

Portfolio 1

IDSN3102

Fall Semester

Asia Long

Stakeholder Profiles

- The owner of the space is Communitysmith a real-estate developer
- The client of for this design project is Herman Miller
- The users of the location are the customers, clients, employees, and attendees at community events.
- What each stakeholder wants to see from the space are commercial retail workspace and a space can display their furniture for customers the purchase.




Site Profile

- Pitt County district
- 203 E 5th St, Greenville,
 - NC 27858
- 3,000+/- sq/ft



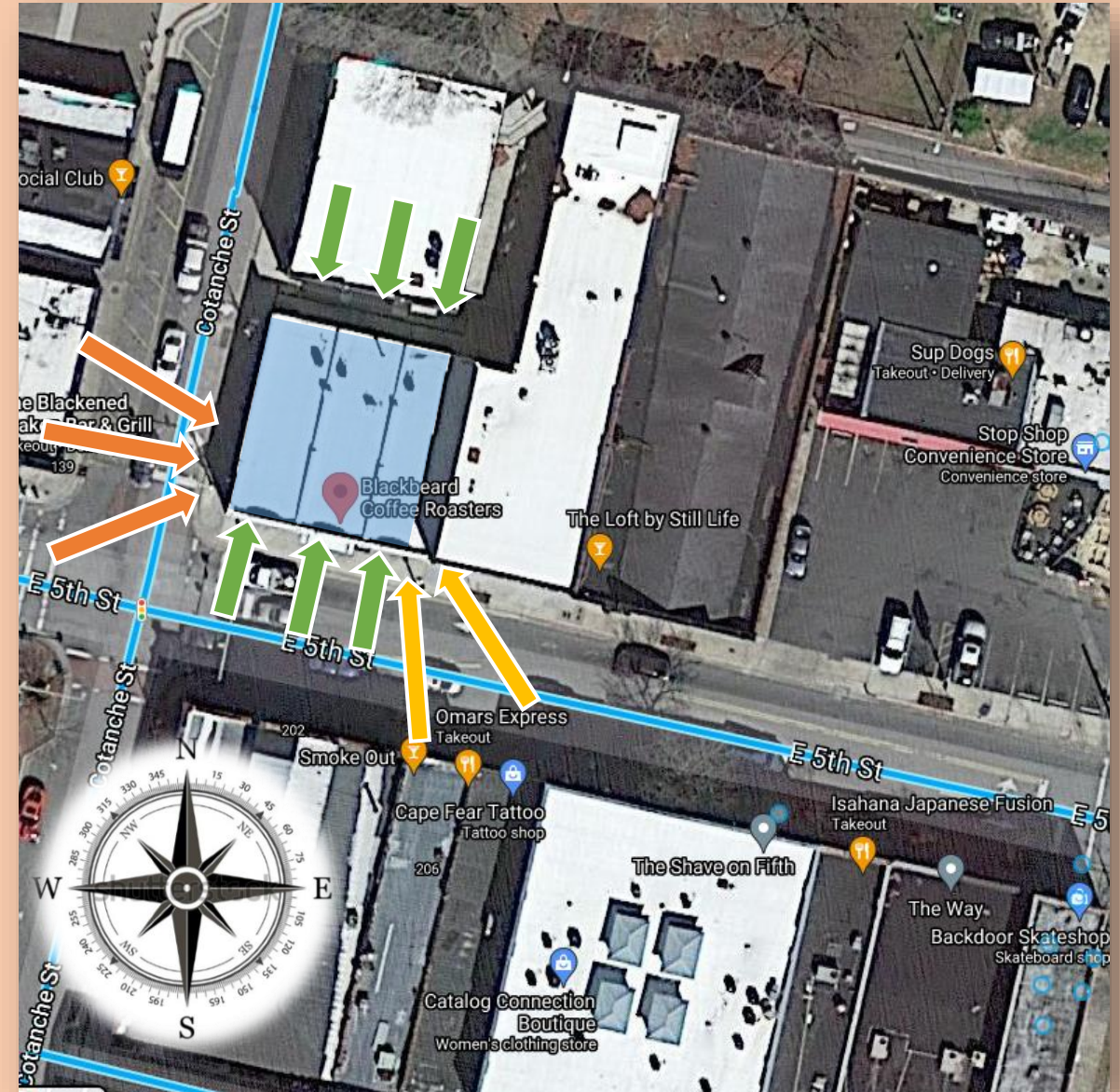
Site Analysis

ENTRANCE – 

MORNING LIGHT – 

DAY/EVENTING LIGHT – 

TENANT SPACE – 



Design Problem Statement

ADA

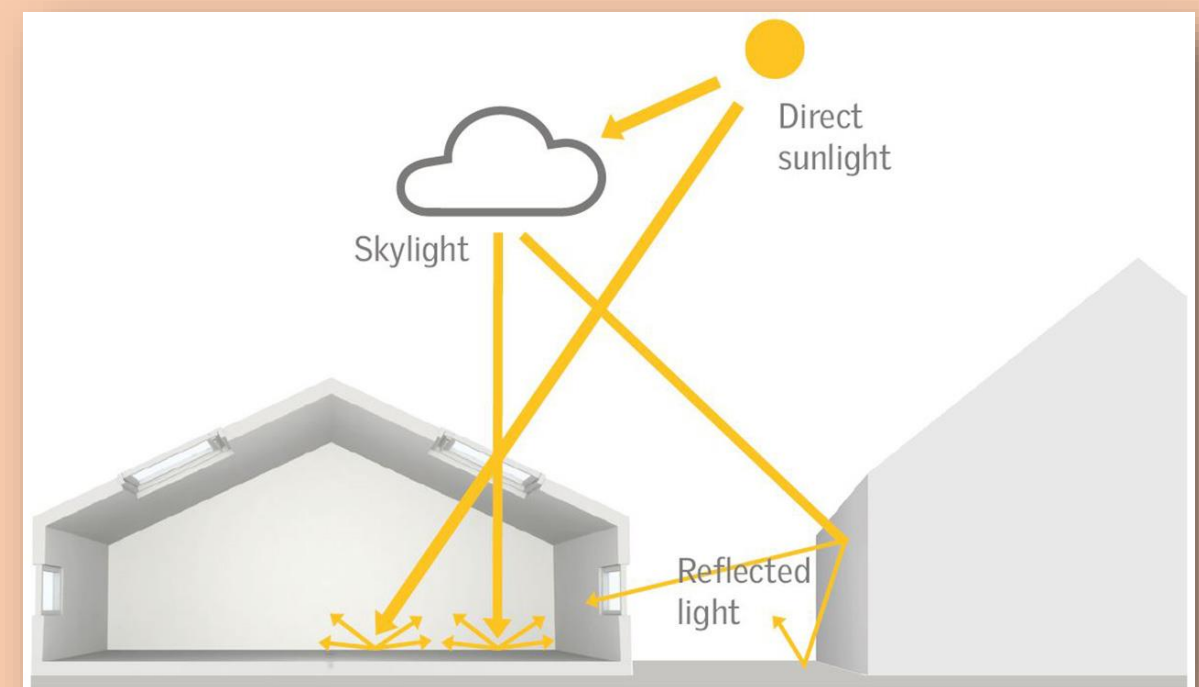
- When designing being ADA officiant is very important for the design concept of the space.
 - Ramp's max 1:12: min. 36" wide: rails both sides if more than 6' long
- Objects protruding into walkways; if the bottom of protrusion is less than 27" above floor
 - Can stick out any dimension above 27" and it can only protrude 4"
- Counters standard table height to be wheelchair assessable.

Daylighting

- In this design space is limited due to natural light only being in the front of the building.

Space

- Connecting the first and second floor design concept will be challenging
- To make sure that the space on the second floor is available for customers and clients who are wheelchair bond.



RESEARCH

- Universal is a space or environment that can be used by all people without needing to be adapted or specialized after the fact.
- Inclusive design is the design of an environment or space so that it can be accessed and used by as many people as possible, regardless of age, gender and disability.
- During the past decade, furniture designers have tried to part the sea of cubicles and encourage sociability—without going nuts. Knoll, for example, created systems with movable, semi-enclosed pods and connected desks whose shape separates work areas in lieu of dividers. Most recently, Vitra unveiled furniture in which privacy is suggested if not realized. Its large tables have low dividers that cordon off personal space but won't guard personal calls.
- Patricia Moore is an internationally renowned gerontologist and designer, serving as a leading authority on consumer lifespan behaviors and requirements.
- UNC - Center for Universal Design (Robert Mace)
 - was a nationally and globally acclaimed architect, product designer, and educator whose design philosophy defied convention and laid the groundwork for a more useable society.
- He invented the phrase "universal design" to characterize the concept of designing all businesses and the built environment to be as aesthetically pleasing and accessible as possible by everyone, regardless of age, ability, or social class. He was also a passionate champion for the rights of persons with disabilities, as seen by his work.
- ADA passageways and doors
 - should be at least 36 inches wide to be ADA accessible.
- ADA Restrooms
 - are required to have a minimum floor space of 30 inches by 48 inches.
 - Enough clearance for the knees and the toes of the person in the wheelchair to reach the sink and to be able to move around freely.

Heights and projection into the space

- Countertops must be no more than 36 inches from the floor, but certain counters can be 2 inches higher, and others can be as low as 34 inches from the floor.
- The ADA also minimum unobstructed area in front of different counter types.



Social Behavior in the Workplace

- Research shows that poor interpersonal skills are the number one reason why people don't get along, don't get promoted or, even worse, lose their jobs.
- Strong interpersonal skills will enable you to talk to and work with all types of people,
 - including managers, coworkers, and customers. Interpersonal skills do more than give
 - you the ability to communicate with other people.

Burolandschaft (1960)

- "office landscape" created by socialist values in Germany
- Elimination of executive offices
- Encouraged collaboration through layout (pinwheels and side workstations)
- Undivided
- Grouping by function

Virtual office (1994)

- No personal desks
- Severe decrease in productivity
- Lack of personal space left employees feeling out of place
- Employees had to grab supplies and find a place to work

Networking (present)

- Moving away from cubicles
- Encourages socializing amongst workers
- Separate work areas without dividers
- Mobile furniture



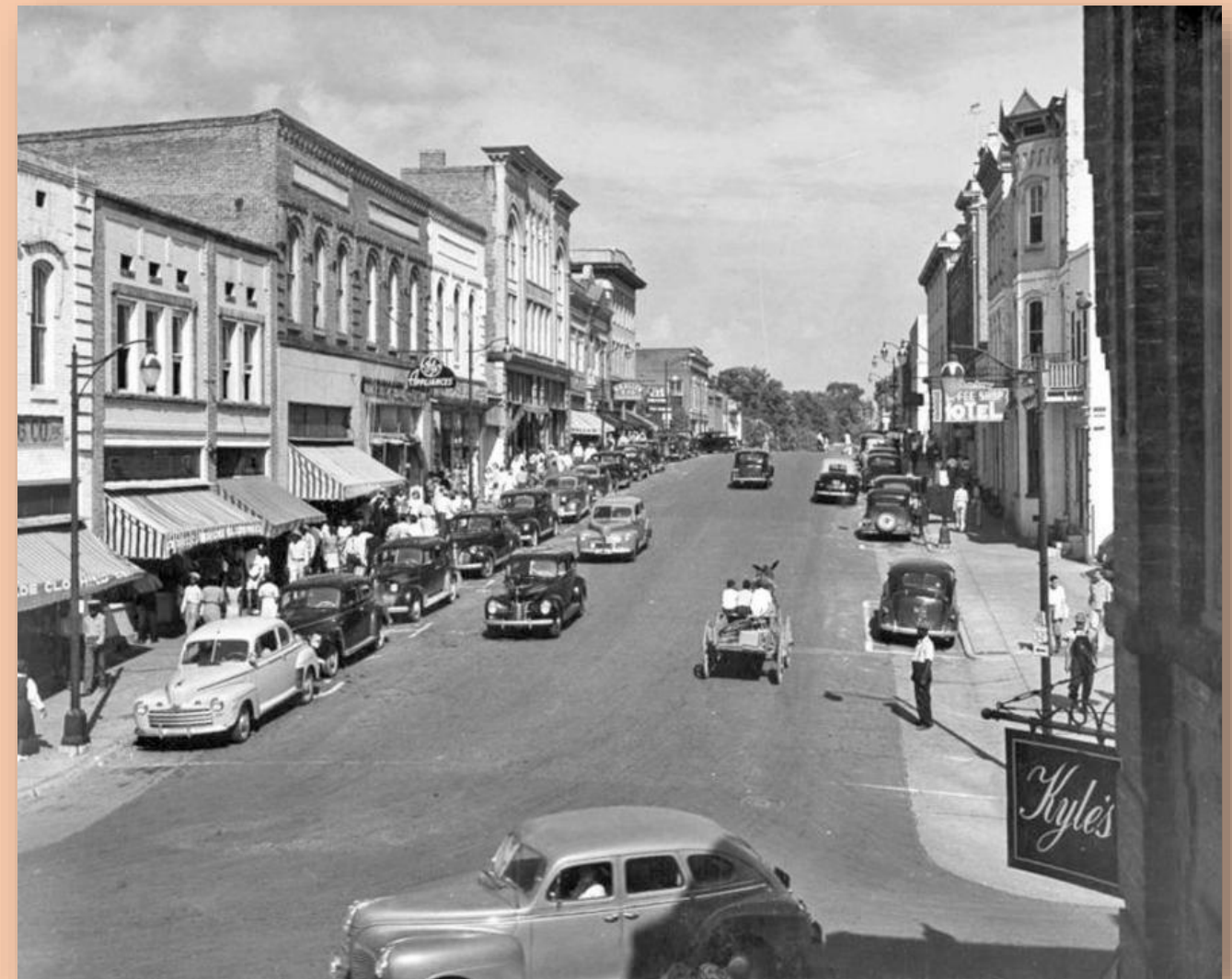
Neighborhood & Town History

History

- The City of Greenville has a vibrant history that stretches back almost 250 years.
- The city was once known as the “Queen City on the Tar” because of its prime location along the Tar River in the heart of Eastern North Carolina.
- By 1909 Greenville became the educational & cultural center of Eastern NC.
- During the Civil War, Greenville experienced massacres, riots, and other tragedies. It wasn't until the end of the nineteenth century that Greenville began to flourish again.

Present Day

- Greenville is the 11th largest city in North Carolina and the 350th largest city in the United States, with a population of 94,822.
- Greenville is the cultural, economic, and educational center of North Carolina's Inner Banks, which is located east of Raleigh and west of the state's coast.



Applicable Fire & Life Safety Codes

- With few exclusions, we will adopt the 2012 edition of the Health Care Facilities Code and remove references to older editions of the Life Safety Code from our rules.
- In today's diverse work force differences can mean accommodations but differences can also mean a much richer workforce
- Many workplaces showcase open concepts within the work environment to encourage interaction, intimate scale, transparent materials, open spaces, and adaptable furniture are promoting personal dialogue and engagement in entertainment venues and design workplaces.



Local Preservation Codes & Credits

- Greenville recognizes that historic preservation is a vital tool for revitalizing its neighborhoods, enhancing quality of life in Greenville, and stimulating economic development in the region.



Sustainability

Design for energy efficiency

- Energy consumption is one of the major contributors to climate change.
- improve a building's energy efficiency, mainly by reducing the amount of energy needed for heating, lighting, running appliances, etc., and by providing renewable, non-carbon-based energy to the building.

Design for low environmental impact

- Pick materials and products with the lowest environmental impact. Organic materials (e.g., wood, wool, natural stone) seem the obvious choice, but we mustn't forget that natural resources need to be treated responsibly.
- An FSC label on wood products ensures that the wood used in the product was harvested sustainably.

Design for waste reduction

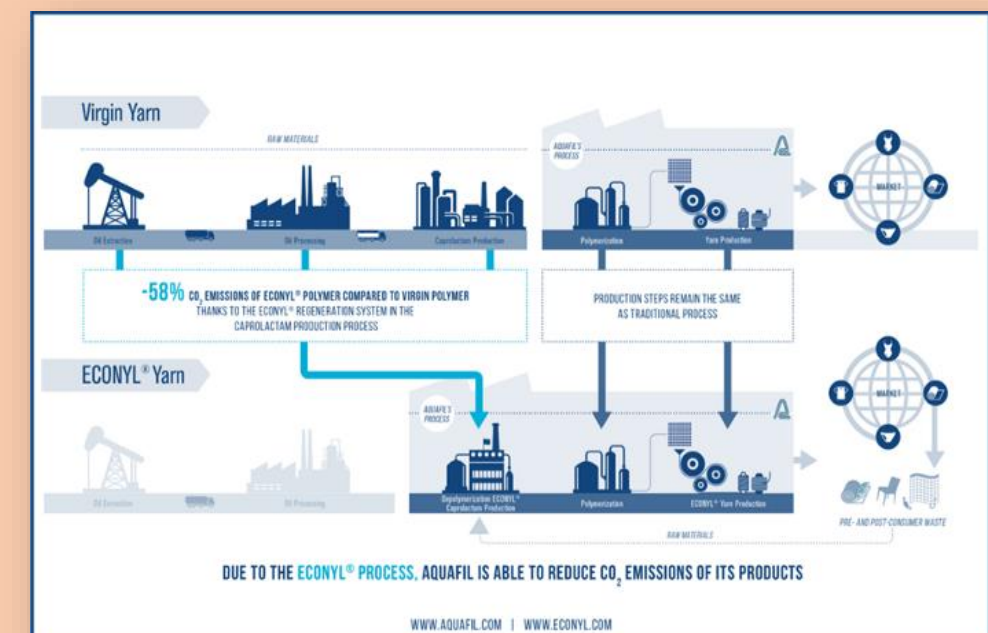
- The world of design is becoming increasingly aware of the need for sustainable thinking and is experiencing a growing interest in sustainable trends, such as recycling, upcycling and repurposing

Design for longevity and flexibility

- When you can easily replace or adapt individual elements of a room, there is no need to demolish and renovate it in its entirety.

Design for healthy environments

- US Environmental Protection Agency, indoor air pollution is one of the five biggest environmental threats to public health. Indoor air pollution is the result of products and materials with high levels of toxic emissions.

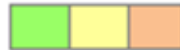




LEED v4 for ID+C: Commercial Interiors

Project Checklist

Y ? N



Credit Integrative Process 2

0 0 0 Location and Transportation 18

Y	Credit	LEED for Neighborhood Development Location	18
Y	Credit	Surrounding Density and Diverse Uses	8
Y	Credit	Access to Quality Transit	7
Y	Credit	Bicycle Facilities	1
Y	Credit	Reduced Parking Footprint	2

0 0 0 Water Efficiency 12

Y	Prereq	Indoor Water Use Reduction	Required
Y	Credit	Indoor Water Use Reduction	12

0 0 0 Energy and Atmosphere 38

Y	Prereq	Fundamental Commissioning and Verification	Required
Y	Prereq	Minimum Energy Performance	Required
Y	Prereq	Fundamental Refrigerant Management	Required
Y	Credit	Enhanced Commissioning	5
Y	Credit	Optimize Energy Performance	25
Y	Credit	Advanced Energy Metering	2
Y	Credit	Renewable Energy Production	3
Y	Credit	Enhanced Refrigerant Management	1
Y	Credit	Green Power and Carbon Offsets	2

0 0 0 Materials and Resources 13

Y	Prereq	Storage and Collection of Recyclables	Required
Y	Prereq	Construction and Demolition Waste Management Planning	Required
Y	Credit	Long-Term Commitment	1
Y	Credit	Interiors Life-Cycle Impact Reduction	4
Y	Credit	Building Product Disclosure and Optimization - Environmental Product Declarations	2
Y	Credit	Building Product Disclosure and Optimization - Sourcing of Raw Material	2
Y	Credit	Building Product Disclosure and Optimization - Material Ingredients	2
Y	Credit	Construction and Demolition Waste Management	2

Project Name:

Date:

0 0 0 Indoor Environmental Quality 17

Y	Prereq	Minimum Indoor Air Quality Performance	Required
Y	Prereq	Environmental Tobacco Smoke Control	Required
Y	Credit	Enhanced Indoor Air Quality Strategies	2
Y	Credit	Low-Emitting Materials	3
Y	Credit	Construction Indoor Air Quality Management Plan	1
Y	Credit	Indoor Air Quality Assessment	2
Y	Credit	Thermal Comfort	1
Y	Credit	Interior Lighting	2
Y	Credit	Daylight	3
Y	Credit	Quality Views	1
Y	Credit	Acoustic Performance	2

0 0 0 Innovation 6

Y	Credit	Innovation	5
Y	Credit	LEED Accredited Professional	1

0 0 0 Regional Priority 4

Y	Credit	Regional Priority: Specific Credit	1
Y	Credit	Regional Priority: Specific Credit	1
Y	Credit	Regional Priority: Specific Credit	1
Y	Credit	Regional Priority: Specific Credit	1

0 0 0 TOTALS Possible Points: 110

Certified: 40 to 49 points, Silver: 50 to 59 points, Gold: 60 to 79 points, Platinum: 80+

LEED ENERGY CREDITS

- **Leadership in Energy and the Environment Design**
 - LEED is the most used green building rating system in the world.
 - It provides a “framework” for creating healthy, highly efficient, and cost saving green buildings.
 - LEED works for all building types anywhere.
 - These buildings save energy, water, and resources.
 - LEED building also generate less waste and support human health.
 - They can also attract more customers, cost less to operate, and boost employment.

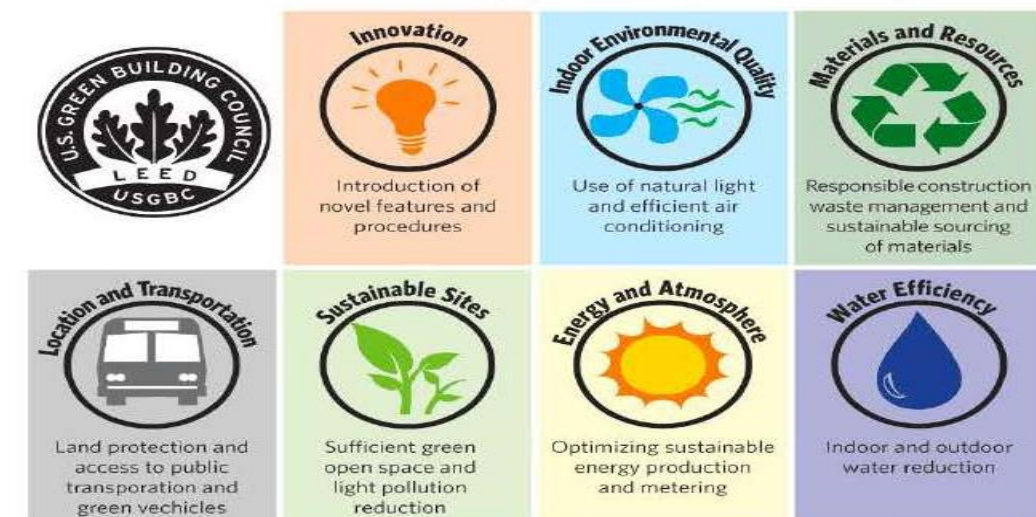
- **Requirements to be a LEED certified building**
 - Step 1: Register the project
 - Step 2: Provide data and receive a Performance Score of at least 4.0
 - Step 3: Complete all prerequisites
 - Prerequisites:
 - Input data in five categories: energy, water, waste, transportation, and human experience

- **Ways to ensure this project could be LEED certified**
 - Reusing the materials that are already in the building
 - Making sure the water and waste are handled in a green way.
 - Cutting some of the transportation of materials from other places by using the local market to find materials.



LEED CERTIFICATION REQUIREMENTS

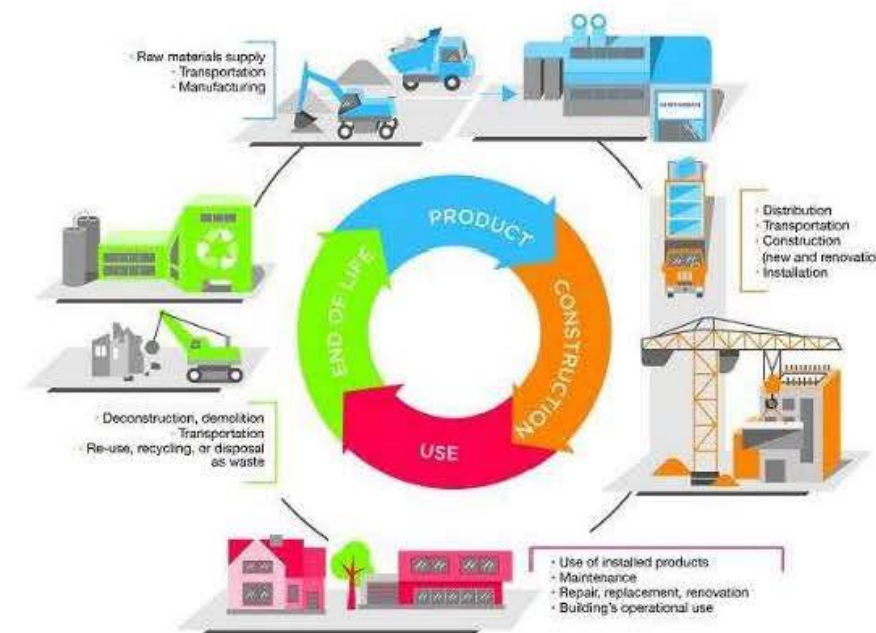
In order to achieve LEED certification, projects must earn points in these categories:



Source: www.usgbc.org

EMBODIED ENERGY

- The total energy used by all of the processes related to the production of a building
- Processes include extraction and processing of natural resources, manufacturing, transport, and product delivery
- Does not include the operation and disposal of the building, which would be part of the building's life cycle
- **Types of Embodied Energy**
 - Initial Embodied Energy: the nonrenewable energy used in the purchase of raw materials, their processing, manufacturing, transportation to site, and construction. It has 2 elements:
 - Direct Energy: energy used to transport building products to the site, and then to construct the building
 - Indirect Energy: energy used to acquire, process, and manufacture the building materials, including any transportation related to these activities
 - Recurring Embodied Energy: the nonrenewable energy consumed to maintain, repair, restore, refurbish or replace materials, components, or systems during the life of the building
- **Gross Energy Requirement (GER) is a measure of the true embodied energy of a material.**
 - Energy used to transport materials and workers to building site
 - All materials used to complete the building
 - Bathroom/kitchen fittings, driveways, outdoor paving
 - Upstream energy input in making the materials
 - Energy used making/maintaining machines that make the materials
 - Embodied energy of urban infrastructure
 - Roads, drains, water, energy supply
- **Factors Affecting Embodied Energy**
 - Different products and materials used
 - Efficiency of the individual manufacturing process
 - Fuels used in the manufacture of materials
 - Distances materials are transported
 - Amount of recycled product used
- **Reducing Embodied Energy**
 - Use current structure instead of demolishing and starting over
 - Design a long life, durable, and adaptable building
 - Recycle materials that cannot be used from existing building



Healthy Building systems

- According to research, working in low temperatures is more advantageous than working in hot temperatures. It is also preferable for workers to be able to make personal adjustments (for example, shades, fans, desk height, and chair height). It is possible to alleviate the sensation of overpopulation by arranging the areas into "neighborhoods."

Recommendations

- Offer natural daylight and views to the outdoor surroundings.
- Provide sufficient and fresh air quality and thermal comfort.
- Reduce CO2 levels and other air pollutants.
- Acquire ENERGY STAR labeled products.
- Bringing plants into workspaces can help freshen air supply.
- Such as: Bamboo palm, rubber plant, and peace lily

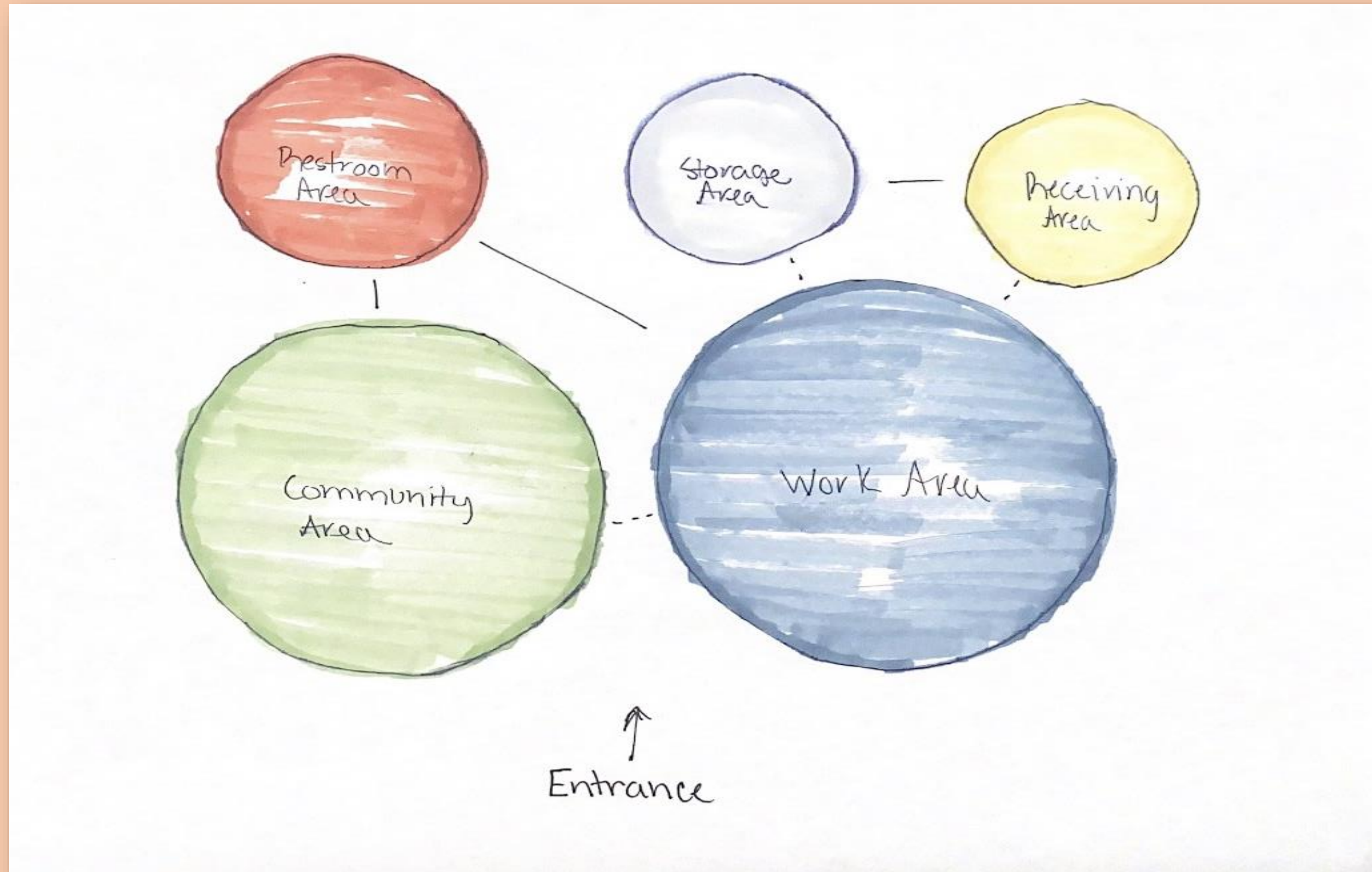
Concept Development

Flexibility

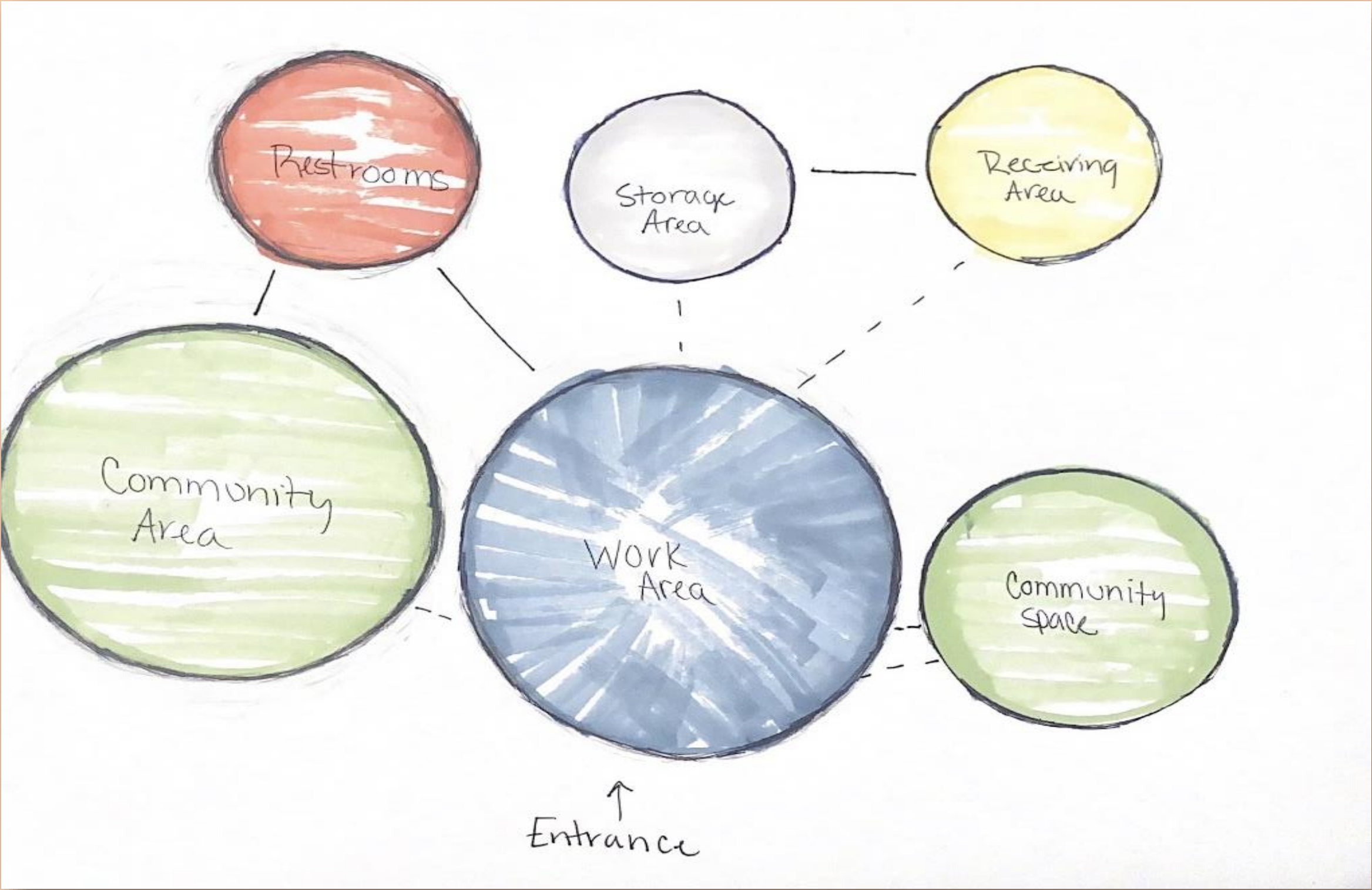
- Boost productivity. Having flexible work hours can boost productivity.
- Attract new talent. Flexible workplace arrangements expand the pool of potential hires.
- Reduce overheads. Companies can significantly reduce overheads with flexible work arrangements.
- Improve retention. Hiring and training new employees' costs both time and money.
- Have happier employees.



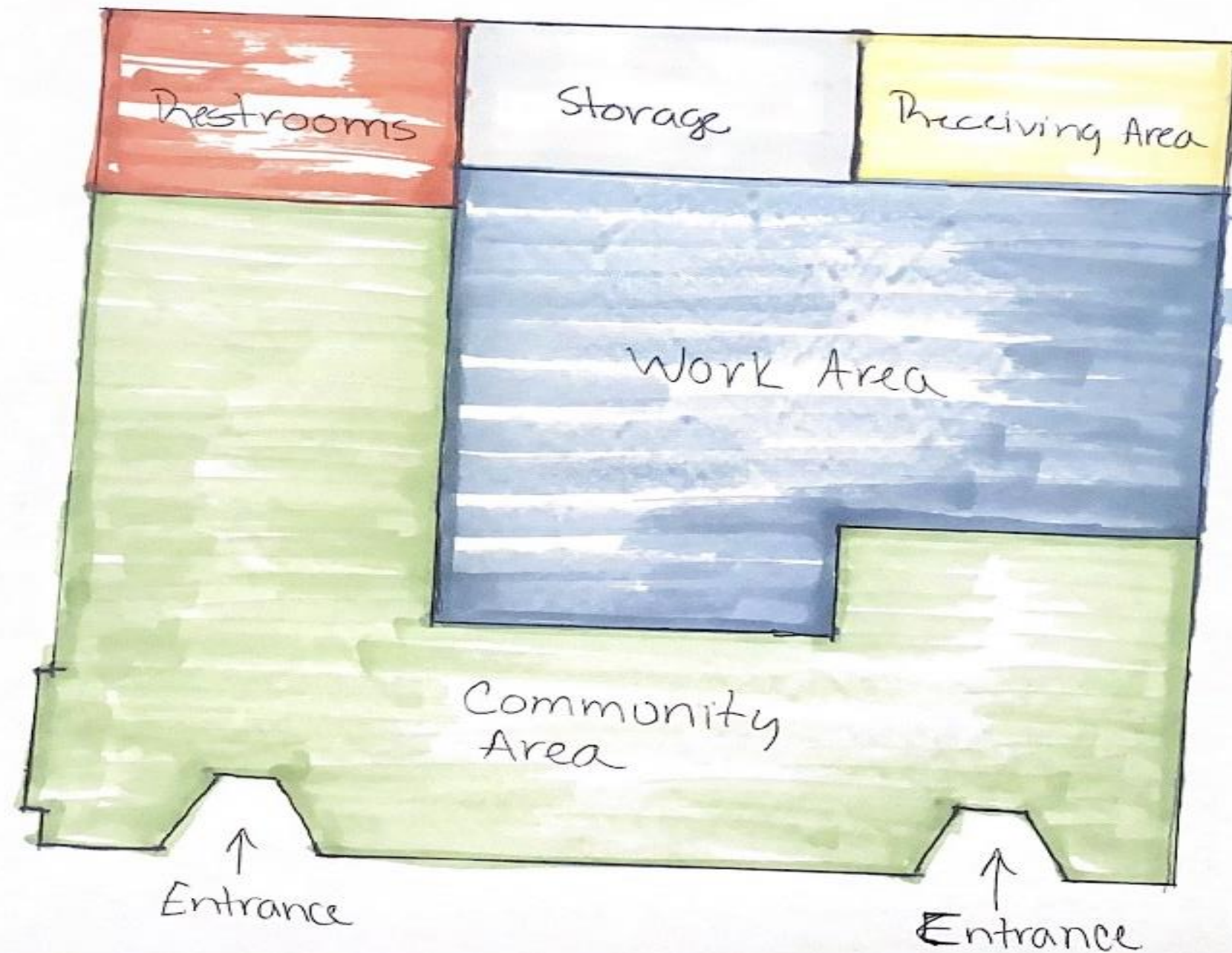
Bubble Diagram



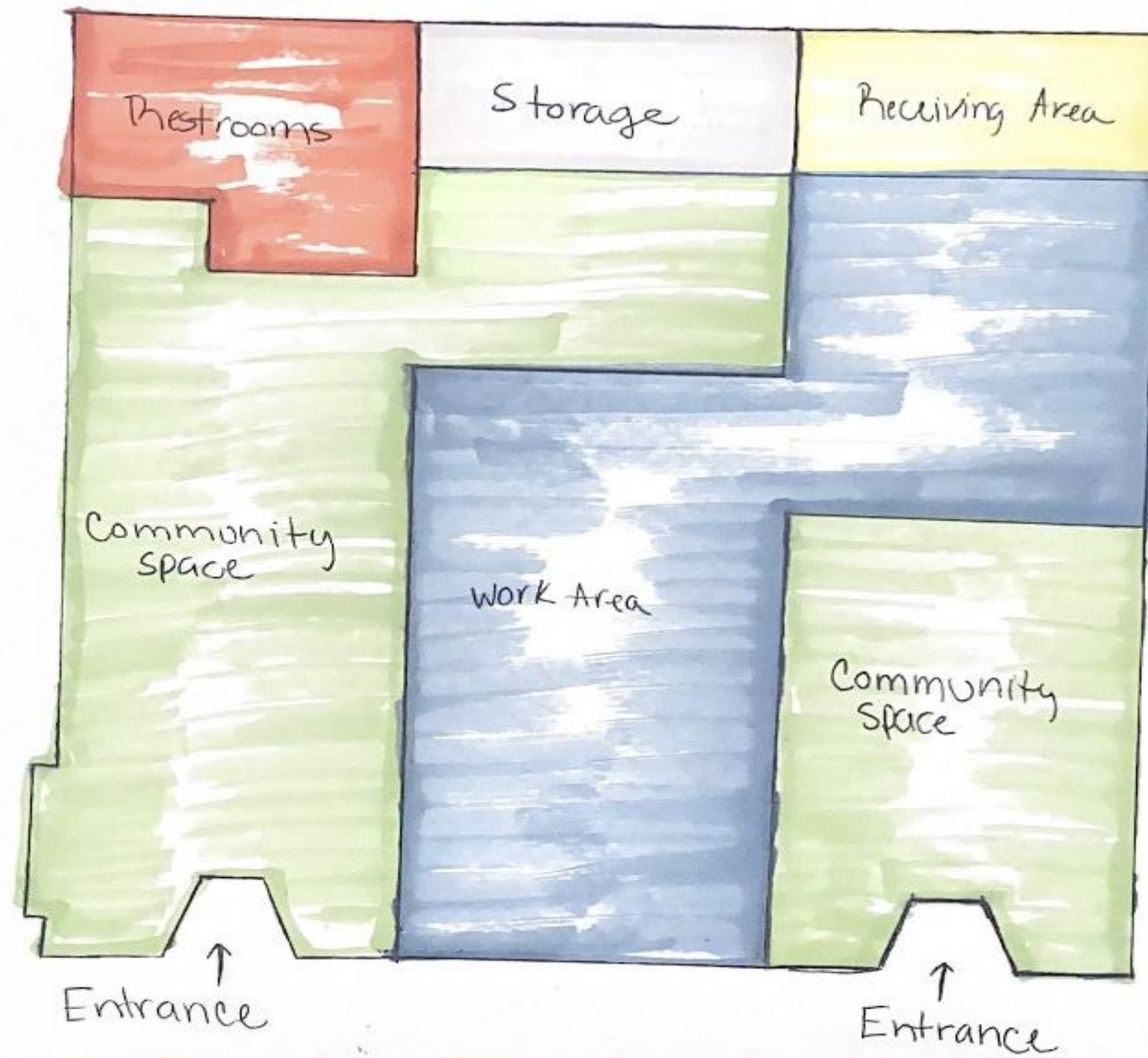
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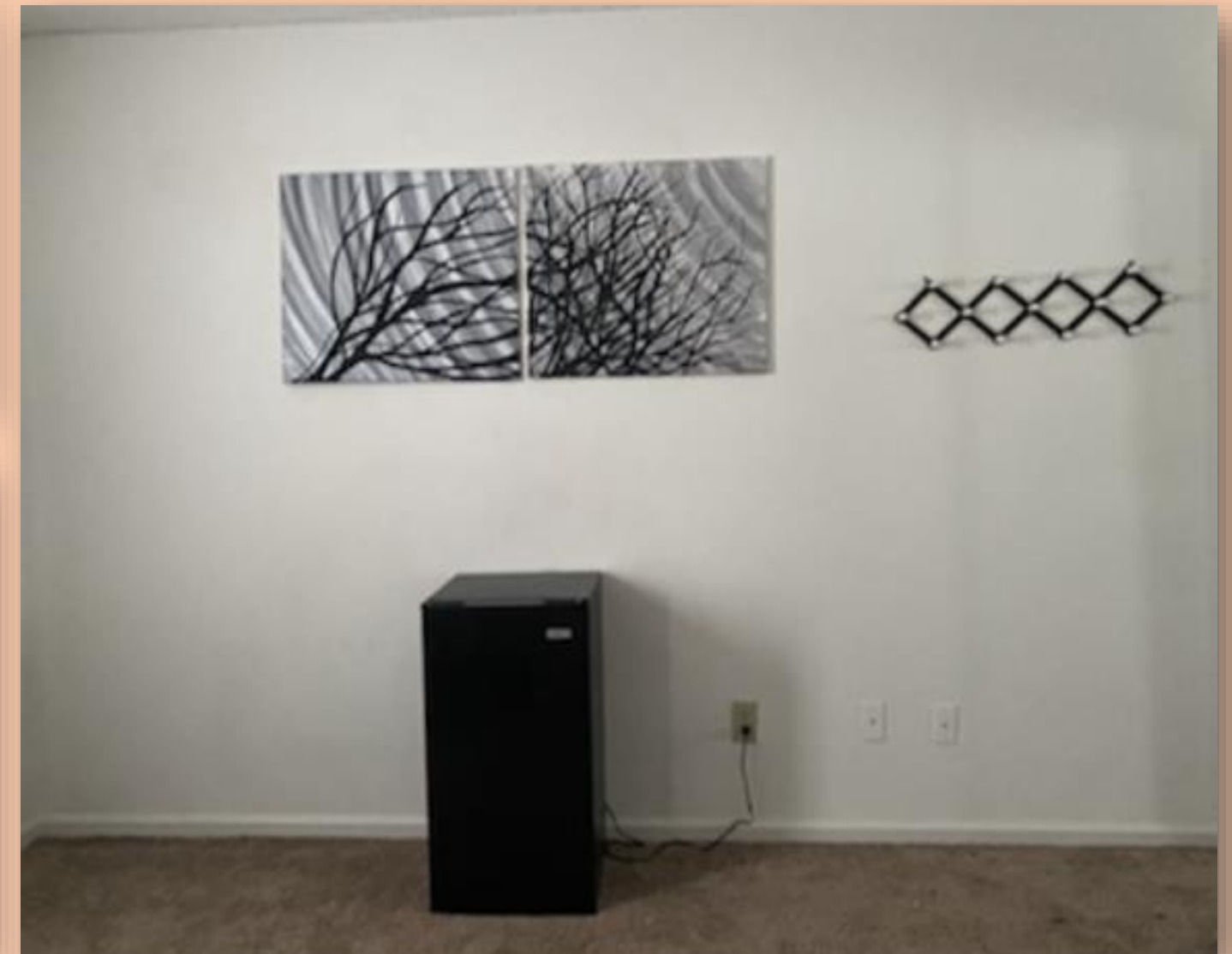
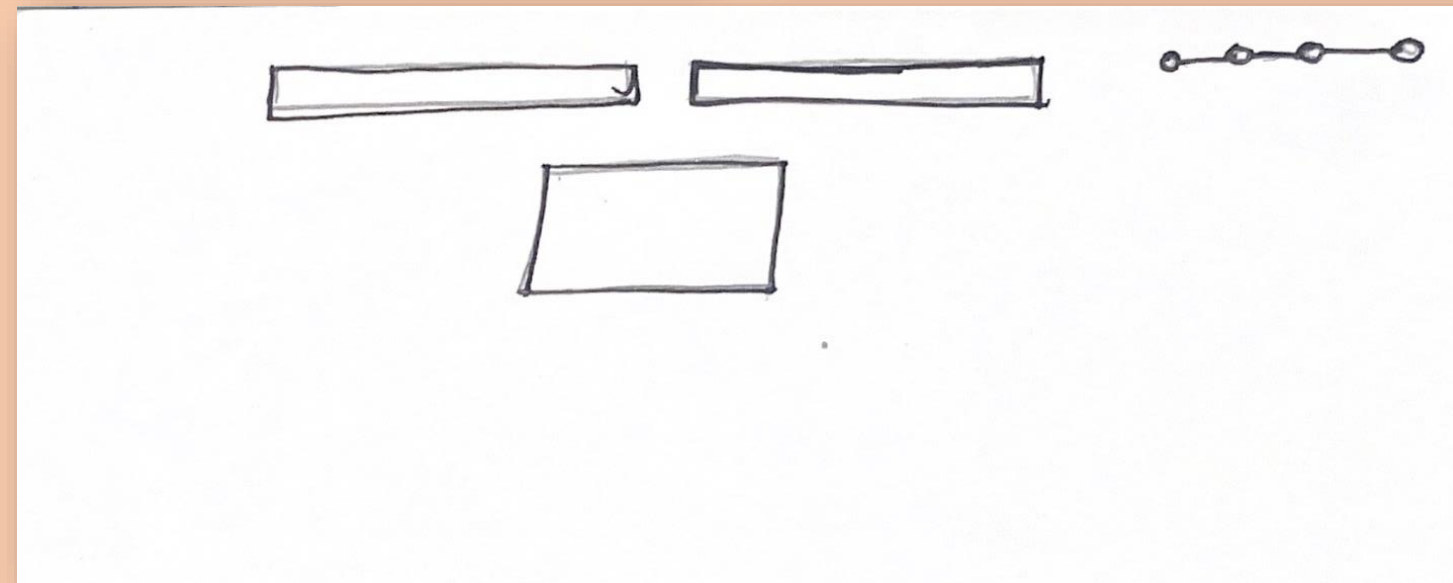
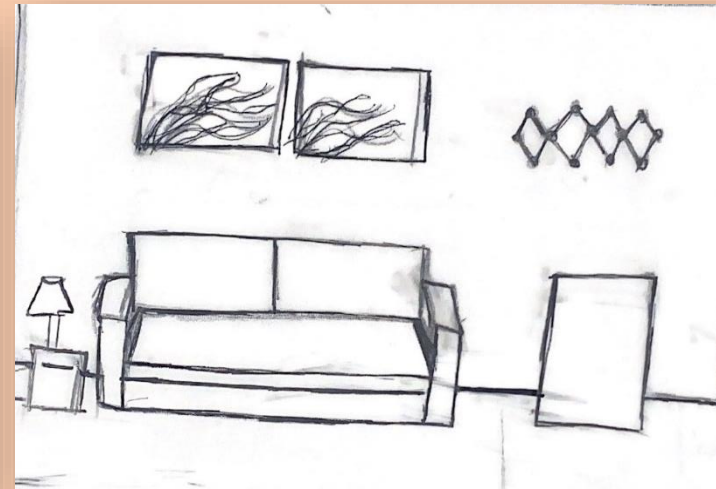
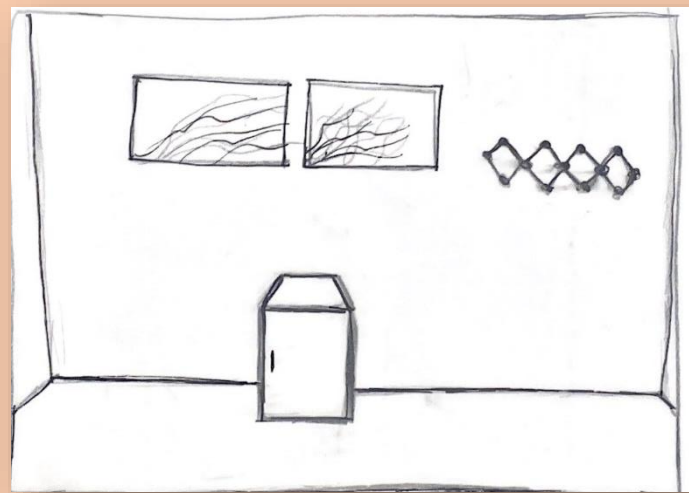
Blocking Diagram



Blocking Diagram

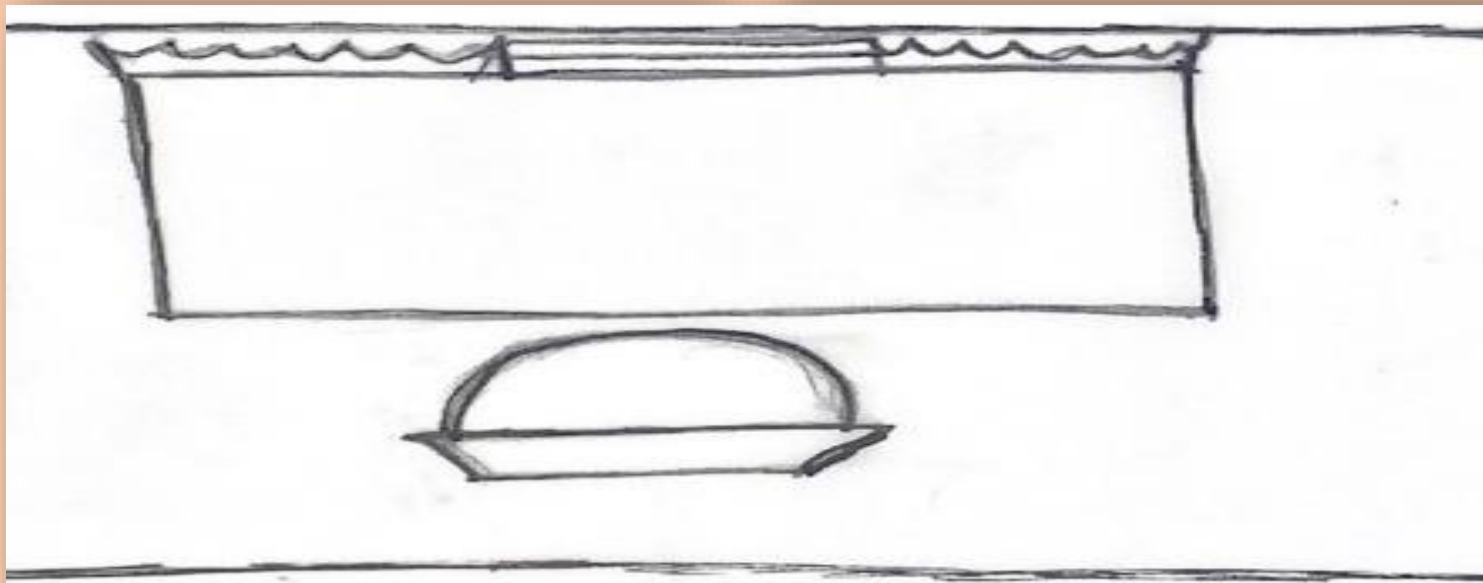
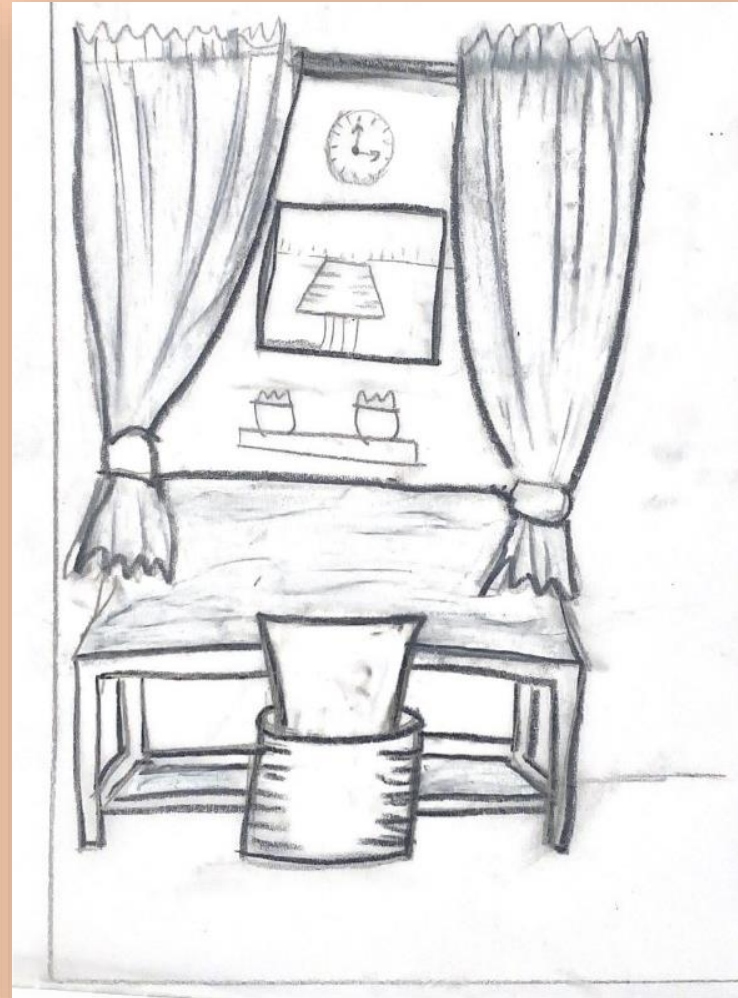
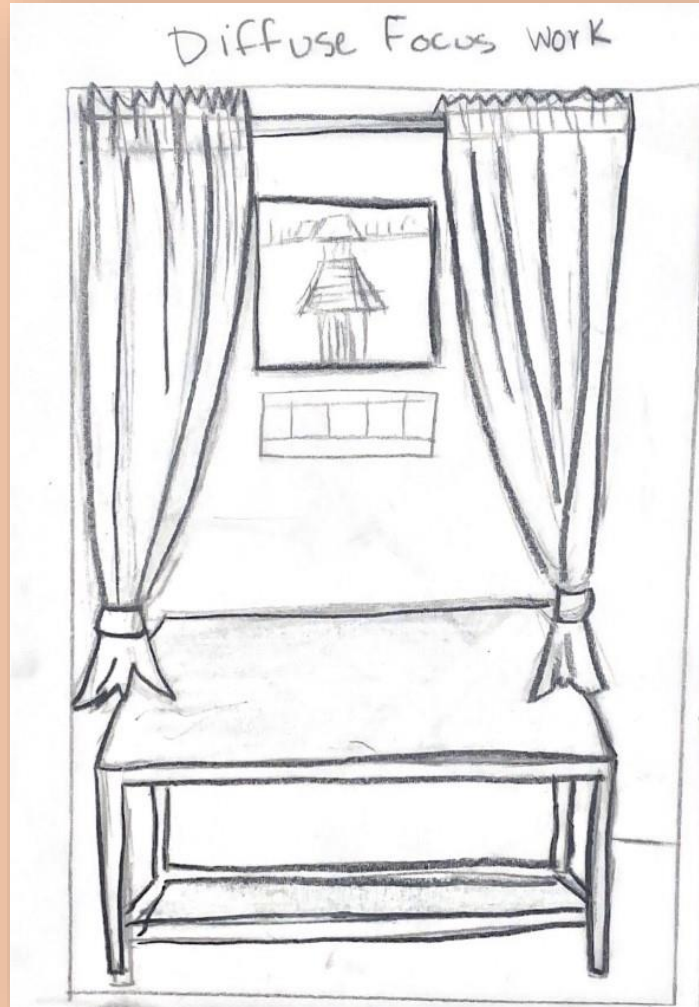


Existing Activity Spaces (Socializing)



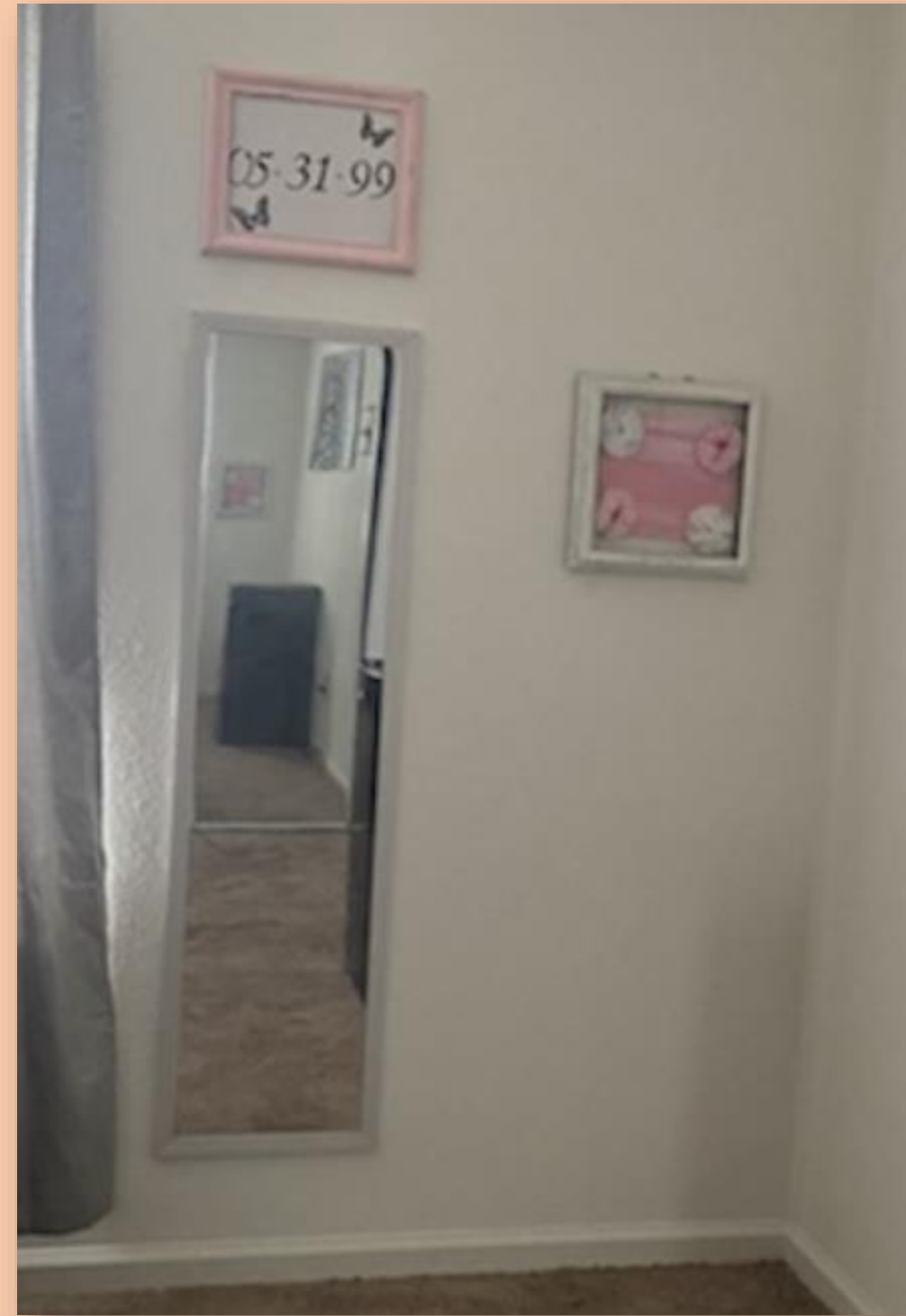
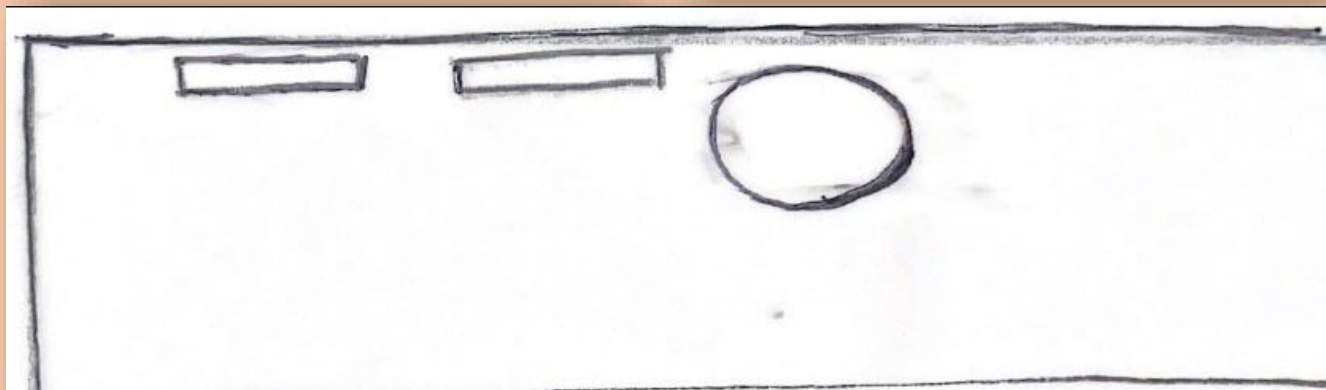
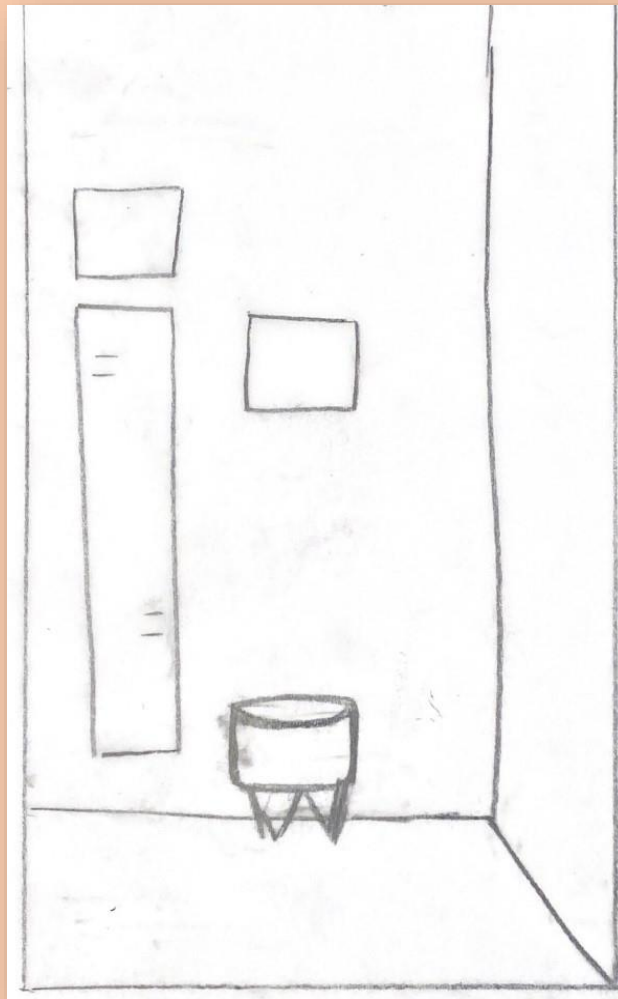
Existing Activity Spaces

(Diffuse focus work)



Existing Activity Spaces

(Daydreaming)

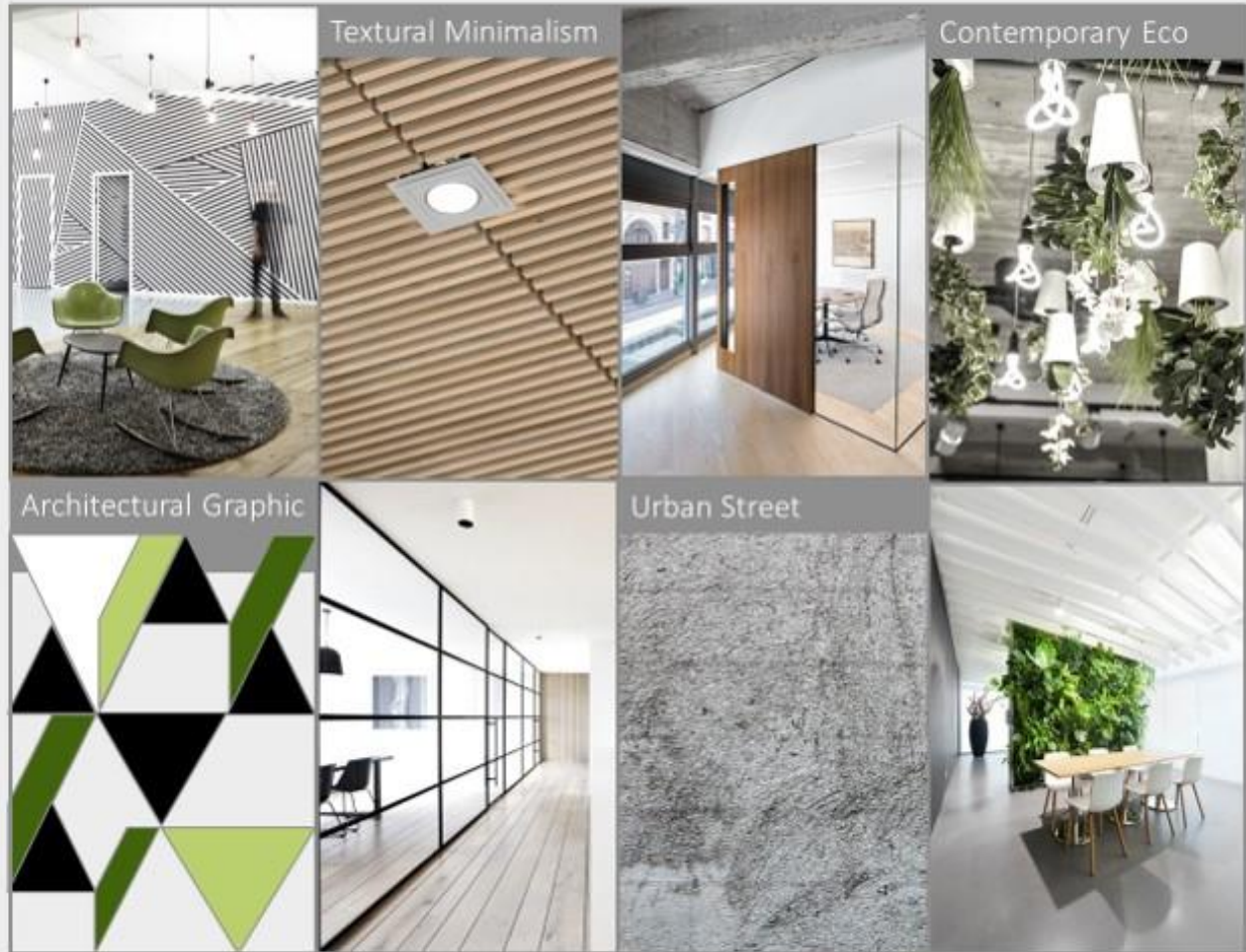


Concept Development

Greenery

- *Natural Stress Reducers*
- *Except for the soothing effect of the color green, generally being close to nature calms peoples' minds and brings people peace and well-being.*
- *Minimizing the amount of carbon dioxide in the air*
- *Escalates the level of the air's moisture*
- *Decreases the presence of pollutants like benzene and nitrogen dioxide*
- *Lessens the amount airborne dust*
- *Keeps the temperature cool and pleasant.*
- *Breathing Easier*





<https://ecu.instructure.com/courses/72057/files/folder/Presentations?preview=5646154>

[What are the benefits of flexibility in the workplace? | Jobcase](#)

[The Effect of Indoor Plants in Architecture - Sara Mortazavi Official Studio](#)

[Top Interior Design Terms to Know Interior - Interior Design Dictionary \(elledecor.com\)](#)