

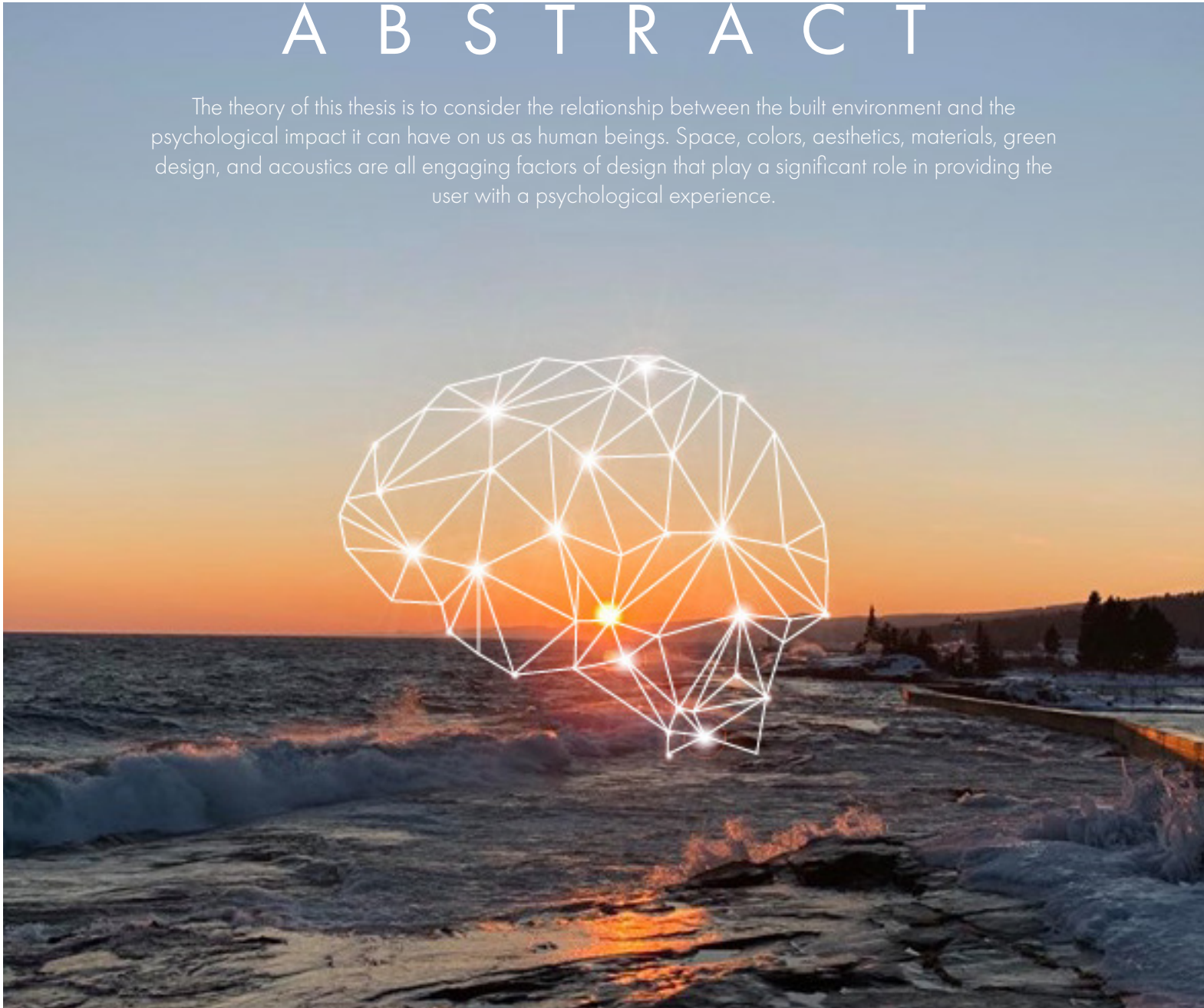
Psychology and Design

ALA MASTER'S THESIS
NORTH DAKOTA STATE UNIVERSITY

A DESIGN THESIS BY:
JENNA ROSE BORDWELL

A B S T R A C T

The theory of this thesis is to consider the relationship between the built environment and the psychological impact it can have on us as human beings. Space, colors, aesthetics, materials, green design, and acoustics are all engaging factors of design that play a significant role in providing the user with a psychological experience.





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

INITIATE SOCIAL ENVIRONMENTS

Determine the qualities of a social living environment and establish guidelines that will aide in the successfulness of the social environment.

CONNECT PSYCHOLOGY TO ARCHITECTURE

This connection initiates a positive reflection of the design strategies. By researching more about how spaces influence psychology, I can schematically design a living space that will initiate a positive connection between the built environment and the resident's biophysical well-being.

DESIGN AN INTERCONNECTED RESIDENTIAL AREA

Connect the environment, the design, and the biophysical response to initiate a relationship between space and psychology. If the relationship between these three elements is healthy and stimulating, this means my design is successful.

CREATE A SEAMLESS ENVIRONMENT

It is important to develop a design strategy that links the interior to the exterior and vise versa, so an overall understanding of landscape design is important. This will enable my design to tie the environment to the built space while working to move people towards the exterior environment.

3 Journal Articles written by scientists working within the WELL Living Lab (based in Rochester MN).

“Architecture for Well Being and Health” by Koen Steemers.

The Healthy Homes Initiative (H.H.I.), ran by the US Dept of Housing and Urban Development.





LIGHTING conditions

THERMAL conditions

ACOUSTICAL conditions



History

“

The built environment can impact occupants' comfort and satisfaction, mood, health, and performance. To optimize the built environment for occupants, we must begin to understand the interactive impact of environmental conditions on occupants.

(Jamrozik)

”

W E L L | L I V I N G | L A B

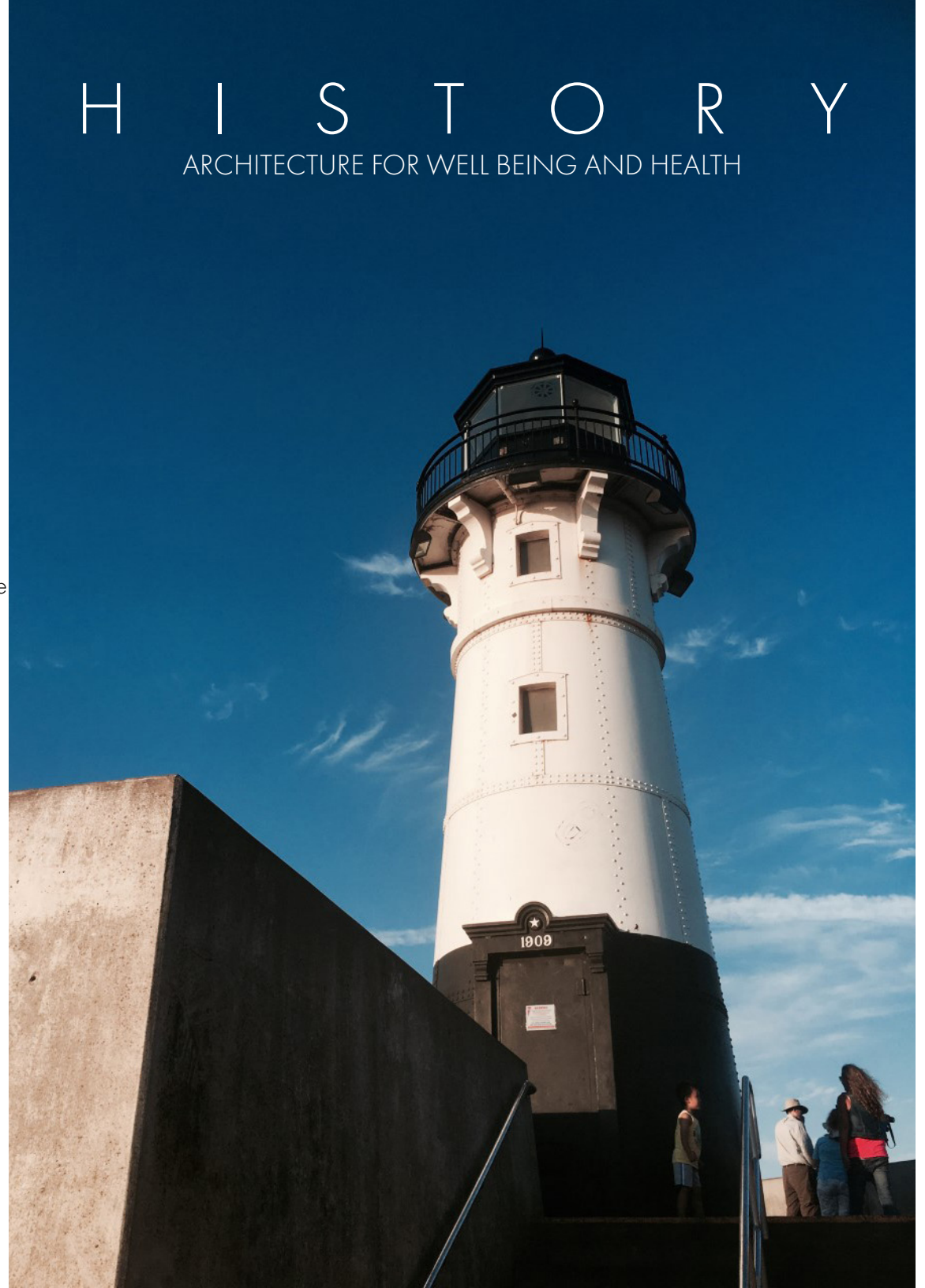
H I S T O R Y

ARCHITECTURE FOR WELL BEING AND HEALTH

“

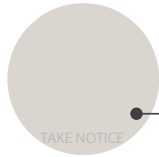
Health is no longer simply a question of access to medical treatment, but it is determined by a range of factors related to the quality of our built environment. (Steemers)

”

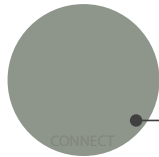


H I S T O R Y

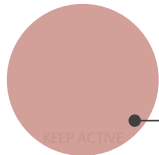
ARCHITECTURE FOR WELL BEING AND HEALTH



TAKE NOTICE: being mindful – paying attention to the present and being aware of thoughts and feelings – is a behaviour that reduces symptoms of stress, anxiety and depression.



CONNECT: the quantity and quality of social connections (e.g. talking and listening to family or strangers) correlates with reported wellbeing as well as physical health.



KEEP ACTIVE: there is ample evidence from global and meta-studies to demonstrate that physical activity reduces symptoms of mental and physical ill-health.



GIVE: evidence has emerged that pro-social rather than self-centred behaviour has a positive impact on happiness. Such consequences of altruistic behaviour are related both to spending on others as opposed to oneself and through volunteering and offering help.



KEEP LEARNING: aspirations are shaped in early life, and those who have higher aspirations tend to have better outcomes. Such aspirations are modified by the environment. The evidence shows that, also later in life, those participating in music, arts and evening classes, for example, attain higher subjective well-being.



5 Ways to Well-Being



History

HEALTHY | HOMES | INITIATIVE

Impact

M E N T A L | H E A L T H

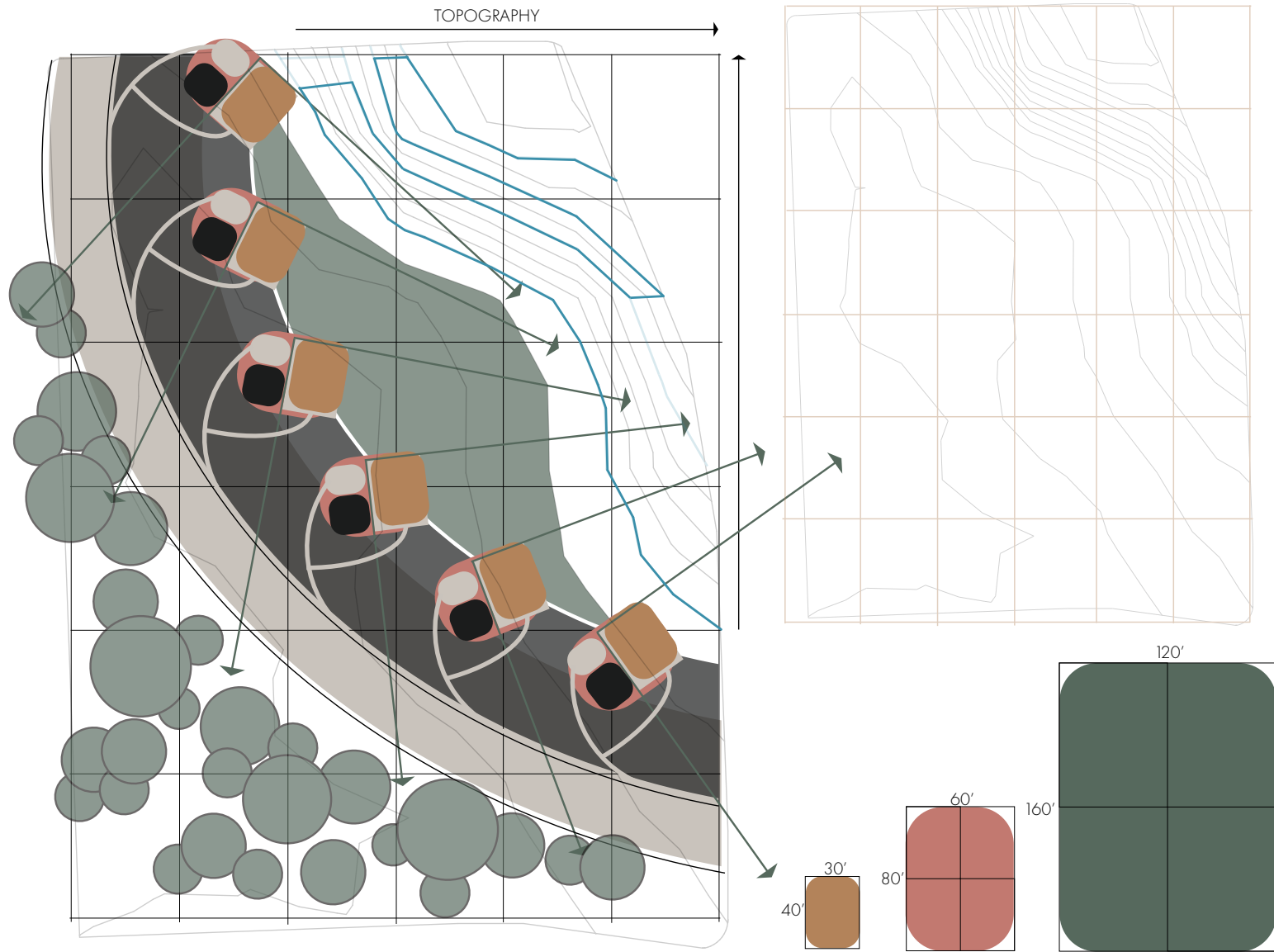


This society has done scientific research to guide their understanding of the direct impact our homes can have on our mental, social, and physical well-being. To this day, the HHI is working to better buildings that are already completed.

History

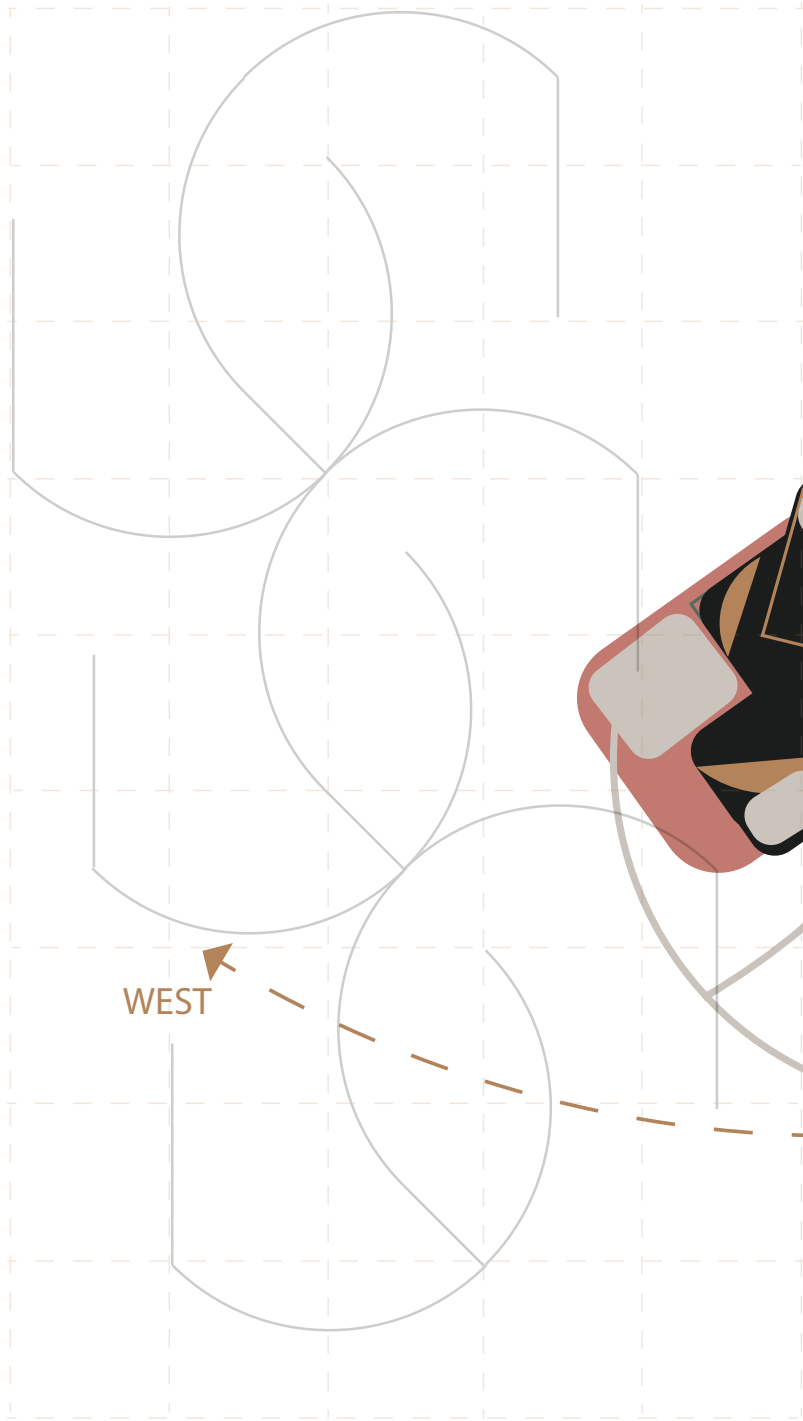
C O N C L U S I O N





Design

B A L A N C E



“

You receive an impression of a noble, firmly integrated composition in which each room presents an ideal form within a greater whole. You also feel the rooms are related in size. Nothing is trivial - all is great and whole.

(Steen Eiler Rasmussen)

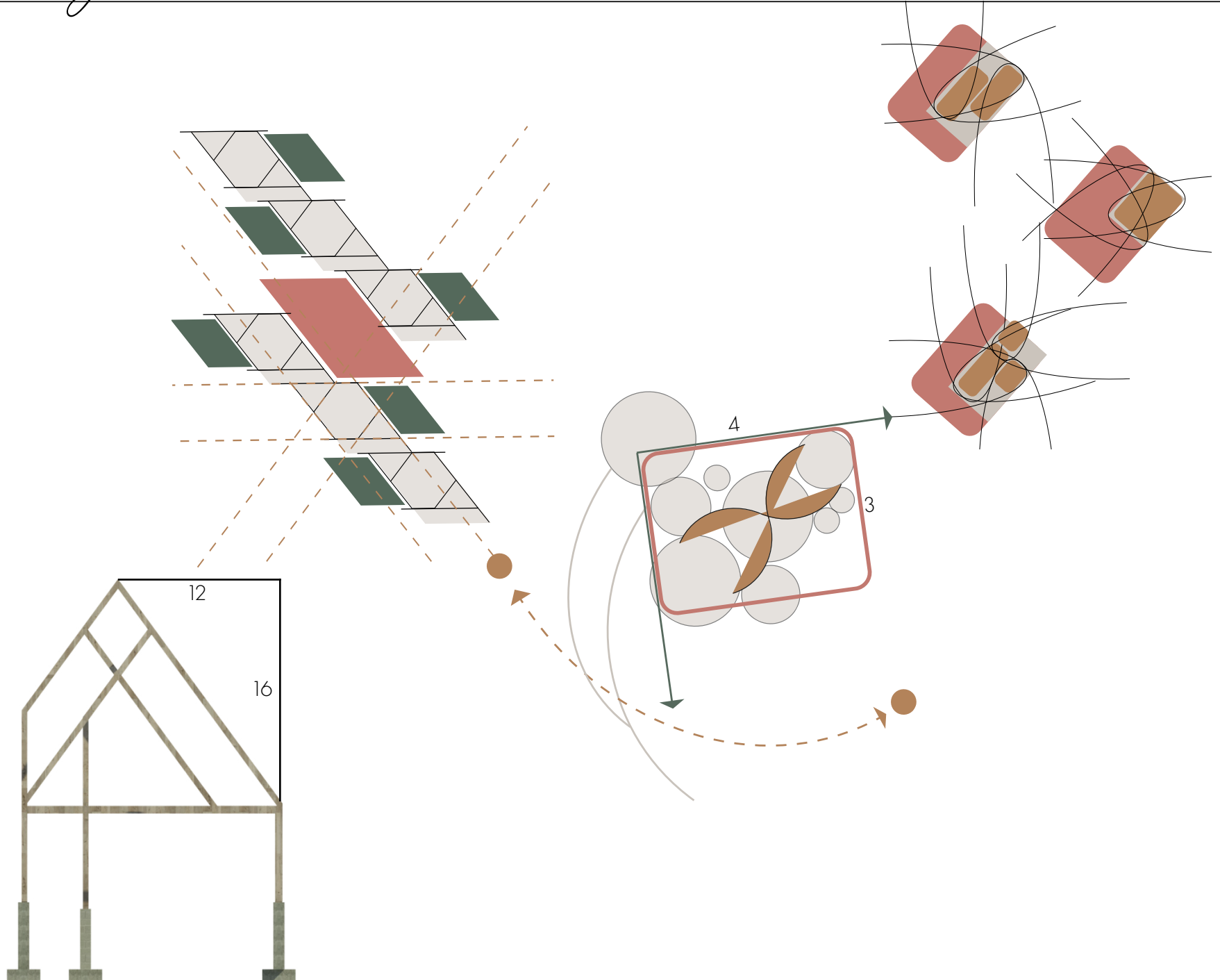
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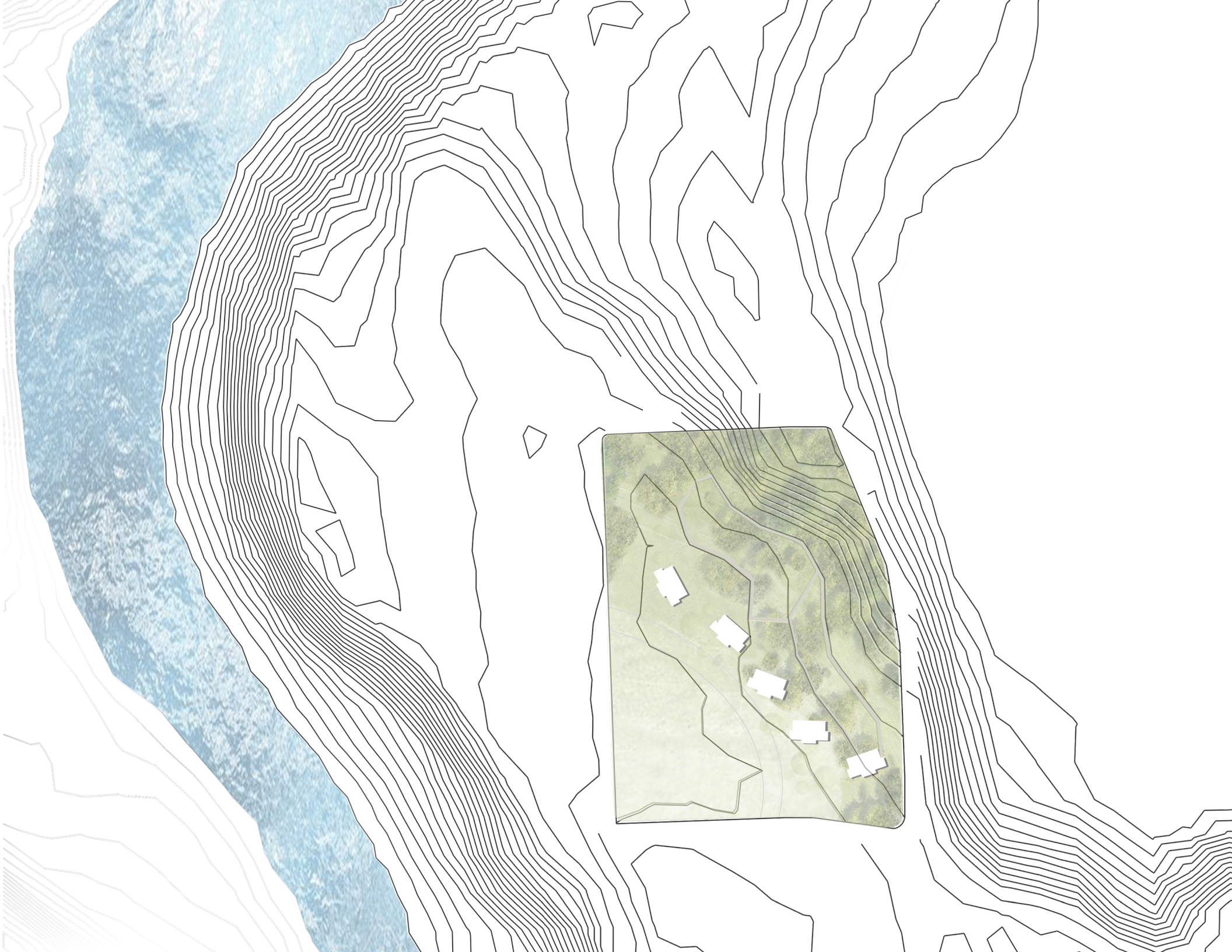
EAST

WEST

Design

P R O P O R T I O N



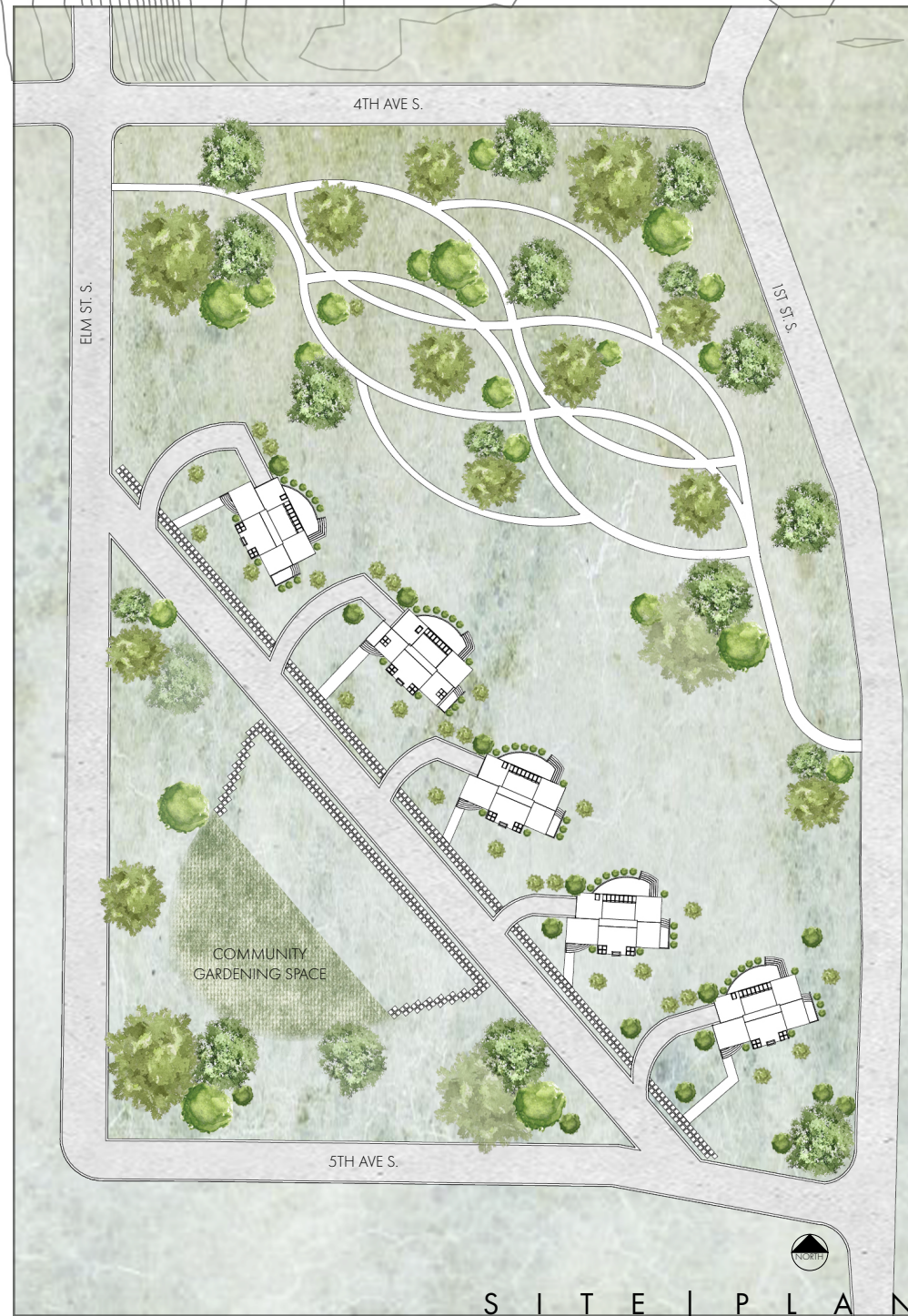


“

Public spaces that brought people together and where friendships and support networks were made and maintained were key to a general sense of well-being.

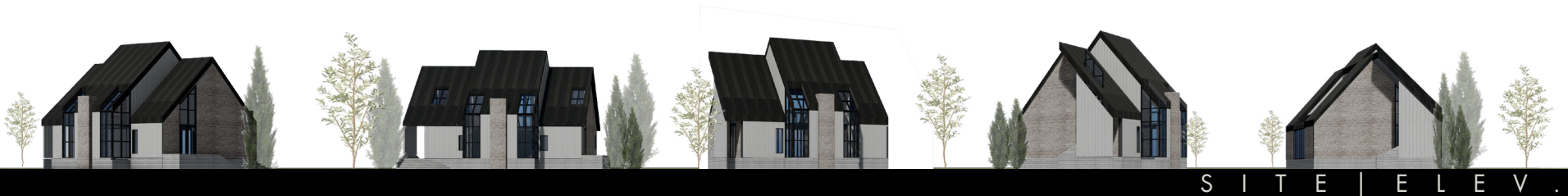
(Steemer P.10).

”



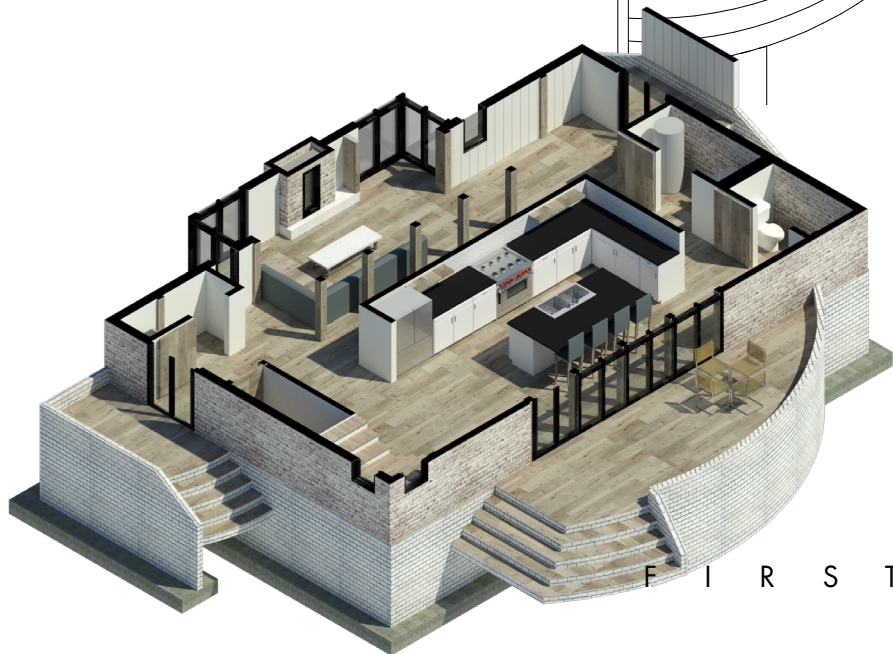
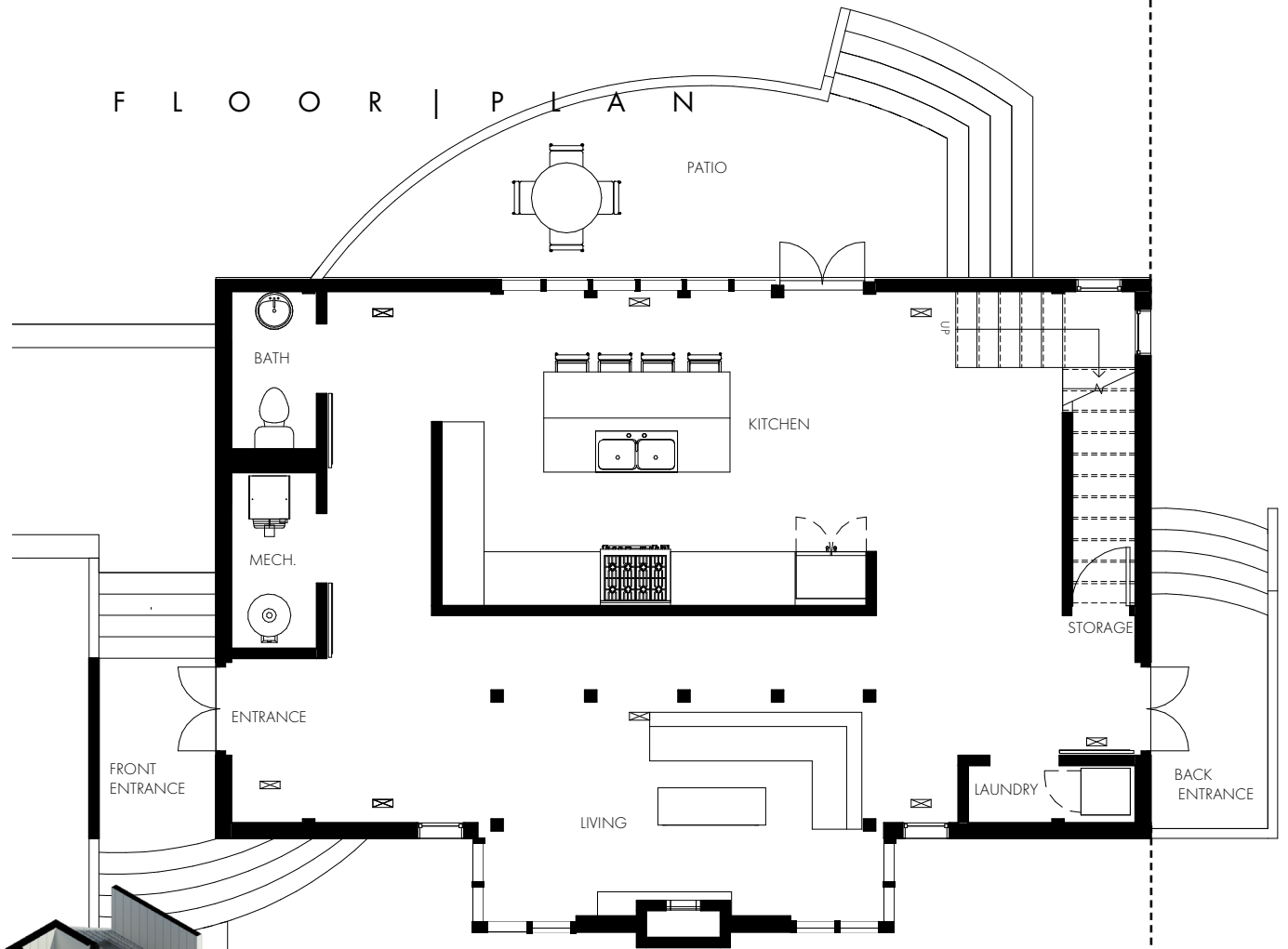
S I T E | P L A N

Psychology and architecture are significantly connected, and the recognition of this connection will aide in the achievement of purposeful built environments that attribute to the community in a positive manner by means of influencing our psychological experience.

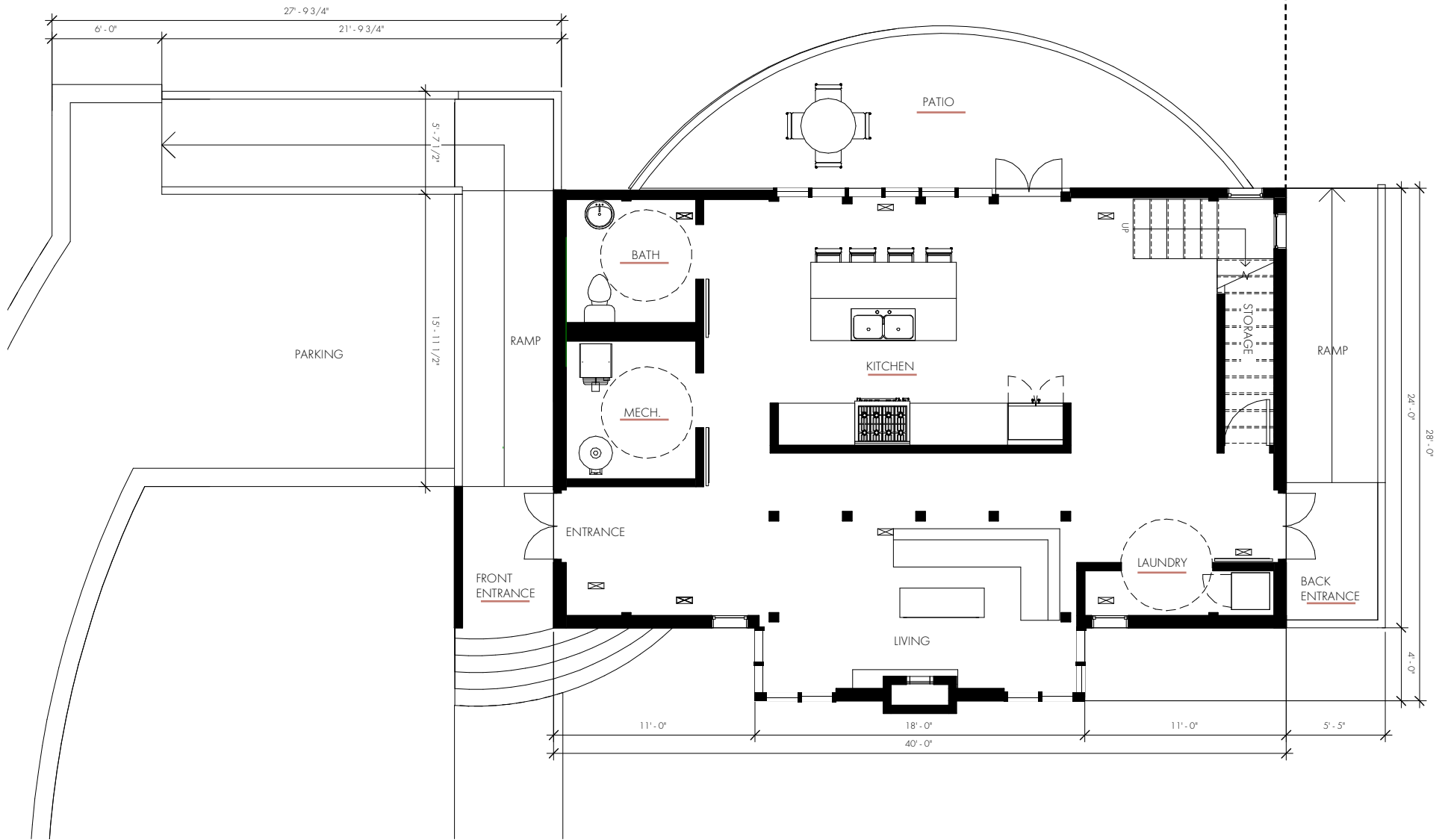


S I T E | E L E V .

F L O O R | P L A N



F I R S T | L E V E L



A D A | S T A N D A R D S





INTERIOR | ENTRANCE



CONNECT

TAKE NOTICE

GIVE

KEEP LEARNING

GIVE
CONNECT

This kitchen supports pro social behaviors and provides residents with a space to invite guests over to share a meal. The size of the kitchen space enables guests and the resident the ability to chat while the meal is being prepared.

TAKE NOTICE

The large window to the left of this image looks down and out to the walking path, allowing those within the kitchen to see all the way to the exterior site.

KEEP LEARNING

Seclusion from the living room and large north facing windows that let in indirect daylight proves the kitchen to be an adequate space to learn and read.

K I T C H E N



“

To design successful indoor environments and to inform new iterations of building standards, it is vital that we understand conditions' interactive impact.

(Jamrozik)

”



L I G H T I N G

“

Lighting influences our productivity levels alongside influencing our health, mood, behavior and comfort levels.
(Jamrozik)

”



“

“Public spaces that brought people together and where friendships and support networks were made and maintained were key to a general sense of well-being”

(Steemer P.10).

”

KEEP
ACTIVE

GIVE

TAKE
NOTICE

CONNECT

KEEP
ACTIVE

The living room naturally enables people to get active, due to the high ceilings and impermanence of the couch and table. Move away the furniture and roll out the yoga mats, the living area will not make you feel claustrophobic if you exercise.

GIVE

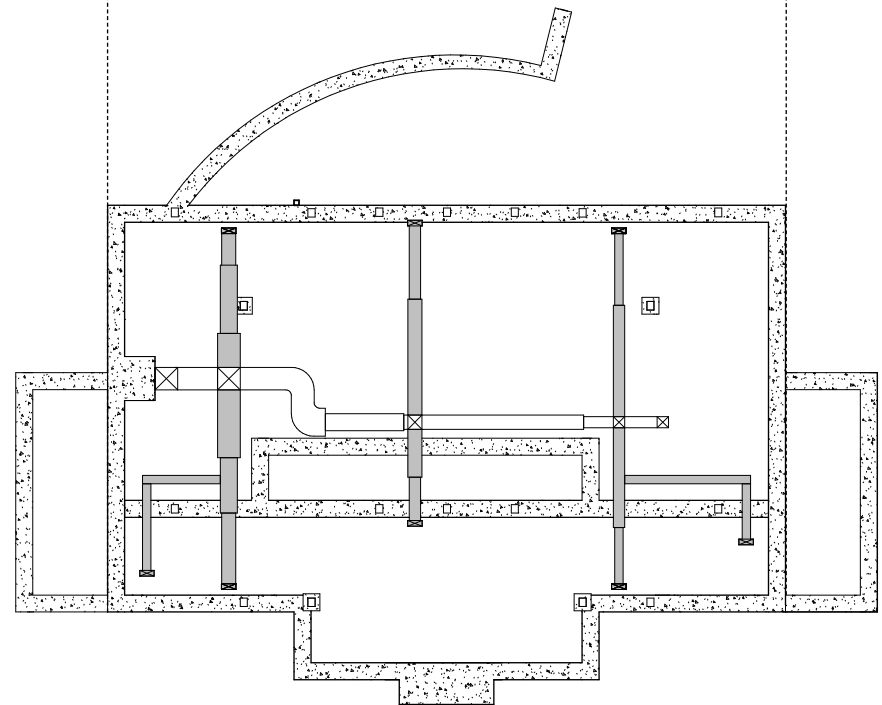
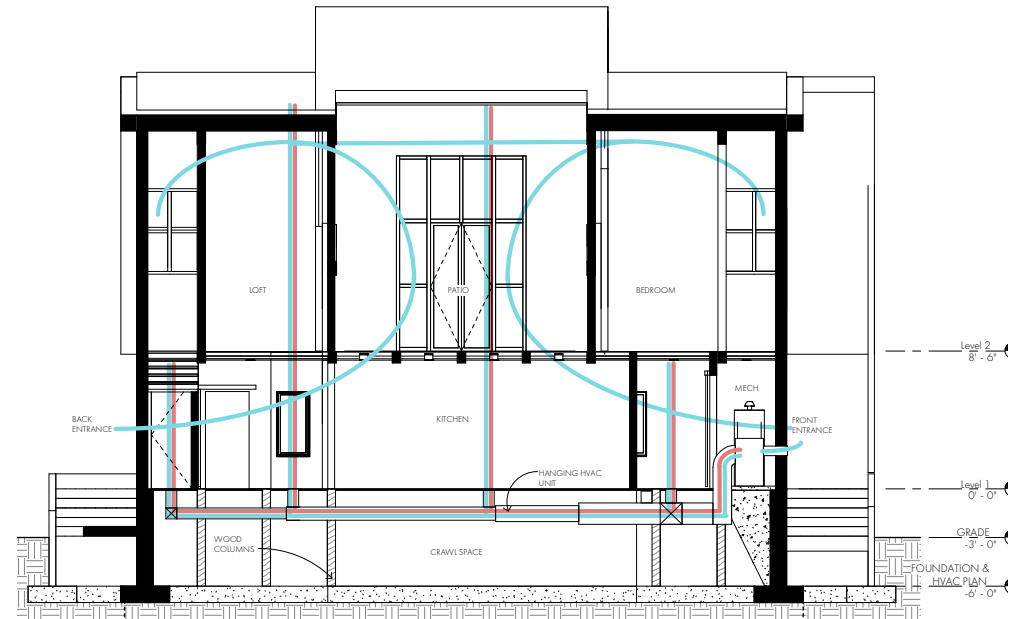
CONNECT

The living room initiates connection between individuals by allocating enough space to invite over guests or even share holiday celebrations.

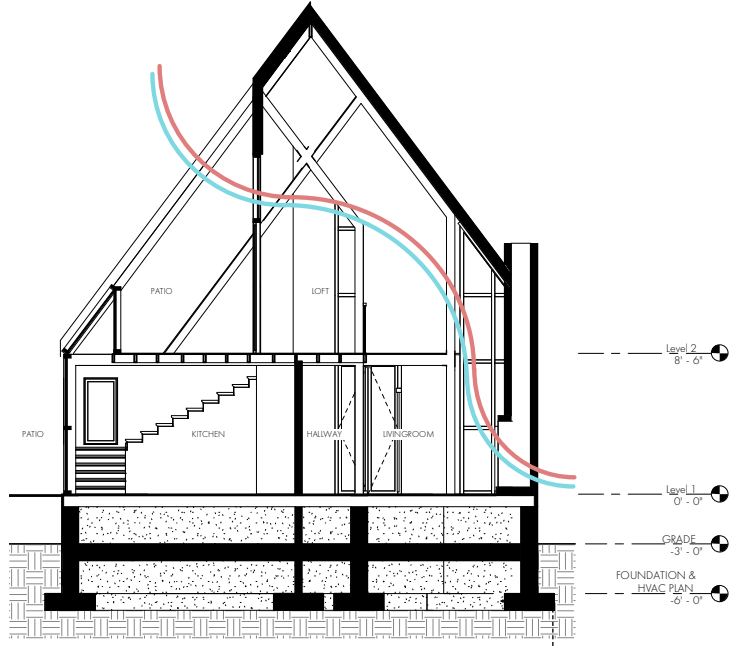
TAKE
NOTICE

Lastly, the large South facing windows allow those within the space the ability to see the street and their driveway, allowing the homeowner to see what is happening outside their home.

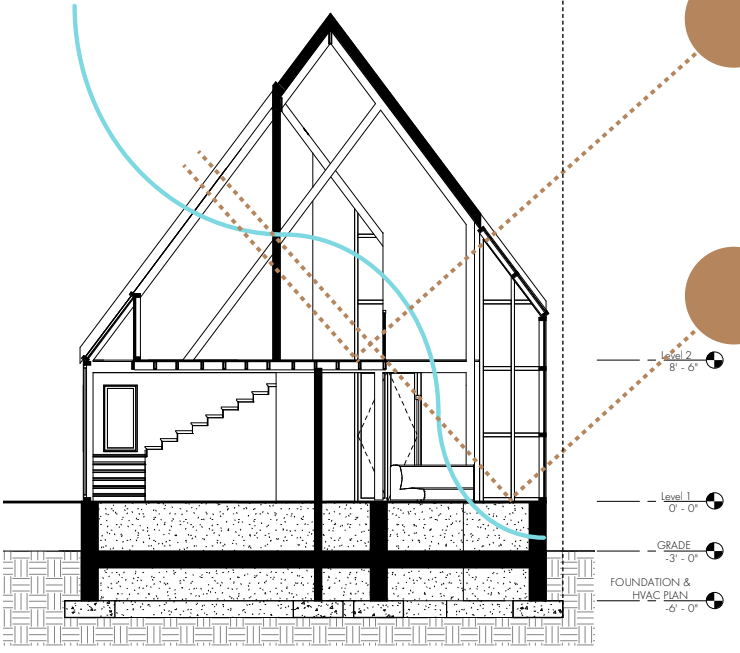
A I R | C I R C U L A T I O N



H V A C | P L A N

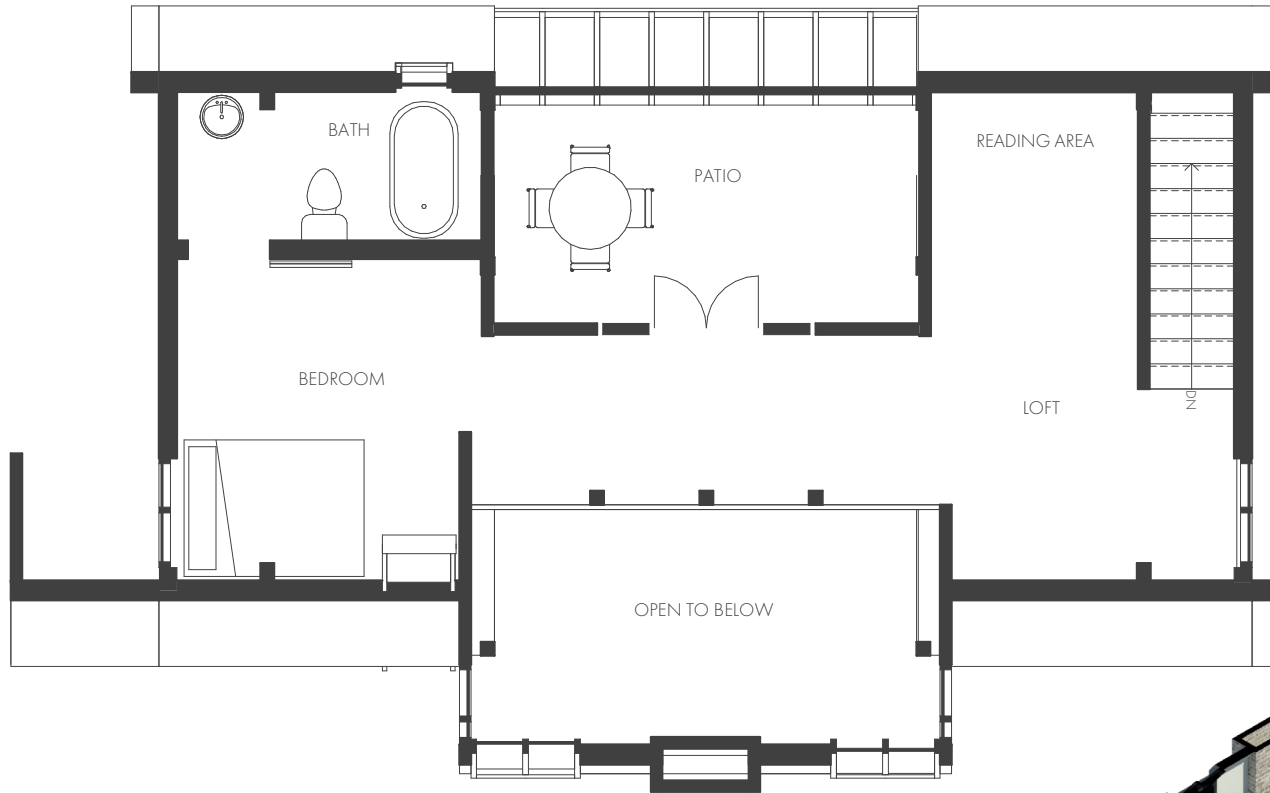


P R I V A T E



P U B L I C

F L O O R | P L A N



S E C O N D | L E V E L



KEEP
LEARNING

TAKE
NOTICE

KEEP
ACTIVE

KEEP
LEARNING

KEEP
ACTIVE

The second level supports learning through the privacy of the spaces, and the ability to turn the loft into an office or library. It works to support activity by providing the resident with a large open space with high ceilings that could be used for workouts.

TAKE
NOTICE

The patio faces the community space below.

Design
C O N C L U S I O N



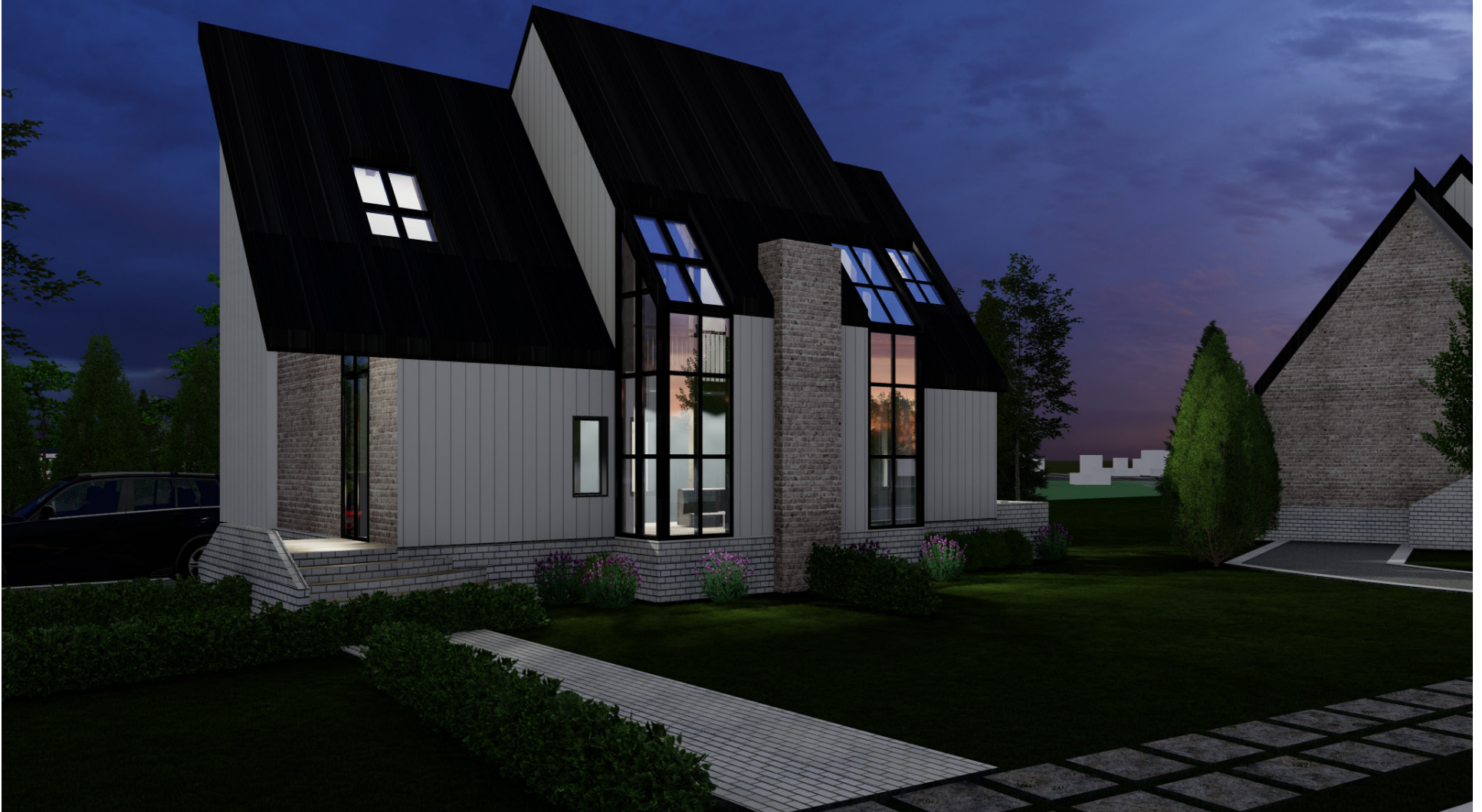
Thesis

G O A L S

By focusing on the 5 strategies of well-being I successfully met the criteria of my thesis goals.

Design Social Environments

Connect Psychology to Architecture





Thesis
G O A L S

Design an Interconnected Residential Area

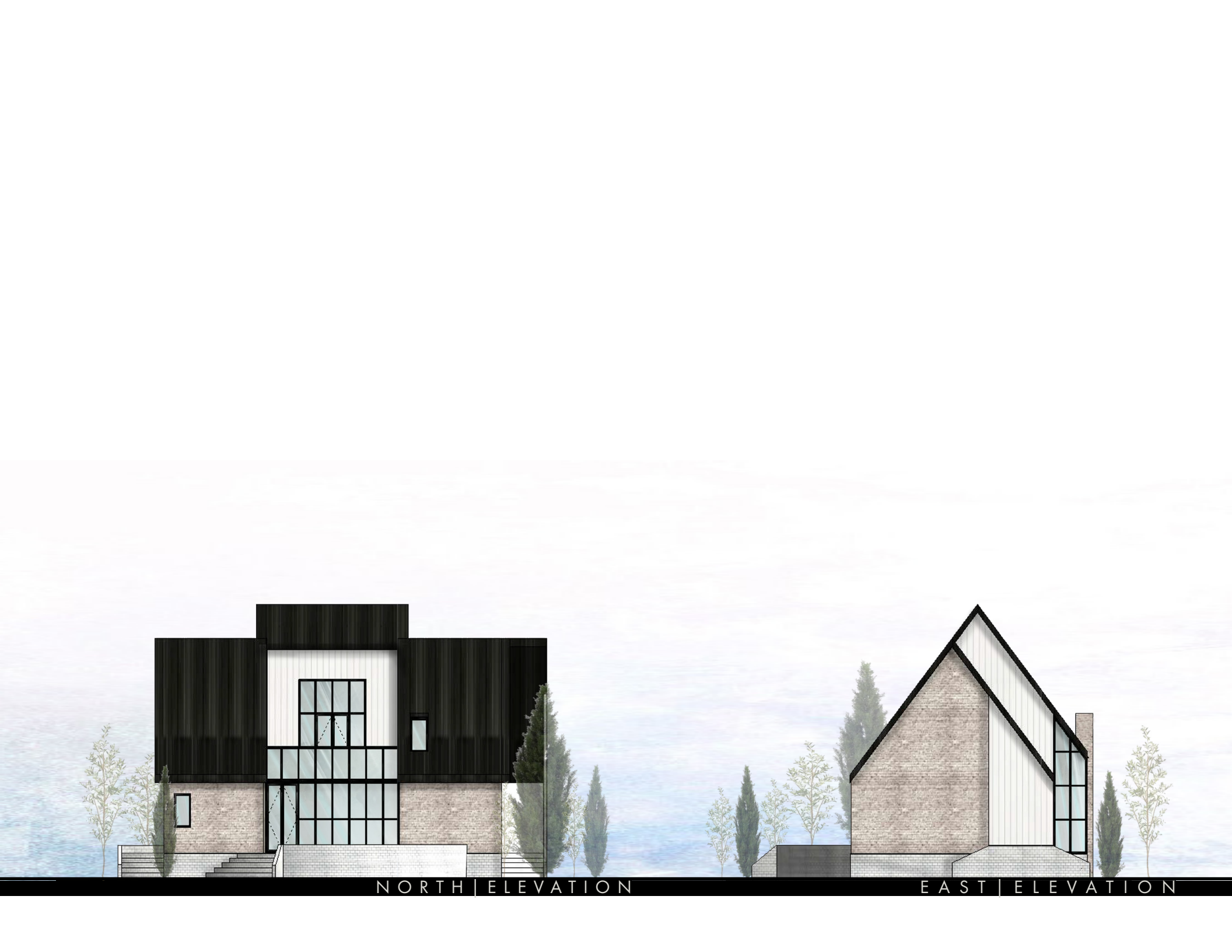
Create a Seamless Environment

The more we consider human psychology, the better
we can design for it.



WEST | ELEVATION

SOUTH | ELEVATION



NORTH | ELEVATION

EAST | ELEVATION

Final Thoughts...

This thesis guided me to the realization that being an architect is a responsibility extending far beyond the design of cohesive buildings...

Being an architect is a timeless commitment to designing space that impacts each client's psychological well-being and health.

This recognition is priceless.



Questions?



RED RIVER

SITE

