjid in North America, despite the fact that this element is usually considered religious in nature.
USES OF MASJID	- The Masjid is a place for worshiping and learning Islamic studies, therefore requiring classrooms within the basic structure.	- Masjids in North America, besides being a place to worship and learn Islamic study, are a place to meet new/old people, to socialize with others, to participate in different activities, and function much like a community center.

FUNERAL SERVICES	- In the time of The Prophet, Muslims washed their dead in their homes, later taking the coffin to the Masjid for prayer. Later, special spaces for body washing appeared in the Masjids.	- In non-Muslim communities it is unfamiliar to have a funeral house inside a religious building, especially with the unfamiliar procedures that Muslims follow before interning a body.
ATTENDANCE	- My experience in a traditional Masjid is that it is a place mostly visited for Friday prayer , Tarawih prayer in Ramadan and Eid's prayer. On such occasions, it is crowded with regular visitors.	- In my experience, I have found Masjids in North America, especially Canada, are a place where one can visit at any time and spend quality time learning about Islam as a religion, as well as practicing other activities. Elements like recreational areas, places to perform Halal slaughters, areas to meet socially, classrooms for studying the Arabic language or the Qur'an, etc., were not provided.

ROLE IN COMMUNITY	- Masjids in Muslim countries always play the Islamic (religious) role.	- Masjids in non-Muslim communities play an economical, political, social and religious role.
FINANCING	- Funded by the government, or wealthy individuals.	- Funded by the community, private donations, and tax breaks from the government.
FORM VS. FUNCTION	- All Masjids retained a prescribed interior form.	- In non-Muslim communities, external form does not reflect internal form or function.

VISUAL EFFECT	- This swings between the control visual effect and the significant visual effect. You can find a few dominant examples, especially in wealthy Muslim countries	- Mostly the dissolve visual effect but lately there is some return to the significant visual effect
SCOPE OF ATTENDANTS INTEREST	- Mostly the needs of mainstream Muslims are taken into consideration.	-Addressing the issues of three different types of Muslims i) Immigrant, ii) Converted, and iii) Western-born.
POWER	- Since the funding is usually from the government, there isn't much focus on the involvement of the community at the decision levels.	- Funding is typically through the community and as such they have more say in decisions for the Masjid.

5.4. What impact do traditional Architectural and religious principles have in contemporary Masjids in Non-Muslim countries?

A traditional Masjid is considered to be the main/base example for building any Masjid. It has become a precedent because it came from the primary and only source; the Prophetic Masjid. Traditional Masjids usually have a sentimental effect on each and every Muslim who was born or raised in a Muslim county as it will remind him/her of their family; it gives them a sense of belonging. Consequently, when Muslims establish their new homes in non-Muslim countries, they want to feel that they belong and that they still have roots to their birthplace/motherland. As a result, they bring traditional Masjid design with them to rekindle this feeling. Therefore, Masjids in non-Muslim countries play many roles, one of which is the psychological/spiritual effect. Besides being a place for Muslims to fulfill their obligations toward God and remind us of His teachings, traditional Masjids perform the basic and fundamental needs to erect a Masjid.

Contemporary Masjids are considered to be a liberal, reformed version of traditional ones. They have reformed the design according to the needs of local Muslims in such a way that does not conflict with religious and spiritual needs in addition to the four main unchangeable architectural elements. Of course if we physically limited and can not accommodate some of these elements then we have to measure the value of that particular element and what its loss will mean. For example if the resources are not available to build the Minbar then we can substitute it or eliminated it providing it will not interfere with the practice of Islam. Changing or removal of the other elements is still a possibility with the exception of the direction of the Qiblah

5.5. Are new factors emerging that are beginning to have an impact on Masjid design in Non-Muslim/Muslim countries? Do contemporary Masjids in Non-Muslim countries influence traditional ones?

I believe that any building in a non-Muslim community could be a Masjid. Islam itself isn't concerned about the decoration or ornamentation in/outside of the Masjid. It is more important that it be a clean place. Take for example the Winnipeg Central Masjid on Ellice Avenue, Originally built as a bar, the building was converted to a Masjid with a few simple changes.

The struggle between satisfying spiritual and physical needs is an issue that humans have been faced with from the beginning of time. In particular, in this thesis, these needs have been examined amongst Muslims in non-muslim communities where it is a challenge to satisfy both. For example, Muslims are required by religion to keep their activities separate based on gender, whilst at the same time there is a need for physical activity. Being able to satisfy both needs in western society can be challenging at best, if not impossible to achieve since under western accepted culture there is no problem with the co-mingling of men and women, especially when it comes to passive sport. Swimming pools allow the mixing of both genders and thus makes is virtually impossible for Muslim women to make use of such facilities. Using this example we can see that there is a need to provide members of the community with access to such facilities so that a) members of the community are not forced to compromise their religious needs to satisfy their physical needs, and b) members are not forced to sacrifice their physical needs because they live in a country that does not easily accommodate their religious

beliefs. So, we can see that contemporary Masjids not only need to address the religious, but also the physical needs of members.

The focus on women's needs and wants within the Muslim Community is not just an element decided by them. There is in fact a majority of men who prefer the separation of men and women during such activities, and this preference is not solely based on religious beliefs but on personal, moral beliefs and comfort levels. There is however, a need in such centers for community members to be careful to prevent the risk of isolating their community members from the rest of society simply because they can provide for both needs in one place. Taking the above example of sports activities even further, we can find many examples of both men and women in western society who prefer to practice such activities in a gender separated environment. As such, any kind of activities that would be offered by a community centre can be opened up to the general society and thus integrate both the structure itself and the members of the community to the rest of society in a positive way.

Religious buildings in non-muslim countries typically depend on the community to fund the construction and maintenance of their facilities. Such centers and Masjids can become fairly large and thus may become difficult to operate solely on funds generated from community members alone. In order to alleviate this pressure it will become necessary to use the structures to generate revenue either through commercial or industrial projects. For example to have stores or rent out certain areas/rooms of the building, or to facilitate the creation of a slaughterhouse that can provide meat products that have been prepared in a Halal Islamic manner. To take it even further, these roles would provide opportunities for new Muslim immigrants to become integrated into their new country by

providing jobs and skill development, all of which are often stumbling blocks for newcomers.

Islam teaches us about respecting the elders of the community and being present around them to gain their experience in life and religion. As such it would beneficial to incorporate a building that will be available for seniors to live in. Having such a structure would provide seniors with easy access to a Masjid and its facilities (which is especially important as it is difficult for seniors to be very mobile). It would also bring seniors into closer proximity with those who are younger and attend the Masjid and its facilities, as opposed to becoming isolated as is often the case as their age progresses.

Islam as a religion always puts an emphasis on respecting nature and encourages us to think twice before we use more than necessary. So thinking about recycling and the use of passive energy to operate buildings are new ideas that need to be incorporated into the structure and its maintenance. Integrating ideas of renewable energy and recycling are also positive lessons that will be learnt by the youth and others who frequent the Masjid.

To extend the idea of the Masjid serving more than just spiritual needs even more, a small/hobby farm could be introduced to present a balanced cycle of consumption and production. The produce, like fruit and vegetables, could be used within the community for events, etc., and the remainder could be sold for revenue.

Finally, an important aspect that needs to be integrated is a cemetery along with the facilities that are required for the preparation of a person's body before burial, which needs to be done in a specific way according to Islam.

Having a complex building for the Muslim community that serves both their mandatory and elective needs would be a great achievement; however we need to be

careful in that we don't want to push the idea in such a way that would isolate the members of the Muslim community. If we are able to provide them with all of the above mentioned needs, we risk negating the necessity for members of the community to mingle with and integrate with the rest of the city/larger community. And this would not only be detrimental for members of the Muslim community but also for everyone else. When immigrants first come to Canada if they do not explore their new surroundings then they will not become well integrated or become productive citizens, they will not learn the language properly and they will have difficulties in bringing up their children; our future generation.

So, considering this, it may be more preferable alongside some of the basic ideas like having a gym/swimming pool and retail stores, to have programs that act more as a transitory or stepping-stone programs for our members. Placing these programs into a transitory category, instead of a permanent one, will help reduce the likelihood of the risk of isolation of and creation of a "mini-city" for the Muslim community. These programs could be directed towards preparing newcomers to the life in North American society or for the enrichment of their experiences for job acquisition and life success.

Going back to the idea of having a sports facility, such ideas can actually help with the integration and inclusiveness of the members of the community since these ideas can be open to public use as well. Such concepts can promote friendships and positive interactions between Muslim and non-Muslim.

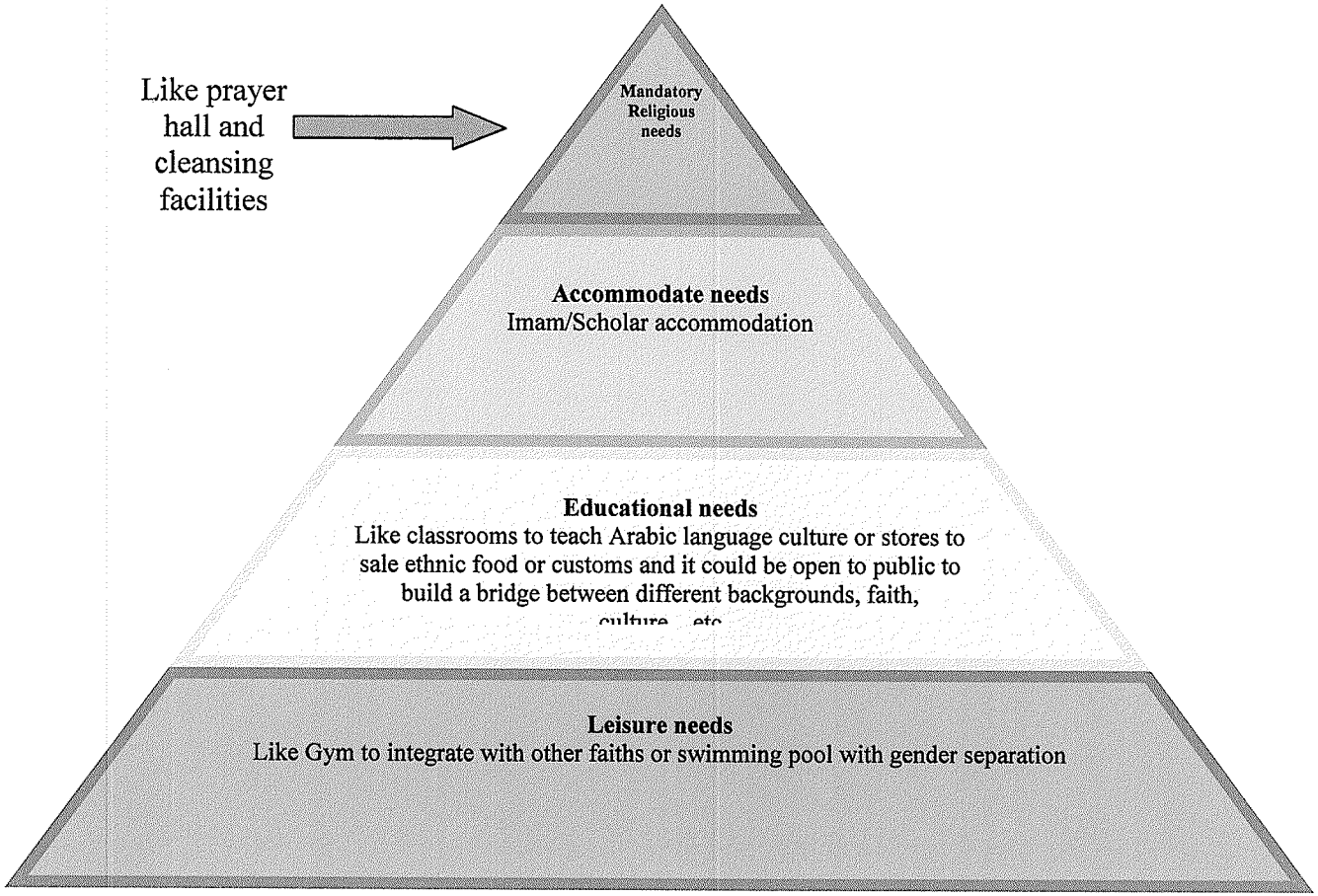
The idea of having a farm in the surroundings of the MIA Masjid is to direct seniors toward providing a meaningful activity for a senior who would accommodate a senior's complex. Not only would it provide activity for those members of the community

who cannot move around much, but the ability to produce organic food which can be sold on a weekly basis after Friday congregational prayer. It would create a weekly market which would be very conducive to a residential area that Waverly West is (there will be over 400 new houses built by September 2006). This idea is also something that would be considered to be an integration project as it would not be something exclusive to Muslims.

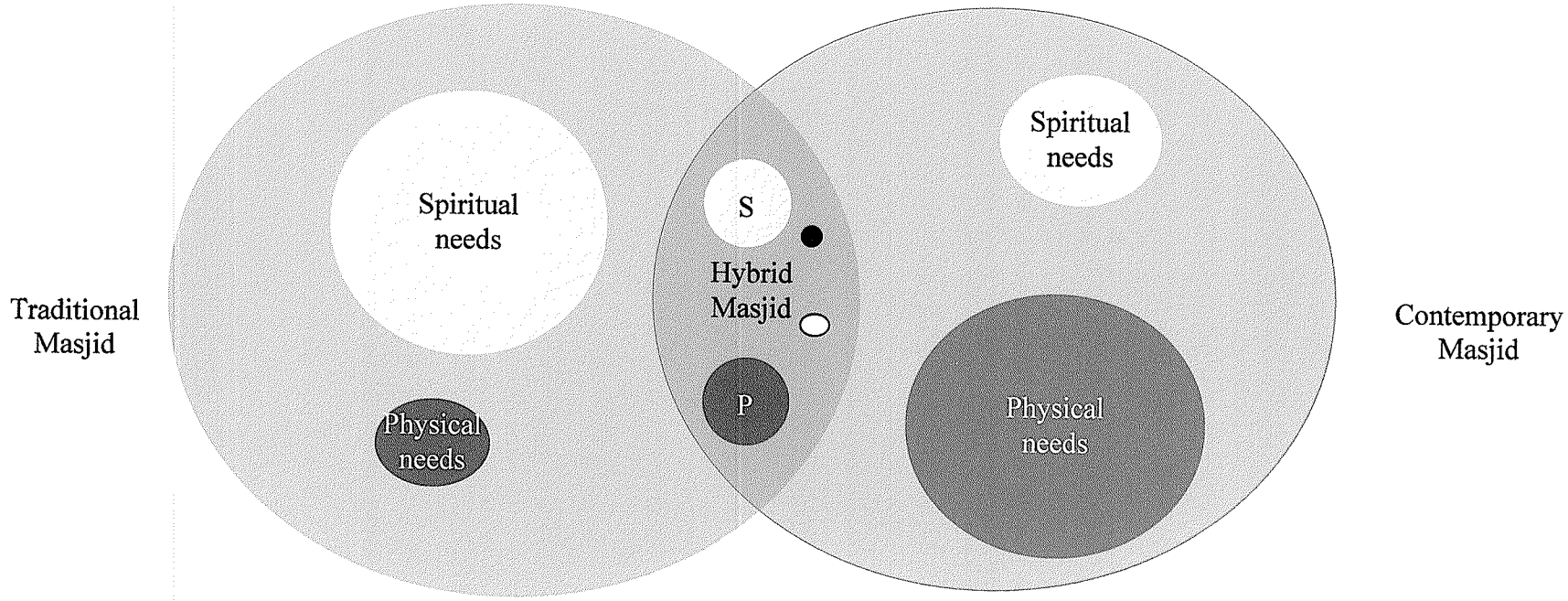
The great thing about architecture is that there are no 'correct' answers; the final judgment should be based on the site conditions, the community composition and aspirations.

Architecture is a form of knowledge that allows your imagination open to all different types of concepts which leads me to believe that with respect to design anything and everything is possible. In my opinion, Masjids as architectural symbols could take many different shapes and styles and use all kind of materials and technology, yet it does not have to effect the religious functionality of the Masjid.

The requirements to program a Masjid in Non-Muslim Country



Creating a Hybrid Masjid



Black and white small circles inside the hybrid area represent misalliance future needs and requirements

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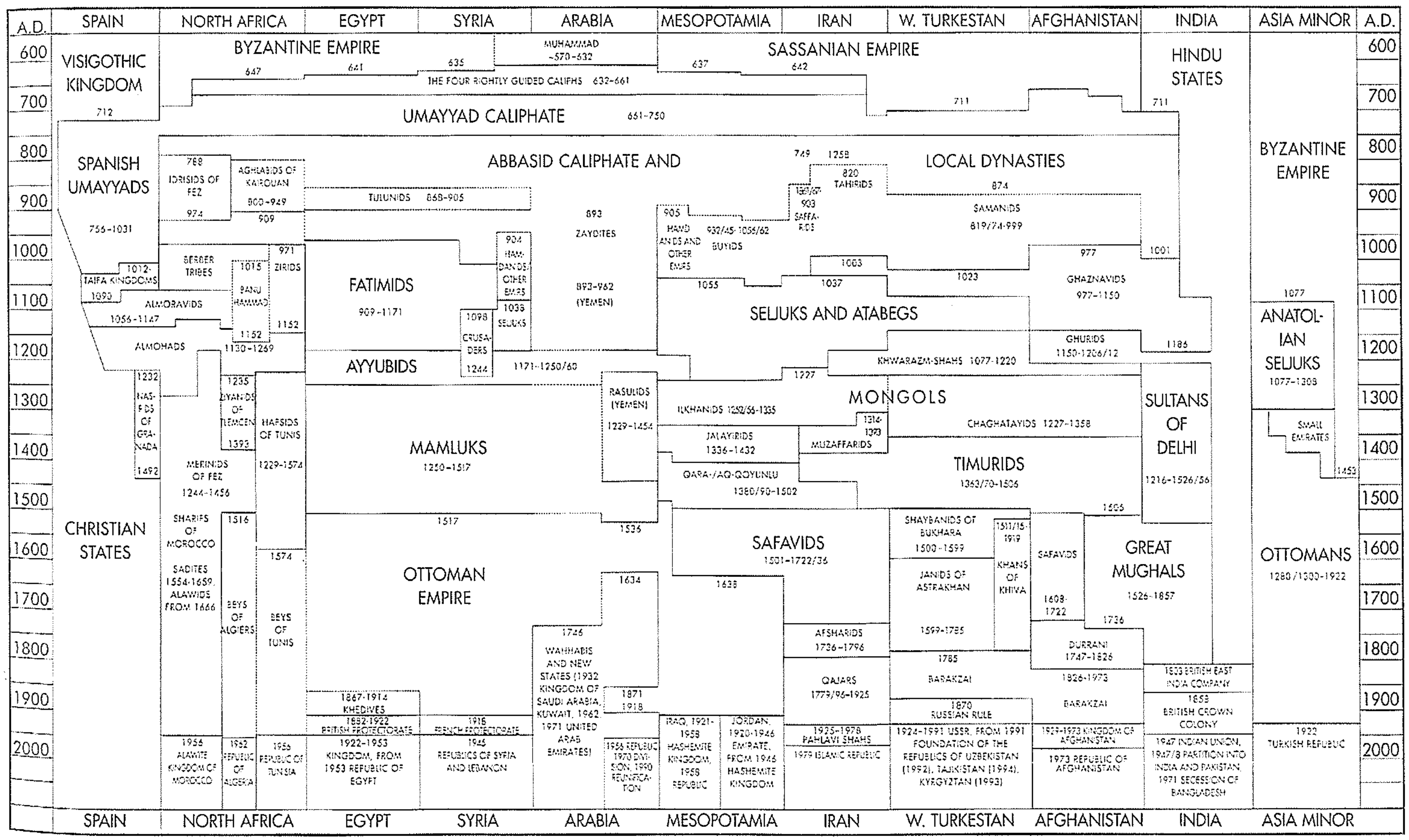
GLOSSARY

(1) ABLUTION	Systmatic clesansing procceture using water which is required before preforming prayer
(2) ATHAN	The call to prayer
(3) ALLAH	The Arabic word for God, and it is the main word (of the 99 descriptive words) used to refer to God
(4) BAB	Door
(5) BAQARA	The second sura in Qur'an, consist of two chapters and half
(6) CALIPH	Successor, and it called only on the four leaders who fallowed Prophet Muhammad
(7) EID	The Muslims festavils, and they have two annually
(8) HADITH	A tradition, saying, narrative, or written report of actions attributed to the Prophet Muhammad; the source of material for Sunnah, Regarded as a source of Islamic Law
(9) IFTAR	Breaking the fast
(10) IMAM	A prayer leader who is designated to lead any of the formal prayers.
(11) ISLAM	Submission to Allah "The God"
(12) Ishaa Prayer	Night Prayer
(13) IWAN	Roofed or vaulted hall open at one end.
(14) HALAL	The Meat that has been slaughtered according to Islamic law
(15) HIJRA/ HIJRI	The departure and journey of the Prophet Muhammad and his followers from Makkah to Medinah in AD 622, thus marking the beginning of the Muslim Era.
(16) JAMI	Literally, what brings together; congregational mosque where the Friday Prayer is Preformed
(17) KA'BAH	The sacred black cube-shaped structure located in the mosque at Makkah. Abraham an Ismail rebuilt the Ka'bah after Adam as a symbol of monothesim
(18) KHATIB	The speaker who delivers the khutbah " exhortation" at the time of congregational worship on Fridays.
(19) ME'ATHNA	Minaret, the place that announce prayer from it
(20) MAKKAH	The City that has the Ka'bah in it , and it is in Saudi Arabia
(21)MADINAH/AL MADINAH	The city that Prophet Muhammad emigrated to AD 622 it used to be called Yathrib but after the Prophet arrived changed to Al Medinah Al Munawarah "The lighten City" and it is in Saudi Arabia

(22) MADRASAH	A school for teaching religious as well as secular subjects.
(23) MAREB DAM	A dam in Yemen and believed to be the first dam built in the world
(24) MASJID / MAJAJID	Mosque; a place of congregational gathering, education, and religious activates
	A prayer niche indicating the direction of Makkah
(25) MINARET ME'ATHNA	An elevated tower integrated into the architecture of a mosque from where the call to prayer was pronounced in earlier times. Today a public address system is used
(26) MINBAR / MIMBER	A rostrum, pulpit, or platform of three or more steps upon which the Khatib stands to deliver the exhortation on Fridays
(27) MU'ATHEN	The official at Masjid who delivers the call to prayer :adhan: five times a day
(28) MUGHREB PRAYER	The prayer after sunset
(29) MUQARNAS	Ornamental valuating composed at small concave elements, often employed to decorate an Iwan or to fill the zone of transition between supporting walls and a dome.
(30) MUSLIM	One who submits to the will of Allah; one who accepts, professes, and practices Islam.
(31) NISA	women
(32) QIBLAH	The direction of Ka'bah in Makkah. Worshippers must face Makkah during the ritual performance of prayer; all Masjids have a mihrab that indicates the direction of Makkah
(33) QUR'AN	The sacred text of Islam; literally translated as recitation or reading, it consisted 30 chapters
(34) RAHMAH	Mercy
(35) RIWAQ	Hypostyle hall with regularly spaced columns and arches
(36) SAHEN	Courtyard
(37) SALAT	Prayer
(38) SUFFRAT	A shaded area
(39) SUNNAH	Practice, custom, personal mannerism, model, convention, law, habit, etc.
(40) SURAT	A paragraph in the Qur'an
(41) THAMOOD	The tribe of prophet Salih, find the complate story in the Holy Qur'an sura Al-Fajer "Dawn"& Al-Shams "Sun"
(42) UMAYYAD	Ruled Muslims between 661-750 A.D, and their capital city was Damascus
(43) WUDU	Ablutions performed by a worshipper before prayer.

Time chart of Islamic dynasties



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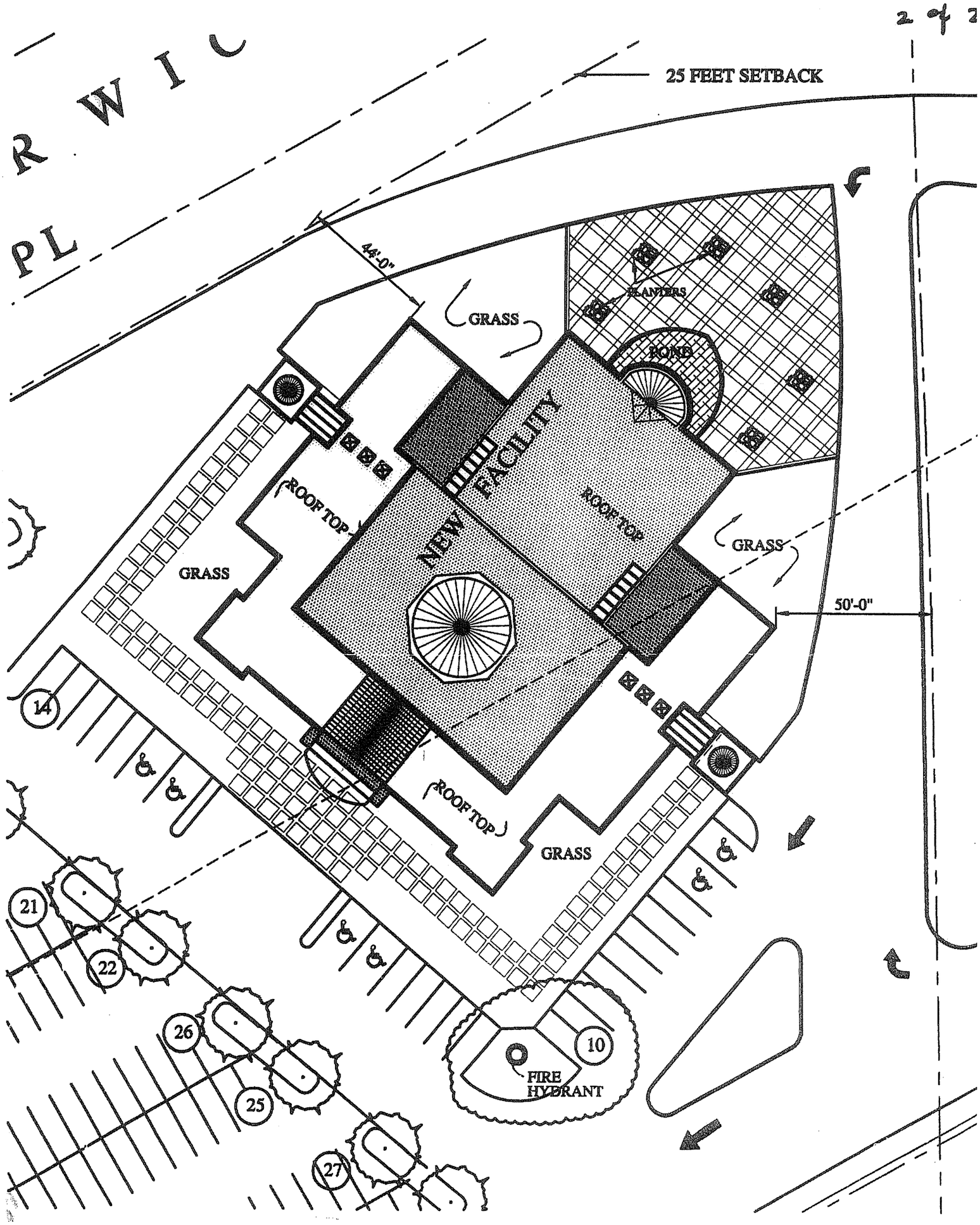
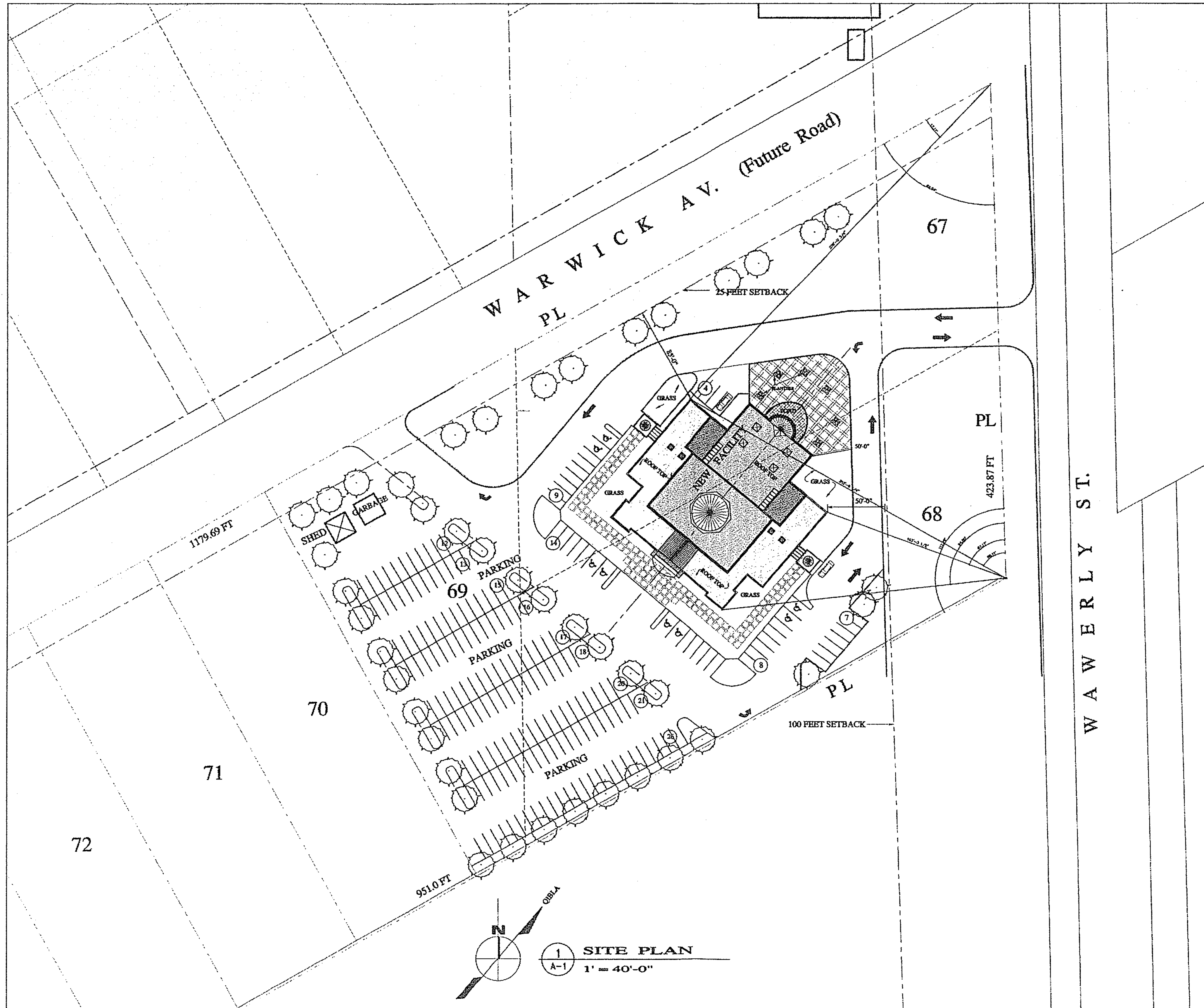

25 FEET SETBACK
44'-0"
GRASS
PLANTERS
POND
NEW FACILITY
ROOF TOP
ROOF TOP
ROOF TOP
GRASS
GRASS
50'-0"
GRASS
14
21
22
26
25
27
10
FIRE HYDRANT



1. OCCUPANCY CLASSIFICATION

a) GROUP A DIV. 2.
b) NUMBER OF STOREYS – 1
c) NO. OF STREETS FACING –2
d) NOT SPRINKLERED
TOTAL AREA ALLOWED AS PER TABLE 3.2.2.25=2000 SQ. M.

THE BUILDING IS PERMITTED TO BE COMBUSTIBLE OR NON–COMBUSTIBLE USED SINGLY OR IN COMBINATION.

OCCUPANT LOAD 3.1.16.1 –BANQUET ≈ 900 PEOPLE
–GATHERING ≈ 1200 PEOPLE

2. SIZE AND OCCUPANCY (NBC–3.2.2)

a) MAIN FLOOR S AREA = 19,715 SQ. FT.
= 1832 SQ. M.
b) ALLOWABLE = 2000 SQ. M.

3. CONSTRUCTION

NON–COMBUSTIBLE.

4. EXIT REQUIREMENTS

a) GATHERING WORSHIP – 9610 SQ. FT.=892.8 SQ. M. AREA
OCCUPANCY ≈ 1200
REQUIRED = 1200x6.1/900 = 8 EXITS
PROVIDED = 14
b) BANQUET = 900x6.1/900 = 6 EXITS
PROVIDED = 10

MAXIMUM TRAVEL DISTANCE = 30m AS PER ARTICLE 3.4.2.5.1(f)

5. MEZZANINE

TOTAL OPEN AREA: 1800 SQ. FT.
BUILDING AREA : 19,715 SQ. FT.
% OF MEZZANINE= 1800/19,715 = 9.1%
AS PER ARTICLE 3.2.8.2.1(c)

6. PLUMBING FACILITIES

WORSHIP –1200 CAPACITY
1000 MEN / 200 WOMEN
REQUIRED –1WC/150 PEOPLE
=1000/150 = 7 WC.
=200 /150 = 1.33 = 2 WC.

BANQUET –900 CAPACITY
450 MEN / 450 WOMEN
REQUIRED – 7MEN WC 13 FEMALE WC
PROVIDED – 11MEN LAVS 8 14 FEMALE LAVS 8

LEGAL DESCRIPTION

LOTS 67 – 73, BLOCK 2, PLAN 1918

No.	Description	Date (d/m/y)	Drawn	Checked
2.	REVISED FOR PRICING	MAY.14.04	RA	RA
1.	DATE OF PLOT	DEC.06.03		

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M.I.A. COMMUNITY CENTER COMPLEX
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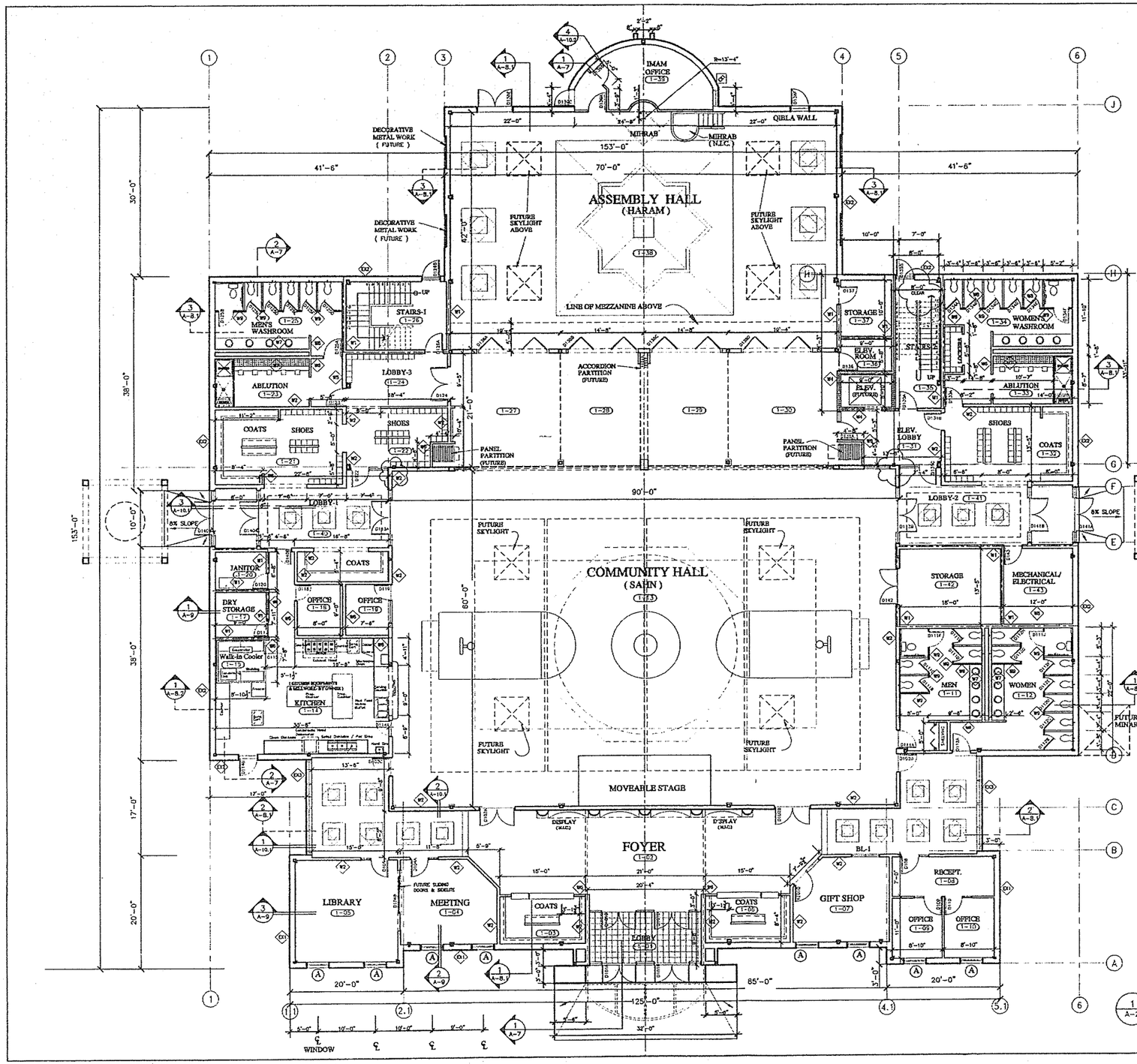
WINNIPEG. MB.

Sheet Title: SITE PLAN

Scales: 1" = 50'-0" Date: MAY, 2003

File Number: - Sheet Number: A–1



WALL TYPES

EXTERIOR

EX1
4" FACE BRICK
1" AIR SPACE
1" RIGID INSULATION(FIBRE GLASS)
TYVEK AIR BARRIER
1/2" EXT. DRYWALL SHEATHING
18 GA. – 6" STEEL STUDS @ 16" O.C.
R-20 BATT INSULATION
6 MIL POLY V.B.
1/2" DRYWALL

EX2
EXTERIOR ACRYLIC STUCCO C/W WIRE MESH
1" RIGID INSULATION(FIBRE GLASS)
TYVEK AIR BARRIER
1/2" EXT. DRYWALL SHEATHING
18 GA. – 6" STEEL STUDS @ 16" O.C.
R-20 BATT INSULATION
6 MIL POLY V.B.
1/2" DRYWALL

EX3
SINGLE GLAZED, CLEAR SPAN SPANDREL
AIR BARRIER
3/4" P.T. PLYWOOD
6" STEEL STUDS
18 GA. – 6" STEEL STUDS @ 16" O.C.
R-20 BATT INSULATION
6 MIL POLY V.B.
1/2" DRYWALL

INTERIOR

1 HR. - SEPARATION ULC 415

W1
5/8" F.G. DRYWALL BOTH SIDES
2X6 STL STUDS @ 16" o/c.
WALL HEIGHT TO U.S OF ROOF STRUCTURE

W2
1/2" DRYWALL BOTH SIDES
2X6 STL STUDS @ 16" o/c.
WALL HEIGHT TO U.S OF ROOF STRUCTURE

W3
1/2" DRYWALL BOTH SIDES
2X6 STL STUDS @ 16" o/c.
WALL HEIGHT TO U.S OF ROOF STRUCTURE

W4
1/2" DRYWALL
1 5/8" STL STUDS @ 12" O.C.
1" SPACE
4" CONC. BLOCK

W5
1/2" DRYWALL BOTH SIDES
2X6 STL STUDS @ 16" o/c.
WALL HEIGHT TO U.S OF ROOF STRUCTURE
ACOUSTIC BATTS FULL HEIGHT

W6
1/2" DRYWALL BOTH SIDES
3 5/8" STL STUDS @ 16" O.C.
1'-0" ABOVE CEILING HEIGHT

W7
1/2" DRYWALL
3 5/8" STL STUDS @ 16" O.C.
1'-0" ABOVE CEILING HEIGHT

W8
CERAMIC TILES BOTH SIDES
1/2" DRYWALL
1 5/8" STL STUDS @ 12" O.C.
1/2" DRYWALL
TO 7'-0" A.F.F.

W9
1/2" DRYWALL BOTH SIDES
3 5/8" STL STUDS @ 16" O.C.
TO 8'-0" A.F.F.

No.	Description	Date (d/m/y)	Drawn	Checked
4.	REVISED FOR PRICING	MAY. 14, 04	RA	RA
3.	DATE OF PLOT	JAN. 14, 04	RA	RA
2.	DATE OF PLOT	DEC. 08, 03		
1.	BLDG PERMIT	JULY 1ST, 03	RA	AC

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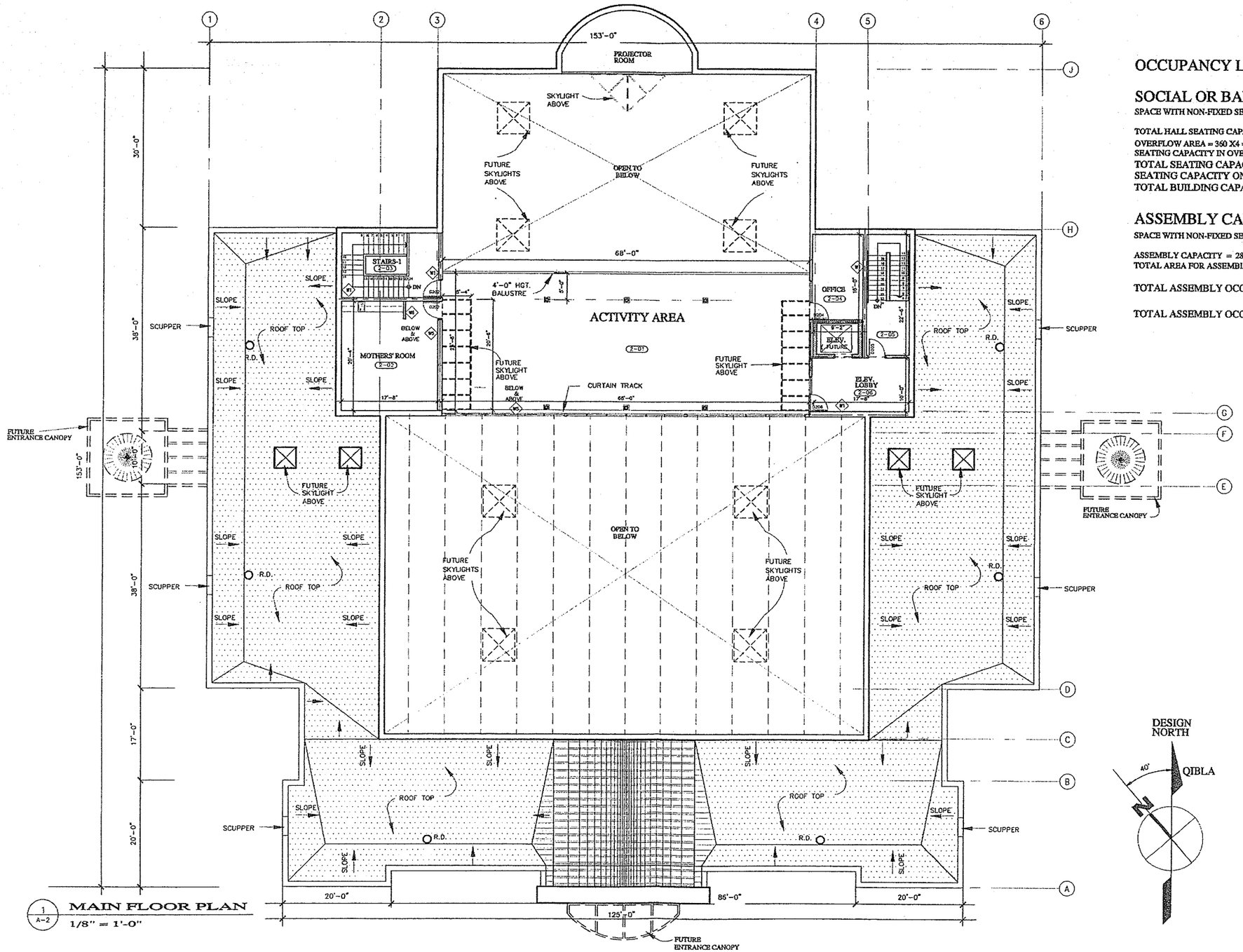
Sheet Title: MAIN FLOOR PLAN

Scales: AS IND
Date: MAY, 2003
File Number: -
Sheet Number: A-2

1 A-2 **MAIN FLOOR PLAN**
1/8" = 1'-0"



1 / A-2 **MAIN FLOOR PLAN**
1/8" = 1'-0"

OCCUPANCY LOAD:

SOCIAL OR BANQUET CAPACITY:

SPACE WITH NON-FIXED SEATS & TABLES @ 0.95 SQ. M/ PERSON
= 10.23 SQ. FT/ PERSON
TOTAL HALL SEATING CAPACITY = 5320/10.23 = 520 PEOPLE
OVERFLOW AREA = 360 X4 = 1440 SQ. FT.
SEATING CAPACITY IN OVERFLOW AREA = 1440/10.23 = 141 PEOPLE
TOTAL SEATING CAPACITY ON MAIN FLOOR = 661 PEOPLE
SEATING CAPACITY ON MEZZANINE = 220 PEOPLE
TOTAL BUILDING CAPACITY = 881 PEOPLE

ASSEMBLY CAPACITY:

SPACE WITH NON-FIXED SEATS @ 0.75 SQ. M/ PERSON
= 8.07 SQ. FT/ PERSON
ASSEMBLY CAPACITY = 2850/8.07 = 353 PEOPLE
TOTAL AREA FOR ASSEMBLY USAGE = 2850 + 1440 + 5320
= 9610 SQ. FT.

TOTAL ASSEMBLY OCCUPANCY ON MAIN FLOOR:
= 9610/8.07 = 1190 PEOPLE

TOTAL ASSEMBLY OCCUPANCY ON MEZZANINE:
= 2280/8.07 = 282 PEOPLE

DESIGN NORTH
40°
QIBLA

No.	Description	Date (d/m/y)	Drawn	Checked
3.	REVISED FOR PRICING	MAY. 14, 04	RA	RA
2.	DATE OF PLOT	DEC. 08, 03		
1.	BLDG PERMIT	JULY 1ST, 03	RA	AC

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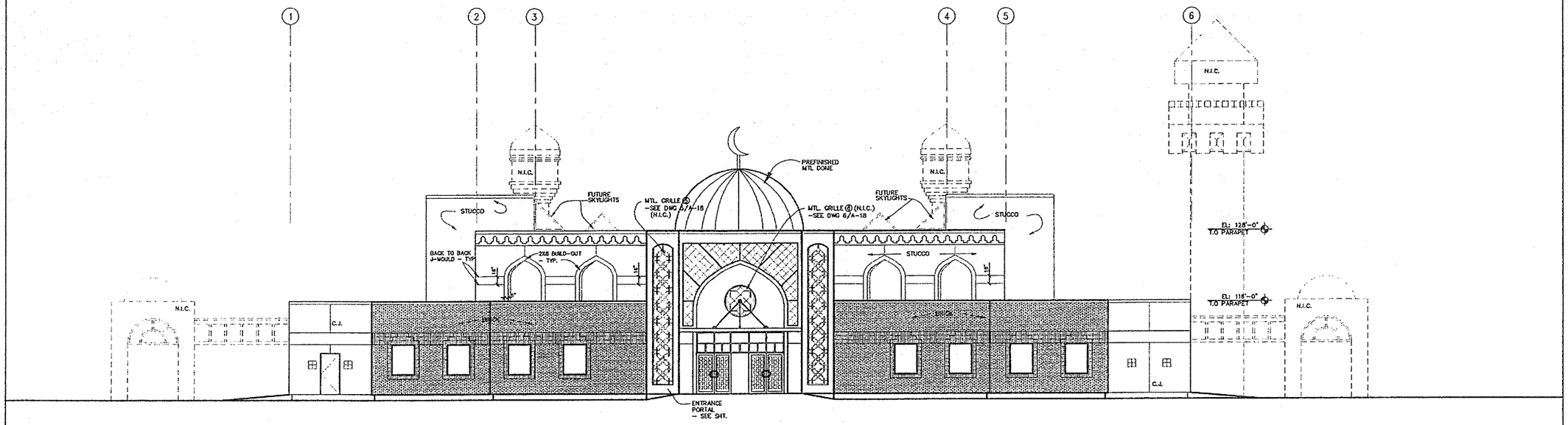
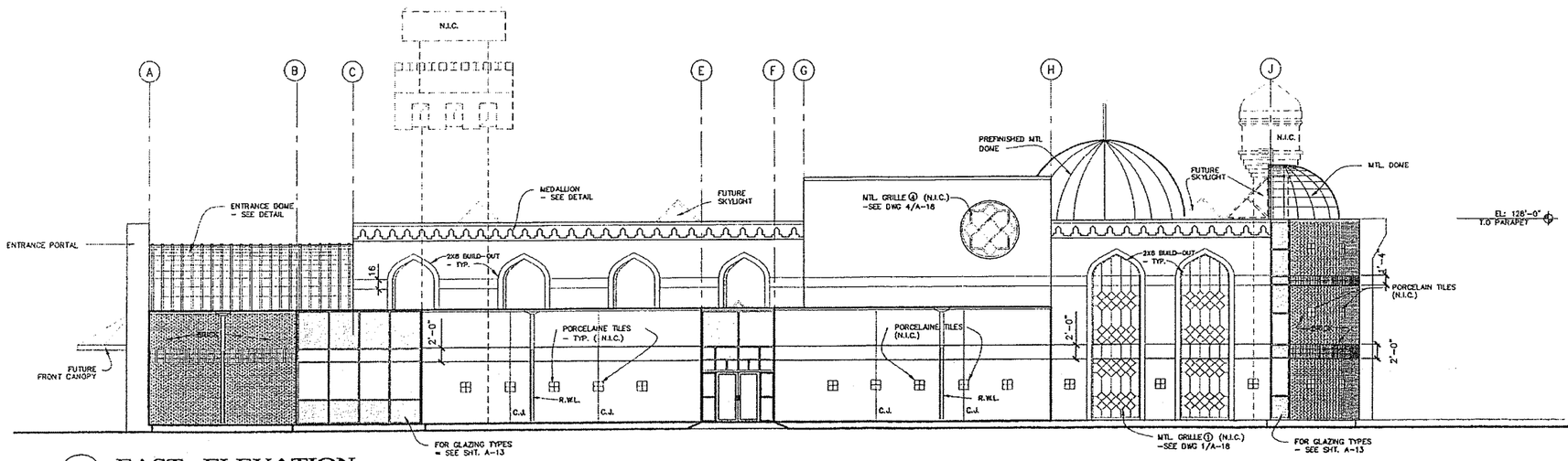
Sheet Title: MEZZANINE FLOOR PLAN

Scales	Date
AS IND	MAY, 2003
File Number	Sheet Number
-	A-3



1 / A-5 **FRONT ELEVATION**

1/8" = 1'-0"



2 / A-5 **EAST ELEVATION**

1/8" = 1'-0"

No.	Description	Date (d/m/y)	Drawn	Checked
3.	REVISED FOR PERMIT	MAY. 14, 04	R.A.	R.A.
2.	DATE OF PLOT	JAN. 16, 04	R.A.	R.A.
1.	DATE OF PLOT	DEC. 08, 03		

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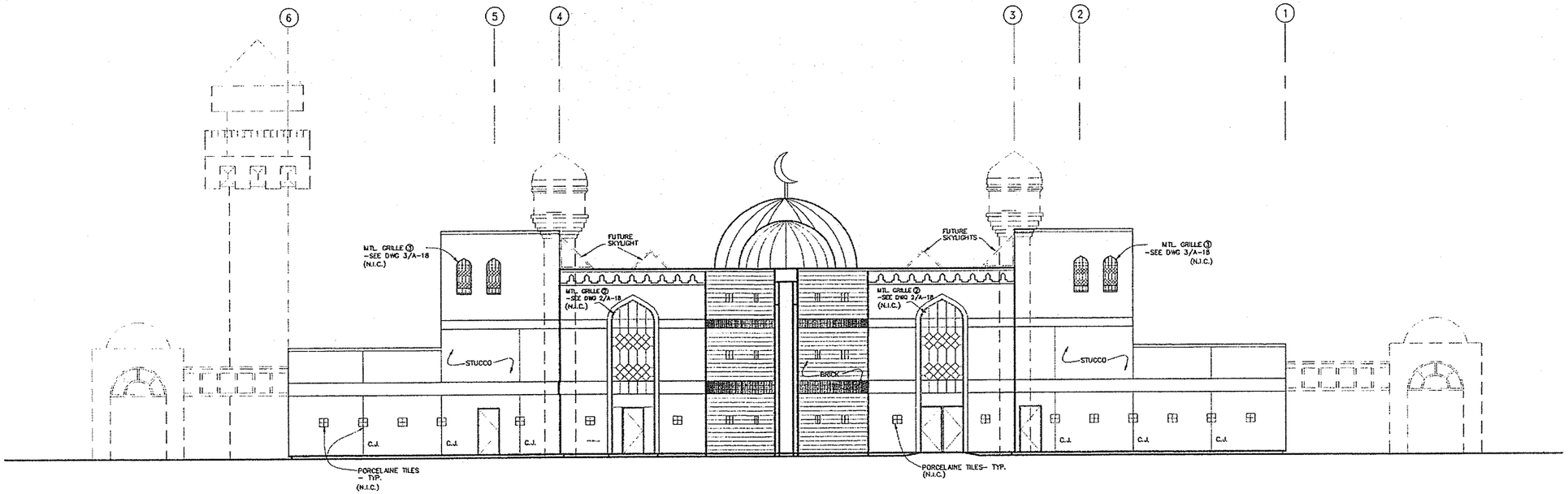
Sheet Title: ELEVATIONS

Scales: AS IND

Date: MAY, 2003

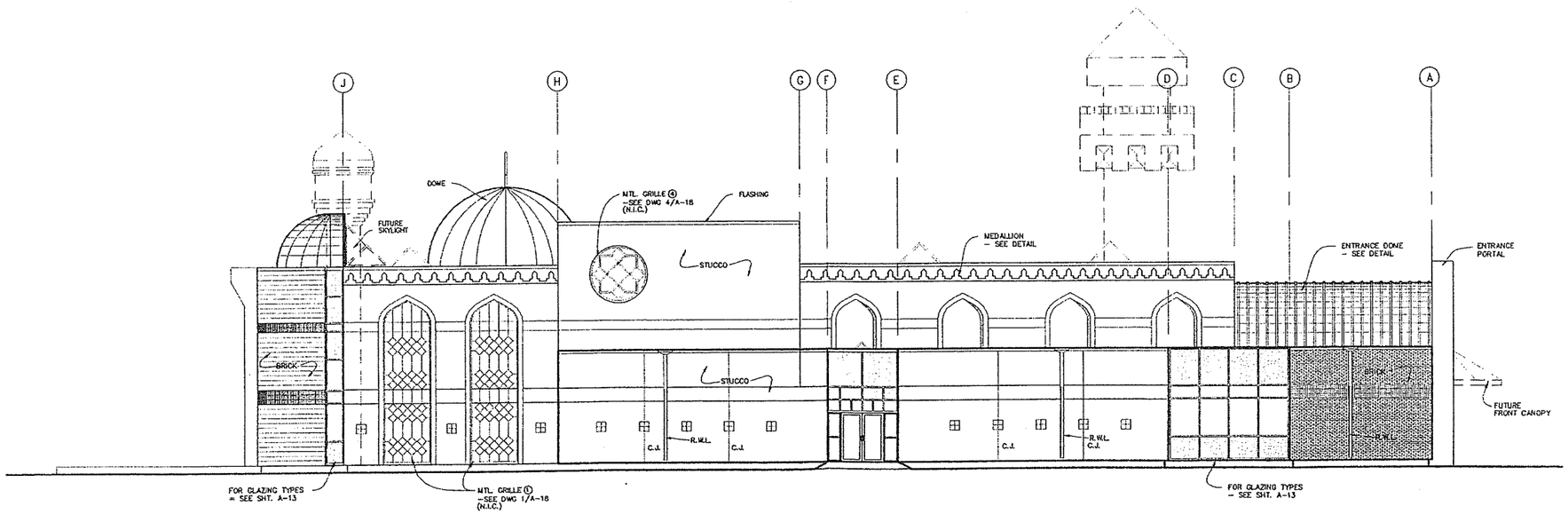
File Number: -

Sheet Number: A-5



1 / A-6 **NORTH ELEVATION**

1/8" = 1'-0"



2 / A-6 **WEST ELEVATION**

1/8" = 1'-0"

No.	Description	Date (d/m/y)	Drawn	Checked
2.	REVISED FOR PRICING	MAY. 14, 04	RA	RA
1.	DATE OF PLOT	DEC. 08, 03		

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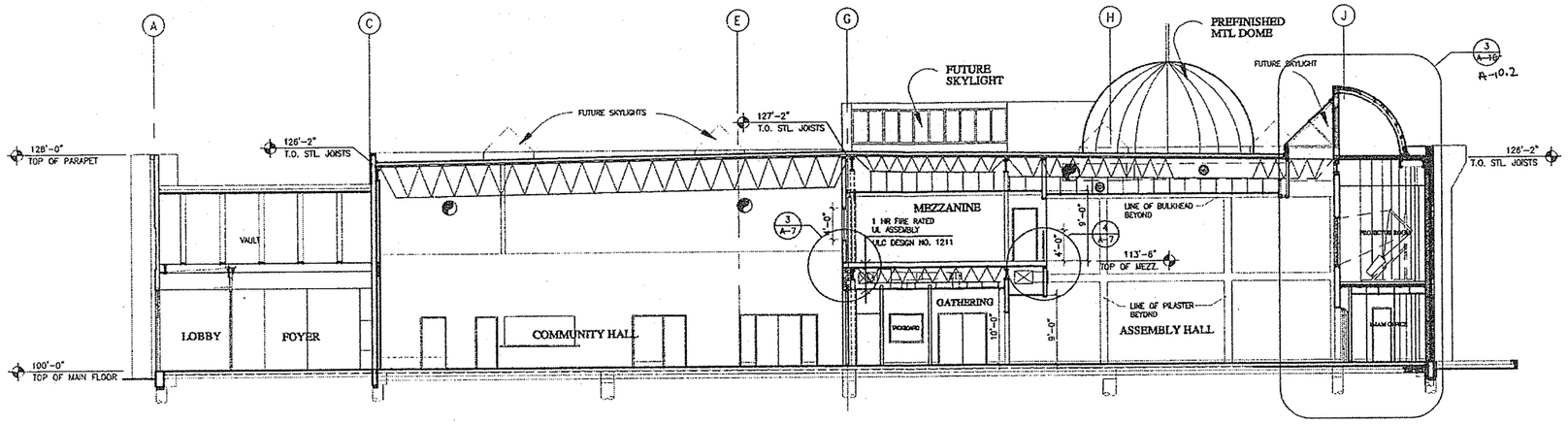
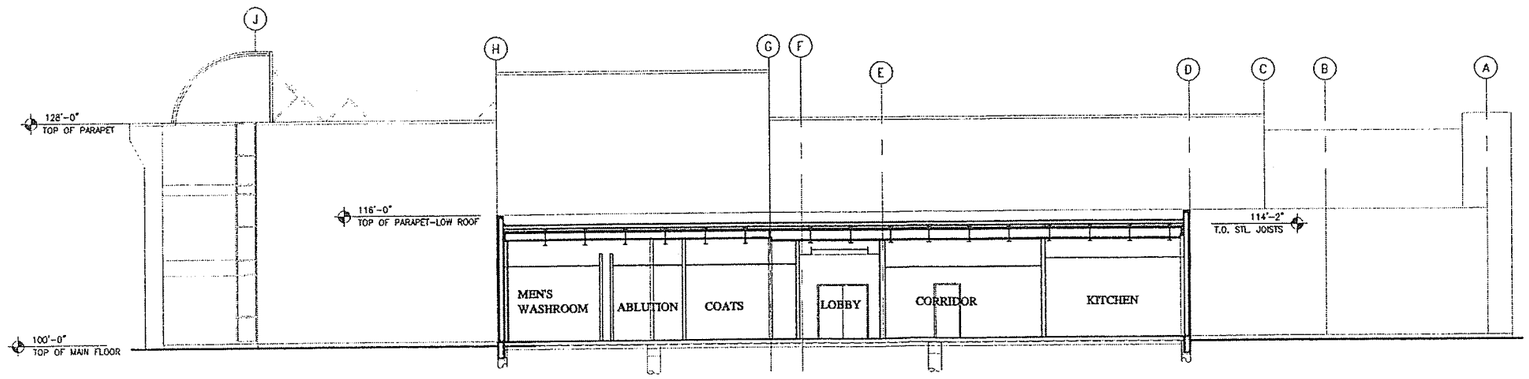
Sheet Title: ELEVATIONS

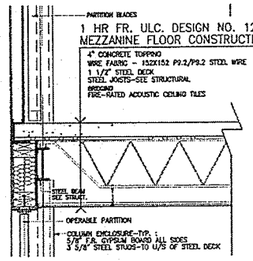
Scales	Date
AS IND	MAY, 2003
File Number: -	Sheet Number: A-6



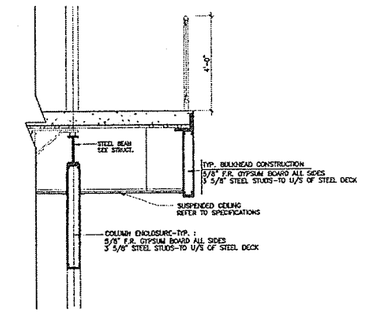
1/A-7 **BUILDING SECTION 1-1**
1/8" = 1'-0"



2/A-7 **BUILDING SECTION 2-2**
1/8" = 1'-0"



3/A-7 **SECTION DETAIL**
SCALE: 3/8" = 1'-0"



4/A-7 **SECTION DETAIL**
SCALE: 3/8" = 1'-0"

No.	Description	Date (d/m/y)	Drawn	Checked
	Revisions/Issuance (Read Up)			
3.	REVISED FOR PRICING	MAY. 14, 04	RA	RA
2.	DATE OF PLOT	JAN. 16, 04	RA	RA
1.	DATE OF PLOT	DEC. 08, 03		

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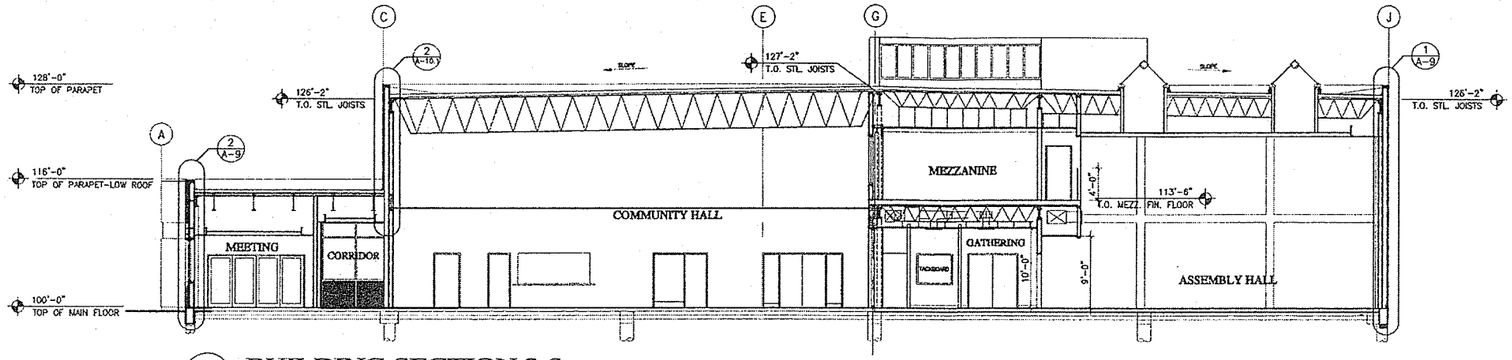
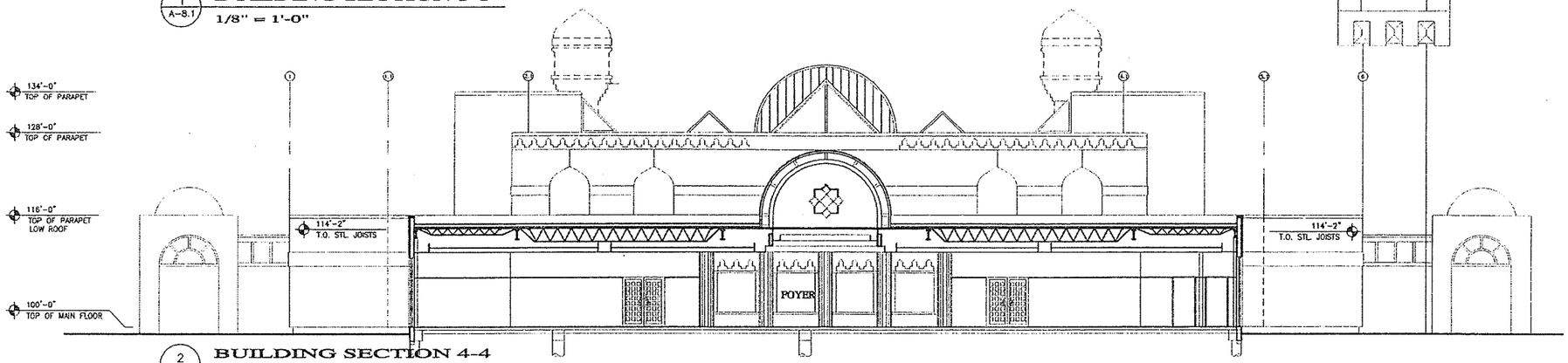
Sheet Title
BUILDING SECTIONS

Scales	Date
1/8"=1'-0"	MAY, 2003
File Number	Sheet Number
-	A-7



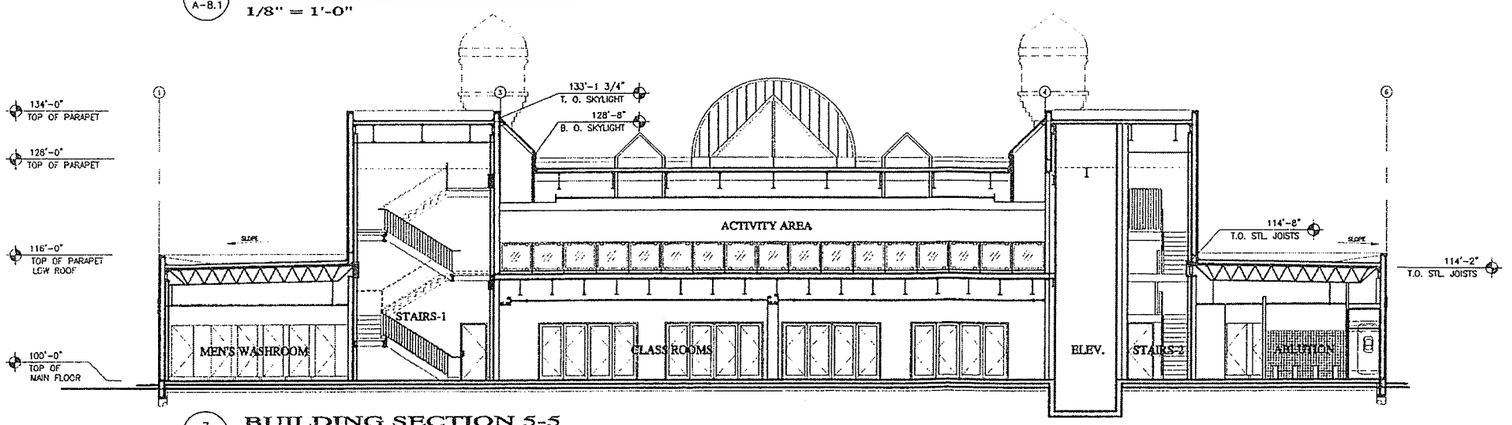
1 / A-8.1 **BUILDING SECTION 3-3**

1/8" = 1'-0"



2 / A-8.1 **BUILDING SECTION 4-4**

1/8" = 1'-0"



3 / A-8.1 **BUILDING SECTION 5-5**

1/8" = 1'-0"

No.	Description	Date (d/m/y)	Drawn	Checked
3.	REVISED FOR PRICING	MAY. 14, 04	RA	RA
2.	DATE OF PLOT	JAN. 16, 04	RA	RA
1.	DATE OF PLOT	DEC. 08, 03		

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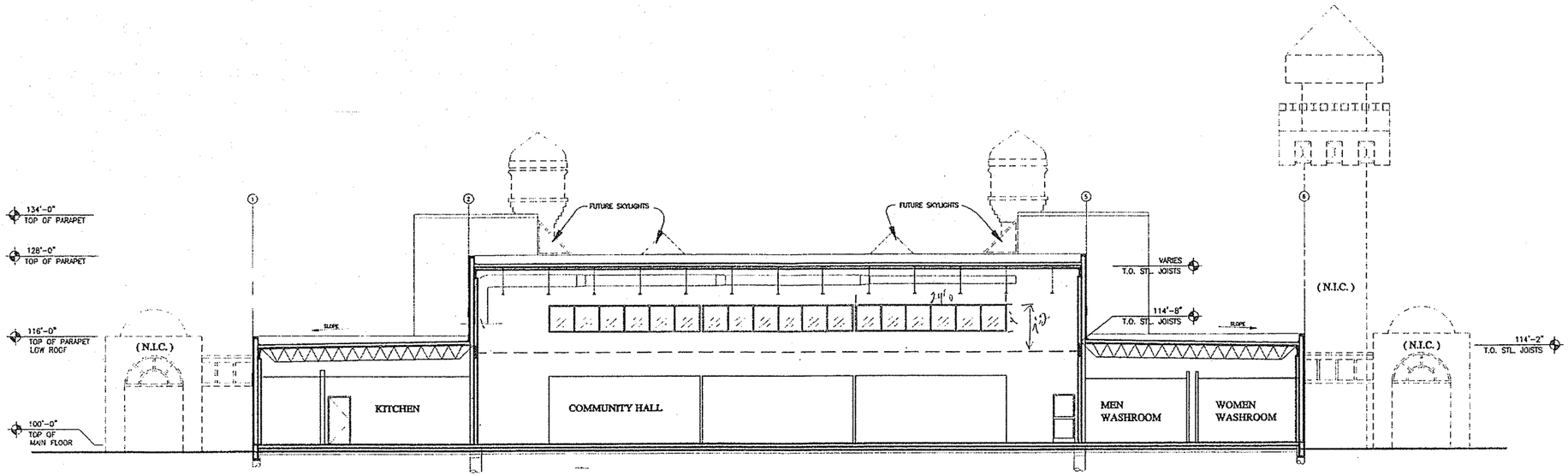
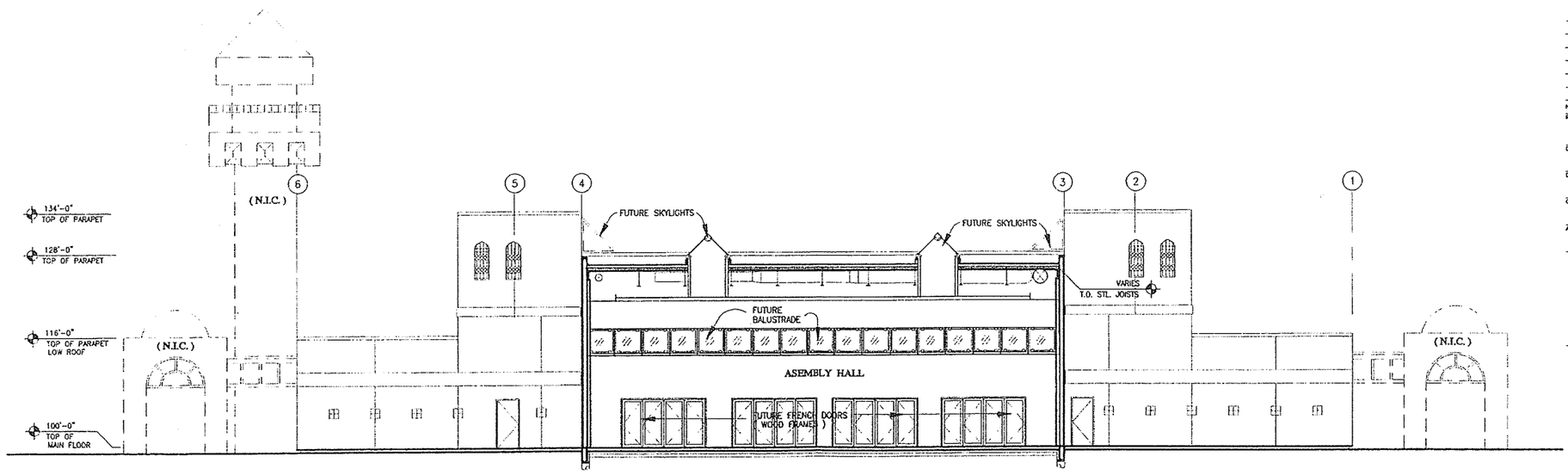
Sheet Title
BUILDING SECTIONS

Scales: 1/8"=1'-0"
Date: MAY, 2003
File Number: -
Sheet Number: A-8.1



1 A-8.2 **BUILDING SECTION 6-6**

1/8" = 1'-0"



2 A-8.2 **BUILDING SECTION 7-7**

1/8" = 1'-0"

No.	Description	Date (d/m/y)	Drawn	Checked
2.	REVISED FOR PERMIT	MAY. 14, 04	RA.	RA.
1.	DATE OF PLOT	JAN. 16, 04	RA.	RA.

Revisions/Issuance (Read Up)

	Initialed By
Designed By	RA
Drawn By	ET
Checked By	
Approved By	

CENTRAL CANADIAN STRUCTURES(1998) LTD.
CONTRACTORS AND ENGINEERS

M.I.A. COMMUNITY CENTER COMPLEX WAVERLY STREET WINNIPEG. MB.

Sheet Title
BUILDING SECTIONS

Scales	Date
1/8"=1'-0"	OCT, 2003
File Number	Sheet Number
-	A-8.2

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