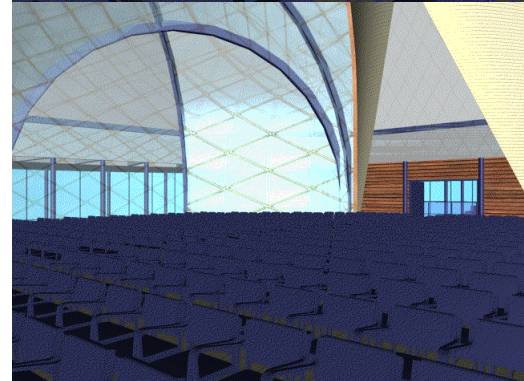
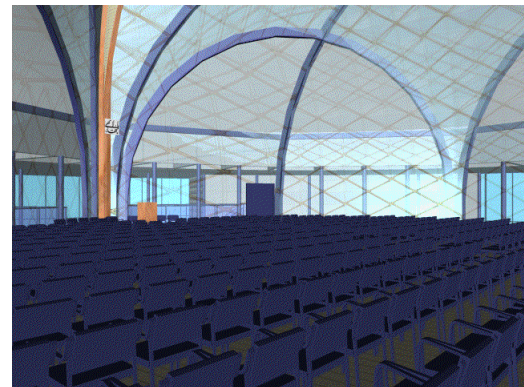
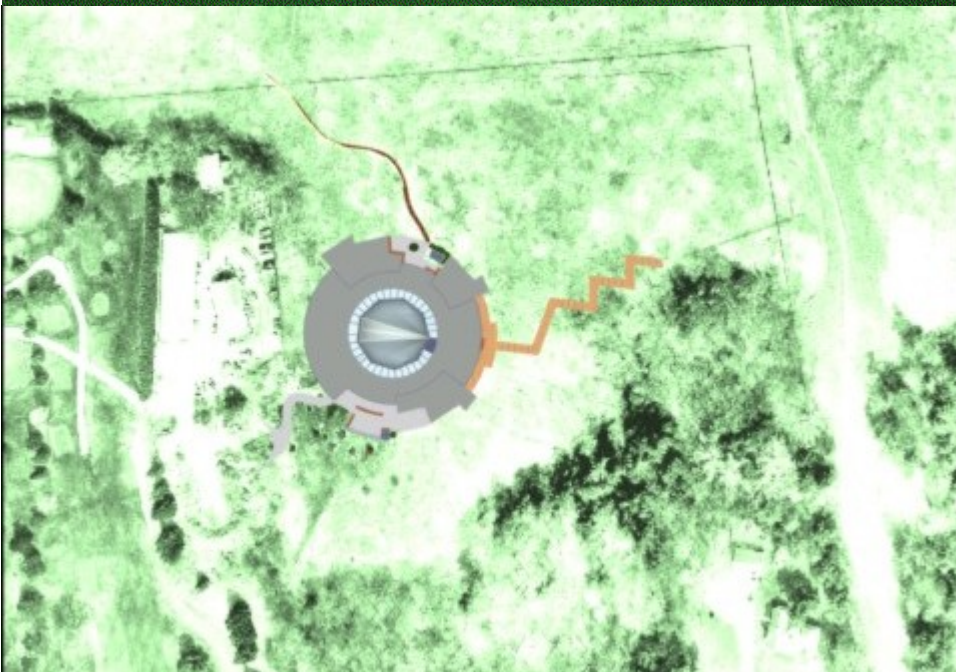
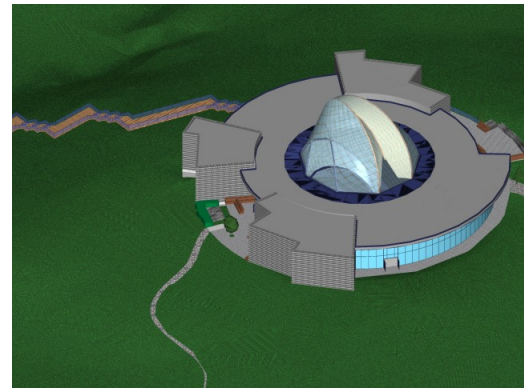
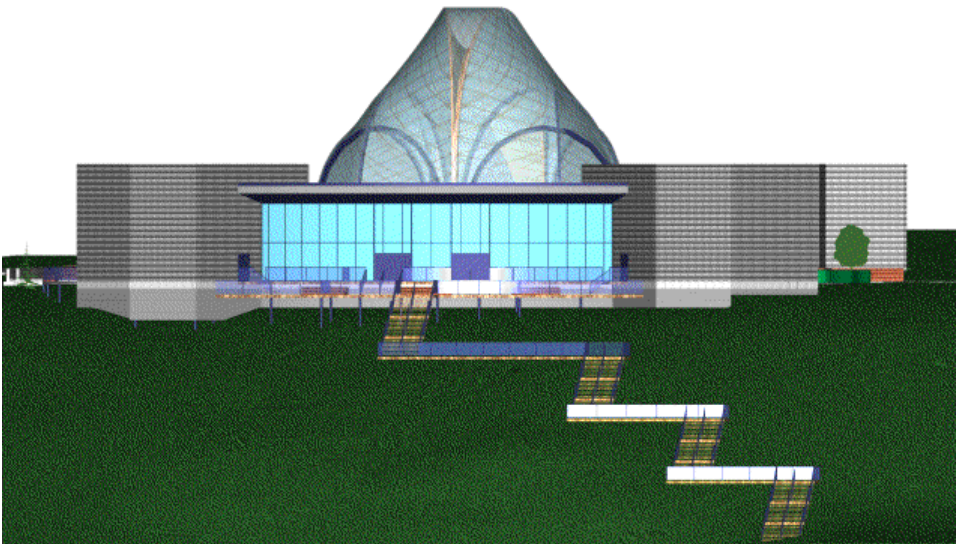
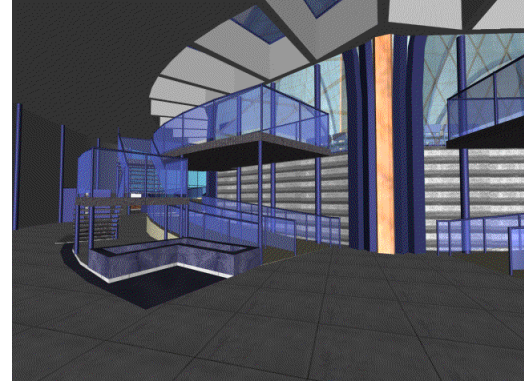
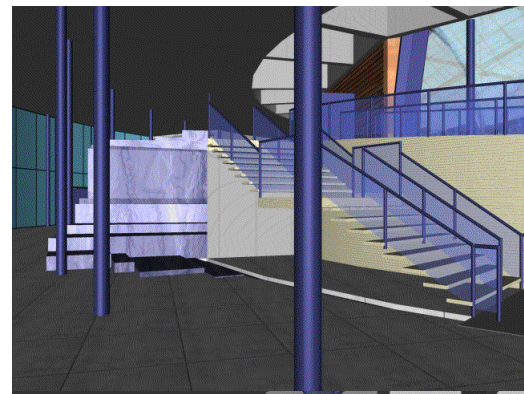
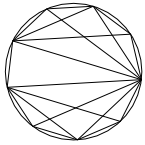


A BAHÁ'Í TEMPLE FOR CANADA

By Susanna A. Khodarahmi-Bron



A BAHÁ'Í TEMPLE FOR CANADA

By Susanna A. Khodarahmi-Bron

A Master's Degree Project submitted to the Faculty of Environmental Design in partial fulfilment of the requirements for the degree of Master of Architecture.

For the University of Calgary

Calgary, Alberta

January 2003

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ABSTRACT AND KEY WORDS

Using the piece of land in Markham, Ontario, purchased by the Bahá'í community for the eventual actualization of the first Bahá'í Temple in Canada, the intent of this Master's Degree Project is to propose a design for that purpose. In pursuit of this objective, research is done exploring the characteristics of a Bahá'í Temple, using both religious texts and a study of precedent, reviewing possibilities for experimentation. A brief overview of symbolism and sacred place is conducted, beginning with general terms, and then examining a few relevant Bahá'í examples, such as the number nine. Subsequently, a short study of Canadian culture and architecture is done, examining possibilities of expression, in addition to subsequent design influences. After a fairly thorough site analysis, a method of design development is devised, resulting in the final product: A Bahá'í Temple for Canada.

Key Words: Religious Architecture, Bahá'í Temple, Nine, Worship, Markham, Ontario, Canada.

PRAYER

“Blessed is the spot, and the house, and the place, and the city, and the heart, and the mountain, and the refuge, and the cave, and the valley, and the land, and the sea, and the island, and the meadow where mention of God hath been made, and His praise glorified.”

-BAHÁ'U'LLÁH¹

¹ Bahá'u'lláh. *Bahá'í Prayers, A Selection of Prayers Revealed by Bahá'u'lláh, The Báb, and 'Abdu'l-Bahá*. Bahá'í Publishing Trust, Wilmette, Illinois, 1991.



Fig. 1: Bahá'í Temple in Sydney, Australia.

ACKNOWLEDGEMENTS

I would like to thank my committee members, including my Advisor, Dr. Pierre-Yves Mocquais, and especially my Supervisor, Dr. Michael McMordie, for all their time and effort towards this Project. Furthermore, I would like to thank everyone connected with the Canadian National Bahá'í Centre and the Town of Markham who aided me in my research. And finally, I would like to thank my family, in particular my husband, through whose love and support made this Degree possible.

FOREWORD

Please note that the following Project is a reflection of my worldview and religious beliefs, but is not intended to offend. Therefore any reference to God or the Deity has been capitalized out of respect, using He or Him as is the most common practice, although recognizing the fact that God has no gender. However, the system of capitals frequently used in Bahá'í context to refer to the Prophets of God and their texts, when not using titles or proper names, has not been used, unless the words are taken from a direct quote. For example, personal pronouns referring to Bahá'u'lláh have not been capitalized, neither have references to sacred texts. In addition, other than direct quotes, any interpretation of the Bahá'í writings expressed in this Project is to be considered as my personal opinion, and should not be taken as fact without independent investigation on the reader's part.

ABOUT THE AUTHOR

Raised in a Unitarian/Catholic environment, I was drawn to the Bahá'í Faith near the end of my Degree of Bachelor of Environmental Design at the University of Manitoba, in Winnipeg, Manitoba. Finding that it provided the most logical, yet spiritual perspective of today's world, I decided to join the religion as a full participant. Now, in my final year of my Master of Architecture program at the University of Calgary, I chose a topic for my Master's Degree Project that synthesizes my two leading interests: the Bahá'í Faith and architecture. Using a site in Markham, Ontario, purchased by the Canadian Bahá'í Community for the potential erection of a House of Worship, my design for *A Bahá'í Temple for Canada* was the result of this Project.

Understanding that it is a fairly new religion, being only a little over 150 years old, and that it is not widely understood, I have included within this Project, a brief introduction to the Bahá'í Faith and a glossary of terms. (Appendix A and Glossary) Therefore, hopefully, any reader, regardless of their background knowledge, will be able to follow what is written within these pages, and progress, as I did, through the process of its creation, with a greater understanding of the Bahá'í Faith and Bahá'í inspired architecture.

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Source: <http://www.bahai-biblio.org/centre-photo/lieux/temple/ichqabad/tichqa~03m~ichqabad-entree.htm>

2. Bahá'í Temple in Kampala, Uganda.

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Source: <http://www.bahai-biblio.org/centre-photo/lieux/temple/ichqabad/tichqa~08m~ichqabad-plan.htm>

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Source: *Architectural Information*. Bahá'í House of Worship, Wilmette, Illinois, 2001 (Unpublished hand-out from the Bahá'í House of Worship Visitors' Center Main Office).

8. Interior of the Bahá'í Temple in Wilmette, Illinois. Photo by Jens von Krogh.

Source: National Spiritual Assembly of the Bahá'ís of the United States. Bahá'í Publishing Trust, Wilmette, Illinois, 1994.

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Source: <http://www.janeresture.com/samoa/fales.htm>

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Source: <http://www.bahai-biblio.org/centre-photo/lieux/temple/new-delhi/proche-newdelhi/tnewdp~43m~new-delhi-proche.htm>

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Source: Scerrato, Umberto. *Monuments of Civilization: Islam*. Cassell and Company Ltd., 1977, p. 93.

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Source: Scerrato, Umberto. *Monuments of Civilization: Islam*. Cassell and Company Ltd., 1977, p. 106.

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Source: Badiie, Julie. *An Earthly Paradise: Bahá'í Houses of Worship Around the World*. George Ronald Publisher, Oxford, 1992, p. 107.

6. Notations for the number nine.

Source: Balmond, Cecil. *Number 9: The Search for the Sigma Code*. Prestel, New York, New York, 1998, p. 39.

7. Equations.

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Source: Balmond, Cecil. *Number 9: The Search for the Sigma Code*. Prestel, New York, New York, 1998, p. 203.

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Source: Balmond, Cecil. *Number 9: The Search for the Sigma Code*. Prestel, New York, New York, 1998, p. 90.

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Source: Balmond, Cecil. *Number 9: The Search for the Sigma Code*. Prestel, New York, New York, 1998, p. 122.

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Source: Balmond, Cecil. *Number 9: The Search for the Sigma Code*. Prestel, New York, New York, 1998, p. 134.

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Source: Doczi, György. *The Power of Limits: Proportional Harmonies in Nature, Art and Architecture*. Shambhala Publications, Boulder, Colorado, 1981, title page.

13. “Design over the entryway, the Bahá’í House of Worship in Wilmette. The decoration shows the letters ‘ABHA’, Arabic for ‘the Most Glorious.’ In the center is a stylized depiction of a tree.”

Source: Badiee, Julie. *An Earthly Paradise: Bahá’í Houses of Worship Around the World*. George Ronald Publisher, Oxford, 1992, p.103.

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Source: Momen, Wendi. *A Basic Bahá’í Dictionary*. George Ronald Publishers, Oxford, 1989, p. 90.

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Source: Momen, Wendi. *A Basic Bahá’í Dictionary*. George Ronald Publishers, Oxford, 1989, p. 198.

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Source: Badiee, Julie. *An Earthly Paradise: Bahá’í Houses of Worship Around the World*. George Ronald Publisher, Oxford, 1992, p.117.

17. “Mountain Temple, Kanchipuram, India.”

Source: Badiee, Julie. *An Earthly Paradise: Bahá’í Houses of Worship Around the World*. George Ronald Publisher, Oxford, 1992, p, 66.

18. The Shrine of the Báb, Haifa, Israel.

Source: <http://www.bahai-biblio.org/centre-photo/lieux/bab/mausole-loin/bmense~17m~mausole-bab-loin.htm>

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Source: <http://www.bahai-biblio.org/centre-photo/lieux/Bahji/tombeau-baha/seuil-sacre/jseuil~17m+bahji-seuil-sacre.htm>

20. Plan of the Great Mosque of the Umayyads. Prayer hall is divided into three naves parallel to the Qiblih wall.

Source: Scerrato, Umberto. *Monuments of Civilization: Islam*. Cassell and Company Ltd., 1977, p. 25.

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1. Habitat '67 designed by Moshe Safdie for Expo '67.

Source: Susanna A. Khodarahmi-Bron, 2002.

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Source: Whiteson, Leon. *Modern Canadian Architecture*. Hurtig Publishers Ltd., Edmonton, Alberta, 1983, p. 49.

3. The Lester Pearson College of the Pacific on Vancouver Island: “View down over Pedder Bay.” Photo by John Fulker.

Source: Whiteson, Leon. *Modern Canadian Architecture*. Hurtig Publishers Ltd., Edmonton, Alberta, 1983, p. 48.

4. Saint Mary’s Roman Catholic Church, Red Deer, Alberta. Photo by Hu Hohn.

Source: Kalman, Harold. *A History of Canadian Architecture*. Oxford University Press, Toronto, 1994, vol. 2, p. 824.

5. Toronto City Hall, Toronto, Ontario.

Source: Kalman, Harold. *A History of Canadian Architecture*. Oxford University Press, Toronto, 1994, vol. 2, p. 807.

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Source: Kalman, Harold. *A History of Canadian Architecture*. Oxford University Press, Toronto, 1994, vol. 2, p. 841.

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Source: Ahmadíyyih, Hidáyatu’lláh. *The Bahá’í Faith*. Bahá’í Canada Publications, Thornhill, Ontario.

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Source: Susanna A. Khodarahmi-Bron, 2001.

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Source: Susanna A. Khodarahmi-Bron, 2001.

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Source: Susanna A. Khodarahmi-Bron, 2001.

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Source: Susanna A. Khodarahmi-Bron, 2001.

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Source: Susanna A. Khodarahmi-Bron, 2001.

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Source: *Town of Markham Data*. Town of Markham, Centre for GIS, Markham, Ontario, April 1999 (Received on CD and through e-mail).

Modified by: Susanna A. Khodarahmi-Bron, 2003.

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Source: Pehnt, Wolfgang. *Expressionist Architecture*. Praeger Publishers, New York, New York, 1973, p. 56.

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Source: Pehnt, Wolfgang. *Expressionist Architecture*. Praeger Publishers, New York, New York, 1973, p. 150.

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Source: Pehnt, Wolfgang. *Expressionist Architecture*. Praeger Publishers, New York, New York, 1973, p. 150.

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Source: Pehnt, Wolfgang. *Expressionist Architecture*. Praeger Publishers, New York, New York, 1973, p. 76.

5. BCE Place, Toronto, Ontario. Photo by Robert Burley.

Source: Sharp, Dennis. *Architectural Monographs No. 46: Santiago Calatrava*. Academy Editions, London, England, 1996, p. 39.

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Source: Sharp, Dennis. *Architectural Monographs No. 46: Santiago Calatrava*. Academy Editions, London, England, 1996, p. 34.

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Source: Holgate, Alan. *The Art of Structural Engineering: The Work of Jörg Schlaich and His Team*. Edition Axel Menges, Stuttgart/London, 1997.

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Source: <http://stardust.jpl.nasa.gov/spacecraft/aerogel.html>

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Source: Susanna A. Khodarahmi-Bron, 2003.

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Source: Polo, Marco. "Speed and Stasis," *Canadian Architect*. Business Information Group, April 2002, vol. 47, no. 4, p.16.

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Source: Susanna A. Khodarahmi-Bron, 2003.

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Source: Susanna A. Khodarahmi-Bron, 2003.

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Source: Susanna A. Khodarahmi-Bron, 2003.

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Source: Susanna A. Khodarahmi-Bron, 2003.

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Source: Susanna A. Khodarahmi-Bron, 2003.

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Source: Susanna A. Khodarahmi-Bron, 2003.

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Source: Susanna A. Khodarahmi-Bron, 2003.

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Source: Susanna A. Khodarahmi-Bron, 2003.

23. Interior view of Hall of Worship looking west.

Source: Susanna A. Khodarahmi-Bron, 2003.

APPENDICES

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Source: Susanna A. Khodarahmi-Bron, 2003.

B. Aerial Photograph of Site

Source: *Town of Markham Data*. Town of Markham, Centre for GIS, Markham, Ontario, April 1999 (Received on CD and through e-mail).

Modified by: Susanna A. Khodarahmi-Bron, 2003.

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Sources:

1. Painting: <http://www.studiokgraphics.on.ca>
2. Landfill Information: Morrison Beatty Ltd., and Baker Salmona Assoc. Ltd. *Settler's Park Master Plan*. Corporation of the Town of Markham, Parks and Recreation Department, January 1987, fig. 2-3.
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6. Map: Berczy, William. "Das Deutsche Erbe in Markham," *Conrier German Newspaper*. June 29, 1972, p.23.

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Source: Susanna A. Khodarahmi-Bron, 2001.

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Modified by: Susanna A. Khodarahmi-Bron, 2003.

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Source: Susanna A. Khodarahmi-Bron, 2003.

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Source: Susanna A. Khodarahmi-Bron, 2003.

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Source: Susanna A. Khodarahmi-Bron, 2003.

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Source: Susanna A. Khodarahmi-Bron, 2003.

P. Final Design: Wall Section

Source: Susanna A. Khodarahmi-Bron, 2003.

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Source: Susanna A. Khodarahmi-Bron, 2003.

INTRODUCTION

“Blessed is he who, at the hour of dawn, centring his thoughts on God, occupied with His remembrance, and supplicating His forgiveness, directeth his steps to the Mashriqu'l-Adhkár and, entering therein, seateth himself in silence to listen to the verses of God, the Sovereign, the Mighty, the All-Praised. Say: The Mashriqu'l-Adhkár is each and every building which hath been erected in cities and villages for the celebration of My praise. Such is the name by which it hath been designated before the throne of glory, were ye of those who understand.”

-Bahá'u'lláh¹

Bahá'í Houses of Worship have so far been established in all five continents, and have a continental mandate. The process has now been started to erect Houses of Worship in major sub-continental areas. Each continental House of Worship, in Kampala, Uganda; Wilmette, Illinois; Frankfurt, Germany; Sydney Australia; and 'Ishqábád, Turkistan; is considered to be a “Mother Temple” of that continent. The other three Houses of Worship in existence (Panama, Samoa and New Delhi, India) have been erected in sub-continental areas, as will be the Temple to be realized soon in Santiago, Chile, and are therefore, “Mother Temples” of those sub-continental areas. Individual countries have yet to have Houses of Worship built within their own borders to act as “Mother Temples” of their countries. This is the case for the Bahá'í community of Canada.

Anticipating the eventual actualization of such an undertaking, this Master's Degree Project (MDP) consists of a design proposal for the first Bahá'í Temple for Canada. Using a piece of land in Markham, Ontario, already purchased by the Bahá'í community for the potential erection of a House of Worship, the process to achieve the final design includes a literature review, a site analysis, and an exploration through design. The topics included in this study are the authoritative Bahá'í texts, existing Bahá'í Temples, symbolism, sacred place, Canadian culture and architecture, other architectural influences, and general design guidelines and methods. Accordingly, through this process, the ultimate goal of the execution of this strategy

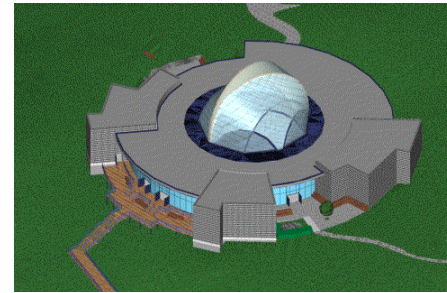


Fig. 1: Preview of Design.

is to create a place that best embodies the spirit of the above quote, for the Canadian environment, in the time allotted for this MDP.² (Fig. 1)

¹ Bahá'u'lláh. *The Kitáb-i-Aqdas*. Bahá'í World Centre, Haifa, Israel, 1992, verse 115, p. 61.

² For an introduction to the Bahá'í Faith, please see Appendix A and the Glossary.

CHAPTER 1

INVESTIGATING THE BAHÁ'Í TEMPLE

“Mashriqu'l-Adhkár” is an Arabic term that literally means “Dawning-place of the praises or remembrances or mention of God.”¹ It refers to the heart of the sincere worshiper, to any space that is reserved for devotions, or to the Bahá'í Temple and its dependencies. In the Bahá'í Faith, the entire institution of the Mashriqu'l-Adhkár has the mission to act as an announcement of the oneness of mankind and a unifying element between humanity and the Kingdom of God. However, Shoghi Effendi, the Guardian of the Bahá'í Faith states:

“It should be borne in mind that the central Edifice of the Mashriqu'l-Adhkár, round which in the fullness of time shall cluster such institutions of social service as shall afford relief to the suffering, sustenance to the poor, shelter to the wayfarer, solace to the bereaved, and education to the ignorant, should be regarded apart from these Dependencies, as a House solely designed and entirely dedicated to the worship of God...”²

For the purpose of this project, the study of the Mashriqu'l-Adhkár has been limited to the buildings that conform to the particular architectural characteristics of a Bahá'í House of Worship and are reserved for worship. The importance of the dependencies to cure the ills of society through their designated programs and complete the institution of the Mashriqu'l-Adhkár, is recognized, but has not been studied at any great length for the following reason: In the development of the Bahá'í Faith, the writings indicate that the Mashriqu'l-Adhkár must begin as a spiritual institution first and then, as specific needs arise, and material means increase, the dependencies will grow around it. The Universal House of Justice, which is the internationally elected administrative body of the Bahá'í Faith, explains in a letter dated 20 April 1997:

“The establishment of the Mashriqu'l-Adhkár as a distinct institution has been started at the continental level, with the erection in each continent of the building which constitutes the prayer hall and central shrine of a Mashriqu'l-Adhkár and then, as

*material means permit, by the construction and operation of the dependencies which are designed to surround that edifice. So far only the Home for the Aged in Wilmette has been established... ”*³

Therefore, for this MDP, I have decided to develop a proposal for a single building, the House of Worship itself, rather than including ancillary buildings that may be created in the future according to the needs of the time. Consequently, the design proposal has become more detailed than a vague outline of a building, and can serve as a basis for its potential materialization into reality, although, as time has been constrained for this Project, staying within the limits of suggestion, and not a thoroughly completed, working product.

In the research of the texts for the nature of the Bahá'í Temple, solely authoritative Bahá'í writings have been used. These include, in order of priority, the texts from Bahá'u'lláh, the Founder of the Bahá'í Faith, 'Abdu'l-Bahá, Bahá'u'lláh's son and appointed interpreter of Bahá'u'lláh's writings, Shoghi Effendi, the great-grandson of Bahá'u'lláh and Guardian of the Bahá'í Faith from 1921 to 1957, and the Universal House of Justice.⁴ The writings of Bahá'u'lláh are considered by the Bahá'ís to be the most recent revelation of God to humanity, and are therefore deemed to be the most authoritative. However, in the *Kitáb-i-'Ahd* (Book of the Covenant), Bahá'u'lláh states:

*“Consider that which We have revealed in Our Most Holy Book: ‘When the ocean of My presence hath ebbed and the Book of My Revelation is ended, turn your faces toward Him Whom God hath purposed, Who hath branched from this Ancient Root.’ The object of this sacred verse is none other except the Most Mighty Branch [Abdu'l-Bahá].”*⁵

He also explains in the *Kitáb-i-Aqdas* (Most Holy Book) “refer ye whatsoever ye understand not in the Book to Him Who hath branched from this mighty Stock.”⁶ Hence, upon his death, Bahá'u'lláh invested 'Abdu'l-Bahá with the sole authority to interpret his writings. In turn, in his *Will and Testament*, 'Abdu'l-Bahá appointed his grandson Shoghi Effendi as Guardian of the Bahá'í Faith and sole interpreter of the writings of both Bahá'u'lláh and 'Abdu'l-Bahá. In his *Will and Testament*, 'Abdu'l-Bahá writes:

“O my loving friends! After the passing away of this wronged one, it is incumbent upon the Aghsán (Branches), the Afján (Twigs) of the Sacred Lote-Tree, the Hands (pillars) of the Cause of God and the loved ones of the Abhá Beauty to turn unto Shoghi Effendi...as he is the sign of God, the chosen branch, the Guardian of the Cause of God... He is the Interpreter of the Word of God and after him will succeed the first-born of his lineal descendents.”⁷

Within the Bahá'í context, the writings of Bahá'u'lláh, ‘Abdu’l-Bahá, and Shoghi Effendi represent successive levels of interpretation and expansion and are essentially complementary. After the passing of Shoghi Effendi in 1957, due to the lack of lineal descendents, authoritative interpretation of the writings of Bahá'u'lláh and ‘Abdu’l-Bahá ceased. The role of the Universal House of Justice elected in 1963 according to the provisions in the writings of Bahá'u'lláh and ‘Abdu’l-Bahá, consists essentially in enacting laws for the international Bahá'í community that are not expressly recorded in the writings. While authoritative interpretation is no longer possible, personal interpretation is permissible, and this MDP is a representation of a personal interpretation.

The precedent study of the application of the characteristics of a Bahá'í House of Worship uses other sources. Some examples include *The Bahá'í World*, which is assembled by, and contains articles from individual Bahá'ís, and magazine articles from non-Bahá'í organizations. Finally, the timeless tools of prayer and meditation are used to reflect on the research and guide the design later in the document.

THROUGH THE TEXTS

To begin the study of the Bahá'í texts, the following verse found in Bahá'u'lláh's *Kitáb-i-Aqdas*, which is Arabic for *The Most Holy Book*, seems to embody what is expected for a Bahá'í Temple:

*“O people of the world! Build ye houses of worship throughout the lands in the name of Him Who is the Lord of all religions. Make them as perfect as is possible in the world of being, and adorn them with that which befitteth them, not with images and effigies. Then, with radiance and joy, celebrate therein the praise of your Lord, the Most Compassionate. Verily, by His remembrance the eye is cheered and the heart is filled with light.”*⁸

Most of the verse is quite self-explanatory. However, it is in the writings of ‘Abdu’l- Bahá and Shoghi Effendi that the purpose and specifics of Bahá'u'lláh's statement is explained. *The Promulgation of Universal Peace* by ‘Abdu’l- Bahá states:

*“In brief, the original purpose of temples and houses of worship is simply that of unity--places of meeting where various peoples, different races and souls of every capacity may come together in order that love and agreement should be manifest between them. That is why Bahá'u'lláh has commanded that a place of worship be built for all the religionists of the world; that all religions, races and sects may come together within its universal shelter; that the proclamation of the oneness of mankind shall go forth from its open courts of holiness--the announcement that humanity is the servant of God and that all are submerged in the ocean of His mercy. It is the *Mashriqu'l-Adhkár*.”*⁹

Further in the *Kitáb-i-Aqdas*, Bahá'u'lláh writes:

*“Whatever hath been constructed for the worship of the one true God, such as mosques, chapels and temples, must not be used for any purpose other than the commemoration of His Name. This is an ordinance of God, and he who violateth it is verily of those who have transgressed...”*¹⁰

This implies that anything not directly associated with the worship of God is not permissible within the walls of any House of Worship. In addition, the *Kitáb-i-Aqdas* states that pulpits are prohibited, however, “a chair placed upon a dais” is allowed for the speaker, as are chairs or benches for the rest of the people in attendance.¹¹ The firm nature with which these are written suggests that there are guidelines on this subject. Accordingly, ‘Abdu’l- Bahá further describes the manner of the activities to be held in the Temple:

*“In the Mashriqu’l-Adhkár services will be held every morning. There will be no organ in the Temple. In buildings near by, festivals, services, conventions, public meetings and spiritual gatherings will be held, but in the Temple the chanting and singing will be unaccompanied. Open ye the gates of the Temple to all mankind.”*¹²

In letters written by Shoghi Effendi, published in *Lights of Guidance*, he explains that ‘Abdu’l- Bahá is not expressing Bahá'u'lláh's dislike for organ music, but merely stating that no musical instruments of any kind may interfere with the Holy Scripture uttered or sung by the human voice. In addition, sermons, speeches, addresses, lectures, or “extraneous matter” may not be introduced. Solely the writings of the Báb, Bahá'u'lláh, the sacred writings of the other Prophets of the world's religions, and the writings of ‘Abdu’l- Bahá may be recited within its walls, in addition to hymns “based upon Bahá’í or non-Bahá’í sacred Writings.” Furthermore, the position of singers, the dais, or any other low platform may not be fixed, which seems to imply that the seating should be flexible too. Shoghi Effendi also clarifies that “images and pictures, with the exception of the Greatest Name,¹³ should be strictly excluded” from within the Temple's walls.¹⁴ He further reveals that “the more universal and informal the character” of worship in the Temple the better, the reasons for which can be found in the above paragraph from *The Promulgation of Universal Peace* by ‘Abdu’l- Bahá. Shoghi Effendi elaborates on this point more vividly in the following document:

“It should not be inferred, however, from this general statement that the interior of the central

Edifice itself will be converted into a conglomeration of religious services conducted along lines associated with the traditional procedure obtaining in churches, mosques, synagogues, and other temples of worship. Its various avenues of approach, all converging towards the central Hall beneath its dome, will not serve as admittance to those sectarian adherents of rigid formulae and man-made creeds, each bent, according to his way, to observe his rites, recite his prayers, perform his ablutions, and display the particular symbols of his faith, within separately defined sections of Bahá'u'lláh's Universal House of Worship. Far from the Mashriqu'l-Adhkár offering such a spectacle of incoherent and confused sectarian observances and rites, a condition wholly incompatible with the provisions of the Aqdas¹⁵ and irreconcilable with the spirit it inculcates, the central House of Bahá'í worship, enshrined within the Mashriqu'l-Adhkár, will gather within its chastened walls, in a serenely spiritual atmosphere, only those who, discarding forever the trappings of elaborate and ostentatious ceremony, are willing worshipers of the one true God... ”¹⁶

Subsequently, ‘Abdu’l- Bahá describes how this unification of humanity and religions should be represented through the design:

“The Mashriqu'l-Adhkár must have nine sides, doors, fountains, paths, gateways, columns and gardens, with ground floor, galleries and domes, and in design and construction must be beautiful.”¹⁷

‘Abdu’l- Bahá outlines that the Temple must have “nine sides, doors, fountains, paths, gateways, columns and gardens...” but additional guidance from Shoghi Effendi has stressed that this is not to be necessarily taken literally, and that the essential principle be that the architectural elements occur in multiples of nine. Shoghi Effendi explains:

“The essentials of the design, as stipulated by ‘Abdu’l- Bahá are that the building should be nine-sided, and circular in shape. Aside from this, the architect is not restricted in any way in choosing his

*style of design.”*¹⁸

“The Guardian has also indicated that there is nothing in the teaching requiring one dome for the building, in fact, any dome. It is of course more beautiful, generally to have a dome, or even domes, but that is not a necessary requirement of the Temple.

Likewise the Guardian indicates, it is not essential that there be nine doors.

*The real requisite is that the building should be circular in shape, having nine sides; that there should be nine gardens, walks, etc.”*¹⁹

These statements seem to imply that beyond the requirements of nine sides and circular in shape, the structure of the Temple is not to be limited, including the roof. On the other hand, ‘Abdu’l-Bahá and Shoghi Effendi did request that a central dome be part of the Temple projects they supervised. Now the Universal House of Justice also reserves the right to choose the design of new Temples. Some deviations can be seen in projects supervised by the Universal House of Justice (from Panama City onwards).

In his interpretation of ‘Abdu’l-Bahá’s guidance, Shoghi Effendi clarifies that nine doors are not essential. Therefore, it appears that beyond the nine sides, ‘Abdu’l-Bahá was listing possible architectural elements of a Temple, specifying that they be in multiples of nine. Furthermore, Shoghi Effendi reinforces that concept by stressing the need for “nine gardens, walks, etc.,” but does not provide exact definitions of these “gardens” or “walks,” which again leaves a great deal of latitude to the designer. Consequently, beyond the nine sides and circular in shape, the prime element of the guidance is that the design be harmonious, with an inner logic based on the number nine. This can be tied back to Bahá’u’lláh’s prescription that Houses of Worship be “as perfect as possible in the world of being,” due to the fact that the number nine is associated with “Bahá” and perfection. In the “world of being,” perfection would therefore be, as ‘Abdu’l-Bahá described when he was discussing the Temple in ‘Ishqábád: “...nine on nine, all nines.”²⁰ In *Directives From the Guardian*

Shoghi Effendi elaborates:

*"Nine is the highest digit, hence symbolizes comprehensiveness, culminations; also, the reason it is used in the Temple's form is because 9 has the exact numerical value of 'Bahá' (in the numerology connected with the Arabic alphabet) and 'Bahá' is the name of the Revealer of our Faith, Bahá'u'lláh...the Temple has 9 sides because of the association of 9 with perfection, unity and 'Bahá.'"*²¹

It must not be forgotten, however, that the Mashriqu'l-Adhkár has important accessories, which according to a quote by 'Abdu'l- Bahá in *Bahá'u'lláh and the New Era*, "are accounted of the basic foundations." These include, but are not limited to a "school for orphan children, hospital and dispensary for the poor, home for the incapable, college for the higher scientific education, and hospice."²² On the other hand, these are considered dependencies of the Temple, and will begin to manifest themselves around it, as the Bahá'í Faith grows, but not before. A letter written on behalf of the Universal House of Justice explains the process:

*"The first part to be built is the central edifice which is the spiritual heart of the community. Then, gradually, as the outward expression of this spiritual heart, the various dependencies...are erected and function. This process begins in an embryonic way..."*²³

Therefore, this MDP will primarily focus on the Temple itself and any spaces essential to its function. Nonetheless, room for growth will be considered in light of the master plan for the Mashriqu'l-Adhkár.

THROUGH PRECEDENT

To date, only eight Bahá'í Houses of Worship have been built, of which just seven remain. These include, in order of completion, the Mashriqu'l-Adhkár in 'Ishqábád, Turkistan (which was destroyed by a series of earthquakes and heavy rains after it was seized by the Soviet Government and turned into an art gallery); in Wilmette, Illinois; in Kampala, Uganda; in Sydney, Australia; in Frankfurt, Germany; in Panama City, Panama; in Samoa; and in New Delhi, India. (Fig. 1-8, 10-12, and Fig. 1 of "Prayer": p. iv) However, over 120 sites around the world have already been purchased and set aside for future Temples, including a site in Santiago, Chile, which will be used to erect the next Bahá'í House of Worship.

The above Houses of Worship are referred to as "Mother Temples" in the Bahá'í writings, whose influence and functions are associated with their time period and location. That is, they are identified as the first Mashriqu'l-Adhkár to be erected in a geographical area from which other Mashriqu'l-Adhkár will spring. Symbols of reproduction, they are models for the coming centuries, and "Silent Teachers" for the Bahá'í Faith. A letter written on behalf of Shoghi Effendi dated 19 July 1957 describes:

*"The influence that this Mother Temple of the whole Pacific area will exert when constructed is incalculable and mysterious. The beloved Master told the American friends that their Temple would be the greatest silent teacher, and there is no doubt that this one building has exerted a profound influence on the spread of the Faith, not only in the United States and the Western Hemisphere, but throughout the world. We can therefore expect that the construction of another 'Mother Temple' in the heart of Australasia, and one in the centre of Africa, as well as one in the heart of Europe, will exert a tremendous influence, both locally and internationally."*²⁴

It has been stated that one of the primary prescriptions of a Bahá'í House of Worship is that it be circular in shape due to its original purpose, that it symbolize unity. The definition of "circle" in *The Concise Oxford Dictionary* reads: "a round plane figure whose circumference is everywhere equidistant from its centre; a roundish

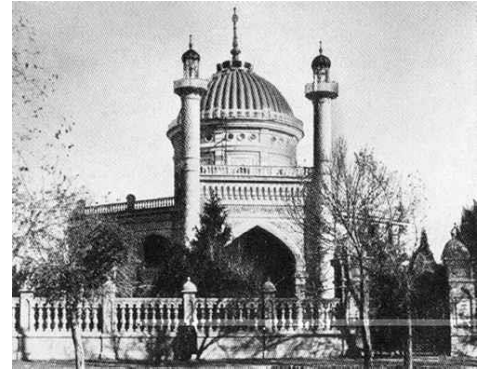


Fig. 1: Bahá'í Temple in 'Ishqábád, Turkistan.

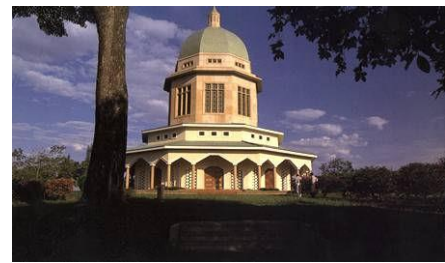


Fig. 2: Bahá'í Temple in Kampala, Uganda.



Fig. 3: Bahá'í Temple in Frankfurt, Germany.

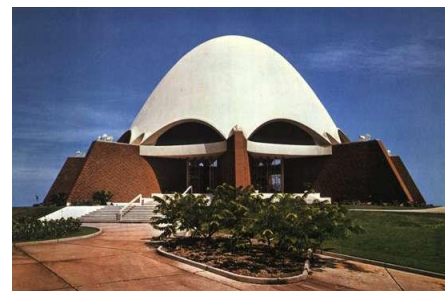


Fig. 4: Bahá'í Temple in Panama City, Panama.



Fig. 5: Bahá'í Temple in New Delhi, India.

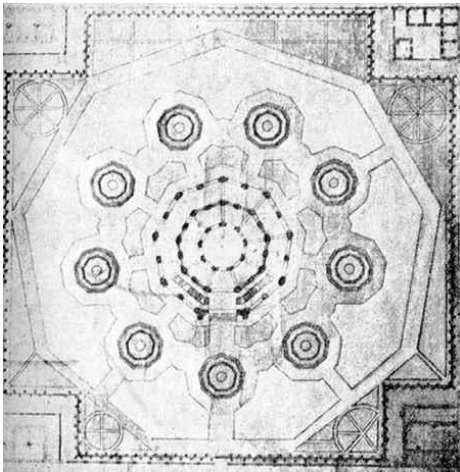


Fig. 6: Plan of the Bahá'í Temple in 'Ishqábád, Turkistan.

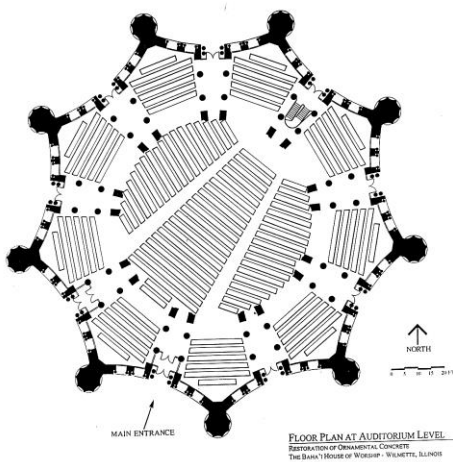


Fig. 7: Plan of the Bahá'í Temple in Wilmette, Illinois.

enclosure or structure,” while “circular” reads: “having the form of a circle.”²⁵

All of the built Temples exhibit this characteristic by having each corner of their nine-sided structural plans of the central Hall of Worship touch a point on a continuous circumference and equidistant from the centre. However, as one moves from the boundaries of the structure within which the Hall of Worship is contained, the symmetry of the nine equal sides breaks down. (Fig. 5) In fact, because the surrounding environment is not symmetrical, usually the nine approaches to the edge of the Temple plan vary in character, at least one of which is designated as a main avenue and designed to lead to a specific entrance. Quite often, this main entrance is distinctively designed and identified through some element like a larger size or a vestibule. (Fig. 6)

Furthermore, although most of the main architectural elements are in multiples of nine, methods of access to upper galleries (if they exist) are not necessarily in multiples of nine. Evidently, vertical circulation was not considered a major architectural element in these cases and it was somewhat hidden from sight. For example, in the Wilmette Temple, the sole set of stairs inside the hall of worship is located between a set of columns (Fig. 7), and in the Temple in Sydney, five sets of stairs can be found in the nine hollow pylons that surround the building. (Fig. 1 of “Prayer”: p. iv) Consequently, even in the Hall of Worship the nine sides are equal in length, but not exactly identical in design. Additionally, each Temple design has some element, like a door or a tree, facing the Shrine of Bahá'u'lláh in 'Akká, Israel, the resting place of Bahá'u'lláh's physical remains, and Qiblih²⁶ of the Bahá'í Faith, to orient the Bahá'í believers in their prescribed prayers.

None of these Houses of Worship have any statues, pictures or religious symbols within their walls other than the Greatest Name of God,²⁷ which is often found in the apex of the “dome,” or the word of God, that is occasionally found above the interior of the doors, using a different quote for each door. However, inside the Temple in Wilmette, intricate lace-like designs cover most of the vertical surfaces, but those designs are purely ornamental, drawing from the orbits of planets, geometric and vegetal

designs. (Fig. 8) On the other hand, the outside walls of the Wilmette Temple contain distinctive symbols of many of the world religions as well as a number of known symbolic references to the Deity. (Fig. 1 of “Chapter 2: Symbolism and Sacred Place”)

Natural light is also a common element of design. In fact, the Temple in Wilmette has been referred to in architectural journals as the “Temple of Light” with its perforated dome. (Fig. 8) All of the Temples used some kind of innovative technique in their construction. The Temple of Light had a new type of concrete invented for its erection, and the Lotus Temple of India was the first poured-in-place concrete structure to be built of its scale in the world.

Very little information was found regarding the acoustics inside the buildings, but it was observed that some of the Temples use electronic equipment to amplify the voice in order to complement the natural acoustical properties of the space. The floor plans are all flexible with regards to furniture, as none of it is fixed, and with regards to acoustics, as there was no evidence of the sound being focused through the design for a pre-determined seating layout. This flexible nature follows Shoghi Effendi’s stipulation that the Bahá’í Faith should be “devoid of all ceremony and ritual,”²⁸ and demonstrates the “changeless Faith of God,”²⁹ which the *Mashriqu’l-Adhkár* must embody.

As for supporting facilities, beyond washrooms and a mechanical room, most of the Temples have a visitor’s centre, a caretaker’s residence, and either a bookstore or a library associated with them, located in the basement, or in a building nearby. The House of Worship in Wilmette even has a lecture hall for presentations on the Bahá’í Faith temporarily located in the basement. Nevertheless, any space linked to the Hall of Worship must retain a use that is appropriate for the mandate of that Temple. If a House of Worship is meant to spiritually serve a continent, then all activities held in the Temple or any of its service spaces, must contribute to the reinforcement of that mandate.

Shoghi Effendi also made clear that the design “must under all circumstances be dignified, and not represent an extremist point of view in architecture.”³⁰ This and the understanding that they must be beautiful and appropriate

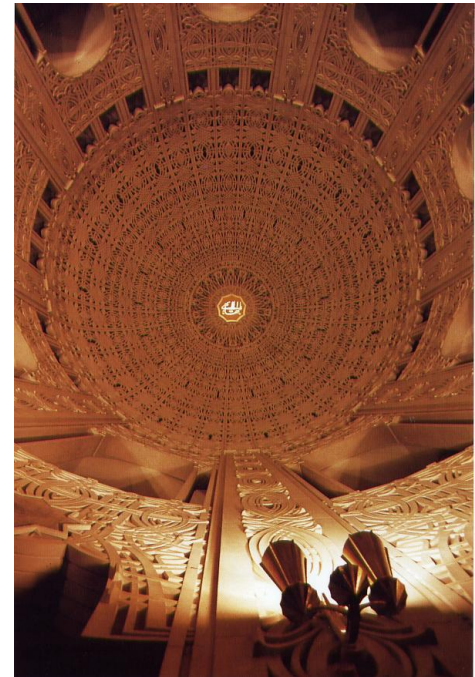


Fig. 8: Interior of the Bahá’í Temple in Wilmette, Illinois. Photo by Jens von Krogh.



Fig. 9: Native Fales, Samoa, Circa 1885.



Fig. 10: Bahá'í Temple in Samoa.

for the area, is evident in all the examples of existing Bahá'í Temples. The site, culture and available materials all have an influencing factor on their design. The Temple in Samoa is a good example of this; it incorporates the indigenous fale roof³¹ in its modest design, melding traditional meaning and form with modern technology, and keeping the scale and proportion in harmony with the green, lush, tropical setting, deviating from the true dome form found in the earlier examples. (Fig. 9-10)

THROUGH PRAYER AND MEDITATION

"Care of the soul requires ongoing attention to every aspect of life...If we do not tend the soul consciously and artfully, then its issues remain largely unconscious, uncultivated, and therefore often problematic."

-Thomas Moore³²

The importance of developing oneself spiritually before embarking on any project of design, especially one that is religiously related, is well known by many cultures. Douglas Cardinal, a famous Native Canadian architect, regularly receives strength to create from rites of purification such as the Sweat Lodge, the Sun Dance, and fasting. These rites are used by the Plains Indians as a means to discover and develop their character, and to purge their soul.³³ Fariburz Sahbá, the architect of the Bahá'í House of Worship in New Delhi, India, began his design process for the Temple "without preconceptions - ready for ideas." He researched, travelled, concentrated, and prayed, so that God would guide him towards an understanding of the Temple and a concept. As a result, he said, "that he felt a sense of celestial assistance at every step of the way."³⁴ (Fig. 11) Furthermore, the soul is nurtured by beauty, and Thomas Moore, in his book *Care of the Soul: A Guide for Cultivating Depth and Sacredness in Everyday Life*, defines beauty "as the quality in things that invites absorption and contemplation."³⁵ In order to create beauty, one must understand it. Prayer and meditation are vehicles to this end. A Tablet by 'Abdu'l-Bahá exemplifies this concept in relation to the Temple:

"I ask God to make the heart of every one of you a temple of the Divine Temples and to let the lamp of the great guidance be lighted therein; and when the hearts find such an attainment, they will certainly exert the utmost endeavor and energy in the building of the Mashrak-el-Azcar³⁶; thus may the outward express the inward..."³⁷

In fact, in the Bahá'í Faith, there have been specific prayers written for such occasions, including the following, which was written by 'Abdu'l-Bahá for the Mother Temple of the West, in Wilmette, Illinois. (Fig. 12) I used it in addition



Fig. 11: Interior of the Bahá'í Temple in New Delhi, India.



Fig. 12: Exterior view of the Bahá'í Temple in Wilmette, Illinois.

to meditation and contemplation as I was working on this Project:

“O God, my God! I implore Thee with a throbbing heart and streaming tears to aid whosoever expendeth his energy for the erection of this House, and the construction of this Building wherein Thy name is mentioned every morn and every eve.

O God! Send down Thy divine increase on whosoever endeavoreth to serve this edifice and exerteth himself to raise it amongst the kindreds and religions of the world. Confirm him in every good deed in promoting the welfare of mankind. Open Thou the doors of wealth and abundance unto him and make him an heir to the treasures of the Kingdom, which perish not. Make him a sign of Thy bestowals among the peoples and reinforce him by the sea of Thy generosity and bounty, surging with waves of Thy grace and favor. Verily, Thou art the Generous, the Merciful and the Bountiful.”³⁸

¹ Momen, Wendi. *A Basic Bahá'í Dictionary*. George Ronald Publishers, Oxford, 1989, p. 148.

² *The Bahá'í World: An International Record*. Bahá'í World Centre, Haifa, Israel, 1950-54, vol. XII, p. 519.

³ “Hazíratu'l-Quds and Mashriqu'l-Adhkár,” *Letters of The Universal House of Justice*. Bahá'í World Centre, July 2, 1998, section 7, p. 2-3 (Unpublished document available online and by request from the Bahá'í World Centre).

⁴ Please see Appendix A or the Glossary for a brief explanation of the significance of these people in the Bahá'í Faith.

⁵ Bahá'u'lláh. *Tablets of Bahá'u'lláh*. Bahá'í Publishing Trust, Wilmette, Illinois, 1988, p. 221.

⁶ Bahá'u'lláh. *The Kitáb-i-Aqdas*. Bahá'í World Centre, Haifa, Israel, 1992, p. 82, 246.

⁷ From the *Will and Testament of 'Abdu'l-Bahá*:

<http://www.bahai.com/writings3/AbdulBaha/will/11-15.htm>

⁸ Bahá'u'lláh. *The Kitáb-i-Aqdas*. Bahá'í World Centre, Haifa, Israel, 1992, verse 31, p. 29-30.

⁹ 'Abdu'l-Bahá. *The Promulgation of Universal Peace*. Bahá'í Publishing Trust, Wilmette, Illinois, 1982, p. 65-67.

¹⁰ Bahá'u'lláh. *The Kitáb-i-Aqdas*. Bahá'í World Centre, Haifa, Israel, 1992, Q. & A. # 94, p. 134.

¹¹ Bahá'u'lláh. *The Kitáb-i-Aqdas*. Bahá'í World Centre, Haifa, Israel, 1992, verse 154, p. 75.

¹² Esslemont, J. E. *Bahá'u'lláh and the New Era*. Bahá'í Publishing Trust, Wilmette, Illinois, 1980, p. 188.

¹³ Please see the Glossary for an explanation of this term.

¹⁴ Hornby, Helen Basset. *Lights of Guidance: A Bahá'í Reference File*. Bahá'í Publishing Trust, New Delhi, India, 1994, no. 2059, 2061, p. 608.

¹⁵ This refers to the *Kitáb-i-Aqdas*.

¹⁶ *The Bahá'í World: An International Record*. Bahá'í World Centre, Haifa, Israel, 1950-54, vol. XII, p. 519.

¹⁷ Esslemont, J. E. *Bahá'u'lláh and the New Era*. Bahá'í Publishing Trust, Wilmette, Illinois, 1970, p. 192.

¹⁸ Effendi, Shoghi. *Light of Divine Guidance*. German Bahá'í Publishing Trust, 1982, vol. 1, 25 June 1954, p. 216.

¹⁹ Effendi, Shoghi. *Light of Divine Guidance*. German Bahá'í Publishing Trust, 1982, vol. 1, 20 April 1955, p. 232-233.

²⁰ 'Abdu'l-Bahá. "Address of 'Abdu'l-Bahá at the Dedication of the Mashriqu'l-Adhkar Grounds, Chicago, High Noon, May 1, 1912," *Star of the West*. December, 31, 1914, vol. V, no. 16, p. 250.

²¹ Effendi, Shoghi. *Directives From the Guardian*. Hawaii Bahá'í Publishing Trust, 1973, no. 141, p. 51-52.

²² Esslemont, J. E. *Bahá'u'lláh and the New Era*. Bahá'í Publishing Trust, Wilmette, Illinois, 1970, p. 192.

²³ Hornby, Helen Basset. *Lights of Guidance: A Bahá'í Reference File*. Bahá'í Publishing Trust, New Delhi, India, 1994, no. 1884, p. 556.

²⁴ Effendi, Shoghi. *Letters from the Guardian to Australia and New Zealand, 1923-1957*. Australia Bahá'í Publishing Trust, 1971, 19 July 1957, p. 135-36.

²⁵ Allen, R. E. *The Concise Oxford Dictionary of Current English*. 8th Ed., Clarendon Press, Oxford, 1990, p. 203-204.

²⁶ Please see the Glossary for a definition of this word.

²⁷ Please see the Glossary for an explanation of this term.

²⁸ Effendi, Shoghi. *God Passes By*. Bahá'í Publishing Trust, Wilmette, Illinois, 1971, p. 350.

²⁹ Bahá'u'lláh. *The Kitáb-i-Aqdas*. Bahá'í World Centre, Haifa, Israel, 1992, verse 182, p. 85.

³⁰ Effendi, Shoghi. *Light of Divine Guidance*. German Bahá'í Publishing Trust, 1982, vol. 1, 21 June 1956, p. 261-270.

³¹ The fale roofs are fashioned after the local residential units called "fales" which have a curved pitch, and have a circular or elliptical open plan of timber posts with woven screens suspended between them.

³² Moore, Thomas. *Care of the Soul: A Guide for Cultivating Depth and Sacredness in Everyday Life*. HarperCollins Publishers, New York, New York, 1992, p. 177.

³³ For the purpose of this Project, the soul will be defined as "the inner and essential reality of human beings, which is not composed of physical matter, and thus continues to exist after death." (Momen, Wendi. *A Basic Bahá'í Dictionary*. George Ronald Publishers, Oxford, 1989, p. 213.)

³⁴ Rai, Raghu, and Roger White. *Forever In Bloom: The Lotus of Bahapur*. Time Books International, New Delhi, India, 1992, p. 15-16.

³⁵ Moore, Thomas. *Care of the Soul: A Guide for Cultivating Depth and Sacredness in Everyday Life*. HarperCollins Publishers, New York, New York, 1992, p. 279.

³⁶ This is a different way of spelling Mashriqu'l-Adhkar.

³⁷ 'Abdu'l-Bahá. *Tablets of 'Abdu'l-Bahá Abbas*. 2nd Ed., Bahá'í Publishing Society, Chicago, February 1919, vol. III, p. 678.

³⁸ *Bahá'í Prayers: A Selection of Prayers Revealed by Bahá'u'lláh, the Báb, and 'Abdu'l-Bahá.* Bahá'í Publishing Trust of the United States, Wilmette, Illinois, 1991, p. 268.

CHAPTER 2

SYMBOLISM AND SACRED PLACE

“...the real Collective Centers are the Manifestations of God, of Whom the church or temple is a symbol and expression.”¹

Symbols are meant to reveal a condition of the World that is not immediately evident in this plane of experience, and often simultaneously express several meanings at once. The Bahá'í Faith, like all religions, uses distinctive and abstract symbolism both verbally and physically, which is reflected in the designs of its architecture. At the same time, there is much abstract symbolism that transcends all boundaries of culture and religion, like light and water. Equally important, would be the discussion of sacred place, and its meaning. Similar to other religions, the Bahá'í Faith is associated with a number of sacred places that are part of a framework of sites that have special historical significance, and local places of worship. However, the purpose of this MDP is not to provide a complete essay on symbolism, sacred place and their different categories, but rather to use them as vehicles of exploration for potential ideas for design. Therefore, this investigation of symbols and sacred place is limited to a few of the more important ones of the expansive list used by humanity to date, in order to maintain perspective of the ultimate goal: to design a Temple. References for this section include, but are not limited to, the writings of Mircea Eliade, J. E. Cirlot, Julie Badiée, Cecil Balmond, and various compilations of different authors.

SYMBOLISM



Fig. 1: Detail of the Bahá'í Temple in Wilmette, Illinois.

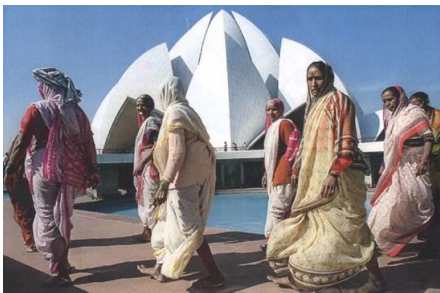


Fig. 2: View of the Bahá'í Temple in New Delhi, India.

The circle is one of the most universal symbols of the sacred, embodying unity, wholeness, completion, and eternity. Additionally, it is a pure sign of spirit unencumbered by matter, in many cases standing for Heaven. The circle is often set in opposition to the square, which is a symbol of the earthbound and the physical. Similarly, the wheel is an ancient solar symbol representing Divine energy and light, a synthesis of the activity of cosmic forces and the passage of time. Correspondingly, the symbol of the moon reveals the rhythm of cyclic time, perpetual renewal, the cycles of women, death, resurrection, and the human destiny, while the crescent moon, as stated by 'Abdu'l- Bahá, "hath reference to the beginning of the religion of God which shall grow to be a full moon."² (Fig. 1)

References to gates or doors to Heaven have long existed in religious architecture. Some indigenous structures in North America had long poles planted in the ground that extended out of an opening in the roof of the structure. These poles represented a world axis that extends from the underworld, through the various levels of Paradise. Accordingly, in the Bahá'í Faith, the Name of the Báb, who was the Herald of the Faith to guide humanity to the next level of spirituality, literally means the "Gate."

In most religions, a flower is often used to signify the Manifestation of God. The lotus flower is used a great deal in Asia and ancient Egypt and is linked with concepts of purity, divinity, spiritual attainment, the light of the sun, creation, the beginning of life or rebirth. It is a symbol for the celebration of the Divine in the material plane. The story is that the flower arises unsullied from the dirty water of the pond, which epitomizes overcoming the material world, and opens up when the sun rises. This is the image that Fariburz Sahbá chose for the Bahá'í House of Worship in New Delhi, India: (Fig. 2)

"I felt it should, on the one hand, reveal the simplicity, clarity and freshness of the Bahá'í Revelation—as apart from the beliefs and man-made concepts of the many divided sects—and, on the other hand, should show respect for the basic beliefs of all the religions of the past and act as a

reminder to the followers of each Faith that the principles of all the religions of God are essentially one."³

Water is one of the four elements of creation and the basis for life on Earth. It has a diversity of meanings ranging from purification to a vivifying force. A gift from the Divine, it is used in ablutions, baptisms, etc. It can confer knowledge and wisdom, healing or mercy. In Buddhist scriptures, Buddha has been likened unto a rain cloud, and in the *Bible*, Christ likened himself to a Fountain of Living Water.

Light is a universal symbol for the Divine, and white light is traditionally equated with the spirit. In the Bahá'í Faith, Bahá'u'lláh describes each of the Founders of the world's great religions as "Lights (which) have proceeded from but one Source...Thou canst discern neither difference nor distinction among them."⁴ In turn, the sky provides images of the "high, infinite, eternal and powerful." It arouses "a sense of divine transcendence."⁵

Mountains, linked with the world axis discussed earlier, demonstrate the act of moving upward or skyward towards the Divine, ascending spiritually from one state to another. In a like manner, the earth represents resurrection, regeneration, and is linked to "ideas of fertility and abundance," the rhythmical renewal of the cosmos.⁶

In Islam, representational art is forbidden in Mosques, as it is in Bahá'í Temples, therefore, abstract decoration is used. However, even those non-descriptive designs have some meaning. Geometric designs, with their repetitive, interlocking patterns represent the ordered nature of the universe and mystical thought. Similarly, vegetal designs portray spiral motion and density, characterizing the creative, growing element of the cosmos and alluding to Paradise and the Tree of Life. (Fig. 3-4)



Fig. 3: Detail of decoration on the great mihrab in the Masjid-i Juma in Isfahan, Iran.

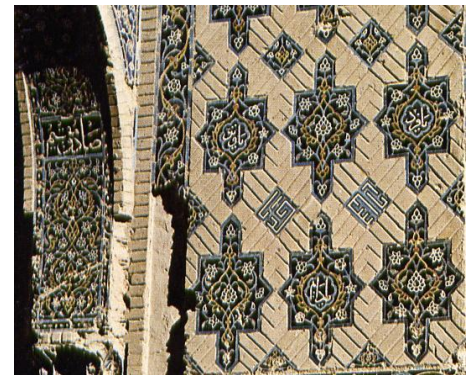


Fig. 4: Detail of the mosaic decoration on the Blue Mosque in Tabriz, Iran.

THE NUMBER NINE

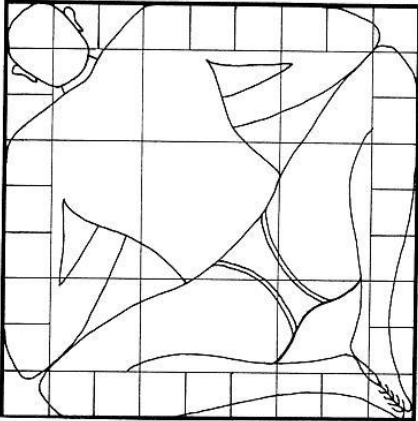


Fig. 5: “The Great Man, *mahapurusha*, drawn on a nine-square temple mandala. From a Hindu manual of architecture.” Sketch by Nandan Gautam.

<i>Egyptian</i>	
<i>Babylonian</i>	
<i>Chinese</i>	
<i>Greek</i>	
<i>Hebrew</i>	
<i>Roman</i>	
<i>Indian</i>	
<i>Arabic</i>	

Fig. 6: Notations for the number nine.

In many religions, numbers are used as symbols and a key to understanding the universe. Greek temples and sculptures were “created according to a strict canon of proportions,” as were Gothic cathedrals. In Hebrew and Islamic philosophy, numbers “became a kind of language of the Divine.” A “link between letters and numbers was developed into sophisticated systems of numerical symbolism associated with each letter of the alphabet.”⁷

Some numbers are considered to be more powerful than the others. For instance, the number one is associated with the Creator, indivisible and unified. Also connected with unity, zero is its opposite, representing non-being. Three stands for the Trinity in Christianity, and “the triangle represented the coming together of the intellect, the spirit and the soul” in Islam.⁸ In many cultures, such as North American Native cultures, the number four can be linked with the physical world, found in the four directions, the four seasons, the four colours of humanity, etc. Five is connected to Nature and the human form (five fingers, five senses, etc.) in the form of the pentagram.

The triplication of three, and the highest single digit, nine is commonly related to the heavens. Dante used nine concentric circles to represent the nine heavens of Paradise. “Buddhist relics in stupas are buried at a central ninth point, around which eight small buddhas sit marking the directions of the world.”⁹ In addition, “Buddha was the ninth incarnation of Vishnu.”¹⁰ Nine is a common base number for the creation of Hindu and Japanese Buddhist mandalas. (Fig. 5) For Hebrews, the number nine “was the symbol of truth, being characterized by the fact that when multiplied it reproduced itself (in mystic tradition).”¹¹ Allah, in Islam, has 99 names, and there are nine planets in our solar system. The notation we now use for the number nine, a line that curls continuously, was fixed by Arab mathematicians a thousand years ago in its upright position, and was inherited as far back as AD 876 from a Hindu script. (Fig. 6)

From these examples, it seems that the number nine is “a point of initiation and departure, a beginning and an end.”¹² The language of mathematics best describes this. In his

book *The Number Nine: The Search for the Sigma Code*, Cecil Balmond explains:

*“Each and every number has a secret number. Buried beneath the surface, hidden within the construction is another mark, a secret code that defines the original number...It is an imprint.”*¹³

*“The Sigma value of a number is the ultimate essence of a number. It is the hidden mark which lurks within the greater construction; in this sense it is a primary code, a blueprint.”*¹⁴

In order to find this “imprint,” Cecil Balmond uses the sigma value of numbers, which is the value of a number when its integers are summed up, to explore patterns in our system of mathematics in his book. Through his investigation, the number nine is revealed to be special. Some of its properties include the fact that in addition and subtraction, the number nine leaves no trace, the sigma value of the number remains untouched. In multiplication, nine takes over the identity of a number, changing the sigma value of the number to nine. (Fig. 7) Using primes, the building blocks of numbers, the sigma power sequence reveals a pattern using the “stepping stones” of nine: 3-6-9. (Fig. 8) However, one of the most revealing patterns that demonstrate the significance of the number nine from a mathematical point of view, is the sigma multiplication table, where nine is featured “as a limiting value, as a border; but there is also the symmetry of nine, marking out the corners of a square in the middle of the table.”¹⁵ (Fig. 9) If these products of multiplication, according to the sigma code, are plotted in radial arms on the sigma circle, it reveals a mandala where “the outermost layer of nine acts as a boundary and also as a mirror.”¹⁶ (Fig. 10) Moreover, paring the numbers eight and one, seven and two, six and three, and five and four, whose products of multiplication, according to the previous sigma code mandala, are reversals of each other, a new mandala is derived. (Fig. 11) “In the dynamic that swirls around,” in this new mandala, “the number nine is stationary, serene and unmoving.”¹⁷ It is “the point of change...a point of reversal, a location of twist.”¹⁸ Taking primarily the shape of this new mandala into account, it renders the symbol for infinity. The Golden Section, whose proportions are frequent in patterns of organic growth, and used widely in art and architecture,

$$\begin{aligned} \Sigma N + \Sigma 9 &= \Sigma N \\ \Sigma N - \Sigma 9 &= \Sigma N \\ \Sigma N \times \Sigma 9 &= \Sigma 9 \\ \Sigma N \div \Sigma 9 &= \Sigma N \text{ (remainder)} \end{aligned}$$

Fig. 7: Equations.

Prime Number N	(ΣN) ¹	(ΣN) ²	(ΣN) ³	(ΣN) ⁴	(ΣN) ⁵	(ΣN) ⁶	Adding columns one to six
1	1	1	1	1	1	1	→ 6
2	2	4	8	7	5	1	9
3	3	9	9	9	9	9	3
5	5	7	8	4	2	1	9
7	7	4	1	7	4	1	6
11	2	4	8	7	5	1	9
13	4	7	1	4	7	1	6
17	8	1	8	1	8	1	9
19	1	1	1	1	1	1	6

Fig. 8: “Chart of Sigma Value of Primes.”

Sigma code values of the multiplication table

	×1	×2	×3	×4	×5	×6	×7	×8	×9
1	1	2	3	4	5	6	7	8	9
2	2	4	6	8	1	3	5	7	9
3	3	6	9	3	6	9	3	6	9
4	4	8	3	7	2	6	1	5	9
5	5	1	6	2	7	3	8	4	9
6	6	3	9	6	3	9	6	3	9
7	7	5	3	1	8	6	4	2	9
8	8	7	6	5	4	3	2	1	9
9	9	9	9	9	9	9	9	9	9

Fig. 9: “Sigma code values of the multiplication table.”

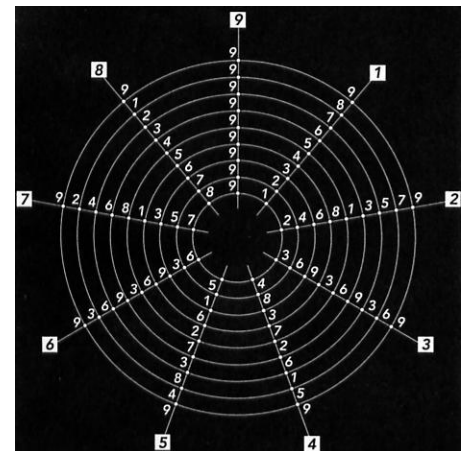


Fig. 10: Mandala of the multiplication table.

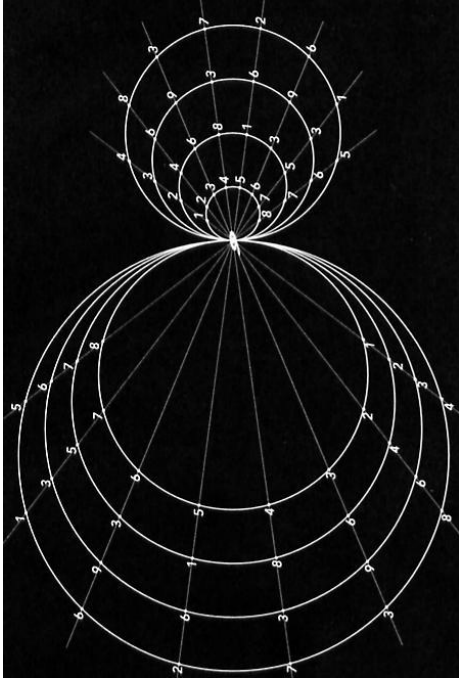


Fig. 11: New mandala of the multiplication table.

when plotted out in a continuously divided rectangle, is of course the shape of a line that curls to infinity; the shape of the symbol for the number nine. (Fig. 12) Consequently, the number nine, the Golden Section, and infinity are all connected.

For Bahá'ís, the number nine is the symbol of perfection, the numerical value for the word Bahá, the name for the Manifestation of God for this age, and the basis of the Bahá'í teachings and its Temples: unity.

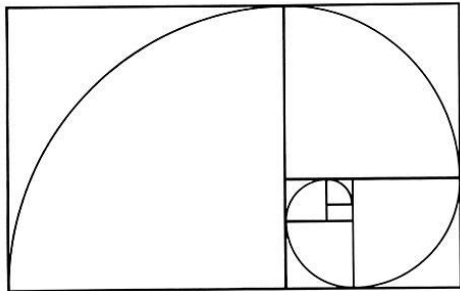


Fig. 12: The Golden Section.

BAHÁ'Í SYMBOLS

The Spirit of God has had many representational forms in religious history such as a Burning Bush, a Dove, and in the Bahá'í Faith, the Maiden of Heaven. It was she who revealed herself to Bahá'u'lláh when he received his Mission, and although God has no gender, the direct voice of God is always female in nature in the Bahá'í texts. Bahá'u'lláh wrote:

“But when I saw myself at the culmination of calamity, I heard, from above my head, the most wonderful and melodious voice, and when I turned I witnessed a Maiden of the celebration of the Name of my Lord, suspended in the air on a level with my head. I saw her, that she was indeed rejoicing within herself as though the embroidered garment of pleasure was manifesting itself upon her face, and the brightness of the Merciful was apparent upon her cheeks, and between the earth and heaven she was uttering a call, by which all the hearts and minds will be drawn, and at the same time, gladdening all the limbs of my internal and external being, with glad-tidings that made my soul rejoice, and those of the noble servants. Then, with her finger, she pointed to my head, and addressed all those in heaven and earth, saying: 'By God, This is indeed the Beloved of the universe, but ye do not understand! This is the Beauty of God among you, and His Dominion within you, if ye are of those who know!'”¹⁹

Moreover, the Mystic Bird in the Bahá'í Faith, refers to Bahá'u'lláh, and is often found in the Divine Lote-Tree, also known to other religions as the Sadratu'l-Muntahá, which is commonly believed to be the “Tree beyond which neither men nor angels can pass.”²⁰ In these religions, God's Station is only accessible by God, and the Station of the Manifestation of God is next to God, and not beyond. Accordingly, the Divine Lote-Tree simultaneously represents the Station of the Manifestation of God and a symbol of the Manifestation of God. (Fig. 13)

Symbols can often point to a reality concerning human existence and fulfill their function subconsciously and through prophecy even when their meaning might be



Fig. 13: “Design over the entryway, the Bahá'í House of Worship in Wilmette. The decoration shows the letters ‘ABHA’, Arabic for ‘the Most Glorious.’ In the center is a stylized depiction of a tree.”



Fig. 14: “The Greatest Name, in the calligraphy of Mishkín-Qalam.”

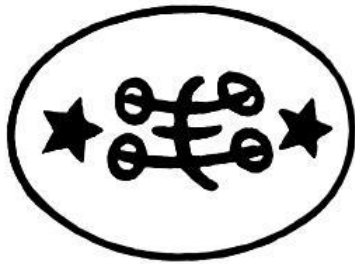


Fig. 15: Ringstone symbol.

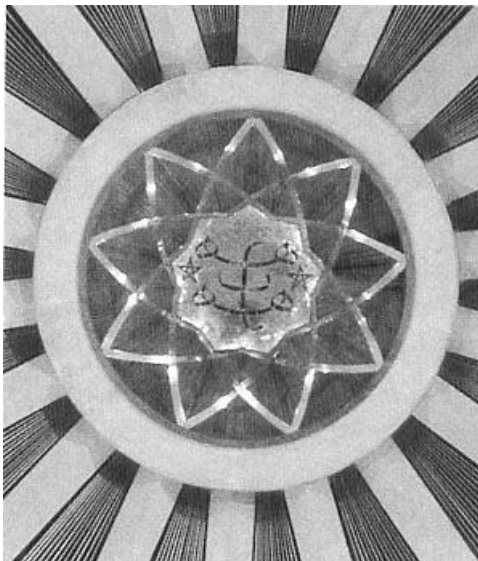


Fig. 16: Interior of the dome of the Bahá'í Temple in New Delhi, India. Photo by Charles Nolley.

currently obscured. For instance, the identity of the Greatest Name of God was obscured from the people of the Middle East among the known Names of God until Bahá'u'lláh announced his Mission. Bahá'u'lláh declared this Name as “Bahá,” which means glory, splendour, light, or perfection. His title, “Bahá'u'lláh,” is a derivative of this Name, and means “the Glory of God.” Other derivatives include “Abhá,” (Fig. 13) “Alláh'u'-Abhá,” which is often used as a greeting among Bahá'ís, and means, “God is Most Glorious,” and “Yá Bahá'u'l-Abhá,” which means “O Glory of Glories,” and is used as an invocation. There are two forms of calligraphic representations of this invocation commonly used by Bahá'ís. One was designed by Mishkín-Qalam (Fig. 14), which is often displayed in an honoured way by Bahá'ís in wall hangings, or other artistic endeavours. The other one was designed by `Abdu'l-Bahá, and is referred to as the “ringstone symbol” (Fig. 15), because it is often worn on jewellery, or more specifically, rings. The symbol is “composed of the forms of the Arabic equivalents of the letters B, H and A,” and represents not only the Greatest Name, but is also a diagram of the basic Bahá'í beliefs.”²¹ The three horizontal lines represent, from the top: “the world of God, the Creator; the world of the Manifestation, the Cause or Command; and the world of man, the creation.” The vertical line, which joins them, is a repeat of the second horizontal line, therefore, joining the Creator and the creation through the teachings of the Manifestations. The two five-pointed stars that flank these lines “represent the human body, as well as the two Manifestations, the Báb and Bahá'u'lláh, for this day.”²² `Abdu'l-Bahá elaborates on these stars:

*“As for the stars: They are types of guides; for, verily, the star is a guide to people, even in the most gloomy darkness, on both land and sea. In former centuries, people were guided by the pole-star in whatever direction they went.”*²³

Not commonly known, the pentagram, which represents the human temple or the vehicle for the Word of God, supremacy, and the highest attainment, is actually the symbol of the Bahá'í Faith, as used by the Báb and explained by him.²⁴ Either one of the calligraphic versions of the Greatest Name can be found in the interior focal points of the Bahá'í Temples. (Fig. 16)

SACRED PLACE

The term “sacred” is applied when “participation with the transhuman, ‘invisible world’ occurs and is part of humanity’s understanding of itself and the world.”²⁵ William Morgan Briskie writes in his MDP that “religious man believes that there is an absolute reality, ‘the sacred’, which transcends this world but manifests itself in this world, thereby sanctifying it and making it real.” He explains that “the manifestation of the sacred is a paradox; the object becomes something else, yet continues to remain itself.”²⁶ According to *The Concise Oxford Dictionary*, “space is a “continuous unlimited area or expanse which may or may not contain objects, etc.,” or “an interval between one, two, or three-dimensional points or objects.”²⁷ In contrast, it defines “place” as “a particular portion of space.”²⁸ Therefore, “place” is space that has gained additional meaning, and if a space, whether defined by physical items or not, becomes sacred, then that “space” becomes “place.”²⁹

A sacred place can either be physically created or selected from nature as a result of the history or the teachings of a religion. For instance, Hindus have always been attracted by the Himalayan Mountains. Believed to represent the abode of some of their deities, their massive, mysterious, snow-clad peaks have inspired much of the Sanskrit literature, which elevates them to the status of divinity, and many Hindu temples have been designed to resemble them. (Fig. 17) Conversely, churches, mosques, and temples can be built on land that was originally considered sacred, or that becomes sacred through the construction process.

Another sacred place unique to the Bahá’í Faith is the Garden of Ridván where Bahá’u’lláh declared his Mission to his followers for the first time in 1863. The Garden’s original name is Najíb-Páshá, and was situated on the outskirts of Baghdád, across the River Tigris from the House of Bahá’u’lláh. Ridván literally means “Paradise,” a common theme for gardens in religious teachings, which often symbolize a new beginning in human history or a higher state of being.

Each religion has a framework of sites that have special historic significance and local places of worship that are associated with them in some way. Many places in this



Fig. 17: “Mountain Temple, Kanchipuram, India.”



Fig. 18: The Shrine of the Báb, Haifa, Israel.



Fig. 19: The entrance to the Shrine of Bahá'u'lláh, the Qiblih of the Bahá'í Faith in 'Akká, Israel.

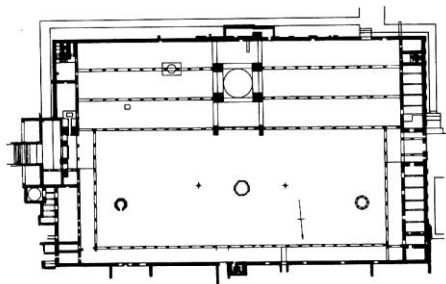


Fig. 20: Plan of the Great Mosque of the Umayyads. Prayer hall is divided into three naves parallel to the Qiblih wall.

framework share the characteristic of having links with their Founder or other important figures. Bahá'u'lláh, for example, informed 'Abdu'l-Bahá where to bury the remains of the Báb on Mount Carmel, in Haifa, Israel, and thus, His Shrine was erected on that spot. (Fig. 18) However, Bahá'u'lláh was laid to rest adjacent to the residence he passed away in, which then became the Qiblih of the Faith. (Fig. 19) The Bahá'í Temples are oriented toward the Qiblih both spiritually, and physically through some element of the design. Many other religions share this affiliation with the East, for instance, the Qiblih for Islam is in Mecca, and mosques are always oriented towards it in some manner. (Fig. 20) Additionally, the Jewish people have an element of their synagogues facing towards the original site of Solomon's Temple, Christian churches have their apse oriented towards the east, and the Plains Indians of North America erected their tepees, sacred or not, with the opening towards the east.

The experience of place is multi-faceted and influenced by culture, personal distinctiveness, and choice of awareness. Each place has a unique quality, which in turn influences what can best be done there. Perceiving the sense of a place is often best accomplished in non-linear, symbolic or metaphoric terms. Beauty, in the final analysis, is sensed and felt, not calculated.

¹ 'Abdu'l-Bahá. *The Promulgation of Universal Peace*. Bahá'í Publishing Trust, Wilmette, Illinois, 1982, p. 163-171.

² 'Abdu'l-Bahá. *Tablets of 'Abdu'l-Bahá Abbas*. 2nd Ed., Bahá'í Publishing Society, Chicago, February 1919, vol. III, p. 598-599.

³ Rai, Raghu, and Roger White. *Forever In Bloom: The Lotus of Bahapur*. Time Books International, New Delhi, India, 1992, p. 15.

⁴ Bahá'u'lláh. *The Kitáb-i-Íqán*. Bahá'í Publishing Trust, Wilmette, Illinois, 1989, p. 160.

⁵ Briskie, William, Morgan. *Sacred Heart Parish Church: Time, Cosmos, Nature*. University of Calgary, Faculty of Environmental Design, Calgary, Alberta, 2002, p. 42.

⁶ Briskie, William, Morgan. *Sacred Heart Parish Church: Time, Cosmos, Nature*. University of Calgary, Faculty of Environmental Design, Calgary, Alberta, 2002, p. 43.

⁷ Badiie, Julie. *An Earthly Paradise: Bahá'í Houses of Worship Around the World*. George Ronald Publisher, Oxford, 1992, p. 91.

⁸ Badiie, Julie. *An Earthly Paradise: Bahá'í Houses of Worship Around the World*. George Ronald Publisher, Oxford, 1992, p. 91.

⁹ Balmond, Cecil. *Number 9: The Search for the Sigma Code*. Prestel, New York, New York, 1998, p. 29.

¹⁰ Balmond, Cecil. *Number 9: The Search for the Sigma Code*. Prestel, New York, New York, 1998, p. 45.

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- ¹¹ Cirlot, J. E. *A Dictionary of Symbols*. 2nd Ed., Redwood Burn Ltd., Great Britain, 1971, p. 223.
- ¹² Balmond, Cecil. *Number 9: The Search for the Sigma Code*. Prestel, New York, New York, 1998, p. 29.
- ¹³ Balmond, Cecil. *Number 9: The Search for the Sigma Code*. Prestel, New York, New York, 1998, p. 65.
- ¹⁴ Balmond, Cecil. *Number 9: The Search for the Sigma Code*. Prestel, New York, New York, 1998, p. 66.
- ¹⁵ Balmond, Cecil. *Number 9: The Search for the Sigma Code*. Prestel, New York, New York, 1998, p. 93.
- ¹⁶ Balmond, Cecil. *Number 9: The Search for the Sigma Code*. Prestel, New York, New York, 1998, p. 123.
- ¹⁷ Balmond, Cecil. *Number 9: The Search for the Sigma Code*. Prestel, New York, New York, 1998, p. 135.
- ¹⁸ Balmond, Cecil. *Number 9: The Search for the Sigma Code*. Prestel, New York, New York, 1998, p. 129.
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- ²⁴ Hornby, Helen Basset. *Lights of Guidance: A Bahá'í Reference File*. Bahá'í Publishing Trust, New Delhi, India, 1994, no. 375, p. 110.
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- ²⁶ Briskie, William, Morgan. *Sacred Heart Parish Church: Time, Cosmos, Nature*. University of Calgary, Faculty of Environmental Design, Calgary, Alberta, 2002, p. 10.
- ²⁷ Allen, R. E. *The Concise Oxford Dictionary of Current English*. 8th Ed., Clarendon Press, Oxford, 1990, p. 1164.
- ²⁸ Allen, R. E. *The Concise Oxford Dictionary of Current English*. 8th Ed., Clarendon Press, Oxford, 1990, p. 908-909.
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CHAPTER 3

CANADIAN CULTURE AND ARCHITECTURE

“What should be done is to follow the Master's¹ instructions as to the Temple, and then create something that will be desirable and appropriate for your area.”²

The Bahá'í Temple that has been designed for this MDP is intended to be a “Mother Temple” for Canada, pregnant with possibilities for other Temples. Therefore, it must not only represent the ideals of the Bahá'í Faith, but also the culture of the country in which it is built. The following is a brief review of Canadian culture³ and architecture.



Fig. 1: Habitat '67 designed by Moshe Safdie for Expo '67.

Canada, a relatively newly formed country, has just come to terms with its national identity in the last half of the twentieth century, and is still evolving. Prior to the 1960's there were no Canadian Universities offering graduate programs devoted to the study of Canadian architecture. Heritage Canada, the Canadian Inventory of Historic Buildings, the Society for the Study of Architecture in Canada, and the Association for Preservation Technology, did not come into existence until the 1970's. Consequently, the sixties seemed to be the decade of change for Canadian cultural identity, as it “saw an awakening of national pride, and the adoption of a new flag and new national anthem.”⁴ Modern architecture had spread across the country, revealing itself at Expo '67 in Montreal. The Canadian pavilion used the theme of ‘The Land, the People, the Spirit,’ demonstrating Canada's “cultural richness and artistic ingenuity.”⁵ One popular expert declared: “The modernization of Canada will be dated from this Fair.”⁶ (Fig. 1)

Canada's cultural environment gathers strength from its regional diversity, its natural environment, and its commitment to social welfare. In order to understand the Canadian culture a little better, one must compare it to its neighbour, the United States of America. The American culture encourages its immigrants to integrate and assimilate into its “cultural melting pot”, while the Canadian culture preserves its diverse identity through a “cultural mosaic.” Cornelius J. Jaenen, from the Department of History at the University of Ottawa, wrote:

*“...unlike the American republic born in revolution, we were conceived in an evolutionary process which has not yet completed its course...Canada has always been a multicultural and multilingual region of the North American continent. For countless centuries aboriginal peoples belonging to diverse cultural modes and at least eleven linguistic families interacted with each other and their environments economically, culturally and politically...We must never ignore the fact that New France was built on an aboriginal foundation...this British colonial period was founded on the existing French colonies of Acadia and Canada...The coming of the British did not replace the existing Native or French populations. They only added to them...”*⁷

Canadian architecture reflects this regional diversity through the varied influences of design, ranging from colonial to indigenous structures. However, “it is the combination of those diverse and numerous influences which is most distinctively Canadian.”⁸ Frank Lloyd Wright, a famous American architect, was influenced by Japanese style after World War II, in turn; he influenced the West Coast style of British Columbia. His main impact was through domestic architecture, where an “organic” architecture married a methodology of structural framing and the use of natural, non-industrial materials together with a formal discipline learned from the Orient,” which uses a “flow of interior and exterior spaces with fused planes.”⁹ Writer Leon Whiteson explained, “it was the so-called Vancouver school...that first caught the country’s eye as a distinctively Canadian modern style.” He described the style as “a local idiom based on the western framing system of timber post and beam native to their magnificently forested mountain region.”¹⁰ Ron Thom, a well-known Canadian architect, and innovative West Coast designer, admitted that the inspiration of the style owes a great deal to “the character of its landscape, its curious sense of floating on the edge of the known world, confronting vast oceanic space,” due to the fact that the Vancouver area is “cramped by its geography, shut in between mountains and the sea.”¹¹ The Lester Pearson College of the Pacific on Vancouver Island that Ron Thom designed with Barry Downs, another well-known Canadian

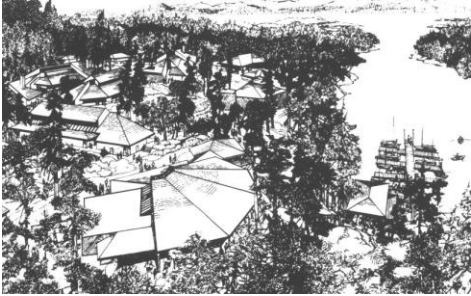


Fig. 2: The Lester Pearson College of the Pacific on Vancouver Island: “Sketch plan of college layout.”



Fig. 3: The Lester Pearson College of the Pacific on Vancouver Island: “View down over Pedder Bay.” Photo by John Fulker.

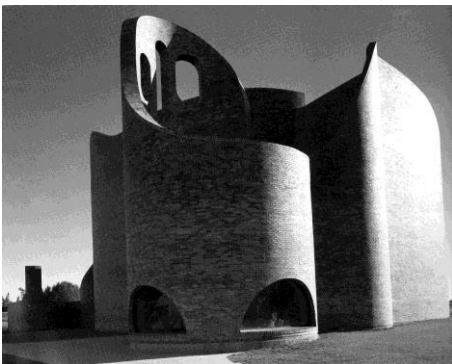


Fig. 4: Saint Mary’s Roman Catholic Church, Red Deer, Alberta. Photo by Hu Hohn.

architect, would be a good example of this style, with red cedar timber framing, steep roofs, cedar shakes, and the walls and ceilings covered with rough-sawn boards. The cluster of fourteen buildings sits on the rocky shoreline of the bay, surrounded by trees, and has wide overhangs and projecting terraces to protect the large glass areas that frame the ocean view. (Fig. 2-3)

Having a “relatively sparse population with a vast and often inhospitable geographic area,” the varied geography and climate of Canada has had a large influence on its cultural expression.¹² Architect John C. Parkin, said in a speech in 1976:

*“It is...a country of cold winters and long nights. Half the continental land mass is occupied by thick, bony plates of Pre-cambrian rock. The rest is a dwarfing sweep of Prairie, or a convulsion of fresh, jagged mountain peaks. No one can live with such a geography without being shaped by it.”*¹³

Peter Hemingway, an architect based in Alberta wrote, “the Prairie region, in its geographic immensity, climatic hostility, and social rigidity requires architects to be potent givers of form.”¹⁴ Another architect said, “flat horizons prompt an architecture of powerful silhouettes.”¹⁵ Buildings that punctuate the flat Prairies have proven to best suit this landscape. Architects Clifford Wiens, Etienne Gaboury, and Douglas Cardinal developed a Prairie “poetry of place” through their styles, and “have given Canadian architecture new and particularly native forms at once thoroughly modern and deeply indigenous.”¹⁶ Douglas Cardinal places man at the centre of the design process, yet uses technology to make the environment more compatible with him, then designing from the inside out, wraps a sculptural shell around it. Saint Mary’s Church in Red Deer, Alberta, serves as a good example of this with its undulating, yet encompassing, shell of brick; an “organic” precedent of the flat prairie “sea”. (Fig. 4)

John Parkin described the Canadian habitat as “where the best available solutions have been borrowed and adapted to the unique Canadian circumstances.” He persisted that the Canadian psyche “deploras conspicuous consumption or extravagant show. It is not widely original, radical or experimental. It is modest and it is apt.”¹⁷ Similarly,

although he considers Canada world class in the field of architecture, Whiteson feels that “we are famous more for our humanism than our brilliance.” He believes that Canadians are a “more cautious national character” than Americans, and that the simplicity of Canadian designers generates a “cheerful innocence” in their designs.¹⁸ Toronto Architect Macy DuBois, additionally feels that Canadian architecture is “economic, inventive and socially-concerned.” In 1981 he wrote that Canadian architecture is moving into an era of “Elemental Architecture,” which he defined as “fine-muscled, unclothed, spartan buildings where the power and expressiveness comes from the direct visual use of the vast work required in construction.” He described it further as “the rational architecture of minimal means and maximum effect,” and that “the differentiation between interior and exterior will continue to disappear. Large interior spaces of exterior scale will be commonplace.”¹⁹ In a like manner, the architect Barton Myers writes:

“The severe Canadian climate and the increasing cost of heating fuel have caused architects to ‘re-think’ the idea of designing buildings composed of highly articulated or separated building elements.”²⁰

Comparing Toronto’s City Hall, designed, by Viljo Revell in 1965, “to produce a meaningful internal and external built form set in a lively urban public square,”²¹ and Eaton Centre, completed in 1977 with its chief designer Eberhard Zeidler, to become, “when opened, the largest indoor shopping complex in the world,”²² this disappearance of interior versus exterior is evident. (Fig. 5-6) The City Hall has “two thin concave free-standing towers of unequal heights (20 and 27 storeys) that embrace the saucer-shaped Council Chamber,”²³ while Eaton Centre’s 900-foot-long gallery is three levels high, accommodates 250, 000 square feet of retail space “in a climate controlled environment and acts as a fresh air plenum which, with the use of a heat exchange system, balances the energy requirements in the complex.”²⁴

Raymond Blake, the Director of the Saskatchewan Institute of Public Policy at the University of Regina, wrote that in 2001 “more than 90 percent of Canadians now claim that Canada has a unique identity, separate from that of the



Fig. 5: Toronto City Hall, Toronto, Ontario.



Fig. 6: Interior of Eaton Centre, Toronto, Ontario. Photo by Balthazar Korab.

United States...Canadians continue to see our Maple Leaf flag, our health care system, our international role, our multicultural mix, our French and English heritage and yes, even our climate and geography, as some of the major components of our national identity.”²⁵ On similar lines, Jaenen writes:

*“The American historian, Arthur Schlesinger, described Canada as a conservative counter-revolutionary society lacking a strong national myth and lacking a unifying national identity. To my mind, this is what is especially attractive about Canada – this absence of homogenizing uniformity, of conformist indoctrination, of a singular identity, of a chauvinistic mythology.”*²⁶

Andrew Nurse, an Assistant Professor of Canadian Studies at Mount Allison University, said that his students were “well aware of the challenges Canada faces in terms of ethnic intolerance, the misplaced priorities of so much contemporary public policy, the wage gap and other forms of sexism, ecological damage, and the host of other problems that animate public discourse today.” For them, “the current fragmentation of Canada – so often portrayed as a weakness – was in actuality a strength. It was a sign that Canadians from different ethnic and linguistic groups, different parts of the country, and different genders were challenging the boundaries and meaning of Canadian identity and culture.”²⁷ Results of a survey done in 2001, using participants between the ages of 18 and 25, by the Centre for Research and Information on Canada and the Association for Canadian Studies indicate that “young Canadians possess reasonably high levels of tolerance...And while they feel a strong attachment to their country, their interests extend beyond Canada, as reflected in their attitudes on globalization and world history.” However, the “respondents do not appear to view strong national and regional identities as contradictory.”²⁸ Stanley M. Stein and Michael J. McMordie, professors from the University of Calgary, wrote “Canada has had an official policy of multiculturalism since 1971...and has long been regarded abroad as a country to be admired for its multiculturalism, bilingualism, and respect for diversity.”²⁹ The Trudeau Government drew its justification for the policy from these terms:

*“National unity if it is to mean anything in the deeply personal sense, must be founded on confidence in one’s own individual identity; out of this can grow respect for that of others and a willingness to share ideas, attitudes and assumptions. A vigorous policy of multiculturalism will help create this initial confidence. It can form the base of a society which is based on fair play for all.”*³⁰

Consequently, the modest, socially concerned, diverse styles that the Canadian habitat exhibits, with very little effort, produces an appropriate muse for a Bahá’í Temple, because, among other reasons, the Bahá’í Faith emphasizes the importance of such principles as unity in diversity. (Fig. 7) Bahá’u’lláh wrote:

*“It is not for him to pride himself who loveth his own country, but rather for him who loveth the whole world. The earth is but one country, and mankind its citizens.”*³¹



Fig. 7: A group of Bahá’ís in Canada.

¹ A reference to ‘Abdu’l-Bahá.

² Effendi, Shoghi. *Light of Divine Guidance*. German Bahá’í Publishing Trust, 1982, vol. 1, 10 February 1955, p. 227-228.

³ For the purpose of this Project, “culture” will be defined as: “the values, beliefs, forms of art, language, way of doing things that constitute the forms of life within which people organize and structure their lives.” (Stein, Stanley M., and Michael McMordie. *A Tread of Many Fibres*. University of Calgary, Faculty of Environmental Design, Calgary, Alberta, June 2001, p. 4 [Unpublished conference presentation for the Russian Association for Canadian Studies at the 6th International Canadian Studies Conference, Saint Petersburg].)

⁴ Allwood, John. *The Great Exhibitions*. Cassell & Collier MacMillan Publishers, London, 1997, p. 166.

⁵ LeJeune, Léo R. *Canada at the Fairs: An Architectural Legacy – An Exhibition Hall Design For Expo 2005*. University of Calgary, Faculty of Environmental Design, Calgary, Alberta, 1997, p. 47.

⁶ Whiteson, Leon. *Modern Canadian Architecture*. Hurtig Publishers Ltd., Edmonton, Alberta, 1983, p. 14.

⁷ Jaenen, Cornelius J. “Dual and Diverse,” *Canadian Issues*. Association of Canadian Studies, Summer 2000, p. 21-22.

⁸ Anderson, Barbara A. *The Design of the Canadian Embassy in Tokyo: A Cultural Analysis*. University of Calgary, Faculty of Environmental Design, Calgary, Alberta, 1986, p. 35.

⁹ Thom, Ron. “Modern Architecture on the West Coast,” *Modern Canadian Architecture*. Hurtig Publishers Ltd., Edmonton, Alberta, 1983, p. 23.

¹⁰ Whiteson, Leon. *Modern Canadian Architecture*. Hurtig Publishers Ltd., Edmonton, Alberta, 1983, p. 12.

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- ¹¹ Thom, Ron. "Modern Architecture on the West Coast," *Modern Canadian Architecture*. Hurtig Publishers Ltd., Edmonton, Alberta, 1983, p. 23.
- ¹² Stein, Stanley M., and Michael McMordie. *A Tread of Many Fibres*. University of Calgary, Faculty of Environmental Design, Calgary, Alberta, June 2001, p. 13 (Unpublished conference presentation for the Russian Association for Canadian Studies at the 6th International Canadian Studies Conference, Saint Petersburg).
- ¹³ Whiteson, Leon. *Modern Canadian Architecture*. Hurtig Publishers Ltd., Edmonton, Alberta, 1983, p. 15.
- ¹⁴ Hemingway, Peter. "Prairie Architecture: An Introduction," *Modern Canadian Architecture*. Hurtig Publishers Ltd., Edmonton, Alberta, 1983, p. 69.
- ¹⁵ Whiteson, Leon. *Modern Canadian Architecture*. Hurtig Publishers Ltd., Edmonton, Alberta, 1983, p. 15.
- ¹⁶ Whiteson, Leon. *Modern Canadian Architecture*. Hurtig Publishers Ltd., Edmonton, Alberta, 1983, p. 16.
- ¹⁷ Whiteson, Leon. *Modern Canadian Architecture*. Hurtig Publishers Ltd., Edmonton, Alberta, 1983, p. 15.
- ¹⁸ Whiteson, Leon. *Modern Canadian Architecture*. Hurtig Publishers Ltd., Edmonton, Alberta, 1983, p. 15-19.
- ¹⁹ Bernstein, William, and Ruth Cawker. *Building with Words: Canadian Architects on Architecture*. The Coach House Press, Toronto, 1981, p. 44-45.
- ²⁰ Bernstein, William, and Ruth Cawker. *Building with Words: Canadian Architects on Architecture*. The Coach House Press, Toronto, 1981, p. 77.
- ²¹ Murray, James. "A Century of Canadian Architecture," *Canadian Architect*. Southam Magazine Group Ltd., January 2000, p. 27.
- ²² Whiteson, Leon. *Modern Canadian Architecture*. Hurtig Publishers Ltd., Edmonton, Alberta, 1983, p. 164-166.
- ²³ Kalman, Harold. *A History of Canadian Architecture*. Oxford University Press, Toronto, 1994, vol. 1-2, p. 808.
- ²⁴ Whiteson, Leon. *Modern Canadian Architecture*. Hurtig Publishers Ltd., Edmonton, Alberta, 1983, p. 164-166.
- ²⁵ Blake, Raymond. "Destination 2025," *Canadian Issues*. Association of Canadian Studies, June/July 2001, p. 8.
- ²⁶ Jaenen, Cornelius J. "Dual and Diverse," *Canadian Issues*. Association of Canadian Studies, Summer 2000, p. 24.
- ²⁷ Nurse, Andrew. "Destination 2025," *Canadian Issues*. Association of Canadian Studies, June/July 2001, p. 40.
- ²⁸ Jedwab, Jack. "Destination 2025," *Canadian Issues*. Association of Canadian Studies, June/July 2001, p. 2.
- ²⁹ Stein, Stanley M., and Michael McMordie. *A Tread of Many Fibres*. University of Calgary, Faculty of Environmental Design, Calgary, Alberta, June 2001, p. 2 (Unpublished conference presentation for the Russian Association for Canadian Studies at the 6th International Canadian Studies Conference, Saint Petersburg).
- ³⁰ Canada, House of Commons. *Debates*. 8 October 1971, no. 8545.
- ³¹ Bahá'u'lláh. *Gleanings from the Writings of Bahá'u'lláh*. Bahá'í Publishing Trust, Wilmette, Illinois, 1983, p. 250.

CHAPTER 4

SITE ANALYSIS

On 7200 Leslie Street, the Bahá'í Community of Canada has established its National Bahá'í Centre (NBC) in the Thornhill community of the Town of Markham, Ontario, just north of the Toronto/Markham border. (Fig. 1-5) Bahá'í Centres, also known, as “Hazíratu'l-Quds” are headquarters for the Local and National Bahá'í Spiritual Assemblies, which are composed of nine members elected every year. The Hazíratu'l-Quds are the pivot of all Bahá'í administrative activity and complementary to the Houses of Worship in regards to function. The following quote contains guidance from the Universal House of Justice:

“As to the future, it is envisaged that a Mashriqu'l-Adhkár will constitute the heart and nerve-centre of its community. The dependencies which cluster around the central House of Worship include not only the Hazíratu'l-Quds but also a range of institutions of social service, as is explained in God Passes By...”¹

In a letter written a few years later, the Universal House of Justice writes that the Mashriqu'l-Adhkár and the Hazíratu'l-Quds should preferably function “in close proximity to each other.”² Shoghi Effendi describes the Hazíratu'l-Quds:

“Complementary in its functions to those of the Mashriqu'l-Adhkár -- an edifice exclusively reserved for Baha'i worship -- this institution, whether local or national, will, as its component parts, such as the Secretariat, the Treasury, the Archives, the Library, the Publishing Office, the Assembly Hall, the Council Chamber, the Pilgrims' Hostel, are brought together and made jointly to operate in one spot, be increasingly regarded as the focus of all Bahá'í administrative activity, and symbolize, in a befitting manner, the ideal of service animating the Bahá'í community in its relation alike to the Faith and to mankind in general...”³

Anticipating a future Mashriqu'l-Adhkár to be built in the vicinity of the National Bahá'í Centre, the Bahá'ís of Canada purchased about 21 acres of endowment property



Fig. 1: Sign for entrance to the National Bahá'í Centre.



Fig. 2: Front view of National Bahá'í Centre looking west.



Fig. 3: Back view of National Bahá'í Centre looking east.



Fig. 4: North corner of National Bahá'í Centre.



Fig. 5: South corner of National Bahá'í Centre.



Fig. 6: View of endowment property.

that, in due time, may be used to build a Temple. (Fig. 6) Since, ultimately, the decisions regarding timing, the size of the building, the area of land, accessibility to the site, and even the choice of design will all be made by the Universal House of Justice, any decisions concerning these topics in this Masters Degree Project are a matter of personal opinion, and are not to be regarded as immediate or foreseeable plans of the Bahá'í Community in any way.

The following chapter provides a quick “snap shot” of the physical context for this Project, examining the boundaries, access, climate, flora, fauna, soil conditions, and history. Then it analyses this information in order to select the optimum site.

THE CONTEXT

Surrounded by a green setting, the endowment property is enclosed by German Mills Settlers' Park to the north and the east, a row of upper-middle class houses line the south border below the National Bahá'í Centre, and a private golf course bounds it to the west. Found between John Street and Steeles Avenue, the latter road being the boundary line between Toronto and its region, this area contains German Mills Creek, (Fig. 7) which runs south, a municipal building housing a major sanitary sewage pumping station, and a private fitness club to the southeast. Surrounding the German Mills Settlers' Park and golf course is mainly low-density middle to upper-middle class single-family residential housing. (Appendices B-D)

At a latitude and longitude of approximately 43.8132 (43° 48' 47") and -79.3759 (-79° 22' 33"), the National Bahá'í Centre and surrounding area receives an average precipitation of 65 to 70 mm per month, has an average low temperature of -7 to -9 °C in January, although it has a severe design temperature of -20 °C, and an average high of 26 to 28°C in July. The prevailing winds come mainly from the northwest, except in fall and winter, when they predominantly come from the southwest.

Once a heavily forested area, settlement of the area by Europeans greatly changed the number and variety of plant and animal species. Currently, typical urban parkland plant species for the area include White Pine, Red Oak, Sugar Maple, Staghorn Sumac, Field Thistle, Dandelions, Chickory, and more. (Fig. 8) Animals associated with the area include White-Tailed Deer, Coyotes, Grey Squirrels, Groundhogs, Downy Woodpeckers, American Robins, House Sparrows, Eastern Garter Snakes, Green Frogs, and Minnows. The Metropolitan Toronto and Region Conservation Authority is currently overseeing regeneration of the Don Watershed, German Mills Creek being one of its subsidiaries. The Task Force's principles include "to protect what is healthy" and "regenerating what is degraded," "by restoring clean, life sustaining water, regenerating habitats to increase the diversity of fish and other wildlife, and maintaining the existing connections between habitats."⁴ Plans to execute these directives include treating stormwater discharges, plantings to increase habitat connections, access improvements,



Fig. 7: German Mills Creek.



Fig. 8: Example of vegetation on site.

education and interpretive trails “highlighting its cultural significance, natural environment, and monitoring its recovery,”⁵ and installing control ponds. A great deal of this has been executed already, and the Town of Markham has currently gathered a few proposals to revitalize the portion of German Mills Settlers’ Park to the north and northeast of the Bahá’í endowment property.



Fig. 9: Back view of heritage building, circa 1950.

There are a number of historical sites in this area, including remains of the old German Mills Settlement established by William Berczy in 1794. Mostly existing at a distance to the north east of the endowment property, they include a deposit of Indian relics, an old school house, and remnants of the old mill and dam. On the endowment property, at the base of the hill, can be found a residence listed in the Markham Inventory of Heritage Buildings with a date of circa 1950, which was previously used as the National Bahá’í Centre before the current one was completed in 1975. (Fig. 9 and Appendix C)

Due to the large amounts of sand deposits in the area, prior to 1974, German Mills Settlers’ Park was known as the Sabiston Sand and Gravel Pit, which then became known as the Sabiston Landfill after the sand was extracted. According to the Ministry of the Environment records, the class of waste for this landfill was restricted to “A5.” This means that between the 1950’s and 1969, the landfill was receiving waste consisting of tree stumps, brush, rubble, paper, and cardboard. From 1969 to 1974, dumping was restricted to industrial waste, including brick, mortar, concrete block, lumber, plaster, clay, sand, and tree stumps, and excluding liquid waste, hazardous materials, and household garbage. The Sabiston Landfill was closed May 15, 1974, and received only earth fill until 1978, to bring it up to the original grades. Since 1978, no filling has occurred.

Shortly after the landfill was closed, the Bahá’í Community of Canada acquired the land for the National Bahá’í Centre and the endowment property. Referring to the site plan showing the limit of the area of the landfill, it can be seen that a portion of the landfill extends over the property line of the endowment land. (Appendix C) However, this boundary is approximate, and could be slightly more, or slightly less than indicated. The water table is about 151 metres above sea level, and the ground elevation of the

Sabiston Landfill slopes from west to east from 187 to 161 metres above sea level. The depth of the refuse ranges anywhere from 10 to 36 metres, therefore, the sand extraction, and thus the landfill, is not believed to have extended below the water table.

In a study done for the Ministry of the Environment, on-site inspections for leachate seepage into the German Mills Creek, which lies roughly on the eastern border of the landfill, shows that it does not currently impact stream water quality, and accordingly, does not currently present a public hazard. A landfill gas control system is installed around the north and west limits of the Sabiston site. The system is composed of a row of wells that are connected to a central fanhouse. Its purpose is to prevent the migration of methane gas, a combustible by-product of the decomposition of organic wastes, which is potentially explosive, into the ground below the residential areas. Methane gas production and settlement of the landfill materials will continue for many more decades, however, the rate is decreasing with time. Currently, the amount of methane gas collected by the system now in use needs to be enhanced with natural gas in order to keep the flare lit.

Vehicular access to the National Bahá'í Centre is provided by Leslie Street, which stops at the southeast base of the endowment land. (Appendix B and Fig. 10-12) A shared road with the golf course branches in a west direction off Leslie Street, leads to the parking lot of the Centre, turns north on to the golf course, becoming their private service access, and then, continues beside the west side of the endowment property. Public transit can be accessed on John Street and Steeles Avenue, which is about a ten or fifteen minute walk from the Centre.



Fig. 10: Entrance to Steeles Avenue from Leslie Street looking south.



Fig. 11: View down Leslie Street from National Bahá'í Centre.



Fig. 12: Entrance to National Bahá'í Centre and German Mills Settlers' Park from Leslie Street (Leslie Street ends).

THE ANALYSIS



Fig. 13: Site Analysis Sketch.

The most prominent restriction for the site, or endowment property, is the extent of the landfill. (Fig. 13 and Appendices B, C) The Ontario Provincial Government does not normally allow the construction of buildings on landfills, and any surrounding land is under risk of contamination of methane gas and leachate. In order to prevent explosion hazards and the emission of toxic or odorous gases, a study done for the Ministry of the Environment recommends the following precautions:

1. To construct all buildings on undisturbed ground, outside of the fill limits.
2. To install gas probes around the proposed building(s) to make sure the subsurface soils are free of methane.
3. To install cut-off walls in utility trenches constructed on or near the landfill to prevent methane migration through the granular bedding.
4. To seal all electrical conduits that are buried in trenches on or near the landfill at the point-of-entry into the building(s).
5. To add a thicker cover of fill over much of the landfill site and perimeter.⁶

The geology of the land surrounding the landfill consists of a till cap overlying a deep deposit of fine-grained sand. The depth of till ranges from 2 to over 9 metres, and in quality from silty sand to sandy silt till. Since the contamination would most likely travel through water or sand, and not the till cap, a geotechnical consultant informally recommended that the foundations of any building sited near the landfill be kept a minimum of 2 metres above the sand deposit, or to place the building on stilts, allowing ventilation underneath. He also suggested that methane gas monitors, similar to the carbon monoxide detectors found in residential homes, would be necessary. Consequently, before committing to a permanent site for the Bahá'í Temple, the Bahá'í Community will have to perform soil tests to examine the depth of the till cap, the extent of contamination, and various other concerns.

The second strongest restriction on the site would be the extent of the flood plain of the German Mills Creek. However, on a map provided by the Toronto Region Conservation Authority, the Regulatory Flood Plain, which is based on the regional storm, Hurricane Hazel, or the 100 Year Flood, whichever is greater, just touches the east property line of the endowment property, and hence, does not affect any site selection criteria. On the other hand, the Fill Regulation Line does extend into the property slightly, and might involve some extra consideration if it is used and/or the contours are altered in this area. (Appendix B)

Thirdly, the orientation of the Qiblah of the Bahá'í Faith is important to reference through some element of the design, regardless of what that element will be. Short of employing a professional to calculate this exact angle, for the purposes of this MDP, a Robinson Projection Map of the World with Standard Parallels was used, measuring from the midpoint of a line connecting Toronto and 'Akká, to the nearest parallel, in order to get a rough estimate of the direction to the Qiblah. This method produced an angle of 6.75° south of due east.

Sometimes in architecture, the history of a site is considered a high priority of the context, and as a result, has a large influence on the design. However, for this Project, it would be inappropriate, because a Bahá'í Temple is more about improvement, and the unity of humanity, which according to my interpretation of the Bahá'í writings, can only be accomplished if people release their attachment to traditions and focus solely on the word of God. Consequently, it is a project of the future, not the past, and accordingly, should not dwell on it.

Other site selection criteria for this MDP include a relatively flat site to accommodate the large, flexible, circular plan of a Hall of Worship to hold around 500 people. At the same time, good views and abundant natural light are important to provide a connection with nature. Finally, minimal damage to any existing trees is preferred in order to keep an environmentally friendly context for the Project.

The only area within the property that contains most of these criteria, and is far enough from the estimated line of

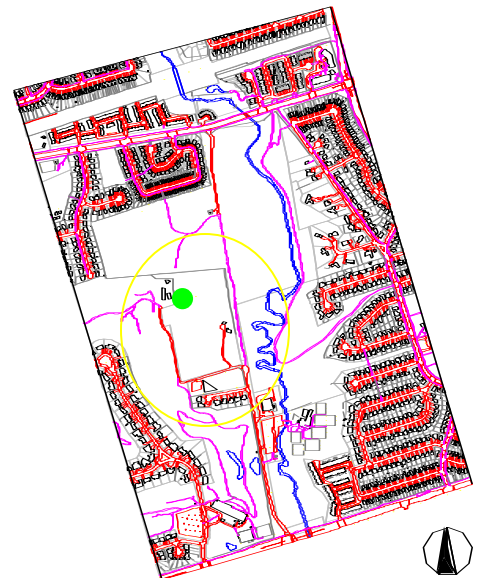


Fig. 14: Site Plan: Proposed site in green, Bahá'í property within yellow oval.

the Bahá'ís and the Town of Markham, as the users of German Mills Settlers' Park would then have access to an adequate parking lot on the south side of the Park.

Sanitary sewers already exist all the way up the road allowance of Leslie Street, but the watermain has to be extended up with the road. (Appendix E) The utility poles that cross the Bahá'í endowment property to access the golf course service sheds and caretaker residence have to be either buried or re-routed, unless the Bahá'í community also purchases that portion of the golf course property in order to eliminate the sheds, gain a caretaker's residence, and gain better views on the west side without having to plant a number of trees to improve the site lines from the Temple. (Appendix D) For this MDP, however, no additional land has been "purchased," and trees have been planted to block the view of the service sheds.



Fig. 18: Leslie Street road allowance.

¹ "Hazíratu'l-Quds and Mashríqu'l-Adhkár," *Letters of The Universal House of Justice*. Bahá'í World Centre, July 2, 1998, section 6, p. 4-5 (Unpublished document available online and by request from the Bahá'í World Centre).

² "Hazíratu'l-Quds and Mashríqu'l-Adhkár," *Letters of The Universal House of Justice*. Bahá'í World Centre, July 2, 1998, section 5, p. 7 (Unpublished document available online and by request from the Bahá'í World Centre).

³ Effendi, Shoghi. *God Passes By*. Bahá'í Publishing Trust, Wilmette, Illinois, 1971, p. 339-40.

⁴ *Forty Steps to a New Don: The Report of the Don Watershed Task Force*. The Metropolitan Toronto and Region Conservation Authority, 1994, p. 97.

⁵ *Forty Steps to a New Don: The Report of the Don Watershed Task Force*. The Metropolitan Toronto and Region Conservation Authority, 1994, p. 108.

⁶ Morrison Beatty Ltd., and Baker Salmona Assoc. Ltd. *Settler's Park Master Plan*. Corporation of the Town of Markham, Parks and Recreation Department, January 1987, p. 18-19.

⁷ Please see: *National Building Code of Canada 1995*. Canadian Commission on Building and Fire Codes, National Research Council of Canada, Ottawa, 1995.

⁸ Please see: *Zoning By-Law 28-97*. Town of Markham. February 1997.

⁹ Please see: *Zoning*. Town of Markham, Development Services Commission, Jan. 1997, sheet B7.

CHAPTER 5

DESIGN DEVELOPMENT

“...two points must be constantly borne in mind by the architects; one, that the building must not be too expensive, and two, that the design must be beautiful and dignified, and not show the influence of the extremes of modern architecture...”¹

Ideally, the design of a Bahá'í Temple must be distinctive, yet unrelated to any established school of architecture, and dissimilar to traditional places of worship so as to exclude no one. Nevertheless, every design is influenced by its surroundings, which includes other architecture. Situated in a multi-cultural society, the design for this Temple has, accordingly, many influences. Some have already been discussed in the previous chapters, but more will follow. Additionally, a list of general guidelines for a design strategy has been considered, and a method of execution established. Since it is not known when the first Bahá'í Temple in Canada will be erected, and since prices vary on a yearly basis making a predictive costing analysis futile and beyond the scope of this Project, the expense of any options of construction is not discussed, and as a result, solely the physical form of the design and the experience of the spaces have been considered.

ARCHITECTURAL INFLUENCES

“Architecture is a fusion of logic and cultural memory. It operates by a kind of informed intuition, an emotional instinct derived from an understanding of structure and social necessity. It is, at best, an art derived from technology, yet free to express feeling.”²

Among the styles that have inspired the design of this House of Worship is Expressionist Architecture, which historically manifested itself in Europe between the years of 1910 and 1923, and influenced many architects in the years to follow. Some were attracted to the imaginative shapes that it provided, and others through its expressive use of materials. Brutalism, for instance, shows this influence through the use of heavy, rugged design and exposed concrete surfaces. Responding to the harsh Canadian shield and its granite outcroppings, Brutalism motivated many Canadian architects during the 1960’s and 1970’s, later giving way to the Post-Modernist Period of the 1980’s and then the High Tech style that now characterises many of the more recent projects finished in Toronto, Ontario.

During the Expressionist Period, “a theme treated by poets, painters, philosophers and critics,” was “an unknown religion of the future in which the new art would find its first true realization.” Expressionist theology included three parts: “the Lost Paradise” (represented by East Indian or Gothic architecture), “the chaotic present” (with its “competitive strife, and profit-oriented thinking”), and the new era to come (the age of spirit, faith and love).³ For Expressionists, the crystal “represented the ultimate, the supreme.” For playwright Lothar Shreyer, who taught occasionally at the Bauhaus school of design in Germany, the crystal meant the “annunciation of the ‘world of symbol’, landscape of the soul, bridge to the supernatural, vessel of the divine.” Hendrikus Theodorus Wijdeveld, the editor of the Dutch magazine the *Wendingen*, stated, “the crystal conceals nothing. Its secret lies in its transparency. Its surfaces reflect the light of the external world.”⁴ These crystalline forms, in addition to “star-shaped plans, and decorative elements drawn from the mineral world” were very common among the Expressionists.⁵ (Fig. 1) Otto Bartning, with his “star church” design, was a leading Protestant church builder from 1922 on, he “believed in a

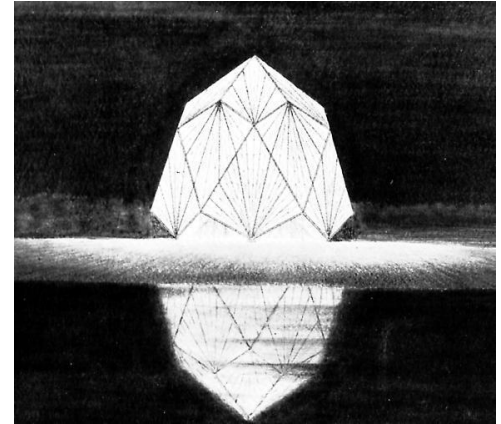


Fig. 1: “Crystal on the Sphere,” by Wassili Luckhardt. Project for a religious building.

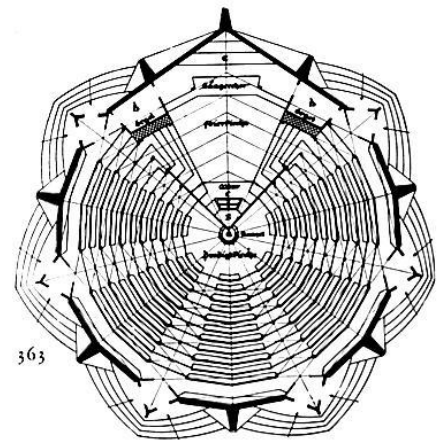


Fig. 2: Plan of “star church,” design by Otto Bartning.



Fig. 3: Section of “star church,” design by Otto Bartning.

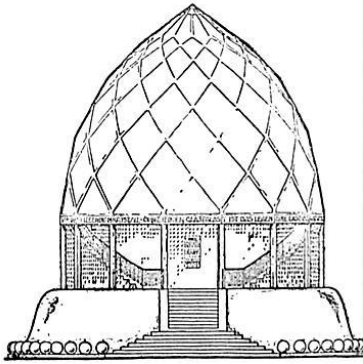


Fig. 4: “Glass Pavilion at the Werkbund exhibition, Cologne, 1914,” by Bruno Taut.

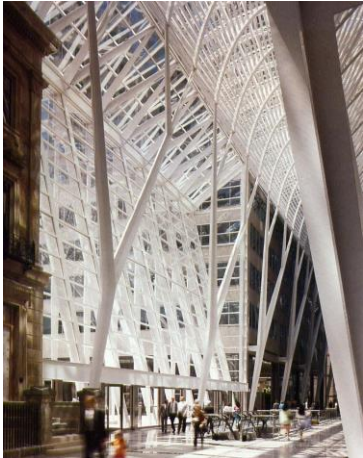


Fig. 5: BCE Place, Toronto, Ontario. Photo by Robert Burley.



Fig. 6: Wohlen High School, Switzerland. Photo by Paolo Rosselli.

Church cleansed of its historical accretions, in the ‘holy melting-pot’ of the community of the future.”⁶ (Fig. 2-3) Bruno Taut, another architect of the period, “regarded his glass houses of prayer as the empty vessels of faith yet unknown, because in the view of the mystics the return of the divine presupposed emptiness and silence.” He specifically said: “Were I empty and pure, God would have to come to me out of his own nature and be enclosed within me.”⁷ (Fig. 4)

An equally important influence on the design for this Bahá’í Temple is Santiago Calatrava, who is currently one of Europe’s leading architect-engineers. Similar to Antonio Gaudi, Calatrava combines technological innovation with his creative impulses, and his designs are often based on metaphors derived from nature, such as plants, animal skeletons and human gestures. However, Calatrava’s work is more contemporary in terms of the crisp lines of his forms, his choice of materials, and the level of technology used. An example of Calatrava’s work is the arcade at BCE Place in Toronto, Ontario, in which a “glazed translucent roof covers the 30 by 30 metre square and is supported by large composite tree-like elements.”⁸ (Fig. 5) Another example is his design for the Wohlen High School in Switzerland, for which the roof of the great hall uses “V”-shaped wood girders as the loadbearing structure, and a separate system for the envelope, which “allows natural light to filter into the hall below.”⁹ (Fig. 6)

GENERAL DESIGN GUIDELINES AND METHOD

According to the book *Building With Words: Canadian Architects on Architecture*, by Bernstein and Cawker, Macy DuBois lists the challenges in architecture as spatial variety, the exploiting of light, a sense of climate, a concern for orientation, a sense of place, and a sense of numbers of people.¹⁰ Although this list presents itself as a good starting point for a design strategy, a more specific list of design guidelines is needed. Using Barbara A. Anderson's list in *The Design of the Canadian Embassy in Tokyo: A Cultural Analysis* and the design philosophies of a number of Canadian architects as a starting point, some aspects of architecture that are considered include a harmonious and direct response to the site through recognition and integration of the four distinctive seasons of the climate, via both an exposure to, and a protection against their effects. This is accomplished through an integration of interior and exterior spaces in an elimination of the wall through transparencies, using heavy, rugged materials with good thermal capacity, and a combination of unconcealed and concealed structure. Human interaction with the design is enhanced through various kinds of movement through the space, informal and formal settings, and attention to detail by means of emphasizing the natural pattern and quality of the material used. Equally important, due to the intended use of the building, as many elements as possible will be based on the number nine.

Native spirituality is a good example of a philosophy that embraces the idea of connection with the environment and the "wholeness" of all things. Julie McLean, in her MDP *Searching for the Sacred: A Place of Spiritual Well-Being*, writes that "we are intimately connected with all life on the planet and any separation between us and nature is a mirage." She continues: "even the worst of buildings becomes 'humanized' by the fact that plants will grow up it or around it and trees and bushes will screen it."¹¹ Nidhi Jain, in her MDP *Connection Between Spirituality and Sustainable Development*, talks about honouring nature and "allowing nature's laws to guide for design solutions and creating a built-environment that can establish interconnectedness between people and nature." She discusses Feng-Shui, which is "a profound sensitivity to the uniqueness of all things and all moments, and an awareness of the fact that they are constantly changing." Based on

this philosophy, she writes “there can be no firm, final answers and no automatic, enduring solutions.”¹² Consequently, “sustainable development” is “the development that meets the needs of the present without compromising the ability of the future generations to meet their own needs.”¹³

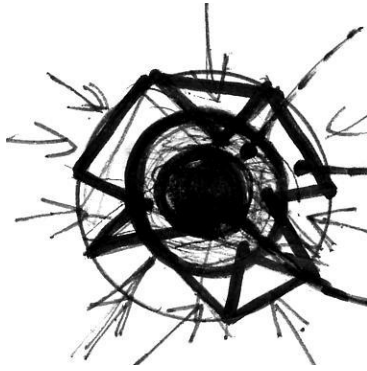


Fig. 7: Thumbnail sketch for plan idea.

The exploration of the Temple’s form has been accomplished through sketches, mandalas based on the nonagon, and models. (Appendix F-H) The general approach to the Temple that this MDP takes is one that investigates areas of the design that have not been given much consideration in the past. For instance, as discussed earlier in the document, although the Temple must have nine sides and be circular in shape, not all sides have to be the same, and therefore, it is not necessary for the design to be symmetrical nine ways. Additionally, it is not compulsory to have nine doors or a dome, which after observation of a few official Bahá’í web sites and pamphlets on the Temples, is a common misconception among Bahá’ís. Accordingly, different types of expressive roof structures for the Hall of Worship have been explored. Moreover, even though the Hall of Worship itself must be circular in plan, any supporting facilities need not be. Consequently, since the landfill near the site forces most, if not all of the program of the building to be ground level or higher, the circular plan of this MDP starts with the Hall of Worship, and degrades as it progresses through the ambulatory into the service spaces and beyond. (Fig. 7) Equally important, this MDP orients some of the design elements towards the east, or more specifically, towards the Qiblih of the Bahá’í Faith in ‘Akká, Israel, to aid the users in their prayers.

With this in view, it is necessary to mention that the only supporting facilities to the Hall of Worship that are absolutely necessary for the functioning of the Temple are a mechanical room, washrooms, storage, a janitor’s closet, and perhaps a coat check. However, as a result of the current stage of this fairly new Faith, and the fact that as the Bahá’í Faith grows, the needs of the Temple will too, additional service spaces have been integrated into the design based on the example of the existing Temples, keeping in mind that they must be flexible for future change. For this Project these additional supporting facilities include, as an example of possible choices, a

bookshop, an office, a reading room, a nursery, a kitchen (to be used only for the supporting facilities), and an additional multi-purpose assembly room for lectures, etc.

¹ Effendi, Shoghi. "Letter Dated April 9, 1955, to an Individual Believer," *Extracts From the Writings and from Letters of the Guardian and the Universal House of Justice on the Arts and Architecture*. U.S. Bahá'í National Center Bulletin Board Server (BNCBBS).

² Eberhard Zeidler from: Whiteson, Leon. *Modern Canadian Architecture*. Hurtig Publishers Ltd., Edmonton, Alberta, 1983, p. 19, 166.

³ Pehnt, Wolfgang. *Expressionist Architecture*. Praeger Publishers, New York, New York, 1973, p. 35.

⁴ Pehnt, Wolfgang. *Expressionist Architecture*. Praeger Publishers, New York, New York, 1973, p. 37.

⁵ Pehnt, Wolfgang. *Expressionist Architecture*. Praeger Publishers, New York, New York, 1973, p. 38.

⁶ Pehnt, Wolfgang. *Expressionist Architecture*. Praeger Publishers, New York, New York, 1973, p. 149.

⁷ Pehnt, Wolfgang. *Expressionist Architecture*. Praeger Publishers, New York, New York, 1973, p. 35.

⁸ Sharp, Dennis. *Architectural Monographs No. 46: Santiago Calatrava*. Academy Editions, London, England, 1996, p. 37.

⁹ Sharp, Dennis. *Architectural Monographs No. 46: Santiago Calatrava*. Academy Editions, London, England, 1996, p. 31.

¹⁰ Bernstein, William, and Ruth Cawker. *Building with Words: Canadian Architects on Architecture*. The Coach House Press, Toronto, 1981, p. 15.

¹¹ McLean, Julie. *Searching for the Sacred: A Place of Spiritual Well-Being*. University of Calgary, Faculty of Environmental Design. Calgary, Alberta, 1997, p. 28, 39.

¹² Jain, Nidhi. *Connection Between Spirituality and Sustainable Development*. University of Calgary, Faculty of Environmental Design, Calgary, Alberta, 2001, p. 44, 66.

¹³ Martell, L. *Ecology and Society*. Polity Press, Cambridge, 1994, p. 45.

CHAPTER 6

FINAL DESIGN PROPOSAL

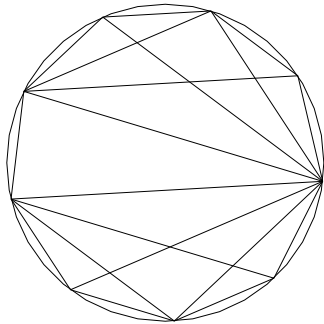


Fig. 1: Mandala.

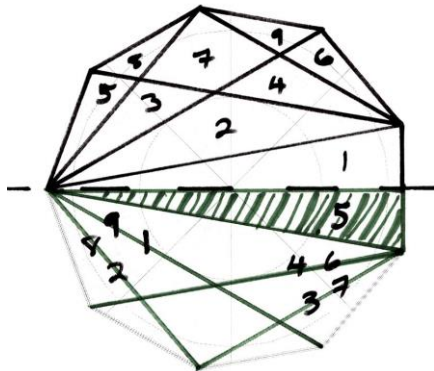


Fig. 2: Mandala Analysis.

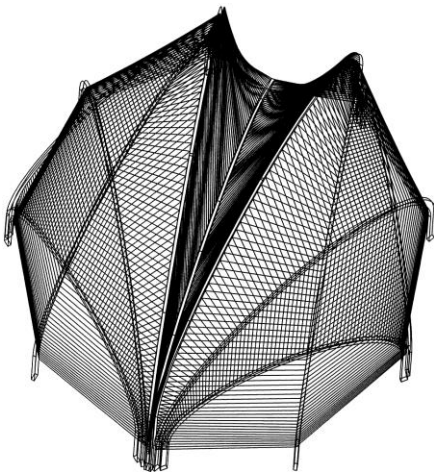


Fig. 3: Drawing of arch system derived from the mandala.

The final design proposal is intended to express my intentions for the design. Site plans, floor plans, sections, and model renderings of these intentions can be found in Appendices I to O. The structural systems for the design have been created from observation and suggested span to depth ratios, but have not been calculated by a structural engineer. (Appendix P) The existence of mechanical and acoustic systems will be mentioned, but will not be designed, and lighting will only receive a rough schematic. (Appendix Q)

The final design solution for the Hall of Worship was based on a mandala derived from a nonagon. (Fig. 1) Other than its aesthetic properties, the mandala was selected due to the fact that it has an obvious orientation towards one direction, which can be used as a guide towards the Qiblah of the Bahá'í Faith in 'Akká, Israel, and its structure is only symmetrical on one axis in section, but remains within the formula of a regular nonagon in plan, which is a departure from the existing Temples to date. Additionally, if the mandala is divided along this axis, there are nine spaces between the diagonal lines and the boundary of the nonagon on either side. (Fig. 2)

From this mandala, a series of eight connected steel arches were eventually derived, using the middle triangle as a wooden "V"-shaped component, which acts as an entrance condition, the ninth major element in the primary structural system, a stabilizing source, a directional element, and a gesture of humility. (Fig. 3 and Appendix L) Encasing this system of arches on both the interior, starting from the floor of the Hall of Worship, and exterior, starting from the roof of the ambulatory, is a cable stiffened, glass grid roof with steel slats, inspired by the designs of the European engineer, Jörg Schlaich. (Fig. 4-5) Due to the climatic conditions of the site, an insulated glass system that can achieve a thermal resistance (R-value) of at least R-30 with two units layered, and that has a relatively low emissivity (low-e) to minimize solar heat gains, should be used within this assembly to reduce heating and cooling requirements. The 400 mm sealed air space between the glazing units will have virtually no insulating value, as a result of its size and the inevitable air movement that will occur within it. If it

could be evacuated, its R-value would greatly increase, but the seal on such a large space would be too hard to maintain, consequently, there is only the two layers of glazing units to rely on for any insulation value.

Currently on the market, are the first generation of “superwindows,” which use “multiple low-e coated glazing with inert gas fills and improved edge spacers.”¹ However, the thermal resistance of these window units cannot reach much more than R-8 per unit. Nevertheless, there is emerging glazing technology that can help achieve the R-value of 30 and low-e desired, such as evacuated spaces in the narrow gaps between the panes, and “smart windows” having “switchable” chromogenic properties in which materials alter their reflectivity and absorptivity in response to climatic changes, but manufacturers such as the Nippon Sheet Glass Company are still researching how to maintain the vacuum with tempered glass (which will be necessary to use in a dome environment), and the exact R-value of most of these emerging products have not been made widely available yet, although some, such as electrochromic glazing, is ready for market introduction. With this in view, it is aerogel, a transparent insulation with a thermal resistance ranging from R-5 to R-7 per 25 mm of material that provides the most promising alternative. (Fig. 6)

First invented by Dr. Steven Kistler in 1931, but until recently, not fully developed for market introduction, “aerogel is a dry gel principally made from silica,”² “weighing as little as 3 times that of air,” and on a per weight basis, is “the strongest, lightest and only transparent building material.” It “has the lowest density of any known solid,”³ and a “very high compression strength for its mass.” “But aerogel is not really so much of interest as a structural material,” says Dr. David Noever. “The real clincher is its incredible insulating effects on any kind of energy transfer: thermal, electrical or acoustic. Aerogel can damp out almost any kind of energy.”⁴ Originally produced with a slightly bluish cast, or a cloud-like appearance, aerogel has earned nicknames such as “frozen smoke,” (see picture) however, the Jet Propulsion Laboratory that developed the aerogel for NASA’s STARDUST mission used “a water clear, high purity silica glass-like material that...is strong and easily survives launch and space environments.”⁵ Aspen Aerogels Inc., the

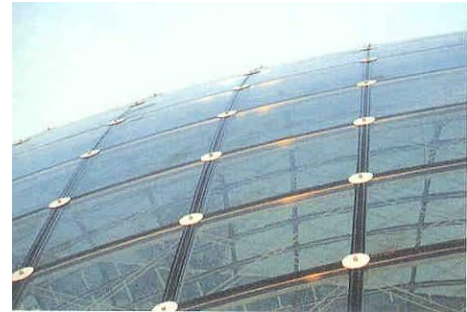


Fig. 4: Example of glass dome exterior.

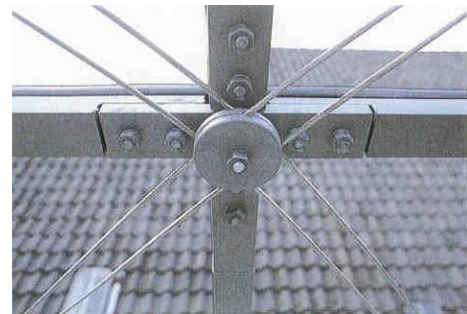


Fig. 5: Detail of glass.

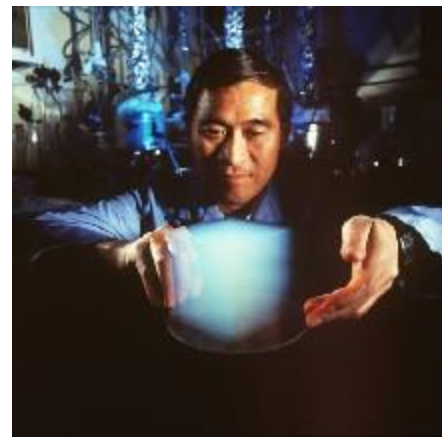


Fig. 6: Dr. Peter Tsou holding a sample of aerogel.



Fig. 7: A sample of clear aerogel by Aspen Aerogels Inc.

global leader in aerogel technology, invented a low cost, high speed manufacturing process for aerogels in March of 1999. Manufacturing aerogel in a variety of forms, including clear monolithic sheets (Fig. 7), Aspen is currently preparing for mass-production of aerogels and “believes its ‘disruptive technology’ will allow for entrance into multiple global markets.”⁶ “A non-toxic, non-flammable alternative to current thermal and sound insulation materials,”⁷ but a porous material that can be damaged by water and works best under a slight vacuum, aerogel can not yet be used on its own as glazing, therefore, prototypes of double paned glazing units filled with aerogel have been developed at places such as Lawrence Berkeley National Laboratory. (Fig. 8-9)



Fig. 8: Prototype of double paned glazing unit filled with aerogel at Lawrence Berkeley National Laboratory.

Although the glazing system in the Hall of Worship should be somewhat transparent, so that the outline of the arches are visible from the exterior and the interior of the building, it does not need to be fully transparent. Visibility of the sky and the interior of the ambulatory does not have to be clear, hence, the amount and quality of the light that passes through the glazing can be controlled with either the transparency of the aerogel, which comes in both a bluish cloud-like and clear appearance, low emissivity coatings on the glass, which come in many tints, chromogenic “switchable” glazing, which can change from clear to cloudy in response to climatic conditions, or a combination of them. The decision on exactly what the combination will be, should be made closer to the point when, and if, this design is to be realized, and will depend on the availability of the products. Furthermore, the framing of the glazing system should be designed with thermal breaks, insulated frames, and spacers made of a material such as fiberglass, when possible, to avoid any thermal bridges.



Fig. 9: Test site comparing aerogel filled units to normal glazing units.

Distinct from the structure of the Hall of Worship, the ambulatory uses a flat roof system of I-beams, columns, and an open-web truss and joist system, covered with corrugated metal decking, insulation, a roofing membrane, and precast concrete ballast. (Fig. 1 of “Introduction” and Appendix P) The exterior walls consist of a glass curtain wall system (with at least a thermal resistance rating of R-20 using the same insulating materials as the glazing on the Hall of Worship), and post-tensioned cables between the structural columns along the exterior wall provide any additional lateral stability required. On account of the

severe winter climate, air locks, also known as vestibules, will have to be added to the major entrances of the ambulatory, which is basically just a covered space that connects the Hall of Worship to its supporting facilities. (Appendix K)

The additional service spaces, including the bookstore, reading room, office, washrooms, nursery, kitchen and assembly room, have a similar structural system as the ambulatory, although in contrast to the cantilevered roof of the ambulatory, the concrete clad exterior walls of these spaces extend above the roofline to hide it. (Fig. 10) The windows on the exterior walls use long, horizontal slits in the undulating concrete façade to screen them, which was inspired by the New York University Honour Court and Welcome Centre in Toronto, Ontario, designed by Teeple Architects, Inc. (Fig. 11) The floor assemblies are similar to the roofs of the ambulatory and the service spaces, only there is no insulation or roofing membrane on them, and the concrete is poured in place.

The storage and mechanical rooms exist directly underneath the Hall of Worship, which is raised one storey above ground level, and a crawl space to access the ducting, etc. leads from the mechanical room to the other spaces, as whose depth could be reduced if it was found to be less than 2 metres above the contaminated sand deposit. An Under-Floor Air Distribution System (UFAD) exists within the floor of the Hall of Worship, whose return ducts can be found in the slightly enlarged door frames to the Hall. The coat check and janitor's closet can also be found below the main entrance to the Hall of Worship.

Physical access to the Temple can begin at a number of points, the most prominent being the two parking lots. (Fig. 12 and Appendices J-K) The lot to the east connects to a series of zigzagging, uncovered stairs (currently portrayed in wood to contrast with the concrete walls, but for which a steel and pre-cast concrete structure could be substituted) that go up the hill in multiples of nine, and lead to a stepped, outdoor balcony from which the bookstore, the assembly hall, and most importantly, the ambulatory can be accessed. (Fig. 13) Once in the ambulatory, the east side of the structure of the Hall of Worship is articulated by spotlights, and flanked by a mirrored pair of pools of water, plants, ramp entrances, and balconies. If

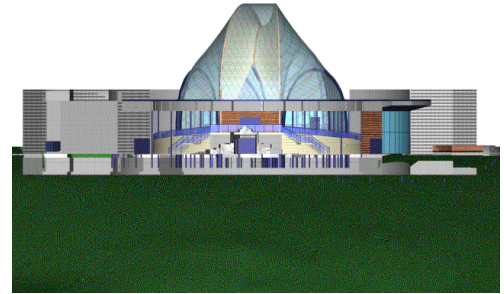


Fig. 10: A north-south section looking east.

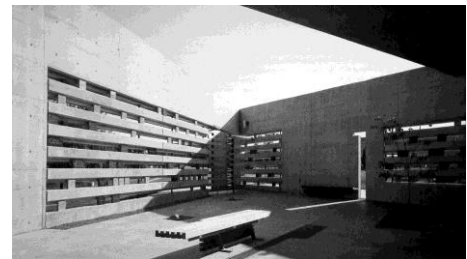


Fig. 11: York University Honour Court and Welcome Centre, Toronto, Ontario. Photo by Steven Evans.

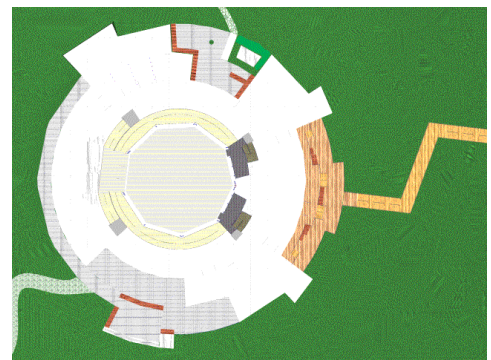


Fig. 12: Plan rendering of design without roof.

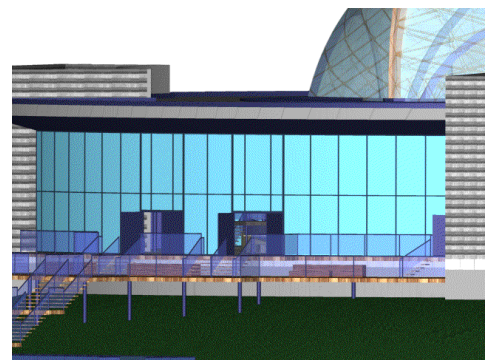


Fig. 13: East/Primary Entrance.

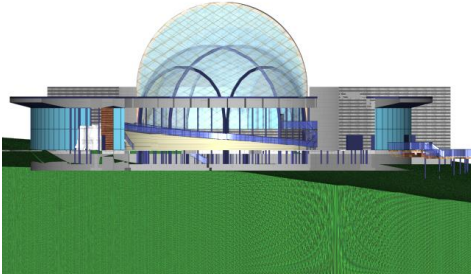


Fig. 14: An east-west section looking north.

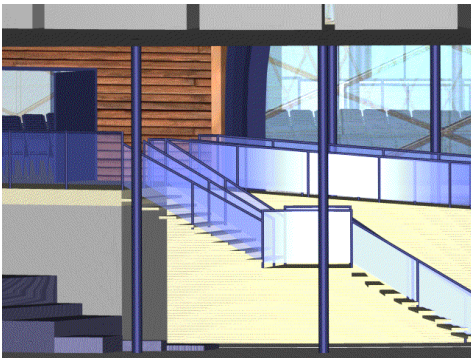


Fig. 15: Interior view of main entrance to Hall of Worship.

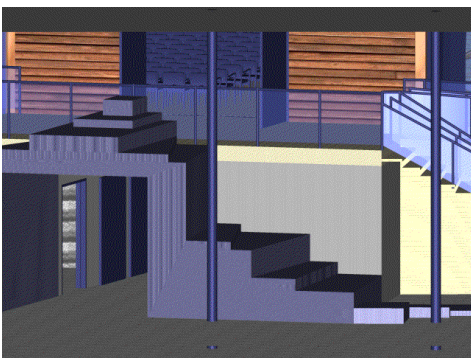


Fig. 16: Interior view of fountain and waterfall. Access to storage and mechanical rooms through opening in waterfall structure.

people use the ramps that start underneath the emergency exit/choir balconies for the Hall of Worship, they will continue around the Hall, underneath the skylights, against the current of the small, one foot wide moat of water that feeds the pools of water already mentioned, and finish at the platform in front of the main entrance to the Hall of Worship. (Fig. 14-15) On this platform, directly across from the entrance can be found a fountain for ablutions and a cascading waterfall, which feeds the moats with water. (Fig. 16) The lot to the west, which has handicap parking and a vehicular drop-off, accesses a winding, level path that enters the ambulatory beside an extension to the pre-existing garden, through a set of doors to the left. (Fig. 17) Visitors can either travel through the ambulatory around the Hall to access the beginning of the ramp, or they can use the stairs between the waterfall and the ramp, which is a more direct, although not handicap accessible route to the main entrance of the Hall. A third, and less prominent access to the building would be from a path from German Mills Settlers' Park, through a meditative garden, and again, into the ambulatory approaching from the north side of the Temple. (Fig. 18-23) There are nine exit points to the exterior of the complex in total, which even though they are asymmetrically positioned could theoretically allude to the nine "gardens" and "walks" that Shoghi Effendi mentioned in a quote previously in the document.⁸

Lighting in the Hall of Worship is provided by cone/shell shaped High Intensity Discharge Lamps located on the intersection between the ambulatory roof and the arches of the Hall. (Appendix Q) In addition, spotlights concentrate on the eastern corner of the structure, highlighting the focal point of the architecture, and the Greatest Name of God, which is mounted at that end. At the same time, a series of fibre optic lights are inserted around the edge of the hardwood floor of the Hall, giving the impression of a floating floor plate within the glass "domed" structure. The arches of the structure remain continuous until they reach the foundation below, and any visible intersections with floor assemblies are articulated with an indentation containing fibre optics around the member.

The ambulatory uses inwardly angled, linear, fluorescent fixtures around the exterior edges of the ceiling. In addition, spotlights highlight the indoor fountain and waterfall, as well as the exposed structure of the Hall of

Worship on the east side of the ambulatory. More fibre optic lighting can be found in the moat of water with their twin pools that encircle the vertical circulation system, highlighting the qualities of the water. Furthermore, there is additional ceiling-mounted general illumination surrounding the outside circumference of the skylights for when the sky is dark, using linear, fluorescent fixtures again. The supporting facilities have not been addressed with regards to specific lighting designs; however, they have been assigned with task lighting supplemented by general illumination. At the same time, the exterior of the building is briefly mentioned to have down-lights around all the exit doors and patios, with low-key lights lining either side of the stairs on the hill, and vertical park lights lining the path from the handicap parking, and the parking lots.

Francis Ching writes, “a room’s acoustics is dependent on its shape, form, volume, and the nature of its surfaces.”⁹ On account of the fact that the floor plan of any Hall of Worship within a Bahá’í Temple complex has to be flexible, with no fixed furniture or prescribed layout, and the fact that the design of any music performance space, whether solely for vocals or not, “is a very complex procedure involving extensive calculations of absorption, reverberation time and ray diagramming,”¹⁰ the sound issues of the Hall of Worship for this Project are too extensive to address in detail. Nevertheless, an attempt will be made to roughly describe their nature.

Many religious buildings throughout history have been built with reflective surfaces of stone, marble, or mosaics that add to a longer reverberation time to enhance the music, and at the same time use domes and vaults to focus it in certain areas. Similar to those buildings, this design has a great deal of reflective and concave surfaces. However, unlike many of the traditional Christian churches, for instance, there is an absence of parallel surfaces to reflect the sound back and forth, due to the nonagon shape, and there are some convex shapes in the upper part of the glass “dome” which will diffuse the sound. Without providing some strategically placed textured glazing in some areas and adding movable, absorptive, aesthetically pleasing acoustic panels to reduce any potential undesirable “hot spots” of sound produced by the concave reflective shapes, the rough estimate for the

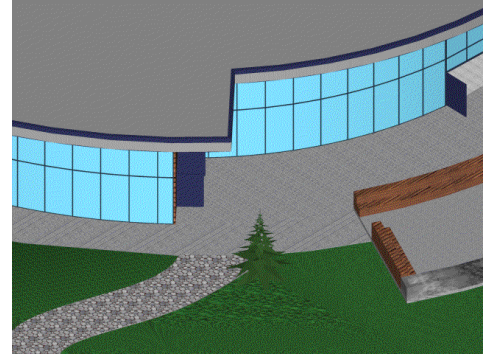


Fig. 17: West/Secondary Entrance.

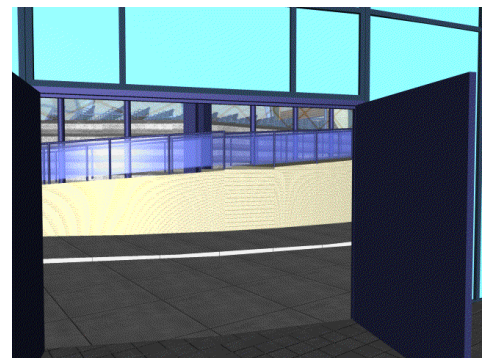


Fig. 18: View from North/Tertiary Entrance.

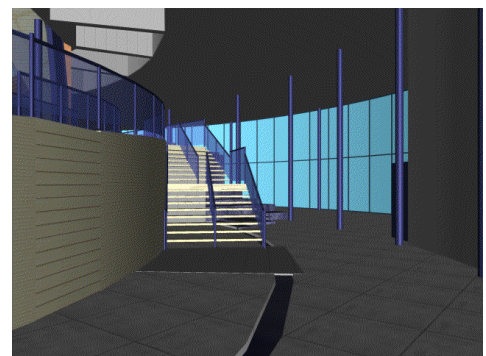


Fig. 19: Interior view approaching the main entrance of the Hall of Worship.

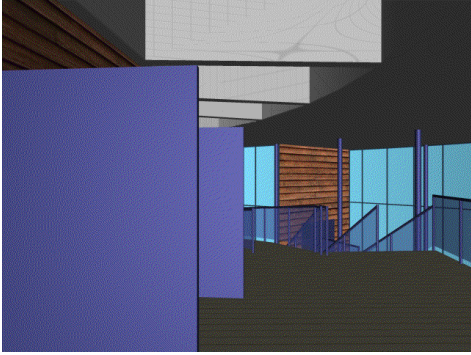


Fig. 20: Interior view of platform and main entrance to the Hall of Worship.

reverberation time of the Hall is just above 2 seconds, which is within the recommended range for religious buildings. On the other hand, the average room absorption is below the recommended level of 0.2, and could be improved with the methods described above. For example, a tripling of the glass coefficient of absorption could bring the reverberation time to an optimum of 1.6 seconds for the volume of space. At the same time, these calculations were made assuming that all 550 chairs would be present, and half occupied. If these circumstances change, as they inevitably will with the flexible layout, then the calculations will too. Additionally, it may be necessary to use electronic equipment to amplify the voice of a soft speaking individual and to reinforce the acoustic properties of the space.¹¹

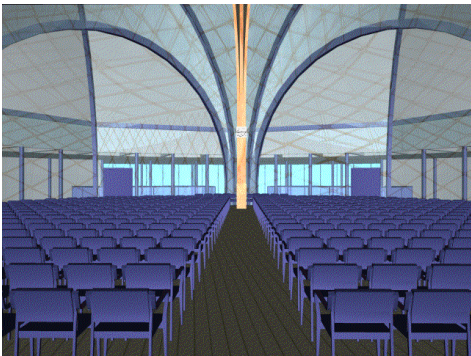


Fig. 21: Interior view of Hall of Worship looking east.

One advantage of the design is that the additional service spaces, which have been arbitrarily assigned with functions that would be useful and appropriate for the Temple and are subject to change, can theoretically be added or subtracted using the suggested structure and act as examples of how the dependencies, or institutions of social service mentioned at the beginning of the document, could relate to the Temple in such a context. Furthermore, The Hall of Worship, in structure and appearance, has been made distinctively separate from the rest of the complex, reinforcing its significance and permanence as the Temple proper.

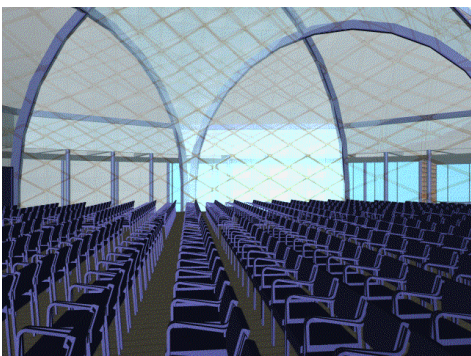


Fig. 22: Interior view of Hall of Worship looking south.

Another advantage of the design is that it uses what is referred to as a “brown” site. The east parking lot and the lower part of the exterior stairs are on top of the landfill (which is why the stairs are raised slightly above the ground to avoid direct contamination), while the rest of the complex rests on top of indirectly contaminated and/or disturbed ground. The building has its foundation in the till cap that protects against the methane gas and leachate that could migrate from the landfill in the sand deposit below, and the parking lot to the west uses a disturbed section of land now used as a depository for excess dirt and cuttings from the golf course, which is currently leasing that area of land from the Bahá’ís. These areas of land were already damaged by human activity, and had very little vegetation on them other than weeds and grass. Moreover, as the prevailing winds come mainly from the northwest or southwest, there was already somewhat of a “shelter belt”

of trees to the west for the ambulatory and supporting facilities, which has been reinforced in the design by additional planting, making the strong view lines to the east even stronger, and focusing the user's attention towards the direction of the Qiblah.

On the whole, many sources within the document, and many beyond the scope of explanation have influenced the final product. These factors of inspiration are too numerous to list here, consequently, as many artists do with their work, they will be left for the reader to interpret.

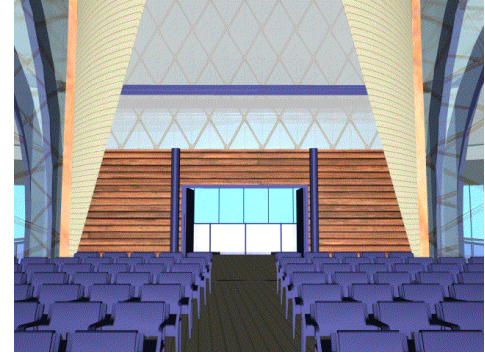


Fig. 23: Interior view of Hall of Worship looking west.

¹ <http://eande.lbl.gov/BTP/DOE/optics.html>

² <http://science.nasa.gov/newhome/help/tutorials/housefuture.htm>

³ <http://stardust.jpl.nasa.gov/spacecraft/aerogel.html>

⁴ http://science.nasa.gov/newhome/headlines/msad05feb99_1.htm

⁵ <http://stardust.jpl.nasa.gov/spacecraft/aerogel.html>

⁶ <http://www.aerogel.com/>

⁷ <http://stardust.jpl.nasa.gov/spacecraft/aerogel.html>

⁸ Please refer to page 9.

⁹ Ching, Francis D. K., and Cassandra Adams. *Building Construction Illustrated*. 2nd Ed., Van Nostrand Reinhold, New York, New York, 1991, p. A-14.

¹⁰ Stein, Benjamin and John S. Reynolds. *Mechanical and Electrical Equipment for Buildings*. 8th Ed., John Wiley and Sons, New York, 1992, p.1354.

¹¹ Based on notes taken from class 79.356 *Technology 4*, in the 1995-1996 Session, with the Department of Environmental Design, in the Faculty of Architecture, at the University of Manitoba and the book by Benjamin Stein and John S. Reynolds: *Mechanical and Electrical Equipment for Buildings*. 8th Ed., John Wiley and Sons, New York, 1992.

CONCLUSION

“When the Mashriqu'l-Adhkar is completed, when the lights are emanating therefrom, and the righteous assemble therein, when prayers are offered to the Kingdom of divine mysteries and the voice of glorification is raised to the Supreme Lord, then shall the believers rejoice, and their hearts be dilated, overflowing with the love of the ever-living and self-subsisting God.”¹

The initial objective of this Master’s Degree Project was to propose a design for the first Bahá’í Temple for Canada using the endowment property purchased by the Bahá’í community next to the National Bahá’í Centre of Canada, but through the process of creating it, this Project has become much more. The literature review of the Bahá’í writings uncovered the basic objectives of the Temple, revealing some misconceptions, such as the fact that nine doors and a dome are not necessary characteristics of a Bahá’í Temple, and that all nine sides of the building do not have to be the same. This “opened doors” to new possibilities of design, greater variety, and a new found freedom of expression.

Another interesting finding was the significance of the number nine beyond the Bahá’í Faith. Through the research, it was discovered that the power of the number nine has been known to scholars for hundreds of years. Acting as a “point of change”² in the dynamics of our language of mathematics, and “a point of initiation and departure,”³ it is intimately connected to infinity, which many people attribute as a characteristic of the Great Spirit, or God, who has no beginning or end.

Gaining a better understanding of the Canadian culture and its architecture was the third challenge presented in the research. Having a regional diversity influenced by its vast and varied landscape, multicultural society, humanism, and ability to adapt borrowed technology and ideas to new circumstances, Canadian architecture has been described by architects as modest and apt. However, Canadians do not see this apparent fragmentation of cultures and styles as a weakness, but as a strength, encouraging not only national unity through individual identity, but also global unity

through diversity, which is accordingly, a principle of the Bahá'í Faith.

A great deal of useful information was gained in the site analysis, not only for this Project, but hopefully for the Bahá'í community as well. Preserving as much as of the natural habitat as possible, “working around” the old landfill, and finding opportunities for access were the greatest challenges for the site selection of this Project. Through an exploration of available documents and various personal communication with people connected to the issues, viable choices were suggested, aiding not only the purposes of this project, but also serving as a point of departure for any future construction on the site.

Using Expressionist Architecture and its exploration of the crystal as one of the architectural influences was a logical choice for this Project, as the Expressionist ideology seemed to be reaching for goals similar to the purpose of the Bahá'í Temple: an age of spirit, faith and love. The empty, pure, glass houses of prayer represent the “annunciation of the ‘world of symbol’” and a “vessel of the divine.”⁴ Additionally, the work of Santiago Calatrava’s skeleton-like structures seemed to complement the work of the Expressionists through its revealing composition.

Employing all these influences, the final design proposal was derived using the direction of the Qiblah as a focal point and the necessary flexible nature of the supporting facilities as an opportunity. The structure of the Hall of Worship, derived from a mandala based on the number nine, and the most permanent space of the design, was meant to be distinctive and separate from the service spaces that surround it, which have been essentially arbitrarily assigned, and can be added or subtracted at any time using the recommended structure. Consequently, providing the relatively new religion with what it needs most in its goal for global unity: opportunities for change.

¹ ‘Abdu’l-Bahá from: “Hazíratu’l-Quds and Mashriqu’l-Adhkár,” *Letters of The Universal House of Justice*. Bahá'í World Centre, July 2, 1998, section 8, p. 1 (Unpublished document available online and by request from the Bahá'í World Centre).

² Balmond, Cecil. *Number 9: The Search for the Sigma Code*. Prestel, New York, New York, 1998, p. 129.

³ Balmond, Cecil. *Number 9: The Search for the Sigma Code*. Prestel, New York, New York, 1998, p. 29.

⁴ Pehnt, Wolfgang. *Expressionist Architecture*. Praeger Publishers, New York, New York, 1973, p. 37.

APPENDIX A

INTRODUCTION TO THE BAHÁ'Í FAITH

The Bahá'í Faith is founded on the belief that there is one God who reveals His word in each period of history through a chosen Individual, also referred to as a Prophet, whom the Bahá'ís call "the Manifestation of God". This Individual re-states in every era¹ God's purpose and will. Included among the recorded Manifestations of God that Bahá'ís recognize are Abraham, Zoroaster, Krishna, Buddha, Moses, Christ, Muhammad, the Báb, and so on, considering Bahá'u'lláh as the most recent for this era. Shoghi Effendi states:

*"...Divine Revelation is a continuous and progressive process, that all the great religions of the world are divine in origin, that their basic principles are in complete harmony, that their aims and purposes are one and the same, that their teachings are but facets of one truth, that their functions are complementary, that they differ only in the nonessential aspects of their doctrines, and that their missions represent successive stages in the spiritual evolution of human society..."*²

The first significant event of the Bahá'í Faith took place in Persia on May 23, 1844, when a young Man called Siyyid 'Alí-Muhammad declared himself to be the "Promised One" of Islam, otherwise known as the "Qá'im". He adopted the title of the "Báb", or the "Gate", and said that his mission was to act as the "Gate" through which people would prepare for the advent of another Prophet, "Him Whom God shall make manifest", the Promised One of all religions who would usher in an age of world peace. On July 9, 1850, after six years of suffering and imprisonment, the Báb was executed, in addition to over 20,000 of his followers.

Three years later, a follower of the Báb, known as Mírzá Husayn-'Alí and a leader of the Bábís, received a revelation from God that he was the Manifestation of God foretold by the Báb, although he did not publicly declare it until 1863. He suffered a total of 40 years of imprisonment and exile, and passed away in the year 1892 in the prison city of 'Akká, now part of Israel. His title is known to the Bahá'ís as "Bahá'u'lláh", or "the Glory of God".

In those years, Bahá'u'lláh wrote over a hundred volumes expounding the laws and principles of his faith, in addition to proclaiming his Message to the religious and secular rulers of both the Eastern and Western countries. The public can access the original documents of his writings at the Bahá'í World Centre in Haifa, Israel. The ones that have been translated into English include the *Kitáb-i-Aqdas: The Most Holy Book*, the *Kitáb-i-Íqán: The Book of Certitude*, and *The Seven Valleys*. Shoghi Effendi explains some of Bahá'u'lláh's fundamental principles:

"The Bahá'í Faith upholds the unity of God, recognizes the unity of His Prophets, and inculcates the principle of the oneness and wholeness of the entire human

*race. It proclaims the necessity and the inevitability of the unification of mankind, asserts that it is gradually approaching, and claims that nothing short of the transmuting spirit of God, working through His chosen Mouthpiece in this day, can ultimately succeed in bringing it about.”*³

Shoghi Effendi also adds that Bahá'u'lláh teaches the “unfettered search after truth,” the elimination of all prejudice, “the purpose of religion to be the promotion of amity and concord,” the essential harmony of science and religion, the equality of men and women, the elimination of the extremes of wealth and poverty, the unnecessary need for clergy and monasticism, the exaltation of any work performed in the spirit of service to the level of worship, and universal peace.⁴

In his Last Will and Testament, Bahá'u'lláh appointed his eldest son, ‘Abbás Effendi, who later became known as “‘Abdu’l-Bahá”, or “Servant of Bahá”, as the sole Interpreter of His Writings. Since his early childhood, ‘Abdu’l-Bahá shared a great deal of his father’s imprisonment, and remained a prisoner after Bahá'u'lláh’s death, in 1892, until 1908, when as a result of the Young Turk Revolution, he was released from his confinement in the city of ‘Akká. Shortly after, he embarked on a three-year journey to Egypt, Europe, and North America to teach his father’s Message. During this journey, ‘Abdu’l-Bahá visited Canada on August 30, 1912, for eleven days. He stayed for three of those days at the home of May and William Sutherland Maxwell in Montreal, which is still standing, and now known to the Bahá’ís as the Montreal Bahá’í Shrine, used for pilgrimage, and a historic monument. It is the only official Bahá’í Shrine outside of the Middle East to this date. Shoghi Effendi described ‘Abdu’l-Bahá as “the perfect Exemplar of His Faith...endowed with superhuman knowledge, and to be regarded as the stainless mirror reflecting His light.”⁵ In addition to his humanitarian work for which he was knighted by the British government in 1920, ‘Abdu’l-Bahá wrote many books and Tablets interpreting and explaining the writings of Bahá'u'lláh. Some of his works that have been translated into English include: *Some Answered Questions*, *The Secret of Divine Civilization*, and *The Promulgation of Universal Peace*. ‘Abdu’l-Bahá passed away on November 28, 1921, in Haifa, Israel.

Before his death, ‘Abdu’l-Bahá named his eldest grandson, Shoghi Effendi, as his successor, Guardian of the Cause and authorized interpreter of the Bahá’í teachings. Shoghi Effendi married Mary Maxwell, the daughter of the Maxwells, and saw to the supervision of some of the more important architectural projects in the Bahá’í community, such as the superstructure of the Shrine of the Báb in Haifa, Israel, designed by William Sutherland Maxwell, and the International Archives building in Haifa, Israel, designed by Charles Mason Remey. Shoghi Effendi died in 1957, after which, in accordance to the Bahá’í writings, the Universal House of Justice was established as the international administrative body of the Bahá’í Faith, which is elected every five years, and permanently resides in Haifa, Israel. Examples of writings by Shoghi Effendi are *God Passes By*, *The Promised Day is Come*, and *Messages to Canada*.⁶

¹ The length of an “era” varies, but the Bahá’í writings suggest that the Bahá’í era is to last 1000 years.

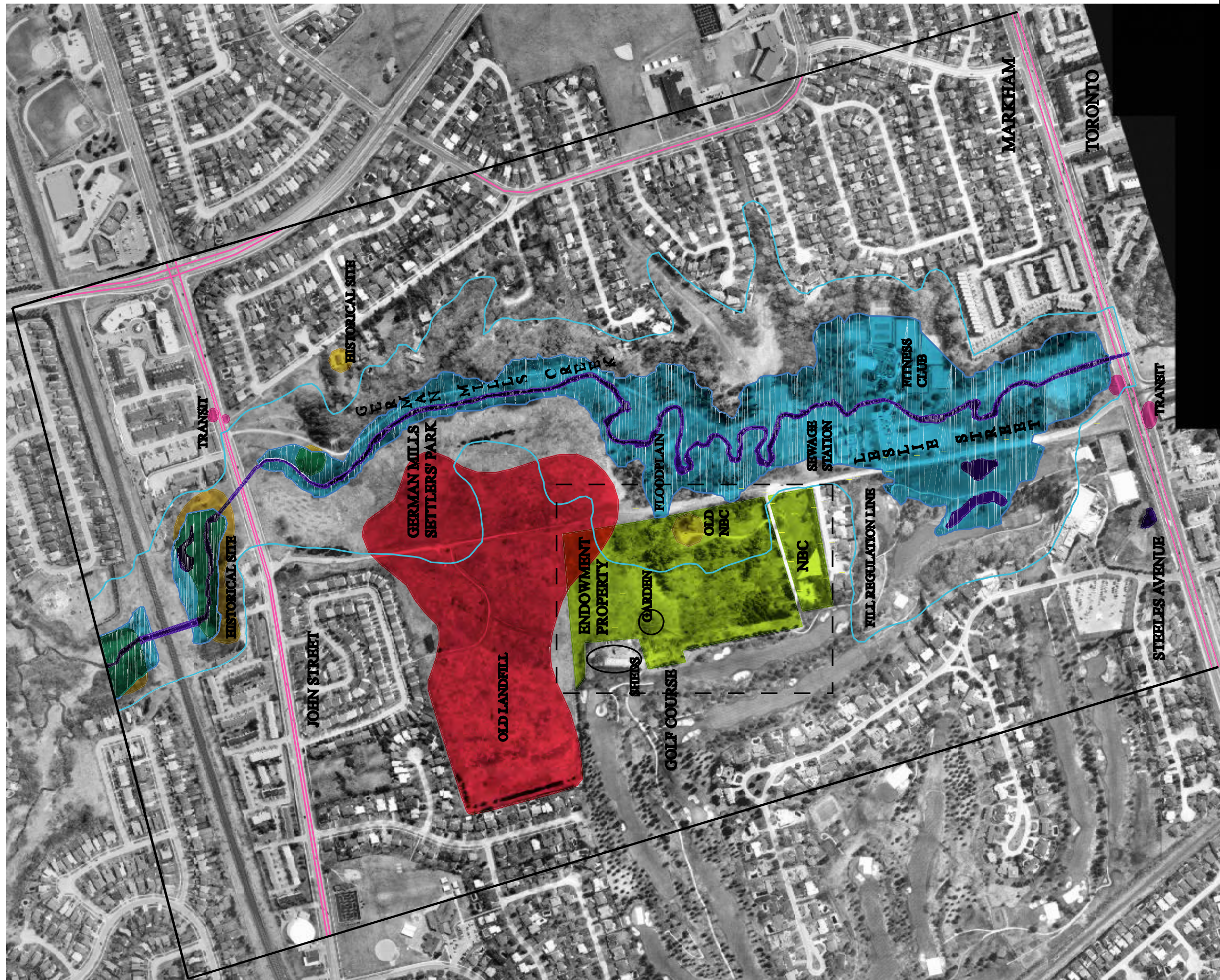
² Effendi, Shoghi. *The Promised Day is Come*. Bahá’í Publishing Trust, Wilmette, Illinois, 1980, p. 1-2.

³ Effendi, Shoghi. *The Promised Day is Come*. Bahá'í Publishing Trust, Wilmette, Illinois, 1980, p. 1-2.

⁴ “Science and Religion: Letter Dated 14 July 1947, by Shoghi Effendi to the United Nations Special Commission on Palestine,” *Letters of The Universal House of Justice*. Aug. 1, 1997, p. 3.

⁵ Effendi, Shoghi. *God Passes By*. Bahá'í Publishing Trust, Wilmette, Illinois, 1971, p. 242.

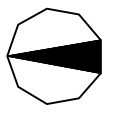
⁶ For a slightly more complete general introduction to the Bahá'í Faith, I recommend *Bahá'u'lláh and the New Era*, by J. E. Esslemont, or *The Bahá'í Faith: An Introduction*, by Gloria Faisi.



APPENDIX B

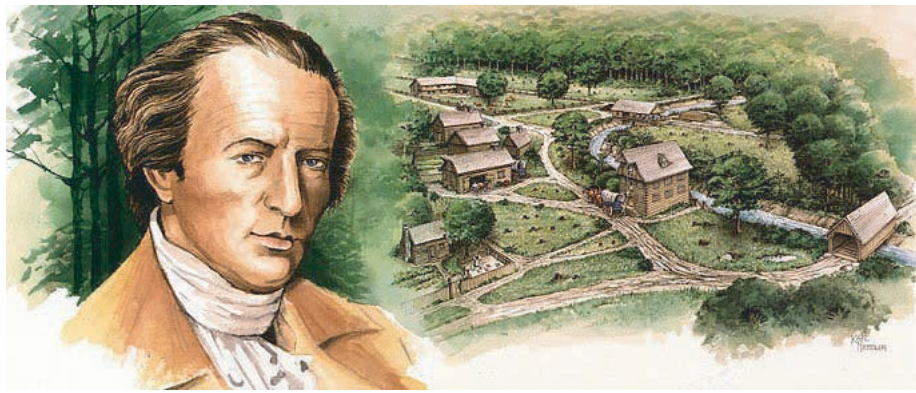
AERIAL PHOTOGRAPH OF SITE

N.T.S.



NBC = National Baha'i Centre





AN ARTIST'S RENDERING OF WILLIAM BERCZY AND OLD GERMAN MILLS SETTLEMENT



OLD SCHOOL HOUSE

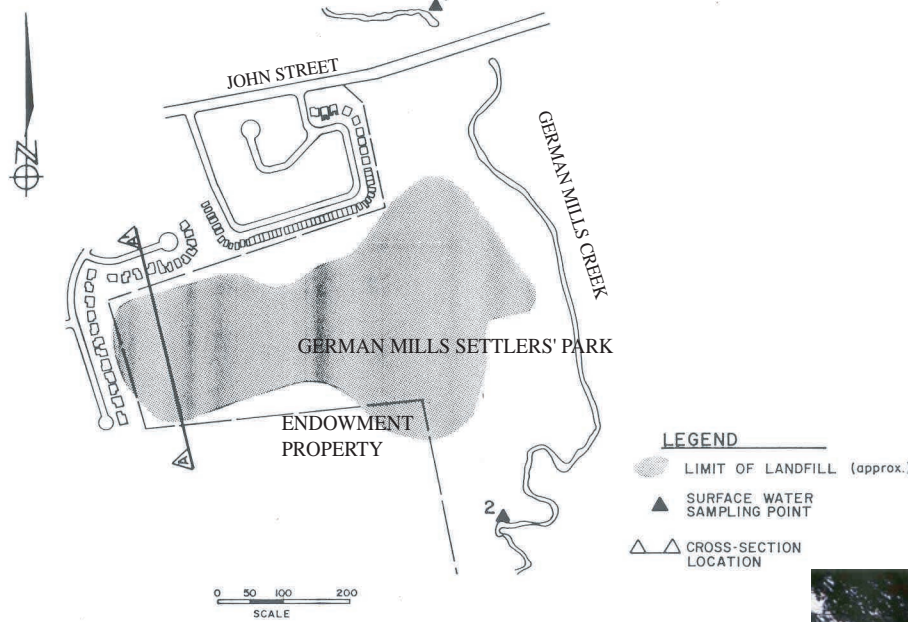


AERIAL PHOTOGRAPH OF AREA 1946 (N.T.S.)

APPENDIX C VISUAL HISTORY OF SITE



RENDERING OF INDIAN LONGHOUSES



PLAN: APPROXIMATE EXTENT OF OLD SABISTON LANDFILL



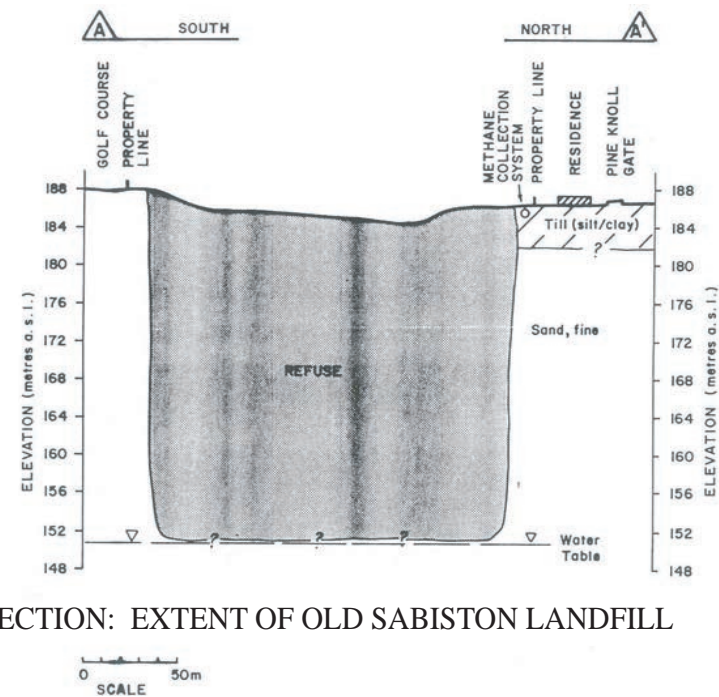
EXAMPLE OF TREES ON SITE



AERIAL PHOTOGRAPH OF AREA 1970 (N.T.S.)



HISTORICAL RESIDENCE CIRCA 1950
(OLD NBC)



SECTION: EXTENT OF OLD SABISTON LANDFILL



AERIAL PHOTOGRAPH OF AREA 1981 (N.T.S.)



MAP OF MARKHAM BY WILLIAM BERCZY

APPENDIX D
PICTURES OF SITE



A: EXISTING GARDEN ON THE ENDOWMENT PROPERTY



B: GERMAN MILLS CREEK



C: ENTRANCE TO NATIONAL BAHAI CENTRE FROM LESLIE STREET



D: VIEW OF ENDOWMENT PROPERTY FROM PARK



E: OLD SABISTON LANDFILL AREA NORTH OF BAHAI PROPERTY



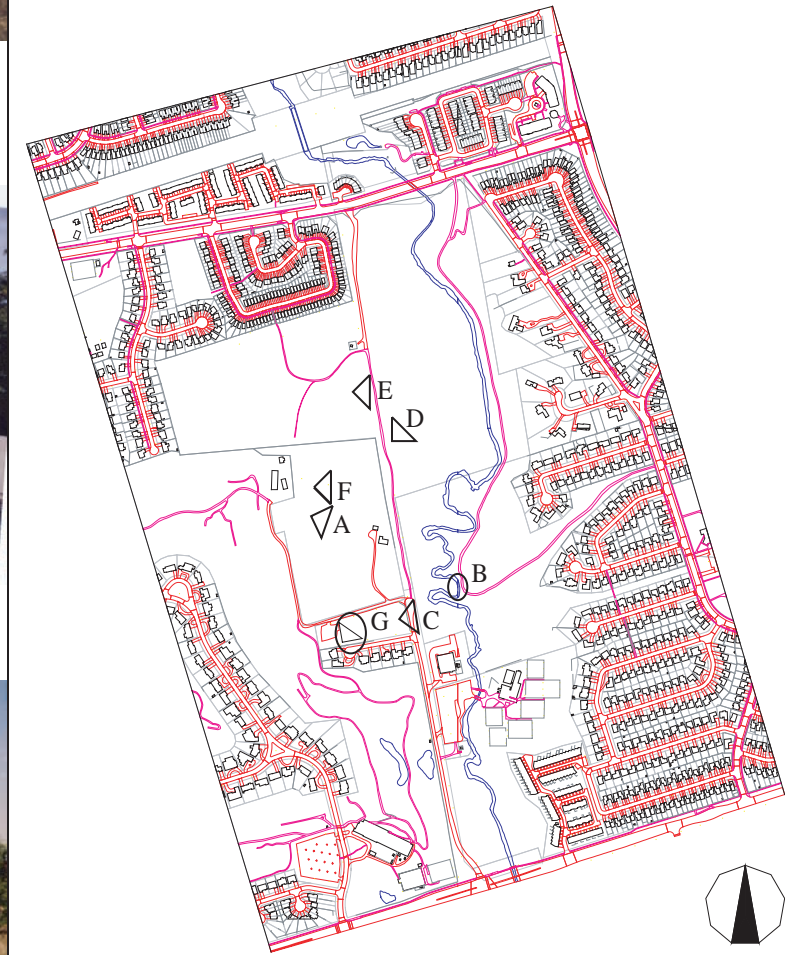
F: VIEW OF SHEDS AND POTENTIAL TEMPLE SITE



G: RECEPTION DESK AND FRONT DOOR OF NATIONAL BAHAI CENTRE



G: NATIONAL BAHAI CENTRE

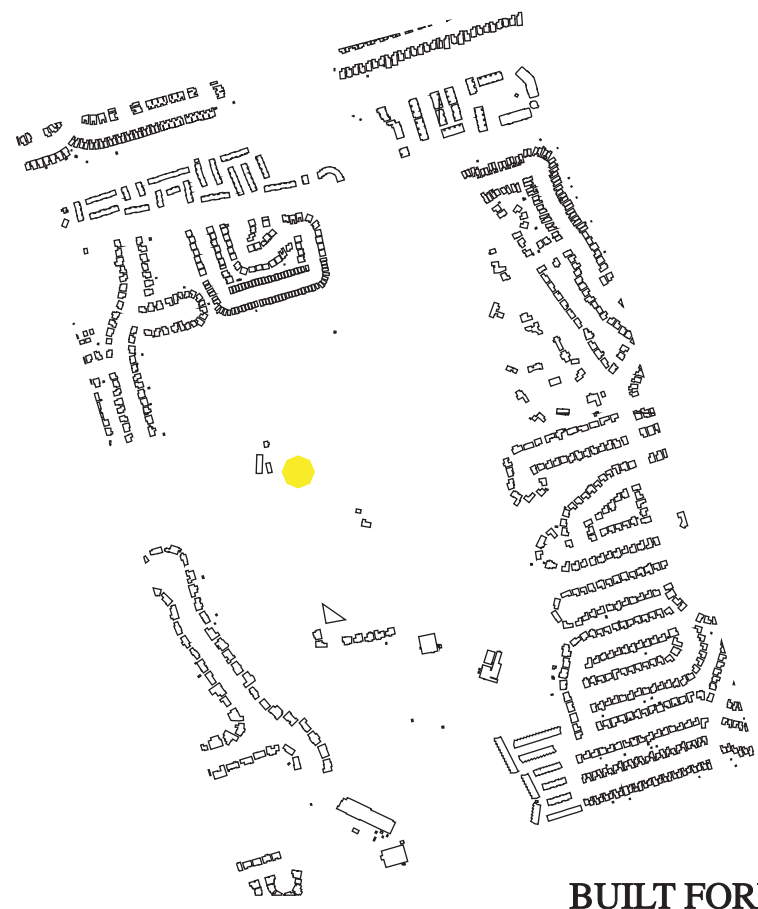


REFERENCE MAP

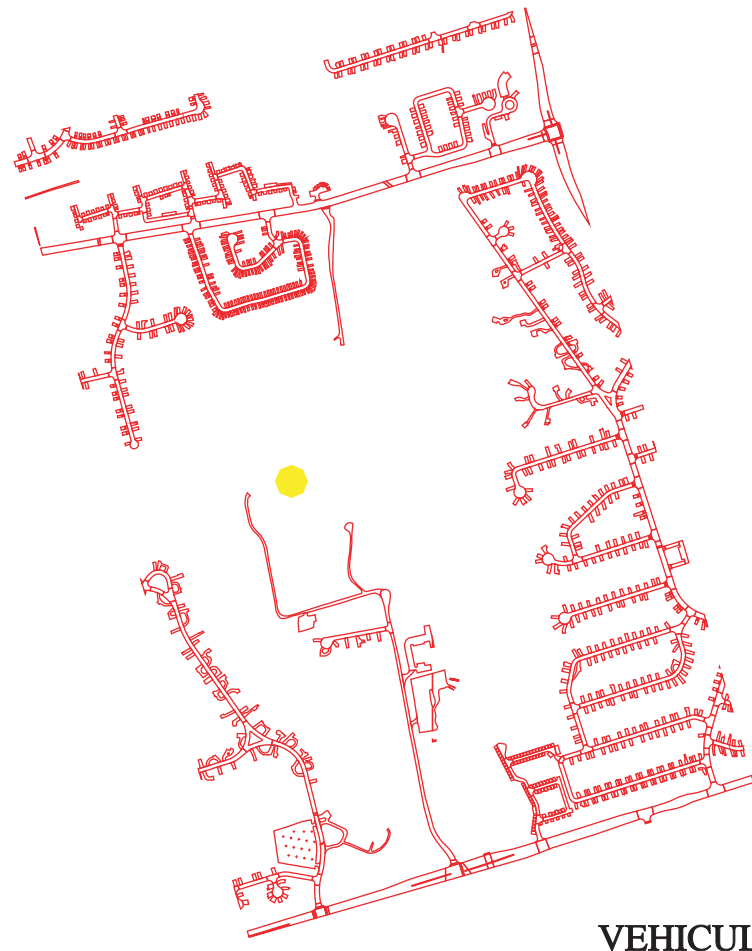
APPENDIX E

VIGNETTES OF SITE

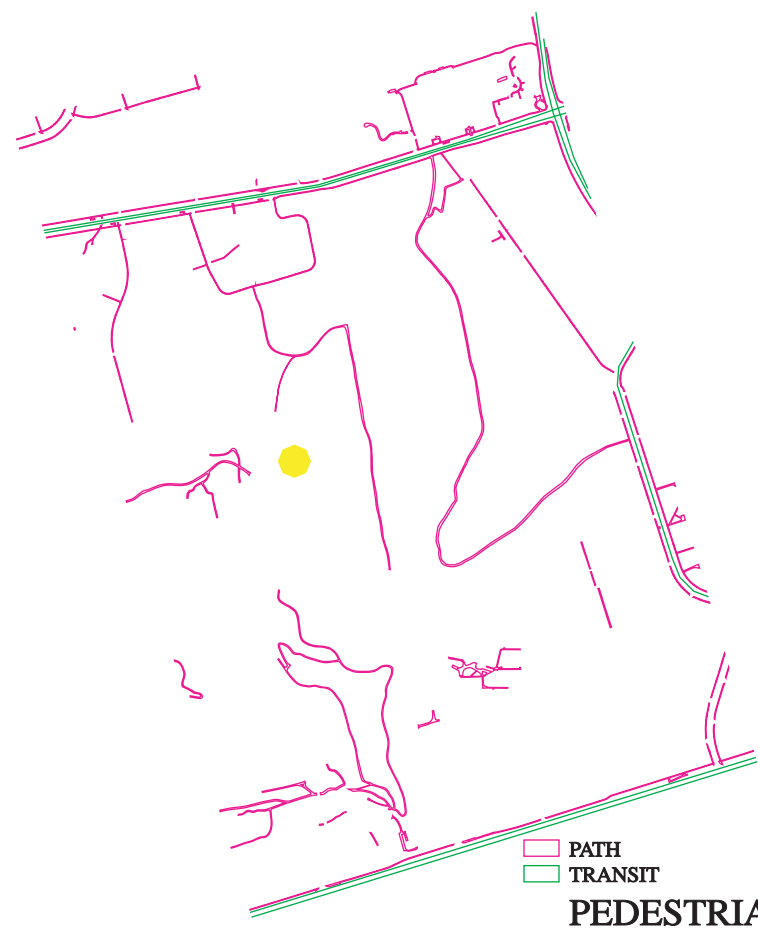
N.T.S.



BUILT FORM

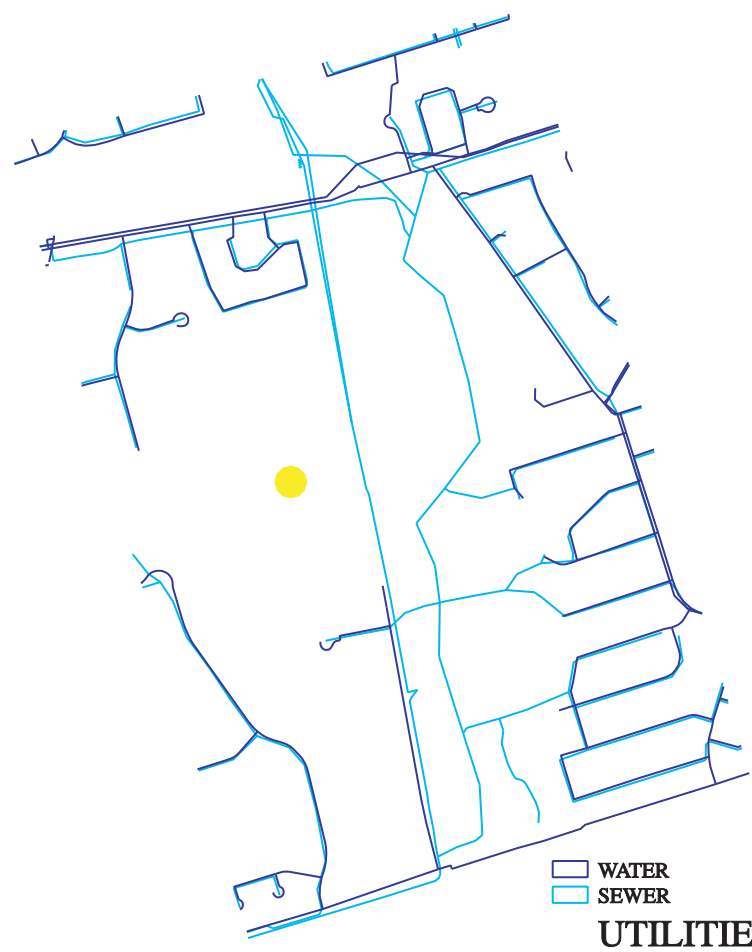


VEHICULAR ACCESS



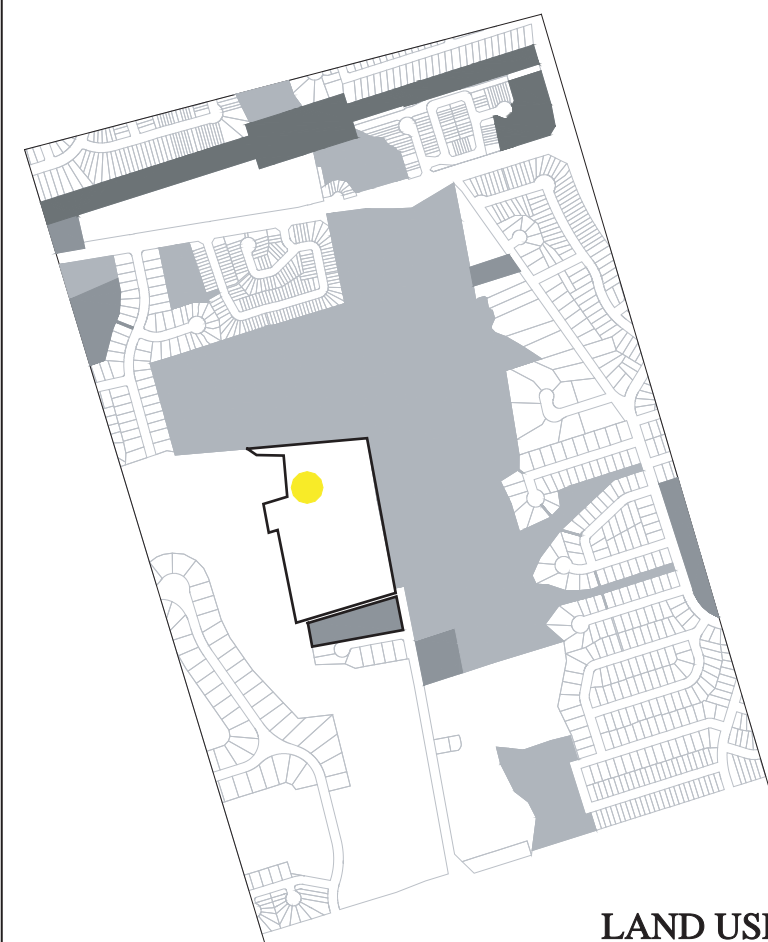
PINK PATH
GREEN TRANSIT

PEDESTRIAN ACCESS

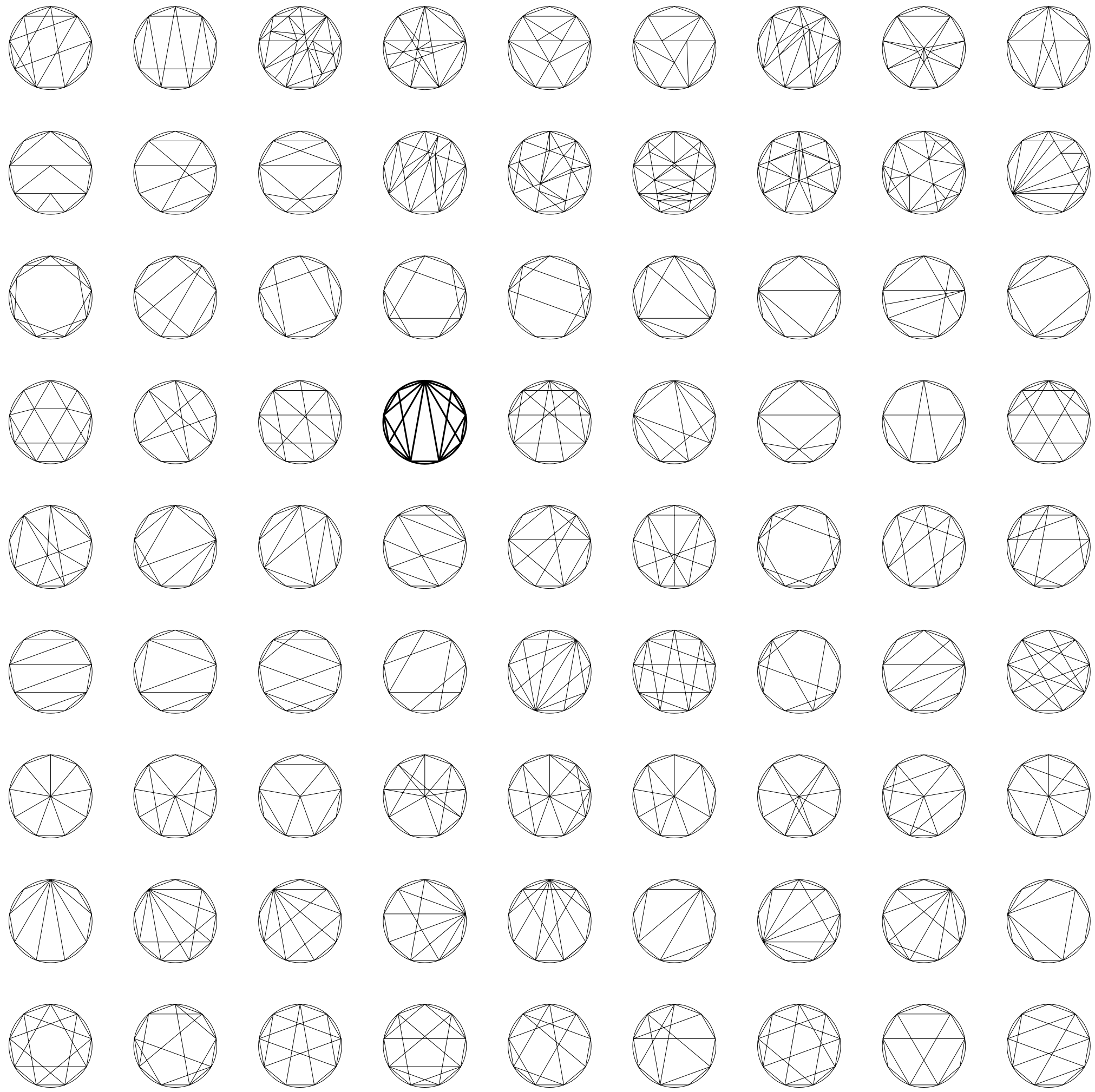


WHITE WATER
Cyan SEWER

UTILITIES



LAND USE
■ COMMERCIAL
■ INSTITUTIONAL
■ PARK (PUBLIC)
□ RESIDENTIAL



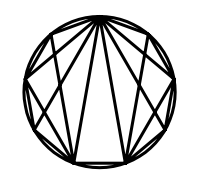
APPENDIX F

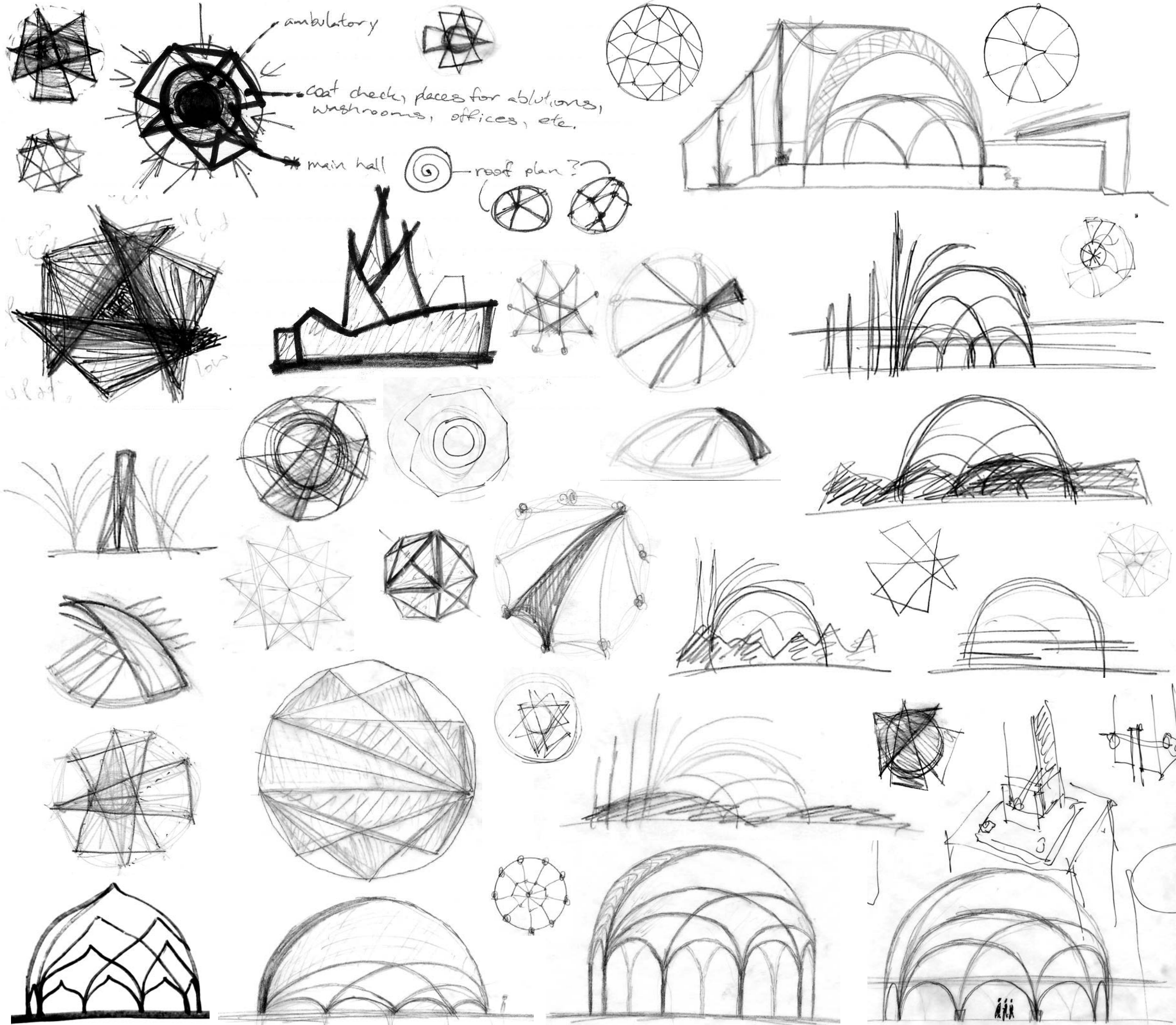
81 MANDALAS BASED ON THE NONAGON

Definition of "mandala"*:
"A symbolic circular figure
representing the universe in
various religions."

-Allen, R. E. *The Concise Oxford
Dictionary of Current English*. 8th
Ed., Clarendon Press, Oxford, 1990,
p. 720.

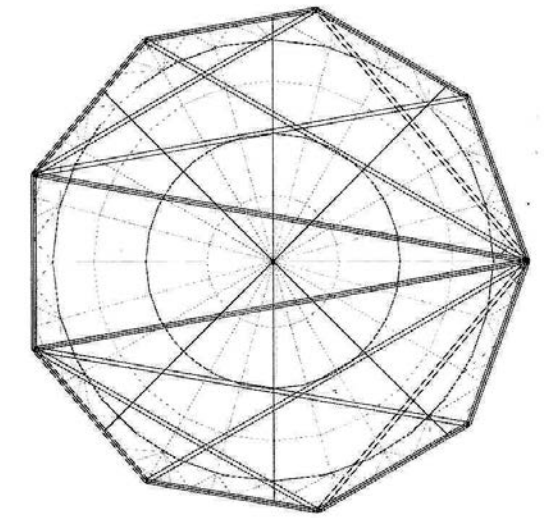
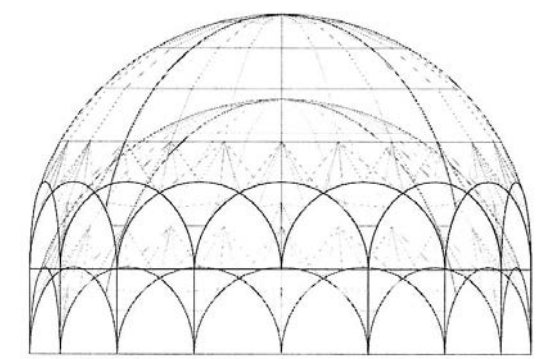
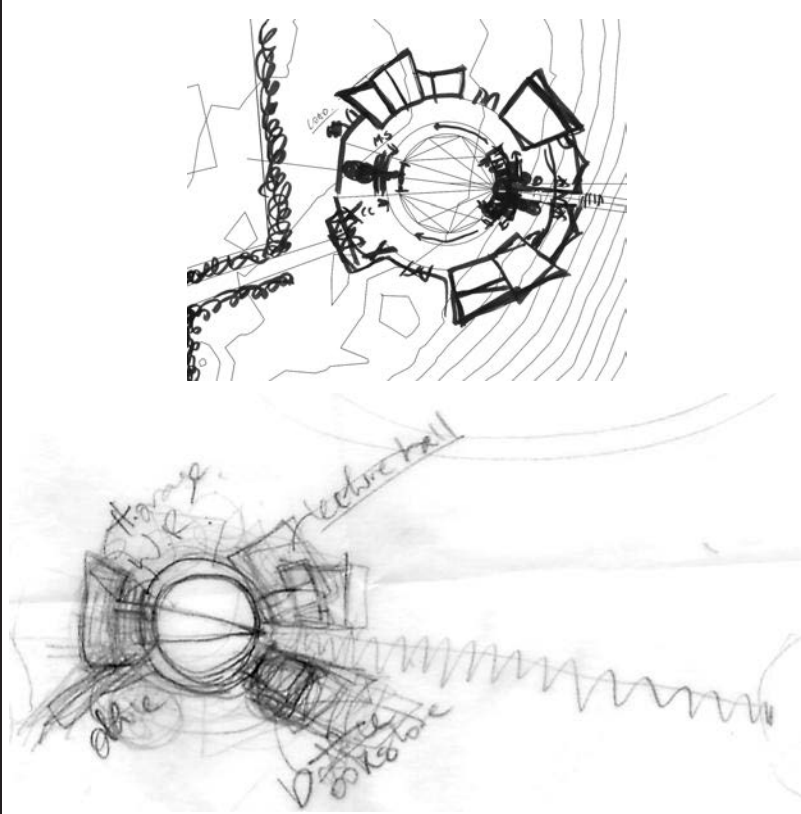
*(Used here mainly as a
starting point for ideas to
generate a plan for the
Temple.)

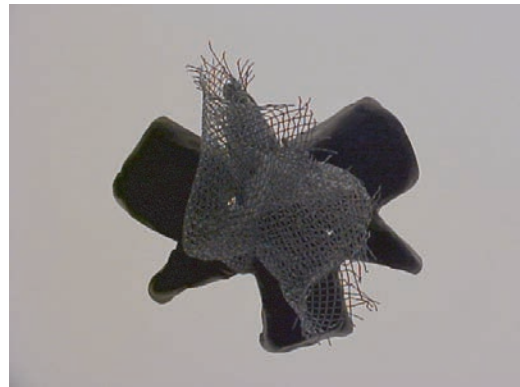
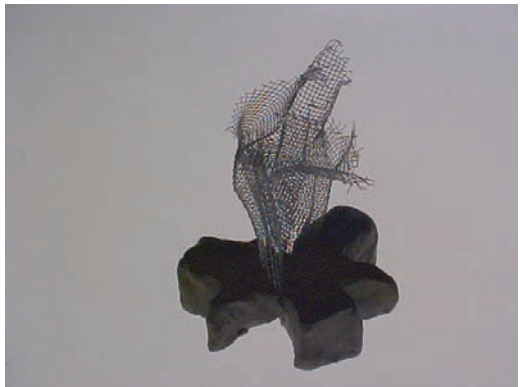
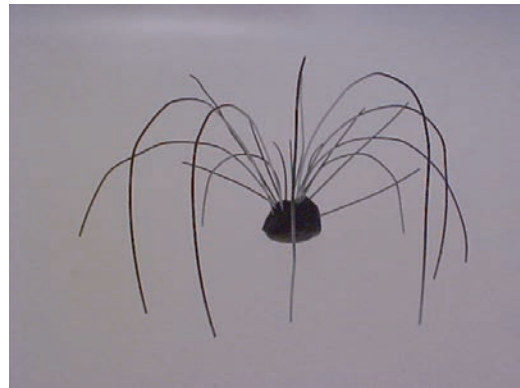
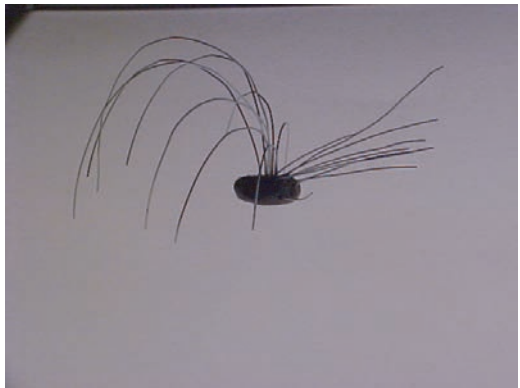
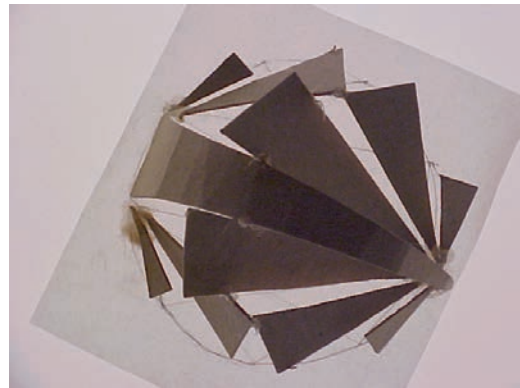
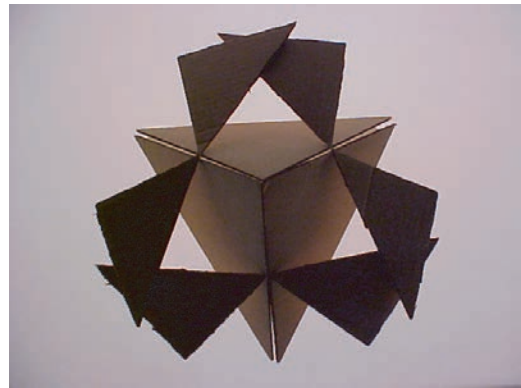
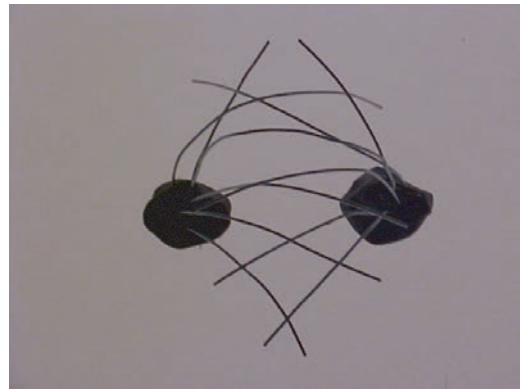
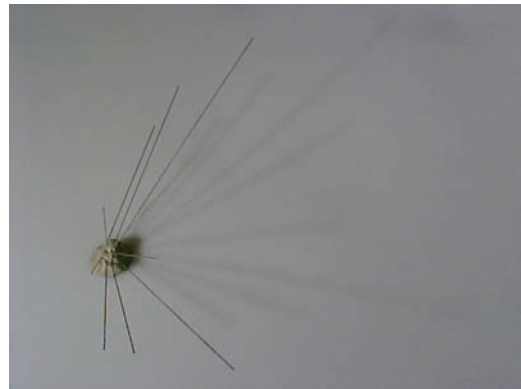
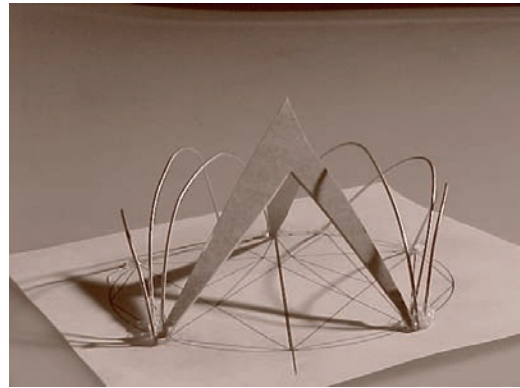
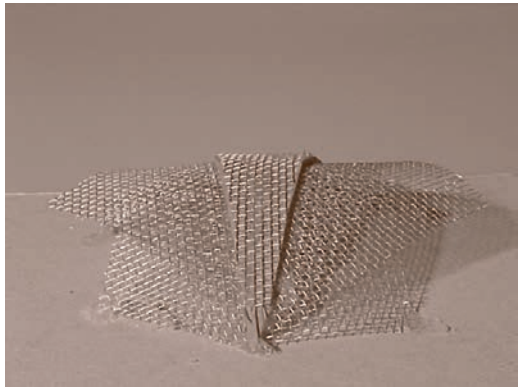
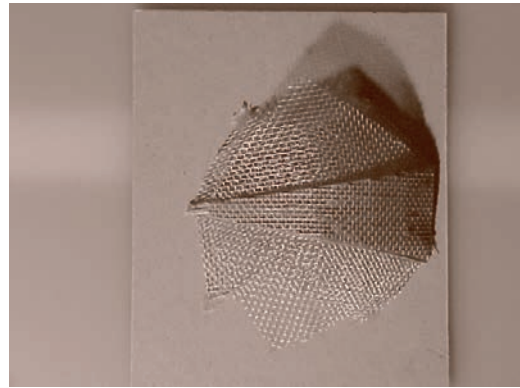
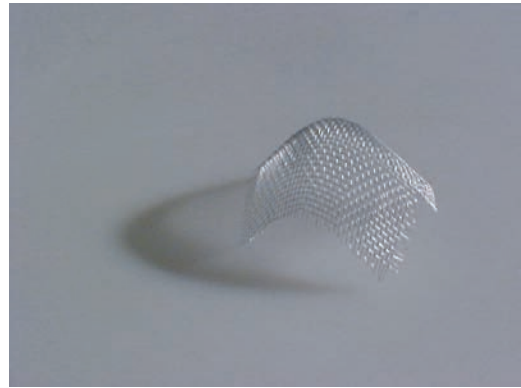
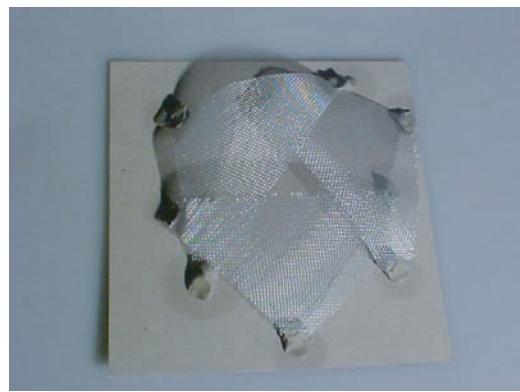
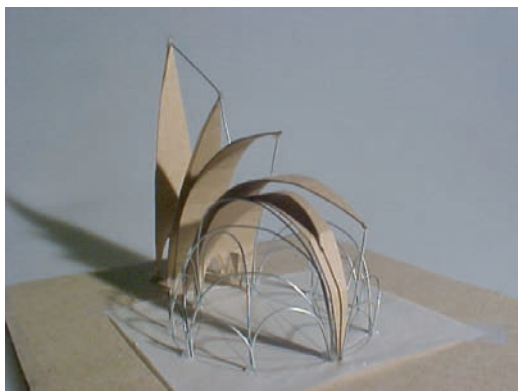
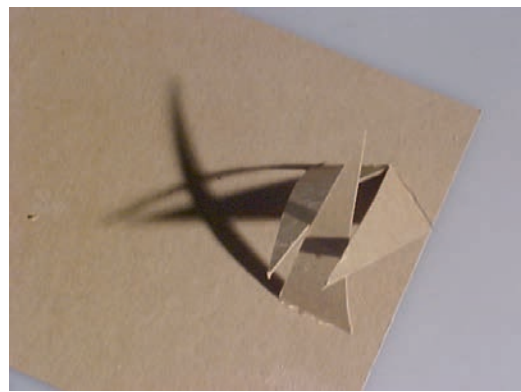




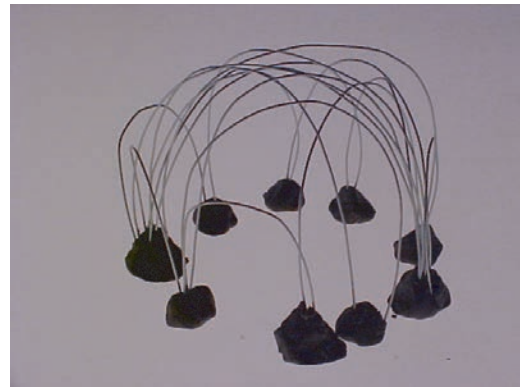
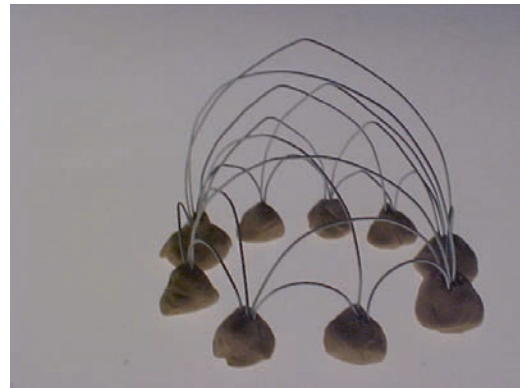
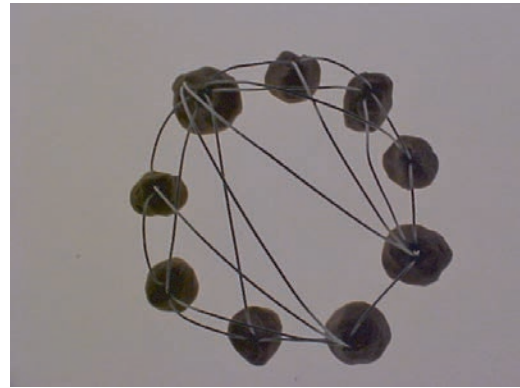
APPENDIX G

SKETCHES OF DESIGN IDEAS

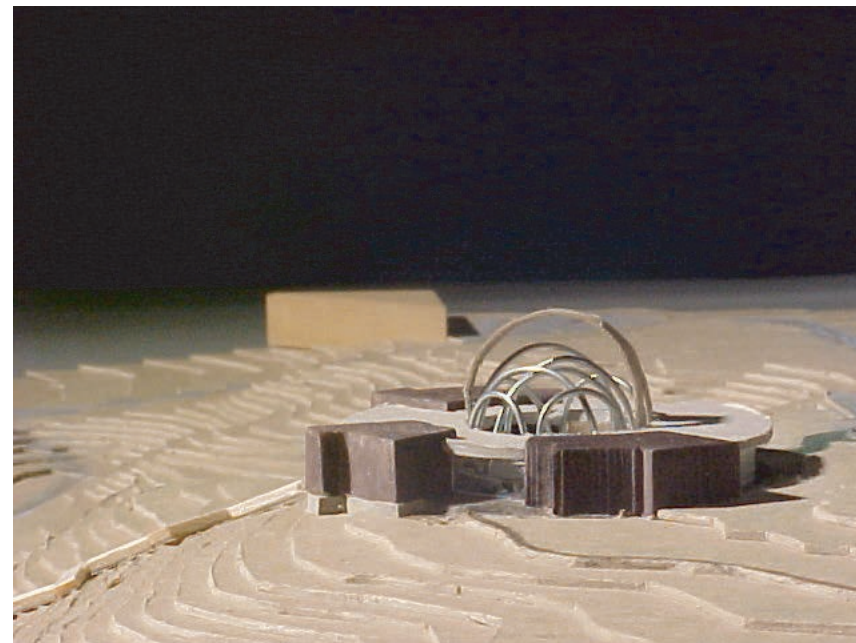
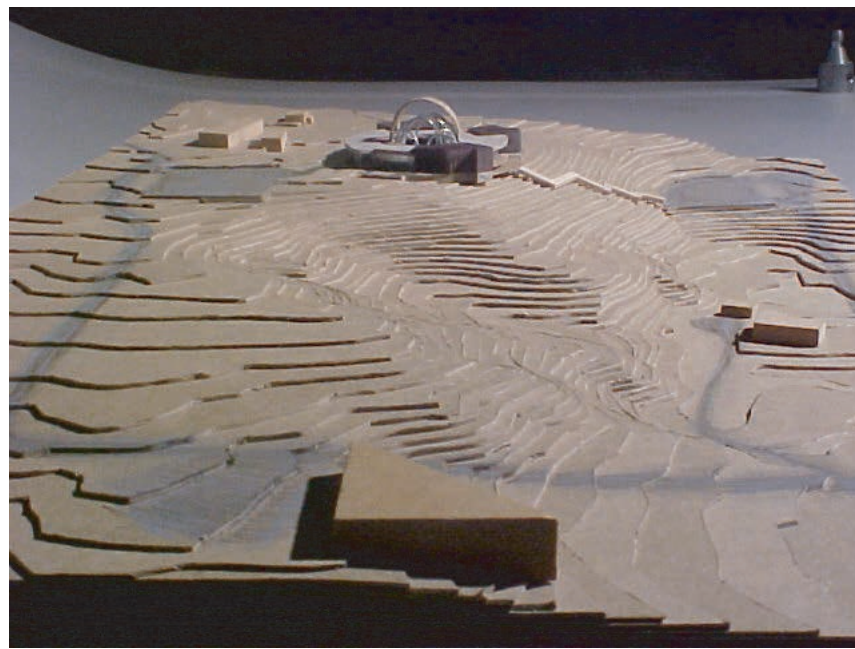




APPENDIX H
MODELS OF
DESIGN IDEAS



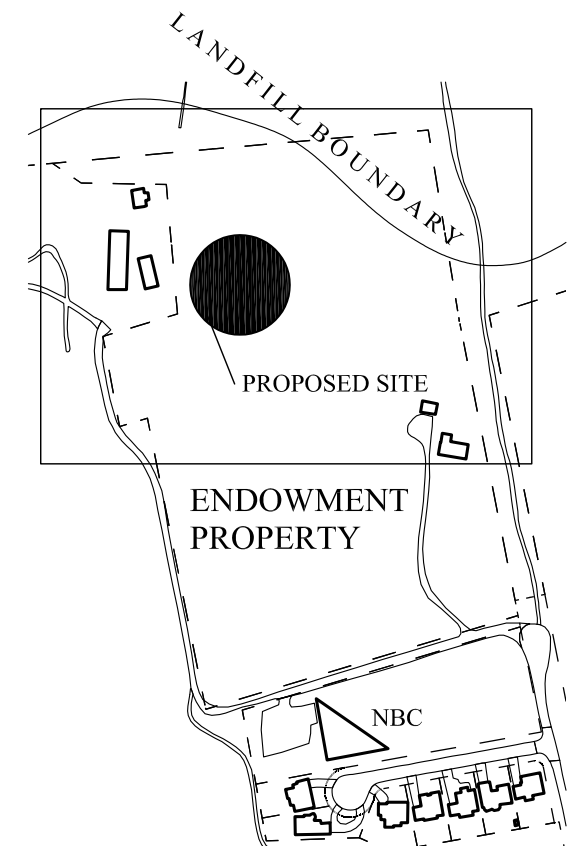
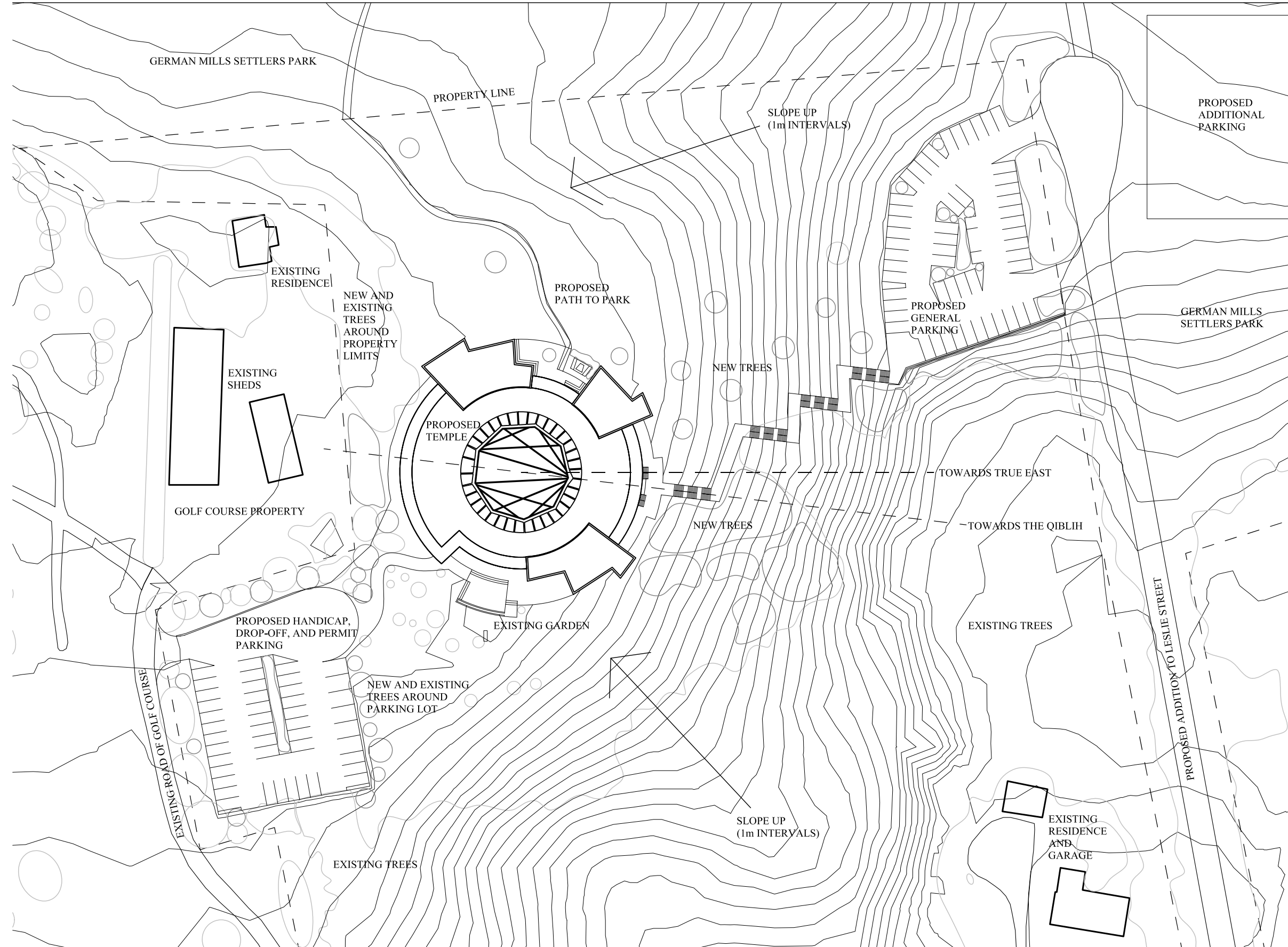
APPENDIX I
FINAL DESIGN:
SITE AND
GESTURE MODEL



APPENDIX J

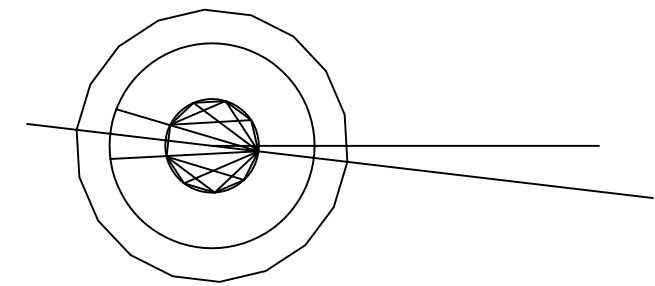
FINAL DESIGN: SITE PLAN

SCALE: 1:1000



KEY MAP

SCALE: 1:5000



GEOMETRY

APPENDIX K

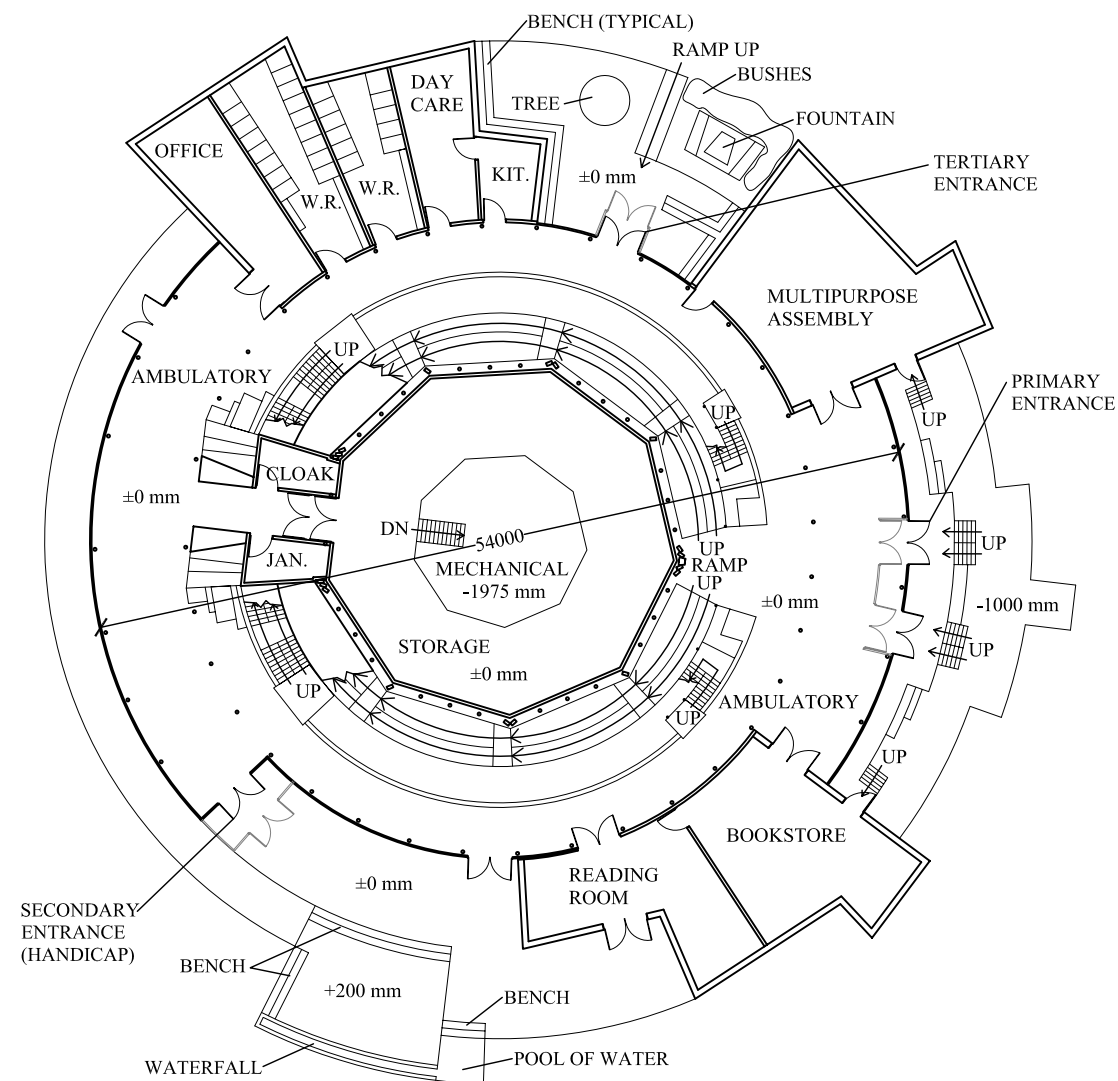
FINAL DESIGN: FLOOR PLANS

SCALE: 1:500

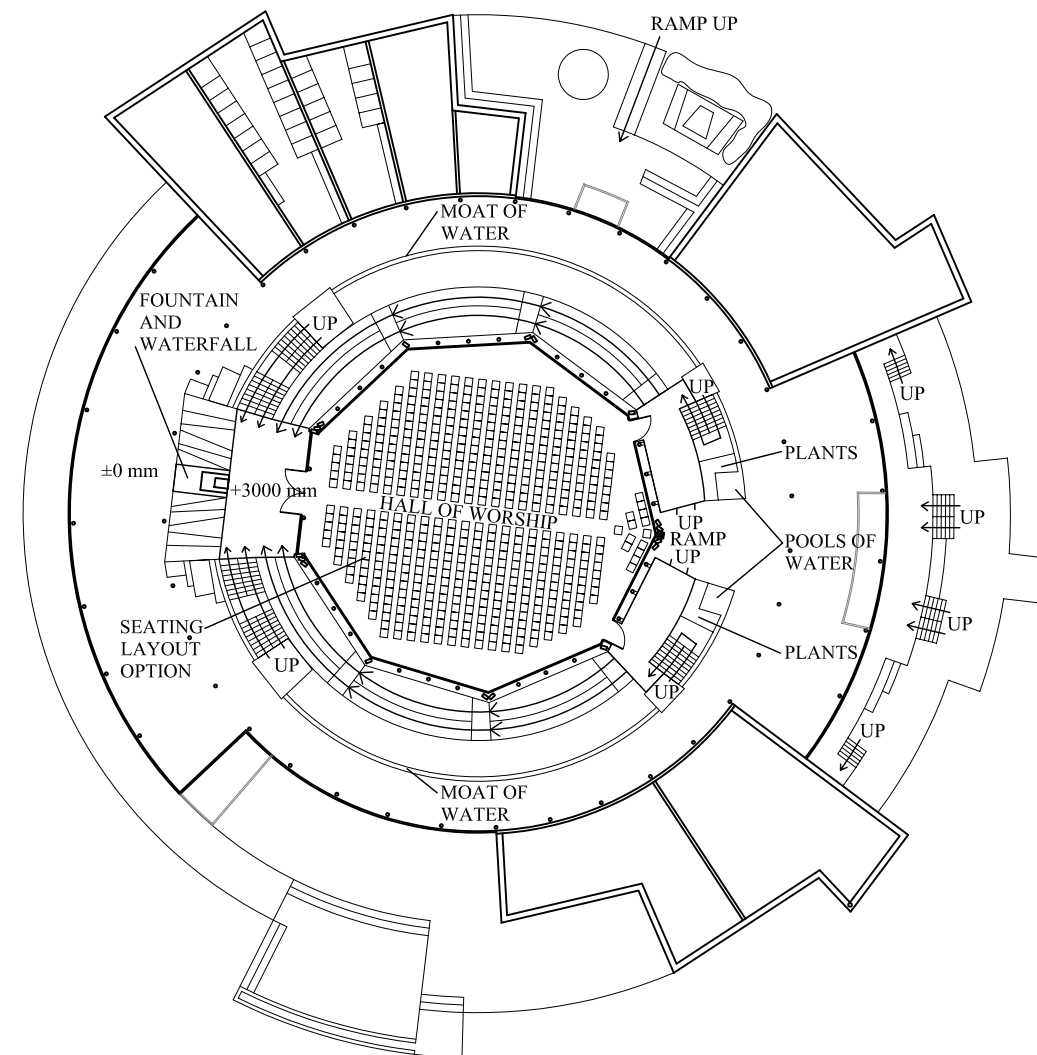


HALL OF WORSHIP: ±400 m²
(MAX. 550 PEOPLE)

TOTAL FLOOR AREA: ±2800 m²



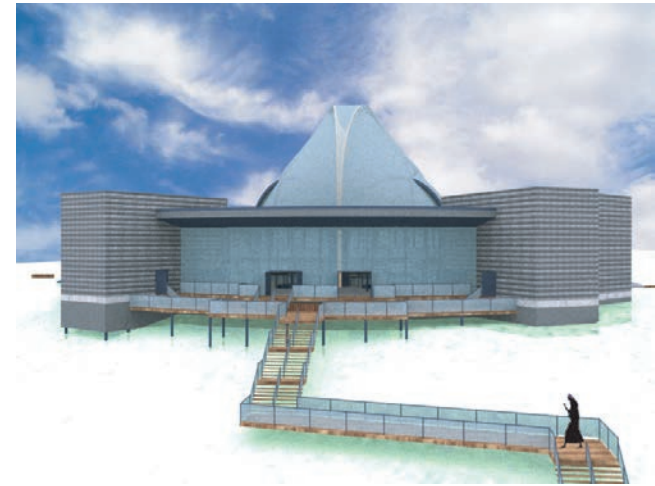
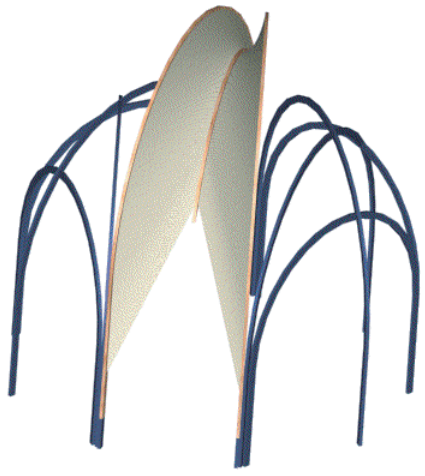
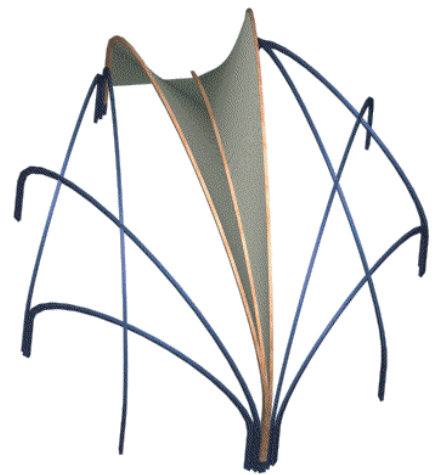
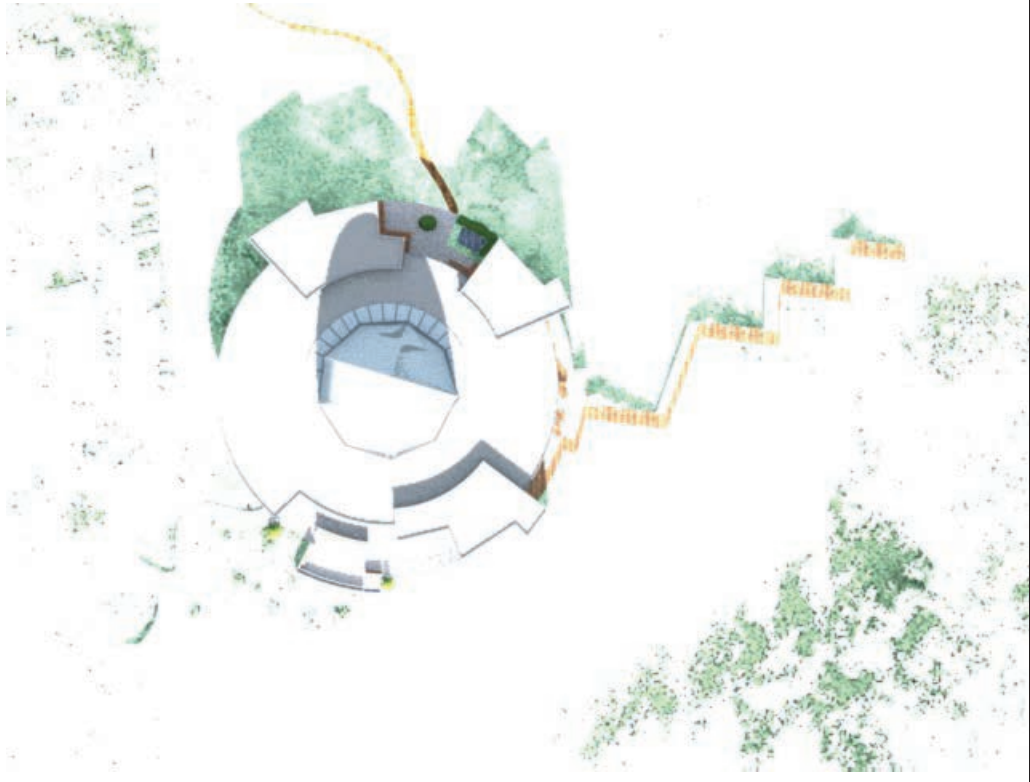
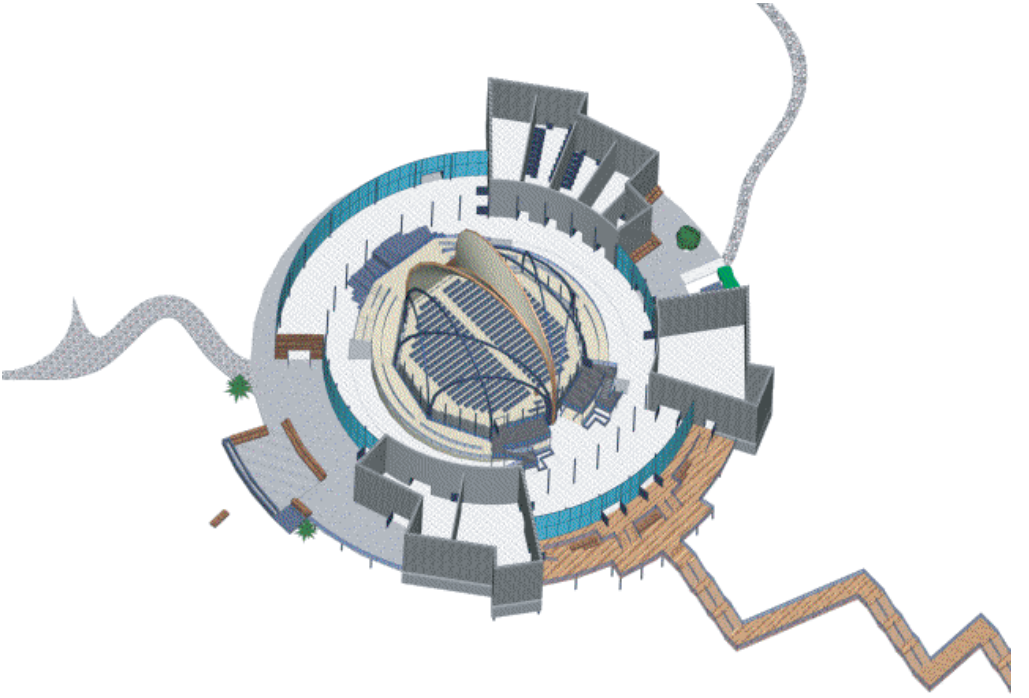
GROUND FLOOR PLAN



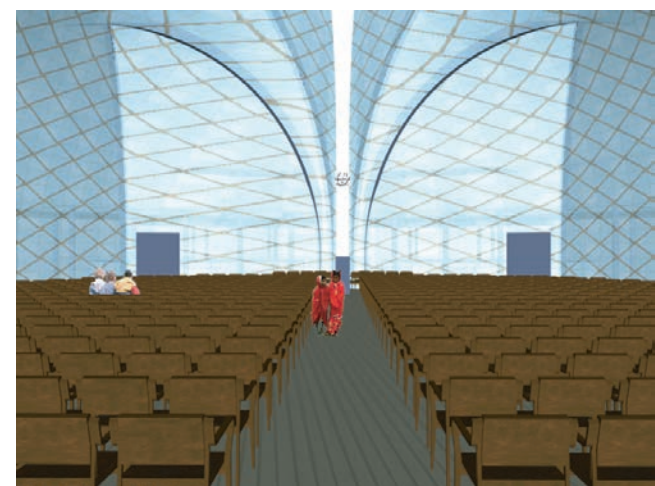
UPPER FLOOR PLAN

APPENDIX L

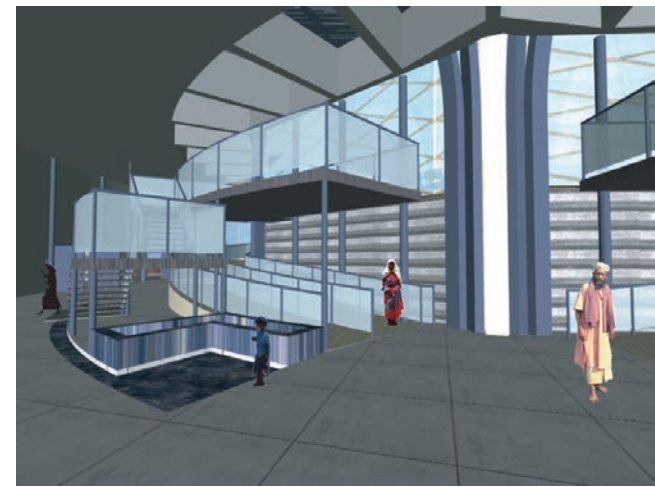
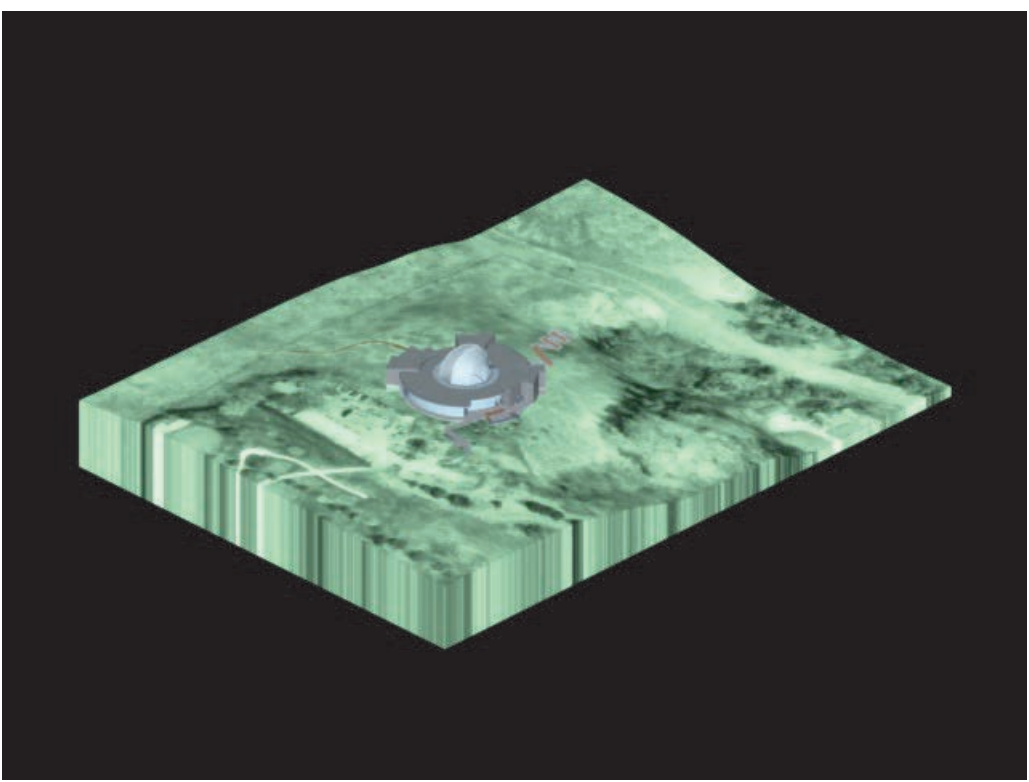
**FINAL DESIGN:
MODEL RENDERINGS 1
N.T.S.**



EXTERIOR PERSPECTIVE LOOKING WEST

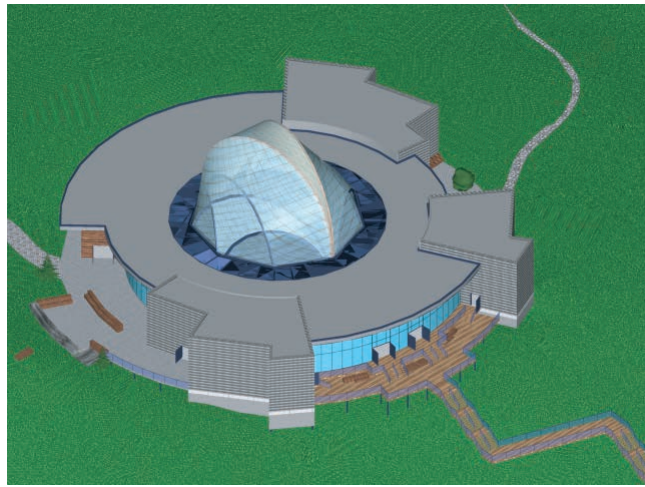


INTERIOR PERSPECTIVE OF HALL OF WORSHIP

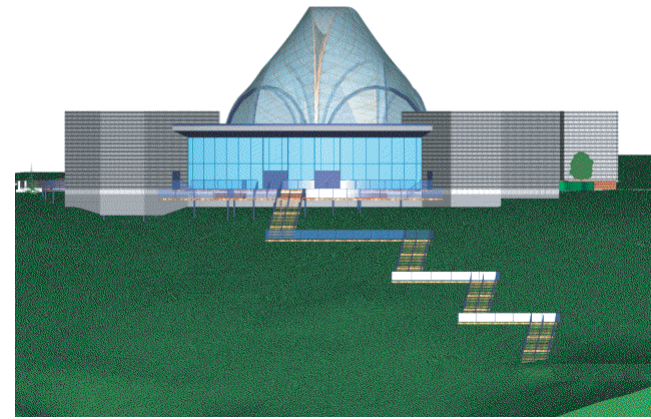


INTERIOR PERSPECTIVE OF AMBULATORY

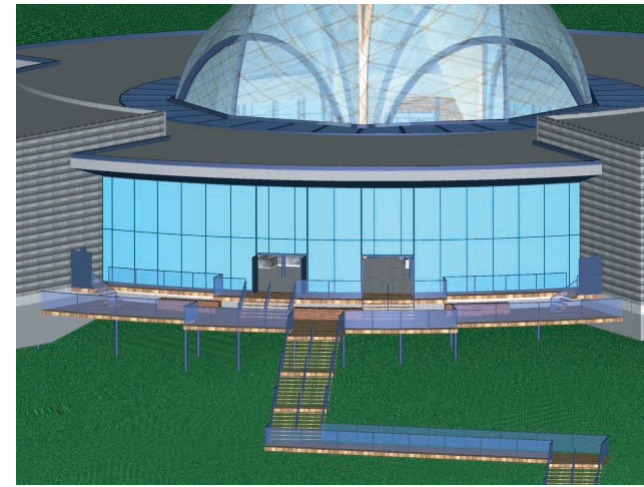
APPENDIX M
FINAL DESIGN:
MODEL RENDERINGS 2
N.T.S.



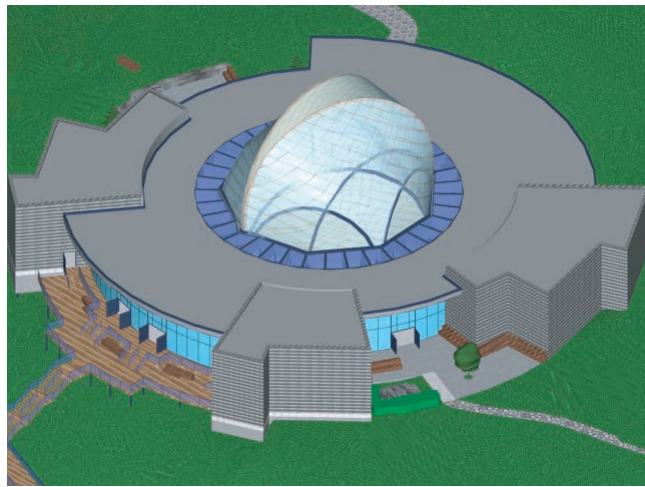
SOUTH-EAST AXONOMETRIC



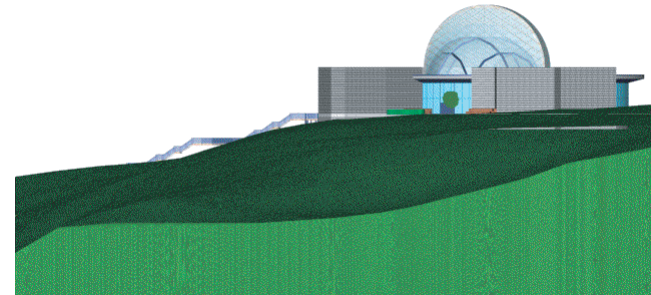
EAST ELEVATION



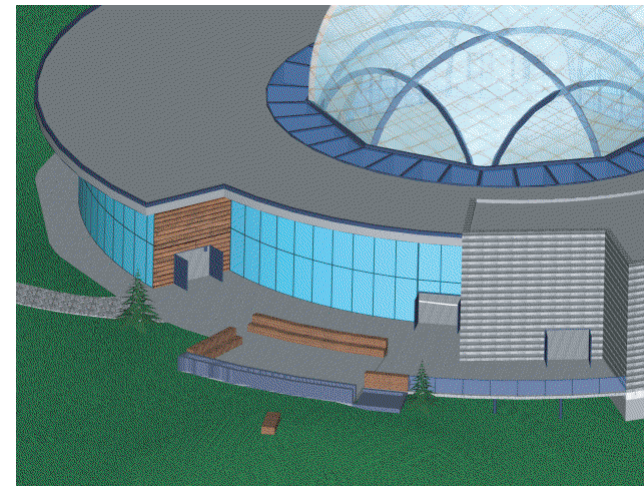
PERSPECTIVE OF PRIMARY ENTRANCE



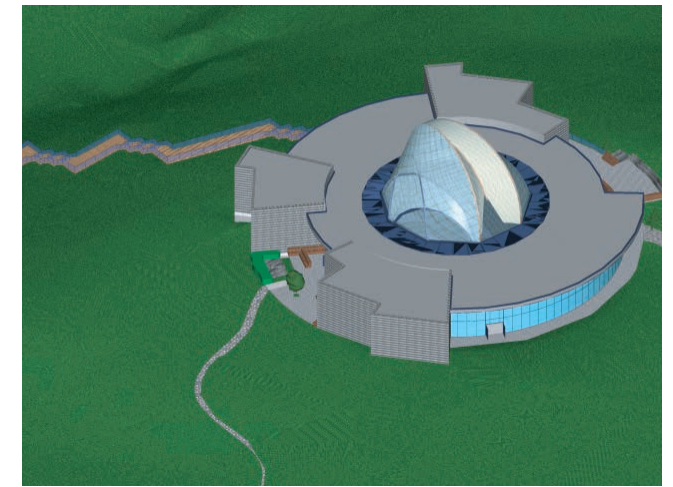
NORTH-EAST AXONOMETRIC



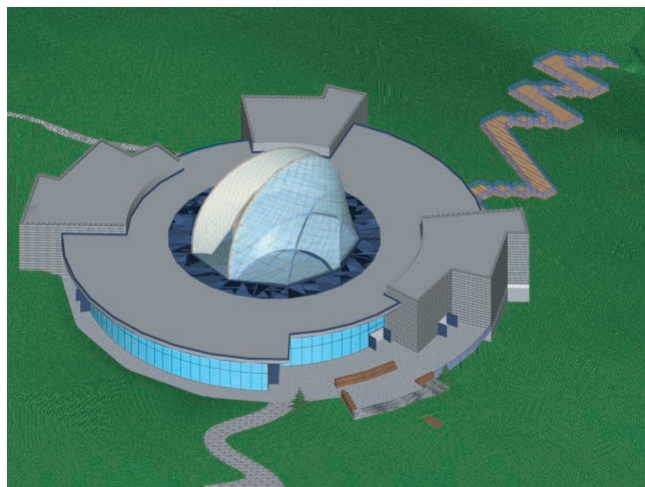
NORTH ELEVATION



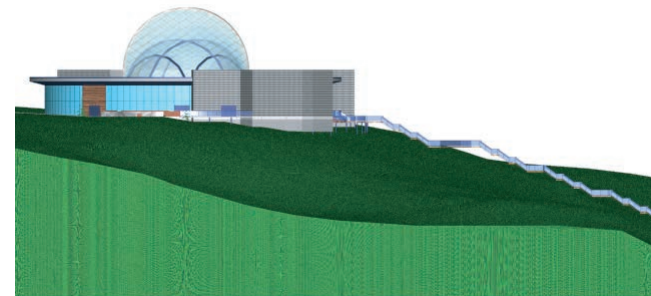
SECONDARY ENTRANCE AND PATIO



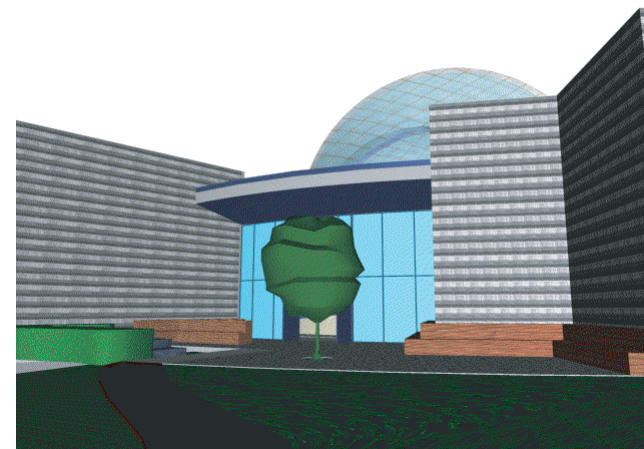
NORTH-WEST AXONOMETRIC



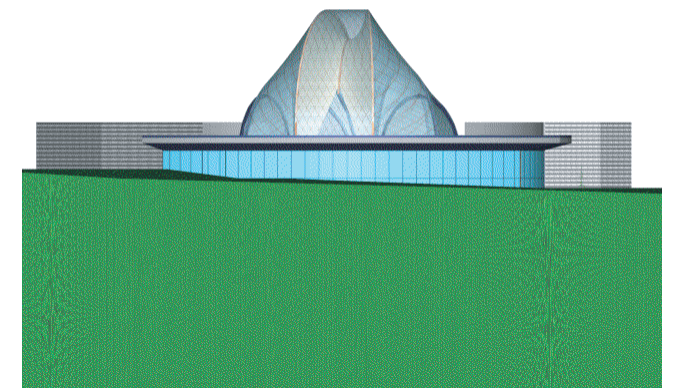
SOUTH-WEST AXONOMETRIC



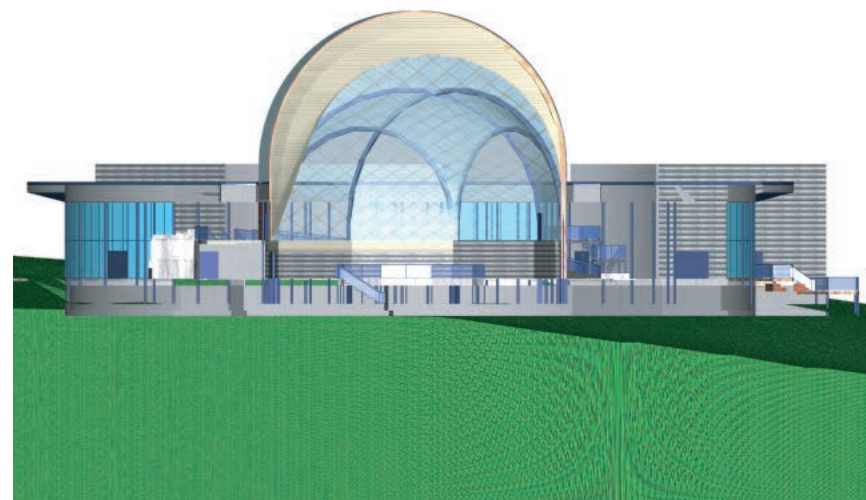
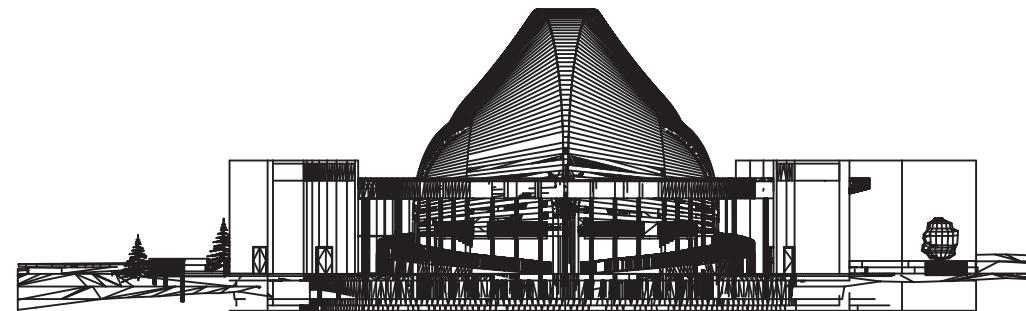
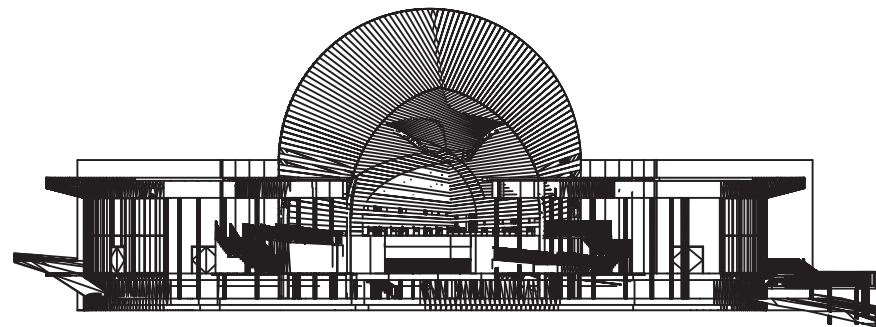
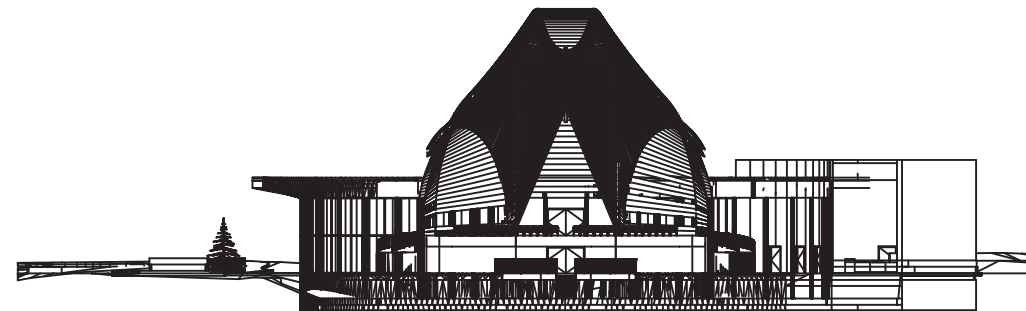
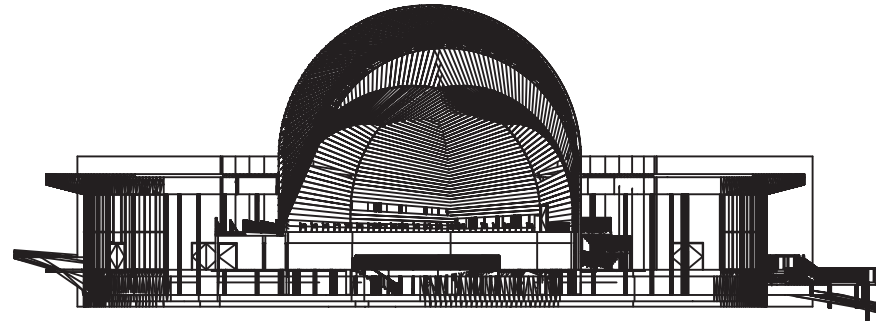
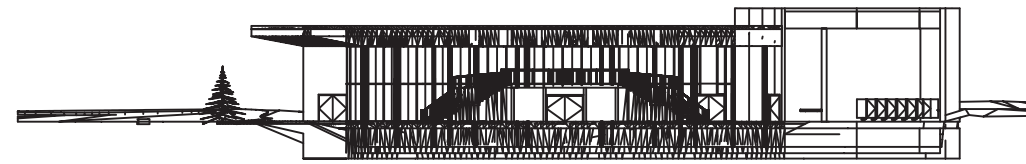
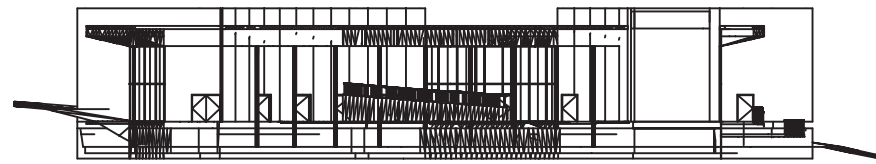
SOUTH ELEVATION



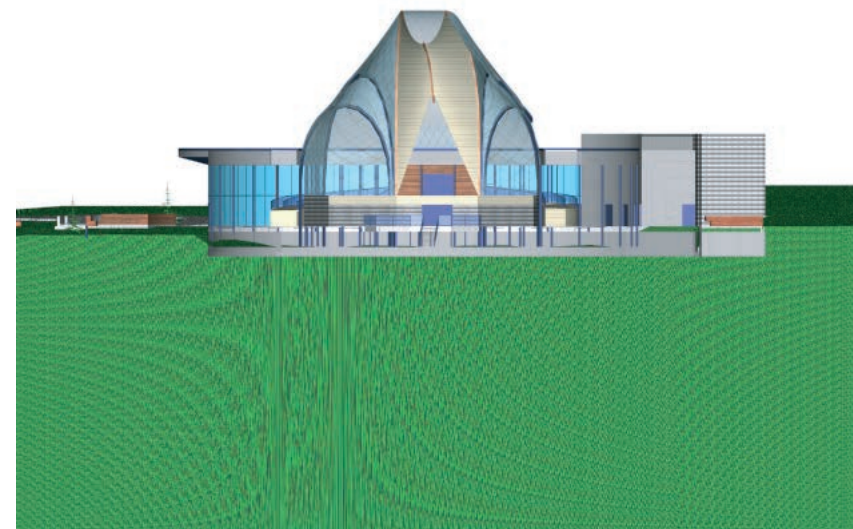
TERTIARY ENTRANCE AND PATIO



WEST ELEVATION



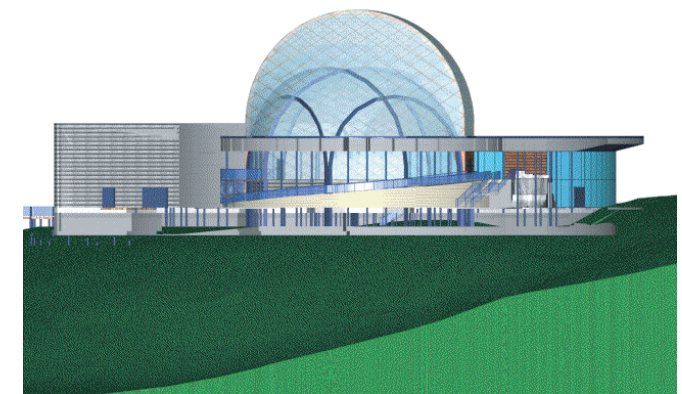
EAST-WEST SECTIONS LOOKING NORTH



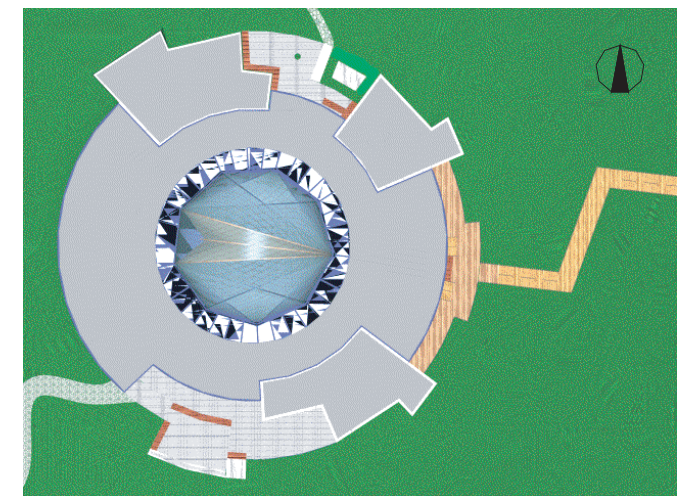
NORTH-SOUTH SECTIONS LOOKING WEST

APPENDIX N

FINAL DESIGN:
MODEL RENDERINGS 3
N.T.S.



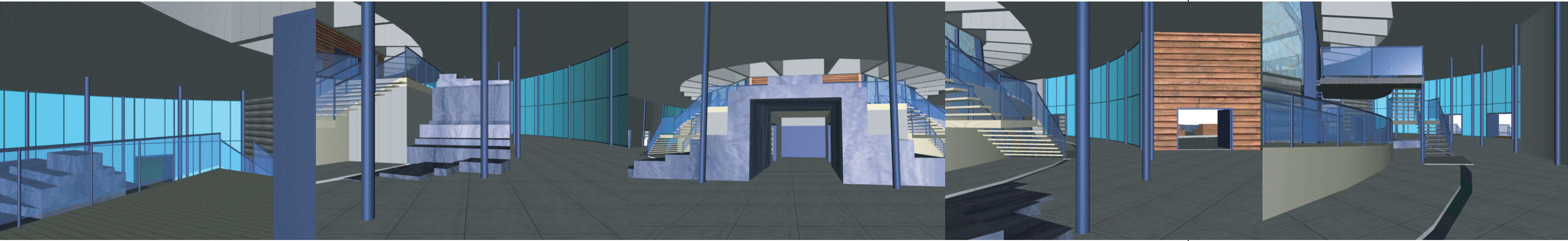
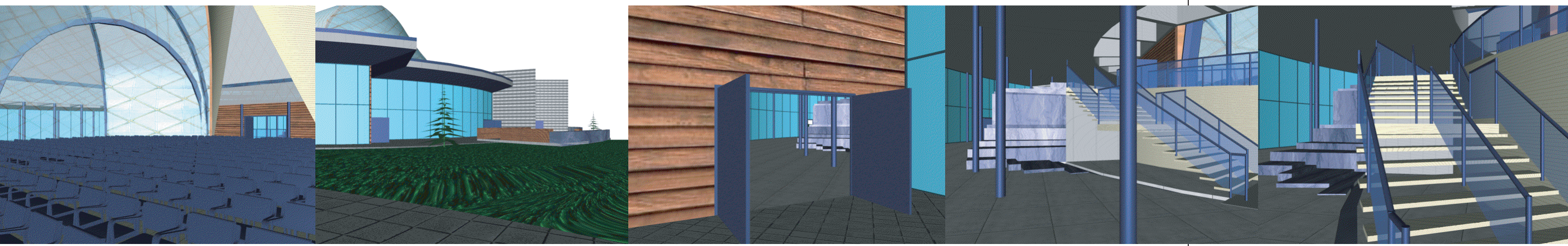
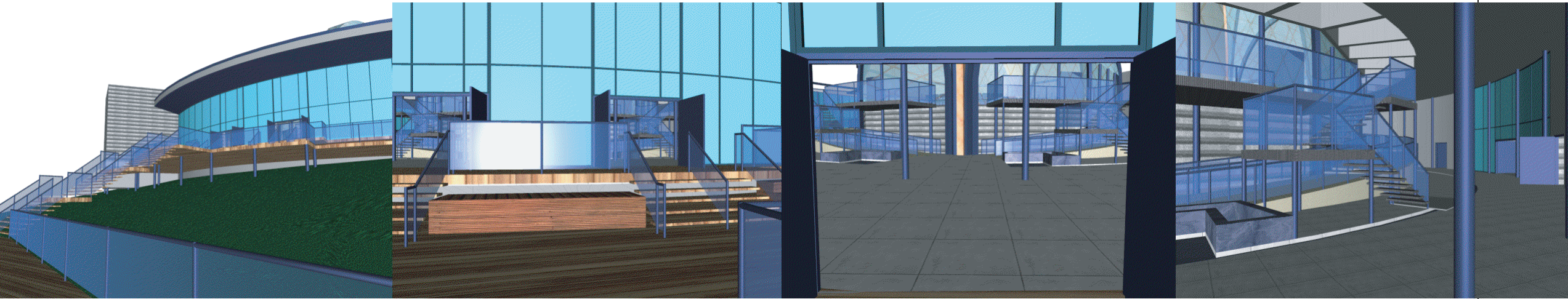
EAST-WEST SECTION LOOKING SOUTH

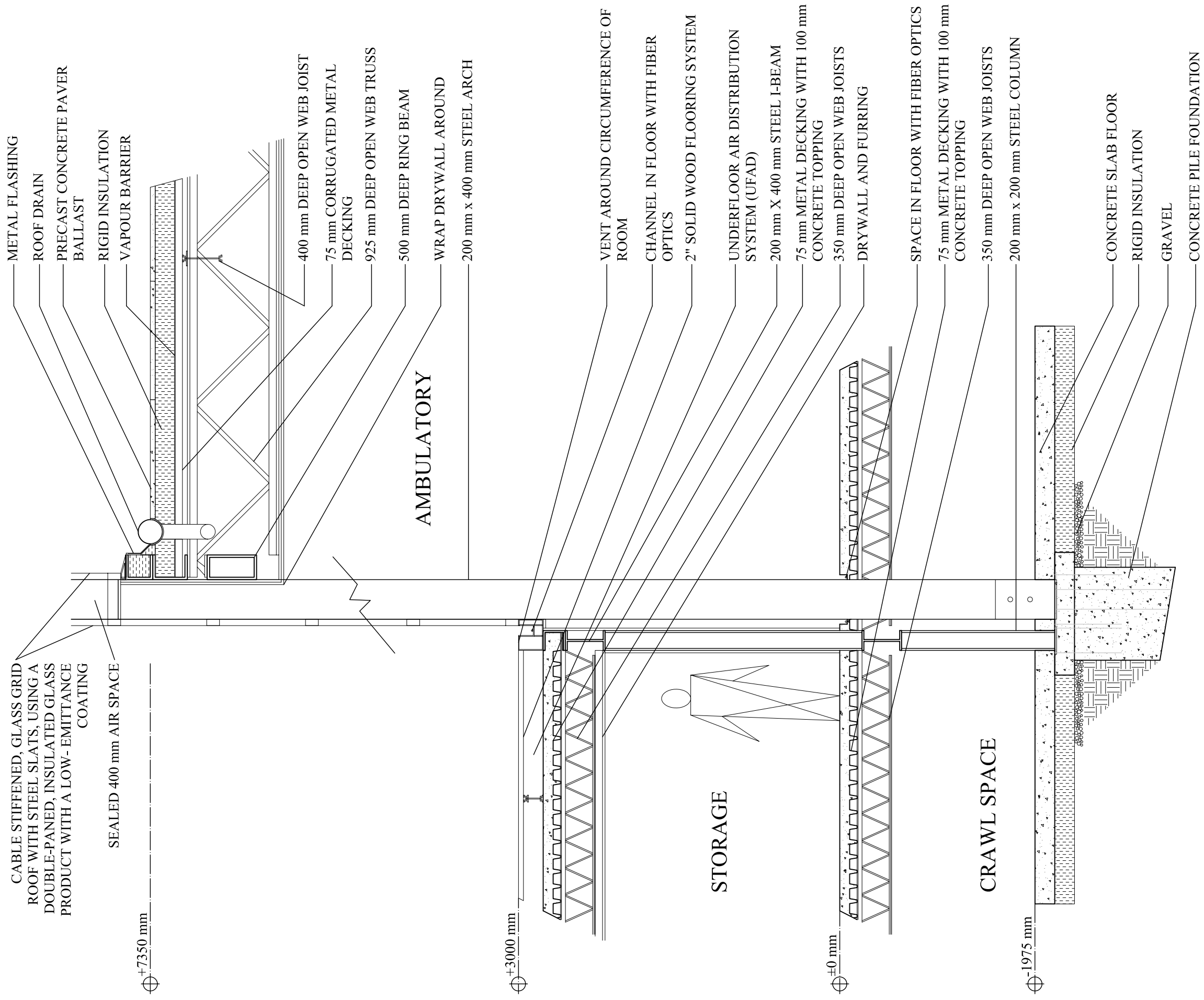


ROOF PLAN

APPENDIX O

FINAL DESIGN:
MODEL RENDERINGS 4
N.T.S.





CABLE STIFFENED, GLASS GRID ROOF WITH STEEL SLATS, USING A DOUBLE-PANED, INSULATED GLASS PRODUCT WITH A LOW-EMITTANCE COATING

SEALED 400 mm AIR SPACE

⊕ +7350 mm

METAL FLASHING
ROOF DRAIN
PRECAST CONCRETE PAVER BALLAST
RIGID INSULATION
VAPOUR BARRIER

400 mm DEEP OPEN WEB JOIST
75 mm CORRUGATED METAL DECKING
925 mm DEEP OPEN WEB TRUSS
500 mm DEEP RING BEAM
WRAP DRYWALL AROUND
200 mm x 400 mm STEEL ARCH

AMBULATORY

⊕ +3000 mm

STORAGE

VENT AROUND CIRCUMFERENCE OF ROOM
CHANNEL IN FLOOR WITH FIBER OPTICS
2" SOLID WOOD FLOORING SYSTEM
UNDERFLOOR AIR DISTRIBUTION SYSTEM (UFAD)
200 mm X 400 mm STEEL I-BEAM
75 mm METAL DECKING WITH 100 mm CONCRETE TOPPING
350 mm DEEP OPEN WEB JOISTS
DRYWALL AND FURRING

⊕ ±0 mm

CRAWL SPACE

SPACE IN FLOOR WITH FIBER OPTICS
75 mm METAL DECKING WITH 100 mm CONCRETE TOPPING
350 mm DEEP OPEN WEB JOISTS
200 mm x 200 mm STEEL COLUMN

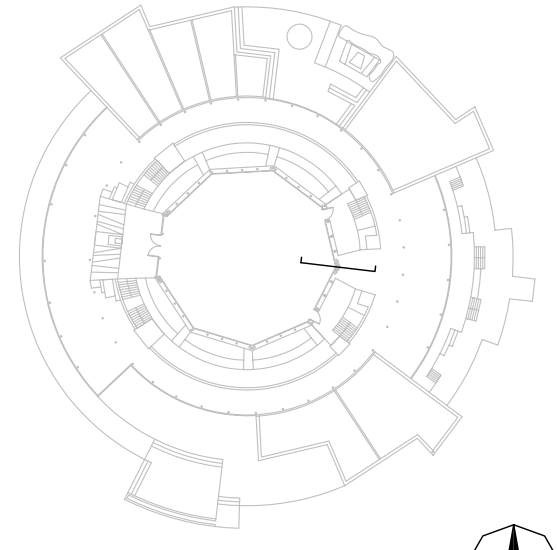
⊕ -1975 mm

CONCRETE SLAB FLOOR
RIGID INSULATION
GRAVEL
CONCRETE PILE FOUNDATION

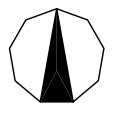
APPENDIX P

FINAL DESIGN: WALL SECTION

SCALE: 1:40



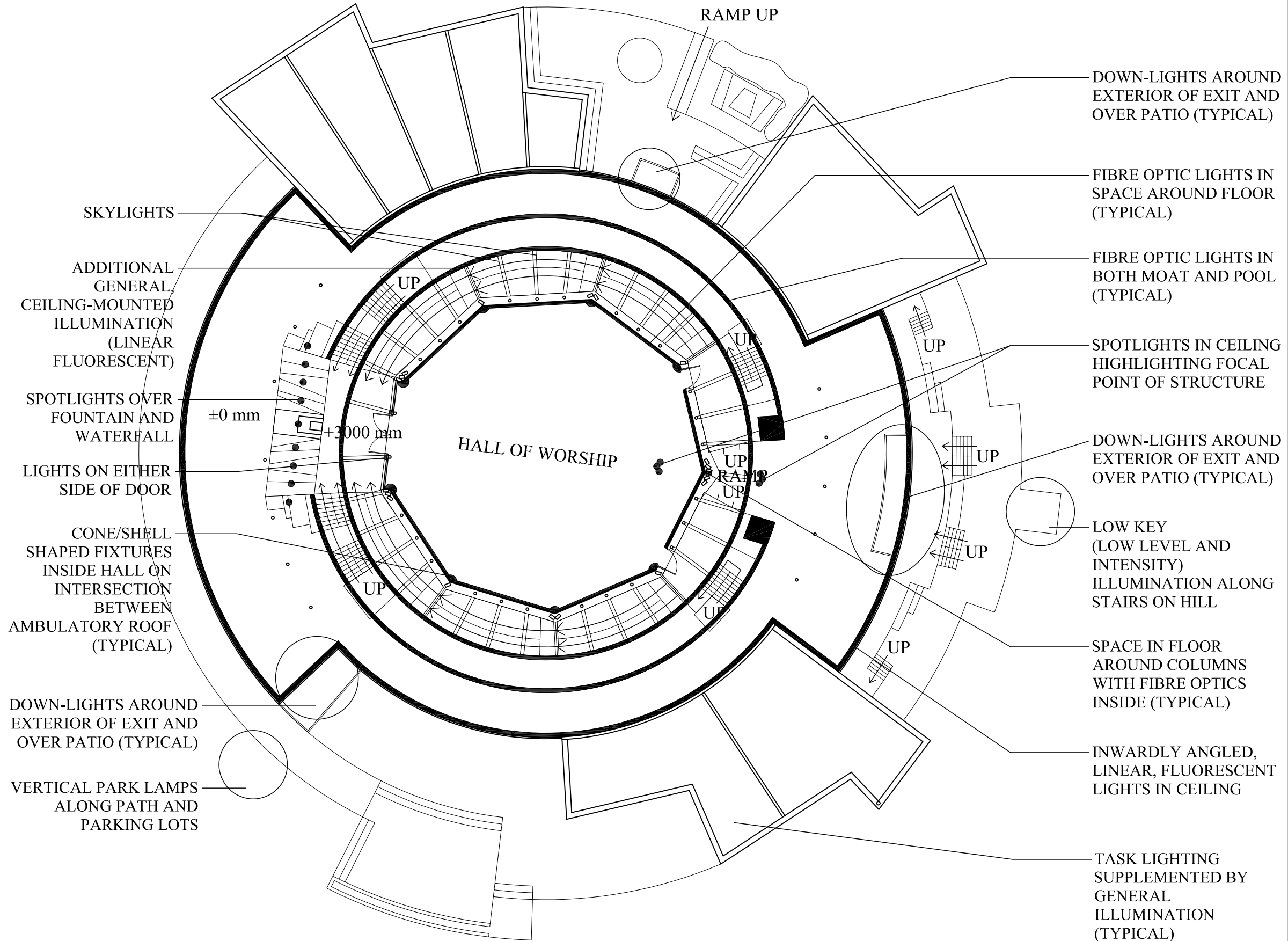
LOCATION PLAN
(N.T.S.)



APPENDIX Q

FINAL DESIGN: LIGHTING LAYOUT

SCALE: 1:300



SKYLIGHTS

ADDITIONAL
GENERAL
CEILING-MOUNTED
ILLUMINATION
(LINEAR
FLUORESCENT)

SPOTLIGHTS OVER
FOUNTAIN AND
WATERFALL

LIGHTS ON EITHER
SIDE OF DOOR

CONE/SHELL
SHAPED FIXTURES
INSIDE HALL ON
INTERSECTION
BETWEEN
AMBULATORY ROOF
(TYPICAL)

DOWN-LIGHTS AROUND
EXTERIOR OF EXIT AND
OVER PATIO (TYPICAL)

VERTICAL PARK LAMPS
ALONG PATH AND
PARKING LOTS

RAMP UP

UP

UP

UP

RAMP UP

UP

UP

UP

UP

UP

UP

UP

UP

UP

DOWN-LIGHTS AROUND
EXTERIOR OF EXIT AND
OVER PATIO (TYPICAL)

FIBRE OPTIC LIGHTS IN
SPACE AROUND FLOOR
(TYPICAL)

FIBRE OPTIC LIGHTS IN
BOTH MOAT AND POOL
(TYPICAL)

SPOTLIGHTS IN CEILING
HIGHLIGHTING FOCAL
POINT OF STRUCTURE

DOWN-LIGHTS AROUND
EXTERIOR OF EXIT AND
OVER PATIO (TYPICAL)

LOW KEY
(LOW LEVEL AND
INTENSITY)
ILLUMINATION ALONG
STAIRS ON HILL

SPACE IN FLOOR
AROUND COLUMNS
WITH FIBRE OPTICS
INSIDE (TYPICAL)

INWARDLY ANGLED,
LINEAR, FLUORESCENT
LIGHTS IN CEILING

TASK LIGHTING
SUPPLEMENTED BY
GENERAL
ILLUMINATION
(TYPICAL)

±0 mm

+3000 mm

HALL OF WORSHIP

GLOSSARY¹

'Abdu'l-Bahá: “Eldest surviving son of Bahá'u'lláh and His designated successor...was known as ‘Abbás Effendi outside the Bahá’í community...He chose the name ‘Abdu'l-Bahá (Servant of Bahá) for Himself after the passing of Bahá'u'lláh...In the *Kitáb-i-‘Ahdí* (Book of the Covenant), He [Bahá'u'lláh] named ‘Abdu'l-Bahá as His successor and the authorized Interpreter of His Writings...Renowned outside the Bahá’í community for His humanitarian work, ‘Abdu'l-Bahá was knighted in 1920 by the British government for his efforts of the relief of hunger in Palestine during World War I...In His Will and Testament, ‘Abdu'l-Bahá named His grandson, Shoghi Effendi, to succeed Him as Guardian of the Bahá’í Faith. ‘Abdu'l-Bahá died in Haifa on 28 November 1921, and is buried in a vault of the Shrine of the Báb.”

Abhá: [Arabic] “Superlative of ‘Bahá’ (Glory), meaning ‘Most Glorious’.”

Ablutions: “Washing of the hands and face before reciting the obligatory prayers.”

Alláh-u- Abhá: [Arabic] “God is Most Glorious, God is All-Glorious. A form of the Greatest Name [Bahá], used as a greeting among Bahá’ís.”

The Báb: “Gate. The title assumed by Siyyid ‘Alí-Muhammad, the Forerunner of Bahá'u'lláh, and Prophet-Founder of the Bábí Faith...The Báb proclaimed Himself to be the Promised One of Islam, the Qá’im, and said that the Mission of His Dispensation was to alert the people to the imminent advent of another Prophet, ‘Him Whom God shall make manifest’...As the Báb gained followers, His doctrines inflamed the *Shí’ih* clergy, who determined to stamp out the new faith...On 9 July 1850 the Báb was brought before a firing squad in the barracks square of Tabríz...His remains were hidden by His followers and in 1899 transferred to Palestine [now Israel] where in 1909 ‘Abdu'l-Bahá Himself interred them in the sepulchre on Mount Carmel known as the Shrine of the Báb.”

Bábí: “A follower of the Báb; of or pertaining to His revelation.”

Bahá: [Arabic] “Glory. The Greatest Name. A title by which Bahá'u'lláh is designated.”

Bahá’í: “A follower of Bahá'u'lláh.”

Bahá’í Centre: See *Hazíratu'l-Quds*.

Bahá’í Era: “The period of the Bahá’í dispensation beginning with the Declaration of the Báb on 23 May 1844, and ending with the appearance of a new Manifestation of God at some date in the future. The Bahá’í Era is promised by Bahá'u'lláh to last no less than a thousand years.” Also see *Calendar, Bahá’í*.

Bahá’í Faith: “Religion founded by Bahá'u'lláh.”

Bahá'u'lláh: “Prophet-Founder of the Bahá’í Faith and the Manifestation of God for this Day. He was born Mírzá Husayn-'Alí on 12 November 1817 to a noble family of Núr in Mázindarán,

Iran...He became a follower of the Báb in 1844 at the age of twenty-seven, when the Báb sent Mullá Husayn to tell Him of the new Revelation. Although Bahá'u'lláh and the Báb never met, they corresponded... Bahá'u'lláh became known as a Bábí leader...After an attempt on the Sháh's life by two misguided Bábís, in 1953 Bahá'u'lláh was imprisoned for four months in an underground prison...It was there He first received a revelation, through a dream of a Maid of Heaven, that He was the One promised by the Báb...He ascended at the age of seventy-four on 29 May 1892... Bahá'u'lláh's Writings are considered by Bahá'ís to be the revelation from God and some 15,000 of His Tablets have so far been collected."

Calendar, Bahá'í: "The Bahá'í calendar was established by the Báb in the *Kitáb-i-Asmá'* and approved by Bahá'u'lláh, who stated that it should begin in 1844 (AH 1260). It is based on the solar year of 365 days, five hours and some fifty minutes. Each year is divided into nineteen months of nineteen days each with four Intercalary Days (five in leap year)...which Bahá'u'lláh specified should precede the nineteenth month. New Year's Day (Naw-Rúz) falls on the Spring Equinox."

Feast, Nineteen Day: "The principle gathering of Bahá'ís of a particular locality...held on the first day of every Bahá'í month, and brings together the members of the Bahá'í community for worship, consultation and fellowship."

God: "The deity. Bahá'ís believe there is only one God, unknowable in His essence, who is the creator and absolute ruler of the universe."

The Greatest Name (of God): "In Islam there is a tradition that among the various names of God, one is the greatest. However, the identity of this Greatest Name is hidden. Bahá'ís believe that the Greatest Name of God is Bahá, which means glory, splendour or light."

Hazíratu 'l-Quds: [Arabic] "The Sacred Fold. The 'official and distinctive title' of the headquarters of Bahá'í administrative activity, whether on a local or national level."

Holy Spirit: The entity which acts as an intermediary between God and His Manifestations."

Kitáb-i-Aqdas (Most Holy Book): Bahá'u'lláh's book of laws, revealed in 'Akká in 1873..."

Local Spiritual Assembly: "The local administrative body of the Bahá'í community. The nine members are directly elected from among the body of the believers in a community...and serve for a period of one year."

Manifestation of God: "The great Prophets of God, His chosen Messengers, who appear in each age...The Manifestations of God are not God descended to earth, but are rather perfect reflections of His attributes, just as a mirror reflects the sun but is not the sun itself...All the Manifestations have the same spirit, although their outward forms are different and they manifest different attributes of God relevant to the needs and circumstances of the age in which they appear..."

Mashriqu'l-Adhkár: [Arabic] “Dawning place of the praises of remembrances or mention of God. Generally, the Bahá’í House of Worship or Temple and the dependencies clustered around it...primarily used to refer to buildings which conform to particular architectural requirements and which are reserved for devotions and reading from the revealed Word of God.”

Mother Temple: “The first Bahá’í House of Worship to be built in a particular geographic area.”

Mount Carmel, Israel: “The mountain spoken of by Isaiah as the ‘mountain of the Lord’. Site of the Bahá’í World Centre including several Bahá’í Holy Places, the most important of which are the Shrine of the Báb and the Monument Gardens...is also the location of the Bahá’í world administrative institutions...”

National Spiritual Assembly: “The national administrative body of the Bahá’í Faith.”

Qiblih: [Arabic] “The Point of Adoration; the direction in which people turn when praying. The Kaaba in Mecca is the Qiblih for Muslims; the Shrine of Bahá'u'lláh at Bahjí [in ‘Akká] is the Qiblih for Bahá’ís.”

The Ringstone Symbol (of the Bahá’í Faith): “A form of the Greatest Name, designed by ‘Abdu’l-Bahá, used on Bahá’í rings.” (Fig. 15 of “Chapter 2: Symbolism and Sacred Place”)

Sháh: [Persian] “King, especially of Iran.”

Shí’ih: “One of the two major branches of Islam.”

Shoghi Effendi: “The Guardian of the Bahá’í Faith, born on 1 March 1897 in ‘Akká, the son of Díyá’íyyih *Khánum*, the eldest daughter of ‘Abdu’l-Bahá, and Mírzá Hádí *Shírází*, a relative of the Báb...passed away on 5 November 1957 while in London and is buried in the New Southgate Cemetery there.”

Shrine of Bahá'u'lláh: “The resting place of Bahá'u'lláh’s mortal remains. On the day of Bahá'u'lláh’s Ascension, 29 May 1892, He was laid to rest beneath the floor of a room in the house adjacent to the Mansion of Bahjí [in ‘Akká]. The Shrine of Bahá'u'lláh is the holiest spot on earth to Bahá’ís, a place of pilgrimage and the Qiblih of the Bahá’í Faith.”

Soul: “The inner and essential reality of man which is not composed of physical matter and thus continues to exist after death.”

Universal House of Justice: “Supreme administrative body of the Bahá’í Faith, ordained by Bahá'u'lláh in the *Kitáb-i-Aqdas*...is elected every five years by the members of the national spiritual assemblies who gather at an International Convention for the purpose.”

¹ The definitions for this section have been taken from Wendi Momen’s *A Basic Bahá’í Dictionary*. (Momen, Wendi. *A Basic Bahá’í Dictionary*. George Ronald Publishers, Oxford, 1989.) Please note that her book was written about the Bahá’í Faith from the perspective of a Bahá’í, therefore, in these quotes, not only God, but also the Báb, Bahá'u'lláh, any other Manifestations or Prophets of God recognized by the Bahá’ís, and even ‘Abdu’l-Bahá

are capitalized when referred to, whether using the proper name, or “Him”, as it is custom among Bahá’ís to do so. Additionally, any references to text considered by the Bahá’ís as written on behalf of God, such as the Bible, the texts by the Báb and Bahá’u’lláh, the Qur’án, and so on, are also capitalized in these quotes. For example, using the “Writings of God” and the “Word of God” is common practice with Bahá’ís.

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