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Breaking the Stigma: Challenging the mental health crisis through a new way of designing a recovery facility in Salt Lake City, Utah

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BREAKING THE STIGMA



Challenging the mental health crisis through a new way of designing a recovery facility in Salt Lake City, Utah

BREAKING THE STIGMA

Challenging the mental health crisis through a new
way of designing a recovery facility in Salt Lake
City, Utah

Approval of Thesis Research
Project Book is Presented to:

Tim Frank

and to the
Faculty of the Department of Architecture
College of Architecture and Construction Management

by

Lindsey Denig

In partial fulfillment of the requirements for the Degree

Bachelor of Architecture

Kennesaw State University
Marietta, Georgia

May 9, 2023

DEDICATION

This book is dedicated to the following people for their continuous love and support throughout my architecture journey:

My Family

Thank you for sacrificing so much for me to pursue my dreams. You all have always stood by my side, no matter what, and I truly appreciate everything you do for me.

My Friends

From elementary school to college, you all have made such an impact on me. Thank you to those who have stuck by my side and loved me for who I am. Your support means the world.

The Polyidus Chapter

This chapter has impacted much of my college experience in so many ways. I met my best friends and have a found family, that will last a lifetime. Thank you for all of the laughs and cries brothers.

ACKNOWLEDGMENTS

I would like to acknowledge all of my friends and family for their love and support throughout my architectural journey.

I would like to give special thanks to my advisor, Tim Frank. You have guided me through this program since first year. This thesis would not have been possible without your support and knowledge this past year.

I would also like to give thanks to all of the faculty for their guidance and assistance throughout these 5 years.

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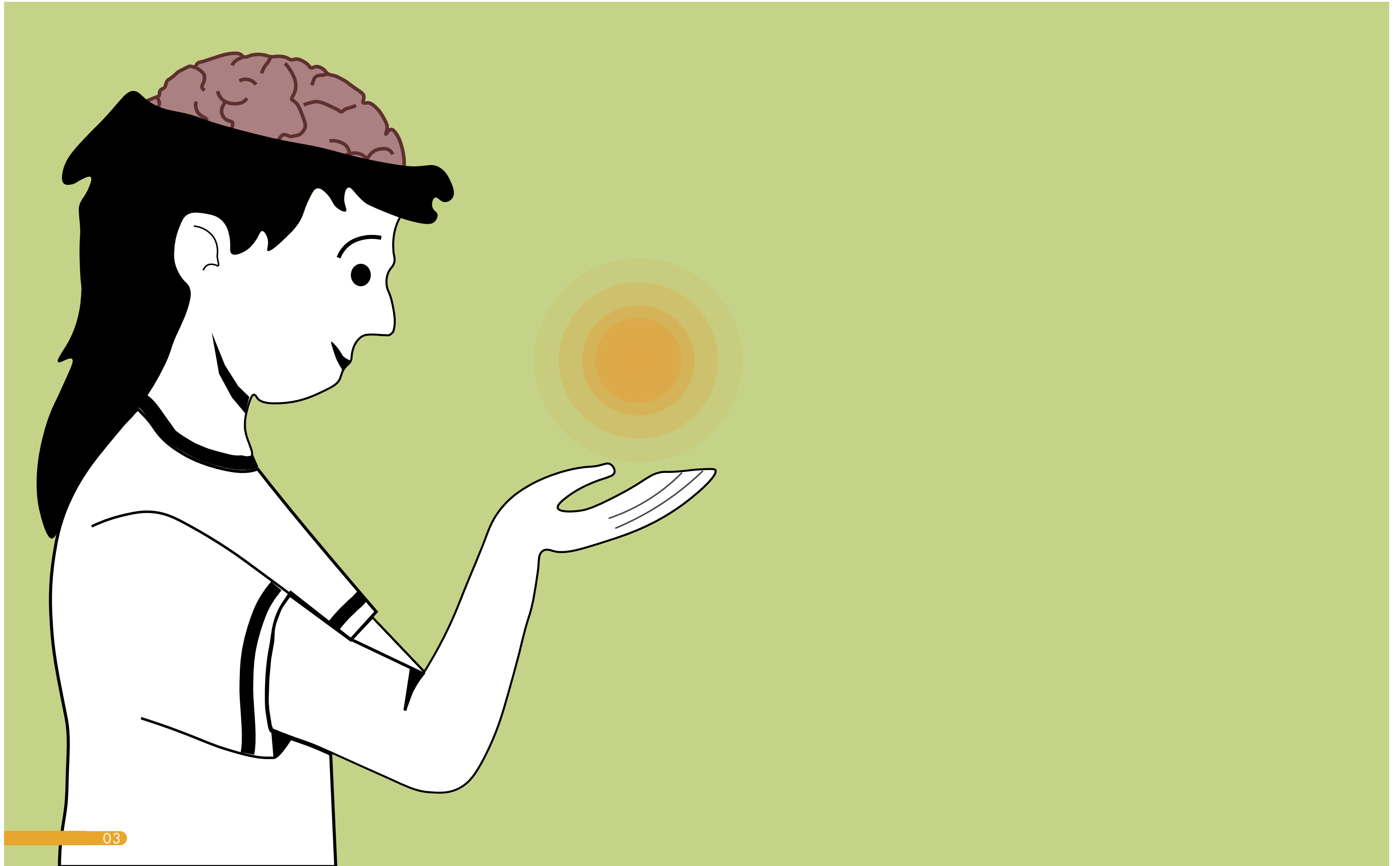
FINAL BOARDS
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01

DESIGN THEOREM

RESEARCH CONTEXT - PROBLEMS - DISORDERS



DESIGN THEOREM

RESEARCH CONTEXT

Mental health is a highly stigmatized topic within today's society. The mental health system in the United States has failed to consistently create safe and successful spaces for recovering patients with psychological disorders.

Facilities are often described as "inhumane" by patients in how they are designed. Patients have expressed that there is lack of safe, private spaces. The spaces that are considered "private" are solitary confinement wards with no windows or furniture. It is said that interior design is not a priority as well, with no colors or art on walls. Spaces are cold and dead feeling, which does not help patients in their healing process.

People need a safe and encouraging place to go in order to start their road to recovery. Breaking the Stigma aims to challenge the mental health crisis and create a calming and uplifting space for recovering patients in Millcreek, Utah.

Creating a space that is positive for a patients mental health would include access to outdoor gathering spaces, both public and private, natural and artificial lighting as well as colors within spaces to lift moods, and carefully designed rooms for patients to gather with others and recover on their own time.

DESIGN THEOREM PROBLEMS

Research has shown approximately 50% of all lifetime cases of mental illness will develop before the age of seventeen [1]. Teens struggle with social media and comparing themselves, pressure to succeed, and much more. They aren't given the proper facilities to begin the long or never-ending healing process. The rise in mental health disorders among teens has shown a direct correlation to the increase in teen suicide. Recent data shows suicide as the second leading cause of death among teens ages fifteen to nineteen [2].

The mentally ill are sometimes even put in prisons just as a result of the lack of safe recovery facilities. Patients/inmates are treated horribly. They are held in solitary confinement for 23 hours per day, that is guarded by corrections officers. Group therapy sessions are held in 4- by 10-foot metal cages [3]. This fact is valid for all age groups.

Many psychiatric hospitals to this day are designed like prisons. Rules are extremely strict and patients are treated like inmates. Hospitals have white walls, harsh materials, cage-like rooms that are shared between patients, and little to no lighting. Lack of safe facilities is a huge issue in the mental health crisis. Patients never recover and just lie with their own demons for the rest of their lives, rather than learning healthy coping mechanisms.



Figure 1



Figure 2



Figure 3

DESIGN THEOREM

DISORDERS

The categories of behavioral health disorders each have their own unique characteristics and triggers. A patient's environment can either help or harm the characteristics. There are seven main categories of behavioral health disorders [4], but I am focusing on the less severe ones:

- Mood Disorders
- Anxiety Disorders
- Eating Disorder
- Personality Disorders



Figure 4

MOOD DISORDERS

disorders in which
your mood is
distorted/inconsistent



Figure 5

ANXIETY DISORDERS

disorders with
intense worry and
fear



Figure 6

EATING DISORDERS

disorders that show
a disturbance in
eating behaviors



Figure 7

PERSONALITY DISORDERS

disorders in which you
have an unhealthy
pattern of thinking



MOOD DISORDERS

"Your general emotional state or mood is distorted or inconsistent with your circumstances and interferes with your ability to function.

You may be extremely sad, empty or irritable (depressed), or you may have periods of depression alternating with being excessively happy (mania)." [5]

EXAMPLES

Major Depressive Disorder

Bipolar Disorder

Seasonal Affective Disorder

ANXIETY DISORDERS

"People with anxiety disorders frequently have intense, excessive and persistent worry and fear about everyday situations.

Often, anxiety disorders involve repeated episodes of sudden feelings of intense anxiety and fear or terror that reach a peak within minutes (panic attacks)." [6]

EXAMPLES

Generalized Anxiety Disorder

Obsessive Compulsive Disorder

Phobias

Social Anxiety Disorder

Panic Disorder

Separation Anxiety Disorder





EATING DISORDERS

“Eating disorders are actually serious and often fatal illnesses that are associated with severe disturbances in people’s eating behaviors and related thoughts and emotions.

Preoccupation with food, body weight, and shape may also signal an eating disorder.” [7]

EXAMPLES

Anorexia Nervosa

Bulimia Nervosa

Binge Eating Disorder

Avoidant Restrictive Food Intake Disorder (ARFID)

PERSONALITY DISORDERS

“A personality disorder is a type of mental disorder in which you have a rigid and unhealthy pattern of thinking, functioning and behaving.

A person with a personality disorder has trouble perceiving and relating to situations and people.” [8]

EXAMPLES

Paranoid Personality Disorder

Schizoid Personality Disorder

Schizotypal Personality Disorder

Antisocial Personality Disorder

Borderline Personality Disorder

Histrionic Personality Disorder

Narcissistic Personality Disorder

Avoidant Personality Disorder

Dependent Personality Disorder

Obsessive Compulsive Personality Disorder





0 2 DESIGN ANALYSIS

DESIGN PRINCIPLES - CASE STUDIES - SITE ANALYSIS - PROGRAM

PRINCIPLES



Figure 8

LIGHTING

Lighting is an important factor in any design. It can include natural lighting as well as artificial lighting within a space.

I plan to analyze both aspects of lighting in my design.

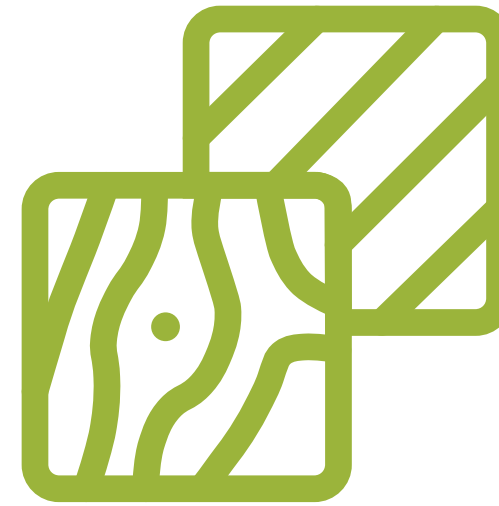


Figure 9

MATERIALS

Materials can make or break a space. They need to be placed in areas where they make sense.

I aim to include materials that have a low thermal conductivity such as fabrics and wood.



Figure 10

COLOR

Colors are all around us. Some make us feel calm, while some overstimulate our senses.

I plan to analyze my case studies in regards to color, to determine the best color palettes to include in my design.

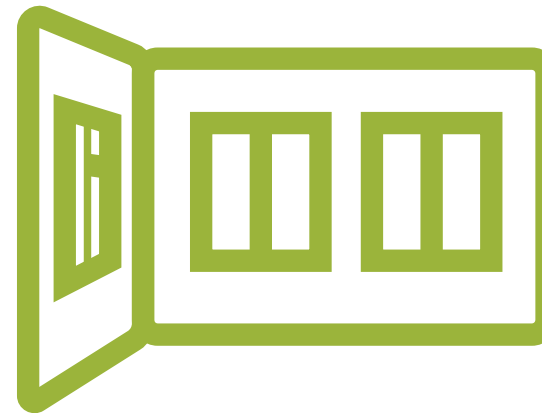


Figure 11

DEGREE OF ENCLOSURE

The degree of enclosure refers to the openness of a space. Private spaces are more enclosed, while public spaces are opened up.

I aim to implement these techniques into my design of public and private spaces and their enclosure.

INSTITUTIONAL



Figure 12

Institutional mental hospitals are often described as “cold” and “sad”. The rooms have little to no decoration as it is a safety hazard but as a whole that, “they don’t seem to make interior design a priority” [9]

MAGGIE’S CENTER



Figure 13

Maggie’s Center features natural lighting that enters through triangular roof light and is supported by timber beams [10]. This healing space focuses on communal areas and warmer color palettes [11].

EL CAMINO BEHAVIORAL HEALTH



Figure 14

El Camino Behavioral Health has a connection to nature with the 4 courtyards accessible to patients at all times [12]. The health center focus on rich materials and soothing colors [13].

DESIGN ANALYSIS CASE STUDIES

My case studies are analyzed thoroughly in reference to my four design principles: lighting, color, materials, and degree of enclosure.

I looked at examples of a “bad” mental health hospital as described as “institutional” as well as two examples of a “good” mental health hospital. By analyzing these buildings thoroughly based on my principles, I was able to draw conclusions about the best strategies are when designing my building.

These strategies include:

- Warm colors rather than grays and blacks
- Natural light rather than artificial
- Natural materials like wood
- Open spaces with partitions

INSTITUTIONAL

LIGHTING



Figure 15

CMYK

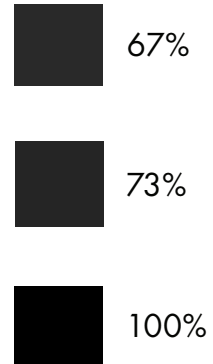


Figure 16

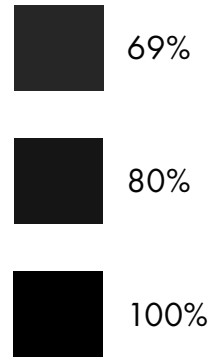
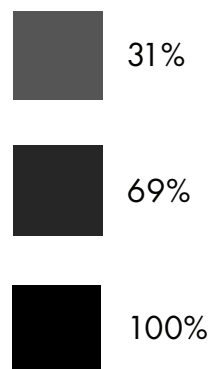


Figure 17



0% 100%

MATERIALS



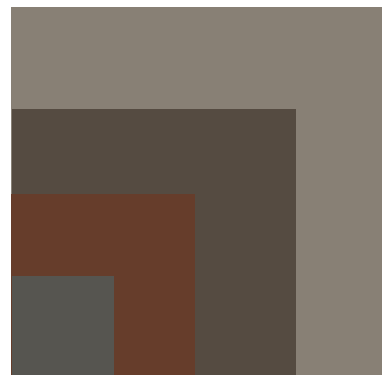
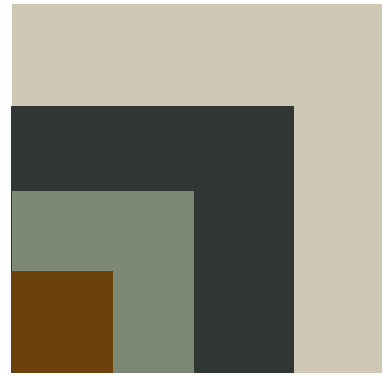
Figure 18



NUMERIC VALUE OF THERMAL CONDUCTIVITY

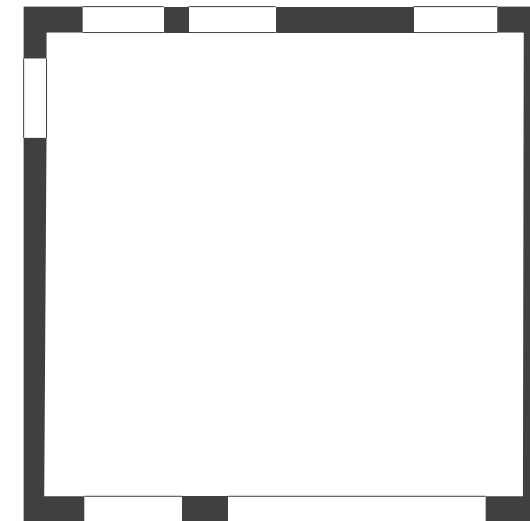
Material	Thermal Conductivity
Aluminum	204 k
Glass	0.76 k
VCT	0.48 k
Sheetrock	0.17 k
Wood	0.13 k
Human Skin	0.4-0.9 k

COLORS



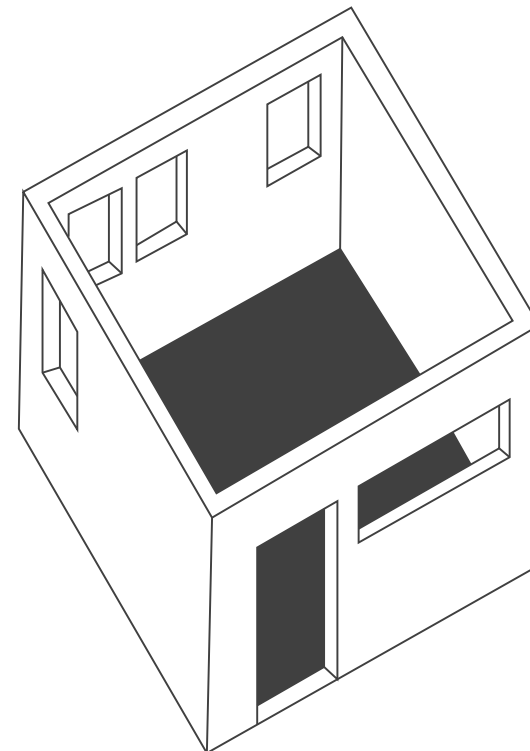
DEGREE OF ENCLOSURE

Openings lying wholly within the enclosing planes of space, which makes said space feel tight. There are openings, but they are small within wall [14]



Plan View

Figure 19



Axonometric View

MAGGIE'S CENTER

LIGHTING



Figure 20

CMYK

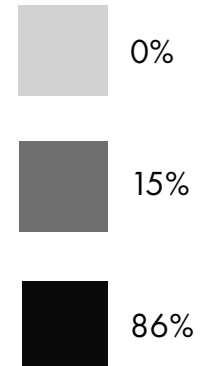


Figure 21

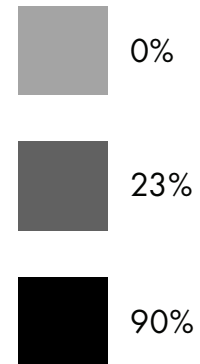
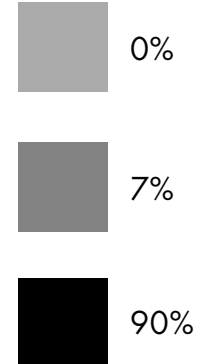


Figure 22



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100%

MATERIALS



Figure 23



Timber



Porcelain Brick



Sheetrock



Ribbed Tile



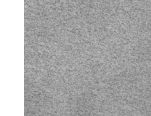
Timber



Fabric- Green



Glass



Carpet- Grey

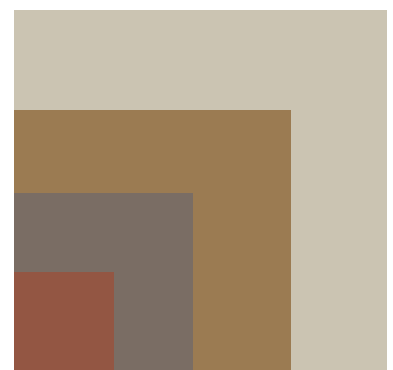
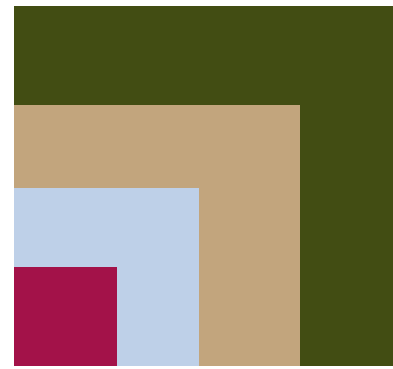
NUMERIC VALUE OF THERMAL CONDUCTIVITY

Material	Thermal Conductivity
Porcelain Brick	0.70 k
Ribbed Tile	0.31 k
Sheetrock	0.17 k
Wood	0.13 k
Fabric	0.127
Human Skin	0.4-0.9 k

COLORS

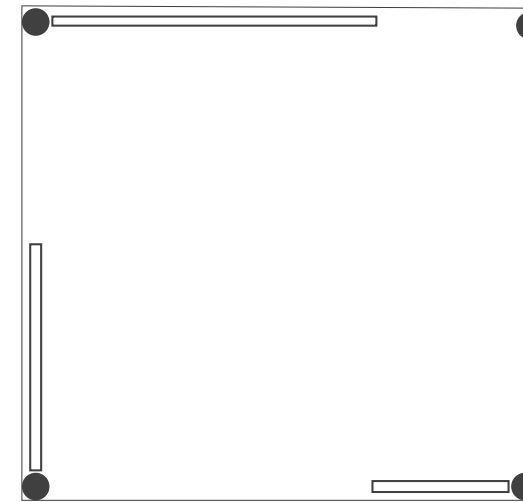


Figure 24

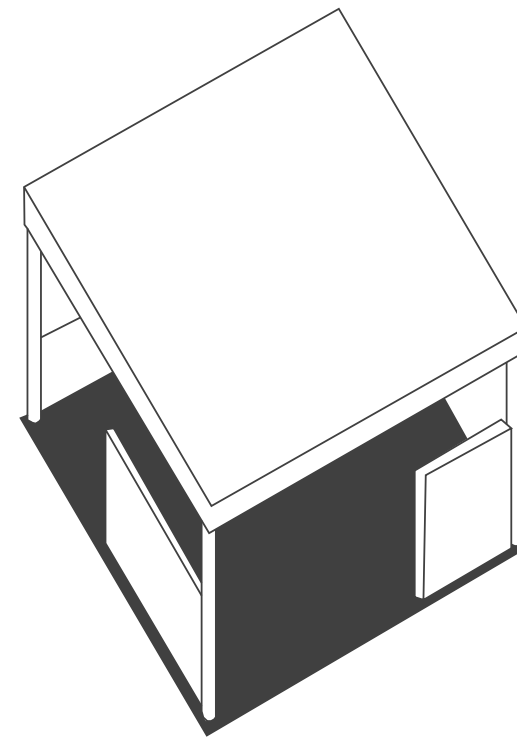


DEGREE OF ENCLOSURE

Openings between the enclosing planes of space visually isolate planes. Space loses the sense of enclosure and merges with adjacent spaces. There are few walls to separate space as needed [15]



Plan View



Axonometric View

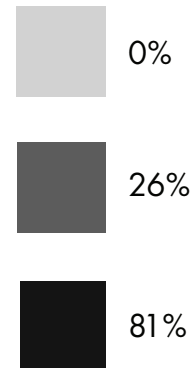
EL CAMINO BEHAVIORAL HEALTH

LIGHTING



Figure 25

CMYK



MATERIALS



Figure 28



Safety Glass



Concrete Pavers



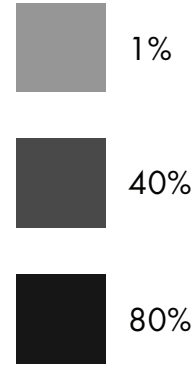
Lemon Grass



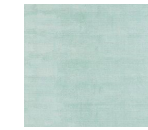
Aluminum Panel



Figure 26



Safety Glass



Carpet



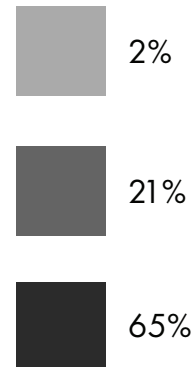
LVP



Sheetrock



Figure 27



NUMERIC VALUE OF THERMAL CONDUCTIVITY

Material	Thermal Conductivity
Aluminum Panel	204 k
Concrete Pavers	1.4 k
Glass	0.76 k
Sheetrock	0.17 k
Wood	0.13 k
Human Skin	0.4-0.9 k
Carpet	0.08 k



0% 100%

COLORS



Figure 29

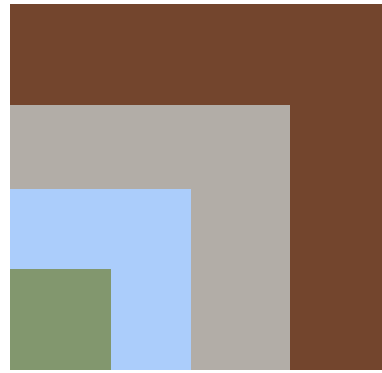
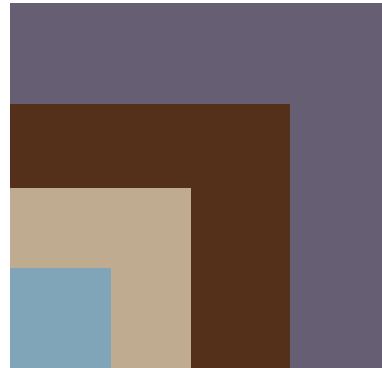
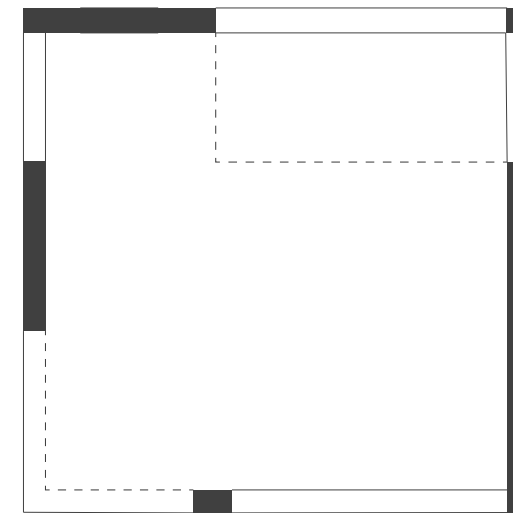


Figure 30

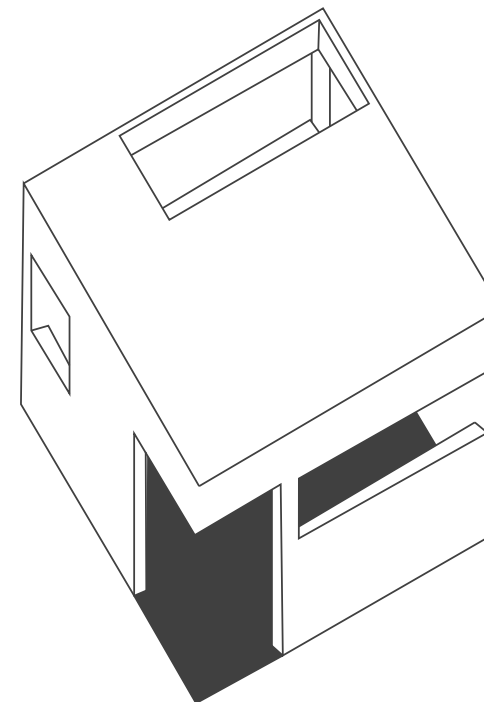


DEGREE OF ENCLOSURE

Openings located along the edges of the enclosing planes of space. This strategy promotes visual continuity and interaction with adjacent spaces [16]



Plan View

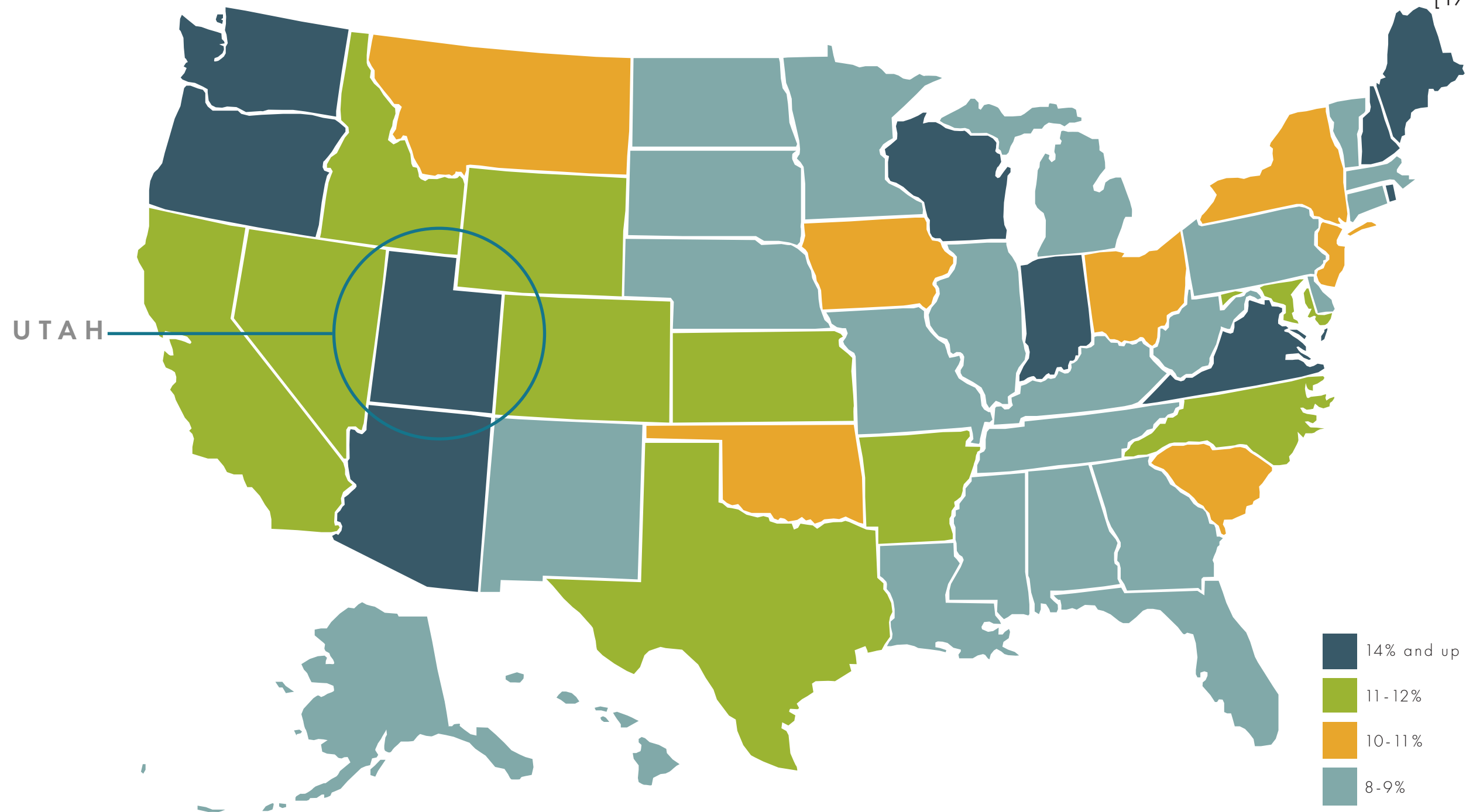


Axonometric View

SITE SELECTION

MAJOR DEPRESSIVE EPISODES IN ADOLESCENTS AGES 12-17 FROM 2013-2014

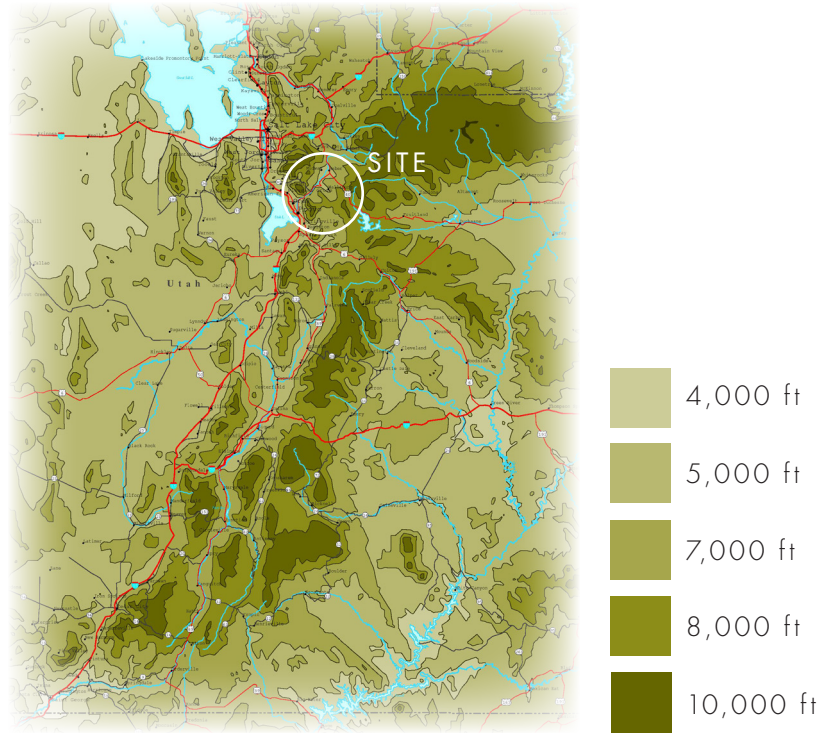
[17]



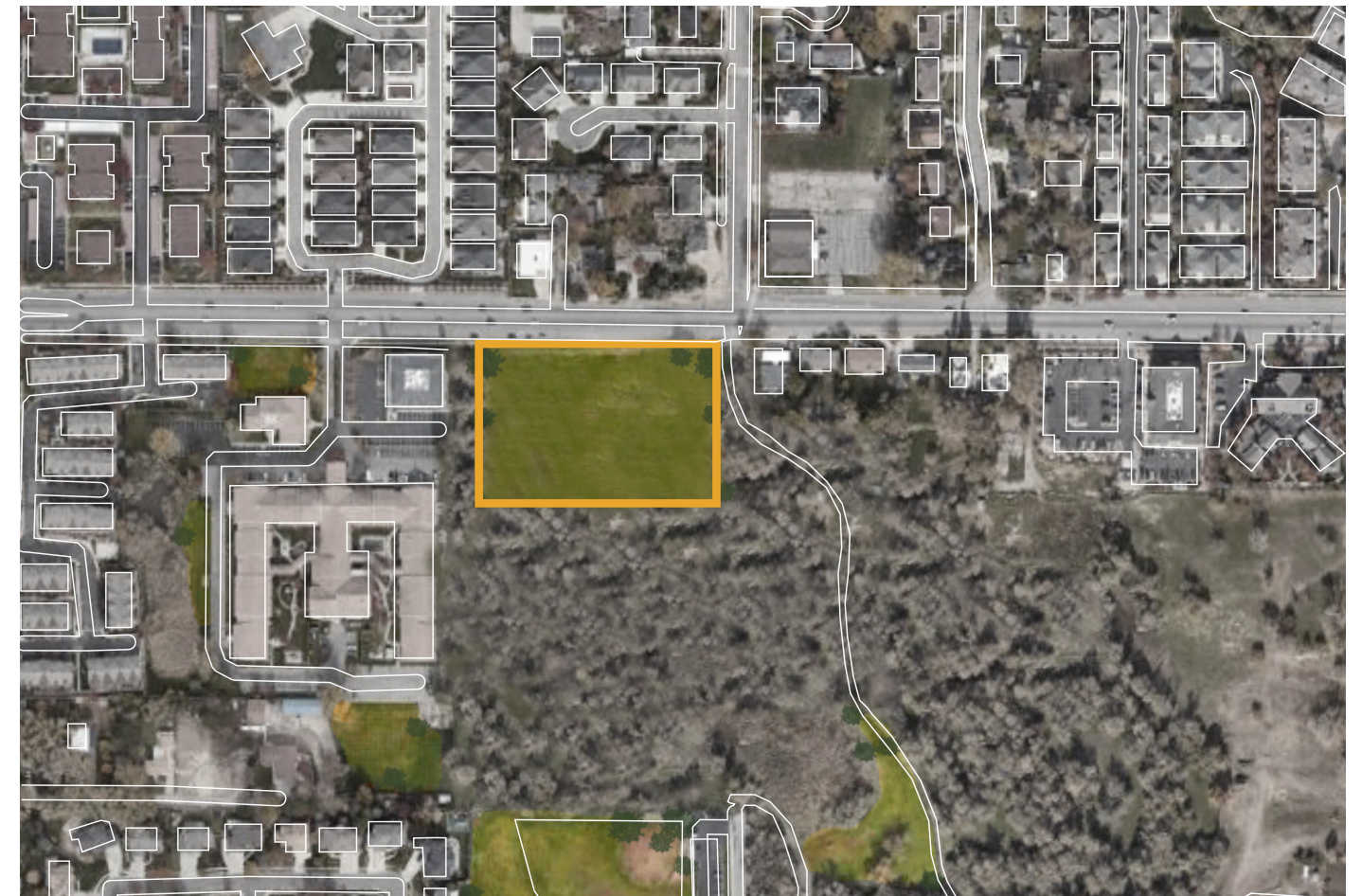
STATE OF UTAH MENTAL HEALTH STATISTICS

- 33% of the 70,000 Utah youth surveyed said that they have felt sad or hopeless
- 18.1% of teens seriously considered suicide
- Teen suicide rate in Utah is **DOUBLE** the national rate and has increased more than 5 times faster than [18] the national average

UTAH ELEVATION MAP

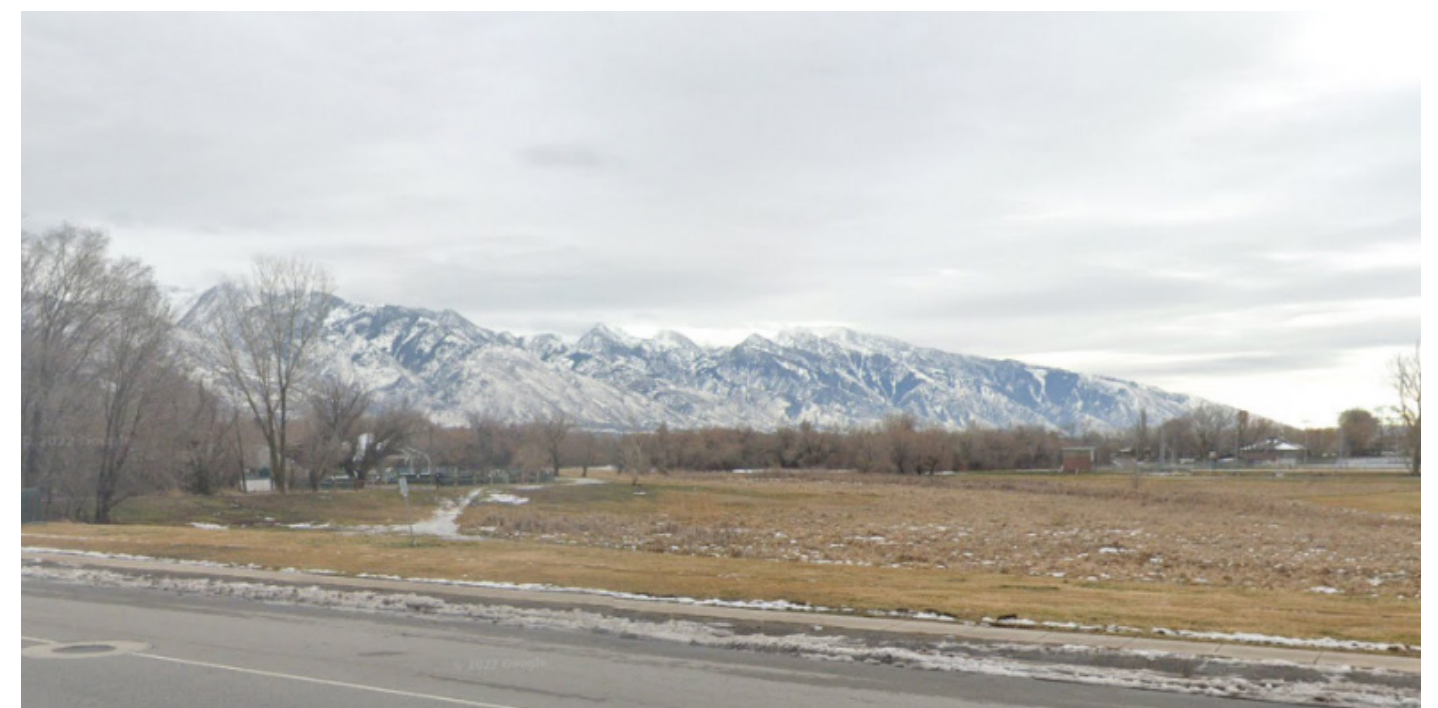


High altitudes can alter the number of neurotransmitters, which Renshaw suspected might lead to enjoyment for some and depression for others. [19]



1440 E 4500 S
MILLCREEK, UT 84117

Figure 31



PROGRAM

Privacy	Room	Quantity	Square Footage	Total (SF)
Public	Lobby	1	1,600	1,600
Public	Courtyard	2	2,800	5,600
Public	Restroom	2	200	400
Semi-Private	Care Suites	8	232	1,856
Private	Patient Room	32	315	10,080
Private	Patient Room <i>*SEVERE*</i>	13	355	4,615
Public	Common Space	6	500	3,000
Semi-Private	Group Therapy <i>*LARGE*</i>	4	340	1,150
Semi-Private	Group Therapy <i>*SMALL*</i>	6	215	1,050
Private	Private Therapy	7	154	1,500
Public	Dining Hall	1	1,500	1,500
Semi-Private	Visitor Area	3	220	660
Private	Office Support	5	150	750

- Private
- Semi-Private
- Public

Privacy	Room	Quantity	Square Footage	Total (SF)
Semi-Private	Green Roof	2	300	300
Private	Staff Lounge	1	300	300
Private	Kitchen	1	600	1,200

36,743
 +9,000 CIRCULATION

45,743 SF



- Private
- Semi-Private
- Public

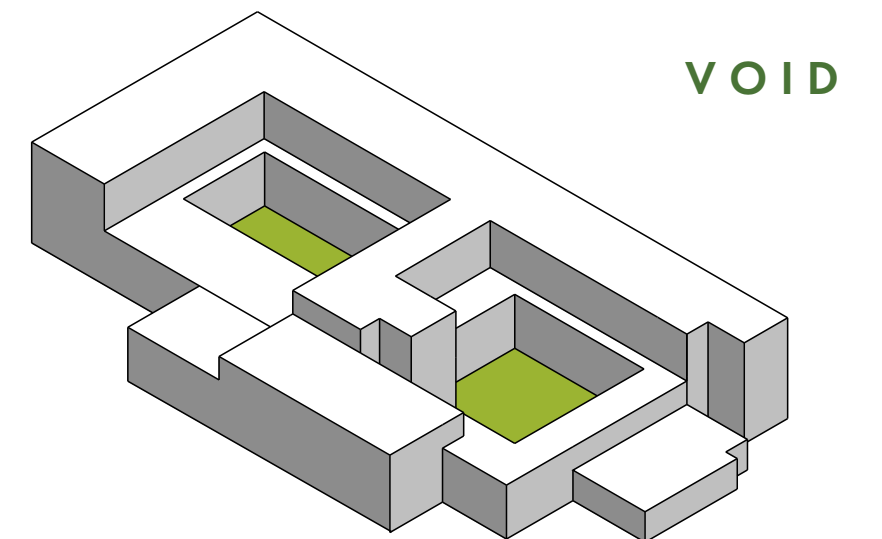
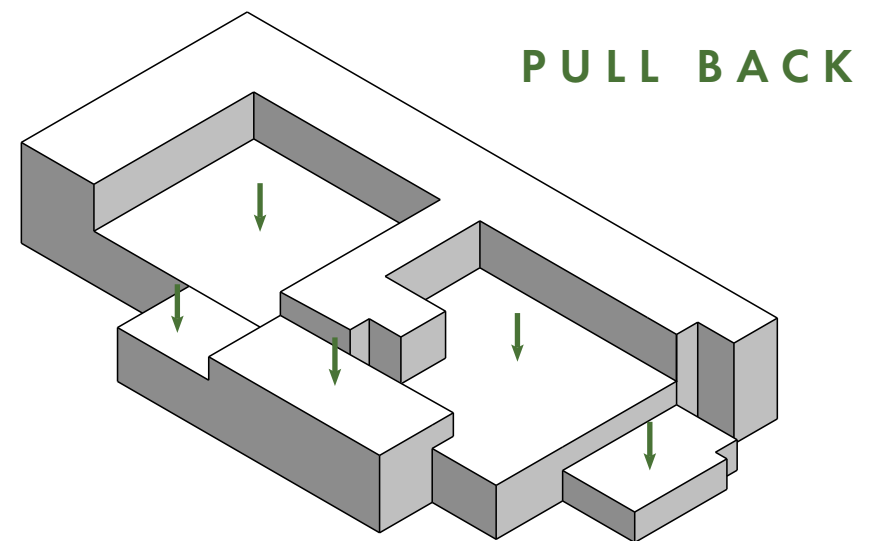
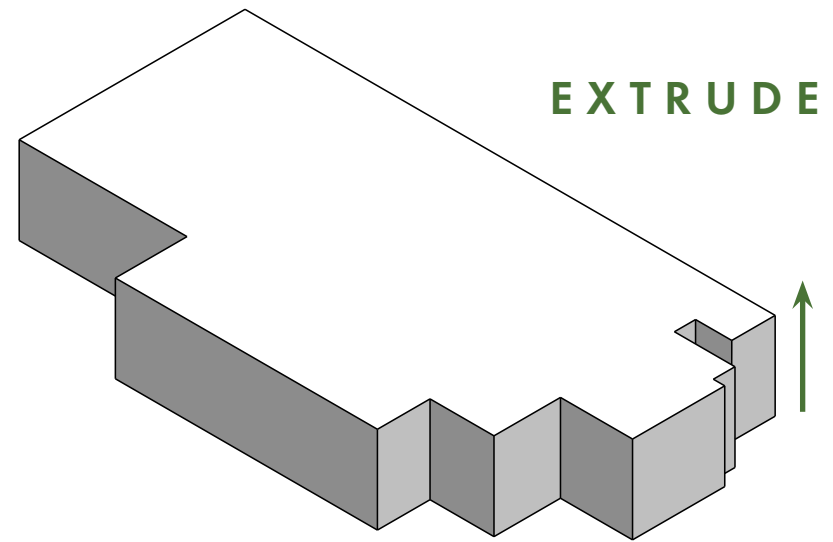
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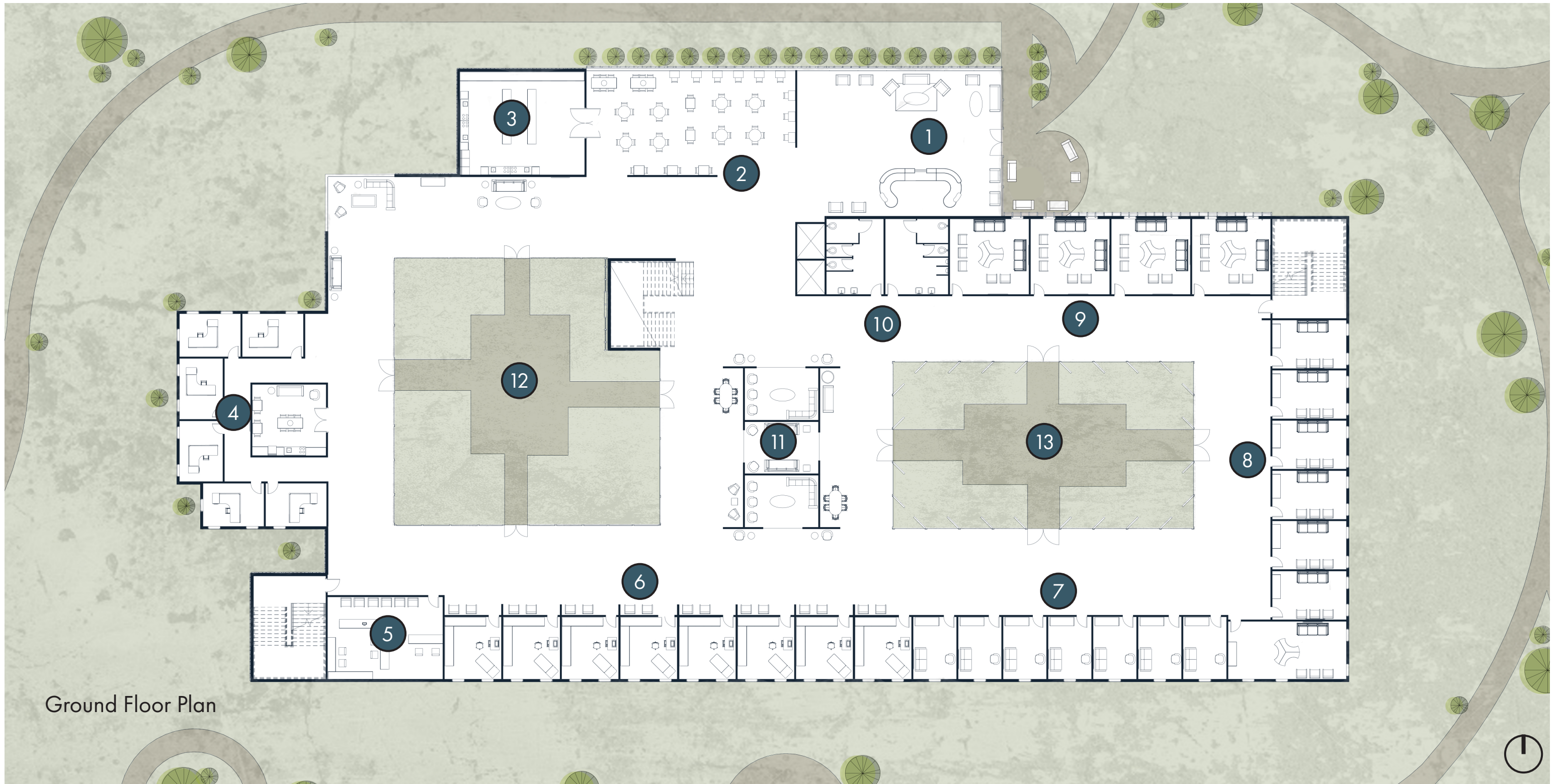
03

DESIGN SYNTHESIS

FORM FINDING - FLOOR PLANS - SECTIONS - ELEVATIONS

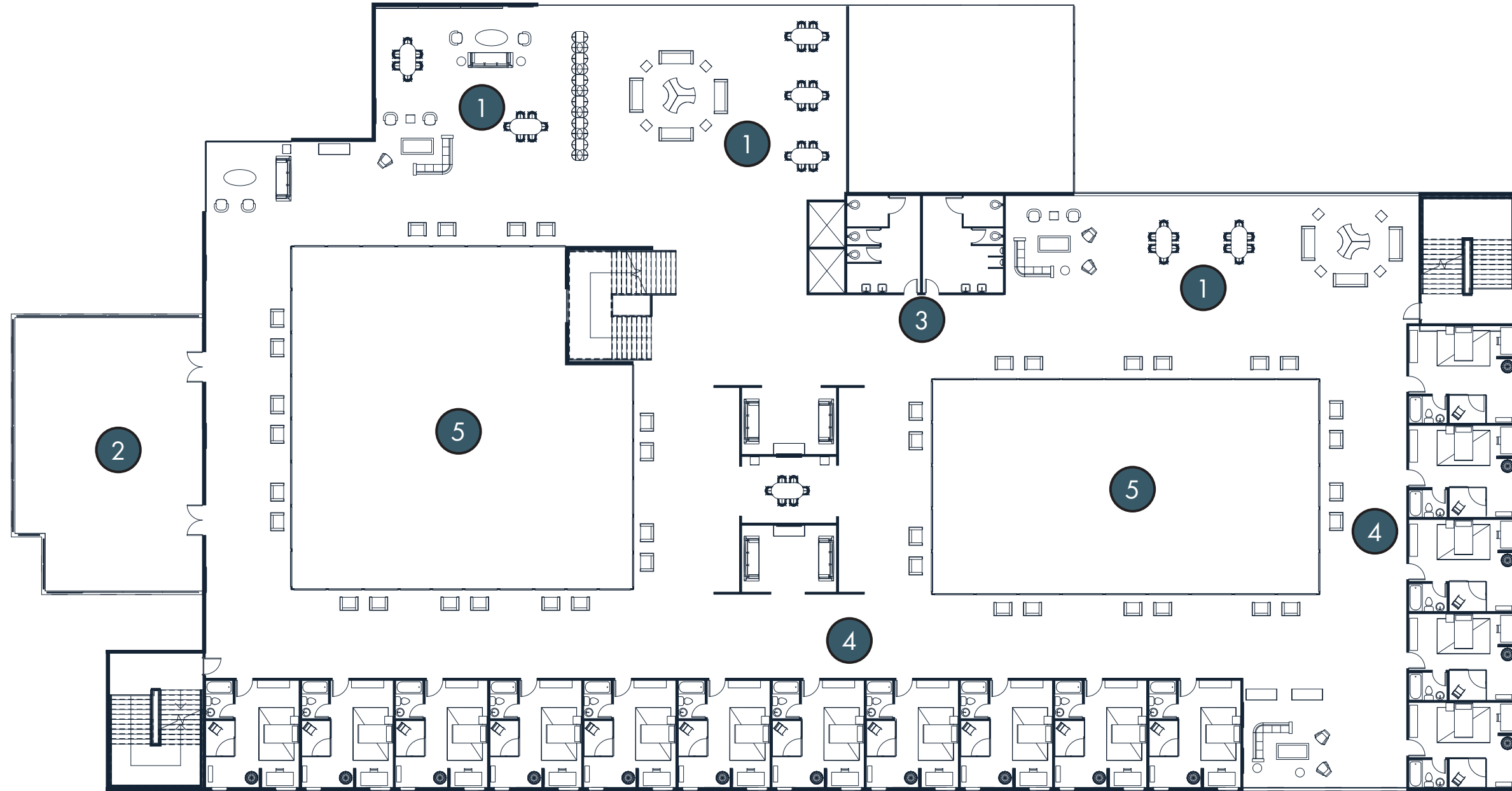
FORM FINDING





Ground Floor Plan

- | | | | | |
|-------------------|---------------|-----------------------|---------------------|------------------|
| 1 Lobby/Reception | 4 Staff Area | 7 Private Therapy | 10 Public Restrooms | 13 Therapy Court |
| 2 Dining | 5 Pharmacy | 8 Small Group Therapy | 11 Visitor Area | |
| 3 Kitchen | 6 Care Suites | 9 Large Group Therapy | 12 Public Court | |



Second Floor Plan

- 1 Common Space

2 Green Roof

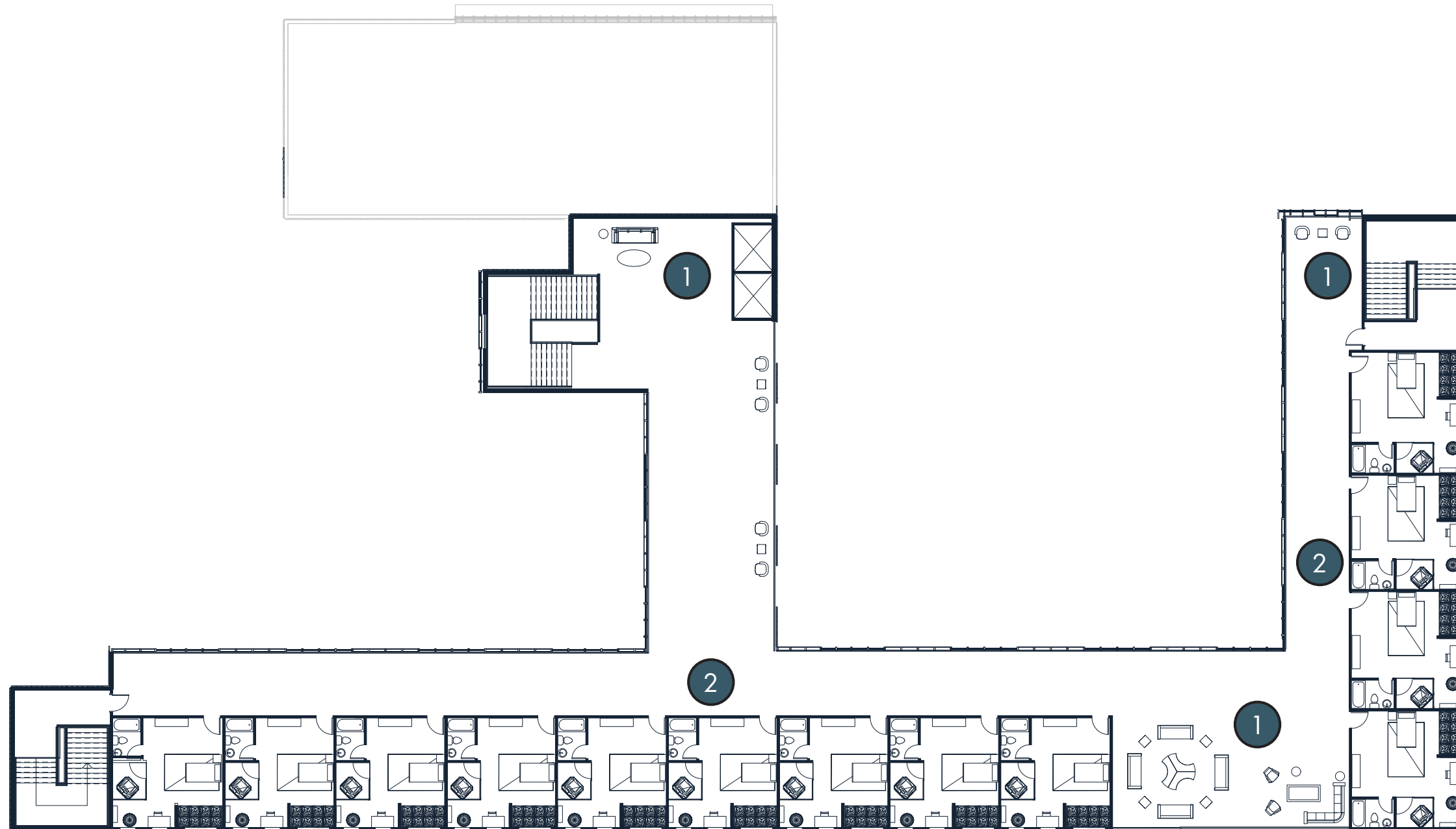
3 Public Restroom
- 4 Standard Patient Room

5 Courtyard Overlook



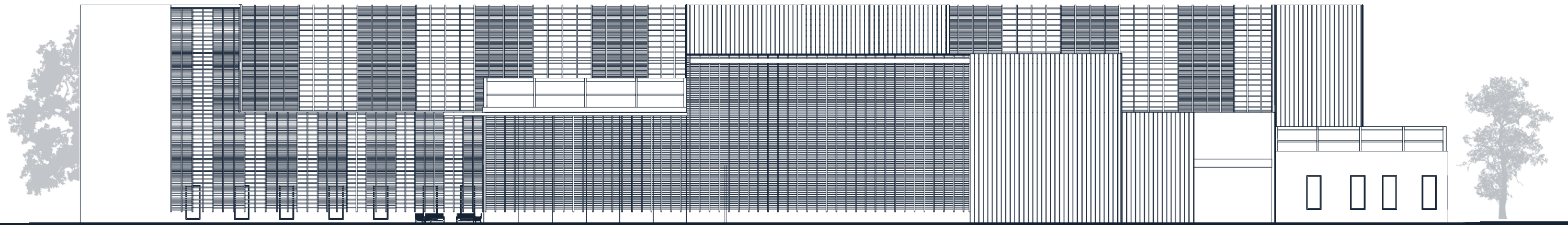
Third Floor Plan

- 1 Common Space
- 2 Green Roof
- 3 Standard Patient Room
- 4 Courtyard Overlook

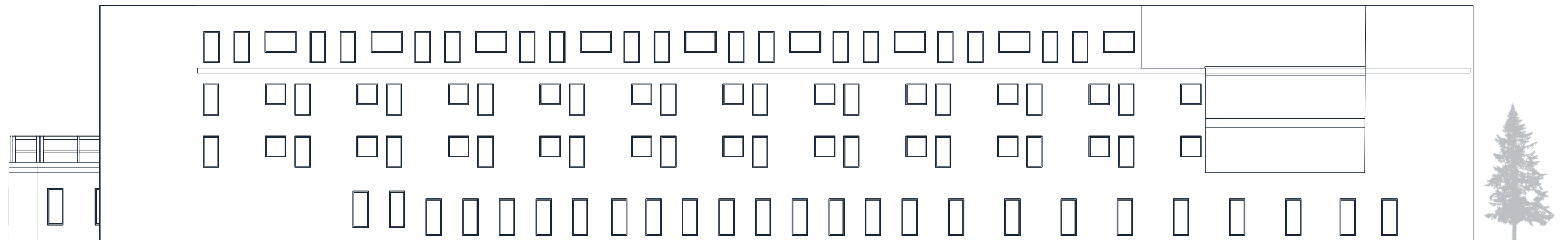


Fourth Floor Plan

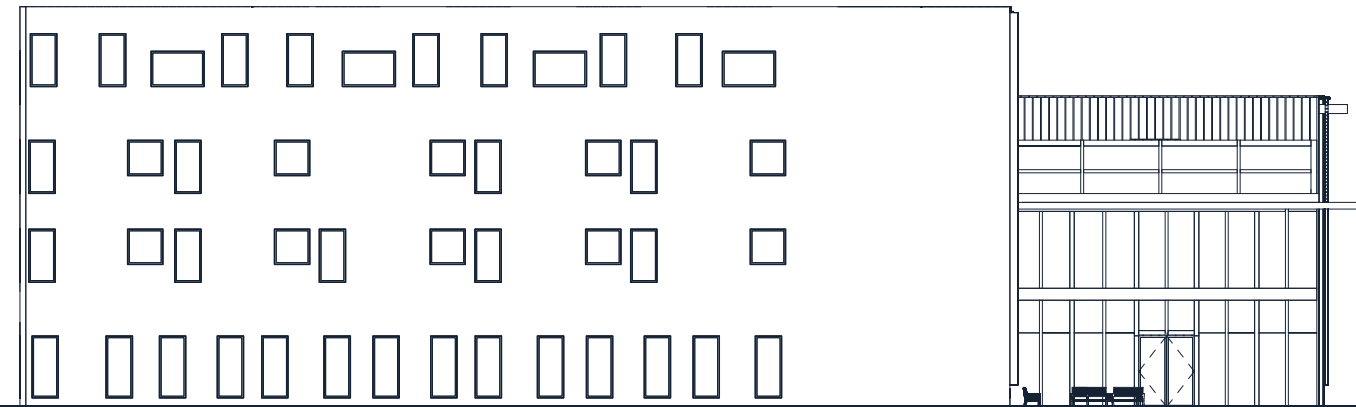
- 1 Common Space
- 2 Severe Patient Room



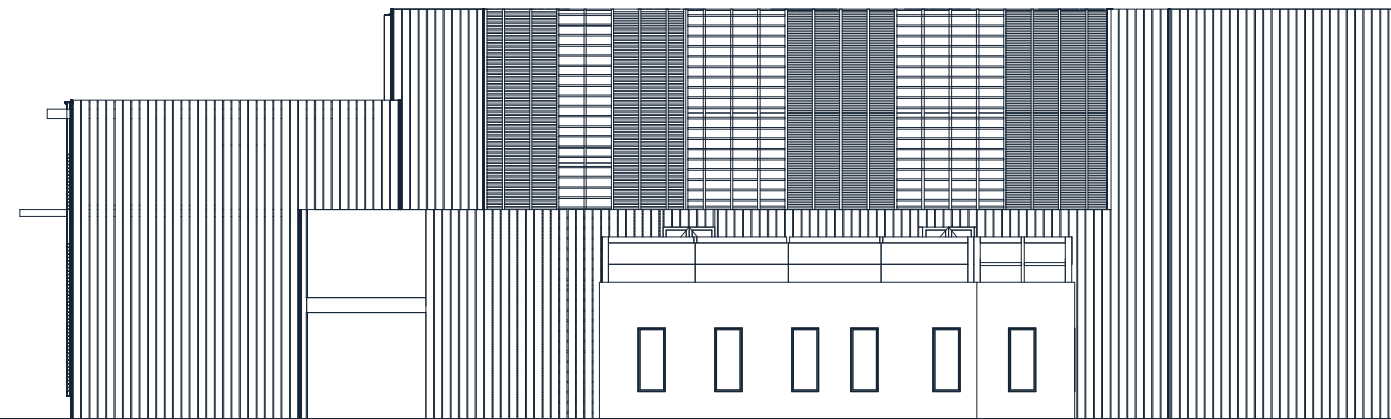
North Elevation



South Elevation



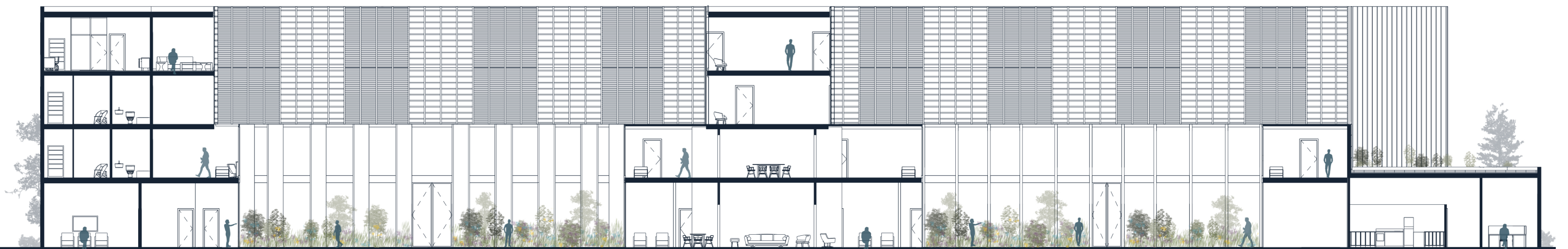
East Elevation



West Elevation



West Section

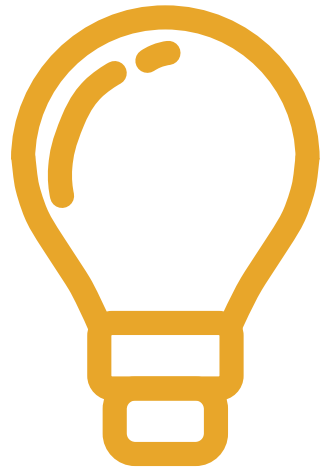


North Section

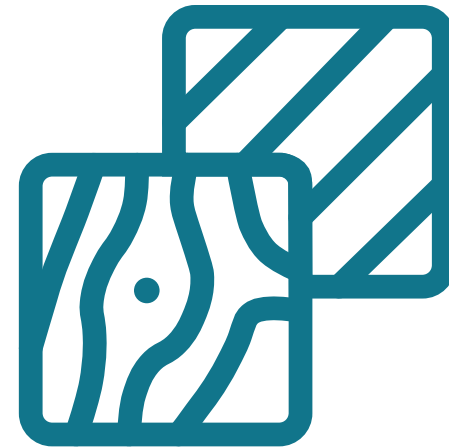


04 DESIGN RESPONSE

PRINCIPLE ANALYSIS - ROOM AXONS - RENDERINGS



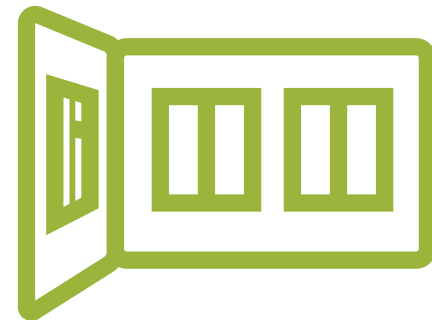
LIGHTING



MATERIALS



COLOR



DEGREE OF
ENCLOSURE

DESIGN CONCLUSION PRINCIPLE ANALYSIS

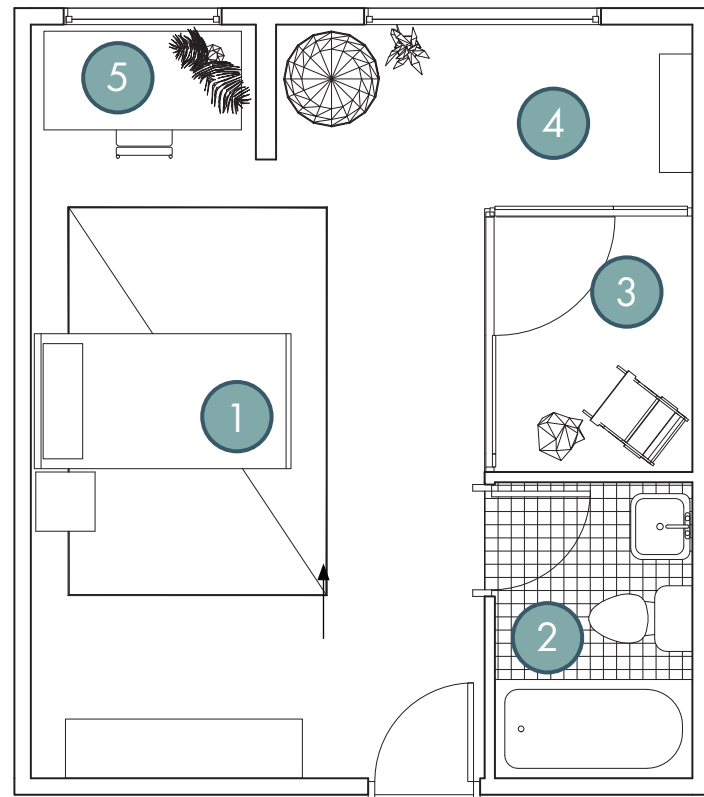
The design of 3 specific spaces in the mental health facility was very important to creating a successful care facility for the patients.

The spaces that are further analyzed based on the 4 design principles of lighting, color, materials and degree of enclosure are the **lobby**, **patient rooms**, and **courtyards**. These spaces are a mixture of public, semi-private, and private spaces that patients and visitors will frequent.

PATIENT ROOMS

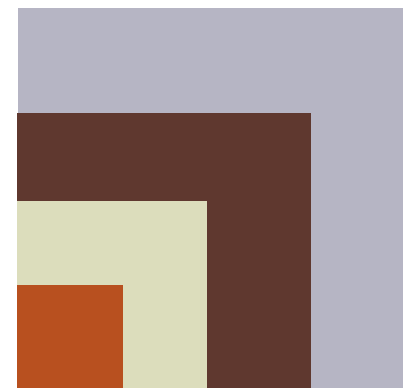
STANDARD ROOM

315 SF

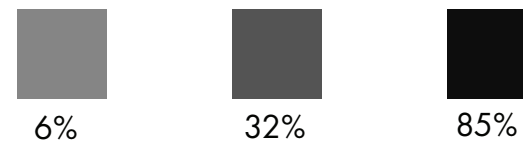


- 1 Bedroom
- 2 Private Bathroom
- 3 Private Courtyard
- 4 Reading Nook
- 5 Desk Nook

COLORS



LIGHTING



MATERIALS

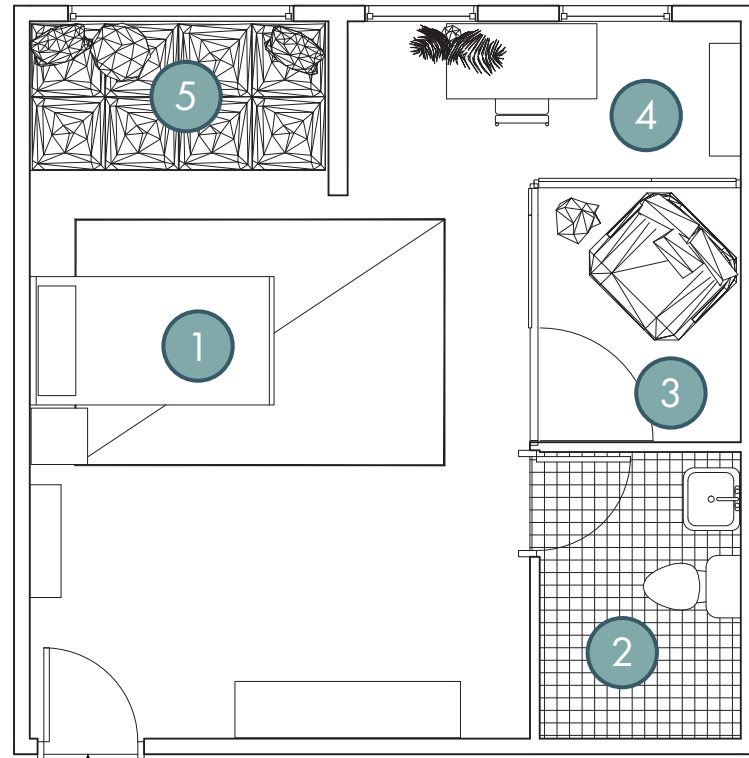


NUMERIC VALUE OF THERMAL CONDUCTIVITY

Material	Thermal Conductivity
Glass	1.0 k
Sheetrock	0.17 k
Wood	0.159 k
Fabric	0.127 k
Human Skin	0.4-0.9 k

SEVERE ROOM

355 SF

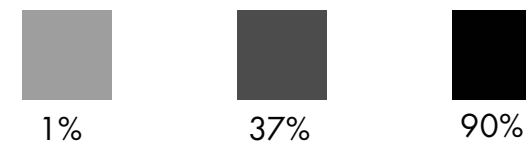


- 1 Bedroom
- 2 Private Bathroom
- 3 Private Courtyard
- 4 Desk Nook
- 5 Window Nook

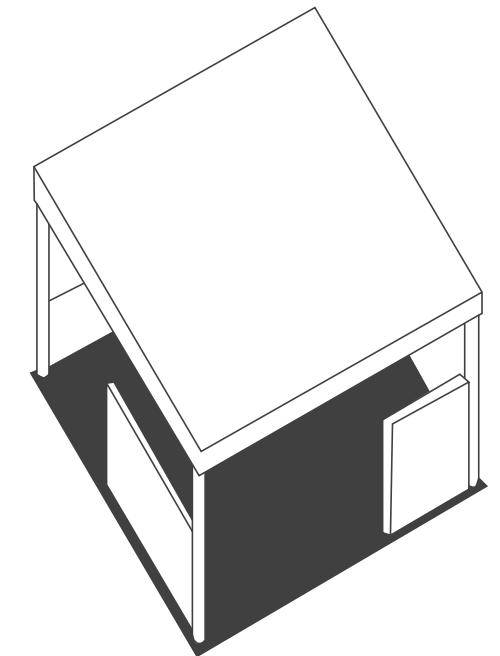
COLORS



LIGHTING



ENCLOSURE



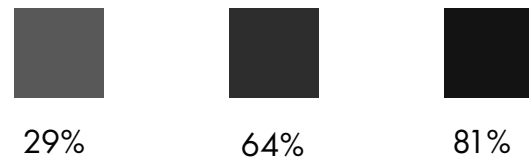
Planes that visually isolate spaces

PATIENT ROOM LIGHTING ANALYSIS PHYSICAL MODEL

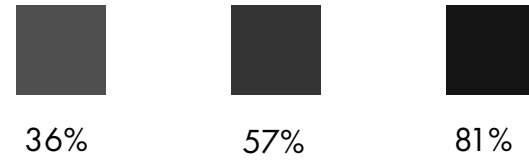
The final standard patient room was analyzed further through a physical model. This process helped me finalize the room's lighting.

Diffused lighting through various skylight designs:

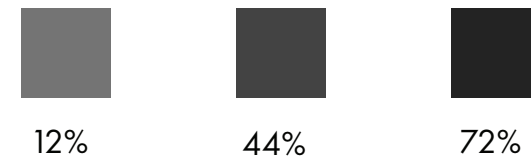
BASE ROOM WITH NO SKYLIGHTS



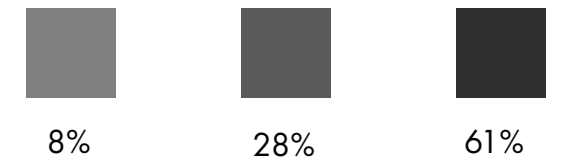
2 SQUARE SKYLIGHTS



5 CIRCULAR SKYLIGHTS



9 CIRCULAR SKYLIGHTS

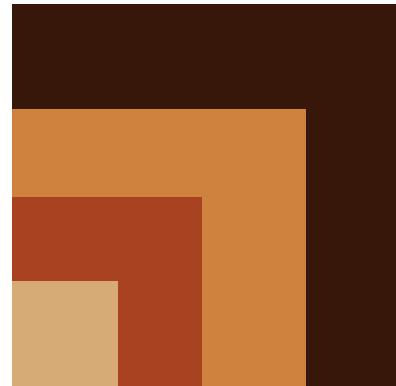


LOBBY

LIGHTING



COLORS



MATERIALS



Albedo Wood



Fabric- Green



Glass

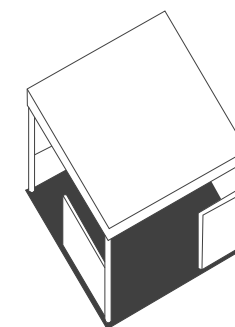


Sheetrock

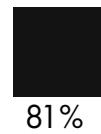
NUMERIC VALUE OF THERMAL CONDUCTIVITY

Material	Thermal Conductivity
Glass	1.0 k
Sheetrock	0.17 k
Wood	0.159 k
Fabric	0.127 k
Human Skin	0.4-0.9 k

ENCLOSURE



Planes that visually isolate spaces



COURTYARD

PIET OUDOLF INSPIRED COURTYARD GARDEN



Figure 32



Figure 33

PLANTS & FLOWERS



Figure 34

Pennisetum spathiolatum



Figure 35

Muhlenbergia rigens



Figure 36

Spartina bakeri



Figure 37

Carex remota



Figure 38

Small birch trees

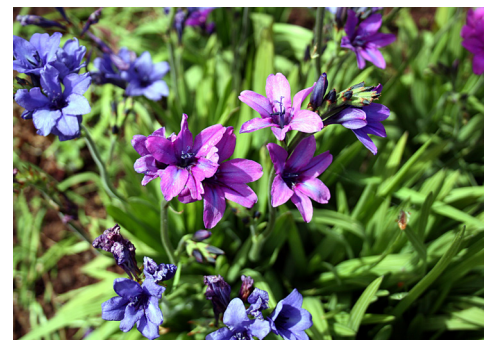


Figure 39

Babina flowers



Figure 40

Pink allium christophii

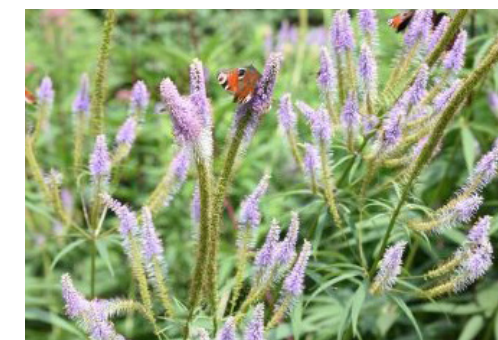


Figure 41

Veronicastrum virginicum

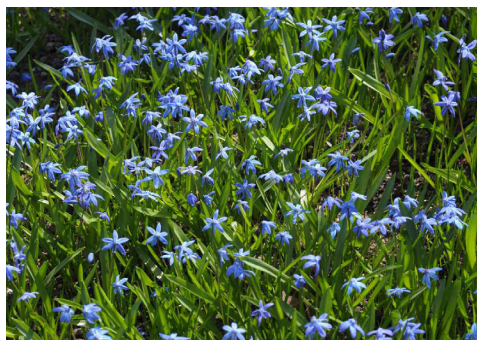


Figure 42

Scilla flowers

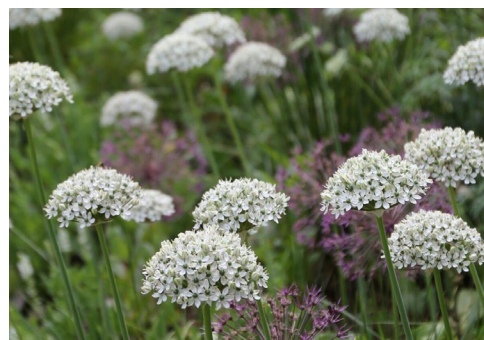


Figure 43

White allium nigrum



Figure 44

Blue camassia flowers

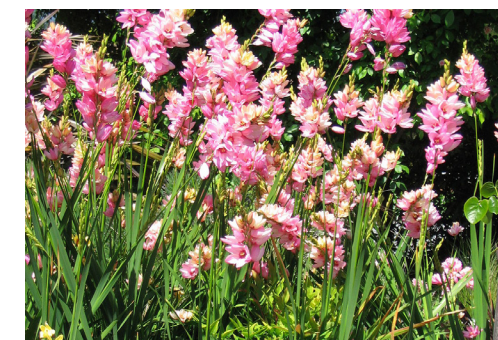
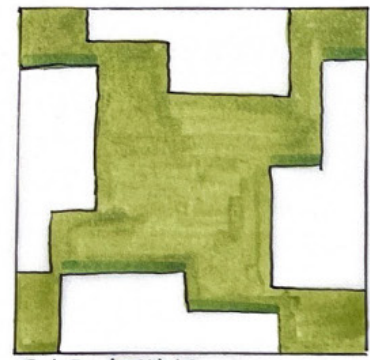


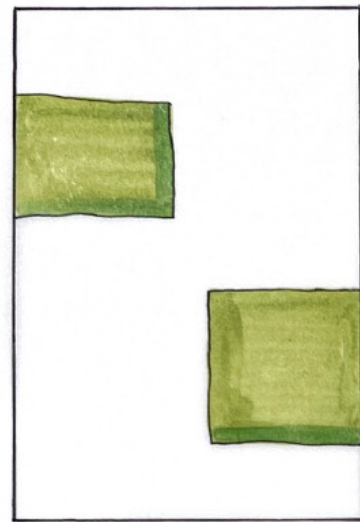
Figure 45

Ixia flowers

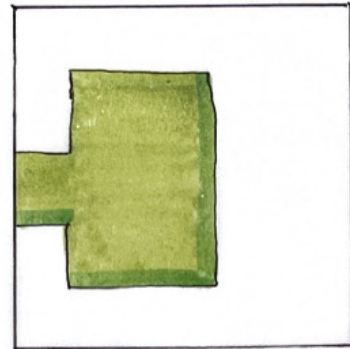
FIRST DESIGN SKETCHES



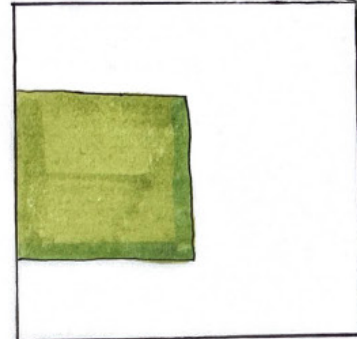
RADIATING



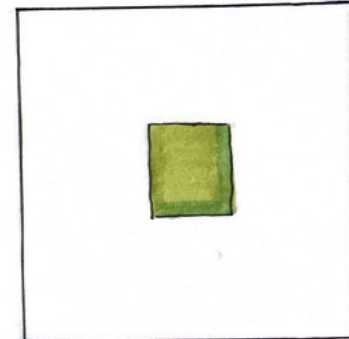
MULTI/S



PARTIALLY CLOSED

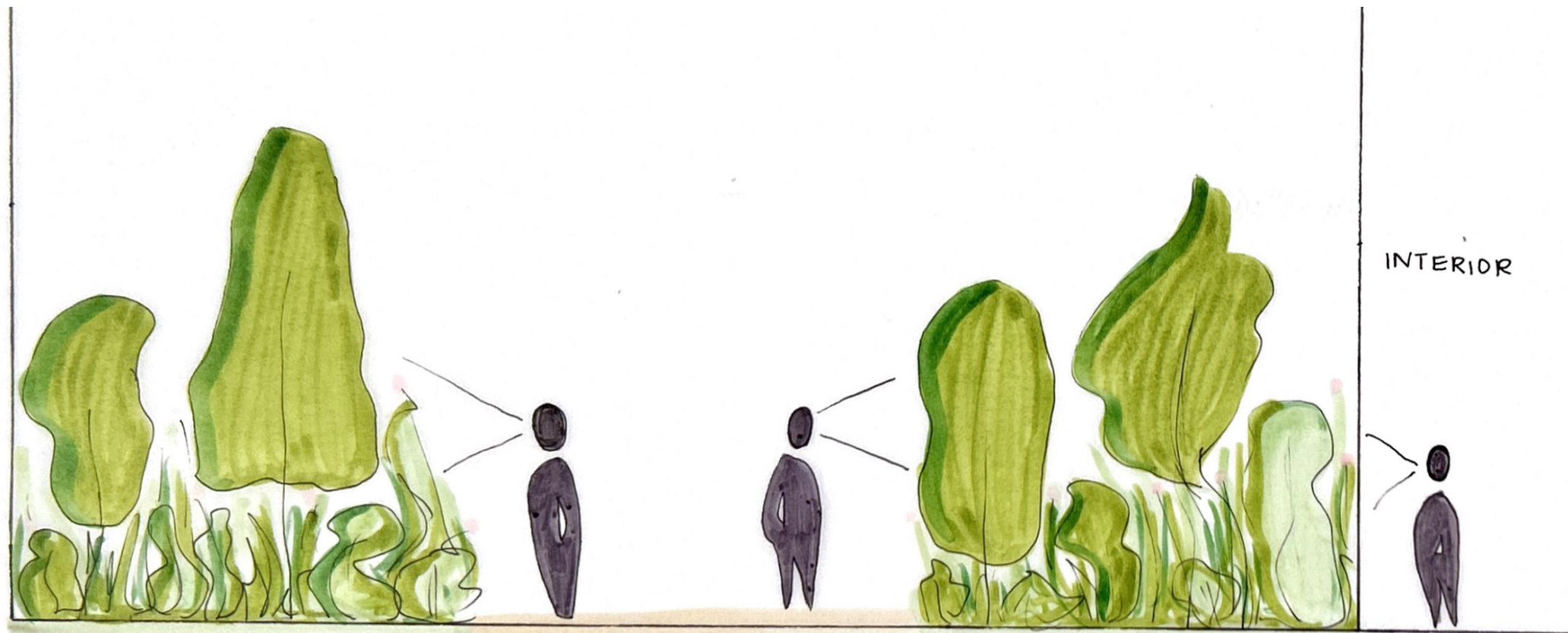


U-SHAPED

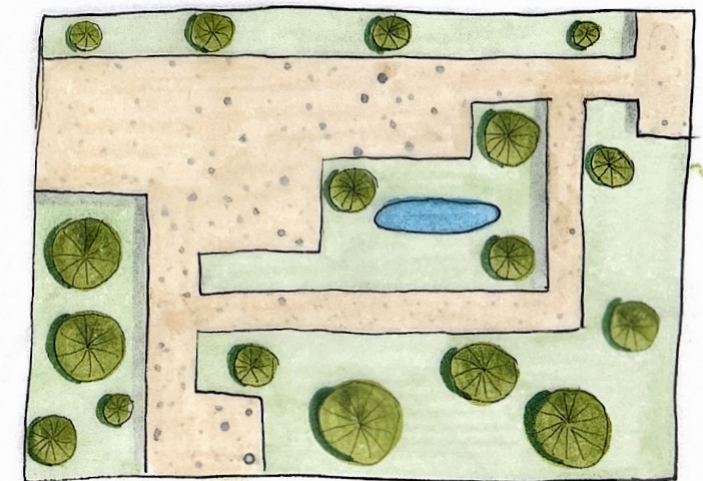
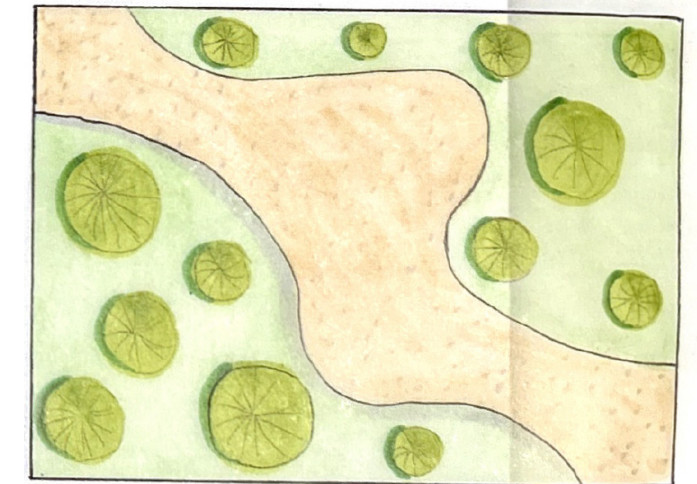
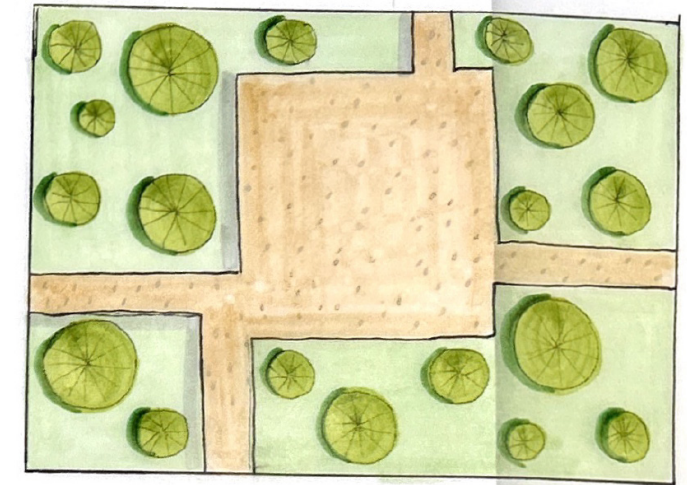


ENCLOSED

Courtyard Types



INTERIOR

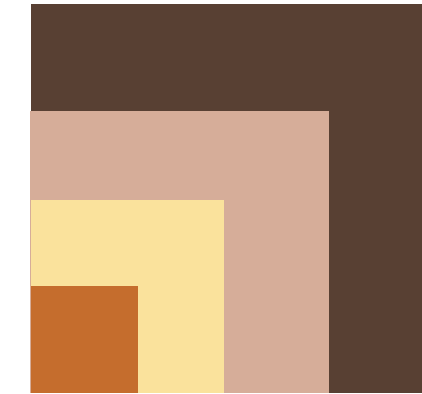


Layout Ideas

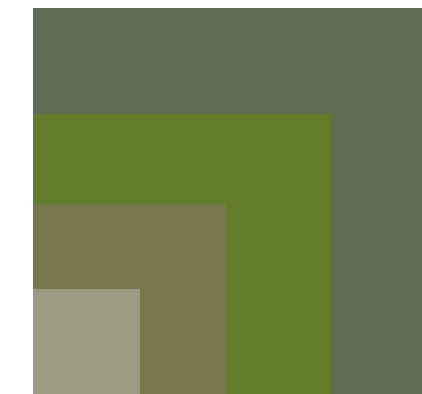
THERAPY COURTYARD



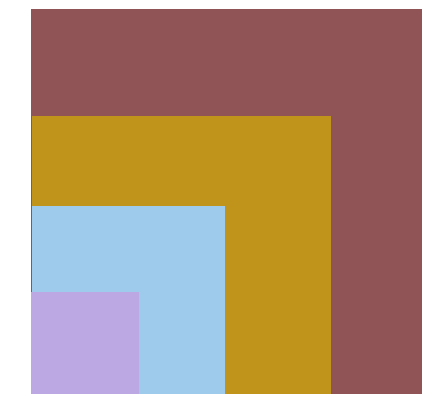
COLORS



Woods

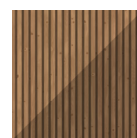


Grasses



Flowers

MATERIALS



Albedo Wood



Glass



Pennisetum spathiolatum



Spartina bakeri



Blue camassia flowers



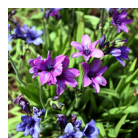
Multicolored Pebbles



Birch tree



Muhlenbergia rigens

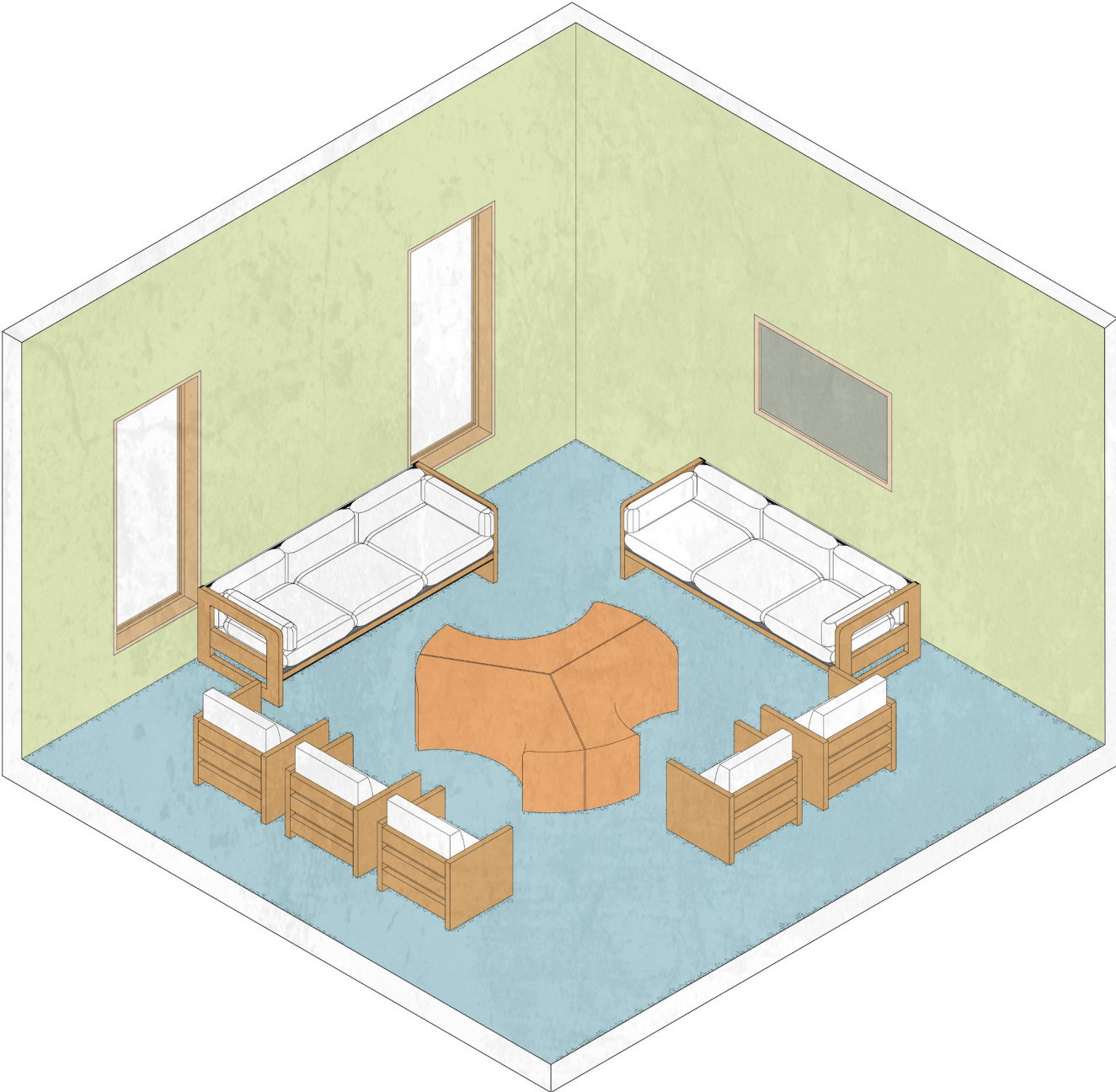


Babina flowers

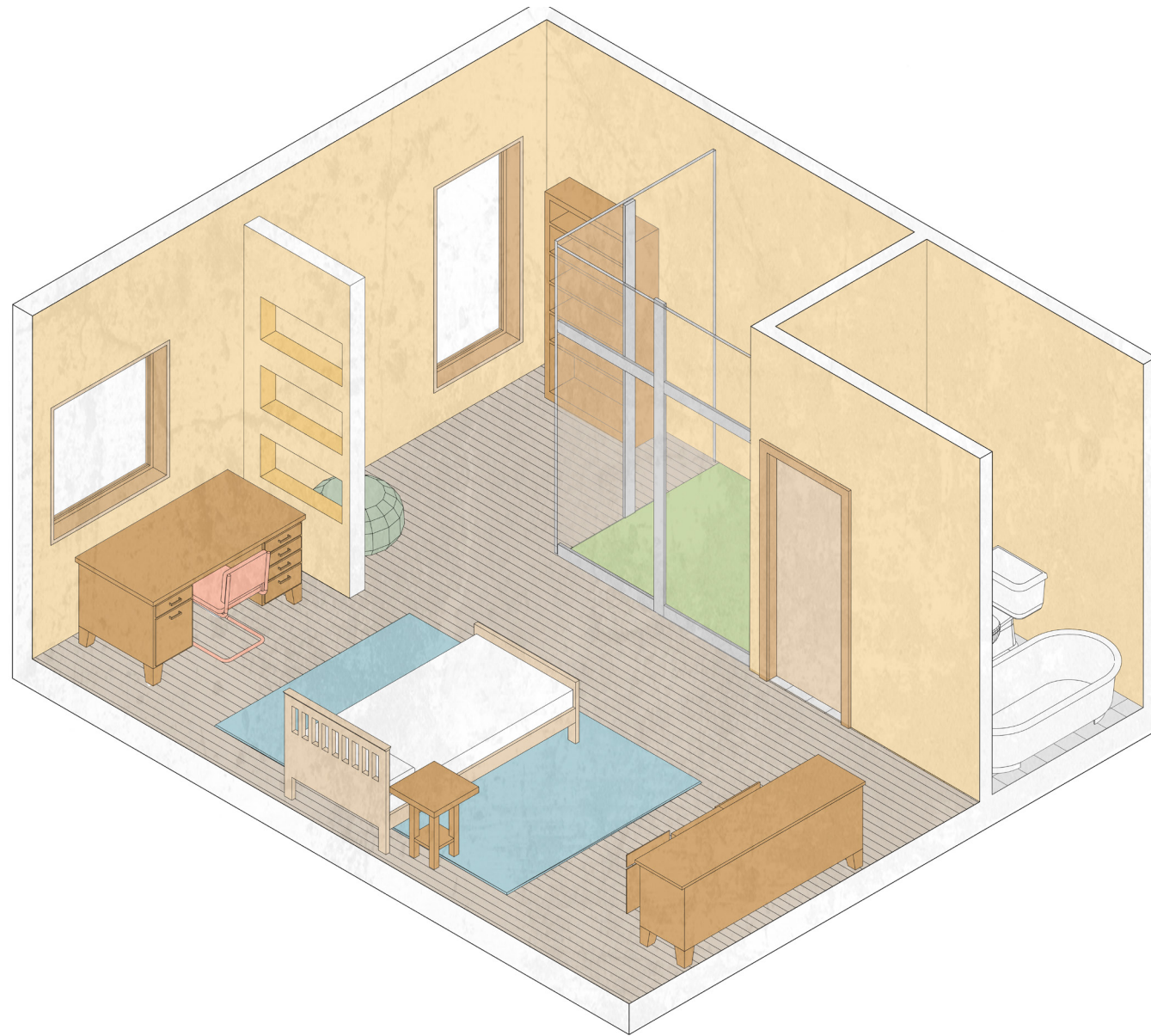
ROOM AXONS



CARE SUITE



THERAPY ROOM



STANDARD PATIENT ROOM



SEVERE PATIENT ROOM

RENDERINGS



FRONT ENTRY



GREEN ROOF



COMMON SPACE



COMMON SPACE



LARGE-GROUP THERAPY ROOM



05 DESIGN CONCLUSION

CONCLUSION/REFLECTION

DESIGN CONCLUSION

REFLECTION

What I learned?

This has been a long journey that has lasted over a year now. Me a year ago and me now are very different people. Going through this process, I learned a lot about what elements makes a space enjoyable to a user. This includes elements of nature, color, and materials. These are my principles that I developed in Fall 2022.

What surprised me?

I was surprised how much research was needed for my courtyards. I did heavy research into landscape architects in order to choose the style I wanted to incorporate into my design. I didn't realize how much went into landscape architecture, and I tried my best to emulate Piet Oudolf's style.

I was also surprised by the relationship between my design principles to make a successful design. I suspected that they would work well together, but they look better than expected. The materials and lighting have a special connection. Great lighting with natural materials make for a successful space.

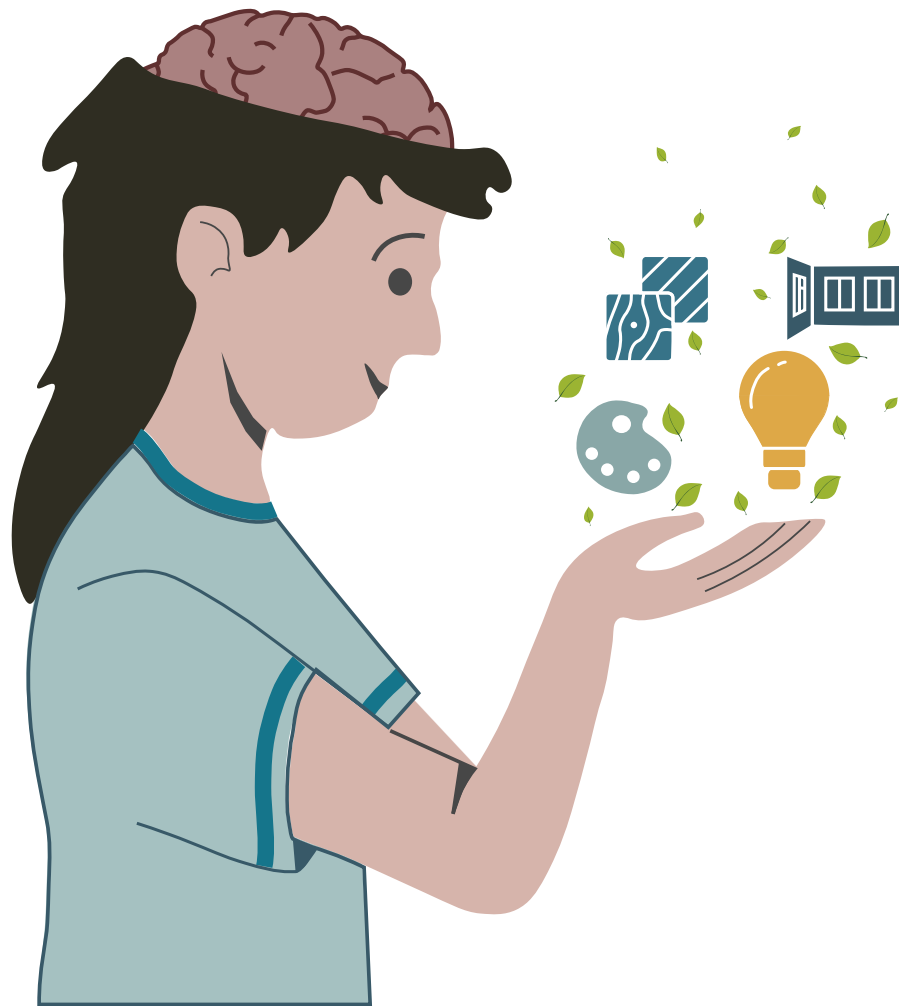
[Redacted text block]

06 APPENDIX
FINAL BOARDS - SOURCES - FIGURES

THESIS COMPETITION BOARDS

BREAKING THE STIGMA

CHALLENGING THE MENTAL HEALTH CRISIS THROUGH A NEW WAY OF DESIGNING A RECOVERY FACILITY FOR TEENS



RESEARCH CONTEXT

Mental health is a highly stigmatized topic within today's society. The mental health system in the United States has failed to consistently create safe and successful spaces for recovering patients with psychological disorders.

Facilities are often described as "inhumane" by patients in how they are designed. Patients have expressed that there is lack of safe, private spaces. The spaces that are considered "private" are solitary confinement wards with no windows or furniture. It is said that interior design is not a priority as well, with no colors or art on walls. Spaces are cold and dead feeling, which does not help the patients in their healing process.

People need a safe and encouraging place to go in order to start their road to recovery. Breaking the Stigma aims to challenge the mental health crisis and create a calming and uplifting space for recovering patients in Millcreek, Utah.

Creating a space that is positive for a patients' mental health would include access to outdoor gathering spaces, both public and private, natural and artificial lighting as well as colors within spaces to lift moods, and carefully designed rooms for patients to gather with others and recover on their own time.

PROBLEMS

Patients all over the country are debilitated by their mental health. They aren't given the proper facilities to begin the long or never-ending healing process. The mentally ill are sometimes even put in prisons just as a result of the lack of safe recovery facilities. Patients/inmates are treated horribly. They are held in solitary confinement for 23 hours per day, that is guarded by corrections officers. Group therapy sessions are held in 4-by-10-foot metal cages. This fact is valid for all age groups. Lack of safe facilities is a huge issue in the mental health crisis. Patients never recover and just live with their own demons for the rest of their lives, rather than learning healthy coping mechanisms.



DISORDERS

The categories of behavioral health disorders each have their own unique characteristics and triggers. A patient's environment can either help or harm the characteristics.



MOOD DISORDERS

"Your general emotional state or mood is altered or inconsistent with your circumstances and interferes with your ability to function. You may be extremely sad, empty or irritable (depressed), or you may have periods of depression alternating with being excessively happy (mania)."

EXAMPLES
Major Depressive Disorder
Bipolar Disorder
Seasonal Affective Disorder



ANXIETY DISORDERS

"People with anxiety disorders frequently have intense, excessive and persistent worry and fear about everyday situations. Often, anxiety disorders involve repeated episodes of sudden feelings of intense anxiety and fear or terror that reach a peak within minutes (panic attacks)."

EXAMPLES
Generalized Anxiety Disorder
Obsessive Compulsive Disorder
Phobias
Social Anxiety Disorder
Panic Disorder
Separation Anxiety Disorder



EATING DISORDERS

"Eating disorders are usually serious and often fatal illnesses that are associated with severe disturbances in people's eating behaviors and related thoughts and emotions. Preoccupation with food, body weight, and shape may also signal an eating disorder."

EXAMPLES
Anorexia Nervosa
Bulimia Nervosa
Binge Eating Disorder
Avoidant Restrictive Food Intake Disorder (ARFID)



PERSONALITY DISORDERS

"A personality disorder is a type of mental disorder in which you have a rigid and unhealthy pattern of thinking, functioning and behaving. A person with a personality disorder has trouble getting on and relating to others and people."

EXAMPLES
Paranoid Personality Disorder
Schizoid Personality Disorder
Schizotypal Personality Disorder
Antisocial Personality Disorder
Borderline Personality Disorder
Obsessive Compulsive Personality Disorder
Histrionic Personality Disorder
Narcissistic Personality Disorder
Avoidant Personality Disorder
Dependent Personality Disorder

DESIGN PRINCIPLES



LIGHTING

Lighting is an important factor to any design. It can include natural lighting as well as artificial lighting within a space. I plan to analyze both aspects of lighting in my design.



MATERIALS

Materials can make or break a space. They need to be placed in areas where they make the most sense. I aim to include materials that have a low thermal conductivity such as fabrics and wood.



COLOR

Colors are all around us. Some make us feel calm, while some overstimulate our senses. I plan to analyze my case studies in regards to color, to determine the best color palettes to include in my design.

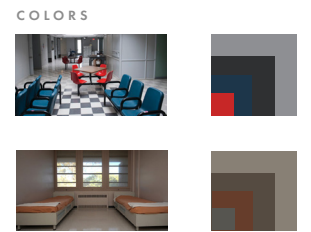
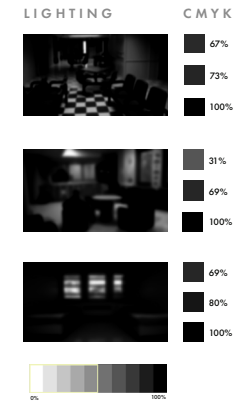


DEGREE OF ENCLOSURE

The degree of enclosure refers to the openness of a space. Private spaces are more enclosed, while public spaces are more open. I aim to implement these techniques into my design of public and private spaces and their enclosure.

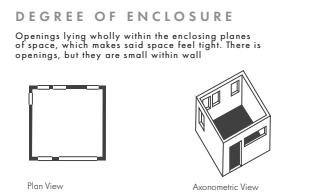
CASE STUDIES

INSTITUTIONAL

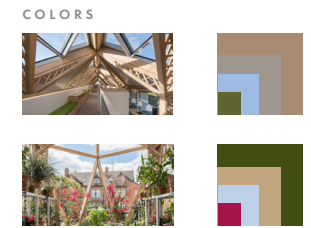
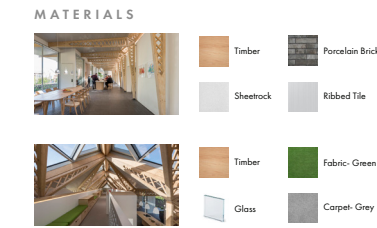
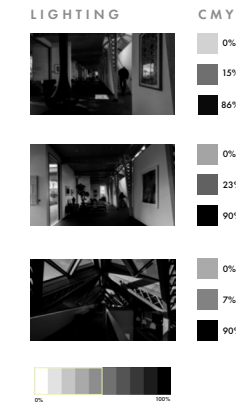


NUMERIC VALUE OF THERMAL CONDUCTIVITY

Material	Thermal Conductivity
Aluminum	204 k
Glass	0.76 k
VCT	0.48 k
Sheetrock	0.17 k
Wood	0.13 k
Human Skin	0.4-0.9 k

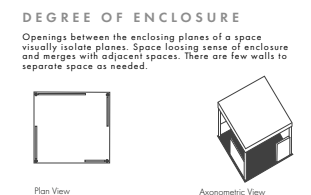


MAGGIE'S CENTER

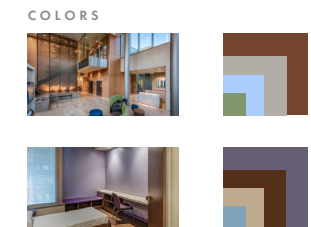
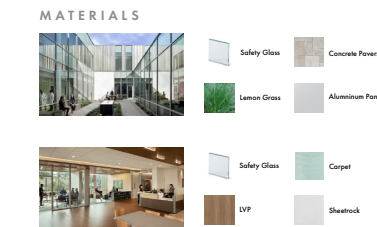
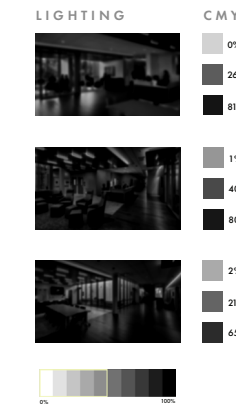


NUMERIC VALUE OF THERMAL CONDUCTIVITY

Material	Thermal Conductivity
Porcelain Brick	0.70 k
Ribbed Tile	0.31 k
Sheetrock	0.17 k
Wood	0.13 k
Fabric	0.127 k
Human Skin	0.4-0.9 k

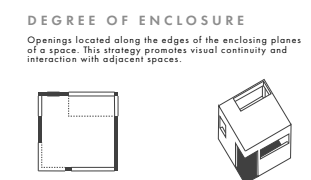


TAUBE PAVILION



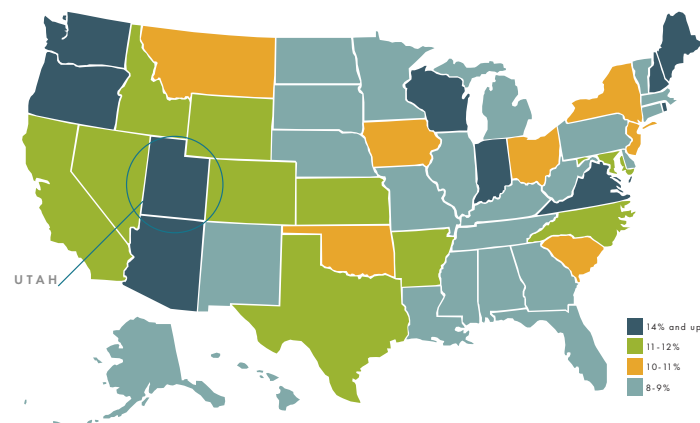
NUMERIC VALUE OF THERMAL CONDUCTIVITY

Material	Thermal Conductivity
Aluminum Panel	204 k
Concrete Pavers	1.4 k
Glass	0.76 k
Sheetrock	0.17 k
Wood	0.13 k
Human Skin	0.4-0.9 k
Carpet	0.08 k



SITE SELECTION

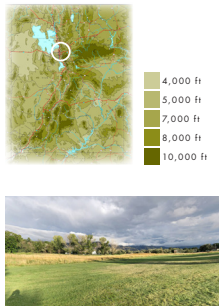
MAJOR DEPRESSIVE EPISODES IN ADOLESCENTS AGES 12-17



STATE OF UTAH MENTAL HEALTH STATISTICS

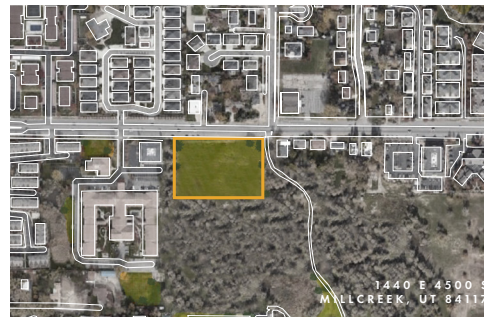
- 33% of the 70,000 Utah youth surveyed said that they have felt sad or hopeless
- 18.1% of teens seriously considered suicide
- Teen suicide rate in Utah is DOUBLE the national rate and has increased more than 5 times faster than the national average

UTAH ELEVATION MAP



High altitudes can alter the number of neurotransmitters, which Renshaw suspected might lead to enjoyment for some and depression for others.

SITE MAP



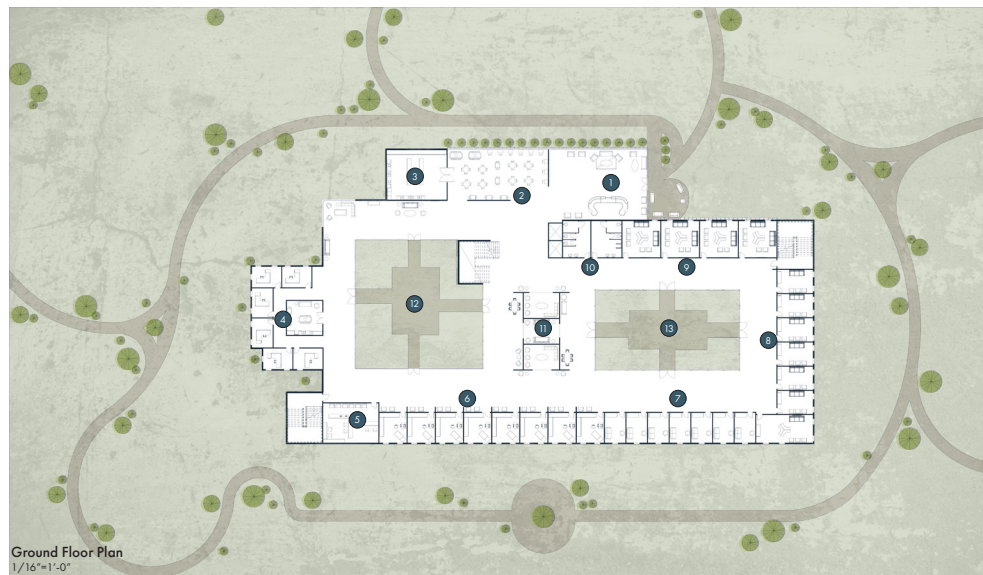
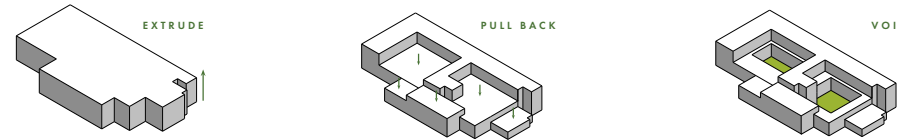
PROGRAM

Privacy	Room	Quantity	Square Footage	Total (SF)
Public	Lobby	1	1,400	1,400
Public	Courtyard	2	2,800	5,600
Public	Reception	2	400	800
Public	Care Suites	8	232	1,856
Public	Pharmacy	1	140	140
Public	Patient Room	32	350	11,200
Public	Patient Room - Severe	13	400	5,200
Public	Common Space	4	300	1,200
Public	Group Therapy - Large	4	340	1,360
Public	Group Therapy - Small	6	215	1,290
Public	Private Therapy	7	154	1,050
Public	Dining Hall	1	1,300	1,300
Public	Visitor Area	3	220	660
Public	Office Support	5	180	750
Public	Staff Lounge	1	300	300
Public	Kitchen	1	727	727
Public	Green Roof	2	400	800
Public	TOTAL			36,743
Public	PROGRAM CIRCULATION			42,923

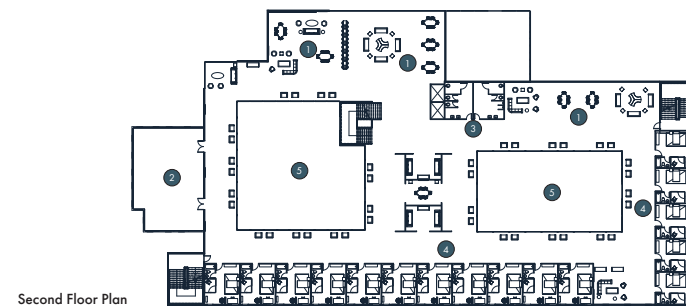
- Private
- Semi-Private
- Public



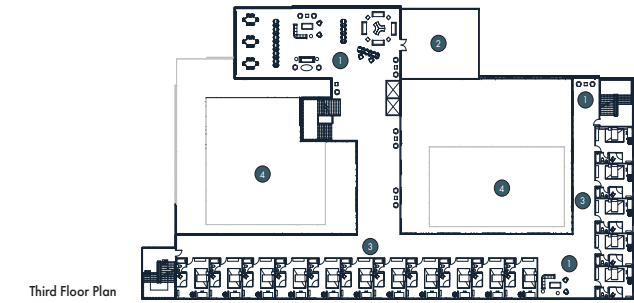
FORM



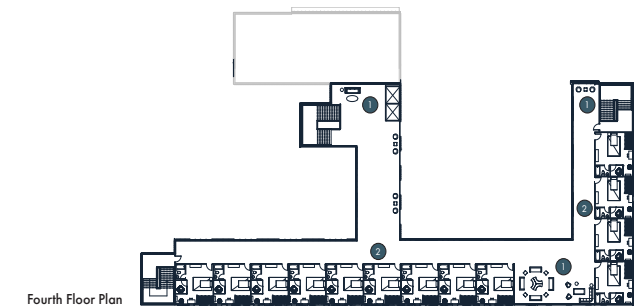
- 1 Lobby/Reception
- 2 Dining
- 3 Kitchen
- 4 Staff Area
- 5 Pharmacy
- 6 Care Suites
- 7 Private Therapy
- 8 Small Group Therapy
- 9 Large Group Therapy
- 10 Public Restrooms
- 11 Visitor Area
- 12 Public Court
- 13 Therapy Court



- 1 Common Space
- 2 Green Roof
- 3 Public Restroom
- 4 Standard Patient Room
- 5 Courtyard Overlook



- 1 Common Space
- 2 Green Roof
- 3 Standard Patient Room
- 4 Courtyard Overlook



- 1 Common Space
- 2 Severe Patient Room



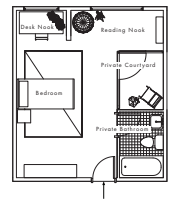
PRINCIPLE ANALYSIS

DESIGNING OF 3 SPECIFIC SPACES BASED ON PRINCIPLES

The design of 3 specific spaces in the mental health facility was very important to creating a successful care facility for the patients. The spaces that are further analyzed based on the 4 design principles of lighting, color, materials and degree of enclosure are the lobby, patient rooms, and courtyards. These spaces are a mixture of public, semi-private, and private spaces that patients and visitors will frequent.

PATIENT ROOMS

STANDARD ROOM 315 SF



COLORS



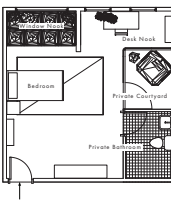
LIGHTING



MATERIALS

Timber	Fabric- Green
Glass	Sheetrock
Material	Thermal Condu
Glass	1.0 k
Sheetrock	0.17 k
Wood	0.159 k
Fabric	0.127 k
Human Skin	0.4-0.9 k

SEVERE ROOM 355 SF



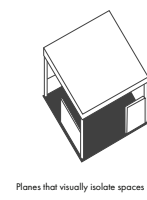
COLORS



LIGHTING



ENCLOSURE



Planes that visually isolate spaces

PATIENT ROOM LIGHTING ANALYSIS PHYSICAL MODEL

The final standard patient room was analyzed further through a physical model. This process helped me finalize the room's lighting.

Diffused lighting through various skylight designs:

-Square and circular, with varying amounts

BASE ROOM WITH NO SKYLIGHTS



2 SQUARE SKYLIGHTS



5 CIRCULAR SKYLIGHTS



9 CIRCULAR SKYLIGHTS



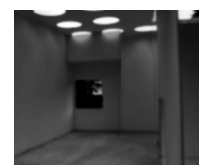
29% 64% 81%



36% 57% 81%



12% 44% 72%



8% 28% 61%

LOBBY

LIGHTING



15% 64% 81%

COLORS



MATERIALS

Albedo Wood	Fabric- Green
Glass	Sheetrock
Material	Thermal Conductivity
Glass	1.0 k
Sheetrock	0.17 k
Wood	0.159 k
Fabric	0.127 k
Human Skin	0.4-0.9 k

COURTYARD

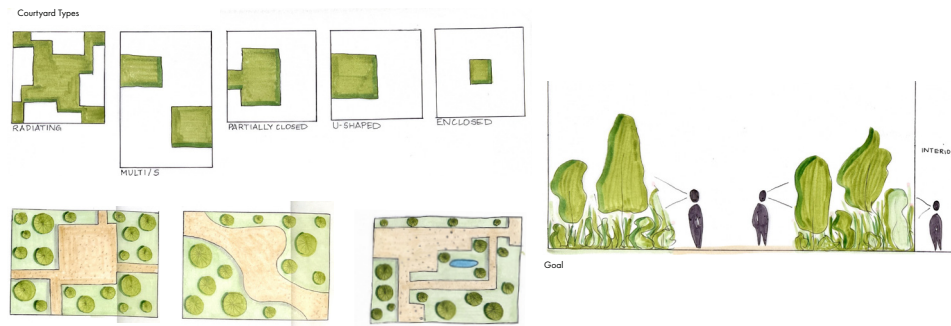
PIET OUDOLF INSPIRED COURTYARD GARDEN



PLANTS & FLOWERS



FIRST DESIGN SKETCHES



THERAPY COURTYARD



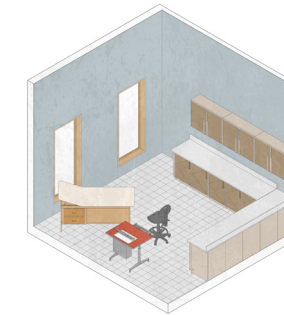
COLORS



MATERIALS

Albedo Wood	Multicolored Pebbles	Glass
Pennisetum spathulatum	Muhlenbergia rigens	Spartina bakeri
Birch tree	Babina flowers	Blue camassia flowers

ROOM AXONS



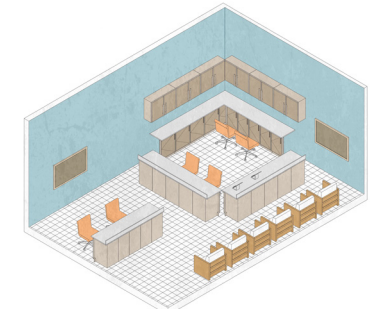
CARE SUITE



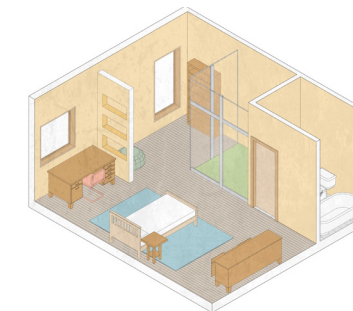
THERAPY ROOM



VISITOR AREA



PHARMACY



STANDARD PATIENT ROOM



SEVERE PATIENT ROOM

REFLECTION

What I learned?

This has been a long journey that has lasted over a year now. Me a year ago and me now are very different people. Going through this process, I learned a lot about what elements makes a space enjoyable to a user. This includes elements of nature, color, and materials. These are my principles that I developed in Fall 2022.

What surprised me?

I was surprised how much research was needed for my courtyards. I did heavy research into landscape architects in order to choose the style I wanted to incorporate into my design. I didn't realize how much went into landscape architecture, and I tried my best to emulate Piet Oudolf's style.

I was also surprised by the relationship between my design principles to make a successful design. I suspected that they would work well together, but they look better than expected. The materials and lighting have a special connection. Great lighting with natural materials make for a successful space.



COMMON SPACE



FRONT ENTRY



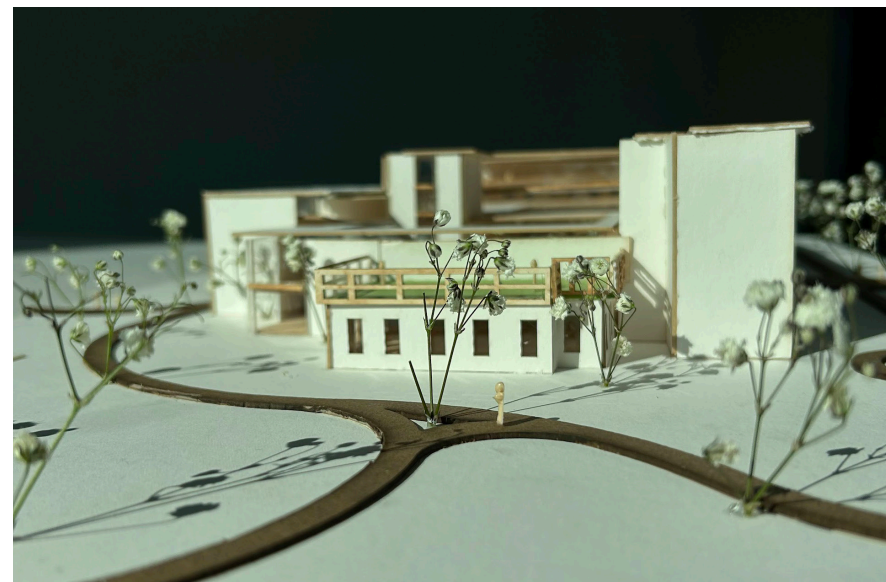
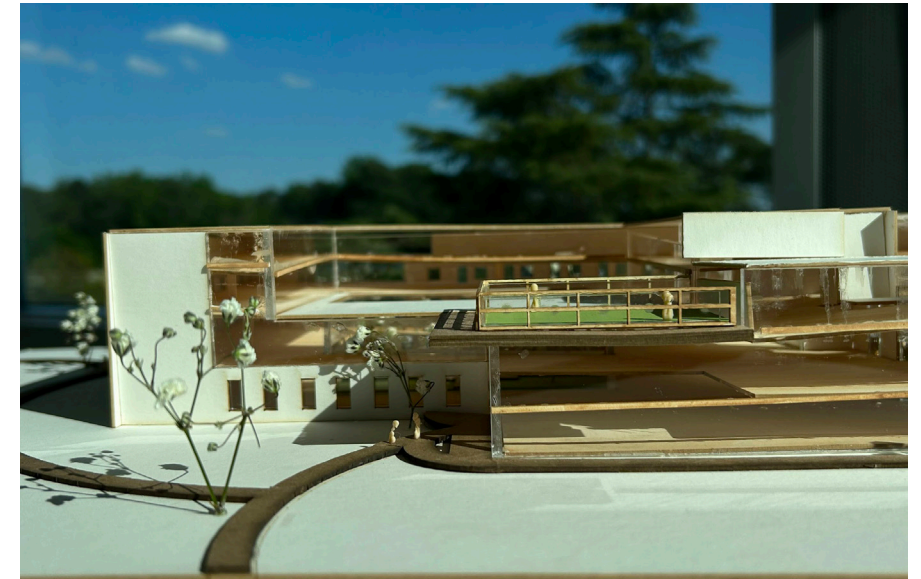
LARGE-GROUP THERAPY ROOM



COMMON SPACE



GREEN ROOF



"Happiness can be found even in the darkest of times, if one only remembers to turn on the light"
-Albus Dumbledore

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-Albus Dumbledore

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