FORM AND FUNCTION OF NORTHEAST OHIO MOSQUES

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FORM AND FUNCTION OF NORTHEAST OHIO MOSQUES

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Thesis

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ABSTRACT

The United States of America is a very diverse social and cultural environment. People from different ethnicities try to integrate into American society. One of the most important expressions of ethnicity is the religious places of worship. The thesis studies the case of mosques architecture in the Northeast American environment. Islam is one of the fastest growing major religions in the world. Muslim immigration started in the last thirty decades and mosques are new features in American society. According to MIT Islamic Architecture Archives, there are three different types of mosques in the United States: Imported, adapted, and innovative forms. The study examines the factors dictating the form and function of Northeast Ohio mosques. In order to get compatible and efficient information about mosques, a qualitative approach of an architectural and a development surveys is employed. It is necessary to personally explore the sites by conducting an inventory of architectural features, obtaining photographs, and interviewing people. Expectations highlight the variation between the mosques in Northeast Ohio regarding traditional reflection in form and function. The most important factors behind this variation are tradition and modernity versus traditional ideology followed by funding, law, and material.

DEDICATION

To my father George, who taught me that the word impossible does not exist.

To my mother Hana, who taught me faith and patience, and reminded me that largest tasks can be achieved if done a step at a time.

ACKNOWLEDGEMENTS

This work would not have been achieved without the steadfast support of my advisor Dr. Linda Barrett who has been abundantly helpful. I would like to thank her for making this research successful. I would like also to thank the rest of my committee, Dr. Allen Noble, Dr. Charles Monroe, Dr. Robert Kent, and Dr. Adil Sharag-el Din for their assistance and insightful criticisms. Special thanks to all who contributed in this research especially people in the Northeast Ohio mosques. Finally, I would like to thank my family and friends, especially my aunt Mary Zogbi, my brothers Maroun and Marc Khachan, and my friend Chika Young-Nwafor who offered me moral support and patient encouragement during this process.

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CHAPTER I

INTRODUCTION

American society constitutes one of the largest, most diverse, and complex social environments in the world. People from different countries, each with their own ethnicities and cultures, continually arrive in the United States, bringing with them new ideas, values, and ways of living. While immigrants typically attempt to integrate into the general population, they often remain attached to many of their traditional customs and beliefs, which may range from language to food to clothing styles and, perhaps most importantly, to religion.

Islam is one of the fastest growing major religions in the world (Haddad, 1998). Significant Muslim immigration to the United States began in the last three decades. Northeast Ohio is one of the regions where there is a notable concentration of Islamic population (Figure 1.1), as it is home to one of the largest concentration of Arab-Islamic immigrants in the United States. Also, Northeast Ohio region presents a noticeable concentration of mosques, religious places of worship for Muslims.

Mosques are new features in American society. According to the Massachusetts Institute of Technology Islamic Architecture Archives, there are three different types of purpose-built mosques in the United States: imported, adapted, and innovative forms. A growing number of mosques are a consequence of this population increase. As a cathedral is revered by Christians, the mosque is the most important expression of Islamic

architecture and provides a place of worship for Muslims, as well as space for social gatherings, education, and community service (Serageldin, 1996).

Many factors dictate how mosques are developed and where they are located. The major factors shaping the form and function of a mosque are the reflection of the historical architectural preference, the law which governs the local environment in which it is built, the members' ideology with respect to modernity versus tradition, the materials available for construction, and the funding available.

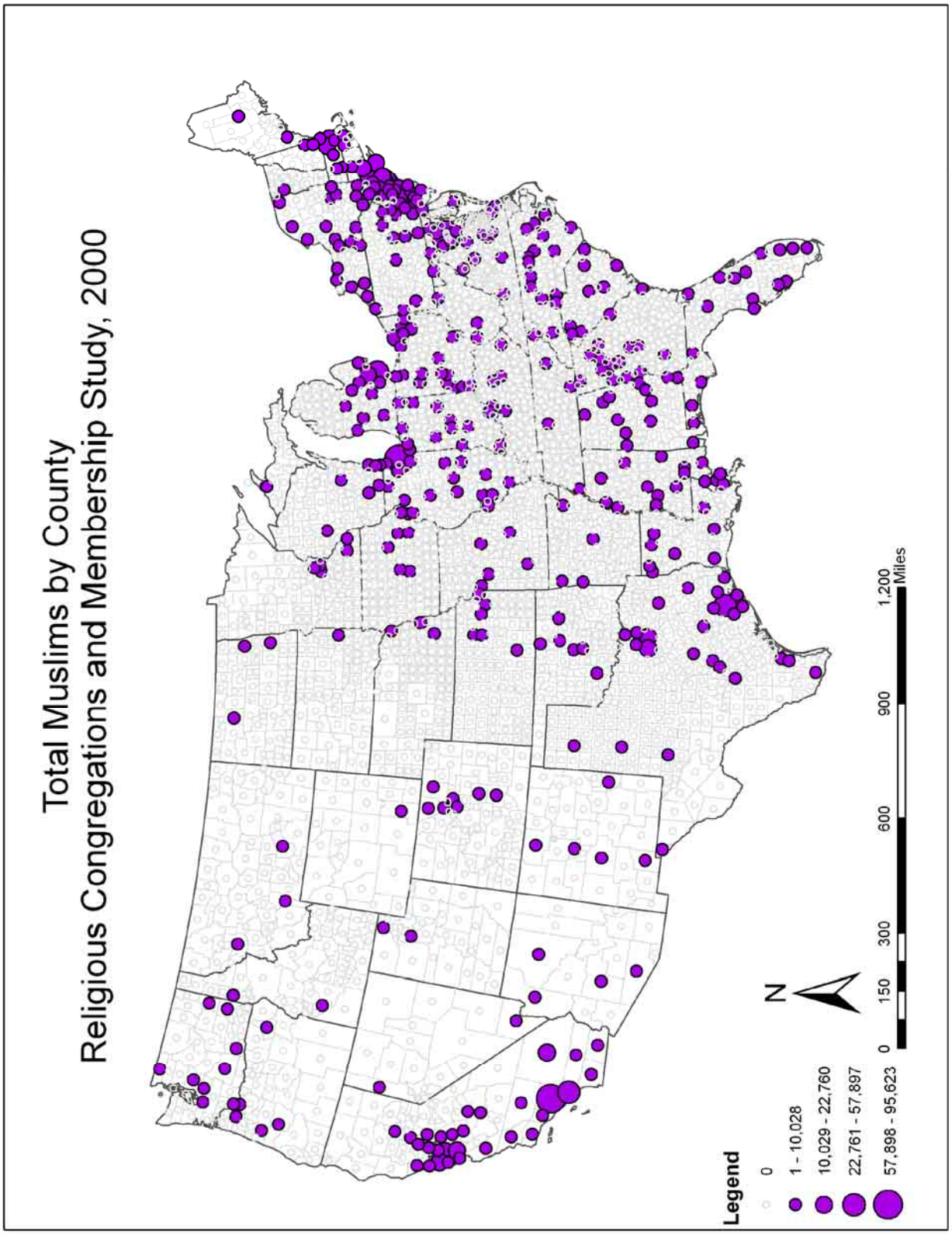

Figure 1.1: Muslim distribution by county
(Data Source:http://www.thearda.com/Archive/Files/Descriptions/RCMSCY.asp)

Three reasons contribute to the need to understand the mosque's form and function in Northeast Ohio in comparison to the traditional mosque. These include the area's growing Islamic population, the resulting proliferation of new mosques in the region, and the misunderstanding of Islam in Western society (Lewis, 2003). Moreover, investigating the mosque's status, integration, transformation or adaptation in a Western culture would be beneficial in terms of approaching the issue of interaction and cultural influence and exchanges between two extremely different worlds.

Traditionally, the mosque serves as the nucleus of the Muslim community as well as the physical center of the city (Al-Azawe, 1998), a role which remains important in Islamic countries today. However, in non-Islamic countries, in particular the United States, there is a noticeable difference in where and how mosques are built as well as how they are utilized (Warner and Wittner, 1998).

In Northeast Ohio, the mosque typically represents a quasi-public facility that serves as a place for worship, social gatherings, and interactions. Mosques also provide education, particularly for Muslim immigrants. Furthermore, community service constitutes a major function of most mosques, often offering help for fellow Muslims. Examining the form and function of the Northeast Ohio mosques in comparison to the traditional mosque model will lead to a better understanding of Islam in a non-Islamic country, especially in how it is expressed in architecture.

This thesis serves to explore the case of mosque architecture in the Northeastern Ohio region of the United States. In particular, it will investigate how mosques in the study area have been purpose-built, or even adapted from existing structures, while

comparing form and function with traditional mosques that have been erected in the Islamic World.

The procedures undertaken to analyze these factors include qualitative analysis such as the compilation of a mosque inventory complete with photographs, interview and narrative data, and architectural drawings. The research seeks to understand the form and function of mosques in Northeast Ohio compared with their traditional counterparts built in countries with an Islamic cachet. In this context, many factors contribute to shaping the typology, design, and role of the mosque in a multicultural, secular, American environment. Among those factors are liturgical elements, law and local environment, materials, funding, and the ideology of modernity versus traditionalism among members. The complexity of the research issue requires the use of multiple research approaches, designs and methods to help understand and explore in more detail how mosques in the Northeast Ohio compare with the form and function of the traditional mosques constructed in the Islamic world.

In this study, the word “mosque” indicates all types of buildings dedicated for Muslims to gather and pray. A mosque is a sacred place, generally consisting of the ten liturgical common elements. In the Western World, and particularly in the United States, most of the mosques constructed became Islamic centers devoted to serve not only as places for worship, but also as gathering spaces for cultural, social, and entertaining purposes. Another terminology for an Islamic place of worship not included in the study is the term *mussallah* also called *zawiya*, which refers to a rented or a temporary room where Muslims gather to pray (Serageldin and Steele, 1996).

The research employs both primary and secondary data to analyze and investigate the research issue. The secondary data includes a review of reports, books, articles, photographs, drawings and other historical evidence that relate to the form and function of the traditional mosques constructed in the Islamic world and mosques built in Northeast Ohio. The primary sources include questionnaire administration, interviews, and field checks and observations.

Using both purposive and convenient sampling approaches, which means to select individuals that they can purposefully inform an understanding of the research problem, the study will select the mosques from three counties in Northeast Ohio: Cuyahoga, Summit, and Portage Counties. These counties contain eighteen mosques of which eight have been selected to explore the research issue.

The primary purpose of this research is to offer an assessment of how sacred Islamic space is located, designed and used in the United States through comparing Northeast Ohio mosques with traditional mosques existing in the Islamic World. Additionally, this research seeks to provide an explanation of the factors which determine form and function of mosques constructed in the United States.

It is expected that the study will increase the knowledge and clarify perceptions in the geographic, planning, and architectural domains. A key goal of this study is to provide people with a deeper understanding of how Islamic sacred spaces have adapted over the years and from an Islamic environment to a world with a Christian cachet. This study also seeks to assist architects, engineers, urban planners and designers in not only envisioning the original form and function of a traditional mosque, but in providing

insight into how sacred space may be physically and functionally reshaped by the mosque placement within religiously pluralistic societies, such as the United States of America.

CHAPTER II

LITERATURE REVIEW

In the American setting, law is secular and culture is diverse. Many value systems abound within shared space. Even among Muslims, there are many different traditions and backgrounds which come together in the formation of new congregations. This literature review explores the form and function of mosques in Northeast Ohio in relation to the traditional mosques found in Islamic nations (Figure 1.1).

This literature review provides a better understanding of the form and function of the mosques in the Islamic world as well as the component elements and the typological forms that determine the facility's outward appearance and interior special distribution. It focuses on the design of the mosque and its function and at the same time explores the role of the mosques within the communities it serves. It also includes the typologies of the mosques existing in the United States coupled with factors dictating their form and functions such as the reflection of liturgical elements, funding, American zoning codes, ideological debate between modernity and traditionalism, and construction materials.

In this study, the word "form" indicates the physical characteristics of the mosque. It principally refers to the design of the building and its featured component elements as well as their articulation and organization. The word "form" also includes the distribution and the function of each element and each interior space. The form of the

mosque is often related to the concept of a “hidden architecture” which means the tendency of adapting functions to predetermined forms (Michell, 2002).

Mosques in the Islamic World

In the Islamic World, most of the mosques constitute the nucleus of the city, present all traditional liturgical elements, and at the same time have religious, social, political, and judicial functions.

Mosque Form / Traditional Elements –

The first mosque was built in Medina in 622 and was the home of the Prophet Muhammad. The building consisted of a courtyard and a sheltered area for worshipers, as well as living space. While some mosques could be as simple as four perpendicular lines drawn in sand with one side facing the holy city of Mecca, most were based on the form of the very first mosque and eventually evolved to embrace a set of common elements (Badran, 2005).

Typically, most observers identify ten common architectural elements in a mosque (Macaulay, 2008; Figure 2.1). The most important element to consider is the sheltered prayer-hall or sanctuary (*haram).* The *qibla*, one of the prayer-hall walls, is always constructed to face Mecca. The *mihrab*, a location representing where Muhammad had stood at prayer within the *haram*, is a recess in the *qibla* wall. The design of the *mihrab* is that of a Roman semicircular niche. The *minbar,* or pulpit, is traditionally located to the right of the *mihrab* when viewed from the entrance to the *haram*. It typically consists of a staircase leading to a small platform where the imam

would stand to deliver the *khutba* (Oration). The *dikka* is a platform positioned in line with the *mihrab*, which is used by respondents to repeat the ritual postures of the imam to the congregation. Nearby the *dikka* is the usual placement of the *kursi*, a reading desk on which the *Qur'an* is placed.

Another key element is the courtyard, an uncovered space often surrounded by columns or arcades which serves as a place for adherents to gather and prepare. The ablution fountain, generally located at the center of the courtyard, offers a place for attendees to wash before prayer, a practice which is required by the *Qur'an*.

Perhaps the most well-known and visible element of all is the minaret, a tower that serves as a landmark for the mosque as well as a place from which Muslims are called to prayer. The final element to consider is the entrance portal, a prominent architectural feature of mosques representing a gateway between the life's common busy affairs and the calm of sacred space (Fig. 2.1).

Repeated geometric patterns are widely used in the design of a mosque. The modular system of simple geometric forms such as squares, rectangles, and circles was developed to express symbolism in the architecture of the mosque. For instance, repetitious designs represent the Islamic value of constantly repeated prayers (Ettinghausen, Grabar, and Jenkins-Madina, 2001).

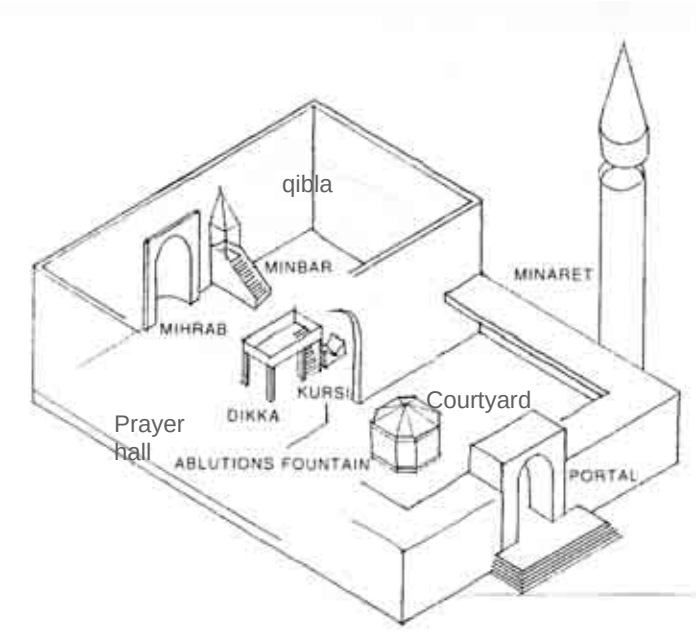

Figure 2.1: The standard components of the mosque (Source: Frishman and Khan, 2002)

Traditional Typologies –

A typology is a systematic organization of elements into types based upon shared attributes. There are six traditional typologies which describe the form and function of mosques. These typologies are known as the Arabian or hypostyle, Turkish or central-dome, Iranian or *Iwan*, Indian, Chinese and Southeast Asia types. The most popular mosque types in the Islamic World are the hypostyle mosque, the central-dome mosque, and the *Iwan* type mosque. The other three typological forms are derived essentially from the three most popular types (Rasdi, 2001).

Hypostyle Mosque –

The hypostyle mosque is commonly found in the Arabian Peninsula, extreme southwestern Europe and North African regions. The word hypostyle means “under pillars” and the design allows for the construction of large spaces (Figure 2.2). The hypostyle mosque was introduced by the Umayyads in Syrian and later adopted by the

Abbasid dynasty that ruled Persia and modern day Iraq. The hypostyle mosque features a large courtyard and a flat-roofed sanctuary supported by regularly spaced columns or arcades. It constitutes a flexible architectural unit for constantly growing communities (Flood, 2001).

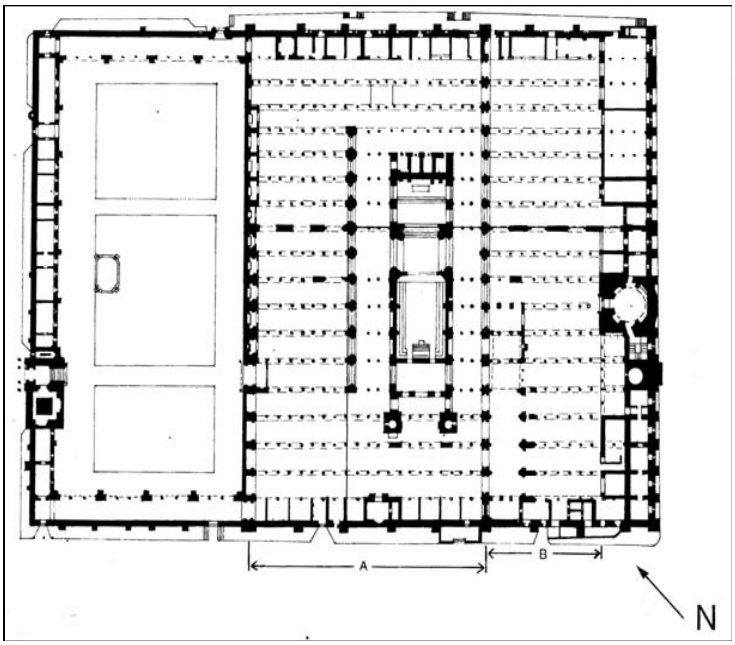

Figure 2.2: Hypostyle prayer hall of Cordoba Mosque, Spain (Source: Khan, 2004)

Central-Dome Mosque –

The central-dome typology was introduced by the Ottomans in the fifteenth century (Kuran, 1968). It is constituted by a hall dedicated for worship and crowned with a central dome (Figure 2.3). The central dome is often surrounded by smaller and lower semi-domes. This typology of mosque provides an ambulatory and more illuminated space. Perhaps the best known example of this typology is the Dome of the Rock in Jerusalem, Israel. The Selimye Mosque in Edirne, Turkey constitutes an example of the central-dome mosque with transformation and expansion of the number of minarets (Badran, 2005; Figure 2.3).

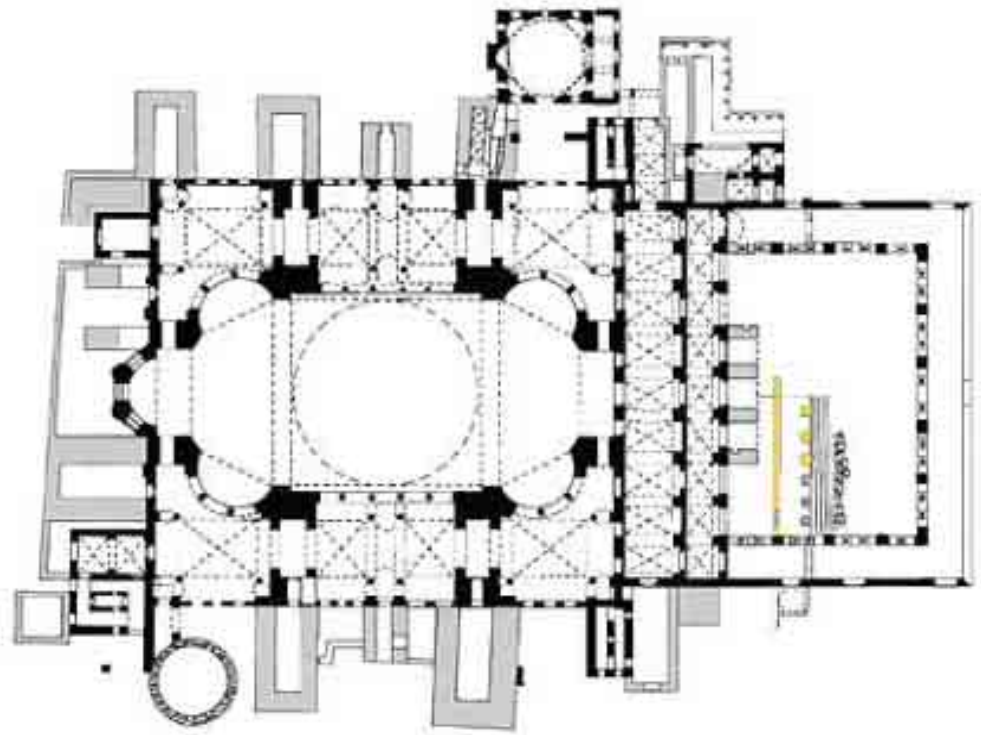

Figure 2.3: Hagia Sophia.Istanbul the imperial Byzantine church which was converted to a mosque, Istanbul, Turkey (Source: Khan, 2004)

Figure 2.4: Sultan Ahmed (Blue) Mosque, Istanbul, Turkey (Source: Waldman, 1988)

Iwan Mosque –

The *iwan* typology was developed during the medieval period. It consists of a courtyard serving as the prayer hall and surrounded by four *iwans* where one of them comprised the portal (Figure 2.5). The *iwan* opposite of the portal contains the *qibla* wall.

The typology of the *iwans* was borrowed from basic Iranian architecture and is characterized by vaulted ceilings with one wall open (Blair and Bloom, 1994).

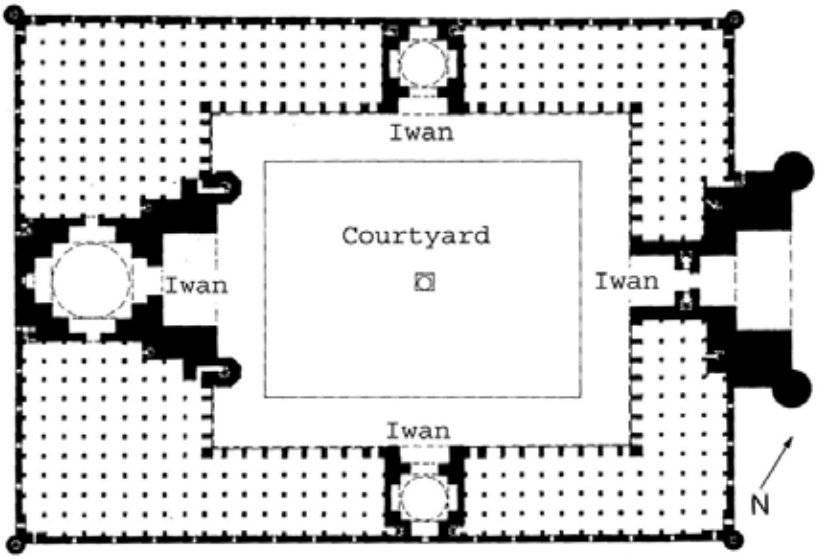

Figure 2.5: Plan of the Bibi Khanim Mosque, Iran (Source: Khan, 2004)

Indian Mosque –

The Indian mosque typology was designed after that of the *iwan* model with immense gateways (Figure 2.6 and 2.7). However, the Indian mosque typology is more distinctive by its large courtyard space and its preference to spherical domes and arches.


Figure 2.6: Badshahi Mosque, Pakistan.
(Source: Frishman and Khan, 2002, p. 168)

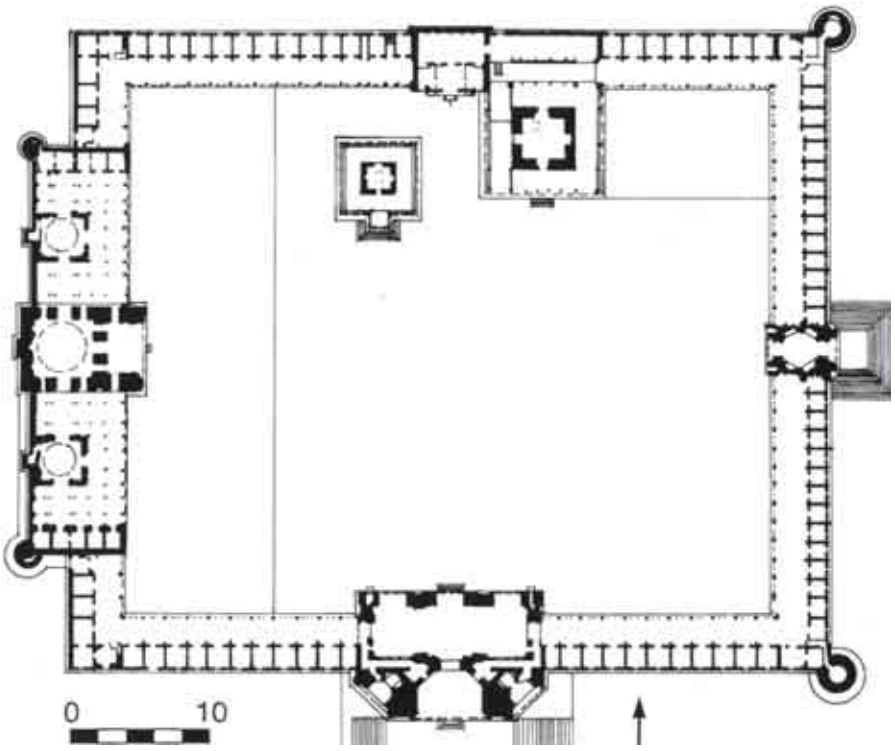

Figure 2.7: Plan of the Friday Mosque, Fatehpur Sikri, India
(Source: Frishman and Khan, 2002, p. 169)

Chinese Mosque –

The Chinese mosque typology revealed a great influence of the Chinese house, temple, and palace architecture. The mosque consists of a series of courtyards surrounded by timber structured walls. The dome of this mosque is covered by a hexagonal Chinese typology timber roof (Figure 2.8).

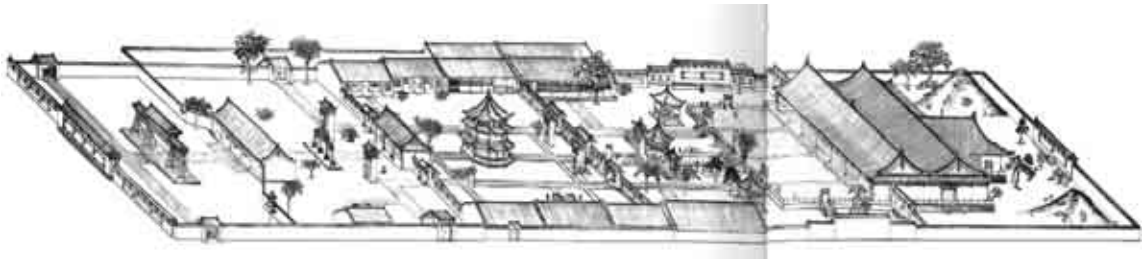

Figure 2.8: The Great Mosque, Xian, China (Source: Frishman, 2002, p. 223)

Southeast Asia Mosque –

The Southeast Asian mosque typology features a tower within an enclosed area. The spatial characteristics of the mosque summarized master-columns of four or six columns indicating a vertical axiality without interior subdivisions (Figure 2.9 and 2.10). Southeast Asian mosques generally stand without walls or fences, nor do they possess minarets (Blair and Bloom, 1994).

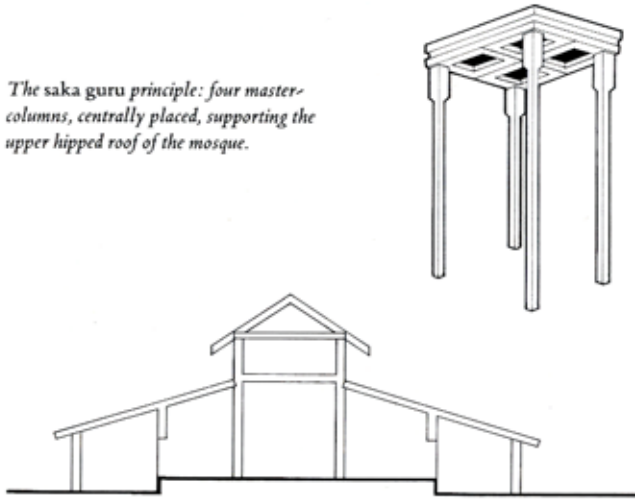

Figure 2.9: The four master-columns supporting the upper roof (Source: Frishman and Khan, 2002, p. 233).

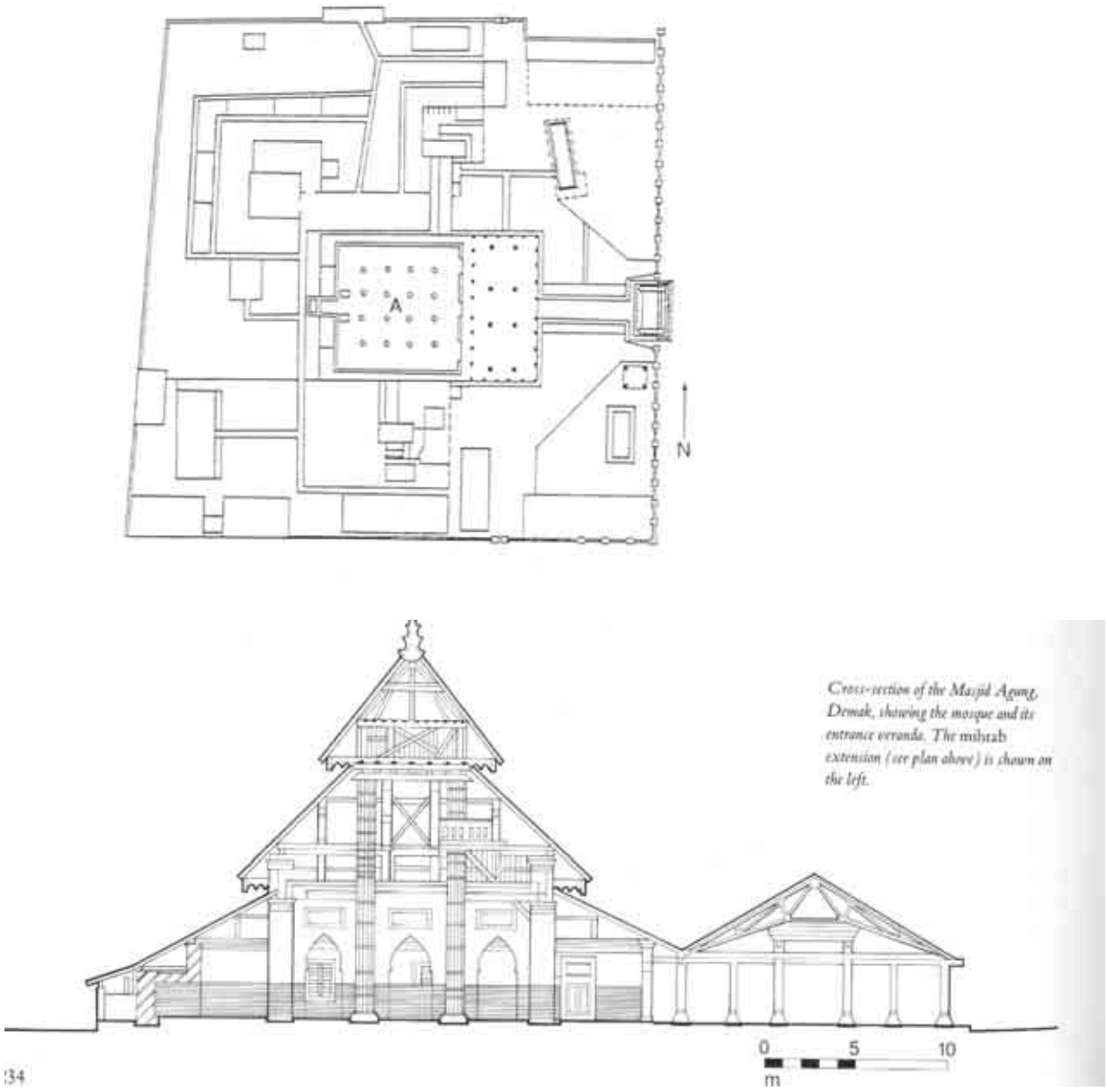

Figure 2.10: Masjid Agung, China (Source: The Mosque, Frishman and Khan, 2002, p. 234).

Mosque Function –

The function of the mosque goes beyond the organization and the articulation of the interior spaces. It indicates the role of the mosque within the overall societal fabric. Thus, in order to address the function of the mosque, it is necessary to study its role within a complete societal structure (Serageldin and Steele, 1996).

Islam, a monotheistic religion, originated in the Arabian Peninsula in 610 A.D. (Sopher, 1967) when its adherents believe the Angel Gabriel appeared to the Prophet Mohamed. At this time most people in the region were polytheistic and practiced paganism. The Prophet received the divine messages and started to preach to the people of Mecca, urging them to believe in one indivisible God and in the *Qur'an*. The *Qur'an*, an inspired religious text, constitutes a source of guidance that formulates traditional Islamic laws according to which worshipers should live (Piotovsky, 2000).

A mosque is a place dedicated for Muslims to gather and worship. The prayer hall or sanctuary, also called the *haram,* forms the space where congregants pray five times a day in rows facing Mecca. Additionally, a mosque holds the main prayer service for Muslims which is the Friday prayer, *salat ul-jumuah* (Frishman and Khan, 2002). The *sahn* or the mosque's courtyard is an important place for public gatherings (Harvey and Henning, 1987).

One of the primary functions of the mosque is community service (Qureshi, 1989). This role is evident in the traditional hosting of meals in the mosque during Ramadan as well as other religious events that reach out to the community. As charity, or *zakat,* is one of the five pillars of Islam, mosques are also supposed to help the poor

Muslims of their communities. Mosques, center of Muslims communities are used to give and collect *zakat*, especially prior to Eid ul-Fitr.

Another role played by the mosque is embodying socio-political activities (Rasdi, 2001). Traditionally, mosques formed the nucleus of the Muslim community and were located at the center of the city. Congregation, especially men, came to gather and pray, as well as to engage in politics. As a result, mosques also served as space used to promote civic participation, protests, and to sign petitions. For instance, *Al-Abbas* mosque, in Asnaf, Yemen, served not only as a place to pray but also as a meeting place to resolve problems and conflicts among tribes (Tsien et al., 2004).

Additionally, mosques have a major educational role to play. Some mosques provide Islamic schools. Traditionally, *Madrassas* are separate buildings that have an important educational role helping Muslims to study and to become *imams*, religious prayer leaders, analogous to Christian priests and ministers (Pacione, 2005).

Mosques in the United States

In the United States, mosques are proliferating due to the growing numbers of Islamic population and immigration. The form and function of the mosques are dictated by many factors such as the reflection of traditional elements, funding, traditional versus modern ideologies, planning laws, and materials.

Islamic Immigration to the United States—

The first substantial immigration of Muslims to the United States occurred between 1875 and 1925 (Nimer, 2002). Most arrived from the Middle East in order to

escape conscription into the Ottoman army. Many worked as traders, mink ranchers, and shopkeepers, often earning money in order to support their families back home. At the end of World War I and after the demise of the Ottoman Empire, Muslim immigration continued from Lebanon, Syria, Jordan, and Palestine. Most people made the voyage for political and economic reasons (Karpat, 2002).

Between 1947 and 1969 the majority of Muslim immigrants were from present-day Serbia-Montenegro, Albania, India, Pakistan, and the former Soviet Union (Nimer, 2002). Contributing to increased immigration numbers in 1965 was President Lyndon Johnson's sponsorship of an immigration bill in that year which repealed the longstanding system of quotas by national origin and opened up opportunities for many Muslims to immigrate to the United States (Koszegi and Gordon, 1992).

In recent years, Muslims have been attracted to the United States because of opportunities in higher education, business, as well as to flee political and economic situations, particularly in the Middle East (Alsayyad and Castells, 2002). As Arab-Islamic immigration to the United States expanded in the last 30 years, rapid growth in the number of mosques has occurred. Approximately 3000 Islamic centers, mosques, and prayer locations have been established in the United States and nearly 87 percent had been founded after 1970 (Wuthnow, 2005).

Mosque Typologies in the United States—

Students and faculty in the Department of Architecture at the Massachusetts Institute of Technology (MIT) have studied purpose-built mosque form and function in the USA and have hypothesized three approaches to the design of the mosques existing in

the United States: the imported, the adapted, and the innovative typologies (Khalidi, 2001).

The imported form is exemplified when people, especially architects, apply the same designs and forms existing in their native countries of origin to new mosques erected in a culturally different society. The Toledo Mosque located in Ohio provides an example of the imported form, as it is modeled after the central dome typology geodesic mosque, which is known for its massive dome (Figure 2.11).

Figure 2.11: Islamic Center of Greater Toledo, Ohio (Eck, 2006)

The adapted form corresponds to an amalgamation of American architectural elements and a new expression along with interpretation of the traditional mosque form and function. The Islamic Cultural Center in New York City constitutes a tangible example of such a typology.

The innovative mosque architecture type is demonstrated when architects create new concepts, forms, and ideas to build new spaces. Under such categories, mosques become places of worship as well as embodying many other functions, such as when a multi-functional hall, library, recreational center, or school is added to the center. The Islamic Society of North America, headquartered in Plainfield, Indiana provides a solid

example. The mosque does not contain any representations of the traditional architecture. Instead, it reflects a new and modern concept of mosque design personified in the combination of cubical brick forms (Fig. 2.12).

Figure 2.12: Example of innovative design: Islamic Society of North America, Headquarters. Plainfield, Indiana (Khalidi, 2006, 27)

Five Factors Controlling Mosque Design and Construction in The United States

The design and the function of mosques in Northeast Ohio are dependent upon five factors, the reflection of common traditional liturgical elements, funding, planning laws, traditional versus modern ideologies and materials.

Tradition

Tradition is a prominent factor in dictating mosque form and function. It represents the cultural continuity of social attitudes, customs and ethnic identities. The importance of history's role in a particular mosque's design is reflected in the existence and prominence of the ten common liturgical elements. A second measure of how history is valued in the construction of a mosque is its resemblance to a certain traditional typology (Warner and Wittner, 1998).

In the Western World, while constructing a mosque, some Muslim communities have insisted upon incorporating the clichés of a dome and a minaret. Architects of such mosques would think that adding a dome or a minaret or any of the prominent liturgical and exterior elements are enough to transform any structure to a mosque. This was the case at the University of Southern California, where a growing population of Muslim students requested that a mosque be built near their campus. The architect assigned to construct the religious facility converted an existing concrete building primarily with the installation of a dome and minaret (Serageldin and Steele, 1996).

Regarding the typologies of mosques in Western society, many Muslim communities embrace the format of the traditional mosque. For instance, the construction of the New Mosque and Islamic Cultural Center in Rome was based on the concept of the square hypostyle typology with a dome and an exterior courtyard. Moreover, The Islamic Center in Washington DC constitutes a copy of the hypostyle mosques built in the Middle East (Serageldin and Steele, 1996).

Funding

Another factor contributing to the form and function of mosques is funding. The financing of any project for a congregation is an indicator of that community's prosperity (Rapoport, 1969). As a result, the more affluent communities tend to generate the larger and more complex religious facilities, while poorer populations may have to settle for smaller and less convenient spaces. For the traditional mosque, particularly those built in the Middle East; the availability of funding is ample as Islamic theocracy generally supports the erection of new mosques. In the American context, however, the sources of

funding must arrive from avenues other than government. Instead, money for mosque construction often comes from fundraising activities, expanded networking between mosques, personal financial sources of the congregation, and even foreign governments or states (Avcioglu, 2007). Once again, the Islamic Cultural Center in Manhattan, New York, provides another prime example in the fact that it was the State of Kuwait which funded the facility's initial construction (Khalidi, 2001); though later its own local members footed the $150,000 bill for a classic minaret. Also, the construction of the Islamic Center in Washington DC, which cost roughly $3 million, was financially supported by the governments of Muslim countries, including Saudi Arabia and Kuwait with some contributions of Muslim and Christian communities in America (Serageldin and Steele, 1996).

Moreover, financial help may sometimes come from the Western governments themselves for many reasons such as the case of many mosques in Europe (Avcioglu, 2007). One of the motivations behind that could be to encourage dialogue between Islam and the Western World. For instance, to build the Rome Mosque in 1975, the city council of Rome donated a 30,000 square meter building site in order to erect the new construction (Serageldin and Steele, 1996).

Planning Laws

Planning law and regulation is another factor in the form and function of mosques. Under traditional Islamic law, mosques are to constitute the physical center of the community as well as the core of the social and political community. Zoning codes and land use regulations, however, have critical roles in dictating the form and function

of a mosque in the United States, as they do with any structure. Such influence is evident in the prohibition of the presence of traditional elements, such as minarets that exceed height restrictions (Eck, 2006). Coupled with noise regulations, some minarets may completely lose their role in publicly calling worshipers for prayers. Moreover, zoning regulations may affect the allocation of space and selection of materials of a building. Cost-prohibitive parking spaces may be required for such quasi-public buildings, or major infrastructural items such as sewers may not even exist to serve the functions of a mosque (Gorman, 2007). Though uncommon, other land use regulations ban the construction of religious buildings altogether in certain districts (Gorman, 2007).

Additionally, mosques face competition for space in the Western World. With land use regulations that do not favor one particular religious development over another, mosques must be built into communities rather than automatically being placed at the urban center. As a result, the placement of mosques is dependent upon zoning districts and funding which can purchase the desired land, which is often only available to the buyer with the highest offer. Furthermore, because zoning has the ability to dictate what types of uses transpire; it may dramatically affect the value of land. For instance, prominent Massachusetts Avenue site of The Islamic Center in Washington DC, which was flanked by two large parks, came at a very high financial cost because of competition with a myriad of businesses and organizations that also sought the property (Serageldin and Steele, 1996).

Traditional versus Modern Ideologies

The way in which today's Muslims wish their new mosques to appear raises the ideological issue of modern versus traditional design. The older mosques in the Islamic countries are arguably traditional. Conflicts regarding modern and traditional design concepts among Muslims arose almost as soon as Islam expanded to the Western World.

Understanding the cultural attitudes of all people within the area in question is just as important as analyzing a mosque's financial and legal attributes. Traditional mosques exist in predominantly Islamic environments where the religious ideology is ingrained into the every-day life of all citizens, thus the dilemma of religious and cultural diversity is nearly non-existent. In the American setting, however, law is secular and culture is diverse. Many value systems abound in shared space. Even among Muslims, there are many different traditions and backgrounds which come together in the formation of new congregations (Haddad and Smith, 1994). In the construction of new mosques, the issue of physical form and function easily initiates debate within such communities. A common point of confrontation in Muslim congregations occurs when one group or more wishes to represent the traditional mosque designs from their home countries (Frishman and Khan, 2002).

In the American context, disagreements within Islamic communities are often manifested in debates about the physical forms and functions of mosques (Waugh, Abu-Laban and Qureshi, 1983). In such an instance, part of the Muslim community may insist on maintaining continuity in tradition and reproduction of conventional elements, design, and spatial distribution within their new mosque. However, other members, including architects, will search for a "modernist" building knitted in its surrounding context of the

secular community. The Islamic Cultural Center (ICC) of Manhattan, New York is a perfect example of such debate and confrontation (Dodds and Grazda (2002). The conflict occurred between two groups of committee members, the prominent members of the Muslim community in New York, and the architectural committee. The first committee wanted to reproduce the exact hypostyle typology of a traditional mosque including a dome and a minaret. Conversely, the latter sought to approach new form and function in a modern mosque and refused to design or build a minaret. In order to achieve their purpose, the wealthier traditionalist Muslims funded another group of architects to create the desired design (Khalidi, 2001). Such debates also take place in very diverse, large, social, ethnic and cultural groups attempting to create a collective identity.

Materials

The architecture for mosques is highly dependent upon the availability and costs of materials as well as the preference of those leading mosque construction projects. A thousand years ago, for example, mosques were often built out of canvas, stone, brick, wood, tile and concrete. The Great Mosque of Homs in Syria was built of striped masonry and paving, which later influenced the Ottoman architecture in Turkey (Michell, 2002). The Yaama, Niger, mosque is an example of mud-brick construction (Sharp, 1990). Additionally, the Jondishapur University mosque in Bangladesh was built of brick (Frishman and Khan, 2002). However, the parliament mosque in Ankara, Turkey, was more progressive as mixed concrete and glass were used in its construction (Frishman and Khan, 2002). In the Said Naum mosque of Jakarta, Indonesia, a new concrete form was made possible due to the development of new materials not used before in the region.

Thus, the predominant material of the land occupied by the Muslims affected the design of the mosques (Frishman and Khan, 2002).

Aside from available materials, there were also many building techniques used to erect traditional mosques that developed over time. For instance, masonry techniques entailed the use of specialists to craft and place shaped stones. Brickwork technique also utilized craftsmen and involved specialists ranging from brickmaker, bricklayer, to brickcutter. Moreover, clay walling, or earth walling without the use of brick, remains one of the surviving techniques in the Islamic world. Additionally, there were specific techniques and types of construction for some architectural elements such as vaults, domes, and minarets (Michell 2002). However, some studies argue that materials and building techniques are considered as modifying factors and as facilitators more than as determinants to a building's form and function (Rapoport, 1969).

CHAPTER III

METHODOLOGY

This research project consists of conducting interviews and surveys with key informants to answer questions regarding the location of mosques as well as typology, developments, and community composition. The study employs multiple approaches to aid in answering the research issues. Notably, the study utilizes extensive qualitative and some minor quantitative approaches.

Qualitative Analysis

As part of this project, a qualitative analysis is developed to explore the data captured during the research phases of this project. In general, a qualitative analysis assigns a theoretical value based upon known data to specific attributes that are otherwise immeasurable. For the purposes of this study, the qualitative analysis approach considers four methods in assigning values: direct observation, independent interviews, participation in the setting, and documentation and literature. This qualitative method allows data to be categorized into patterns. Common and frequent patterns or themes may reveal the importance of a specific factor on influencing the study subject, in this case the form and function of a mosque (Creswell, 2007).

The data consist of surveys (see appendices B and C), interviews, and observations taken from eight sample mosques located in the study area of Northeast

Ohio. Additional data procured to execute the analysis include a review of existing literature as well as exploration of studies, findings, interviews, architectural drawings, and pictures.

Reliability and Validity

The study of the mosque's form and function as well as the factors dictating them, tradition, funding, traditional versus modern ideologies, and materials, require data acquired through field checks, interviews, photographs, inventories and architectural drawings. In addition, literature resources and other documentation are essential in understanding mosque form and function.

In order to avoid biases and errors, a pretest was conducted for one mosque excluded from the sample mosques. There are two types of questionnaires, an observational survey (Appendix B) and a semi-structured questionnaire (Appendix C), used to obtain the needed information about selected mosques. These questionnaires were conducted for one unselected mosque in order to test the validity and the comprehensiveness of the questions.

Sample Selection

The study area covers Cuyahoga, Summit, and Portage Counties of Northeast Ohio (Figure 3.1). The study area was chosen for its concentration of mosques (Figure 3.2) and substantial Muslim immigration. While the study area includes eighteen mosques ranging in date of founding from 1937 to the present, the study will focus specifically on the eight mosques (Table 3.1).

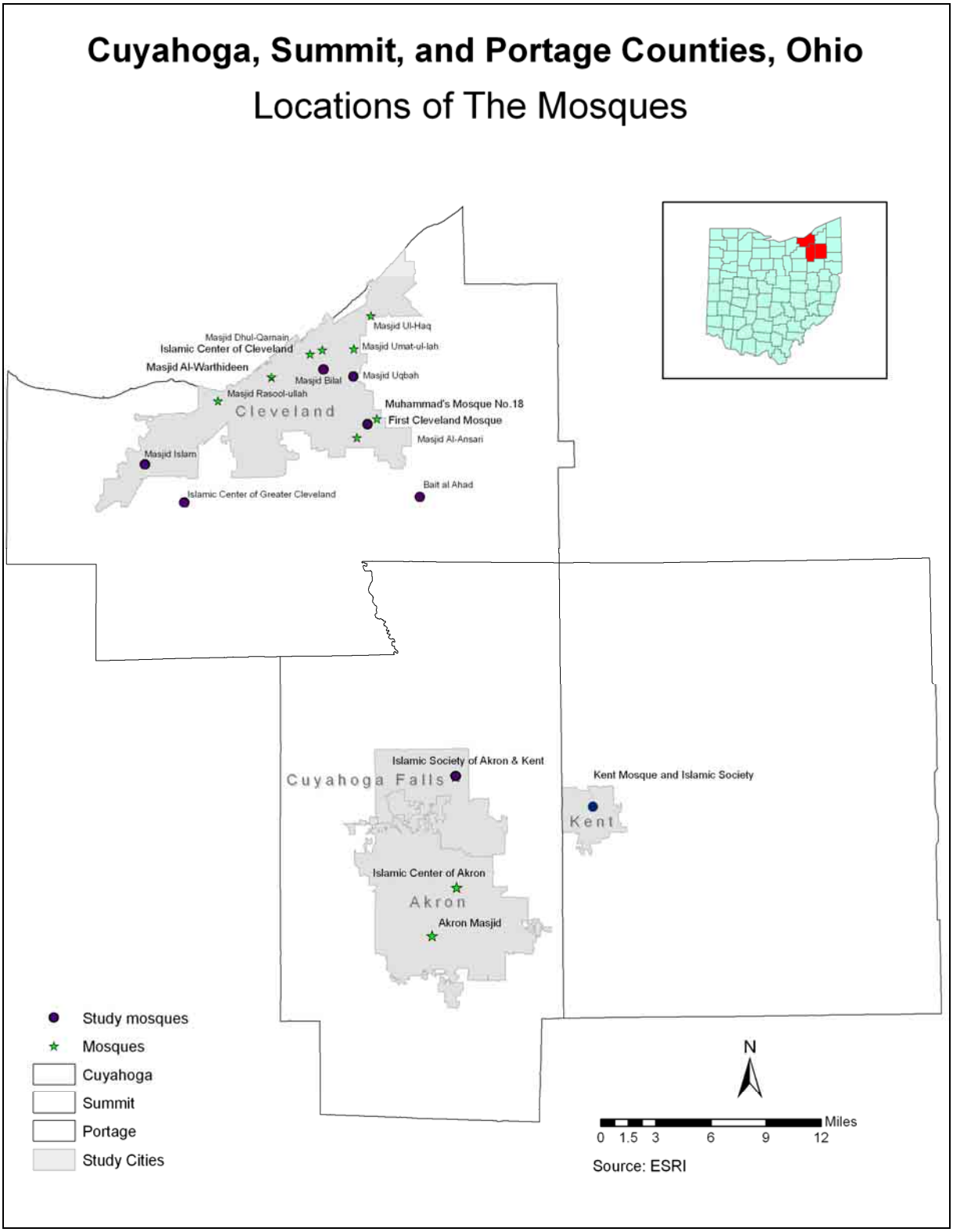

Figure 3.1: Mosque locations in the proposed study area, Cuyahoga, Summit, and Portage Counties, Ohio, USA

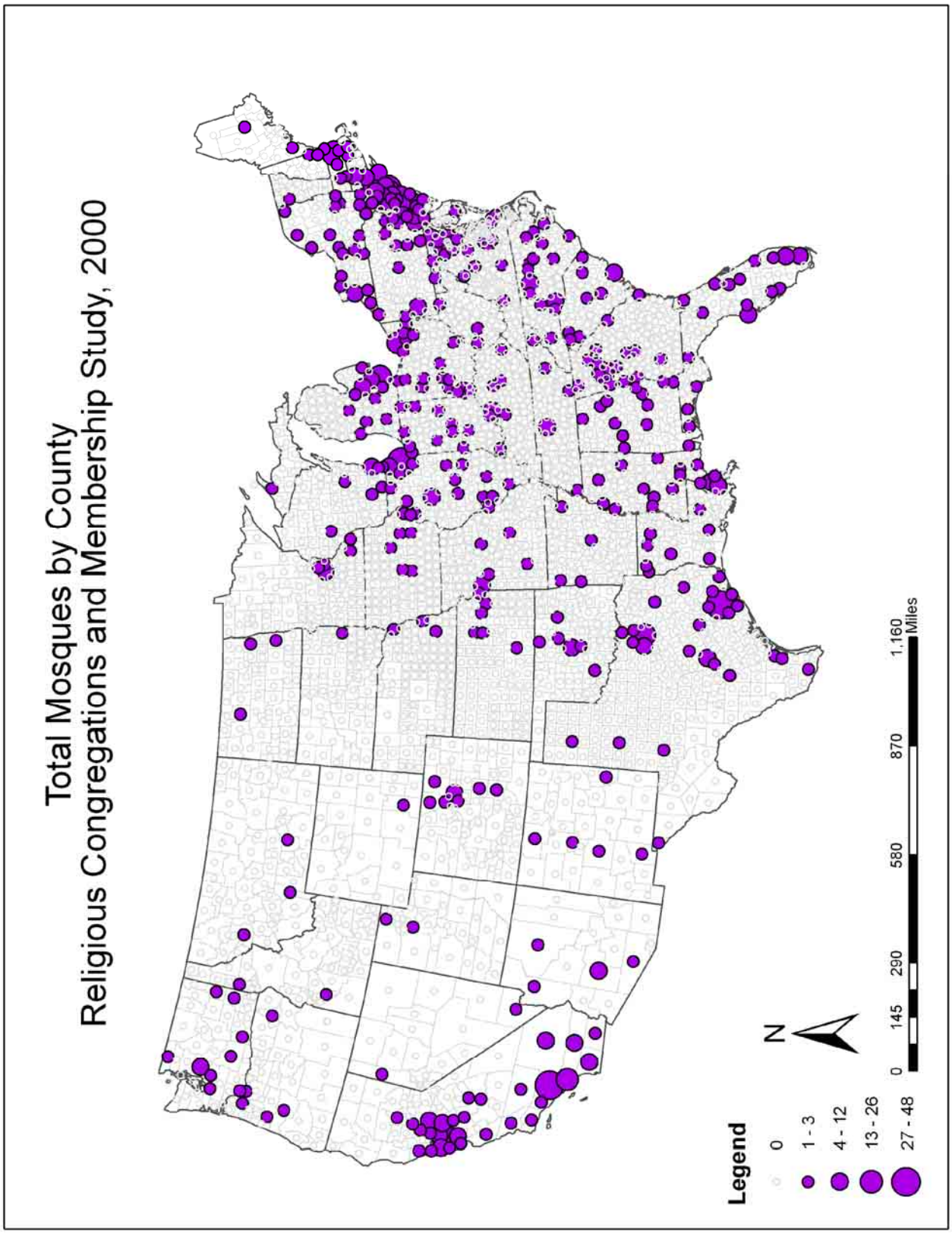

Figure 3.2: Mosques distribution by county
(Source:http://www.thearda.com/Archive/Files/Descriptions/RCMSCY.asp)

Table 3.1
Mosques in Cuyahoga, Summit, and Portage Counties, Ohio

Mosque Name Code	Street Address	City	Zip
Masjid Bilal	**7401 Euclid Ave**	**Cleveland**	**44103**
Masjid Dhul-Qarnain	5618 Luther	Cleveland	44103
Masjid Al-Warithdeen	7301 Superior	Cleveland	44103
Masjid Al-Ansari	3520 E 116th St	Cleveland	44105
Masjid Uqbah Ibn Nafeh	**2222 Stokes Blvd**	**Cleveland**	**44106**
Masjid Islam	**4600 Rocky River Dr**	**Cleveland**	**44135**
First Cleveland Mosque	**3613 E-131 Street**	**Cleveland**	**44128**
Islamic Center of Cleveland	9400 Detroit Ave	Cleveland	44120
Masjid Umat-ul-lah	1396 E-115th Street	Cleveland	44106
Masjid Rasool-ullah	9400 Detroit Ave	Cleveland	44102
Masjid Ul-Haq	78-1187 Hayden Avenue	Cleveland	44110
Muhammad's Mosque No. 18	14406 Kinsman Road	Cleveland	44120
Islamic Center of Greater Cleveland	**6055 W 130th Str**	**Parma**	**44130**
Islamic Society of Akron and Kent	**152 E. Steels Corners Rd**	**Stow**	**44224**
Islamic Center of Akron	345 Lookout Ave	Akron	44310
Akron Masjid	1147 Old Main St	Akron	44301
Kent Mosque and Islamic Society	**325 E. Crain Ave**	**Kent**	**44240**
Bait al Ahad	**297 Center Rd**	**Bedford**	**44146**

(Source: Koszegi and Gordon, 1992)
Boldface entries are the studied entries

For this study, the method used to select the sample mosques is the purposive and convenient sampling based upon three principal criteria: the building's purpose, geographical location, and ethnic origin of members. The major rationale is that the structures should be easily recognizable as mosques by the average person. In other words, the selected structures are clearly identifiable as being purpose-built mosques with common elements visibly apparent, or otherwise have significant and permanent modifications indicating that a building has been converted from previous use. Temporary rooms dedicated to worship, such as *mussallah*, are not included in the study. The Islamic Society of Akron and Kent Mosque in Cuyahoga Falls, the Islamic Center of Greater Cleveland in Parma, and Uqbah and Bilal mosques in Cleveland are identifiably purpose-built mosques. The remaining samples, The First Cleveland mosque in Cleveland, the Islamic Society-Greater Kent in Kent, Masjid Islam and Bait Al-Ahad mosque in Bedford, each constitute examples of structures that have been permanently transformed and are identifiable as mosques. For instance, the First Cleveland mosque is mainly identified by a permanent placard incorporated in the building where Islamic scriptures are written. Another example is the Bait A- Ahad mosque in Bedford where a golden dome tops what was previously a small church.

In addition, mosques in the study group are selected from the three different counties of the study area. Since mosques are principally concentrated in Cuyahoga County (Cleveland), six of them are selected from this area, while one is selected from Summit County (Cuyahoga Falls) and the other from Portage County (Kent).

Finally, as the composition of the Muslim community fabric in Northeast Ohio consists of African-Americans, Arab Americans, and South Asians, mosques are selected

so that each of the three primary ethnic group communities is represented in the study (Table 3.2). Three mosques in particular, the First Cleveland mosque, Uqbah mosque, and Bilal mosque, are African-American. Four mosques, the Islamic Center of Greater Cleveland, the Bait Al-Ahad mosque, the Islamic Society-Greater Kent in Kent, and Islam, are Arab-American mosques. Finally, the Islamic Society of Akron and Kent mosque constitutes a mix of Pakistanis and Arabs.

Table 3.2
Islamic community ethnic composition in the United States

	% by group 1994 Study	% by group 2000 Study
African American	29	27
South Asian	29	28
Arab	21	15
Mixed evenly South Asian and Arab	10	16
All Other Combinations	11	14
Total	100	100

Dominant groups are calculated by: 35-39 percent of participants in one group and all other groups less than 20%; 40-49 percent of one group and all others less than 30; 50-59 percent of one group and all others less than 40; any group over 55%.
*Mixed groups calculated by two groups with at least 30 percent of participants each.
(Source: Bagby et al., 2001)

Using the eight case studies (mosques) selected, architectural (Appendix B), historical, ethnic, and social (Appendix C) inventories were compiled. The data were used to compare regional mosque form and function with traditional mosque architecture. With these data it is possible to assess the influence of each of the following factors: history, modernity, planning laws and regulations, materials, and funding, while comparing their relative impact on Northeast Ohio mosque development.

To complete the research, it was essential to field check the mosques, including attending services, obtaining photographs, compiling an inventory of mosque features and typologies, and collecting architectural drawings. Five key informants including imams, engineers, officials, and congregation with long institutional memory were surveyed at each of the sample mosques. For example, for the two imported mosques, interviewing engineers from the G M Rembowski Architect Inc which was in charge of the construction was proved impossible due to their continual refusing to meet up. Thus, people with information about the design and construction and from the board of trustees provided the needed data about the structure of the mosque. Preliminary visits to each site and meetings with imams and other officials were important in identifying the persons to be surveyed. The surveys were conducted in the mosque after the traditional prayer service. Those selected for a survey were queried on the community's size, age, and building structures as well as about the building itself. The questionnaire provided critical information on each mosque's development, including the year of construction, source of funding, size and typology, spatial distribution, and ethnic identity of builders. An observational survey (Appendix B) and a structured questionnaire were used to gather these data (Appendix C).

The architectural survey (Appendix B) is divided into four sections. It consists of questions about the location of the mosque, the traditional liturgical elements, typologies, interior spatial distribution and landscaping. The surveys were completed following field checks and consultation with architects and engineers who were charged with designing and erecting the sample mosques. For each mosque, two copies of such survey were filled out. Thus, a total of sixteen surveys were obtained. In order to be more authentic and for

valid result, one copy was filled out by the author (the interviewer), and the other one by the engineer or the person in charge of the mosque construction.

The development survey (Appendix C) is primarily concerned with the evolution of the mosques as well as the community composition and development and was also divided into four sections. The first section includes questions about mosque history and construction, the second section focuses upon the process of selections of the typology and the architect, as well as questions about the general attitude of the community. The third section is comprised of informant questions about securing money and the last section contains information about the size and the composition of the community. In the mosque after Friday prayer, five key informants filled out the questionnaires, bringing the total number of survey responses from all mosques to forty five.

It is important to mention that all data were available from all mosques except for the Bait Al-Ahad mosque where communication with key informants of the mosque proved difficult. Nobody answered the phone calls in the mosque, so I visited the mosque many times, even on Fridays. After meeting with the secretary, I realized there were few people in charge of the mosque, who would answer the questionnaires. Three of five people promised to complete the surveys and return them to me, but after contacting them many times, I was not able to get the answers. Therefore, information for the development questionnaire for this specific mosque is not available.

Factors of Interest

Factors of interest include consideration of a mosque's location, design, interior spatial distribution, exterior landscaping, and historical and social context as well as financial record.

Common Traditional Elements

In order to determine the amount of influence traditional ideology has upon the development of mosques within the United States, it was necessary to understand those elements that are common in traditional mosque architecture. Such elements can be used to compare with those elements present, or not present, in the construction of the sample mosques. For instance, traditional liturgical elements, typologies, and interior spatial distribution and function constitute factors intrinsically reflective of tradition in the physical and functional aspect of the mosque. Thus, for the purposes of the architectural questionnaire, the liturgical elements factor considered ten common traditional mosque elements, which are the minarets, prayer hall, ablution fountain, *qibla* wall, *mihrab*, *minbar*, courtyard, portal, *dikka*, and *kursi*.

As noted in the literature review, the interior spatial distribution consists of space designated for specific functions, such as a community hall, kitchen, library, classrooms, offices, and so forth. Collecting data regarding mosque typologies offered an opportunity to explore the reflection of traditional aspect of the mosque in comparison with the Northeast Ohio mosques. Typological questions point out three traditional and prominent typological types: the hypostyle, the central-dome, and the *iwan* mosques. Additionally, along with field checks, a construction worker, engineer, or architect was surveyed from

each mosque and asked to describe whether their mosque was of an innovative, adaptive, or imported typology.

Funding

Funding is an unquestionably essential element of mosque development. Wealthier mosque communities can create more elaborate and expansive religious buildings while poor congregations must survive with often minimalist facilities. Furthermore, as stated previously, the wealthier members within a community often have the most influence in how a mosque appears as they are the primary financiers, meaning that even if the rest of the community wishes to instill traditional elements in the final design of a new mosque, those wishes may not come to fruition unless the wealthier members agree.

In order to determine how the design decisions were made from a financial perspective, it was necessary to understand each mosque's financial situation. Through the interviews and particularly the development survey, the study secured data regarding each mosque's procurement of funding for construction, the general financial viability of its community members, and relationships with other communities where financial support may have been offered. Additionally, through field checks, individual mosque inventory data, and human structure data, generalized determinations could be made regarding the wealth and financial well-being of mosque communities. For instance, one sample mosque, Masjid Al-Islam, contained space for only two offices while a second, the Islamic Center of Greater Cleveland, had room for four, indicating that the first mosque is likely smaller in its operations and financial resources than the latter. For the

purposes of a qualitative analysis, the same application is made to determine a community's collective financial wealth by considering the physical size of each mosque.

Planning Laws

American planning laws and land use regulations often determine where a mosque may be placed within a community. Each of the sample mosques had to contend with the issues of zoning that may or may not have allowed for mosque development within certain districts. E. g., Cuyahoga Falls would not allow the construction of a mosque in the commercial district without a conditional approval by the city's board of zoning appeals. The two imported mosques, the Islamic Community Center and the Islamic Community Center, which contend with the zoning requirements of the two cities Parma and Cuyahoga Falls, are located away from crowded intersections and provided large parking lots. The converted typology mosques such as the First Cleveland Mosque do not satisfy the zoning requirements, thus a new building with more parking lots, is designed to replace the old structure. Moreover, another significant variable for American planning and regulations is landscaping which also provides data about the requirement and the availability of parking lots and green areas. Using the development questionnaire (Appendix C), data were compiled to determine how planning law affected the form, function, design and location of each mosque. Additionally, information regarding the land uses surrounding each mosque was collected to make observations on possible environmental constraints in how the mosque developed.

Traditional versus Modern Ideologies

Questions about the process of selecting an architect to design a mosque and internal community debate identify the significance that ideology plays in mosque development. The two primary positions defined for this study are that of modernity, which embraces new forms of architecture and design, and that of traditionalism, which often seeks to strictly adhere to the traditional forms found in Islamic countries. The debate between modernity versus traditionalism can be found within Muslim communities, often touching the issue of the community's attitude towards its dominant ethnic, racial, and political groups. At the same time, the debate expresses a community's collective desire to embrace familiar traditional typologies found in nations left behind.

Using the architectural survey (Appendix B), questions about traditional liturgical common elements, typologies, and interior spatial distribution seek to determine the influence of ideology in terms of traditional versus modernity. For instance, one question was about the minaret, its existence and its heights, or about the prayer hall, its existence and its area, as well as about the typology itself: Is it a hypostyle, central-dome, *iwan*, or other modern typologies such as imported, adapted, or innovative. Moreover, in the development survey, data such as process of selection of the mosque's typology and architect as well as community's compositions are used to qualitatively discern the prevalence of one of the ideological ideas.

Materials

Questions about materials utilized to build the mosque are primarily found in the development survey under the mosque history and construction section. Using

information about year of building and material used such as siding, brick, concrete, stone, or other modern materials such as glass or steel, is important to explore the influence of the material elements. Moreover questions about the history of evolution as well as the important dates in the erection or conversion of a mosque would investigate the importance of such factor.

Analytical Plan

The study used the qualitative plan including identification of various themes and patterns that were recurring throughout the interview responses. Each significant theme and pattern, as determined by the analysis, was made into its own variable for qualitative analysis. Themes and patterns that were more frequent in affirmative responses received higher rankings and vice versa. For instance, if the mosques indicated that they received "no outside financial assistance" more frequently than they reported receiving assistance, then a qualitative analysis concluded that most mosque developments are dependent largely upon donations from within. Additionally, with the findings, relationships to other factors were sought. For instance, the study highlighted the attributes separating the mosques that received outside financial assistance from the mosques that are independently funded.

CHAPTER IV

DATA ANALYSIS AND PRESENTATION

The main purpose of the research is to explore how environmental, legal, social, financial, and ideological factors present in an area affect the form and function of mosques constructed in the United States. This study utilizes a comparison between mosques constructed in Northeast Ohio and those built in the Islamic World. The analytical plan consists of a qualitative approach. This chapter explains how the data acquired were compiled and analyzed. Comprehensive narratives complemented with tables are used to identify similarities and differences between the sample mosques utilized for the study as well as the traditional form and function of mosques as depicted from literature resources.

Common traditional architectural elements

The analysis highlights the existence as well as the importance of each traditional element for every mosque's typology, the imported, the adapted, and the converted types.

Imported mosques

The imported typology is illustrated when people including architects and engineers, entirely transplant their traditional designs and forms and use them to construct new mosques in a different social and physical environment (Khalidi, 2001). Of

the mosques studied and based on this definition, the Islamic Center of Greater Cleveland and the Islamic Community Center have the characters that meet the imported typology mosques (Figures 4.1 and 4.2). The fact that the mosque has a central golden dome, an octagonal-shaped structure for the dome, and blue and white colored facades made it similar to the Dome of the Rock. During the interviews, people reported that when they decided to build the Islamic Center of Greater Cleveland, they were specifically thinking about copying the Dome of the Rock. However, the differences between the two mosques dwell in adding the minarets which do not exist in the structure of the Dome of the Rock which has an octagonal floor plan. The floor plan of the Islamic Center of Greater Cleveland is rectangular and its facades are not covered with colored mosaics and Arabic calligraphies. Thus, the outward appearance of the Islamic Center of Greater Cleveland represents a replica of the Dome of the Rock mosque in Jerusalem. This mosque provides a large covered and illuminated space crowned by a big golden dome and embodies nine out of ten defining and common elements of the traditional mosque (Table 4.1).

Figure 4.1: Islamic Center of Greater Cleveland mosque
(Source: Author's photographs).

Also based on the definition of the imported mosque typology, the Islamic Community Center was intentionally copied from the Shah Faisal mosque in Pakistan.

The fact that the mosque has triangular-shaped elements such as the minarets, the windows, and the roofing, and a light concrete color made it looks like the Shah Faisal mosque (Figure 4.3 and 4.4) . The mosques differ in scale, number of minarets, and shape of the prayer halls. The Shah Faisal mosque area is around 70,000 square feet and it serves 300,000 worshippers, while the size of the Islamic Community Center is 23,000 square feet and serves around 1,500 congregants. The former mosque holds four minarets and has a triangular floor plan for the prayer hall while the latter one possesses only one minaret and the shape of the prayer hall is rectangular.

Figure 4.2: Islamic Community Center mosque (Source: Author's photographs).

The Shah Faisal Masjid, one of the largest mosques in the world, was erected in 1986 and is located in Islamabad, Pakistan (Figure 4.4). It embodies an unusual design that looks like the traditional Arab Bedouin's tent. The triangular shapes are repetitively used and prominent in roughly every element of the mosque (Shaw 1989). The Islamic Community Center also embodies the predominant triangular shape reflected in the design of major architectural elements such as the minaret, the dome, and the large windows of the prayer hall. Although a large difference of scales exists between the two

mosques the Islamic Community Center contains, besides the seven common elements, a dome made of glass, concrete, and steel and has a pyramid shape. Using this design of the dome, the Islamic Community Center reproduced the concept of the tent but on a smaller scale (Figure 4.5).

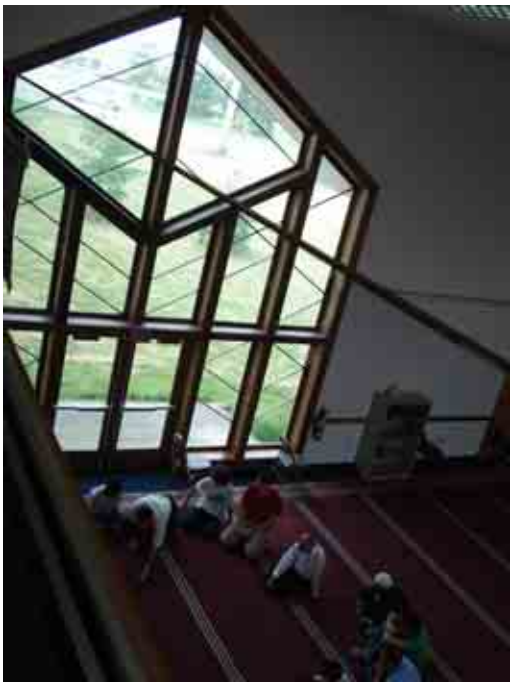

Figure 4.3: Windows,
Islamic Community Center
(Source: Author's photographs)

Figure 4.4: Windows,
Shah Faisal
(Source: Shah, 1969)

Figure 4.5: Shah Faisal mosque, Pakistan.
(Source: Shah, 1969)

Figure 4.6: The dome of the Islamic Community Center
(Source: Author's photographs)

Table 4.1
Mosque Typology, architectural elements, and congregational composition

Mosque Name	Typology	Architectural Elements Present (out of 10)	Congregation Composition Percent			
			Arab	South Asian	African	Other
Islamic Center of Greater Cleveland	Imported	9	50	30	10	10
Islamic Community Center	Imported	7	40	45	5	10
Masjid	Adapted	7	0	0	90	10
Masjid Al-Uqbah	Adapted	5	30	10	60	0
First Cleveland Mosque	Converted	6	15	10	70	5
Masjid Al-Islam	Converted	4	40	25	20	15
Bait Al-Ahad	Converted	6	n/d	n/d	n/d	n/d
Kent Mosque and Islamic Society	Converted	6	50	45	5	5

Source: Author's Survey (Appendix B)

Adapted mosques

The adapted mosque typology represents a modern interpretation of the traditional form and function sometimes combined with contemporary elements and designs from the American architecture. The two mosques Masjid Bilal and Masjid Al-Uqbah are examples of this category of mosques typology (Figures 4.7 and 4.8).

Figure 4.7: Masjid Bilal mosque
(Source: Author's photographs).

Masjid Bilal mosque corresponds to a reinterpretation of the concept of the central dome in combining the central space concept of the prayer hall with modern elements and materials. The building was erected in 1981. The architecture of the mosque is simple and does not include a dome, a *minbar* or a courtyard but it holds seven out of the ten common and standard elements constituting a typical traditional mosque. The minaret of this mosque, as for all other mosques in the United States, functions as symbolist element and serves as a landmark in the city (Table 4.1).

Figure 4.8: Masjid Al-Uqbah mosque
(Source: Author's photographs).

Masjid Al-Uqbah also represents an interpretation of the central-dome traditional typology along with contemporary architectural elements and materials. The mosque holds a dome beside five other common liturgical elements (Table 4.1).

The community of the Masjid Bilal mosque is predominately African-American. The composition of the community of Masjid Al-Uqbah is sixty percent of African Americans, thirty percent of Arab Americans, and ten percent of other ethnic groups such as Asian Americans and White Americans (Table 4.1). The dominant ethnic group for the adapted mosque typology does not have a major effect on the outcome of the mosque. Therefore, the common traditional architectural elements are less represented and influencial than for the imported mosque typology.

Converted mosques

According to the literature review, there are three typologies of mosques built in The United States. In Northeast Ohio, the study shows a fourth type of mosque which is the converted typology. Converted typology is expressed in designs and forms of buildings that are transformed from a specific function that is not necessarily religious into a mosque. The First Cleveland Mosque, Bait Al-Ahad, and Kent Mosque and Islamic Society mosques correspond to entirely transformed mosques (Figures 4.9, 4.12, and 4.13). However, Masjid Islam mosque on Rocky River Road in Cleveland exemplifies a partially converted mosque typology where only the second floor is dedicated as a mosque space (Figure 4.11).

The First Cleveland Mosque is the oldest continuing Muslim institution in America and was founded in 1937. The mosque community acquired the Polish

Community Center and converted the building to a mosque in 1976. A placard including Islamic scriptures written in Arabic was added to the building in order to indicate the presence of a mosque. The main room, which originally functioned as a theater, was converted to a prayer hall. Nothing was changed except adding a *minbar* and a *mihrab* directed towards Mecca (Figure 4.10). For the remaining rooms few adjustments were involved where most of them still have the same original functions as offices, classes, and gym. The building does not possess a dome or a minaret and it only includes six out of the ten liturgical common elements (Table 4.1).

Figure 4.9: First Cleveland Mosque (Source: Author's photographs).

Figure 4.10: *Minbar* and *Mihrab* in The First Cleveland Mosque (Source: Author's photographs).

In Masjid Al-Islam mosque, a part of the building was adjusted to serve as a mosque (Figure 4.11). The mosque was initially a church which the mosque's congregation converted to a school, the *School of Excellence*. The mosque's community acquired the building and made modifications in order to convert the second floor to a mosque. The two traditional liturgical elements (the *minbar*, the *mihrab*), a carpet, and a simple separation between men and women were added to the prayer hall. The first floor is used as an elementary public school run by the congregation itself. Moreover, the

mosque does not hold a dome or a minaret and only includes four out of the ten most common liturgical and architectural elements (Table 4.1).

Figure 4.11: Masjid Al-Islam mosque
(Source: Author's photographs)

The Bait Al-Ahad mosque's building was formerly a Presbyterian church (Figure 4.12). It was renovated and converted into a mosque in 1986. The golden dome and the Islamic symbol of crescent were added to make the building appear more like a mosque. The sanctuary of the church was adjusted to be used as a prayer hall. The structure possesses six out of ten standard mosque's elements (Table 4.1).

Figure 4.12: Bait Al-Ahad Mosque
(Source: Author's photographs)

The Kent Mosque is located in the neighborhood of a large university (Figure 4.13). Thus, the mosque is a mixture of community members and students and at the same time serves the needs of Muslims from many countries. The building formerly served as a Christian denomination church, the Church of Nazarene, and was converted into a mosque in 1984. The mosque does not host a minaret or a dome. However, the mosque presents six out of the ten liturgical common elements (Table 4.1).

Figure 4.13: Kent Mosque and Islamic Community (Source: Author's photographs).

Congregations used the available structures and converted the building into a mosque. Most of them are satisfied by adding the most two common and important elements, the *minbar* and the *mihrab*, to their prayer hall. Thus, the factor, reflection of the common traditional architectural and liturgical elements, does not have a great impact on the converted mosque typology.

Ultimately, the analysis demonstrated that among the eight selected sample mosques in Northeast Ohio, every mosque hosts most, if not all, of the traditional elements. Moreover, all of the selected mosques contain a prayer hall, a *mihrab* and a *minbar*, while all aside from the Masjid Al-Islam Mosque host a portal (Table 4.2). The prayer hall constitutes the nucleus of the mosque hosting worshippers to gather and pray,

and listen to the oration of the Imam. The *qibla* wall is the primary factor in the orientation of mosques. Many sampled mosques, especially the converted ones, were not built to a correct orientation. Thus, a *mihrab* was added to indicate the direction of Mecca. The *minbar* is one of the most important elements constituting the mosque since the Imam uses it to deliver sermons and have better contact with the audience. The presence of the portal is very necessary since it invites congregants to the mosque and at the same time indicates a transitional space between the outside world and the sacred space. Additionally, all the sampled mosques excluding the Masjid Al-Uqbah and the Masjid Al-Islam featured a *qibla* wall while all those, except for the Islamic Community Center, include a *kursi*. Half of the mosques in the study area feature a minaret, though only two mosques, the Islamic Center of Greater Cleveland and the Islamic Community Center, embody a courtyard. Only the Islamic Center of Greater Cleveland possesses an ablution fountain while none of the eight samples contain a *dikka* (Table 4.2). The ablution fountain is not used and functions only as a decorative element. In most of the sample mosques, ablution fountains were replaced by simple taps located in the bathrooms and used for washing before prayer. The *dikka* does not represent an important element in the mosque since all the worshippers can repeat the postures of the Imam without standing over a tribune. Thus, the existence and the importance of the common traditional liturgical elements differ between the various mosque typologies.

Figure 4.14: Minbar and Mihrab in Islamic Community Center (Source: Author's photographs).

Table 4.2
Traditional Architectural Elements Present in Mosques

Mosque Name	Typ-ology	Min-aret	Prayer Hall	Ablution Fountain	Qibla Wall	Mih-rab	Min-bar	Court-yard	Portal	Dikka	Kursi
Islamic Center of Greater Cleveland	I	X	X	X	X	X	X	X	X		X
Islamic Community Center	I	X	X		X	X	X	X	X		
Masjid Bilal	A	X	X		X	X	X		X		X
Masjid Al-Uqbah	A	X	X			X	X		X		
First Cleveland Mosque	C		X		X	X	X		X		X
Masjid Al-Islam	C		X			X	X				X
Bait Al-Ahad	C		X		X	X	X		X		X
Kent Mosque and Islamic Society	C		X		X	X	X		X		X

I = Imported; A = Adapted; C = Converted
Source: Author's Survey (Appendix B)

Interior spaces

The interior spatial distribution infers the importance of the adaptations to roles that a mosque plays in American society. Table 4.3 displays an inventory of spaces from the Northeast Ohio mosques, such as kitchens, offices, and class rooms, which

collectively include those modern mosques, encompass a greater variety of processes, such as education, community development, and entertainment, in conjunction with the traditional function of religious worship and community gathering. The analysis highlights that all the mosques, except Masjid Al-Islam mosque, feature a community hall (Table 4.3). Data also show that apart from the Kent Mosque and Islamic Society mosque, all of the samples included at least one kitchen and one classroom (Table 4.3).

Figure 4.15: Community Hall in The First Cleveland Mosque
(Source: Author's photographs).

Moreover, with the exception of the Masjid Al-Islam mosque, the mosques have at least one office. Aside from the Masjid Al-Uqbah, Masjid Al-Islam, and the Bait Al-Ahad mosques, all sampled mosques contained a library. Finally, only two mosques, the Islamic Center of Greater Cleveland and the First Cleveland Mosque, included a gym in their buildings.

Figure 4.16: Classrooms in The First Cleveland Mosque
(Source: Author's photographs).

Figure 4.17: An office in the Islamic Community Center
(Source: Author's photographs).

The Western functions included in the mosque structures such as the kitchen, the community hall, the offices, the classrooms, and the gym were not incorporated in the traditional mosque. Figure 4.18 represents the ground floor plan of Masjid Al Daleel, a traditional mosque constructed in the United Arab Emirates in 848. The plan only shows the common traditional architectural elements such as the prayer hall, the qibla wall, the minbar, the mihrab, the portal, the ablution fountain (Abed Al-Sater, 1998). However, contemporary mosques constructed in the Islamic world incorporate most of the modern

functions such as the community hall, the kitchens, the offices, the gym, and so on (Figure 4.19).

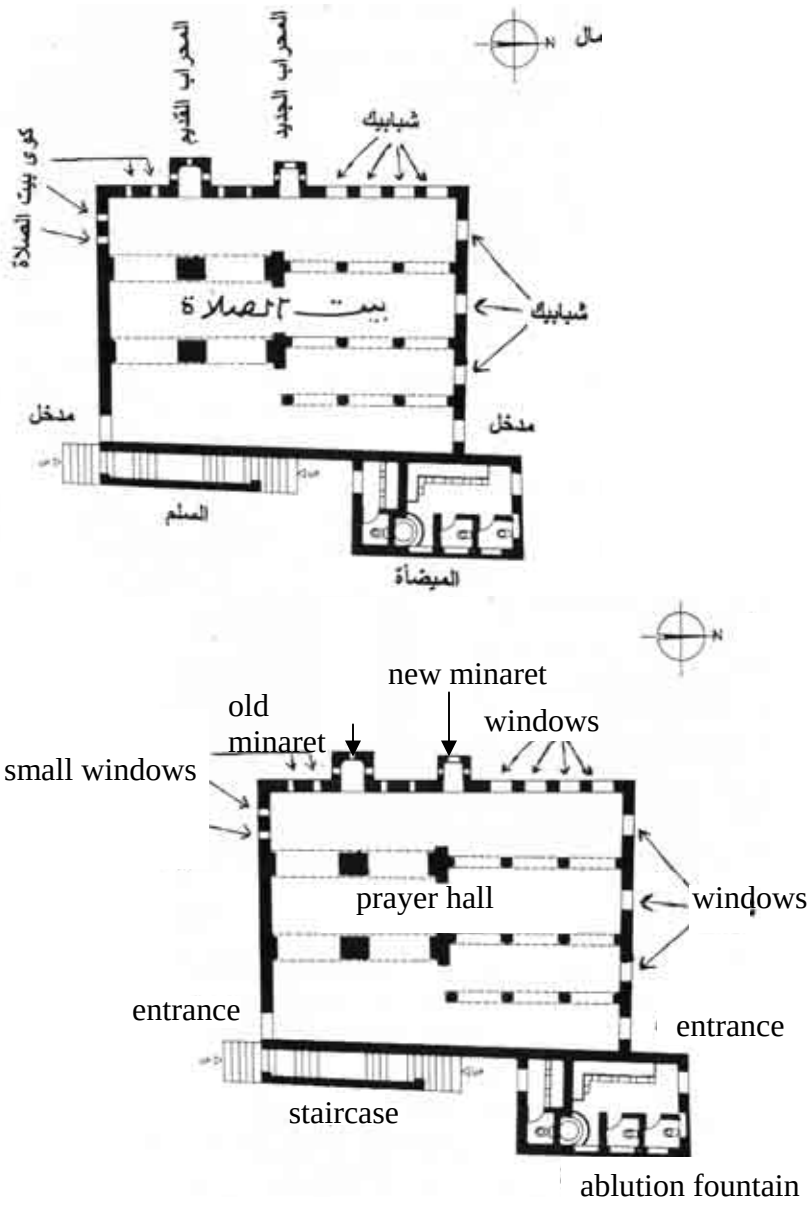

Figure 4.18: Plan of Masjid Al-Daleel, Al-Shareka, The United Arab Emirates (Source: Abed Al-Sater, 1998, p. 13)

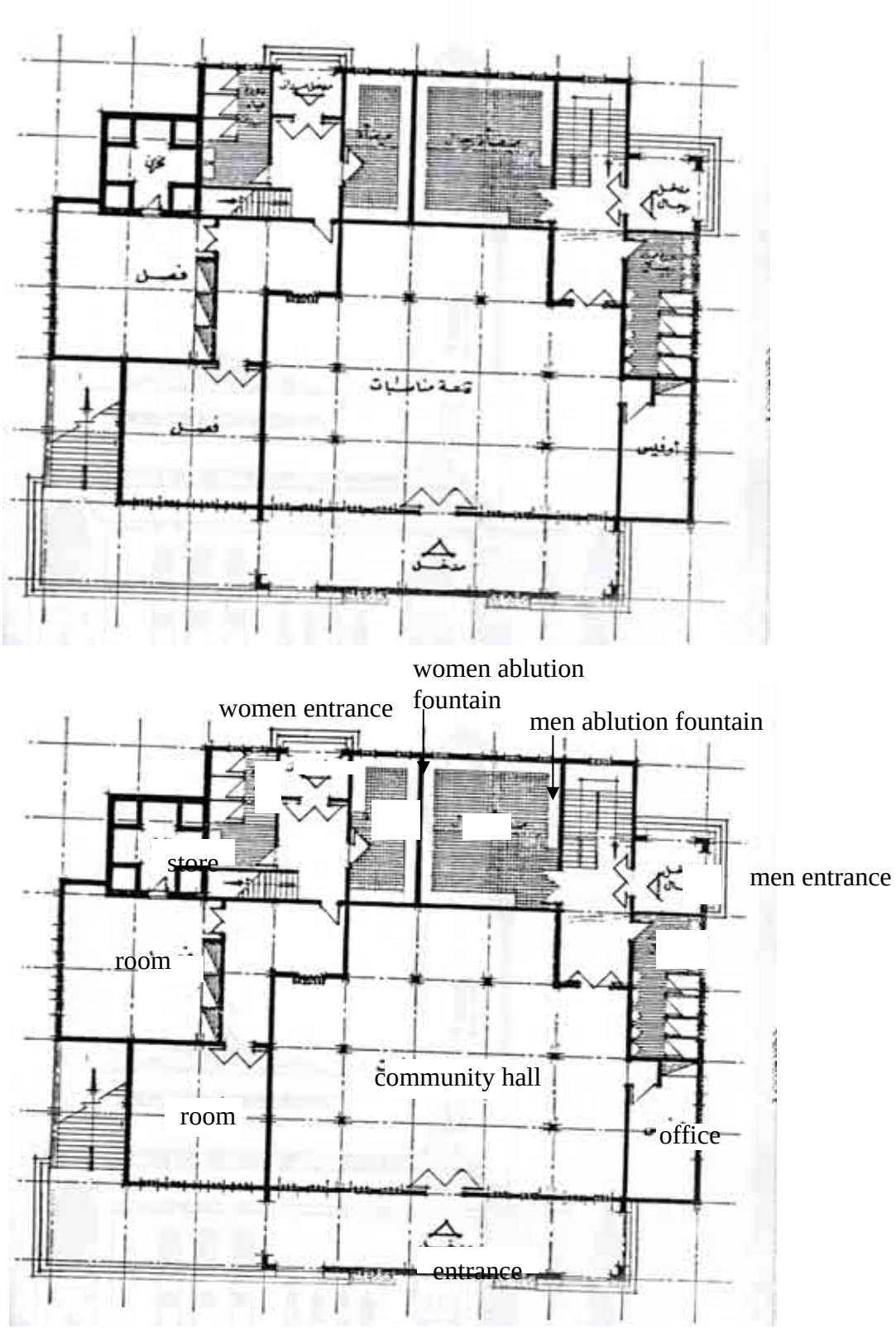

Figure 4.19: First Plan of mosques built by the Egyptian Ministry of Public Affairs (Source: Esmail 1995, p. 316)

Table 4.3
Functional architectural spaces present in Northeast Ohio mosques

Mosque Name	Typology	Com-munity Hall #; (Total Sqft)	Kitchen #; (Total Sqft)	Classroom #; (Total Sqft)	Gym #; (Total Sqft)	Library #; (Total Sqft)	Office #; (Total Sqft)
Islamic Center of Greater Cleveland	I	1(10,000)	1 (500)	8 (14,000)	1	1 (500)	4(7,000)
Islamic Community Center	I	1(10,000)	1 (500)	8 (10,000)	1	1 (500)	4(7,000)
Masjid Bilal	A	1 (2,000)	1 (500)	8 (9,000)	0	1 (500)	2(5,000)
Masjid Al-Uqbah	A	1(2,000)	1 (300)	2 (5,000)	0	0	2(3,000)
First Cleveland Mosque	C	1(10,000)	1 (500)	8 (5,000)	1	1 (500)	2(5,000)
Masjid Al-Islam	C	0	0	5 (1,000)	0	1 (500)	2(300)
Bait Al-Ahad	C	1(800)	1 (500)	2 (500)	0	0	2(5,000)
Kent Mosque and Islamic Society	C	1(800)	0	0	0	1(200)	2(5,000)

I = Imported; A = Adapted; C = Converted
Source: Author's Survey (Appendix B)

Funding

Undeniably, funding performs a critical role in shaping the form and function of the mosques in Northeast Ohio. Those parties within a community possessing a

disproportionately larger amount of wealth tend to be those that dictate how a mosque will develop, particularly in those cases where funds may be transferred into one community from another, such as the case with the Islamic Cultural Center in New York (Khalidi, 2001). In the case of the Northeast Ohio mosques, however, the majority of communities provided their own funding. For instance, key informants from the Islamic Center of Greater Cleveland and from the Islamic Community Center who participated in the development survey stated that the community itself, without any outside help, provided the necessary funding to construct the mosques. At the same time, in Northeast Ohio, the imported typology mosques do not have a financial relationship with other communities which indicates that both congregations do not depend financially on other communities (Table 4.4)

Table 4.4
Mosque area, current community size,
avenues to secure money, relationships between mosques' communities.

Mosque	Typology	Area (Sqtf)	Current size of the community	Community secures money	Outside grant	Relationships with other communities
Islamic Center of Greater Cleveland	I	38,000	30,000	Yes	No	social
Islamic Community Center	I	23,000	1,500	Yes	No	social
Masjid Bilal	A	14,000	700	Yes	No	None
Masjid Al-Uqbah	A	8,800	500	Yes	Yes	Financial& social
First Cleveland Mosque	C	23,000	1,000	No	Yes	Financial& social
Masjid Al-Islam	C	8,000	300	Yes	No	Financial& social
Bait Al-Ahad	C	16,000	n/d	n/d	n/d	n/d
Kent Mosque and Islamic Society	C	16,000	400	No	Yes	Financial& social

I = Imported; A = Adapted; C = Converted
Source: Author's Survey (Appendix B)

Masjid Bilal mosque does not have any relationship with other mosques and does not get outside financial support as well. Interviewees from Masjid Bilal affirmed that it is through the community itself that the mosque is funded. However, most of the interviewees from the Masjid Al-Uqbah mosque indicated that securing money was done

through both avenues, the community itself and also outside financial sources. Also, the community of the mosque possesses a strong financial and entertainment relationship with other mosque communities (Table 4.4).

The majority of people from the First Cleveland mosque, Masjid Al-Islam mosque, and the Kent Mosque and Islamic Society mosque remembered that construction was not primarily funded through the community itself, but rather from outside sources (Table 4.4). For instance, the First Cleveland mosque was funded through grants provided by foreign governments. In addition to that, the construction of the Kent Mosque and Islamic Society, which entailed the renovation of an existing building previously used as a church, was primarily funded by the Islamic Community Center in Cuyahoga Falls. Moreover, answers show that the inter-community relationship for the three mosques is primarily based on entertainment and financial support.

The fourth section of the Development Survey also addressed the nature of any potential relationships between the sampled mosques and other Islamic communities. Almost all the interviewees from four of the mosques, the First Cleveland Mosque, Masjid Al-Uqbah, Masjid Al-Islam, and the Kent Mosque and Islamic Society, mentioned that the nature of their relationships with other communities was primarily entertainment and financial. Those interviewees from the Islamic Community Center who responded to the question indicated that inter-community relationships existed to sponsor entertainment with one interviewee adding that the mosques shared socio-spiritual and cultural ties. Only one answer was received from the Islamic Center of Greater Cleveland, where one interviewee defined the inter-community relationship as being socio-spiritual and cultural. Lastly, interviewees from Masjid Bilal did not define any

relationship types with other communities (Table 4.4). The imported typology mosques which also possess the largest mosque areas, do not show any financial relationships with other communities. The other mosque typologies, especially those that are converted, partially depend on the financial support of other communities. Consequently, one can understand that the bigger and more sophisticated the form and functions of the mosque are, the less they depend upon outside grants.

Arguably, larger communities tend to have more financial resources, as each community member is a potential financial donor. In the fourth section of the Development Survey, participants were asked to explain the demographics of their mosque's community with emphasis on the number of persons constituting those communities. The imported mosque types possess the largest community sizes. For instance, the Islamic Center of Greater Cleveland held the biggest community size, as interviewees placed the number of congregants as the highest among all the sample mosques. At second place was the Islamic Community Center's mosque, which provided the second highest number of people. The First Cleveland Mosque held the next largest community and was followed respectively by Masjid Bilal and Masjid Al-Uqbah. Both mosques, the Kent Islamic Society and Majsid Al-Islam reported approximately the same number of congregants (Table 4.4). The result shows a strong correlation between the area of a mosque and the size of the community which serves. Also, the larger the community size, the more sophisticated the architecture and the more elements are represented in the final structure of the mosque. A community's collective wealth is analyzed by recognizing the size of its religious facility. Responses to the fourth section of the architectural and design survey demonstrated that the imported mosque typologies

cover larger areas. The adapted mosque typology comes second and the converted mosque type comes third with the exception of the First Cleveland Mosque which possesses the third largest area (Table 4.4).

Almost all mosques except Masjid Al-Islam feature a community hall, with the largest ones belonging to the Islamic Center of Greater Cleveland and to the Islamic Community Center. The smallest size of the sampled mosques' kitchens was reported at the Masjid Al –Uqbah while the largest size belonged to the Islamic Center of Greater Cleveland. Thus, the imported mosque typology, serving the largest community sizes, includes the largest community hall and also the largest kitchen. The converted mosque typology, with the exception of the First Cleveland Mosque, possesses the smallest community hall and kitchen areas. Additionally, the two mosques of the imported typology, the Islamic Center of Greater Cleveland, and the Islamic Community Center, each contain the highest number of classrooms. At second place were the adapted mosque types, Masjid Bilal and Masjid Al-Uqbah followed respectively by the converted mosques The First Cleveland Mosque, and Bait Al Ahad mosques (Table 4.3). However, the Kent Mosque and Islamic Society does not include any classroom in its structure. The architectural questionnaire shows that libraries exist in six mosques, the Islamic Center of Greater Cleveland, the Islamic Community Center, the First Cleveland Mosque, Masjid Bilal, Masjid Al-Islam and Kent Islamic Society. Such information indicates that the imported mosque typologies all include libraries while other typologies do not necessarily incorporate such function except if they embody classrooms for teaching the Koran and the Arabic language. Since the mosque of the imported mosque typology need

more offices to serve their communities, their structures include more offices than for the rest of the mosques (Table 4.3).

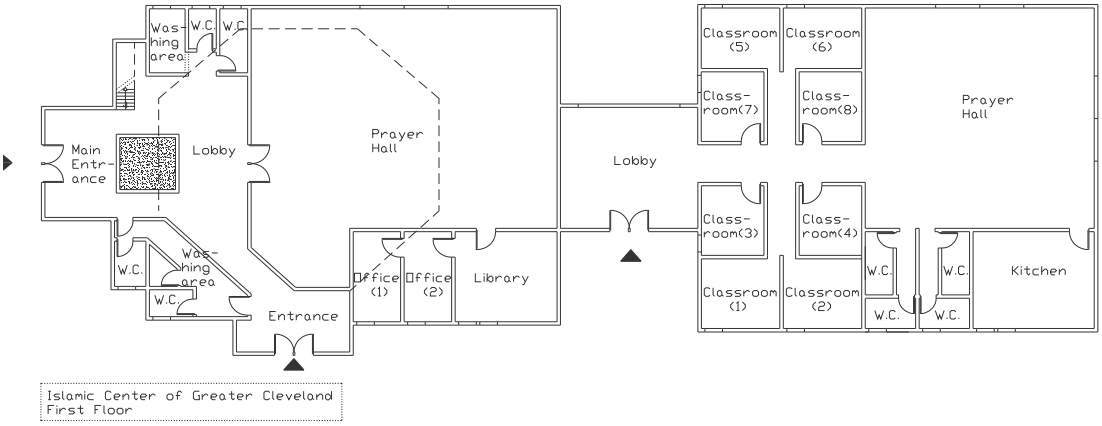

Figure 4.20: First floor of the Islamic Center of Greater Cleveland
(Source: Author's drawing)

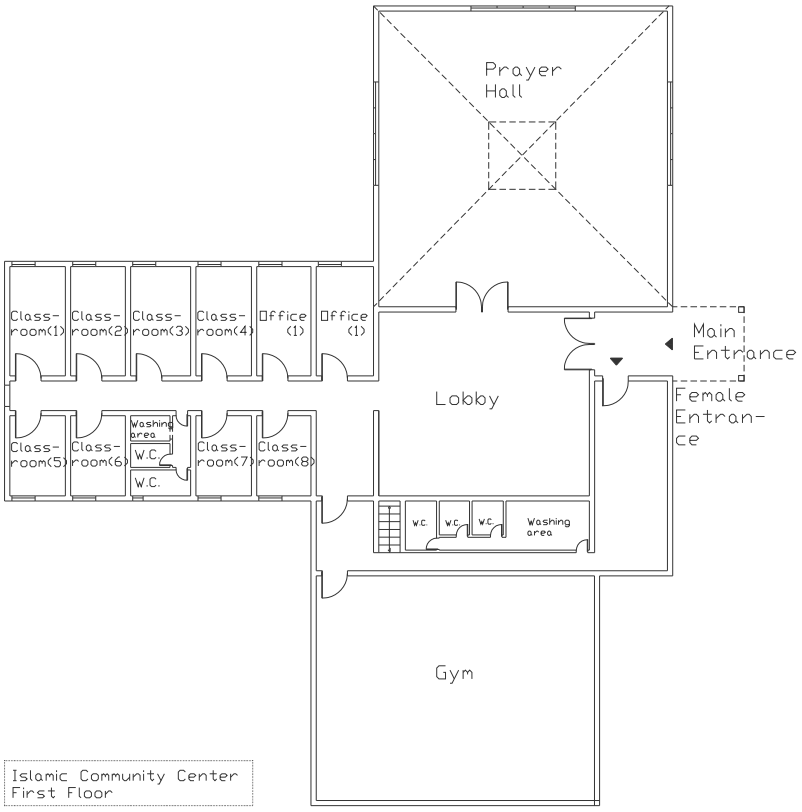

Figure 4.21: First Floor of the Islamic Community Center
(Source: Author's drawing)

Planning Laws

American planning laws and regulations have a large impact on the form and function of the mosques in Northeast Ohio. Information about the location, including parking, green areas, surrounding land uses, and existing zoning codes reveal the impact of planning law on the structures and function of each mosque.

Information for each mosque's location and zoning requirement shows the Islamic Center of Greater Cleveland and the Islamic Community Center are located in suburban and mixed use zoning districts (Table 4.5). The mosques are surrounded by zoning districts of one or two family residential and permitting multi-family as well and retail and commercial services. They also have attached parking lots featuring the largest capacity lots among all sampled mosques and they reported maintaining large areas of green space. Photographs show that the two mosques each feature a well designed and arranged landscape comprised of carefully planned parking areas and gardens (Table 4.5). Moreover, the aerial photographs show that the imported mosques are located in low density areas and between two major intersections. Thus, planning laws strongly affect the location and the placement of the mosques within the parcel.

Figure 4.22: Location of the Islamic Center of Greater Cleveland
(Source: Ohio Statewide Imagery Program -
http://ogrip.oit.ohio.gov/ServicesData/StatewideImagery/tabid/86/Default.aspx)

Figure 4.23: Location of the Islamic Community Center.
(Source: Ohio Statewide Imagery Program -
http://ogrip.oit.ohio.gov/ServicesData/StatewideImagery/tabid/86/Default.aspx)

Table 4.5
Locational zoning categories, area of the prayer hall, parking lots, and green area

Mosque Name	Typology	Locational zoning categories	Area of the prayer hall (Sqft)	Parking lots type capacity (cars)	Green area (acres)	Minaret Height (ft)
Islamic Center of Greater Cleveland	I	Suburban & mix use	5,980	400	Natural & landscaping (12)	60
Islamic Community Center	I	Suburban & mix use	4,000	400	Natural & landscaping; (12)	50
Masjid Bilal	A	Urban & mix use	1,000	100	Natural	50
Masjid Al-Uqbah	A	Urban & mix use	2,000	50	0	50
First Cleveland Mosque	C	Suburban & mix use	2,000	50	0	0
Masjid Al-Islam	C	Suburban & mix use	500	100	0	0
Bait Al-Ahad	C	Suburban & mix use	2,000	50	0	0
Kent Mosque and Islamic Society	C	Urban & mix use	2,000	50	0	0

Source: Author's Survey (Appendix B)

The adapted typology mosques, Masjid Bilal and Masjid Al-Uqbah are situated in urban but also mixed use zoning districts and they both had decent parking capacities but only Masjid Bilal features natural green areas (Table 4.5). Additionally, the mosques are surrounded by retail, institutional zoned areas, and vacant land allowing low density neighborhoods. Thus, planning laws have a great influence on the adapted mosque.

Figure 4.24: Location of Masjid Bilal (Source: Ohio Statewide Imagery Program - http://ogrip.oit.ohio.gov/ServicesData/StatewideImagery/tabid/86/Default.aspx)

Figure 4.25: Location of Masjid Al-Uqbah.
(Source: Ohio Statewide Imagery Program - http://ogrip.oit.ohio.gov/ServicesData/StatewideImagery/tabid/86/Default.aspx)

The converted mosques including Masjid Al-Islam, Bait Al-Ahad, and Kent Mosque and Islamic Society, are located in suburban and mixed use zoning districts.

However, the first Cleveland Mosque is situated in urban but also mixed use zoning district. The converted typology mosques have the smallest parking lots and they do not feature green areas whether natural or landscaping (Table 4.5). They are encircled by areas zoned as mixed use of light and heavy industry, institutional functions, single family residential, multi-family residential, and vacant land, and intensive commercial. The aerial photographs highlight the relatively high density areas where the mosques are located, and at the same time suggest that for the three mosques, Bait Al Ahad, First Cleveland Mosque, and Kent Mosque and Islamic Society, there are barely enough parking spaces adjacent to them (Figure 4.26, 4.27, 4.28, and 4.29). Congregants especially on Friday Prayer use the driveways surrounding those mosque to park their cars. The mosques of the converted typology are different from the imported and adapted one in the sense that they do not comply with the city zoning ordinances and codes.

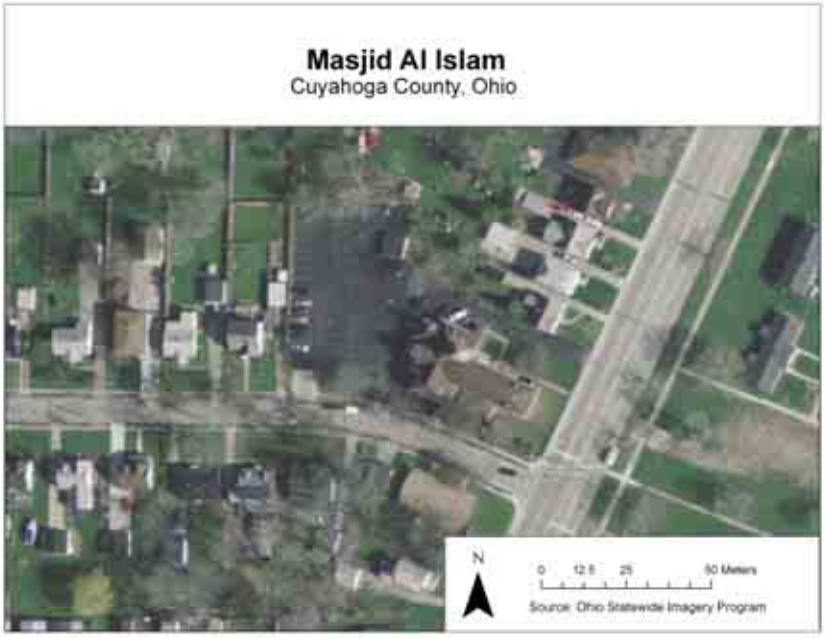

Figure 4.26: Location of Masjid Al-Islam.
(Source: Ohio Statewide Imagery Program - http://ogrip.oit.ohio.gov/ServicesData/StatewideImagery/tabid/86/Default.aspx)

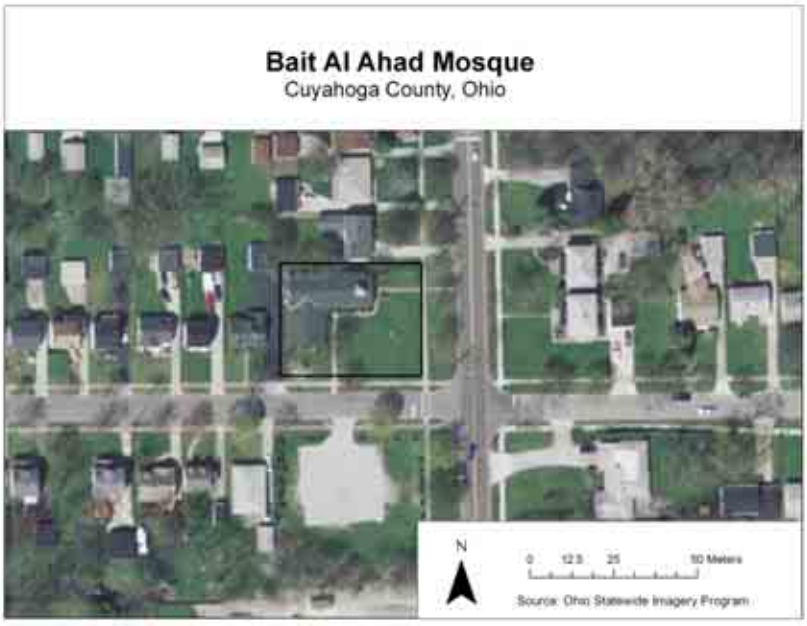

Figure 4.27: Location of Bait Al Ahad mosque.
(Source: Ohio Statewide Imagery Program - http://ogrip.oit.ohio.gov/ServicesData/StatewideImagery/tabid/86/Default.aspx)

Since American planning laws and regulations generally contain noise ordinances that ban mosques to use their minarets in order to call adherents for prayers, less than 50 % of the sampled mosques have a minaret. Such liturgical element is often utilized for aesthetic purposes or as a landmark indicating the existence of a mosque. Furthermore, the minaret of Masjid Bilal, located in an urban area, and that of the Islamic Center of Greater Cleveland, existing in a suburban area are both 60 feet height (Table 4.5).

Figure 4.28: Location of the First Cleveland Mosque.
(Source: Ohio Statewide Imagery Program - http://ogrip.oit.ohio.gov/ServicesData/StatewideImagery/tabid/86/Default.aspx)

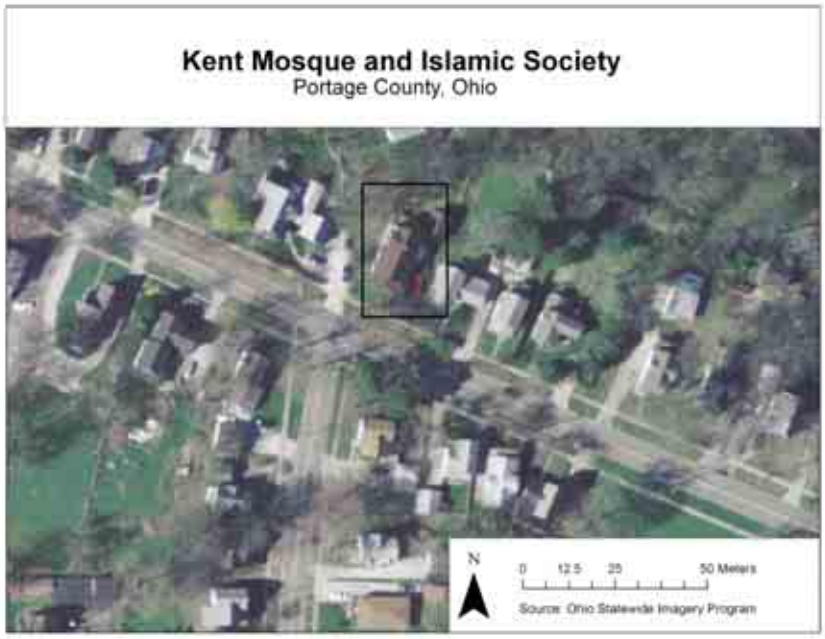

Figure 4.29: Location of Kent Mosque and Islamic Society.
(Source: Ohio Statewide Imagery Program - http://ogrip.oit.ohio.gov/ServicesData/StatewideImagery/tabid/86/Default.aspx)

Traditional versus Modern Ideologies

In the United States, and particularly in Northeast Ohio, the ideologies of traditionalism versus modernity have the potential to collide when Muslims of different backgrounds embark upon the designing of a new mosque. Such conflict has affected the way in which today's Muslims conceive the form and function of the purpose-built mosques in particular. The prominence of one ideology over the other is explored through many informational questions from the two surveys, the architectural and the development questionnaires.

The first survey focuses upon the ideological problems within each of the four sections of the questionnaire. For instance, where all the common traditional elements of the mosque exist and at the same time the construction follows traditional typologies, traditional ideologies show prevalence over the modernity.

The issues are further investigated within the second and the fourth sections of the development survey, which concern, respectively, the process of selecting mosque design staff and the ideological base of the mosque's community of adherents. In particular, the second section of the development survey sought information about the critical size of the dominant group-racial, ethnic of the community.

The imported mosques, including the Islamic Center of Greater Cleveland and the Islamic Community Center, offered different answers. For the Islamic Center of Greater Cleveland the majority of interviewees declared that the dominant group rules the community attitude. However, for the Islamic Community Center mosque, more than 75 percent of the people who were interviewed reported that the size of the dominant group had no known effect upon the community's attitude. For the first one, four out of five of

the interviewees admit that the dominant group had a large influence on the selection of the architect while the latter mosque surveys only two people answered this question and they agreed that the larger group decides the architect of the mosque. Almost similar result is given for the informant data about the process of selection of the mosque's typology and if the dominant group decides about it (Table 4.6).

Table 4.6
Mosque typology, dominant group influence

Mosque Name	Typology	Dominant group dictates community's attitude	Dominant group selects the architect	Dominant group selects the typology
Islamic Center of Greater Cleveland	Imported	Yes	Yes	Yes
Islamic Community Center	Imported	No	Yes	Yes
Masjid Bilal	Adapted	Yes	No	Yes
Masjid Al-Uqbah	Adapted	No	No	No
First Cleveland Mosque	Converted	No	No	No
Masjid Al-Islam	Converted	No	No	No
Bait Al-Ahad	Converted	n/d	n/d	n/d
Kent Mosque and Islamic Society	Converted	No	No	No

Source: Author's Survey (Appendix B)

Two adapted mosques, Masjid Bilal and Masjid Al-Uqbah, also offered different answers regarding the size and the influence of the dominant group. Masjid Bilal

interviewees by majority, declared that the dominant group rules the community attitude. Moreover, for the same mosque, interviewees disagreed that the dominant group has a large influence regarding the process of how the architect for the mosque was selected but they corroborated that this group has significantly influenced the overall community's choice a propos the typology. Also, more than 80 percent of the interviewees' answers from Masjid Al-Uqbah denied the fact that the size of the dominant group had known effect upon the community's attitude and does not determine the architect to design and build the typology of the mosque (Table 4.6).

For three converted mosques, the First Cleveland mosque, Masjid Al-Islam, and Kent Mosque and Islamic Society, interviewees by majority declared that the dominant group does not rule the community attitude. Moreover, more than eighty percent of the interviewees' answers denied that the dominant group determined the architect to design and build the mosque. In the same section, there is a question regarding the process of how the architect for the mosque was selected and whether or not the dominant group significantly influenced the overall community's choice in the matter. Similar results were given about the process of selection of the mosque's typology and if the dominant group decides about it. One can notice that the three mosques, the First Cleveland mosque, Masjid Al-Islam, and Kent Mosque and Islamic Society, disagreed with that the dominant group has an influence on the typology's preference.

Additionally, the majority of the First Cleveland Mosque's community is African-American mixed with few Palestinians, Pakistanis, and so on. For the Masjid Al-Islam mosque, the community is mainly composed of Arab Americans mixed with a minority of African Americans and South Asians. The majority of the community members of the

Kent Mosque and Islamic Community are Arab Americans combined with South Asians and African American (Table 4.1). For the three converted mosque typologies, the dominant ethnic group does not have any effect on the outcomes of the mosques.

It is extremely important to study the composition of each community the mosques serve especially in a very diverse environment like the United States. Four mosques have shown that the majority of the congregants are Arab Americans. The Islamic Center of Greater Cleveland is one of them, where data have shown that almost 50 percent of the people are Arab Americans (predominantly Palestinians), while 30 percent are South Asian such as Pakistani, 10 percent are Afro Americans, and around 10 percent of other nationalities who are not defined by the interviewees. This result explains the resemblance of the mosque to the Dome of the Rock in Jerusalem. Furthermore, the Islamic Community Center is another mosque where the majority is South Asians predominantly Pakistanis which is about almost 50 percent, and where the percentages of Arab American is 35 percent, Afro American is 5 percent, and 10 percent for other ethnic groups. Even though table 4.6 shows that the dominant group does not affect the community's decisions, the influence of the Pakistani group is obvious since the mosque design elements are immensely similar to the ones of the Shah Faisal mosque in Pakistan. After comes the Kent Mosque and Islamic Society mosque where the dominant group is that of Arab Americans with a percentage of fifty to fifty five, and percentages of twenty five to thirty five of Afro Americans, ten to fifteen of South Asians and five of others. The dominant Arab group, which later decided to erect the Islamic Community Center mosque, primarily affects the financial decisions regarding dedicating money for the enlargement or the modifications of the building. People from the Kent

Mosque and Islamic Society, primarily students, acquired the building of the Church of Nazarene and converted it to a mosque. Since the size of the community has increased and the facility was getting too small for the activities, students and community members decided to merge with other communities in Akron area and to build a larger structure, the Islamic Community Center, surrounded by the needed parking lots. With approximately forty percent of Arab Americans, the Masjid Al-Islam is also of an Arab American prominence where the percentage of the dominant and largest group is about forty percent, twenty five percent for the South Asian group, twenty percent for the Afro American, and fifteen percent for the other ethnicities. However, the three remaining mosques, Masjid Bilal, the First Cleveland Mosque, and Masjid Al-Uqbah, are of Afro American dominance. The dominant group has a large influence on the community's decisions and it decided not to have strong relationships with other communities (Table 4.1).

The larger ethnic group composing the community of the Islamic Center of Greater Cleveland is the Arab Americans where most of them originally came from Palestine (Table 4.1). This situation explains the reproduction of the Dome of the Rock design in the outcomes of the mosque and subsequently the presence of most of the liturgical common elements. Moreover, the larger ethnic group forming the community of the Islamic Community Center mosque is the South Asian predominantly Pakistani (Table 4.1). Consequently, the mosque borrowed the design of its architectural elements and tried to imitate the Shah Faisal mosque in Islamabad. Thus, for the imported mosque typology, it is obvious that the dominant groups have the large effect on the outcomes of the mosques where they tried to copy and reproduce the most known or important

mosques from their native countries. Noticeably, most of the common architectural and liturgical elements for the mosque are represented in the design of this type of typology.

To conclude, traditional versus modern ideology factor has more effect on the structure of the imported mosques. The imported mosques are more likely to be traditional instead of modern. Data in table 4.6 shows that the dominant group is of a great influence in dictating the mosque's form and function. This factor is less influential on the structures of the adapted mosque since most of the key informants denied that the dominant group dictates the outcomes of the mosques. Furthermore, the factor traditional versus modern ideology does not affect the buildings of the converted mosques. All the interviewees agree that the dominant group has no effect on the final outcome of the mosque.

Common themes

Familiarization with jargon and recognition of common themes is critical to gaining information from reports by interviewees concerning the community's process the process of selecting a mosque's design and the influence of the dominant group in that decision. For instance, terms including "many ethnic backgrounds", "many academic nationalities", "community even includes Shi'a and Sunni", and "mixed use ethnicities" were used repetitively in order to show variety in the fabric of individual communities. Moreover, many interviewees believed that the dominant group did not dictate the attitude of the overall communities, as exemplified by one an interviewee's statement: "Ethnicity has little if any role in our community". The interviewee was answering the question about the influence of the dominant group on the community's decision for the

Islamic Community Center mosque. He as many other members stressed the fact that representation in the decision-making process of the community should afford balance among different groups. Repeating statements such as “no domination of any groups”, “careful elections in order to maintain balance in form and substance”, and “all together praying under one floor” interviewees from Masjid Al Uqbah and The First Cleveland Mosque demonstrate the unity of the communities. However, on the other side many other members especially from the Islamic Center of Greater Cleveland believe that the dominant group has a large influence on the community’s attitude through reiterating terms such as “typology looks like . . . [a particular mosque].” Parallel to that, concerning the community’s choosing of an architect employed to build the mosque and selecting the style, many of the interviewees believed that the dominant group did not apply any controlling influence upon the process. Accounts such as “committee of 12, 15, or 16 members selected”, “open competition”, “members collectively opted”, and “via *shura*” were repeated by interviewees from the Islamic Community Center, Masjid Al Uqbah, and the First Cleveland Mosque, to demonstrate the idea that the dominant group did not significantly affect selections. On another hand, interviewees from other mosques reported that the dominant groups largely influenced selections of the architect and the typology of the community’s mosque. Certain terms such as “mosque represents the picture of Masjid Al Aqsa,” repeated by interviewees from the Islamic Center of Greater Cleveland suggests that the dominant group had great control on selections.

As far as the process of securing money, most of the interviewees from the Islamic Center of Greater Cleveland and the Islamic Community Center repeated the statements “no outside help”, “internal fund raising”, “definitely not”, “was secured by

the community", "donation by members are relied upon completely", and "self sufficient" in order to explain that the money required for construction came through the communities themselves. Additionally, certain members from the same mosques believed that the size of the community determined the degree of the community's prosperity. They offered descriptions such as "certainly", and "the larger the contribution body, the more funds are available to expand" in order to express their idea about internal funds securing money for the mosques' communities.

Materials

The availability and the costs of the materials is a critical factor in shaping the form and function of the mosques in the Northeast Ohio. The second section of the architectural survey examines the typologies of the existing mosques and informs about specific construction techniques concerning some of the typologies. Moreover, the first part of the second appendix, the development questionnaire explores the year building as well as the material used while erecting the structure of the mosque.

Each mosque has a different year of founding. Ranges of dates vary from 1966 to 1980 for the imported typology mosques, and from 1937 to 1993 for the converted typology mosques. The year of founding of the adapted typology mosques is pretty recent, in 1988 (Table 4.7).

Imported mosques constitute the most modern structures and are constructed in most recent years and they used the most expensive available materials such as concrete and glass. For instance, the most recent mosque structure, which was erected using concrete mixed with large windows of glass, was constructed in 2000 and it belongs to

the Islamic Community Center. Following is the Islamic Center of Greater Cleveland which was built in 1995 using materials such as concrete and glass (Table 4.7). The newest mosques, particularly the imported ones, are choosing to import the stylistic designs of the traditional and the familiar native mosques of the dominant group. Muslim immigrants typically integrate into the general American society yet they are still attached to their traditional religious buildings and elements. More often, they reproduce the same prototypes while building new structures for nostalgic reasons and at the same time to show their independent identity in the diverse context (Metcalf, 1996).

Table 4.7
Mosque Typology, year built, and materials

Mosque Name	Typology	Year of founding of community	Year Built or converted	Materials
Islamic Center of Greater Cleveland	Imported	1966	1995	Concrete & Glass
Islamic Community Center	Imported	1980	2000	Concrete & Glass
Masjid Bilal	Adapted	n/d	1981	Wood & Concrete
Masjid Al-Uqbah	Adapted	1988	1997	Wood & Concrete
First Cleveland Mosque	Converted	1937	1995	Wood & Brick
Masjid Al-Islam	Converted	1993	1995	Brick
Bait Al-Ahad	Converted	n/d	1986	Brick & Concrete
Kent Mosque and Islamic Society	Converted	1980	1984	Brick

Source: Author's Survey (Appendix B)

The two adapted mosques come next. Masjid Al-Uqbah was constructed from concrete and wood in 1997. Nevertheless, Masjid Bilal's structure was made by wood and brick and built in 1981 (Table 4.7).

Converted mosques form the oldest structures among all types of mosques. In 1976 the structure of the First Cleveland Mosque was put up and material used was essentially wood. Finally, Masjid Al-Islam mosque was built in 1955 and the primary material used was brick (Table 4.7).

Thus, the factor material has more influence on the final outcomes of the modern mosques than on the other mosque types. Financial support and availability of new materials led to new shapes and larger spaces. This factor is less influential for the adapted mosque typologies. People from both Masjid Bilal and Masjid Al-Uqbah do not have the necessary financial help to build larger and more sophisticated form and spaces. Finally, material does not have an importance in shaping the converted mosque structures since such mosques are converted from previous buildings.

CHAPTER V

CONCLUSION

In the United State immigrants try to integrate into the general environment while at the same time they remain attached to their traditions and beliefs. This thesis provides a study of how the form and function of the mosques in Northeast Ohio compare to the traditional mosques that have been constructed in Islamic countries.

Many factors shape the development and dictate the location of the mosques in Northeast Ohio. The major factors affecting the form and function of the mosques are the architectural elements preference, the availability of financial resources, American planning laws and regulations, the ideologies of modernity versus traditionalism, and the accessibility to different kinds of materials.

The study utilized multiple and complementary methods, including qualitative analyses of surveys and minor quantitative approaches utilizing a variety of survey and demographic data in order to answer the specific research issues, particularly how liturgical elements, ideology (traditionalism vs. modernism), funding, planning law, and materials affect a mosque's form and function in Northeast Ohio. The study area covered Cuyahoga, Summit, and Portage Counties of Northeast Ohio. While the study area includes eighteen mosques, a purposive and convenient sampling method was used to select eight mosques. The bulk of the data used for the qualitative analysis was obtained

through a development survey and an architecture survey answered by five key informants from each of the eight mosques. Additional data were obtained through literature sources, photographs, field checks, and personal interviews with key informants of each mosque.

Limitations

Though substantial data were gained through the surveys and interviews, there were some limitations in gathering certain information. It was unclear how much reference data concerning the topic of the study are available. Fairly accurate reference was found little. For instance, detailed information regarding the form and function of mosques in The United States is relatively limited. The most significant publications and relevant reference sources deal with the Muslims communities in USA.

Additionally, some questions begged for proprietary information, particularly those questions related to finances. Key informants were especially sensitive to issues regarding the procurement of funding for facility construction and community wealth. For instance, none of the key informants provided detailed answers or gave accurate names concerning the issue of securing money for the mosques communities. Additionally, the constraint of time limited the number of mosques that could be effectively analyzed as case studies. At many times, different congregants committed to the same mosque gave different information to answer the same question. Moreover, one of the limitations of this qualitative method is that researchers sometimes are likely to overweight subgroups or mosques in the study area that are readily accessible.

Another restriction of the current study is that it is a local study that may not be necessarily generalized in The United States. However, different weighting of factors might be expected in other places based on local conditions of the mosque or community. For example, mosque communities in Washington D.C. are composed of many ethnic groups. In that case, the outcome of the building does not completely represent the tradition of only one ethnic group as it is for the imported mosques in Northeast Ohio. Moreover, such communities are far wealthier than the ones existing in Northeast Ohio. As a result, the designs of their mosques are more innovative and more sophisticated.

Summary of Results

The results show the importance of the five factors, common traditional elements, funding, planning laws, traditional versus modern ideologies, and materials for every mosque's typology existing in Northeast Ohio.

Imported-Mosque Typology

Under the imported category found in the MIT study comes the Islamic Center of Greater Cleveland, which is a reproduction of the Dome of the Rock mosque in Jerusalem and the Islamic Community Center in Cuyahoga Falls which also exemplifies the imported typology with incorporation of elements and designs from the Faisal Mosque in Islamabad. The prevalence of the common liturgical and historical elements of the mosque constitutes the most important factor shaping the imported-mosque typology. For the Islamic Center of Greater Cleveland, nine out of ten common elements were utilized and for the Islamic Community Center mosque, also seven out of ten elements

were represented. At the same level of importance comes the funding factor. The two semi-public facilities, the Islamic Center of Greater Cleveland and the Islamic Community Center, possess the larger areas as well as the greater community's sizes among all sample mosques. Moreover, the communities of these mosques secure money themselves without any outside financial supports. Next, the factor planning laws constitutes an essential element influencing the imported mosques of the study area. The two mosques are located in a suburban mixed use area, have a 400-car capacity parking lot and possess twelve acres of natural and landscaping green area. The factor, traditional versus modern ideologies comes as a very important element shaping the outcome of the imported-mosque types of Northeast Ohio. Interviewees by majority declared that the dominant group dictates the attitude of the community, selects the architects and the typology of the mosque for both mosques. The last important factor in shaping the outcome of the imported mosques in Northeast Ohio is the cost and the availability of the materials. The two imported-typology mosques were recently built using the most expensive available materials such as concrete and glass.

Adapted-Mosque Typology

In the study area, Masjid Bilal and Masjid Al-Uqbah mosques fall under the adapted typology. According to the MIT study, the adapted typology is an amalgamation of traditional design elements and American architecture shapes the design of the building. The common traditional liturgical elements and funding are the most important factors which are followed by the modernity versus traditionalism. Both mosques, Masjid Bilal and Masjid Al-Uqbah, approximately embody seven out of ten elements in the

structures. Funding is of a similar importance to the reflection of the common traditional liturgical elements. The two mosques have large buildings and community sizes and reported that funding is secured through the community themselves. Nevertheless, Masjid Al-Uqbah mosque accounted that financial support is also funneled by outside sources. Then, materials constitute the next important factor and planning laws is the last critical factor in shaping mosque's form and function. The two mosques were erected respectively in 1981 and 1997 using relatively expensive materials such as concrete and wood. Moreover, the adapted-typology mosques and located both in urban and mixed use districts and have small parking lots, and do not show any area dedicated for green spaces.

Converted-Mosque Typology

In addition to the imported, adapted, and innovative typologies found in the MIT study on mosques in The United States, some of the mosques in the study area show a fourth typology constituting the converted mosque. Converted typology exemplifies in the design where community change an existing building which is not necessarily utilized as a religious facility to a mosque. As a result, a transformed building could be entirely as well as partially converted. There are three existing converted-typology mosques in the study area, the First Cleveland Mosque, Masjid Al-Islam, Kent Mosque and Islamic Society, and Bait Al-Ahad. The most influential factor for these mosques is the reflection of the common traditional elements followed by funding. The three mosques, the First Cleveland Mosque, Masjid Al-Islam, and Kent Mosque and Islamic Society declared that they depend upon outside financial sources since the community itself cannot secure the

required amount of funding. The nature of the inter-community relationship that connects the mosques is financial and entertainment. Next, materials perform a crucial role in dictating the outcome of the converted mosque. The buildings were erected respectively in 1951, 1976, and 1984 using the cheapest and most accessible materials such as wood and brick. Lastly, planning laws followed by modern versus traditional ideologies are the least prominent factors dictating the structure and the function of the converted-typology mosques in Northeast Ohio. The three converted mosques of the study area are situated in suburban and mixed use areas. The effect of the planning laws factor is reduced to the presence of small parking lots. The factor modern versus traditional ideologies is almost absent in shaping the form and function of the mosque since all mosque substantiated that the dominant group does not dictate the attitude of the community and does not select the architect or the typology of the structure.

Common Traditional Liturgical Elements

Many studies have arguably demonstrated that historical and locational influences are able to explain the spatial expression and distribution, design, and technological form and function of a mosque (Khaloose,1998). The MIT study demonstrates that the factor common traditional liturgical element has a great influence on mosques constructed in the United States. In Northeast Ohio, each group of a certain Islamic community tries to express its aspirations, and sometimes ethnic identity, through the architecture of their religious facilities. The predominant aspiration of the sample mosques was visibly the Arab-Islamic homeland architecture. For instance the Islamic Center of Greater

Cleveland mosque in Parma reflects all the traditional elements of the classic mosque. It also falls under the central-dome typology.

Moreover, seven out of ten common liturgical elements, such as the *qibla* wall, the *mihrab*, the *minbar*, the prayer hall, the portal, and the *kursi* are present for almost all of the eight sample mosques. Thus, the presence of the liturgical elements in the mosque's structure of Northeast Ohio is an important factor shaping their structures. However, a similar observation can be made for other religious groups, such as Catholic churches that each contains altars, pulpits, and tabernacles (Stillman 1979).

The importance of the impact of the common traditional elements varies between the different mosques' typologies. There are three different typologies of mosques in the United States, the imported, the adapted, and the innovative typologies. In Northeastern Ohio only the first two categories are applicable. Under the imported category, the Islamic Center of Greater Cleveland, which is a reproduction of the Dome of the Rock mosque in Palestine, is a straightforward example. The Islamic Society mosque in Cuyahoga Falls also exemplifies the imported typology with its mixture of new materials while remaining anchored with the Pakistani mosque, the Faisal Mosque. For the two imported type of mosques, more than eight out of ten common traditional liturgical elements exist in their structures. Thus, this factor is very prominent concerning the imported-typology mosque. However, the factor is less prominent in shaping the form and function of the adapted-typology mosques. Masjid Bilal and Masjid Al-Uqbah mosques fall under the adapted typology where an amalgamation of traditional design elements and American architecture shapes the design of the building. The structure of the buildings embodies only six and seven out of ten elements.

Additionally, some of the study area mosques evince a fourth typology constituting the converted mosque. This category is the least affected by the common traditional liturgical elements since it only presents four to six out of ten elements in their structures. Converted typology personifies in the design where people transform an existing building which does not necessarily function as a religious facility to a mosque. As a result, a transformed building could be entirely converted such as the First Cleveland Mosque or the Kent Mosque and Islamic Society as well as partially converted, as was the case with the Masjid Islam on Rocky River Road in Cleveland, where only the second floor was dedicated as mosque space. Moreover, the converted-mosque typology often reflects pluralism and personifies eclecticism. For instance, the Baital Ahad mosque in Bedford, Ohio, initially a Presbyterian church, was christened with a golden dome added to the original American architecture.

Funding

This factor has the most effect on the imported mosques since communities for both mosques, the Islamic Center of Greater Cleveland and the Islamic Community Center possess the largest building's areas and the largest community and at the same time concerning funding they are self sufficient. Funding has less influence in shaping the form and function of the adapted mosques, Masjid Bilal and Masjid Al-Uqbah mosques. Even though the first mosques declared that the community secures money itself without outside support, the latter confirmed that the community also depends upon outside grant and upon the good networking that was built with other mosques. Finally, the funding factor is the least influential on the converted mosques' outcomes. All three converted

mosques, the First Cleveland Mosque, Masjid Al-Islam, and Kent Mosque and Islamic Society, affirmed that the communities themselves cannot afford the required funding thus they depend upon outside financial help.

Additionally, for the non-self sufficient mosques, interviewees explained that funding came mainly from internal fundraising activities and from strong networking among Islamic communities. In an interview with the imam, it was explained that the First Cleveland Mosque was at first a Slovak community center before it was converted to a mosque. A realtor helped the community to find the place. More recently, the community has grown wealthier and the number of members has increased with financial help provided by the Islamic Center of Greater Cleveland. With this support, the congregation was able to purchase land in front of their current building and create plans for a new mosque.

The larger the building and the number of congregants, the more prosperous the mosque's community. The largest of the mosques, the Islamic Center of Greater Cleveland, has the largest area with additional spaces and more architectural elements. The mosque is considered to be the wealthiest and at the same time provides financial and entertainment helps to other mosques. Additionally, certain members believed that the funding also depends upon the financial status of memberships. Thus, many have confirmed that for most communities few doctors and businessmen made the majority of the donations. Also, wealthier communities generally erected new buildings for religious facilities while the less wealthy mosque falls under the converted types of mosques. The First Cleveland Mosque illustrates the case of a converted mosque which community financial depends largely on outside grants.

Planning Laws

American laws, and zoning codes and regulations shape the mosque's form and steer its function in Northeast Ohio. A good example of the application of the American planning laws on religious buildings is that of the recent case involving a Hindi temple which was denied construction permits in Richfield Township of Summit County. The Richfield Township Board of Zoning Appeals (BZA) refused the request to construct the temple because it would have affected the neighboring homes' water supplies, as the facility would have required substantial amounts of well-water to cover the needs of its congregants. Instead, the BZA's approval required the temple to be built adjacent to a non-residential area (Gorman, 2007).

Mosques are quasi-public facilities. Mosques tend to be located at or near institutionally-zoned or institution-acceptable areas. Considering that they are quasi-public facilities that offer a variety of community services, this is to be expected. Furthermore, zoning code documents of each city determine that places of worship are permissible only if they are variances or conditional uses. For the city of Akron, it is allowed that the Board of Zoning Appeals may vary the application of certain regulations established in the zoning codes to maintain harmony with their purpose. Institutional uses are church or places of worship, hospital, nursing home, rest home, nonprofit lodge, and so on.

The factor planning laws performs a crucial role in dictating the imported mosques of the study areas, the Islamic Center of Greater Cleveland and the Islamic Community Center. The two mosques possess attached large parking lots as well as well designed landscaping and natural green areas surrounding their structures. The role of

this factor is less important for the adapted mosques, Masjid Bilal and Masjid Al-Uqbah, which embody decent parking lots but do not include green spaces. Moreover, the effect of the planning laws on the converted mosques such as the First Cleveland Mosque, Masjid Al-Islam, and Kent Mosque and Islamic Society appears in having small and inadequate areas for parking lots.

Additionally, the size of the parking lots required by planning laws requires differs depending upon the size of the structure. The largest two mosques, the Islamic Center of Greater Cleveland and the Islamic Community Center present a well designed landscape consisting of parking lots and gardens.

Traditional versus Modern Ideologies

According to the MIT study, the factor traditional versus modern ideology has a major role in shaping the form and function of mosques in The United States. In Northeast Ohio, the difference between traditionalism and modernity constitutes another factor dictating the mosque's form and function. Within the study area, the two newly built mosques or the imported-typology mosques, the Islamic Center of Greater Cleveland and the Islamic Community Center, did not encounter this dilemma. In this community, the predominant group entrusted an architect sharing the same points of view in reproducing traditional native mosques. As a result, the factor, traditional versus modern ideology is the least prominent for the imported-mosque category. The same result obtained for the converted mosques such as the First Cleveland Mosque, Masjid Al-Islam, and Kent mosques and Islamic Society mosques, since the community in general does not have major inputs on the structures of the mosques. However, this factor

is more important in dictating the form and function of the adapted mosques. For instance, the attitude of the Masjid Bilal mosque's community is dictated by the dominant group but at the same time this group does not select the architect or the typology of the mosques. Thus, different groups within the community argued on the process of selection of both the architect and the design type.

Regarding the local environment of the Northeast Ohio mosques, the issue of how form and function are expressed is hotly debated among various Muslim communities. For many Muslim groups, particularly immigrants, the importance of creating familiar mosques with the same attributes found in their countries of origin are paramount. The Islamic Center of Greater Cleveland, a replica of the Dome of the Rock mosque in Palestine, exemplifies the desire from the dominant group. Also, the Islamic Society mosque in Cuyahoga Falls is a replica of the King Faisal mosque in Pakistan (Frishman, 2002, 263).

The existence of modern spaces such as kitchen, gymnasium, library, and office is also an indicator of how modern a mosque is. For instance, almost all of the sample mosques possess a kitchen which constitutes an important facility serving congregants' meetings, social gatherings, and parties. Many mosques have classrooms where most of them are to teach the Arabic language. For instance, the four mosques, the Islamic Center of Greater Cleveland, the Islamic Community Center, the First Cleveland Mosque and Masjid Bilal, all contain additional classrooms.

Materials

In Northeast Ohio, the materials available for mosque construction may range from the most available and cheapest items, such as wood, to the more expensive elements, including brick, concrete, and glass. For the imported purpose-designed mosques such as the Islamic Center of Greater Cleveland and the Islamic Community Center, materials perform an important role in shaping the mosques' structures. For instance, the Islamic Community Center of Cuyahoga Falls was entirely built with concrete and glass. The ability of a congregation to use such materials is often an indicator of its prosperity. The factor, cost and availability of materials is less important for the two adapted mosques, Masjid Bilal and Masjid Al-Uqbah, which utilized relatively less expensive materials such as concrete and wood. However, the converted type of mosques such as the First Cleveland Mosque, Masjid Al-Islam, and Kent Mosque and Islamic Society, are considered the less wealthy among all mosques and are composed of cheaper and more available materials such as wood.

Importance of Factors

The results indicate that the degree of impact of each factor varies for every mosque typology. For instance, by order of priority of the most important factors for the imported and the adapted mosques are both common traditional elements and traditional versus modern ideologies followed by planning laws, then funding, and materials. While for the converted mosques, common traditional elements comes first, then funding, materials are third, followed by planning laws, and traditional versus modern ideology is the least influential element. The result also shows that the most dominant factors

dictating the form and function of all mosques in Northeast Ohio are both the presence of common traditional elements and traditional versus modern ideology followed by planning laws and financial support, and materials.

Future research

The analysis and study of mosque form and function in Northeast Ohio allow expanding perspectives about mosques in the United States. The first research possibility is to include the other mosques that are not clearly identifiable as mosques such as the *mussallah* and some of the innovative typologies existing in The United States. The *mussallah* is a temporary room dedicated to pray and which shows the minimum elements features that are needed to make the space a prayer hall. Moreover, a good example of innovative typology is the Islamic Society of North America, Headquarters in Plainfield, Indiana which does not represent any external Islamic indications.

The second research possibility is to investigate the communities' composition of mosques in Northeast Ohio. It is interesting to study how the different ethnic groups or different denominations affect the form and functions of the mosques. For instance, in this study, all the sampled mosques are Sunni. However, it will be beneficial to study mosques that have other denominations such as Shia, Ahmadiah, and others. Moreover, a detailed study on the elements of the Northeast Ohio constitutes one of the future possible studies. For instance, a comparative analysis of the minaret in Northeast Ohio, its form and function to traditional and also to current minarets existing in Islamic Countries is very potential.

Finally, the third research possibility is to compare the mosques in Northeast Ohio to other areas where other traditions and religions dominate, such as mosques constructed in Europe. Also, one can compare mosques in Northeast Ohio to contemporary structures in the Muslim World. Specifically, it is interesting to research whether or not the same results could be found in the many different environments found throughout the world.

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APPENDICES

APPENDIX A

TABLES

Table 18
Traditional liturgical elements

Mosque Name	Location	Area (Sqft)	Number of Floors	Minaret	Minaret Height (ft)
Mosque 1	Suburban/ Mixed Use	38,000	2	Yes	60
Mosque 2	Suburban/ Mixed Use	23,000	2	Yes	60
Mosque 3	Suburban/ Mixed Use	23,000	3	No	n\d
Mosque 4	Urban/ Mixed Use	14,000	2	Yes	60
Mosque 5	Urban/ Mixed Use	8,800	2	Yes	60
Mosque 6	Suburban/ Mixed Use	8,000	2	No	n\d
Mosque 7	Suburban/ Mixed Use	16,000	1	No	n\d
Mosque 8	Urban/ Mixed Use	16,000	2	No	n\d

Mosque 1 = Islamic Center of Greater Cleveland; Mosque 2 = Islamic Community Center; Mosque 3 = First Cleveland Mosque; Mosque 4 = Masjid Bilal; Mosque 5 = Masjid Al-Uqbah; Mosque 6 = Masjid AL-Islam; Mosque 7 = Bait Al-Ahad; and Mosque 8 = Kent Mosque and Islamic Society.

Table 19
Traditional liturgical elements

Mosque Name	Prayer Hall	Area of the Prayer Hall (Sqft)	Abulation Fountain	Number of Abulation Fountains	Location of Abulation Fountains
Mosque 1	Yes	5,980	Yes	2	inside mosque
Mosque 2	Yes	4,000	No	2	in the bathroom
Mosque 3	Yes	2,000	No	2	in the bathroom
Mosque 4	Yes	1,000	No	2	in the bathroom
Mosque 5	Yes	2,000	No	2	in the bathroom
Mosque 6	Yes	500	No	2	in the bathroom
Mosque 7	Yes	2,000	No	2	in the bathroom
Mosque 8	Yes	2,000	No	2	in the bathroom

Table 20
Traditional liturgical elements

Qibla Wall	Mihrab	Minbar	Courtyard	Types of Courtyard (Sqft)	Area of the Courtyard	Portal
Yes	Yes	Yes	Yes	Closed	2,000	Yes
Yes	Yes	Yes	Yes	Closed	700	Yes
Yes	Yes	Yes	No	-	No data	Yes
Yes	Yes	Yes	No	-	No data	Yes
Yes	No	Yes	No	-	700	Yes
Yes	No	Yes	No	-	No data	No
Yes	Yes	Yes	No	-	No data	Yes
Yes	Yes	Yes	No	-	No data	Yes

Table 21
Traditional liturgical elements and typologies

Dikka	kursi	Traditional Typology	Modern Typology	Community Hall	Number of Community Halls	Area of Community Halls	Kitchen
No	Yes	Central-Dome	Imported	Yes	1	10,000	Yes
No	No	Central-Dome	Imported	Yes	1	10,000	Yes
No	Yes	No data	Converted	Yes	1	10,000	Yes
No	Yes	No data	Adapted	Yes	1	2,000	Yes
No	No	Central-	Adapted	Yes	1	2,000	Yes
No	Yes	No data	Converted	No	0	800	No
No	Yes	No data	Converted	Yes	1	800	Yes
No	Yes	No data	Converted	Yes	1	800	No

Table 22
Functions

Number of Kitchens	Area of Kitchens	Classrooms	Number of Classrooms	Area of Classrooms	Gymnasium	Area of Gym
1	500	Yes	8	14,000	Yes	n/d
1	500	Yes	8	10,000	Yes	n/d
1	500	Yes	4	9,000	Yes	500
1	500	Yes	4	5,000	No	n/d
1	300	Yes	2	500	No	n/d
0	0	Yes	5	5,000	No	n/d
1	500	Yes	2	500	No	n/d
0	0	No	0	0	No	n/d

Table 23
Functions

Library	Area of Library (Sqft)	Offices	Number of Offices	Area of Offices (Sqft)
Yes	500	Yes	4	7,000
Yes	500	Yes	4	7,000
Yes	500	Yes	2	5,000
Yes	500	Yes	2	5,000
No	0	Yes	2	3,000
Yes	500	No	0	300
No	0	Yes	2	5,000
Yes	200	Yes	2	5,000

Table 24
Parking lots and Landscaping

Parking Lots	Capacity (cars)	Green Areas	Types	Area of the Green (acres)
Yes	400	Yes	Natural & Landscaping	12
Yes	400	Yes	Natural & Landscaping	12
Yes	50	No	0	n/d
Yes	100	No	0	n/d
Yes	50	No	0	n/d
Yes	50	Yes	0	n/d
Yes	100	Yes	0	3
Yes	50	No	0	n/d

Table 25
Islamic Center of Greater Cleveland

Interviewees	Year of Building/ Conversion	Materials used	Important dates in evolution	Attitude dictated by the dominant group	Dominant group selected the Architect	Dominant group selected the typology
Interviewee (1)	1995	concrete\ Glass	n/d	Yes	Yes	Yes
Interviewee (2)	1995	concrete\ Glass	1967	No	n/d	n/d
Interviewee (3)	1995	concrete\ Glass	n/d	Yes	Yes	Yes
Interviewee (4)	1995	concrete\ Glass	n/d	Yes	Yes	Yes
Interviewee (5)	1995	concrete\ Glass	n/d	Yes	Yes	Yes

Table 26
Islamic Center of Greater Cleveland

Community itself secures money	Outside Grant	Community's size determines the attitude	Percentage of African-Americans	Percentage of Arab Americans
Yes	No	Yes	10	50
Yes	No	No	n/d	n/d
Yes	No	Yes	10	50
Yes	No	Yes	10	50
Yes	No	Yes	10	50

Table 27
Islamic Center of Greater Cleveland

Percentage of South Asians	Percentage of others	Year of founding of community	Size of the community	Relation-ship with communities
30	10	1966	30,000	Other
n/d	n/d	1967	n/d	Other/ Socio-Spiritual Cultural
30	10	1966	30,000	Other
30	10	1966	30,000	Other
30	10	1966	30,000	Other

Table 28
Islamic Community Center

Interviewees	Year of Buil-ding/ Conver-sion	Materials used	Important dates in evolution	Attitude dictated by the dominant group	Dominant group selected the Architect	Dominant group selected the typology
Interviewee (1)	2000	concrete\ Glass	1999	No	Yes	Yes
Interviewee (2)	2000	concrete\ Glass	2007	No	n/d	n/d
Interviewee (3)	2000	concrete\ Glass	2007	Yes	n/d	n/d
Interviewee (4)	2000	concrete\ Glass	1999	No	n/d	No
Interviewee (5)	2000	concrete\ Glass	2007	No	No	No

Table 29
Islamic Community Center

Community itself secures money	Outside Grant	Com-munity's size determines the attitude	Percentage of African-Americans	Percentage of Arab Americans
Yes	No	Yes	5	45
Yes	No	Yes	10 to 15	10 to 15
Yes	No	Yes	5	50
Yes	Yes	Yes	5	45
Yes	Yes	Yes	5	45

Table 30
Islamic Community Center

Percentage of South Asians	Percentage of others	Year of founding of community	Size of the community	Relation-ship with communities
45	5	1980	1,500	Entertainment
10 to 15	10 to 15	1983	n/d	n/d
35	10	1980	1,500	n/d
45	5	1980	1,500	Entertainment
45	5	1980	1,500	Other/Socio-Spiritual/Cultural

Table 31
First Cleveland Mosque

Interviewees	Year of Building/ Conversion	Materials used	Important dates in evolution	Attitude dictated by the dominant group	Dominant group selected the Architect	Dominant group selected the typology
Interviewee (1)	1976	Wood	n/d	No	Yes	No
Interviewee (2)	1976	Wood	n/d	Yes	No	No
Interviewee (3)	1976	Wood	n/d	Yes	No	No
Interviewee (4)	1976	Wood	n/d	N o	No	No
Interviewee (5)	1976	Wood	n/d	No	No	No

Table 32
First Cleveland Mosque

Community itself secures money	Outside Grant	Community's size determines the attitude	Percentage of African-Americans	Percentage of Arab Americans
No	Yes	No	70	15
No	Yes	No	70	15
No	Yes	No	70	15
Yes	Yes	No	70	15
Yes	Yes	No	70	15

Table 33
First Cleveland Mosque

Percentage of South Asians	Percentage of others	Year of founding of community	Size of the community	Relation-ship with communities
10	5	1937	800	Financial/ Entertainment
10	5	1937	800	Financial/ Entertainment
10	5	1937	800	Financial/ Entertainment
10	5	1937	800	Financial/ Entertainment
10	5	1937	800	Financial/ Entertainment

Table 34
Masjid Bilal

Interviewees	Year of Buil-ding/ Conver-sion	Materials used	Important dates in evolution	Attitude dictated by the dominant group	Dominant group selected the Architect	Dominant group selected the typology
Interviewee (1)	1981	Wood/ Concrete	n/d	Yes	No	No
Interviewee (2)	1981	Wood/ Concrete	n/d	Yes	No	Yes
Interviewee (3)	1981	Wood/ Concrete	n/d	Yes	No	Yes
Interviewee (4)	1981	Wood/ Concrete	n/d	Yes	No	No
Interviewee (5)	1981	Wood/ Concrete	n/d	Yes	No	No

Table 35
Masjid Bilal

Community itself secures money	Outside Grant	Com-munity's size determines the attitude	Percentage of African-Americans	Percentage of Arab Americans
No	No	Yes	90	0
No	No	No	100	0
No	No	Yes	100	0
Yes	Yes	Yes	90	0
Yes	Yes	Yes	90	0

Table 36
Masjid Bilal

Percentage of South Asians	Percentage of others	Year of founding of community	Size of the community	Relation-ship with communities
0	10	n/d	400	None
0	0	n/d	500	None
0	0	n/d	550	None
0	0	n/d	400	None
0	10	n/d	400	None

Table 37
Masjid Al-Uqbah

Interviewees	Year of Building/ Conversion	Materials used	Important dates in evolution	Attitude dictated by the dominant group	Dominant group selected the Architect	Dominant group selected the typology
Interviewee (1)	1997	Wood/ Concrete	1988-1995-1997	No	No	No
Interviewee (2)	1997	Wood/ Concrete	1988-1995-1997	No	No	No
Interviewee (3)	1997	Wood/ Concrete	1988-1995-1997	No	No	No
Interviewee (4)	1997	Wood/ Concrete	1988-1995-1997	No	No	No
Interviewee (5)	1997	Wood/ Concrete	n/d	Yes	Yes	No

Table 38
Masjid Al-Uqbah

Community itself secures money	Outside Grant	Community's size determines the attitude	Percentage of African-Americans	Percentage of Arab Americans
Yes	Yes	No	60	30
Yes	Yes	No	60	30
Yes	Yes	No	60	30
Yes	Yes	Yes	60	30
Yes	n/d	Yes	60	30

Table 39
Masjid Al-Uqbah

Percentage of South Asians	Percentage of others	Year of founding of community	Size of the community	Relation-ship with communities
10	-	1988	700	Financial/ Entertainment
10	-	1988	700	Financial/ Entertainment
10	-	1988	700	Financial/ Entertainment
10	-	1988	700	Financial/ Entertainment
10	-	1988	700	Financial/ Entertainment

Table 40
Masjid Al-Islam

Interviewees	Year of Buil-ding/ Conver-sion	Materials used	Important dates in evolution	Attitude dictated by the dominant group	Dominant group selected the Architect	Dominant group selected the typology
Interviewee (1)	1951	Brick	n/d	No	No	No
Interviewee (2)	1951	Brick	n/d	No	No	No
Interviewee (3)	1951	Brick	n/d	No	No	No
Interviewee (4)	1951	Brick	n/d	No	No	No
Interviewee (5)	1951	Brick	n/d	No	No	No

Table 41
Masjid Al-Islam

Community itself secures money	Outside Grant	Com-munity's size determines the attitude	Percentage of African-Americans	Percentage of Arab Americans
Yes	Yes	No	20	40
Yes	Yes	No	20	40
Yes	Yes	No	20	40
Yes	Yes	Yes	20	40
Yes	Yes	Yes	20	40

Table 42
Masjid Al-Islam

Percentage of South Asians	Percentage of others	Year of founding of community	Size of the community	Relation-ship with communities
25	15	1993	1500	Financial/ Entertainment
25	15	1994	1750	Financial/ Entertainment
25	15	1993	1000	Financial/ Entertainment
25	15	1993	1000	Financial/ Entertainment
25	15	1993	1000	Financial/ Entertainment

Table 43
Kent Mosque and Islamic Society

Interviewees	Year of Building/ Conversion	Materials used	Important dates in evolution	Attitude dictated by the dominant group	Dominant group selected the Architect	Dominant group selected the typology
Interviewee (1)	1984	Brick	n/d	No	No	No
Interviewee (2)	1984	Brick	n/d	No	No	No
Interviewee (3)	1984	Brick	n/d	No	No	No
Interviewee (4)	1984	Brick	n/d	No	No	No
Interviewee (5)	1984	Brick	n/d	No	No	No

Table 44
Kent Mosque and Islamic Society

Community itself secures money	Outside Grant	Community's size determines	Percentage of African-Americans	Percentage of Arab Americans
No	Yes	Yes	10	50
No	Yes	Yes	15	55
No	Yes	Yes	15	55
Yes	Yes	No	10	50
Yes	No data	No	10	50

Table 45
Kent Mosque and Islamic Society

Percentage of South Asians	Percentage of others	Year of founding of community	Size of the community	Relation-ship with communities
35	5	1980	300	Financial/ Entertainment
25	5	1980	350	Financial/ Entertainment
25	5	1980	350	Financial/ Entertainment
35	5	1980	350	Financial/ Entertainment
35	5	1980	300	Financial/ Entertainment

APPENDIX B

QUESTIONNAIRE

Survey/Observation Sheet Date……

Mosque ……...Address…….....

Location……Urban……Residential
Suburban Commercial
Rural Industrial
Mixed use

Area of each floor……Number of floors……..…….

1. Traditional liturgical elements-

Minarets	Yes/Height	No	Other……...
Prayer hall	Yes/Area	No	Other……..
Ablution Fountain	Yes/Location	No	Other…….....
Qibla wall	Yes	No	Other……...
Mihrab	Yes	No	Other……...
Minbar	Yes	No	Other……...
Courtyard	Yes/Area	No	Other……..
Portal	Yes	No	Other……..
Repeated geometric patterns	Yes/ Type…….	No	
Dikka	Yes	No	Other……...
Kursi	Yes	No	Other……..

2. Typology-

Traditional	Hypostyle	Central-dome	Iwan	Other/Type ……...
Modern	Imported	Adapted	Innovative	Other/Type ……...

3. Interior spatial distribution-

Community hall	Yes/Number/Area	No
Kitchen	Yes/Number/Area	No
Classrooms	Yes/Number/Area	No
Gym	Yes/Area	No
Library	Yes/Area	No
Offices	Yes/NumberArea	No

4. Landscape-

Parking lots	Yes/Number/Area	No
Green areas	Yes/Number/Area Types- Park Garden	No

APPENDIX C

QUESTIONNAIRE

Questions about mosque history, construction and community composition

Date…….

Mosque …….....Address…….....

Interviewee……Imam……...

1. Mosque history and construction

-Year built……..

-Materials Used

Siding……..Brick…….Concrete……..Stone……Others……

-History of evolution/

Important

dates…….....

……

……

…….....

2. Process of selection

-Is the critical size of the dominant group-racial, ethnic, political-dictate the attitude of the community?

Yes/How……

……

……

No……...

-Does the dominant group select the kind of architect employed?

Yes

……

If not / How is the architect selected?
……

-Does the dominant group select typology?
Yes,How…….
……..……...
….....
……
……
No……...

3. Process of securing money
- Through the community itself
Yes
……
……
If No, how? And through what sources?
……
……
-Other sources of funding
Other communities…….Other states……Individuals

-Does the size of the community determine the degree of prosperity?
Yes
……
No,
How……

4. Mosque community
- Composition- Percentage of African American ……
Percentage of Arab American …….
Percentage of South Asian …….
Percentage of others …….
- Year of founding of community
……
- Size/Number of persons
…….....

- Relationships with other communities
Financial……Entertaining……Other……

Any other comments:

……
……
……
……
……
……
……
……
……
……

Any additional information or important questions not included in the survey

……
……
……
……
……
……

APPENDIX D

IRB APPROVAL

The University of Akron Institutional Review Board

Registration Form

Please complete this form if you propose to conduct a project that involves interaction/intervention with or collection of information about human individuals that meets one or more of the criteria below.

IRB review is not required because:

- ☐ The project does not meet the Common Rule definition of research.
- ☐ All data/specimens are about/from deceased individuals.
- ☐ Results will be shared only with the client or stakeholder(s) for private use for evaluation of an established program or for other non-research purposes.
- ☐ The project utilizes only data from secondary sources that are not individually identifiable.
- ☐ The project is an internal evaluation intended for quality control of ongoing program only.
- ☒ The project involves only oral history activities, such as open ended interviews, that ONLY document a specific event or the experiences of individuals without intent to draw conclusions, generalize findings, or influence policy or practice.

Project Title:	**Mosques in Northeast Ohio**
Principal Investigator (PI):	**Lucie Khachan**
PI Department:	**Geography and Planning**
PI Phone & email:	**(216)338-5322**
Co-Investigators (list all co-investigators):	
Faculty Advisor (if PI is a student):	**Dr. Robert Kent**

Provide below a brief description of the purpose of this study and the type and source of the information on individuals that you will use. (The space will expand as you type.)
It is a preliminary study about mosques in Akron, Cleveland, and Kent areas. During this exploratory study, I will visit the mosques and talk to mosque officials. I will also take pictures and meet engineers, planners, and architects involved on mosque siting and construction. Moreover, I will ask questions about the mosque architecture such as the year of built, the location, the history of development, the concept and design, and the influence of the American planning law and regulations on the design. I will also ask questions about the community itself such as the community composition and size, and the relationships with other mosque communities.

Investigator's Assurance

I certify that the information provided in this Registration Form is complete and accurate. I understand that as Principal Investigator, I have ultimate responsibility for the ethical conduct of this project.

Principal Investigator: Lucie Khachan Date: 12 June 2007

Faculty Advisor's Assurance

I certify that the student is knowledgeable about the regulations and policies governing the research and has sufficient training and experience to conduct this particular study.

Faculty Advisor: Robert B Kent Date: 12 June 2007

Please submit this form to the IRB, c/o ORSSP, 284 Polsky, 44325-2102

Excluded from IRB review ☒ IRB Chair/Designee Date: 6/12/07