

body.soul.inHABIT

SAFETY AND SECURITY WITHIN THE HUMAN BODY SCALE

A Design Thesis Submitted to the Department of Architecture and Landscape Architecture of North Dakota State University

By

Jill Cayley-Wieler

In Partial Fulfillment of the Requirements for the Degree of Architecture

Primary Thesis Advisor

Thesis Committee Chair

September 2010
Fargo, North Dakota

NON EXCLUSIVE DISTRIBUTION LICENSE

By signing and submitting this license, you (the author(s) or copyright owner) grants to North Dakota State University (NDSU) the non-exclusive right to reproduce,

Translate (as defined below), and/or distribute your submission (including the abstract) world-wide in print and electronic format and in any medium, including but not limited to audio or video.

You agree that NDSU may, without changing the content, translate the submission to any medium or format for the purpose of preservation.

You also agree that NDSU may keep more than one copy of this submission for purposes of security, back-up and preservation.

You represent that the submission is your original work, and that you have the right to grant the rights contained in this license. You also represent that your submission does not, to the best of your knowledge, infringe upon anyone's copyright.

If the submission contains material for which you do not hold copyright, you represent that you have obtained the unrestricted permission of the copyright owner to grant NDSU the rights required by this license, and that such third-party owned material is clearly identified and acknowledged within the text or content of the submission.

IF THE SUBMISSION IS BASED UPON WORK THAT HAS BEEN SPONSORED OR SUPPORTED BY AN AGENCY OR ORGANIZATION OTHER THAN NDSU, YOU REPRESENT THAT YOU HAVE FULFILLED ANY RIGHT OF REVIEW OR OTHER OBLIGATIONS REQUIRED BY SUCH CONTRACT OR AGREEMENT.

NDSU will clearly identify your name(s) as the author(s) or owner(s) of the submission, and will not make any alteration, other than as allowed by this license, to your submission.

Name _____ Date _____

thesis abstract -----

the problem statement-----

statement of intent-----

-

the narrative-----

user/client description-----

major project elements-----

site information-----

project emphasis-----

a plan for proceeding-----

previous studio experience-----

theoretical premise/unifying idea-----

case studies -----

site analysis-----

historical context-----

goals for thesis-----

programmatic requirements-----

reference list-----

personal identification-----

[TABLE OF
CONTENTS]

This thesis investigates the human body and its proportions in relation to the comfort and security experienced within a space. This thesis also takes a deeper analytical look at how the treatment of our own bodies has potentially a direct correlation to our surrounding environment. An examination of how these two statements affect one another will be thoroughly investigated.

The manifestation of this research will be expressed in the design of a multi-occupancy building. This social housing complex will allow those who dwell there to develop a strong relationship with their body and to be conscious of how their atmosphere affects them. This high density housing will be located in Fargo, North Dakota near a downtown urban setting that presents a relatively flat landscape. The building will have 26 units total.

Key Words: Proportions, Humans, Safety, Security, Conscious

[THESIS AB-
STRACT]

How is our relationship to our body
affected by our surroundings?

[PROBLEM STATEMENT]

[S.T.A.T.E.M.E.N.T.
.O.F.
.I.N.T.E.N.T.]

Multi-unit social housing complex[TYPOLOGY]

Western society has lost a conscious relationship with their body, and architecture has played a part in this alienation.[CLAIM]

Humans are influenced by their surroundings, whether is it positive or negative. Architecture plays a role in affecting human actions. In western society, unthoughtful building design has contributed to the disconnect between humans and their body.[PREMISES]

In order for humans of western society to re-gain a conscious relationship with our body, there must be an unveiling of what pushed us into the comatose state we are currently in. The investigation of relevant contributing factors will help us to gain insight into how we can correct this issue as we go forward. Human body proportions and the fibonacci series can be used as a basis for design that delivers consciousness of beauty and comfort.[THEORETICAL PREMISE/UNIFYING IDEA]

The fundamental relationship of the human body and its influence on spatial configuration is extremely relevant to western society today. Within the past few decades, western culture has lost the conscious connection between their body and its surroundings. Not until recently has our culture started to become mindful of how much our surroundings have impacted our bodies in such a negative manner. The human body can be mathematically analyzed in order to determine and develop the appropriate scale needed for human enlightenment and comfort.[PROJECT JUSTIFICATION]

[T.H.E. .P.R.O.P.O.S.A.L.]

As western society has evolved, there has been a slow process of disengagement from our surroundings. This disconnection has caused us to become unconscious of how our environment impacts us. In western society, we have mistaken our priorities. Serious issues concerning our health have developed because we do not realize what we are eating, why we are eating it and furthermore, what impact it is having on our bodies. Obesity rates have multiplied to the point of being called an epidemic. The number one cause of death in our society is related directly to our diet. Another issue that faces our culture is the advancement of technology. Technology is a blessing, but perhaps in moderation. Stimulation of our bodies by technology commands a very large portion of our day and is increasing rapidly for every generation.

To contrast this, Japan is a place where cultural values are engrained in society and overall the statistics show that health and happiness are higher than western society. In Japan, a typical day starts with rajio taiso or "radio exercises", which are morning exercises that raise energy levels and encourage good health. Is there a connection between morning exercise and nearly non-existent obesity rates in Japan?

Starting every day with a connection to one's body is a great way to develop a conscious awareness of how our actions and surroundings affect us. The progression of this responsiveness is also hindered or enhanced through architecture. Most people have not stopped to think how space is really affecting them

[NARRATIVE]

and what conscious reactions it evokes. As humans, we reserve the right to be living in well thought out, beautiful and harmonious spaces.

As stated by Steven Holl, some of the most intense and visually pleasing pieces of architecture have used the essence of the human body proportions as a basis for the scale from which to build. They have mastered the use of these scales in ancient architectural accomplishments that still awe us today. This scale is derived from the fibonacci sequence as well as the golden mean. How can we use this ancient wisdom and combine it with modern stipulations to produce architecture that will give us a conscious sense of comfort, security and joy?

The questions presented are extremely relevant and important to our modern day culture. These questions also address underlying societal issues that have been previously ignored, but can be dealt with an optimistic approach. It is important that these questions are evaluated because improvements within our current society and methodology of thinking need to be focused on and re-assessed.

This thesis will develop these issues and examine them on a much deeper level in the hope of answering a much ignored question that faces architects as we rush into the future: How can we use ancient architectural methods and apply them to our modern day dilemmas to result in beautiful and thoughtful architecture that evokes a sense of awareness and well being?

[NARRATIVE]

The conscious dwelling complex is for those who want to re-connect with their bodies. It will be designed for a flexible number of clients per unit. There are three different unit sizes ranging from 800 to 1050 square feet. This allows for the client to choose a unit size based on want and need. Someone who is single may choose the smaller unit whereas a married couple with a child may opt for the largest of the three units. The most conducive environment is one that is relatively calm and quiet. These clients will be craving a different environment: a habitat that evokes emotion, inspires action, and awakens the conscious mind.

In addition to those who are inhabiting the private units, a public space, will provide a communal area and it will be a way to incorporate the all of the tenants with one another and the events happening within the complex.

[USER CLIENT
DESCRIPTION]

The galley: This is the kitchen. A place to prepare food consciously and carefully consider meal choices. This is a light space.

The lavatory: Also known as a bathroom, this is a place to cleanse the body. This is a light space.

The reflection room: This room is for personal exercise, where reflection upon the way the body moves is essential. This is a light space.

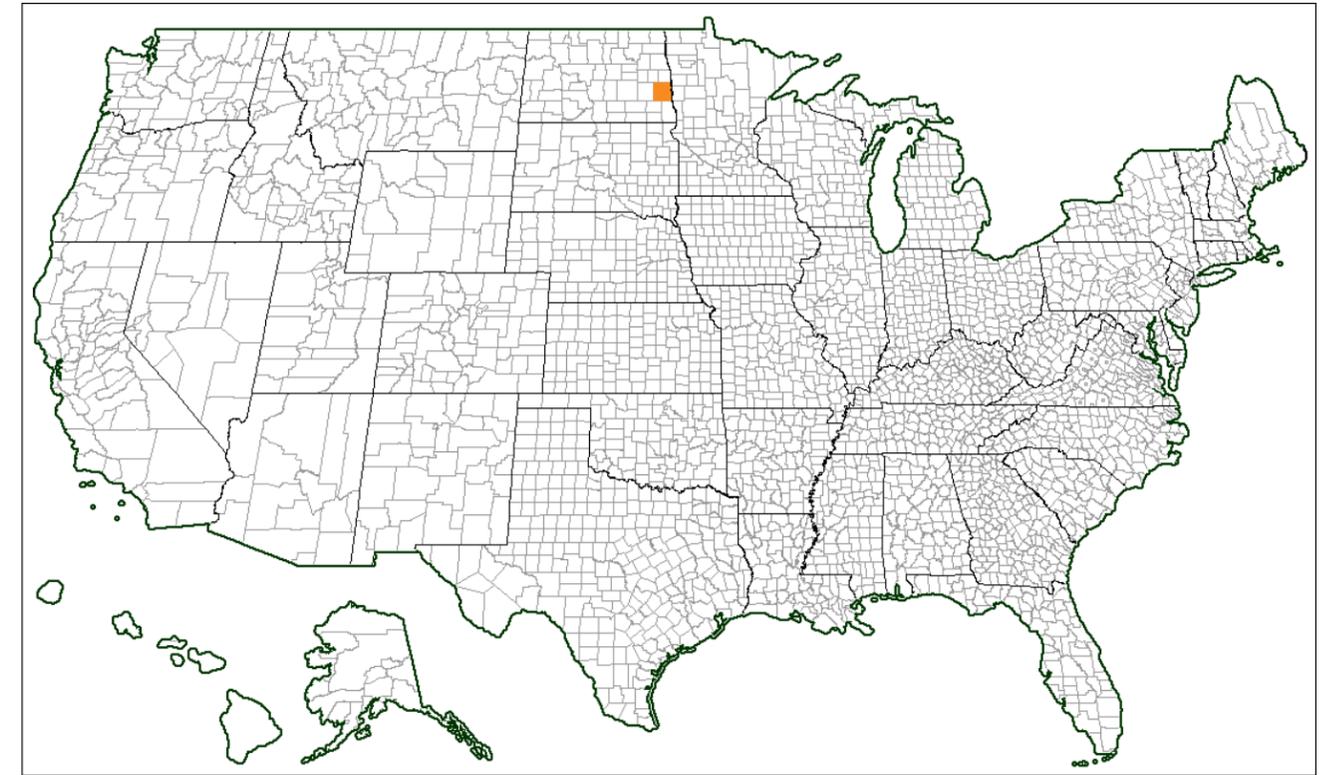
The contemplation room: This room can be used as a space for studying and meditation. It is a multi purpose room. This is a heavy space.

The grazing room: This room is previously known as the kitchen. This space is for taking time to feed the body and to take in vital nourishment. This is a heavy spaces.

The dormancy room: Formerly known as the bedroom, this space is designed for the client to suspend their consciousness, which is an integral part to overall body health. This is a heavy space.

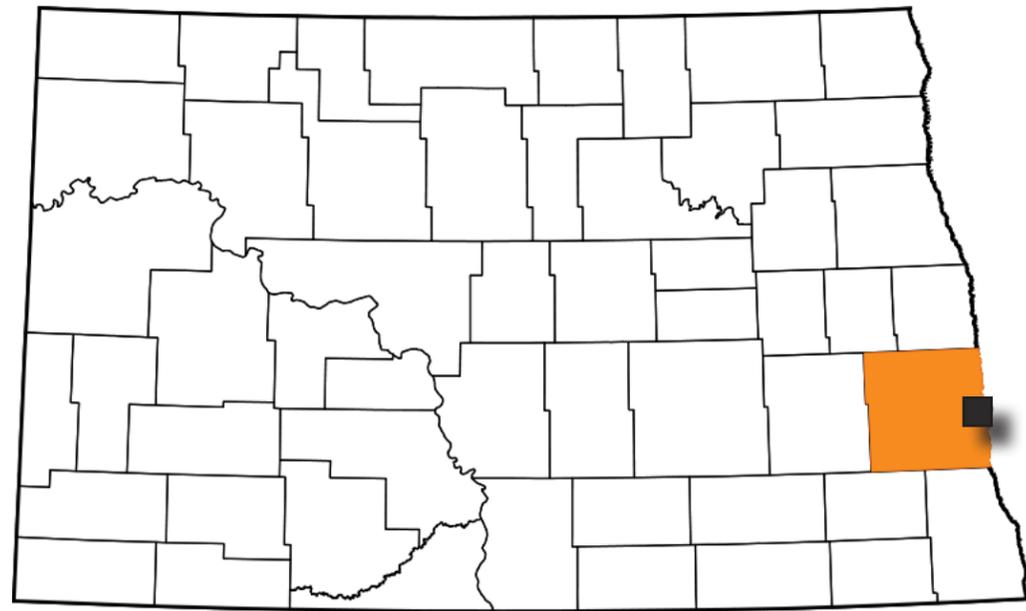
The sunbathing room: This is, simply put, a sun room. This room can be designated for whatever the client needs: perhaps practicing music, sewing, painting, etc. It is a room that provides lots of light ing for tasks to be carried out with energy and joy. This is a heavy space.

[MAJOR PROJECT ELEMENTS]



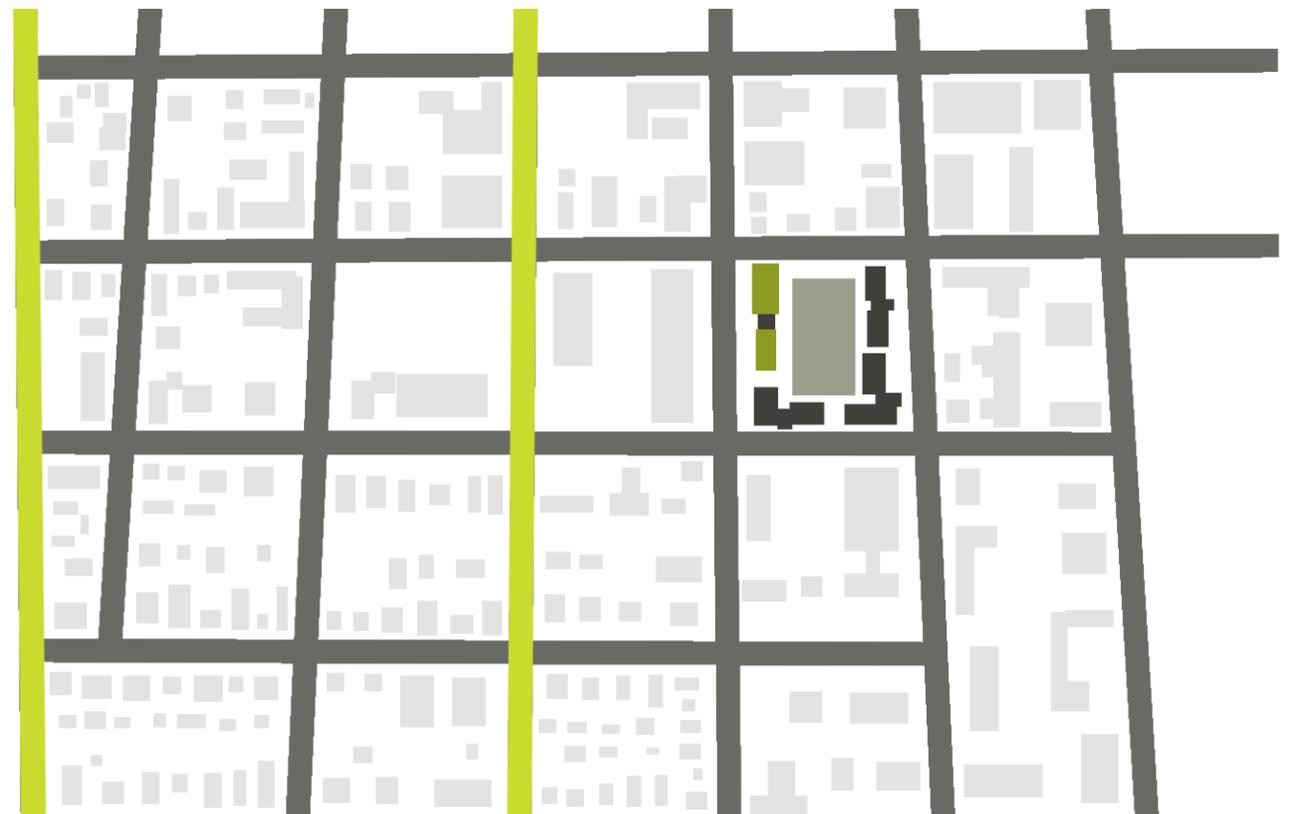
Cass County, North Dakota is located in the heart of the Midwest, which is also famous for being part of the breadbasket of North America.

[SITE INFORMATION]



Fargo is located on the Red River, which forms the border between North Dakota and Minnesota. Fargo was founded in 1871 because of the Northern Pacific Railroad, which passes through Fargo and continues over the Red River into Moorhead Minnesota. Fargo was originally a frontier town, but quickly expanded because of cheap and productive farmland.

[SITE INFORMATION]



The site is located near downtown Fargo, which is part of the original settlement of the city. Island Park is very close to the site and is as old as Fargo itself. The East side of the site borders Eighth Street, which is known for its classical and historical homes. Downtown is starting to thrive once again and is drawing more events and businesses.

[SITE INFORMATION]

The focus of this project lies in examining the human body and its relationship to architecture and design within historical projects and to better understand how this can be applied to our modern culture. In addition, there needs to be a focus on how our environment influences our conscious relationship with our body and vice versa. There is also focus on studying historical systems and approaches so we can approach modern situations in the appropriate manner. The challenge lies in bridging the past and future methods to find architecture that provides awareness and harmony to its users.

[P R O J E C T
E M P H A S I S]

Research for this thesis will be a mixed use of qualitative and quantitative research. The research will be carried out according to the theoretical premise, project typology, historical context, site analysis, and programmatic requirements. Information will be gathered in a qualitative manner by visiting and experiencing the site in addition to the surrounding site as well as exploring related case studies and conducting thorough research of archival related data. The data gathered statistically and scientifically will be analyzed in depth and presented through the thesis text as well as graphically.

Documentation will be gathered in phases throughout the design and research process. This includes but is not limited to: sketches, photographs, scanned documents and images, models, and digital models and drawings.

[A P L A N F O R
P R O C E E D I N G]

Arch 271 fall semester 2006
Tea house/boat house/mountain dwelling/
Darryl Booker

Arch 272 Spring semester 2007
A place for smokers/musical inspired dwelling/
Stephen Wischer

Arch 371 Fall semester 2007
Agencourt historical home/moorhead public library/
Ron Ramsay

Arch 372 spring semester 2008
Austin performing arts center/virgin galactic space center
David Crutchfield

Arch 471 fall semester 2008
High rise in san francisco/
Bakr Aly Ahmed

Arch 472 spring 2009
lake tanzynika school/low income housing in haiti/Frank Kratky/Darryl Booker/
Paul Gleye

[P.R.O.G.R.A.M.
D.O.C.U.M.E.N.T.]

[P R E V I O U S
STUDIO EX-
PERIENCE]

The goal of this thesis is to examine the relationship that our natural and built environment has on our bodies. In addition, this thesis hopes to determine whether or not our surroundings have an affect on our conscious ability as humans to realize and appreciate our surroundings. There will also be an investigation into how human body proportions affect design and, in turn, how that space will affect those residing in it. A study of historical societies such as Greek and Roman culture and their usage of the human body dimensions through the fibonacci series will be examined. The results from this research will be compiled in a meaningful manner in order to create a modern day application. The transition from past to present will need to be translated through successful design solutions that can be presented in this project. There is also an emphasis on Western society as the primary focus for change. There will be a compare and contrast of other cultures in order to reveal differences that could potentially help to understand why we have lost touch with our surroundings. There will be an investigation to determine how much cultural values and morals impact the human body and how much that makes a person aware of their environment that surrounds them.

We have, in a sense, become unconscious of what surrounds our bodies and what we let our bodies take in. This seems to be a phenomenon that has happened mostly in Western society. We have what has recently been classified as an obesity epidemic. We have taken advantage of the abundance of agriculture to the point of abusing it.

T H E O - R E T I C A L P R E M I S E / U N I F Y - I N G I D E A R E S E A R C H

There must be some sort of connection between our cultural values and morals that has caused us to come to such a disastrous state. How is it possible that we are known to log more hours working at our jobs than other cultures and yet we are overweight? This implies that humans of the West are not lazy, yet our number one contributor of death happens to be something that is directly related to diet and lifestyle. I am of course speaking about heart disease, which is caused by poor nutrition intake coupled with a sedentary lifestyle. So how is it that an entire population of people can be completely clueless as to what is essentially causing early death? This leads to a previous point made referring to the theoretical premise that humans have become completely unaware of their surroundings and how it affects them. Throughout this research, I will continue to allude back to this same point over and over.

Technology is another factor that has had a major impact on our society. Technology is so rapidly advancing there seems to be little time to process it. Humans are constantly stimulated throughout the day: television, email, cell phones, web-browsing, texting, ipads, mp3 players, video game consoles, and the list goes on and on. This continuous stimulation leaves little to no time for self reflection, self analyzation, meditation, etc. The consequences of the loss of our own self-awareness have yet to be fully realized. This thesis is just one attempt to start to grasp what impact this depletion is having. The purpose of this research is to help initiate the process of becoming more

T H E O - R E T I C A L P R E M I S E / U N I F Y - I N G I D E A R E S E A R C H

aware as a societal whole of the issues that are negatively impacting us and help us to realize that we can still change this evolution. We have started to become a society of instantaneous gratification, for which there will be serious implications. The over-stimulation of technology must contribute to the gradual numbing to our surroundings. Logically, this appears to make sense. For example, you are walking down the street checking your cellular device for any new emails, facebook updates or text messages-where is the appreciation of the wind blowing through your hair or the sun shining in the sky?

We are pulling away from nature, which we had the most intimate relationship with at one point. Both of these points stated thus far have a relation to nature. Food stems from nature and something we should appreciate approximately three times a day. This point is now debatable because there are certainly many things we consume that may or may not be considered "food". Chemicals that are man-made certainly have no place in our daily diet, yet they are almost unavoidable. In fact, we have developed terms to identify food for not being "processed with chemicals". Organic refers to something that is not treated with pesticides, genetically modified, or having a minimum of additives. These past statements alone attest to how far removed we are from the root of nature. Technology is the next distraction. Why go for a walk in the park when we could watch television instead?

T H E O - R E T I C A L P R E M I S E / U N I F Y - I N G I D E A R E S E A R C H

These things are slowly eroding our sense of consciousness and that is something this thesis will attempt to shed light on. This unconsciousness has trickled over into the realm of architecture in a certain sense. Residential housing rarely is designed by architects. Rather, it is constructed as quickly and efficiently as possible by contractors who are motivated mainly by monetary gain. This can be seen particularly in Western society by houses that are stamped out over and over and thus fall under the constructed "cookie-cutter" term. This term has been developed as a response to unconscious design. These houses have vinyl siding, which contributes the the emission of CFC's into the atmosphere. This is all unconscious choice. Even houses that are "expensive" are not any more aware of what they represent. There is a distortion of scale in these houses, spaces that are big solely to communicate the wealth status of those who inhabit those homes.

Fargo has a great example of this in the southern portion of town where rapid expansion of residential communities is happening. There is a clear difference between historic North Fargo with old-growth trees shading the streets and South Fargo, where trees are almost non-existent. There is also no attention paid to privacy between neighbors or set-backs to give aesthetics and privacy as well. The reason for choosing eighth street for my site has to do with the consciousness that is inherent to the heart of Fargo-downtown. There is a struggle happening in Fargo between downtown and the rest of the city.

T H E O - R E T I C A L P R E M I S E / U N I F Y - I N G I D E A R E S E A R C H

Downtown Fargo was the major hub for shopping and entertainment until the 1970's. In the 70's West Acres was built, which caused a split between downtown Fargo and South Fargo, where West Acres is located. The construction of West Acres pulled people out of downtown and caused them to start taking their business to West Acres. Because of this downtown nearly became extinct. As of the late 90's, was mostly territory claimed of the Fargo homeless. There were a few businesses who clung on to the downtown area but many failed from loss of foot traffic. There has been a recent surge within the last ten years of the downtown area. Businesses have flooded back as well as North Dakota State University's architecture and art department. This is relevant because there is almost a clear division of conscious and unconscious citizens. Downtown Fargo is the conscious group because of the appreciation of restorative architecture as well as parks and pedestrian activity. The South parts of Fargo are part of the unconscious group because their focus is on unthoughtful architecture, vehicular traffic and sparse vegetation. Perhaps it seems unfair to make such accusational statements, but for the purpose of direction in this thesis, it is justified.

T H E O -
R E T I C A L
P R E M I S E /
U N I F Y -
I N G I D E A
R E S E A R C H

We are pulling away from nature, which we had the most intimate relationship with at one point. Both of these points stated thus far have a relation to nature. Food stems from nature and something we should appreciate approximately three times a day. This point is now debatable because there are certainly many things we consume that may or may not be considered "food". Chemicals that are man-made certainly have no place in our daily diet, yet they are almost unavoidable. In fact, we have developed terms to identify food for not being "processed with chemicals". Organic refers to something that is not treated with pesticides, genetically modified, or having a minimum of additives. These past statements alone attest to how far removed we are from the root of nature. Technology is the next distraction. Why go for a walk in the park when we could watch television instead?

[THEORETICAL
P R E M I S E /
U N I F Y -
I N G I D E A
R E S E A R C H
S U M M A R Y]

We have, in a sense, become unconscious of what surrounds our bodies and what we let our bodies take in. This seems to be a phenomenon that has happened mostly in Western society. We have what has recently been classified as an obesity epidemic. We have taken advantage of the abundance of agriculture to the point of abusing it. There must be some sort of connection between our cultural values and morals that has caused us to come to such a disastrous state. How is it possible that we are known to log more hours working at our jobs than other cultures and yet we are overweight? This implies that humans of the West are not lazy, yet our number one contributor of death happens to be something that is directly related to diet and lifestyle. I am of course speaking about heart disease, which is caused by poor nutrition intake coupled with a sedentary lifestyle. So how is it that an entire population of people can be completely clueless as to what is essentially causing early death? This leads to a previous point made referring to the theoretical premise that humans have become completely unaware of their surroundings and how it affects them. Throughout this research, I will continue to allude back to this same point over and over.

[THEORETICAL
PREMISE /
UNIFY -
ING IDEA
RESEARCH
SUMMARY]

[CASE
STUDIES]

CASE STUDY ONE

RICHMOND HOUSING CO-OP
TORONTO, CANADA
TEEPLE ARCHITECTS, INC.



Photo © Shai Gil Photography

The Richmond Housing Co-op is a wonderful design by Teeple Architects. They were able to consider the needs of the users and incorporate those ideas into the design so that every space has a unique appeal. The floor plans are laid out in an efficient way, maximizing space and flexibility. There are public spaces located on the first floor of the building, such as: restaurants, a gym, offices as well as plenty of parking and green space. Although this building is very modern, it fits in the neighborhood because it uses similar fenestration sizes and building shapes as those structures surrounding it. It is a rectilinear building so that it doesn't cause that much of an interruption to the eye. The interior spaces include lots of natural and bright lighting as well as unexpected surprises.

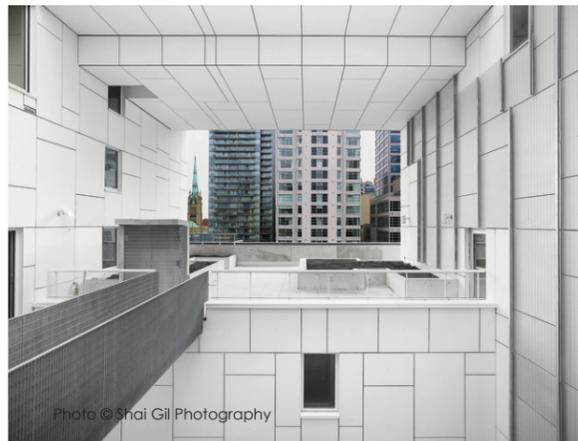


Photo © Shai Gil Photography



Photo © Shai Gil Photography



Photo © Shai Gil Photography



- 1 LOBBY
- 2 OFFICES
- 3 RESTAURANT
- 4 TRAINING KITCHEN
- 5 PANTRY
- 6 BICYCLE PARKING
- 7 AUTOMOBILE PARKING
- 8 GARBAGE/SERVICE
- 9 UNITS
- 10 PUBLIC TERRACES
- 11 GARDENS
- 12 PRIVATE TERRACES

SIXTH FLOOR

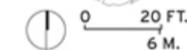
Image courtesy Teeple Architects Inc.

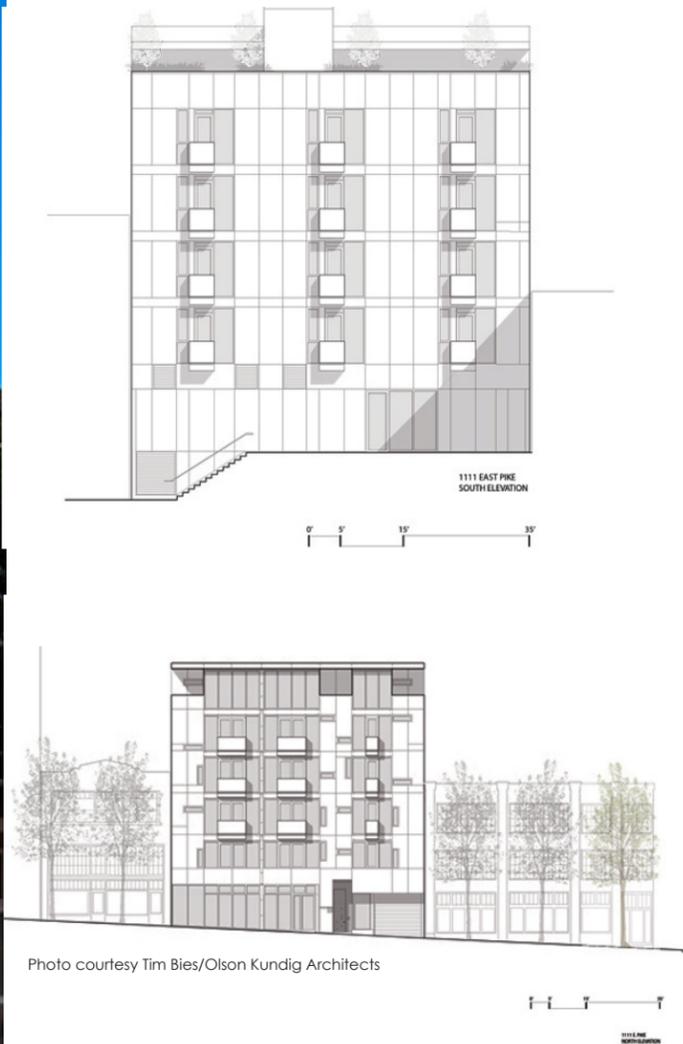


- 1 LOBBY
- 2 OFFICES
- 3 RESTAURANT
- 4 TRAINING KITCHEN
- 5 PANTRY
- 6 BICYCLE PARKING
- 7 AUTOMOBILE PARKING
- 8 GARBAGE/SERVICE
- 9 UNITS
- 10 PUBLIC TERRACES
- 11 GARDENS
- 12 PRIVATE TERRACES

GROUND FLOOR

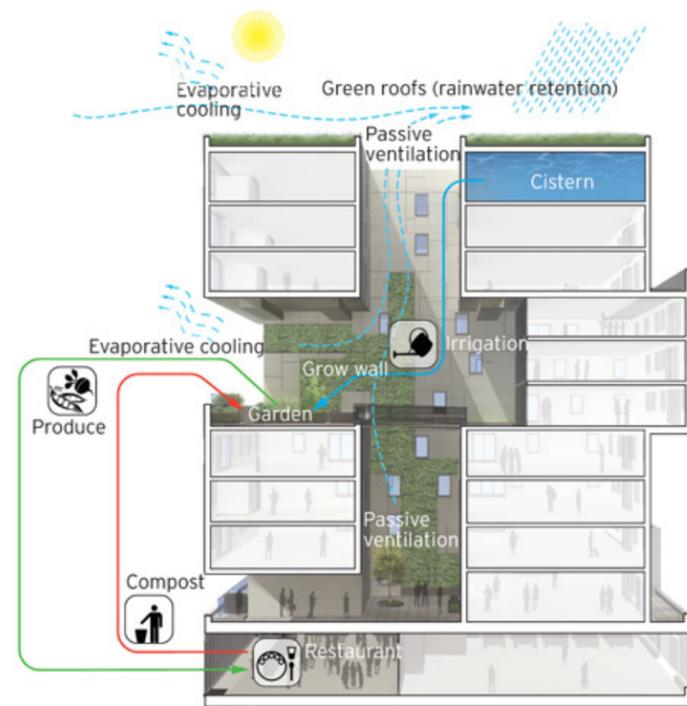
Image courtesy Teeple Architects Inc.





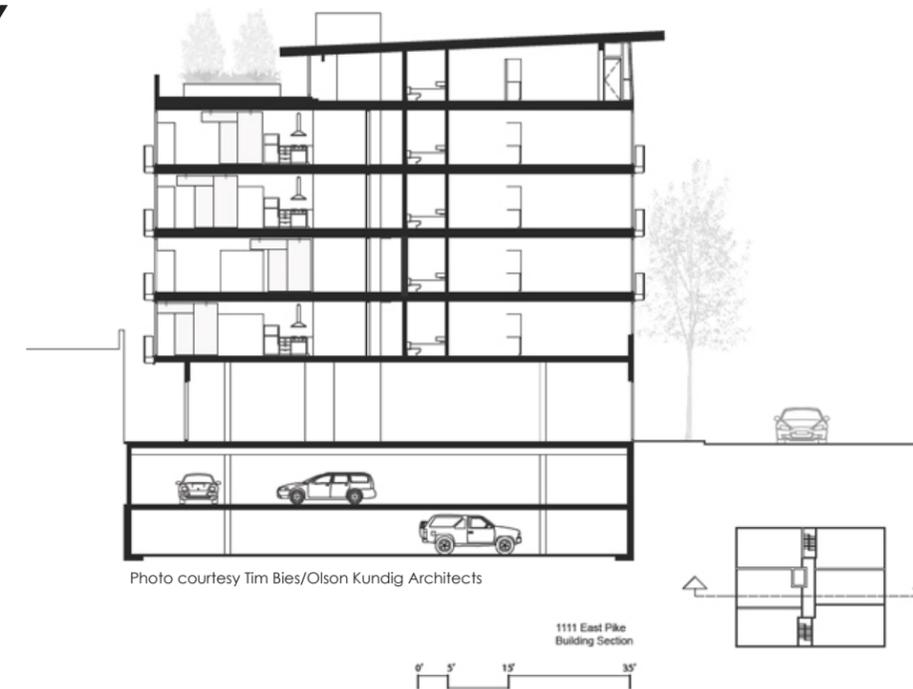
CASE STUDY TWO

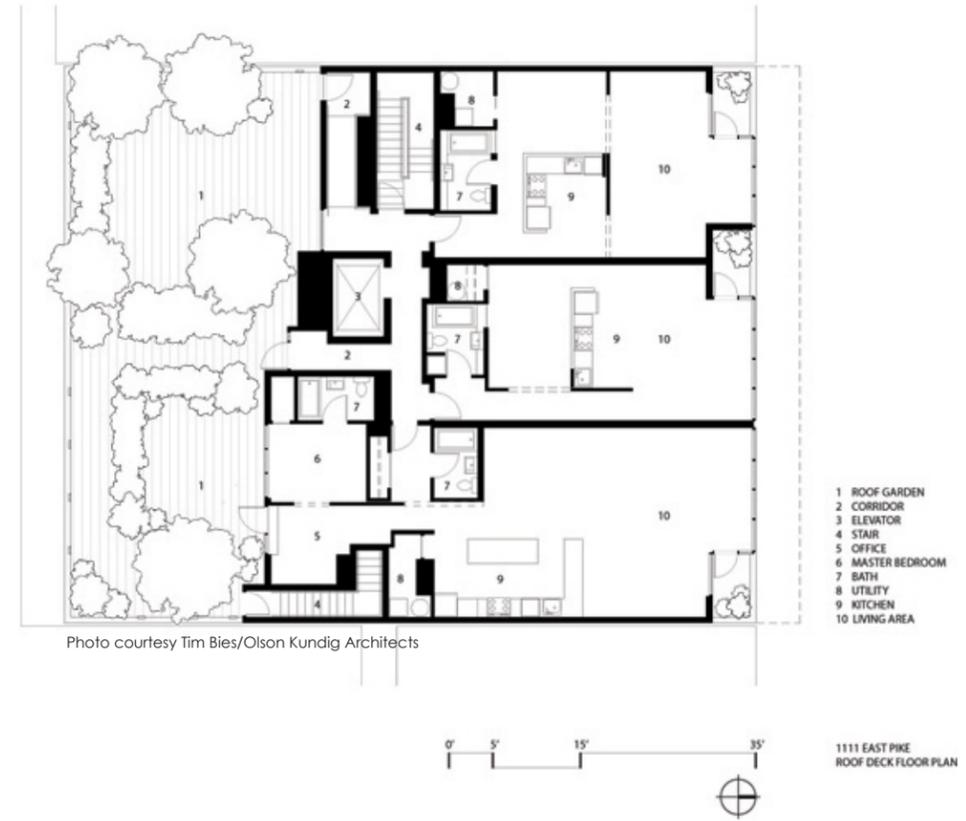
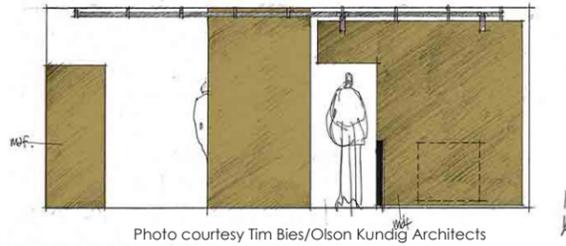
1111 E. PIKE
SEATTLE, WASHINGTON
OLSON KUNDIG ARCHITECTS



SUSTAINABILITY SECTION

Image courtesy Teeple Architects Inc.

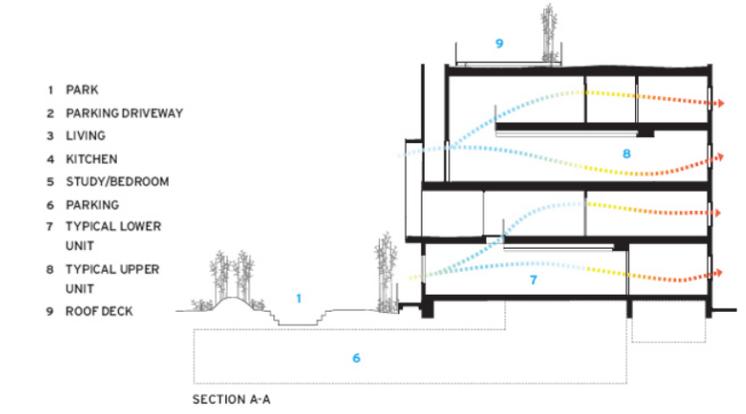
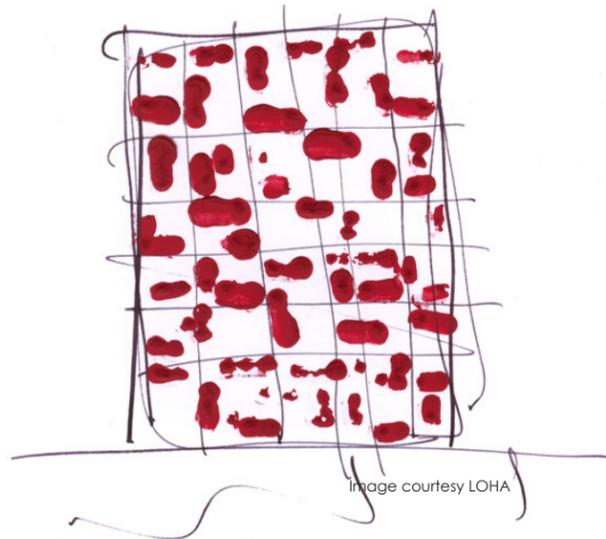




The Pike Place apartments have lots of flexible space, which is one of the most appealing aspects for the inhabitants. The specially designed sliding walls by Olson Kundig Architects are a special feature that is becoming more popular, but still hard to find. This allows for the spaces to function as either private or public and leaving the option up to the needs of the user. The units feature open floor plans which allow for the flow of spaces into one another.

CASE STUDY THREE

FORMOSA 1140
WEST HOLLYWOOD, CALIFORNIA
LORCAN O'HERLIHY ARCHITECTS
(LOHA)



C A S E S T U D Y S U M M A R Y

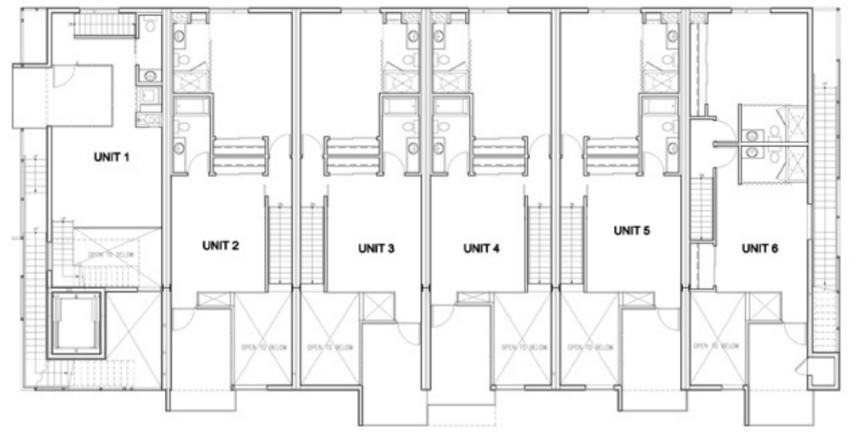


Image courtesy LOHA

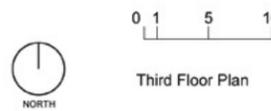
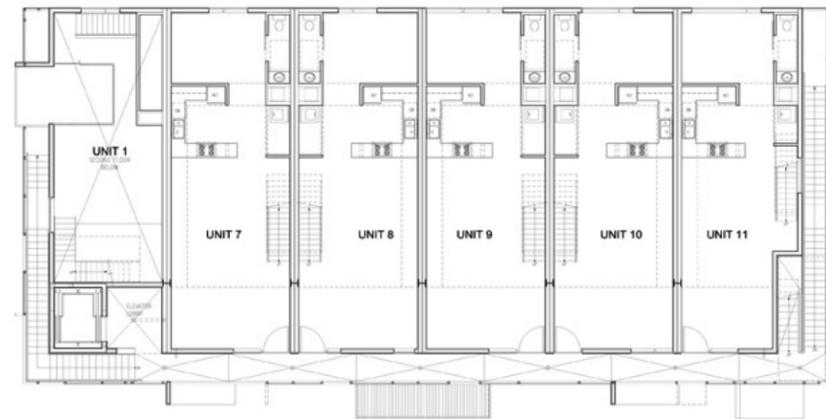


Image courtesy LOHA

The Formosa condominiums feature a shotgun style layout, with the floor plans being very long in length and short in width. This naturally allows for the separation of spaces from north to south due to the size of the apartments being limited in the east and west directions. The floor plans are very similar, which can be positive and negative. The positive part is that there is not a lot of difference in unit size, so that clients don't feel as though they are sacrificing certain things because of a particular unit they chose. The negative is also the positive, they do not have the ability to choose characteristics that are unique to their unit. The facade of the building is extremely interesting and plays with the pushing and pulling of planes. In addition, it is painted a very bright and bold color which is a trademark of modern architecture and if chosen correctly is appealing choice for those residing in and around the building.

These case studies were very helpful in motivating my thought process into the initial stages of design. There are a lot of great aspects that can be used for inspiration within each of these studies. The shotgun style floor plan is something that is appealing to inner city design because usually there is not a lot of space to work with. Also, some lots can be very narrow and this is a good solution to fit all of the activities of a unit into a long floor plan. Also, the open floor plan is something that I plan on drawing from and using as inspiration for my design because most people really want to be able to see from one room into another. The old way of having each room be completely separated from one another is an outdated concept and not one that will be utilized in my design.

C A S E S T U D Y S U M M A R Y

Also, the use of sliding room dividers is something that is inspired from Japan and is extremely functional and flexible for modern day clients. I will also plan on using some sort of derivative of this design within my units because it allows for the user to have control over what they need for a space. The other thing that was inspirational from all three of these case studies was the facades. Each study had a unique and modern concept on the facade. The Formosa study really took into account how the facade not only functions as practical but also how it can provide shade and privacy to outdoor spaces. The Pike study did not accommodate for patio, balcony or green space on the roof and I think this was a downfall of the overall design. Also, the predominant use of white material in the Richmond study was overwhelming and will show dirt and wear too much. These are great lessons that I learned from my typological research and will be able to apply to my own design.

SITE ANALYSIS

SITE ANALYSIS

habitat issues: The site does have the potential to be flooded but the only thing that would be affected by this would be the underground parking that will be located on the site. There are also very strong winds from the northeast that have a very harsh and coldness to them. The site is also close to downtown and major traffic veins which means there is a potential for more light and noise pollution that will come from its surroundings.

soil conditions: The site soil has a very rich topsoil which is mostly black dirt and very rich in nutrients. This soil is great for planting and for the possibility of community gardens and food production. The deeper down you go, approximately ten to twelve feet there is clay. Clay can be an issue for foundation support in some situations.

weather impacts: Fargo can have very long winters and very little sunlight year round. This will be taken into consideration throughout the design process as to where windows and patios should be placed. The winter months can start as early as October and end as late as April, so this can sometimes hinder the happiness of people in the area. Also, there are very strong winds and very windy days a large portion of the year in Fargo. This can be hard to deal with when wind speeds reach over thirty miles per hour many times throughout the year.

SITE ANALYSIS

noise: There is a courthouse that is located across the site and this has lots of vehicular and foot traffic throughout the weekdays. Also, there is a lot of pedestrian traffic in and around the site because it is close to a major park and downtown. This noise will be cut down on through the design because there will be a central courtyard space that will block out some of this excess noise. Also there are some major traffic veins that are close to the site and this could cause more noise than normal, especially at night.

regional relationships: The site is located in a very up and coming area. Downtown is starting to boom again and the site is located a short walking distance from downtown shops and venues. Also, there are two major traffic arteries located within blocks of the site and this allows for easy commute to other parts of the city. In addition, there are bus stops on these major roads as well as the bus headquarters downtown. Also, the oldest and largest park, Island Park, is located a short distance from the site to the east. The site is situated in a very great place to access other places in Fargo quickly and easily.

SITE ANALYSIS



SITE ANALYSIS



SITE ANALYSIS



HISTORICAL CONTEXT OF THESIS

Biomimicry is a branch of study which focuses on using nature as an inspiration to solve problems faced by the humans on Earth. People have been practicing biomimicry since the dawn of time, but it has become a topic of special interest in modern world in hopes that it could be a driving force behind more regenerative design. Many companies have invested in these types of sustainable strategies, which looka at new ways of developing everything from textiles to solar panels.

There is no specific starting point for biomimicry. For as long as there has been life inhabiting Earth, there has been the inspiration of nature as a design resource. There has been a suppression of this idea because we as humans have strived to control our surroundings in an attempt to conquer them for our own benefit. We do not have the right to abuse Mother Nature, for she is what supports the birth and life of all living things. Without her we would surely not survive. We can show respect to her splendor by imitating her gentle and harmless ways.

Industrialization is: a historical phase and experience and the overall change in circumstances accompanying a society's movement, population, and resources from farm production to manufacturing production and associated services.

Industrial growth has been called into question by environmentalists and others concerned about the rapacious use of resources and the disintegration of culture and environment. Urban and industrial growth is often referred to as cancer a thing that grows for its own sake and not for the sake of the organism it inhabits. Some people use the term nature's services to refer to the processes by which, without human help, water and air are purified; erosion, floods, and drought are mitigated; materials are detoxified and decomposed; soil is created and its fertility renewed; ecological equilibrium and diversity are maintained; climate is stabilized; and, aesthetic and spiritual satisfaction is provided to us. We don't like to focus on services, since nature does not do any of these things just to serve people. But it is useful to think of these processes as part of a dynamic interdependence in which many different organisms and systems support one another in multiple ways. The consequences of growth-increases in insects, microorganisms, birds, water cycling, and nutrient flows--tined toward the positive kind that enrich the vitality of the whole ecosystem.

HISTORICAL CONTEXT OF THESIS

The consequences of a new strip mall, while they may have some immediate local benefits and many boost country's overall GDP, are gained at the expense of a decline in overall quality of life-increased traffic, asphalt, pollution, and waste (Braungart & McDonough).

Ever since the invention of the assembly line, there has been a decrease in the value of a single item as something to be cherished and reused. From the time humans inhabit the Earth, there seems to ve an inherent appreciation of "things", whether they be man-made or naturally occuring in nature. Certain materials had an inherent value that was recognized. Some materials had more than others but, this was never an issue. There was a sort of natural hierarchy, but it worked.

After industrialization, there was such an abundance of cheap fossil fuels that production and distribution of goods skyrocketed. With this dramatic change, there didn't seem to be any planning or forethought into what this could cause. Industrialization sprouted up and flourished without anyone protesting the possible negative futuristic impacts that could arise.

HISTORICAL CONTEXT OF THESIS

HISTORICAL CONTEXT OF THESIS

Before the assembly line, we created man-made things to last for as long as possible. For example, the original concept of light bulbs were created to last several decades. Now we have things that break immediately or seemingly right away; one may wonder if it is poorly made on purpose as a means to inspire more consumption. Industrialization was perhaps not such a blessing after all. From the time of Henry Ford and the assembly line, we have started to have a different way of looking at man-made things and there has been a different way of creating these things. Factories now accommodate for the fact that it is cheaper to buy a new item than it is to fix it. There is no longer a need for so many professions that were originally part of human culture-blacksmith, watchmaker, etc. Now we just have thousands upon thousands of assembly line jobs to fill, where each person is given one task to do over the period of an eight-hour day. This has alienated not only the workers making the consumable goods, but the consumers buying the goods.

Everyone now strives to have everything "new" because the idea of having something that is "used" seems unappealing, even detestable to most. Western culture has set the example for the rest of the world and we have created a world of hungry consumers. With all of this consumption there becomes just as much waste, waste that is no longer able to decompose or to dissipate back into our natural landscape. Now we throw away food that could easily be composted, but instead, it ends up in a landfill where it sits and is preserved in its current state because of all the chemicals leaching from the surrounding waste products. We have gone beyond a point of returning without damage, but at the current time we just need to realize that any change in the right direction is better than no change at all. The era of industrialization and consumption must come to an end, and we must start a new era of "regenerating" and "recycling." We need to start appreciating what we have not striving for what we don't have. Along with the new era needs to come a new mentality to accompany the change, or there may not be success in our future.

HISTORICAL CONTEXT OF THESIS

G O A L S O F T H E S I S

The academic goal of this thesis is to contribute to the overall knowledge base and research of the human body. I would like to be able to show an elegant example of embodiment of the research I have done through sleek and plausible architecture. I also want to accomplish a project that is able to inspire others and to be used as an inspiration for other designers students, and colleagues. I would like to show that architecture can be attainable and beautiful while respecting its surroundings.

The professional goals of this thesis are to hopefully create a new premise in which to consider architecture. We need to change the attitudes we have, and with this change will be a different way of doing things. I would like to demonstrate that the architecture profession is extremely imperative to our future as we need to adjust the way we treat construction and design of all buildings. I would like to start and re-define the way the profession has been conceived for so long. There are many technological changes, which I also hope to demonstrate through successful design.

G O A L S O F T H E S I S

I hope to show that the profession of architecture can adopt to the way that we need to change as a society and that our profession can flourish in a new way. We now have the ability in our profession to take the current state of the planet and to adjust how we design so that we can continue to survive as a species. I hope to demonstrate how important naturally occurring design really is and that, like engineers, we can harness this wealth of knowledge and create meaningful and regenerative design.

My personal goal is to successfully communicate the millions of ideas in my mind through an organized, timely, and aesthetic presentation of my project. I hope to prove that I am able to create architecture that impacts people and is mindful of its surroundings. I want to prove to myself that I have grown as a student and, more importantly, as a designer over my years of formal education.

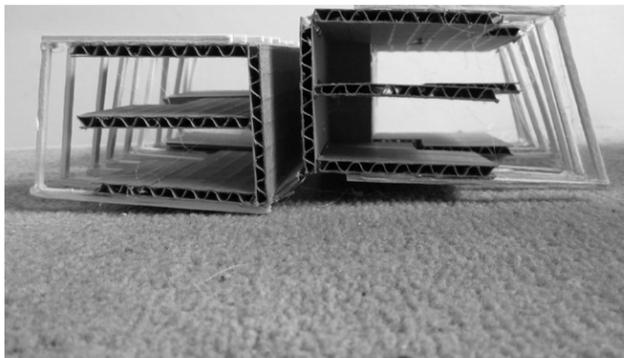
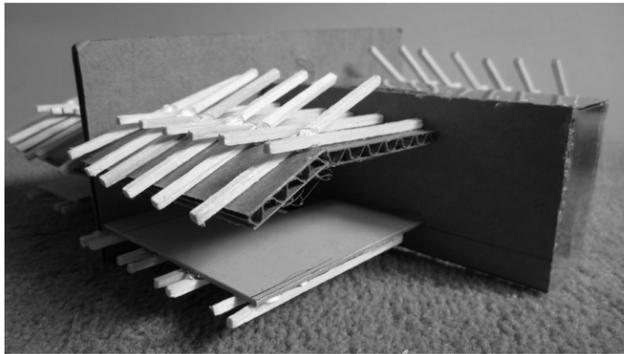
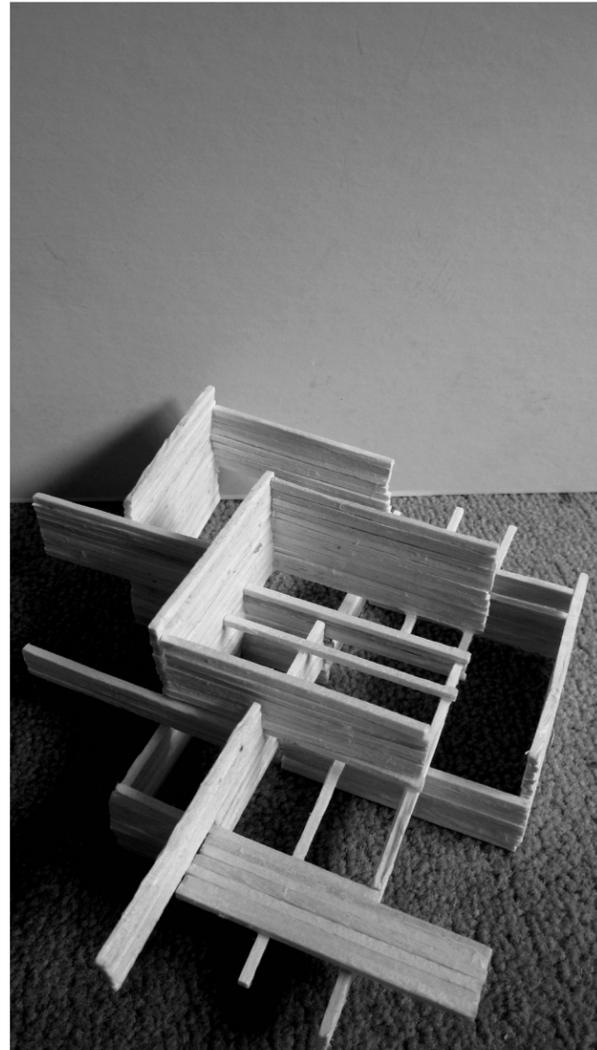
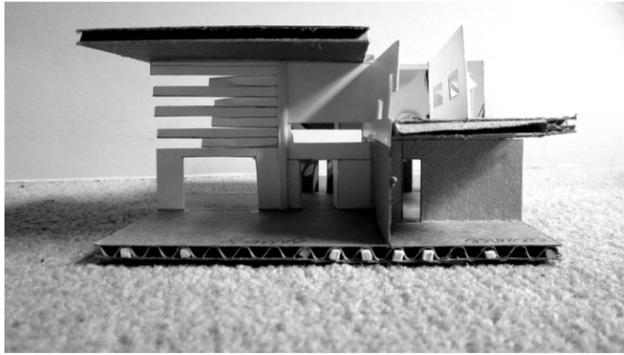
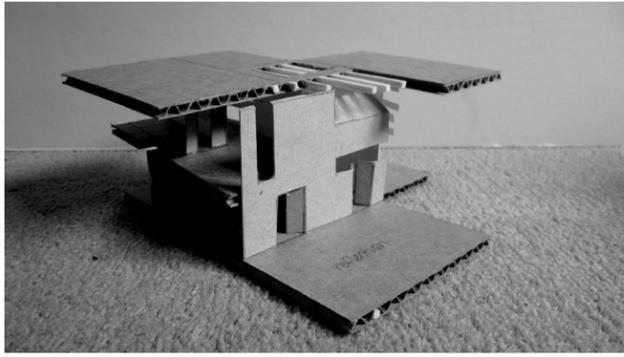
PROGRAM- MATIC RE- QUIRE- MENTS

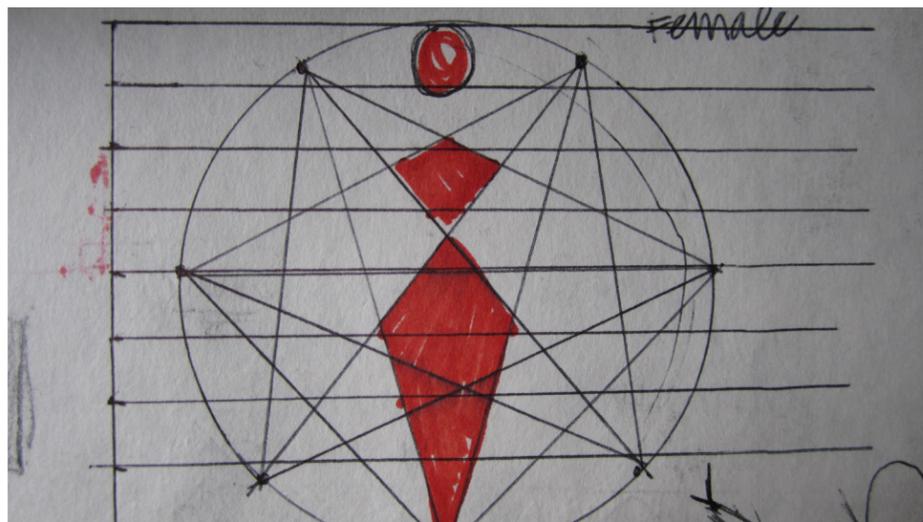
MINI UNITS: APPROX 650 SQ FT

MOD UNITS: APPROX 800 SQ FT

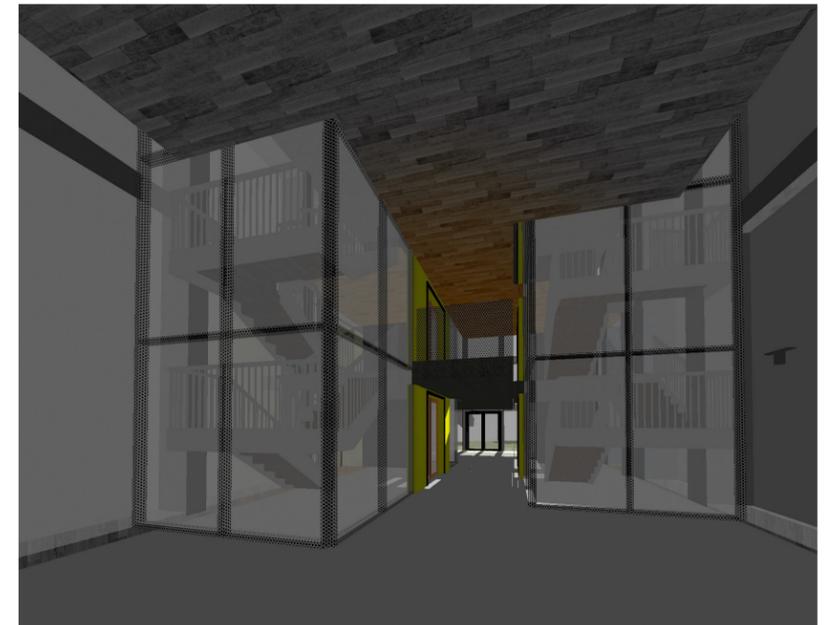
MEGA UNITS: APPROX 1050 SQ FT

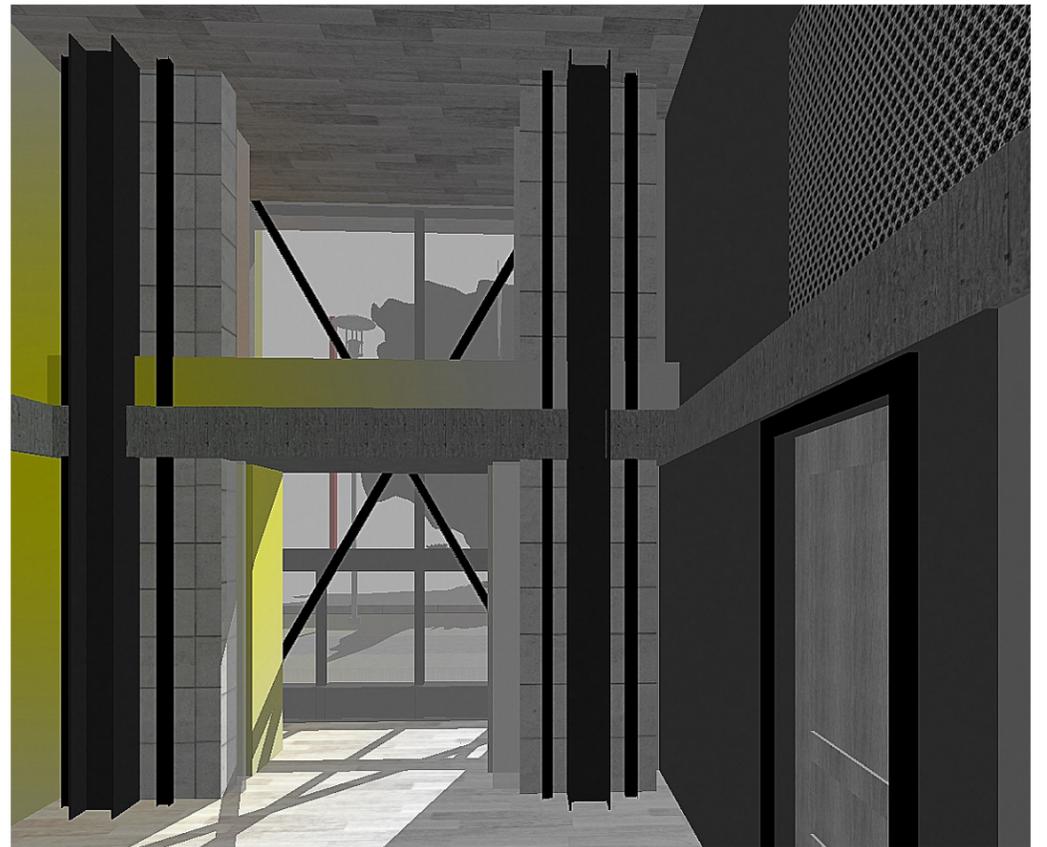
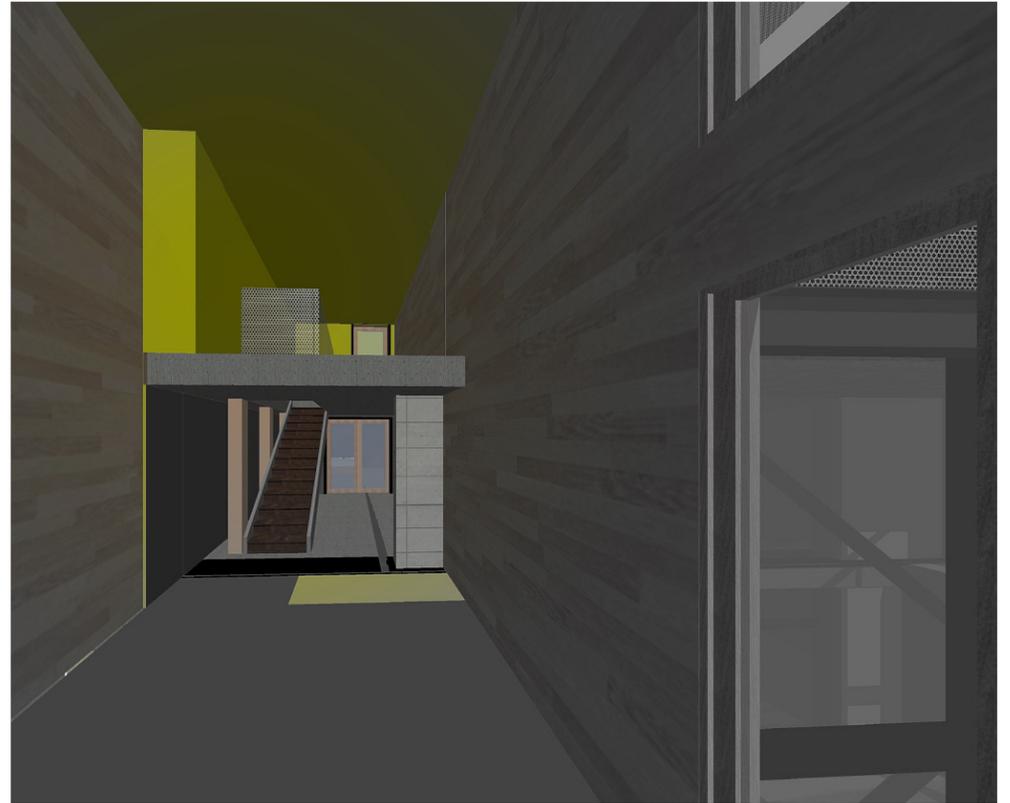
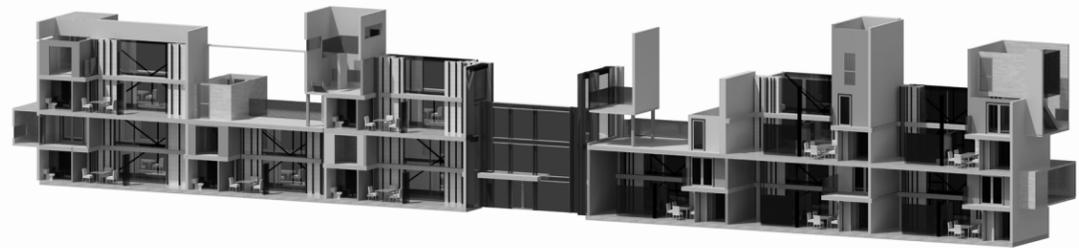
PROCESS

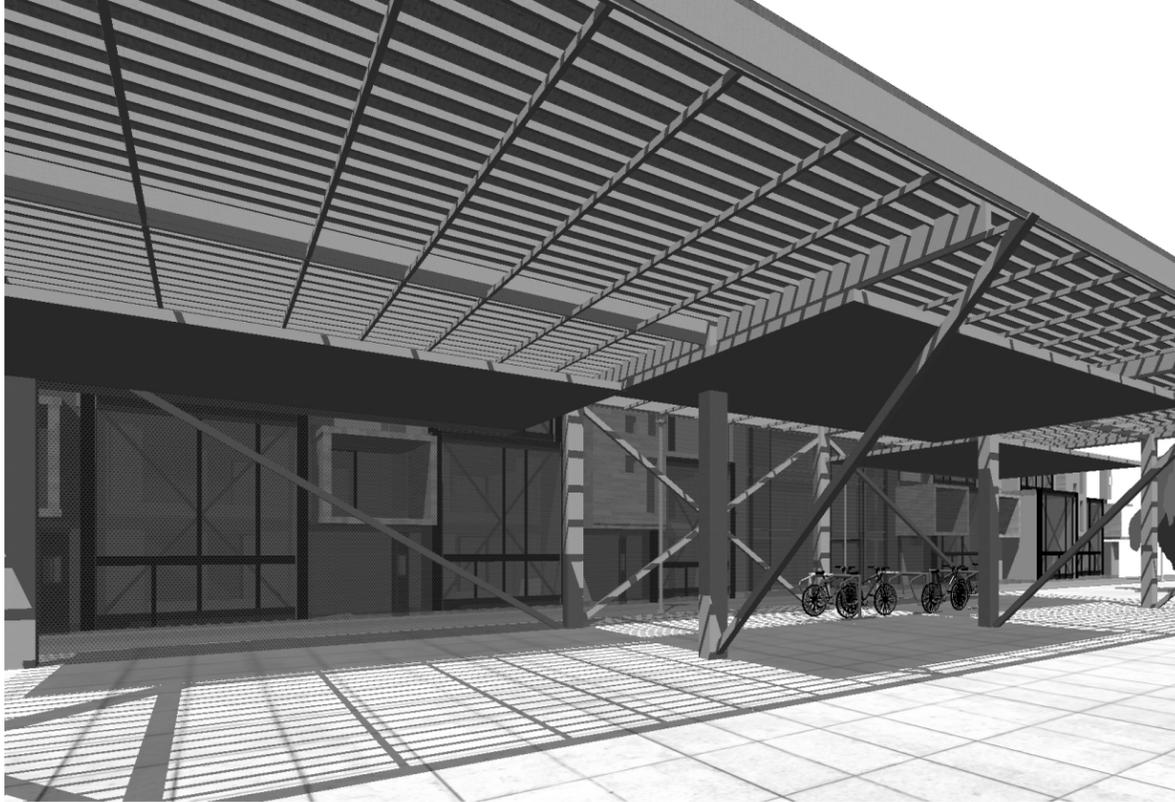




FINAL DESIGN







REFERENCES

TEXT:

Braungart and McDonough. (2002). Cradle to Cradle New York, New York.

Enn, O. (2001). Decoding Theoryspeak: An Illustrated Guide to Architectural Theory. Philadelphia, Pennsylvania.

Fox, Warwick. (2000). Ethics and the Built Environment. Pittsburgh, Pennsylvania.

Maczulak, A. E. (2004). Environmental Engineering: Designing a Sustainable Future. Boston, Massachusetts.

McLennan, J. F. (1999). The philosophy of sustainable design: the future of architecture. New York, New York.

IMAGES:

USA county map

http://www.google.com/imgres?imgurl=http://www.boomspeed.com/atucker7/USA_counties_Blank.png&imgrefurl=http://ultimatefoodsng.com/wf-blank-us-county-map.htm&usg=__k-F5_dylw9GcPuNoIYklgHVTIPI=&h=674&w=1132&sz=74&hl=en&start=34&zoom=1&tbnid=Mqs_trilEtOmRM:&tbnh=127&tbnw=214&ei=jNZRTer_OYOBlAezu_ChCg&prev=/images%3Fq%3Dblank%2Bunited%2Bstates%2Bmap%26hl%3Den%26sa%3DX%26biw%3D1865%26bih%3D841%26tbs%3Disch:10,500&itbs=1&iact=hc&vpx=130&vpy=359&dur=4222&hovh=173&hovw=291&tx=164&ty=119&oei=HdZRTcP9MsL6lwe1-MSKCQ&esq=2&page=2&ndsp=35&ved=1t:429,r:0,s:34&biw=1865&bih=841

north dakota map with cass county highlighted

http://www.google.com/imgres?imgurl=http://upload.wikimedia.org/wikipedia/commons/thumb/6/63/Map_of_North_Dakota_highlighting_Cass_County.svg/800px-Map_of_North_Dakota_highlighting_Cass_County.svg.png&imgrefurl=http://commons.wikimedia.org/wiki/File:Map_of_North_Dakota_highlighting_Cass_County.svg&usg=__gXUNS2Otcj6RnOn2uc6OxkmORPo=&h=476&w=800&sz=61&hl=en&start=0&zoom=1&tbnid=gOkqE-JWDrxHEM:&tbnh=137&tbnw=230&ei=PNhRTfqPK4P7lwfNxoyGCQ&prev=/images%3Fq%3Dcass%2Bcounty%2Bnd%26hl%3Den%26sa%3DX%26biw%3D1865%26bih%3D798%26tbs%3Disch:1%26prmd%3Divnsm&itbs=1&iact=hc&vpx=1533&vpy=272&dur=2842&hovh=173&hovw=291&tx=221&ty=62&oei=PNhRTfqPK4P7lwfNxoyGCQ&esq=1&page=1&ndsp=32&ved=1t:429,r:15,s:0

Other images not cited in text are copyright of myself



40225 Purlieu Rd.
Dent, MN 56528

jilliancayley@gmail.com

Dent, MN

[P E R S O N -
A L I D E N T I -
F I C A T I O N]