

## SLIDE

It is often said that we don't know where a journey will take us or where it will end. Sometimes we don't even realize we are on a journey or know where it all began. With every connection between two things, two experiences, two people, and even two moments in time, there are countless more connections that flow from each. When I look back at the thesis project here today, it is a moment along a journey that I never realized started so long ago. Over five years ago, I was leaving the twin cities on my way to Fargo to visit NDSU for the first time unsure of where I was headed in my life when my mother received a phone call. My grandfather, who was in the hospital with a failing liver, had just received the news that a liver had been found, and surgery to perform the transplant was scheduled for the morning. Suddenly plans all changed and my mother headed south to be with her father before the risky procedure. What made the operation even more dangerous was that this was not his first transplant. Thirteen years earlier, before I was even old enough to read, his liver had failed and it was uncertain how much longer he would live, certainly not more than a few days or weeks. It was then that he received the miracle of a transplant, a gift of life. For more than a decade he lived on borrowed time though this gift of another person's liver only made possible through their family's hardship. Through it he had gotten the chance to travel the country and the world, to see his sons get married, and to be part of the lives of five more grandchildren. He had taken every opportunity to be a part of my life, coming to school functions, taking my sister and me camping, and even taking my family to the black hills and then Yellowstone. He told me stories about his childhood mischief and taught me about making the most of life. He educated me on how to make the very best s'more and made sure we took a picture of every bison we saw, ironically his favorite animal.

The second transplant was also a success, another miracle granting him more time. Again, he was an active part of my college education, always interested in my work and even asking if he could travel with me when I studied abroad last year.

It was during this time abroad that we were asked to submit a question for our thesis. Branching off of other personal life experiences and crises faced by friends, I had posed the question, "How does one receive healing and comfort, that is, receive consolation or relief from sadness, sorrow, pain, or worry and receive the strength to hope and continue living? How can architecture respond to this?"

## SLIDE

I envisioned a place of quiet and meditation or a spiritual setting, a place to escape from life's difficulties.

## SLIDE

Soon after I returned home, it was clear that my grandpa's liver was failing again, his liver disease returning. This time there would be no transplant, so after several weeks in the hospital, he was sent home. I was lucky enough to have the chance to spend time with him and say goodbye to him not long before he died last June after the gift of 18 additional years of life thanks to an his two life-saving transplants.

I did not make the connection between him and my project until the fall, when, thru the beginning of my research, I decided I needed a more focused program and user. Thinking back over the years, I remembered the countless days my grandfather was in the hospital, days my grandmother and mother spent at his side several hours from home. On top of the stress of a loved one in the hospital, an impersonal hotel room or chair in the corner of his hospital room would have had to act as their home. Bills added up from the numerous tests, drugs, and nights he spent in the hospital. The relief came for them in a small house near the Mayo Clinic, one where they knew they could stay as a home away from home.

### SLIDE

In addition to an affordable place to stay for the night, it offered the needed but often forgotten comforts of home such as a kitchen, a laundry room, and a place to be with other people who understand what you're going thru. It is a place for patients to stay when not staying overnight in the hospital, but still in town for tests before or after a transplant. It also serves their families during any length of stay. It seemed to be the kind of place that fit with my question and a place that held great meaning for me, fueling my ambition for the project.

### SLIDE

As my research progressed, I looked at connections. I explored the connections that people have with each other, a higher power, the built environment, and nature, focusing some on the ideas of Feng Shui. I also explored other similar buildings. Very few transplant houses exist today, less than a dozen that I could find.

### SLIDE

Few people know they even exist or even much about the life-saving power of a transplant. However, most people have heard of a Ronald McDonald house, which is similar home, except focused on kids with various life-threatening illnesses. I explored how these houses work and what some of the goals behind the architecture, such as the importance of views from each room and a feeling of community in the shared spaces.

### SLIDE

I also looked at several of the award-winning Maggie's Centres in the United Kingdom. They don't function as a residence, but rather a place where anyone affected by cancer can escape for a bit, find out more information, or simply find community.

Already, the initial direction of my design was beginning to come into focus. And so I set out to design a transplant house, one that was a hybrid of a residence and a place of escape, even for just a few hours, and one that would be conceived in such a way that would allow for affected children to stay in the house as well.

## SLIDE

My parti, or initial idea that I could look back on for inspiration and direction, focused on the idea of connections and balance. Separately, the three pieces do little, but when connected, they balance, seemingly against the odds, and even when one is hurt, the connection allows them to continue to stay in balance.

## SLIDE

From there, I began looking at my site in Minneapolis, Minnesota. The site I selected for my project was on where I saw a great need for such a house.

## SLIDE

The University of Minnesota Medical Center performs over 300 transplants every year, making it one of the top university hospitals in the world for transplants. It specializes in transplants in children and high-risk cases. No transplant house currently exists for the transplant center there, and so I began looking for a place that would make a suitable location for this house of healing and comfort.

## SLIDE

A sliver of green exists along the Mississippi River nearby, beginning in a park just south of Gehry's Wiseman Art Museum and then winding along the river with a bike path hidden among the trees. Set apart from the busy university by a steep hill and abundant foliage, it seemed like it could be the perfect location for a small oasis house. When I visited the area, I was struck by the contrast between the hospital and the park.

## SLIDE

Amid the huge hospital buildings at the University of Minnesota Medical Center, it is easy to feel insignificant, overwhelmed, and disconnected. The towering buildings cut off any views, and the whole environment is one of sterility and anxiety. Finding where you want to be is nearly impossible unless you ask one of the unsociable employees marching between buildings.

## SLIDE

If you reach the edge, where a winding road marks the backside of the medical campus, a hint of life captures you.

## SLIDE

One side of the street is lined with cold facades while the other is cushioned by a soft line of trees.

## SLIDE

Stairs switchback into the valley below, and one branch of the road snakes down gradually. Here lies the tail of something inhuman and the beginning of something more natural.

### SLIDE

Cars and traffic takes their seats, and a path unfolds for us. Here, at the intersection of these two contrasting environments lies a place for man to dwell. From this crossroads, though in a valley, views thrive in contrasting balance.

### SLIDE

To the north, atop the bluff the once overwhelming hospital sits, its power reduced.

### SLIDE

To the east, a smooth, grassy plain emerges as a step in the naturally terraced landscape. It extends far into the distance slowly funneled by trees to the point where the path disappears into their blanket of green.

### SLIDE

The steady flow of the Mississippi River winds around from the south to the west, framing the views of its opposite bank, also flanked by trees and the companion hospital beyond.

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The view to the south almost appears to be a mirror, like a reflection of the site itself.

### SLIDE

To the west, a bridge can be seen pulling the two banks together. Every view is framed by the trees instilling life's energy into the place. Nature is allowed to govern the site with its tranquil presence.

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In harmony with nature, man has left footprints on the site. From the manmade path to the area where his machines sit, there is no doubt that this is a place for man as well as nature.

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The newly constructed boathouse rests near the far limits of the grassy plain, offering a symbol of health and wellness. It is the only manmade structure that occupies the park, other than the tree-like legs of the platforms spanning the river high above.

### SLIDE

The field is tended to by man, its decoration kept short and regular offering a place to run and play.

### SLIDE

It offers an interruption from the groves of trees around, allowing the sun's warmth and light to penetrate onto the site. Light and darkness dance across the site between the sun's rays and the shadows of nature's canopy. Intense light frequents some sections while it is scarce in others. A few streetlights dot the road, and the distant buildings offer a twinkle of artificial lighting.

### SLIDE

The stimuli of the site flood the senses. First met with vistas of sight, if one allows the other senses to roam freely as sight, they too will be met with the junction of the manmade and natural.

### SLIDE

Sounds of the river's soothing flow balance the sounds of traffic and the city. Wind rustles through the trees, which offer a buffer against its power, and creatures sing in the background.

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The refreshing, water purified air is filled with the scent and flavor of life and rejuvenation seasoned with a hint of the bustling city's polluted, stagnant sensation.

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Textures in the skin of the trees, ripples of grass, and waves of water excite the hands and inspire the mind.

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The site offers an oasis of life. It resonates with peace and healing in contrast to the cold air of the nearby health center.

**PAUSE! BREATHE!**

### SLIDE

I decided to use the far western corner of the site for my building for many reasons. First, it allowed the majority of the site to remain a public park and green area. Second, it allowed for the building to be tucked away from the general public and retain some privacy and intimacy with the surrounding environment still allowing for some more private green space focused at the occupants of the house.

### SLIDE

Third, it rendered itself a good location of strength and energy, with water and openness at the front, and a hill for strength at its back. Fourth and finally, it provided good views in all directions, including views of the river to the south and all the way back to the transplant center to the northeast.

### SLIDE

I illustrated many of these important connections with this map where I literally tried to tie the site to the various important aspects of the site and surrounding area. As you can see, it includes ties to nature, topography, views, even hidden links to the other hospital buildings and the Ronald McDonald House that serves them.

### SLIDE

Focusing even further in, I began to explore the movement within the building and spaces themselves. Drawing from the ideas of Feng Shui, I envisioned the spaces to be laid out in a radial, spiraling manner, as is common in nature.

### SLIDE

The entry would be prominent at the front, close to the water and outdoor public areas. From there the movement within the house would work through more public spaces such as living and play rooms into the kitchen and community dining area, then slowly work up to the more private and quiet spaces, separating them for privacy. At the back of the house would be the strong hill and private gardens, further creating a safe, personal, comforting space for the residents. I also did not want the separation and flow to be simply two dimensional. Instead I saw the spiral wrapping around and up allowing for more separation of the functions and a cohesive flow throughout the house, not just on each floor independent of the others.

### SLIDE

I continued studying Feng Shui in residential design more and began to gather different aspects of it that I wanted to apply in the house, aspects that made sense functionally and aesthetically as I tried to create an environment of comfort and healing. Feng Shui is a theory originating in the eastern world that is concerned with the connection between the built and the natural environment. It reminds us that we are inseparably linked to our environment, and it seeks to reestablish that connection via our senses and emotions. As with the spiral idea, shapes and forms in nature follow organic, regular, and simple geometric patterns. A design that is too

complex or irregular creates disunion between the two environments whereas proportions such as the golden section developed by the Greeks and a human scale to details and spaces help to reconnect the two. Paths should echo the timeless duration of nature; they should wind both vertically and horizontally, eliminating a straight course that allows energy to pass too quickly through it making it seem dead. Techniques that permit and encourage new discoveries, creating a sense of mystery and revelation through time and space follow from the natural. Natural lighting and even color and material palates that come from nature help unite the built and the natural environments.

#### SLIDE

On a practical and direct level some of the things I wanted to remember throughout the design include:

- Movement, as before, through the spaces, following a spiraling pattern
- Carefully watching for symmetry, even in the smallest sense such as putting doors directly across from each other
- Uses of high or vaulted ceilings sparingly, and only in gathering or public spaces, keeping them at a human level and scale in all other more private or intimate spaces
- Avoid the use of long hallways or paths

#### SLIDE

- Be critical of stair placement to not overwhelm the space, nor be a large focus in a house where the majority of vertical movement would probably be done in an elevator
- A low and prominent entry that is easily found and welcoming at a human scale, and creating a bridge between the natural and built
- Clear movement, direction, and way finding throughout the building

#### SLIDE

- Human details, fit to a human scale
- Use of natural light and ventilation as much as possible and in every space
- Avoid irregular shapes, even L shapes, and sharp corners eliminating the feeling that something is missing or something is lurking around a corner

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- A strong and clear foundation or grounding for the building, something that it can tie back to, and a lighter, smaller top as seen in nature
- Consider furniture placement, giving furniture a base or support so that its not just floating in a space or creating awkward flow

#### SLIDE

#### BREATH

#### SLIDE

After playing around with different space configurations, using the golden section to initially determine the proportions of each space, it was necessary and made sense to put in a strong element to tie everything together, more than just the center of the spiral atrium was doing.

### SLIDE

Two strong core walls were integrated into the design, running on the two cardinal axes as a further reflection of feng shui and the natural environment. Paths winded through them like thread passes through cloth tying the spaces together. Every space was arranged to touch one or both of the walls as they became the elements that connected every space together yet allowed them to be separate. They took on a thickness and strength to be a focus and a way for the residents to orient and ground themselves.

### SLIDE

In addition, these core walls took on human traits, acting as the veins that pumped vital fluids throughout the house. Fresh air ducts, pipes, electrical wires, and all other important mechanical system components flowed through them from the mechanical room that beat in the foundations of the building.

### SLIDE

They acted as the backbone, or main structural system for the building to which the smaller beam and column system connected like ribs protecting the important spaces and inhabitants.

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### PAUSE-----BREATH

### SLIDE

### PAUSE-----BREATH

### SLIDE

I continued making my concentration smaller and began to look at each space within the larger whole, focusing first on the individual bedrooms.

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A total of 8 bedrooms and 2 private apartments each with a private bathroom are included in the design allowing for up to 10 families to stay at the house at one time, including a host.

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No long hallways are used, most branch off a small gathering space restricting the number of each per floor.

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Each room or apartment is directly connected to one of the two core walls providing a visual strength, necessary structure, and vital technical connections to water, air, and power.

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They delicately touch adjoining spaces and bedrooms, allowing for almost complete privacy and limited need for acoustic treatment between the rooms. This also allows for the separation of the mechanical functions to help cope with immune suppressancy.

### SLIDE

None is a replica or mirror image of another, yet all are kept simple and understandable. These personal spaces were given top priority when it came to views out. Some face the river and a view that is secluded and quiet for relaxation. Others have views of the open public park, still inviting nature in, but also a view that is animated and filled with active life and people. Several have a hint of a view toward the transplant center itself, acting as a visual connection to a family member who may be staying there.

### SLIDE

The public spaces in the house have a more robust presence.

### SLIDE

Directly off the entry, they provide spaces that can be used for small gatherings, day visitors like in the Maggie Centre's, and also as a place for community within the house to grow. Doors off the main living room allow it to connect almost uninterrupted to the park outside making it animated and fresh, filled with the light, sounds, and smells of outside.

### SLIDE

Variety in the spaces prevent it from becoming stagnant or dead despite the regularity of the shape of the spaces.

### PAUSE

### SLIDE

The communal dining room and kitchen continue the gathering space, offering a variety of options for communal eating and cooking.

SLIDE  
PAUSE  
SLIDE

The main dining area lies in the central atrium and is flexible to accommodate many people or other functions. From the main floor of the house the public spaces taper off as you ascend or descend.

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Below are flexible spaces

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And louder activity spaces that allow for the noise from them to be separate from the bedrooms, as well as laundry rooms, storage and the mechanical room.

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Above the dining area are smaller, more intimate or chance meeting and gathering spaces, a TV room focused more toward overnight guests, and small quiet spaces for meditation.

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An elevator and staircase sit central to the plans allowing easy and direct access to all the bedrooms if one needs to be alone and does not wish to walk through the active community spaces.

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At every level there is access to green space, whether it is directly out into the park or one of many extensive green roofs. This allows for a degree of privacy to be achieved while still being outside in the midst of a public area.

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PAUSE  
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I took one more step closer and looked at materials and several details within the spaces. I selected a color palette for each space, keeping in mind the energy it gave.

SLIDE

The core walls add texture to each of the spaces with a red and tan stone color palette. The modular nature of stone brings the massive walls down to a human scale while still portraying strength and foundation. Neutral spaces took on a warm yet simple light brown, to be warm and comforting, yet not chaotic or overwhelming.

SLIDE

Warm active colors were used in the public spaces such as yellow and red.

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PAUSE-----BREATH

SLIDE

Contemplative spaces were painted with a cool yet active color such as purple or blue.

SLIDE

Two color palettes were selected for the bedroom spaces, one blue and one green. Each of the colors is nature based and not overpowering for the given space, but also not a color possibly associated with death or disease. Hardwood floors would be used to make cleanup easy to keep the house sanitary without being stiflingly sterile like the hospital. Rugs, pillows, and other soft, home items would be used to soften these hard surfaces and allow for more individual control.

SLIDE

Finally, I looked at the windows and exterior doors used.

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As the connection points between the inside and the outside, as well as a focal point of each space, I saw this as a detail that I could use to add a final layer of comfort for the residents.

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I worked through many window variations, finally deciding that a few simple, customized windows would make the spaces feel most like a special and comforting home.

SLIDE

The main window used has mullions based on the golden section dividing it and creating various frames for the views. It is operable like a European window as both a casement window and an awning window depending on the weather and amount of ventilation desired. The Exterior doors are comprised of four sections, with the dividers based on my parti. The biggest section is the door panel, with the smaller window above it also being operable to allow for varying degrees of ventilation again.

## SLIDE

Finally, the only interruptions to the regular, cardinally oriented walls are the distinctive window seats in each bedroom. With their three-dimensional windows offering views of nature and a personal space of peace and reflection, these seats cradle their inhabitants in a world set apart from the monotony and hardship of reality. Based off a simplified interpretation of the floor plans each window contains 4 independent panes, four interior framing members, and three modules all intended to give a sense of human scale or something of a size you could handle with your hands. Two of the openings are operable, allowing fresh air in, and they are arranged in such a way to create a specially framed view when one is seated. The varying depths of the window create interesting shelves for plants, pictures, books, or even just a refreshing cup of tea. Still directed in to create a sense of being held, the seats themselves are proportioned to fit a seated person, and vertically at the height of a wheelchair to allow them to accommodate those with disabilities as well. There is a small shelf or container carved in the largest of the three blocks. Here sits paper and a pencil or pen. It can be used for journaling in the quiet, meditation time, to perhaps write a note of encouragement to the next family staying in the room, or to write one of the hardest letters one may ever have to write. When one receives an organ, especially in the case of a deceased donor, they often do not know who the donor was. Unless the family of the donor wishes the recipient to know, which is rare, little connection is made between the two parties. However, a transplant is perhaps the ultimate gift to give or receive and recipients are encouraged to write a letter in thanks to the donor's family to be delivered via the center. I remember my grandpa struggling to write this letter after his second transplant. What can you say to a family grieving the loss of a loved one to thank them for their generosity that has allowed you to continue living? It may take months or years to finally find the words to express such gratitude. This transplant house seeks to provide a space of comfort and healing even down to the smallest detail of providing a quiet, private space with the simplest feature containing paper and pencil. Even this tiny and seemingly insignificant connection may be just what a person faced with hardship needs to restore the balance in life.

## SLIDE

So with this design of a house, a home, connections are made, defined and explored. It does not stand independent. It cannot be isolated from its context for which and in which it was designed. To do this would be to only discuss it in terms of its physical aspects and remove it from the context of humanity. Its function is to serve people affected by organ failure and transplantation. Its architecture seeks to always be conscious of this as it can be their home away from home.

## SLIDE

Understanding this, I gave it the name Matilda's House in memory of my grandfather who used the name as a nickname for his granddaughters. The name itself means "strength in battle," a fitting name for a house of healing.

## SLIDE