



# **A CONTEMPORARY TEMPLE: DESIGNING A CENTRE TO PROMOTE MINDFULNESS**

**Hussein Agoushi**

**2023**

A CONTEMPORARY TEMPLE:  
DESIGNING A CENTRE TO PROMOTE MINDFULNESS

Hussein Agoushi

A Practicum submitted to the Faculty of Graduate Studies of

The University of Manitoba in partial fulfillment of

the requirements of the degree

MASTER OF INTERIOR DESIGN

Department of Interior Design

Faculty of Architecture

University of Manitoba

Winnipeg

2023

THE UNIVERSITY OF MANITOBA  
FACULTY OF GRADUATE STUDIES

---

COPYRIGHT PERMISSION

## A CONTEMPORARY TEMPLE: DESIGNING A CENTRE TO PROMOTE MINDFULNESS

by  
Hussein Agoushi

A Thesis/Practicum submitted to the Faculty of Graduate Studies of The University  
of Manitoba in partial fulfillment of the requirement of the degree

MASTER OF INTERIOR DESIGN

Advisor: Tijen Roshko  
Internal Advisor: Kurt Espersen-Peters  
External Advisor: Jason Hare

Copyright © 2023 by Hussein Agoushi

Permission has been granted to the Library of the University of Manitoba to lend  
or sell copies of this thesis/practicum, to the National Library of Canada to  
microfilm this thesis and to lend or sell copies of the film, and to University  
Microfilms Inc. to publish an abstract of this thesis/practicum.

This reproduction or copy of this thesis has been made available by authority of  
the copyright owner solely for the purpose of private study and research, and  
may only be reproduced and copied as permitted by copyright laws or with  
express written authorization from the copyright owner.

## Thesis Statement

This thesis attempts to design a community building that can serve as an alternative to a traditional sacred space or spaces with special significance. The design proposal of this thesis will introduce spatial qualities that promote a meaningful coexistence among people with different intellectual or spiritual backgrounds. This will be done by providing an interior design language to transform the St. Norbert Art Center into an all-inclusive meditation and community building.

## Abstract

Humans have always tried to achieve deeper levels of meaning and find answers to the most fundamental question of “who we are.” Spirituality and religion are two of the most influential fields that provide an intellectual and social atmosphere for individuals to think, meditate and investigate the sacred and meaningful aspects of our existence. While doing this, as a side effect, the prevailing belief systems have divided people into groups and sects that often cannot necessarily coexist. This project aims to use interior design elements to build a centre that revives the classic sacred space concept, where contemporary individuals can experience mindful rituals and practice the spirituality rooted in our common understandings of human values. By promoting a sense of spatial coexistence, this project will try to alleviate tension caused by opposing worldviews. This centre will provide the necessary facilities for an interfaith community, including a meditation space, gallery, conference area, workshop area and a restaurant serving world cuisine. These spaces will help communities perform their cultural

rituals and expose other individuals to our world's cultural diversity. The main research investigates the sacred architecture's language and how we can apply it to contemporary architecture.

This project attempts to revive the traditional relationship between space and individual understanding of spirituality. This will happen by analyzing the common interior design elements among meditative spaces which respond to our common desire for spirituality. The research explores the architectural qualities that were used throughout the world among various traditions that turn a space into a meditative and sacred space. The methodology used in this paper is mainly done by literature search from secondary resources including books and academic papers about sacred architecture, meditative spaces, spirituality and symbolism in sacred spaces. In addition, the study proposes architectural solutions to regenerate the architectural qualities that resemble the timeless classic worship spaces. around the world that have spiritual and sacred qualities embedded within their design.

This project attempts to create meditative and playful spaces that help visitors build a connection with their innermost selves and contemplate the common human values. The created spaces also include dialogue zones that will facilitate conversation between visitors and will help them enjoy coexistence and harmony.

Acknowledgment:

To my **mother** and **father** who gave life and love to me and taught me devotion.

To my sisters, Rogaye and Maryam, who taught me unconditional love.

... and to my brothers, Mohammad and Hassan, who taught me how to be great and showed me the true way of living.

To my advisor, Tijen Roshko, who didn't give up on me during the toughest days of Covid. You believed in me and not only taught me how to be a creative designer but also introduced me to the poetry of life and showed me what compassion and caring truly mean.

To my internal advisor, Kurt Espersen-Peters, who inspired me to believe that mindfulness can not only be integrated into our daily lives but can also find a place in our design practices.

To my external advisor, Jason Hare, who taught me how to deeply dive into the ocean of meaning in life and the architectural realm.

To Yagoub Mohammadzad, who taught me how to be compassionate and kind in life. I will never forget the kindness you showed to the lost and homeless refugees in Istanbul. You revealed to me the true essence of generosity.

To Kris Robinson, who taught me how to be a caring person. You demonstrated that kindness and caring can transcend borders, gender, and living species.

To Ali Khiabani, who taught me the poetry of art, architecture and design and supported me throughout my creative journey.

And finally, to that special someone who taught me how to love and be loved.

I will be forever grateful to you.

# Table of Contents

Thesis Statement.....	3
Abstract.....	3
<b>1.0 Introduction .....</b>	<b>8</b>
1.1 Purpose of this Practicum .....	9
1.2 Rationale .....	9
1.3 Research Questions.....	9
1.4 Learning Objective and Methodology.....	10
1.5 Assumptions.....	11
<b>2.0 Literature Review .....</b>	<b>11</b>
2.1 The Architecture of Sacred Spaces .....	11
<b>3.0 Theoretical Framework .....</b>	<b>13</b>
3.1 Theory of Emplacement.....	14
3.2 Theory of Human Environments.....	16
3.4 Responding to Research Questions .....	18
3.4.1 The Language of Sacred Architecture .....	19
3.4.2 Design Elements that Align with Spiritual Consciousness .....	23
3.4.3 Meditative Space .....	26
3.5 Summary .....	28
<b>4.0 Precedents .....</b>	<b>28</b>
4.1 The Matrimandir .....	29
4.1.1 Design Criteria.....	32
4.2 MIT Chapel / Eero Saarinen .....	32
4.2.1 Design Criteria.....	35
4.3 Northeastern University Interfaith Spiritual Center .....	36
4.3.1 Design Criteria.....	38
4.4 King Abdullah Financial District Metro Station .....	39
4.3.1 Design Criteria.....	41
<b>5.0 Site Analysis .....</b>	<b>42</b>
5.1 Project Overview.....	42
5.2 Adjacencies, Zoning, Land Use.....	42
5.3 Vegetation, Animal Life, and Topography .....	44
5.4 Climate .....	46

5.5 Building analysis:.....	47
5.6 Inspirations from the Site and SNAC Building.....	50
6.0 Programming.....	50
6.1 Overview .....	51
6.2 Project Goals .....	51
6.3 Proposed Programmatic Activities.....	52
6.4 Spatial Requirements .....	52
6.5 Human Factor Analysis.....	56
6.5.1 User Profile.....	56
6.7 Zoning and Circulation Analysis .....	59
7.0 Design Solution .....	62
7.1 Design Language Development .....	62
7.1.1 Design Language Development – 1 <sup>st</sup> Approach .....	62
7.1.2 Design Language Development – 2 <sup>nd</sup> Approach.....	65
7.1.3 Design Language Development – 3 <sup>rd</sup> Approach.....	70
7.2 Conceptual and Volumetric Studies.....	71
7.2.1 All-Direction Temple .....	71
7.2.2 Birds’ Nest.....	74
7.2.2 Design Solutions for research questions:.....	79
7.2.2.1 Question 1:.....	79
Entrance Area narrative Diagram .....	81
7.2.2.2 Question 2:.....	89
7.2.2.3 Question 3:.....	95
7.3 Design Drawings.....	101
7.3.1 Plans .....	101
List of Materials .....	111
Furniture and Equipment List .....	113
Restaurant, Banquet and ceremony area furniture .....	113
Custom Furniture List.....	115
References .....	116
APPENDIX A: BUILDING CODE ANALYSIS .....	119

# 1.0 Introduction

In our rapidly changing era, technological and scientific development promises a brighter future. While we are experiencing this fast-paced life, we struggle with various psychological and social side effects, including anxiety, isolation and desensitization of society. Spirituality used to play a crucial role in our ancestor's public and individual life, and they largely benefited from its positive impacts on taking care of stress and anxiety by promoting "peace, purpose, and forgiveness" (livingwaters, 2022). Architecture and design have helped religions and spiritual systems to reach their audiences. The primary purpose of this practicum is to investigate the role of space making in meditative and religious buildings and the way these buildings' impact their respective communities. By investigating the precedent religious and sacred spaces, a common design language will be investigated that resonates with a wide variety of faith practitioners. This investigation will discuss the spatial qualities, ornaments and materials to find the essential and common interiority that could be used in an all-inclusive spiritual community building. The result is a contemporary sacred space that welcomes people of different background and help them come together to immerse themselves in a contemplative environment and practice their religion or enjoy the meditative space. This place welcomes individuals regardless of their background and religious attitudes. Cultural programs will be held to foster a sense of dialogue between people and visitors. A world-food restaurant and a ballroom will be designed to house various ceremonies, including marriage and gathering events.

## 1.1 Purpose of this Practicum

The main objective of this interfaith community building is to create an interior space that facilitates and promotes mindfulness, tolerance, and peaceful coexistence. Those who visit this building will find a chance to have a quiet time to relax and contemplate their inner sacredness along with the people of different faiths; a meditative space that helps people to feel comfortable to pray, meditate individually or in a group, or seek a higher meaning in their life. The purpose of this practicum is to design a space where a person can interact with people of all faiths, discuss the differences and similarities, and pray and meditate with them to search for the common spirituality of all religions; a public space that helps us to shape a culture of respect.

## 1.2 Rationale

This project aims to create an all-inclusive meditation and contemplation center—a cultural beacon to gather individuals and intellects seeking meaningfulness and mindful activities. The designed interior will include vernacular elements to keep visitors connected to the natural environment. In addition, architectural symbolism will be implemented in various layers of development and construction to open the space for meaningful interpretations of the current and future users. In order to bridge the transcendental experience of classic architecture with the contemporary design methods, a new design language should be invented that includes classic sacred and religious elements of classic architecture and resonates with contemporary secular communities.

## 1.3 Research Questions

The following questions will be investigated to find the common and essential features of a meditative space that resonates with public individuals and help them reach higher levels of meaning:

- 1- What is the common design language among the sacred and religious buildings?
- 2- Which design elements are important in developing an interior design language that aligns with the spiritual consciousness of individuals?
- 3- How can a space's spatial harmony and interiority create a meditative realm?

## 1.4 Learning Objective and Methodology

The primary learning objective is to investigate the qualities such as narration, meaningfulness and symbolism embedded in the buildings designed to serve a sacred and spiritual purpose. It is hoped that the attained knowledge from this investigation will be implemented in our contemporary interior design practices.

Several site visits were conducted to religious buildings to understand the design language of classic and modern buildings designed for ritual purposes. Furthermore, the relationship between the religious buildings and visitors was observed to understand how people of different faiths communicate and interact with their worship and meditation spaces. To have an understanding about the origin of ornaments in religious buildings, the mathematical and conceptual formation of the base geometries of was studied. This knowledge was used as an inspiration source for developing new ornaments and forms that resonate with contemporary individuals. The vaulting

muqarnas system and girih tiles (ribbon-like forms) in Islamic architecture, for example, was studied as base for development of contemporary forms. In addition to the mentioned traditional form development, the algorithmic and parametric design methods are studied and put into practice to develop organic and architectural forms. These algorithmic aided designs are used as interior and exterior design development. In addition, classic and modern architectural written works are studied to understand the practical connection between architecture theories and sacred architecture in different eras. *The Ten Books on Architecture* by Roman architect Marcus Vitruvius, the contemporary book *Seeking the Sacred in Contemporary Religious Architecture* by Douglas R. Hoffman, and *The Eyes of the Skin: Architecture and the Senses* by Juhani Pallasmaa are examples of the books reviewed for this purpose.

## 1.5 Assumptions

Spirituality and divinity are shaped by those who believe in the existence of higher levels of meaning. These people express their gratitude for “love, protection, blessings, happiness, prosperity and peace” and try to avoid negativities such as “hatred, unhappiness and poverty” (Garg, 2010). Each individual has a unique visual and symbolic perception of divinity. Depending on their geographical and religious background, people have developed rituals to express their respect for the unmanifested layers of the universe (Garg, 2010).

# 2.0 Literature Review

## 2.1 The Architecture of Sacred Spaces

As Walter Pichler and Hans Hollein in the book *Programs and Manifestoes on 20th-Century Architecture* indicate, “Architecture is a spiritual order” that is comprehended in the “building” process (Pichler & Hollein, 1975, p. 181). This building process requires a combination of the pure and collective consciousness of founders, designers, and artisans that come together to bring a building into existence. In other words, “man’s spiritual energy and power” are put into work to build a significant space (Pichler & Hollein, 1975, p. 181). Some ancient mythologies and monotheistic religions consider our world a harmoniously complex and functional universe, and the temples that our ancestors designed reflect this tuneful universe (Alberti, 1986, p. 79). There is an embedded appreciation of the naturalness and beauty of “material” that is elevated by believers to connect to the divinity that they consider “sacred” (Alberti, 1986, p. 136). In this regard, temples may be specially used to raise visitors to experience devotion and holiness by packing their “minds” with captivating joy and “entertaining” them with praising the magnificence of temples (Alberti, 1986, p. 136). Accordingly, temples are built to reach the climax of “imagination” that the visitors cannot imagine any further and put the observers in a state of “awe and amazement” and compel them to cheer with amazement that “this place is certainly worthy of God” (Alberti, 1986, p. 136).

In *The Ten Books of Architecture*, Leon Battista Alberti mentions that building a temple in a city is the only task that requires our attention and conscientiousness because “it is moreover the habitation of the Gods (Alberti, 1986, p. 136). According to Alberti, assigning a building to a profound subject like God, as the architect of the entire world, adds an important dimension and significance to an earthly architect’s ability to design and build a space (Alberti, 1986).

Our perception of “the continuity of time and space” pauses when we enter a sacred space (Hoffman, 2010, p. 6). Sacred space helps us to experience a shift from one layer of “understanding” to a deeper layer of perception (Hoffman, 2010, p. 6).

The architecture of sacred spaces is a significant task rooted in collective human knowledge. In order to design a sacred space in the contemporary era, one should be aware of the significance of the task and be familiar with the mythological and scientific knowledge behind the development of these spaces. The astronomical knowledge, for example, will be integrated into this project’s design strategy by having a central space with openings to cardinal directions to help practitioners orient themselves to the universe and perform their rituals.

## 3.0 Theoretical Framework

The theoretical investigation is centred around identifying the qualities that can transform a built environment into a community space that is meaningful and purposeful. Sacred spaces have played an essential role in creating meaningful spaces, and the collective architectural experience around these buildings can be used in contemporary architecture. To inform the investigation, the project will reference the theoretical and academic works of experts who have studied the qualities that make a space sacred. By doing so, the project seeks to build upon established principles and theories in order to create a more nuanced understanding of how to create spaces that hold meaning and significance for people. The theory of Emplacement by Jonathan Z. Smith and the theory of Human Environment by Eugene Walter are two theories that are used in this project. Both theories explore the qualities that shift space and turn an ordinary place into a

sacred space. This project attempts to revive some timeless architectural qualities and apply them to a contemporary context by studying these theories.

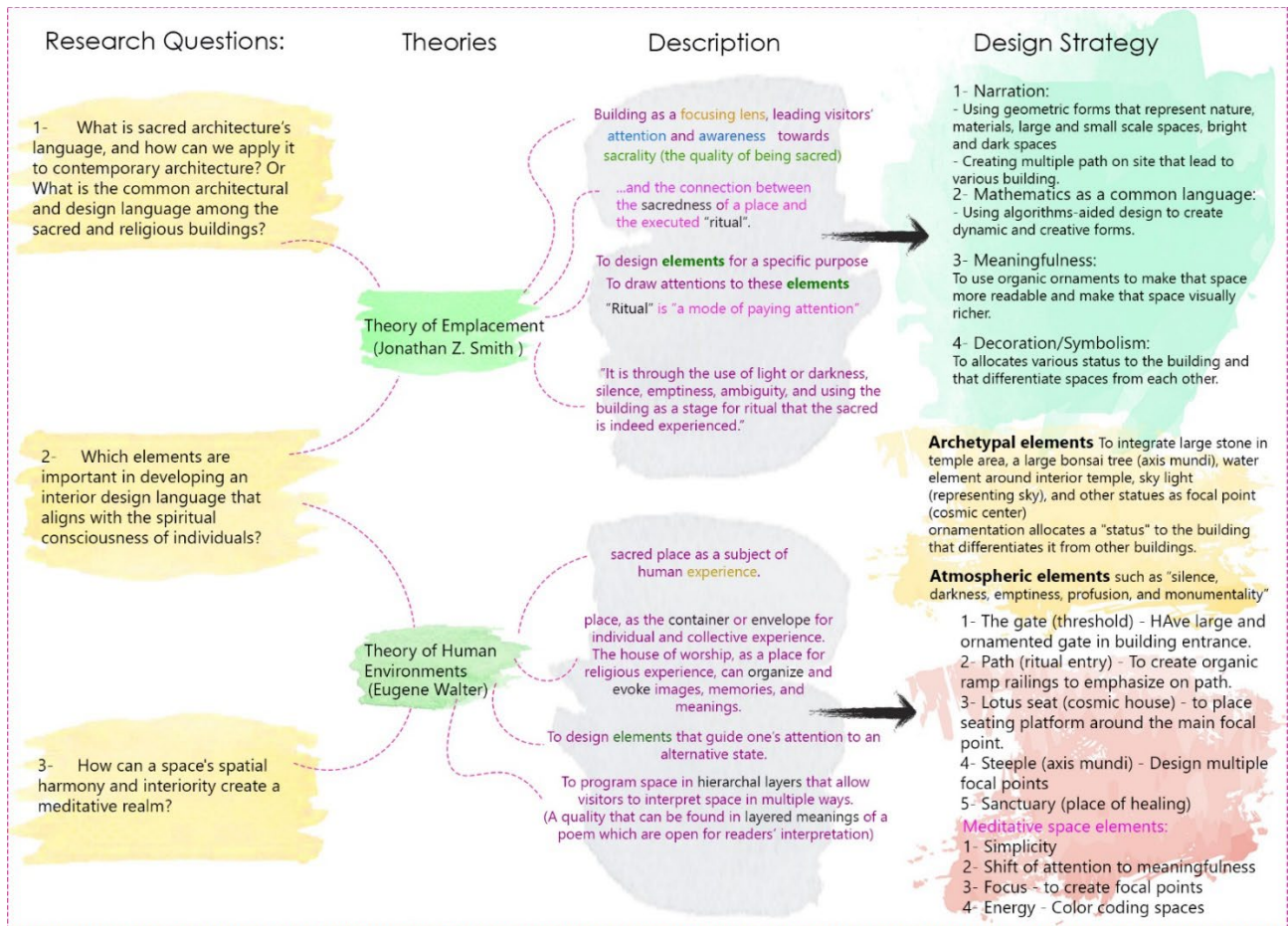


Fig 01. Theoretical Framework Diagram

### 3.1 Theory of Emplacement

In our technologically evolved era which our tranquility and calmness are distracted by digital tools and devices, we are seeking possible ways to fulfill our need for a meaningful life (Hoffman, 2010, p. 1). Our interest in meaning has pushed us to search for communities and spaces that allow us to experience blissful states (Hoffman, 2010, p. 1).

The first theory discussed and implemented in this practicum is the Theory of Emplacement by Jonathan Z. Smith. He believes that “Sacrality,” the quality of being sacred, in the first place, is related to “emplacement” (Jonathan Z. Smith, 1987, p. 104). In a designed sacred space, visitors step into a space which its elements are intentionally planned for a specific purpose; these designed elements require your notice and awareness to be drawn to themselves (Jonathan Z. Smith, 1987). In other words, the architects of sacred spaces manage visitors’ attention and guide them to focus on a particular matter. A building devoted to worship and rituals often functions as a “focusing lens” that leads visitors’ awareness and sets up a space for important matters to happen (Jonathan Z. Smith, 1987, p. 104). An “ordinary” matter can be transformed into “sacred” merely by taking place in a worship building. (Jonathan Z. Smith, 1987, p. 104).

In the book *To Take Place*, Smith indicates a difference between sacred space and sacred place. He believes “Space is more abstract than place” (Jonathan Z. Smith, 1987, p. 28). Smith elaborates his point of view: “If we think of space as that which allows movement, then place is pause; each pause in movement makes it possible for location to be transformed into place” (Jonathan Z. Smith, 1987, p. 28). Conceptualizing the connection between the sacredness of a place and the executed “ritual” in that place is the main focus of the theory of “emplacement”.

In this theory, the performed “Ritual” is, most importantly, “a mode of paying attention” and is a taken step to show passion in an obvious and noticeable way (Jonathan Z. Smith, 1987, p. 104). This approach to ritual signifies the “role of place as a fundamental component of ritual: place directs attention” (Jonathan Z. Smith, 1987, p. 104). Similarly, the tool and items that are used to perform a “ritual” do turn into “sacred” by having “attention” pointed towards them in a highly

noticeable way; therefore, the concept of “sacred” and “profane” does not essentially inherent to any phenomena (Jonathan Z. Smith, 1987, p. 104). The ambience created by architects, combined with our readiness to encounter meaning, are two factors that establish the context for the sacredness to happen. The performed rituals in a place play an important role in turning an ordinary environment into a sacred space (Hoffman, 2010, p. 1). In this project, interior design elements will lead visitors’ attention toward a meditative state to create a sacred ambience. In addition, the spatial programming of the project will revive the traditional hierarchal space arrangement in which visitors will pass from multiple thresholds before entering the main meditation hall. This will instill a sense of movement and ascension and create a narrative spatial sequence for visitors.

## 3.2 Theory of Human Environments

Eugene Walter, in the book *Placeways*, talks about another theory about sacred space, which is the “theory of human environment” (Hoffman, 2010, p. 8). Walter talks about the idea of sacred place as a subject of human experience. He describes that sacred space has elements that guide one’s attention to an alternative state; and also argues that “Perceptions and sensations in religious environments” are open for interpretation and can have more than one meaning (Walter, 1988, p. 72). Douglas R. Hoffman, in the book *Seeking the Sacred in Contemporary Religious Architecture*, focuses on this point and elaborates that:

“This distinction emphasizes the role of architecture in creating place, as the container or envelope for individual and collective experience. The house of worship, as a place for religious experience, can organize and evoke images, memories, and meanings.” (Hoffman, 2010, p. 8)

The ancient Greeks believed that a concealed and invisible equilibrium of forces forms the “nature of a place” (Walter, 1988, p. 70). A “sick place” was related to “keres” (Greek word for death-spirits), and a “sacred place” was filled with “good spirits” (Walter, 1988, p. 70). Our ancestors also reciprocated “the feeling and meaning of rocks, trees, and contours of the ground”; They used these perceptions and qualities to foster a liberating understanding of nonmaterial liveliness (Walter, 1988, p. 70). They were establishing worship/offering places in nature and were trying to connect with the “experienced presence” by sacrificing their belongings (Walter, 1988, p. 70).

“Come no closer; take the shoes off your feet; the place where you are standing is holy ground.” Exodus 3:5, ESV

Walter mentions another form of spiritual place that commands the direction of our attention. What he considers as “ambiguity of space” is a quality that helps us to interpret space in multiple ways; a quality that can be found in layered meanings of a poem which are open for readers’ interpretation (Walter, 1988, p. 72). Like poetry, architecture is a form of art that can guide and evoke emotions and create a sense of meaning or purpose and the sacred architecture remind us of the awe-inspiring experience people experience while visiting these places.

A sacred place has a scheme that responds to our sensations and mental structure and assists and cherishes our vision and understanding of the reality of our faith and spiritual belief (Walter, 1988, p. 75). This spatial programming is done by assembling “sight and sound,” presenting “light” to display “clarity and order,” or by creating shadow to propose unmanifested phenomena (Walter, 1988, p. 75).

Similar to Christian worship places, Islamic architecture devises some methods to put the practitioners into a “meditative mood” or to transform their “state of consciousness” (Walter, 1988, p. 76). Walter mentions the following examples to promote the trans-like shift of a “place” (Walter, 1988, p. 76).

- 1- The mesmerizing effect of shiny “mosaics on Byzantine walls”.
- 2- The visual dialogue between “light and shadow in Romanesque churches”.
- 3- The mystical emission of light and captivating “colors of great windows in Gothic buildings.”

The above-mentioned heavenly representation is to help us overlook the fact that these buildings are made with “mortar and stone” and also helps us focus on our innermost qualities when we step into the divine place (Walter, 1988, p. 76).

In sacred architecture, there are certain spots, “a meetinghouse” for example, that it is tried to evade from using visual stimulation as sensual interruption, since the practitioners try to develop a meditative state and retreat from material realm and practice to guide their attention to their inner self (“interior”) and observe the “inner light and to hear the still, small voice” (Walter, 1988, p. 77).

Walter's theory emphasizes the importance of understanding the interplay between human beings and their environment. According to Walter, the environment is not just a physical space but also a social and cultural construct that is shaped by human activity and experience.

### 3.4 Responding to Research Questions

### 3.4.1 The Language of Sacred Architecture

Question 1: What is the common design language among the sacred and religious buildings?

Timelessness is a key part of sacred architecture. Architecture, in its nature, responds to the dread of time by turning the transitory and indeterminate surroundings into steady space, "transforming chaos into cosmos" (Harries, 1997, p. 228).

#### 1- Narration

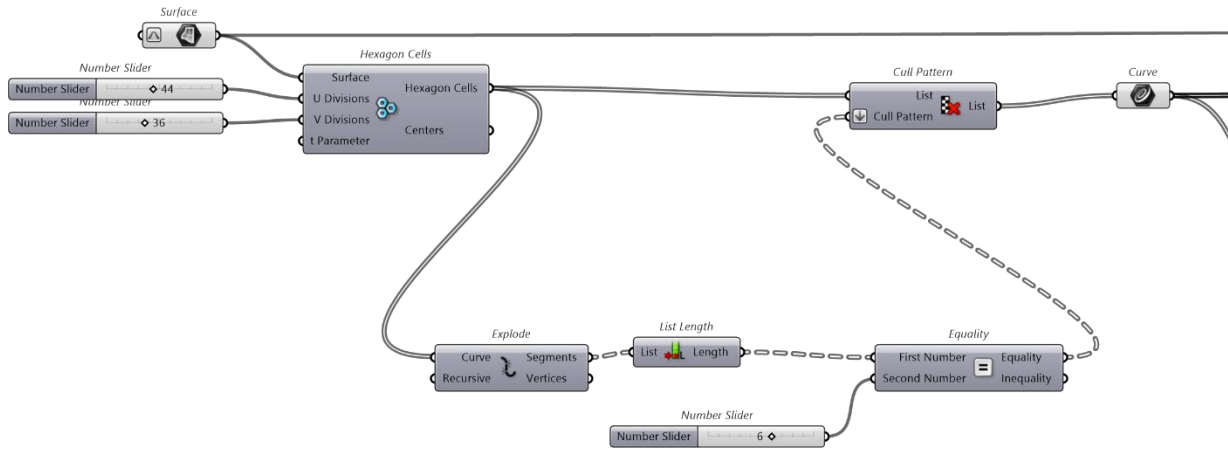
On a larger scale, the fundamental mission of architecture and other forms of art is to protect the truth and independency of "human experience" and to express a narration and an understanding from the "transcendental realm" and the "domain of the sacred" (Pallasmaa, *Light, Silence, and Spirituality in Architecture and Art*, 2015, p. 32). Remarkable architecture attempts to go beyond visible delusions and creates meaning by directing "consciousness" towards our inner self and existence; like other purposeful art mediums, memorable architecture directs us to encounter our inner self as real, manifested and "spiritual beings" (Pallasmaa, 2005, p. 11). All forms of meaningful spaces engage with visitors' memory and emotions and help them discover a narration embedded in the building. Those who experience architectural narration often have a story to share with others about their adventure.

To build a narrative architecture, the designer can benefit from "forms, materials, scale, light, heat, and sound" (archisoup.com, 2023) In addition, the designer can use the available features on site to tell a story (archisoup.com, 2023). In this project, there are multiple paths and ramps that lead visitors to main spaces. Depending on the path they choose, visitors will experience

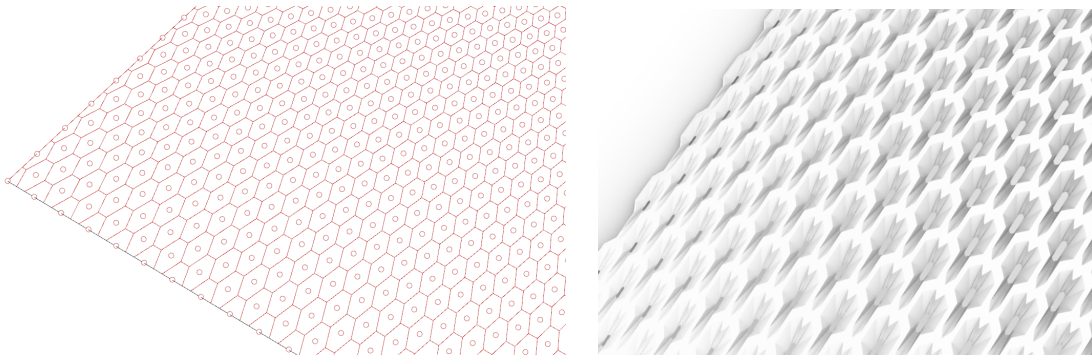
different spatial qualities. For example, one path directly leads to main meditation hall, where they will find themselves in a larger-scale hall surrounded by water and natural light. The other path goes through outdoor gardens and gathering hall that has weaved-shaped exterior pattern, representing the harmony of universe. The third path leads to indoor botanical garden, where is surrounded by indoor plants and organic forms.

## 2- Mathematics as a common language

We need to develop a dialect with our surrounding world to understand it. To build a dialogue with universe, we need to comprehend the structure and language of the natural surrounding we inhabit. Michael S. Schneider, in the book *A Beginner's Guide to Constructing the Universe: The Mathematical Archetypes of Nature, Art, and Science*, indicates that "mathematics" and its characters ("triangles, circles, and other geometrical figures") is a significant language for us to perceive our surrounding Universe (Schneider, 1994). The universe that we live in has complex principles and patterns that align with mathematical orders. Natural elements in our Universe could be represented by mathematical properties such as "numbers, shapes, and their arithmetic and geometric relationships" (Schneider, 1994). The algorithms-aided design using computer software helps us leverage mathematics towards creating dynamic and creative shapes with unique formal characteristics. In this project, dodecagonal geometry is used to develop the exterior façade of the temple. By using the grasshopper software, the base geometry's parameters were altered to reach a harmonious and parametric pattern.



**Fig 02. Grasshopper Algorithm.** By Author,  
(Design process of exterior façade for temple)



**Fig 03. Form Development using computer algorithms.** By Author,  
(Design process of exterior façade for temple)

### 3- Meaningfulness:

Visiting a sacred space of Christians is similar to going into a place that is rich with symbols, stories and "meanings" (Kieckhefer, 2004, p. 135). A metaphoric relationship exists between a

sacred space's architectural composition and a narrative chronicle's written ideas and emotions. Stepping into a designed sacred space is similar to reading a story and interpreting the inner consistency and narrative elements of that story (Kieckhefer, 2004, p. 135). The used ornaments in a sacred space make that space more readable and make that space visually richer (McNamara, 2009, p. 91). Ornaments deliver a "poetic" narration from the formation of a church and its engineered elements and elegantly disclose the hidden layers of the natural environment's presence in a building (McNamara, 2009, p. 101).

#### 4- Decoration/Symbolism

There is a network of symbols in a designed sacred space, and the connection between these symbols varies from one building to another (Kieckhefer, 2004, p. 164). In the case of Christian architecture, for example, the used ornaments and architectural metaphors have many meaningful layers, and believers are constantly processing their perception and understanding from that space (Kieckhefer, 2004, p. 164). Similarly, there is a complex connection between "ornament" and the beautifulness of a building. A part of this beauty is rooted in the used ornamentation, and the clarity ornaments add to the space (McNamara, 2009, p. 107). In addition, this ornamentation allocates a "status" to the building that differentiates it from other buildings (McNamara, 2009, p. 107). A big part of the rank and reputation of a building comes from the functionality of that space, and the used ornamentation in that space clarifies the significance of the rituals performed in that building (McNamara, 2009, p. 107). In Christian architecture, for example, the used decoration implies the significance of the Christian faith and its meaningful worship rituals (McNamara, 2009, p. 107). Buildings interact with their designed

elements, and the ideal ornamentations are those elements that "animate the building as a whole" on a "smaller scale" (Semmes, 2001, p. 18). Ornamentation clarifies and redefines the designed forms in a compact and comprehensible size for visitors' eyes that have a closer encounter with architecture; In other words, "Ornament is the architecture of the near view" (Semmes, 2001, p. 18).

Although the common design language among sacred and religious buildings can vary depending on the religious and cultural context, there are frequent elements that can be traced in many of them. The active use of symbolism, tendency to create meaning and narration and the mathematical development of forms are example of the common design elements in sacred spaces.

### 3.4.2 Design Elements that Align with Spiritual Consciousness

Question 2: Which elements are important in developing an interior design language that aligns with the spiritual consciousness of individuals?

Spiritual consciousness is a type of awareness built through "meditation" and reflection over meanings and results in developing a sense of unity and transcendental condition (Mayer, 2000, p. 3). *Sacred "cannot, strictly speaking, be taught, it can only be evoked, awakened in the mind; as everything that comes 'of the spirit' must be awakened"* (Otto, 1950, p. 5).

The awakening of spirituality has an important role in understanding the connection of "architecture to the sacred" (Hoffman, 2010, p. 6). Architecture as a physical phenomenon cannot directly awaken people, but it can present symbolic components to "awaken consciousness" (Hoffman, 2010, p. 6). These components function as "symbolic markers" to

change the condition and nature of a normal built environment into a “sacred” location (Hoffman, 2010, p. xiii). It should be considered that these transcendental “elements” that affect the “faith and geographic boundaries” can be interpreted differently by various belief systems and societies (Hoffman, 2010, p. 3).

*“It is through the use of light or darkness, silence, emptiness, ambiguity, and using the building as a stage for ritual that the sacred is indeed experienced.” (Hoffman, 2010, p. 9)*

Dennis McNally in his 1982 PhD thesis, “Sacred Space: An Aesthetic for the Liturgical Environment,” researched the “sacred space in Catholic churches” and recognized two major principles that aesthetically contribute to a space (Hoffman, 2010, p. 10):

- 1- **Archetypal elements** such as “stone, tree (axis mundi), water, sky, earth, and mountain-city-temple (cosmic center) (Hoffman, 2010, p. 10).
- 2- **Atmospheric elements** such as “silence, darkness, emptiness, profusion, and monumentality” (Hoffman, 2010, p. 10).

Michel Hoffman, in his publication, uses the Jungian definition of archetype, which is considered as “archaic forms of innate human knowledge passed down from our ancestors” (Cherry, 2022). In the elements mentioned above, archetype refers to the primitive and basic formation of the “collective unconscious,” and the “atmospheric elements” refer to the transformation of spatial qualities that are open to interpretation, similar to the process of changing “light” into “shadow” (Hoffman, 2010, p. 13).

In the book *The Temple in the House: Finding the Sacred in Everyday Architecture*, Anthony Lawlor determines the following design components as shapers of a “sacred environment” (Hoffman, 2010, p. 10).

- 1- The gate (threshold),
- 2- Path (ritual entry)
- 3- Lotus seat (cosmic house)
- 4- Steeple (axis mundi)
- 5- Sanctuary (place of healing)

According to Hoffman, the concepts of **gate** and **path** and **lotus seat** could be translated into the longing, exploration and accomplishment of the “spiritual” journey; while the **steeple** and **sanctuary** could be considered as “physical manifestation of the sacred experience” (Hoffman, 2010, p. 10). In a symbolic language, the “gate” depicts a transcendental state in which someone exits from one condition and enters another realm (Hoffman, 2010, p. 10). The “Path” represents the beginning of a quest and the moment of change; a path to obtain awareness and revive “consciousness” (Hoffman, 2010, p. 10). Finally, the “lotus seat” represents reaching a target where the travellers experience wholeness, union and peace (Hoffman, 2010, p. 10). Therefore, the first three elements indicate the transition “from the ordinary to the sacred” (Hoffman, 2010, p. 10). The last two elements shift from mere physical phenomena into representatives of a spiritual realm by using “archetypal” metaphors (Hoffman, 2010, p. 10).

### 3.4.3 Meditative Space

Question 3: How do spatial harmony and interiority create a meditative realm?

Architecture has often tried to symbolize our "being" in the world by delivering a timeless definition from the structure of an "ideal life" (Pallasmaa, 2012, p. 76). This given definition is often conveyed by contemplating over designs and commonalities of a suitable and satisfying life (Pallasmaa, 2012). Furthermore, architecture helps us to know ourselves and the formless "reality" around us by defining a spectrum of "culture and time" (Pallasmaa, 2012, p. 76).

In the book *Meditative Places*, Michael Freeman indicates four major qualities that help us build a meditative state:

#### 1- Simplicity

He believes that simple, uncomplicated, or easy-to-understand spaces help us empty our "mind" (Freeman, 2005, p. 7). As is common among Zen practitioners, "Form is emptiness and the very emptiness is form" (Freeman, 2005, p. 9). Similarly, in the Taoist worldview, we have the tea house structures that are translated into "the abode of vacancy." The following verses from the book of Tao Te Ching explain this concept more clearly.

*“Thirty spokes join together in a single wheel,  
but it is the center hole  
that makes the wagon move.*

*We shape a lump of clay into a vessel,  
but it is the emptiness inside the vessel  
that makes it useful.  
We hammer doors and windows of wood for a house,  
but it is the empty inner space  
that makes the rooms livable.  
We build with the tangible,  
but the intangible is what we use.”  
(Tao Te Ching)*

## 2- Shift

The quality in which our perception and the state of mind is shifted from the physical surrounding towards another mental realm by using psychological excitement (Freeman, 2005). The visual enthusiasm that architectural and design elements create, can motivate visitors to practice meditation regularly and stay committed to the process.

## 3- Focus

Using design elements that provide a focal point for eyes and visitors' attention; "a tangible motif or icon" that draws attention and visual perception towards itself and helps visitors stay focused (Freeman, 2005, p. 127).

## 4- Energy

In ancient China, some practitioners had methods to ensure that the flow of energy (chi) was in harmony with its physical surroundings (Freeman, 2005, p. 173). For example, a site's energy could be translated into the underlying "meanings" of a specific location; meanings such as the collective memories and awareness associated with that place (Freeman, 2005, p. 173). In addition, the used geometrical forms can collect energy, similar to "pyramids" and "Pagoda," which are considered long-lasting forms and are permeated with energy (Freeman, 2005, p. 173).

## 3.5 Summary

The design process of this temple incorporates the theory of Emplacement and the Theory of Human Environments to narrate a story in which the visitors actively take a role in it. By using form, material, light and sound this building draws participants' attention to the deepest layers of imagination and contemplation. According to these theories, interior elements function as focusing lens that lead visitor's attention towards a meaningful journey that can be defined as spirituality. Devising multiple interior and exterior walking path, for example, help visitors experience a form of walking meditation and pilgrimage ritual. According to these theories, ritual is a form of paying attention and interior design should provide the spatial requirement of performing rituals. Having multipurpose rooms and gathering spaces plays an important role in fulfilling this requirement. The active use of light and darkness, silence and emptiness will help us design spaces that accommodate ritualistic activities.

The theory of Human Environments finds the space as a place for human experience. According to this theory, place is a container or envelop for individual and collective experience. The house of worship or meditation in particular is a place to organize and evoke images and meanings. Programming space in hierarchal order, for example, help visitors to discover the space gradually and reflect in the embedded meaning within their existence.

## 4.0 Precedents

## 4.1 The Matrimandir

The Matrimandir is the inner chamber of Auroville, a contemporary town that welcomes individuals from all over the world regardless of their faith or nationality. This place tries to promote “harmony above all creeds, all politics and all nationalities” and is a place to “realize human unity” (auroville.org, 2022)



**Fig 04. The Matrimandir - Exterior.** From *Auroville*, <https://auroville.org/page/visiting-the-matrimandir> (accessed November 06, 2022)

The website of the Matrimandir informs visitors that this place is not a ‘touristic’ space; but “a place for individual silent concentration” which should be visited “in a quiet physical and mental state” (auroville.org, 2022). The city’s general plan consists of a “main temple, an amphitheater and gardens.” In addition, the main temple includes a “meditation chamber,” which is surrounded by a “flattened sphere” (auroville.org, 2022).

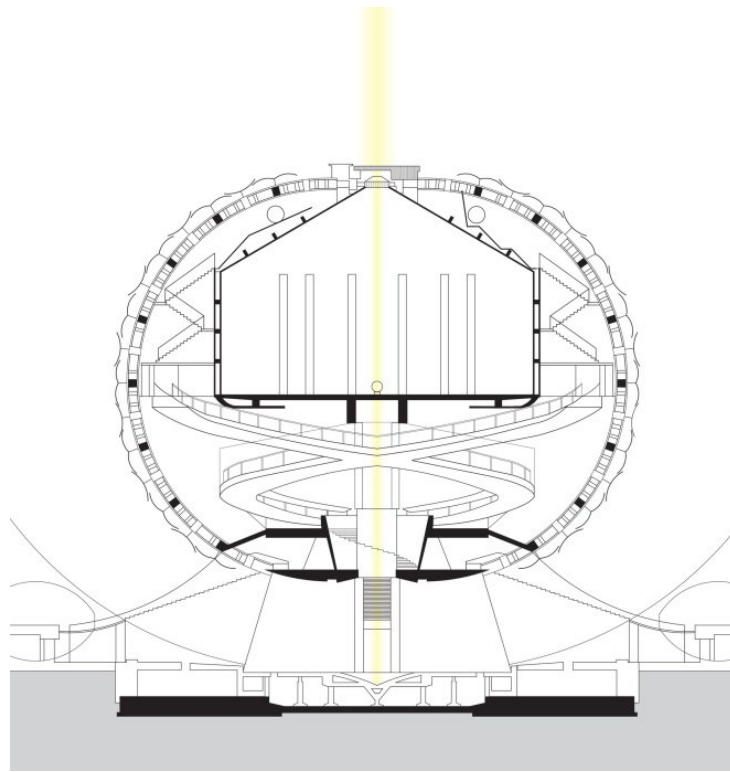


**Fig 05. The Matrimandir – Interior- Chamber.** From *Auroville*,

<https://auroville.org/page/a-thousand-pillared-chamber-aayirakkalmandapam-321> (accessed November 06, 2022)

The meditation chamber has 12 sides and 12 angles in plan view and a cone-shaped interior roof. The main color of the mediation chamber is white, and “spiral ramps” are used to provide circulation to other areas (auroville.org, 2022).

The most important part of the meditation chamber, which includes the archetypal elements of sacred architecture, is the “crystal globe,” which is positioned in the core of the space and functions as a “focal point of attention.” A “heliostat,” a set of individual mirrors that redirect sunbeams towards a center, provides daylight for the central crystal sphere (auroville.org, 2022). In The absence of sunlight, electrical lights imitate the sun’s radiation.



**Fig 06. The Matrimandir – Section.** From *architectural-review.com*

<https://www.architectural-review.com/essays/building-utopia-50-years-of-auroville> (accessed November 06, 2022)

Beneath the meditation level is a basin in a “lotus” shape with another “crystal globe” in its center, which receives the same circulating light generated by the heliostat. This circulating light is present in deeper and darker levels of structure and represents the concept of meaningfulness that enlightens hearts. Following is the message of the Mother, the founder of the Matrimander:

“Let it not become a religion,” the Mother said. “The failure of religions is... because they were divided. They wanted people to be religious to the exclusion of other religions, and every branch of knowledge has been a failure because it has been exclusive. What the new consciousness wants (it is on this that it insists) is: no more divisions. To be able to understand the spiritual

extreme, the material extreme, and to find the meeting point, the point where that becomes a real force.” (auroville.org, 2022)

### 4.1.1 Design Criteria

Precedent One	<b>The Matrimandir</b>
Precedent Objectives	<ul style="list-style-type: none"> <li>• All-inclusive meditation place</li> <li>• A place for individual silent concentration</li> <li>• Central Crystal Globe (archetypal element) as central focal point.</li> <li>• A heliostat: a set of individual mirrors that distribute light to the core of building</li> <li>• Availability of light in darker levels of structure and represents the concept of meaningfulness that enlightens hearts.</li> </ul>
Inspired Solutions	<ul style="list-style-type: none"> <li>• To have a meditation hall supported by archetypal elements such as water, light and shadow.</li> <li>• To have quiet spots in the indoor areas that allow silent and private meditation for groups or individuals.</li> <li>• To use flow of water in temple area to add a sense of tranquility. Water serves as a symbolic and atmospheric element.</li> <li>• To use central oculus as skylight in the ceiling of temple to represent the sky inside the building.</li> </ul>

**Fig 07. Precedent one - The Matrimandir**

## 4.2 MIT Chapel / Eero Saarinen

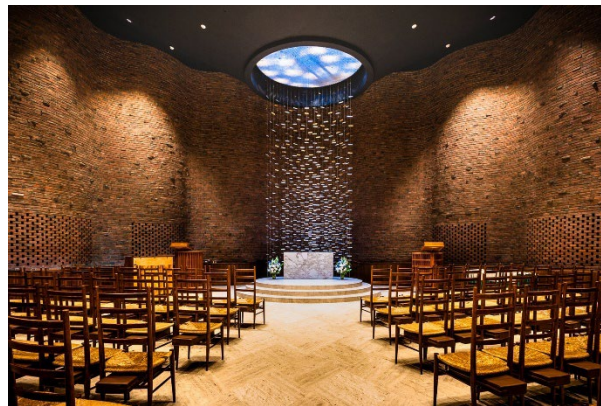
The MIT chapel is located on the MIT University campus and was constructed in 1955. The exterior of the building has a plain cylinder form. Inside the building, however, has an intricate and transcendental ambiance. The interior is infused with natural and artificial lighting, designed to evoke and inspire a spiritual quality in the eye of guests (Souza, 2022).



**Fig 08. MIT Chapel – Exterior.** From *hiddensacredspaces.org*

<https://www.hiddensacredspaces.org/massachusetts-institute-of-technology/>

This chapel is designed to welcome people of any Christian denomination but does not limit itself to religion. It is open to those who want to isolate themselves from the rush of life and experience a meditative state (Souza, 2022).



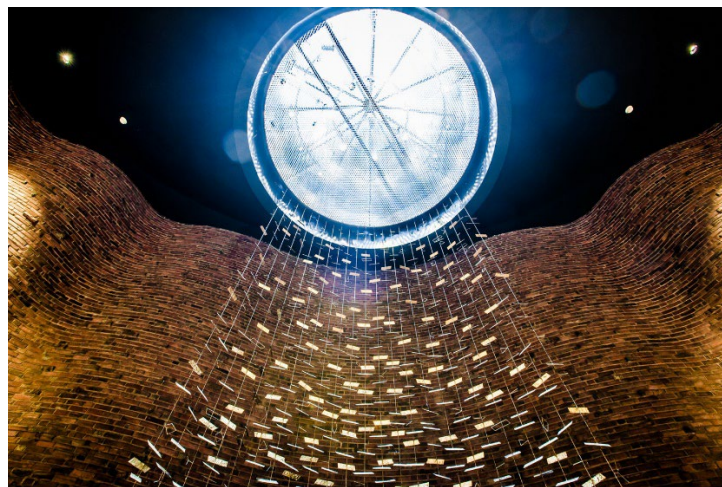
**Fig 09. MIT Chapel – Interior.** From *hiddensacredspaces.org*

<https://www.hiddensacredspaces.org/massachusetts-institute-of-technology/>

The building is located among trees and has no windows on its walls. The chapel is encompassed by a broad ditch which reminds the moats around historical castles that were built to add an extra protective layer to the building (Souza, 2022). Unlike the outside look of the chapel, the interiority is mysterious, with design elements and considerations that are imbued and enriched with directed daylight (Souza, 2022).

The building's exteriority fully covers the interiority of the space. Unlike the solid and motionless exterior, the interior walls follow a wave pattern which surprises the visitors who enter the chapel (Souza, 2022).

In the top part of the central holy table, there is a sculptural pendant with small mirrors reflecting the daylight from the opening in the ceiling (Souza, 2022). This pendant plays a crucial role in redefining the sacredness of the space since it draws visitors' attention and help them focus on the qualities and meanings that the space was intended for.



**Fig 10. MIT Chapel – Interior.** From *hiddensacredspaces.org*

<http://www.hiddensacredspaces.org/massachusetts-institute-of-technology> (accessed November 06, 2022)

“The sculpture appears as a cascading waterfall of light that is constantly adjusting, moving, and redefining the interior of the chapel.” (Souza, 2022)

Unlike the exteriority of the building that merges with its context on campus, the interiority of the space has a unique and carefully designed language (Souza, 2022). The flow and movement of lines and materials inside the chapel, accompanied by the light of sun and sky reflected via an opening in the roof, create a meditative ambience for visitors and guide their minds and attention to a higher level of meaning.

“Through sheer manipulation of light and its focus on a blazingly white marble altar block, Saarinen created a place of mystic quiet.” – (Leland M. Roth in Souza, 2022)

### 4.2.1 Design Criteria

Precedent Two	<b>The MIT Chapel</b>
Precedent Objectives	<ul style="list-style-type: none"> <li>• The interior is infused with natural and artificial lighting</li> <li>• chapel is designed to welcome people of any Christian denomination</li> <li>• The building has no windows on its walls but a central oculus on the roof.</li> <li>• The interior walls follow a wave pattern with bricks which surprises the visitors who enter the chapel.</li> <li>• There is a sculptural pendant with small mirrors reflecting the daylight from the opening in the ceiling which represent a cascading waterfall of light.</li> <li>• manipulation of light and its focus on a blazingly white marble altar block</li> </ul>
Inspired Solutions	<ul style="list-style-type: none"> <li>• To design a parametric façade to control the amount of natural light inside the building by adjusting the size of openings.</li> <li>• Provide skylight.</li> <li>• To design dynamic interior walls that are inspired by nature. Use the Grasshopper algorithm to generate an organic-shaped wall. This approach will provide design flexibility to generate forms that evoke sense of motion in space.</li> <li>• To design sculptural columns that merge with organic walls.</li> <li>• To design sculptural pendants for ceilings to provide artificial light and instill a sense of nature.</li> <li>• To design an indoor platform representing a contemporary perception of the altar.</li> </ul>

**Fig 11. Precedent Two – The MIT Chapel**

## 4.3 Northeastern University Interfaith Spiritual Center

This center was designed by Office DA to welcome individuals regardless of their beliefs and worldview (nadaaa.com, 2022). The designed complex tries to respond to the needs of various belief systems while simultaneously trying to remain neutral so no particular believer can interpret the space in favour of their religion (nadaaa.com, 2022).



**Fig 12. Northeastern University Center for Spirituality, Dialogue and Service– Interior.** From nadaaa.com

<https://www.nadaaa.com/portfolio/northeastern-inter-faith-center/> (accessed November 06, 2022)

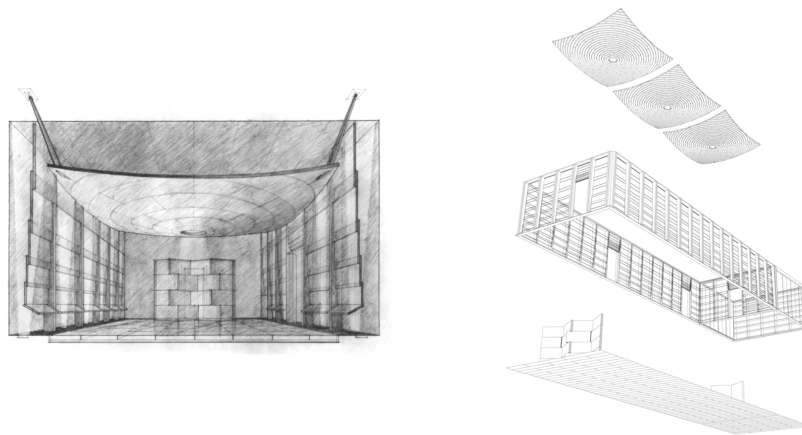
Unlike the ordinary praying halls at universities which are often bland and do not respond to believers' requirements, this centre is intended to create an adaptable context for groups of people with more than one faith (nadaaa.com, 2022). In addition to creating a pleasing environment for religious purposes, this place helps visitors to socialize and exchange ideas (nadaaa.com, 2022).



**Fig 13. Northeastern University Center for Spirituality, Dialogue and Service– Interior.** From nadaaa.com

<https://www.nadaaa.com/portfolio/northeastern-inter-faith-center/> (accessed November 06, 2022)

The building is oriented in a way that its “east-west” is aligned with “Mecca and Jerusalem” (hiddensacredspaces.org, 2022). This positioning helps Muslim and Jewish practitioners direct their praying as required in their belief system.



**Fig 14. Northeastern University Center for Spirituality, Dialogue and Service– Sketches.** From nadaaa.com

<https://www.nadaaa.com/portfolio/northeastern-inter-faith-center/> (accessed November 06, 2022)

The central hall has multiple functions and is open “for worship, yoga, meditation, and interfaith events as well as private prayer and meditation” (hiddensacredspaces.org, 2022). There is a

designated private space for female Muslim prayers; in addition, there is a washing area for Muslim prayers to perform their ablution ritual before praying (hiddensacredspaces.org, 2022). A separate room is allocated for formal gatherings or group discussions.



**Fig 15. Northeastern University Center for Spirituality, Dialogue and Service– Sketches.** From nadaaa.com  
<https://www.nadaaa.com/portfolio/northeastern-inter-faith-center/> (accessed November 06, 2022)

“In a true university, we choose to respect and love those whose religious practices are different and sometimes in conflict with ours. This sacred space symbolizes our need to embrace the multiplicity that exists within the oneness. If we could do that in all aspects of our lives, then this university, this society and this world could reach its full potential.” (David Hall, Provost and Professor of Law at the dedication of the space from hiddensacredspaces.org, 2022)

### 4.3.1 Design Criteria

Precedent Three	Northeastern University Interfaith Spiritual Center
Precedent Objectives	<ul style="list-style-type: none"> <li>All-inclusive meditation and praying space.</li> </ul>

	<ul style="list-style-type: none"> <li>• This space has an adaptable concept and can adapt itself to the specific requirements of practitioners. (people can sit either on provided carpet or portable chairs)</li> <li>• This place a space for socializing and exchanging ideas.</li> <li>• multiple functions and is open “for worship, yoga, meditation, and interfaith</li> <li>• There is a designated private space for female Muslim prayers</li> <li>• there is a washing area for Muslim prayers to perform their ablution ritual before praying</li> </ul>
Inspired Solutions	<ul style="list-style-type: none"> <li>• To use fabric element in flooring and walls. This fabric elements can help me soften emotions and add texture and color to space; elements that are necessary to create meditative focal points.</li> <li>• To facilitate private space for female practitioners</li> <li>• To design washrooms that allow Muslim practitioners do the ablution ritual before praying.</li> <li>• To allocate enough space for socializing and exchanging ideas</li> <li>• To design adjustable and morphing sitting platform in which people can either kneel or sit like normal chair.</li> </ul>

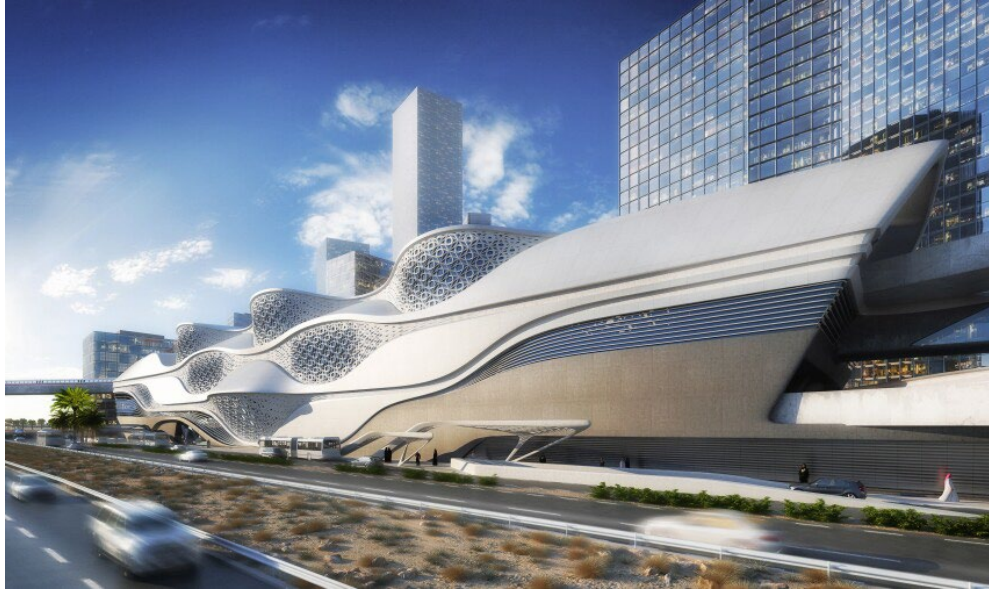
Fig 16. Precedent Three – Northeastern University Interfaith Spiritual Center

## 4.4 King Abdullah Financial District Metro Station

Riyadh city is experiencing a large shift in its population and King Abdullah Financial District (KAJD) Metro Station will play a significant role in connecting the existing and future transportation networks. KAJD Metro Station comprises six platforms based on “four public floors and two underground car parking” (architectmagazine.com, 2023). This building transforms the regular metro station “typology” and highlights the role of multi-purpose communal places in creating urban dynamism (architectmagazine.com, 2023).

The building's exterior façade is shaped by a series of intricate and "dynamic sine-waves" that represent the functional flow and "circulation" inside the building (Battista, 2023). The used

sine-wave forms that are used in the interior and exterior of the building represent the "sand dunes" in desert that is shaped by the flow of "winds" (Battista, 2023).



**Fig 17. King Abdullah Financial District Metro Station.** From zaha-hadid.com - <https://www.zaha-hadid.com/architecture/king-abdullah-financial-district-metro-station/> (accessed February 11, 2023)



**Fig 18. King Abdullah Financial District Metro Station.** From zaha-hadid.com - <https://www.zaha-hadid.com/architecture/king-abdullah-financial-district-metro-station/> (accessed February 11, 2023)



**Fig 19. King Abdullah Financial District Metro Station.** From zaha-hadid.com - <https://www.zaha-hadid.com/architecture/king-abdullah-financial-district-metro-station/> (accessed February 11, 2023)

“Sine-waves or sinusoids, that is mathematical curves that are usually employed to describe a smooth repetitive oscillation, occur in pure and applied mathematics, as well as physics, engineering, signal processing and many other fields” (Battista, 2023).

### 4.3.1 Design Criteria

Precedent Three	Northeastern University Interfaith Spiritual Center
Precedent Objectives	<ul style="list-style-type: none"> <li>• To connect existing and future network of public transportation (including walkways, bridges and metro lines)</li> <li>• This space has a flexible development plan and can adapt itself to the specific requirements of city and public.</li> <li>• To enhance and clarify the traffic and interior circulation, “connectivity diagrams” have been “mapped and structured” in various parts of building. (architectmagazine.com, 2023).</li> <li>• The used sine-wave patterns are “generated from the repetition and frequency variation of station’s daily traffic</li> </ul>

	flows” and will guide visitors throughout the building (architectmagazine.com, 2023).
Inspired Solutions	<ul style="list-style-type: none"> <li>• To translate interior and exterior circulation into mathematical orders. Similar to spirituality, mathematics can create a transcendental feeling by developing symbols and patterns.</li> <li>• To use mathematical algorithms and generate geometries that interior spaces readable.</li> <li>• To extend interior layout to the building envelope and shape building’s exterior in harmony with interior design.</li> <li>• To use the geometric motifs to design interior partition walls and green walls (organic forms).</li> </ul>

**Fig 20. Precedent Three – King Abdullah Financial District Metro Station**

## 5.0 Site Analysis

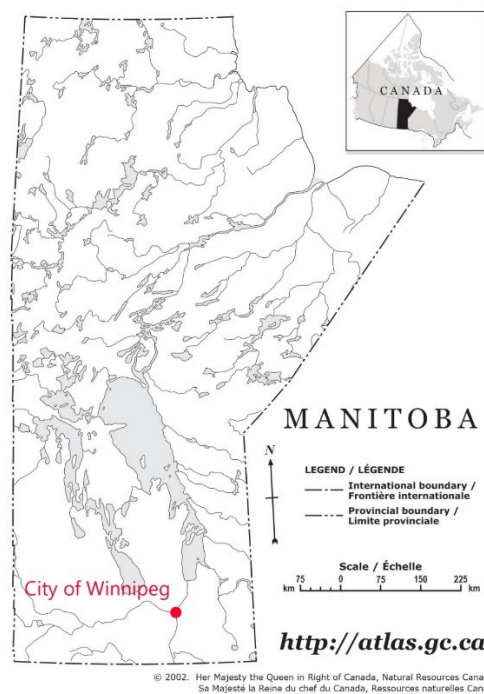
### 5.1 Project Overview

This project is an all-inclusive meditation space that welcomes people from different backgrounds. In addition, this project facilitates dialogue among religions and other worldviews. The building typology of the building is a mix of cultural centre community building, place of prayer, restaurant, workshop area, gallery and conference rooms.

### 5.2 Adjacencies, Zoning, Land Use

The city of Winnipeg is located in the center of the North America continent and provides a

unique geographical and cultural diversity. The site of the building is located in the southern part of Winnipeg, in the St. Norbert neighborhood, which includes both English and French speaking communities and is famous for housing a well-known “farmer’s market” (tourismwinnipeg.com, 2022). The current St. Norbert Arts and Culture Centre was a place for Trappist monks, a group of monks who have chosen a simple life and have devoted themselves to praying God and caring of environment (trappistcaskets.com, 2022).



**Fig 21. Map of Province of Manitoba indicating the city of Winnipeg.** From <ftp.geogratis.gc.ca> [https://ftp.geogratis.gc.ca/pub/nrcan\\_rncan/raster/atlas\\_6\\_ed/reference/bilingual/man\\_out.pdf](https://ftp.geogratis.gc.ca/pub/nrcan_rncan/raster/atlas_6_ed/reference/bilingual/man_out.pdf) (accessed January 11, 2023)

The current St. Norbert Art Center (SNAC) is deeply committed to encouraging and fostering its “core values of diversity, equality and harmony” (snac.mb.ca, 2022). This center bridges the

distance between “arts” and other kinds of “social expression” and has aimed to cooperate with other social orders to build strong communities (snac.mb.ca, 2022). The current SNAC building is home to art producers, and its third and fourth floors can be rented as offices; the ground floor of the building is used for showcasing art, a managerial office, a gift store and other community purposes such as holding marriage ceremonies and similar activities (snac.mb.ca, 2022). SNAC building is encompassed by dense trees and is adjacent to LaSalle River. Around the SNAC there are parks, eating houses and various outdoor art pieces, including “statue of Buddha, the Pagoda, Solar Greenhouse and more” that welcome everyone who visits the building (snac.mb.ca, 2022).

### 5.3 Vegetation, Animal Life, and Topography

The SNAC building is located in the secluded part of Winnipeg and has rich natural surroundings. This isolation from the main body of the city provides a quiet and relaxing atmosphere for visitors. Being adjacent to the La Salle river and having a dense urban fabric, the site is an ideal place for meditation and contemplative activities. Following are samples of vegetation and tree inventory:

## Vegetation and Tree Inventory:

### **Bur Oak** (data.winnipeg.ca, 2022)

**Botanical Name:** *Quercus macrocarpa*

**Traditional Indigenous Names :**

**Cree:** Maskawátik

**Ojibwe:** Mitigomizh

**Michif:** La shenn

(www.inaturalist.org, 2022)



Tree.1.1 Bur Oak. From search.shelmerdine.com  
[https://search.shelmerdine.com/11050002/Plant/378/Bur\\_Oak/](https://search.shelmerdine.com/11050002/Plant/378/Bur_Oak/)



Tree.1.2 Bur Oak. From search.shelmerdine.com  
[https://search.shelmerdine.com/11050002/Plant/378/Bur\\_Oak/](https://search.shelmerdine.com/11050002/Plant/378/Bur_Oak/)

### **White Spruce** (data.winnipeg.ca, 2022)

**Botanical Name:** *Picea glauca*

**Traditional Indigenous Names :**

**Cree:** Minahik

**Ojibwe:** Zesegaandag

**Dene:** Tzu'cho

**Michif:** La nipint blaán

(www.inaturalist.org, 2022)



Tree.2.1 White Spruce. From inaturalist.org  
[https://www.inaturalist.org/guide\\_taxa/873080](https://www.inaturalist.org/guide_taxa/873080)



Tree.2.2 White Spruce. From inaturalist.org  
[https://www.inaturalist.org/guide\\_taxa/873080](https://www.inaturalist.org/guide_taxa/873080)

## Green Ash (data.winnipeg.ca, 2022)

**Botanical Name:** *Fraxinus pennsylvanica*

**Traditional Indigenous Names :**

**Cree:** Askátik

**Ojibwe:** Sagima'kwun Aagimaak

**Dakota:** Pse khti chan to

**Michif:** Li frenn vayr

(www.inaturalist.org, 2022)



Tree.3.1 Green Ash. From inaturalist.org  
[https://www.inaturalist.org/guide\\_taxa/873089](https://www.inaturalist.org/guide_taxa/873089)

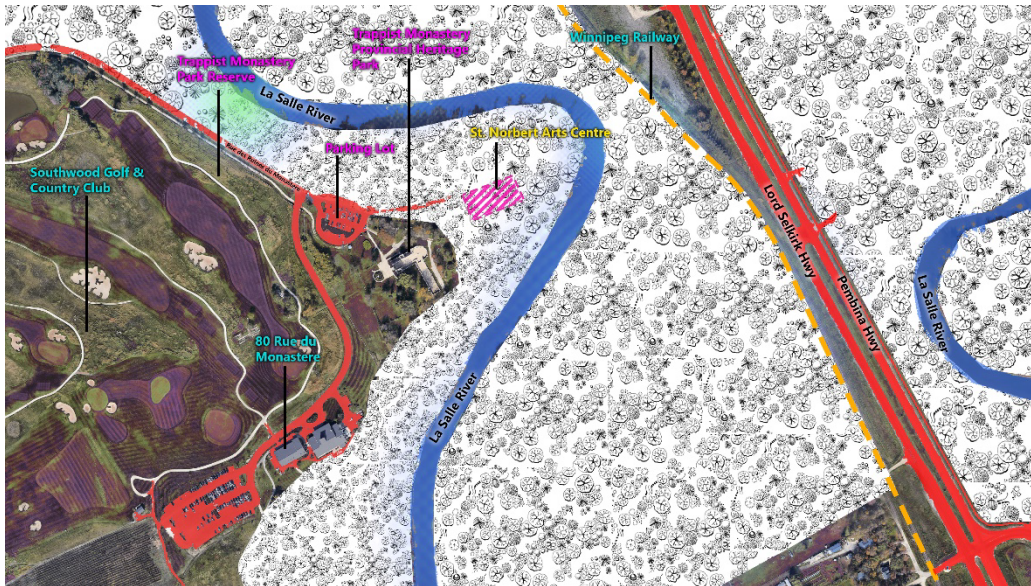


Tree.3.2 Green Ash. From inaturalist.org  
[https://www.inaturalist.org/guide\\_taxa/873089](https://www.inaturalist.org/guide_taxa/873089)

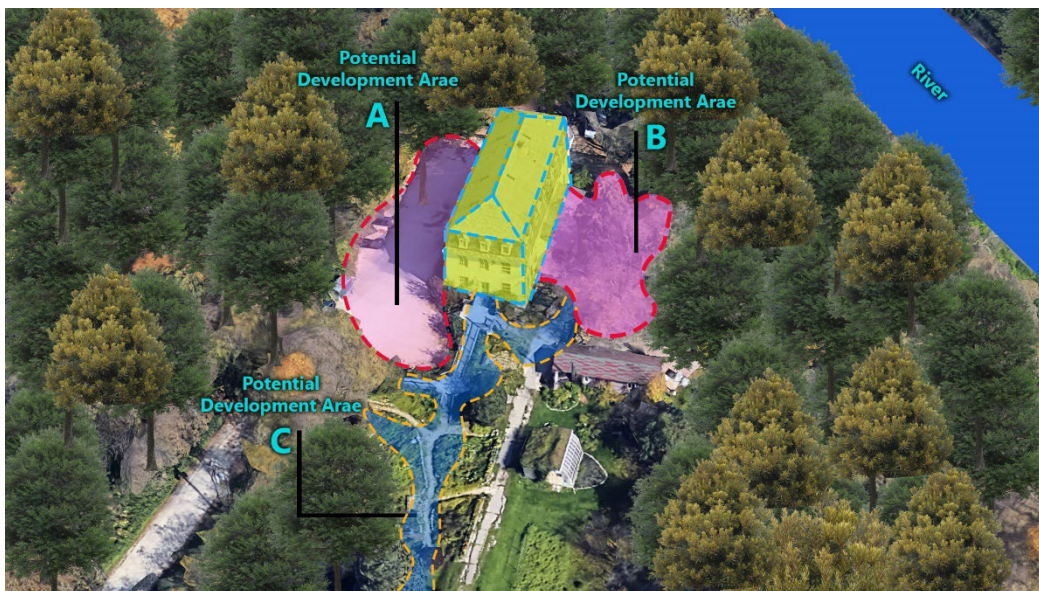
## 5.4 Climate

Winnipeg is located in the center of the North America Continent and is set to Central Standard Time Zone (CST) and has “a continental climate” where experiences a full cycle of seasons, with prolonged winters (tourismwinnipeg.com, 2022).

Winnipeg city experiences an average temperature of above 19 degrees Celsius from the middle of May to mid-September, in July the highest average reaches 26 degrees Celsius (weatherspark.com, 2022). The winters start from mid-November and extend to early March with average temperature spanning from a daily high of -3 to daily low of -18 degrees Celsius in January (weatherspark.com, 2022).



Map 1. St. Norbert Art Center and its Surroundings.



Map 2. St. Norbert Art Center and its Surroundings

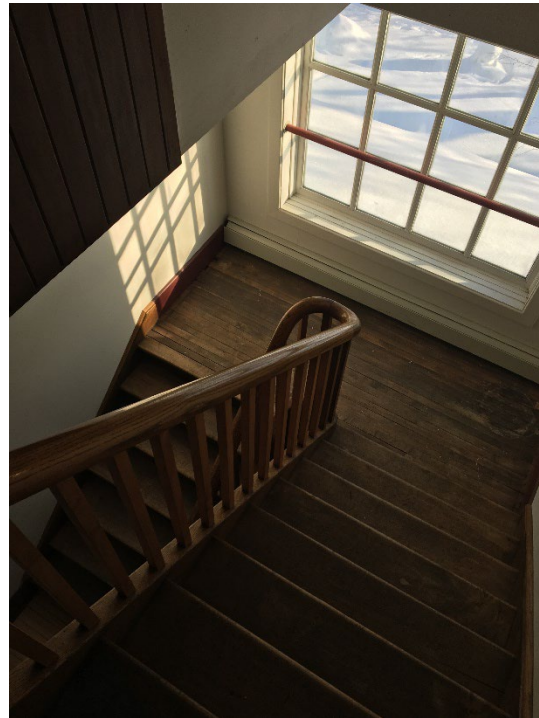
## 5.5 Building analysis:

The St. Norbert building has preserved the traces of spiritual history of original land and those monks who lived in this place. The wooden exterior of the building accompanied by wooden windows frame and historical pieces of furniture make the St. Norbert Art Gallery building an

iconic spot for Winnipeggers. The building and its site have historical references to early settlers of Canada and architecturally narrate the story of a group of Christian monks who had an isolated and contemplative life. Nowadays, the St. Norbert building plays a community-building role by hosting art and cultural events.



**Fig 22. St. Norbert Art Center – Landscape**



**Fig 23. St. Norbert Art Center – Interior Staircase**

Inside the building there is an organic herb products essentials oil store that welcomes visitors with exotic products and gift items. The presence of this shop extends the natural surrounding of the building to the interiority of the place. In addition, there are some study areas and manager's office in the main floor with eclectic wooden furniture and international decorative elements that help space to maintain its historical and meditative quality.



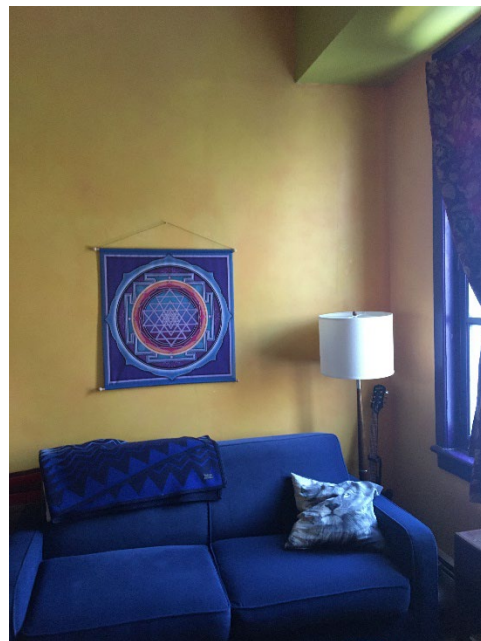
**Fig 24. SNAC – Interior (Herb Store)**



**Fig 25. SNAC – Main Floor Interior**



**Fig 26. SNAC – Main Floor Interior**



**Fig 27. SNAC – Main Floor Interior**

## 5.6 Inspirations from the Site and SNAC Building

The site of this project houses the architectural ruins of the Trappist Monastery. The monks who were living in this monastery were seeking “a life of prayer, work and contemplation, according to the Rule of St. Benedict” (Manitoba.ca, 2023). The green surrounding of this place accompanied by the vast farming fields and flow of the La Salle river creates an ideal spot for meditative activities. The vast and dense forest that surrounds the building site is washed with pure rays of the sun during each sunset and sunrise which makes the residents appreciate the beauty of nature.



Fig 28. The architectural ruins of Our Lady of the Prairies – image by author

## 6.0 Programming

## 6.1 Overview

This project attempts to revive the historical role of praying houses and meditation spaces that used to welcome people of different background. In order to achieve this, the building needs to follow spatial programming that not only addresses the necessities of various religious practices but also responds to secular communities' requirements. This building's typology tries to narrate a contemporary interpretation of classic religiosity by incorporating cultural and community activities into its programs. Religion-based communities often have a defined circle of participants, whereas this contemporary temple welcomes individuals regardless of their religious background. This will mainly be done through designing spaces for cultural gatherings, places of prayer, restaurants, workshop areas, galleries and conference rooms.

It is written in the entrance of the monastery of Abu 'l-Hassan Kharaqani, 10<sup>th</sup> century spiritual sage that:

"Give him or her bread who comes to this house, and do not ask about his or her faith."

## 6.2 Project Goals

The design process of this project focuses on creating new types of spaces that help the public community and visiting individuals develop new insight towards their natural and built environment. This will be done by introducing new building typologies that help visitors connect with their innermost selves and other individuals as well. The spatial programming, for example, follows a hierarchal connection between spaces. One who wants to visit the building will navigate through a long path which is designed and embedded in the project's site. This path

represents the first step of the spiritual journey. This path is then connected to an indoor garden where visitors will get prepared for their encounter with axis mundi (world pillar) – an indoor tree that symbolically represents the connection between sacred and mundane. From here, visitors will continue their journey to other parts of the building.

## 6.3 Proposed Programmatic Activities

- Cultural and Historical Events’ Celebration
- Book Launching Parties
- Graduation Ceremonies
- Reception
- Religious Ritual Performances
- Music and Art Introduction Events
- Yoga Events
- Meetings and Conferences
- Meditation
- Administrative Activity
- Wedding and Gathering Ceremonies

## 6.4 Spatial Requirements

Space	Max. Occupancy Load	Min. Area (Sq.m)	Details	Material and Desired Atmosphere	FFE (quantity)
Main Meditation Hall	217 (Desired 50)	443	Group and individual meditation	Natural wood flooring. Presence of natural elements such as water and plants	Portable tatami floorings. Meditation cushion set
Ceremony & Banquet Space	50	250	Event celebrations, gatherings, weddings	Semi-closed space with	Circular Tables (10) Chairs(100)

Courtyard	195	300	Outdoor Events, Celebrations, BBQ	Organic-shaped planting pots	Circular Tables (10) Chairs(100)
Multipurpose room	(Desired 50)	200	Holiday celebrations, dinners, Birthday parties, Group discussions	Carpet flooring , Partition panels with embedded lights, Acoustic treatment	Chairs (50) Conference Table (3) Round Table (8)
Guest lounge	50	150	A gathering and socializing place for guests before moving into the main space.	Ornamented Windows and openings with views to the site. Geometric blinds to shield direct sunlight. A mix of hardwood and carpeted floors.	Tall table (10), Bar chairs (25).
Conference room	50	300	Scholarly talks, workshops, lectures, private sessions	Ornamented Windows and openings with views to the site. Geometric blinds to shield direct sunlight. A mix of hardwood and carpeted floors. Acoustic treatment.	Auditorium chairs (50) Lecture Table (1)
Restaurant	50	300	Serving international food, Private events	Ornamented Windows and openings with views to the site. Geometric blinds to shield direct sunlight. A mix of hardwood and carpeted floors. Acoustic treatment.	Round table (20) Dining chair (60)
Kitchen	10	500	A multifunctional kitchen to prepare food for international restaurant and cater events.	Washable floor and walls with multiple drainage and floor grill.	
Dishwashing	4	N/A			
Kitchen storage	N/A	40			
Gift shop	10	150	A permanent exhibition of goods and products that promote the tolerance,	Series of custom designed shelves with various display size. Brass metal finish for	Display Shelves (5) Display Tables (3)

			coexistence and other values of the center.	shelve. Stands and other display tables.	
Offices	20	200	Multipurpose office rooms to adapt themselves to various office activity. Data and IT infrastructure.	Carpet flooring with neutral and calming colors. Birch wood desks to match existing doors.	
Staff Lounge	10	100	A place for staff to gather, have conversation and eat their food.	Carpet flooring with neutral and calming colors. Green acoustic wall panels. Adjustable ceiling lights.	Coffee machine (2), Lounge chairs (10), sofas (1), coffee tables, TV, beverage dispenser,
Building Manager	6	150	Multipurpose manager rooms to adapt themselves to various office activity. Data and IT infrastructure.	Carpet flooring with neutral and calming colors. Green acoustic wall panels. Adjustable ceiling lights.	
Washroom Female-Office	4	40	Accessible	Secure access, Ceramic walls, Ceramic tile flooring, adequate light and HVAC	Hand dryer, Grab bar, toilet paper dispenser, air freshener
Washroom Male-Office	4	40	Accessible	Secure access, Ceramic walls, Ceramic tile flooring, adequate light and HVAC	Hand dryer, Grab bar, toilet paper dispenser, air freshener
Washroom unisex accessible	1	10	Accessible	Secure access, Ceramic walls, Ceramic tile flooring, adequate light and HVAC	Accessible sink, Hand dryer, Grab bar, toilet paper dispenser, air freshener
Female public washroom (2)	5	40	Accessible	Secure access, Ceramic walls, Ceramic tile flooring, adequate light and HVAC	Hand dryer, Grab bar, toilet paper dispenser, air freshener
Male public washroom (2)	5	40	Accessible	Secure access, Ceramic walls, Ceramic tile flooring, adequate light and HVAC	Hand dryer, Grab bar, toilet paper dispenser, air freshener
Reception & waiting area			A welcoming space for guests to be guided to various	Reception desk to be designed with	Custom Reception Desk (1),

			parts of the center. Issue Ticket.	organic patterns to match other	Reception Chairs (2), IT, PC, printer.
Custodial room	2	15	Used by security and caretakers for storing backup items and cleaning supplies	Safe and secure access, solid walls, heavy duty rubber tile flooring, adequate HVAC	
Meditation coat Room	20	60	Visitors place their coats and belongings before entering main meditation area.	Accessible drawers for coats and shoes.	
Meditation area storage	2	20	Storing yoga and seating mats and blocks and other audio visual equipment		
Backstage	2	20	Technical room for controlling lights, audio and video projectors.	Sufficient IT and power outlets to supplied	
Washroom accessible F	5	60	Accessible	Secure access, Ceramic walls, Ceramic tile flooring, adequate light and HVAC	Hand dryer, Grab bar, toilet paper dispenser, air freshener
Washroom accessible M	5	60	Accessible	Secure access, Ceramic walls, Ceramic tile flooring, adequate light and HVAC	Hand dryer, Grab bar, toilet paper dispenser, air freshener
Exhibition space	25	120	Exhibition space for showcasing spiritual and cultural art and installation.	Clear and portable walls to be adjusted for various art mediums. Flexible and adjustable lighting fixtures.	
Security office	4	45	Monitoring the events and other facility via CCTV (closed circuit television) cameras.	Solid walls, LVT flooring, adequate HVAC, IT infrastructure.	
Loading dock vestibule	N/A	50	Receiving groceries and kitchen supplement.	Solid walls, Epoxy floors, galvanized steel bed, adequate lighting	
Mechanical room	N/A	40			

Electrical room	N/A	40			
Net area					
Circulation & structure	360				
Gross area	1567 m <sup>2</sup>				

**Figure 29. Occupant load per space and related material and spatial requirements**

## 6.5 Human Factor Analysis

### 6.5.1 User Profile

This project aims to revive the traditional sense of religious community in contemporary secular society. The building welcomes different religious communities and tries to accommodate their traditional and cultural requirements. In addition, this project allows non-religious individuals to visit and enjoy the peaceful atmosphere and pursue their own spiritual journey. Art and music and yoga enthusiasts also can come and perform their art in the available facilities. Therefore, the main focus will be on the public community, religious communities and secular groups of activists and artists.

Primary Users (cumulative)	Age	Gender	Number
Adults	19 - 50	M/F	70
Teenagers	12 - 18	M/F	35
Children	6 mo. - 11	M/F	30
Elderly	50 and above	M/F	20
Adults	19 - 50	M/F	75
Teenagers	12 - 18	M/F	40
Adults	19 - 50	M/F	75
Teenagers	12 - 18	M/F	40
Children	6 mo. - 11	M/F	35
General Public (Canadian, non-Canadian, Religious and non-Religious)			160

**Figure 30. User Profile**

The secondary user profile belongs to the administrative and office personnel. Managers, event coordinators, educators, security staff, caretakers and kitchen staff. The administrative zone will be on the upper floors of the main building and will have different access than the public entrance.

<b>Secondary Users (cumulative)</b>	<b>Age</b>	<b>Gender</b>	<b>Number</b>
Office Staff	N/A	M/F	4
Building Managers	Above 18	M/F	3
Event Coordinators	Above 18	M/F	4
Educators	N/A	M/F	5
Security Staff	Above 18	M/F	8
Caretakers	Above 18	M/F	5
Kitchen Staff	Above 18	M/F	8

**Figure 31. User Profile**

The tertiary users of the building are city personnel for garbage removal, post and delivery services who will have an allocated building entry and spot on the site of the project.

<b>Tertiary Users (cumulative)</b>	<b>Age</b>	<b>Gender</b>	<b>Number</b>
Garbage removal	Above 18	M/F	2
Post services	Above 18	M/F	1
Courier delivery	Above 18	M/F	1
Pick up services	Above 18	M/F	1
Event set up staff	Above 18	M/F	3

**Figure 32. User Profile, Age and Gender**

## 6.7 Zoning and Circulation Analysis

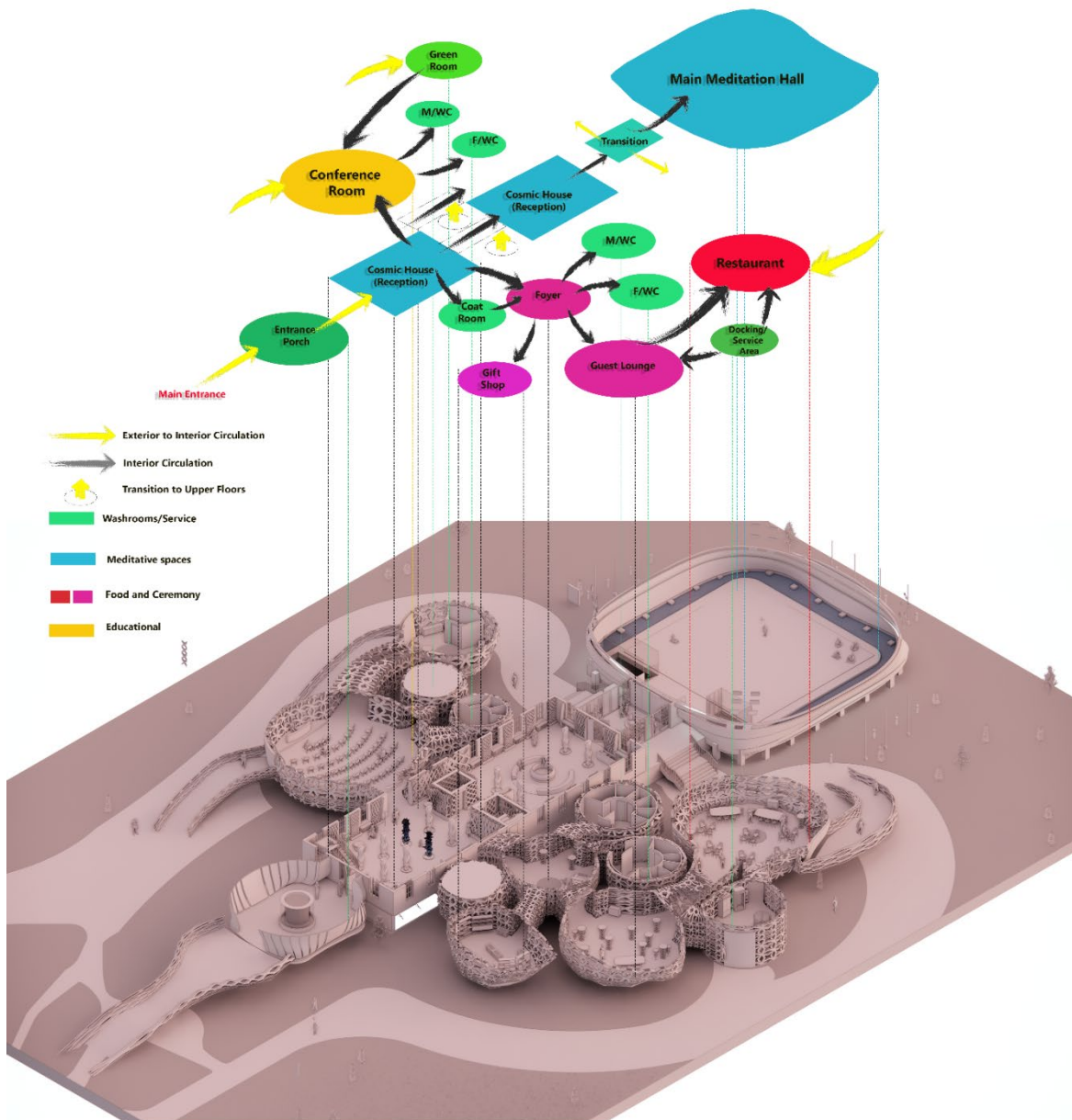


Fig 33. Spatial programming and circulation diagram

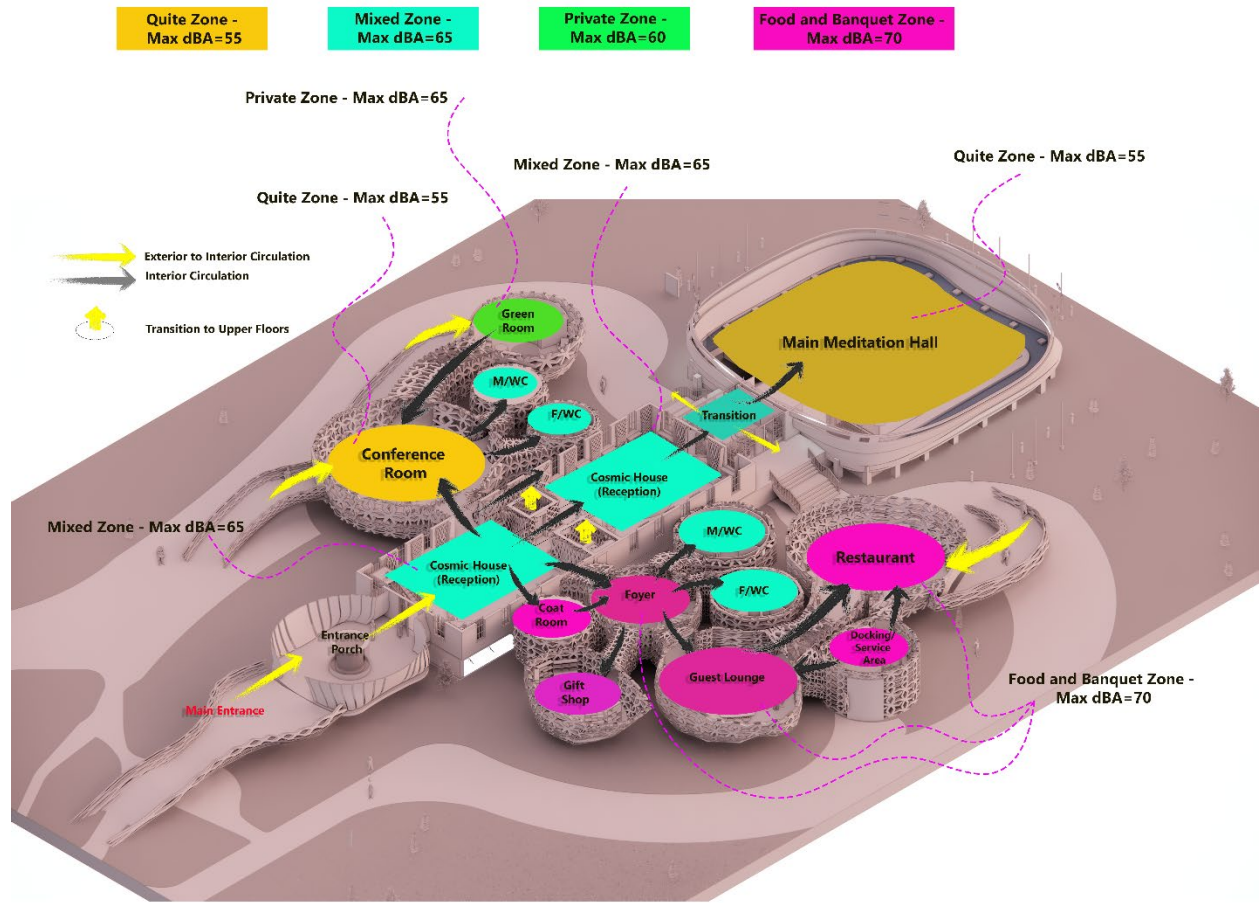


Fig 34. Acoustical landscapes diagram with intended sound levels

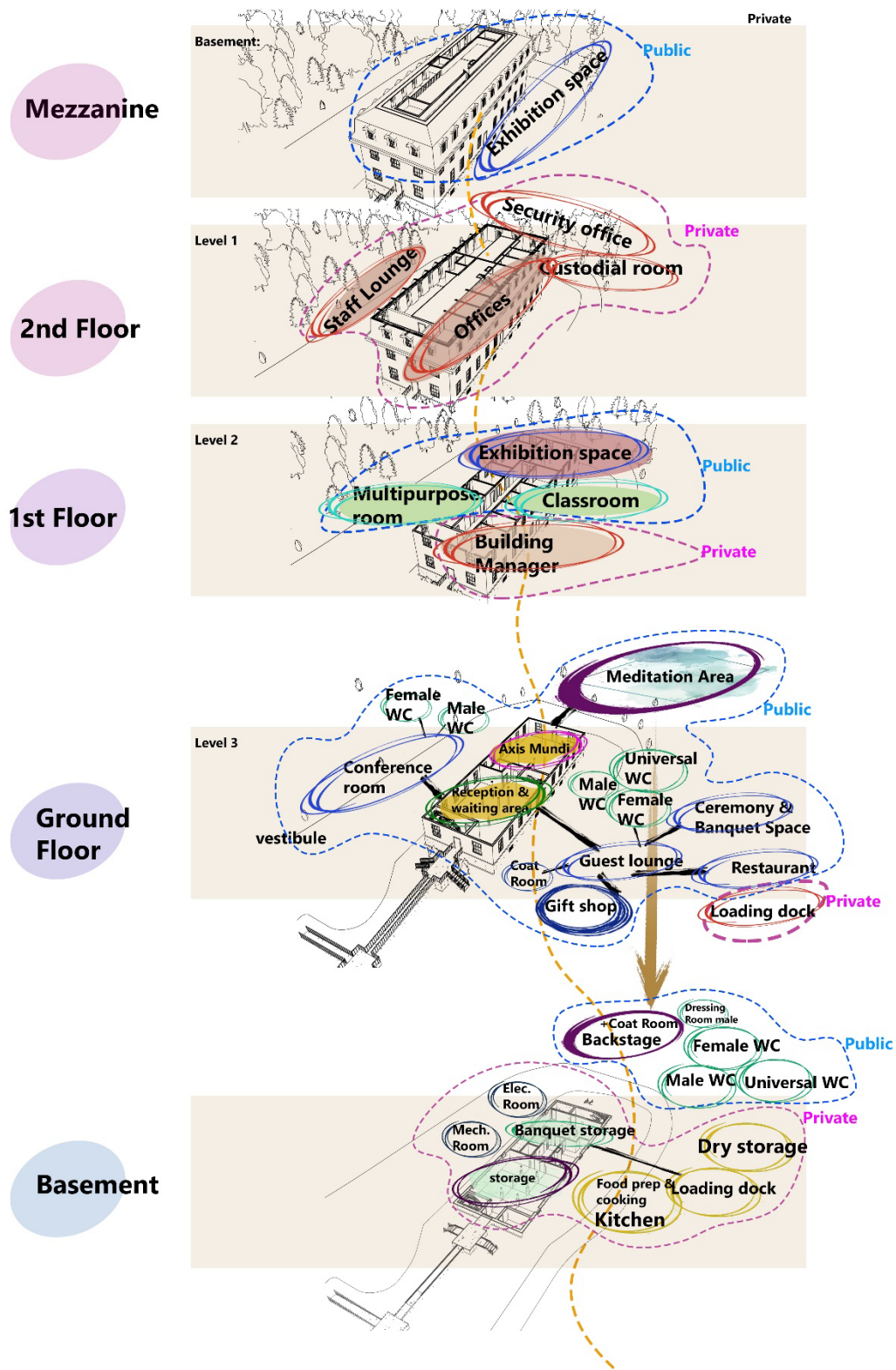


Fig 35. Spatial Programming

# 7.0 Design Solution

## 7.1 Design Language Development

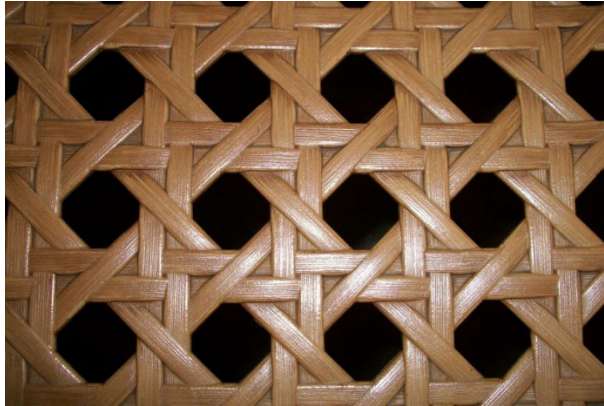
This project attempts to create a meditative atmosphere for visitors where they can practice their faith, have a dialogue with other faith practitioners, learn about other cultures and ultimately, experience the sacred and meaningful architecture in our contemporary secular society.

### 7.1.1 Design Language Development – 1<sup>st</sup> Approach

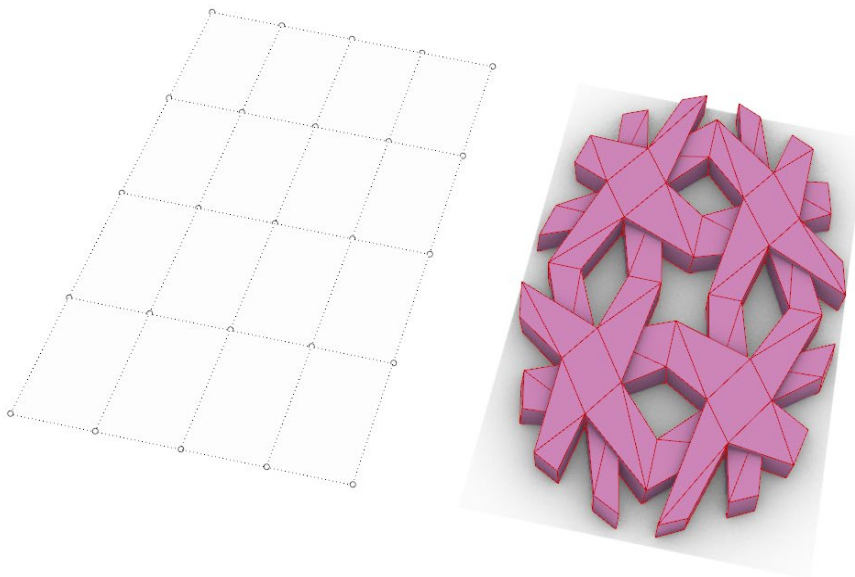
The design concept of the Meditative Nest project is inspired by multiple natural and human-experience phenomena. For example, the similarities between a bird's instinctive weaving techniques and the mathematical formation of human-made fabric inspired the form and interiority of extension buildings. Mixing the bird's nest formation and weave pattern not only shapes the building envelop but also can shape the building volume for developing an interior design language. This design approach helped me study various weaving patterns and integrate algorithm-aided design methods to develop a new design language.



**Fig 36. Bird Nest - Image by Reinhard Thraier from Pixabay**  
<https://pixabay.com/photos/bird-stork-nest-bill-plumage-5724711/?download>  
(accessed January 27, 2023)



**Fig 37. Weave Willow Pattern- Image by PublicDomainPictures from Pixabay**  
<https://pixabay.com/photos/basket-weave-willow-osier-withies-14175/>  
(accessed January 27, 2023)



**Fig 38. Developed Weave Pattern to be used in the extension buildings**

Rhino and Grasshopper software are used to develop a weave pattern with parametric bases and its parameters can be controlled to generate an optimized and architectural form. In order to find the right pattern, multiple weave pattern examined that are available for in Mesh+ plugin for Grasshopper, including Criss Cross (Lattice), Continuum and Thatch pattern. The chosen weave

parameters, Figure 99, has enough volume to shape the building envelop and enough depth for window frames to be installed.

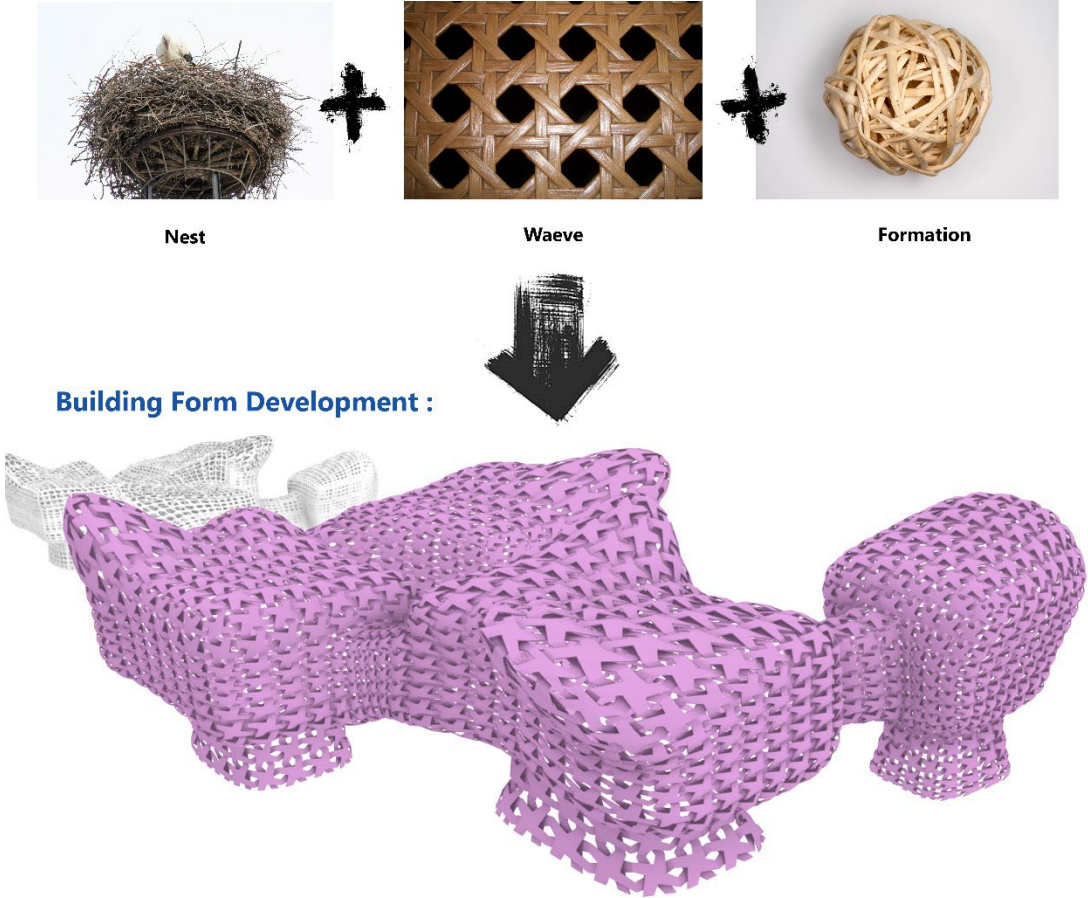
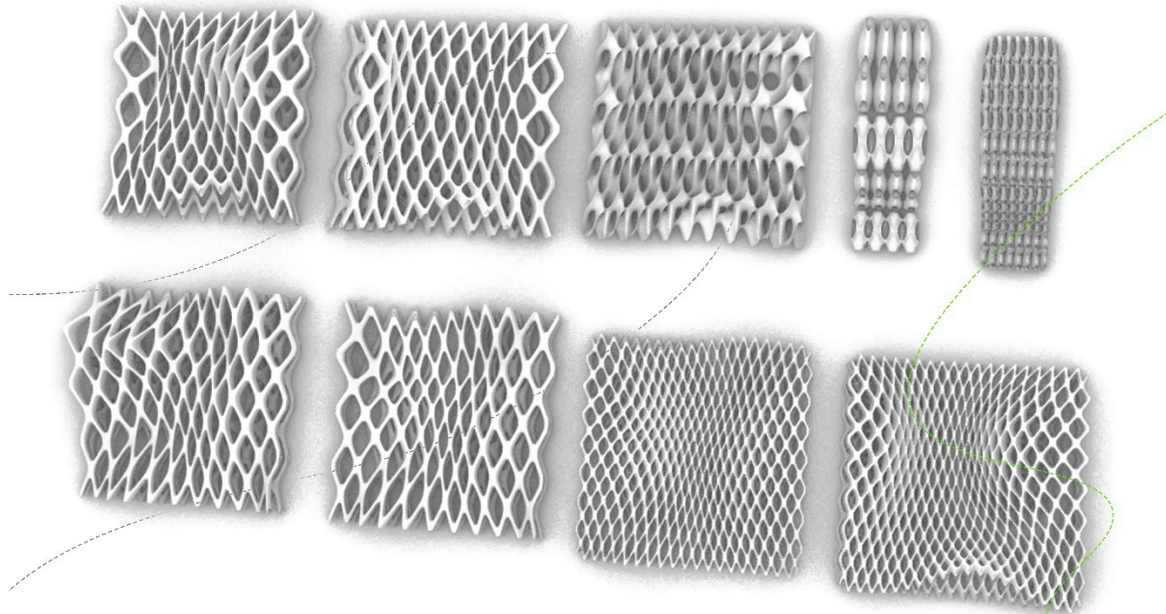
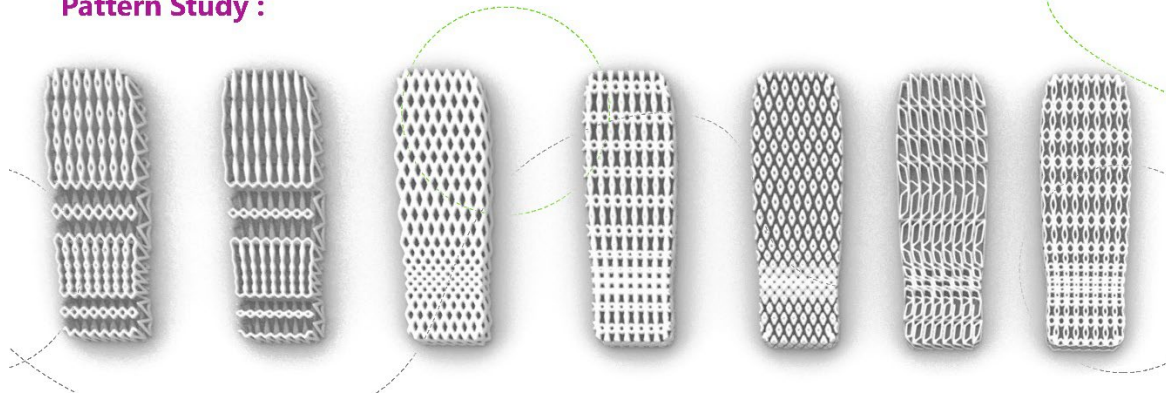


Fig 39. Concept Board 1

**Partition Wall Form Development :**



**Pattern Study :**



**Fig 40. Pattern Study for partition walls**

### 7.1.2 Design Language Development – 2nd Approach

The second concept is based on the formation of the universe by particles. The common perception of the universe as particles is widely used in poems and artworks throughout history.

Mevlana Rumi, the 13<sup>th</sup>-century sage and poet, for example, were seeing humans as dancing particles that float in the universe:

ای روز برا که نره ها رقص کنند  
آن کس که از او چرخ و هوا رقص کنند  
جانها ز خوشی بی سر و پا رقص کنند  
در گوش تو گویم که کجا رقص کنند

*“O’ daylight, arise!  
Shine your light, and let the particle dance,  
He whom the universe is dancing for,  
come with ecstasy,  
Free from body and mind  
I’ll whisper in your ear where their dance is leading them.  
All the particles in the air and in the desert are dancing,  
drunken to the ray of light,  
they seem bewildered.”*

By Jalāl al-Dīn Rūmī

Moving from the fact that all solid object in our physical surrounding is formed by moving particles, I tried to visualize the existing movement and dynamism in solid and static physical matters. To express this, I used 3Ds Max software and TyFlow plugin to turn a solid object into voxels. “In 3D computer graphics, a voxel represents a value on a regular grid in three-dimensional space.” (dbpedia.org, 2023) Using the same software, the gravity and wind forces were applied to the generated voxels to create motion. The wind force was applied in multiple directions, representing the different directions each individual takes in their life. This animated

process generated organic forms that represent the embedded dynamism in solid and natural phenomena, including our physical bodies.

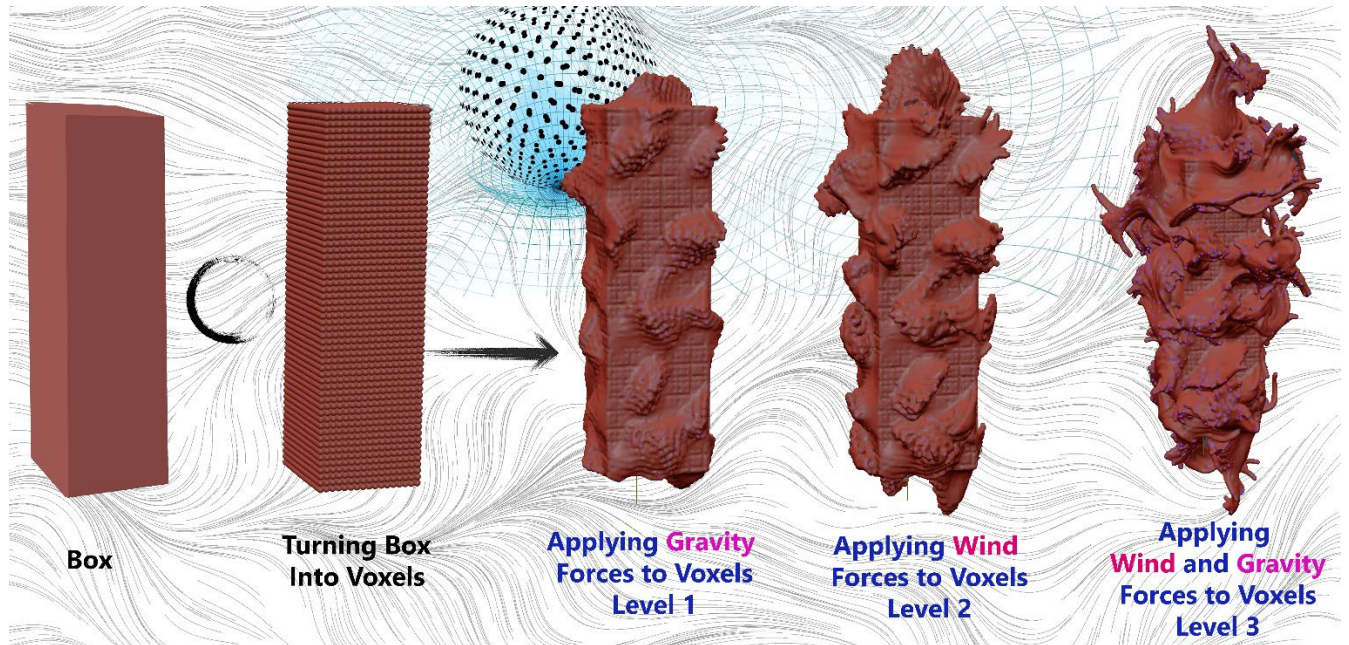


Fig 41. Concept Board 2 – Turning solid object into an array of voxels and applying forces to them

This process is applied to the interior design language to generate decorative columns and light fixtures. The following images are a series of visual experimentation of the same process.

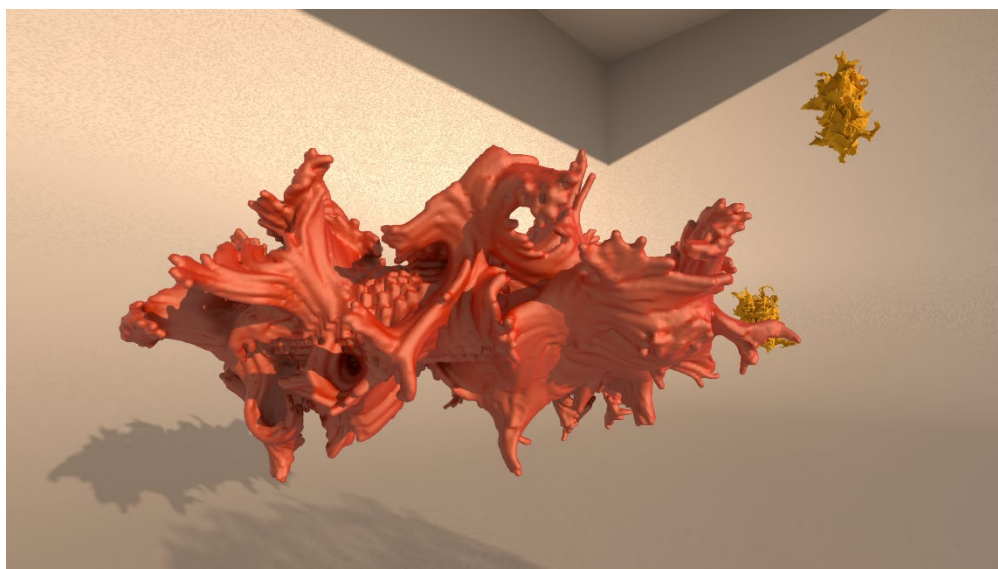
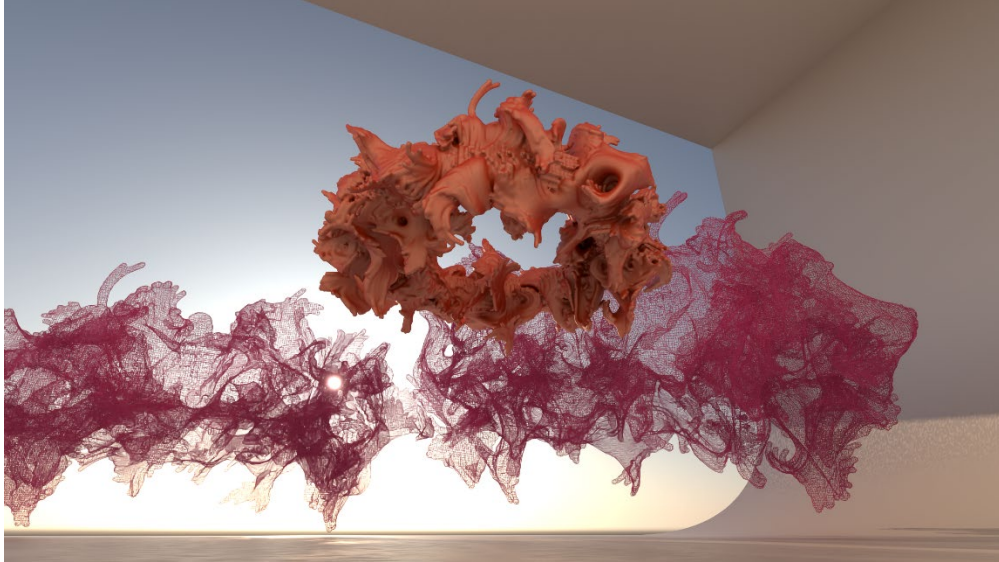


Fig 42. Visual Experimentation with Voxels 01



**Fig 43. Visual Experimentation with Voxels 02**



**Fig 44. 3D Printed Version Voxel Experimentation**



**Fig 45. Visual Experimentation with Voxels 03**

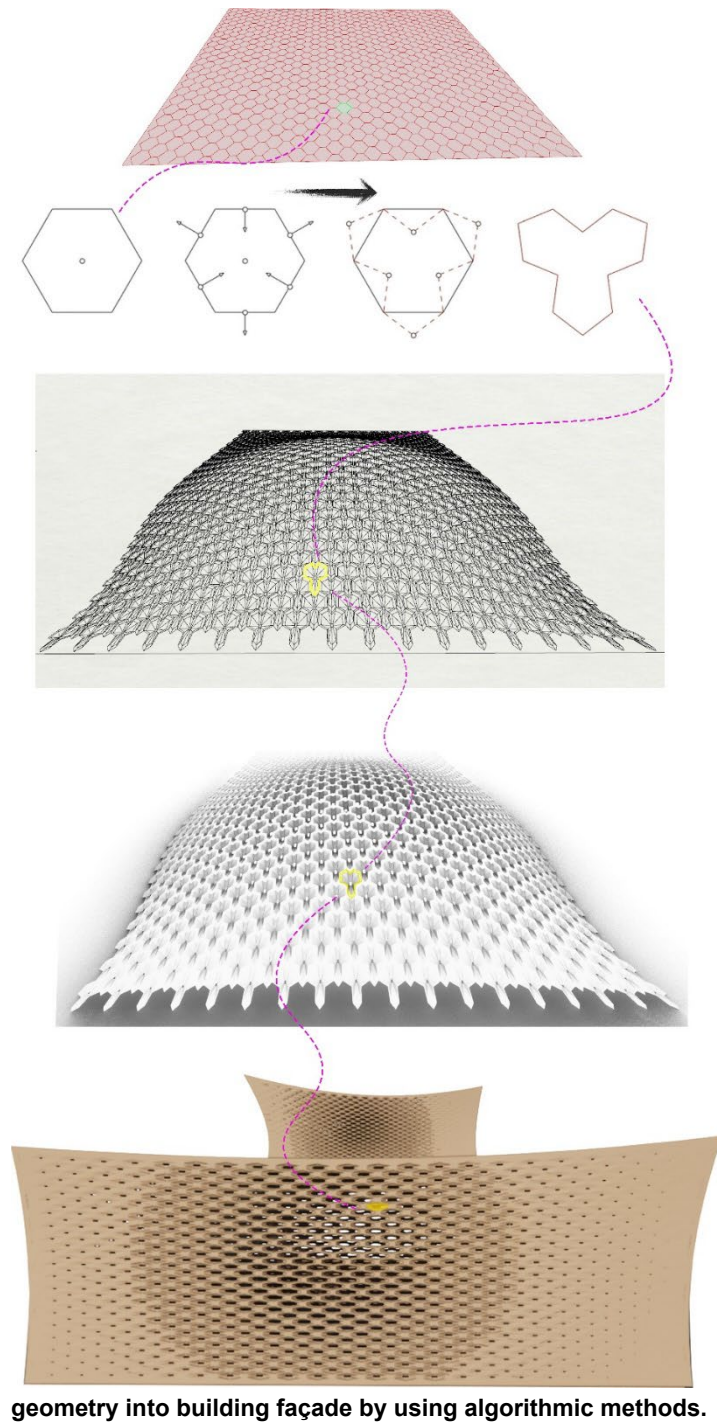


**Fig 46. Visual Experimentation with Voxels 04**



**Fig 47. Visual Experimentation with Voxels 04**

### 7.1.3 Design Language Development – 3<sup>rd</sup> Approach



The third concept is the mathematical and symbolic exploration of geometric shapes. To design a parametric façade, a simple hexagon geometry (6-sided shape) was transformed into a dodecagonal (12-sided shape) by using algorithmic design methods. In this process, a two-dimensional pattern is transformed into a three-dimensional surface.

Fig 48. Transformation of dodecagonal

geometry into building façade by using algorithmic methods.

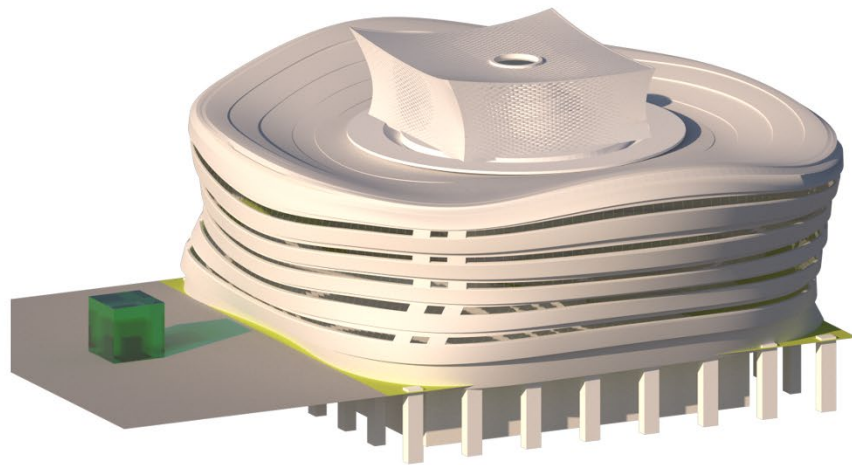
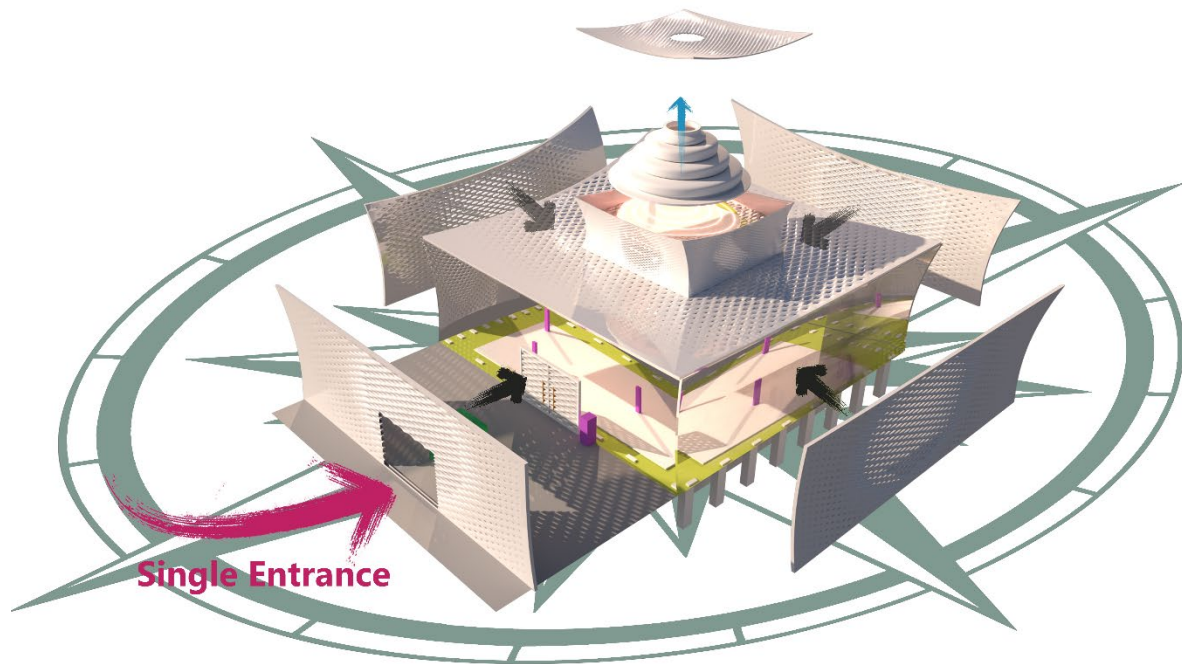
## 7.2 Conceptual and Volumetric Studies

### 7.2.1 All-Direction Temple

The main worship area is designed to meet various faith practitioners' spatial and spiritual requirements. An all-inclusive meditation area requires a certain level of purification from any known religious sign or design element representing a particular sect or worldview. At the same time, depending on their religion or worldview, each individual has a cardinal direction preference to direct their prayers or thoughts. Therefore, to facilitate all faith practitioners, this temple has unified interior elevations which allow visitors to choose their direction of prayer.



**Fig 49. Designing a temple with no direction limitation that allows practitioners face their desired direction.**



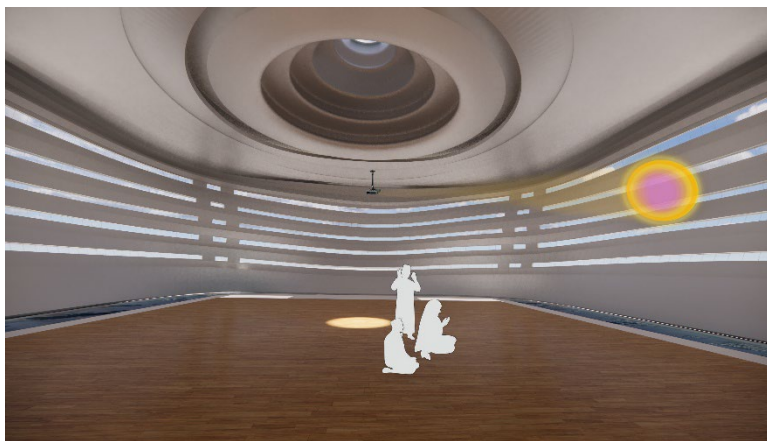
**Fig 50. Designing a temple with no direction limitation that allows practitioners face their desired direction.**



**Fig 51. Designing a temple with no direction limitation that allows practitioners face their desired direction.**

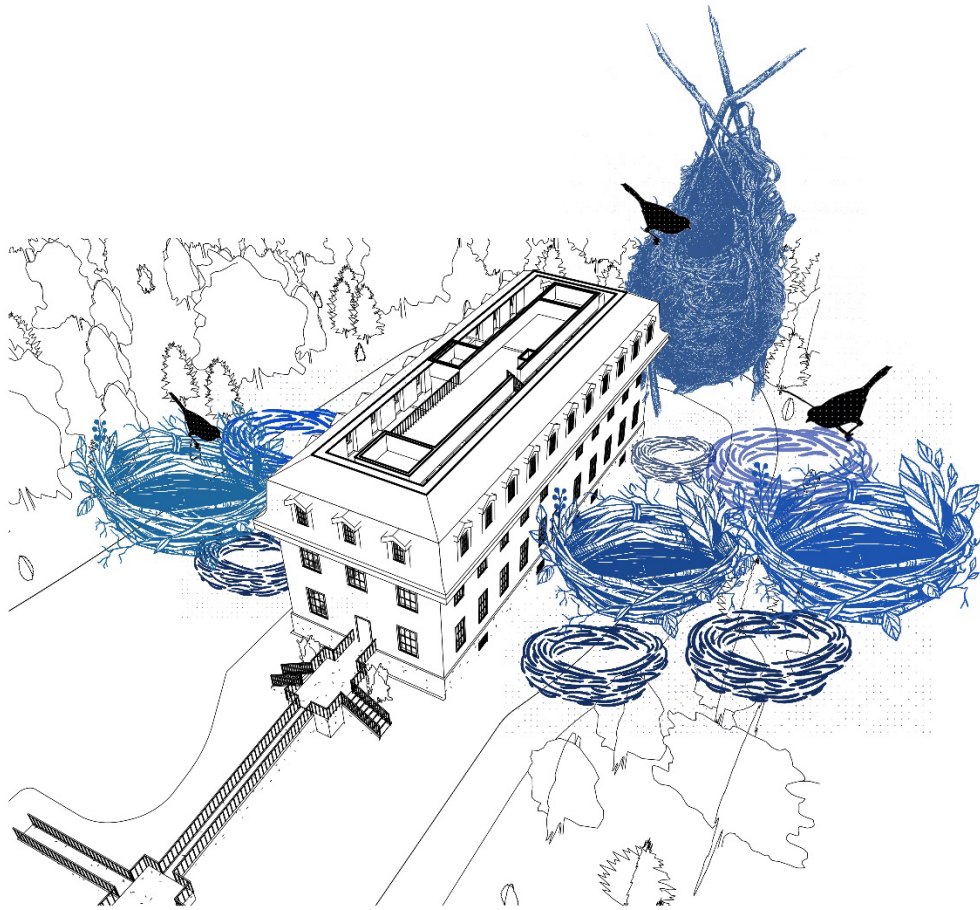


**Fig 52. Using light as visual cue for prayers who need to direct their prayers to a specific geographical direction as a part of their rituals**

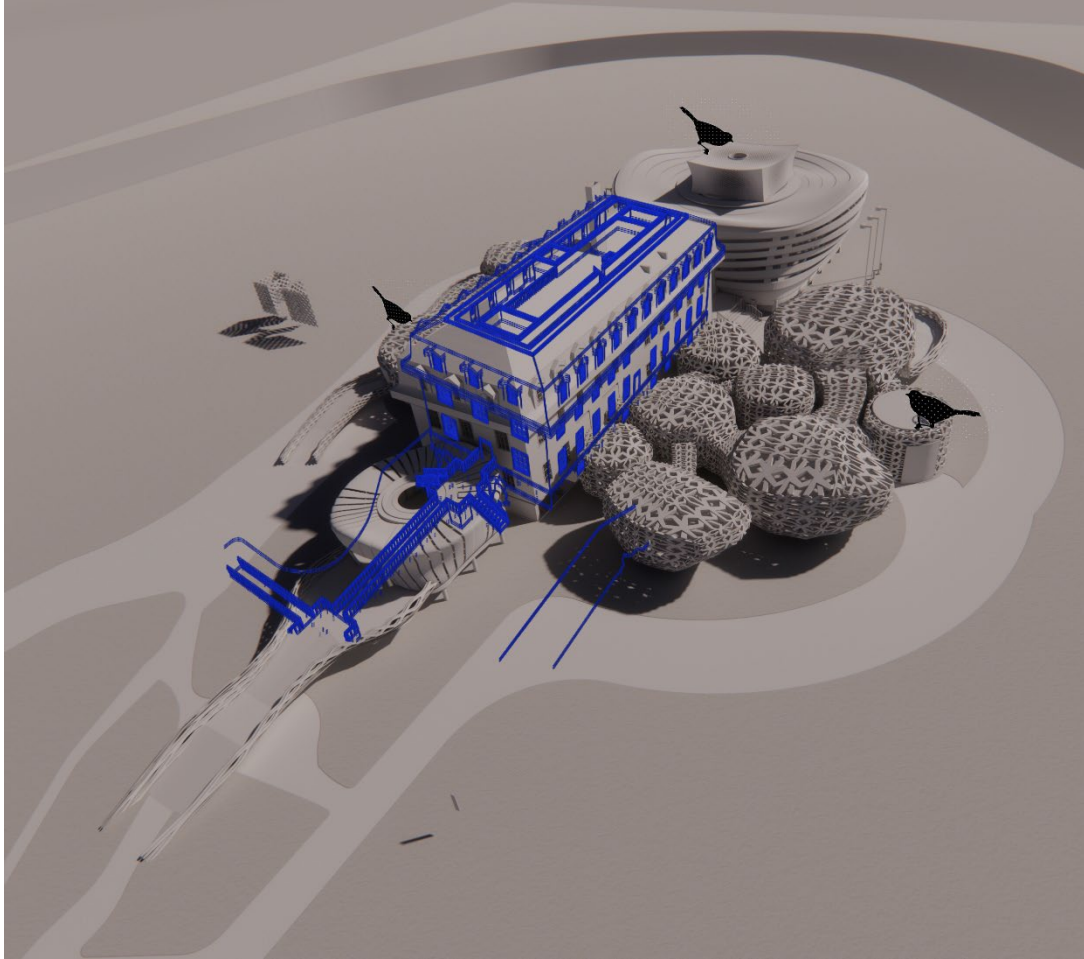


**Fig 53. Using light as visual cue for prayers who need to direct their prayers to a specific geographical direction as a part of their rituals**

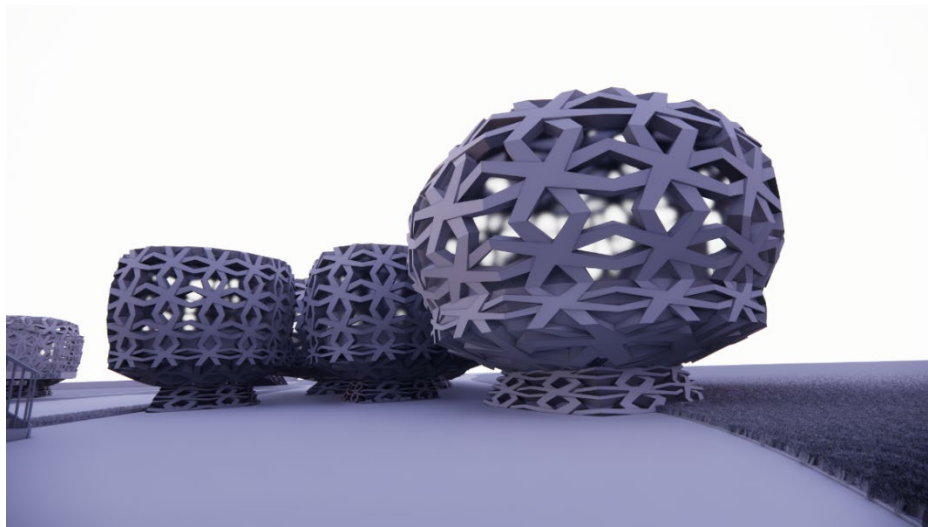
## 7.2.2 Birds' Nest



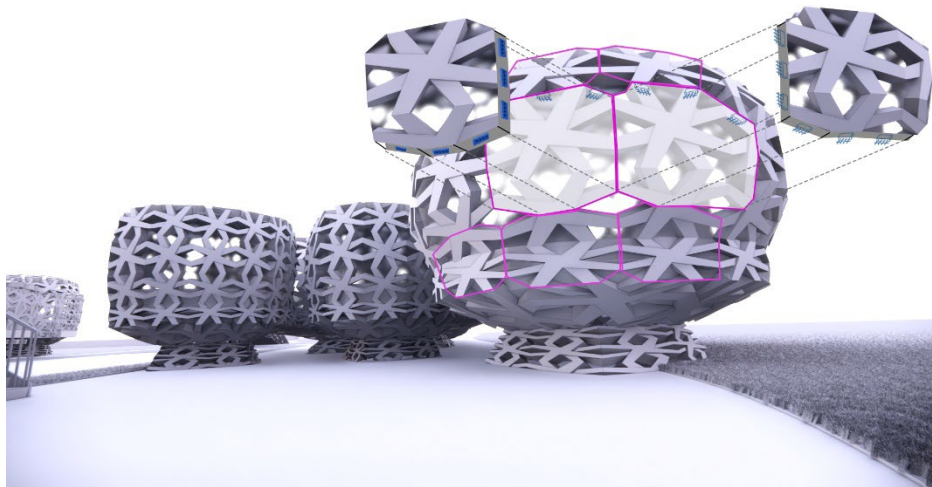
**Fig 54. Designing a temple with no direction limitation that allows practitioners face their desired direction**



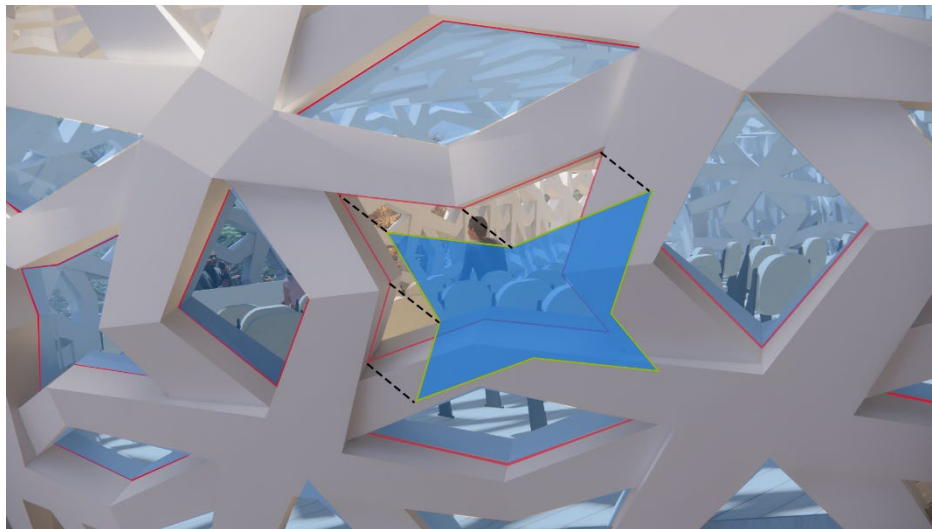
**Fig 55. Organic development of forms around site**



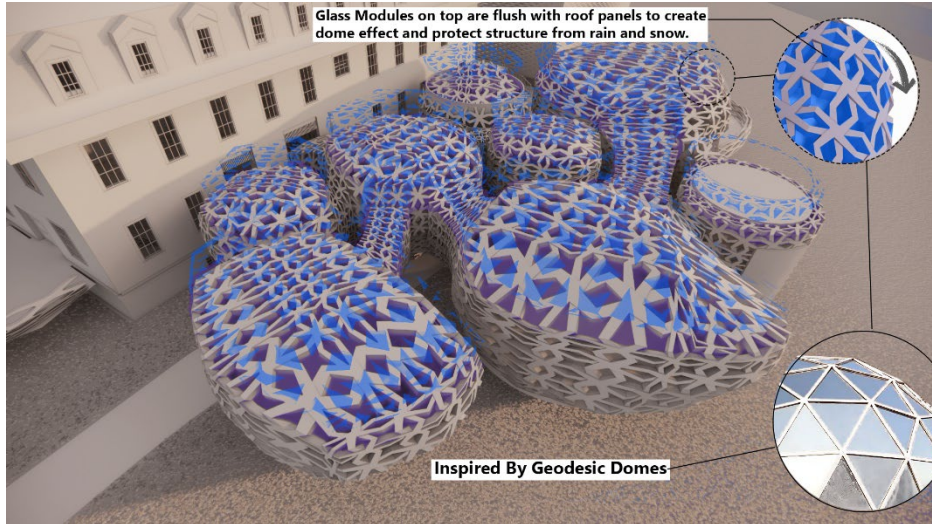
**Fig 56. Refined human nests inspired by bird's nest**



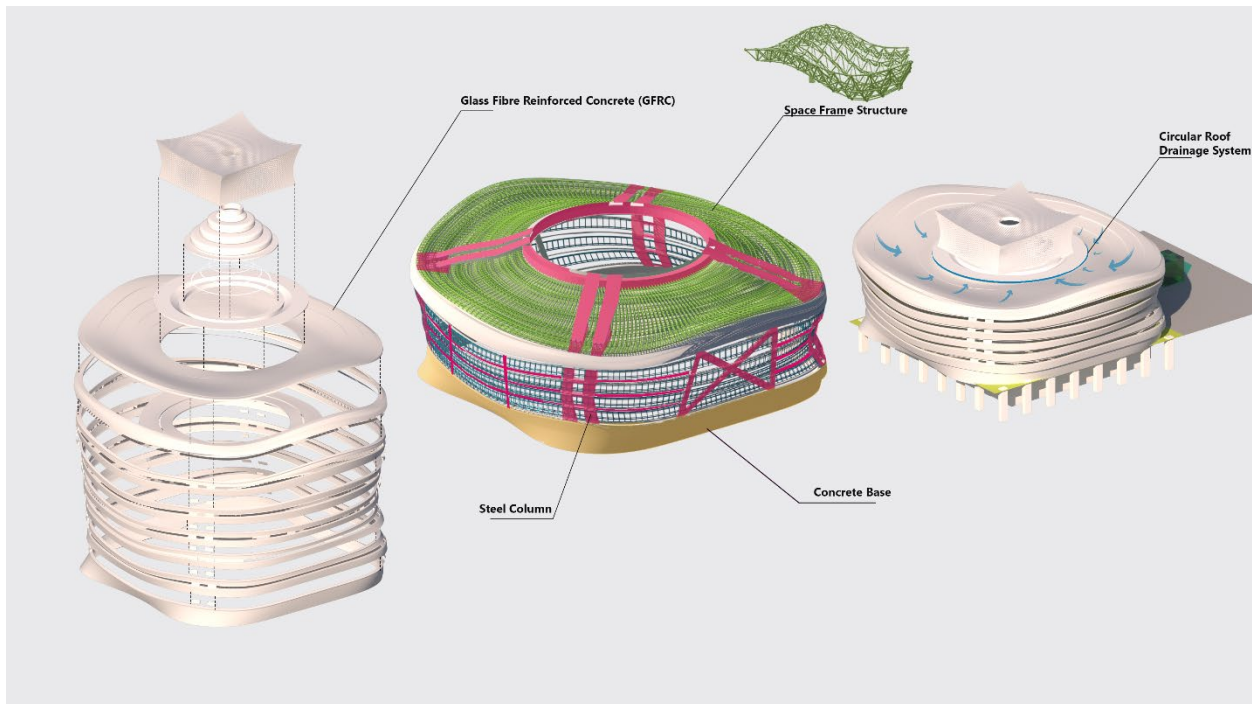
**Fig 57. Refined human nests inspired by bird's nest**



**Fig 58. Refined human nests inspired by bird's nest**



**Fig 59. Glass Modules on top are flush with roof panels to create dome effect and protect structure from rain and snow.**



**Fig 60. Main Temple Structural Diagram**

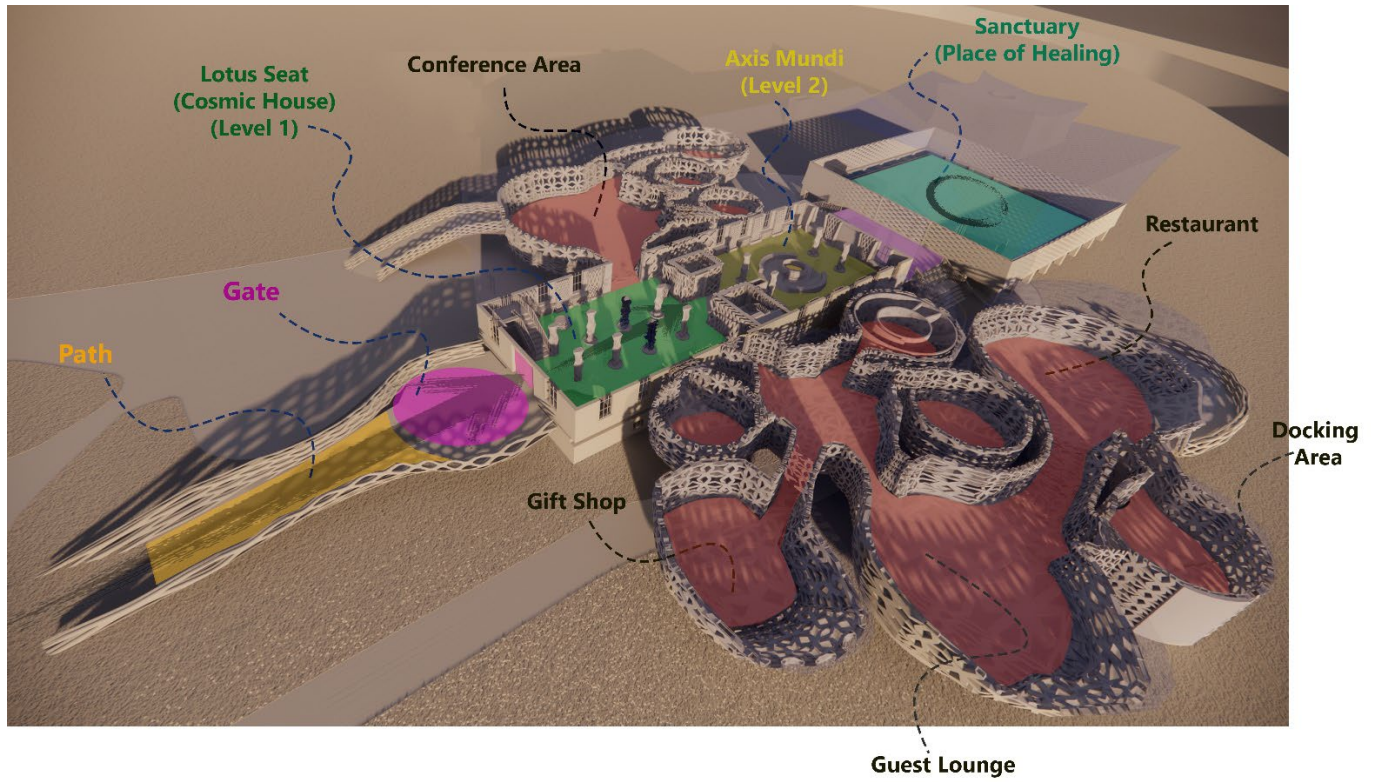


Fig 61. Spatial diagram of interior spaces

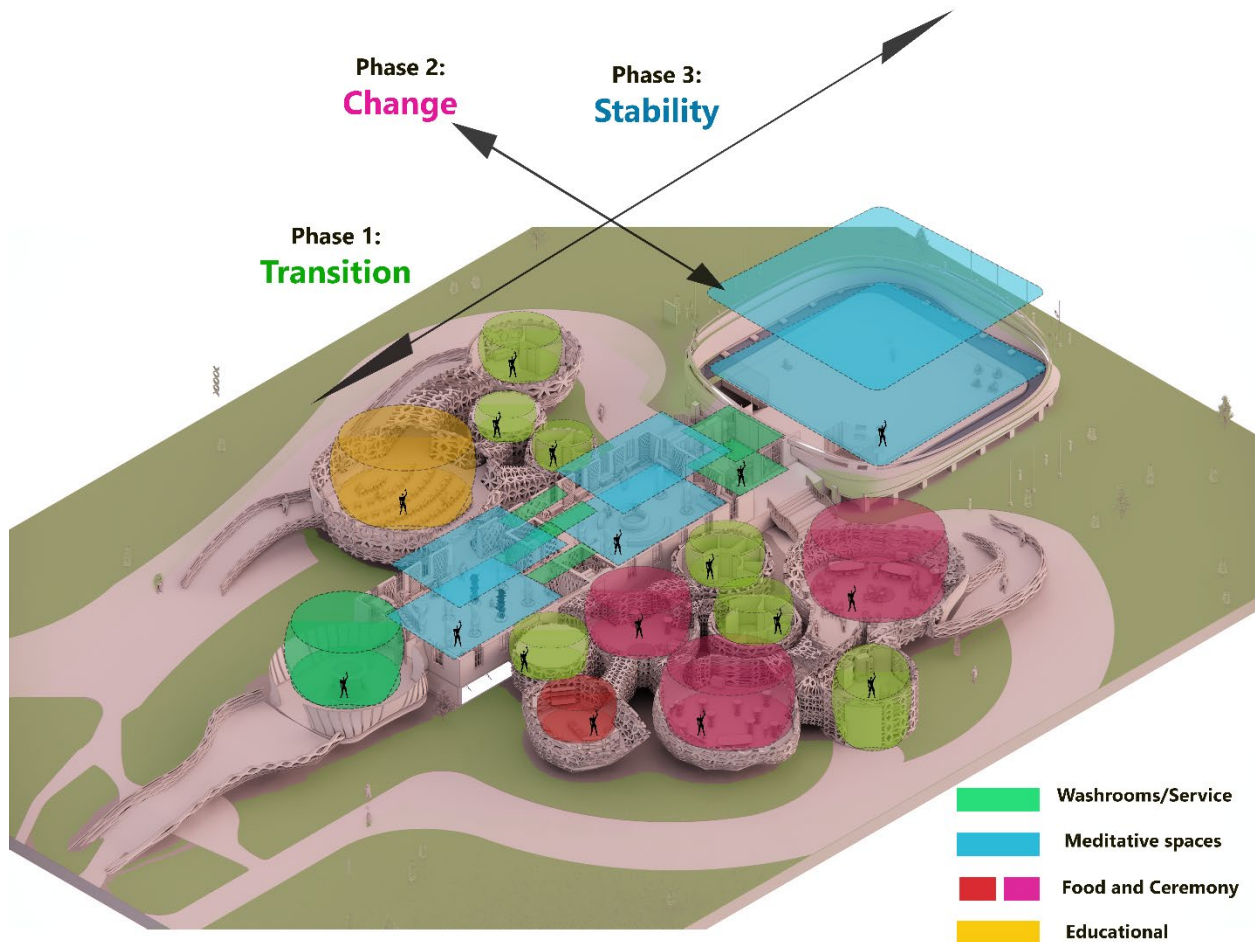


Fig 62. Human Scale Relation Diagram

## 7.2.2 Design Solutions for research questions:

### 7.2.2.1 Question 1:

What is the common design language among the sacred and religious buildings?

#### Question 1 - Design implication 1: **Narration**

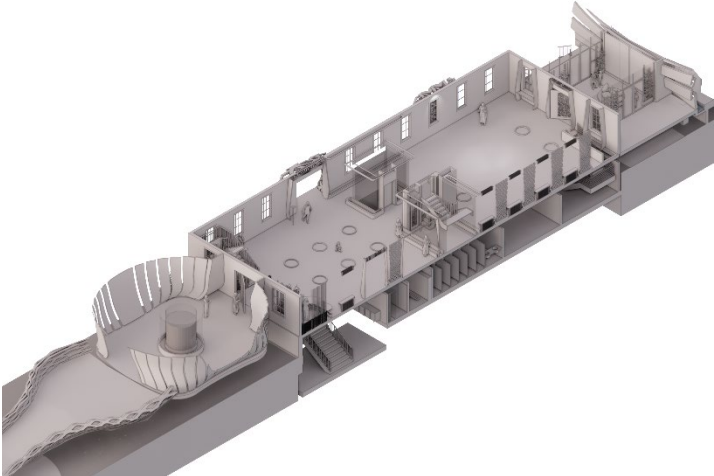
This project attempts to create meaningful spaces that engage with visitors' memory and emotions and help them discover the embedded narration in the building. This design goal is

mainly achieved by directing visitors' consciousness toward the inner self by creating multiple pauses and focal points inside and outside the building. Visitors circulate through various paths leading to different spaces to discover these focal points. The hierarchal arrangement of spaces allows visitors to follow the interior design narrative of the building. The project's spatial narrative is mainly expressed by using generative and organic forms, natural use of materials and interior lighting.

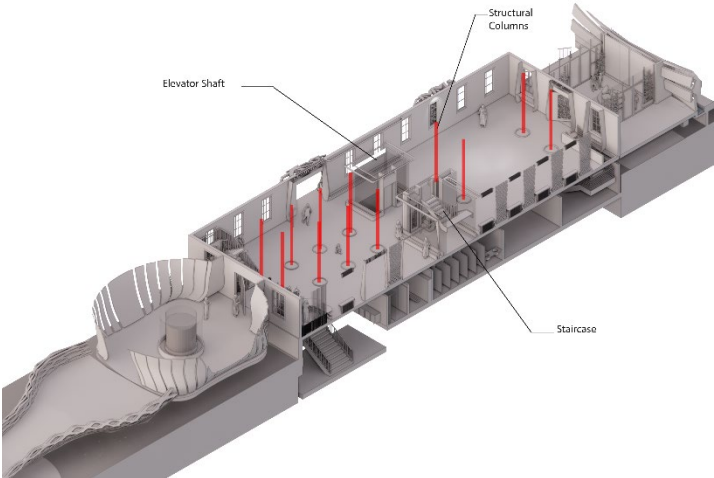


**Fig 63. Top View Diagram**

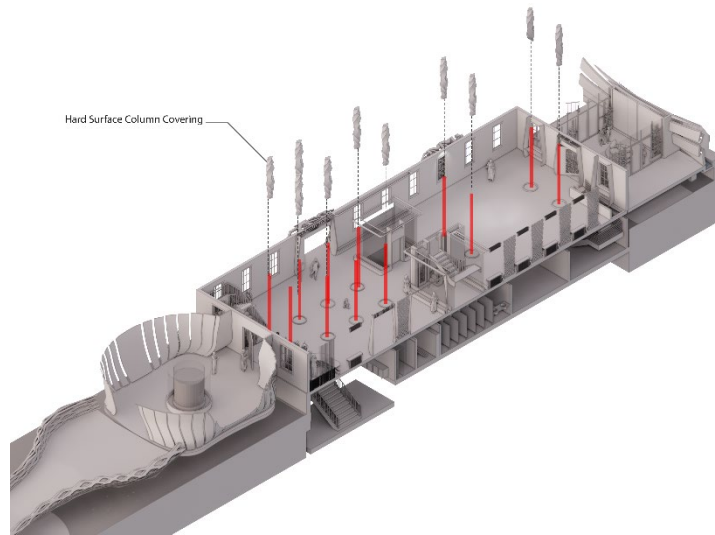
# Entrance Area narrative Diagram



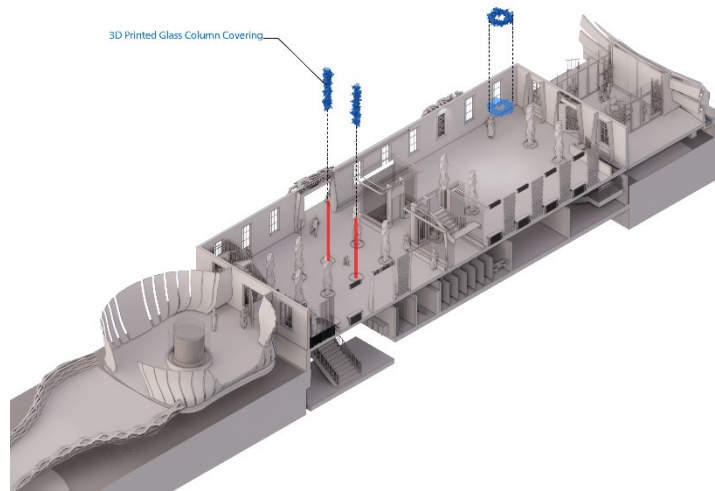
**Fig 64. Entrance Area Narrative Diagram 1**



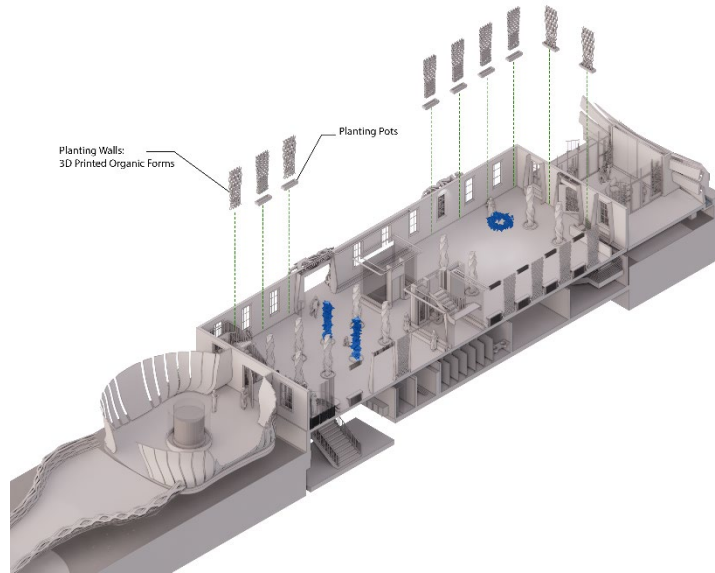
**Fig 65. Entrance Area Narrative Diagram 2**



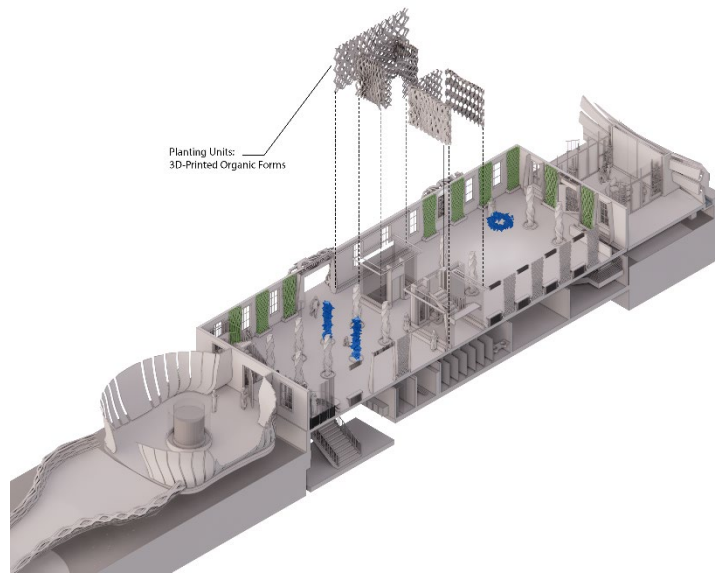
**Fig 66. Entrance Area Narrative Diagram 3**



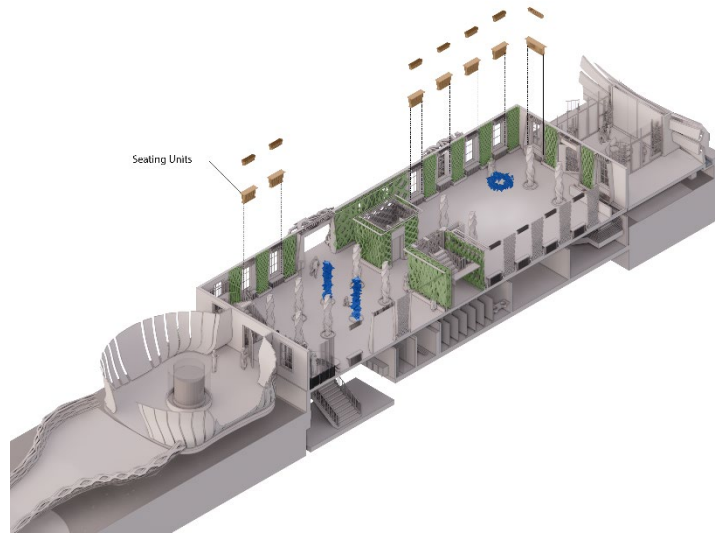
**Fig 67. Entrance Area Narrative Diagram 4**



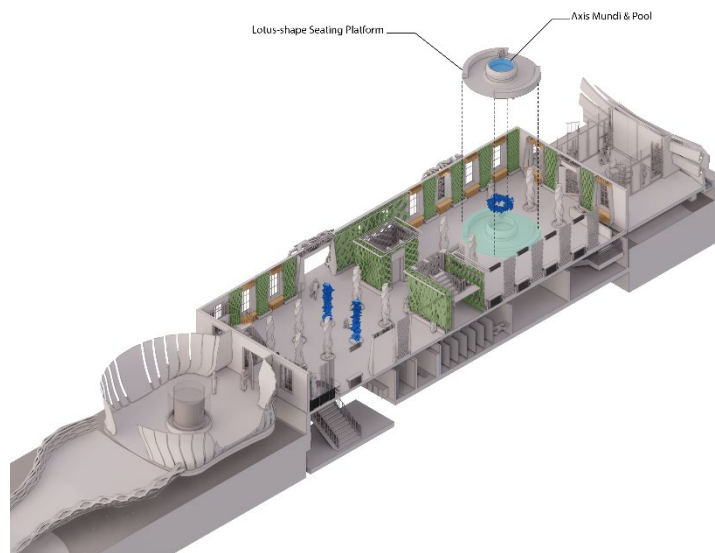
**Fig 68. Entrance Area Narrative Diagram 5**



**Fig 69. Entrance Area Narrative Diagram 6**



**Fig 70. Entrance Area Narrative Diagram 7**



**Fig 71. Entrance Area Narrative Diagram 8**



Fig 72. Entrance Area Narrative Diagram 9

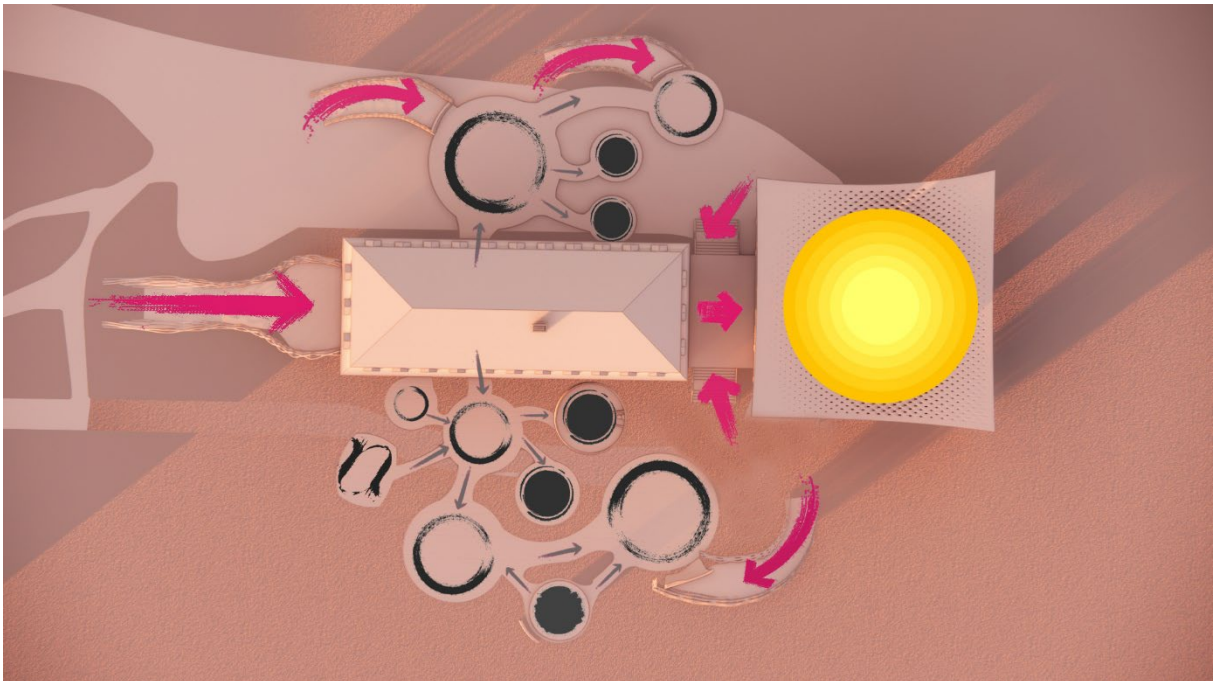
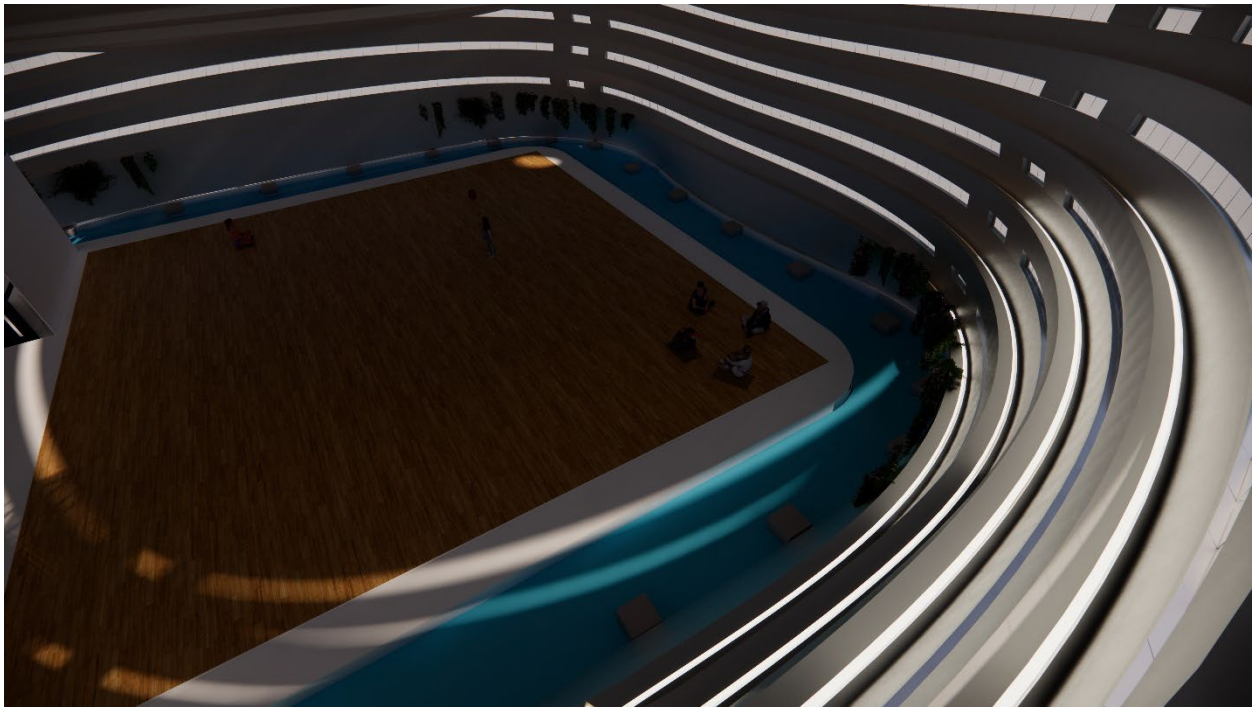


Fig 73. Interior and exterior circulation diagram

## Question 1 - Design implication 2: Mathematics

The geometric shapes are turned into dynamic and creative forms using algorithms-aided design. The mathematical formation of spaces and forms creates the timeless harmony common among precedent sacred and meditative spaces. By having a phenomenological approach to mathematics, it tries to connect the spirituality and aesthetics of mathematics and its geometric patterns. One of the common elements between spirituality and mathematics is their ability to define our surrounding world as a harmonious order. Just like mathematicians, the spiritual figures try to investigate the underlying meaning and purpose in our world. The existing mathematical forms and order in the interior spaces, assist participants to seek the logic and purpose within their individual existence and evoke a sense of harmony and balance.



**Fig 74. Mathematical formation of space and motifs**

### Question 1 - Design implication 3: **Meaningfulness & Symbolism**

In order to revive the metaphoric relationship between a sacred space and human emotions, a series of generative ornaments are used inside the building that represents the organic growth of forms. These complex and layered forms also represent the layered meanings in a poem or story.



**Fig 75. Generative ornaments representing organic growth**



**Fig 76. Layered formation of ornaments**

## Question 1 - Design implication 4: Symbolism

The circle used in the main temple represents a significant symbolic value. The circle is often perceived as a “symbol of unity because the circle embraces all the regular polygons.” It is also represented as a “symbol of infinity” since this geometry has no “beginning or end” (math.dartmouth.edu, 2023).

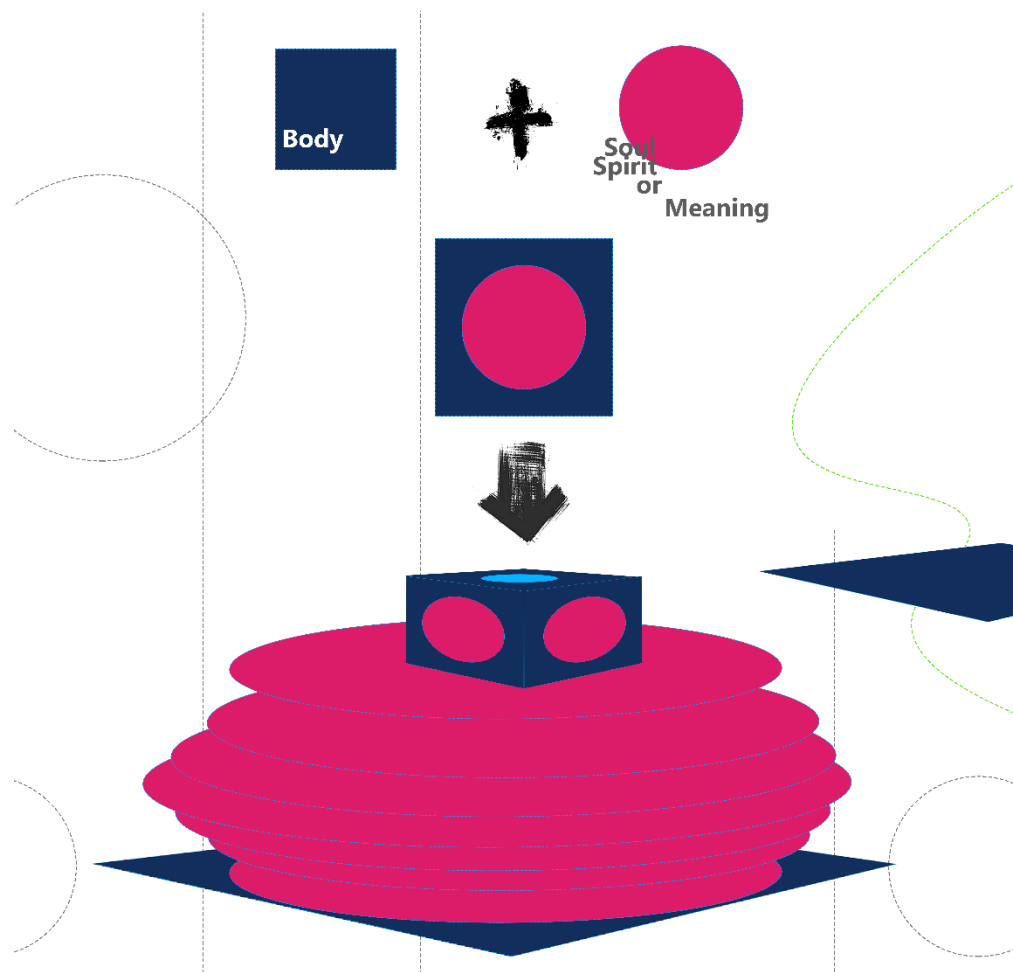


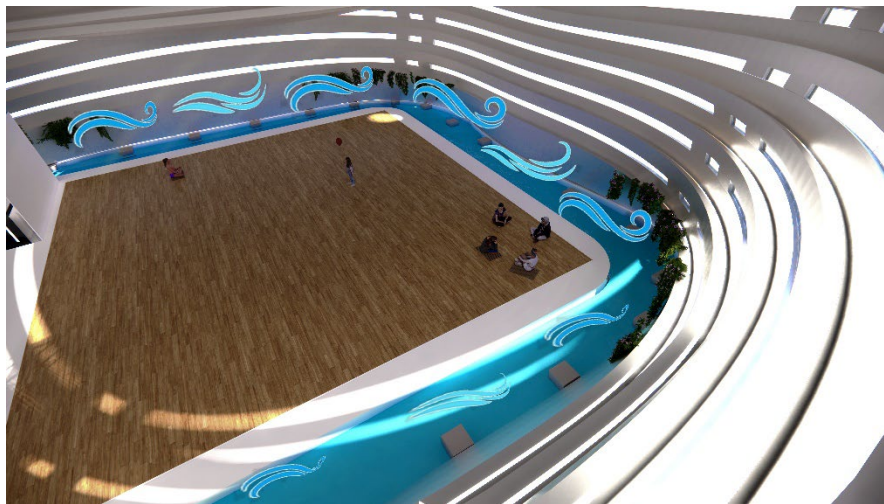
Fig 77. Symbolic use of cube and circle to develop form

The used cube, however, represents the three-dimensional SQUARE, which represents the human physical body.

*“The cube is a three-dimensional SQUARE; it is a symbol of stability and permanence, of geometric perfection. It represents the final stage of a cycle of immobility, it can be seen as the truth, because it looks the same from any perspective, it is commonly thought of as the counterpart of the sphere.” (websites.umich.edu, 2023)*

#### 7.2.2.2 Question 2:

Which design elements are important in developing an interior design language that aligns with the spiritual consciousness of individuals?

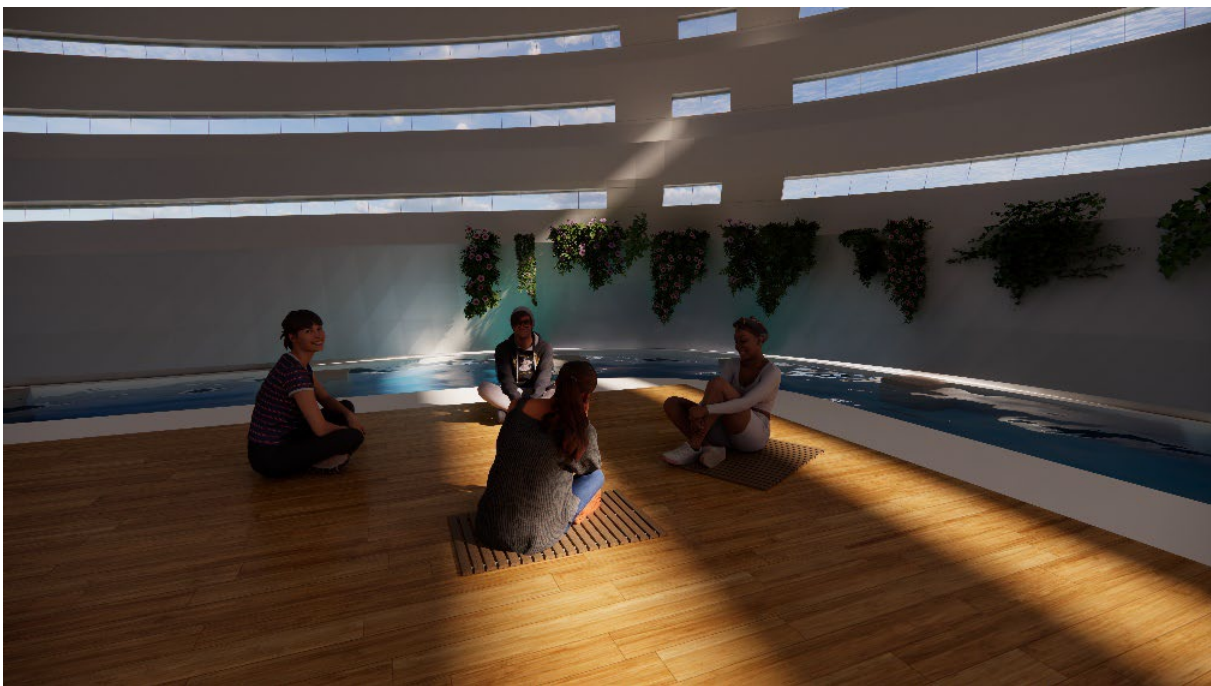


**Fig 78. Archetypal elements of surrounding water and sky**

In order to build spiritual harmony among visitors, a series of archetypal elements are integrated into the design that represents nature and natural phenomena. Archetypal elements such as flowing water around the main meditation hall and the skylight or oculus. Other Atmospheric

elements such as darkness, emptiness, and monumentality are used to reiterate the spiritual value of the place.

*“It is through the use of light or darkness, silence, emptiness, ambiguity, and using the building as a stage for ritual that the sacred is indeed experienced.” (Hoffman, 2010, p. 9)*

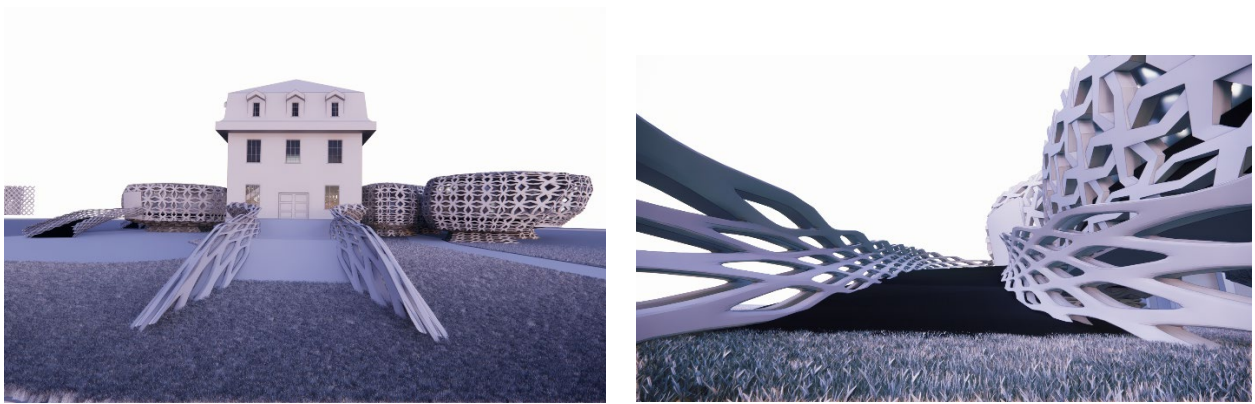


**Fig 79. Atmospheric elements of light and darkness**

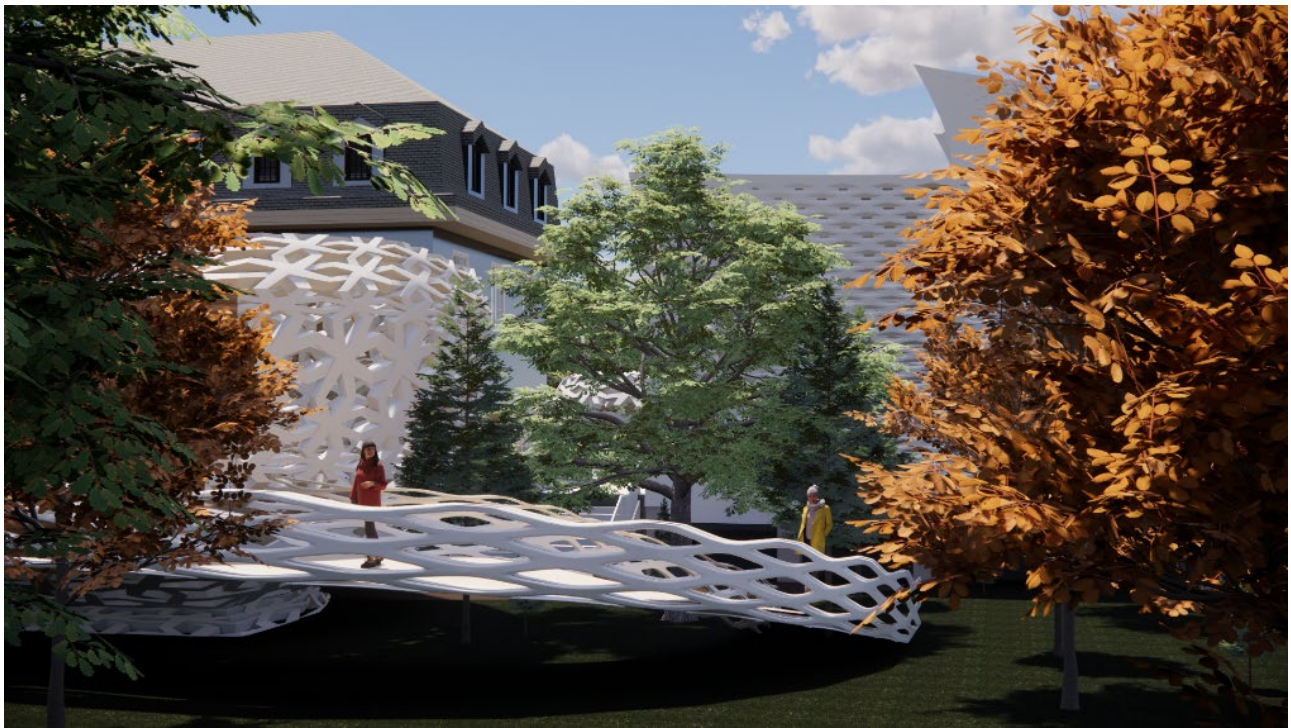


**Fig 80. Archetypal elements of surrounding water and sky**

In addition, the concepts of **gate** and **path** are represented as ramps with organic and geometric railings that lead the visitors throughout the building and guide visitors in their spiritual journey. The “Path” represents the beginning of a quest and the moment of change, a path to obtain awareness and revive “consciousness” (Hoffman, 2010, p. 10). These ramps prepare visitors to experience a transition from the ordinary to the sacred.



**Fig 81. Archetypal element of Path**



**Fig 82. Archetypal elements of surrounding water and sky**

Likewise, the lotus seat represents reaching a target where the travelers experience wholeness, union and peace. This element help visitor to shift from mere physical phenomena into representatives of a spiritual realm by using archetypal and sculptural installations as focusing objects.



**Fig 83. Archetypal elements of Lotus Seat and Axis Mundi**



**Fig 84. Archetypal elements of Sanctuary**

The shaped atmosphere activates the individual and collective human experience by gathering them together. The light and color, likewise, guide individuals' perceptions and help them focus on the deeper layers of their existence. The layered oculus connects the ground to sky and represents the levels of mindfulness and spirituality, embedded within each of us. The oculus also facilitates the ascension of human awareness, which is ultimately unified in the vast and infinite sky; an attempt to build a connection with the inner atmosphere of visitors.

By incorporating color, transparency and echo of light, this project shifts the materiality of the physical environment into a nonmaterial and spiritual atmosphere which encompasses the interested visitors. The recessed light within the surrounding pool enlighten the semi-transparent walls and induce a sense of ascension. Not being exposed to the light source, the elevated and sharp corners of the space remain in shadow, representing the ambiguity of the inner self and the duality of light and shadow.



**Fig 85. Archetypal elements of atmosphere**

The atmospheric installation of this project promotes a sense of sociability and asks individuals to direct their attentions and be present in the space. The interior landscape reiterates the influence of the ongoing forces in our natural surroundings. It also creates a direct interaction between participants' collective spatial experience and natural phenomena such as water, air and light.

#### 7.2.2.3 Question 3:

How do spatial harmony and interiority create a meditative realm?

#### Question 3 - Design implication 1: **Simplicity**

This project attempts to create an intimate atmosphere and detach visitors from the distractions of life. The main meditation hall is formed inside a cubic shape that has small openings to provide natural light and assists viewers evade from the sensory distraction of outside world. By stripping unnecessary elements, this space promotes a sense of togetherness among the body, mind and nature by incorporating simple atmospheric elements such as natural light beams, white colored walls and ceiling, wooden flooring (tatami mats) and, tactile/auditory connection with water element.



**Fig 86. Simplicity as a meditative element**

Question 3 - Design implication 2: **Shift**



**Fig 87. The shift of attention as a meditative element**

The dynamic flow of shapes and the transparency of materials create a shift in atmosphere by invoking spatial phenomena which help visitors accelerate their awareness towards higher levels of meaning. Likewise, the spatial and visual qualities that are embedded in forms, create a sense of motion that encourages the participants to move and experience a personal and meditative shift.

### Question 3 - Design implication 3: **Focus**

The design elements of this project, including the axis mundi, lotus seat and atmospheric meditation lights, help viewers deviate their attention from mundane and everyday thoughts and become self-conscious. The availability of multiple seating platforms helps participants sit and relax while confronting the ongoing art installations and other performative design elements.



**Fig 88. Focus as a meditative element**



**Fig 89. Focus as a meditative element**

Question 3 - Design implication 4: **Energy**



**Fig 90. Energy as a meditative element**

This project attempts to express the deeper levels of forms and objects where visitors can resonate with the embedded energy within physical objects. The surface movement of columns

and walls, for example, indicate the accumulated energy within forms which are directly transferred to project atmosphere and create sensory excitement.

## **8 Conclusion**

Designing a temple for a contemporary society is a task that requires an architect and interior designer to deeply dive into the complex structure of belief systems and practices. To design a flexible space that meets the spatial requirements of a contemporary community and evokes a sense of wonder and transcendence is a difficult task that requires a long process of contemplation and study. Among the challenges that I struggled to address was developing a design language that resonates with contemporary and traditional interpretations of spirituality. Another challenge was to meet the requirements of diverse communities, including non-spiritual individuals. The contemporary community in Winnipeg is diverse, and this project had to design a community building that addresses various practices and helps them perform their rituals. The goal was to design a timeless building that appreciates the inherited architectural and cultural values of our ancestors and helps younger generations reflect on their values and beliefs.

The first limitations that I experienced was to find and develop an appropriate materiality for this temple. My theoretical studies did not cover the development of materials that symbolically contribute to the quality of the spatial experience. Since the materiality of a meaningful space carries a significant role in forming the experience, it would be ideal to allocate more energy to finding proper physical construction materials that would contribute to the spirituality and meaningfulness of space. The second limitation of this project was to develop a more appropriate scale relationships among various elements. I was focused on creating a sense of awe and reverence by incorporating large and enormous elements. However, this design gesture seems to overshadow the human experience and the subtle and delicate nature of mindfulness in a space. Finally, the acoustical consideration of this space has not been covered in my research progress. Throughout the design progress, I attempted to use acoustical qualities that create a sense of awe and mystery in the main meditation space. Another option was to minimize echo and sound levels to create a sense of friendliness and tenderness among visitors. I hope this paper contributes and encourages design exploration and experimentation and helps other designers discover innovative directions and approaches in their design tasks.

## 9.3 Design Drawings

### 9.3.1 Plans

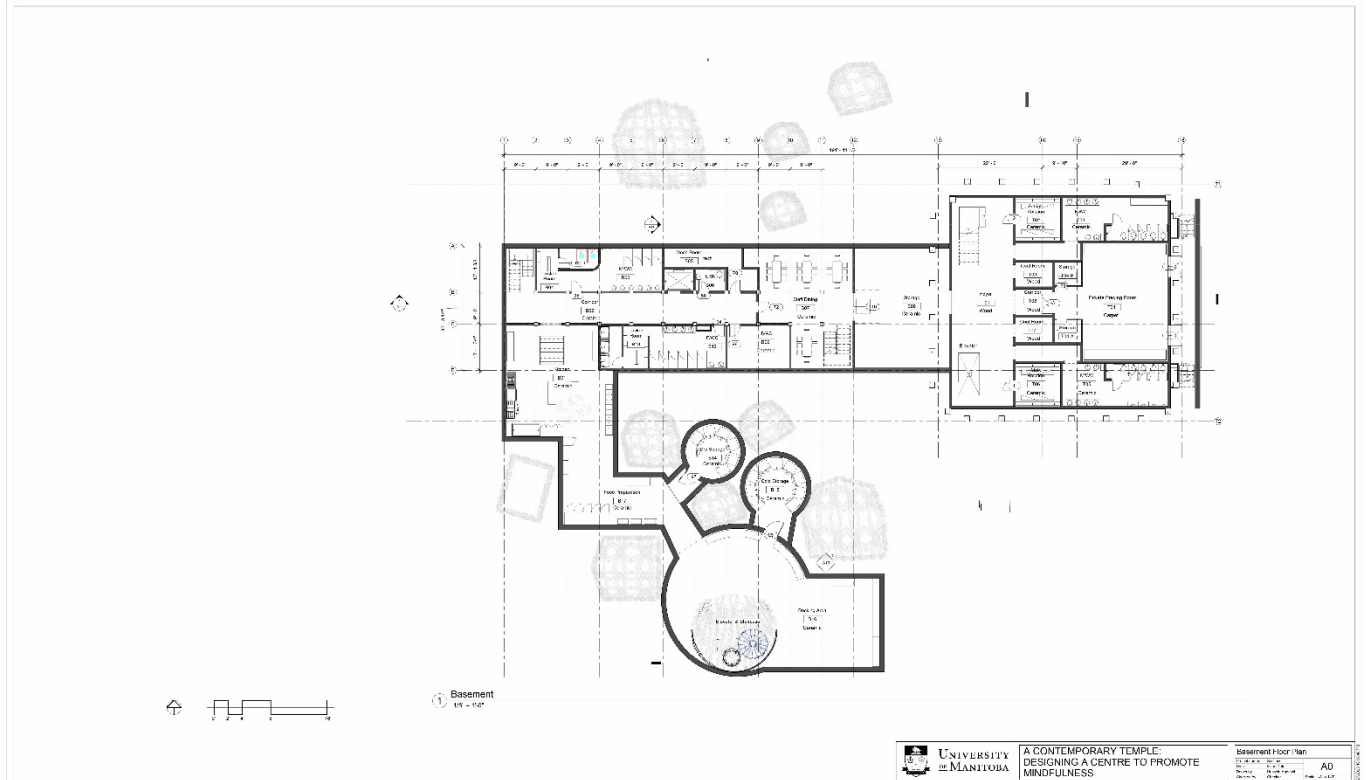


Figure 91. Basement plan

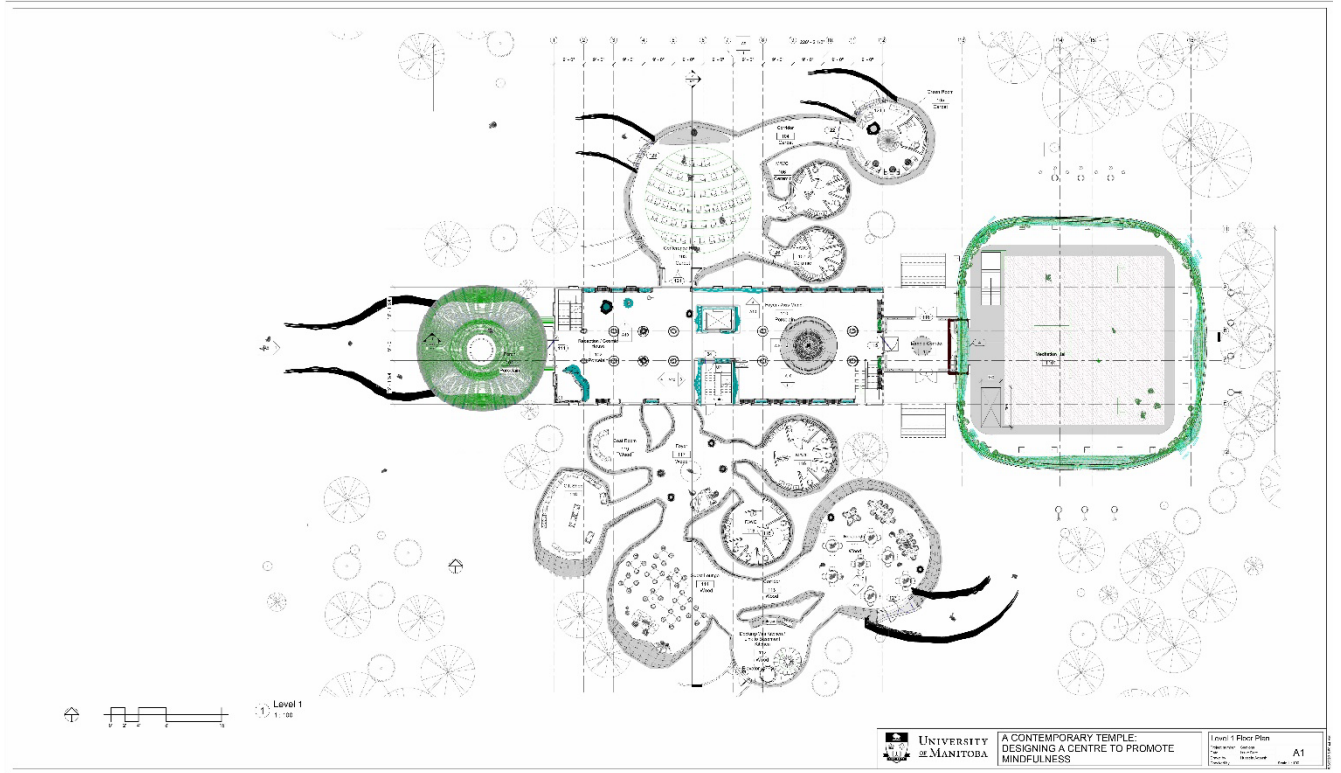


Figure 92. Level 1

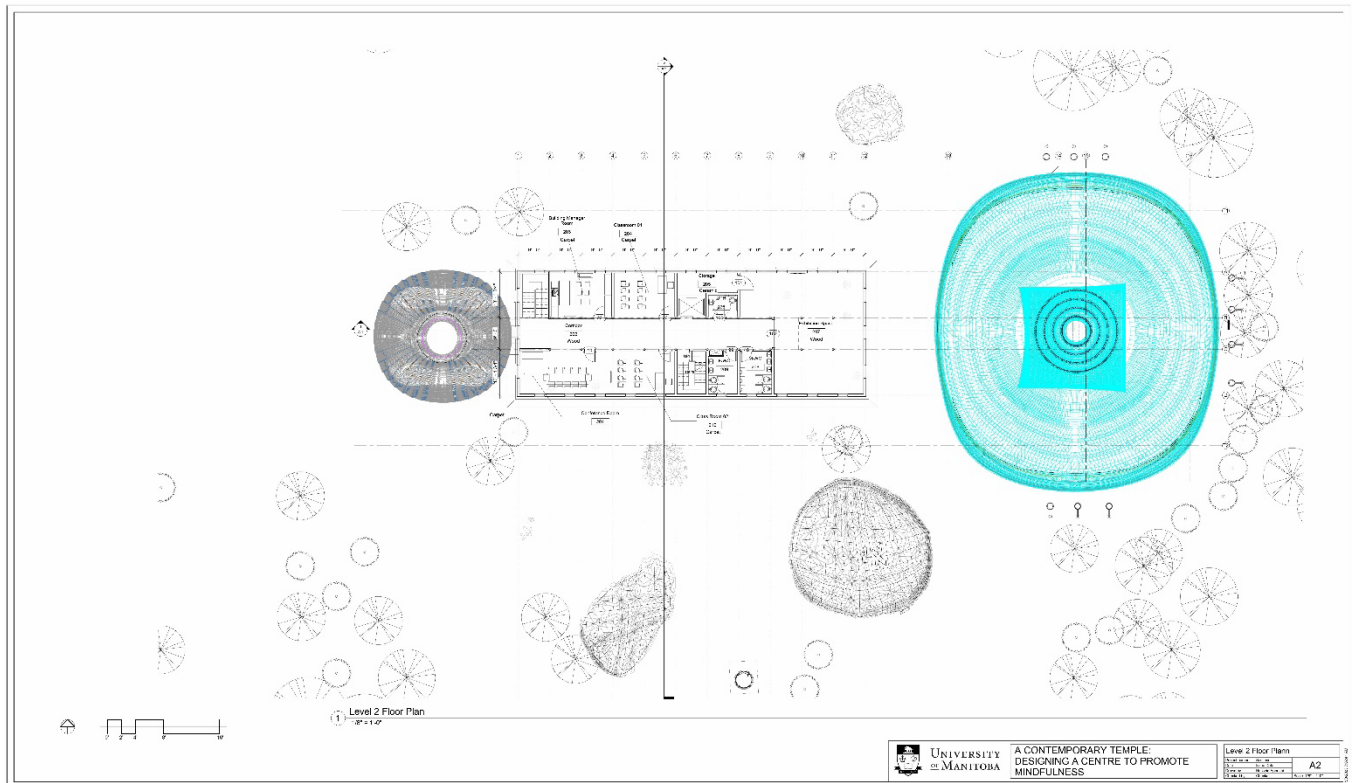


Figure 93. Level 2 Plan

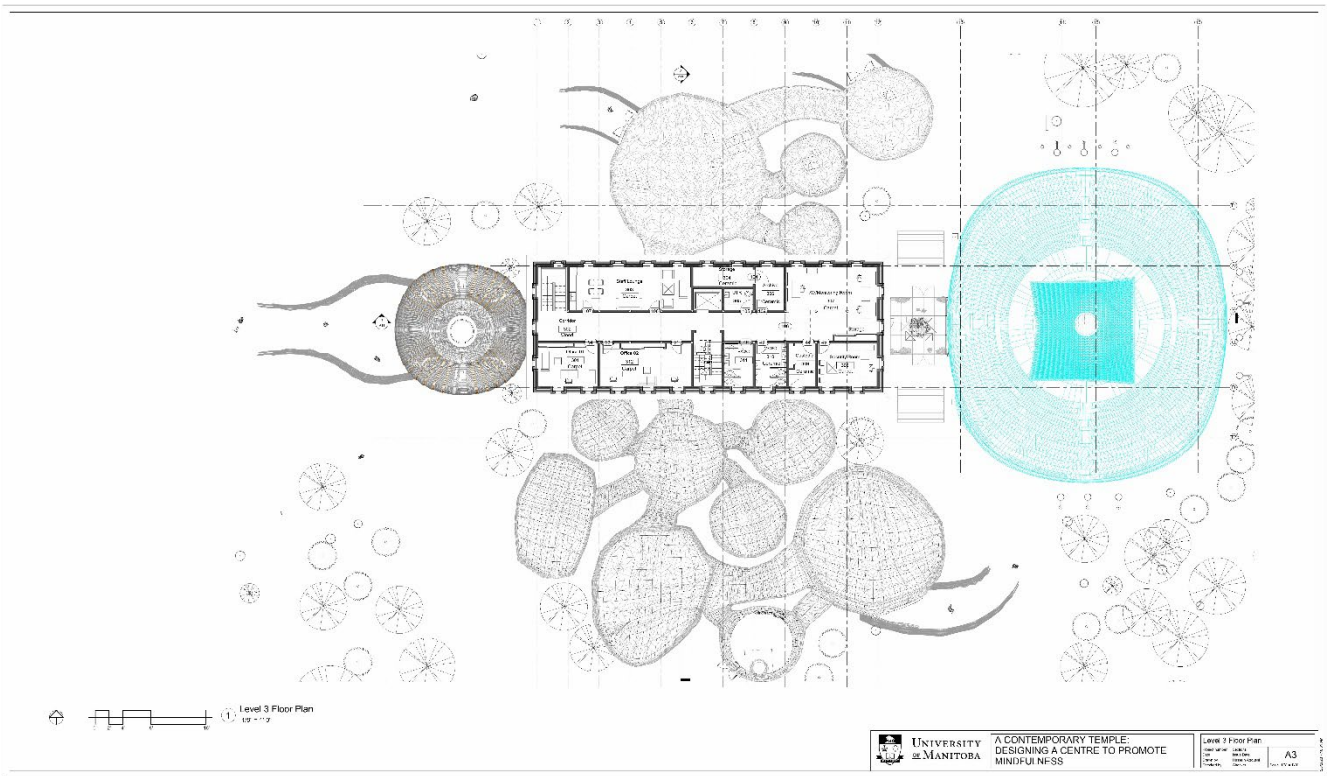


Figure 94. Level 3 Plan

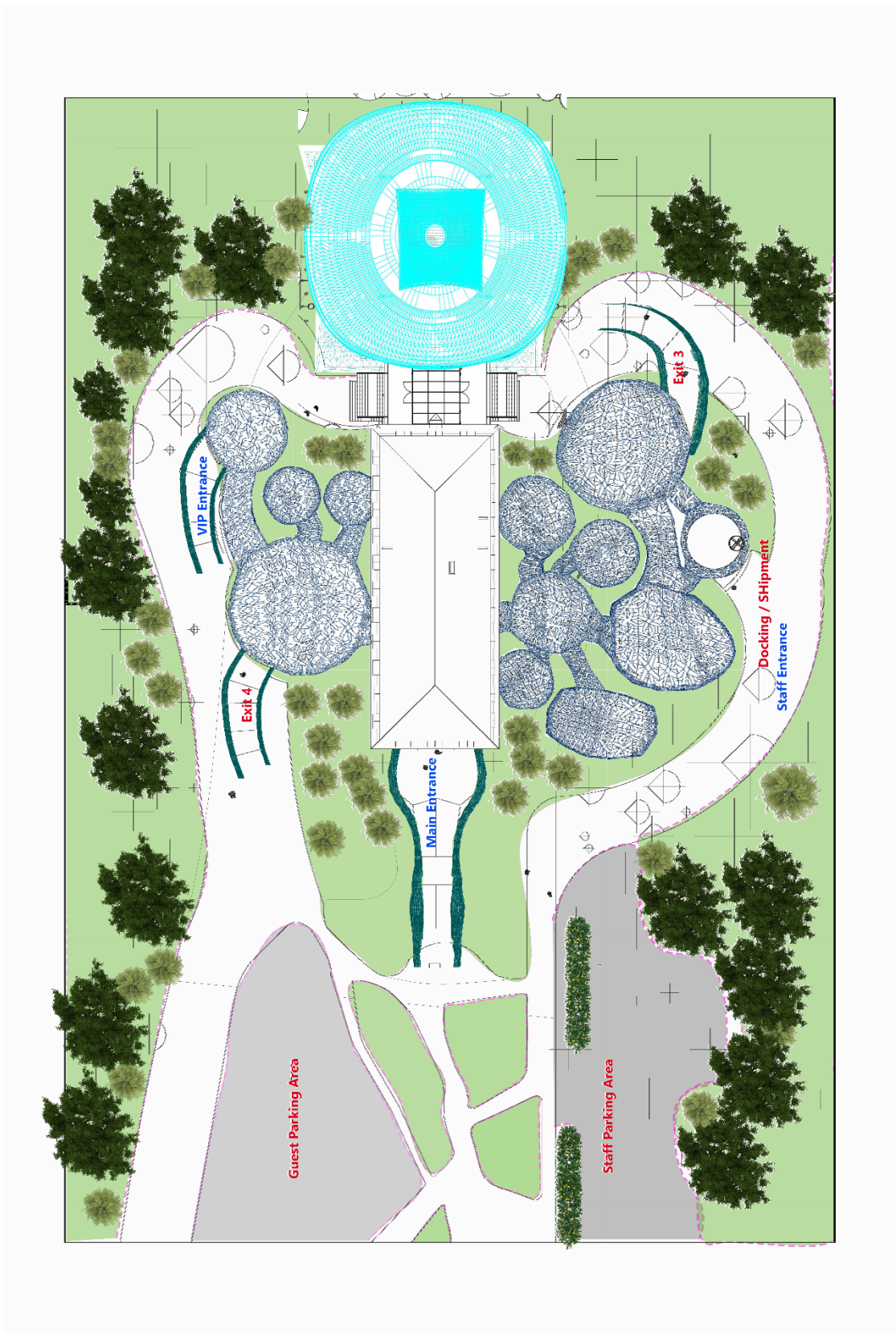


Figure 95. Site Plan

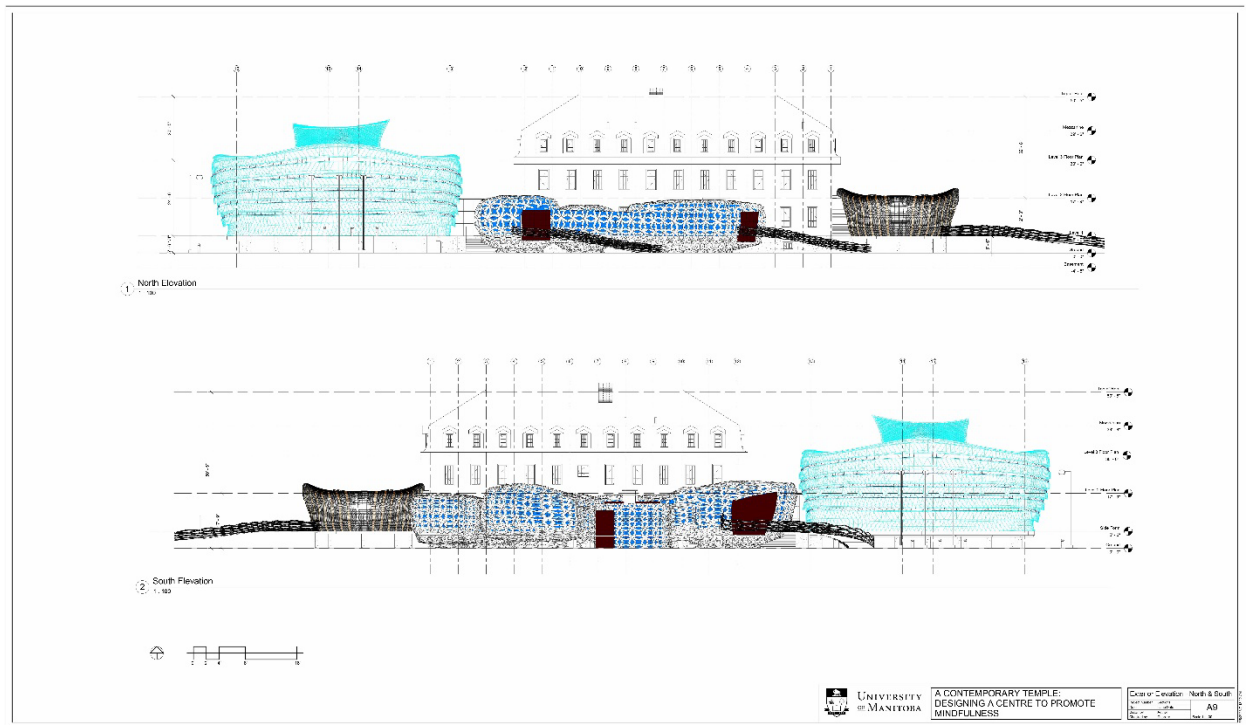
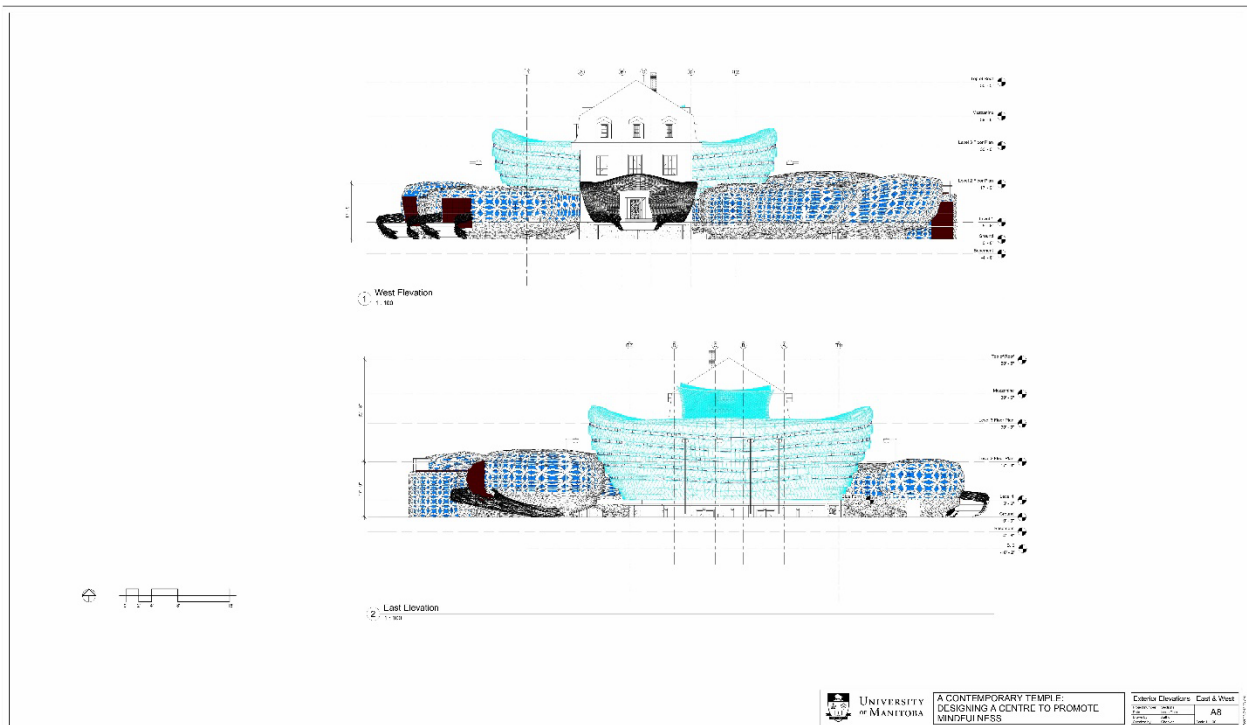
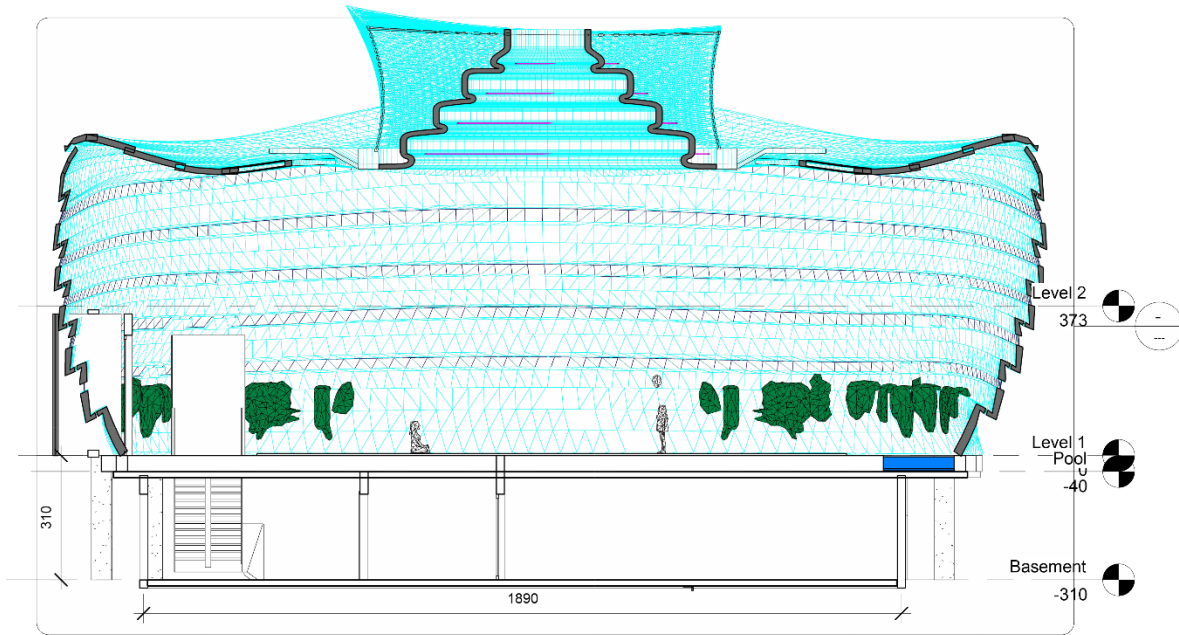


Figure 96. Building Elevations



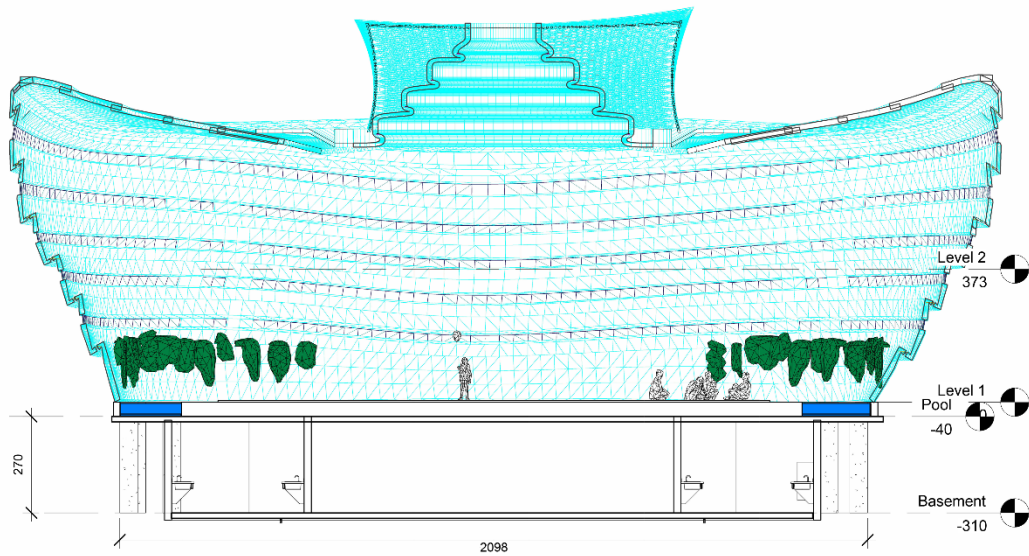
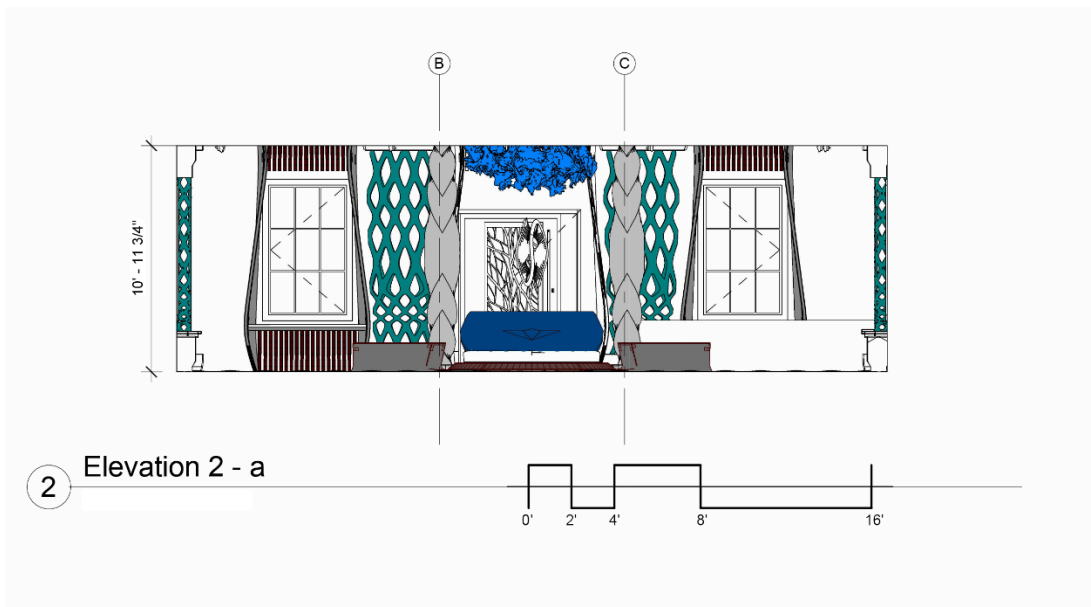


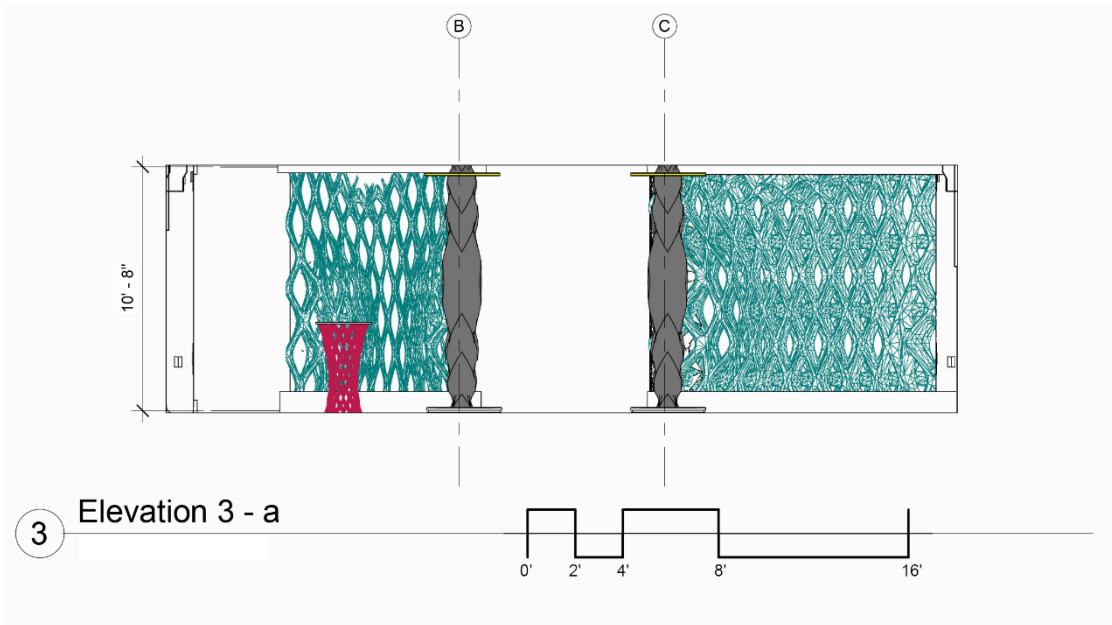
Figure 97. Building Sections



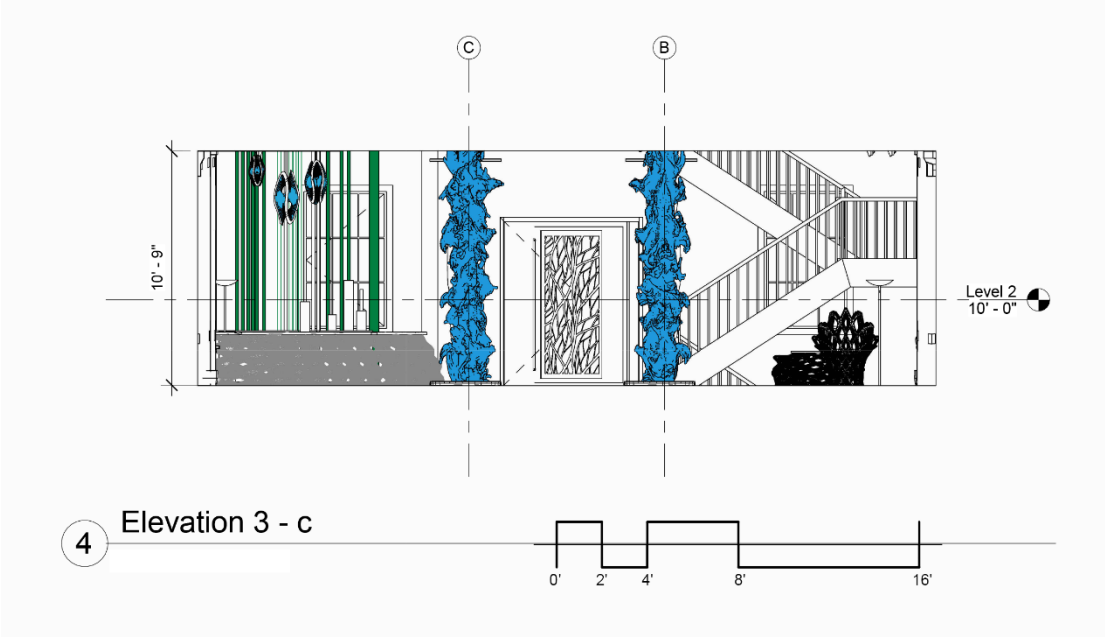
Interior Elevation 1



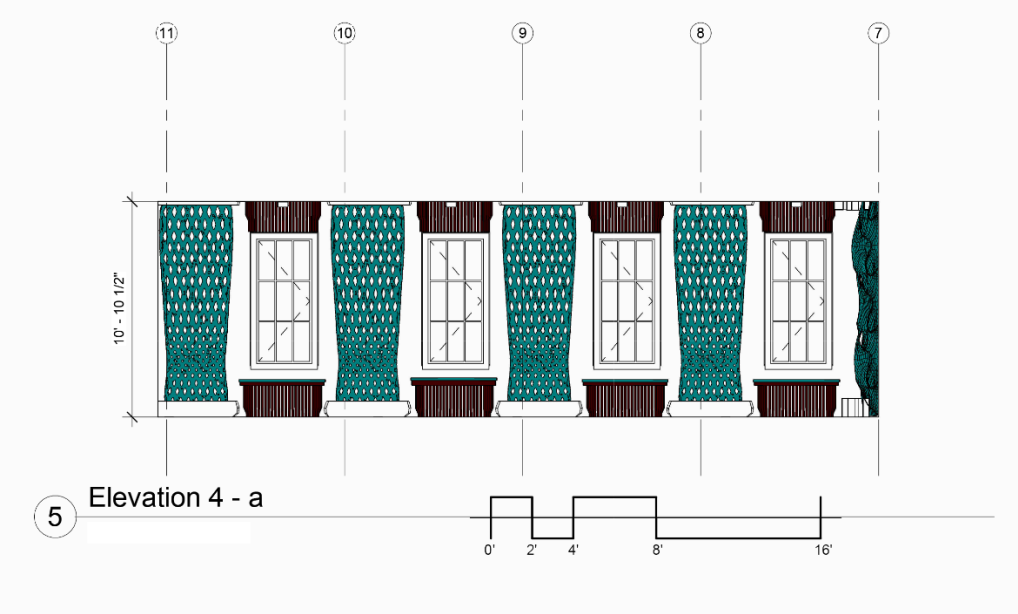
Interior Elevation 2



Interior Elevation 3



Interior Elevation 4



Interior Elevation 5

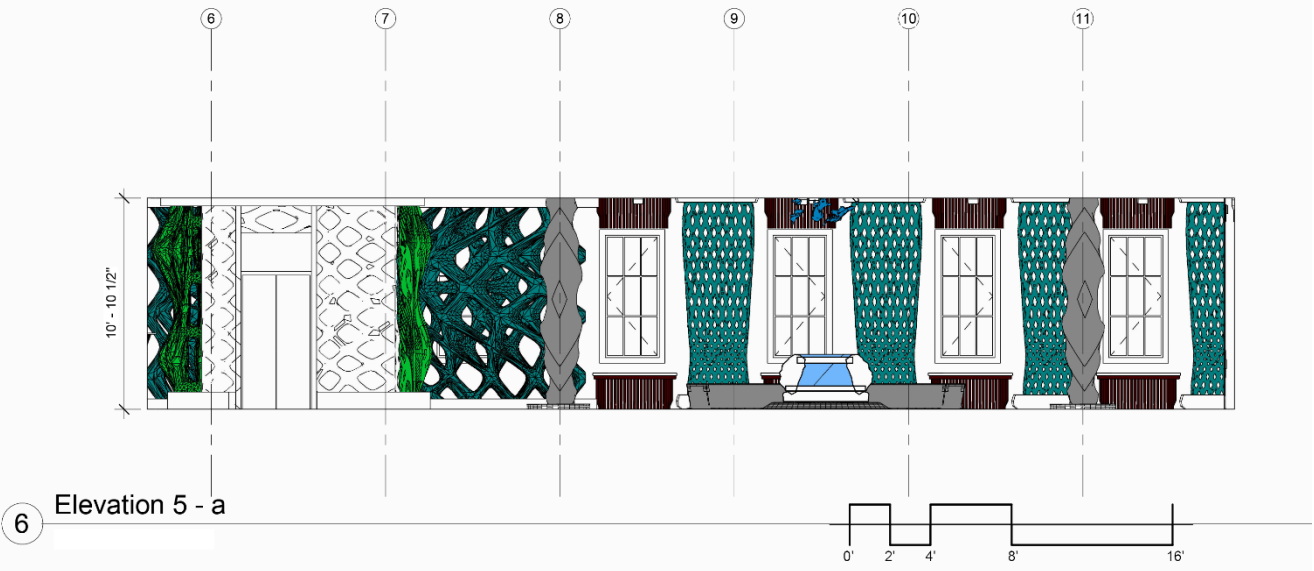


Figure 98. Interior Elevations

# List of Materials

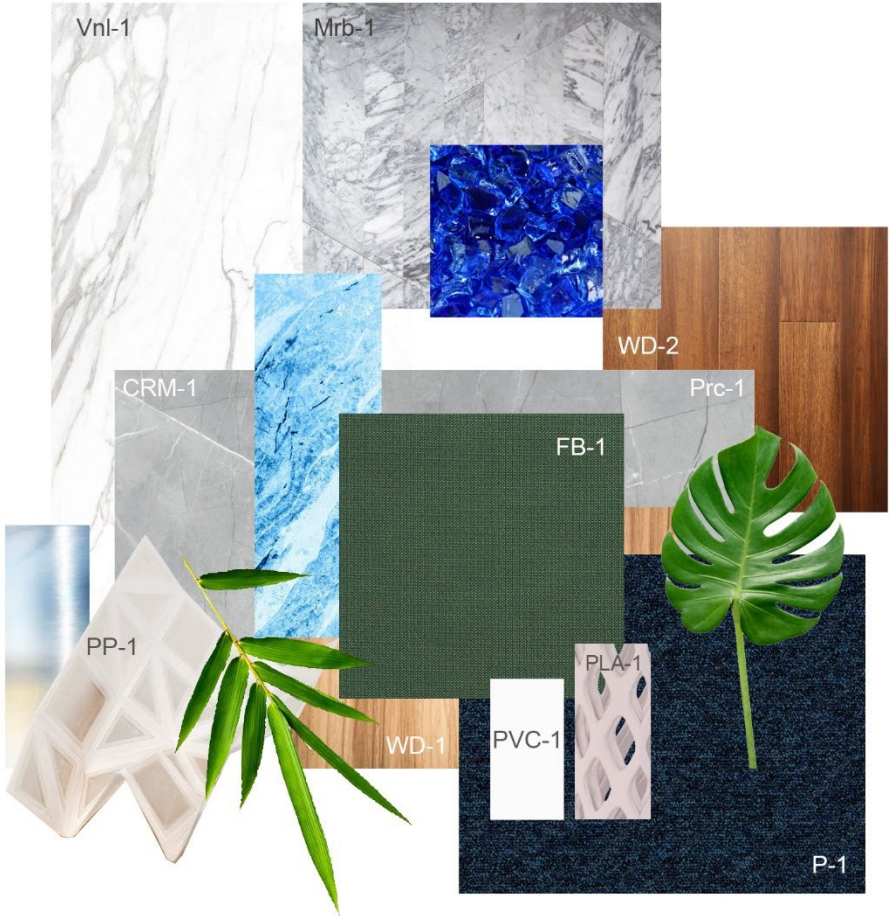


Fig 99. Material Palette

Material Code	Material	Used Location	Material Specification
Prc-1	Porcelain tile	Entrance Porch	Enigma 12-inch x 24-inch Roccia Cromo Matte Pressed Porcelain Tile
Mrb-1	Marble tile	Restaurant Banquet and ceremony hall	Dimensions: 560 x 100 mm. Dedalo. MONITILLO Marble stone
WD-1	Wood Panels	Reception window seating platforms	Alexandria Moulding 1-inch x 6-inch x 8 Feet Red Oak Hardwood Hobby Board S4S
FB-1	Fabric	Second level circulation	Tweed Crypton Fabric – Dark Green
PVC-1	PVC	Column Covering	PVC (polyvinyl chloride) sheet – White Color
PP-1	Polypropylene	Lotus seating	Polypropylene and fiberglass composite to build the custom lotus seating
P-1	Carpet	Restaurant Banquet and ceremony hall	Product Number : 1312302500 – Tufted Textured Loop – Yarn System – 100% Recycled Content Nylon
WD-2	Wood	Meditation Hall Flooring	Malibu Wide Plank Sample -French Oak Montara Engineered Tongue & Groove Hardwood Flooring, 5-inch x 7 inch
PLA-1	PLA 3D Printer Filament	Reception Desk and Organic-shaped walls	GEEETECH PLA 3D Printer Filament, 1.75mm White, 1kg (2.2lbs) Spool, Upgrade Tidy Winding Tangle-Free
CRM-1	Ceramic Tile	Washrooms	MSI Stone ULC White Vena 12 in. x 24 in. Glazed Ceramic Floor and Wall Tile
Vnl-1	Vinyl tile	Green Room	TrafficMaster Carrara Marble 12-inch x 24-inch Peel and Stick Vinyl Tile

**Fig 100. Material Selection Diagram**

# Furniture and Equipment List

Restaurant, Banquet and ceremony area furniture

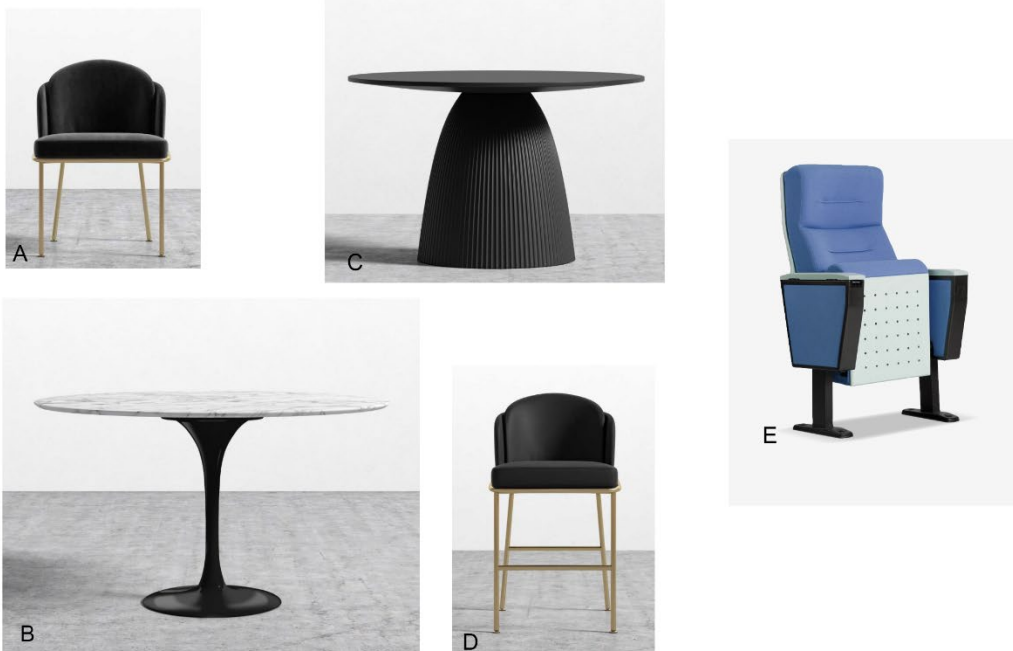


Fig 101. Restaurant, Banquet and ceremony area furniture

Item	FFE	Quantity	Specifications	Notes
A	Angelo Dining Chair	50	21.7 in x 22.5 in x 33.5 in(Width x Depth x Height) – Max weight limit: 330.7 lb	Portable
B	Tulip Table Round – Carrara	10	35.5 in x 35.5 in x 28.5 in(Width x Depth x Height)	Portable
C	Gallus Dining Table	10	48 in x 48 in x 29.5 in(Width x Depth x Height)	Portable
D	Angelo Counter Stool	14	20.5 in x 20.9 in x 36.2 in(Width x Depth x Height)	Portable
E	5038 Series chair auditorium chair	50	Chair Height 40.16” Center to Center 22.44” Seat Height 17.72”	Fixed

**Fig 102. Types of furniture**

# Custom Furniture List



Fig 103. Custom Furniture List

Item	FFE	Quantity	Specifications	Notes
A	Custom 3D Printed Chair	10	55 x 57 cm x 85 cm (Width x Depth x Height)	Portable
B	Custom 3D Printed Banquet Table	5	23.7D cm x 60W cm x 101H Cm	Portable
C	Custom Light Pendant	6	Inner Radius 70 cm	Fixed
D	Custom 3D Printed Café Table	5	65 cm x 60 cm x 60 cm (Width x Depth x Height)	Portable
E	Custom 3D Printed Reception Desk	1	200cm X 70cm X 80 cm (Width x Depth x Height)	Portable

**Fig 104. Types of Custom Design Furniture for This Project**

## References

Alberti, L. B. (1986). *The Ten Books of Architecture*. New York: Dover.

archisoup.com. (2023, 01 08). *archisoup.com*. Retrieved from archisoup.com:  
<https://www.archisoup.com/studio-guide/architecture-narratives>

architectmagazine.com. (2023, 02 12). *King Abdullah Financial District Metro Station*. Retrieved from architectmagazine.com: <https://www.architectmagazine.com/project-gallery/king-abdullah-financial-district-metro-station-3233>

auroville.org. (2022, 11 01). <https://auroville.org/page/matrimandir>. Retrieved from auroville.org:  
<https://auroville.org/>

Battista, A. (2023, 02 09). *Irenebrination: Notes on Architecture, Art, Fashion, Fashion Law & Technology*. Retrieved from irenebrination.typepad.com:  
[https://irenebrination.typepad.com/irenebrination\\_notes\\_on\\_a/2013/05/kafd-metro-station-riyadh-zaha-hadid.html](https://irenebrination.typepad.com/irenebrination_notes_on_a/2013/05/kafd-metro-station-riyadh-zaha-hadid.html)

Cherry, K. (2022, May 02). *What Are the Jungian Archetypes?* Retrieved from verywellmind.com:  
<https://www.verywellmind.com/what-are-jungs-4-major-archetypes-2795439>

dbpedia.org. (2023, 01 28). *About Voxel*. Retrieved from dbpedia.org: <https://dbpedia.org/page/Voxel>

- Esposito, S. T. (2004). *Geography of Religion Where God Lives Where Pilgrims Walk* . Washington, D.C: National Geographic Society.
- Freeman, M. (2005). *Meditative Spaces*. New York : Universe Publishing.
- Frichot, H. (2008). Interior Atmospheres. *Architectural Design*, 31-35.
- Garg, S. (2010). *COMING TOGETHER: A UNIVERSAL SACRED SPACE*. Washington DC: Corcoran College of Art and Design.
- Harries, K. (1997). *The Ethical Function of Architecture*. Cambridge: MIT Press.
- hiddensacredspaces.org. (2022, 11 03). *BOSTON'S HIDDEN SACRED SPACES*. Retrieved from hiddensacredspaces.org: <http://www.hiddensacredspaces.org/space-to-sweat-body-politic>
- Hoffman, D. R. (2010). *Seeking the Sacred in Contemporary Religious Architecture* . Kent State University Press.
- Jonathan Z. Smith. (1987). *To Take Place: Toward Theory in Ritual*. Chicago: University of Chicago Press.
- Kieckhefer, R. (2004). *Theology in Stone: Church Architecture from Byzantium to Berkeley* . New York: Oxford University Press.
- livingwaters. (2022, 10 27). *Ancient History at school and why your child should consider studying this powerful subject*. Retrieved from livingwaters: <https://www.livingwaters.wa.edu.au/ancient-history/>
- Manitoba.ca. (2023, 01 12). *Environment, Climate and Parks*. Retrieved from Manitoba.ca: <https://www.gov.mb.ca/sd/parks/park-maps-and-locations/central/trappist.html>
- math.dartmouth.edu. (2023, 02 08). *The Circle, The Wheel of Fortune & The Rose Window*. Retrieved from math.dartmouth.edu: <https://math.dartmouth.edu/~matc/math5.geometry/unit9/unit9.html#:~:text=The%20circle%20is%20considered%20a,perfect%2C%20the%20ultimate%20geometric%20symbol>.
- Mayer, J. D. (2000). Spiritual Intelligence or Spiritual Consciousness? *International Journal for the Psychology of Religion*, 10:1, 47-56.
- McNamara, D. R. (2009). *Catholic Church Architecture and the Spirit of the Liturgy*. Chicago: Hillenbrand Books 91, 101.
- nadaaa.com. (2022, 11 03). *portfolio*. Retrieved from nadaaa.com: <https://www.nadaaa.com/portfolio/northeastern-inter-faith-center/>
- Otto, R. (1950). *The Idea of the Holy* . London Univ. Press: Oxford.
- Pallasmaa, J. (2005). *The Eyes of the Skin: Architecture and the Senses*. Hoboken: Wiley.
- Pallasmaa, J. (2012). *The Eyes of the Skin: Architecture and the Senses*. Hoboken: Wiley.

- Pallasmaa, J. (2015). Light, Silence, and Spirituality in Architecture and Art. In J. Bermudez, *Transcending Architecture: Contemporary Views on Sacred Space* (p. 32). Washington DC: The Catholic University of America Press.
- Pichler & Hollein, W. P. (1975). *Programs and Manifestoes on 20th-Century Architecture*. Cambridge: MIT Press.
- Schneider, M. S. (1994). *A Beginner's Guide to Constructing the Universe: The Mathematical Archetypes of Nature, Art, and Science*. New York: HarperCollins.
- Semes, S. W. (2001). The Elements of Classical Architecture, 1st ed. . In Georges Gromort, *The Art of Composition* (p. 18). New York: W.W. Norton.
- snac.mb.ca. (2022, 11 14). *about*. Retrieved from snac.mb.ca: <https://www.snac.mb.ca/about>
- Souza, E. (2022, 11 02). *AD Classics: MIT Chapel / Eero Saarinen*. Retrieved from archdaily.com: [https://www.archdaily.com/112682/ad-classics-mit-chapel-eero-saarinen?ad\\_medium=office\\_landing&ad\\_name=article](https://www.archdaily.com/112682/ad-classics-mit-chapel-eero-saarinen?ad_medium=office_landing&ad_name=article)
- tourismwinnipeg.com. (2022, 11 14). *About Winnipeg*. Retrieved from tourismwinnipeg.com: <https://www.tourismwinnipeg.com/plan-your-trip/about-winnipeg>
- trappistcaskets.com. (2022, 11 14). *trappistcaskets.com*. Retrieved from trappistcaskets.com: <https://trappistcaskets.com/cistercians-and-death/>
- Walter, E. V. (1988). *Placeways: A Theory of the Human Environment*. Chapel Hill: Univ. of North Carolina Press.
- weatherspark.com. (2022, 11 15). *Climate and Average Weather Year Round in Winnipeg*. Retrieved from weatherspark.com: <https://weatherspark.com/y/8367/Average-Weather-in-Winnipeg-Canada-Year-Round>
- websites.umich.edu. (2023, 02 08). *Cube*. Retrieved from websites.umich.edu: <http://websites.umich.edu/~umfandsf/symbolismproject/symbolism.html/C/cube.html#:~:text=The%20cube%20is%20a%20three,the%20counterpart%20of%20the%20sphere>.

# APPENDIX A: BUILDING CODE ANALYSIS

Occupant safety and accessibility requirements described in this section comply with the 2010 National Building Code of Canada (NBC).

<b>Name of Practice:</b> <small>Enter address and contact information here.</small>					
<b>Name of Project:</b> <b>A CONTEMPORARY TEMPLE:</b> <small>Enter name here.</small> <b>DESIGNING A CENTRE TO PROMOTE MINDFULNESS</b>					
<b>Location:</b> 100 Rue des Ruines du Monastere, Winnipeg, MB R3V 1B9 <small>Enter address here.</small>					
Item	Ontario Building Code Data Matrix Parts 3 or 9			Building Code Reference	
				References are to Division B unless noted [A] for Division A or [C] for Division C.	
1	Project Description:	<input type="checkbox"/> New <input checked="" type="checkbox"/> Addition <input type="checkbox"/> Change of Use <input type="checkbox"/> Alteration	<input type="checkbox"/> Part 11 11.1 to 11.4	<input type="checkbox"/> Part 3 1.1.2. [A]	<input type="checkbox"/> Part 9 1.1.2. [A] & 9.10.1.3.
2	Major Occupancy(s)	A2		3.1.2.1.(1)	9.10.2.
3	Building Area (m <sup>2</sup> )	Existing <u>315</u>	New <u>1252</u> Total <u>1567</u>	1.4.1.2. [A]	1.4.1.2. [A]
4	Gross Area	Existing <u>315</u>	New _____ Total _____	1.4.1.2. [A]	1.4.1.2. [A]
5	Number of Storeys	Above grade <u>4</u>	Below grade <u>1</u>	1.4.1.2. [A]&3.2.1.1.	1.4.1.2.[A] & 9.10.4
6	Number of Streets/Fire Fighter Access	<u>1</u>		3.2.2.10. & 3.2.5.	9.10.20.
7	Building Classification	A1-A2		3.2.2.20.-83	9.10.2.
8	Sprinkler System Proposed	<input checked="" type="checkbox"/> entire building <input type="checkbox"/> selected compartments <input type="checkbox"/> selected floor areas <input type="checkbox"/> basement <input type="checkbox"/> in lieu of roof rating <input type="checkbox"/> not required		3.2.2.20.-83 3.2.1.5. 3.2.2.17.	9.10.8.2. INDEX
9	Standpipe required	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		3.2.9.	N/A
10	Fire Alarm required	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		3.2.4.	9.10.18.
11	Water Service/Supply is Adequate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		3.2.5.7.	N/A
12	High Building	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		3.2.6.	N/A
13	Construction Restrictions	<input type="checkbox"/> Combustible permitted <input type="checkbox"/> Combustible	<input checked="" type="checkbox"/> Non-combustible required <input checked="" type="checkbox"/> Non-combustible	<input type="checkbox"/> Both <input type="checkbox"/> Both	3.2.2.20.-83 9.10.6.
14	Mezzanine(s) Area m <sup>2</sup>			3.2.1.1.(3)-(8)	9.10.4.1.
15	Occupant load based on	<input checked="" type="checkbox"/> m <sup>2</sup> /person <input type="checkbox"/> design of building		3.1.17.	9.9.1.3.
	Basement:	Occupancy <u>3.7 - 4.6 - 46</u> Load <u>60</u> persons			
	1 <sup>st</sup> Floor	Occupancy <u>9.3 - 0.75 - 1.2 - 3.7</u> Load <u>300</u> persons			
	2 <sup>nd</sup> Floor	Occupancy <u>3.7 - 1.2 - 9.3</u> Load <u>50</u> persons			
	3 <sup>rd</sup> Floor	Occupancy _____ Load <u>30</u> persons			
	(Additional floor areas continued on last page)				
16	Barrier-free Design	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain) _____		3.8.	9.5.2.
17	Hazardous Substances	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		3.3.1.2. & 3.3.1.19.	9.10.1.3.(4)

Building Code Data Matrix, Parts 3 or 9  
Ontario Association of Architects

December, 2013

## 3.1.2 Occupancy Classification

The building will serve multiple occupancy classes. According to the NBC Major Occupancy Classification Section 3.1.2 these occupancies are described as:

1. Group A, Division 1: Assembly occupancies intended for the production and viewing of the performing arts (auditorium).
2. Group A, Division 2: Assembly occupancies not elsewhere classified in Group A (restaurant, banquet/ceremony hall and sports court).

### *3.1.17 Occupant Load*

Total available floor area: 1567 sq.m.

Conference area: 241 sq.m.

- Space with fixed seating: 53 people per given number of fixed seats.
- Stage: 45 sq.m. Required area per person: 0.75 sq.m. Occupant load:  $45/0.75 = 60$  people.
- Total occupant load: 100 people.

Restaurant, banquet and ceremony hall: 445 sq.m. Required area per person: 1.20 sq.m. Occupant load:  $445/1.20 = 370$  people.

## Building Fire Safety

### *3.1.3.1 Separation of Major Occupancies*

Major occupancies shall be separated from adjacent major occupancies by fire separation with fire-resistance ratings of minimum 1 hour between Group A – Division 1 and Group A – Division 2.

### *3.2.2.15 Storeys Below Ground*

If any storey of the building constructed below the adjoining ground level, it will be sprinklered throughout; the floor assembly of this level shall be constructed as a fire separation with a fire rating of 2 hours.

### *3.2.2.18 Automatic Sprinkler Systems*

Automatic sprinkler system shall be required for all levels.

### *3.2.2.20 Group A, Division 1, Any Height, Any Area, Sprinklered; 3.2.2.23 Group A,*

### *Division 2, Any Height, Any Area, Sprinklered*

The building shall be of non-combustible construction, and sprinklered throughout. Floor assemblies shall be fire separations with fire rating not less than 2 hours, and mezzanine levels, if constructed, shall be fire separations with fire rating of no less than 1 hour. Fire rating of load-bearing walls, columns and arches shall be no less than the fire rating of supporting assemblies.

### *3.2.7.1 Minimum Lighting Requirements*

Exits, public corridors and corridor access to exit for the public or classrooms shall be equipped with lighting fixtures that provide no less than 50 lux illumination at floor or tread level, at angles and intersections at changes of level where there are stairs or ramps.

### *3.2.7.3 Emergency Lighting*

Emergency lighting shall be no less than 10 lux at floor or tread level in exits, access to exit in open floor areas,

public corridors, and food preparation areas in commercial kitchens.

### *3.3.1.4 Public Corridor Separations*

No fire separation is required between a corridor and the remainder of the building if the storey is sprinklered throughout unless travel distance from any part of the floor area to an exit exceeds 45 m.

### *3.3.2.13 Stages for Theatrical Performances*

All areas within the theatre space shall be sprinklered. A fire separation between ancillary spaces and stage shall be no less than 1 hour. Stage and ancillary services shall be separated from the seating area by a 1-hour fire separation except a proscenium opening which shall be equipped with a sprinkler deluge system, unframed fire curtain if the opening is no more than 20 m wide or semi rigid fire curtain if the opening is more than 20 m wide.

At least 2 vents for fire and smoke venting shall be provided above the stage. The vent area shall not exceed 1/8 of the area of the stage behind the proscenium, and shall be programmed to open upon the sprinkler actuation.

### *3.4.2.1 Minimum Number of Exits*

Every major occupancy floor area shall have 2 exits.

### *3.4.2.3 Distance Between Exits*

Distance between 2 exits shall be no less than ½ the maximum diagonal distance of the floor area but not more than 9 m where there is a public corridor, and not less than 9 m where there is no public corridor. These requirements are not mandatory if the floor area, separated by a fire separation, is not less than 1/3 of the floor area or if it is necessary to pass through the fire separation in order to escape the building through an exit.

### *3.4.2.4 Travel Distance*

Travel distance is the distance from anywhere on the floor area to an exit measured along the path of exit. Travel distance is permitted to be measured from the egress door of a room to the exit provided that a) the room is separated by a non-rated fire separation from the rest of the sprinklered floor area, or 45-minute fire separation from the rest of the unsprinklered floor area, b) the egress door opens to the exterior passageway or fire separated public corridor, conforming to Article 3.3.1.4.

### *3.4.2.5 Location of Exits*

Travel distance to the exit shall not be more than 45 m, or 105 m if the floor areas with rooms are not separated by fire-rated separations provided that the corridor length is not less than 9 m, the corridor ceiling is not less than 4 m AFF, the building is sprinklered throughout, and not more than ½ of the egress doors of any room open to the corridor leading to the exit. The exits shall be visible and accessible at all times.

## Plumbing Facilities

### *3.7.2.2 Water Closets*

In the auditorium space, the occupancy load of 261 people requires 5 male and 10 female water closets. The ceremony and banquet space, with the occupancy load of 850 people, requires 9 male and 17 female water closets. The restaurant with the occupancy of 383 people requires 6 male and 12 female washrooms. The sport court with the occupancy load of 1257 shall be served by 8 male and 8 female water closets considering that the space might be used for semi-religious ceremonies per Article 3.7.2.2.8).

### *3.7.2.3 Lavatories*

The auditorium shall have 3 lavatories in male and 5 lavatories in female washrooms. The ceremony and banquet space shall have 5 lavatories for male and 9 lavatories for female washrooms. The restaurant shall have 3 lavatories in male and 6 lavatories in female washrooms. The sport court shall have 4 lavatories in male and 8 lavatories in female washrooms. When circular washbasins are used in lieu of lavatories, the washbasins are required to have 500 mm circumference. Each lavatory shall be operated automatically or manually with a lever handle that does not close when spring actuated.

## Accessibility

### *3.4.2.6 Principal Entrances*

At least one door shall be provided as a means of entrance into the building from the exterior, and it will be designed in accordance with the requirements for exits.

### *3.4.3.2 Exit Width*

The minimum aggregate exit width to a) auditorium shall be 1600 mm (6.1 mm x occupancy of 261) at 1:8 ramps, doorways, corridors and passageways, or 2100 mm (8 mm x occupancy of 261) at stairs with not more than 180 mm riser and not less than 280 mm run, b) banquet shall be 5185 mm (6.1 mm x 850), or 6800 mm (8 mm x 850), c) restaurant shall be 2340 mm (6.1 mm x 383), or 3065 mm (8 mm x 383), and d) sport court shall be 7670 mm(6.1 mm x 1257), or 10,060 mm (8 mm x 1257).

### *3.8.1.2 Entrances*

Half or more of all entrances in the building shall be barrier-free, and shall lead to the exterior at sidewalk level or ramp that leads to sidewalk.

### *3.8.1.3 Barrier-Free Path of Travel*

The unobstructed width of a barrier-free path of travel shall be no less than 920 mm. The barrier-free path of travel shall have no floor opening bigger than 13mm in diameter, shall have any elongated openings oriented perpendicular to the path of travel, shall be stable, firm and slip-resistant, shall have ramps 1:2 when the level change is no more than 13mm, and shall have ramps or sloped floors when the level change is more than 13mm. Atrium and corridors shall have a width of a minimum of 1500 mm when their lengths are 30m or long.

### *3.8.3.2 Exterior Walks*

Barrier-free exterior walks shall have slip-resistant, continuous and even surface, be at least 1100 mm wide and have a level area near entrances.

### *3.8.3.3 Doorways and Doors*

Every door, including washroom doors, in the building shall have 800 mm clear width when fully open, and barrier free path of travel doors shall be either equipped with a power door operator or have a clearance of 600 mm beyond the edge of the door opening on approach side, if the door swings in, or 300 mm if the door swings away.

### *3.8.3.8 Water Closet Stalls*

One separate unisex, universal accessible washroom shall be provided alongside male and female washrooms for a greater comfort and ease of access (See 3.8.3.12).

Each washroom shall have at least one barrier-free accessible water closet that is at least 1500mm x 1500mm, can be latched from inside, has a clear opening of at least 800 mm, and swings outward, unless there is enough room to clear the inward swing of the door. The accessible water closet shall have a) a tankless toilet fixture with a clearance of 285-305 mm from the wall on one side, b) equipped with a 30-40mm diameter, horizontal grab bar on side wall, extending not more than 450 mm past the fixture, and another minimum 600 mm long grab bar behind and centered to the fixture, both mounted between 840-920mm AFF with a 35-45mm clearance from the wall, c) coat hook mounted at 1200 mm or less AFF on a side wall with a 50mm or less protrusion, and d) a 1700 mm clearance between the outside face of the stall wall and face of the in-swinging washroom door and 1400 mm clearance between the outside face of the stall wall and fixture.

### *3.8.3.9 Water Closets*

Fixture for persons with disability shall have a seat at 400-460 mm AFF, easily reachable hand operated flushing controls or automatic controls, and seat lid.

### *3.8.3.10 Urinals*

Urinals in barrier-free washrooms shall be wall-mounted with the rim between 488-512 mm AFF. Urinals shall have a clear 800 mm approach with no step, and wall mounted vertical, minimum 300 mm grab bar with its centerline

at 1000 mm AFF, and located maximum of 380 mm from the centerline of the urinal.

### *3.8.3.11 Lavatories*

Barrier-free washroom lavatory shall have its centreline at minimum 460 mm from the side wall, rim height at maximum 865 mm AFF, clearance beneath at a) 760 mm wide, b) 735 mm high at the front end, soap dispenser nearby at maximum 1200 mm AFF, and a towel dispenser or hand dryer nearby mounted at maximum 1200 mm AFF. The bottom of the mirror shall be at maximum 1000 mm AFF or inclined towards the wheelchair user.

### *3.8.3.12 Universal Toilet Rooms (Unisex Washrooms)*

This type of washroom shall be accessible via a barrier-free path of travel. The door shall be lockable with a fist from inside with a latch that is 900-1000 mm AFF. The universal toilet room shall have all the barrier-free requirements of 3.8.3.8, 3.8.3.9, and 3.8.3.11, and shall have an area with a wheelchair turning diameter of 1500 mm for easy maneuverability.

### *3.8.3.14 Counters*

Counters that are more than 2 m long shall have a barrier-free section that is a minimum of 760 mm long centred over a knee space, and a) its surface shall be a maximum of 865 mm AFF, while b) the knee space shall be at least 760 mm W x 685 mm H x 485 mm D.

## **APPENDIX B: Permission**

Re: New Entry: Contact

---

**Subject:** Re: New Entry: Contact

**Caution:** This message was sent from outside the University of Manitoba.

permission granted - please credit it as directed on the website. thanks!

On Sun, Jul 9, 2023 at 6:22 PM Boston's Hidden Sacred Spaces

**Name**

Hussein Agoushi

**Email**

:

**Subject**

Copyright permission request for Image

**Message**

Dear Permissions Manager,

I am writing to request permission to include in my thesis practicum the following:

Following images of MIT Chappel from your Website:

<https://www.hiddensacredspaces.org/massachusetts-institute-of-technology/>

My thesis, entitled A Contemporary Temple, is part of the requirements needed to graduate from the Faculty of Graduate Studies at the University of Manitoba.

My thesis will be posted electronically and will be accessible for free to a worldwide audience from the University of Manitoba's digital repository called MSpace located at <http://mspace.lib.umanitoba.ca/xmlui/>. I do not expect to receive any commercial profits.

Please reply to confirm if you are the copyright owner of the work and if permission is granted to use it as described above. If so, I will include a citation and permission statement with the work.

If you do not control the copyright on the above-mentioned work, I would appreciate any contact information you can provide regarding the proper rights holder.

Thank you for your consideration. If you require further information, please don't hesitate to contact me.

Sincerely,

Hussein Agoushi

[1](#)

Sent from [Boston's Hidden Sacred Spaces](#)



## Re: Copyright Permission Request for Images

**Caution:** This message was sent from outside the University of Manitoba.

Hussein:

Please credit all photographs to Dan Bibb, but copyright them images, including all drawings to NADAAA inc.

Permission granted with proviso of proper credits.

NT

---

Dear Permissions Manager,

I am requesting permission to include in my thesis practicum the following:

Images of Northeastern University Center for Spirituality:

<https://www.nadaaa.com/portfolio/northeastern-inter-faith-center/>

My thesis, entitled **A Contemporary Temple**, is part of the requirements needed to graduate from the Faculty of Graduate Studies at the University of Manitoba.

My thesis will be posted electronically and will be accessible for free to a worldwide audience from the University of Manitoba's digital repository called MSpace located at <http://mspace.lib.umanitoba.ca/xmlui/>. I do not expect to receive any commercial profits.

Please reply to confirm if you are the copyright owner of the work and if permission is granted to use it as described above. If so, I will include a citation and permission statement with the work.

If you do not control the copyright on the above-mentioned work, I would appreciate any contact information you can provide regarding the proper rights holder.

Thank you for your consideration. If you require further information, please don't hesitate to contact me.

Sincerely,

Hussein Agoushi

## RE: Copyright Permission Request to Use Images for Academic Purpose

Dear Hussein,

Thank you for checking.

I can confirm that you are able to use these images in your thesis.

Thank you,  
Liv

**Zaha Hadid Architects**

Dear Liv,

Thanks for sharing the images and information. I do appreciate it. I need you to confirm that I can use these images for academic purposes in my thesis. Please reply to confirm so I can include a citation and permission statement with the work.

Thanks,  
Hussein

**Cc:** F

**Subject:** RE: Copyright Permission Request to Use Images for Academic Purpose

**Caution:** This message was sent from outside the University of Manitoba.

Dear Hussein,

Thank you for your email and interest in the King Abdullah Financial District Metro Station.

As requested, please find below a link to images and information regarding the project.

[King Abdullah Financial District Metro Station](#)

Please note, the image credit is included within the file names.

Very best,

Liv

**Zaha Hadid Architects**

This email is intended only for the use of the recipient(s) named above, is confidential and may also be privileged. Any use of the contents of this email (including, but without limitation, any copying, distribution, disclosure, reliance or any other use) by persons or entities other than the intended recipient(s) is prohibited. If you are not an intended recipient, please delete the material from any computer upon which the message has been received and notify us immediately by telephoning or e-mailing the sender.

Zaha Hadid Limited is registered in England and Wales with registered number 3749443 and has its registered office at 101 Goswell Road, London, EC1V 7EZ.

---

Dear Permissions Manager,

I am requesting permission to include in my thesis practicum the following:

Images of the King Abdullah Financial District Metro Station project from your Website:  
<https://www.zaha-hadid.com/architecture/king-abdullah-financial-district-metro-station/>

My thesis, entitled **A Contemporary Temple**, is part of the requirements needed to graduate from the Faculty of Graduate Studies at the University of Manitoba.

My thesis will be posted electronically and will be accessible for free to a worldwide audience from the University of Manitoba's digital repository called MSpace located at <http://mspace.lib.umanitoba.ca/xmlui/>. I do not expect to receive any commercial profits.

Please reply to confirm if you are the copyright owner of the work and if permission is granted to use it as described above. If so, I will include a citation and permission statement with the work.

If you do not control the copyright on the above-mentioned work, I would appreciate any contact information you can provide regarding the proper rights holder.

Thank you for your consideration. If you require further information, please don't hesitate to contact me.

Sincerely,

Hussein Agoushi

---

## Re: Fw: Copyright Permission Request for Images

---

Dear Hussein,

To the best of our knowledge, there is not copyright on these photos. Our permission is not required.

Regards,  
MM Executives

On Mon, 17 Jul 2023 at 10:45, Media Interface AVF .

> wrote:

Dear Matrimandir executives,

It is my opinion that Hussein wants to use these Matrimandir photos found on the internet only for academic purposes so we could give him the right to use these images.

Do you concur?

Joyously, Joel

On Sat, Jul 15, 2023 at 8:50 PM Hussein Agoushi <

> wrote:

Hi there,

I am writing to follow up on my last week request to get permission to use website images for academic purposes:

I am requesting permission to include in my thesis practicum the following:

Following images of Matrimandir Building exterior and interior:

<https://files.auroville.org/auroville-org/ad20e1a9-4901-434c-9d88-a9f76860ace4.jpg>

<https://files.auroville.org/auroville-org/60ce35e9-c782-493e-9707-778a7d829cf4.jpeg>

<https://files.auroville.org/auroville-org/248d0599-3313-424a-9b1a-331fa5dbe98f.png>

[https://files.auroville.org/auroville-org/system/image\\_attachments/images/000/015/062/original/chamber\\_lens\\_flare.jpg?1644042902](https://files.auroville.org/auroville-org/system/image_attachments/images/000/015/062/original/chamber_lens_flare.jpg?1644042902)

My thesis, entitled A Contemporary Temple, is part of the requirements needed to graduate from the Faculty of Graduate Studies at the University of Manitoba.

My thesis will be posted electronically and will be accessible for free to a worldwide audience from the University of Manitoba's digital repository called MSpace located at <http://mspace.lib.umanitoba.ca/xmlui/>. I do not expect to receive any commercial profits.

Please reply to confirm if you are the copyright owner of the work and if permission is granted to use it as described above. If so, I will include a citation and permission statement with the work.

If you do not control the copyright on the above-mentioned work, I would appreciate any contact information you can provide regarding the proper rights holder.

Thank you for your consideration. If you require further information, please don't hesitate to contact me.

Sincerely,  
Hussein Agoushi

---

**Subject:** Re: Copyright Permission Request for Images

Thanks Joel, I did as you instructed. I do appreciate your help.

Hussein

Get [Outlook for iOS](#)

---

**Caution:** This message was sent from outside the University of Manitoba.

Dear Hussein,

Ideally, you should request permission from the executives of Matrimandir, you can contact them by email: [n](#)

Please add me in copy to the email so that I can follow the exchange.

Best regards,

Joel

On Mon, Jul 10, 2023 at 1:31 AM Hussein Agoushi < > wrote:

Dear Permissions Manager,

I am requesting permission to include in my thesis practicum the following:

Following images of Matrimandir Building exterior and interior:

<https://files.auroville.org/auroville-org/ad20e1a9-4901-434c-9d88-a9f76860ace4.jpg>

<https://files.auroville.org/auroville-org/60ce35e9-c782-493e-9707-778a7d829cf4.jpeg>

<https://files.auroville.org/auroville-org/248d0599-3313-424a-9b1a-331fa5dbe98f.png>

[https://files.auroville.org/auroville-org/system/image\\_attachments/images/000/015/062/original/chamber\\_lens\\_flare.jpg?1644042902](https://files.auroville.org/auroville-org/system/image_attachments/images/000/015/062/original/chamber_lens_flare.jpg?1644042902)

My thesis, entitled A Contemporary Temple, is part of the requirements needed to graduate from the Faculty of Graduate Studies at the University of Manitoba.

My thesis will be posted electronically and will be accessible for free to a worldwide audience from the University of Manitoba's digital repository called MSpace located at <http://mspace.lib.umanitoba.ca/xmlui/>. I do not expect to receive any commercial profits.

Please reply to confirm if you are the copyright owner of the work and if permission is granted to use it as described above. If so, I will include a citation and permission statement with the work.

If you do not control the copyright on the above-mentioned work, I would appreciate any contact information you can provide regarding the proper rights holder.

Thank you for your consideration. If you require further information, please don't hesitate to contact me.

# THANKS

## **A CONTEMPORARY TEMPLE: DESIGNING A CENTRE TO PROMOTE MINDFULNESS**



**Hussein Agoushi**