

Hindsight 20/20:

*Architectural Exploration of Empathy for
Refugees in a Design Solution*



Figure 01

**Hindsight 20/20: *Architectural
Exploration of Empathy for Refugees in a
Design Solution***

A Design Thesis Submitted to the
Department of Architecture
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By
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North Dakota State University Libraries Addendum

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Table of Contents

Phase One	Page
Cover Page	01
Project Title and Signature Page	02
Table of Contents	03-05
Lists of Tables and Figures	06-07
Thesis Abstract	09-10
Thesis Narrative	12-13
Unifying Idea	15-16
Project Typology/Precedent	17-20
Major Project Elements	21
User/Client Description	22
The Site/Context	23-26
The Project Emphasis	27
Goals of the Thesis Project	28
A Plan for Proceeding	29-30
Project Schedule	31

Table of Contents

Phase Two	Page
Thesis Research Document	33
Research Results	34-48
Typological Research / Case Studies	49-69
Project Justification	70-72
Historical Context	73-75
Social Context	76-78
Cultural Context	79-80
Site Analysis	81-86
Performance Criteria	88
Space Interaction Net	89

Table of Contents

Phase Three	Page
Thesis Design Solution	91
Project Documentation	92-94
Project Solution Documentation	95-97
Performance Analysis/Site	98
Performance Analysis/Typology	99
Performance Analysis/Goals	100
Critique of Applied Research	101
Digital Presentation of the Project	102-103
Photographs of the Project	104

Lists of Tables and Figures

Phase One	Figure
Refugees walking through a field	01
Albert Einstein	02
Barak Obama	03
Madeleine Albright	04
Child Soldiers Rehabilitation Center	05
The Map of USA-ND Vector Image	06
Map of Midwest States, USA-ND	07
The Map of North Dakota-Fargo	08
Satellite map of Fargo	09
Google Map Image of the Site	10
Satellite Image of the Site	11

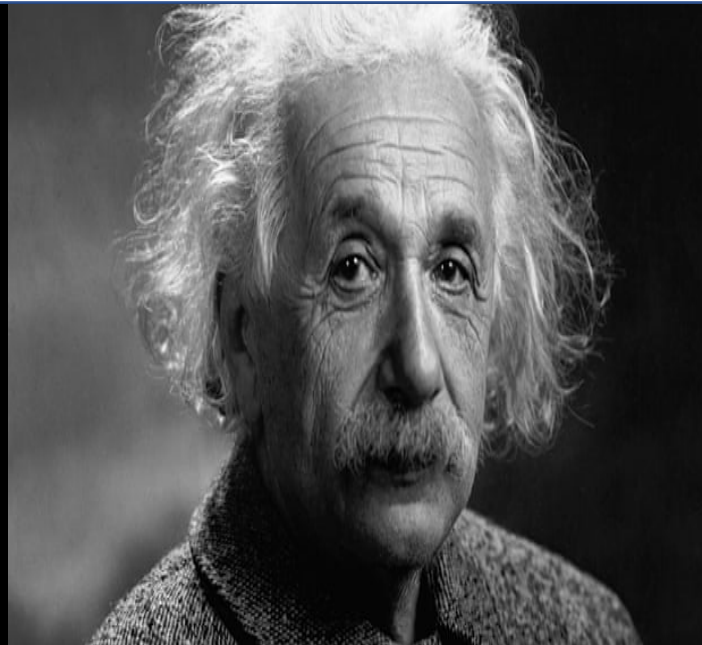
Lists of Tables and Figures

Phase Two figure

World Map IOOS	12
Syrian Refugees in Macedonia	13
Dadaab Refugee Camp	14
Jewish Refugees arriving in the US	15
Shigeru Ban in Kalobeyei Refugee camp	16
The Burning Notre Dame de Paris	17
Proposed Temporary Notre Dame Chapel	18
Nomadic Museum in Santa Monica	19
Shipping container Connector	20
Nomadic Museum in New York	21
Nomadic Museum in Tokyo	22
Structural Detail of Nomadic Museum	23
The Aspen Art Museum	24
North Site View	25
East Site View	26
South Site View	27
West Site View	28
Average Temperature	29
Sun Path	30
Sunshine	31
Wind Speed	32
Wind Rose	33
Cloudy Days	34
Snow Fall	35
Precipitation	36
Humidity	37
Space Interaction Net	38

Lists of Tables and Figures

Phase Three	Figure
Building Main Entry	39
Design concept Iterations	40
Shipping Container Structural Details	41
Shipping Container Assembly	42
Project Solution Documentation	43,44,45
Building Bird View	46
Performance Analysis/Site	07,09,10,47
Performance Analysis/Typology	19,20,46,48,49.
Performance Analysis/Goals	39,50,51,52
Performance Analysis/Case Studies	23,39,53
Digital Presentation	54,55,56,57,58,59,
Photograph of the Project	60



“A bundle of belonging isn’t the only thing a refugee brings to his new country.”

-Albert Einstein

Figure 02

Thesis Abstract

When Albert Einstein said, “A bundle of belonging isn’t the only thing a refugee brings to his new country”, he must have meant it in the most literal sense because, he was a refugee, Sigmund Freud was a refugee, Madeleine Albright & Henry Kissinger both former U.S Secretaries of States were refugees. The way we treat these names today should help us find the positive in Hindsight and support refugees overcome their trauma and help harness the skills and talents they possess to make the world a better place.

This thesis project intends to do just that—Design and Build a facility that is unique in nature yet functional in every aspect of a refugee rehabilitation and development process.

Over the years Lutheran Immigration and Refugee Services (LIRS) has made North Dakota home to thousands of refugees from around the world, notably Bosnia, Burundi, Bhutan, Cambodia, Iraq, Rwanda, Somalia, Sudan, and of lately Afghanistan and Ukraine. Like other States that have resettled refugees, the narrative of the local social fabric is slightly changing to reflect cultures from other parts of the world.

In Fargo for instance where the largest number of refugees resettled, the racial dynamics is readily visible, and you can hardly walk into a grocery store today and not see a refugee or someone related to a refugee. They speak English with accent or no English at all but, they do possess skills, talents and trades that are either acquired formally or informally in languages other than English. If all these could be harness and used, both refugees and the host community would benefit simultaneously.

The question this project seeks to answer therefore is, “How can Architecture as a design profession be used to play the role of a good neighbor who not only welcomes refugees and make them feel safe and at home but, goes a step further and assist refugees establish small businesses within the community even without mastering the language.

This thesis research will expose the level of skills and talents that refugees possessed, while creating an opportunity for growth of small business sectors within the refugee community. The “Refugees Center and Small business Incubator” will focus on developing refugee talents and skills, healing trauma, while establishing a sense of purpose, and a run for a second chance at life.



“The ordeal refugees survive and aspirations they hold resonate with us as Americans. This country was built by people who fled oppression and war, leapt at opportunity, and worked day and night to remake themselves in this new land.

-President Barack Obama

Figure 03

Thesis Narrative

If you had left Fargo 30 years ago and just came back, you will not only be impressed by the amount of change in infrastructure, but also the makeup of the people that live here now. Thanks to the refugee resettlement program, Fargo is now the most culturally and racially diverse city in the State of North Dakota. Within the last 10 years alone, the population that identifies as white dropped by 11.3%. Iverson the census office manager in his own words said, “We have never seen a shift like this in North Dakota,” “We have become a lot more like the rest of the United States.” That statement establishes the concept of what America should look like. Unfortunately, not everybody in North Dakota embraces that concept instead they prefer the status quo. For example, a handful of politicians in Burleigh County recently voted against resettling refugees. In a 3-2 vote they narrowly lost otherwise Burleigh would be the first local government to ban resettlement of refugees.

Refugees are people just like you and I with dreams, hopes and aspiration. Unfortunately, due to circumstance beyond their control, they had to leave their homes and seek refuge in safer environments. Prior to becoming refugees, they lived a normal life with their families and friends. In fact, others are nurses, teachers, engineers, businesspeople and much more.

It is also true not all refugees possess these skills, others worked in the fields and others reared animals for living. The concept of “One size fit all” is not appropriate when dealing with refugees.

It is very visible how the media portray refugees, especially the ones from developing nations and other nations with the most vulnerable population. It is true live in the camps is very miserable and refugees depend on handouts.

It may not be in the same manner when refugees come to the United States but, they might still depend on handouts as they prepare to join the work force. President Obama puts it, “They leap at opportunities and work, day and night to remake themselves in the new land.”

History has shown that refugees can be successful and productive members of our society when afforded the rights tools. The United States shines brighter than any other country in the world when it comes to successful refugees. The list is long but, to bring the point home, few names will do the trick, Albert Einstein, Madeleine Albright, Henry Kissinger, and Gloria Estefan.

When the title of the thesis reads “Hindsight 20/20: Architectural Exploration of Empathy for Refugees in a Design Solution”, the intent is to counter the narrative that refugees deplete resources that could otherwise be for the people of North Dakota. It is true that new refugees would need government assistants to establish themselves in their new home, so does anybody else who find themselves in that circumstance.

Establishing the Refugees Center & Small Business Incubator would create the most needed healing environment for the traumatized refugees and provide a vessel through which refugees will channel their talents, skills, and culture.

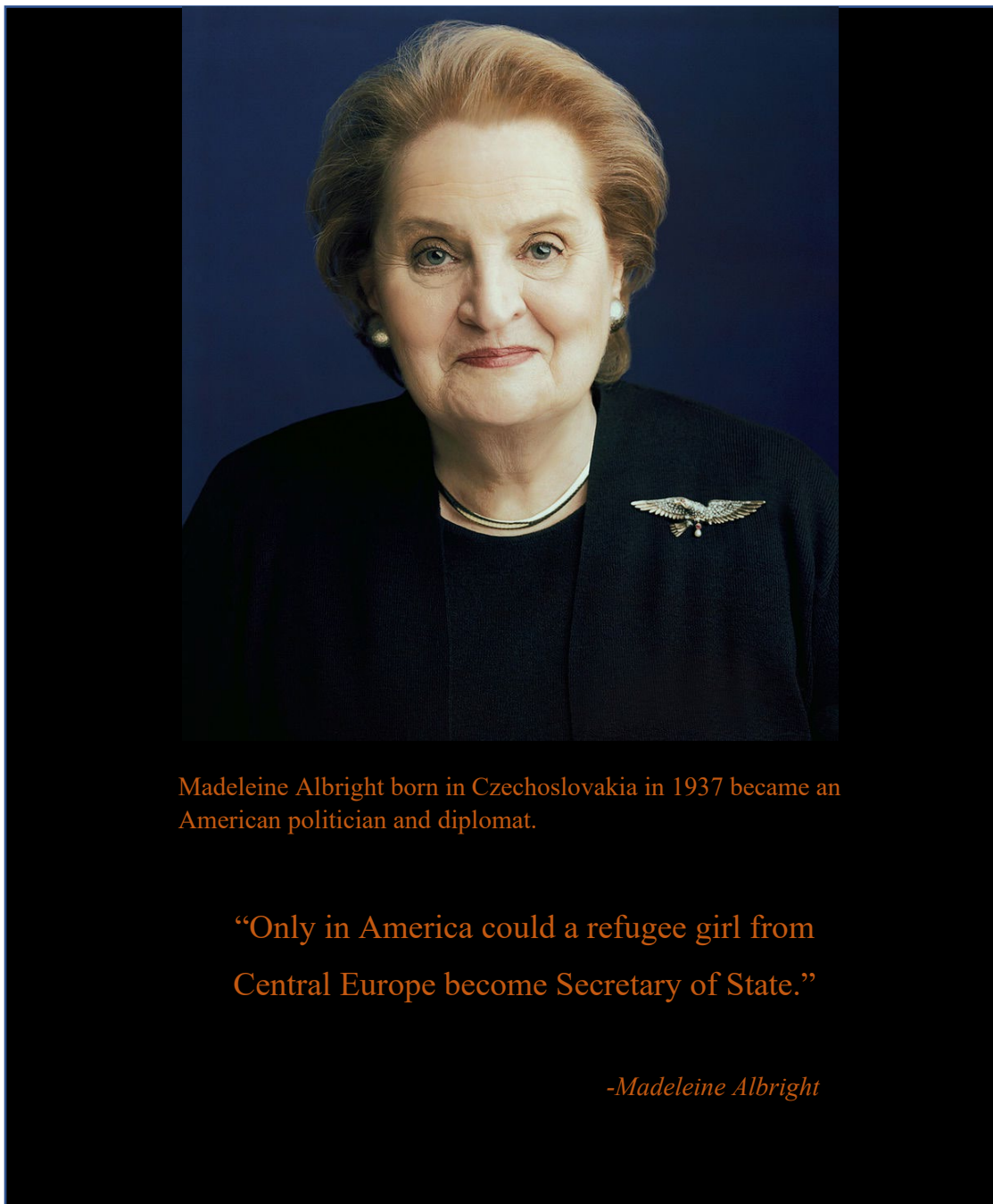


Figure 04

Unifying Idea

In 1980 the United States congress amended its policy on immigration and enacted what is commonly known as the Refugee Act of 1980. The Act adapted United Nation definition of a refugee and established reception and placement programs for refugees. According to definition, a refugee is one who has fled their home country due to persecution, crossed into another country and are no longer ready and willing to return home due to fear of persecution. Albert Einstein who was once a refugee himself stated that, “A ship is always safe at shore, but that’s not what it’s built for.” One could easily interpret this quote and say, a refugee in the United States may worry less about persecution, but that is not the end of the story, in fact the United State could be the launching pad for realization of ones’ potentials. As a refugee myself, one is always grateful for the level of security the United States have provided, but in order to contribute to the society at a certain level, it’s rather important that you start on the right footing, for example receive the necessary rehabilitation for mental health, acquire communication skills needed to join the work force, and get the education and understanding of the local culture. For instance, when you move to a new neighborhood here in the United, there is the tradition where your neighbors come to your house bringing pumpkin pie as a welcome gesture.

It may be a simple gesture but important enough to start conversations and create relationships which in turn may unlock the potentials that the new refugee neighbor may possess.

Granted that Hindsight is 20/20, it is not certain to what extend refugees could contribute at the level of Madeleine Albright - former US Secretary of States, if afforded the right environment and facility.

This thesis project therefore intents to explore among other things Empathy in the realm of architectural design and attempt to create an environment suitable enough to foster healing for the traumatized refugees and create a vessel through which they can channel their talents, skills, and culture for the betterment of the society.

Project Typology

Institutional

Behavioral Health Units:

Rehabilitation and Reintegration of refugees is a particularly important aspect in the process of resettlement. Child soldiers for example require counseling service prior to integrating them into the school system. Girls who are victims of sexual and physical abuse might look fine due the relief of insecurity but, they harbor hidden traumas inside. Majority of these children either never had the opportunity to attend school because of recruitment to fight or simply because there were no schools where they initially took refuge. Parents of these children or the adult refugees for this matter require similar or even intense counseling and rehabilitation before they are fully stable mentally.

Education and Tutor Units:

Children in the United States enroll in school according to their age. Refugees missed so many of their school years due to the instability caused by war. Enrolling a 15-year-old refugee child to ninth grade is appropriate according to the system but, the child may experience difficulties in academics causing more trauma. The Refugee Center and Small Business Incubator will provide special education and tutoring services to help the refugees catch up to the rest of the school children.

Refugees with professional skills and trades but, lacks the language for recertification will received the necessary support and encouragement to continue the use of their skills and talents. In the case of carpenters, cooks, farmers, and small business entrepreneurs, the facility will up their skills to the level and standard necessary to provide services to the general community in the form of small business.



Child soldiers counseling and rehabilitation facility or Transitional Care Center setup and organized by the United Nation's International Children Emergency Fund or UNICEF in the Democratic Republic of Congo.

Civic Space:

Refugees have a rich background of traditions and cultures; celebration of these cultures and traditions enable healing of suppressed trauma experienced during moments of violence. My thesis proposes a Community Hall for socio-cultural activities.

Religious Space:

Refugees depend on prayers to keep their hopes alive. Praying to God, Allah, Buddha, or whoever higher power they believe in is one of the most significant aspects of their daily lives. The facility intends to provide a space secret enough to all refugees who wants to find solace in their lives.

Typological Precedent

In view of all the necessary solutions required for a successful reintegration of refugees into the society, typologies that fit mental health, civic center, education, and spiritual centers will provide a clear perspective of spaces needed in the facility.

Eglin's Invisible Wounds Center:

Located in the United States Air Force base in Florida, is a military clinic that services wounded warriors. Besides Traumatic Brain injuries, the clinic also treats Post Traumatic Stress Disorder or PTSD.

The University of Tulsa Oklahoma:

The University of Tulsa Oklahoma tutoring services. This services help guide students through the learning process and assist them build knowledge of their course material.

Silver Spring Civic Building:

Architect Myoung Kim of the Machado and Silvetti Associates designed Silver Spring Civic Building. The building opened in 2010 and it has become the center of community activities. It houses a theater school and offices.

Cardeau Chapel:

Located in El Salvador, EMC Arquitectura designed the Chapel. It is an amazingly uncomplicated design but, it provides a space that brings solace, peace, and spiritual experience to patrons.

Major Project Elements

The Refugees Center and Small Business Incubator thesis proposal calls for a multi-purpose facility with varied elements. Every element in the facility carries with it certain significance but, the major spaces include Shared space, Private Space, and outdoor Spaces.

Shared Space for Communal and Public Gathering:

These spaces will consist of the cafeteria lounge and other small gatherings, circulations within the building, and the community hall where activities of kindship take place.

Private Space:

Elements considered private in this regard are the food preparation areas, office space, chapel, Nurse's room, classrooms, meeting rooms, and counseling rooms. It is within this setting that individual, or group activities take place.

Outdoor and Public Space:

The outdoor park is an excellent space that provide interactions with nature and helps with therapy for traumatized refugees. The parking lots, ramp, and the grand main entry.

User/Client Description

Client

The Refugees Center and Small Business Incubator or RC&SBI is a proposal to replace Lutheran Social Service or LSS which in 2021 filed for bankruptcy and ended its refugee service program.

RC&SBI will continue with the refugee specific programs ran by LSS which included Job placement, family reunification, language translation, counseling support for mental health, and introduce skills development programs, culture & tradition maintenance, and the creation of small business initiatives for economic development.

Users

The RC&SBI is a year-round program facility whose services and programs require full-time Administration Staffs, Refugees Case Managers, Instructors, Nurses, Therapist, Cooks, and the refugees.

The Project Site

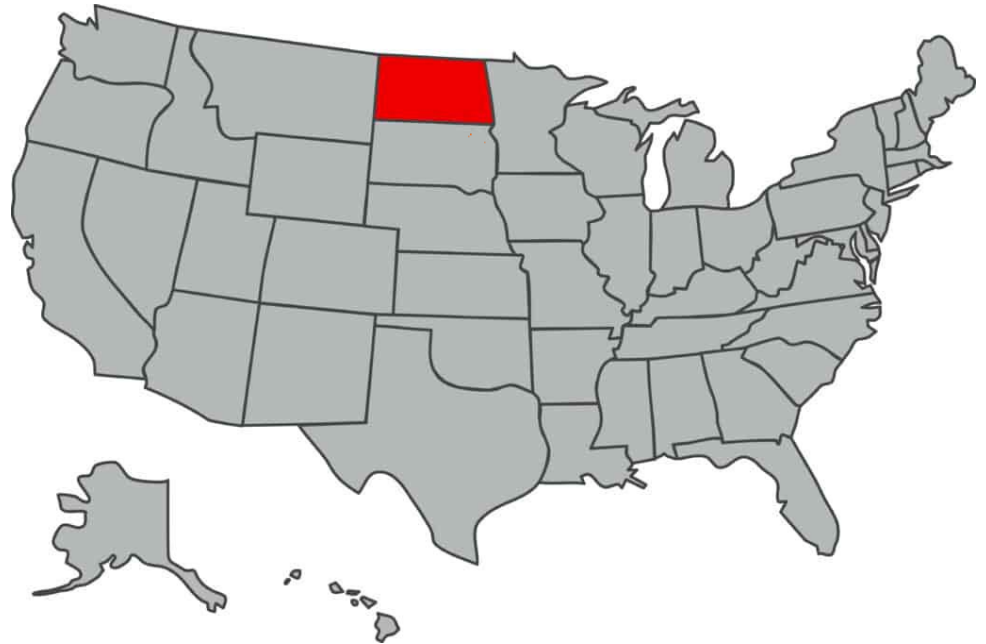


Figure 06

Located in the Upper Midwest region of the United States, North Dakota lies at the center of the North American continent and borders Canada to the north. Dominated by the Great Plains, North Dakota has a population of 762,062 people as of 2019.

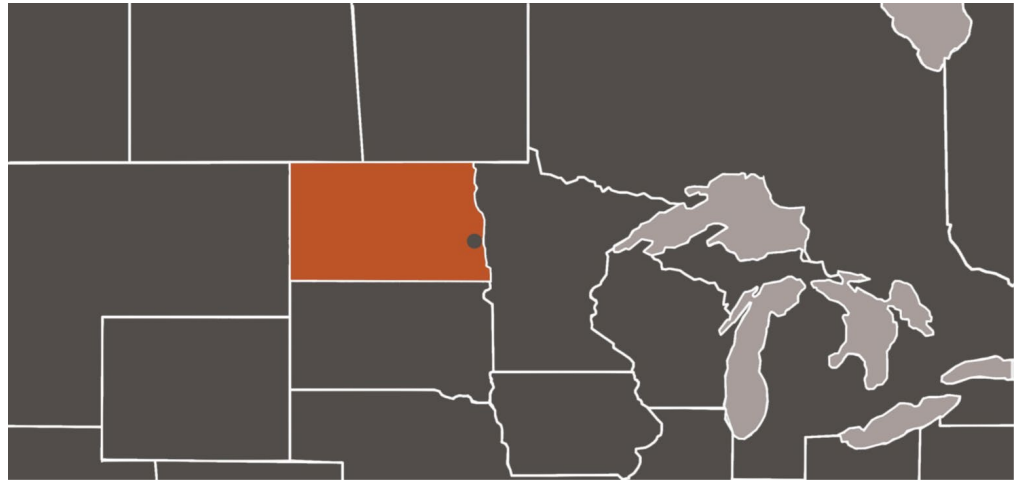


Figure 07

In the far east end of the state lies Fargo, the biggest city in the State of North Dakota with a population of about 121,889 people as of 2019, of which 8% are foreign born. Out of the total number of refugees that resettle in North Dakota, 70% settle in Fargo, making it the largest hub of refugees in the state of North Dakota.

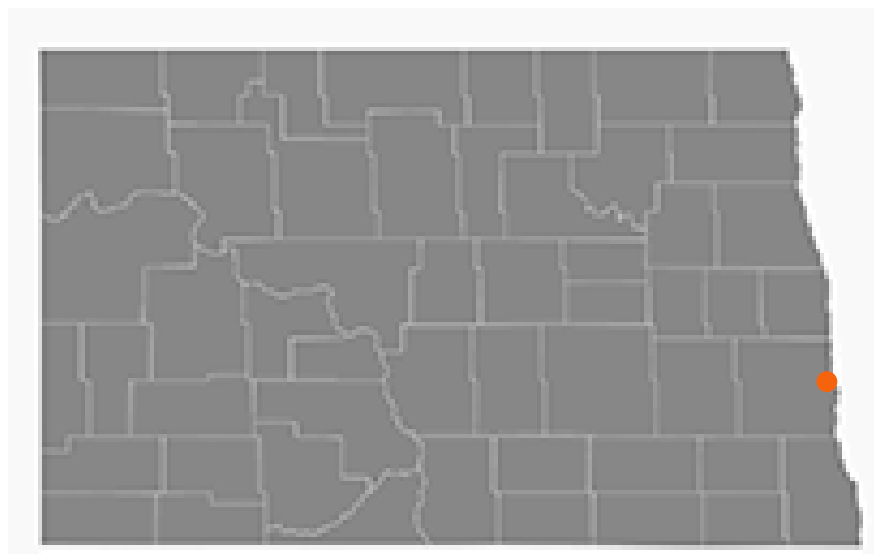


Figure 08



Figure 09



Figure 10

The proposed site for the Refugees Center and Small Business Incubator is located at 6102 10th St. South, Fargo, ND 58104. To the West is University Drive and to the East is the beautiful Red River of the North.

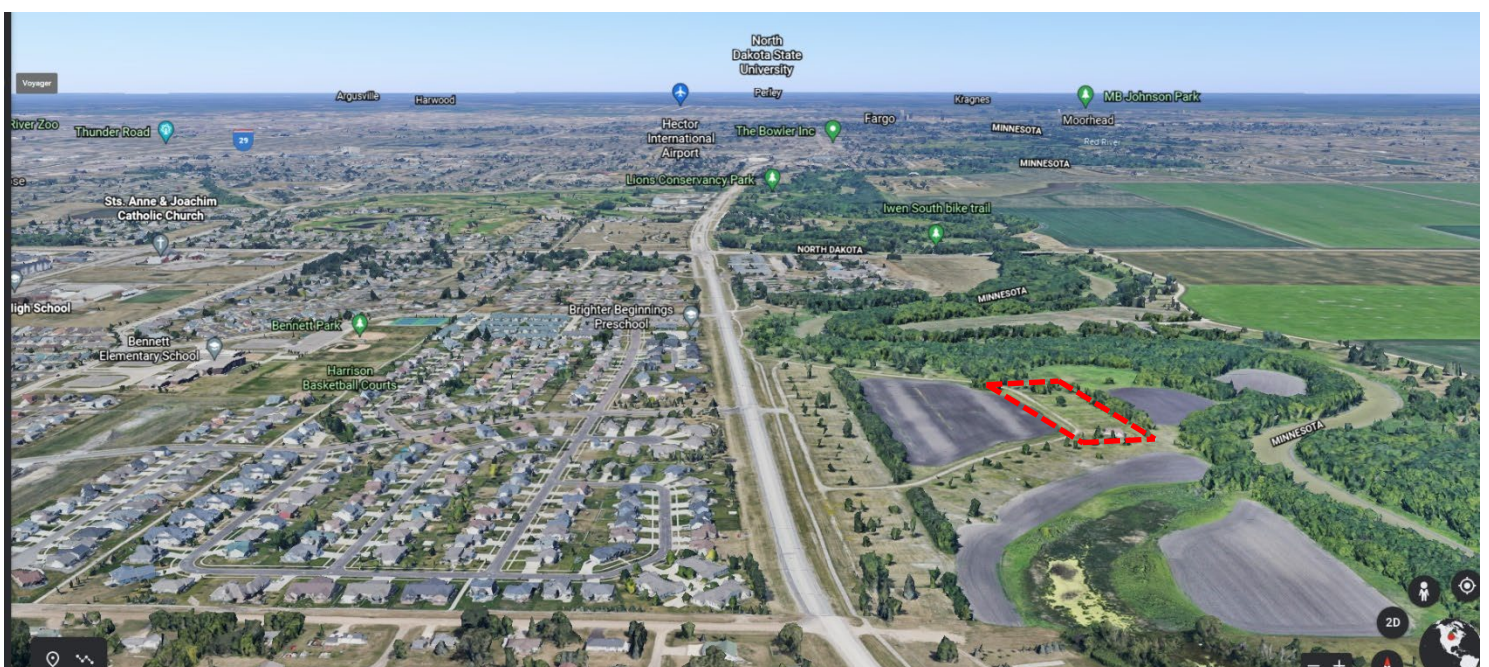


Figure 11

Project Emphasis

The RC & SBI hopes to uplift and offer refugees a second chance at life. The major emphasis therefore is to heal refugees of their trauma and then embark on skill development programs. The Architectural design will create an environment suitable for healing and a makeshift for economic development.

RC & SBI will provoke interest among refugees to pursue the American dream, with the opportunities and programs readily available at their disposal, the sky is the limit.

The design of the project will focus more on healing and well-being of the refugees. Having a transparent roof system, an earth corridor, with plants lined on the side will create an environment of reflection and spirituality.

The outcome of the project will allow easy understanding and communication between the refugees and their host. It will also allow for a desire to learn and adapt to acculturation.

Thesis Goals

Academic

The academic goals of this thesis project for me are the results of the research work acquired through reading of materials from diverse sources and applying the acquired knowledge using Architecture to show the possibilities of healing traumatized refugees, and in turn uplift their self-esteem to work towards improved goals.

Professional

Regarding the profession, I would like to make an impact with this thesis project. Encourage the use of materials that would reflect on the desire of Architects to be part of the global war on climate change. Use the profession not only to put food on the table for ones' family, but to do good in helping the less fortunate within our society.

Personal

This thesis project is my last at North Dakota State University. My choice of the topic (Hindsight 20/20) is indicative of my life experience as a refugee. In all honesty I would hope that this project becomes a reality or at least its concept. Refugees are people just like you and I, with dreams and aspirations. Helping them back on track is not only a moral thing to do, but you could be contributing to the next Madeleine Albright or Albert Einstein who were both Refugees.

Plan for Proceeding

Research

Theoretical Premise: This will involve precedent research of facilities for counseling & rehabilitation, Education & Tutoring, Civic environment, and religious establishment.

Historical context: Understanding the relationship between refugees and the people of North Dakota. How has the social and cultural relationship impacted resettlement of refugees in North Dakota. What impact will establishment like the Refugee Center and Small Business Incubator have on refugees, the economy, and the people of North Dakota.

Site Analysis: Allocation of a site for this project will depend on environmental elements in relations to the climate of the area. The Red River, the surrounding green space, the wind directions, the sun movement, the surrounding noises, and pedestrian engagement in the area. These elements will determine the placement of the building, and the individual unites within it.

Documentation: Data collection and design progress will be a continuous process. Any new and additional data will be review and incorporated into the design process. A look into case studies of similar building typology and an extensive review of journals and articles regarding refugees and their resettlement, rehabilitation, and integration process.

Documentation Process

Medium of Investigation:

- Hand sketching and modeling
- GIS Mapping
- Sketchup Digital Modeling
- Lumion for Rendering

Presentation Methods:

- PowerPoint Presentation of Research, Methods, Iterations, and other Solutions.

Programs for Production:

- SketchUp
- Lumion
- Adobe InDesign
- Adobe Photoshop

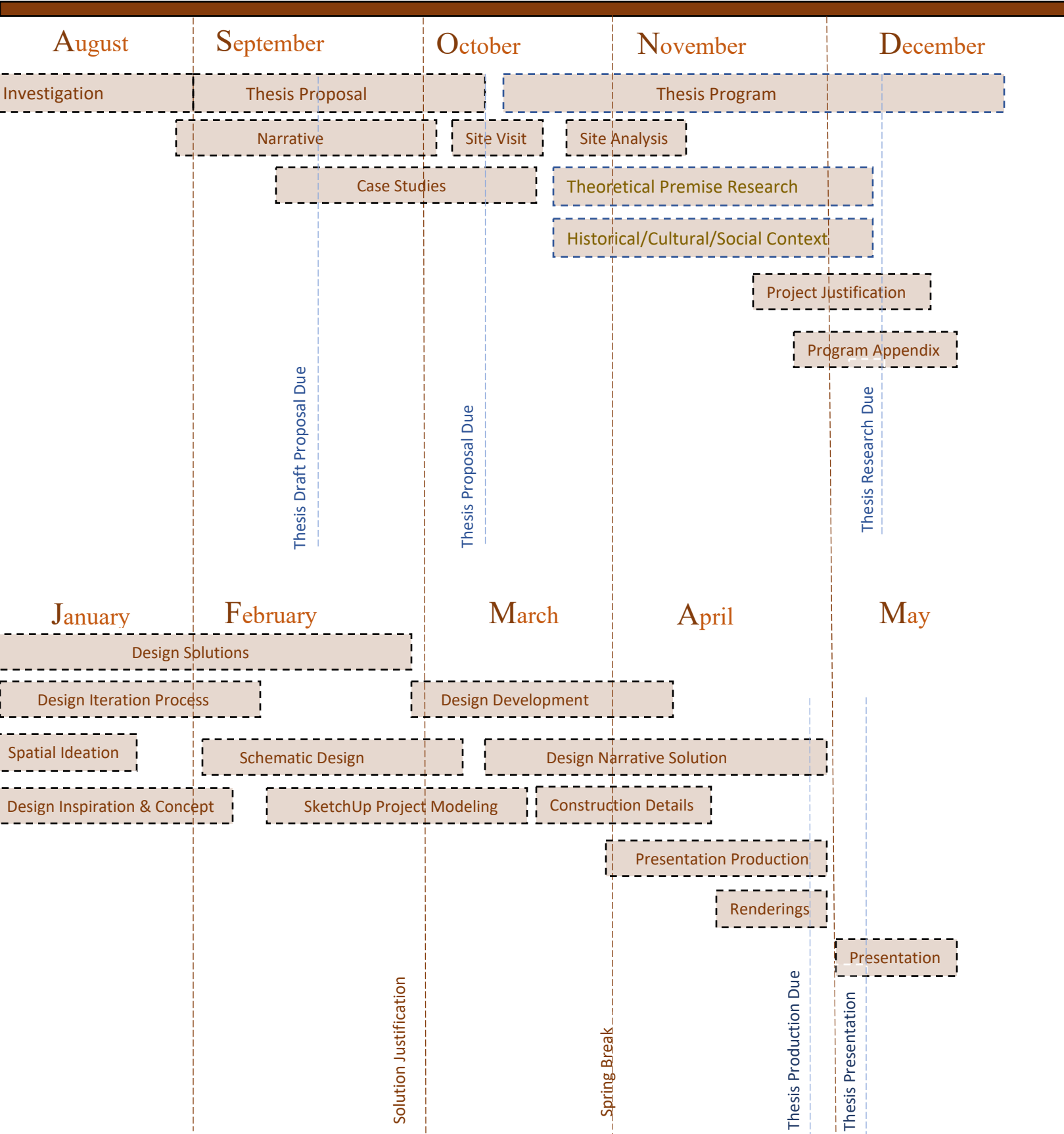
Design Preservation:

- Progress Report with Instructor
- Sketches and Notes
- Research progress and updates
- Scans

Material Publication:

- Project Books, Research and Solutions
- NDSU Thesis Repository

Project Schedule



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Thesis Research Document

Research Results

Case Studies

Project Justification

Historical Context

Social Context

Cultural Context

Site Analysis

Performance Criteria

Space Interaction Matrix/ Net

Research Results

In the aftermath of World War II, a group of people gathered in Geneva, Switzerland for a United Nations Convention to discuss issues relating to the Status of Refugees. In the meeting, twenty-six member States formally adopted an agreement that has become the centerpiece for international refugee protection commonly known as the “1951 Refugee Convention.” In this document a refugee is, “Someone who is unable or unwilling to return to their country of nationality owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group, or political opinion.” In 1967 the group adopted a Protocol that scrapped away the Convention’s geographical constraints and made it almost universal.

Refugees often leave their homes in a hurry, sometimes with nothing more than the clothes on their back. Often when a refugee crosses an international borderline, they are received by officials from the United Nations High Commissioner for Refugees or UNHCR who are mandated by the UN General Assembly to protect and seek permanent solution to refugee problems.



Figure 13

Once the agency establishes eligibility for refugee status, the individual become recognized under the UNHCR in that country to which they fled and placed under the protection of the United Nations. In the case of Uganda, Kenya, Jordan and few other countries, refugees stay in temporary encampments but, as time went by majority refugees find themselves being there for decades establishing a semi-permanent settlement.



Figure 14

While in these camps under the protections of UNHCR, the agency scrutinized individual refugees to determine the best viable solutions for their case. After the agency completes the process, refugees are either repatriated voluntarily back to their home country, integrated into the local host community, or resettled to a third country, like the United States, Canada, or Australia. The latter is where the interest or the focus of my thesis project lies, precisely the United States and its refugee resettlement program.

The United States refugee program is one of the most if not the most successful programs in advancing hope and aspirations among the most vulnerable people around the world. The program has established a platform for humanitarian assistance, and it has put millions of people in a trajectory of economic independence, self-sufficiency and above all the program is a source of immense pride for the great names like Elbert Einstein, Madeleine Albright, Henry Kissinger, and Gloria Estefan who are beneficiaries of the program.



Figure 15

Throughout history, the United States had a system in place for letting in immigrants and refugees from other parts of the world. In 1980 Congress convened and put together the most comprehensive amendment to its immigration laws, and as a result they enacted the Refugee Act of 1980. Since then, the United States has resettled over 1.3 million refugees from more than sixty countries around the world.

Often when refugees complete the vetting process, the agency submit their files to their affiliate agency who arrange for flight tickets and integration requirements. The department of States uses the Reception and Placement program to issue refugees with initial loans that to facilitate their travel expenses. The department also establishes coordination with its resettlement affiliates in the United States to assist refugees when they arrive.

These affiliates are Church based agencies and non-governmental organizations whose initial job before the refugees touches down in the United States is to arrange housing. In a standardized agreement with the resettlement agencies, the Department of State has refugee specific services that the agencies must provide. The agreement also provides a one-time payment intended to assist each refugee with their expenses during the initial 30-90 days of integration. Within this time, the agencies help refugees with the process of obtaining social security card, enrolment of children in school, medical assistance, and few basic but essential services like transportation and language.

According to the (Refugee Act of 1980, 3, USC & 412(a)(6)(A)(i), in order to receive the federal assistance or funding needed for the placement program of refugees, “a State must submit to the Office of Refugee Resettlement (ORR) Director a plan which provides a description of how the State intends to encourage effective resettlement and to promote economic self-sufficiency as quickly as possible.”

The phrase “as quickly as possible” raises an incredibly significant question, of how quickly is quick enough? Each individual refugee is allocated funds to help with their initial integration, and according to the National Immigration Forum, “that money goes mostly towards rent, furnishings, food, and clothing, as well as costs of the agency staff case management and other integration services.”

For other private Agencies, speeding up resettling refugees at a much lower cost was something they could do. For example, in a discussion with their public counterparts, a representative of Lutheran Social Services stated that, “the private sector has been able to move fast to work out alternative plans and be extremely flexible.” Again, especially important questions to ask, “at whose expense is the alternative plan and the flexibility.”

Refugees are people just like you and I born into a family with relatives and friends, but due to extra ordinary circumstance far beyond their control, refugees abandoned their livelihood and settle in a foreign land with the hope of a better life for them and their children. The refugee experience is one of mental distress resulting from exposure to violent acts of killings and destructions perpetrated against people. Studies suggest that a percentage of refugees adjust well during their initial integration, but few fall through the cracks because of prior traumatic experiences that take longer to treat. In fact, psychological distress among refugees may last up to three years (Molica, 2002).

The word refugee is often associated with men, women and children escaping persecution. Today when you google the word refugees, the images that pop up are in fact men,

women and children in distress, mostly cramped up in boats, camps and standing in lines for food rations. These images portray vulnerability and calls out for a helping hand. What is missing in these images are the portrayal of the professional tradesmen, the farmers, and the small business owners. In other words, refugees have skills and talents, that the host economy could benefit from only if given the opportunity to harness itself.

Over the years of resettling refugees, the United States government through the Department of State channels funds to sponsor services geared towards efficient integration of refugees, often based on the guidelines provided by the Office of Refugee Resettlement.

To put this into perspective, Americans have a welcome-to-the-neighborhood tradition where you bring a plate of cookies or pumpkin pie to your new neighbor as a welcoming gesture. It is a very humbling tradition that helps you settle with ease in your new home. As the new neighbor you will be the one receiving the gifts, assistance, and the advice. Based on how the media portrays refugees, it is more than likely your neighbors will view you through the lens of pity and sympathy, especially if your physical appearance resembles the ones cramped in the boards, camps, and in line for food rations.

The title of this thesis reads, “Hindsight 20/20: Architectural Exploration of Empathy for Refugees in a design solution.” First, for a solution to have a meaning, there ought to be a problem, and in this case the problem is recognizing refugee’s prior skills and experience and then partnering in a supporting role to help them triumph over their trauma and economic stagnation. By loosening the status quo and letting the presence of refugees’ influence change within the society could be the most basic way to show empathy or for this matter therefore, creating the Refugees Center for Small Business Incubator where refugees will acquire appropriate opportunities for growth and to triumph over their trauma.

While researching the problems faced by refugees during the integration process, I stumbled upon the following article titled “Refugee Resettlement in Australia: What we know and need to know” Authored by Ferida Fozda and Lisa Hartley. The article emphasized on the excellent services funded by the government of Australia in aiding refugees in the areas of Employment, Education & Training, Housing, Language, Health, Social support, and Cultural Orientation, but then stressed on the fact that there is still work to do in Social Inclusion (Ferida, F. & Lisa, H. 2014, P.1)

Within the same article Goodwin-Gill argues: “a durable solution entails a process of integration into a society; it will be successful and lasting only if it allows the refugee to attain a degree of self-sufficiency, to participate in the social and economic life of the community and to retain what might be described [...] as a degree of personal identity and integrity.” (Ferida, F. & Lisa, H. 2014, P.2)

To put this into context, a study done in the Department of Psychology at the University of Waikato by Bernard Guerin, Pauline Guerin, Roda Omar and Abdirizak Abdi entitled “What Skills do Somali Refugees bring with them” revealed that prior to becoming refugees, other people had formal and informal qualifications. Unfortunately, due to lack of sufficient language coupled with the difference in licensing criteria and qualification, other refugees end up unemployed or settling for low paying jobs, adding more trauma to what refugees already experienced (Beiser & Hou, 2001).

In another article published by the UNHCR “titled A new beginning: Refugee integration in Europe,” the author looked at several areas that seemed to relate and are very similar in nature to the study conducted at the University of Waikato in New Zealand.

In the article, the author acknowledges that the key challenge and concerns during refugee integration process is the language. But also, evidence in the study revealed “loss of identity documentation and qualification certificates, non-acceptance of qualification or educational attainment, trauma and uncertainty, anxiety over family separation, extended period of inactivity in the asylum system and the limited social network.” (UNHCR, Sept.2013).

In the same article, the author mentioned “the individuality of each person’s integration process.” It is important to treat the refugee integration process individually simply because each individual refugee is different, and their circumstance vary. Earlier in the process even before the UNHCR recommends refugee cases for resettlement, the agency thoroughly evaluates each case individually to determine if they remain in the country of their first asylum, voluntarily return to their home country, or resettle them to a third country. According to a key finding in the article, “Refugees come from vastly different individual backgrounds therefore, their challenges could be addressed as individuals, rather than as a homogenous group for whom the same interventions are envisaged as applicable.” (UNHCR, Sept.2013).

To understand this argument further, Albert Einstein once said, “Everybody is a genius, but if you judge a fish by its ability to climb a tree it will live its whole life believing that it is stupid.” Refugees need the opportunity to practice their skills and talents to benefit not only themselves but the local economy as well.

Understanding the language and culture allows for easy access into the host community and its programs, but these are extra ordinary circumstances, and the level of education should not deter from unlocking refugee’s talents and skills. In fact, as a refugee myself, I attended few refugee weddings in the United States, and I can certainly argue that the best food ever served in theses occasion are prepared by people who barely read or write English. Therefore, establishing a facility designed to support and develop such talents and skills into becoming small business entrepreneurs will not only encourage refugees to triumph over their trauma but, provide a healing space and growth opportunities, plus restore the rights and dignity they lost while seeking assistance.

It is obviously true that not every refugee can be an entrepreneur or have the same skill set but, at least the ones that do require the necessary support to develop their skills further. Refugees who are integrating into our communities should not just be vulnerable human beings who need our sympathy, especially not the ones that are in America, Europe Australia, and other developed countries. It is also irresponsible to hire an experienced refugee nurse or a truck driver as a janitor or a hotel house cleaner simply because they cannot provide certification for their prior education, or even because the system cannot equate or recognize their diploma. These individual refugees need support and empowerment to harness the talents, skills and experience they hold and not pushed into entitlement consumption.

In fact, most refugees find it hard to live on government paid entitlements, and the reasoning behind it is that, despite taking care of their families withing their respective host countries, they also take care of their extended families overseas. Therefore, being able to gain an appropriate paid work is a priority among refugees who often value the sense of identity and responsibility.

Summary

Using the words of Albert Einstein, “A bundle of belongings isn’t the only thing a refugee brings to his new country” should inform humanity of how to treat each other in times of their vulnerability. Refugees leave their livelihood and belongings not because they wanted to but, because they had no choice.

In the aftermath of World War II, the amount of human tragedy and devastation was beyond comprehension, therefore the world summoned their inner spirit of humanity and generated a solution that have since maintain protection of the most vulnerable refugees in our society.

Today the world is witnessing a similar tragedy of people getting uprooted from their homes and crossing international borders into neighboring countries in search of safety. Millions of fleeing refugees have entered neighboring countries and have received protection by the United Nations High Commissioner for Refugees. As responsible citizens of this world it is our responsibility to summon our moral value to restore hope, provide healing, and strengthen our solidarity for the common good.

Challenges facing refugees around the world is overwhelming, so much that other countries keep refugees in camps and their movement outside of the allocated area is restricted, even access to finding a job is restricted. Most refugees had a livelihood prior to this point

Most refugees had livelihood prior to this point, others where students, business entrepreneurs and above all citizens of a Nation. In the camps refugees become a number and stateless. For the students and the other professional, careers and dreams come to a hold. Resettlement to a third country especially the West opens the tunnels for hope and provide a gateway to a range of opportunities. Using the Christian biblical philosophy of being “Born Again,” resettled refugees often consider it the opportunity of a lifetime. A chance to start over, right the wrongs and catch up with aspirations and hopes.

During the research portion of this thesis project, 75 percent of the articles I found mentioned language efficiency as being one of the glitches refugees faces during their integrations process. Refugees who spoke languages other than the one spoken by the host country, often suffer setbacks in terms of employment opportunities.

The glitches refugees face during integration are cultural difference, weather, food, and above all the system by which the government is ran. Adding all that to language efficiency, the difference is huge, and it often translated to refugees’ mental health.

With the sheer amount of language translation technology in the marketplace, one would think language should not be a glitch anymore, but it is one of the main factors that have stall growth and development among first generation refugees. It is also due to the level of formal education and the failure to recognize previous skills, qualification, and experience because of the difference in education systems.

Often refugees remain unemployed but not for long because they usually end up accepting low level jobs to help take care of families both here and overseas. Other refugees have years of experience, talents, and skills, but never had to us them, for examples the “Grandma” style cooking where there are no recipe books, just firsthand apprenticeship skills passed from generation to generation.

The Center for Refugees & Small Business Incubator will sit on a 5-acre piece of land located in Fargo, North Dakota. On it will be a plot of land dedicated for farming, and a mixed typology building design to address issues ranging from, training/mentoring, Worship/healing, offices, and recreational space.

Precedent Research



Figur16

After an extensive search for suitable case studies for my project, I came upon the name Shigeru Ban a well-known Japanese Architect famously known for his humanitarian and disaster relief structures, constructed out of recycled materials like paper tubes and shipping containers. Shigeru Ban's work extend from refugee camps in Africa to Museums around the world.

Ban was born in Tokyo, Japan on August 5th, 1957. In 2014 he received the Pritzker Architecture Prize for his work in the field of Architecture.

A dozen of his amazing work that I looked at and eventually decided to study for my project include, the proposed temporary Chapel for Notre Dame Site, The Nomadic Museum, and the Aspen Art Museum.

Case Study # 1

In the early morning hours of April 15, 2019, the famous Notre Dame cathedral in Paris caught fire. Before the fire was extinguish, the spire had collapsed, and the roof structure destroyed.

The fire did not just destroy a tourist icon but, the patrons lost a gathering space for their community and worship. Architect Shigeru Ban proposed an airy pavilion to function as a temporary chapel that would serve as a gathering space for religious services while the restoration of the cathedral took place. Shigeru Ban designed proposal sheltered around his concept of using simple and recyclable materials like shipping containers and paper tubes. The columns and wooden trusses designed to support a simple white gable roof, leaving the space open to elements.



Figure 17

Proposed Notre-Dame Pavilion

Architect: Shigeru Ban

Typology: Church

Location: Parish, France

The proposed design for Notre-Dame Pavilion was to provide an emergency and temporary facility for the patrons of the cathedral. The design concentrated around simple, recyclable materials. The structure anchored by wood-paneled shipping containers that connect to paper tube columns via rope. The columns and wooden trusses support a simple white gable roof, leaving the space open to the elements. In creating the structure, shipping containers stacked in a checker pattern to facilitate easy movement of patrons on the ground level.

The proposed design of the Notre-Dame Pavilion sheltered around Shigeru Ban's concept of simple and recyclable materials in the form of shipping containers and paper tubes of which he is famously known for. The columns and wooden trusses designed to support a simple white gable roof leaving the space open to elements

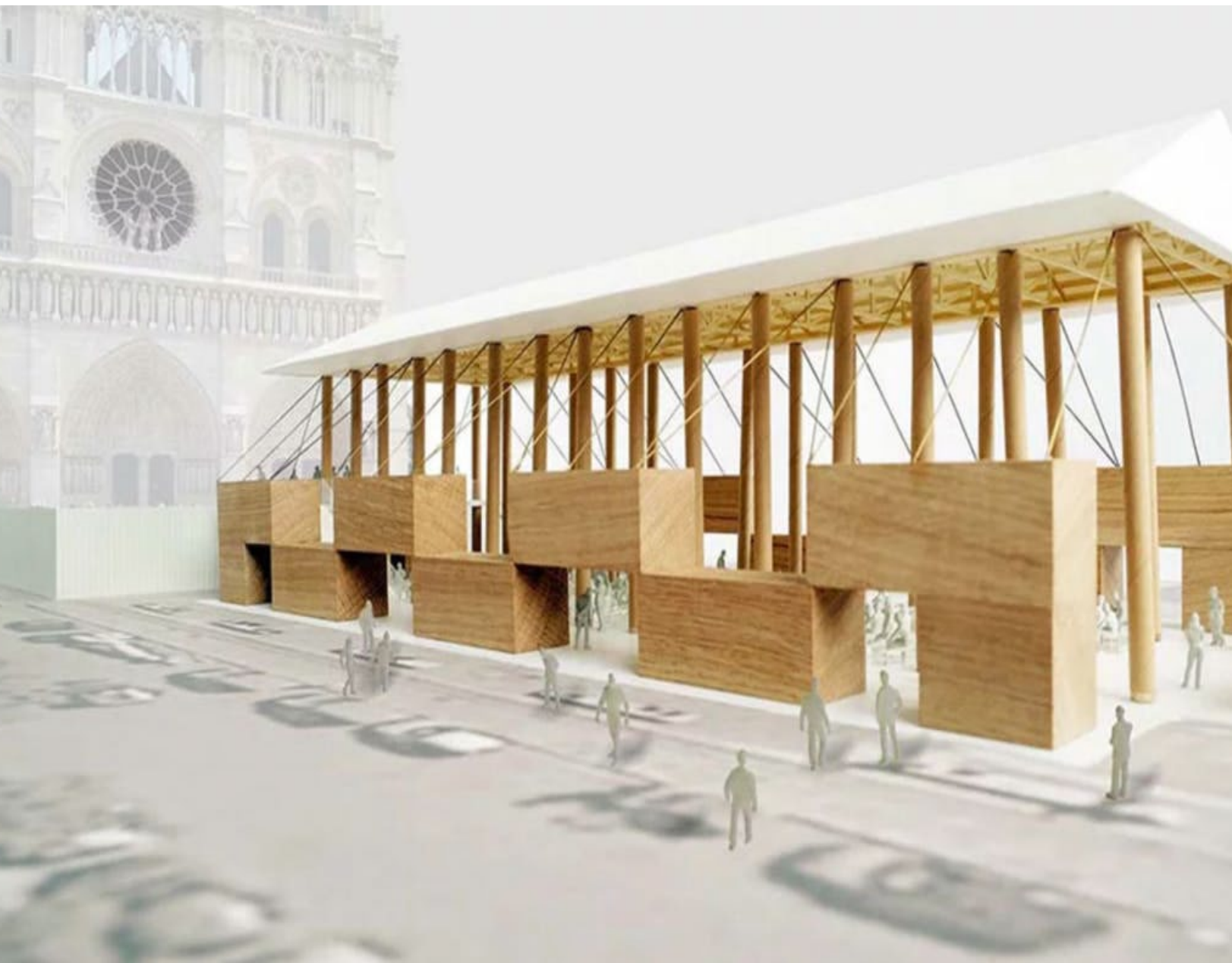


Figure 18



Figure 18



Figure 18

Analysis # 1

The fire that destroyed Notre-Dame Cathedral did not just destroy the physical building, but also mentally and psychologically affected the patrons of the Cathedral.

The proposed design by Shigeru Ban around simple, recyclable materials provides hope and assurance that the situation is temporary, therefore providing healing to the patrons.

Like refugees, the thought of getting uprooted from your home is one that is depressing. Refugees leave their homes and everything they know, and escape to another country. Larger percentage of refugees end up in camps with the hope of returning home.

Providing a facility to embolden that hope the way Shigeru Ban has envisioned in his proposal of the Pavilion, is one of the aspects that the Refugee Center and Small Business Incubator is borrowing from.

The facility intends to instill calm and confidence among refugees who are worried about their future and the future of their children.

Case Study # 2

The Nomadic Museum

Architect: Shigeru Ban

Location: Initially built in New York in 2005.

Typology: Museum/Culture/Leisure



In the year 2000, a Canadian photographer Gregory Colbert approached Shigeru Ban about designing a mobile and transportable gallery for his traveling exhibition entitled Ashes and Snow.

Ban took on the project and design the Nomadic Museum in New York in 2005 and later Santa Monica in 2006, Tokyo 2007 and finally Mexico City in 2008. Though the Museum was an art gallery, it was a work of art that was easy to move around.

The construction used a stack of shipping containers arranged into four layers, and between the layers each container set as a crisscross. Shigeru Ban used 152 shipping containers as walls and waste papers and vinyl as columns and roof.

According to Ban, the choice of shipping containers as the main building elements was because they were mobile and could travel along with the artwork, making them famous as the photographer, Gregory Colbert.

Figure 19

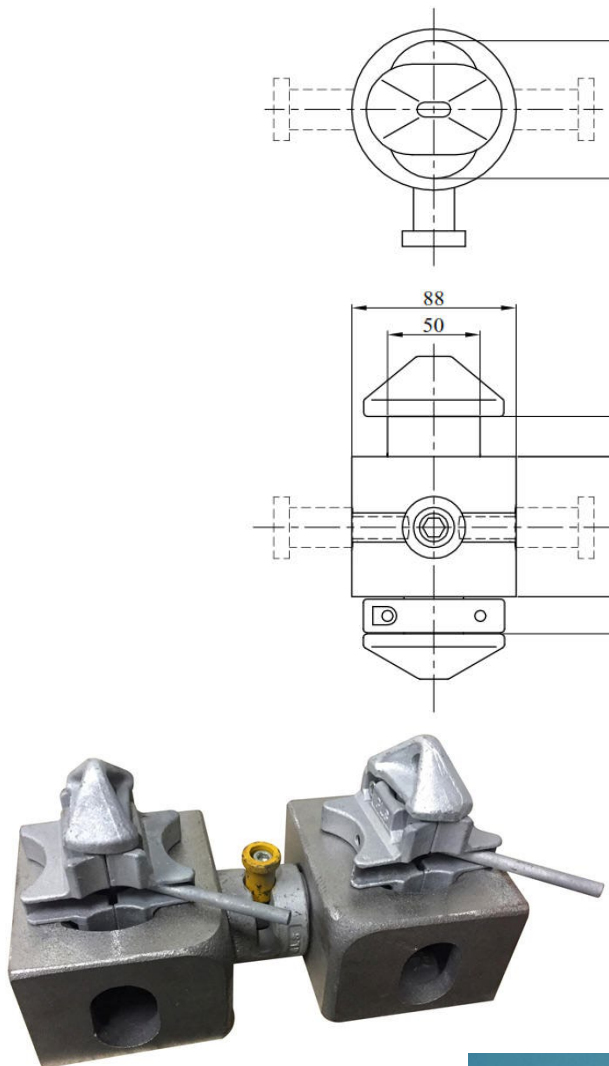


Figure 20

Also shipping containers have a certain strength and stiffness to it. It reusable and easily transported around the world. Shipping containers come in assorted sizes, ranging from 10,20,30, and 40 feet.

In the Nomadic Museum, Ban used twenty feet seaway containers locked in the four corners, using special lockers, and the walls of the containers served as truss for the roof.

To emphasize the concept of recyclability while working on the Nomadic Museum project, Ban rented the shipping containers and returned after the exhibits were over.



Figure 21



Figure 19

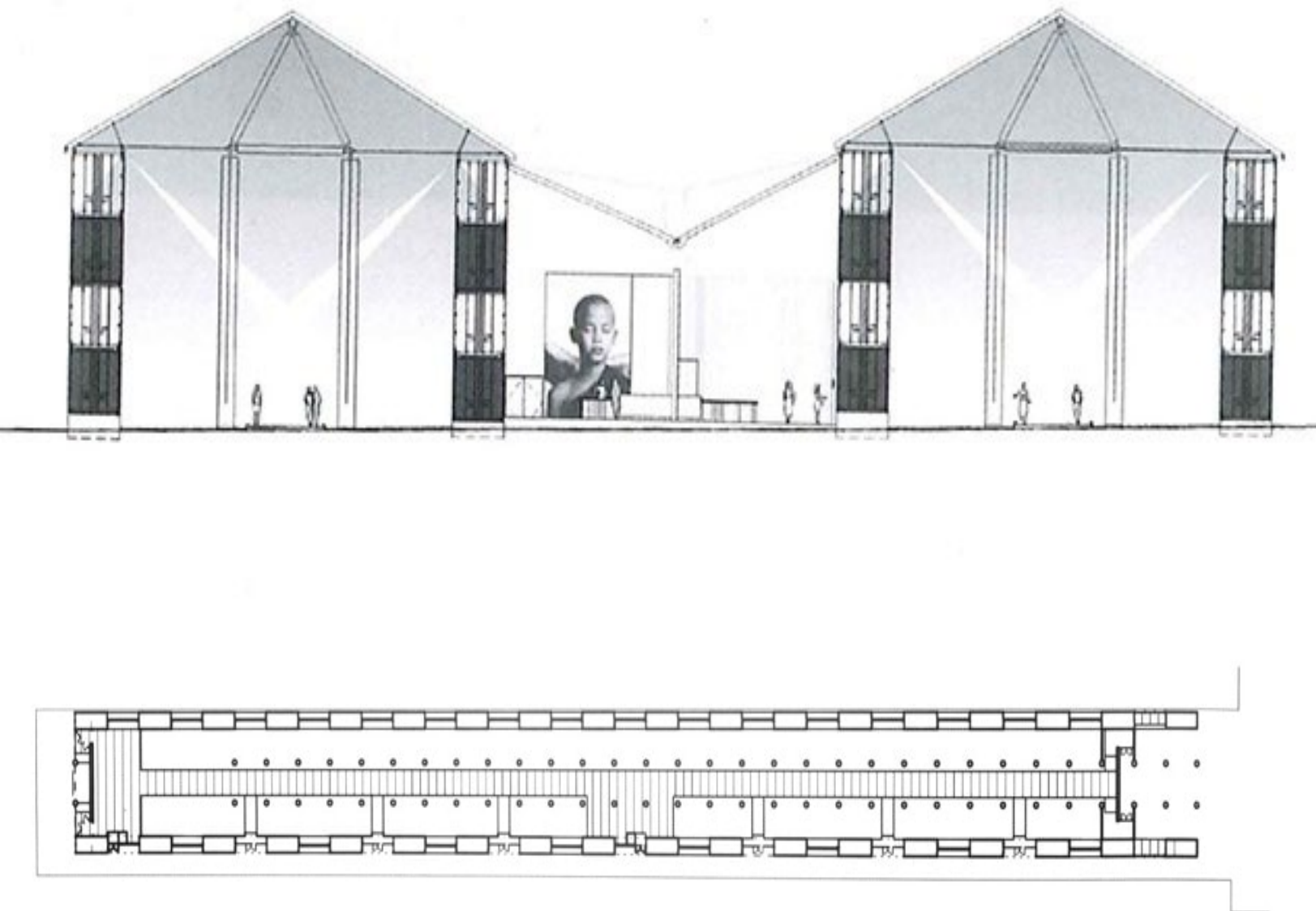


Figure 22

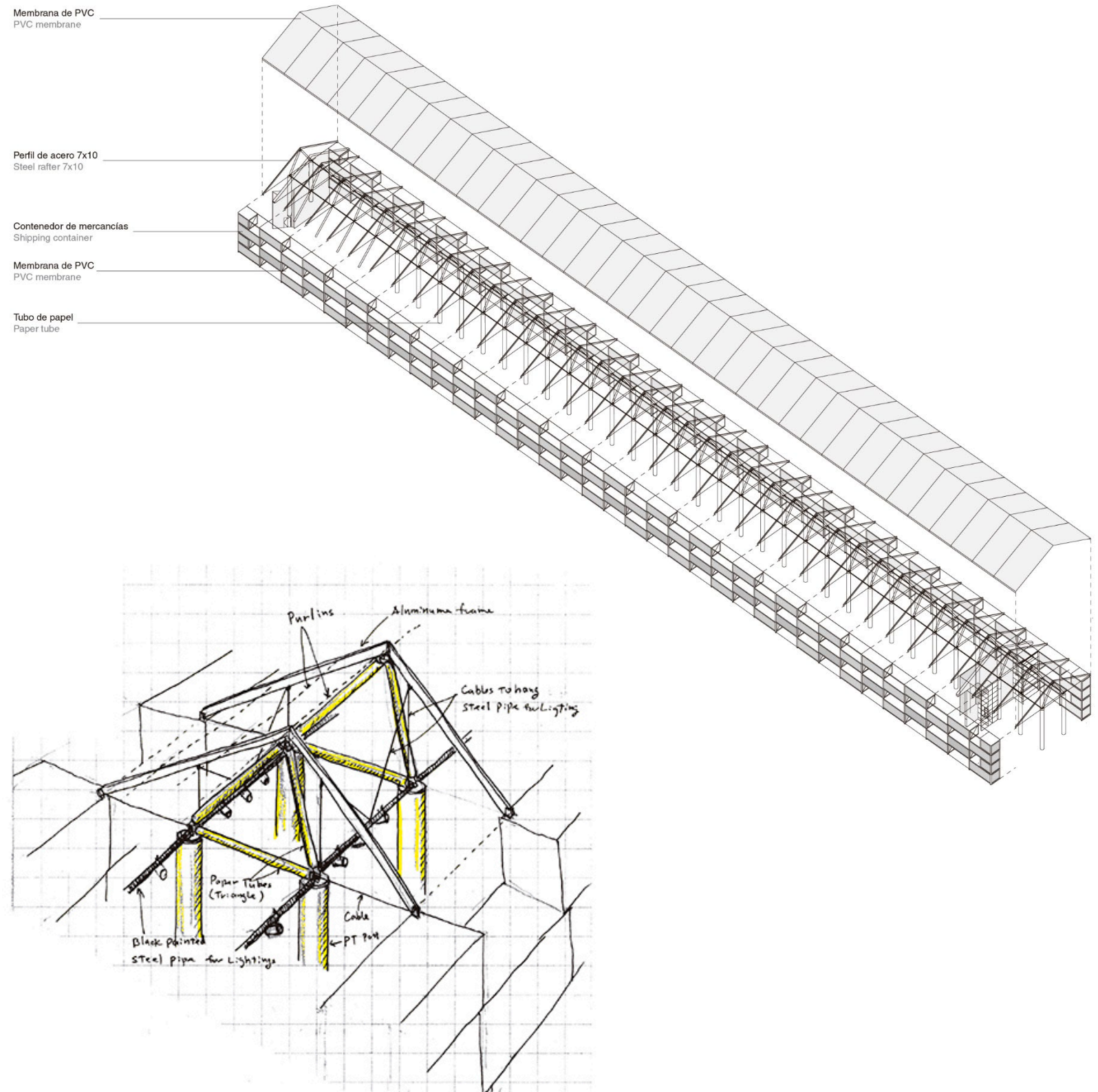


Figure 23

Analysis # 2

The Nomadic Museum was widely welcomed around the world, partly because of the design and the materials that Shigeru Ban chose. In fact, the Museum somehow emerged to be an exhibition itself overshadowing the art exhibits the Museum was intended to house.

After every exhibit the containers are disassembled, and few containers used to store the exhibits and transported to the next venue.

The refugee crisis seems to affect people around the world randomly. For example, eighty years ago, Europe was overwhelmed with refugee crisis and since then Asia, Africa and South America.

The need for a recyclable and easily transportable material in constructing the Refugee Center and Small Business Incubator facility seemed to stand out. Having a building that can be easily transported from one place to another in response to the refugee crisis would offer an opportunity most refugees rarely enjoy.

Case Study # 3

The Aspen Art Museum

Architect: Shigeru Ban

Location: Colorado, USA

Construction completed: 2014

Material: Wood



Figure 24



Figure 24

Several of the work done by Architect Shigeru Ban are temporary, the Aspen Art Museum is the first permanent Museum constructed in the United States.

In his vision while designing the Aspen Art Museum, Architect Shigeru Ban show transparency and it is reflected in the open view planes of the Museum. The concept particularly invites the outside to engage and interact with the building interior. At the same time, it provides similar opportunity for the interior of the building.

As you make your way into the building, the reception area allows visitors to choose their pathway through the spaces in the building. The unique passageway in the building also allows for the natural blending of outdoor and indoor spaces.

Besides providing unparalleled vistas of the museum's environment, the roof deck sculpture garden offers a unique view of the surrounding environment especially the Ajax Mountain. It is also a flexible space that can be activated into an exhibition and event area to feature a café, bar and an outdoor screening space.

The museum's amenities include education space, art storage and galleries, shop, lounges, and offices.

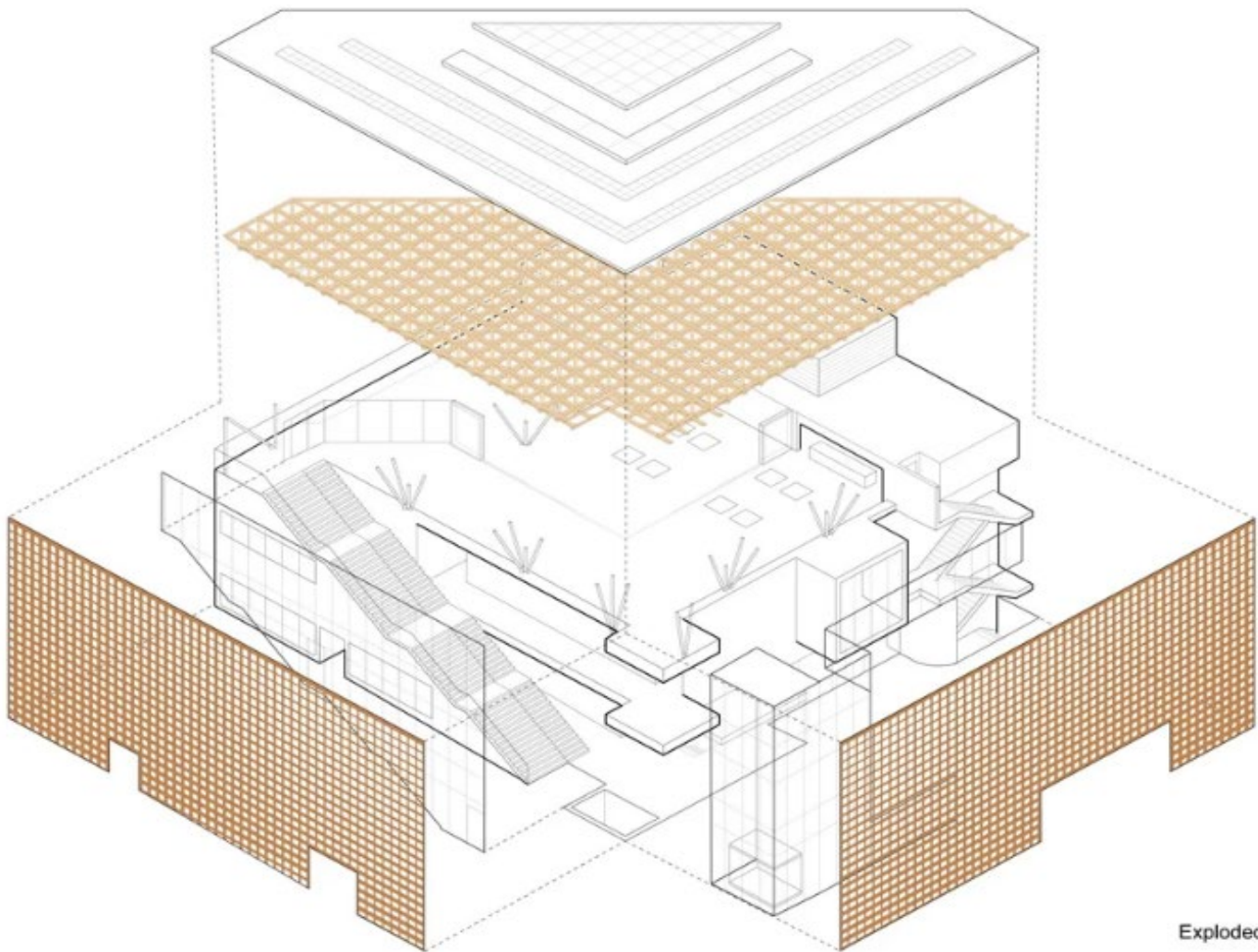


Figure 24



Figure 24

Shigeru Ban Architects
Aspen Art Museum



Exploded Axonometric

Figure 24

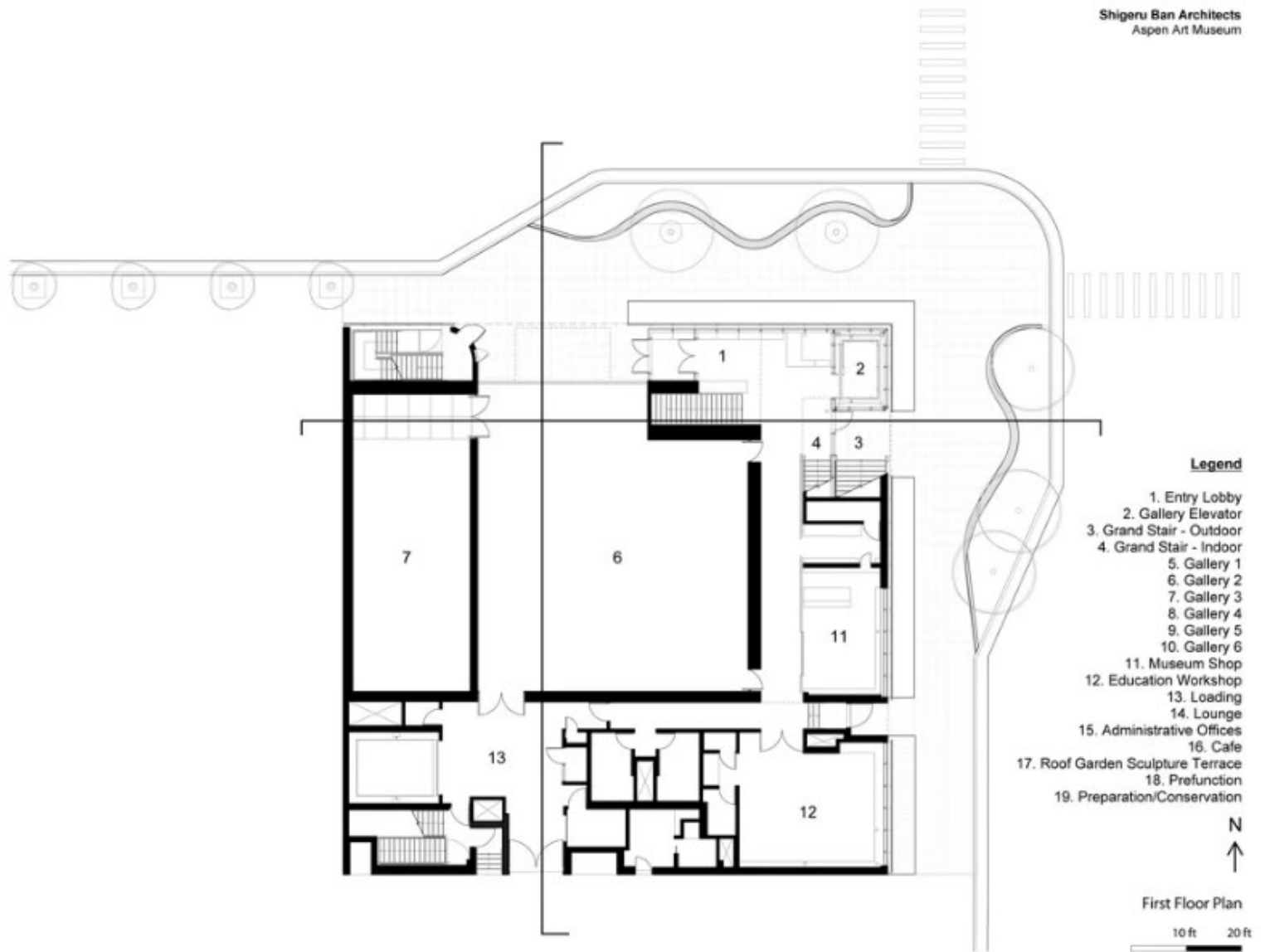
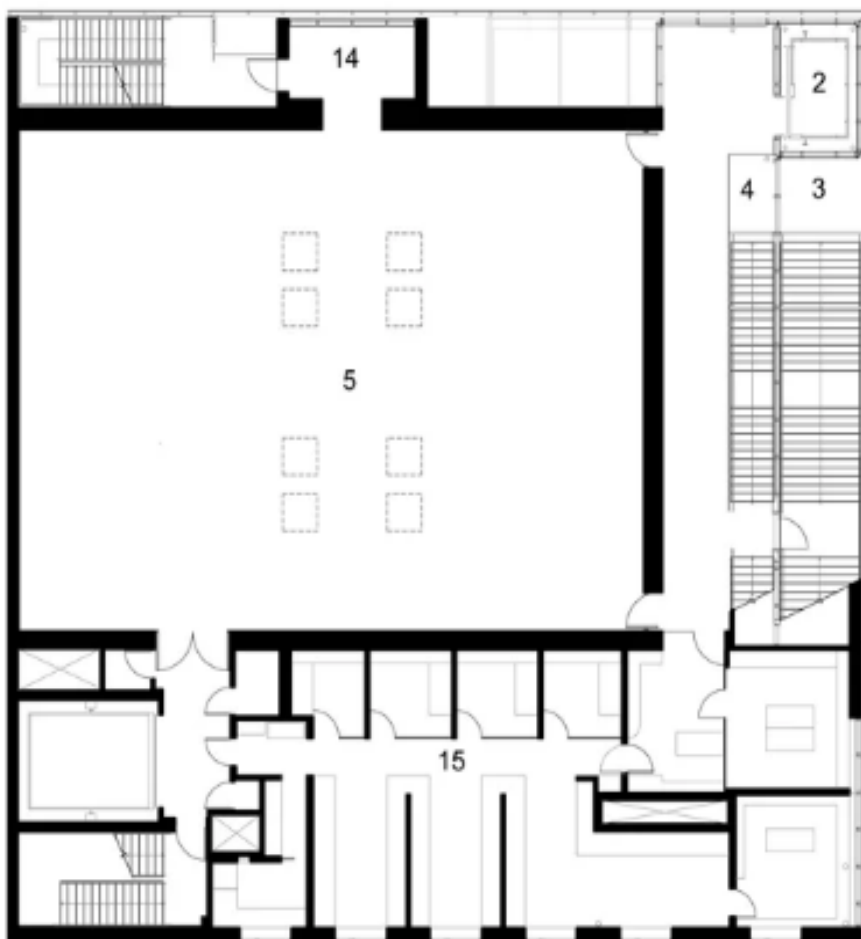


Figure 24

Shigeru Ban Architects
Aspen Art Museum



Legend

1. Entry Lobby
2. Gallery Elevator
3. Grand Stair - Outdoor
4. Grand Stair - Indoor
5. Gallery 1
6. Gallery 2
7. Gallery 3
8. Gallery 4
9. Gallery 5
10. Gallery 6
11. Museum Shop
12. Education Workshop
13. Loading
14. Lounge
15. Administrative Offices
16. Cafe
17. Roof Garden Sculpture Terrace
18. Prefunction
19. Preparation/Conservation

Second Floor Plan

10 ft 20 ft

Figure 24

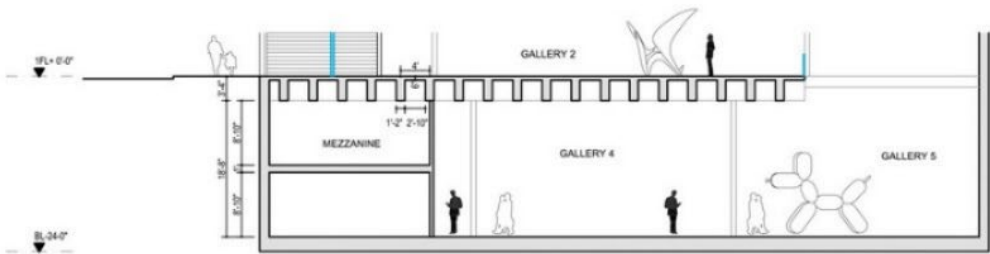
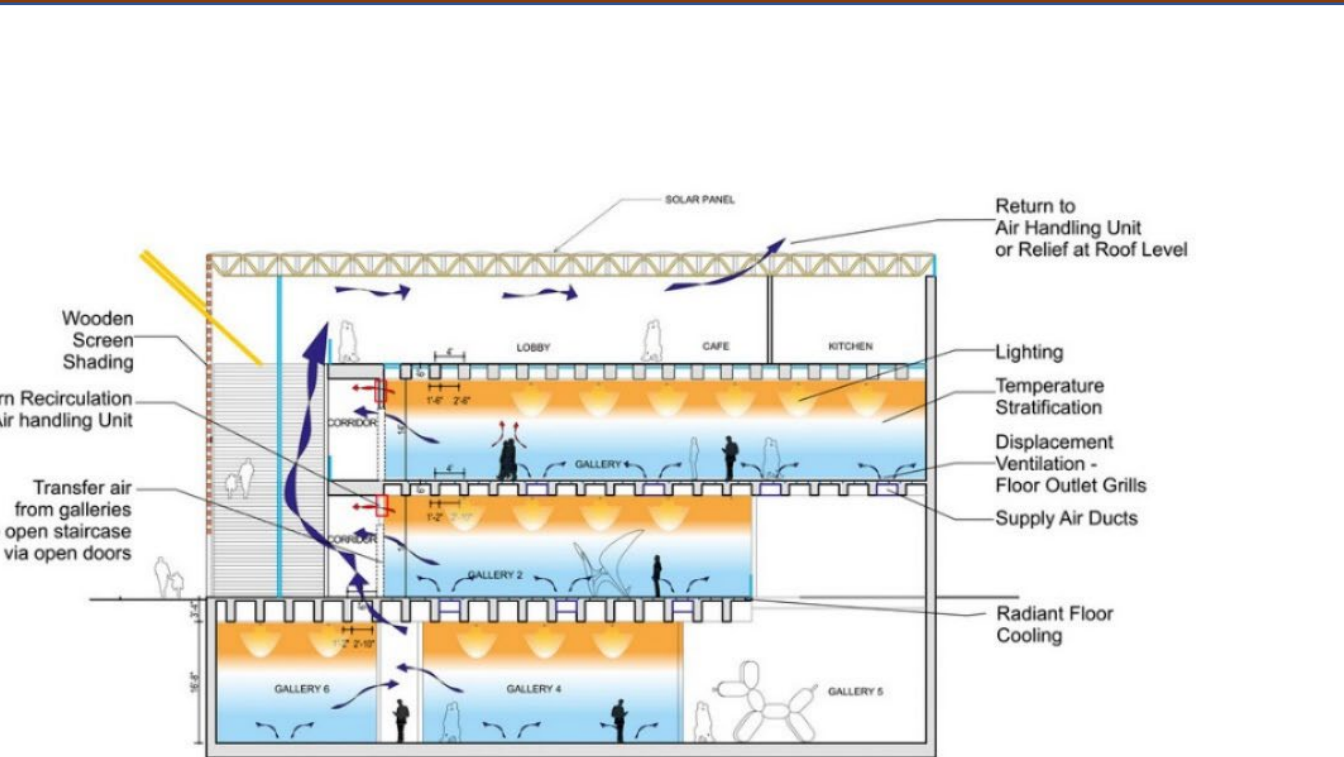


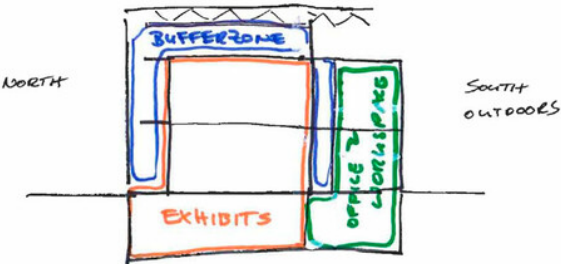
Figure 24

CLIMATE ZONING PRINCIPLES AND VENTILATION

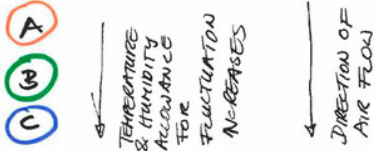
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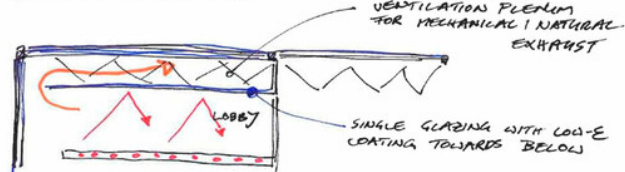
"THERMOS" - PRINCIPLE



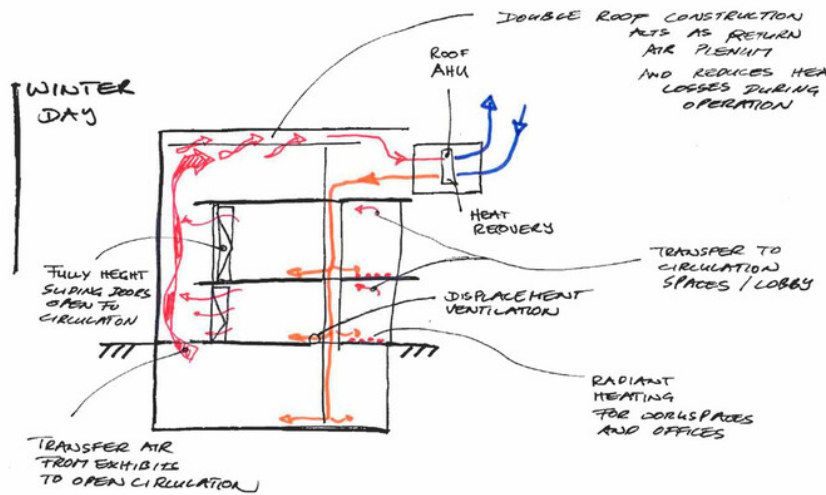
CLIMATE ZONES



"DOUBLE LAYER ROOF"



WINTER DAY



WINTER NIGHT

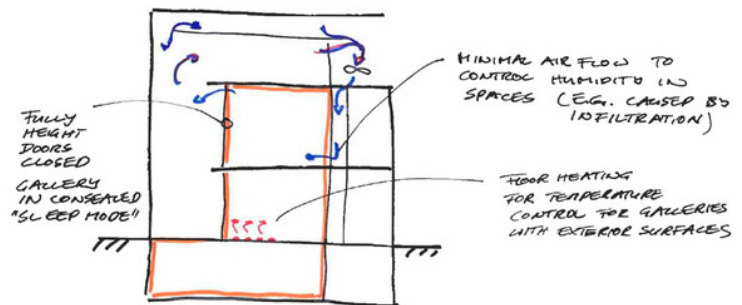


Figure 24

Analysis # 3

The overall takeaway from the design of the Aspen Art Museum is the concept of transparency and openness. The interactions and engagement the museum dictates between the inside and outside environment.

North Dakota's environment in the winter offers a very limited attractions especially when one is confined inside for a good amount of time due to the extreme cold weather.

Suggesting a polycarbonate material for the roofing material offers an opportunity to still interact with the outside environment while being in a climatically comfortable temperature control space.

Project Justification

Refugees leave their homes not because they wanted to, but because it was the only viable option readily available. In fact, anybody would become a refugee if faced with the terrors that refugees faced. In the aftermath of World War II humanity witnessed and experience devastation and misery. In response, a group of men stepped forward with a strategy and put together a program that have eased the problems of refugees.

Today the world is experiencing a repeat of what happened almost 80 years ago with the refugee crisis. Thanks to the programs that are in place for the protection of refugees however, different circumstance calls for different approach. Times have change and if Architecture can skew government policies to empower refugees, then so be it. A facility like the “Refugee Center and Small Business Incubator” would help refugees triumph over their trauma, and used years of experience, skills and talents that would otherwise be left for waste.

As a refugee and a student of Architecture I hold the view that making the world a better place for people to live should be the number one priority. In fact, this project should be the manifestation of what humanity should look like. Refugees are people just like you and I but, at a very vulnerable state of life. A project like this would give them a breath of fresh life, hope and a second chance at life.

North Dakota, especially Fargo has become the center point for resettled refugees. Over the years thousands of refugees have settled in Fargo, and the economic impact has been undeniable. In justifying this project economically, I would like to consider the professional refugees, the tradesmen, the farmers, cooks, and faith base leaders whose years of experience, skills and talents are not being used to capacity simply because of the language barrier and the status quo. A successful Refugees Center and Small Business Incubator will simplify the process and assist these individual refugees with the necessary tools to establish themselves and their skills to foster economic growth by establishing retail shops, farmers market and restaurants.

This project would contribute significantly to the advancement of the architectural profession. The reasoning behind that is refugees may come and go, but the facility and its concept will remain. Designing it well the first time will determine subsequent usage, therefore a successful design will establish a long-term usage of the facility and create a model to follow.

I am working on this project from an Empathetic point of view, and that is because of my experience as a refugee. Classic architectural projects around the world have stood the test of time and are preserve because of the positive impact it has on humanity. Other structures remain clandestine because of the individuality of its design ingenuity.

This project could be handed over to someone in the profession to work on but, the outcome might be different because of the nature of the project individuality and the vision each designer has during their initial concept creation and development. I do not want this to be an over statement but, I can envision refugees interacting with the building and the surrounding farmland.

Historical Context

In the aftermath of World War II, parts of Europe turned into a moonscape or better yet “the city of the dead” as referred to by General Lucius D. Clay who was second in command in the U.S. zone of post-war Germany. Millions of Jewish men, women, and children who survived Hitler’s death camps became stateless and remained at the mercy of the world. Thanks to few concerned world citizens who came together in 1951 with a collective understanding and set up a system of protecting refugees in the 1951 convention.

The 1951 refugee convention covered less areas geographically and concentrated mostly on the people affected by WW II in Europe. Eighteen (18) years later the same group met but this time with more member states, creating the 1967 protocol. The protocol maintained everything in the 1951 refugee convention except for the geographical limitation. The protocol was also widely adopted by many countries around the world. The documents define the terminology ‘refugee’ and clearly points out the fundamental rights of refugee along with the legal obligations of other countries to respect and protect these rights.

In 1968 the United States became a party to the protocol but not to the convention. Twelve (12) years later Congress amended its immigration laws and enacted the refugee act of 1980 to comply with the 1967 Protocol.

It is here that the United States adopted the definition of a refugee as speculated in the 1951 refugee convention ---- “Someone who is unable or unwilling to return to their country of nationality owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group, or political opinion.”

The United States has adopted two separate systems through which the operation of refugee resettlement is conducted. One system is through the U.S. Refugee Admission Program (USRAP) where refugees’ cases are processed abroad and brought in for resettlement. The other is when asylum seekers come to the U.S. border or sometimes within the U.S. and apply for protection. In either scenario, if refugees present a genuine case, they are certainly grant asylum.

Ever since Congress enacted the Refugee Act of 1980, the United States has resettled over three (3) million refugees from all over the world. The way the system works is that each year the President of the United States in consultation with the Judiciary committees of both the Senate and the House comes out with a figurative number of what percentage of refugees can be resettled in the country each year. The percentage is divided among the geographical regions of the world and a proposed percentage is allocated to Africa, East Asia, Middle East, Europe, and Latin America.

Each percentage number is funnel towards the targeted populations of the most vulnerable people who often fit the criteria of a refugee according to the Immigration and Nationality Act (INA).

Over the years United States have resettled refugees from at least sixty (60) countries around the world ranging from, Somalia in Africa, Bosnia in Europe, Burma in Asia, to Colombia in Latin America. The refugees are resettled in forty-nine of the continental United States including North Dakota the proposed site for this thesis project.

Within the last 30 years, the state of North Dakota has resettled over 3500 refugees from at least thirty different countries of the world who found home here in Fargo. To put this into perspective using my own experience as a refugee, 25 years ago you could walk into a grocery store and hardly meet anyone that could visibly be identified as African refugee. Today the narrative is different because not only can you walk into a grocery store and see refugees, but you can walk into a grocery store owned by refugees. Thanks to the Refugees Resettlement Programs and the Lutheran Social Services of North Dakota.

Social Context

To fully grasp the refugee experience in the realm of social integration, it is more practical to begin with a story of my own. As a refugee in Uganda, I was incredibly grateful from the time I received the news of resettlement to the United States. Like other refugees before me, that news alone was a ticket to salvation.

Fast forward few months later after all the vetting in my case completed, we left Uganda and made a stop in Nairobi, Kenya where we picked up more refugees. After 23 hours of flight with one stop in Amsterdam we landed at JFK international airport in New York. We united with case managers from the Lutheran Refugee Service who helped with our entry paperwork and ushered us to our destinations.

The United States is now morally and legally obligated with the laws put in place to maintain our safety and help rewrite our life story going forward. It was the end point for fear of persecution, uncertainty, and the start to a better life. For those we left behind in the refugee camps, it was the certainty that at least one of our own has made it.

I might not be able to speak for all refugees, but soon after we settled in our new homes, we quickly learned the challenges of integrating into the American society. In fact, it was more challenging for those with little to no English, especially in understanding the social, cultural, and economic elements.

Certain aspects of social integration could be universal no matter what corner of the world one is from, like food. In certain social gatherings food is the centerpiece that brings everybody together especially within the refugee community. Somehow it failed to do that for one refugee kid who I have a story to tell.

A young refugee boy took a packed lunch to school one day, and when it was time to eat, he sat at a table with a bunch of kids from his class and opened his lunch. The other kids momentarily got up and left the table claiming his food looked and smelled bad. You could see the humiliation in this young refugee face who never wanted to come back to school the next day and wish he could go back to his friends in the refugee camp.

Another factor within the refugee social context is the family hierarchy and the responsibilities attached to it. Within the Sudanese community for example, the father the head of the family and the main bread winner. The mother on the other hand is second in command and is responsible for cooking for the family and taking care of the kids. Upon settling in the United States, the overall narrative changed and both the father and the mother work to support with rent, often when the kids are old enough to get a job, they too help with paying certain bills in the house.

This changes the dynamic by which the family hierarchy operates. The mother's responsibilities become overwhelming, and the father needs to assist either by cooking, washing dishes or changing diapers which is a normal practice by American standard. By traditional Sudanese standards, it is feminist and by asking the father to perform these duties seemed disrespectful and an attempt to strip him of his God given place in the family hierarchy. Often this causes tension in the family and ends up in family breakups. There has not been a study conducted specifically to see how much these changes have affected the average Sudanese family but being part of the community, I witnessed almost twenty families' separations with kids failing to continue with college after high school.

These instances are very minor, but it undermines the role of fostering the sense of belonging and integration for refugees. It is also important to acknowledge that these minor frustrations add up and embolden the trauma that already exist within the refugee community. It is therefore important that issues of exclusion and marginalization of refugees addressed to try and nurture the social capital within the refugee community.

The proposed design of the Refugees Center and Small Business Incubator shall not treat refugee cases as "One shoe size fit all" but, tackle each case as unique and separate, as well as encourage both refugees and the people of North Dakota to be open minded and take time to experience each other during the integration period.

Cultural Context

The integration of refugees into American societies turned certain small towns into what is commonly known as a “Melting Pot.” Along with that comes cultural diversity. In Fargo for instance, it was not a common occurrence in the mid-nineties to walk into a mall and meet people who are of the African descent. Today the story is slightly different because of the thousands of refugees that have resettled here.

Prior to the resettlement of African refugees in Fargo, the population was over ninety-nine percent white or of European descent. Their behaviors linked to traditions and customs that the refugees viewed as different. For example, the food they eat, the way they dress and the holidays they celebrate. Some cultures are tied to a particular religious believe and that tends to inform peoples’ behaviors and the way they conduct themselves.

Refugees must have the understanding and adapt to live in the cultural context of the community they intend to integrate into. Therefore, the ability to understand and communicate effectively with individuals from a wider range of diverse cultures creates self-awareness when dealing with people from diverse cultures.

Cultural differences between refugees and the people of the community can be overwhelming sometimes especially when culture is the bases that provides a sense of identity. Changing demographics for refugees directs them away from their social and cultural identity which is based on religion, language, and race.

Earlier in the integration process, both refugees and the local population become disoriented after suddenly subjected to an unfamiliar culture, customs, and values. It is view as a challenge to ones' sense of identity and in turn creates the urge for protection and isolation.

The proposed Refugee Center and Small Business Incubator will help refugees maneuver ways and means of acculturation while maintaining their culture, tradition, and values.

Project Site Analysis

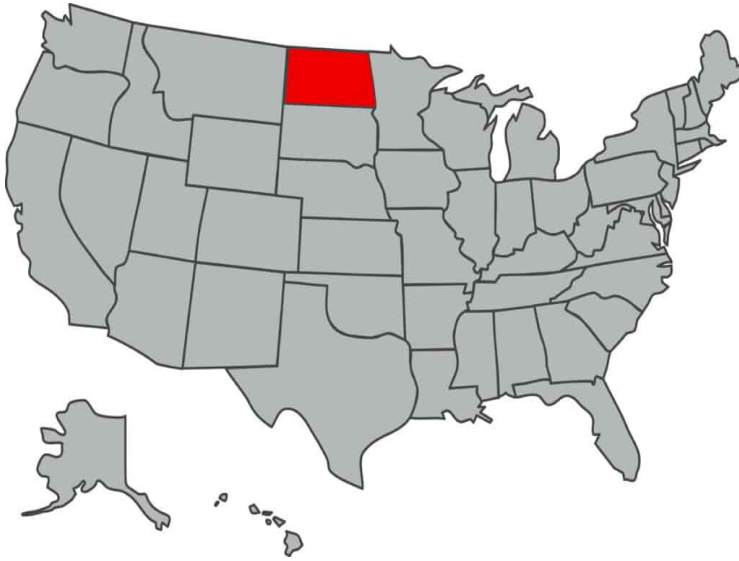


Figure 06

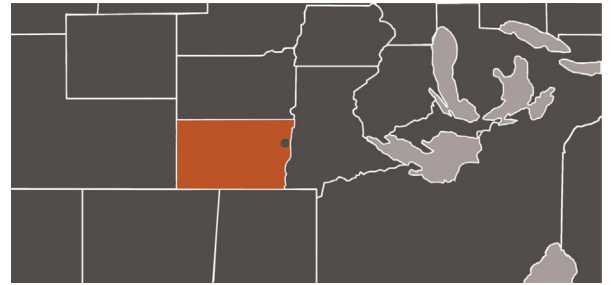


Figure 07



Figure 09



Figure 25



Figure 25



Figure 25



Figure 11



Figure 26



Figure 26



Figure 26



Figure 27



Figure 27



Figure 27

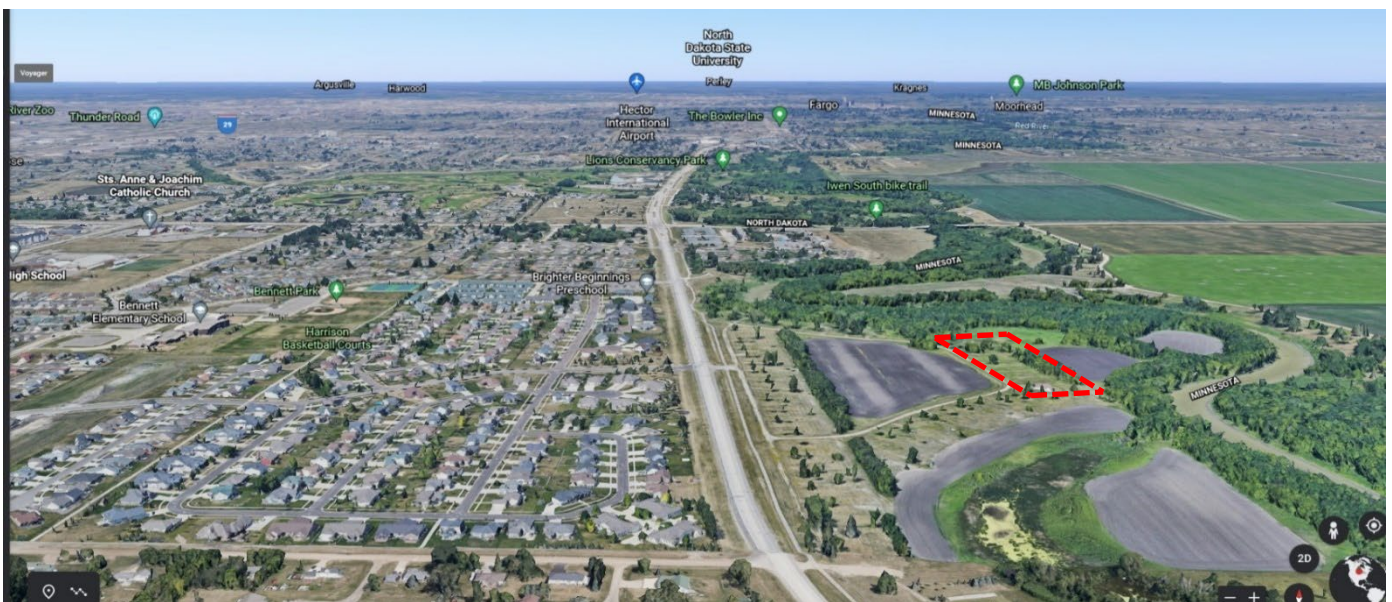


Figure 11



Figure 28



Figure 28



Figure 28

Site Analysis

The average temperatures in Fargo, remain at zero or below zero almost 50% of the time.

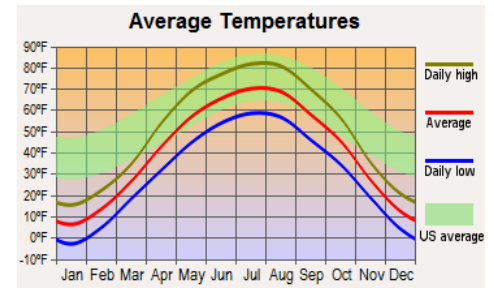


Figure 29

In Fargo, ND the time of the day varies throughout the year. December has the shortest daylight time of 8 hours and 32 seconds, and June has the longest with 15 hours and 54 seconds of daylight.

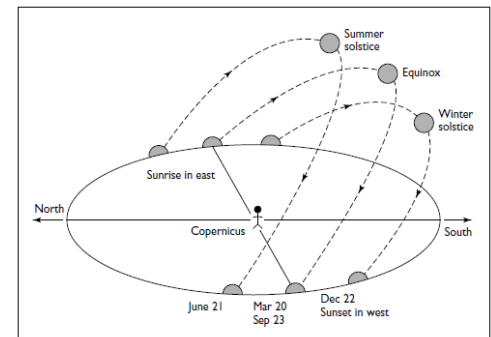


Figure 30

The average high sunshine in Fargo compared to the National average occurs between June and July at a little over 70%.

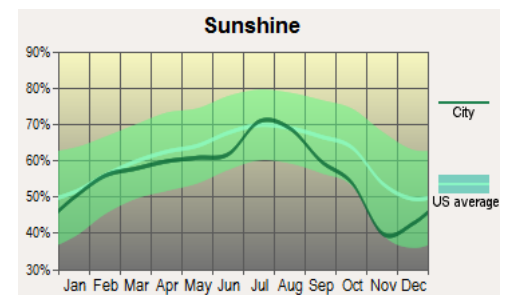


Figure 31

The prevailing wind speed over the course of the year vary between 10 and 14 mph.

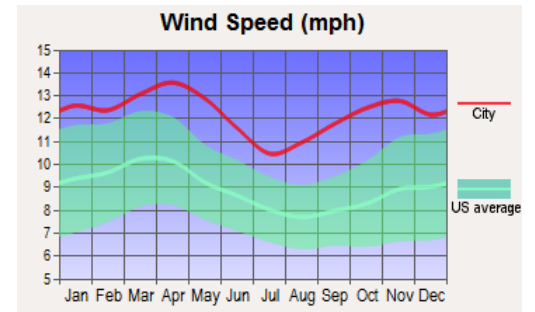


Figure 32

The prevailing wind flow as shown in the wind rose has a strong incoming N & NW wind flow and S & SSE return flow

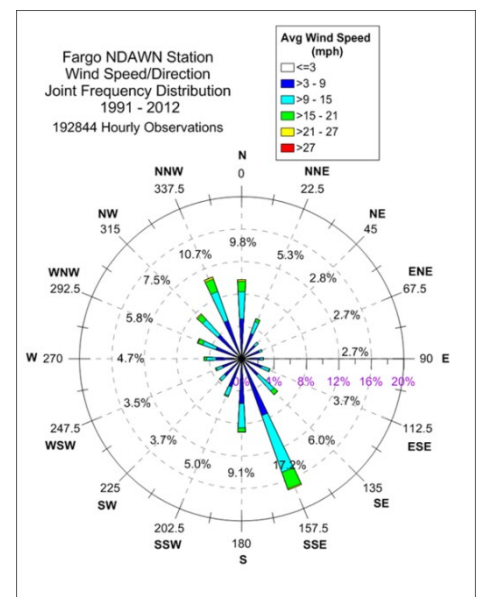


Figure 33

Cloud cover in Fargo ranges between 25% which is mostly clear to about 80 % partly cloudy. December represents the cloudiest time of the year and August shows the clearest but that begins around May

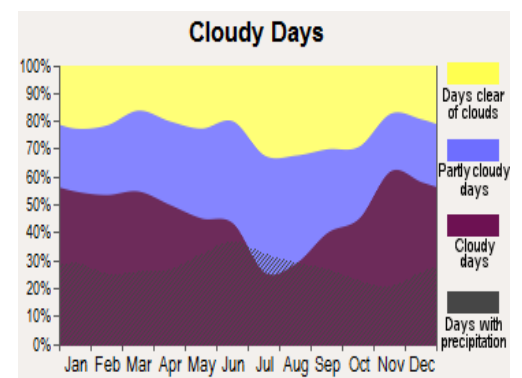


Figure 34

January has the highest snow fall total of about 9.5 inches. Snow fall starts around October and continues through March.

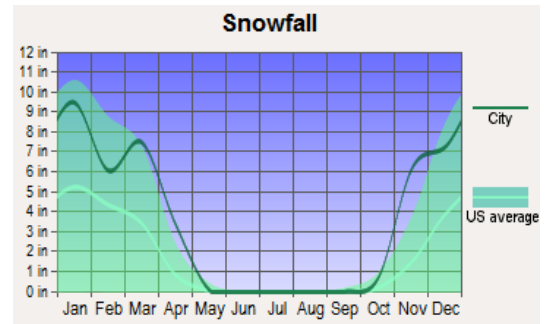


Figure 35

The average precipitation in Fargo is a little over 3 inches and that happens mostly between May and June

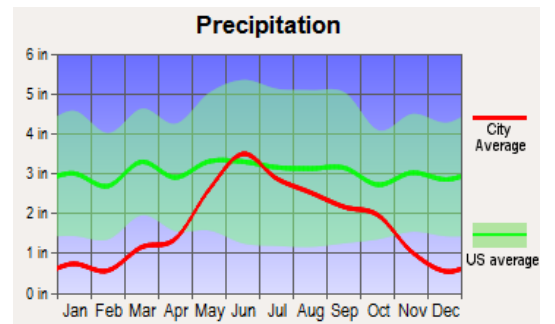


Figure 36

Humidity in Fargo is over 80% around July and August. It has a humid continental Climate.

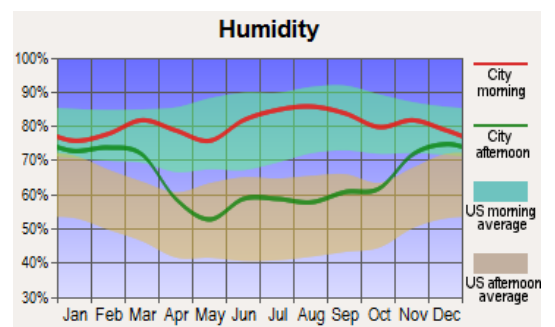


Figure 37

Performance Criteria

The Refugee Center and Small Business Incubator is a project intended to help refugees regain hope, confidence, and freedom. Refugees have gone through misery, suffering and self-degradation but, it does not have to end that way. The project performance criteria for the Refugee Center and Small Business Incubator will be justified by the effect of space and its usage in changing behaviors.

Space Interaction Matrix

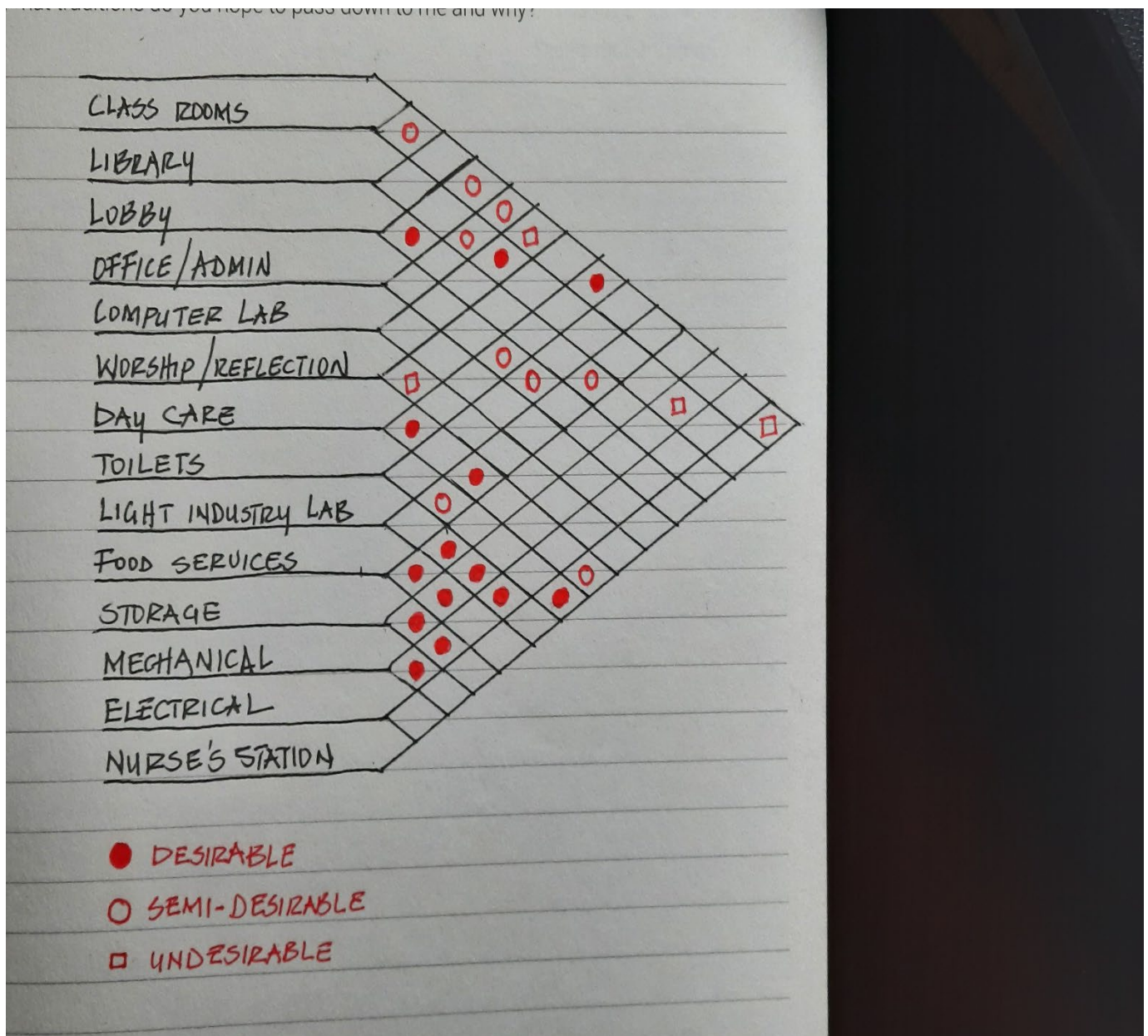


Figure 38

Space Interaction Net

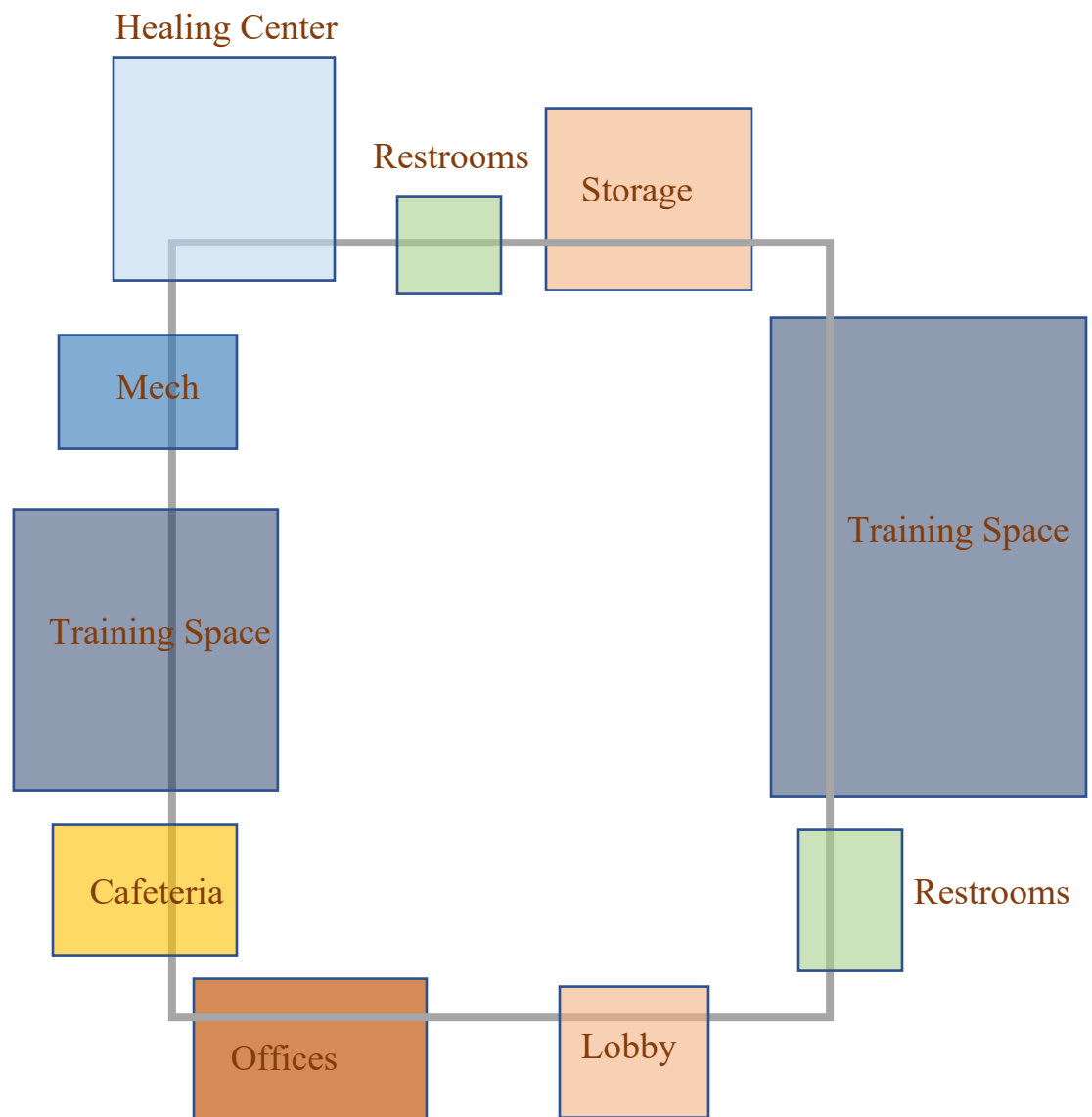


Figure 38

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Thesis Design Solution

Process Documentation

Project Solution Documentation

Performance Analysis / Site

Performance Analysis / Research

Performance Analysis / Goals

Critique of Applied Research

Digital Presentation

Photograph of the Final Boards

Reference List

Studio Experience

REFUGEES CENTER &

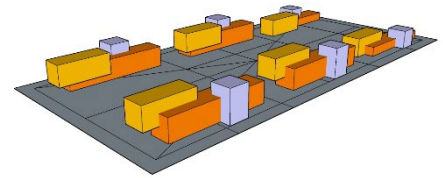
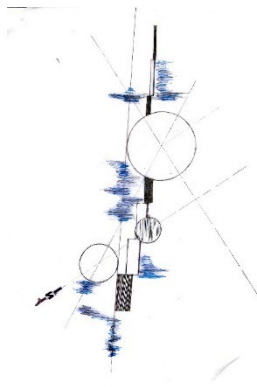
Small Business Incubator

6102 10th St. South Fargo, ND 58104



Figure 39

Process Documentation



The use of simple geometric shapes help understand how space interact to creates a specific impact.

By using the circles, squares, triangles, and rectangles, I create spaces that are both positive and negative in nature.

These spaces that I created by the shapes are just abstract concept applied to a two-dimensional surface. By arranging these shapes in a linear and overlapping forms, I develop spaces that influence the way one may behave when interacting with them.

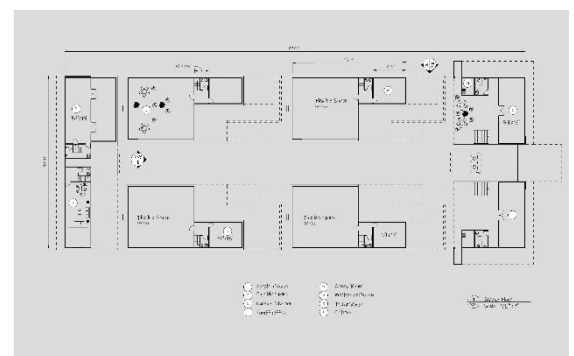
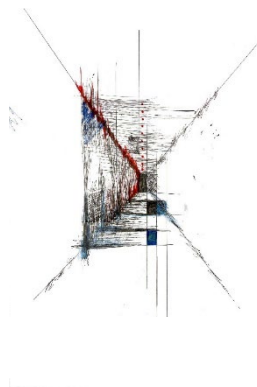
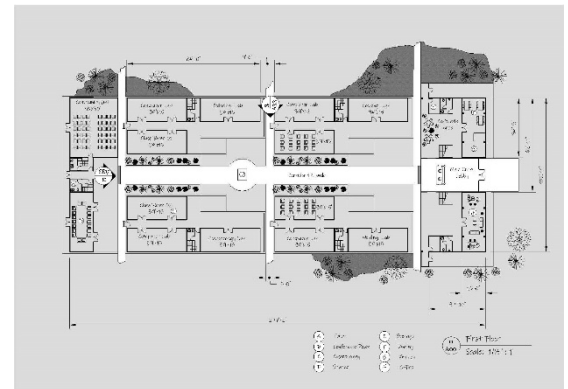
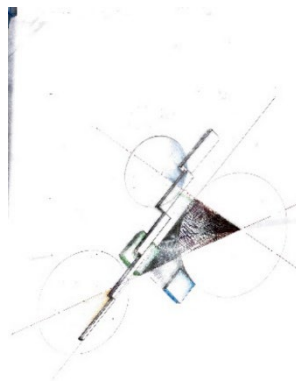


Figure 40

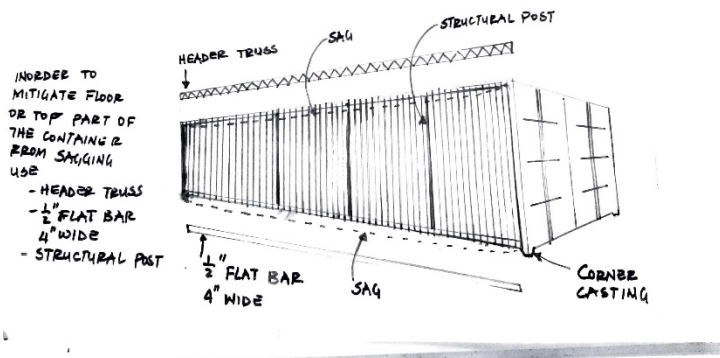


Figure 41



Figure 20

Unlike other building materials, shipping containers are not built for making homes but, they can be modified to fit the purpose. By cutting out the side panels to create windows and doors, we weaken the structural integrity of the shipping container therefore, we introduce the use of steel Header Trusses, Structural Post, and flat Metal Bars to mitigate the problem of sagging. For the purposes of attaching the containers together, instead of welding we use the shipping container connectors which makes it easy to disassemble and move to a different location

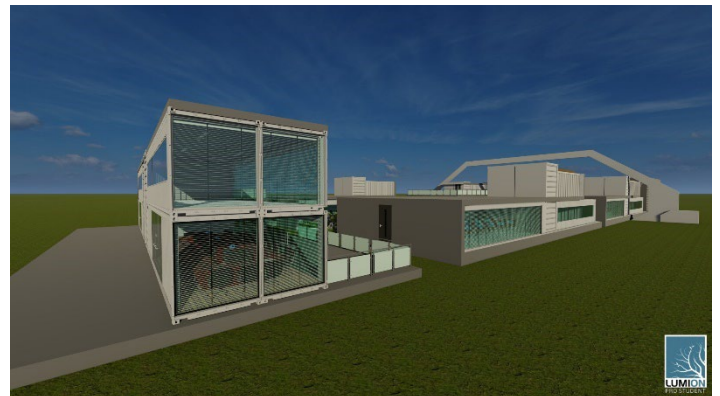
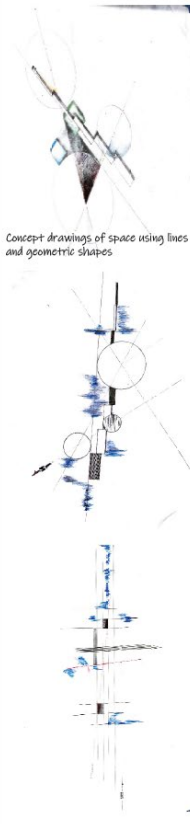


Figure 42

A map of the United States with the state of North Dakota highlighted in red. A black dot is located within the red state, representing the location of the study.



Refugees may continue to live as productive members of the society and maintain their culture, traditions and heritage.



A long, brightly lit corridor with a series of tall, slender columns and a complex, geometric ceiling structure, likely the interior of a modern building. The perspective is from the end of the corridor, looking down its length. The columns are light-colored and support a dark, intricate truss system. The floor is polished and reflects the overhead lights. The walls are dark, and the overall atmosphere is modern and architectural.

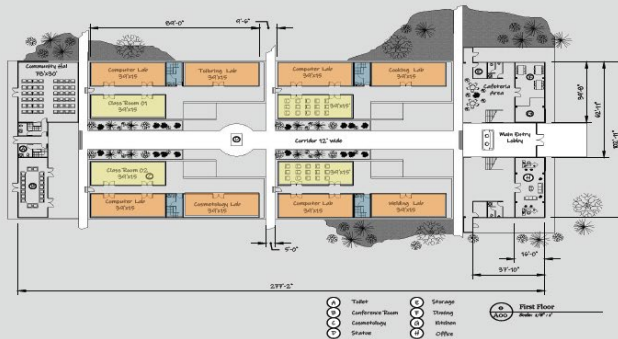
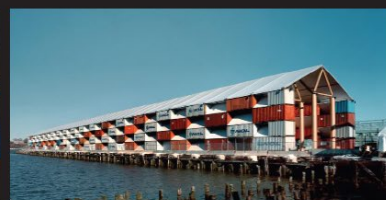


Figure 43



By using the Photovoltaic Watt calculator, the RC & SBI site is located in Latitude 46.81 and Longitude -106.78. The Calculator generated the following variables:

Array Type - Fixed Roof Mount.
System Losses (%) - 14.08
Tilt (Degree) - 20
Azimuth (Degree) - 180

The retail electricity rate for commercial building in this area per the the TVWatt calculator is \$0.08 kWh

The resulting solar Radiation is 4.51 (kWh/m²/day) = 48.437 (kWh/ft²/day)

The total area of the solar panel is 51'x16' = 816 sq. ft.
Total area of the RC & SBI building 277'x122' = 33,794 sq. ft.

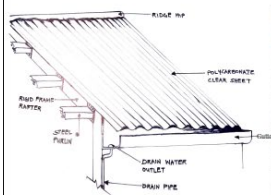
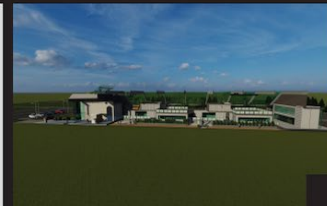
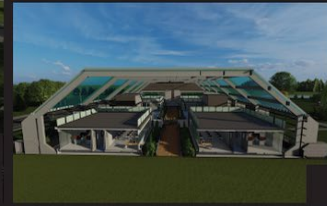
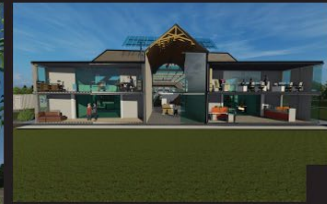
Therefore 816 sq. ft. x 48.437 will equal to 39,524.592 kWh/day.

Using xcel figure of 9 kWh/sq. ft./day multiply by the total area of the building 33,794 sq. ft., we'll get 304,146 kWh/day

Therefore 304,146 kWh/day x 365 days = 111,013,290 kWh/year.

And for our solar panel, 39,524.592 x 365 = 14,426.08 kWh/year

About 1/10 of the total power required for the whole building. That fraction would be used to pump the harvested water for indoor irrigation and other minor operations within the facility.



The major elements that make up the Building Structures and the skin are the Rigid Frame Rafters, the Steel Purlins, the Concrete Footings, the clear Polycarbonate sheets and the shipping containers.

The use of Polycarbonate for roofing the RC & SBI helps in the Green House Effect and allows the refugees to extend their growing season during the Winter Months, creating a perfect condition for planting all year round.

Polycarbonates are best known for blocking 99 % of Ultra Violet Rays, and the diffused lights saves plants from Burns.

Water harvested from the roof during snow and rainy seasons are Chloride free and good for irrigating the indoor gardens during the winter months.

The Interior Images directly to the right shows paved corridor with Earth transported from Africa in shipping containers used in constructing the units for the programs. The Earth and Sky connection attempts to bring nature and its energy inside the traumatized refugees for healing and well-being purposes. The long stretch corridor paved with the Earth reflects on the refugees journey from Africa, the long distance walk on bare foot in search of solace. The connection between the Earth and the sky through the clear polycarbonate roof manifest the relationship that humans have with the Earth and the Heavens in search of peace.



Figure 44

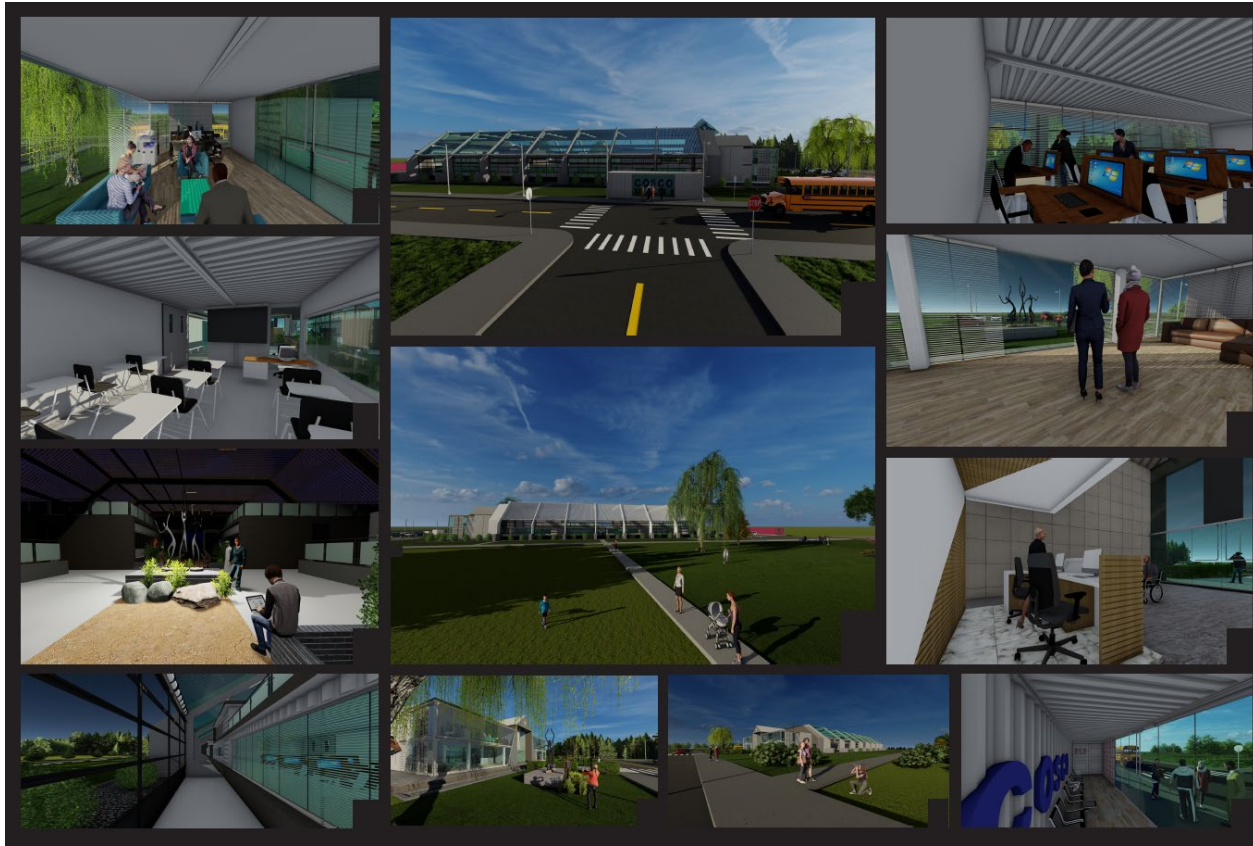


Figure 45

Composition of the various spaces within the building and their corresponding programs. Exterior of the building and the different activities and amenities associated with them. The overall bird view of the building and how it sits on the site. Main entry facing South.

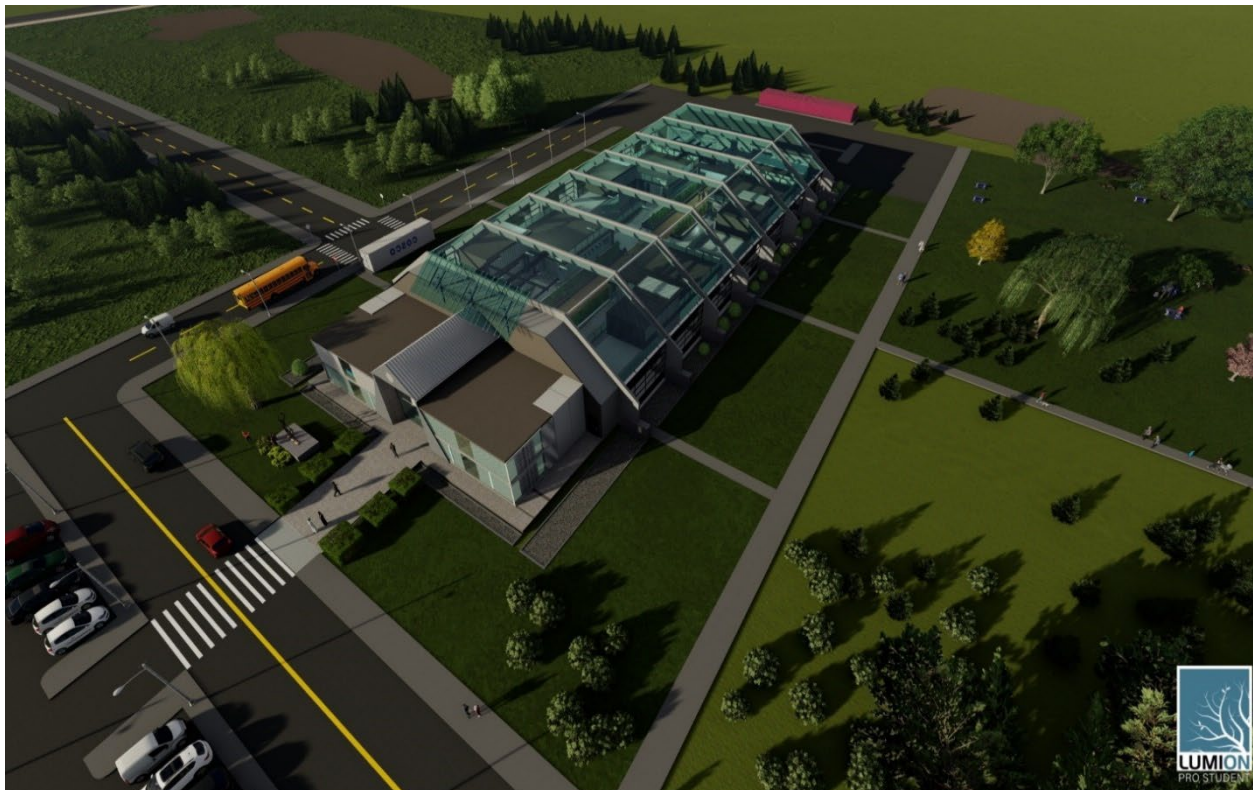


Figure 46

Performance Analysis / Site

Prior to the resettlement of African refugees in Fargo, the population was over ninety-nine percent white or of European descent. In fact, it was rare in the early nineties to walk into a grocery store and meet people who were of the African descent. Today the story is slightly different because of the thousands of refugees that have resettled here.

Fargo is a very suitable place for this project because of the number of refugees who have settled here. Of all the refugees that come to North Dakota, 70 % settle in Fargo making it the largest hub for refugees in North Dakota.

The location 6102 10th St. South Fargo, ND 58104 in particular is important because of its proximity to water and easy access to the larger farming land across the Red River.

With small organic farming activities, this site is a good start point, and if needed the group can extend their activities across the Red River to Moorhead Minnesota where there is a lot of farmlands.

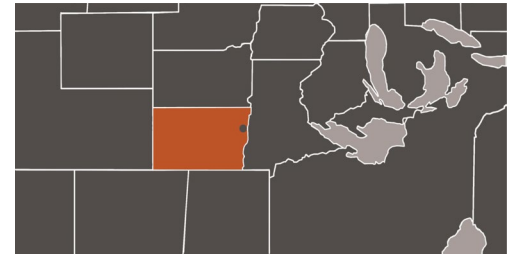


Figure 07

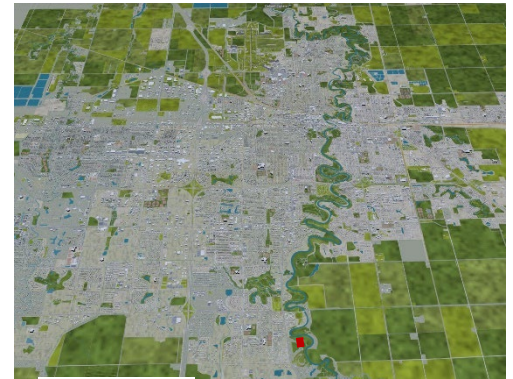


Figure 09



Figure 10

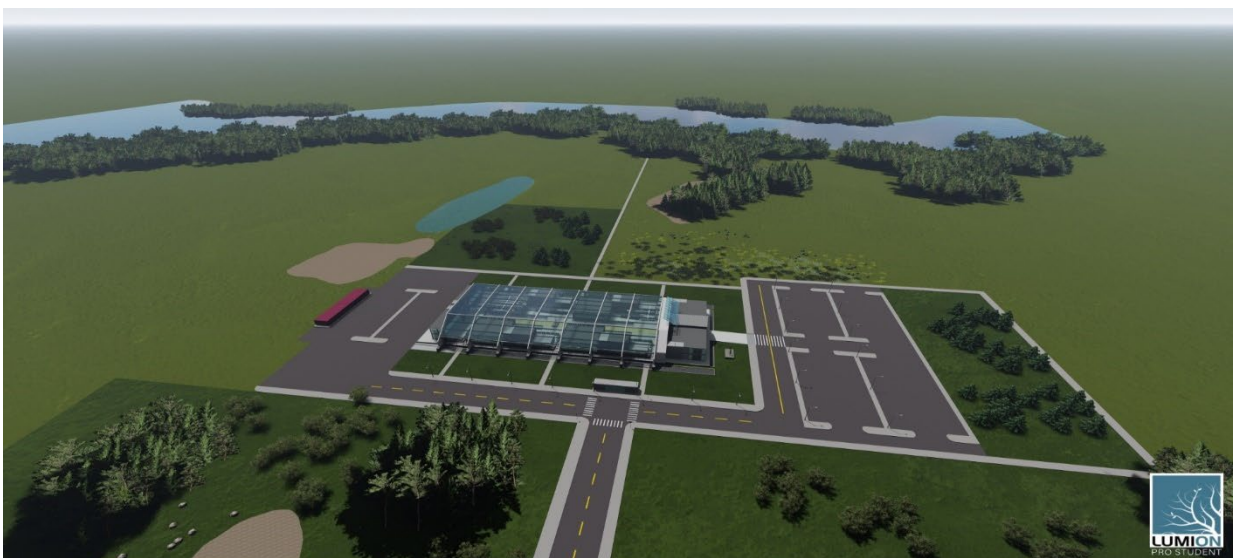


Figure 47

Performance Analysis / Typology

The proposed design for Notre-Dame Pavilion was to provide an emergency and temporary facility for the patrons of the cathedral. The design concentrated around simple, recyclable materials. The structure anchored by wood-paneled shipping containers that connect to paper tube columns via rope. The columns and wooden trusses support a simple white gable roof, leaving the space open to the elements. In creating the structure, shipping containers stacked in a checker pattern to facilitate easy movement of patrons on the ground level.

The proposed design of the Notre-Dame Pavilion sheltered around Shigeru Ban's concept of simple and recyclable materials in the form of shipping containers and paper tubes of which he is famously known for. The columns and wooden trusses designed to support a simple white gable roof leaving the space open to elements

The proposed Notre Dame Pavilion and the Nomadic Museum both by Architect Shigeru Ban informed every decision making in designing the Refugees Center and the Small Business Incubator. From the long central corridors to the use of shipping containers for creating space.



Figure 19



Figure 20



Figure 48

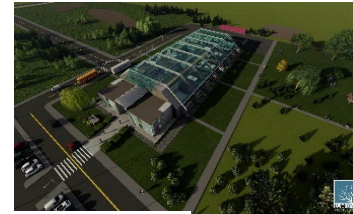


Figure 46



Figure 49

Performance Analysis / Goal



Figure 50 The RC & SBI hopes to uplift and offer refugees a second chance at life. The major emphasis therefore is to heal refugees of their trauma and then embark on skill development programs. The Architectural design will create an environment suitable for healing and a makeshift for economic development.



Figure 39 RC & SBI will give refugees the platform or avenue where they can leverage their talents, skills, social and business acumen.

The design of the project will focus more on healing and well-being of the refugees. Having a transparent roof system, an earth corridor, with plants lined on the side will create an environment of reflection and spirituality.



Figure 51 The outcome of the project will allow easy understanding and communication between the refugees and their host. It will also allow for a desire to learn and adapt to acculturation.

Looking at the outcome of the design, I have no doubt if constructed, the RC & SBI will achieve everything mentioned above.

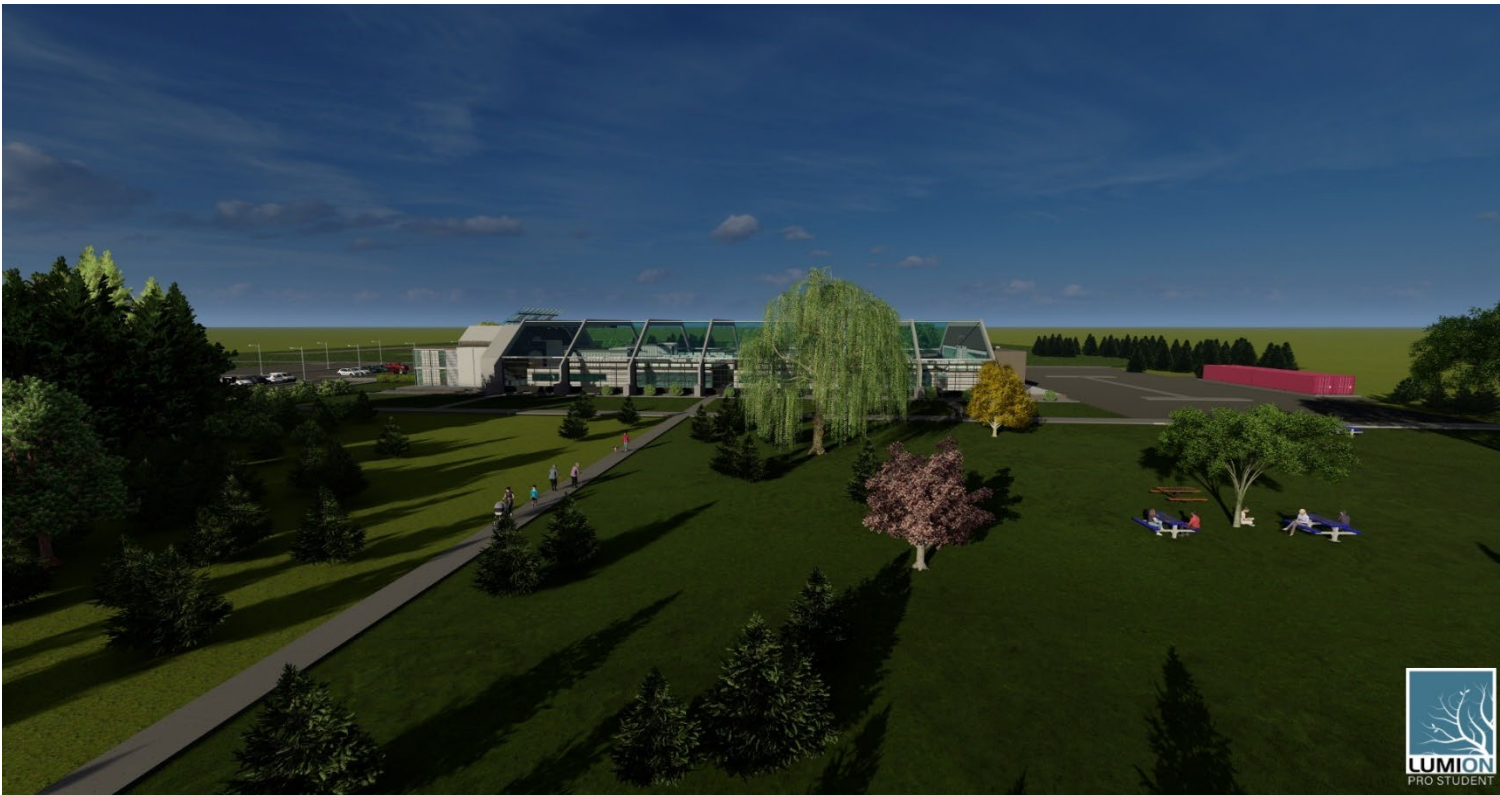


Figure 52

Case Studies / Research Method

The Nomadic Museum was widely welcomed around the world, partly because of the design and the materials that Shigeru Ban chose. In fact, the Museum somehow emerged to be an exhibition itself overshadowing the art exhibits the Museum was intended to house.

After every exhibit the containers are disassembled, and few containers used to store the exhibits and transport them to the next venue.

The refugee crisis seems to affect people around the world randomly. For example, eighty years ago, Europe was overwhelmed with refugee crisis and since then Asia, Africa, and South America.

The need for a recyclable and easily transportable material in constructing the Refugee Center and Small Business Incubator facility seemed to stand out. Having a building that can be easily transported from one place to another in response to the refugee crisis would offer an opportunity most refugees rarely enjoy.

Looking at the two designs side by side, it is visibly clear that the research intent and the outcome has been achieved. The shipping containers arranged on both sides to house the exhibits, and the long middle corridor that invokes spiritual journey. In the case of the Nomadic Museum a journey into art exhibits while for the Refugee Center and Small Business Incubator a journey to find solace and economic freedom.

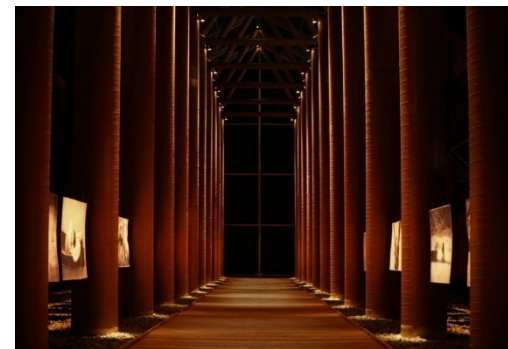


Figure 23



Figure 39

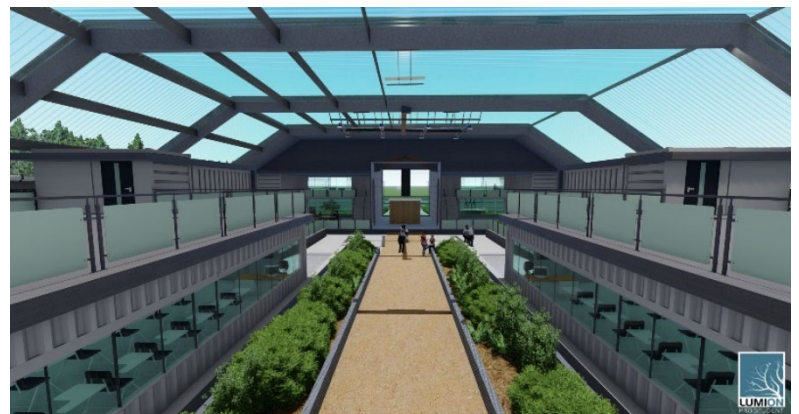


Figure 53

Digital Presentation



Figure 54



Figure 55



Figure 56



Figure 57



Figure 58



Figure 59

Photograph of the Final Boards

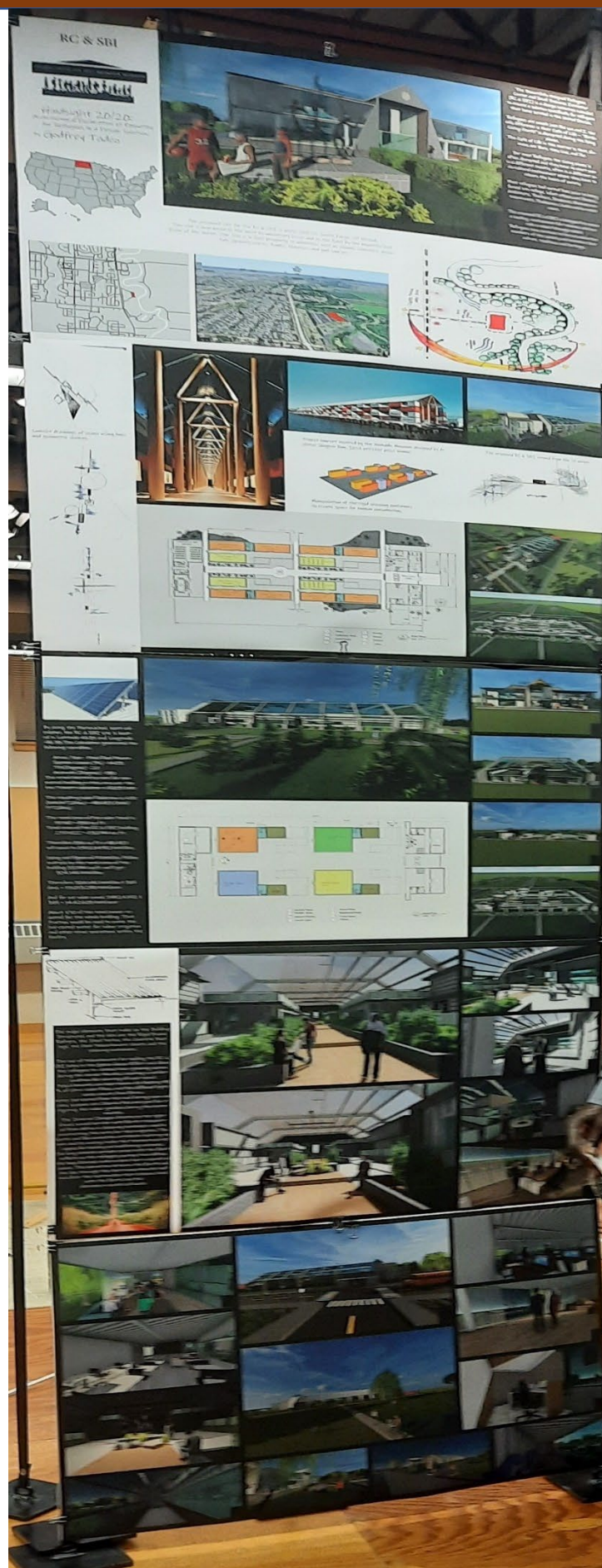


Figure 60

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Studio Experience

GODFREY TADEO



5TH YEAR

Fall and Spring: Dr. Ganapathy Mahalingam.

Fargo, North Dakota

The Refugees Center and Small Business Incubator