

**SPIRITUAL INFRASTRUCTURE:
STITCHING A NEW BUILDING TYPOLOGY INTO THE CITY
TO SERVE OUR SPIRITUALITY**

by

Miranda Bailey

Submitted in partial fulfilment of the requirements
for the degree of Master of Architecture

at

Dalhousie University
Halifax, Nova Scotia
July 2014

© Copyright by Miranda Bailey, 2014

CONTENTS

Abstract	iii
Acknowledgements	iv
Chapter 1: Introduction	1
Foreword	1
Thesis Question.....	1
The Free Meeting House.....	2
From Religion to Spirituality.....	3
Defining Spirituality.....	4
Architecture and Spirituality.....	5
Material and Natural Light.....	6
Program.....	9
Building Form.....	17
Design Principles - Refining the Language	23
Chapter 2: Design.....	34
Identifying Site	34
Identifying City Zones	35
Site Analyses	37
Big Box Store Site.....	37
Institutional (University) Site	40
Urban Downtown Site	43
Drive Thru (Tim Hortons) Site.....	46
Suburban Residential Site	49
Trail Nature Site.....	52
Building Design.....	55
The Trail Design.....	55
The Downtown Design.....	65
The Big Box Store Design	75
Chapter 3: Conclusion	88
References	90

ABSTRACT

This thesis is about the exploration of a new building type that is missing from society today. The introduction of spiritual infrastructure aims to meet each individual's spiritual needs through a series of new public buildings stitched into the existing urban fabric. The program develops from a study of spiritual activities currently existing in the city that are in need of identity.

Throughout this thesis, an architectural language emerges to reflect spirituality in the city through various uses of program. Using the City of Moncton to apply the thesis, zoning studies are identified to determine potential sites of spirituality, challenging the existing programs. Spirituality is an integral part of how people deal with struggles and celebrations in life. This new building type aims to strengthen communities by offering society a spiritual dimension into their everyday lives.

ACKNOWLEDGEMENTS

Thank you to my thesis supervisor Niall Savage and advisor Steve Parcell for your insightful critiques and guidance throughout this process.

To my classmates, thank you for all the smiles, laughs, tears, all nighters, road trips, and adventures, these past four years would not have been the same without you!

Lastly, to my Family, who have been there for me throughout these many years of school and never let me forget that “I can do all things through Christ who gives me strength” (Philippians 4:13). Thank you and love you!

CHAPTER 1: INTRODUCTION

Foreword

Throughout this thesis process it was my intent to stay open to all understandings of spirituality. However, I understand that preconceived ideas of spirituality may have influenced my thesis direction and design. Therefore, I felt it was important to state my own spiritual background and journey.

Spirituality can be a very difficult word to define as it has a different meaning to each individual. I believe spirituality is not just for one group of people -- it does not belong to one religion nor is it outside of religion. It is within everyone to develop their own spiritual connection whether they choose to or not. All my life I have grown up in the church and it is the root of my spirituality. I am a Christian and my spirituality is based on my faith in God. To some, that may not belong to a religion, their spirituality will have a completely different basis. At the beginning of this process I struggled to define spirituality but throughout this semester I have developed my own, as it is truly up to the individual.

This thesis has been an exciting journey having the opportunity to learn about spirituality through the development of a new architecture language. It has pushed not only my understanding of spirituality but also has been a monumental part of my own spiritual journey.

Thesis Question

How can an architecture language be used as a tool to develop spirituality in the city?

The Free Meeting House

In 1821, the Free Meeting House of Moncton opened its doors in New Brunswick. It was built with the purpose to serve as a place for the settlers to the area to practice their faith and religion. In most cases the meeting house was used to establish churches, once they established a strong congregation and had sufficient funds, they would build their own place to meet. Although the Free Meeting House was built much in the style of the New England Meeting House, a Protestant Christian meeting place, it was its freedom of affiliation with one particular religion which made it successful. Over its 142 years in operation the Free Meeting House of Moncton was used by 12 different denominations (Parsons 1997, vii, 6, 31, 32).



Photographs of Moncton Free Meeting House: window above entrance with date of opening (left), exterior entrance (right).

The building itself today is now part of the Moncton Museum and remains in its original box pew layout (Parsons 1997, 186, 256). It is relatively moderate in style, with little to no decoration. The pulpit is located directly across from the entrance and elevated above the room so the speaker could be seen by all. This is all of similar design to the New England Meeting House style; however, one differentiation in design is the exterior. Typically the New England Meeting House was one story on the inside but from the outside

looked like a two story house (Donnelly 1968, 38, 65, 71). The Free Meeting House was both from the interior and exterior a one story structure (Parsons 1997, 18).



Photograph of Free Meeting House interior with box pew layout and elevated pulpit.

The Free Meeting House offered people a place unlike any other building in the city -- a place people could practice their religion freely. Today, if you do not belong to a religion within the city you live it is a challenge to find a place to express your spirituality. In a time where our cities are rich with cultural diversity, a building type with the concept of the Free Meeting House may be exactly what is missing.

From Religion to Spirituality

Programmatically, the meeting house was arguably both extremely flexible and restrictive. Not all practices of religion fit into the pew and pulpit design; however, it was flexible as it was available to all. If the Free Meeting House idea was brought back into the city today, how would it change to serve today's society? Arguably, religions of substantial population have already found a place in the city. Therefore, to serve society today a place for the practice

of individual spirituality is what is needed. Individual spirituality then encompasses all, whether the practice is based on religion or secular.

Religious spirituality is usually associated with a long tradition and certain stories. Secular spirituality is basically this: It does not deny God or the transcendent, but it doesn't mix God or the transcendent with stories that one needs to believe. Of course, you can have spirituality within a religion. You can have religion with spirituality, and you can have religion without spirituality – which also happens quite often. Religion without spirituality is just ideology, such as certain belief structures in the collective mind that one identifies with, and that's not helpful. And then at other times, religion may still have its stories and rituals, and even beliefs, but they are no longer so dense that the light of consciousness cannot shine through. Religion can be an open door into the realm of the transcendent, or religion can be a closed door, depending on how it's used. (Tolle 2012)

What are ways in which people experience their own spirituality in the city currently and how can an architecture be used to establish this new building type?

Defining Spirituality

When typed into Google, the word 'spirituality' returns numerous entries, a variety of meanings, and a common admittance to confusion of the term. "The word spirituality conjures up all sorts of image and ideas" (Tchividjian 2011). Results vary from religious based: "Spirituality -- whether you are Christian, Muslim, a Jew or a Hindu -- is religion experienced intimately" (Greenstein 2000) to very broad explanations "separation from the mundane" (Eliade 1959). In the medical field of nursing, spirituality is described as "that which gives meaning to one's life and draws to transcend oneself" (Greenberg 2008). From these definitions and more, common characteristics of the word begin to overlap. Spirituality is formless, it is something we cannot see with our eyes, it is not of the human world. If these in fact are true, how can architecture design a place for something described as non-physical and formless?

Historically, the ambiguity of the term was not so prevalent. In the medieval ages spirituality was first used in the Christian Church, describing people who believed in 'God the creator' (Khan 2009). Overtime the clarity of the word has shifted, as it has been adapted to other religions and beliefs. Muslims describe spirituality as "the linking of actions to the purpose of life." (Khan 2009). Everything is then considered spiritual as "all actions must be in accordance with God's pleasure" (Tzortzis 2013). Spirituality to Buddhism is concerned with "the end of suffering through the enlightened understanding" (Muesse 2002). "Jewish spirituality is a matter of seeing the holy in the everyday, and invites us to wake up and open our eyes to the holy things happening all around us everyday." (Greenstein 2000). In all forms and beliefs spirituality is completely unique to the individual, each person has their own spiritual journey through life.

Architecture and Spirituality

While sacred architecture was seen as a prominent 'principal task' of architecture in the post-war era, it has become a desirable task for many contemporary architects. This desire is linked to a growing social need. In a world that seems entirely captivated by sheer economic drive and entertainment, churches and chapels are often the only alternative spaces: houses of silence, meditation, freedom and even refuge, for example, for those who seek asylum in the church. (Stock 2004, 11)

Architecturally the ambiguity of spirituality poses interesting complexities of program and requirements of space. With its fundamental reliance on our own direct experience there is not a clear definition of space either (Barrie, Bermudez, Geva, and Teal 2007). One commonality amongst practices is the clearing of materialistic things. We live in world where blocking out the materialistic things, from cell phones to television, can be a challenge. This makes the space in which someone practices their spirituality a type of escape from the mundane world we live.

Besides the places revered as sacred by the religions of the world, there are other locations which could be considered sacred places simply because they are revered by those who visit them. Great numbers of people accord such places a special status and perform "pilgrimages" to them because they provide access to something that transcends everyday life. These locations might be connected with a certain emotion or association with a revered person, and they stand out from the "landscape of the mundane". They have become modern pilgrimage sites without ever being connected to any particular religion, yet the veneration of them can often take on quasi-religious traits; religious feelings are not restricted to faiths or religious institutions or even to institutionalized community. (Engels 2010, 906)

Similar to a pilgrimage, places dedicated to spiritual program are typically found outside the cities in the form of a type of retreat. The selection of these natural sites far from the noise and stress of the city is perceivable -- it is much easier to reflect, ponder, meditate or pray without the distractions of the city life and in a tranquil environment created for the very purpose of spirituality. What does this mean for the city dweller? In the city we are forced into places typically not built for the purpose of spiritual practice, such as, an Alcoholics Anonymous (AA) meeting taking place in the basement of an old church, or clearing out a corner of your bedroom for meditation. Is there a way to bring the tranquil environment back where it is needed most -- into our everyday life? These new buildings in the city could then become not destinations, but steps along a spiritual journey -- integrating a new layer of infrastructure in the city that services our spirituality.

Not only the body, the soul, too, needs a home. But how is architecture to build us such a home? To meet this need we moderns tend to look to the past, to its achievements, its values and ideals, to find there material that we can weave together to cover what an instrument rationality has rendered mute. (Britton 2010, 56)

Material and Natural Light

Materiality, as a language of architecture speaks not only to the visual connection but also the feeling of these spaces. How

material and natural light begin to describe these spaces is what will differentiate them from non-spiritual places in the city.



MIT Chapel, Eero Saarinen, Boston, MA, 1955, photograph by Illa Flaubert (Flaubert 2007)

In Saarinen's MIT non-denominational chapel, water is used as a material through its reflection on the brick material. The water in this design can offer a subtle connection to nature as well as a private way to bring in natural light. Tadao Ando introduces natural light by puncturing the monolithic concrete wall in his Church of Light. This strategic placement forms a cross, which is a representation of the Christian religion; therefore, doubles as a sign to the outside viewer. Louis Kahn's Exeter Library, although not typically considered spiritual, uses contrasting materials to begin to describe the various uses of each space. For example, using wood in places of occupation, such as the study carrels, and concrete in circulation places, such as the stairwells.



Church of Light, Tadao Ando, 1989 (Dal Co 2010, 274).



Exeter Library, Louis Kahn, 1972.

The manner in which natural light is brought into a space can be considered spiritual to those who experience it. Karla Cavarra Britton describes Shim Sutfcliffe's Congregation Bet Ha'am Synagogue (2009) as the "natural light itself becomes an essential building element informing the spatial exploration of the building as one passes from the exterior into the social hall, and on to the sanctuary." (Britton 2013)

In places of simplistic nature the light in the room can become more than a tool for illuminating the space -- it can become the focal point or subject. The restrictions on how or how much light may enter the space is dependant on the program itself and its relative level of privacy. The spiritual process can be a vulnerable experience therefore privacy is essential. Tadao Ando's Azuma House maintains a strong private street front while still allowing an abundance of natural light in. He does this through a central courtyard in the house anchored on both ends by the house's program.

Program

Places in which multi- faith or spiritual spaces can be found currently include; hospitals, universities, and airports. Andreas Duscha completed a captivating photography study on places of worship in airports. He was interested in seeing if they were successful in not affiliating with the popular religion of the area. “Multi- faith spaces in airports are rooms open to members of all faiths for the exercise of their religious practices, and they may also be used by unaffiliated individuals” (Duscha 2008).

Much like the contrast of the busy city to a tranquil spiritual space, Duscha describes a similar complexity in the airport: “How is it possible for these “spaces of peace” to exist entirely apart from those hectic streams of movement that so typify airports as sites that exist primarily to be passed through” (Duscha 2008). Another parallel between this thesis and the airports multi- faith spaces is the necessity of avoiding any symbolism or connection to any one faith. The airport, although located within a city, can be considered international and should therefore not affiliate these spaces with local beliefs. The following images are from Duscha’s Places of Worship collection.



FMO Airport Multi- faith Room, photograph by Andreas Duscha (Duscha 2008).



MUC Airport Multi- faith Room, photograph by Andreas Duscha (Duscha 2008).



ORY Airport Multi- faith Room, photograph by Andreas Duscha (Duscha 2008).

It is clear from his studies that some of these spaces are far more successful than others but there is still much research required into these rooms or spaces to be properly executed. Hospitals and Universities have a strong tendency to design spaces more associated with the prominent religion in that location. Some of these multi-faith spaces are just cleared out extra classrooms. More care needs to be taken into the design for a more successful integration. These spaces can become a pivotal part of a patient's recovery, support for loved ones, or a place that each student feels comfortable in expressing their own faith.

Aside from these rooms specifically designed for multi-faith there are spiritual activities that can be found all over the city. Some of these activities are in the eye of the public, such as a yoga class in the park, and some are hidden from the public, such as group therapy in vacant classrooms. So what can be considered a spiritual activity?

Spirituality in the City

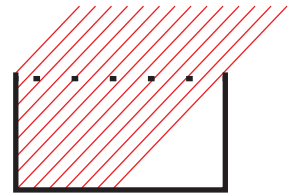
The following list of activities reflects programs that can be considered spiritual or involve a spiritual process within the existing city: meditation, prayer, spiritual discussion, one-on-one support, group support, private counselling, couples therapy, group therapy, music, grieving, yoga, spiritual education, funerals, weddings, and worship. These spiritual activities can then be grouped together based on size and similar use of space. The result is four different scales of program.

- A 1 person - solitude
- B 2-3 people - one on one
- C 10-15 people - small group
- D 50-100 people - large gathering

The following sections explore conceptual ideas of some of the activities based on their spatial requirements.

Solitude (A)

Prayer is a practice of spirituality typically religions use to grow in their spirituality. Prayer involves a second party, in the example of Christianity this would be God. It is through a spiritual relationship that this conversation occurs. People require a quiet, private space. The physical position of the body varies depending on practice, from kneeling, to sitting, to standing. Therefore, the seat or cushion used needs to be movable.



Sketches of people praying.

Section of natural light entering through a skylight to maximize privacy while increasing illumination.

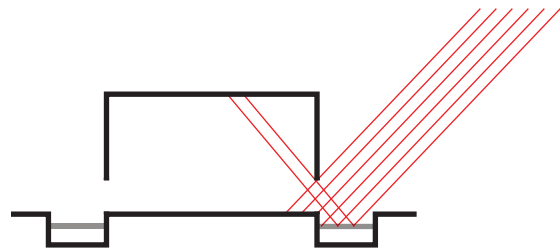


Conceptual collage of prayer space with wood wrapping around and natural light from above.

Meditation is a similar process to prayer where thoughts are focused inward to improve oneself. According to an online psychology dictionary meditation is described as “an exercise during which the individual enters an extended state of contemplation and reflection over a specific subject or their general existence, sometimes with a view to attain a differing state of consciousness” (Psychology Dictionary 2014).



Sketch of women meditating.



Section of light entering through low set windows and reflecting off the water to bring in a calming quality to the space.



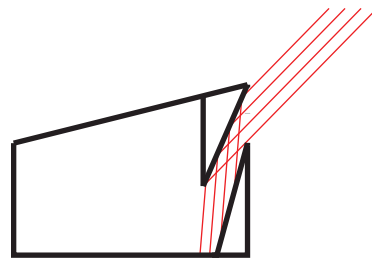
Conceptual collage of meditation space showing the idea of water reflecting on the ceiling.

One on One (B)

Counseling involves at least two people. It is practiced for a variety of purposes, i.e. depression, recovery, support. Spiritual counseling is becoming more predominate in the medical fields, studying the effects of spirituality on patients. "In fact, many scientific centers devoted to such work have been created at prestigious institutions over the past few years and are supported by grants. Additionally, American mass media has featured results from these research efforts with good market response" (Barrie, Bermudez, Geva, and Teal 2007).



Sketch of a counselling session.



Section of light entering through a reflecting wall.



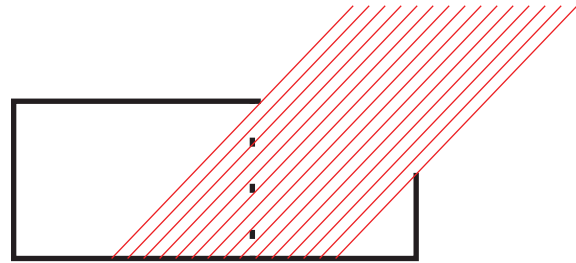
Conceptual collage of one on one support conversation or counseling with natural light diffusing into the space while maintaining a high level of privacy.

Small Group (C)

There are many examples of the positive influence of group spirituality including but not limited to: addiction recovery programs, depression recovery, anxiety and stress related groups, religious studies, illnesses and palliative care groups. Being part of a group going through a similar situation makes it easier to be vulnerable and get the support needed. “[T]here is growing evidence that spirituality can serve as an antidote for substance use disorders. The most consistent finding is that clients with higher scores on measures of spirituality are more likely to be abstinent following treatment than those with lower scores” (White 2006).



Sketch of a group therapy session.



Section of light entering through a privacy wall.



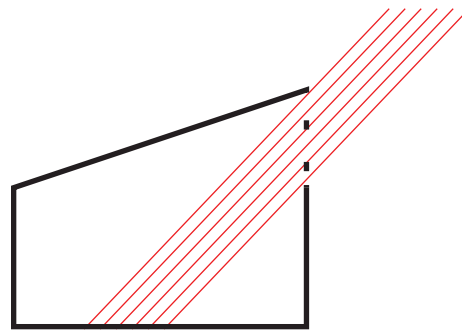
Conceptual collage of group therapy space with privacy wall blocking the public view.

Large Gathering (D)

Part of a spiritual journey is continually learning about your life's purpose. Hearing about other peoples spiritual journey's or learning about other peoples spiritual centers or beliefs can help in discovering ones own path. This can be practiced by attending lectures, religious rituals, sermons, worship music concerts, etc. Spatially this involves either a group or a person speaking to or communicating with an audience.



Sketches of forms of worship.



Section of natural light entering through a clerestory window.



Conceptual collage of a group worshipping through music with view out.

Building Form

“Scholars agree that nature constitutes a basis for spiritual experiences” (Barrie, Bermudez, Geva, and Teal 2007). In the city it can be a challenge to escape and find a connection to nature. Parks within the city offer some connection to nature and depending on the size can be quite successful in blocking out the city. Retreats out of the city are used in a way to connect the person back to nature. The Won Dharma Centre, a meditation and spiritual retreat in Claverack, New York, was designed with two ideas in mind: “Architecture as a threshold to nature and the preservation and appreciation of the surrounding natural landscapes” (Hanrahan 2012).

The connection to nature is of great benefit to the spiritual experience; however, this thesis focuses on the urban approach to spirituality; therefore, this beautiful buffer of nature is not always available. Without this nature threshold how can one move from the mundane to the spiritual in the city? This transition from the city life to the very private spiritual program was studied through a series of case studies.

All buildings require a series of threshold to allow the person entering the building to refocus their mind to the new program they are approaching. For this study, four buildings were selected to better understand these transitions in terms of architecture elements: Tadao Ando’s Church of Light in Osaka, Japan, Louis Kahn’s Hurva Synagogue unbuilt project, Tadao Ando’s Water Temple in Awaji, Japan, and Tadao Ando’s Meditation Center in Paris, France. The reason for selecting these buildings was due to their similar program of spirituality and each facility’s different practice of spirituality.

The studies revealed seven clear points of procession that have been identified in the floor plans. The seven moments of change are described more from the human perspective -- how it feels to be

in these spaces and experience the transitions. Any building may reveal the same seven thresholds however this study is about the architecture of these transitions and how they relate to spirituality.

- 1 Sign - *identifying the building.*
- 2 Approach - *transition from sign to entry.*
- 3 Entry - *first layer in blocking out the city.*
- 4 Public - *support space for spiritual program.*
- 5 Divide - *separates the public and private program.*
- 6 Private - *spiritual program of the building.*
- 7 Departure - *transition from private back to the city.*

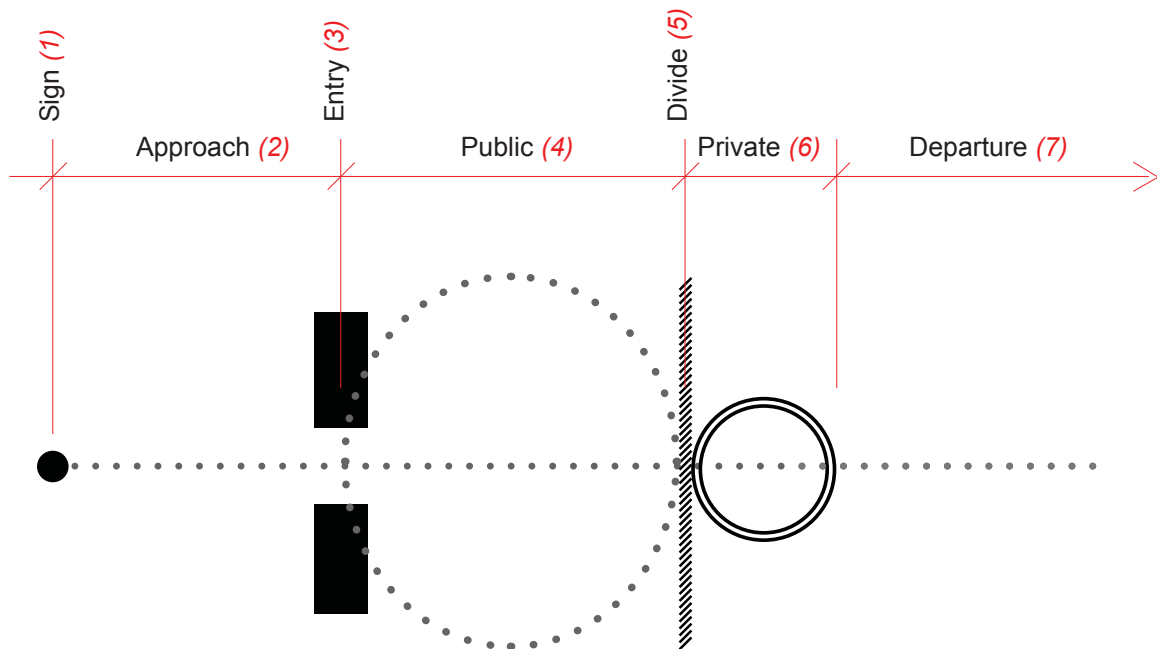
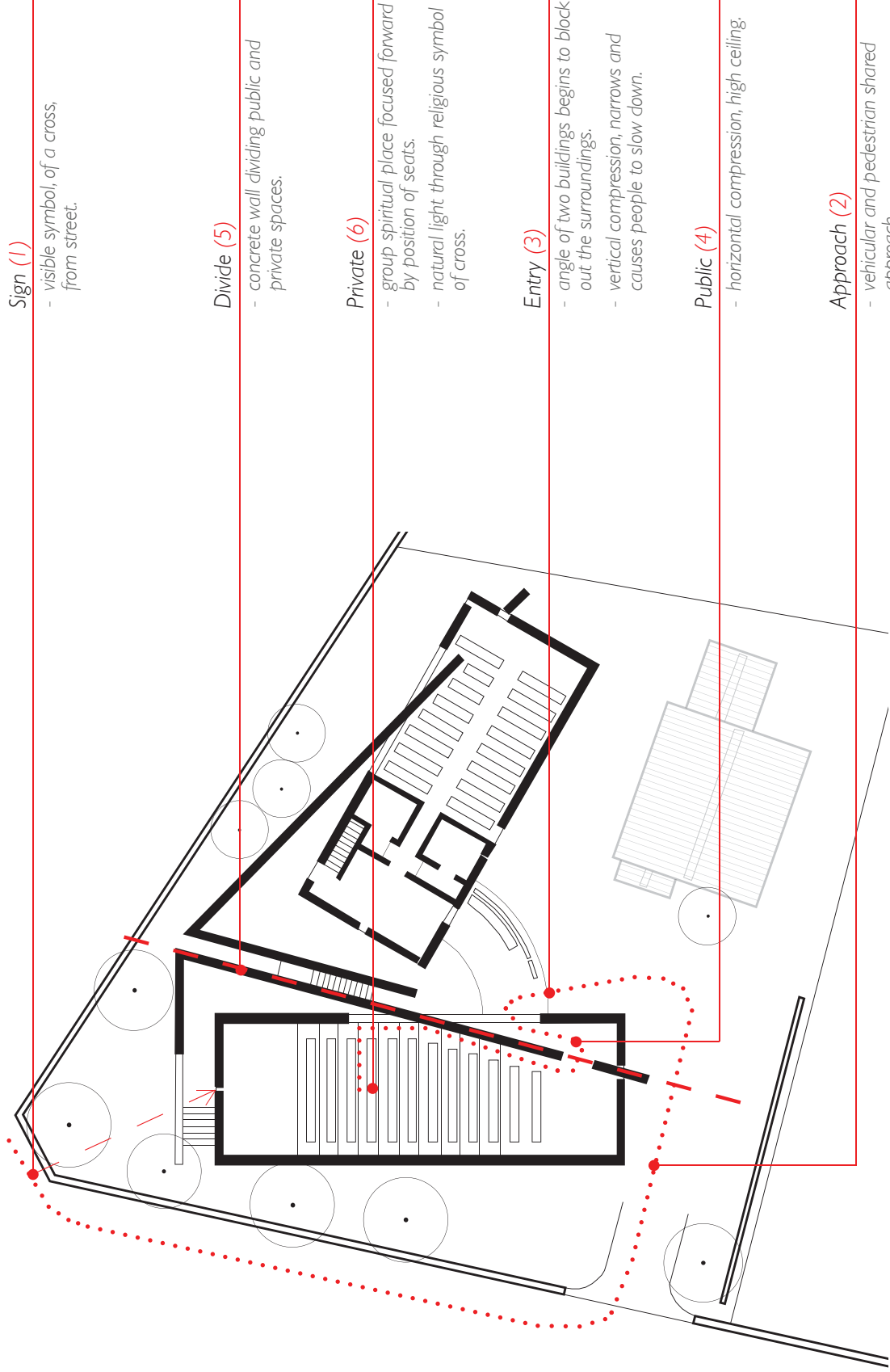
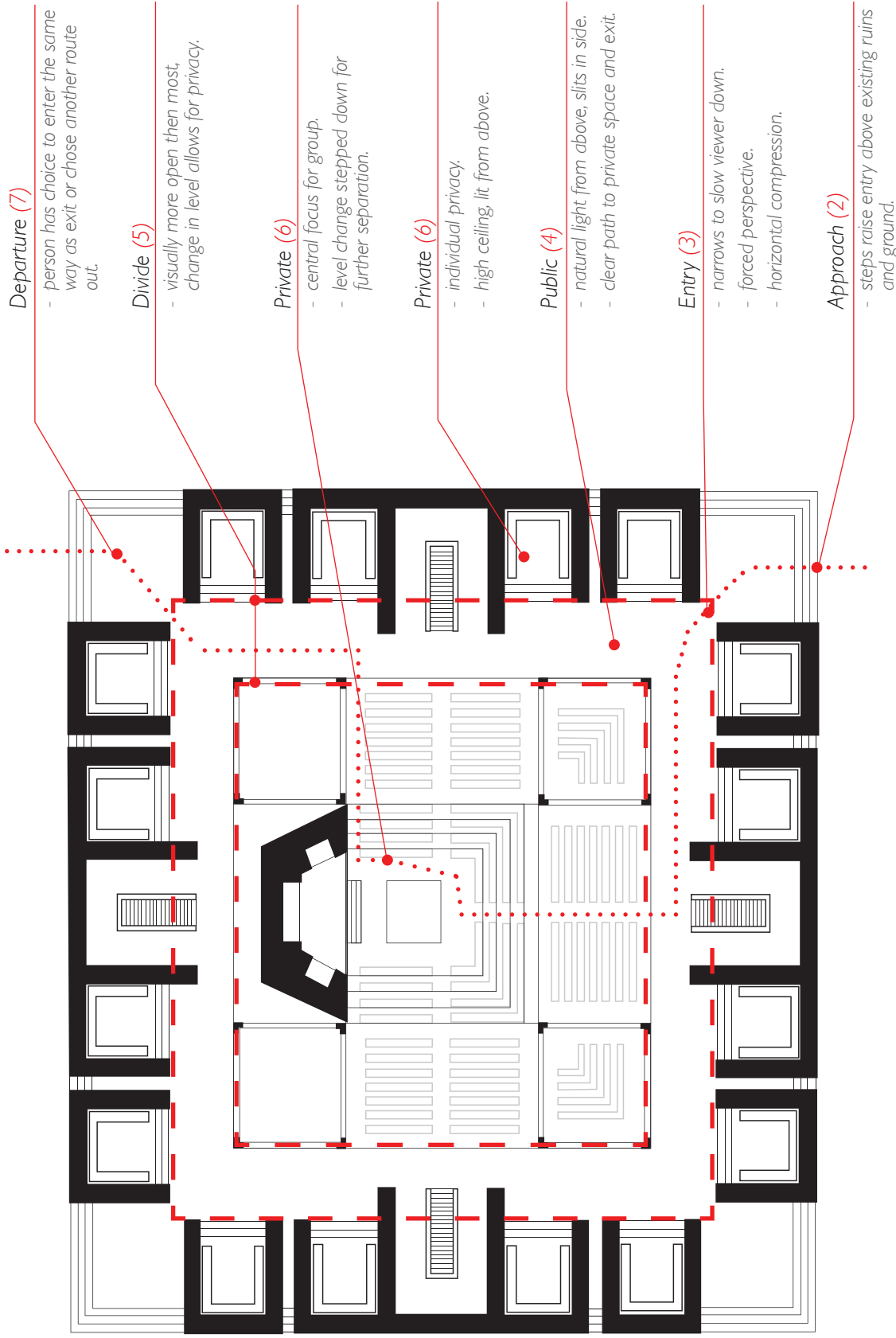


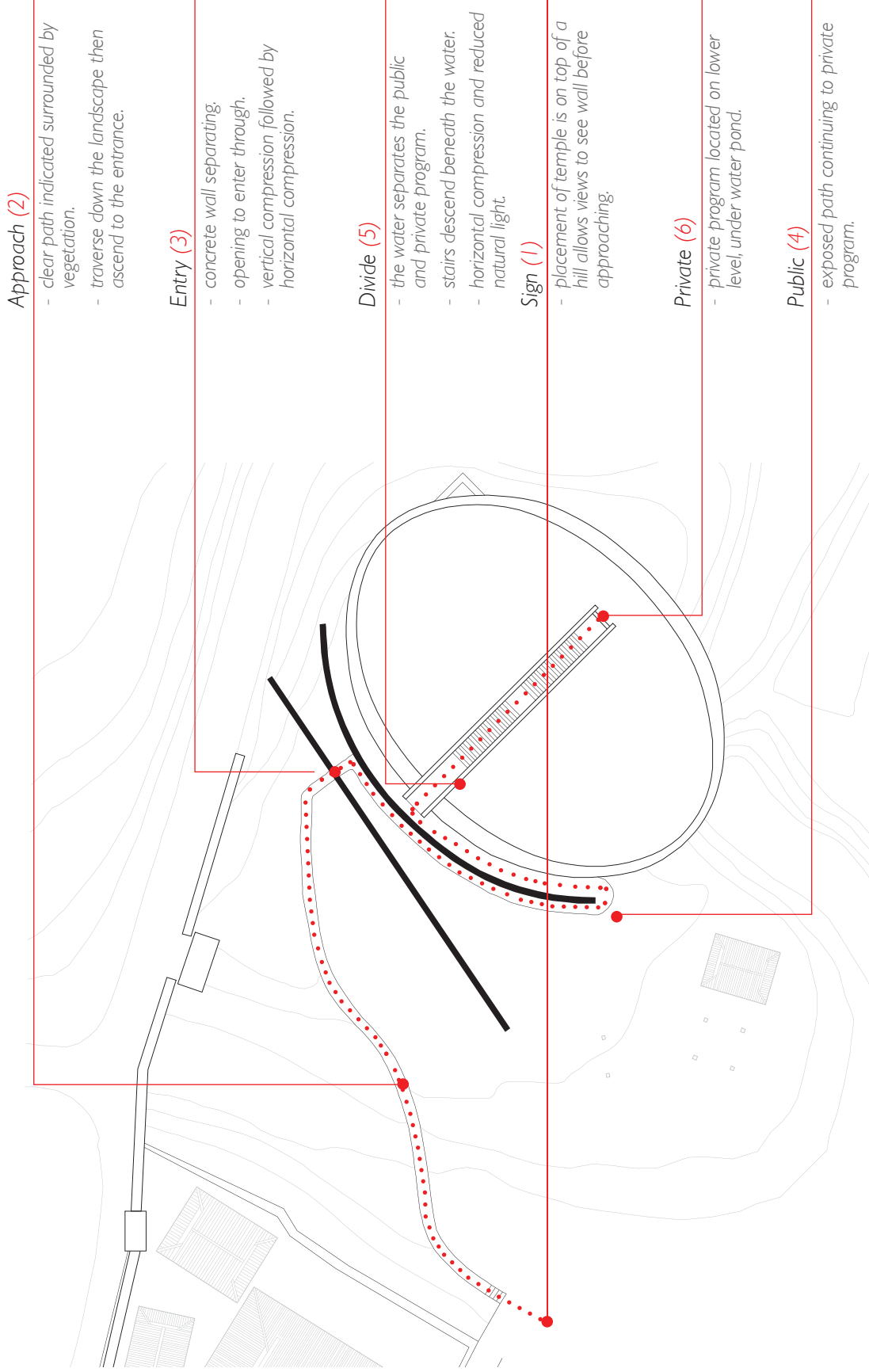
Diagram (in plan) of thresholds.



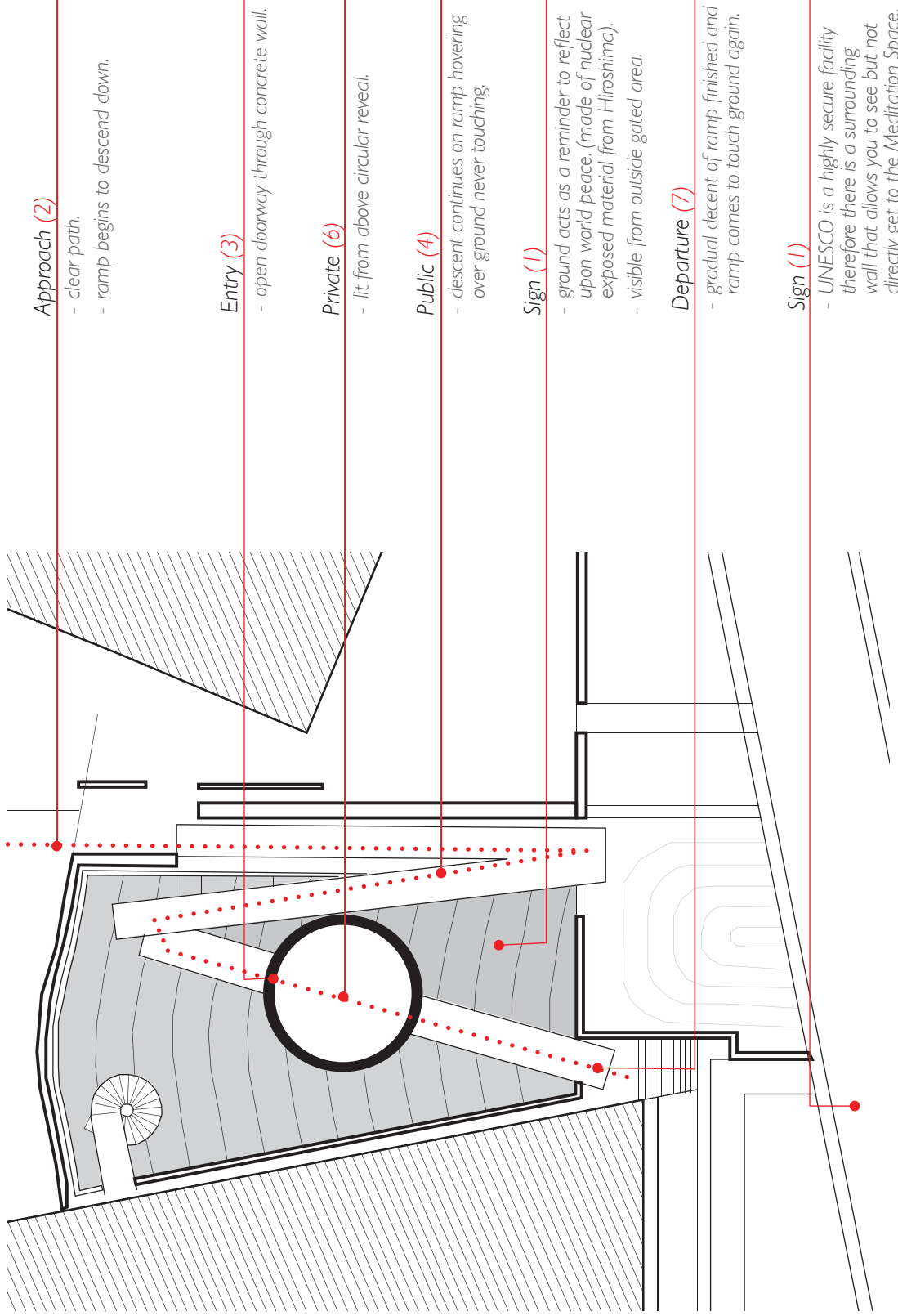
Case study identifying thresholds in plan of the Church of Light, Tadao Ando , Ibaraki, Japan, 1989 (data from Dal Co 2010, 273).



Case study identifying thresholds in plan of the unbuilt Hurva Synagogue (1st Proposal), Louis Kahn, 1968 (data from Larson 2000, 138).



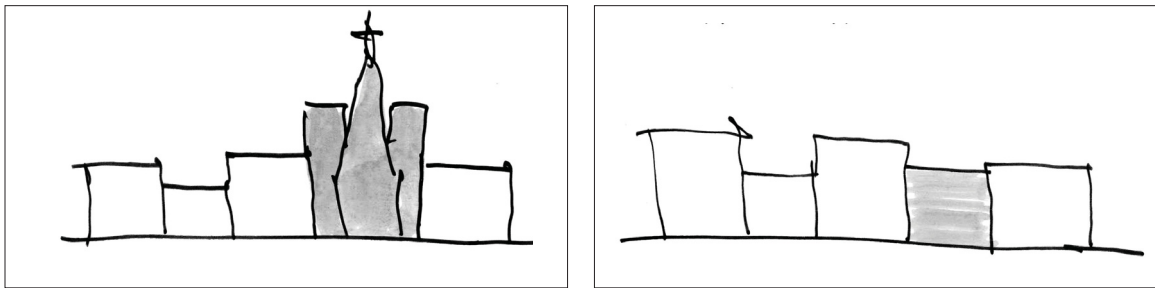
Case study identifying thresholds in plan of the Water Temple, Tadao Ando, Awaji, Hyogo, Japan, 1991 (data from Jodidio 2012, 346).



Case study identifying thresholds in plan of the Meditation Space, UNESCO, Tadao Ando, Paris, France, 1995 (data from Dal Co 2010, 167).

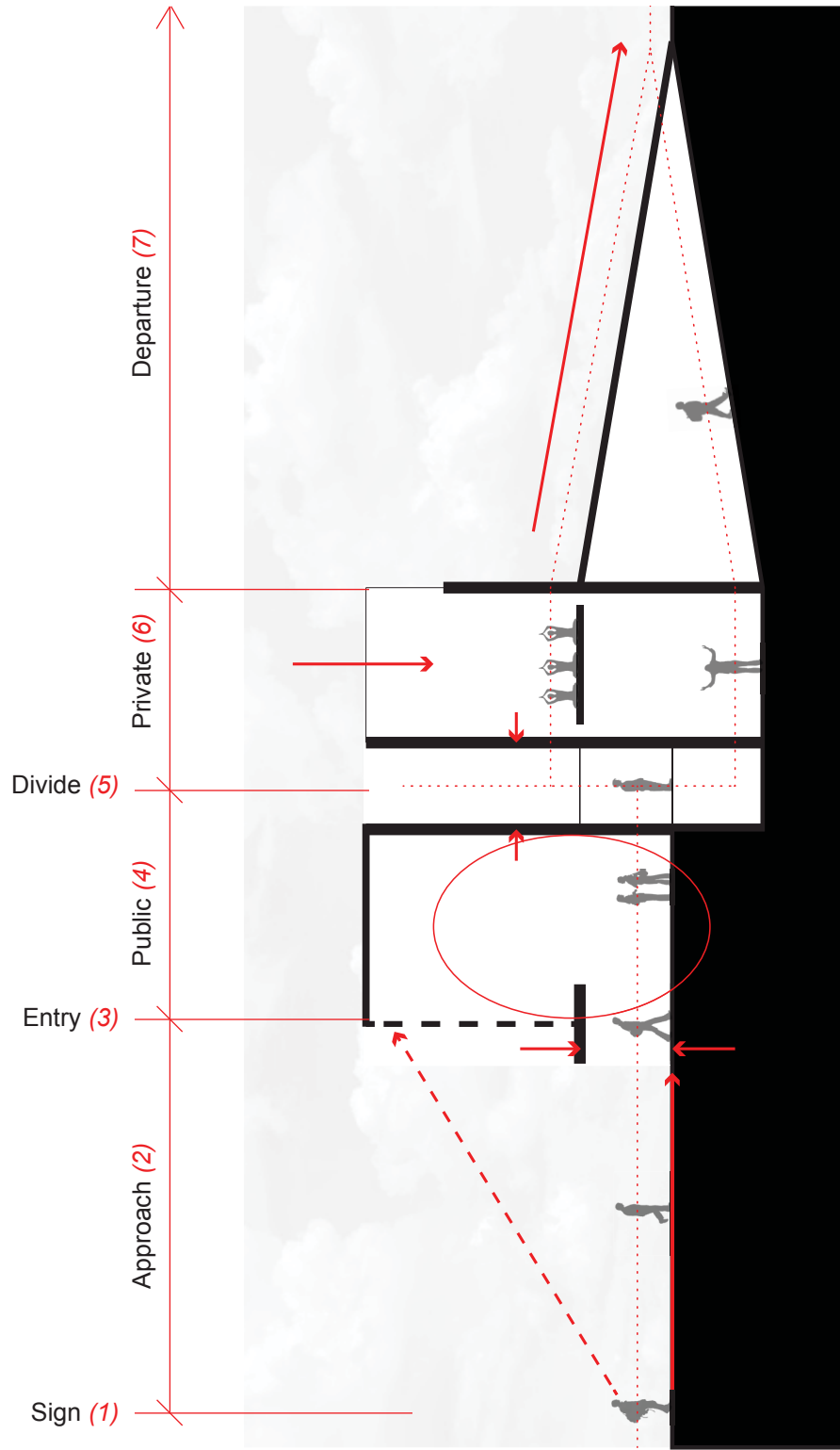
Design Principles - Refining the Language

Although program, material, and form begin to describe a spiritual space it is only together that they can create a language to describe the new infrastructure. The language of form aims to blend in with the existing, in contrast to religious structure that differentiate their form from their surroundings. The spiritual program then becomes part of our everyday lifestyle.



Sketches comparing religious structures in context to blending into the surroundings.

The language of material explores the ways in which the materials contrast and connect with each other to describe changes in program and the feeling of spaces throughout the building. The language of program has two scales; firstly, how the program is selected based on site, and secondly, how the person experiences the programmatic changes through the building. The former is best described through site analysis and can be found in the design section. The language of form, material, and program is best described through the seven thresholds established. They are described in terms of material, use of natural light, activity during each transition, and overall form of the building. The following drawing is a diagrammatic section of the descriptions of these spaces to be applied to each design.

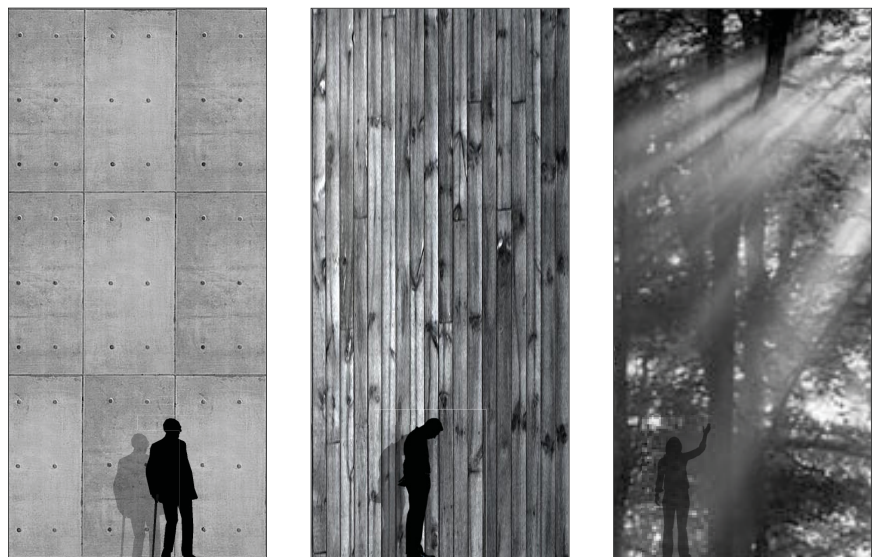


Diagrammatic section of seven thresholds.

Sign

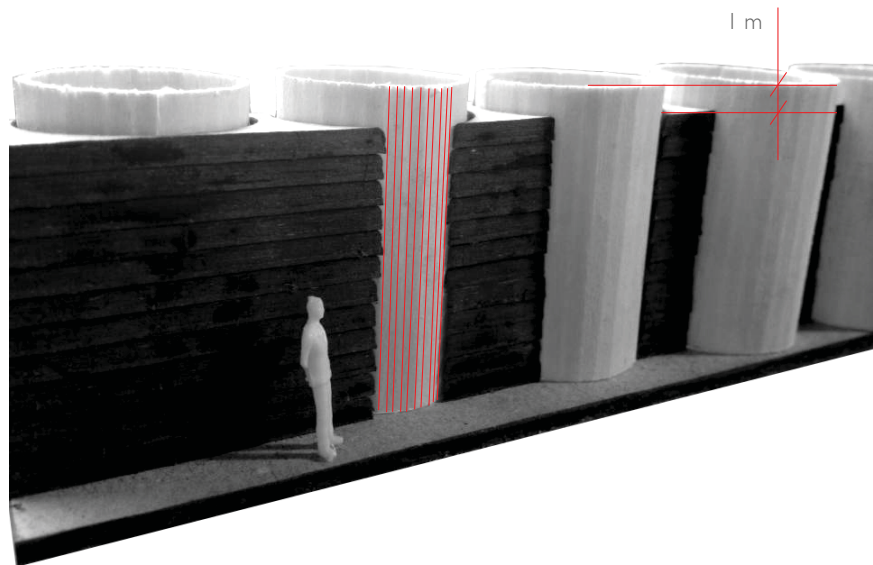
There are numerous ways in which a building can be identified. Stores or shops can be recognized by their name written out on a sign, businesses can be identified by a logo, even a business can be identified by the appearance of the building itself, i.e. material and colour. An example of this is the TD Bank, which long before you can read their logo, the green tinted glass is recognizable as a place which holds money. The golden arches of McDonald's are recognized world wide and are a sign that can be seen far off the highway informing people that there is food ahead. In Christian architecture, churches can be identified by their spire or steeple. The steeple used to be one the tallest built structure in settlements. It was a sign of safety and protection, and a place people could go to practice their faith. What should the sign of spirituality be? How can people relate it to their own idea of spirituality.

Wood, concrete, and natural light are the primary materials used in this design. The concrete material was selected in contrast to the wood. By having two materials working in contrast allows spaces and moments of change to be better defined. The concrete can give



Collage of design materials: concrete, wood, natural light.

off a more cool feeling, in contrast to the wood the concrete can be viewed as monolithic as the wood as fragmented. A cylindrical form was chosen for the spiritual program space with vertical wood cladding. The cylinders are extended above the surroundings and sit one meter above the rest of the building, exposing the form and vertical wood cladding into public view.

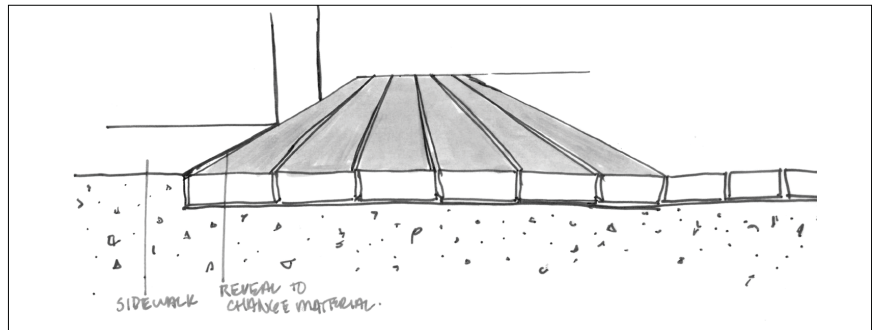
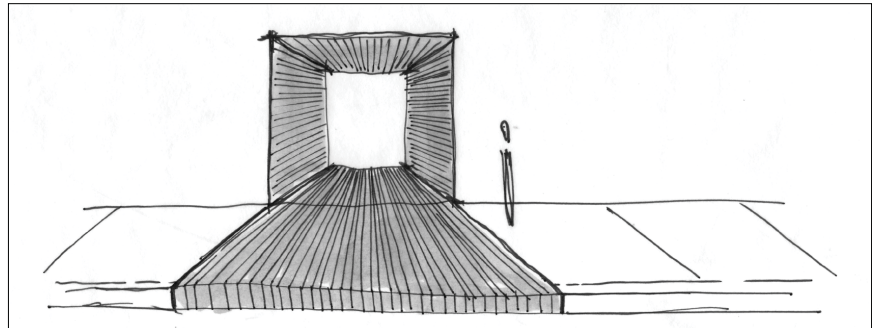


Model of vertically wood cladded cylinders with a 1 metre reveal.

Approach

Approach is how one moves from the point of recognition, sign, to the physical entrance of the building. This design for approach is about guiding the person into the building. With the sky as the height limitation and the ground below this is the last moment in the truly mundane and the first moment you can physically feel change. Directly underfoot the ground changes to a wood finish with the directionality of the wood drawing people in. It is important that the approach is a clearly identified path that fits flush into its existing conditions.

The wooden path is to be cut into the existing ground; in most cases this will be the sidewalk. The person experiences three sensory changes: sight, touch, and sound. Visually the material changes in colour and size from concrete to wood. The sense of walking on the wood has a different feel then walking on the concrete sidewalk. Even the sound of footsteps on concrete versus wood boards is different. The long, continuous wood boards extend into the building.



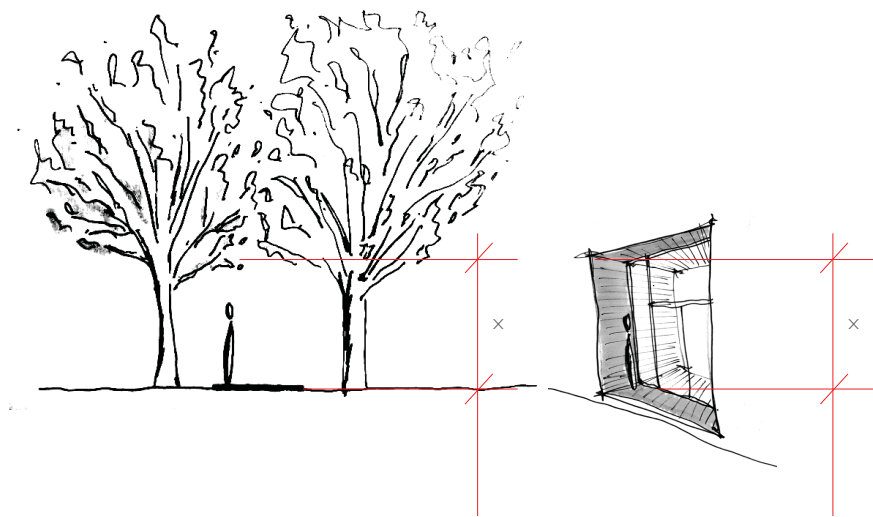
Sketches of wood flooring inset into the sidewalk and stretching into the entrance.



Collage of wood path guiding person into the entry.

Entry

Throughout this procession there are moments that could be considered milestones and moments which move between milestones as identified in the diagrammatic section. The entrance would then be considered a milestone. It is the first layer that blocks out the city. At each moment of entry identified in the case studies there is a change in verticality. Approach offers an expanse of height with no limitation but the clouds and the public space, typically has a high ceiling. The entry, which splits these two spaces, emphasizes this change through a moment of vertical compression. The ceiling drop brings this space to a more human scale. The path underfoot is still continuous from the approach path and breaks through the monolithic concrete facade or wall.

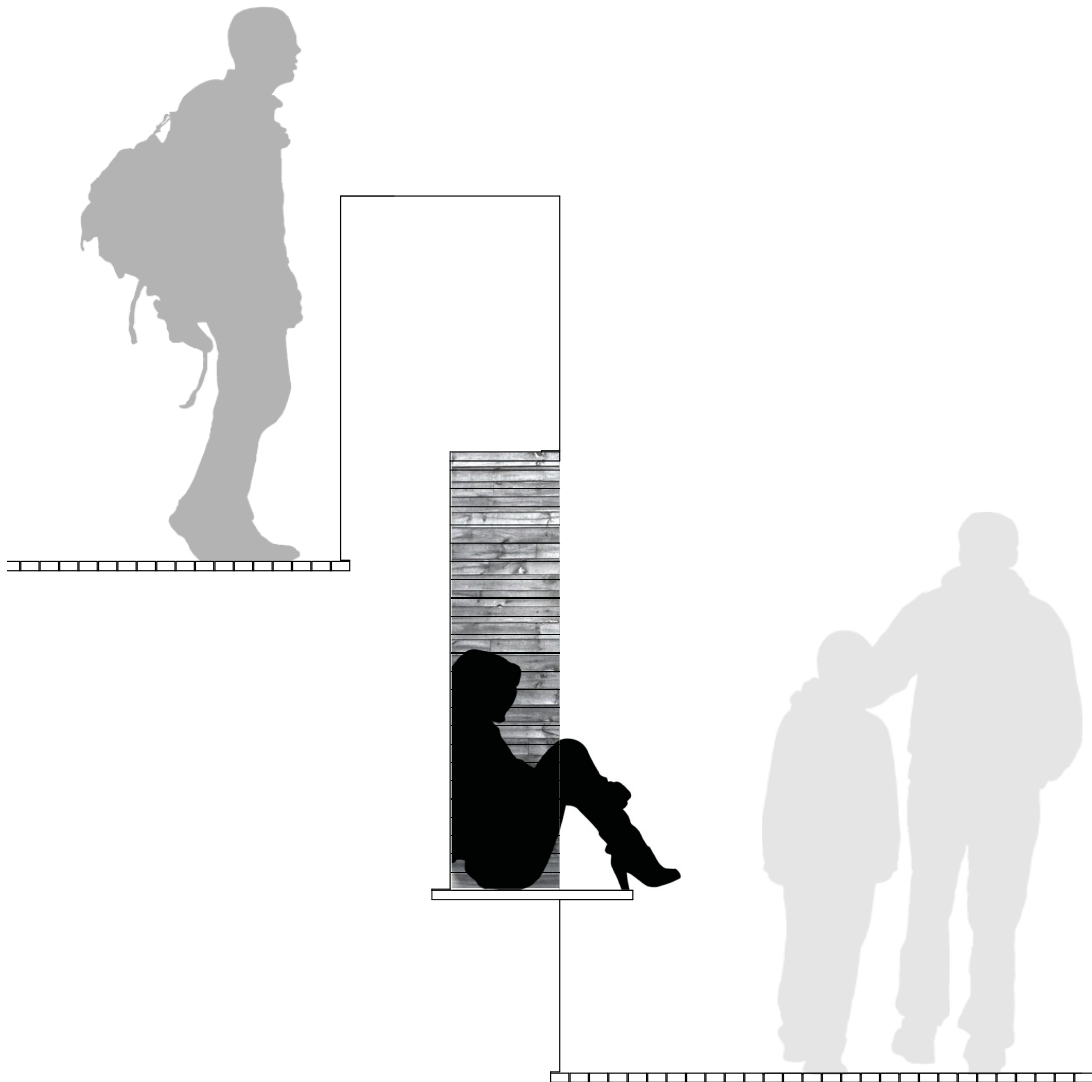


Hand sketches of vertical compression at the entrance in different context.

Public

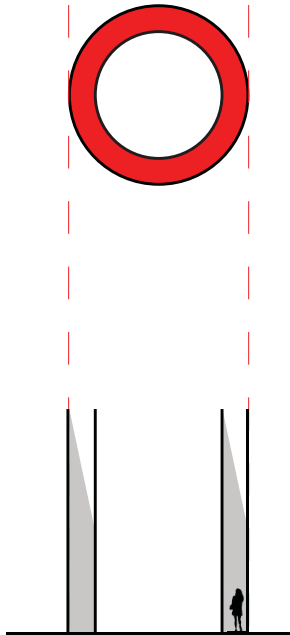
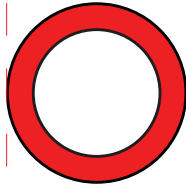
The public space of the building is directly connected to the spiritual program of the building. It is the support space for the spiritual activities. The floor consists of the same long wood board as seen in the approach and entry section. Natural light is brought in through skylights above and through the entrance. There is space for people

to sit and socialize. The walls and ceiling, much like the exterior facade, are concrete. The seats and occupied space is warmer; therefore, a wood finish is used.



Sectional drawing of idea of seating in public spaces.

Divide

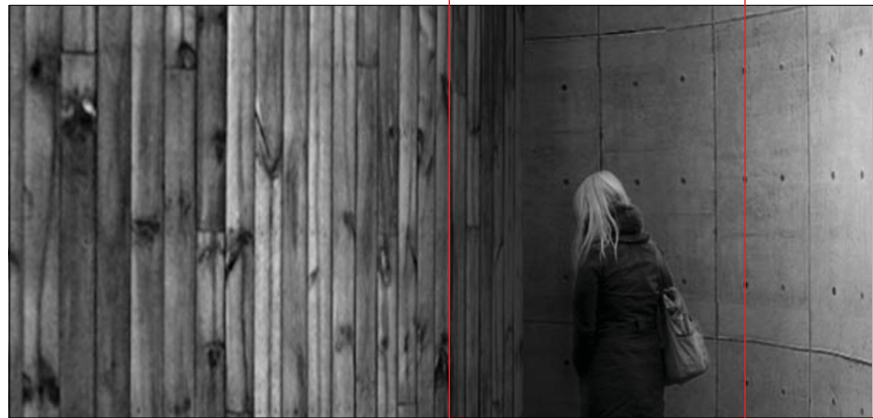


Diagrammatic plan and section of the divide portion of the building.

Similar to the entry, the divide is another milestone which separates the public space of the building from the private, spiritual spaces. As the entry identifies a defining change in verticality; the divide explores a change in horizontality. The space is narrow and forces the person to slow down. The width is more comfortable for one person forcing conversation to stop. With high walls on either side and natural light being the only source of light entering from a skylight above there is a change in atmosphere. There is a very slight but significant change in the ground. To emphasize this, the floor drops 1/8 inch and the materiality changes to polished concrete.

Wood

Concrete

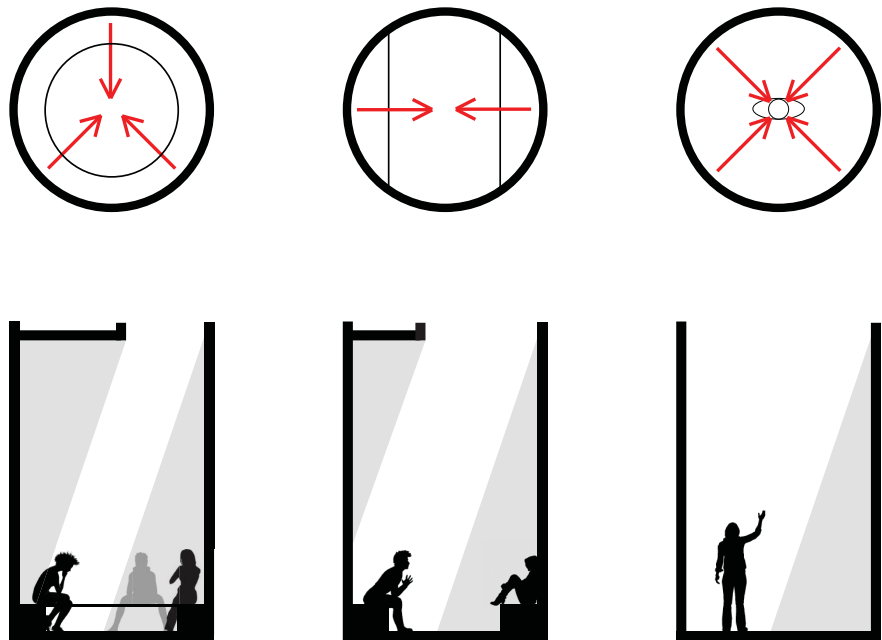


Collage illustrating change in materials, outer circle concrete and inner circle wood.

Private

The private portion of the building is where the spiritual program occurs. Depending on the site this could be anything from meditation to group therapy to musical worship. The circular form in plan was eventually decided upon as it brings the focus inward, much like individual spirituality should reflect internally. When in a group setting the circle is the natural formation of sitting. Everyone is able

to see one another and no one person is more important, everyone is on equal ground. The pure geometric form is structurally made of concrete and finished both externally and internally by vertical wood cladding. Natural light is an important part of this experience, creating bright welcoming spaces. The natural light is brought in through a glass skylight. The actual size of the cylinder varies based on program and the seating layout depends on the use as well.



Diagrammatic plans and sections of varying spiritual program in the circular formation.

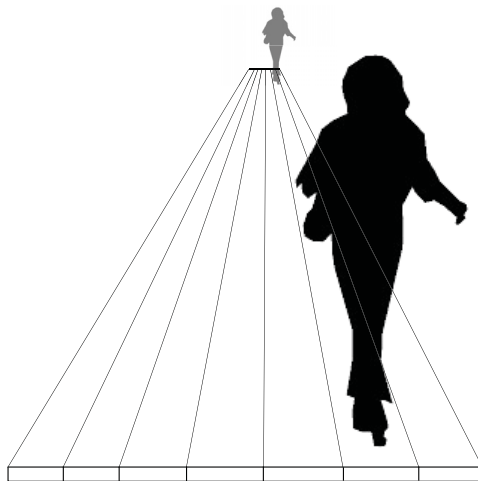
This space is absolutely crucial in this design as it is the final destination. The floor in this case remains polished concrete; however it is brought back up the 1/8" that was dropped in divide. The entry to these circular rooms is through a tall, slender door. Similar to the horizontal compression of the divide, the door is meant to feel significant and unlike the rest of the doors in the building. It is another reminder to the person of the significance of the place they are about to enter. The door is a pocket sliding door that is finished with the same vertical wood cladding as the cylinder. The seating in the private space varies depending on the program but it is continuous in materiality -- wood, for built-in seating.

Departure

Through the case studies it became evident that leaving the spiritual place, in some cases, was just as significant as approaching it. In Tadao Ando's Meditation Space there is a clear path to be followed without requiring the person to backtrack. It is a one way continuous ramp that takes you through the space. In Ando's Water Temple, though it does appear you retrace your steps to leave the spiritual place, the experience itself is much different.

The divide process, walking down the stairs, through the water, focuses on looking downward, moving into the darkness. This could be a parallel to the feeling before prayer or meditation. Exiting the temple frames a very different view, where the person emerges from the darkness into the light. The focus on this path is completely up and on the sky. If the parallel continues, this may be significant of the lifted and positive feeling after a spiritual experience.

Exiting spiritual buildings in the city is slightly different, there is a much more abrupt change back to city life. The designs require a different exit available rather than exiting back through the entrance. The ground beneath their feet again changes to long horizontal wood board that pull the user back to the city. Gradually the city comes back into view.



Drawing of gradual departure from the spiritual space.

The Forum for Architecture, Culture, and Spirituality (ACS) is an organization comprised of a wide range of disciplines and people, from architecture and performing arts to social work and neuroscience, from different religions and faiths, spanning 35 countries with nearly 300 members, both academic and professionals. As a group, ACS, contributes to the discussions of spirituality and meaning in the built environment. ACS suggests that “in the act of creating spiritual places -- architecture can be used as a media of spiritual development” (Barrie, Bermudez, Geva, and Teal 2007).

This is the intent of this thesis -- to explore this new spiritual infrastructure through the development of an architecture language addressing site, program, and form.

CHAPTER 2: DESIGN

Identifying Site

As this thesis is a study of a new building typology it can then be applied to any city. For the purpose of this thesis the City of Moncton was selected to apply the new spiritual infrastructure. (This selection was made mainly due to the familiarity of the city to the author.)

Moncton is one of the largest cities in the Maritimes; geographically, central in the Maritimes, it is known as the 'Hub of the Maritimes'. The City of Moncton has a population of about 70,000 people (Statistics Canada 2014). Greater Moncton is made up of three cities: Dieppe (mainly French speaking), Riverview (mainly English speaking), and Moncton (bilingual), together these three cities make up a population of approximately 140,000 (Statistics Canada 2014). The terrain is fairly flat within the downtown with the Bay of Fundy wrapping through the three cities. This portion of the Bay of Fundy is known as the Petitcodiac River and is composed of mud flats, marshland, tall grass, and a tourist attracting tidal bore.



Aerial photo of the City of Moncton (Bing 2014).

Identifying City Zones

Site selection first involved the identification of the various zones that make up the city: residential (suburbs), residential (city dwelling), commercial, downtown commercial, retail (box stores), retail (shopping malls), institutional (schools and universities), industrial, public parks, and walking trails. Six zones were identified as potential sites for spiritual development. These zones were selected based on their variation from one another and ability to push the design of this thesis.

- 1 Big Box Store Site
- 2 Institutional (University) Site
- 3 Urban Downtown Site
- 4 Drive-Thru (Tim Hortons) Site
- 5 Suburban Residential Site
- 6 Nature Trail Site



City of Moncton with six city zones identified for spiritual design (data from City of Moncton 2013).

Site Analyses

The site context is an important part of the design to allow the buildings to fit into the existing city fabric. A study of each site is necessary before the design can occur. Prior to determining any design principles, initial conceptual collages were created to explore this idea of spiritual infrastructure. Although they are not a reflection of the finish design, these collages show how this new program can begin to occupy a place in these zones.

Big Box Store Site

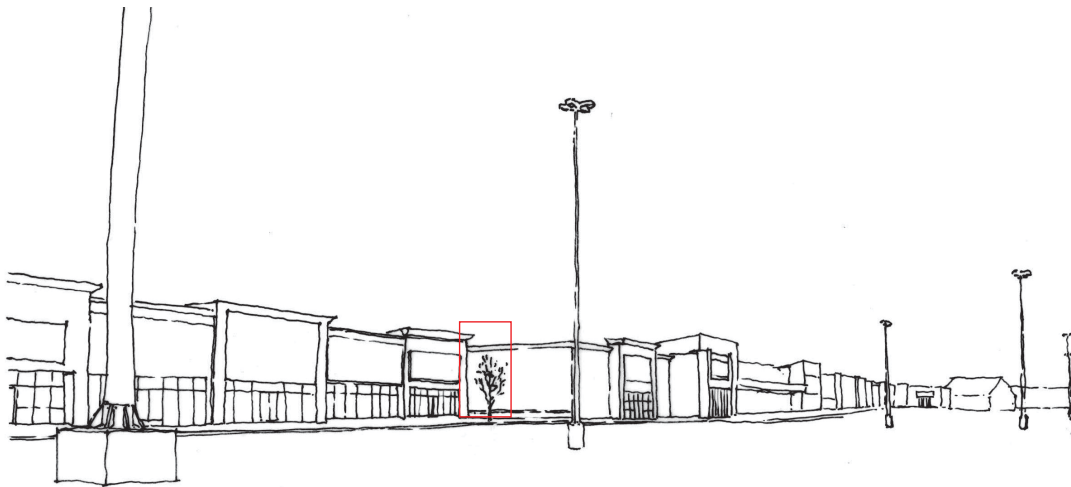
There are many issues surrounding the big box store, including: distance located outside the city, killing the local business, vast amount of parking space, shoe box form replication, no sense of identity. For these reasons and more the box store is perhaps not an ideal site; however, the reason it was included in the study is it's ability to push the design boundaries, which address the issues of an inevitable part of our cities. How can this site benefit from the practice of spirituality? Or, how can spirituality enhance the box store experience?



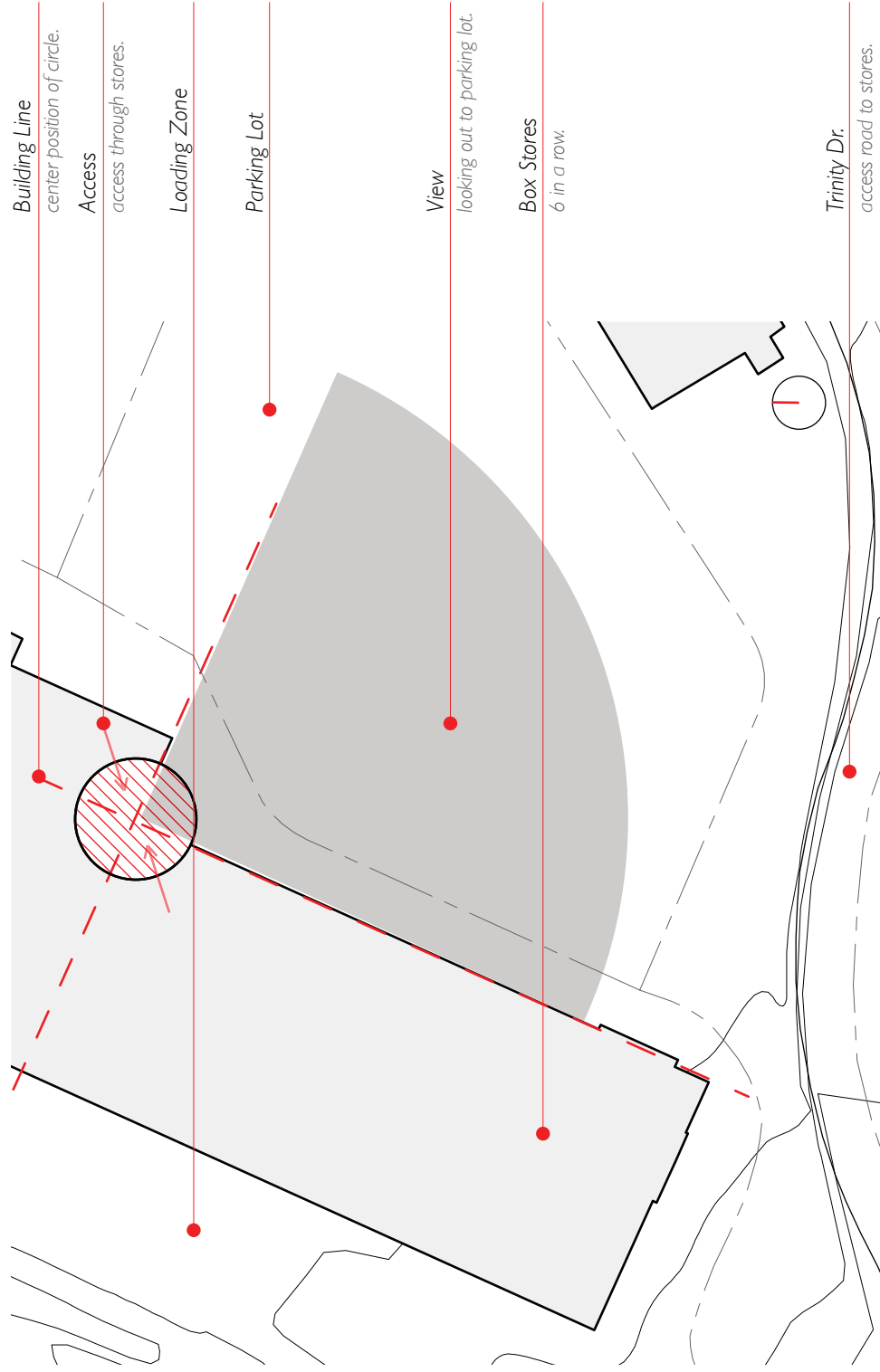
Collage of conceptual spiritual big box store.



Big box store zone existing conditions and context (scale 1:5000).



Big box store existing site hand sketch.



Big box store site analysis (scale 1:1000).

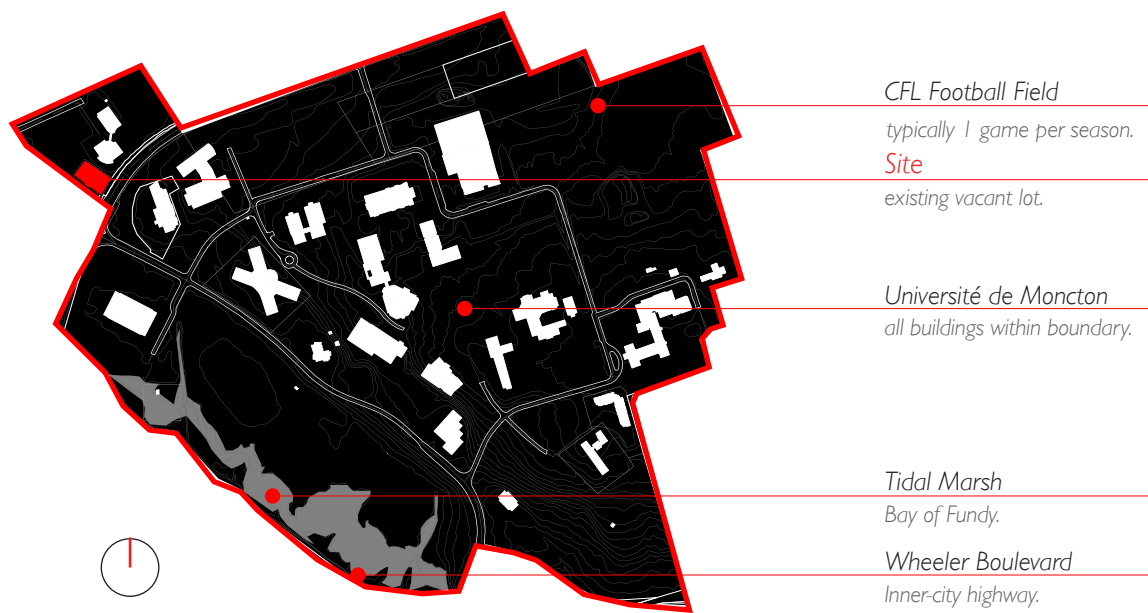
Institutional (University) Site

The institutional zone offers a unique opportunity for spiritual development, in a larger group. University campuses can sometimes operate as a city within a city as they are fairly self-sufficient and students rarely need to leave. Universities are filled with cultural diversity which includes various practices of spirituality. This is why university campuses are some of the first places to begin to see multi-faith rooms or spaces. Programmatically, a larger space of gathering where groups can meet and practice their religion fits into this site. This would be a larger scale of program but has the most potential to be successful here. Few university students own cars; therefore having a place on campus where students are able to practice their own spirituality would be beneficial.

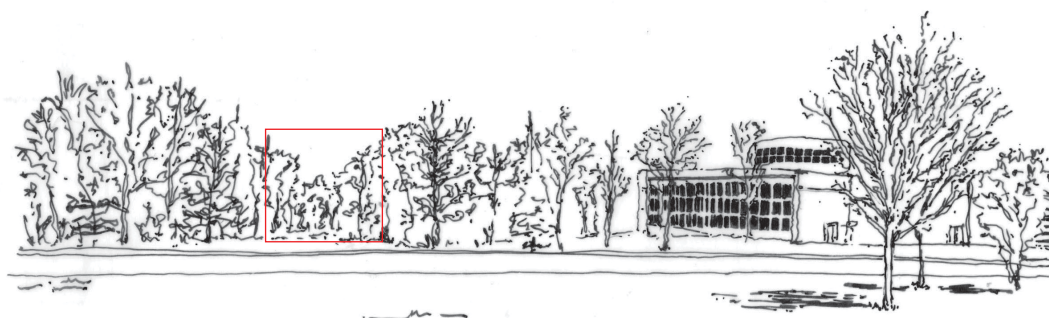


Collage of conceptual spiritual university campus building.

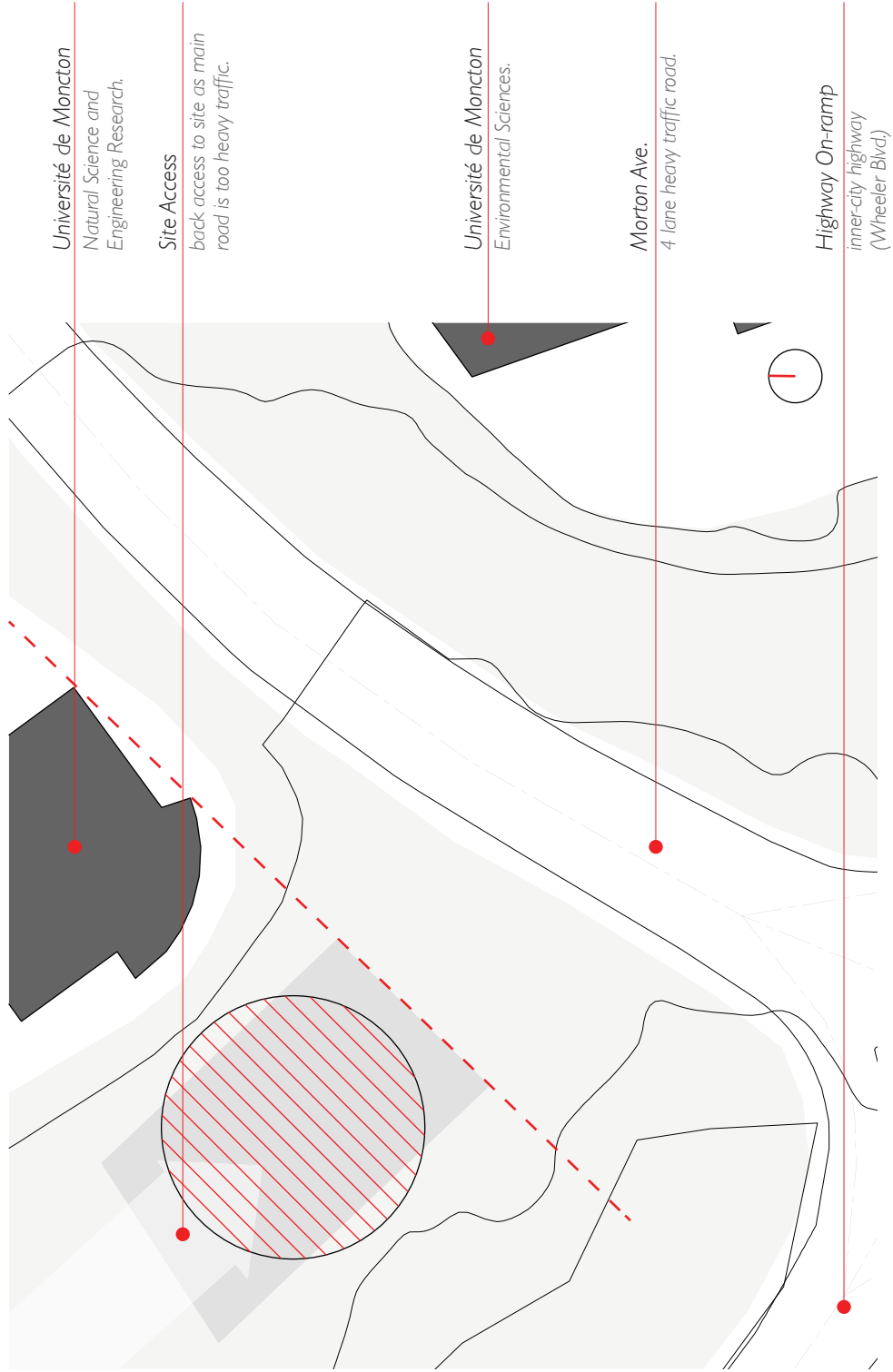
The main issue with this University site, in Moncton, is that it is difficult to work into the existing context. There is not a strong consistency amongst the Université de Moncton buildings. This is one of the reasons why this site was not explored into the design phase as it is potentially not a typical case and may be a clearer study in another city.



University zone existing conditions and context (scale 1:5000).



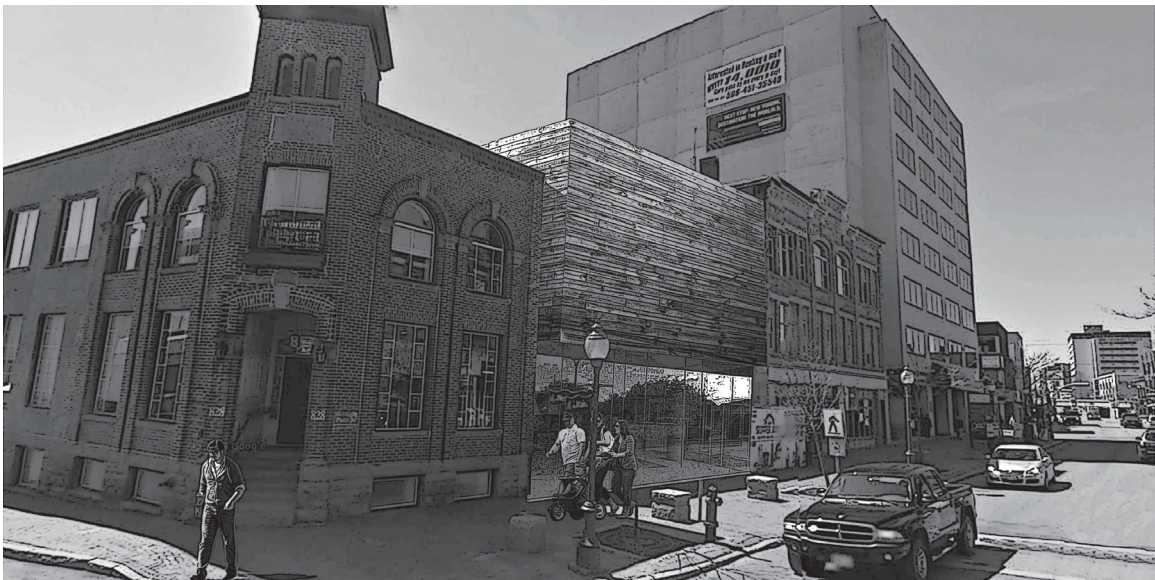
University existing site hand sketch.



University campus site analysis (scale 1:1000).

Urban Downtown Site

The downtown site is perhaps the most practical intervention as it is complete with mixed use programs. Downtowns contain rich building histories and layerings of urban context to work with. With numerous surrounding buildings there becomes a clear set of rules to 'blend' the spiritual building into the everyday life of the downtown dweller. The site selected in the City of Moncton is currently a vacant lot in the core of the downtown with an abundance of surrounding program variance: gym, bank, law firm, offices, theatre, restaurants, farmer's market, bars, and a few residential apartments all within a one block radius.



Collage of conceptual spiritual downtown building.

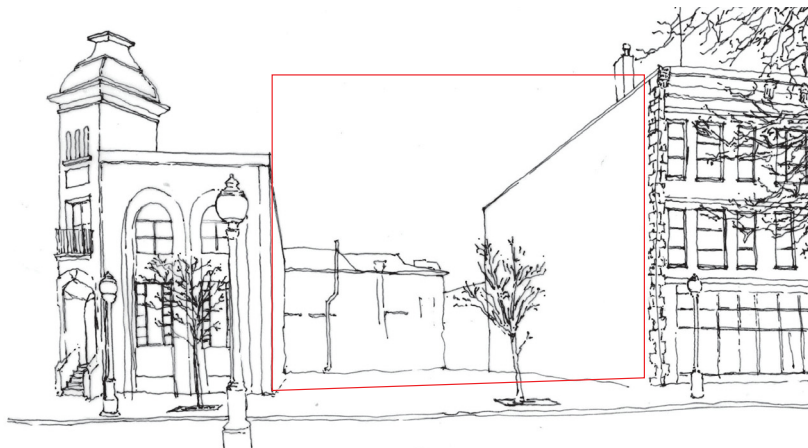
Due to the diversity of programs on the site three scales of spiritual program were introduced to the downtown: small group (group therapy/ support group meetings), one on one (counseling), and individual (meditation/ prayer).

Moncton Free Meeting House
part of Moncton Museum today.

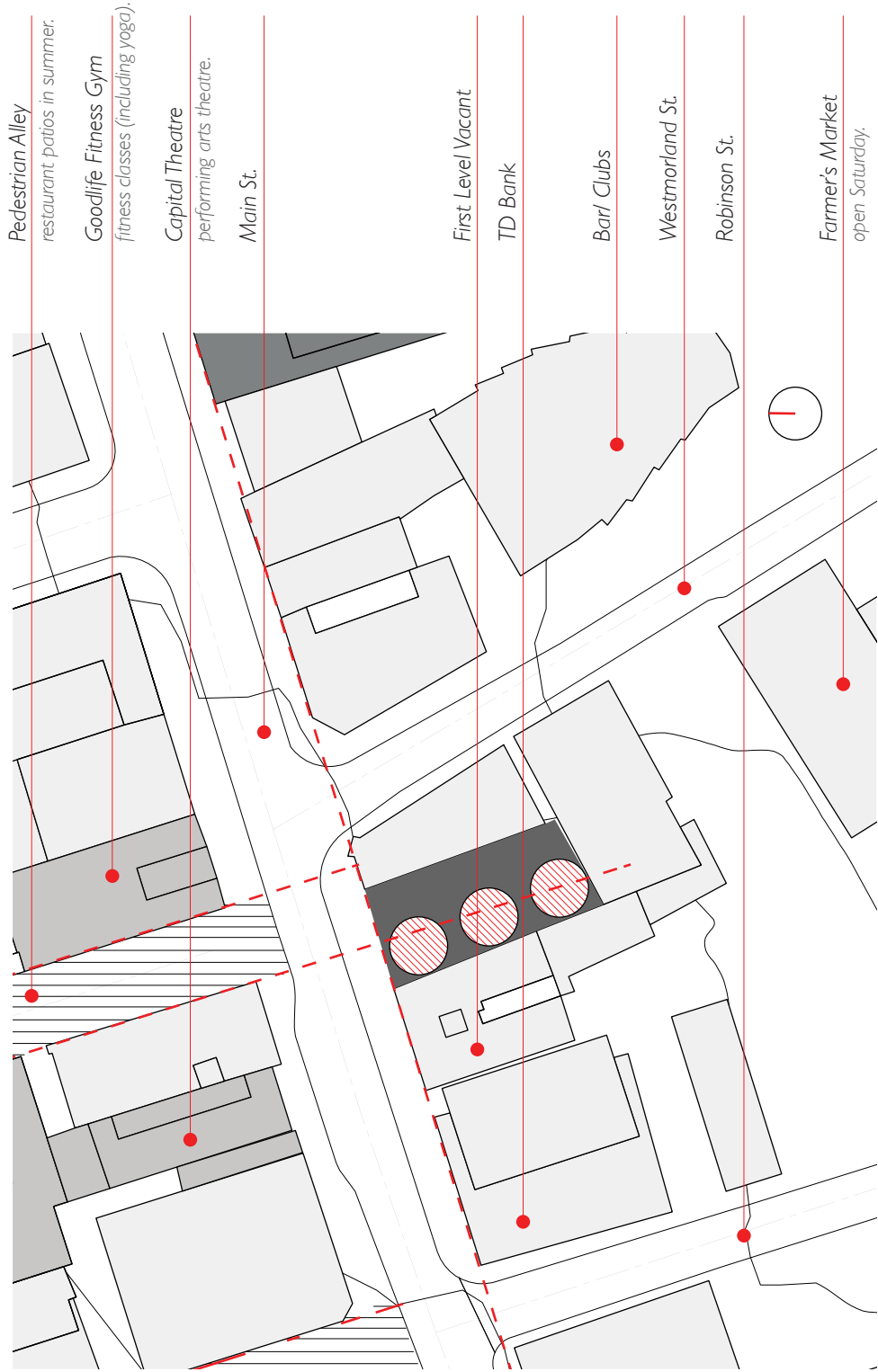
Walking Trails
Petitcodiac River.



University zone existing conditions and context (scale 1:5000).



University existing site hand sketch.



Downtown site analysis (scale 1:1000).

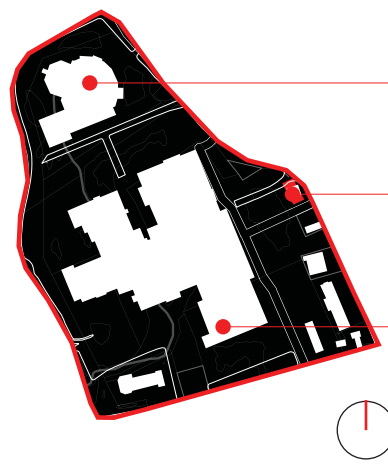
Drive Thru (Tim Hortons) Site

Tim Hortons itself has almost become its own type of infrastructure in the city -- it is part of the Canadian culture. To some, Tim Hortons may already be considered a spiritual place. People have rituals each morning to get their large double-double. It is also a place you meet with others and just like a sound proof barrier can add a layer of privacy, high noise levels can essentially do the same. Conversations begin to disappear amongst the constant hum of talking.

The program for this site adds one more layer of privacy. Tim Hortons does excel at bringing people together, so this program builds upon this success. The new space would be a place groups could book and meet together privately for group therapy (i.e. addiction recovery) or support groups (i.e. expecting mothers).



Collage of conceptual spiritual Tim Hortons site.



Crystal Palace
indoor amusement park, hotel, and movie theatre.

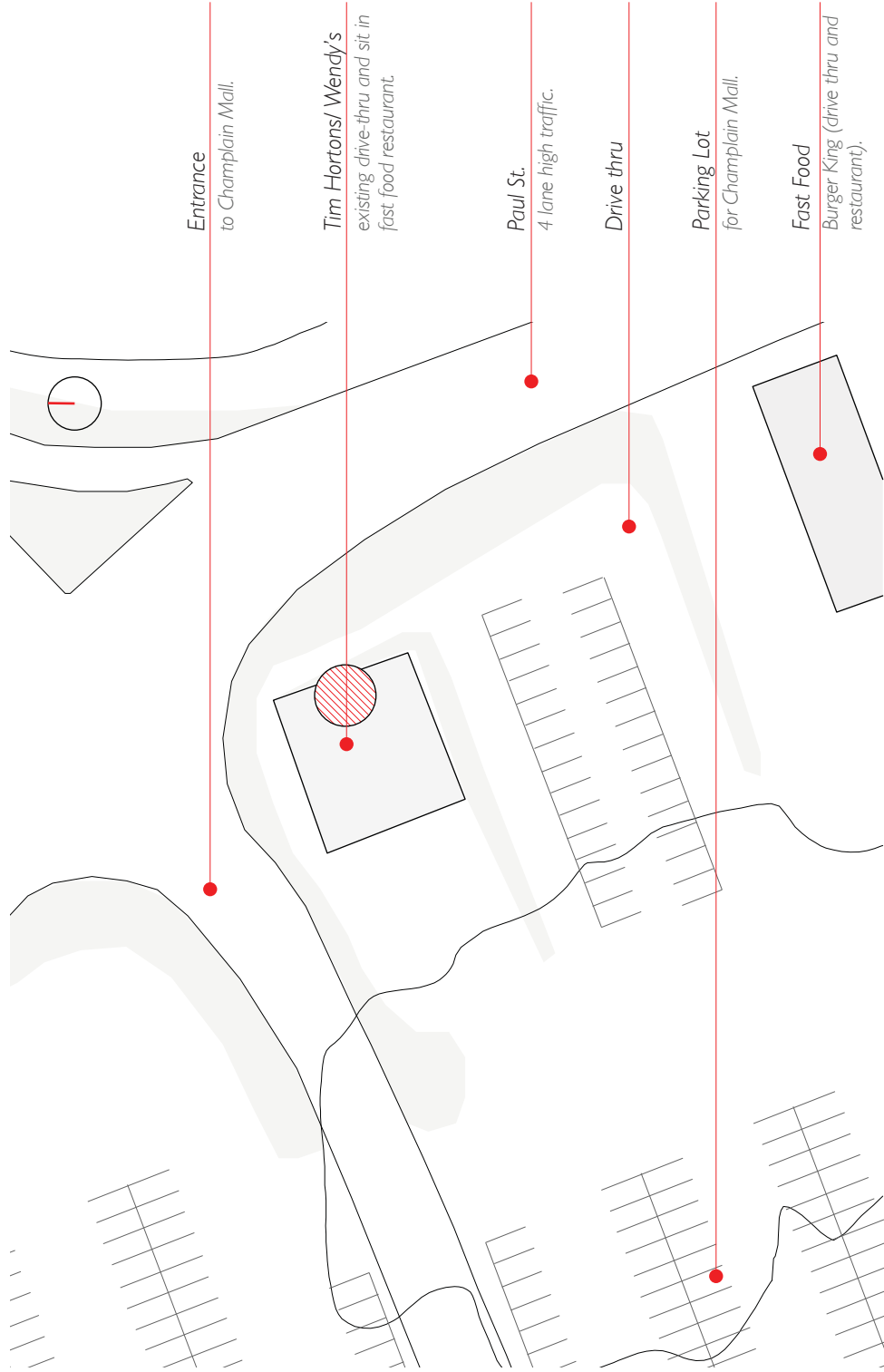
Site
Moncton has most Tim Hortons per capita. Tim's located in shopping mall parking lot.

Champlain Place
shopping mall.

Tim Hortons existing conditions and context (scale 1:5000).



Tim Hortons existing site hand sketch.



Tim Hortons site analysis (scale 1:1000).

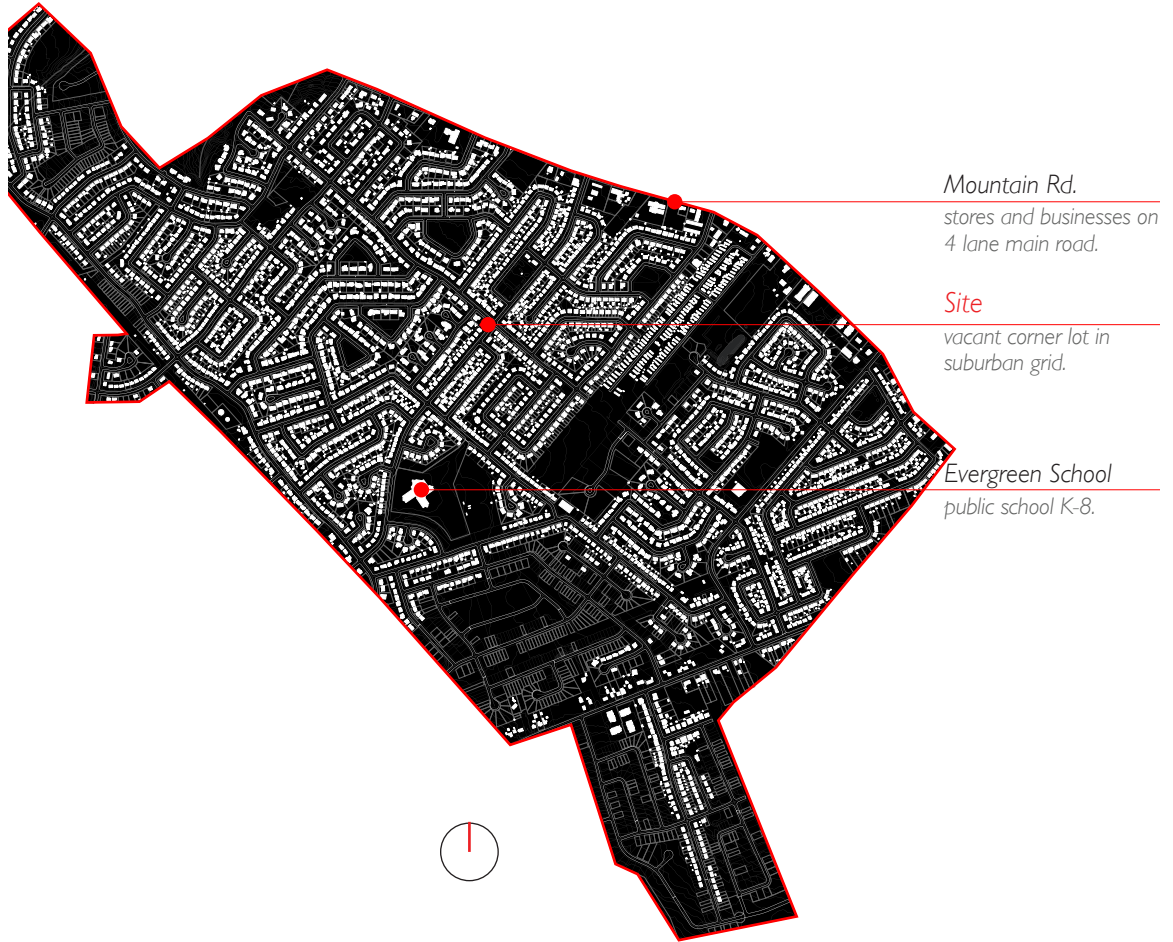
Suburban Residential Site

Many of Moncton's residents reside in the suburbs. Introducing a spiritual program here becomes similar to a park, in that it is available to the public in a strictly private area. In this case, the building must stand out slightly from the context to be recognizable as a public building that all are welcome to use.

The purpose of this spiritual building in the suburbs would be for a more community based spirituality -- a place where community members meet for support groups and offer a place for couple or family counselling.



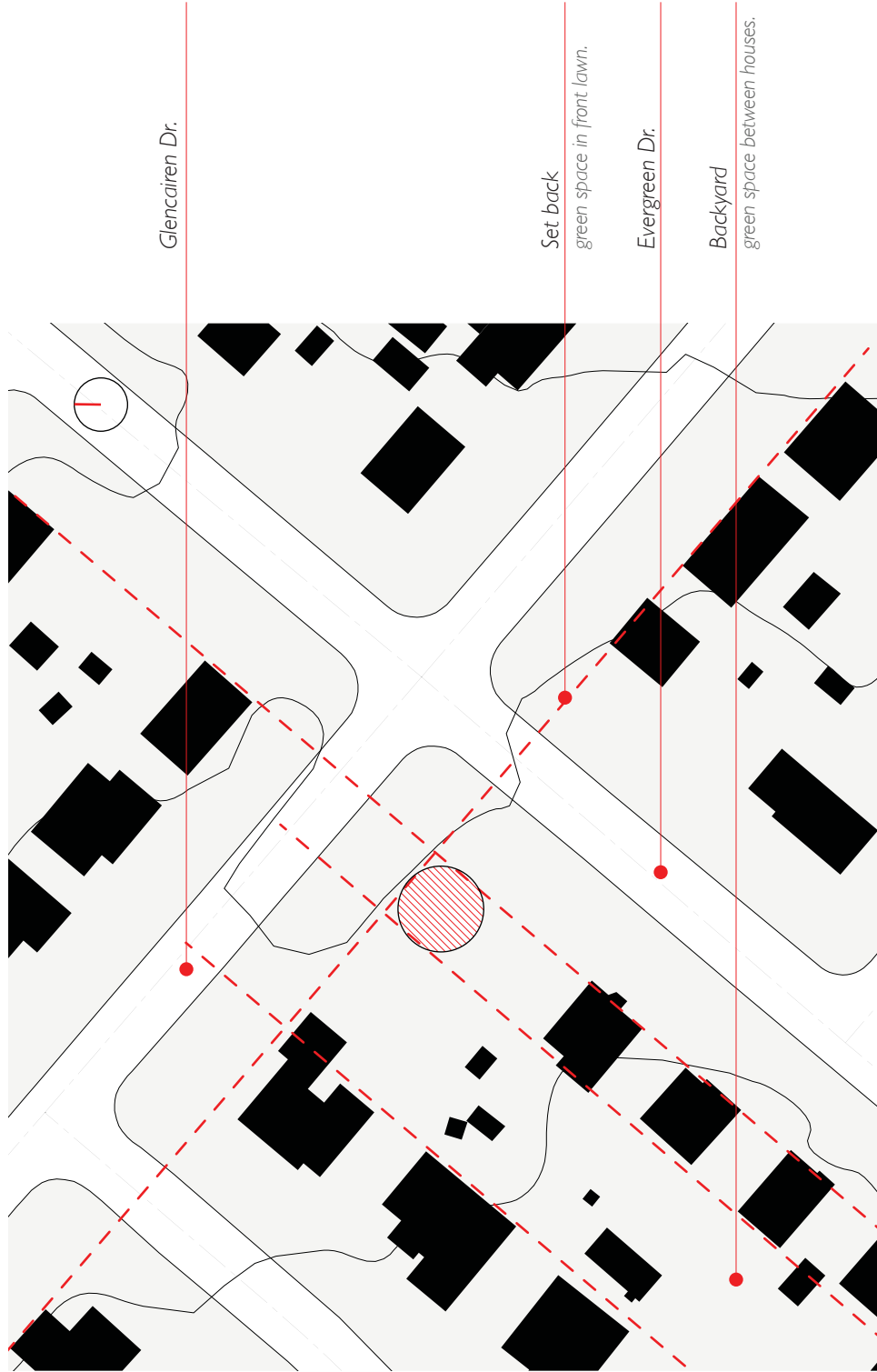
Collage of conceptual spiritual suburban building.



Suburbs existing conditions and context (scale 1:10000).



Suburbs existing site hand sketch.



Suburbs site analysis (scale 1:1000).

Trail Nature Site

The nature site may be considered the most advantageous location for spirituality. The site's direct connection with nature makes this site ideal. Moncton's waterfront trail is in a prime location as it is directly adjacent to the downtown core and runs along the Petitcodiac River. The site selected for the design of this thesis is near an access point to the trail, parallel to a vacant lot (which could be used for parking).

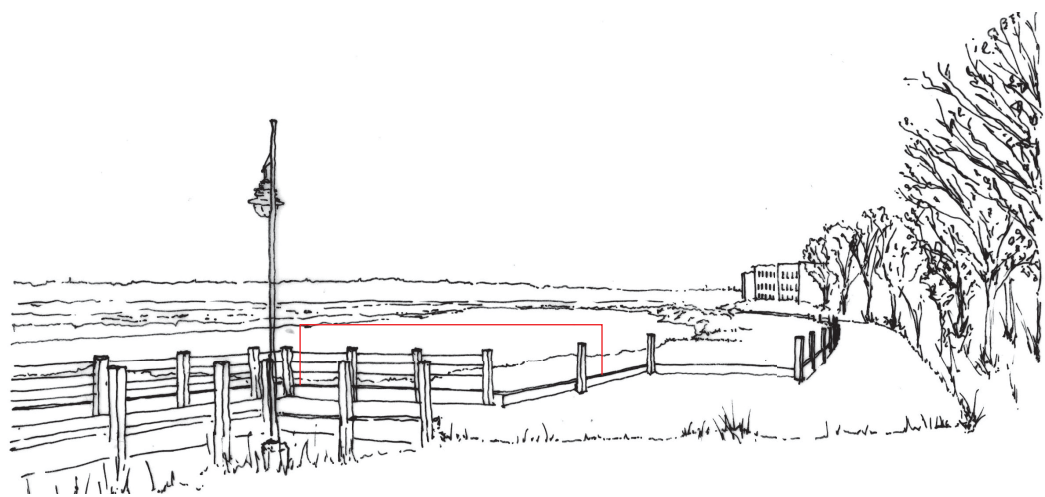
Initially, the program of this site focused on the individual trail walker, offering them a place to meditate in nature while being sheltered from the public and weather. Through pushing the program it became clear that there was much more to take advantage of in this nature site, therefore, in addition to the meditation space, a yoga studio was introduced. Yoga is a popular group spiritual activity today and offering people a place that brings it together with nature is extremely beneficial to the user.



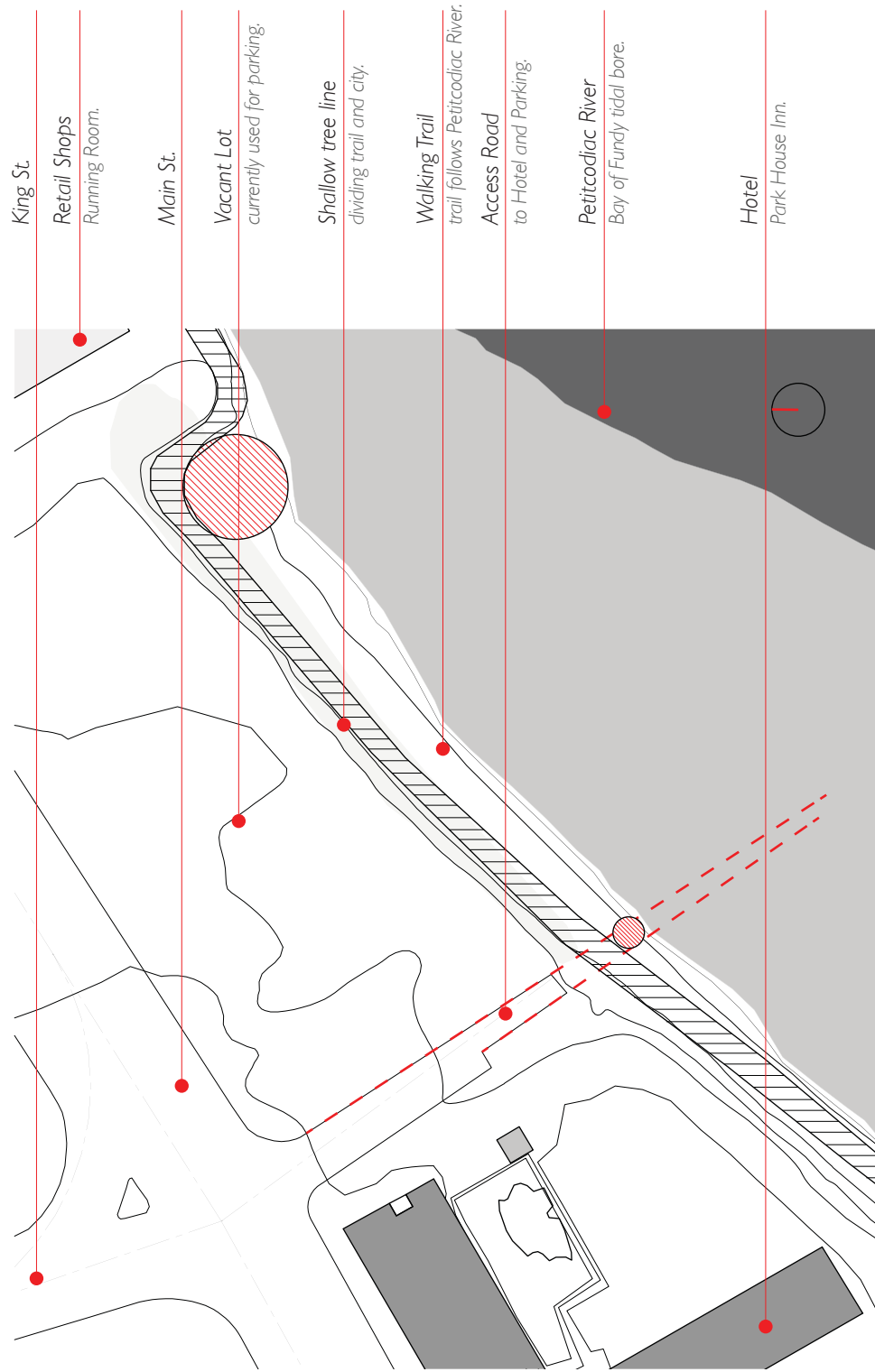
Collage of conceptual spiritual trail building.



Trail existing conditions and context (scale 1:10000).



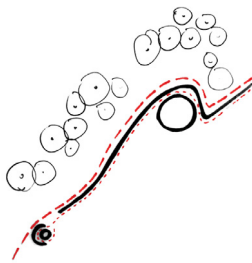
Trail existing site hand sketch.



Trail site analysis (scale 1:1000).

Building Design

Three out of the six zones were selected for further design development due to their range in scale and diversity of program. The trail, the downtown, and the box store sites contain the greatest diversity in context to applying the design principles. The trail examines spirituality at the landscape level of design, working with nature and natural existing conditions. The downtown site has rich urban context, clear patterns to work with, and city history. The box store deals with issues of scale, and building amongst mass repetition.



Trail parti drawing.

The Trail Design

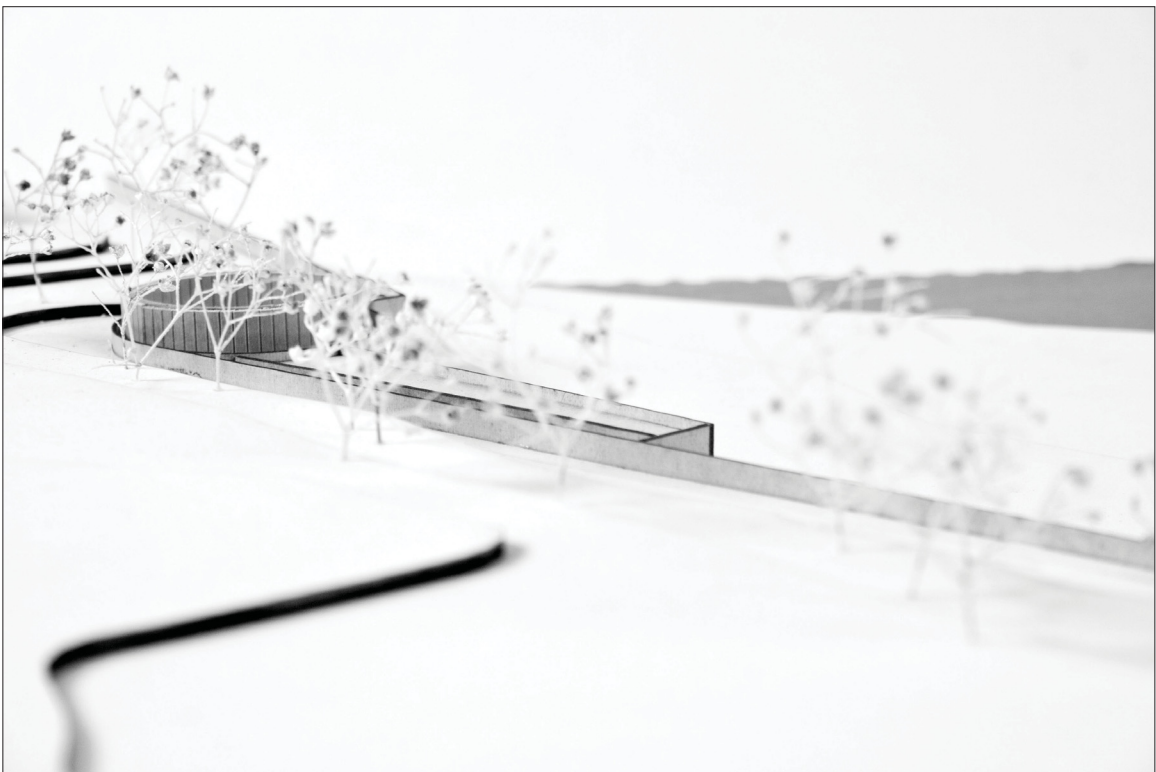
The trail has one advantage over the rest of the sites and was crucial in the design -- incorporating the existing nature into the design. Making this design fit in with the natural existing site made it challenging as the nature of the site itself can be spiritual. So as to not block the view from the existing walking trail and boardwalk



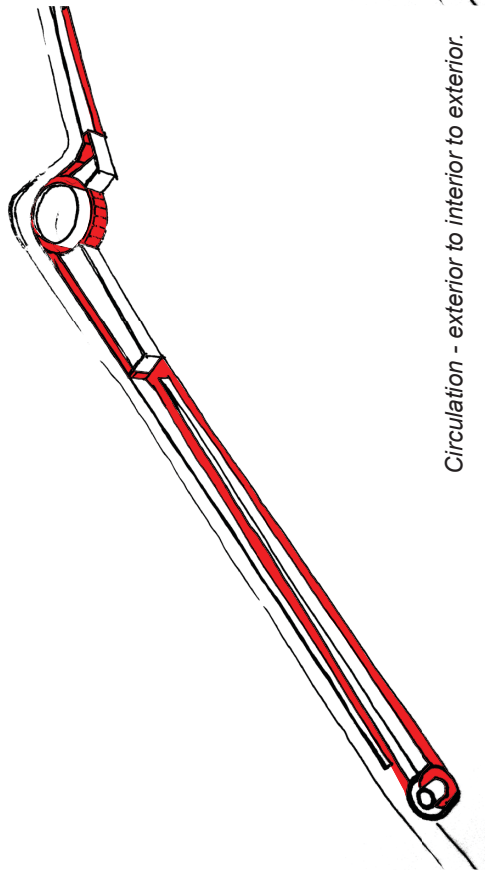
Photograph of model from north looking at the path descending down.

the building was cut into the ground as a type of retaining wall. This has two benefits, it does not block out the views and this change in level is another layer of separation from the city and public. The approach path breaks off from the boardwalk and the long wood boards brings the user down into the public space, which in this case is outside. There are benches punched into the concrete walls offering people a place to sit and look out to the Petitcodiac River. The wooden cylinder tucks into the natural curve of the trail and brings in natural light from the large skylight.

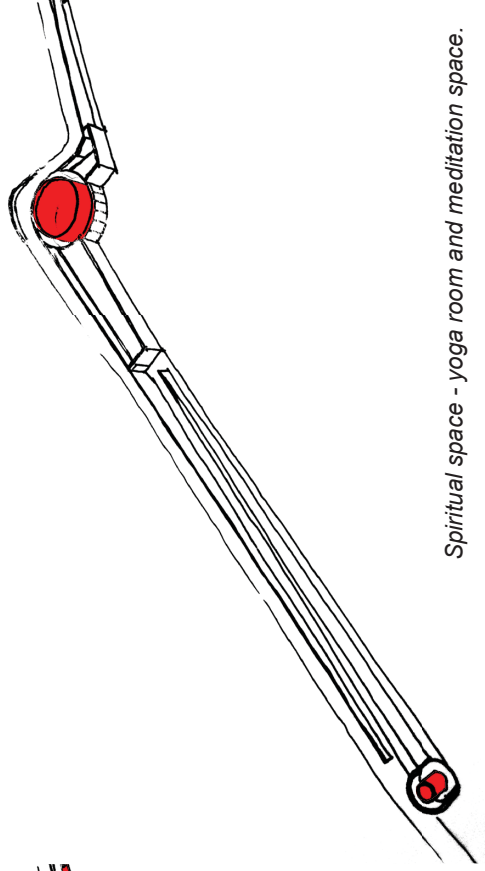
The program was decided to be for yoga and meditation classes with direct views out. This program requires support spaces including washroom facilities and change rooms. A secondary program was developed to address individual spiritual needs -- a small meditation space that is separate from the yoga studio.



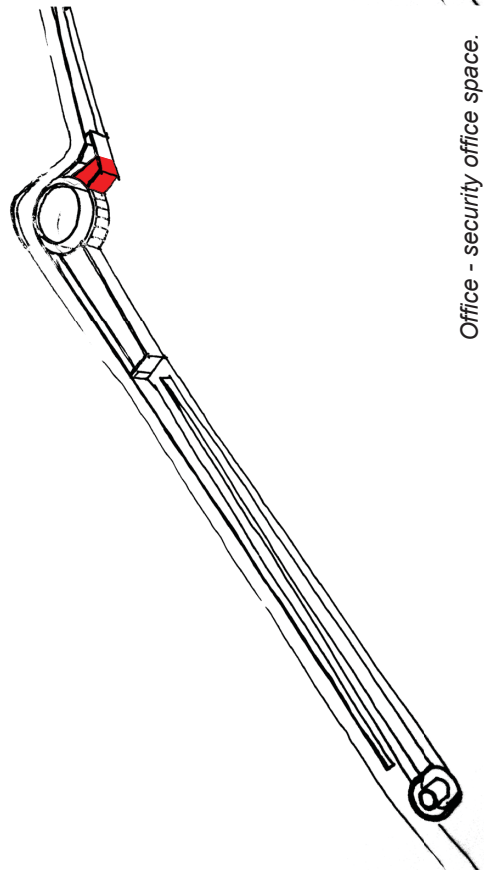
Photograph of model: view of wood cylinder on approaching the site.



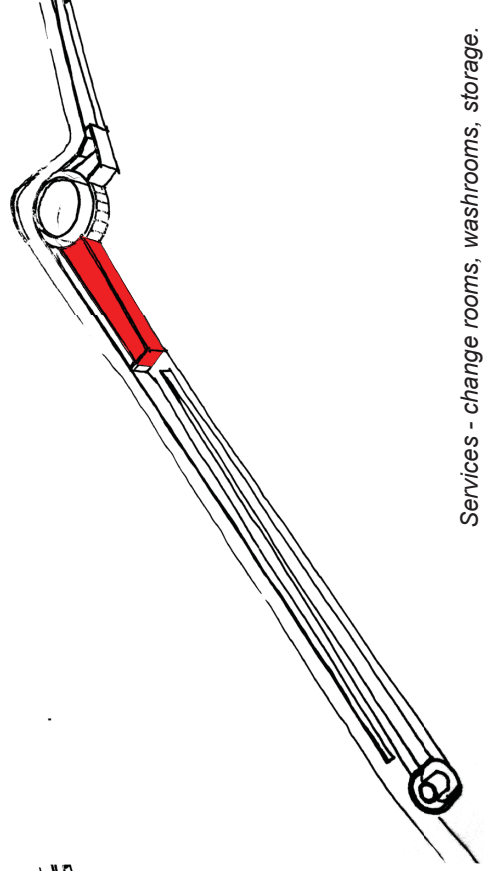
Circulation - exterior to interior to exterior.



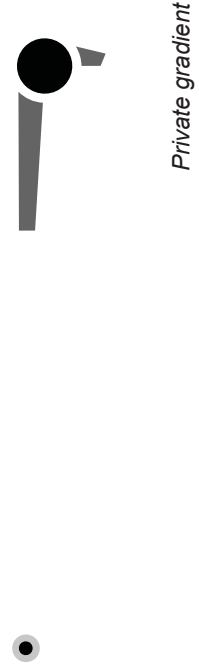
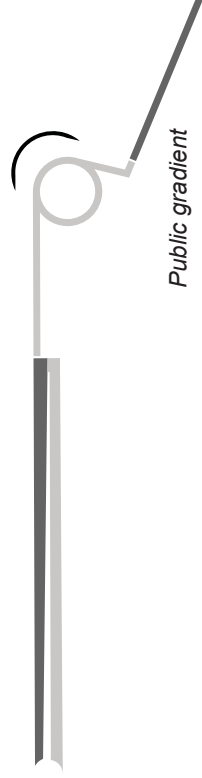
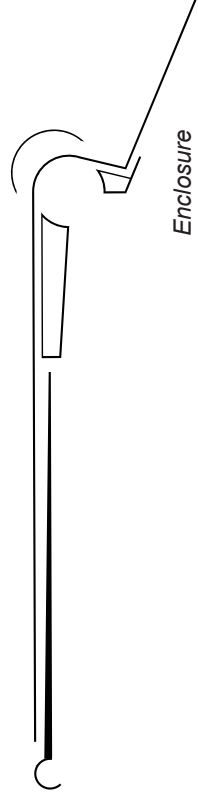
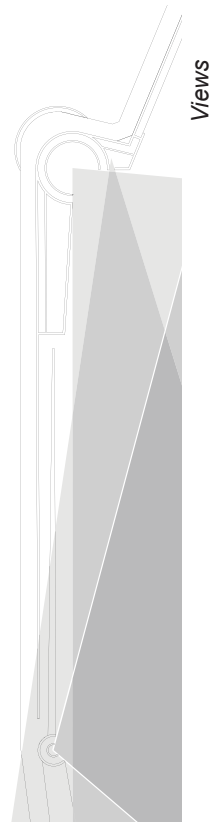
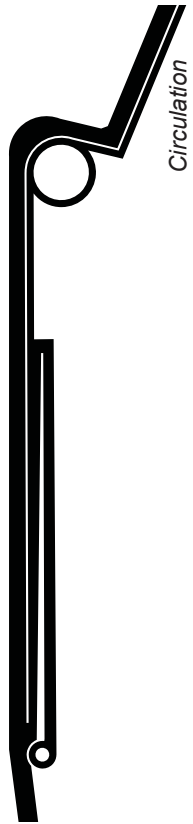
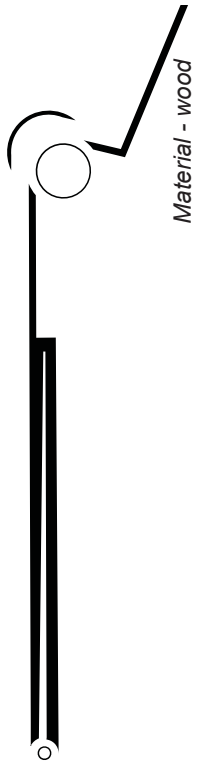
Spiritual space - yoga room and meditation space.

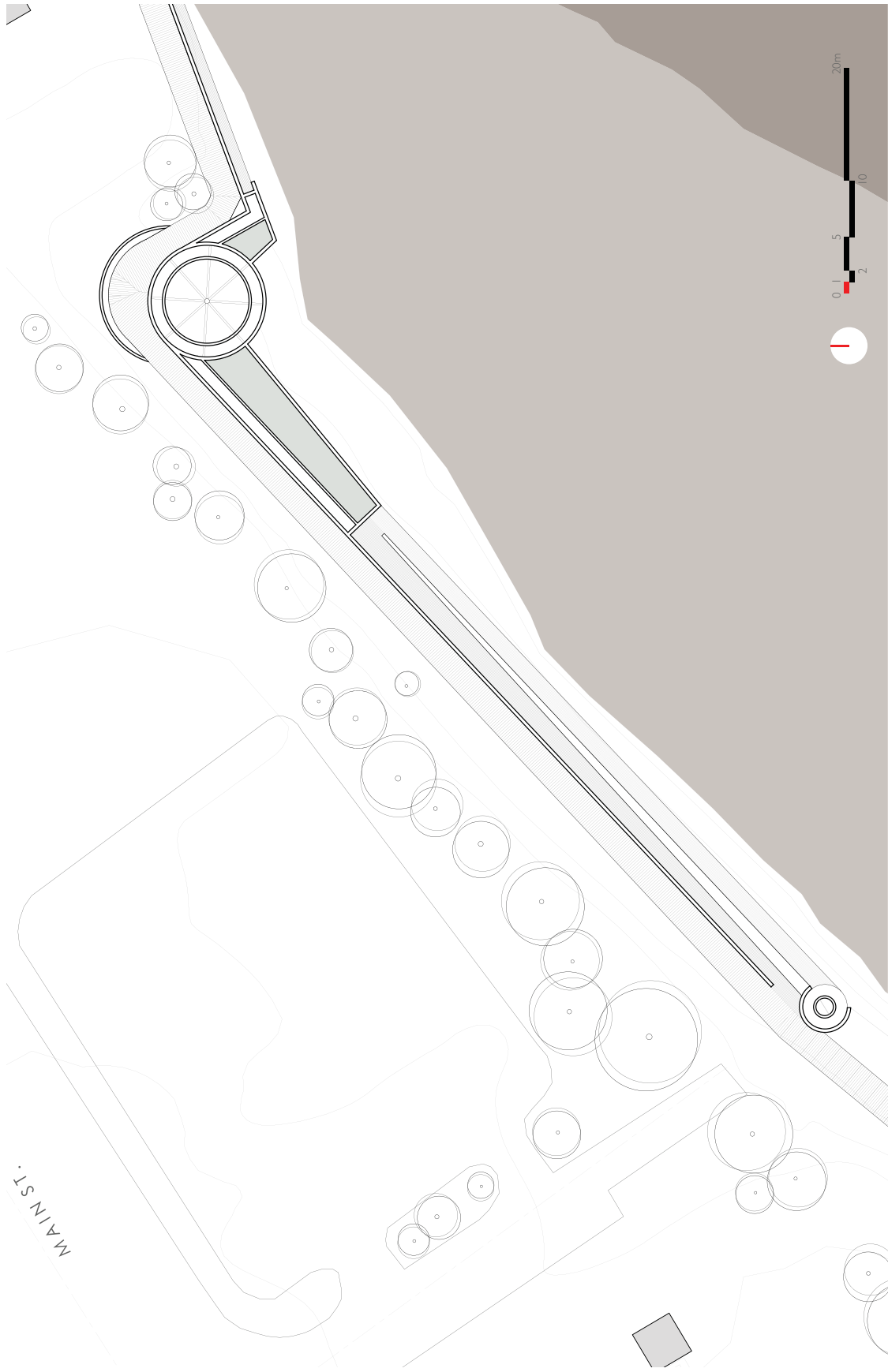


Office - security office space.

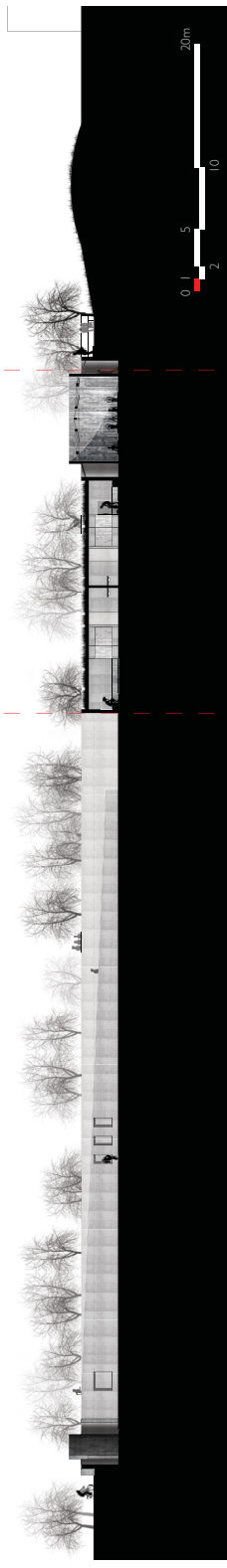
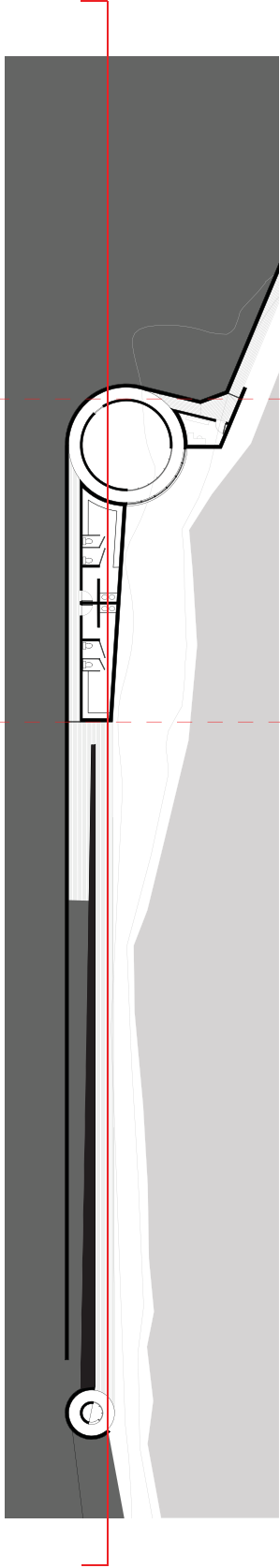


Services - change rooms, washrooms, storage.





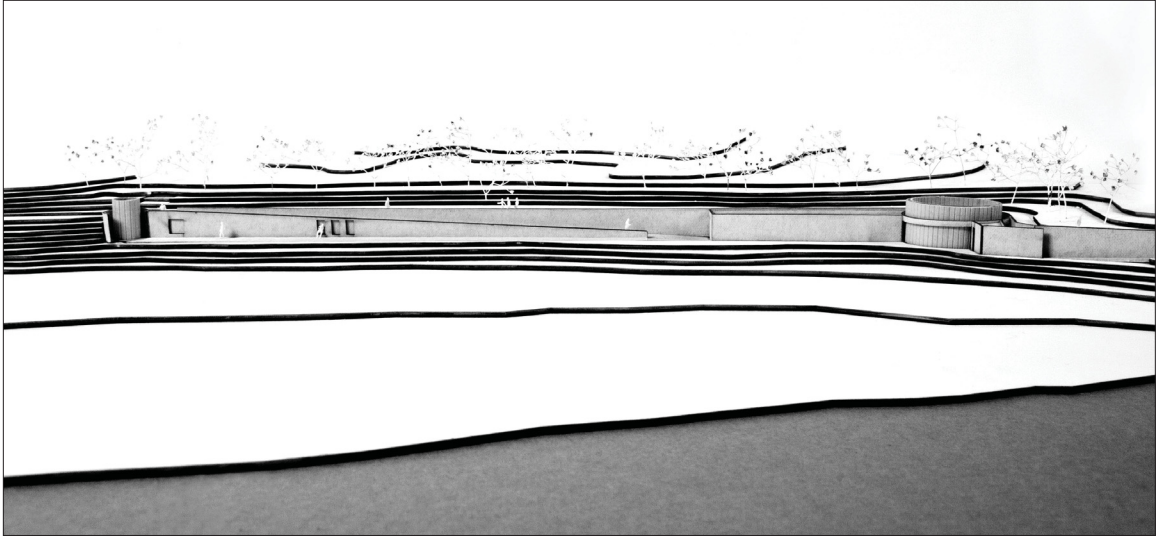
Trail site plan.



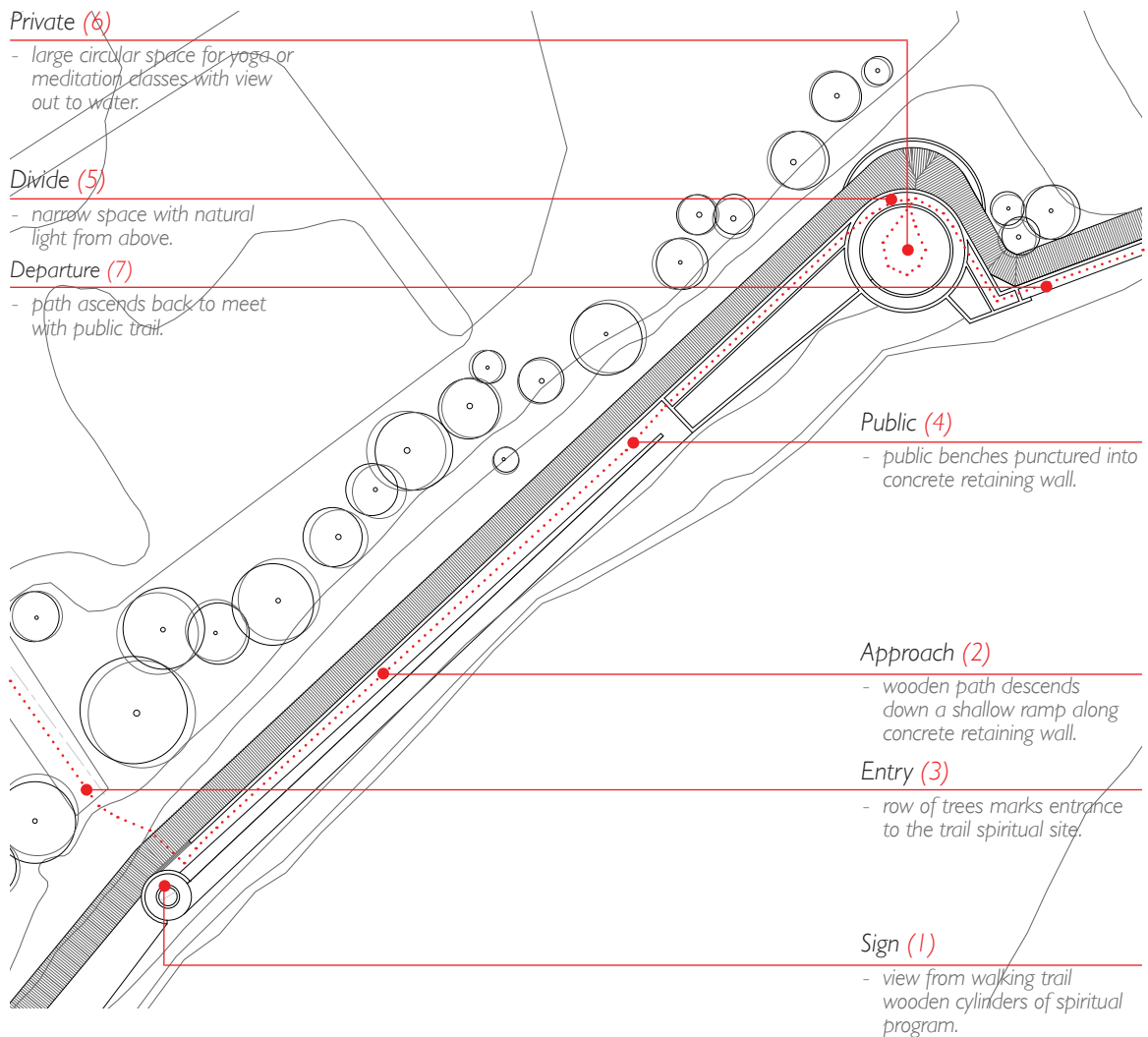
Trail site - plan level 1 (top), elevation (middle), section (bottom).



Trail site cross-section.



Photograph of model in elevation from the river.



Trail site key plan identifying the seven thresholds of design.



Approach (2) - the directionality of the wood changes from the horizontal boardwalk to long linear wood guiding people down the ramp to the yoga spiritual room. The retaining wall is kept low to allow for direct views out to the Petitcodiac River.



Entry (3) - naturally built from the protection and cover of a stretch of trees. With leaves and branches overhead there is a change in verticality and the natural light is reduced due to tree cover.

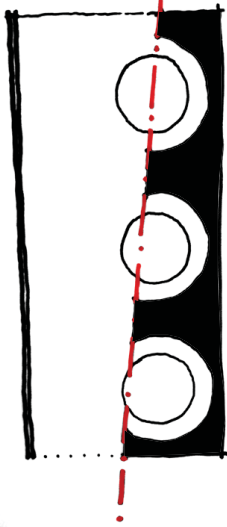


Divide (5) - skylight brings in natural light into this narrow space that guides the person around in into the yoga room.



Departure (7) - with the concrete retaining wall on one side and the Petitcodiac River on the other the wooden ramp gradually brings the man back up to the public boardwalk.

The Downtown Design



Downtown site parti.

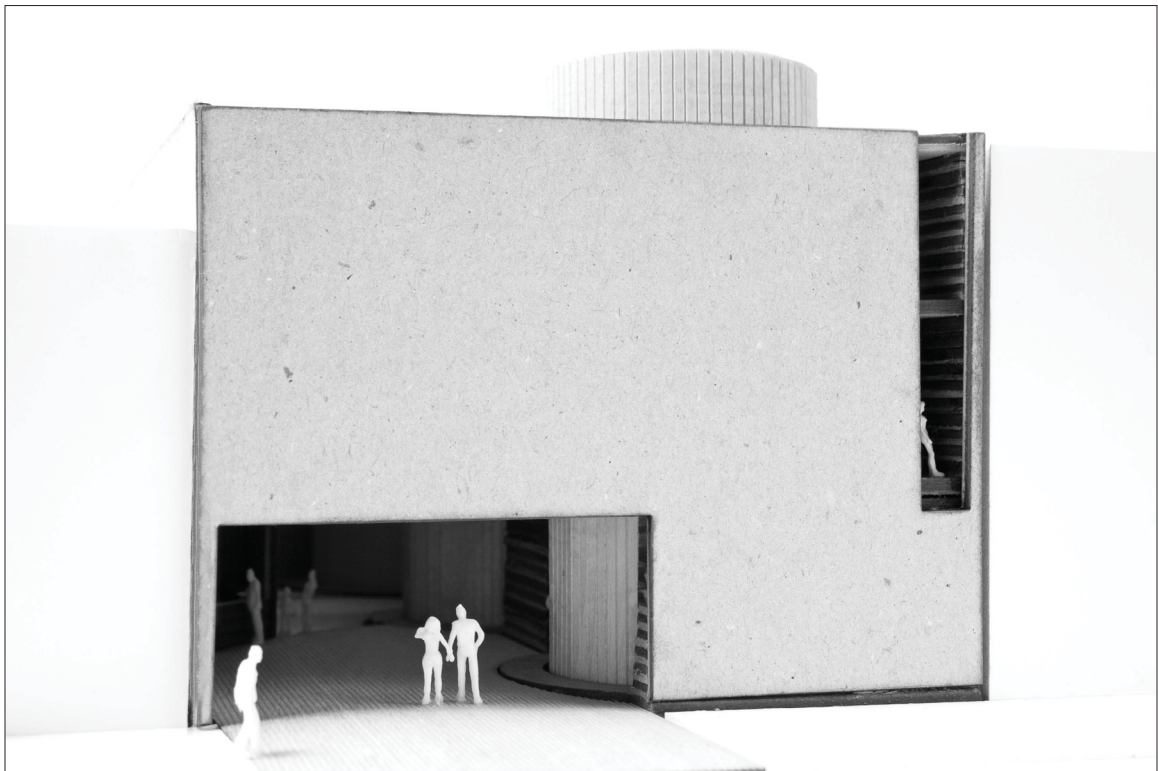
The downtown spiritual location is set in a currently vacant lot on the main street. Across the street from the lot is an outdoor pedestrian space with benches, outdoor seating, and a few trees. To continue with this urban move and visible line of sight, a slice was made through the building which determined entry and the separation of public and private.

The approach path is cut directly into the concrete sidewalk. Allowing people to not only see a change but also feel a change when walking over it. This wooden path then pulls the person into the public part of the building -- a local café. This allows people to feel comfortable entering this space, the café acts as a buffer zone in program between the city streets and the spiritual program. People can meet and talk in a more natural environment and potentially meet people going through a similar situation.

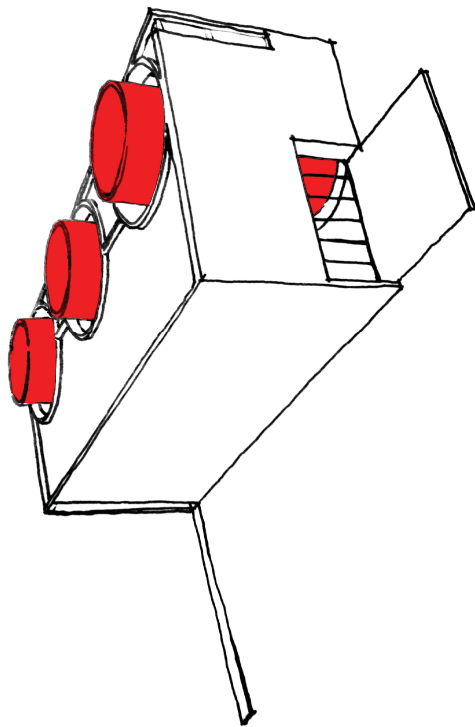


Photograph of downtown building model from above, the clear entry is visibly piercing through the existing sidewalk, then the three zones of spirituality, and finally the departure back to the street.

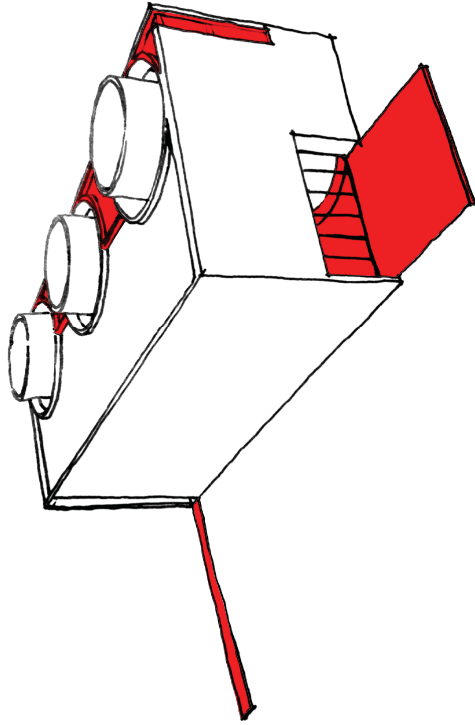
The café also doubles as the front desk where people can sign up for using one of the spiritual rooms in the building or sign up for a class. On the first level of spiritual program is a group space for programs such as group therapy or support. The second level offers a one on one space for counseling. The third level is a solitary space for prayer or meditation for one. Along with the cafe, the support program includes seating for people waiting for rooms or talking with others, and office spaces for the staff, therapy leaders, and counsellors. The circulation is found hidden in between the circular cuts in the concrete.



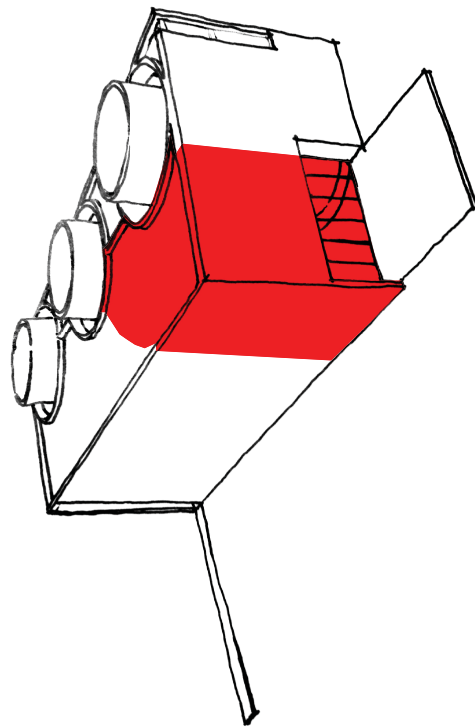
Photograph of model from the street front elevation entrance. The entrance pulls the user into the public café where the wood cladded cylinders are still visible.



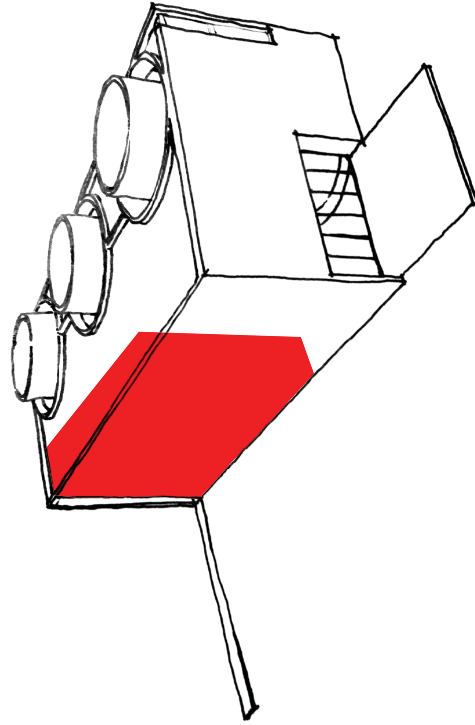
Spiritual space - group therapy (1), counselling (2), solitude (3).



Circulation - entrance to exit.

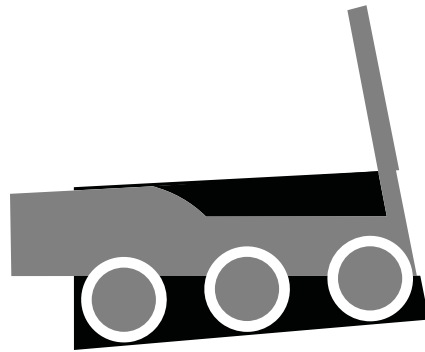


Public space - café and seating.

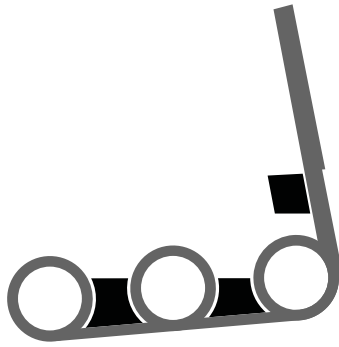


Support program - offices, storage, washrooms.

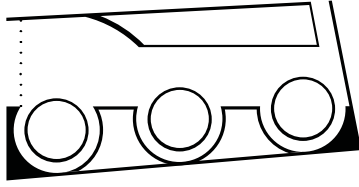
Downtown program schematics.



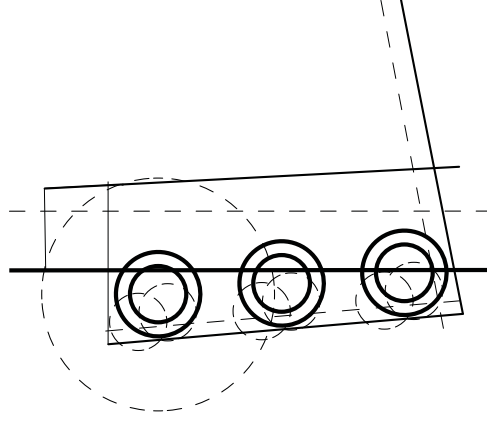
Materiality - wood vs. concrete



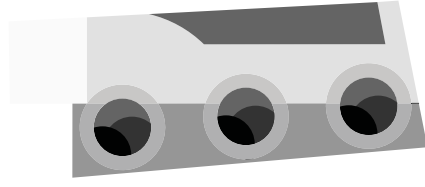
Circulation



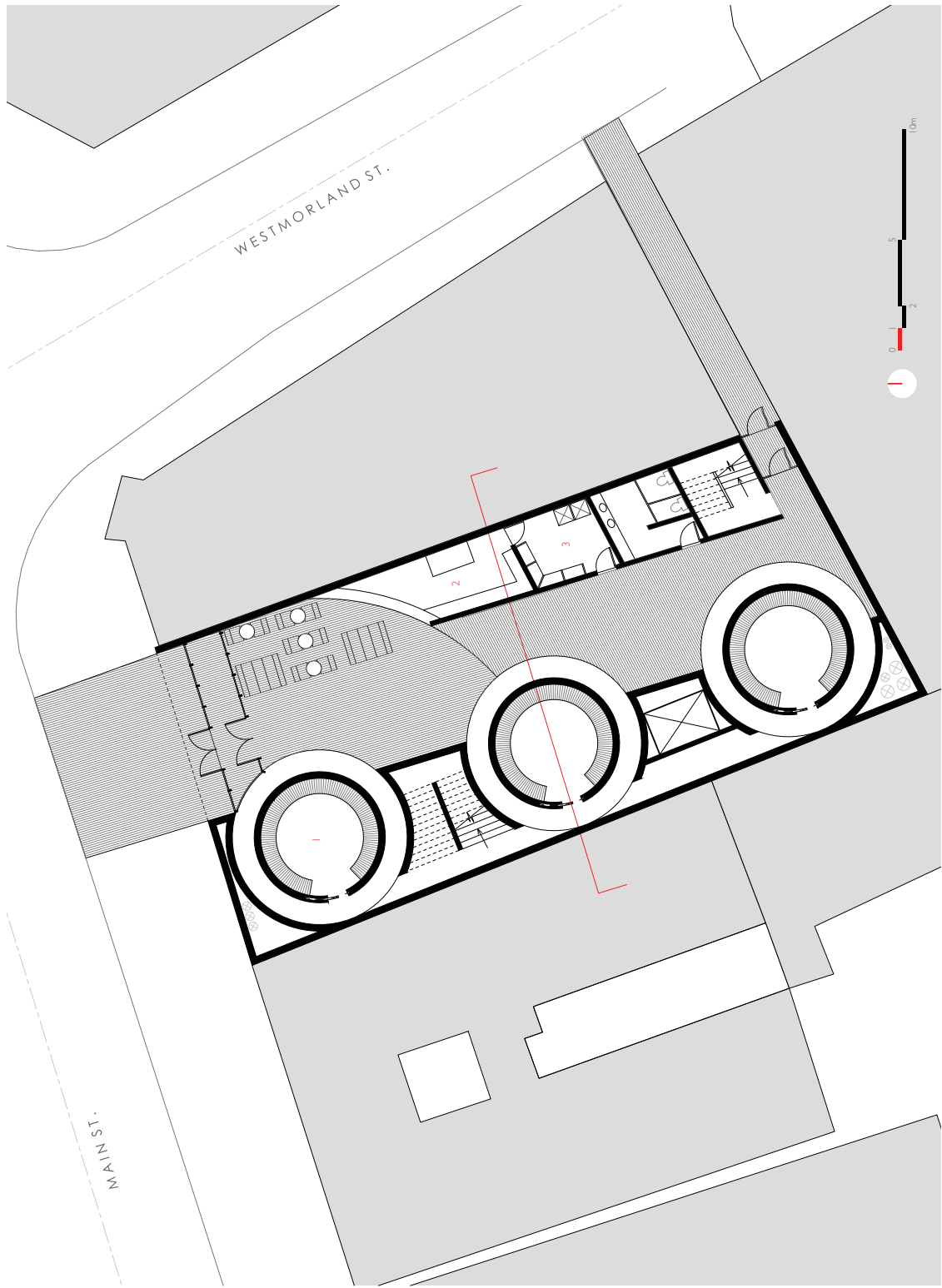
Enclosure



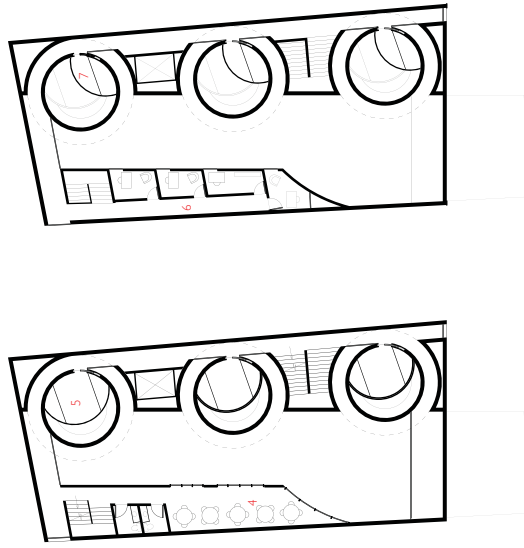
Geometry



Public/private gradient



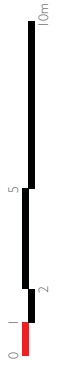
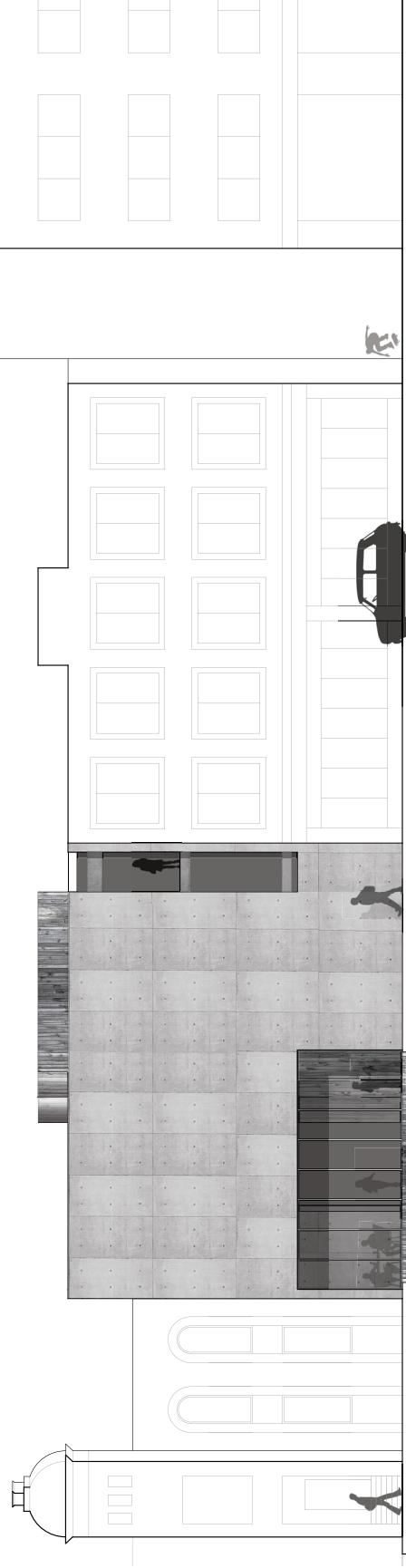
Downtown plan level 1.



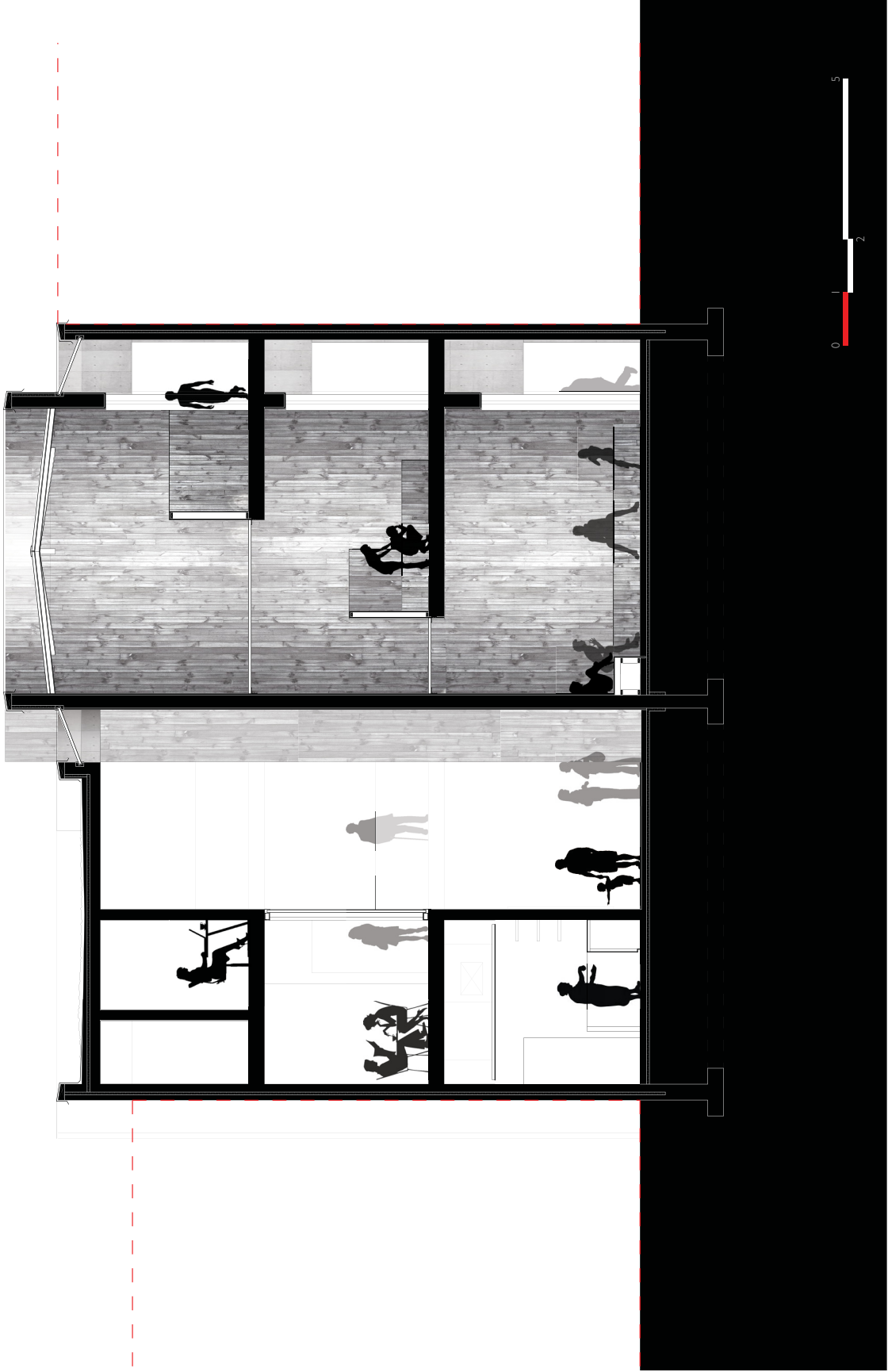
- 1 Group Therapy Room (Private)
- 2 Cafe (Public)
- 3 Storage/ Staff Room
- 4 Second Floor Seating
- 5 Counseling Room (Private)
- 6 Staff Offices
- 7 Individual Meditation Room (Private)



Downtown plans level 2 (left) and 3 (right).



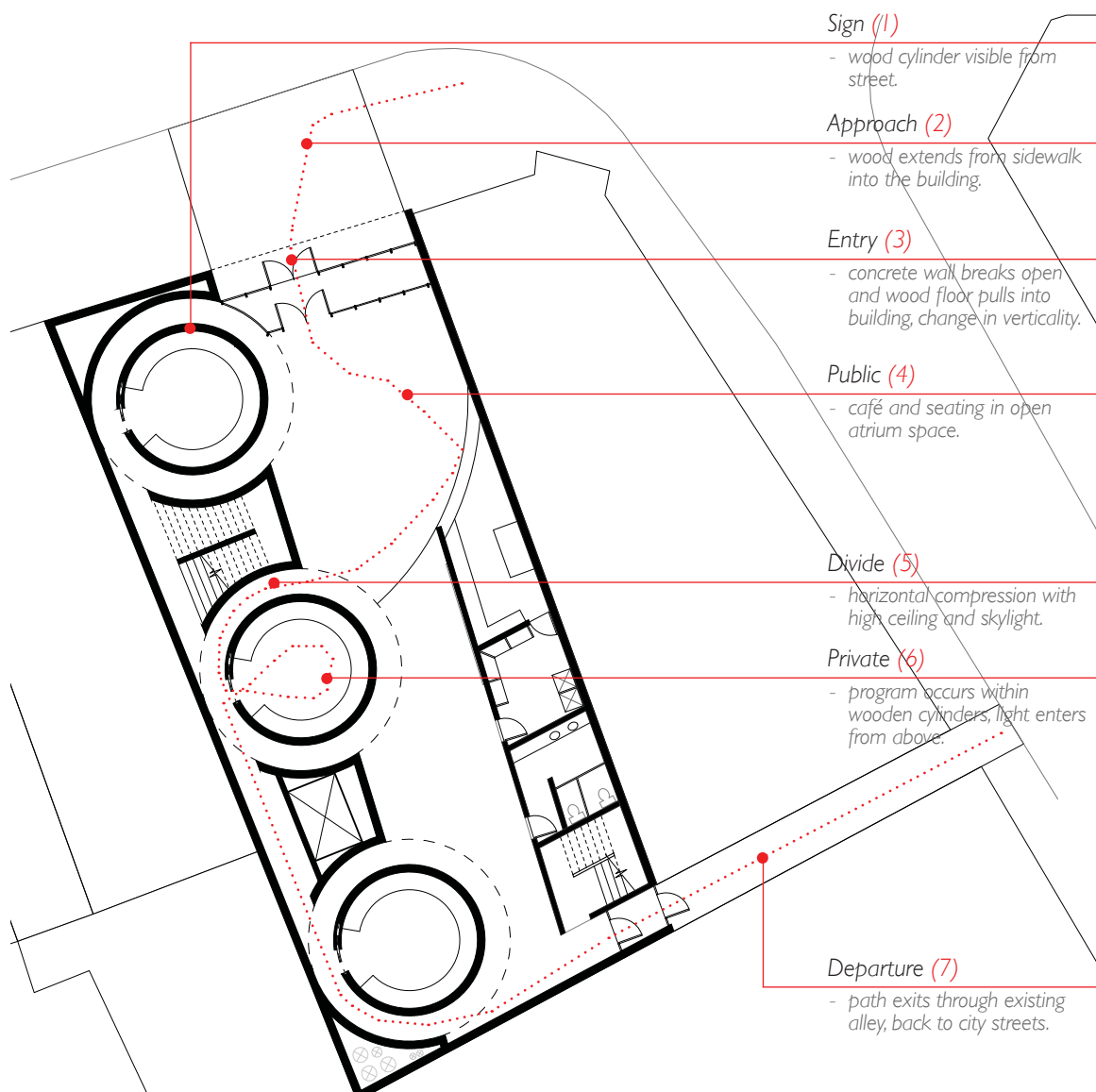
Downtown Main St. elevation.



Downtown cross-section.



Photograph of model - view of entrance and three cylinders from Main St.



Downtown site key plan identifying seven thresholds in design.



Approach (2) - man walking at point of transition to the building's approach, underfoot the concrete sidewalk changes to wood board.



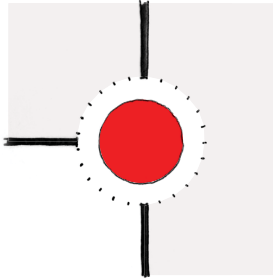
Divide (5) - girl moving from the café to a group therapy class, with the vertical wood cladding on the inner circle and the concrete on the outer circle.



Private (6) - meditation space on third level of building, brings in natural light from above, bench doubles as storage space for cushions, as needed.



Departure (7) long path leads people from the building back to the street following the long linear wood flooring.



Box store parti.

The Big Box Store Design

The box store site was to be located between existing adjacent big box stores. In this particular case, the stores were slightly off set from one another therefore the building was situated into the corner, where the two stores meet. The spiritual program could be considered to be the opposite of the sites existing program. Typically, the program of box stores consists of retail purchasing: from grocery, to clothing, to supplies. This building offers people a place to escape from the materialism of these places.

Although this site had the largest building scale context, the design became the smallest. For security purposes the entrance to this space was made through the adjacent stores. This way the existing program of shopping becomes the public program of this space.

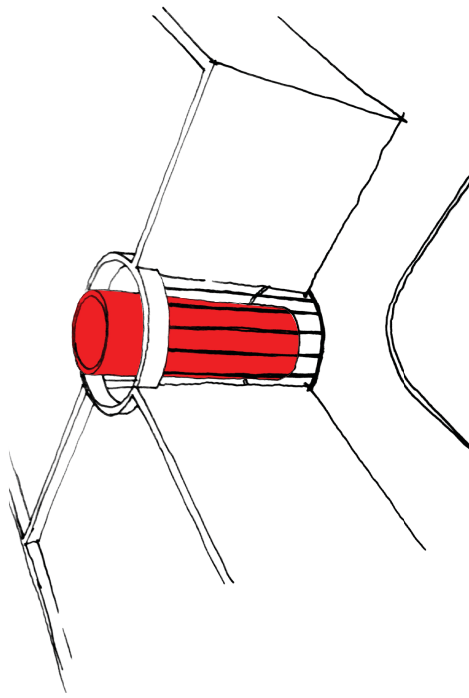


Photograph of model from above indicating path approaching through the inside of an adjacent store. Also visible is the glass curtain wall that surrounds the private program.

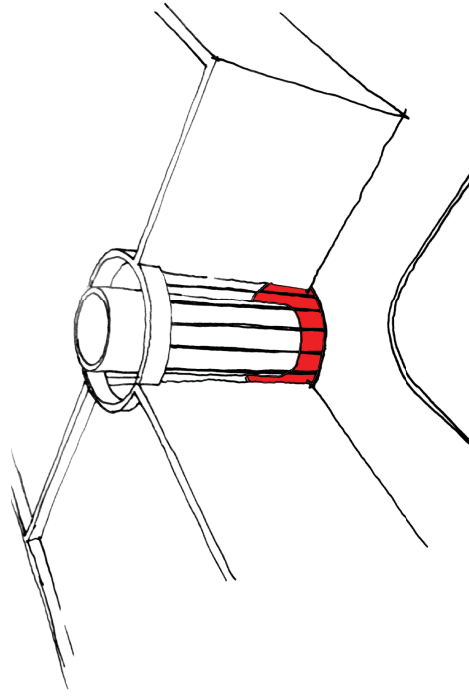
The cylinder is cut directly into adjacent box store leaving a portion sitting out into the parking lot. The cylinder is centered on the box store front facade, therefore at a corner location a quarter will be exposed and in a flush, typical, case half will be exposed. The first cylinder is enclosed by glass where the person experiences sight but loses the surrounding sounds. There are views out to the parking lot and into big box stores. This change in senses allows the person to experience the site in a new way, almost no longer part of what is happening outside the glass. The inner circle further blocks out the visual connection to the outside allowing the person to meditate or sit in silence without distractions. In contrast to the steel framed building structure of the big box stores the wood material will stand out and be identifiable as a place of spirituality.



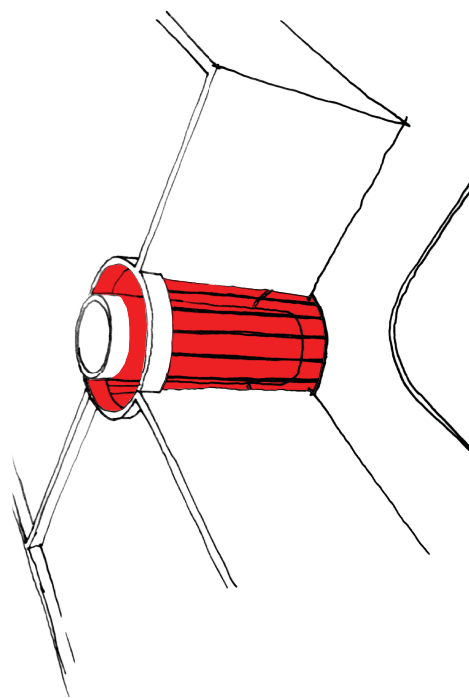
Photograph of model from inside of adjacent store with view into private space.



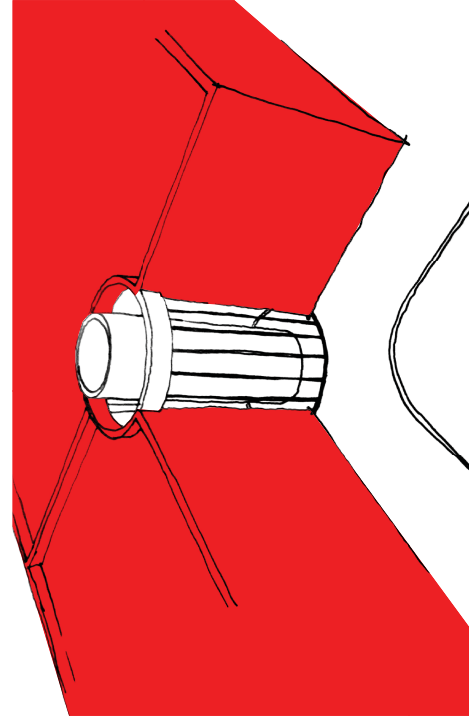
Spiritual space - quiet meditation room.



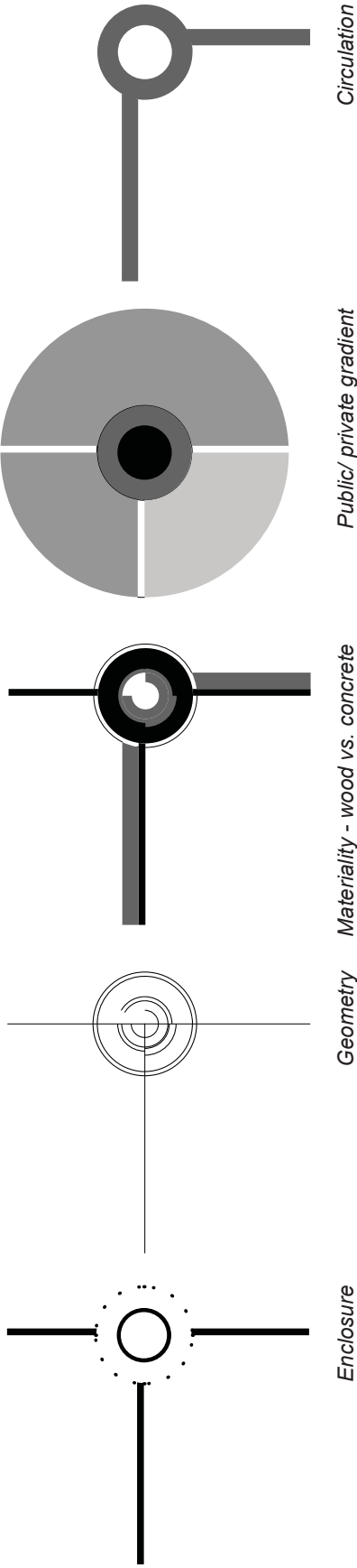
Circulation - exterior to interior.



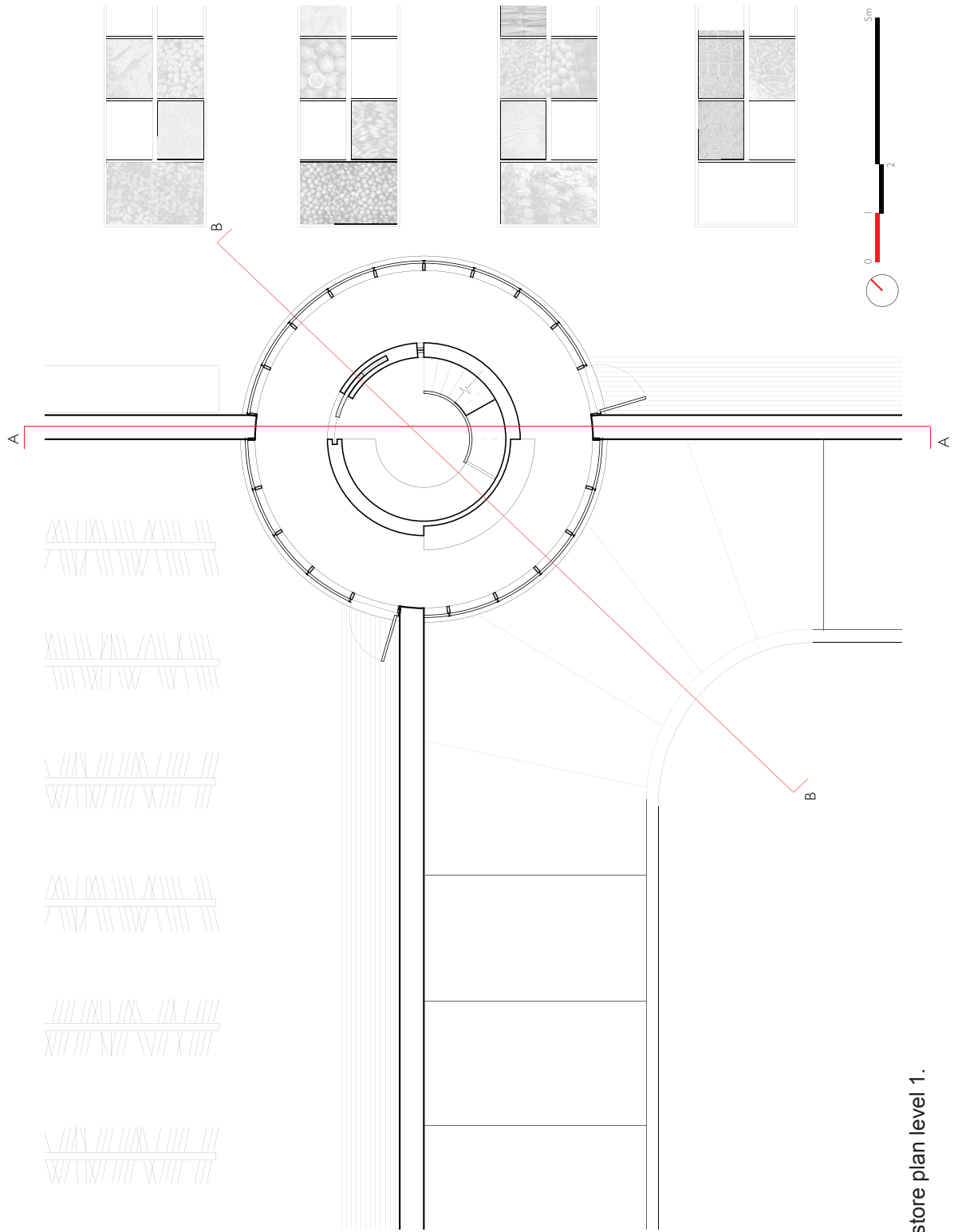
Sound barrier.



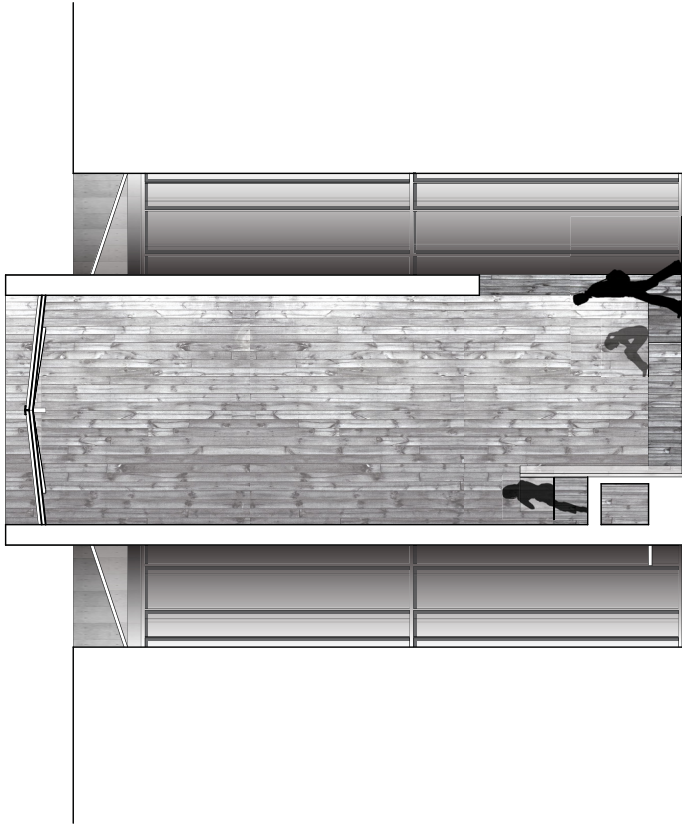
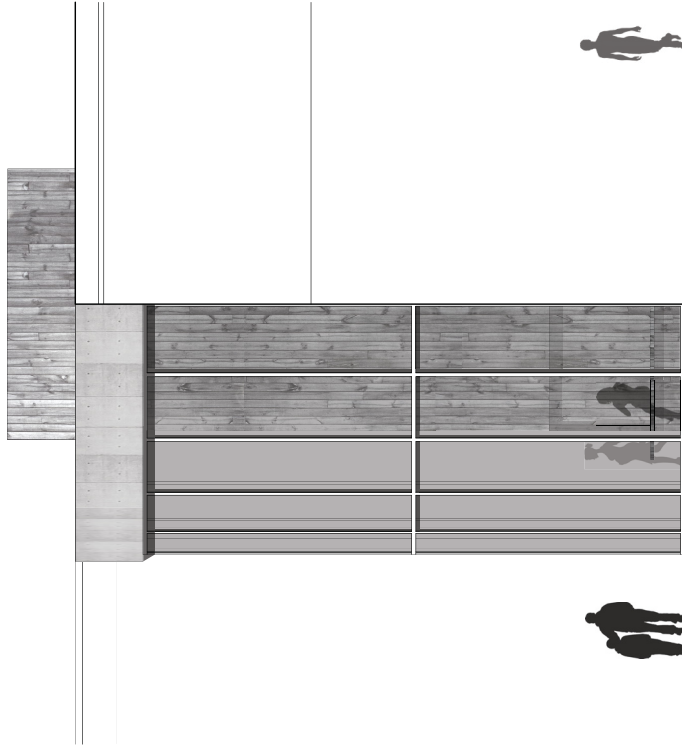
Support space - existing box stores.



Box store building schematics.



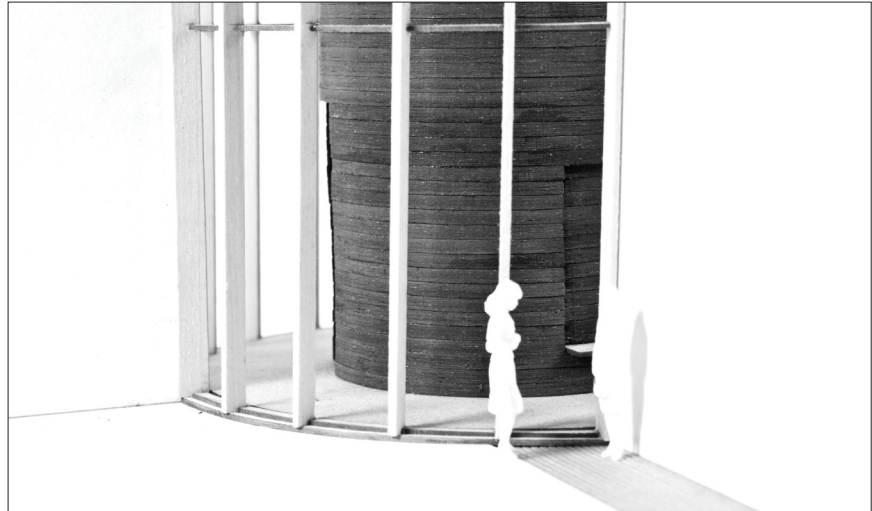
Box store plan level 1.



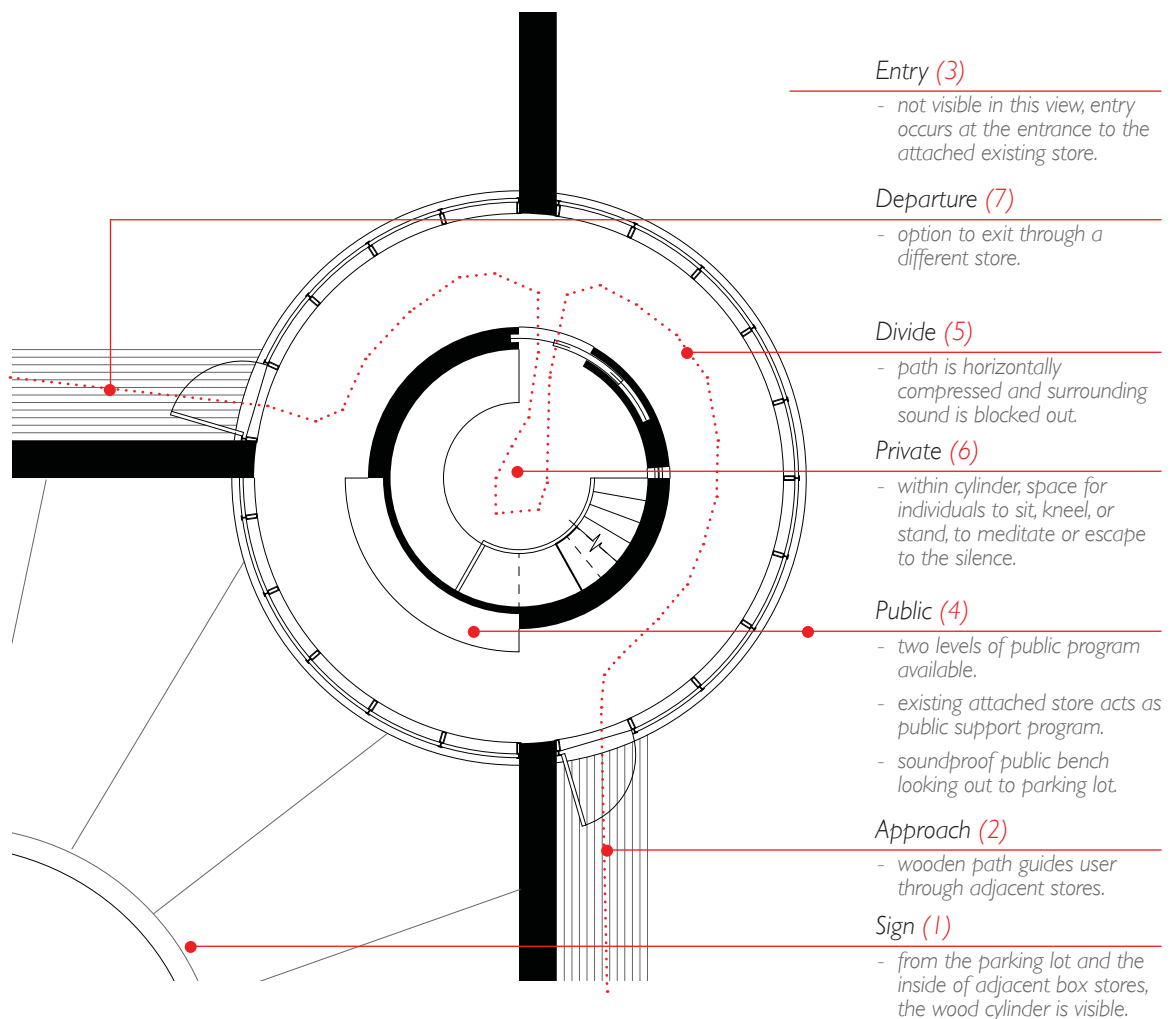
Box store section A (left) and elevation (right).



Box store section B.



Photograph of model at approach to sound blocking entrance.



Big box store key plan identifying seven design thresholds.



Sign (1) - view of spiritual identifier from the parking lot.



Public (4) - man on bench taking a moment away from the surroundings in the audio blocked section.



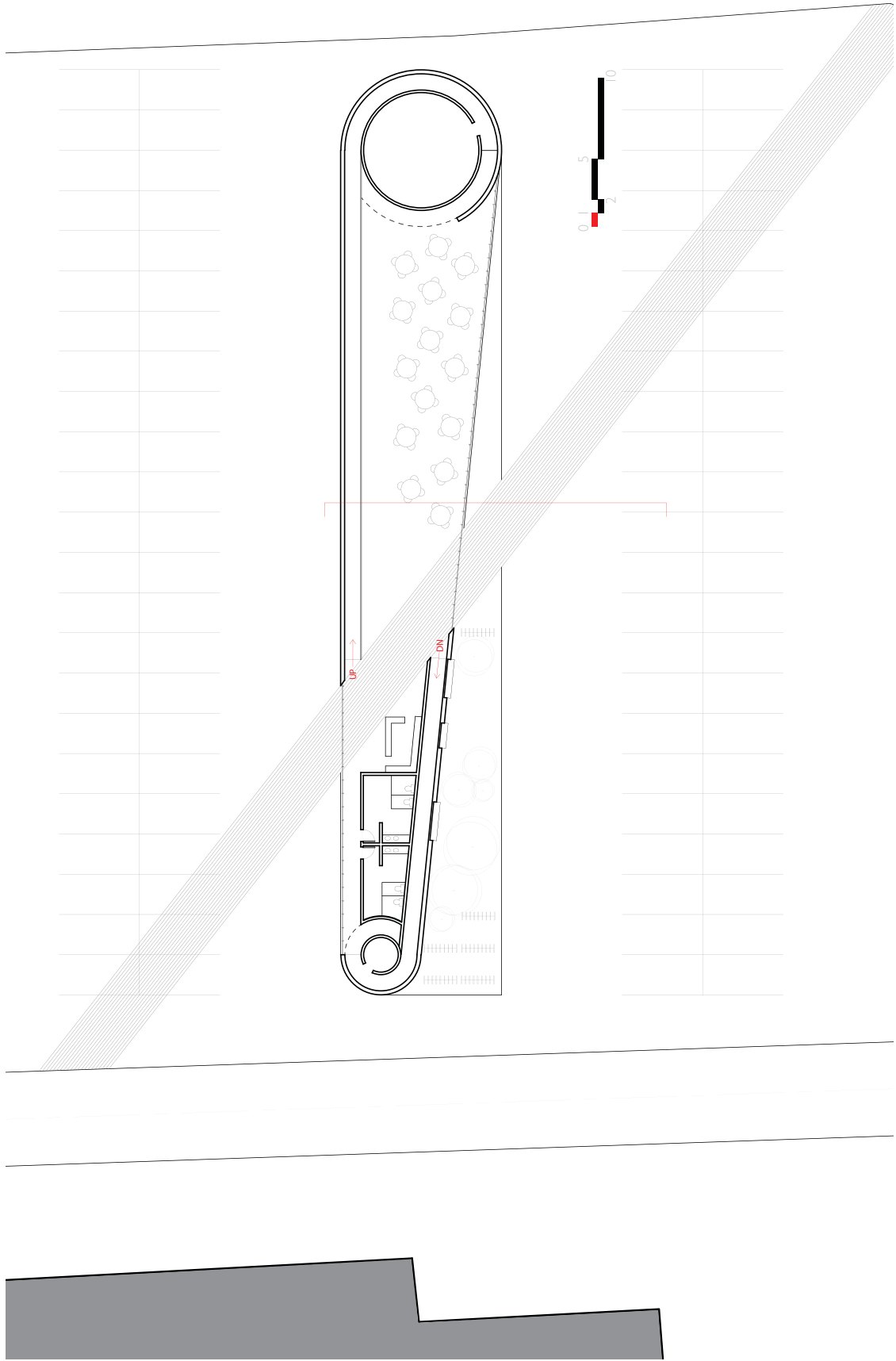
Divide (5) - woman walking to spiritual space in central core with retail store visible through curtain wall on left.



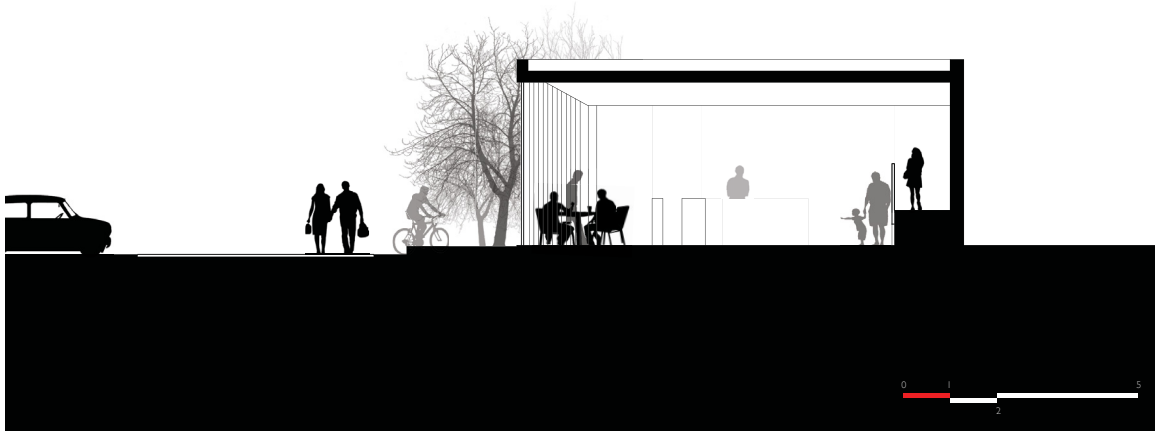
Private (6) - shows options for variation in seating of this space through changing levels and not sitting facing the center.

A second iteration of the big box store re-sites the building into the parking lot. The first site is fully dependent on the operations of the adjacent stores, meaning these stores are now responsible for this spiritual service. This, however, is not in keeping with the rhythm of the existing site conditions. The stores are all kept separate with the only route to get from one store to the next is by going outside. Through further observations on the site the stores situated adjacent to one another are typically retail stores. Additional programs to the site, such as restaurants, gas stations, coffee shops, etc., all which can be considered services to the site, are sited as islands in the vast parking lot. In keeping with this pattern the spiritual program can be considered a service to the larger site as well; therefore, the second iteration of siting the box store spiritual program is located in the parking lot as one of the islands.

For this design the following plan and section were completed to describe an alternative approach using the same base principles of design. A strip of parking was occupied and in keeping with the blending in principle of design the structure was kept low to the ground as it sits amongst vehicles and not other buildings. Completely surrounded by an asphalt parking lot, this new site offers an alternative to the vehicular mode of transportation through the introduction of bike racks and a public transit stop. Although a parking lot may not seem like an ideal location for benches, grass, and trees, these design elements can allow an alternative perspective of the site by offering a different way of experiencing the site.



Big box alternative site plan.



Big box alternative site cross-section.

Due to the buildings isolation in the parking lot the program of the building expanded to allow for staff to operate it. In keeping with the seven thresholds, the sign of the building is, again, the wooden cylinders. The wood approach path to the building is cut directly into the asphalt parking lot to bring shoppers into the building. The public program introduces something that is absent from the big box store site, a place to sit and socialize with people. Similar to malls offering a food court, generally central to the mall, where people can sit and gather. The private programs are located on either end of the building sunken down into the ground slightly to allow for further separation from the public.

CHAPTER 3: CONCLUSION

The aim of this thesis was to establish an architecture language for this new building type to serve our spirituality. These principles established throughout this thesis can be used to design spiritual infrastructure in cities. This particular study was done on a mid-to-small sized city -- selecting six typologies existing in the city. To render a more conclusive set of principles further studies applying the language to a range of city sizes and varying geographical location may be helpful. The language itself became a stronger reflection on the transitions that occurs while moving through the spiritual space. This became the primary focus of each design and the method for describing the architectural elements. These seven thresholds identified could arguably be found in every building design not just spiritual; however, it was through these moments of processions that the design was developed. How the architectural elements begin to describe these thresholds is what makes them successful in transitioning from one activity to the next.

The reality of this new type of infrastructure requires an owner. The spiritual program is a service that is meant to be provided freely to the public; therefore, to do this, the buildings are to be provided and maintained by the municipal government. Reflecting upon the sites selected and examined for this study, the following observations were made regarding the design.

The trail site is currently a piece of land belonging to the government; the primary issue with this site is security as it is tucked away from the public eye in the bank of the river. The building would need to be opened and closed each day by an employee -- this employee would also be responsible for the safety and security of the individual meditation space. This is why a direct line of site was created from the staff office to the meditation entrance.

The downtown site, which is currently vacant, could potentially be purchased by the government to infiltrate the spiritual service. With multiple spiritual programs within the one building there is an opportunity for the café to double as the information desk for the building, where people can come to the desk to book rooms, sign up for classes, or just ask for more information.

The reality of the big box store site is more fitting to the second design iteration as it allows the building to be separately owned and operated by the municipal government. Similar to the downtown site there is a public space where an employee would be responsible for greeting people, answering questions, and booking the two spiritual spaces. The building would operate on the same hours as the surrounding stores.

With this being such a new area of study, there is an immense amount of potential remaining to be explored. Future studies may include a broader perspective on religions or even a different background in religion would give this study a stronger basis. Another interesting exploration may be a more specific analysis on the way in which people occupy these spaces through spiritual practices. This way a higher level of detail could be brought to the private spiritual rooms. Lastly, there is the continuation of the already identified six zones. Only three of these designs were explored, the remaining three designs could be completed.

This has been an interesting study for myself as designing these spaces has made me reflect upon my own spirituality. I think there is still more studies that can be explored on this topic and I am interested to see this new building typology come to reality.

REFERENCES

- Barrie, Tom, J. Bermudez, A. Geva, and R. Teal. 2007. *The Forum of Architecture, Culture & Spirituality (ACS)*. http://www.acsforum.org/ACS_founding_whitepaper_2007.pdf.
- Bing. 2014. Aerial photo of the City of Moncton. Accessed January 20. <http://www.bing.com/maps/>.
- Britton, Karla Cavarra. 2010. *Constructing the Ineffable: Contemporary Sacred Architecture*. New Haven, Connecticut: Yale School of Architecture.
- Britton, Karla Cavarra. 2013. "Light, Wood, Water, Steel". *Faith and Forum* 46, no.2. <http://faithandform.com/feature/light-wood-water-steel/>.
- City of Moncton. 2013. AutoCAD file of the City of Moncton. E-mail to author, October 15.
- Dal Co, Francesco. 2010. *Tadao Ando: 1995-2010*. Munich: Prestel.
- Donnelly, Marian Card. 1968. *The New England Meeting Houses of the Seventieth Century*. Middletown, Connecticut: Wesleyan University Press.
- Duscha, Andreas. 2008. Places of Worship. <http://www.andreasduscha.com/Places-of-Worship>
- Eliade, Mircea. 1959. *The Sacred and The Profane: The Nature of Religion*. New York: Harcourt, Brace and World.
- Engels, Christoph. 2010. *1000 Sacred Places*. Potsdam, Germany: Ullmann Publishing.
- Flaubert, Illa. 2007. Photo of MIT Chapel by Eero Saarinen. <https://www.flickr.com/photos/illaflaubert/645760977/in/photostream/>.
- Greenberg, Neil. 2008. *Can Spirituality be Defined? University Studies Interdisciplinary Colloquy on Spirituality and Critical Inquiry*. University of Tennessee. <http://notes.utk.edu/bio/unistudy.nsf/935c0d855156f9e08525738a006f2417/bdc83cd10e58d14a852573b00072525d?OpenDocument>.
- Greenstein, Rabbi Micah D. 2000. *Jewish Spirituality 10 Ways to be a Spiritual Person*. http://www.explorefaith.org/steppingstones_SpiritualLife_Greenstein.htm.
- Hanrahan, Thomas. 2012. "Landscape Meditation". *Faith & Forum* 45, no.1. <http://faithandform.com/feature/landscape-meditation/>.
- Jodidio, Philip. 2012. *Ando: Complete Works*. Cologne: TASCHEN GmbH.
- Khan, Adnan. 2009. *Islam and Spirituality*. <http://www.khilafah.com/index.php/concepts/belief/5660-islam-and-spirituality->

- Larson, Kent. 2000. *Louis I. Kahn: Unbuilt Masterworks*. New York: The Monacelli Press, Inc.
- Muesse, Mark W. 2002. *What Does It mean to Lead a Spiritual Life? A Buddhist Perspective*. http://www.explorefaith.org/steppingstones_SpiritualLife_Buddhist.htm.
- Parsons, Brenda. 1997. *Moncton's Civic Treasure : The Free Meeting House : A National Historic Site*. Moncton, New Brunswick: Betsons Publishing.
- Psychology Dictionary. 2014. Accessed July 17. <http://psychologydictionary.org/meditation/>.
- Statistics Canada. 2014. *Moncton, New Brunswick: 2011 Census*. Last modified April 28. <http://www12.statcan.gc.ca/census-recensement/2011/dp-pd/prof/index.cfm?Lang=E>.
- Stock, Wolfgang Jean. 2004. *Architectural Guide: Christian Sacred Buildings in Europe Since 1950*. Munich: Prestel.
- Tchividjian, Tullian. 2011. *What is True Spirituality?* <http://www.christianpost.com/news/what-is-true-spirituality-66054/>.
- Tolle, Eckhart. 2012. *Secular versus Religious Spirituality*. <http://communicate.eckhartolle.com/news/2012/04/16/secular-versus-religious-spirituality/>.
- Tzortzis, Hamza Andreas. 2013. *What is Islamic Spirituality?* <http://www.hamzatzortzis.com/q-a/what-is-islamic-spirituality/>.
- White, W. and A. Laudet. 2006. "Spirituality, Science and Addiction Counseling". *Counselor Magazine* 7, no.1. <http://www.williamwhitepapers.com/pr/2006Spirituality%26AddictionCounseling.pdf>.