



**ARCHITECTURE + THE  
CONTORTED BODY IMAGE**

INTEGRATING FITNESS IN THE MODERN URBAN CENTER

CALVIN MOREY

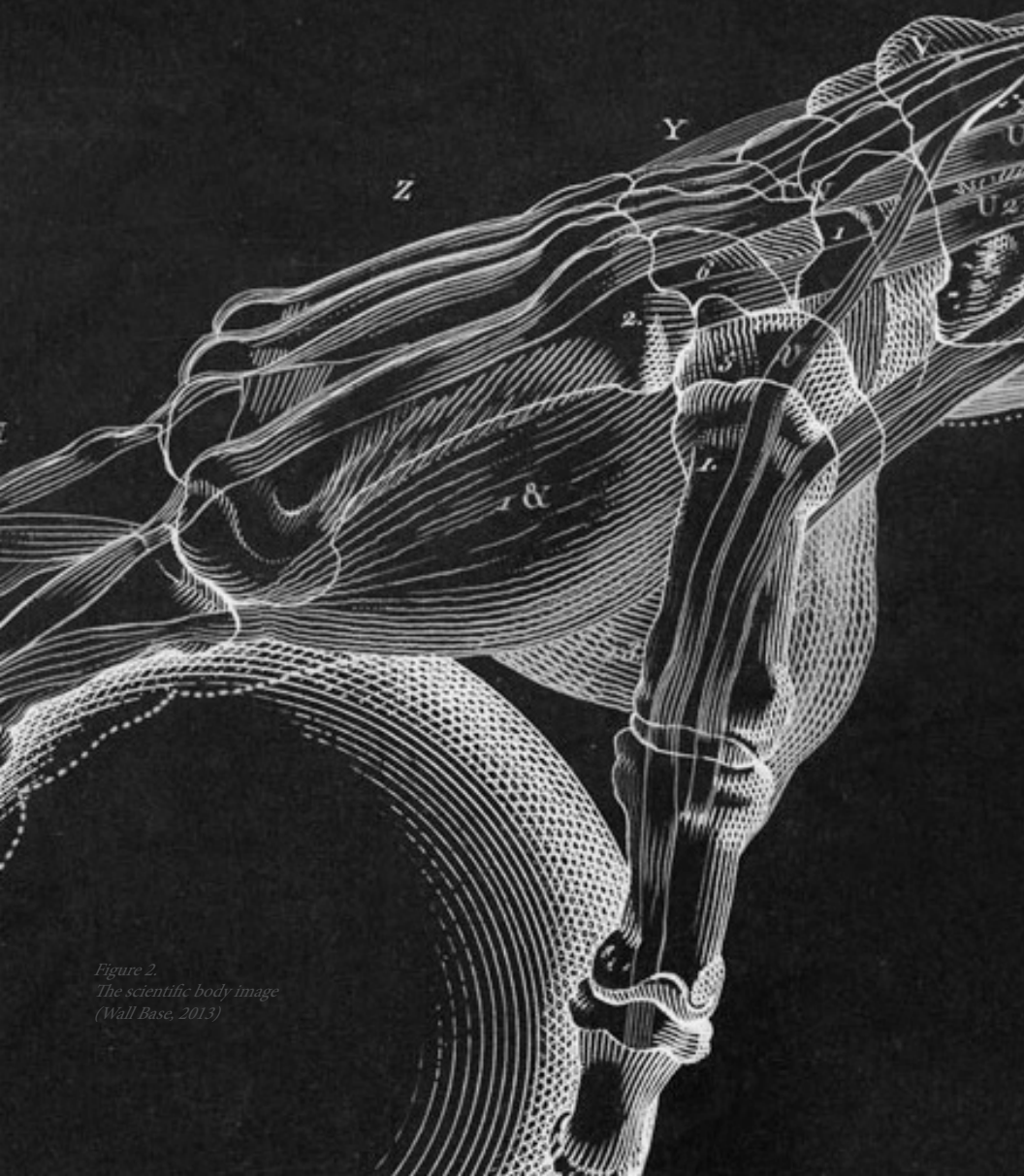
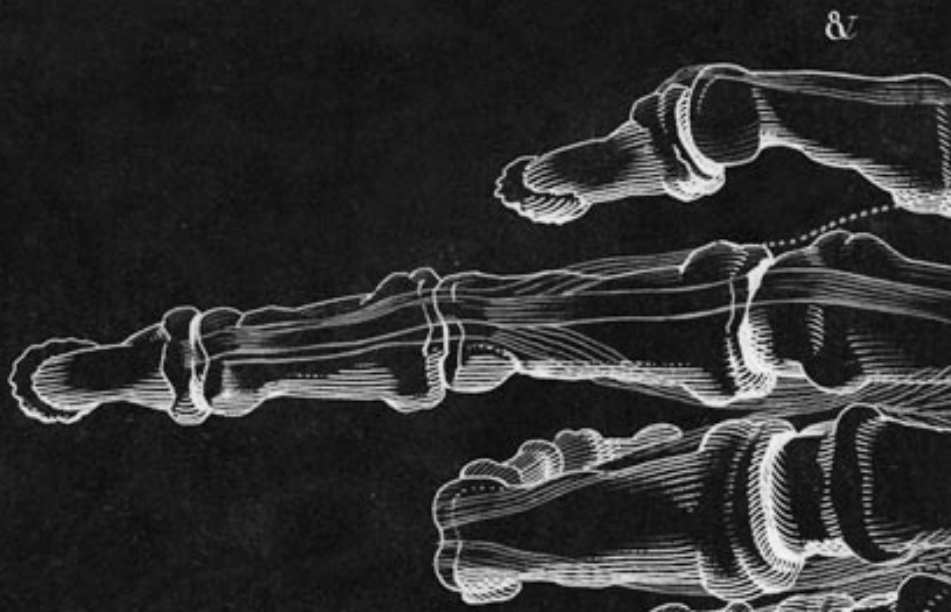
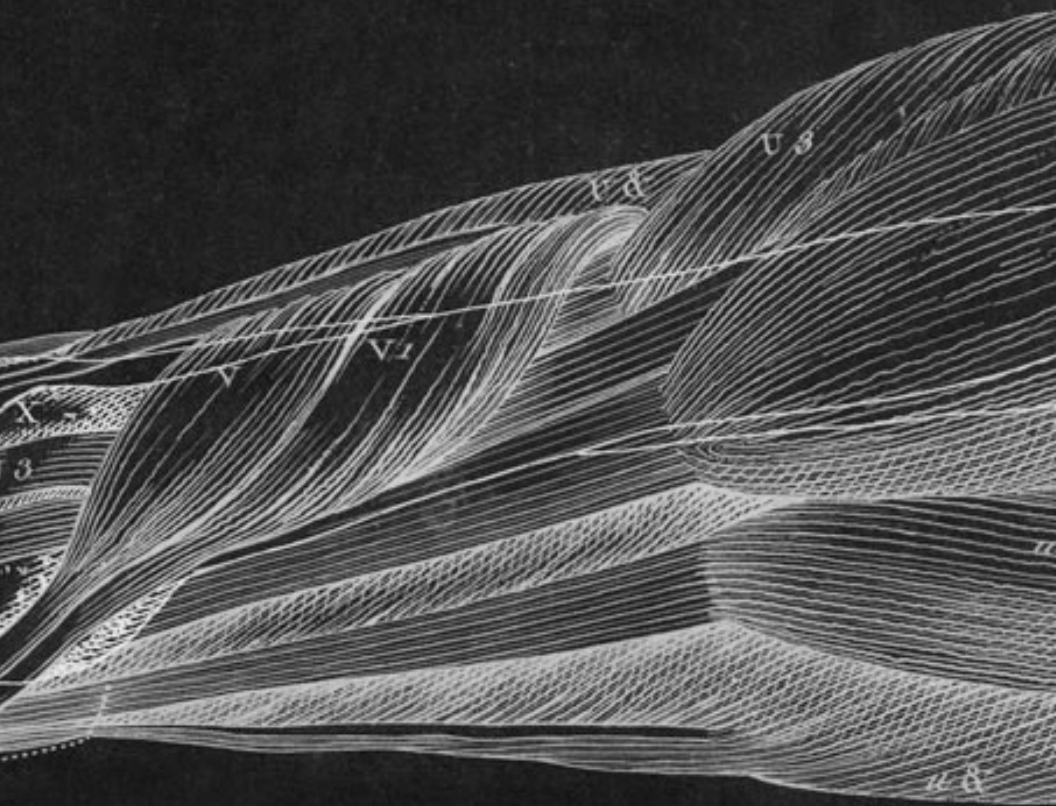


Figure 2.  
The scientific body image  
(Wall Base, 2013)





# ARCHITECTURE + THE BODY

INTEGRATING FITNESS IN THE MODERN URBAN CENTER

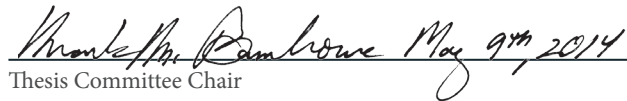
A Design Thesis submitted to the Department of Architecture and Landscape Architecture of North Dakota State University by Calvin J. Morey. In partial fulfillment of the requirements for the degree of Master of Architecture.

May 17th, 2014, Fargo North Dakota



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Primary Thesis Advisor



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Thesis Committee Chair

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*Expressive nature of the body depicted through sculpture; Embedded in Architecture. Stone Figures: Santa Maria de Montserrat Abbey, Spain.*

*Figure 3.  
(Calvin J. Morey, 2014)*

# ABSTRACT


History reveals the human body in a way that differs greatly from today's understanding. Through the artifacts of ancient architectural constructs, art, and literature we can see that the body was once articulated as an integral part to the world as a body of perception. It was and still is the case that through our bodies we are able to sensually touch and translate the world into thought, imagination and dreams. Our environments and their ability to shape our movements through them have an immense impact on how we come in contact with one another, perceive our selves, and engage our bodies. I do not believe that our bodies sensually have changed all that much throughout history, we still hold the same ancient qualities that allow us to perceive our surroundings in a holistic manner. However, I do believe that our perception *of* the body has been drastically contorted.

Today, our bodies have become increasingly separated from the world through our devices, media, and mechanization. Gridded circulation and efficiency plagues our modern urban environments where fast transportation takes its toll on the body and its ability to engage the world on a personal, mental, and physical level. Our culture has become increasingly visual as we find ourselves *seeing* the world through our digital displays rather than *experiencing* the world through our bodies. I would wager that our bodies have become so distracted from the world that our architectural environments have begun to reflect this nature; simultaneously influencing the body's progression to become even more disconnected and sedentary.

I believe that Architecture holds the power to allow us to uphold a more meaningful and engaging relationship between our bodies and the built environment. It is when this power is ignored or negated that we lose a sense of our body and find ourselves in stressful, lackluster situations. By engaging the body physically, mentally, and socially my thesis project focuses on the proper integration of a 75,000 square foot Fitness Center as means to establish a new sense of center, community and body image in the modern urban context of Minneapolis Minnesota.



*Figure 4.*  
*Skyline of Plaça Espanya, Spain.*  
*(Calvin J. Morey, 2011)*

An aerial photograph of a city, likely Los Angeles, showing a dense urban landscape with various buildings and a large stadium in the foreground. The city is set against a backdrop of hazy mountains under a clear sky. The text is centered in the upper half of the image.

**HOW CAN ARCHITECTURE  
EVOKE A SENSE OF MOVEMENT THAT  
OPENS A PARTICIPATION BETWEEN  
THE MODERN BODY AND THE BUILT  
ENVIRONMENT ?**



*Figure 5.  
Minneapolis site image.  
(Calvin J. Morey, 2014)*



# STATEMENT OF INTENT

# TYPOLOGY

A public fitness center

## CLAIM

Through the consideration of human needs, senses and means of use, Architecture can create situations that will sustain a more meaningful interaction between the body and the built environment.

## PREMISES

**1** Our perception of the body and its position in the world is an ever changing phenomenon that has direct implications on the built environment. Due to the contorted modern conception of the body, Architecture has become an application of standards and systems of mass production. Subsequently, the body continues to be negated in design decisions and our environments continue to suffer; ultimately effecting our ability to sustain a healthy life. “A piece of architecture should not become transparent in it’s utilitarian and rational motives.” (Eyes of Skin, 2008). In order to be successful Architecture needs to open up a space of interpretation through our bodies situation and perception.

**2** “The body is our undivided possession,” it allows us access to reality, which is now understood as an embodied consciousness through the polarization of the ‘stuff’ external to the body. (Alberto Perez-Gomez). Our bodies are continually distracted from the current moment by our environments and material devices. At the rate society is growing technologically, the physical world will; in the near future, become completely intertwined with the digital. Computers have drastically altered the professional realm of architecture by optimizing the processes and work flow through a project. However we need to consider how computers hinder our ability to consider the body and its tangible relation to architecture and the world. If we are only working through the computer we can become disconnected from the realities of life and overcome by simulation.



**3**In a world where efficiency is the predominant function of the urban constructs; designing with the consideration for the needs of the human body and scale is of the utmost importance. Often times the most memorable architectural nuances occur through our bodies movement through space. Powerful works of Architecture consider movement in terms of the bodies interaction and progression through the work. Movement is articulated both in a physical and mental sense as we put the work in motion as the perceiver and active participant through our progression. A design process that considers how the body will come in contact with and move through the architecture helps to unfold spaces that shape engaging, memorable, imaginative moments. As architects we hold the power to create environments and situations that invite a participation.

Architecture remains forever static and ignored if there is no need for participation or a call to action.

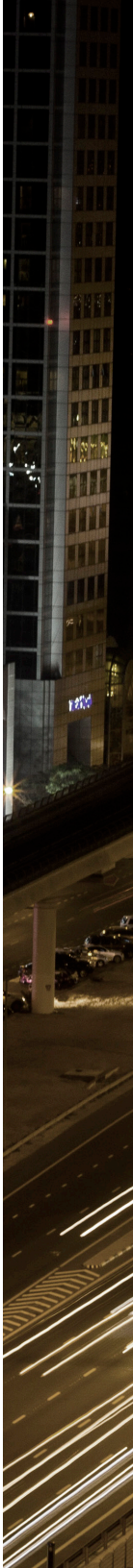
## THEORETICAL PREMISES

Through the consideration of human needs, both social and physical Architecture can create situations that will sustain a more meaningful interaction between the body and the built environment.

## PROJECT JUSTIFICATION

Labor and the concept of work in our modern world has been drastically changed due to our immense technological advancements. This has forever changed the way we perceive and use our bodies. Unfortunately today the human body much akin to everything manufactured is being treated and understood as a mere vessel for efficient use and transportation.

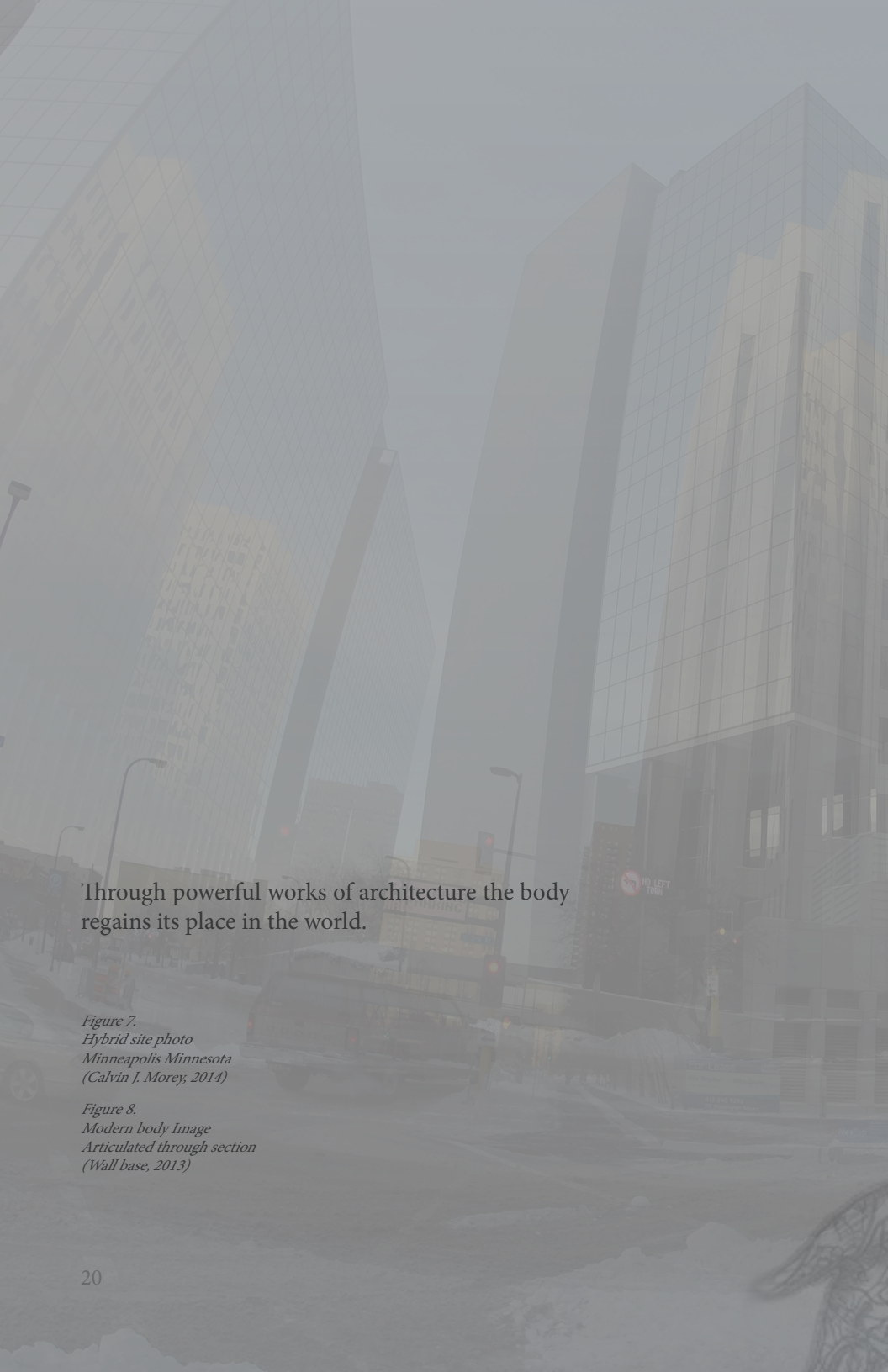
My response to this current situation is to Introduce a new type of architectural engagement and experience to the urban context of Minneapolis; to which body movements are currently bound by the grid of the city. Through the typology of a Fitness Center my project not only opens a place for physical activity it aims to create a new sense of center among the growing surrounding community. Developing a space that awakens the body as a moving and perceiving entity. Ultimately, the Architecture will create a call to move that I propose is pertinent to the practices and rituals of modern society.





*Sheikh Mohammad Bin Zayed Road, Dubai  
Urban Traffic at the highest level. While  
the cars maintain motion, the body on the  
inside remains physically static.*

*Figure 6.  
(Calvin J. Morey)*



Through powerful works of architecture the body  
regains its place in the world.

*Figure 7.*  
*Hybrid site photo*  
*Minneapolis Minnesota*  
*(Calvin J. Morey, 2014)*

*Figure 8.*  
*Modern body Image*  
*Articulated through section*  
*(Wall base, 2013)*

The image features a detailed anatomical drawing of a human torso, showing the ribcage, spine, and internal organs. This drawing is semi-transparent and overlaid on a photograph of a city street. The street scene includes a modern building with a grid of windows on the left, a street with a 'PETERED PARKING' sign, and a street lamp. The overall color palette is muted, with greys, blues, and soft yellows. The word 'PROPOSAL' is centered in a bold, black, sans-serif font.

# PROPOSAL

## THE NARRATIVE

An early morning arrival to work crudely awakens the senses to the world in which we call home. Homogenous lighting tugs violently at the iris demanding restriction from the already heavily situated eye lids. The unceasing drones of mechanical systems hum above as if to drive the conscious mind back to a more dormant state. Finger tips raw from the repeated striking of keys become tense as the knuckles yearn to be cracked against each other. The wrists and forearms fixed ever so heavily to the desk become ill as the circulation of blood becomes bound by the situation. Legs grow restless as they lay comatose fused to the chair for the duration of the day. Searching for relief from the stressful situations of the work day the body communicates the need for physical stimulation within an urban setting. Though the answer to the body's turmoil is found to be situated within the same monotonous environment that was present earlier in the day.

Movement, the harmonious and fundamental function of the human body is being over looked and under considered in today's architecture. Through the earliest writings of Greek literature we see that the human body was once seen as an aggregate of separate parts with a multitude of characteristics.

Today, we leave it up to the very specialized to know and understand the individual parts, functions and properties of the body. As a result of this specialization a disconnect is formed; As designers we cant afford to overlook the individual aspects of the human body as they are assemble in such a particular way, just as an instrument is; in order to contribute to the harmonious ensemble of senses that arise the instant we are immersed in a physical space. This robust, inexhaustible stimulation of our mind and body can never be experienced or expressed in the same profound manor with the solitary use of Cartesian space as a means of production and representation. If our built environments are to be successful in terms of creating healthy sustainable situations they require close physical interaction, manipulation, and tangible experiences that can be truly felt and understood properly before they are carried out through an architectural construct.

*Right Figure 9  
Site View: From the 4th floor. Of the  
Minneapolis Central Library.  
(Calvin J. Morey; 2013)*



## **A CLIENT-USER DESCRIPTION**

### **OWNER**

The fitness center will be owned and operated as a public facility by the city of Minneapolis Minnesota. This will allow for lower admission and monthly membership costs as well as solidifying its place and importance in the context of the city.

### **USERS**

Minneapolis is continually named as one of the healthiest cities in the nation. This is achieved through its high percentage of park land, bike trails and pedestrian friendly outdoor spaces such as Nicollet mall. However Minneapolis is still developing and plans to double its population by 2025. For this reason Minneapolis plans to do a lot of surface parking and vacant lot development. Already the emerging Nic on fifth and the proposed Xcel energy headquarters building are in the works for completion near my site. I foresee the primary users of this fitness center to be procured mainly from these new developments. People working in the surrounding business complexes will be able to contrast the conditions of indoor life by enjoying the park environment my design intends to incorporate. New residents to Minneapolis will be able to incorporate long walks and exercise into their busy lives while being able to socially interact and meet new people from the surrounding community.

With the sites close proximity to professional sporting venues I also see the potential for this project to attract major athletic teams and players to use the facility. University of Minnesota students perhaps working in the city or living in the student living centers north of my site will also be able utilize the new center.

### **EMPLOYEES**

A wide range of employment opportunities will be offered. A variety of health and fitness professionals will be on staff as well as nutrition specialists. Reception and various Maintenance requirements will also need to be met by the employed staff. Student employment and fitness education/training will also be available.



## MAJOR DESIGN ELEMENTS

- 1 Parking and metro transit integration
- 2 Entrances | allow access from all directions
- 3 Reception Desk
- 4 Lobby | Rest Area
- 5 Mixed use gymnasium
- 6 Weight training
- 7 Cardio | Indoor Outdoor
- 8 Rock wall | 42ft. Max.
- 9 Running Track | 200m
- 10 Private class studios
- 11 Lap Pool | 8 lanes
- 12 Recovery pool
- 13 Group steam room
- 14 Sauna rooms
- 15 Male + Female restrooms
- 16 Lockers | shower spaces

## EXTERIOR ELEMENTS

- 1 Large plaza space
- 2 Stepped reading platforms
- 3 Rest space with water features
- 4 Bike racks
- 5 Roof top running track | outdoor classes
- 6 Deck space for rest

# SITE INFORMATION





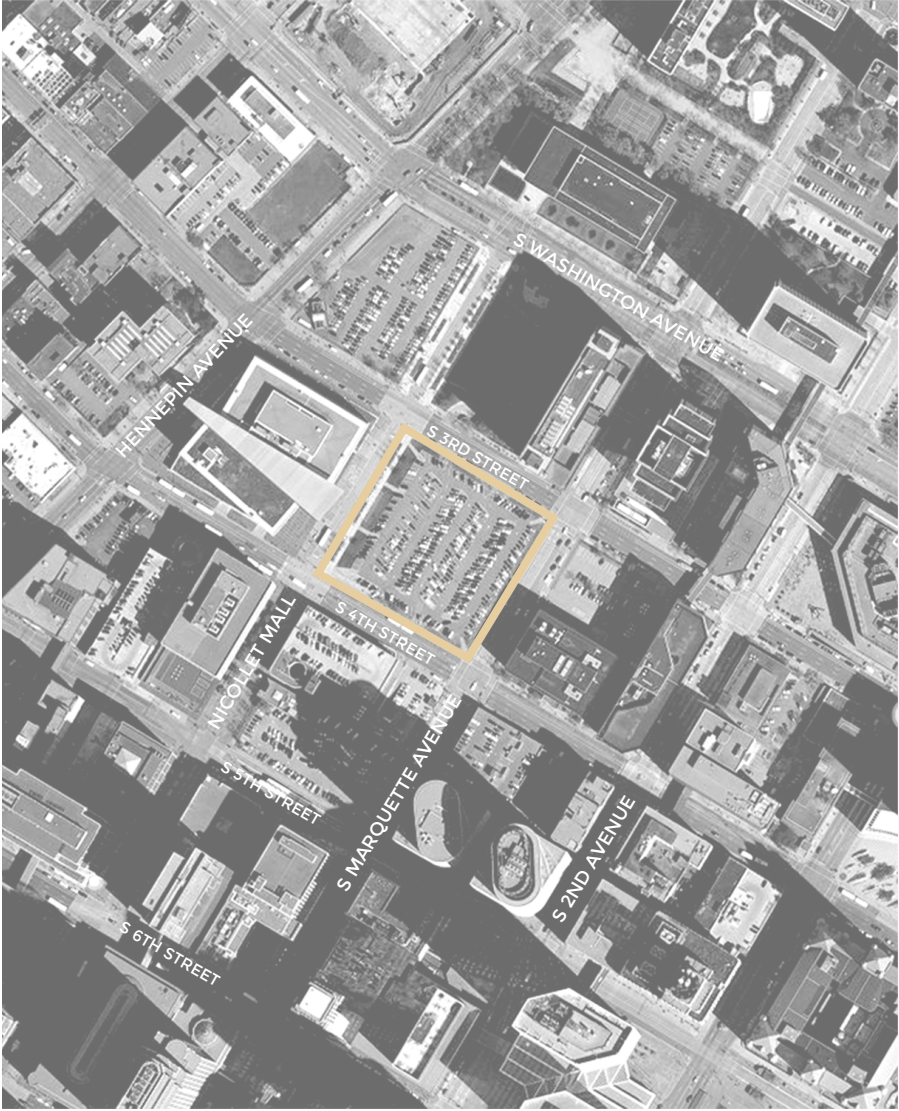
*Figure 10.*  
*Minneapolis Skyline.*  
*(PhotosByJeremiah, 2012)*

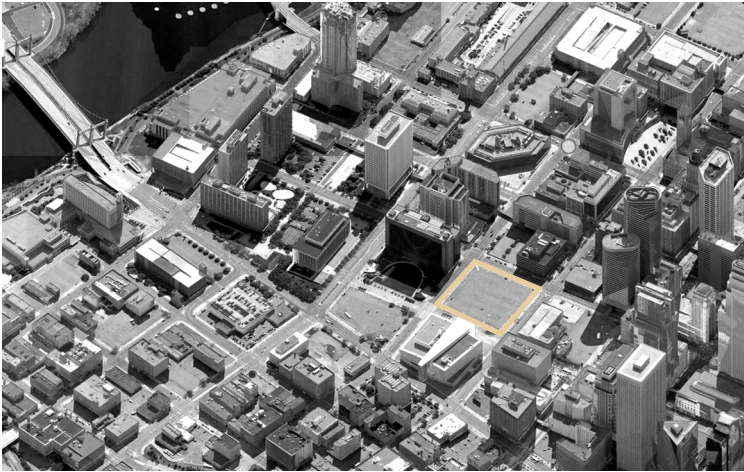




*Above : Figure 11.  
Minneapolis Areal Map  
(Google Maps, 2013)*

*Left : Figure 12.  
Minneapolis Macro map  
(Bing Maps, 2013)*





Situated to the north end of the Nicollet Mall walk way this site has a great potential to further extend the interest of pedestrians to venture further north. If this site were to be successful it would stimulate a multitude of attraction and activities to help bring this part of Minneapolis back together. With the addition of the new 27 story high-rise apartment tower just across from this location, it also has great potential to become a selling point for incoming residents.

Living in an urban setting can definitely take its toll on the body through out the day and through the work week. This site and project would not only serve this growing area as a health center but a connection hub for relaxation and social interaction. A place to work on physical health after a long day/week of working in an office, or just to relax somewhere other than their apartment. Reinforced with effective outdoor public spaces and vegetation this mere parking lot holds the potential to transform this part of Minneapolis into an effective wellness center that engages the surrounding community.

*Left Figure 13.  
Site map + Road labels  
(Bing Image, 2014)*

*Above Figure 14.  
Birds Eye looking East  
(Bing Image, 2014)*

# THE LIBRARY

The site's proximity to the library creates a unique opportunity for the new fitness center to incorporate spaces that would facilitate reading. The act of gaining knowledge through our eyes meeting the pages of a book is as much of an engagement as physically touching or manipulating something. The goal is to integrate spaces that invite a blending of movements both mental and physical. This aims to create a positive tension between the two creating a pull or desire to participate in both realms of active engagement through the body.



*Figure 15.  
Minneapolis Public Library.  
(Ken Friberg)  
Right, Figure 16.  
People and Nicollet mall  
(streets.mn)*



Being situated on Nicollet mall was another reason that I found this site to significant. Arguably one of the best examples of a pedestrian friendly out door walkway through the city, Nicollet Mall connects the busy downtown area of Minneapolis to parks along the river front to the north. By utilizing this pedestrian exposure my architecture will facilitate a park and plaza environment that will connect what is there through the emphasis on physical and mental activity. I see the mall as the integration of a third form of movement, social interaction. An intertwining of the community through movement and action.



THE  
COMMUNITY



As Minneapolis continues to grow in population the consideration for how people will move through the city is of the utmost importance. Social interaction is something that I sense is missing in today's urban environments and if Minneapolis is to successfully respond to its growth it needs to establish places for people to interact. Taking considerations for how my architecture is situated and comes in contact with the ground will be important in creating spaces on the exterior that allow for a meander and social interaction. Through physical models I plan to explore ideas that will properly establish a new sense of center for the growing surrounding community. The architecture to come will also take into consideration the surrounding views of my building from the work and living spaces above. Allowing residents to view the spectacle of movement and action will be a large part of creating an environment that reaches out and creates a connection through a distance. Ultimately creating a call to move.

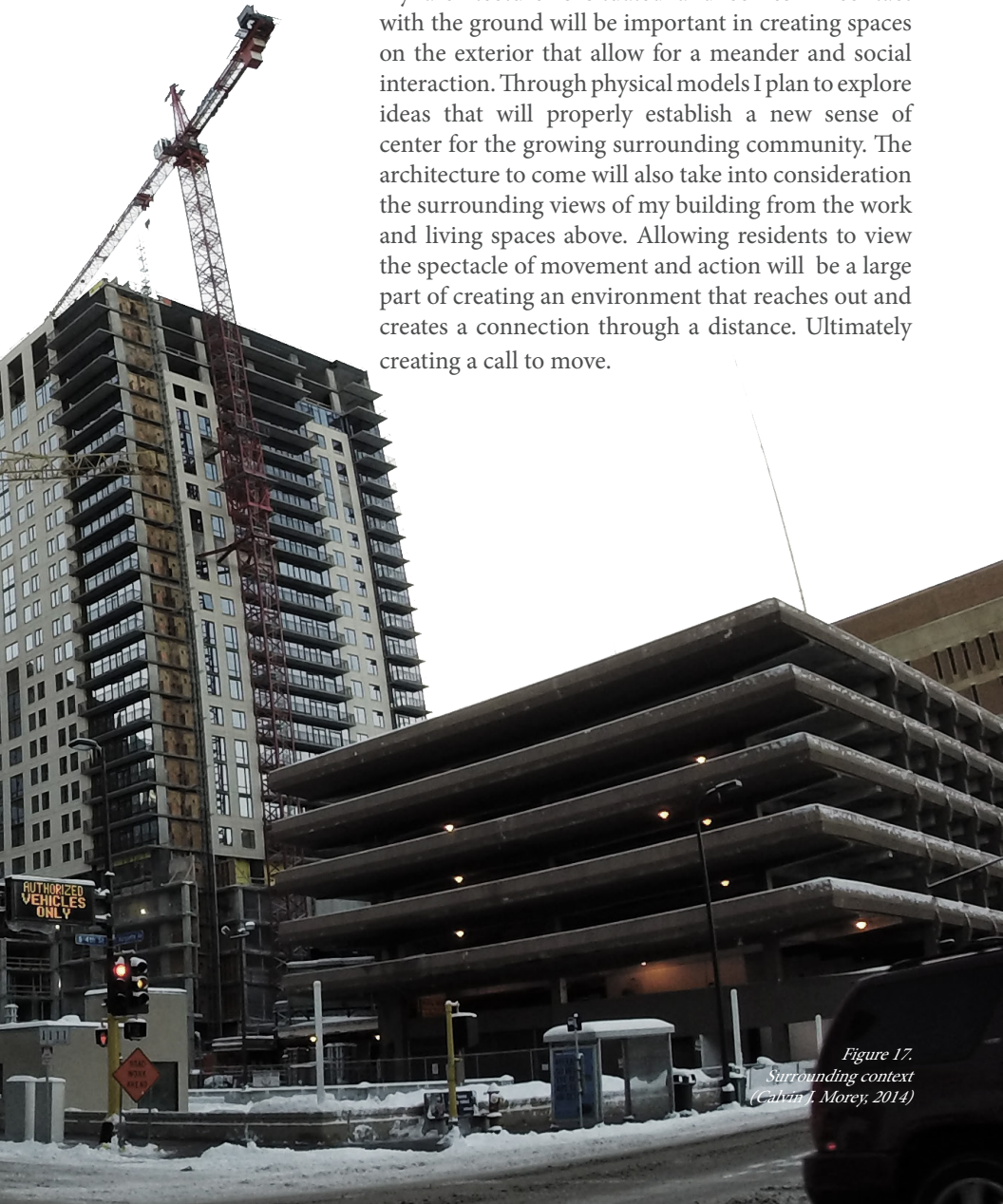


Figure 17.  
Surrounding context  
(Caban I. Morey, 2014)

## PROJECT EMPHASIS

This thesis project aims to reconnect a sense of center and community that will create a call to move by situating itself upon a centrally located parking block in Minneapolis Minnesota. With a focus on fitness this newly developed site and architecture will encourage and welcome a more meaningful interaction. Taking careful consideration for the needs of the human body pertinent to a conscious involvement leading to a harmonious convergence of the senses.

This project will examine the habits of modern society, the study of the body and its changing image through time and the implications those changes have on the built environment. The study of materials, installation techniques, and technology as a means to inform architecture to create a more harmonious environment. To better understand the importance and power of the human interaction with the built environment for the security and sustainability of future architectural works.



*Figure 18.*  
*The body in movement*  
*(Google Images, 2013)*

# A PLAN FOR PROCEEDING

## RESEARCH DIRECTION

The Research for this project is focused on how our bodies are conceived and how this perception has changed throughout history. Also the way in which this affects our surroundings and current situation. This was done through reaction papers pertaining to topics such as phenomenology, psychology, philosophy, the senses and the human body. This was done in conjunction with the Research of contemporary and historical case studies that relate to the main focus of this project. Finally an understanding of the site in terms its relation to the public, history and the human body. This was carried out through site visits, geography and climate research.

## DESIGN METHODOLOGY

The design methodologies that will be worked through in this thesis are as follows:

Mixed method quantitative/  
Qualitative analysis  
Graphic analysis  
Digital analysis  
Sports training analysis

## DOCUMENTATION OF DESIGN

The documentation for the process of this thesis will be carried out through the following:

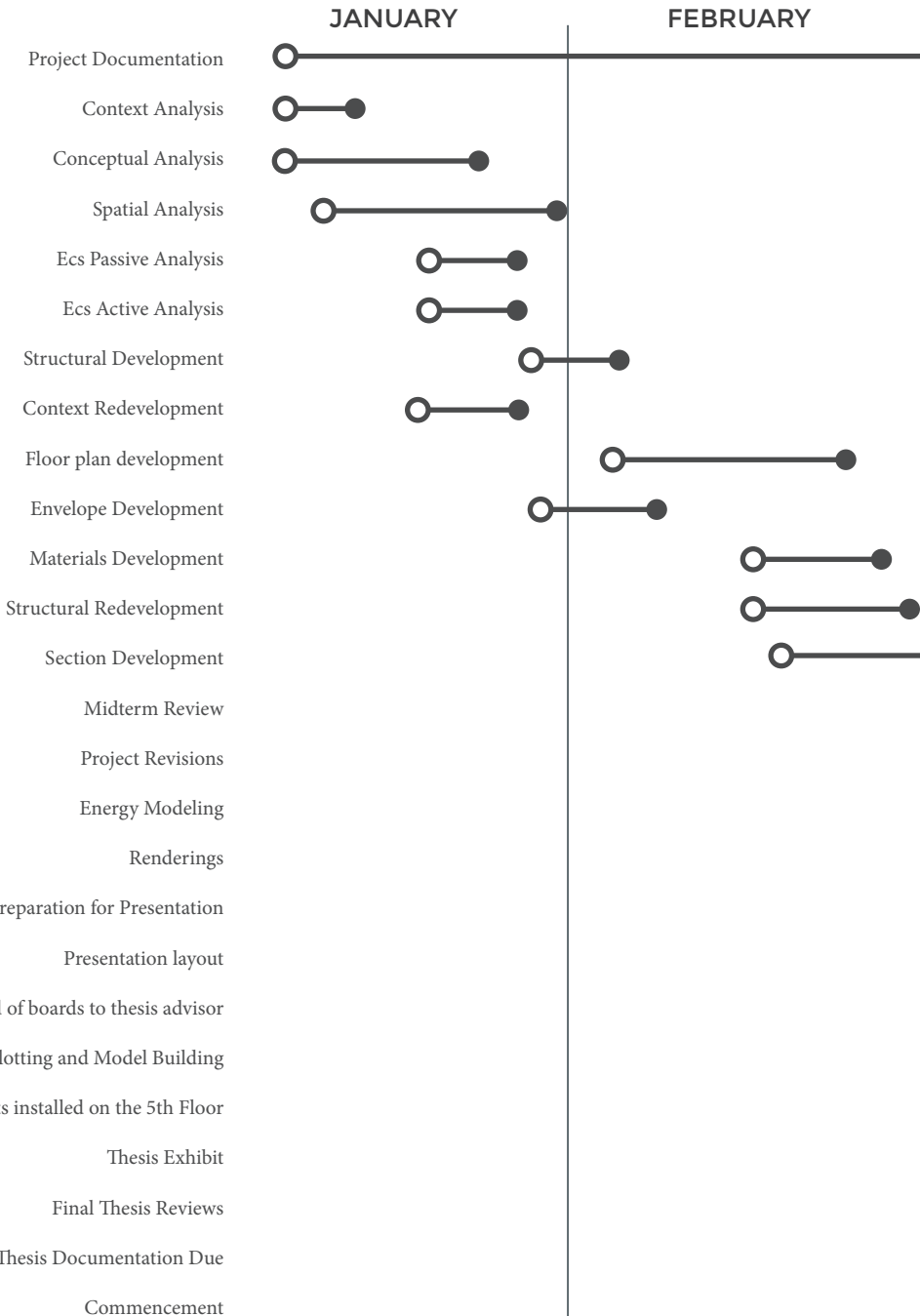
Hand sketches  
Writing  
Artefact exploration  
Photography  
Time-lapse sequences  
Digital reproduction  
Digital representation  
Physical modeling

This documentation will be made available to scholars in the North Dakota State University Libraries Digital Collection in the

## A SCHEDULE FOR ACTION

| TASK                                    | DAYS | DATES     |
|---|------|-----------|
| Project Documentation                   | 88   | 1 9-05 10 |
| Context Analysis                        | 5    | 1 9-01 15 |
| Conceptual Analysis                     | 10   | 1 9-01 22 |
| Spatial Analysis                        | 15   | 1 11-1 31 |
| Ecs Passive Analysis                    | 5    | 1 18-1 24 |
| Ecs Active Analysis                     | 4    | 1 18-1 23 |
| Structural Development                  | 8    | 1 24-2 4  |
| Context Redevelopment                   | 5    | 1 18-1 24 |
| Floor plan development                  | 11   | 2 5 -2 19 |
| Envelope Development                    | 14   | 1 21-2 7  |
| Materials Development                   | 11   | 2 14-2 28 |
| Structural Redevelopment                | 10   | 2 15-2 28 |
| Section Development                     | 10   | 2 15-2 28 |
| Midterm Review                          | 4    | 3 05-3 9  |
| Project Revisions                       | 12   | 3 07-3 22 |
| Energy Modeling                         | 7    | 3 12-3 20 |
| Renderings                              | 24   | 3 13-4 15 |
| Preparation for Presentation            | 7    | 4 05-4 15 |
| Presentation layout                     | 6    | 4 08-4 15 |
| Cd of boards to thesis advisor          | -    | 4 16      |
| Plotting and Model Building             | 5    | 4 16-4 22 |
| All Exhibits installed on the 5th Floor | -    | 4 25      |
| Thesis Exhibit                          | 3    | 4 23-4 25 |
| Final Thesis Reviews                    | 6    | 9 27-10 4 |
| Final Thesis Documentation Due          | -    | 5 10      |
| Commencement                            | -    | 9 27      |

# DESIGN SCHEDULE





MARCH

APRIL

MAY

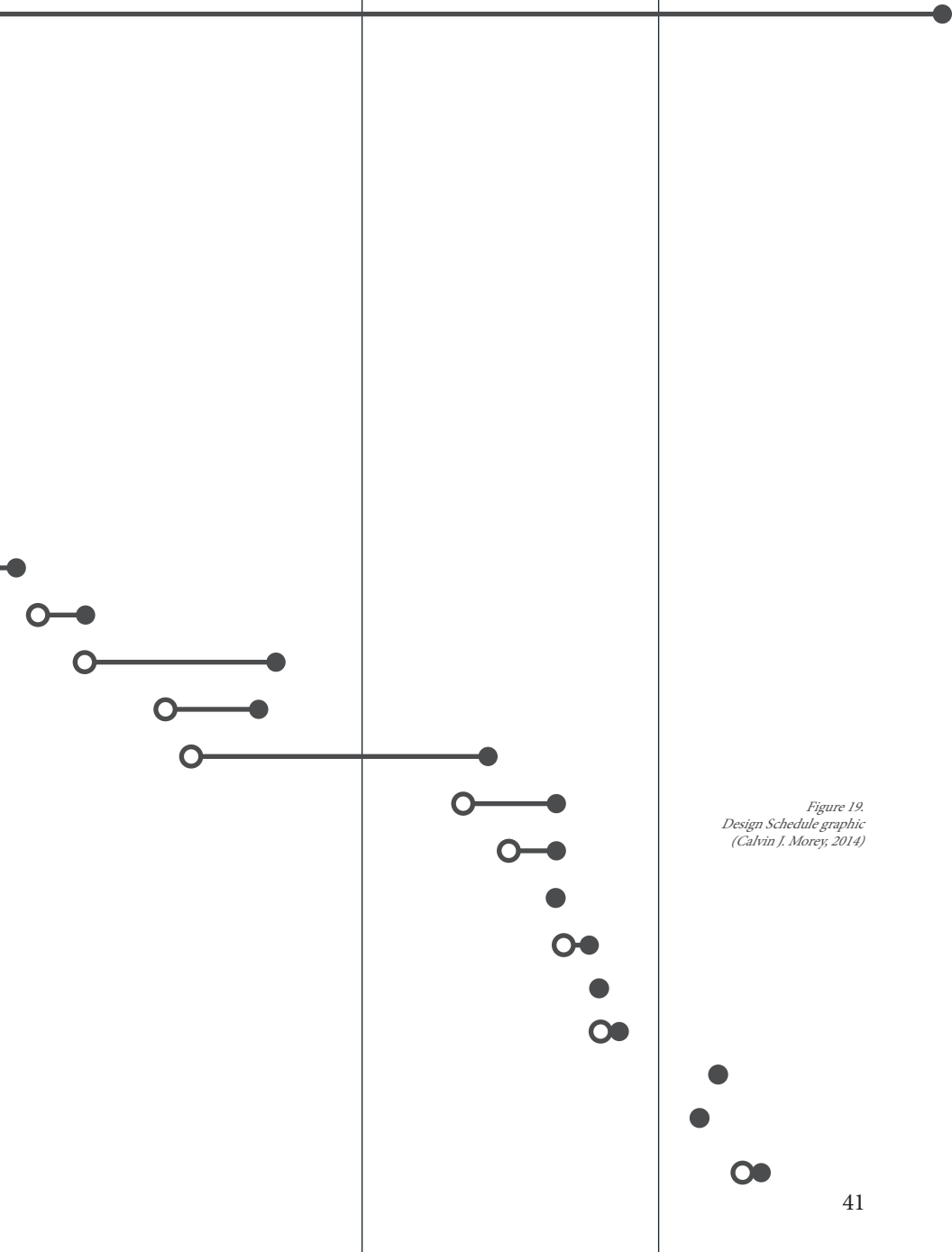
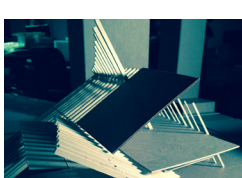
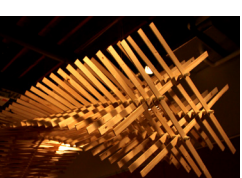
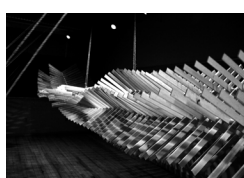
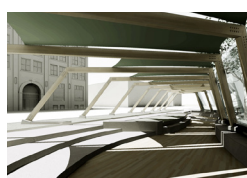
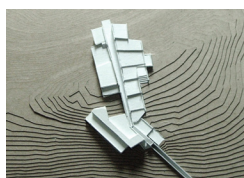
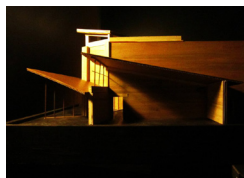
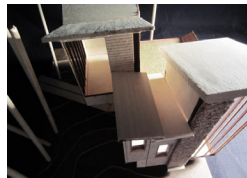
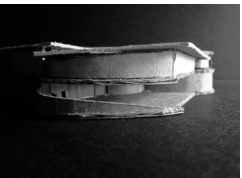
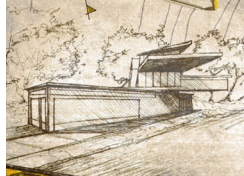


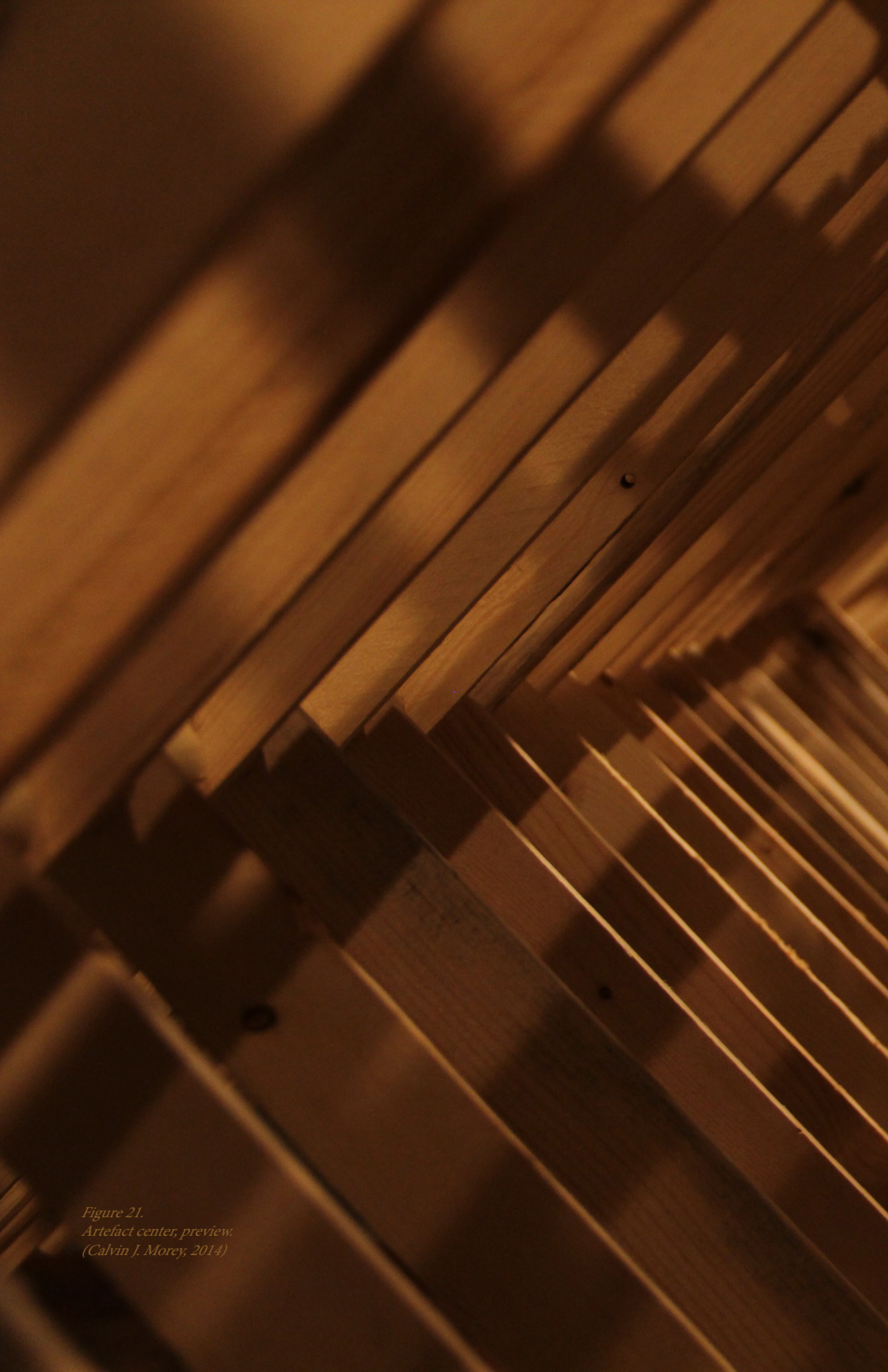
Figure 19.  
Design Schedule graphic  
(Calvin J. Morey, 2014)

# STUDIO EXPERIENCE

| STUDIO                  | YEAR        | PROFESSOR          | PROJECTS   |
|-------------------------|-------------|--------------------|--|
| Arch Design Studio I    | Fall 2010   | Joan Vorderbruggen | Tea House<br>  Boat House                        |
| Arch Design Studio II   | Spring 2011 | Cindy Urness       | Montessori School<br>  Dwelling                  |
| Arch Design Studio III  | Fall 2011   | Steve Martins      | Animal Research Facility<br>  Masonry Guild Hall |
| Arch Design Studio IV   | Spring 2012 | Rhet Fiskness      | Presidential Library<br>  Visual Arts School     |
| Arch Design Studio V    | Fall 2012   | Don Faulkner       | High-rise  |
| Arch Design Studio VI   | Spring 2013 | Don Faulkner       | Hopes Journey<br>  Urban Design Installation     |
| Arch Design Studio VII  | Fall 2013   | Stephen Wischer    | Thesis<br>  ACTS Artefact Exploration            |
| Arch Design Studio VIII | Spring 2014 | Stephen Wischer    | Thesis   |

*Right, Figure 20.  
Previous work samples  
(Calvin J. Morey, 2014)*





*Figure 21.*  
*Artifact center, preview.*  
*(Calvin J. Morey, 2014)*



**RESEARCH**

## BODY + MEMORY

Through out the year I was interested in how the body is in contact with the world as opposed to how it has been in the past. I believe that today due to scientific thought we have come to understand the body as an entity of separation. We can see this through the way we treat our bodies. If we have a head ache we simply take a pill with out considering the conditions our bodies are enduring. Thought is actually formed through our bodies situation, posture and senses. The French philosopher Maurice Merleau-Ponty stated that “we grasp external space through our bodily situation.” Our posture within the world at every moment gives us a holistic and practical relation between our body and the things in this world with us. Through, unlike things, our bodies inhabit or haunt space. For us the body is much more than just a means of transportation from one place to another. It is as Merleau-Ponty put it, “our expression in the world, the visible form of our intentions” Even the movements within our bodies that go unseen and sometimes unnoticed help to shape our perception of things.

*“The world is not seen in your body and your body is not in the visible world. The world neither surrounds nor is surrounded by your body. There is a kinship between the two. “My body as a visible thing is contained within the full spectacle. But my seeing body subtends this visible body, and all the visible with it. There is a reciprocal insertion and intertwining of one in the other.”*

–Maurice Merleau-Ponty

I happen to agree with this notion and I believe the lack of this understanding of the body today has contributed to poor architectural situations. Our memories of spaces and environments are formed through our bodies particular situation with in them. This is why a change in temperature, a taste, or a particular ambient feeling of a space can contribute to us recalling a space that we have encountered in the past.

*Body, Memory, and Architecture* a book by two Yale professors of architecture, Kent C. Bloomer and Charles W. Moore talk about this very idea in the concept of body spatiality. They state that body spatiality “refers to an internal world which is not only distinct from and within an external world, but which is centered around ‘landmarks’ and bodily memories that reflect a lifetime of events encountered outside the psychic body boundary.”

I think we need to become conscious of these “landmarks” and the way in which they effect our bodies. As architects we have to ask ourselves; how will people recall the spaces we create? And since our memories are formed through the body I think an even more appropriate question would be; how does this environment form a lasting relationship to the body? If these questions were considered all the time I have a hard time believing that the stuffy, lackluster office spaces and cramped side walks that plague our cities would exist in the abundance they do today.

We form memories through our bodily situation within space and bring to each situation of interaction memories and stories to be shared. Through movement we carve our paths through time and weave them in with others. In order to be successful the fitness center that I propose must break away from the typical and allow for people to interact with the architecture on a more public level. This is why a sense of community and the freedom to meander is important to my project.

*“The social properties of the body image are formed by reactions to people and social events and are thus as dependent on the attitudes of people who have been encountered (and the circumstances of the encounter) as on the fundamental body actions and desires of the individual.”*

-Kent Bloomer

## ANCIENT LANGUAGE + BODY IMAGE

As I began to delve into history it became evident through the evolution of language, and the artifacts we leave behind that our body hasn't always been perceived and responded to architecturally in the same way. In order to illuminate the modern body condition it is important that we recognize how the perception of the human body has changed throughout the ages.

As an artifact of language, text can be a useful tool in apprehending a better understanding of our position in the world at this current moment and how our understanding of the body has changed through time. As quoted by Stephen Wisner in his paper on Giambattista Vico's *Scienza Nuova*, Vico describes how, through the ricorso, imagination and poetry are weakened and eventually replaced by "reason and reflection," dispersing the initial potency of these same objects into "diminutive signs." The initial potency of these same objects into "diminutive signs." The initial expressions, which articulate similarities in things through metaphor and imitation, are now used for the purpose of rational communication.

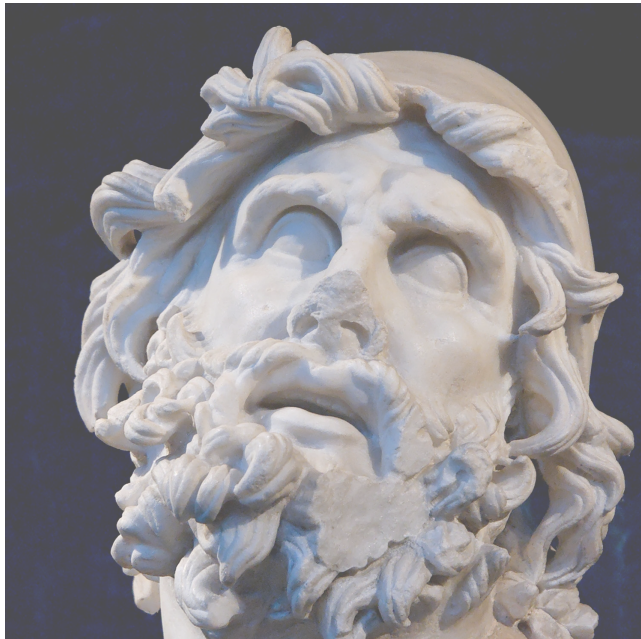
Examples of these earlier forms of language are shown by the variety of nine verbs that Homer uses to denote the operation of sight. δέρκεσθαι ( dérkomǎi ) means to have a particular look in ones eye. The snake or δράκων ( drákōn ) was derived from the initial verb dérkomǎi because the Greeks named it for the manor in which it would look at someone. Bruno Snell a German classical philologist articulates in *the Discovery of the Mind* that it was due to the "uncanny glint" in the snakes eye that he was given this name. He is called the seeing one, not because he can see particularly well, not because his sight functions exceptionally well, but because his stare commands attention." (Snell, Bruno 2008) The same verb is also used of The 'Gorgon' whose glance incites terror, and of the raging boar whose eyes radiate fire. In both cases the Greek language is articulating the expressive nature of the eyes.



Through out the time line of this ancient language several of the original nine verbs vanished from use in later Greek literature. And following the time of Homer only two of the verbs continued to be used. The fall a language or the extinction of a particular way of describing something tells us that the older language recognized certain needs or aspects that were no longer felt or scene in the same way by its successor.

In the later period, the various kinds of sight are modified by the insertion of adverbs and prepositions. In Homer men used their eyes to see, or as Bruno would say “to receive optical impressions.” However at this point in human history the language paid no attention to what we today would regard as the basic function of sight. And if they had no word for it, then as far as they were concerned it did not exist.

Language stands as a link between our bodies and the way we perceive them in the world. Through Language it is made clear that the body image has changed drastically through the ages and that the Greeks perceived the body in an expressive holistic manor with a stronger correlation to the world.



*Figure 22.*  
*Greek expression*  
*Through sculpture.*  
*Head of Odysseus*  
*representing Odysseus*  
*blinding Polyphemus.*  
*(Jastrow, 2013)*

# THE GREEK BODY

## AN ILLUSTRATED ARTIFACT

Much like the early verbs did in the previous section, the words in which Homer uses to speak of the body show us how the body was understood at that time. The word *soma*, or body was the resulting descriptive word that was derived from earlier iterations that referred to the physical nature of the body. Bruno Snell also articulates that Early Greek art was concerned with the intricacies of the human figure and its correlation to motion. The body to the Greeks was scene and portrayed through drawings as an aggregate of parts that are all mutually correlated rather than a simple unit to which our extremities are attached. The muscles and tendons would be dramatized by juxtaposing thin connections against swollen muscles.

*“The Homeric Greeks did not yet have a body in the modern sense of the word; body, soma, is a later interpretation of what was originally comprehended as limbs. Again and again Homer speaks of fleet legs, of knees in speedy motion, of sinewy arms;” it is in these limbs, that are immediately evident to his eyes, that he locates the secret of life.” -Bruno Snell*



Figure 23.  
Ancient Greek vase depicting  
Olympic runners  
(Hulton Archive, 2013)

Greek architecture also solidifies on a larger scale the way they perceived the body. Architecture at this time became an important link in connecting not only to the world but also to sense the self against the world, their gods and the cosmos. Sculpture, in conjunction with their architecture allowed them the opportunity to portray a societal image of strength, stability and power through out their built environment. It is hard to imagine living among these early pieces and not being completely conscious of your body and your position in relation to them.

The Greeks were masters at capturing the holistic feeling or moment in a static form. As depicted by the Caryatids of the Acropolis. The figures seem to be unfazed by the immense weight above as their posture and leg positions suggest that they are in mid stride forward.



Activity and movement for the Greeks was understood at first in terms of its modes, and various attitudes that were connected to the moment of experience. There is a long period of time before language and drawings begin to establish themselves as a means to communicate the essential function of an activity or focus.

*Figure 24.*  
*The Caryatids of the Acropolis*  
*ready to step out into the*  
*mortal world.*  
*(www.ancient.eu.com)*

# THE LOOM

## AN ARTIFACT OF THE BODY

As a physical artifact of human creation and technology, the loom throughout time has always been closely associated with the human body as its main purpose was to aid in the craft of garments. Our clothing not only provides a shield from the harsh forces of the world, they also become an extension of our body image with in society. Our clothing becomes our expression of self and helps to establish ourselves as individuals. In history the loom offered an intimate interaction between the weaver and the medium. Intricate patterns and stories could be woven into garments creating a great deal of worth and meaning in the clothing and textiles of the past. The loom also held symbolic and mythological connotations through out Greek literature and art work. Throughout history and certainly up to this point our garments help to define our bodies expression and contribute to our perception of the world through our movements in them. However, the main difference to consider is the way in which the garments are being crafted.



*Figure 25.  
Penelope and her loom  
Ancient Greek legend wife of Ulysses  
Mother of Telemachus  
Example of domestic virtue.  
(Super Stock, 2014)*

In Chora 3 Ricardo L. Castro writes about the Kogi people who currently inhabit the Sierra Nevada. They are an Indian group that have been one of the most reluctant to establish permanent contacts with western civilization. The Kogi people reject commercial-trade and insist on using only the textiles that they have crafted following traditional methods. To the Kogi, the spindle and loom are more than mere tools, and the spinning and weaving are more than simple productive activities.

Weaving for this indigenous group carries directly into their spaces of dwelling, which of course, historically has always been considerate of the human body. The woven walls of their houses and the pervasive interlacing of structural elements and connections carry with it various symbolic connotations while creating a space that opens up to the heavens and larger continuum. The kogi people hold weaving close to them because it is there mental and tangible connection to the world through their bodies participation.

*“Spinning and weaving are continuous processes that accompany the rhythm of the chant and set a pace for thinking. Spinning generates thoughts, and weaving intertwines them into the Fabric of Life, which is no other than a web of knowledge.”*

-Ricardo L. Castro Chora 3,



Figure 26.  
Kogi Hut  
(Chora 3, 2013)

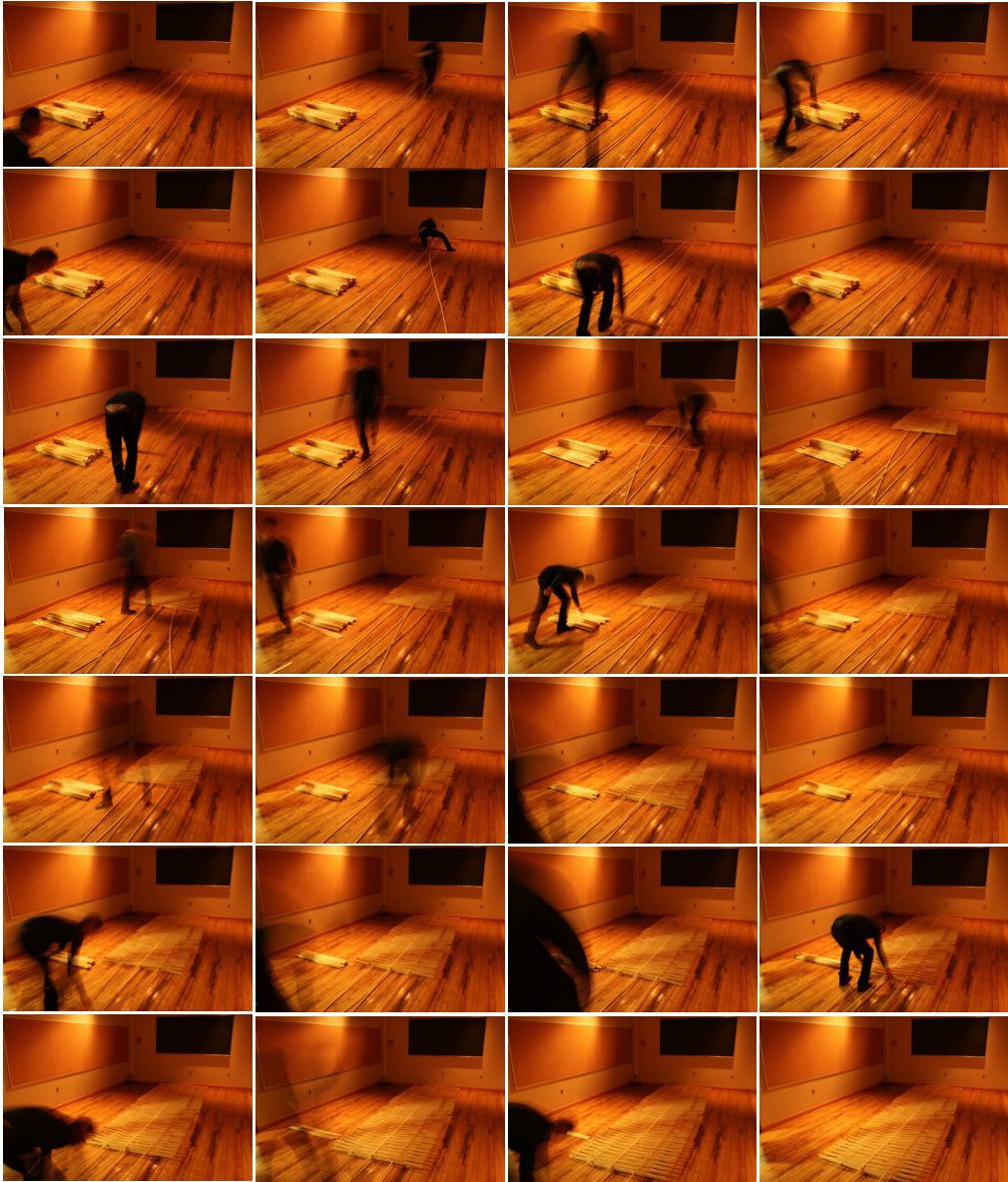
## THE ARTEFACT

Through my research of the body and its origins of perceptual relation to the world I set out to create an artefact that would be a manifestation of movement, interaction, and means of seeing the body in a new way. Ultimately the goal was to bring present something that was like the body and could open up a participation with movement through both a distance and physical interaction. What I mean by distance is that the artefact is not a defined thing, it is something new that opens a space for interpretation and in so doing invites a participation through its movements and ability to metaphorically relate to the body. Allowing this distance was important to me because like the body architecture is often times only considered for its visual appeal. Through the artefact I was able to open a space for interpretation which could later be brought through my architectural design in a way that could move the body in a more meaningful manor.

Early on, the process of creating the artefact sprouted from the inspiration I took from the loom. I felt that the symbolic connotations that accompany the loom was important to my project. Looms present a metaphoric and physical connection between our bodies and there relation to the world. Through our movements through space and time we create and follow paths that are continually crossed and influenced by others around us. Our bodies are intertwined or woven into the fabric of the world through our movements, senses and interactions with others and with things. I allowed this notion of weaving to guide my process through the creation of my artefact.

Using long thin strips of PVC and wooden slats I was able assemble my artefact in a way that is reminiscent of weaving. Through holes on either sides of the wooden slats I slid each piece in to place over and under, in and out. The act of physically sliding each piece of wood into place tightly up against the one that was placed before felt like weaving, but in a new way. The wood acted just like thread would on a loom where with each pass the garment or in this case the structure came into being.

*Figure 27.*  
*Artefact time lapse*  
*(Calvin J. Morey)*



Tension is something that our bodies are constantly experiencing. Our tendons keep our muscles strung across our structural frame and contribute to our ability to move. We can sense this tension when our bodies hold a position for long periods of time. Sitting at a desk behind a computer for hours on end will usually prompt a quick stand and stretch to relieve our tense bodies. Tension is also experienced through my artefact in many different ways. Physically it is felt through the act of gripping the handles and pulling to hoist the structure. Through your hands contact the tension resonates through your body as the artefact becomes an extension of your movements.

Tension can also be experienced from a distance or from the vantage point of someone who isn't physically in contact with my artefact. When it is laying across the floor the weight of the folded wood structure pulls against the ropes that strung through pulleys in the ceiling. The ropes continue past the pulleys and hang down through the center of the concrete handles. Using concrete for the handles allowed for this constant tension to occur and be experienced even in its static position on the floor. This created a calming, dreamy presence that pervaded the room as the artefact laid at rest with the concrete handles suspended above through tension. The smooth almost liquid nature of concrete also lent itself to create a soothing connection to the hand even while the artefact was in the most violent of movements.



*Figure 28.  
Artefact as extension  
of the body  
(Calvin J. Morey; 2014)*

*Right Figure 29.  
A sense of tension  
(Calvin J. Morey; 2014)*







*Figure 30. Expanded open  
Looking through the center of  
the artefact.  
(Calvin J. Morey, 2014)*

Modern thought places the body in the world as a conglomeration of separation where all pieces are defined and unrelated. Though I would argue alongside Maurice Merleau-Ponty that the body is comprised of a multitude of complex parts that are all interconnected and immensely important in their spacial relation to each other in shaping our perception and sense of the world. Our body in its cohesion of parts is how we gain access to the world. My artefact isn't about separation, or the functional aspects. Like the Greek articulation of the body, my artefact is about emphasizing the interconnection between the separate pieces that contribute to the spectacle of movement and expression.

This is achieved through its ability to create a physical and social connection between the users. Physically the users were intertwined together through their hands connection to the heavy concrete handles. The tendon like nature of the rope tethering the four users together through the artefact forms a kinesthetic consciousness of the individuals movements, the artefacts movements, and the fellow users movements. A social bond is formed between them as they come to realize that the artefact was designed in a way that required the mutual attention of four users to make it move properly. It is only effective when there is an active participation between all four users.



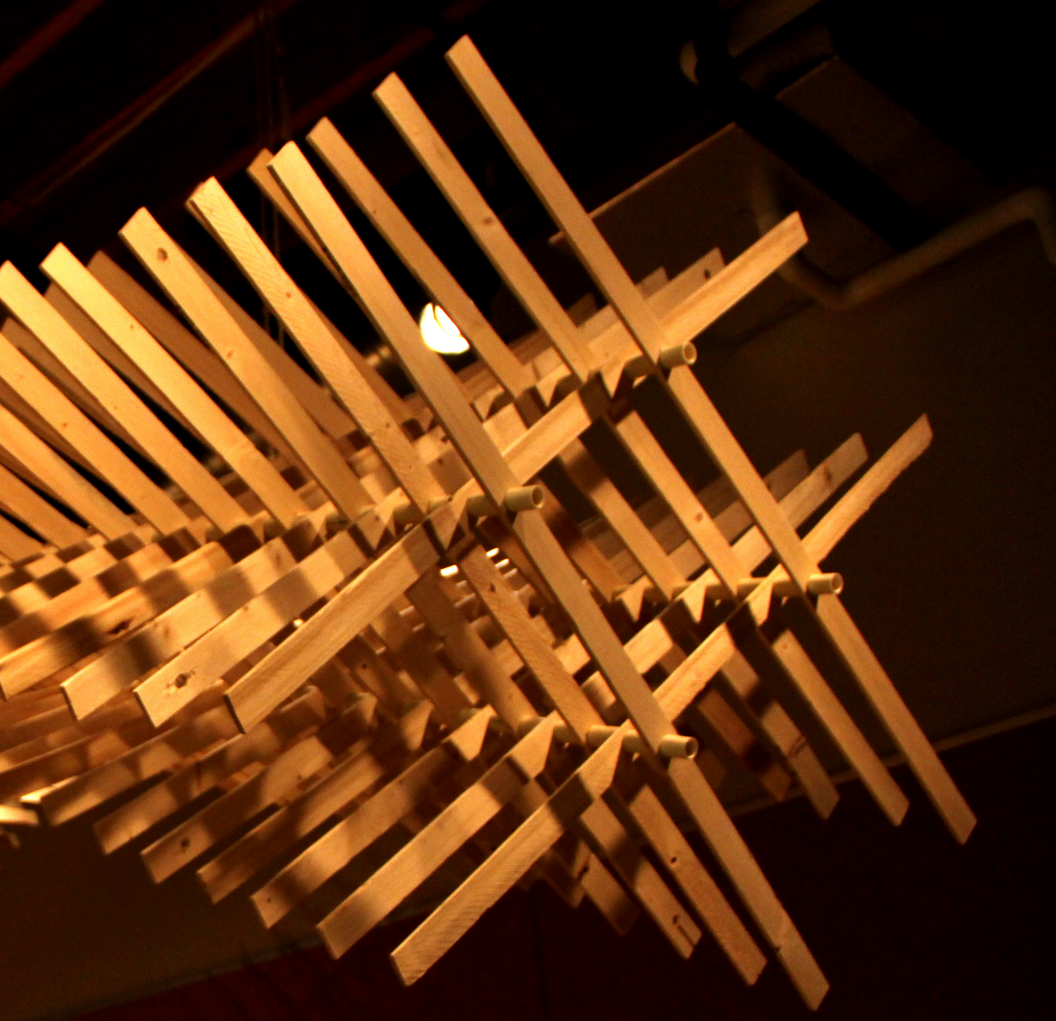
*Figure 31.*  
*Moving as a cohesive whole*  
*(Calvin J. Morey, 2014)*



Figure 32.  
*Artefact in Motion*  
(Calvin J. Morey, 2014)

Figure 33.  
*Progression of Movement*  
(Calvin J. Morey, 2014)





Movement is inherent to life, if Architecture is to be successful it must respond to the bodies need to move and interact with the built environment. My artefact calls attention to the bodies movements through its physical and poetic connection to the users. Ultimately awakening the need for action and movement in the increasingly sedentary life of the urban context.



## CONCLUSION

Through out history the body has always had a close connection to the built environment. Ancient Greek Architecture, art, and language were saturated with the expressive nature of the body and its active engagement with the world. Through their mythologies, beliefs and gods their architecture gained a great deal of power and meaning to their society. Similarly the Kogi people cling to their way of life as they continue to value the physical interaction with their crafts. They weave their huts in a manor that connects the ground (to which their bodies adhere) to the heavens. Architecture in the past and within primitive culture gains its powerful impact from rituals, beliefs and the unknown. However, due to periods such as the enlightenment, and the spark of rational thought, gods and mythologies no longer hold a relevant place with in our society. Nor are they responsible for attributing meaning to architecture as their presence has neutralized.

However, despite this fundamental difference between the past and present our bodies are still bodies of perception and need to continue to be considered as such. Our environments are responsible for influencing the way we feel, our ability to maintain health and our willingness to engage in participation. Our bodies are still immensely effected by our environments and it is the unfortunate occurrence in the modern world that the body has taken a back seat to efficient applications of commodified homogeneous design.

Architecture regains its potency through the consideration for the human body, its senses and movements. Through a space of interpretation my artefact was able to spark the imaginations of the spectators and users. This created an enthusiastic participation that was witnessed through conversation, interaction and body movements. The body and its engagement with the built environment is essential to the health of a culture. By reawakening this exchange through my artefact I propose a fitness center that will provide a healthier way of living in the urban context.



*Top Figure 34.  
The Artefact as architecture,  
(Calvin J. Morey, 2014)*

*Bottom Figure 35.  
Building a participation  
The artefact and the body in motion  
(Calvin J. Morey, 2014)*





# CASE STUDIES

RELAXX SPORTS + LEISURE CENTER  
ORHIDELIA WELLNESS CENTER  
CHICENG NO.2 PRIMARY SCHOOL

# INTRODUCTION

Selecting three particular case studies pertinent to my focus of the body and physical fitness will help to show how the problem architecture can enhance the activities that are practiced within. My studies encompass Relaxx Sports Centre in Slovakia, Orhidelia in Slovenia, and ChiCheng Primary School in China all of which carry with them unique situations and separate but equally effective solutions to each one of their programmatic problems.

Looking into past projects allows for a unique connection or gateway into the history of each architectural instance creating a better sense for what works and is less effective in the pursuit of a successful solution. Wellness is an age old focus that has been practiced intentionally and unintentionally through out history and can most likely be attributed to our very existence today. Architecture has the ability to celebrate and heighten the experience connected with the act of working the body.

I believe that with our society so focussed on speed, money, and technology that the importance of physical fitness is being overlooked and perhaps the architecture that dominates this typology has something to do with this problem. Though I also believe that through the improvement of these environments we may also find the solution. The following case studies reveal new ways of thinking about how to design a space for physical activities.

*Top. Figure 36.  
RELAXX (Andrea Kllmkova, 2013)*

*Mid. Figure 37.  
ORHIDELIA (Miran Kambic)*

*Bottom. Figure 38.  
CHICHENG (LYCS Architecture)*



## RELAXX SPORT + LEISURE CENTER

|               |                               |
|---------------|-------------------------------|
| Architects    | AK2                           |
| Location      | Bratislava, Slovakia          |
| Designers     | Andrea Klimková, Peter Kručay |
| Project Year  | 2008                          |
| Site Area     | 58,318 sqf                    |
| Building Area | 99,792 sqf                    |

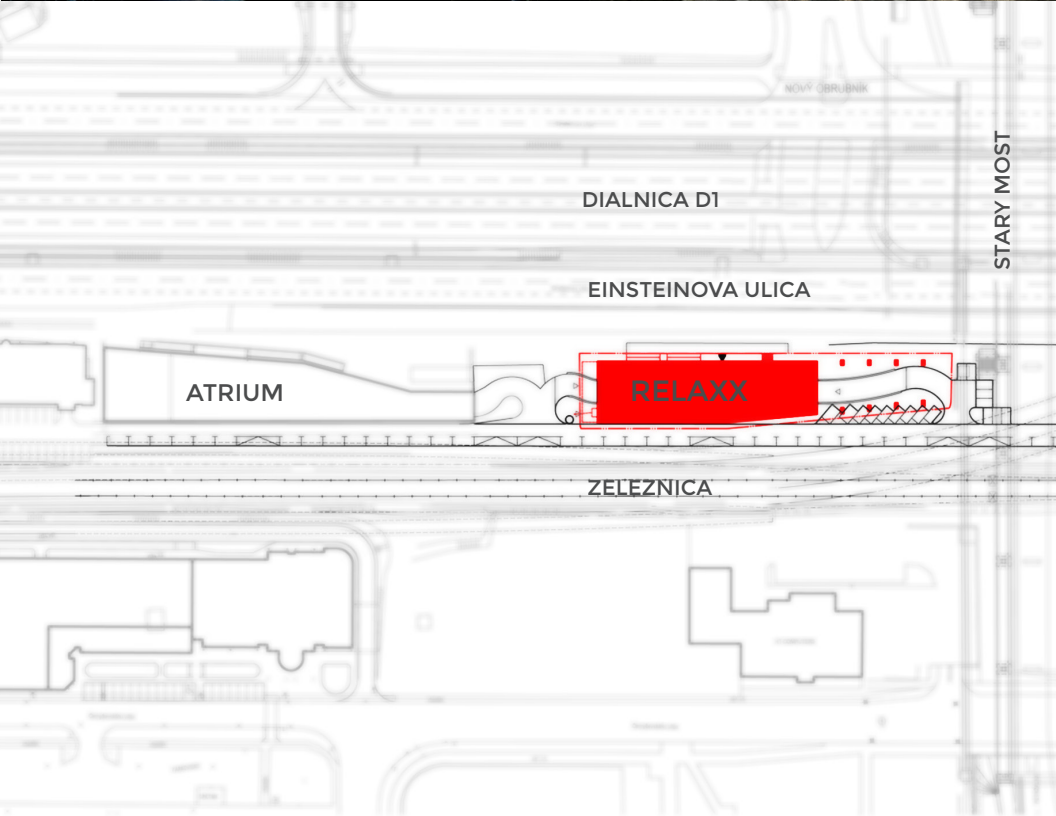
Creating spaces that allow the body to be comfortable in the process of working out is not a simple task. A large contributor to our uncomfortable environments is unwanted noise. Developing within the urban fabric amplifies this problem and makes it a challenge to create effective spaces for physical activity. Einsteinova is reported to be one of the busiest highways in Bratislava. With the high way Cutting through Petržalka, Slovakia the new fitness center would have to respond to its unfortunate location and site conditions. By elevating the structure the interior spaces were able to pull themselves away from the busy ground. Vision is guided up and over the high way while the unwanted noise travels through the undercarriage of the building.

Poetically the building in its form harmonized and directs the noise and chaos. The seemingly fluid smooth gesture the architecture makes through the site reflects a contrasting condition to the fast passed world to its immediate exterior.

The structure on one end comes in contact with the ground symbolizing a restful state of being. The building in this instant is laying across the ground with a heavy relaxed posture. As it progresses forward the structure seems to break away from the ground exposing the large exterior space below. Through its progression of form the building becomes reminiscent of a muscle flexing up and in on itself which also reflects on its ultimate purpose. Poetically the architecture becomes a static form that portrays the importance and beauty of rest as well as aspects of velocity and movement.

*Right top: Figure 39.  
Relaxx sport and leisure center  
(Andrea Klimkova, 2013)*

*Right bottom: Figure 40.  
Relaxx site map  
(Andrea Klimkova, 2013)*



NOVÝ OBRUBNIK

DIALNICA D1

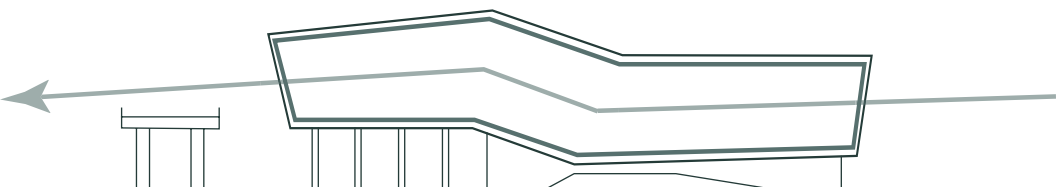
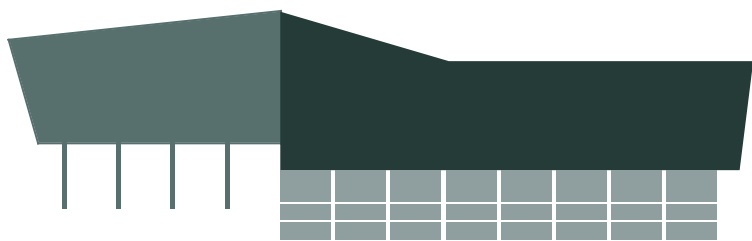
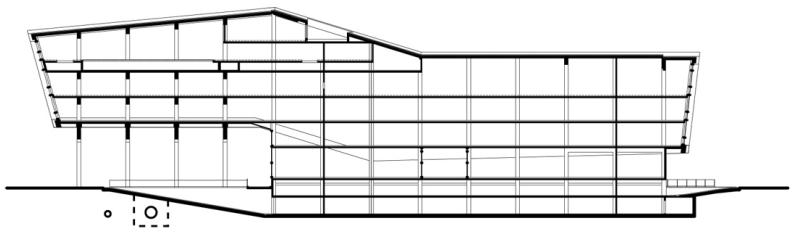
EINSTEINOVA ULICA

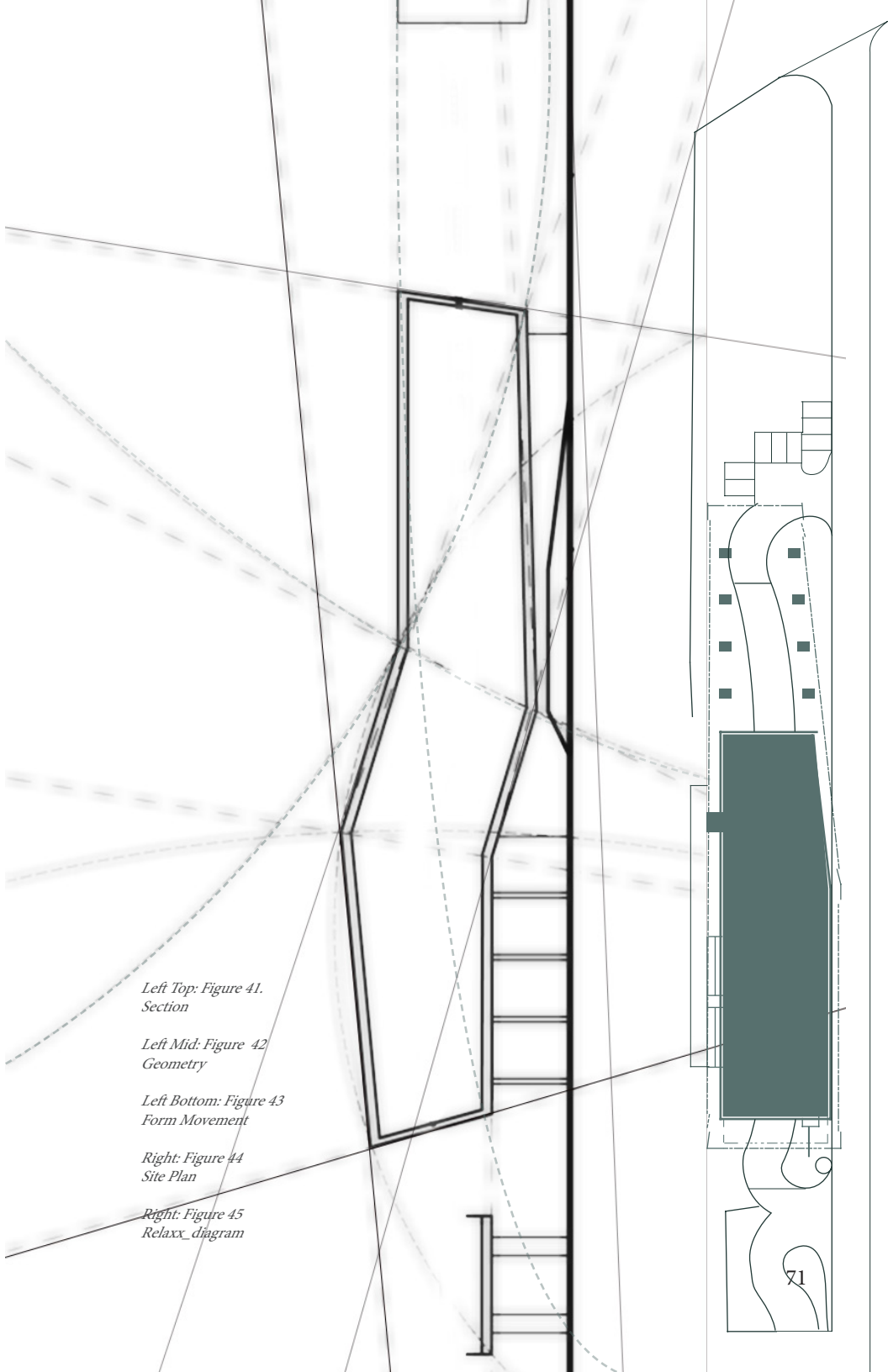
ATRIUM

RELAXX

ZELEZNICA

STARY MOST





*Left Top: Figure 41.  
Section*

*Left Mid: Figure 42  
Geometry*

*Left Bottom: Figure 43  
Form Movement*

*Right: Figure 44  
Site Plan*

*Right: Figure 45  
Relaxx diagram*





Another type of chaos and noise plagues the north side of the site as well. Constant train circulation needed to be addressed in the structure and material choices. A large concrete wall wrapped in metal panels cradles the interior wellness spaces creating a shield from this continual annoyance.



*Figure 46.  
Relax sport and leisure center  
(Andrea Klímková, 2013)*





Its incredible to see that the majority of the structure and form is comprised of concrete. I believe the most successful aspect of this design is its ability to address its site conditions and to do so in a way that evokes movement. It takes concrete which is an extremely heavy substance and makes it seem or feel almost weightless through the structures posture and airy assembly. Filling the other facades with glass not only provides wide panoramic views it also helps to bring fourth this open light feeling.

*Above Figure 47.  
Construction Phase  
(Andrea Kilmkova, 2013)*

*Left Figure 48.  
Use of glass  
(Andrea Kilmkova, 2013)*

## ORHIDELIA WELLNESS CENTER

|              |                      |
|--------------|----------------------|
| Architects   | Enota                |
| Location     | Podcetrtek, Slovenia |
| Project Year | 2009                 |
| Budget       | 17,832,100 US        |
| Site Area    | 107,531 Sqf          |

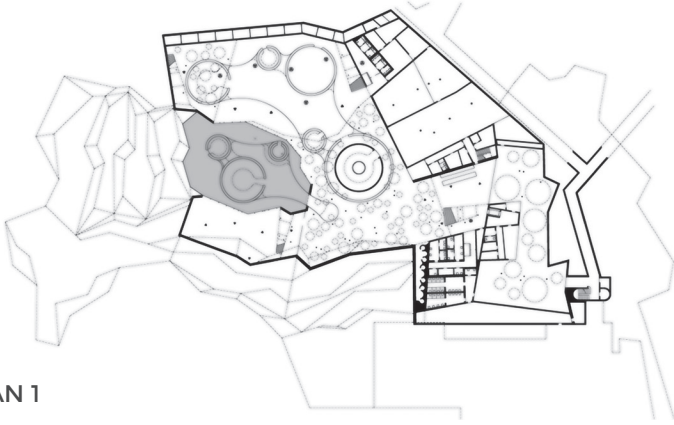
The Main goal for the Orhidelia Wellness Center was to design the building in a way that would diminish as much as possible of its presence from the surroundings. The program being a wellness center demanded a clever solution to how the building was going to situate itself upon the site. Since the program of a wellness center is of an extensively large type and because the only usable lot on the site was fairly small the resulting solution was elongated and nestled down into the site. Through the use of water they were able to accomplish relaxing areas with in the middle court yard space. The unique use of structure through out the building contributes to its effective ability to call relations between its interior and nature.

Columns brake apart and begin to form canopies that create interesting shadows while also bracing the ceiling and roof above. The interesting mullion work sets work also contributes to the experience of the interior spaces through its filtering of light through complex angles that seem to take their inspiration from natural land forms. The way in which the glass facade is assembled is reminiscent of a ridged rocky cliff formation. This is also brought through the design and into interior spaces like caves and taverns. This creates unique experiences that allow tto imagine through the work.



*Above Figure 49.  
Orhidelia main court  
(Miran Kambic)*

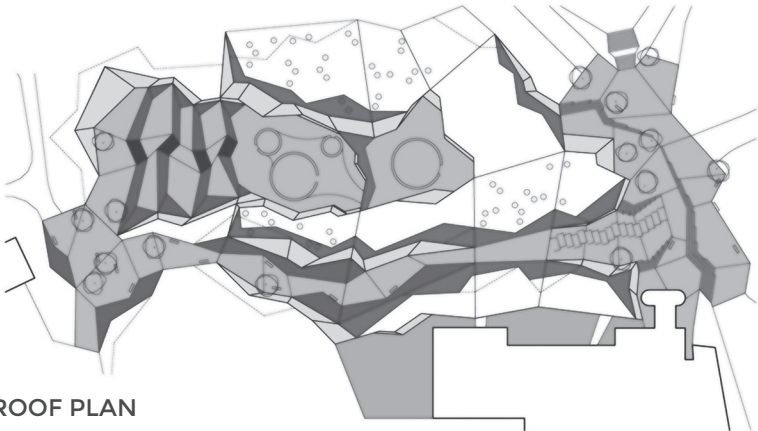
*Left Figure 50.  
Orhidelia interior relax space  
(Miran Kambic)*



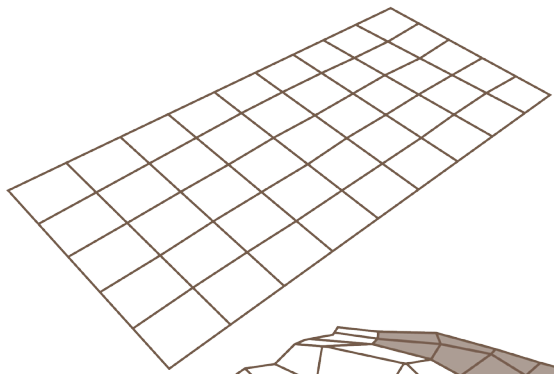
PLAN 1



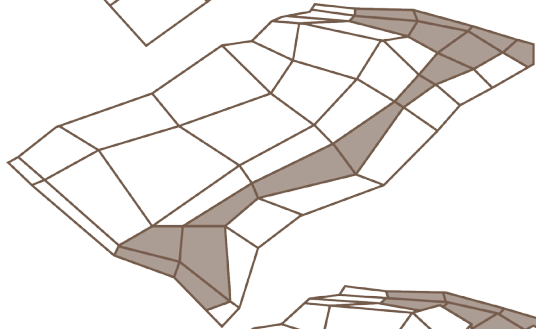
PLAN 2



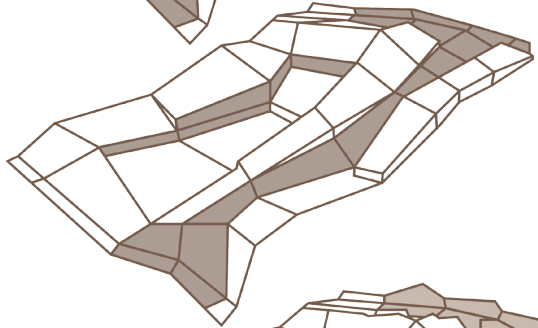
ROOF PLAN



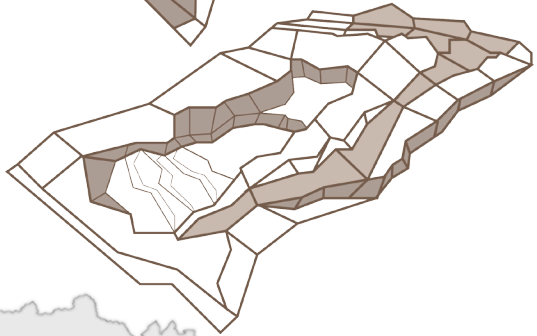
*Left Top: Figure 51.  
Plan 01*



*Left Mid: Figure 52  
Plan 02*



*Left Bottom: Figure 53  
Roof Plan*



*Right: Figure 54  
Form Progression*

*Bottom Figure 55  
Section 01*



We become enticed by its appearance and lured into the space as it provides the element of secrecy and does not become completely transparent like a majority of modern architecture. Designed more like a landscape arrangement than a building it takes hints of its form from the surrounding context and uses it in a new way to drive the form of the building.

Folded elevations appear like supporting walls dividing different levels of landscape surfaces.

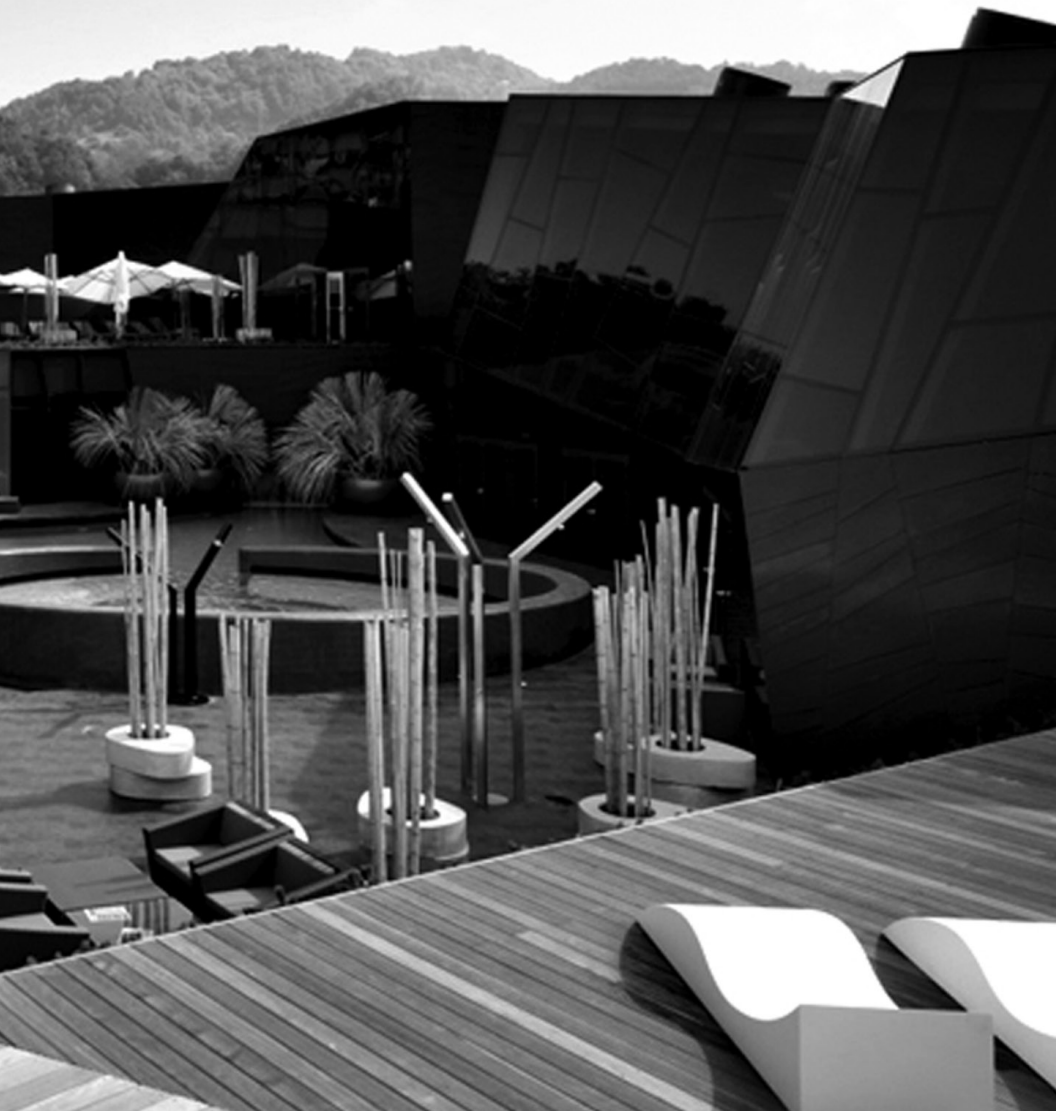


*Figure 56.  
Central outdoor space  
(Miran Kambić)*



A central walking path was implemented across the roof which enable the visitors to interact with the architecture in a new and unfamiliar way.

The site and the architecture compliment each other and the architecture means to take nothing away from the beautiful scenery. In order to maintain a calm atmosphere even while enjoying the site; special design aspects were implemented to ensure that the experience of the place was not interrupted. Where the strolling path connects with passing inner roads, it forms two smaller public squares to control the speed of vehicles and ultimately gives advantage to pedestrians over the traffic.



## CHICHENG NO. 2 PRIMARY SCHOOL

|              |                                |
|--------------|--------------------------------|
| Architects   | LYCS Architecture              |
| Location     | Tiantai, Zhejiang, China       |
| Project Year | Design 2012, Construction 2013 |
| Site Area    | 109,684 Sqf                    |

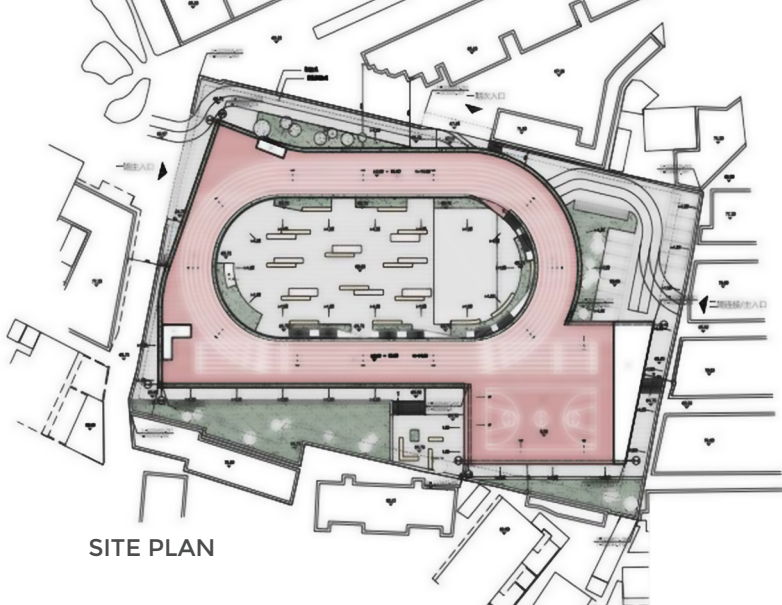
Designing for a dense urban environment can be a challenging endeavor as the space of the site becomes a large factor in the design process. Factors such as traffic flow, pedestrian ways of passage, vegetation and the location of existing buildings are all factors that have to be considered when designing for the urban environment. These Designed by LYCS Architecture, the new proposal for the ChiCheng No. 2 Primary school innovatively addresses these limiting factors within the urban setting. The focus for the project was to address the relationship between architecture and site as well as the connection between site and the greater context of the city.

In addition to this they wanted to create a unique design and experience that would create an enjoyable, inviting school atmosphere. Their concept provides a creative solution to the sites limitation and through the solution unique environments were formed. The program encompasses primarily a school for elementary children but also facilitates a fitness center which carries with it spaces that need to maintain particular sizes. The beauty in this project is found through its ability to overcome both site and programmatic limitation in a way that creates a model school for the surrounding community. One that provides a healthy, engaging environment that allows young minds to grow and prosper through culture physical fitness, art and ethics.

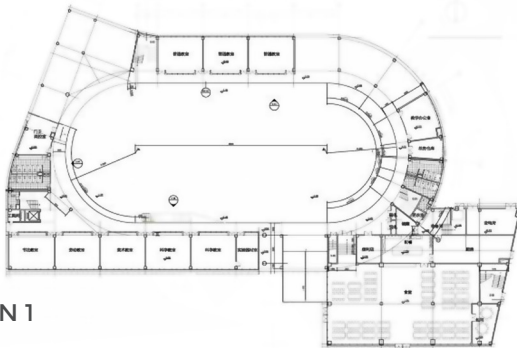
*Right top Figure 57.  
Courtesy of LYCS Architecture  
(LYCS Architecture)*

*Right bottom Figure 58.  
Courtesy of LYCS Architecture  
(LYCS Architecture)*

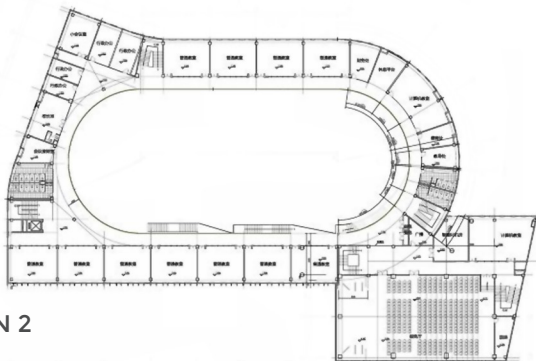




SITE PLAN



PLAN 1



PLAN 2

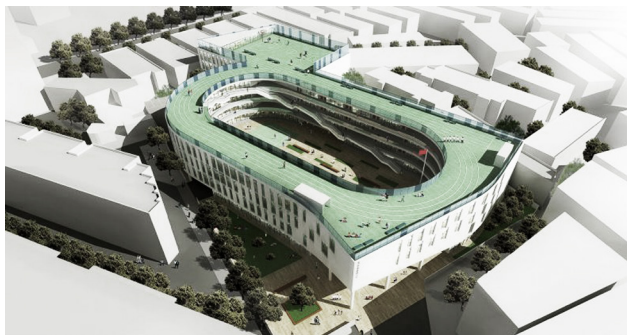
Above Figure 59  
Plans and site plan  
(LYCS Architecture)

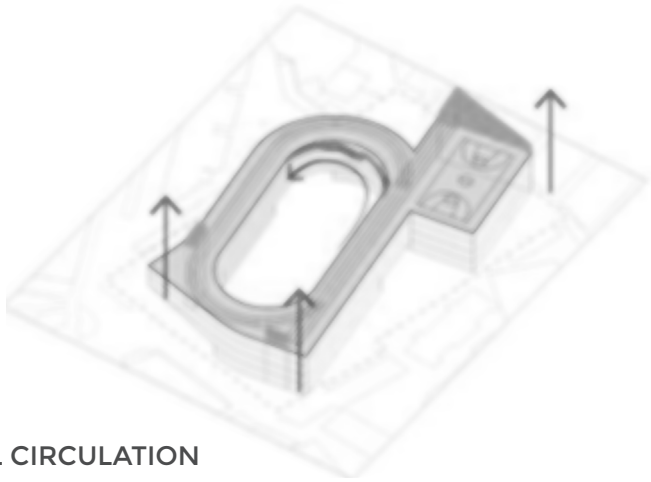
Right Top Figure 60.  
Courtesy of LYCS Architecture  
(LYCS Architecture)

Right bottom Figure 61.  
Courtesy of LYCS Architecture  
(LYCS Architecture)

Due to the limiting space the solution called for the 200m running track to be relocated vertically. Bringing the track and basketball court to the roof allowed for an additional 3000 sqf of usable area to be opened up on the ground level. This move also dictated the overall oval form of the building creating effective outdoor balconies of circulation. The shape also gives a sense of inward orientation that spreads a secure atmosphere for the young students. Lifting the running track also allowed for the total height of the project to be cut down to 4 floors from its original projection of 5. This creates a more harmonious relationship between the new school and the surrounding urban context.

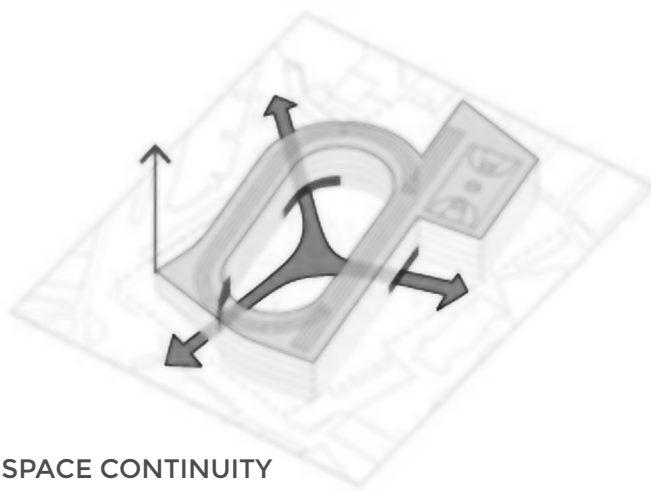
Finally, the building was twisted approximately 15 degrees in order to create complimentary pockets of space between the walls of the building and the site limitations. Ultimately the goal of this project was to create a school that raises the level of educational facilities in the area. In the same sense my architecture aims to address these same issues while raising the level of fitness centers that are developed in Minneapolis.





## VERTICAL CIRCULATION

The vertical circulation comprises of 4 stairwells, 1 elevator, and 1 open-air stair connecting all levels of the building vertically.

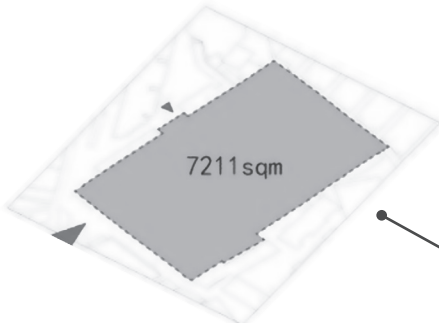


## GROUND SPACE CONTINUITY

To allow for pedestrians to flow freely through the building on the ground floor three parts of the base floor were removed.

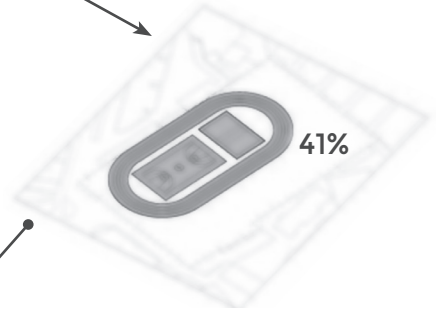
*Above diagrams Figure 62  
Design Process diagrams 02  
(LYCS Architecture, 2013)*

*Diagrams right Figure 63  
Design Process diagrams 01  
(LYCS Architecture, 2013)*



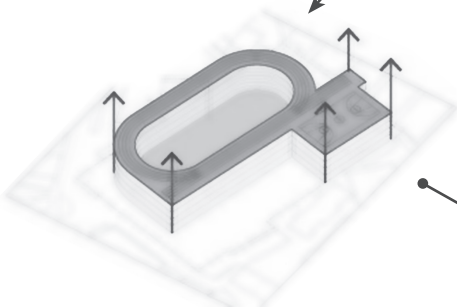
### SITE AREA BOUNDARY

With a total site footprint of 77,600 square feet is addressed with a main entry point to the north west corner and a possible secondary entry from the north.



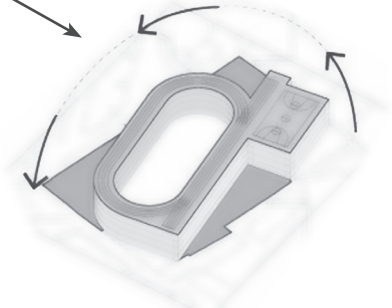
### AREAS OF SPORTS FACILITIES

With a required 2,100 square foot running track the site was reduced drastically. Only 41% of the site remained for the rest of the program.



### EXTRUSION OF MASSING

By hoisting the running track and basketball courts up 4 stories a 27,900 square foot courtyard is created by this gesture.



### ROTATION OF MASSING

Rotating the mass of the building allowed for a series of courtyard spaces to emerge between the building and the site boundary.

## SUMMARY

All three of these case studies not only address the issues pertinent to the typology of an urban fitness center but they also pay close attention to the ways in which they are situated and how they will be inhabited and used. When it comes to my particular site it is important that the ground floor be permeable as there are existing summer activities and events that need to continue on through the development of this project. A level of integrity in relation to the exterior spaces needs to be maintained for the continuation. Future public events such as the blues rock festival will still be able to set up on the site while being enhanced by the architecture.

To me it seems that the architecture that will encompass this area has the potential to add a great deal to the performance quality and all around experience of the spaces within and around the site. For this reason I felt particularly drawn to the ChiCheng Primary School and its ability to sustain a large program on a smaller site situated in a dense urban environment. Our programs differ in the fact that theirs was primarily a school but with in this example there are many aspects that can help to develop ideas pertaining to a similar situation and proposed solution. As depicted in its spacial diagrams it works graciously with the idea of a connection through the exteriors response to urban context

A permeable ground floor that is open to the sky above and would cater beautifully to performances and concerts of a variety of sizes. The rooftop running track is another point of interest in that it supplies a good case to study when it comes to the structural systems necessary for that to be a feasible option. With a smaller site it will be a challenge to find the best way to integrate an expansive area for the guests and members to run freely. This solution is a definite possibility.

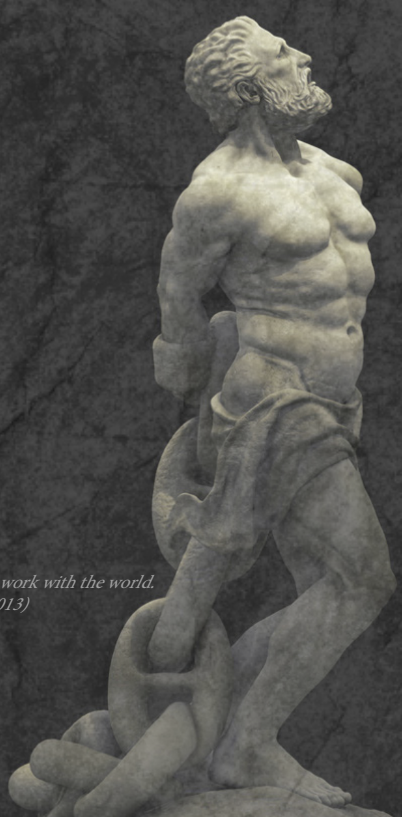
The problem of noise pollution is prevalent in any large urban center and will need to be effectively addressed in order to provide a comfortable focus driven wellness center.



The RELAXX Sports Center was faced with this very problem only on a very loud scale. Situated directly parallel with one of the busiest highways in Bratislava it had to be critical in the way it responded to sound for the sake of the atmosphere within the structure. Another aspect of this case study that I feel is notable would be the unique form that derives inspiration from movement but in a non literal sense. It may be a temptation to depict movement in architecture with the help of complex dynamic structural systems and computerized machinery. Though I would argue that a static building can actually give the appearance of movement even in its very stagnant state. RELAXX moves laterally but also vertically through space and pulls our eyes along with the complex giving the feeling of change and movement.

When thinking about a fitness center it is easy to imagine large open spaces lit with homogenous lighting and filled wall to wall with large machines and free weights. It's easy because that has become the norm when it comes to fitness centers mainly because the concern for flexibility is so high within this typology. Orhidelia is done in a way that promotes a welcoming environment that enhances and actually provokes wonder and interaction within the spaces. Nestled within and among the surrounding site it provides a low profile and showcases the sky and surrounding nature. The way in which you could be walking along the site and the architecture would gradually take shape around you giving a relaxed calming nature that eases you into the spaces. This is in direct contrast to the preconceived notion of a wellness center that would feature no such experience. I would also say that while very appealing to the eye this also does pose a very literal interpretation of nature in a formalist sense.

However it is not the actual 'style' of the building that I find this facility to be successful. I would say that it harnesses success in its attempts at facilitating a more meaningful full experience when it comes to physical fitness and the typology of a wellness center. There is a definite aspect of discovery and interaction being encouraged in the spatial relationships and the consideration for movement through the spaces that could be brought into the development of my thesis.

A marble sculpture of a muscular man, likely a philosopher or worker, standing on a rock. He is shown in profile, looking upwards and to the right. He has a full beard and is wearing a simple loincloth. At his feet is a large, intricate knot. The background is a dark, textured wall.

*Figure 64*  
*The body at work with the world.*  
*(wallbase, 2013)*

## HISTORICAL CONTEXT

## HISTORICAL CONTEXT

One of the most important ways in which we ensure a healthy, life sustaining future is through our ability and inherent need to physically tune our bodies. It was through our continuous pursuit of physical fitness that we found ourselves capable of overcoming and navigating through even the darkest depths of human history. In the beginning, the quest for fitness was propelled by a need to survive through the strenuous task of hunting and gathering. However, with-in our modernized way of living, in which these prehistoric practices that no longer apply, fitness still remains paramount to our health and well-being as we progress through time. Through the historical evolution of fitness and technology and its relation to man's position in time we begin to get an idea of the importance our continued health plays in the advancement of our human race.



Figure 65. Nomadic Man. Alan Sorrell's reconstruction of Star Carr (mesolithic site) ([guerillaarchaeology.files.wordpress.com](http://guerillaarchaeology.files.wordpress.com))

It is interesting to me that there is a relationship between our physical tendencies, practices and rituals and the evolution of technology. It is evident even through recent years that advancements in our technologies usually allow us to do the same tasks with a higher level of ease. There are many examples of this type of transformation throughout time and these changes are usually marked by a direct change in lifestyle and modes of accomplishing tasks. A modern example of this would be the launch of

Siri by apple in 2010. Siri or as Wikipedia defines it, the “intelligent personal assistant and knowledge navigator” was the first attempt by apple to allow the users of their phones to communicate directly with their phone in order to complete tasks. Before Siri, every interaction with the iPhone was prompted through direct physical contact with in the physical bounds of the phone itself. Access to worldwide information is now prompted through voice commands instead of finger swipes. This is interesting, because it wasn't too long before the iPhone or touch technologies, that our fingers were doing a completely different gesture in order to receive the same result.

Using an iPhone as an example is of course a very modern and recent example of changing technologies but I believe there is a lot to be said about the rate at which our technologies are taking shifts and advancements. Throughout history technology is continually changing and improving upon itself, though the difference is the amount of time it takes for these advancements to take place. In our modern world, advancements are almost instantaneous with the release of new technologies. What I mean, is that it seems to be the case that whenever a new product or the “next generation” item is released, it isn't long, if not instantly “out done” or improved upon by its competitor. This however was not always the case and in the grand scheme of time and mans existence is actually a very new way of life and operation. I believe that as technology advances it carries with it the power to change our environments and lifestyles which in turn affects the way we actively engage the world and our ability to maintain fitness and healthy movement.

In order to articulate this I would like to use historical occurrences such as revolutions in technology that have directly affected the way civilizations carried out tasks pertaining to survival and the ramifications these new technologies can have on their level of physical engagement and fitness.

Let us start in a time where man confronted the world with little more than his bare hands and primitive tools. In order to ensure basic survival, primitive man was required to be continually engaged physically with the world. Hunting and gathering was their lifestyle and the way in which they maintained their own individual health as well as the health and safety of their tribe members and family. It was a lifestyle that involved arduous tasks and long on foot journeys to find food and water which put them in direct contact, navigationally and physically with the world. Food and water of course were never guaranteed entities like they are today, so it would not have been uncommon for primitive tribes to celebrate a successful hunt or outing with long periods of song and dance that would last hours at a time. Hunting and gathering, as primitive a lifestyle as it is required an extremely high level of physical fitness in order to ensure basic survival.

Fitness in this time period was not something that was done in order to maintain a certain aesthetically pleasing figure, it was something that was carried out through a primordial connection and understanding of the world that placed the human body in the world as the only thing between life and death. This of course is no longer the case today as it becomes easy to take for granted items such as food and water due to the fact that our technology allows for us the ability to attain them with very little if any physical work.

As time progresses technological advancements can allow for complete changes to the way life is maintained. One of the very first major changes would have been the shift from hunting and gathering to the agrarian lifestyle. Lance Dalleck, PhD, and author of *The History Of Fitness*, Describes that out of the Neolithic Agricultural Revolution came inventions such as the plow and the concept of domestication. For the first time it was possible to obtain a greater amount of resources while establishing a more permanent means of dwelling. From our vantage point this way of life would still be considered to be immensely demanding as the care for crops and live stalk without the aid of modern machines would

be an extremely arduous task. Even our most physically labor intensive careers today such as farming are assisted through the use and operation of heavy machinery in order to aid in the physical process. However to the people of this particular technological revolution, the shift from hunting and gathering to settlement could be described as a much more sedentary way of life in comparison to the preceding practices.



Figure 66.  
*The building of the primitive  
hut after Vitruvius Teutsch.*  
(*Vitruvius on Architecture*)

As more civilizations begin to establish themselves, boundaries also begin to be drawn and the value of land and resources begins to turn man against man. Physical fitness and strength becomes an increasingly valuable asset when it comes to the protection and survival of civilizations who engage in battle. In preparation for an expected conflict early leaders would inspire their people to partake in activities that would strengthen the overall fitness of their civilization. Fitness, in this regard becomes for the first time an implemented activity separate from daily routines that physically engaged the body. Physical strength became a way to protect and secure the land and live stalk that due to technological advancement was now integrated into the boundaries of the civilization. Fitness was becoming a way for societies to build an appearance of physical strength as well as to prove their ability to defend and uphold their power over other forces.



*Figure 67. Ancient Greek Warfare Athenian army defeated in Sicily  
(<http://karenswhimsy.com/ancient-greek-warfare.shtml>)*

Fitness plays a key role in establishing and stabilizing prosperous cities and civilizations and it also tends to be the reason for collapse when it is forgotten or implemented less. This is made increasingly evident through Lance Dallek (Ph.D.) and Len Kravitz' (Ph.D.) research on the History of Fitness, as they use the fall of the Roman Empire as a precedent to illuminate this occurrence. Initially, the prowess of the Roman Empire was of strict training and physical conditioning which contributed to their powerful rein over much of the Mediterranean. Though as they became comfortable as a major power they also became consumed by their wealth and entertainment.



Their prior focus on elite physical condition was thrown to the way side as it seemed to carry less importance. These divergences of social interest eventually lead to the fall of the Roman Empire as they were unable to defend against stronger enemies.

These shifts in social interests due to the advancement of technologies can be found throughout history and I believe to occur even more frequently in recent history. One of the most powerful occurrences when it comes to the way we engage our bodies in the world would be the Industrial revolution. By introducing a plethora of new technologies this time period drastically changed the way we work today. The integration of machines allowed the production industries to boom as the workloads could be completed at faster rates and with less physical effort. More interested in a life less burdened by hard physical labor, people began to gravitate towards the city which promised an easier way of life. Our built environments began to be shaped around the need to house machinery for mass production, negating the presence of the body in architectural design. The effect of this shift not only altered the way we use our bodies but also the way we perceive them.

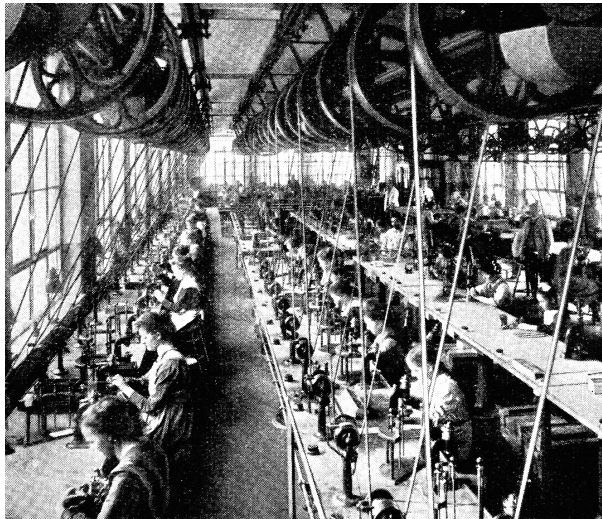


Figure 68.  
*Industrial Revolution + Factory Conditions*  
([http://www.montredo.com/blog/wp-content/uploads/2013/10/junghans\\_02.jpg](http://www.montredo.com/blog/wp-content/uploads/2013/10/junghans_02.jpg))

## CONCLUSION

For this project I used my historical research as a way to articulate the relationship between our bodies and the growth of technology. As well as the relationship between fitness and our societies grasp of its importance. Through the essay on the History of Fitness (Dallek, Kravitz) and many other sources, I found it interesting to learn that when it comes to the overall health of a nation, political and military leaders have always and continue to hold a great deal of power when it comes to articulating the need for a more fit society. It has also been shown that upon the conclusion of a war the interest and participation in physical activity tends to decrease often times leading to detrimental effects on the society as a whole. Furthermore, societies throughout history that become infatuated with material luxury, affluence and entertainment have a tendency to also reflect a more sedentary way of life.

I believe that Architecture has the ability to respond to the mass convergence and infatuation with technology by the way it is situated and its ability to allow a participation and a call to action. Architecture is at the fore front of this discussion as it is the thing to which our bodies touch through distance and imagination on a continuous level. In fact I would say that there is never a point in which architecture is ever truly absent. Architecture and our environments remain embedded in our minds and bodies even when our vision is absent. As we progress through space our movements and senses help to record a holistic feeling or embodied sense of a space which can be later recalled through a similar experience or situation. The ability to spark our memories or to call us to desire a certain place or feeling is the power that architecture holds when it is not deduced down to homogenous space planning.

Through my experiences this is one of the main problems when it comes to the integration of fitness centers with in the urban environment. Often times they are simply placed into vacant tenant spaces within large residential or business complexes with in the city. This usually hides it away from the public dampening its ability to invite a participation. With little to no consideration for how the body will be moving with in the actual spaces they are often uncomfortable, stuffy and lack a presence that would create a desire to return. Physical activity should not be a task on the bottom of a to do list. It should be a celebrated event that you can look forward to at the end of the day.



*Figure 69.*  
*Tight spaces, low ceilings and an absence of natural light*  
*contribute to a poor experience.*  
*(Fitness Center Oyster, 2014)*

# PROJECT GOALS

## ACADEMIC

As a point of personal discovery and development the academic realm of architecture provides a space for the typical to be challenged and the horizons of design and theory to be broadened. It is the unfortunate occurrence in academics that a project becomes a practice of visual appeal or an aestheticization of architecture in order to appeal to the masses to which are only enticed by the immediacy of a pleasing computer renderings. While representation is immensely important, it is of only a small piece of a much deeper conversation. One that is historically rooted, metaphorically articulated, and theoretically driven, delineating architectures vast importance in a world of impetuous creations. Architecture that negates a connection to the human body, its intricate movements, and senses dies by the wayside and joins the ever expanding graveyard of meaningless encounters. The goal then is to create a more meaningful connection between the body and the built environment, through a deeper theoretical understanding of architecture that resonates with

## PROFESSIONAL

It has become the modern condition that situates the architect behind a computer. Optimizing efficient output and production while limiting the creative realm of architectural process to the bounds of the display screen. Our work as architects should not be defined or eclipsed by the capabilities of our devices. It is in the unforeseen nuances that occur when working with models and hand drawings that allow us to grasp and make evident the realities of life. Limiting our process of exploration and train of ever emerging ideas to the confines of a computer is detrimental to the possible outcomes of a professional project.

A project that carries with it the responsibility of being positioned in society, creating moments that actively effect the lives of the people that inhabit and pass by. The goal is to maintain the ability to express and create through various modes of process. To except and embrace imperfections and unforeseen occurrences along the way. Derived from forces of the world and our bodies these anomalies engraving themselves into the unpredictable nature of an architectural process and give way to a new perspective and design solution.

## PERSONAL

Architecture holds with it an illusive seemingly unattainable definition in respect to its vastness of possible outcomes and responses to questions. This is what keeps me chasing the ever growing and evolving realm of architectural design. One of the most powerful aspects of architecture is its ability by way of the designer to script the movements or the procession of the body through space. There is always the opportunity in architecture to capitalize on moments that bring forth a consciousness of our body in relation to the world, Setting up moments of discovery and considering how our bodies encounter or come in contact with the built environment is something that I believe breaths life and perceptual power into the things we create. Of course if I desire a breeze, I can only crack the window, I can not force the wind to blow. Just like any form of art I can only invite a participation, However I believe that through strong design comes a desire to participate. Rather than a static object to which we use for efficient circulation, I believe Architecture as a static concept holds the potential to move both in the perceptual sense and the poetic sense through our bodies active participation and procession.

# THE DESIGN



*Figure 70.  
Interaction and movement captured  
through the artefact.  
(Calvin J. Morey)*

A blurred, warm-toned photograph of a dance studio. The scene is dominated by a wooden floor in the foreground and a wall with a wood-paneled lower section and a plain upper section. Track lighting is visible on the ceiling, casting a soft, golden glow. The image has a motion blur effect, particularly in the lower right corner where a green object is visible. The text "LETS MOVE OUR BODIES" is centered in the lower half of the image.

**LETS MOVE OUR BODIES**

## WHY A FITNESS CENTER?



Movement and the pursuit of regular physical conditioning has always been important to the survival of man kind. The Greeks celebrated the body through their architecture, language, poetry and public gatherings such as the Olympic games.

Today's contorted perception of the body has lifted the importance of our bodies to architecture as space begins to become molded after efficiency and ease of transportation. Our technological advancements have led us to an increasingly sedentary way of life.

Minneapolis, Minnesota has recently been named one of the healthiest cities in the nation due to its bikeability, parks, and pedestrian friendly paths. However Minneapolis is still growing rapidly and plans to double their population by 2025. Like my artefact the fitness center will be lifted from the site to allow an invitation to move their body socially, mentally, and physically.

## SITE NARRATIVE

Guided by the meandering and intertwining highways that situate themselves through the city like veins through flesh we find ourselves entranced by the immense beauty presented before us. Driving becomes a difficult task as our focus dwindles on the distant Goliath marvels of human ingenuity. As the distance between ourselves and the city rapidly become shorter we begin to see new aspects and dimensions revealed to us by our ever changing perspective as a fast paced passerby. Upon entry into this labyrinth that we call Minneapolis our sense of direction becomes distorted and we become mentally lost, frustrated, and uneasy with in the fast passed circulation of the urban fabric. Our memories and intuition try as hard as they can to navigate us through this headache though our attention is stolen by the loud display of the GPS system mounted to the dash. Only been adding another layer of distraction to the situation.

As Hennepin Ave turns onto South 6th street a parking spot reveals itself around the edge of the last of many cars that line the left side of the street. Exiting the car a sense of relief and accomplishment courses through the veins as we progress on through the city. Welcoming the now walking body Nicollet Mall creates a sense of scale and comfort among the bustling traffic. Reaching the intersection of South 4th Street and Nicollet Mall the cantilevered rooftop of the Minneapolis Central Library pronounces itself to us around the brick corner of the Northern States Building. Across a vast open parking lot the Marquette Plaza and Federal reserve Bank find themselves situated. Surrounded by prominent architecture of the area and facing a bright future for growth when it comes to residential living I found this site to be a wonderful opportunity for urban development and improvement.



*Top Figure 71.  
View site from the elevated patio of the  
Minneapolis Central Library  
(Calvin J. Morey, 2013)*

*Right Figure 72.  
Approach from Nicollet Mall  
(Calvin J. Morey, 2013)*



# QUANTITATIVE ANALYSIS

## MONTHLY AVERAGES | MINNEAPOLIS MN

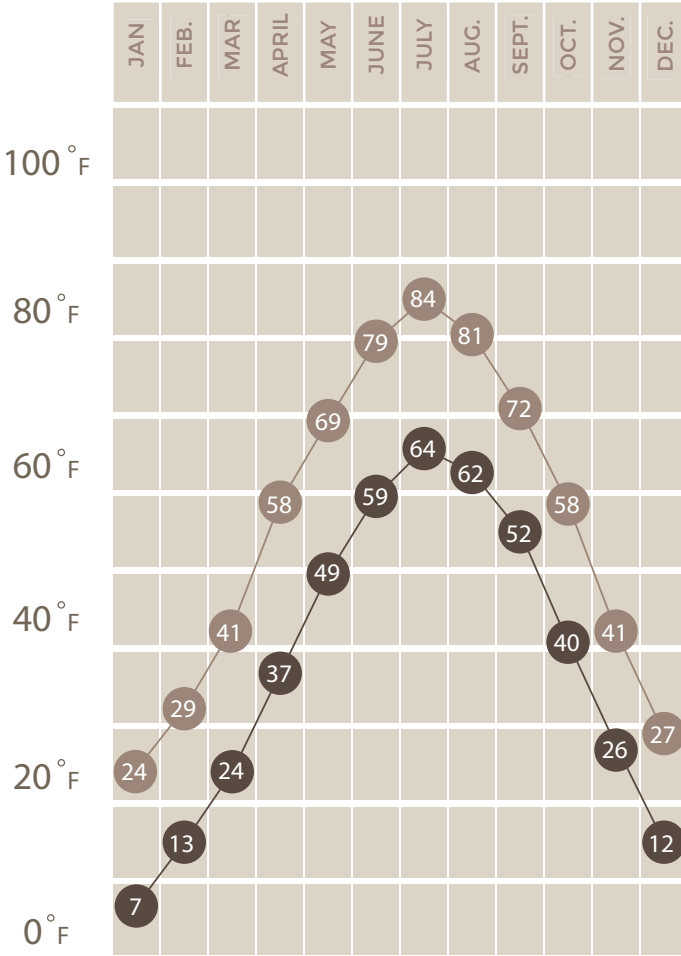


Figure 73  
Monthly average temperatures  
(Calvin J. Morey, 2013)

## Cloud Cover

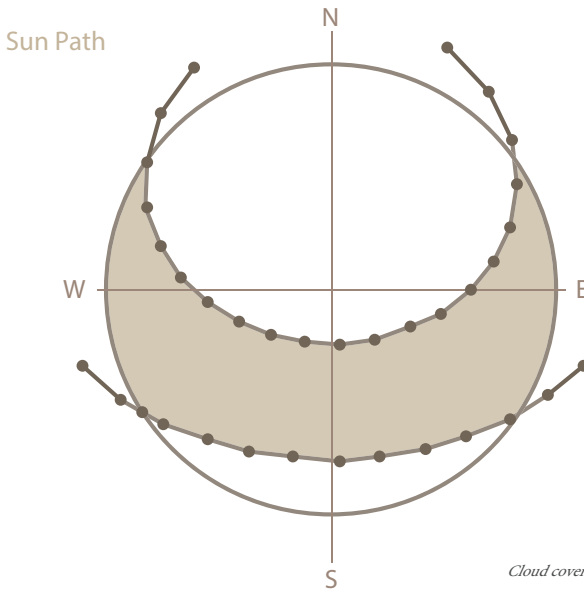
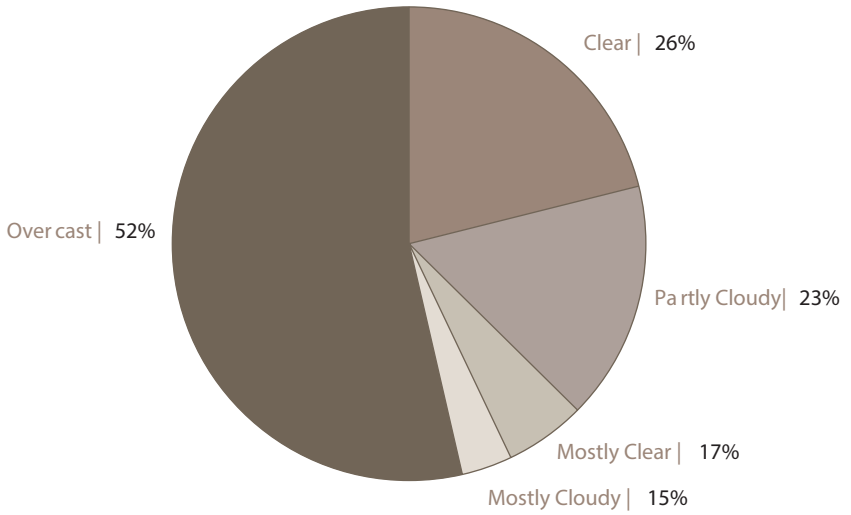
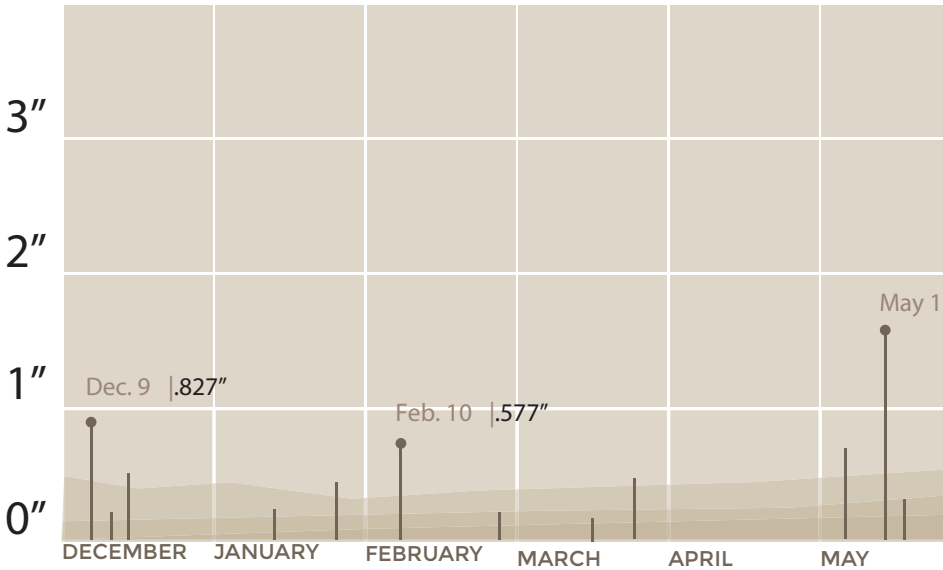


Figure 74  
Cloud cover and sun path diagram

## Precipitation Quantity | Minneapolis MN



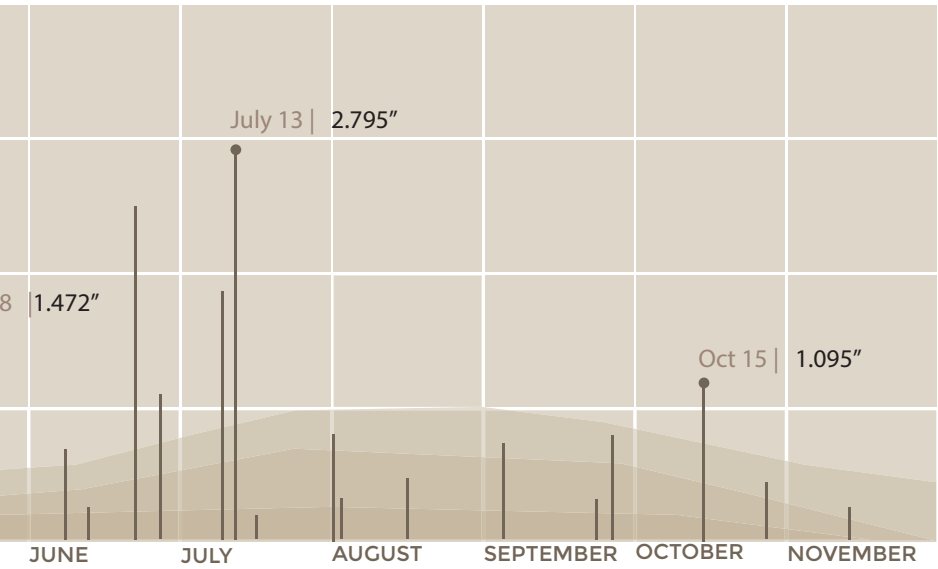
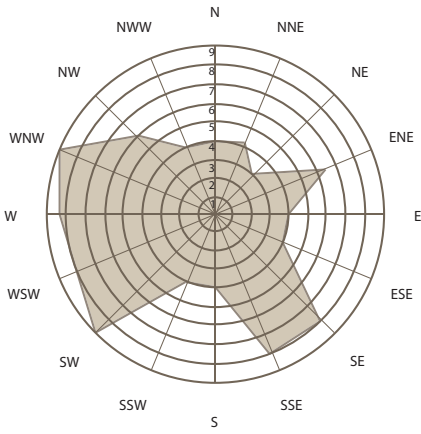
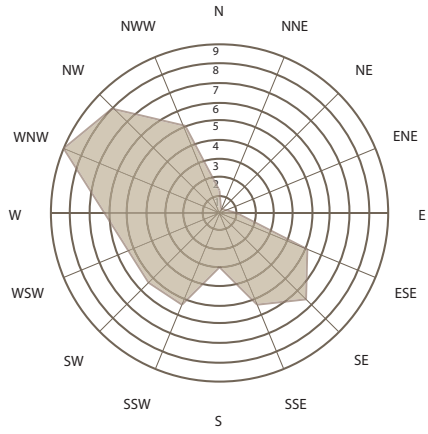


Figure 75  
Yearly precipitation quantity

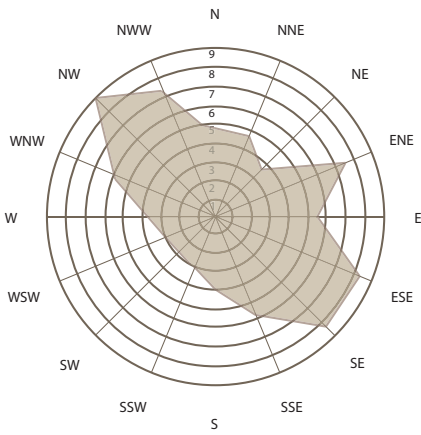
Minneapolis Wind Distribution | February



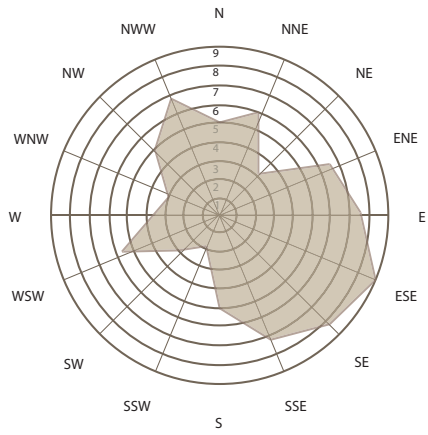
Minneapolis Wind Distribution | January



Minneapolis Wind Distribution | April



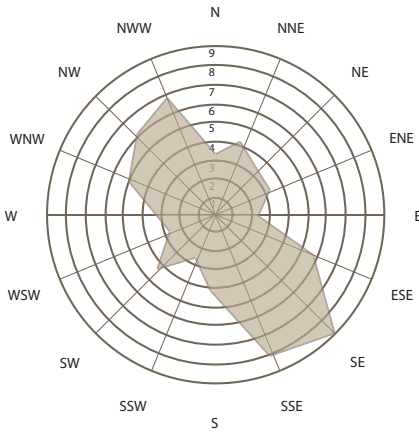
Minneapolis Wind Distribution | May



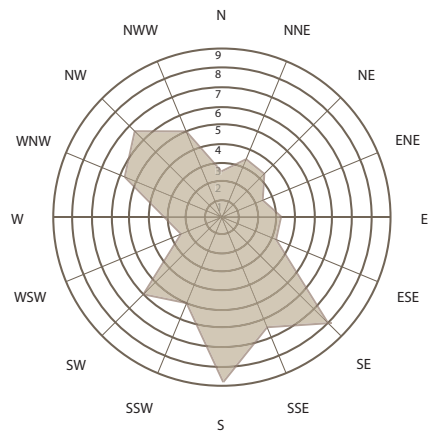
Figures 76  
Wind analysis diagrams



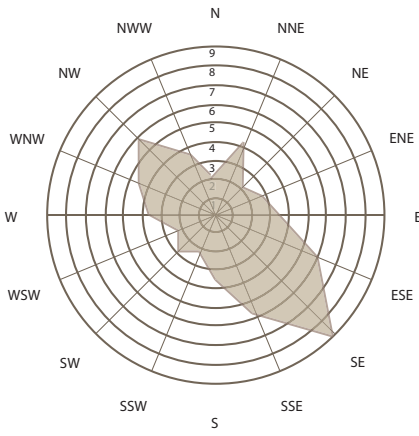
Minneapolis Wind Distribution | March



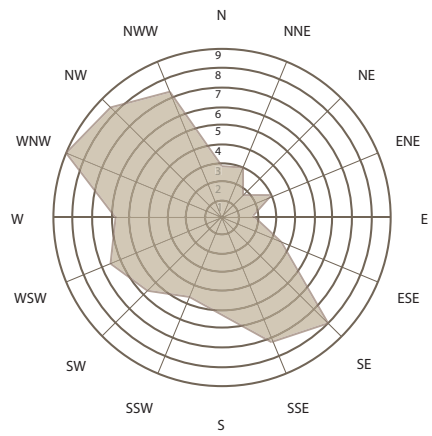
Minneapolis Wind Distribution | July



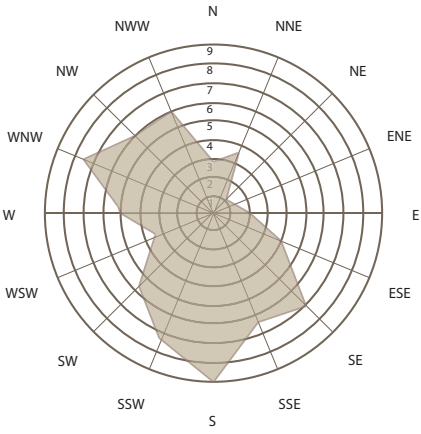
Minneapolis Wind Distribution | June



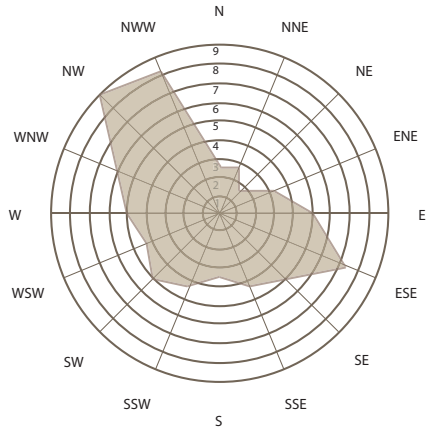
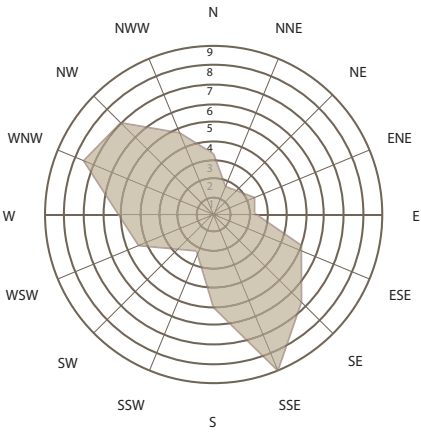
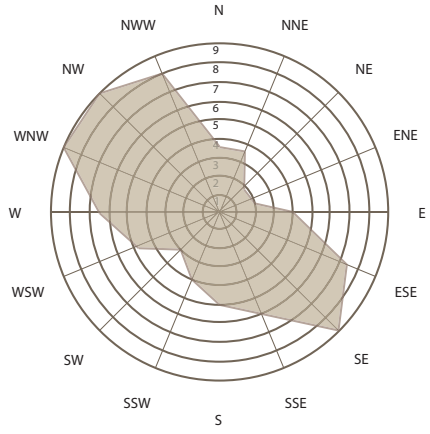
Minneapolis Wind Distribution | October



Minneapolis Wind Distribution | August



Minneapolis Wind Distribution | September



Minneapolis Wind Distribution | November

Minneapolis Wind Distribution | December



NORTH WEST



SOUTH WEST

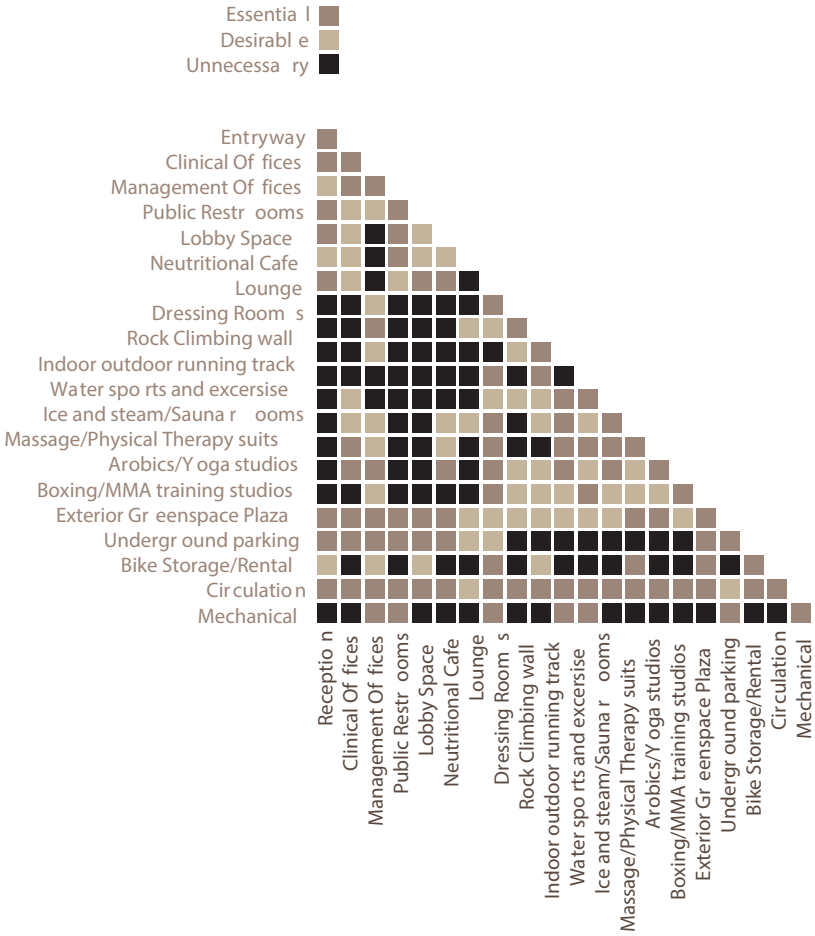


SOUTH EAST



NORTH EAST

# PROGRAM



Right, Figures 78  
 Program Matrix  
 (Calvin J. Morey, 2014)

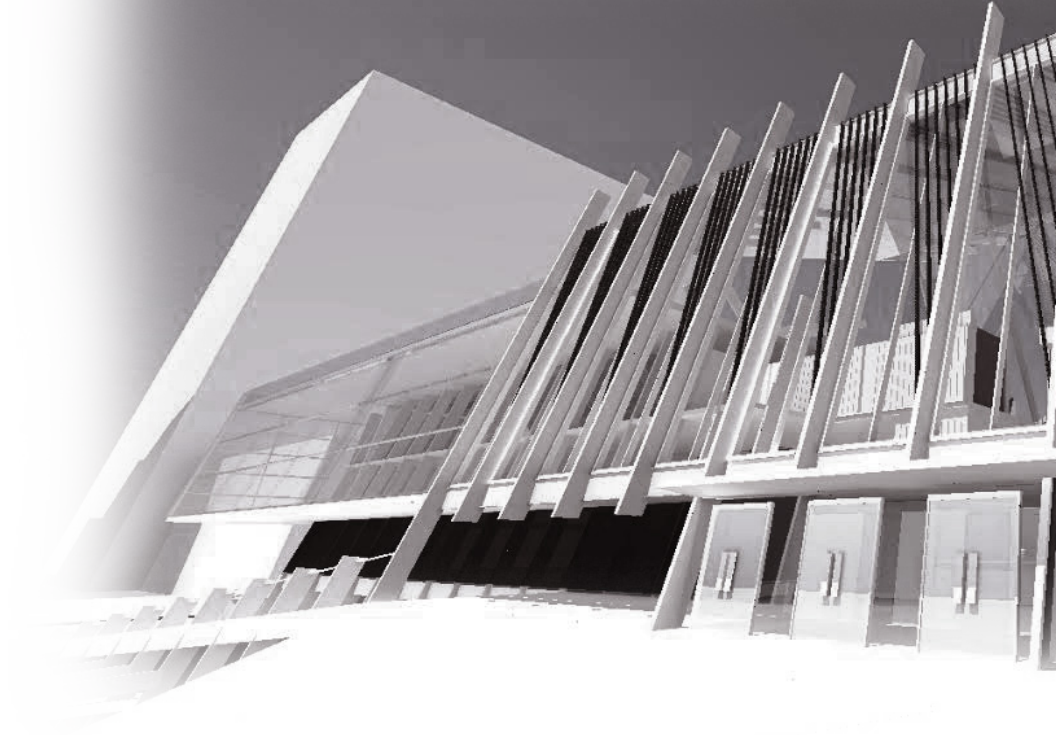
## SPACE AREAS

|       |  |
|-------|--|
| 100   | Entrances   allow access from all directions |
| 200   | Reception Desk                               |
| 400   | Public restrooms                             |
| 2000  | Management offices                           |
| 2000  | Lobby   Rest Area                            |
| 5000  | Dressing Rooms                               |
| 1500  | Showers                                      |
| 3000  | Gym seating                                  |
| 8000  | Mixed use gymnasium                          |
| 6000  | Weight training                              |
| 4000  | Cardio   Indoor Outdoor                      |
| 5000  | Rock wall   42ft. Max.                       |
| 10000 | Running Track   200m                         |
| 6000  | Private class studios                        |
| 10000 | Lap Pool   8 lanes                           |
| 5000  | Recovery pool                                |
| 600   | Group steam room                             |
| 400   | Sauna rooms                                  |
| 800   | Male + Female restrooms                      |

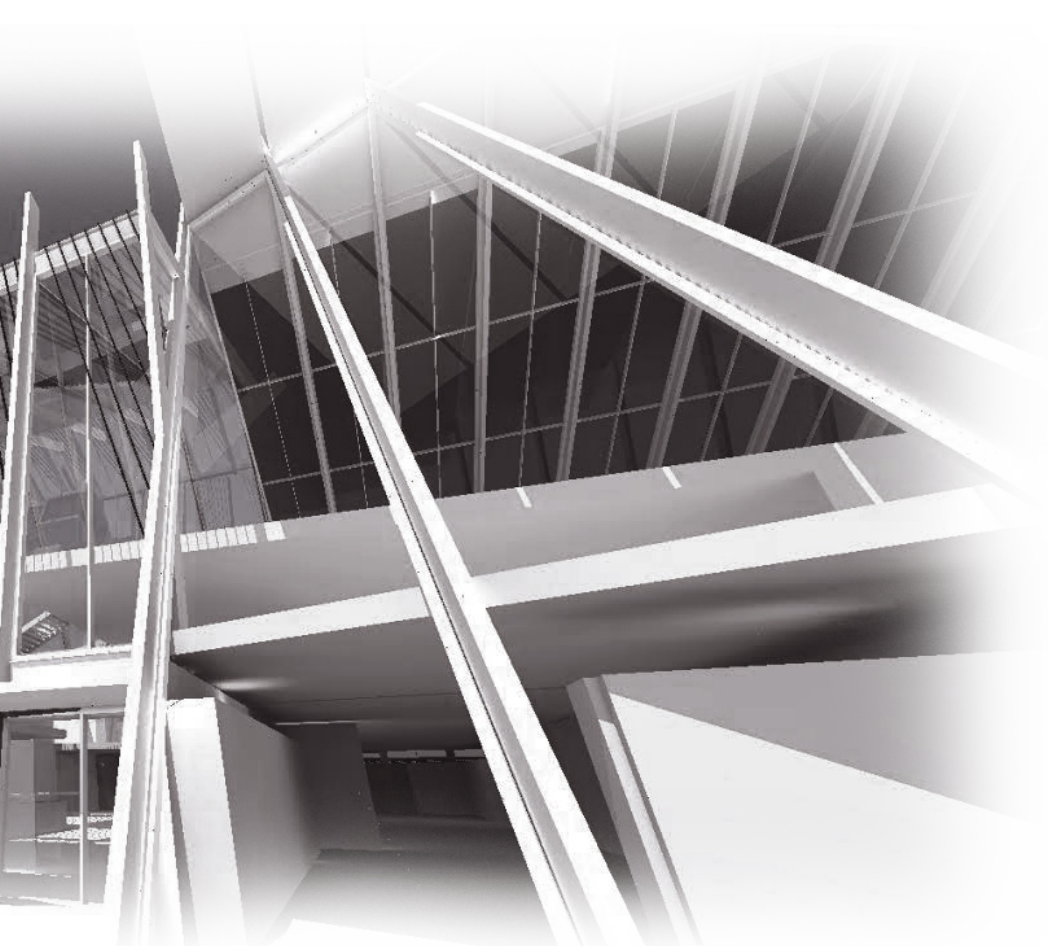
## EXTERIOR SPACES

|        |  |
|--------|--|
| 62000  | Large plaza space                        |
| 3000   | Stepped reading platforms                |
| 2400   | Rest space with water features           |
| 600    | Bike racks                               |
| 2000   | Ramp space                               |
| 3000   | Roof top running track   outdoor classes |
| 2000   | Deck space for rest                      |
| 75000  | Building Total Sqf                       |
| 70000  | Exterior spaces Total                    |
| 135000 | Site Total Sqf                           |

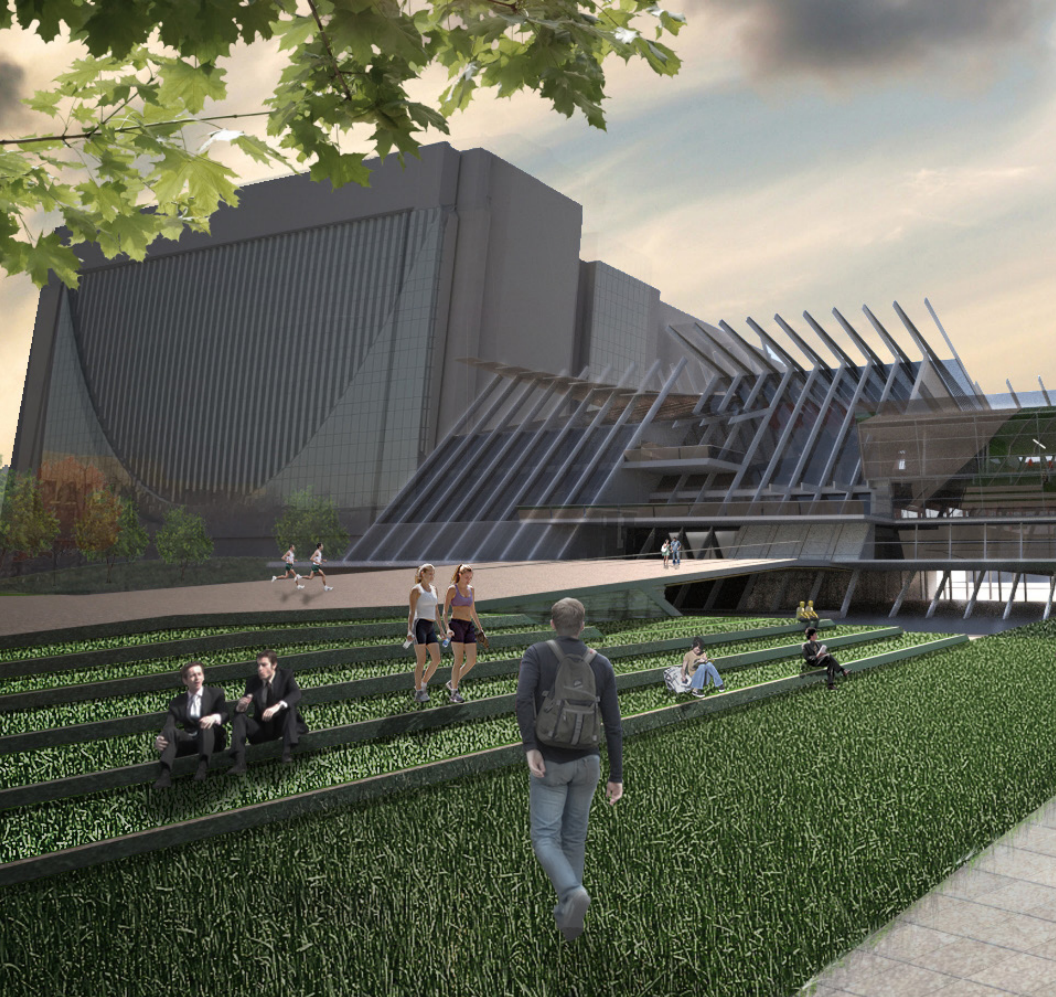
# THE VISION



*Right, Figures 79  
Concept render, South entrance  
(Calvin J. Morey, 2014)*

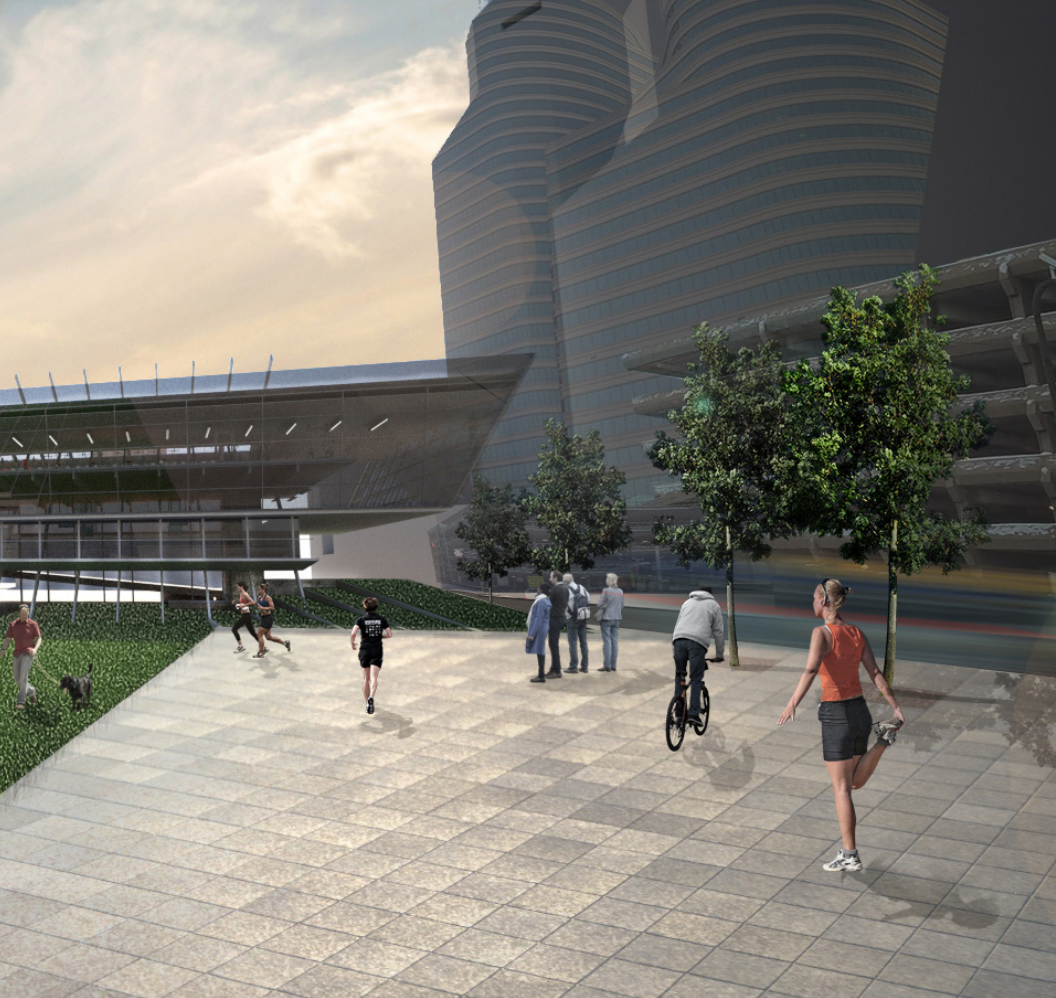


Through out the process of this project I became inspired by three main things. Movement, the body, and technology. I find all three of these to be related in that our movements shape the way we encounter architecture which has an effect on how we perceive our bodies through our environments. Technology is the ever evolving force that has been shown through history to change the way our societies socially, mentally, and physically participate with the world. My vision encompasses the essence of my artefact in which the body finds itself through its interaction and kinesthetic relationship to its movements. Even from a distance my architecture evokes movement through its posture and repetitious nature. Hoisted above the site people are free to experience movements that engage the mind and body.



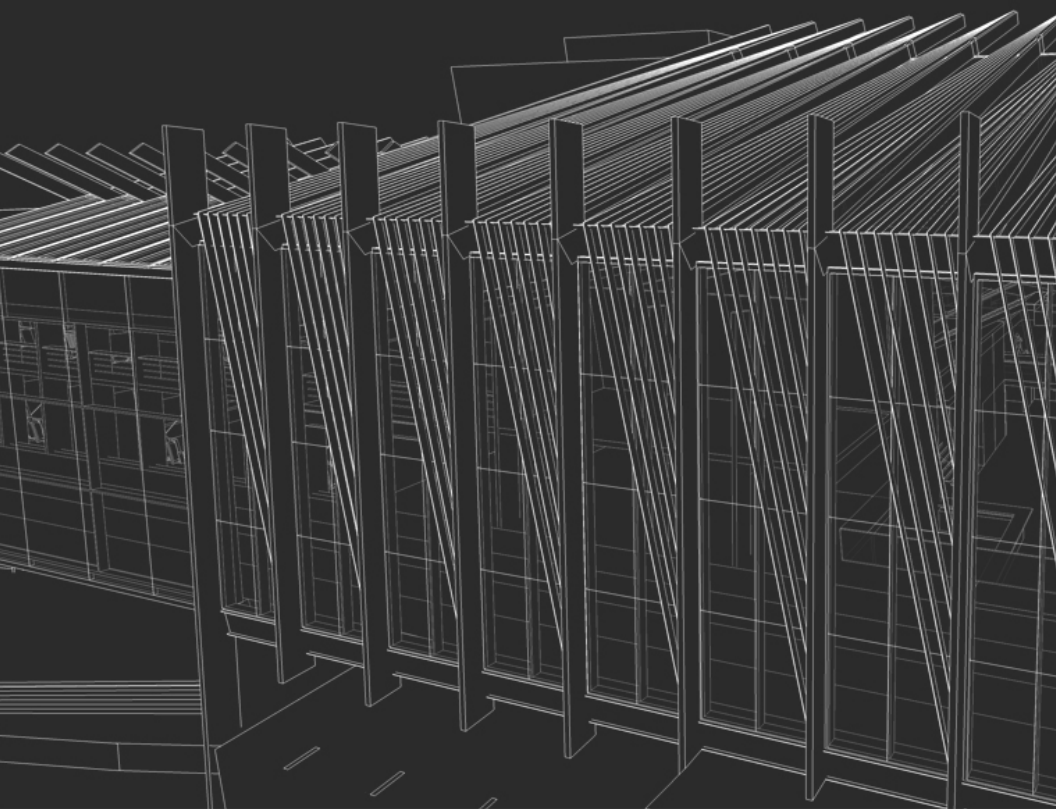
My artefact created a physical and social connection between the users. Physically the users were intertwined together through their hands connection to the heavy concrete handles. The tendon like nature of the rope tethering the four users together through the artefact forms a kinesthetic consciousness of the individuals movements, the artefacts movements, and the fellow users movements. A social bond is formed between them as they come to realize that the artefact was designed in a way that required the mutual attention of four users to make it move properly. It is only effective when there is an active participation between all four users. Similar to my artefact my architecture frames moments that call attention to a physical connection between people.



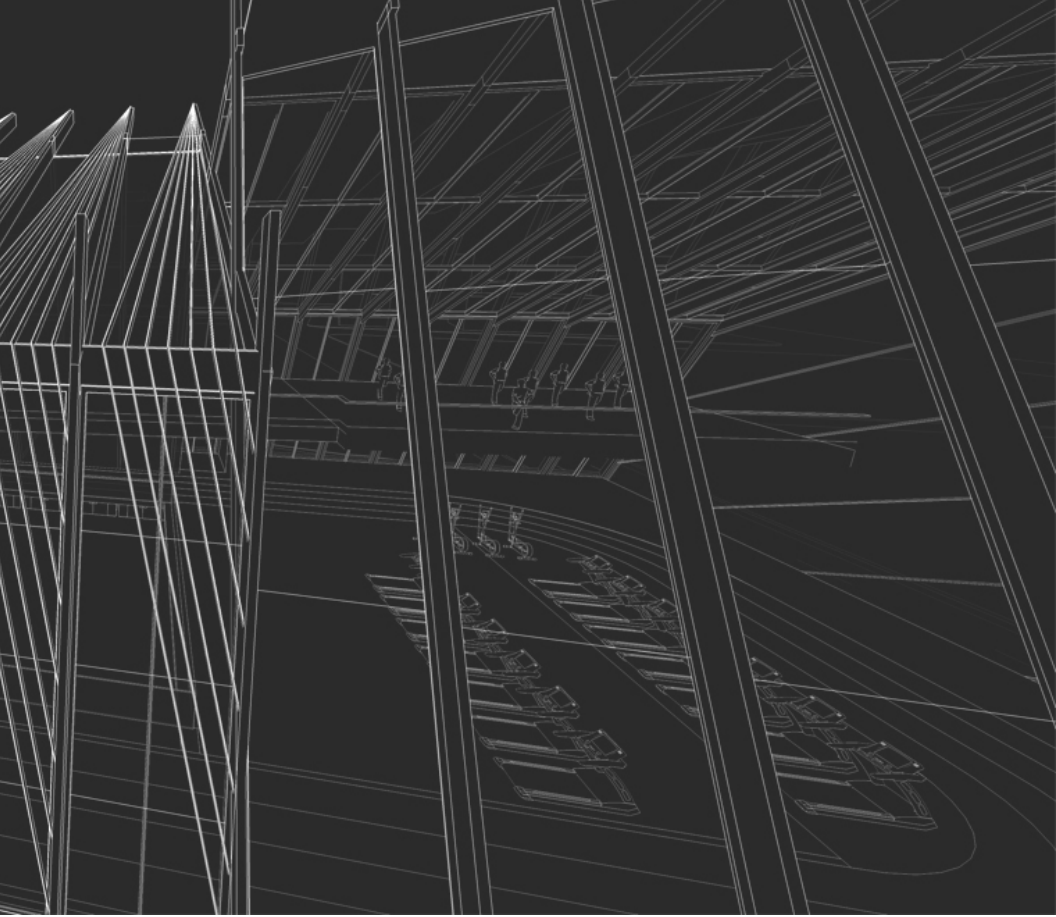


I allowed the structural members of the building to subtend the typical connection to the ground and continue cutting through the site. The intent was to create moments of recollection of your connection to the people around you setting up instances of social interaction through the architectures touch on your body. Simultaneously, this calls your eye to follow the frame work up into the building creating a connection not only to the building but tho the movements within that juxtapose beautifully to the surrounding sedentary setting. Ultimately this distance would in theory create a call to move and participate in the spectacle.

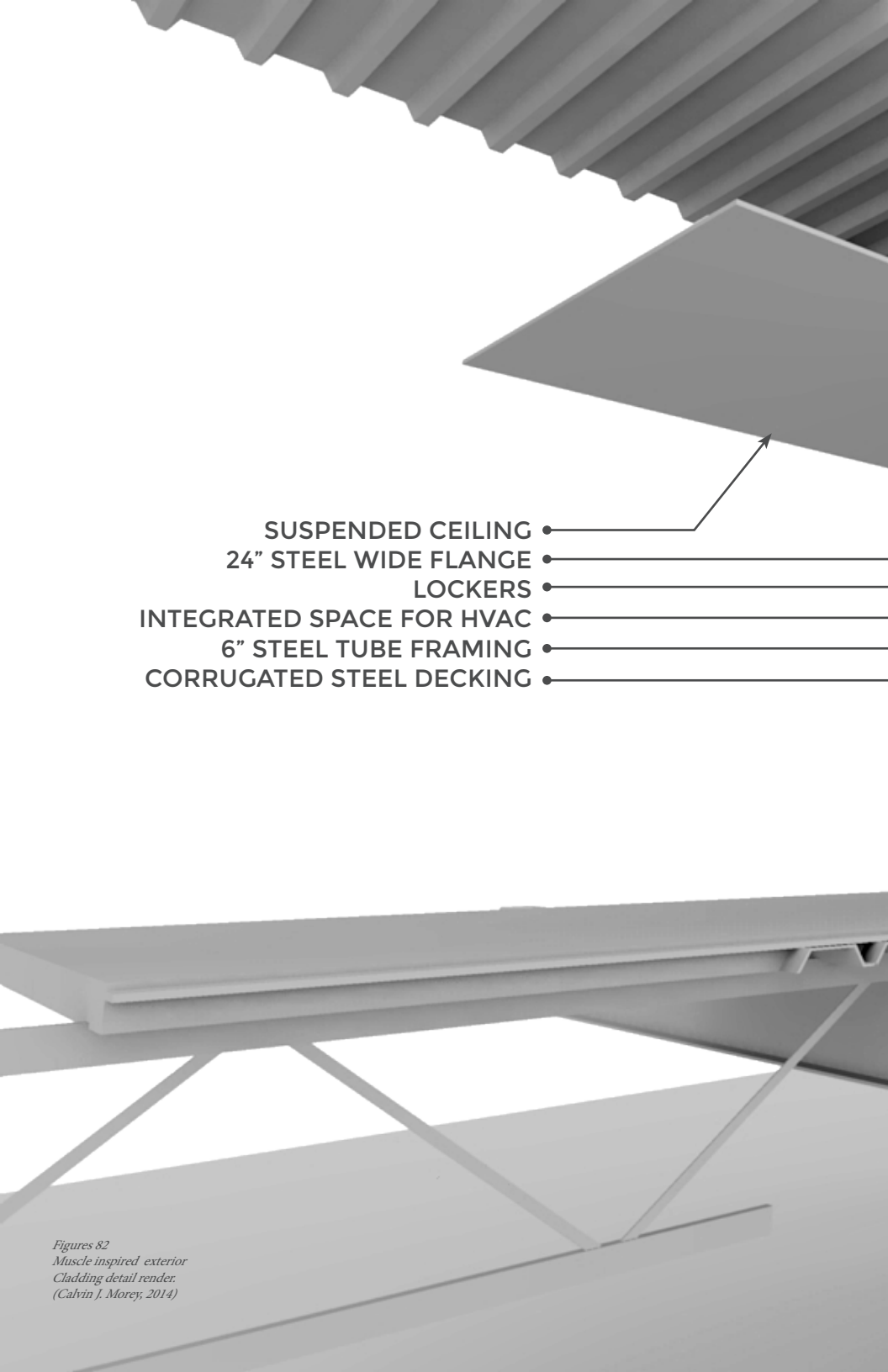
*Figures 80  
Minneapolis Central Fitness Center  
(Calvin J. Morey, 2014)*



Before venturing inside the building I wanted to take a moment to discuss some of the decisions I made concerning the exterior of the building. I wanted to capture moments in the architecture that would reflect my artefacts ability to portray tension. As I described earlier the body is always experiencing tension through our muscles and tendons. This connection to tension is made evident through my architecture in the above detail. The five inch thick steel cables run the entire length of the roof pulling over the edge of the wall. They then flow down the face and anchor into the steel connections below. This not only provides tertiary structure to this section of the building, it acts as a sunshade for the more intense an undesirable early morning and afternoon sun rays.

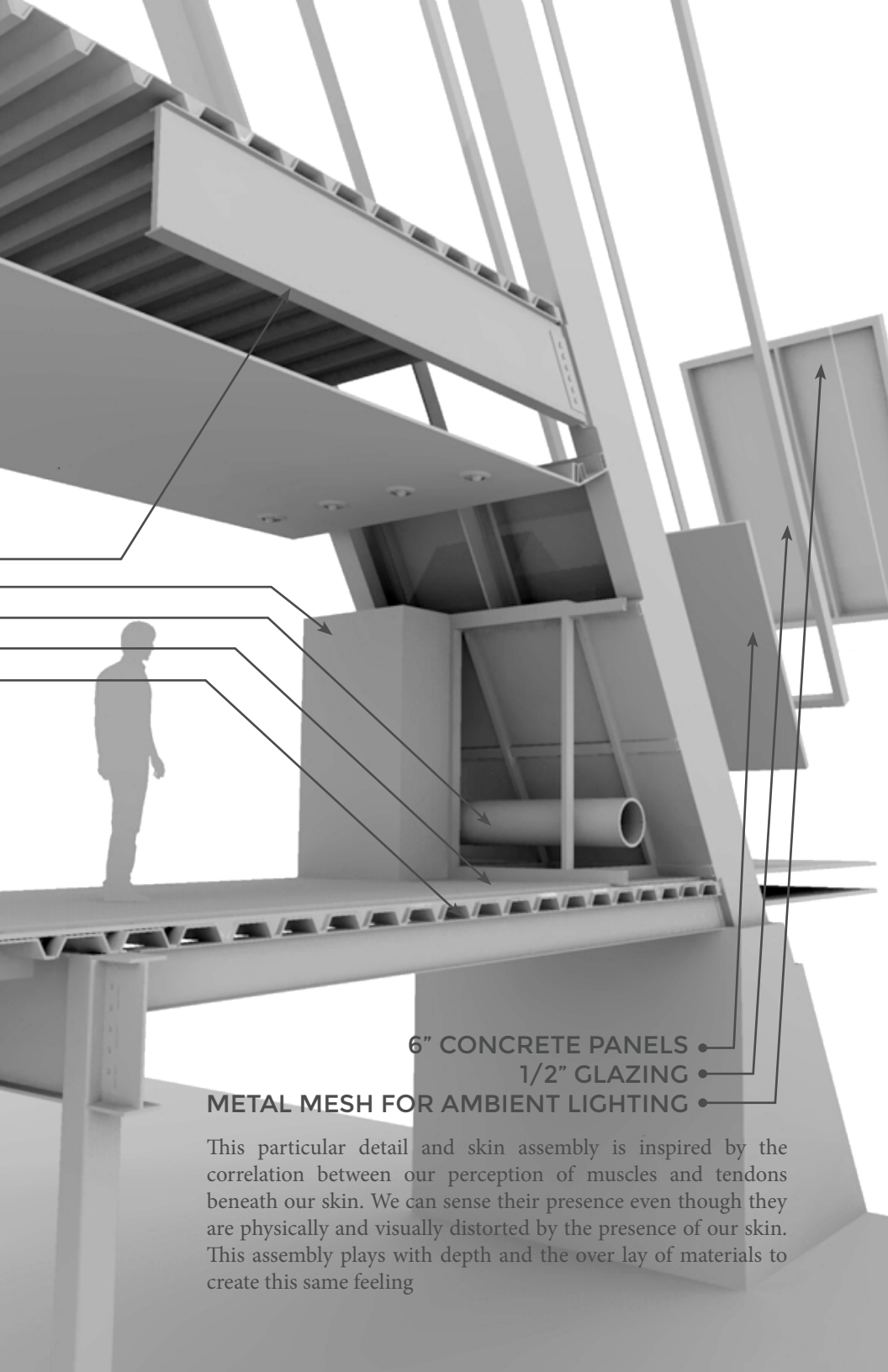


*Figures 81*  
*Tendon inspired structure/sun shade*  
*(Calvin J. Morey; 2014)*



SUSPENDED CEILING  
24" STEEL WIDE FLANGE  
LOCKERS  
INTEGRATED SPACE FOR HVAC  
6" STEEL TUBE FRAMING  
CORRUGATED STEEL DECKING

*Figures 82  
Muscle inspired exterior  
Cladding detail render.  
(Calvin J. Morey, 2014)*



6" CONCRETE PANELS

1/2" GLAZING

METAL MESH FOR AMBIENT LIGHTING

This particular detail and skin assembly is inspired by the correlation between our perception of muscles and tendons beneath our skin. We can sense their presence even though they are physically and visually distorted by the presence of our skin. This assembly plays with depth and the over lay of materials to create this same feeling

# GROUND FLOOR

Green spaces with trees and stepped seating allow you to meander from the library to participate in movement through the act of reading. The ambient soothing sound of falling water allures your senses and creates a comfortable place for a quick rest or conversation with a friend before progressing into the building. The architecture's footprint allows for the flow of people through as well as large spaces for various outdoor activities. Ramps reach out from the building and invite you to participate from all sides of the site.

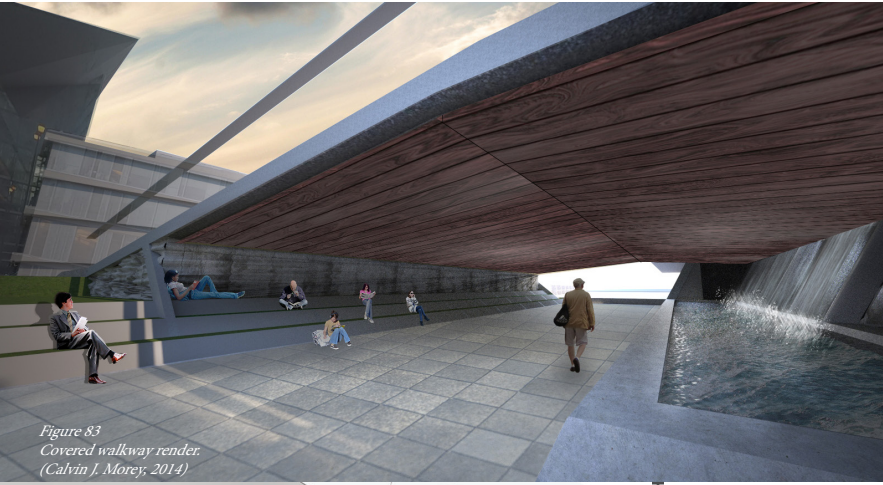
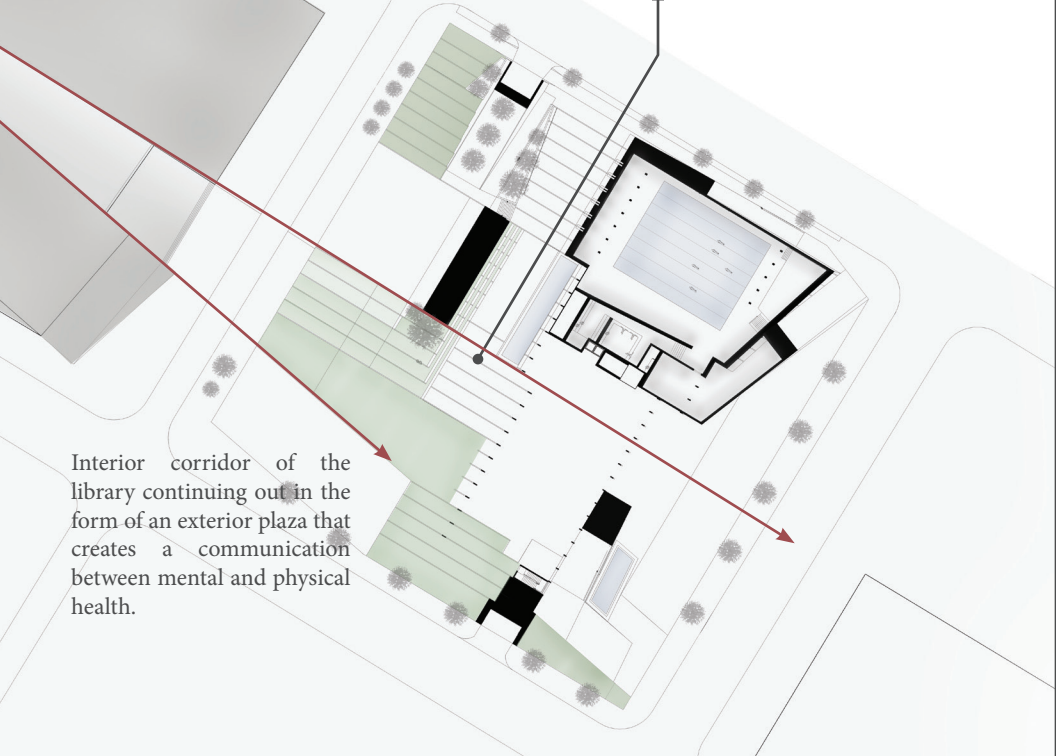


Figure 83  
Covered walkway render.  
(Calvin J. Morey, 2014)



Interior corridor of the library continuing out in the form of an exterior plaza that creates a communication between mental and physical health.

- A Outdoor Plaza space
- B Stepped landscape for moments of rest
- C Covered walk way with seating
- D Elevators | connect to parking below
- E Utility elevator for large equipment
- F Entry Ramp 1
- G Entry Ramp 2
- H Entry Ramp 3
- I Entry ramp 4
- J Plaza water feature
- K Parking entrance 1
- L Parking entrance 2
- M Pocket park + Bike stalls

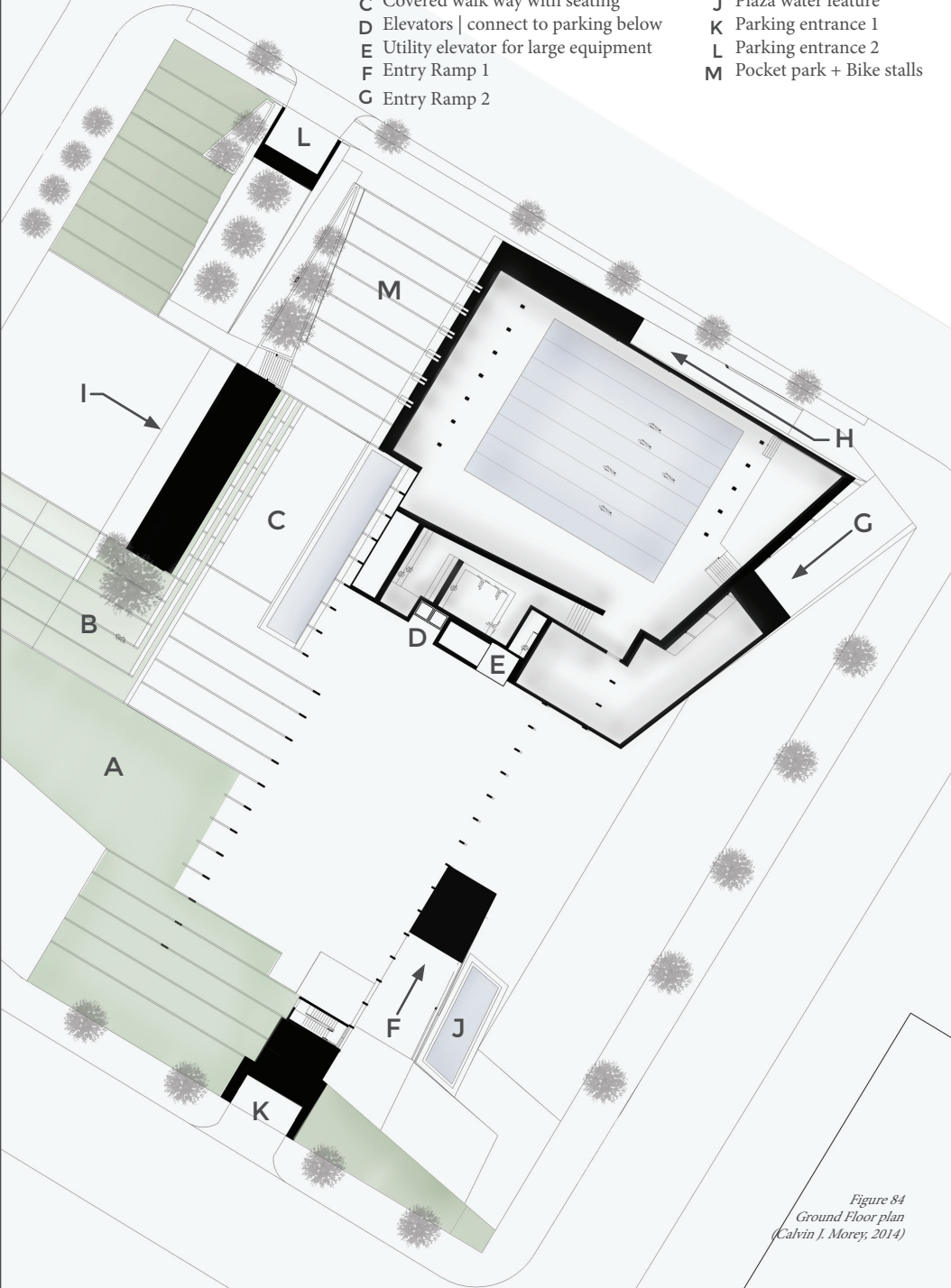


Figure 84  
Ground Floor plan  
(Calvin J. Morey, 2014)

# FIRST FLOOR

As you enter the facility your eyes are immediately called to look upward as the shear breadth of space expands and creates a grand celebration of movement around you. You take a deep breath as the ambient sound of pattering feet and figures of people passing above encourage and call you to participate in the spectacle. Continuing on into the locker rooms reveal a much more intimate setting as the ceilings and walls close in to create privacy and a calming focused environment allowing you to prepare your body for an effective work out. You continue on confident and ready for a healthy work out.

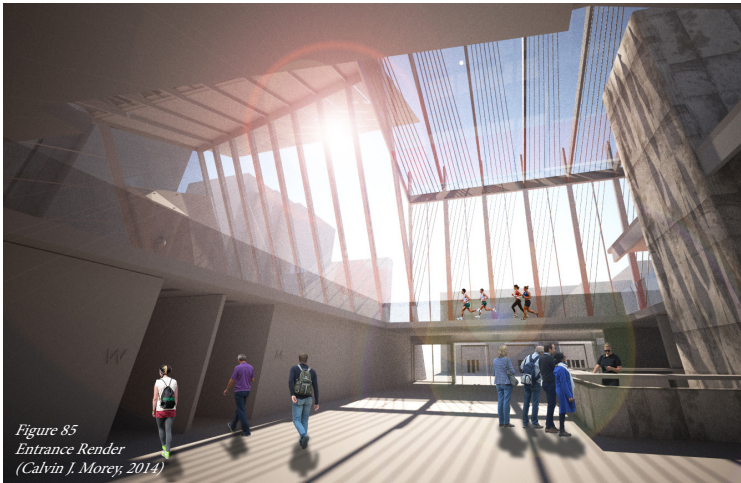


Figure 85  
Entrance Render  
(Calvin J. Morey, 2014)





- A' Main lobby + check in
- B' Men and Women locker rooms
- C' Hall way access to pool area below
- D' Multi-use gymnasium
- E' Public bathrooms
- F' Employee breakroom
- G' Equipment storage
- H' Enclosed staircase 1
- I' Enclosed staircase 2

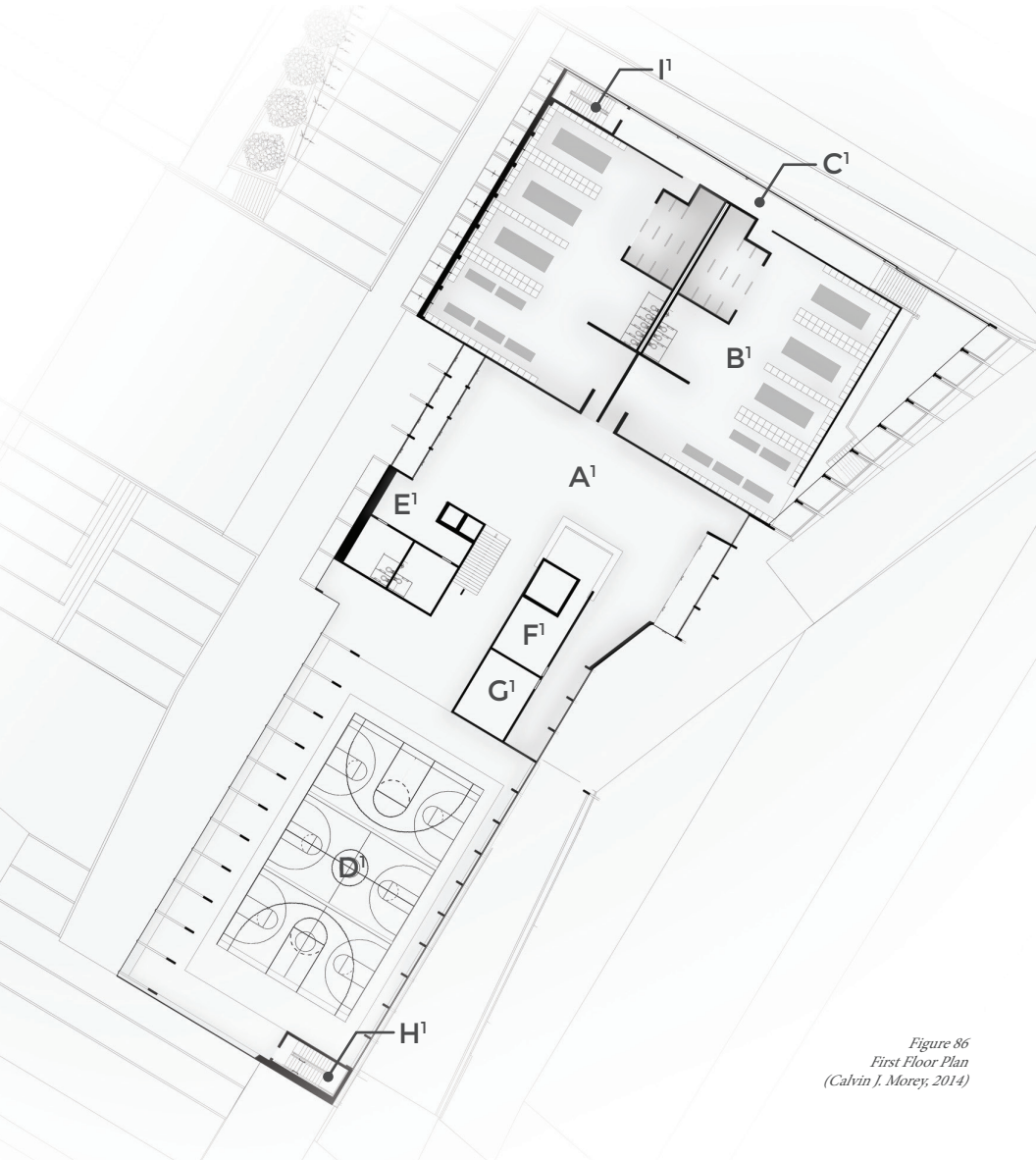


Figure 86  
 First Floor Plan  
 (Calvin J. Morey, 2014)

## SECOND FLOOR

The second floor introduces itself through a large area for you to stretch and further prepare your body for exertion. Proceeding onto the track your shoes grip the track as your legs propel you through the architecture. Initially the structure is of a horizontal configuration. The ceiling and steel members above are brought close and begin to mark your speed and movements as you pass them. Upon taking the first turn the space expands open and becomes completely vertical. With the upper level now exposed through an open balcony the sound of this space amplifies by adding the sounds of weights and machines in operation above. Continuing on the structure continues to push a way from you revealing larger spaces that are effected in different ways through the various activities. The architecture like my artefact expands and contracts around you bringing forth aspects inherent to the body such as breathing and stretching. The running track becomes the heart of the building through the pace and rhythm of the runners feet against the floor and the repetitious nature of the structure setting a beat to your bodies movement.

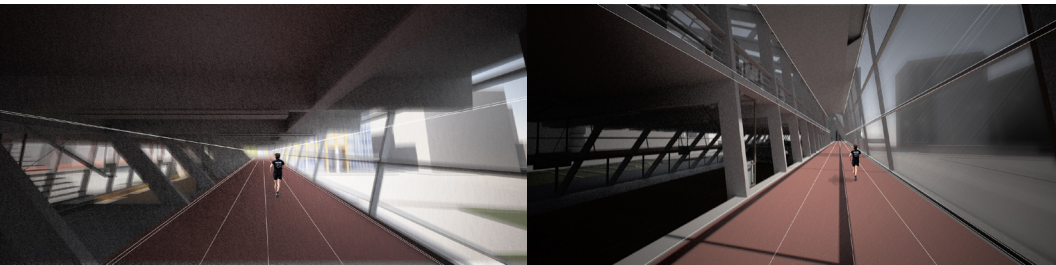
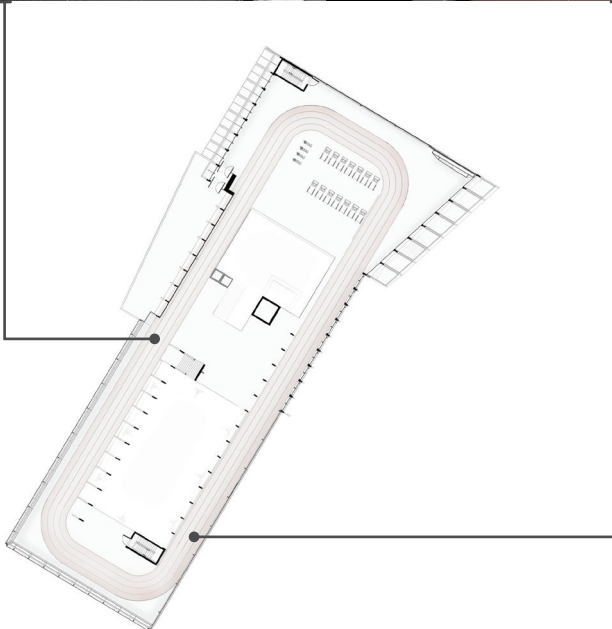


Figure 87  
Track Renderings  
(Calvin J. Morey, 2014)



- A<sup>2</sup> Stretch + warm up landing
- B<sup>2</sup> 200m running track
- C<sup>2</sup> Large cardio space
- D<sup>2</sup> Rock wall climbing corner
- E<sup>2</sup> Cool down | rest space
- F<sup>2</sup> Outdoor cool down + cycling deck

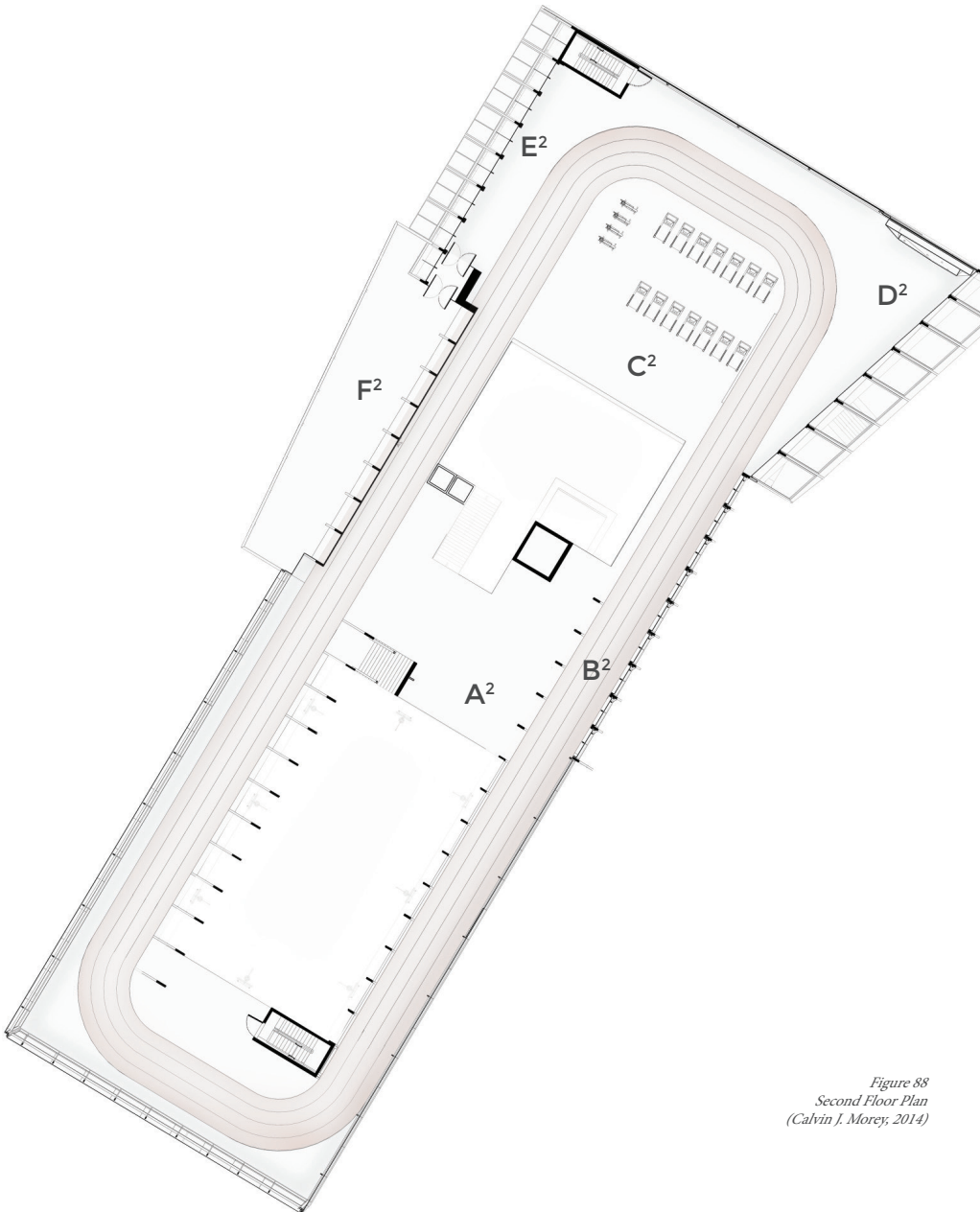


Figure 88  
 Second Floor Plan  
 (Calvin J. Morey, 2014)

## THIRD FLOOR

After a few warm up laps your heart is thumping and ready for the next level of the work out. Situated at an elevated angle to the running track below this space is constantly illuded to as you make your way around the track. I did this intentionally and through the use of reveals through the beams to create moments that encourage you to imagine yourself completing the task at hand in order to move on through the building and your work out. The structure continues up through the roof to expand the space vertically while allowing the maximum amount of natural light possible.

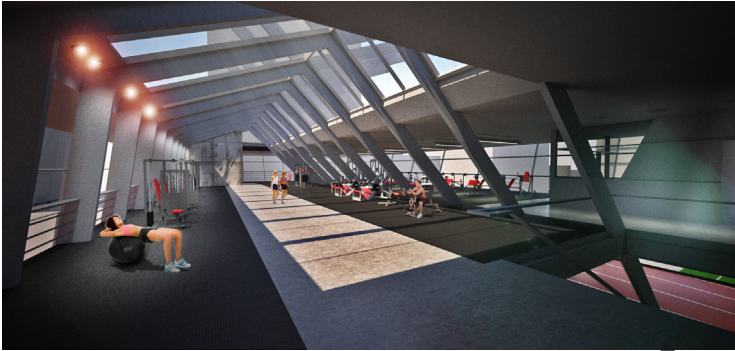
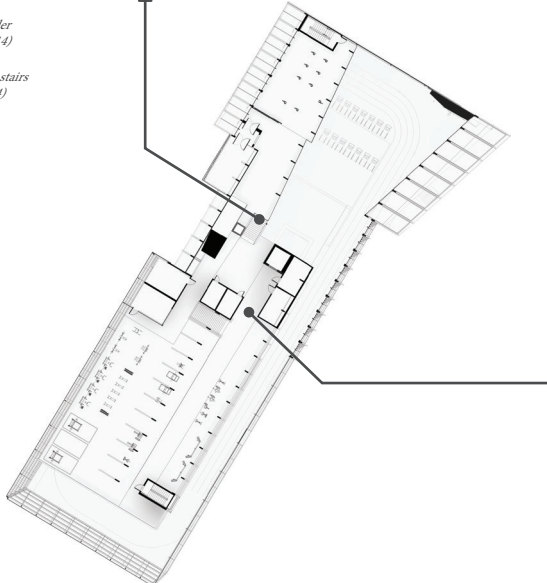
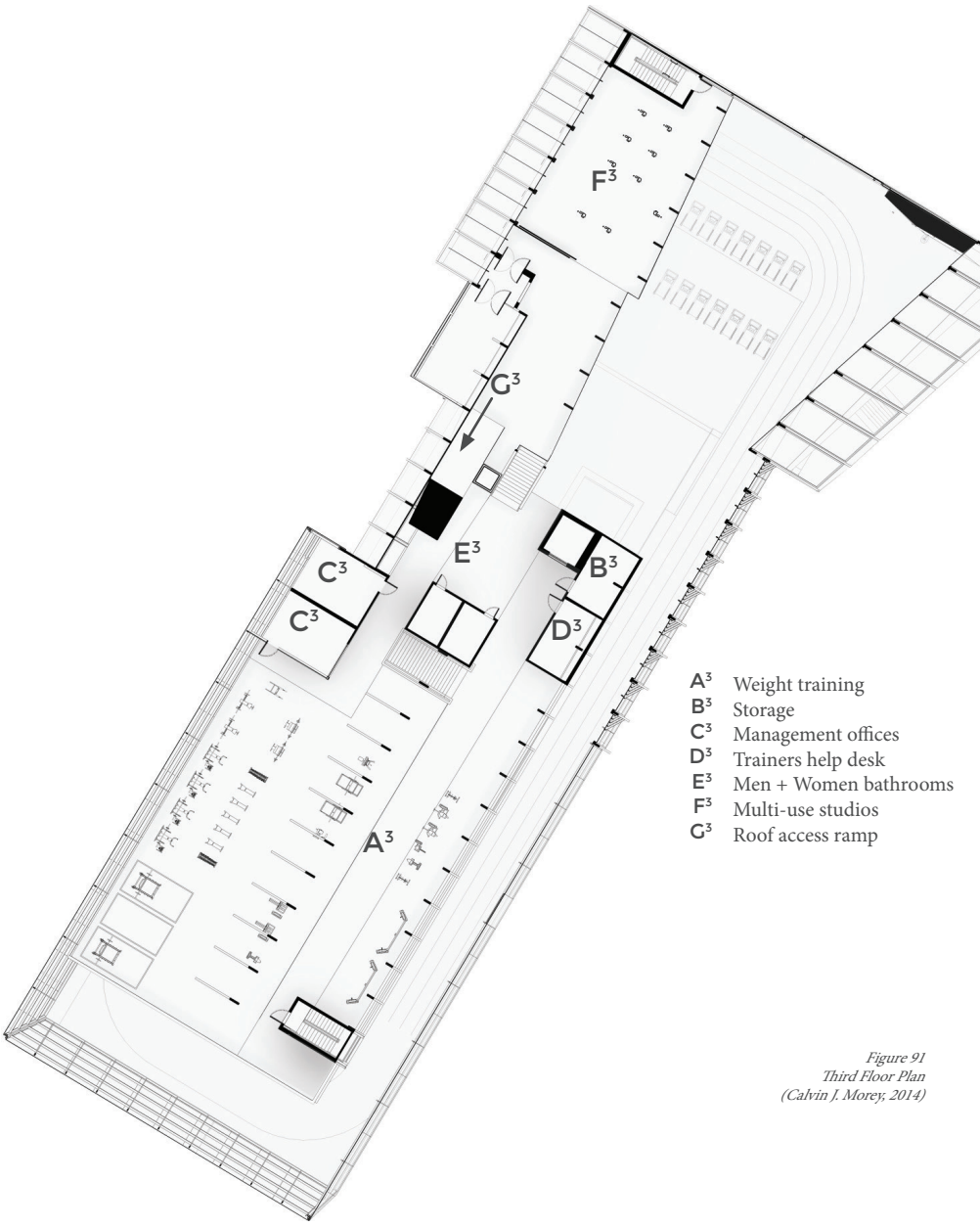


Figure 89  
Weight training render  
(Calvin J. Morey, 2014)

Figure 90  
Third level view from stairs  
(Calvin J. Morey, 2014)



Walking north through the hall way brings you to a point where the structure once again expands out ward. As you progress toward the multi-use studios the same experience of grandeur is felt once again but from a new vantage point. Suspended from the structure above the dance studios like my artefact seem to float with in the space bringing a new a sense of weightlessness while participating within the space.



- A<sup>3</sup> Weight training
- B<sup>3</sup> Storage
- C<sup>3</sup> Management offices
- D<sup>3</sup> Trainers help desk
- E<sup>3</sup> Men + Women bathrooms
- F<sup>3</sup> Multi-use studios
- G<sup>3</sup> Roof access ramp

Figure 91  
Third Floor Plan  
(Calvin J. Morey, 2014)

# GREEN ROOF

In the non winter months the roof deck and running track would be open for anyone who wanted to bring their training outdoors. This would create a new experience as the architecture hoists your body away from the rush of traffic bellow and creates a unique perspective of the city. The deck would also serve as a place to hold yoga, dance, or aerobics classes outdoors. Integrating a field of grass would also allow for people to use this space as a park, during the day you could bring a book to read, rest beneath the trees, get various sports games started. During the cool summer nights you could take a jog under moonlight or lay in the grass and watch the stars after a hard work out. Ultimately the idea is that through the display of an exterior space like this people from a distance would be called to participate.

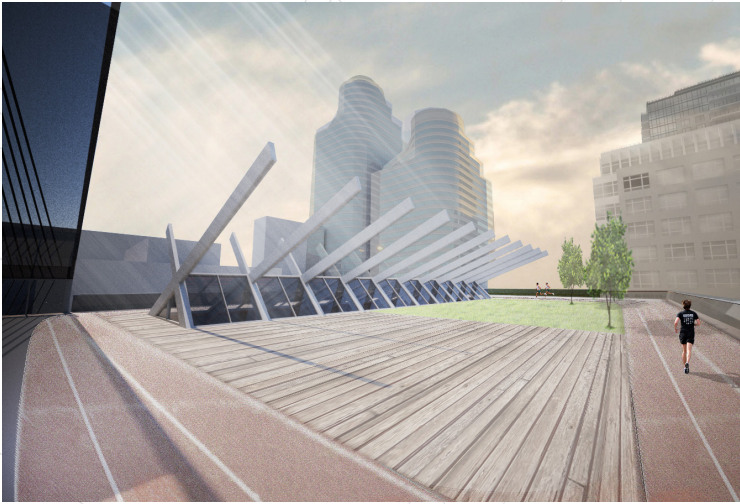


Figure 92  
Roof top render  
(Calvin J. Morey, 2014)

**STUDIO DECK** ●  
**RUNNING TRACK** ●  
**GRASS FIELD** ●

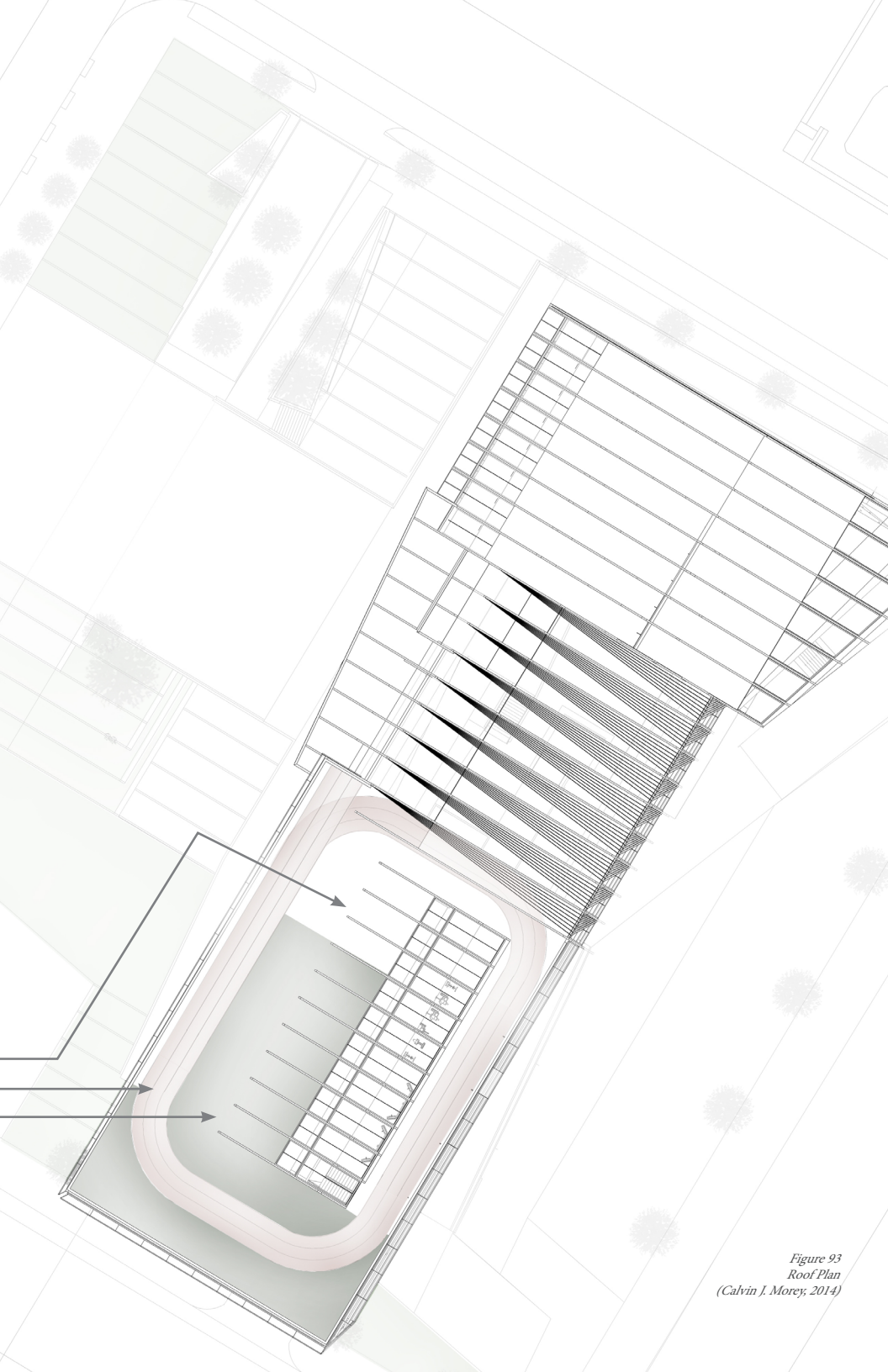


Figure 93  
Roof Plan  
(Calvin J. Morey, 2014)

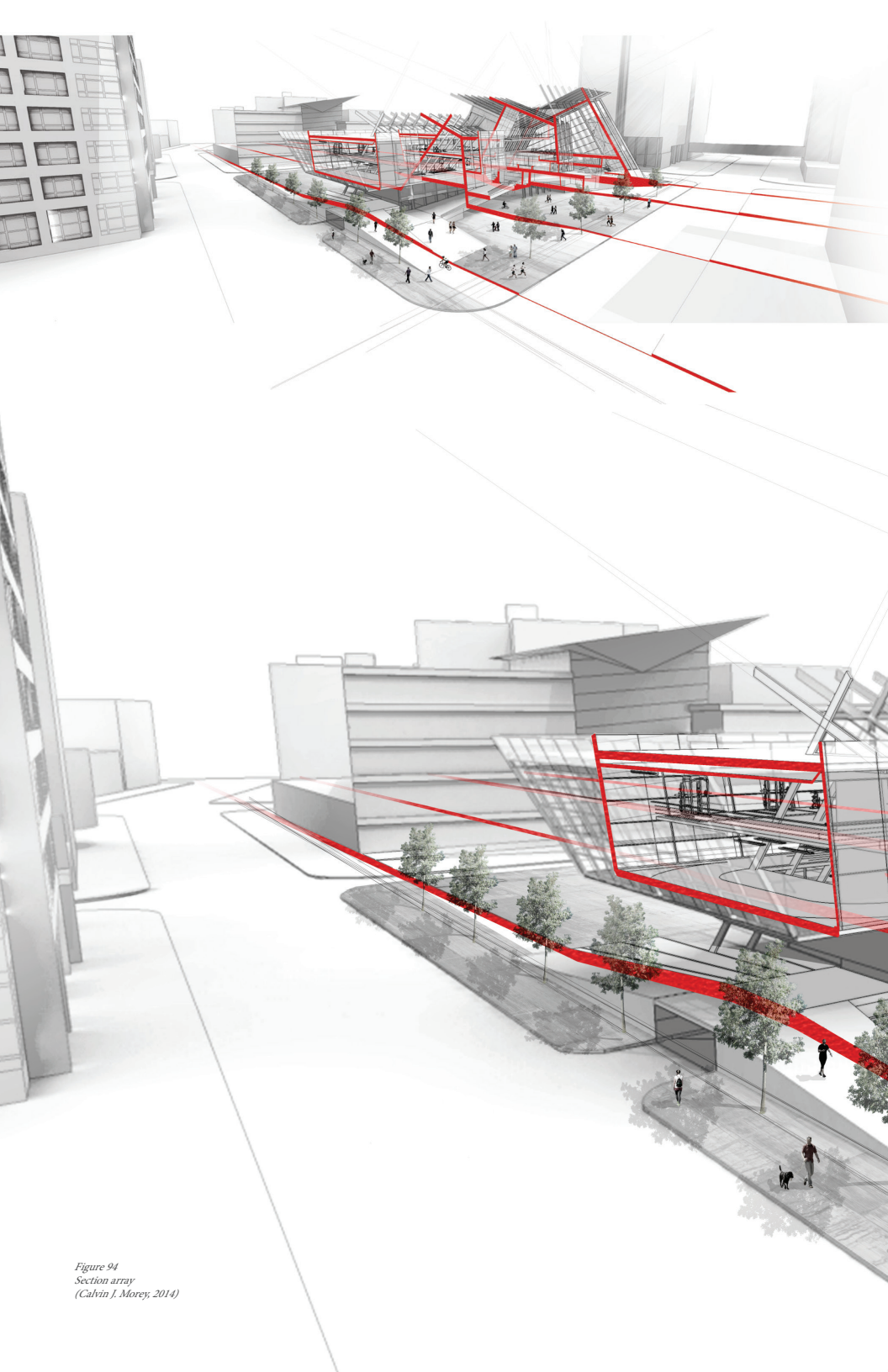
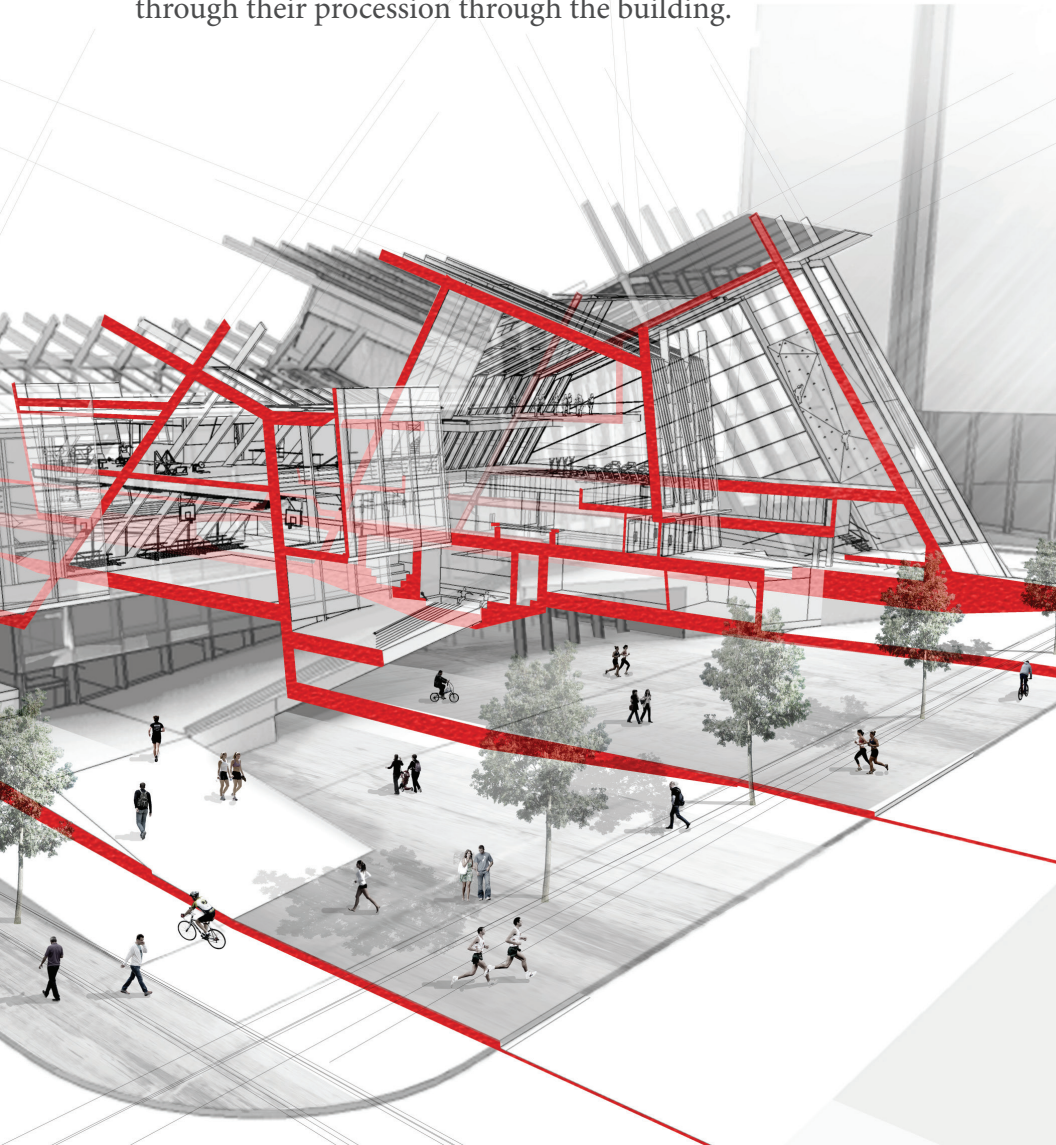


Figure 94  
Section array  
(Calvin J. Morey, 2014)



## SECTION EXPLORATION

Architectural sections allow us to depict many aspects of a building that a plan or rendering cannot. They allow us a unique view of the spacial relationships and the dimensions in height, width and in some cases depth. For this project I felt it was important to portray a sense of movement through the space using the section. By over laying periodic cuts through the length of the building I was able to show the structures ability to expand and contract through space. The body becomes the instrument through which the user can perceive the architecture moving around them. This is sensed through their procession through the building.



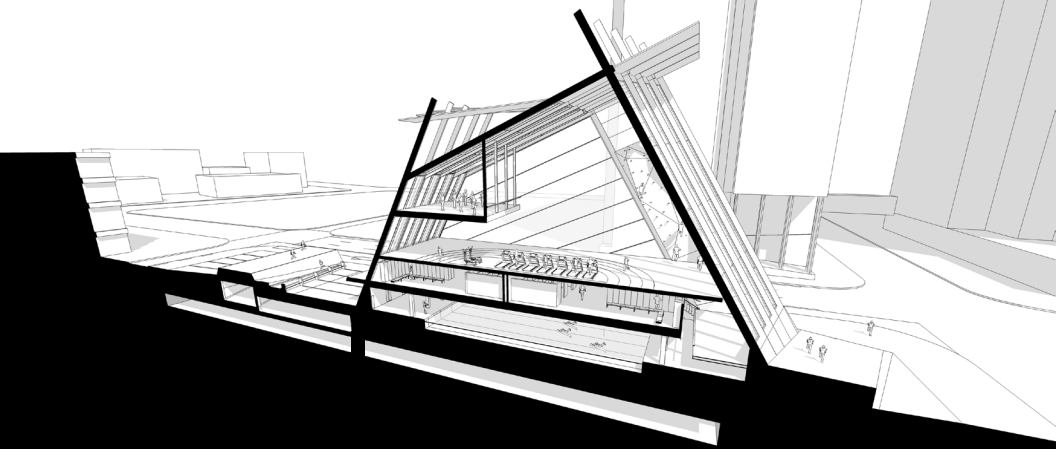
## SECTION EXPLORATION

I used the previous section drawing more as a conceptual articulation of the architecture's ability to frame a multitude of experiential spaces through the body's procession within the spaces. The intent was to show a holistic yet differentiated view of the entire building's progression of structure. In conjunction I felt it was necessary to also show sections that could more clearly show spatial relationships and the body's various moods within the spaces.

A series of three sections in linear relation to each other helped me to show how the building unfolds to the people using the various spaces. With the combination of section and perspective I was able to show the depth, height, and width of spaces that contribute to the experience of the building expanding and contracting around you as you progress through the spaces. In order for these drawings to be effective the viewer must participate by allowing the eye to travel back and forth between the drawings. Memory serves as the link between the drawings and allows us the ability to understand the spaces as a progression of movement rather than a representation of completely homogeneous space. To create a movement of the eye between the drawings and to show how the spaces adapt and form a multitude of relationships with the body was the overall intent behind these section perspectives.

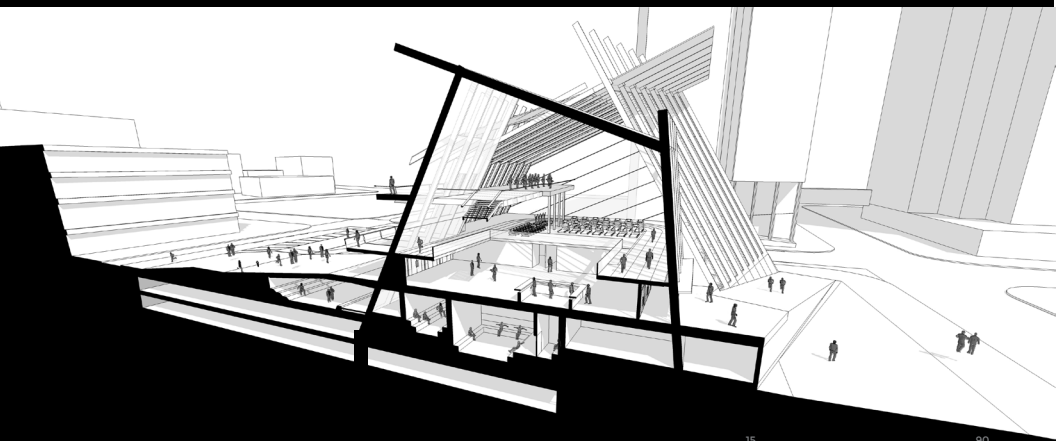
The architecture becomes alive with movement as the body progresses through the spaces. In this sense the body and memory put the architecture in motion.

*Figure 95*  
*Sections*  
*(Calvin J. Morey, 2014)*



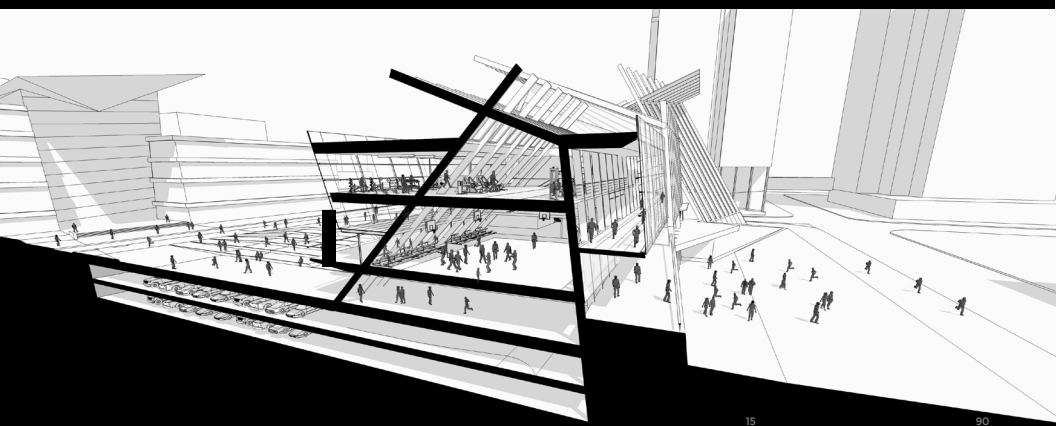
**SECTION C** | 15 90

Depicts the extremely grand spaces juxtaposed against the very intimate. These relationships allow the depth of spaces to become dramatized through the bodies' successional movements through them.



**SECTION B** | 15 90

Reveals spaces that allow the guests to become conscious of the bodies' movements at rest. Sheltered from the busy chaotic urban setting these spaces on the interior allow for muscle recovery and on the exterior create enjoyable quiet places to read or converse.

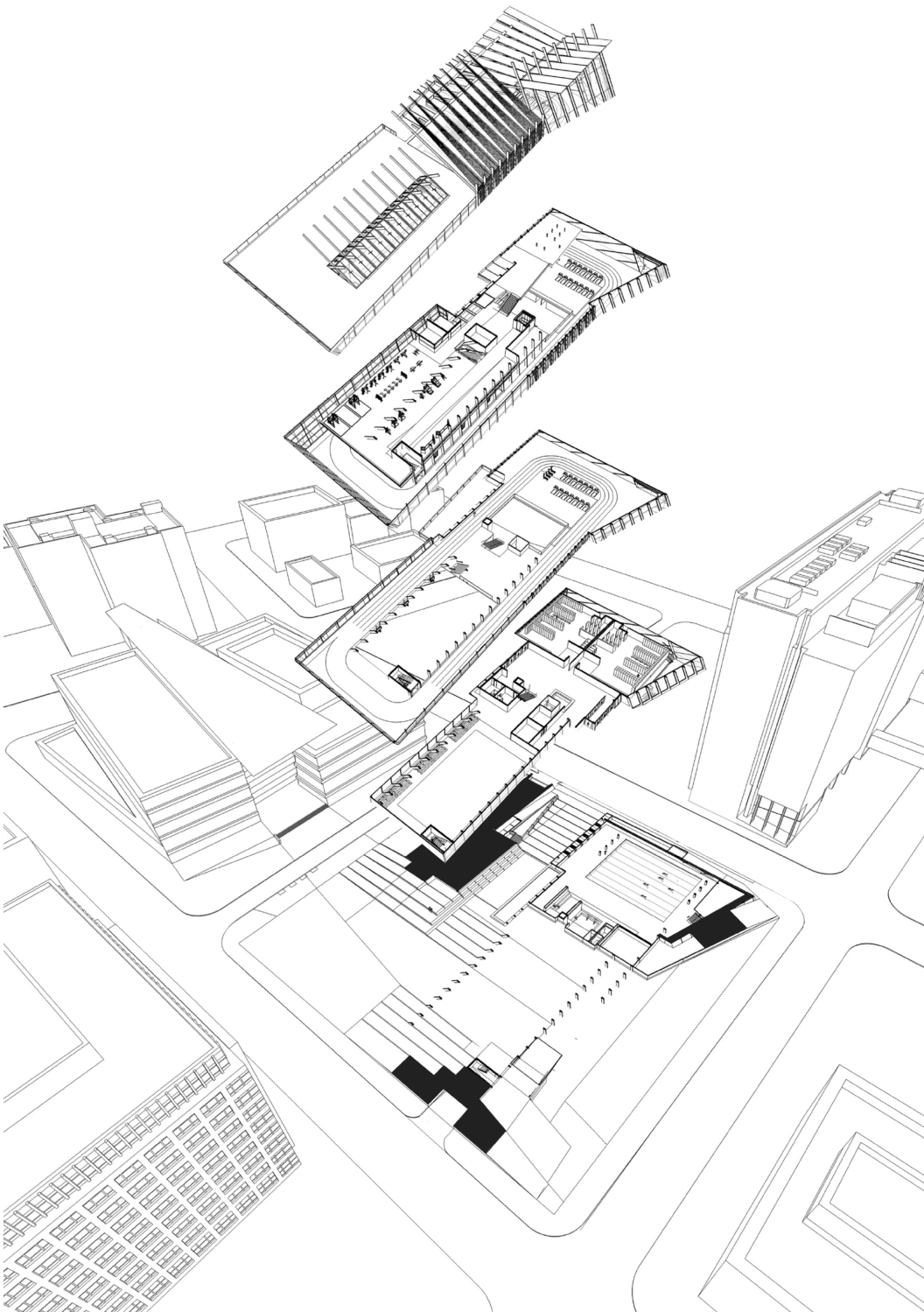


**SECTION A** | 15 90

Shows a relation to the exterior spaces allowing for free movement through the site. The gymnasium's relationship to the track above. And the running tracks' relation to the above weight training spaces. Moving to the next drawing we have to remember these spaces to realize how they form the experience of movement.

By cutting the building horizontally I was able to show the floor plats and structural members more clearly. In plan I found my structure to be hard to read and confusing as to how the members continued up through the building. Through the stacking of oblique plans I was able to incorporate a sense of perspective as well as to show the site and the buildings situation upon it.

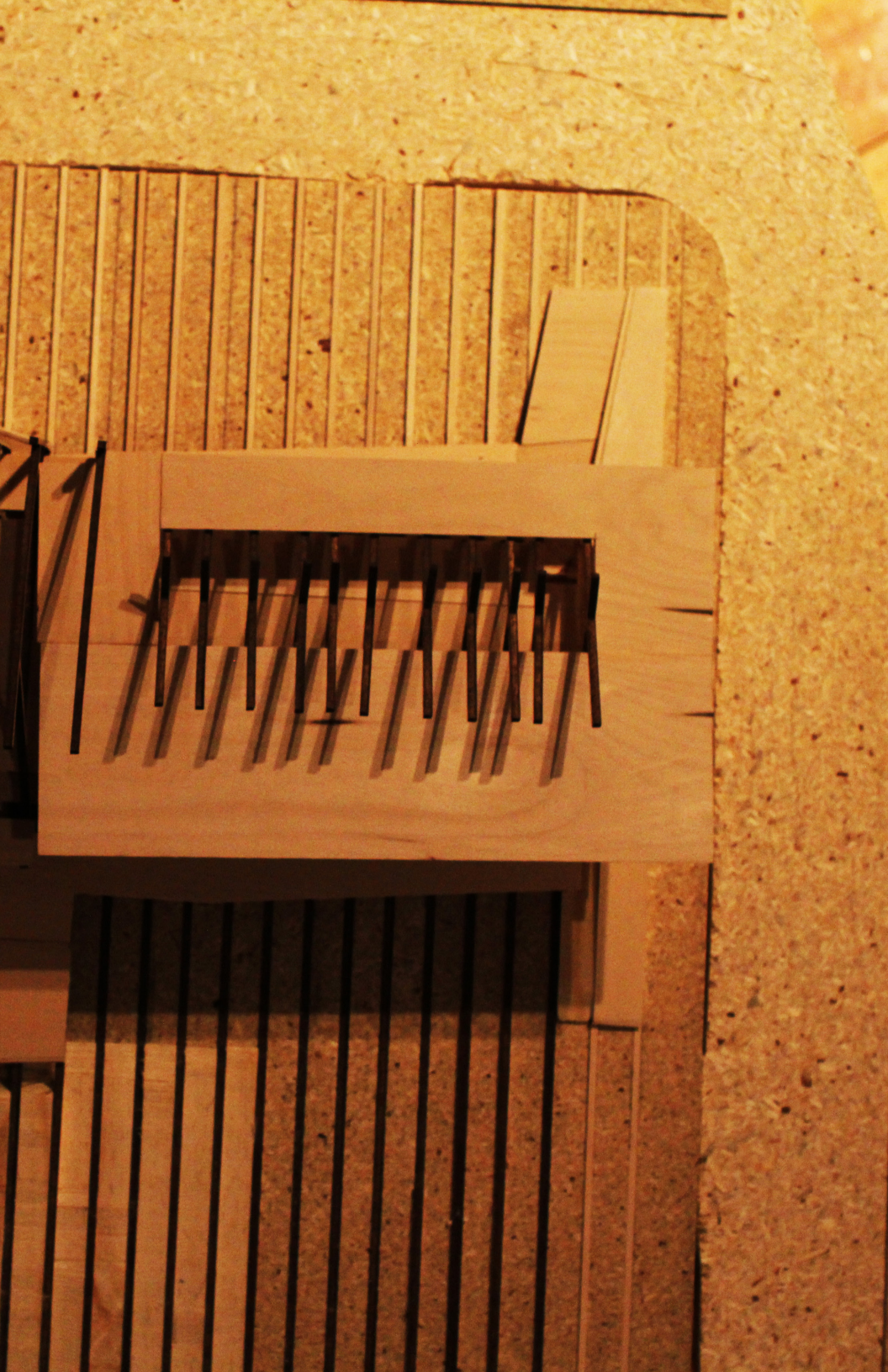
*Right Figure 96  
Exploded plan rendering  
(Calvin J. Morey, 2014)*



# PHYSICAL MODEL

Figure 97  
Physical model top view  
(Calvin J. Morey, 2014)



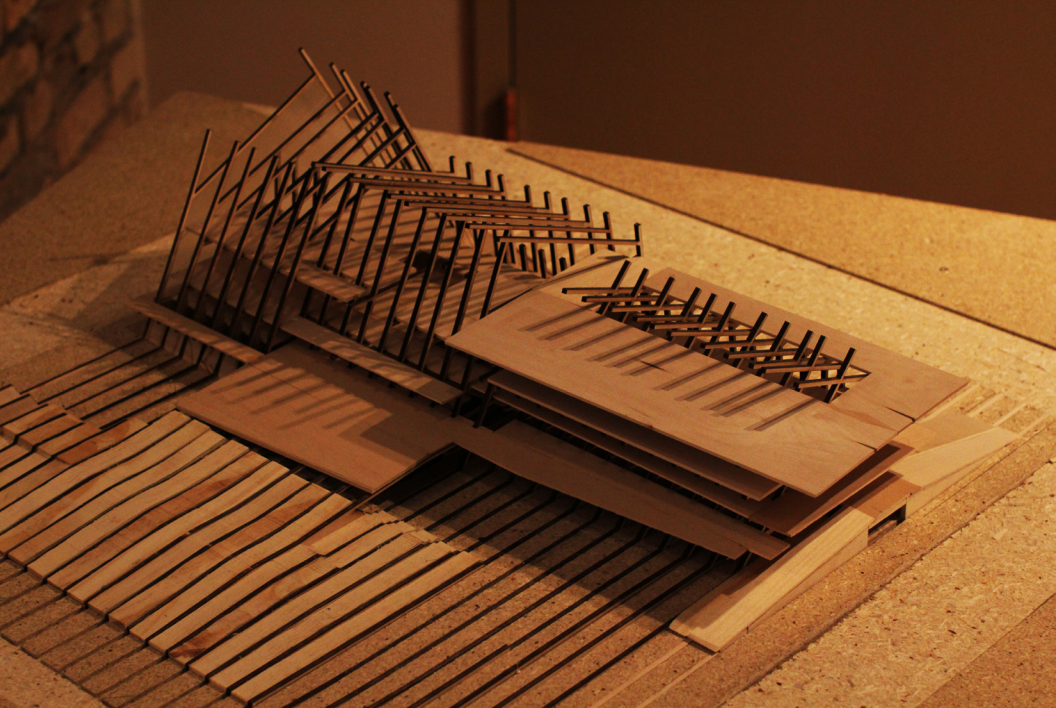




*Figure 98*  
*Physical model, looking east*  
*(Calvin J. Morey, 2014)*

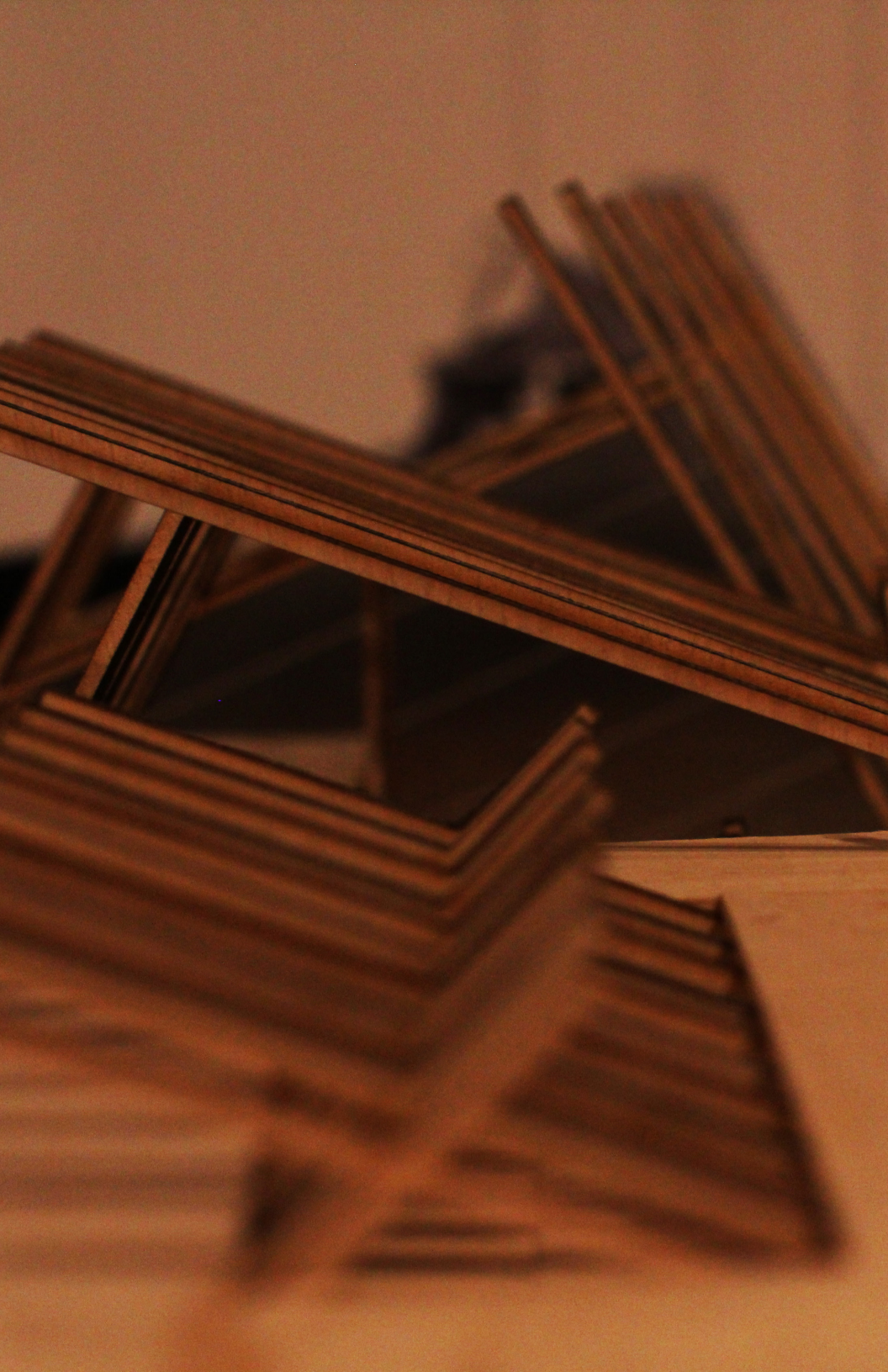


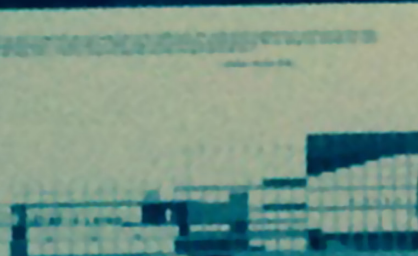
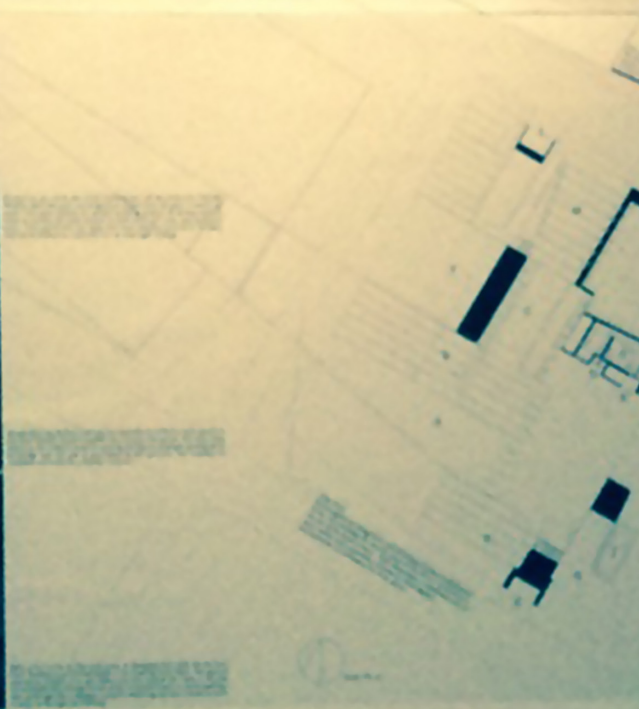














FINAL PRESENTATION

ARCHITECTURE & THE BODY  
INTEGRATING FITNESS IN THE MODERN URBAN CENTER

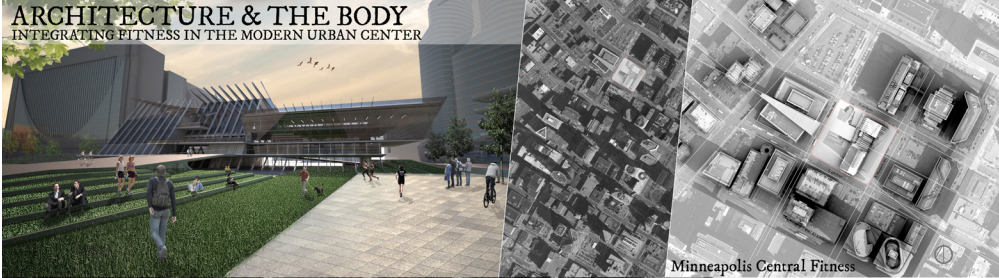


Figure 99  
Final installation  
(Calvin J. Morey, 2014)



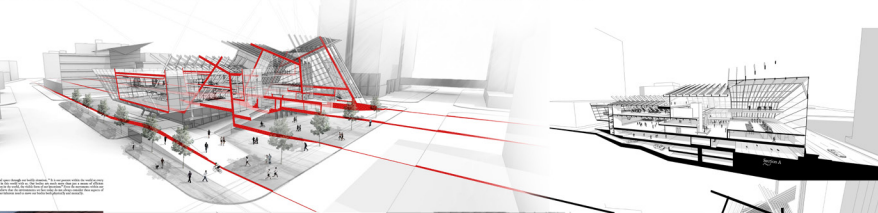
# ARCHITECTURE & THE BODY

## INTEGRATING FITNESS IN THE MODERN URBAN CENTER

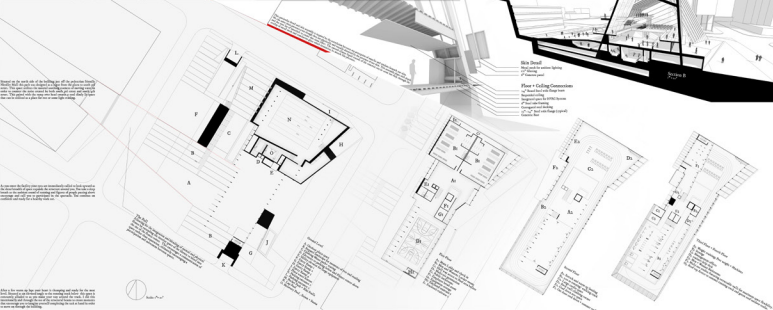
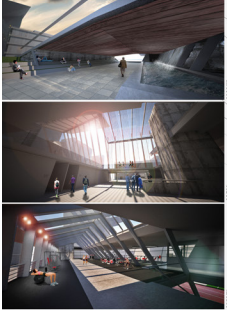


**Author**  
 The Minneapolis Central Fitness building is a prime example of how architecture can be designed to promote health and fitness in the modern urban center. The building's design is based on the concept of "active living," which encourages people to incorporate physical activity into their daily lives. The building's location in the heart of the city makes it easily accessible to a large number of people, and its design encourages people to walk, bike, and use public transportation to get to work.

**Design**  
 The building's design is a blend of modern and traditional architectural styles. The building's facade is made of dark, textured panels, and the interior is bright and open. The building's design is based on the concept of "active living," which encourages people to incorporate physical activity into their daily lives. The building's location in the heart of the city makes it easily accessible to a large number of people, and its design encourages people to walk, bike, and use public transportation to get to work.

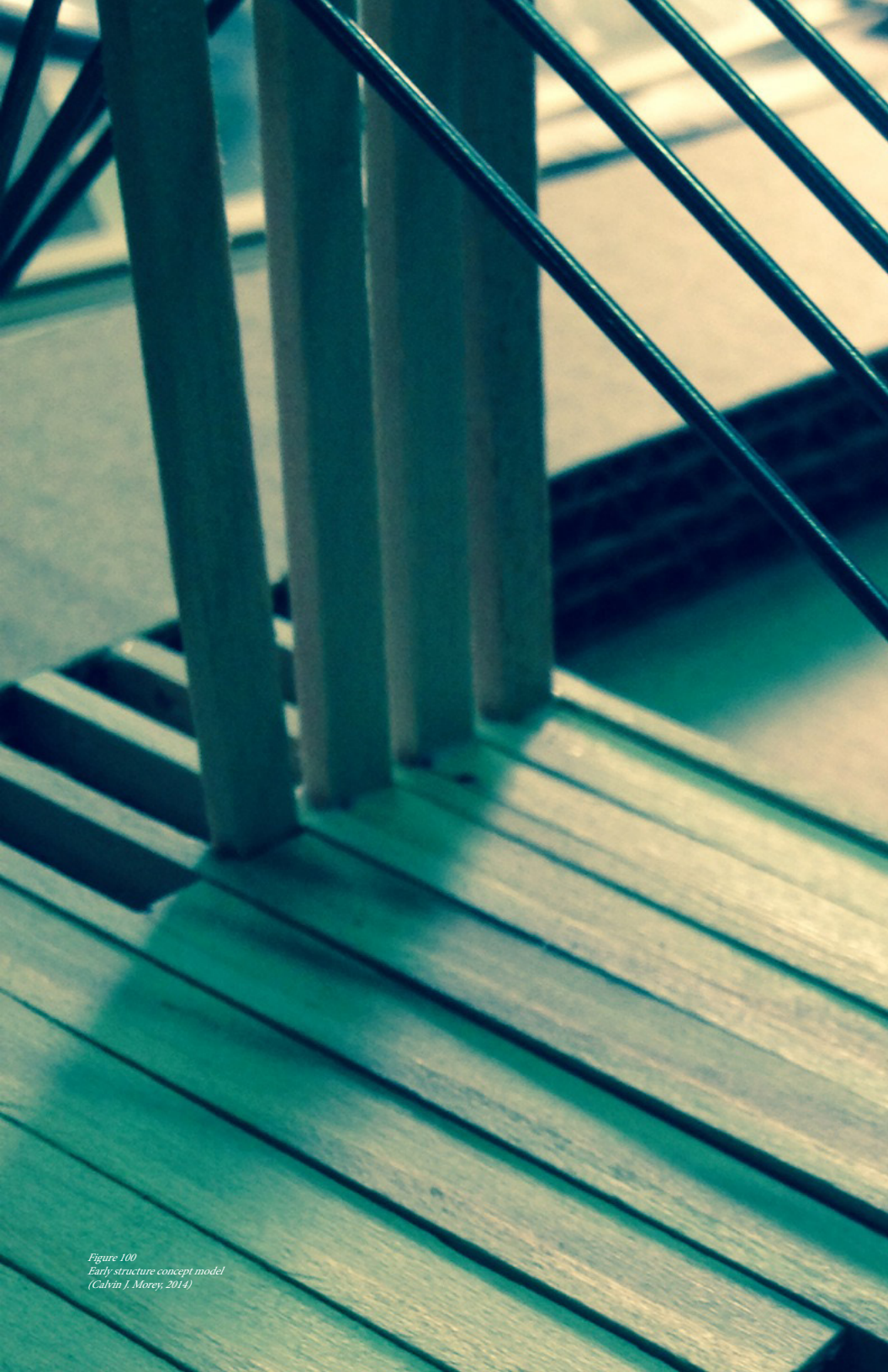


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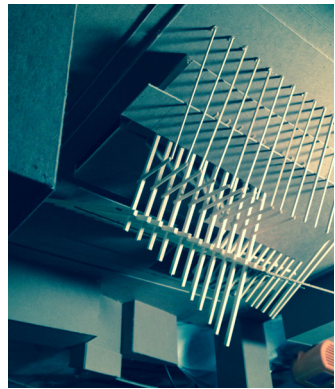
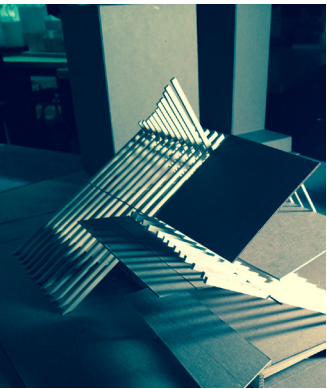
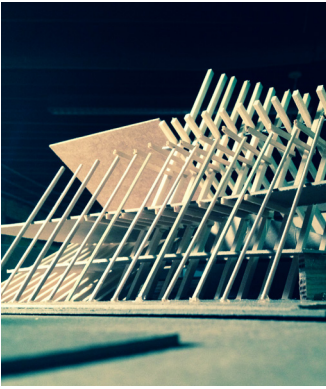
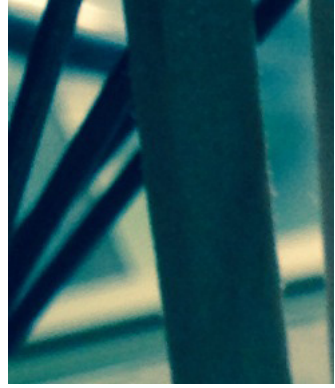
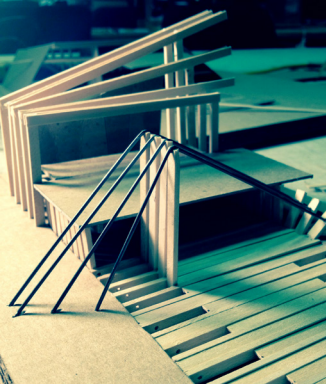




*Figure 100*  
*Early structure concept model*  
*(Calvin J. Morey, 2014)*



PROCESS



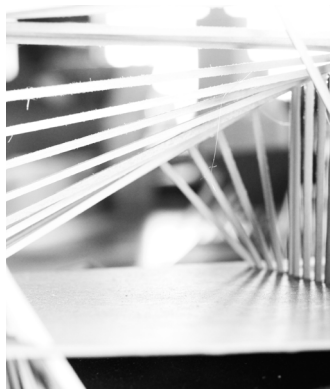
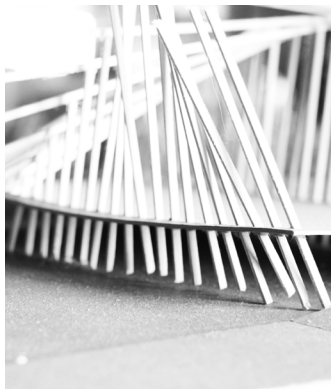
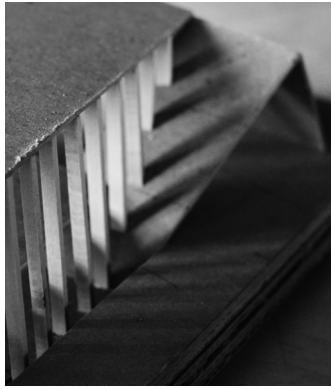
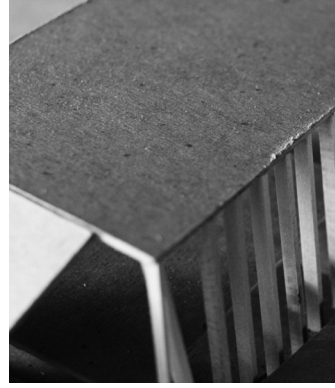


Figure 101  
Process models  
(Christy, 2003, 2014)

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NAME| CALVIN J. MOREY  
ADDRESS| 2671 2ND AVENUE EAST  
PHONE:| 651.356.1498  
E-MAIL| CALVINJMOREY@GMAIL.COM  
HOMETOWN| NORTH SAINT PAUL



*Figure 102 Profile photo  
(Jake Reiners, 2014)*

“Form follows function - that has been misunderstood. Form  
and function should be one, joined in a spiritual union.”

-Frank Lloyd Wright



