

# Empowering Independence:

Empathetic Design of Environments  
for Neuro/Physically Diverse Learners



ANNE CARLSEN

Nurturing abilities. Changing lives.



# LEARNING OBJECTIVES GOALS

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Learn how to actively engage marginalized user groups that cannot represent themselves.



Learn empathetic design practices to employ for neuro/physically diverse learning environments.



Learn to advocate for marginalized learners through design.

# PRESENTERS



**Todd Medd, AIA**  
Healthcare Practice Studio Leader  
Principal-in-Charge



**Stephanie Nelson**  
Anne Carlson Center COO



**Dan Miller, ALEP, AIA**  
K12 Practice Studio Leader



**Katie Becker, AIA**  
Educational Planner



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# Anne Carlsen Center



**ANNE CARLSEN**

Nurturing abilities. Changing lives.

## Our Mission

To make the world a more  
inclusive place where  
independence is a gift to all

*"Empowerment is going from dependence to  
independence."*



Our namesake, Dr. Anne Carlsen



## Our Vision

The Anne Carlsen Center champions the power of inclusion and development of every person's true potential



## Who we Serve

Birth through adulthood  
Intellectual and development disabilities  
Developmental delays or other diagnosis  
Autism  
Medically complex healthcare needs  
Behaviorally complex needs



## Core Values

Acceptance, Teamwork, Gratitude, Lifelong Learning, Compassion, Service above Self, Holistic Services





 **Path to Independence**



 **Family First**



 **Innovation**



**INCLUSIVE GAMING CLUB**

**KF**

**10:1**

STREAM AT



We partner with people and their families to facilitate a transformative journey toward independence



Using a whole-person approach, our team provides specialized services to children and young adults with diverse behavioral health and developmental needs



These services are available statewide, delivered in home at regional outpatient centers or within our residential centers



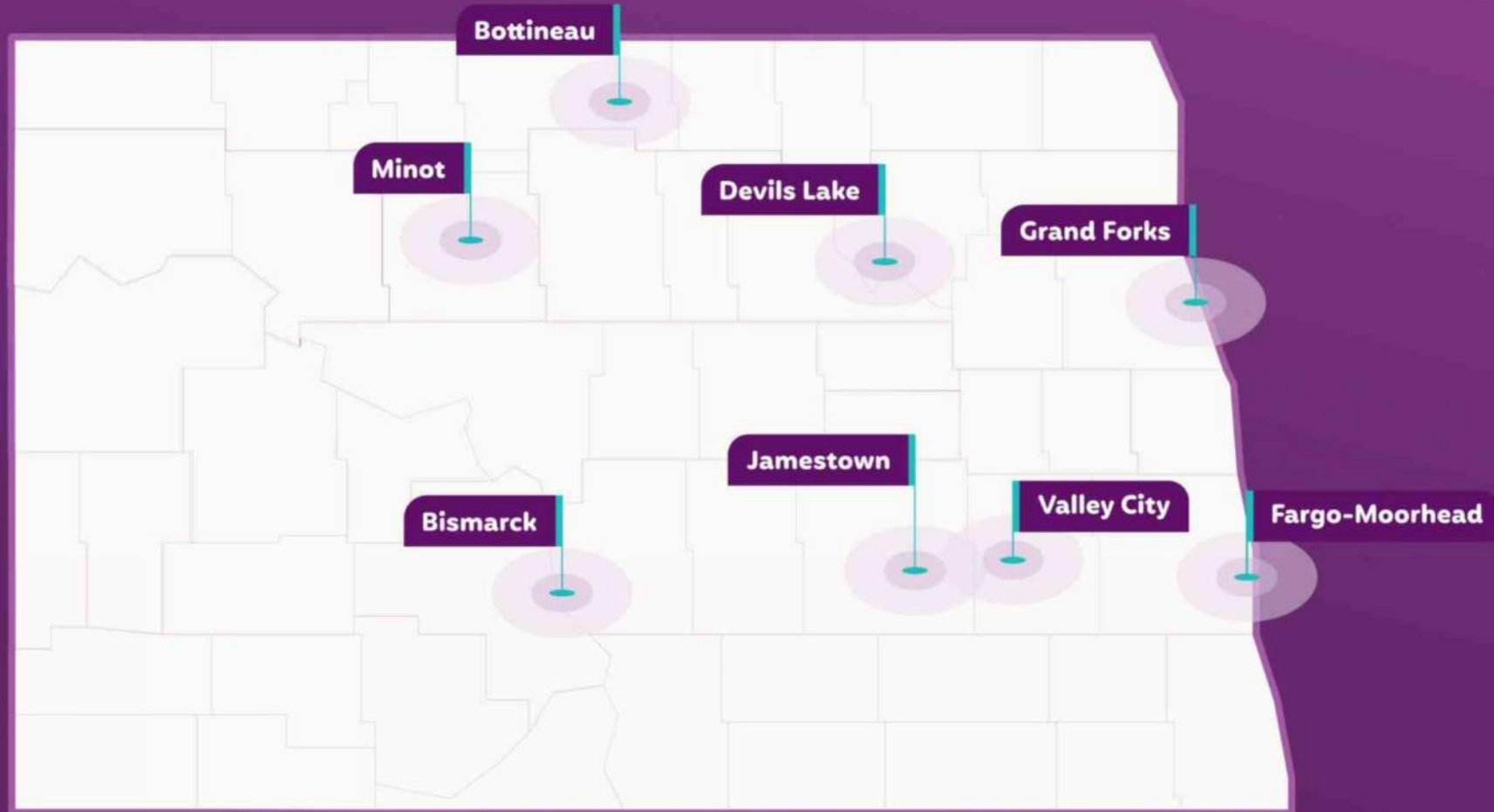


# Anne Carlsen Services Across the Region



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**3,023**

Individuals Served

**96%**

Felt Services Enabled  
Them to Do Things Better  
(n =406)

**75%**

of Payments come from  
Medicaid

**96%**

of Families Would  
Recommend Services to a  
Friend  
(n =412)



# COMPASSIONATE TEAM

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Direct Support Professionals  
Special Education Teachers  
General Education Teachers  
Adaptive Physical Education  
Teachers  
Nurses (LPN, RN, NP)  
Respiratory Therapy  
Pediatrician  
Case Management  
Speech Language Pathologists

Occupational Therapists  
Physical Therapists  
Assistive Technology Specialist  
Adaptive Equipment Specialists  
Chaplain  
Recreational Therapy Coordinator  
Nutritional Therapy Services Team  
Board Certified Behavior Analysts  
(BCBA)  
Registered Behavior Technicians

  
**597**  
Team Members  
Employed

**6.7 years**  
Average Tenure of  
Team Members

**97%**  
of Staff are Aware of  
Org's Mission



# SERVICES

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## Early Intervention



### 0-3 Program / Infant Development

- Parent Coaching Model
- Services provide in home/natural environment

## Clinical Services



### Therapy

- Speech Therapy (ST)
- Occupational Therapy (OT)
- Physical Therapy (PT)



### Behavioral Health/Autism

- Applied Behavioral Analysis (ABA)

## Community Based Services



### In Home Support/Respite



### Day Habilitation (Day Hab)



### Employment



### Residential Habilitation (Res Hab)/Taylor Made Living

# JAMESTOWN CAMPUS

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**Residential Services**  
**Medically Complex**  
**Behaviorally Complex**



**Therapy Services**  
**Physical Therapy**  
**Occupational Therapy**  
**Speech Therapy**



**Educational Services**



# OUR WHY'S

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**Space and Adaptability**



**Innovative Person-centered services**



**Technology & Infrastructure**

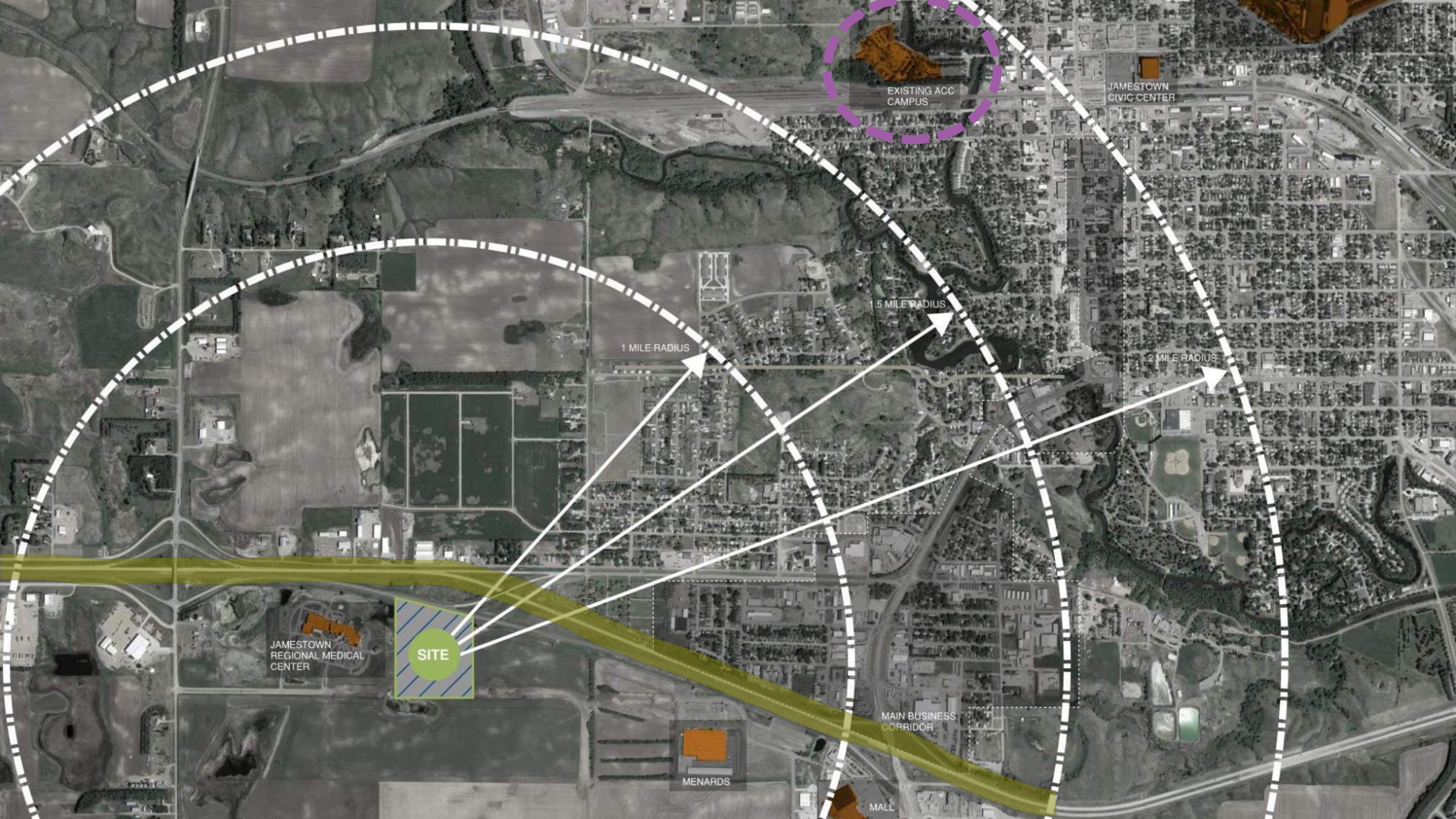


**Expand Services & Connectivity**



**Transformational Impact**





EXISTING ACC  
CAMPUS

JAMESTOWN  
CIVIC CENTER

1 MILE RADIUS

1.5 MILE RADIUS

2 MILE RADIUS

JAMESTOWN  
REGIONAL MEDICAL  
CENTER

SITE

MENARDS

MAIN BUSINESS  
CORRIDOR

MALL

An aerial architectural rendering of a modern, multi-story building complex. The building has a mix of light-colored panels and dark window frames. In the foreground, there is a parking lot with several cars and a paved walkway. The text "ANNE CARLSEN CENTER" is visible on a low wall in front of the building. Overlaid on the center of the image is the text "PATHWAYS PROJECT" in large, white, bold, sans-serif capital letters.

# PATHWAYS PROJECT

ANNE CARLSEN CENTER



# PROJECT GOALS

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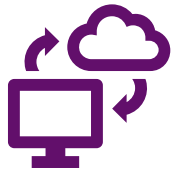
## TEAMWORK AND COLLABORATION

Provide opportunity for teamwork and collaboration



## FLEXIBILITY

Flexible space for life-long learning for clients, families, and staff



## TECHNOLOGY

Embrace and leverage technology and innovation



## VISIBILITY

Visible spaces, activities, and interactions. Ability to highlight and showcase specialized services



# PROJECT GOALS

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## TOP TALENT

Provide a facility that recruits and retains the best



## INDIVIDUAL CARE

Inclusive, individualized care that fosters independence and choice – accessibility of services



## COMMUNICATION

Ability to foster communication between staff and families, staff and clients, and amongst staff

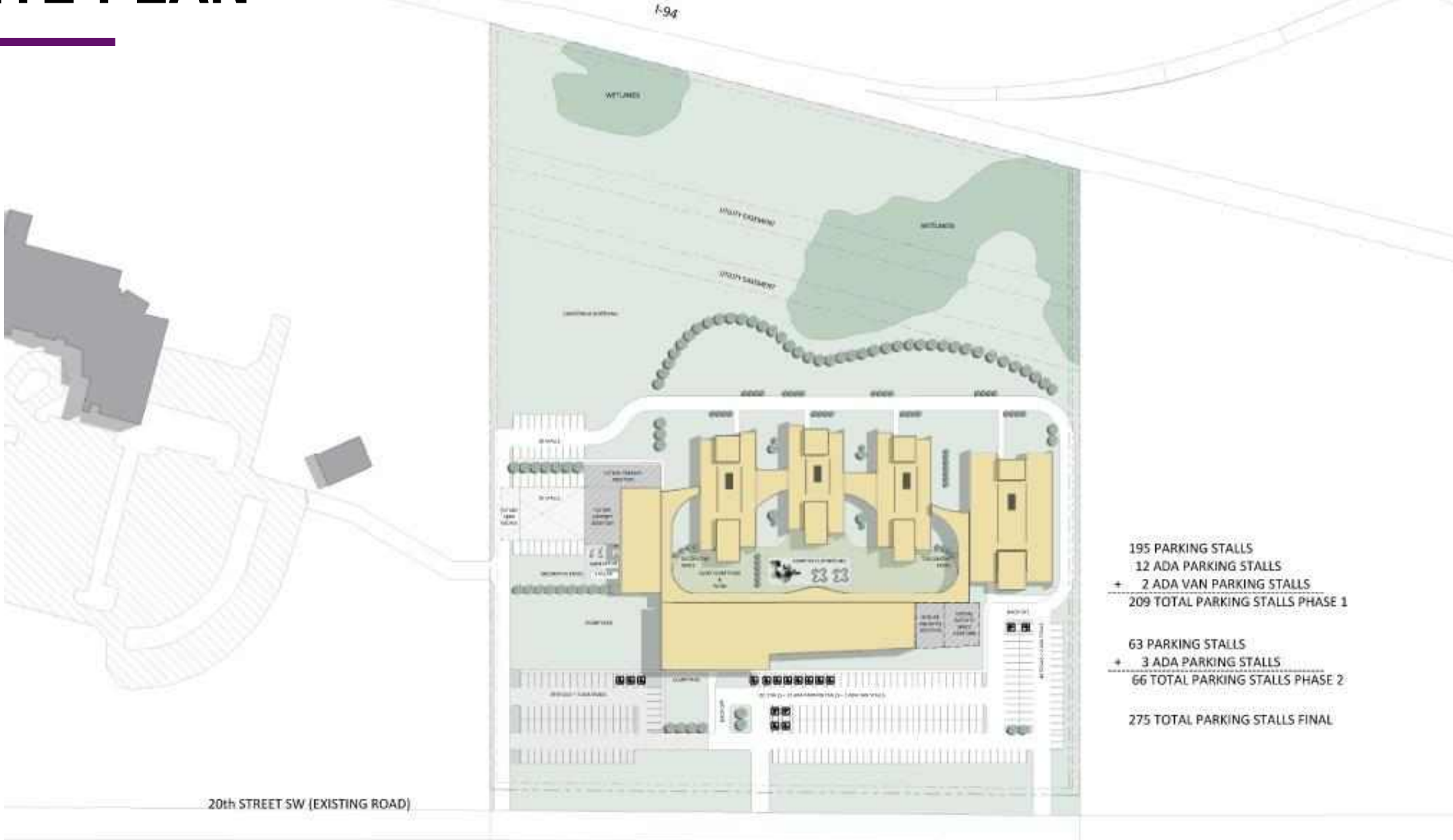


# FLOOR PLAN

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# SITE PLAN



195 PARKING STALLS  
12 ADA PARKING STALLS  
+ 2 ADA VAN PARKING STALLS  
-----  
209 TOTAL PARKING STALLS PHASE 1

63 PARKING STALLS  
+ 3 ADA PARKING STALLS  
-----  
66 TOTAL PARKING STALLS PHASE 2

275 TOTAL PARKING STALLS FINAL



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# PROCESS

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# LANDING THE PROJECT

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**Interview Process**



**Energy and Resources**

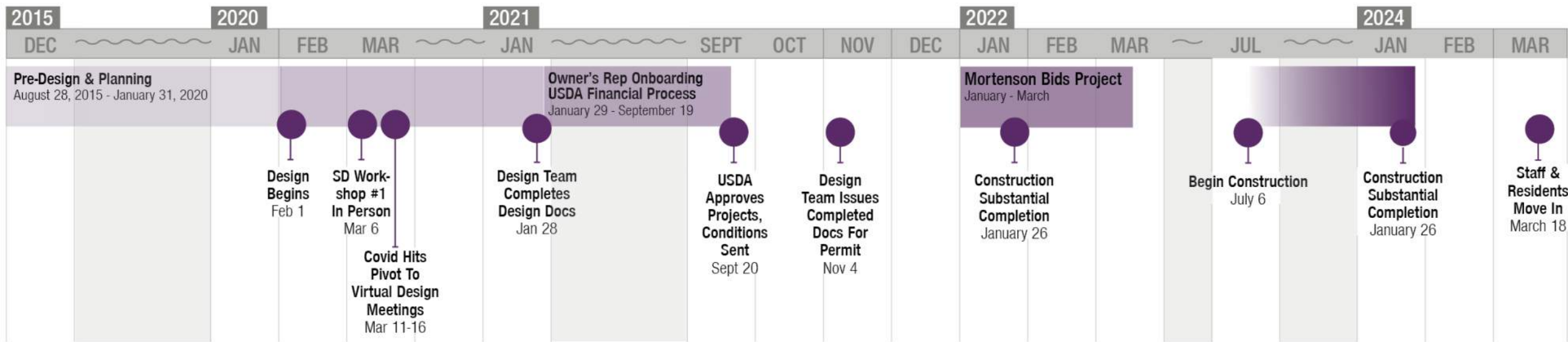


**Mock workshop – Glimpse of the process**





# A DECADE IN THE MAKING



# IMPACT OF A PANDEMIC

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Design process became virtual – We didn't see each other for 16 months



Forced everyone to lean into technology, and resulted in more innovation and integration into building



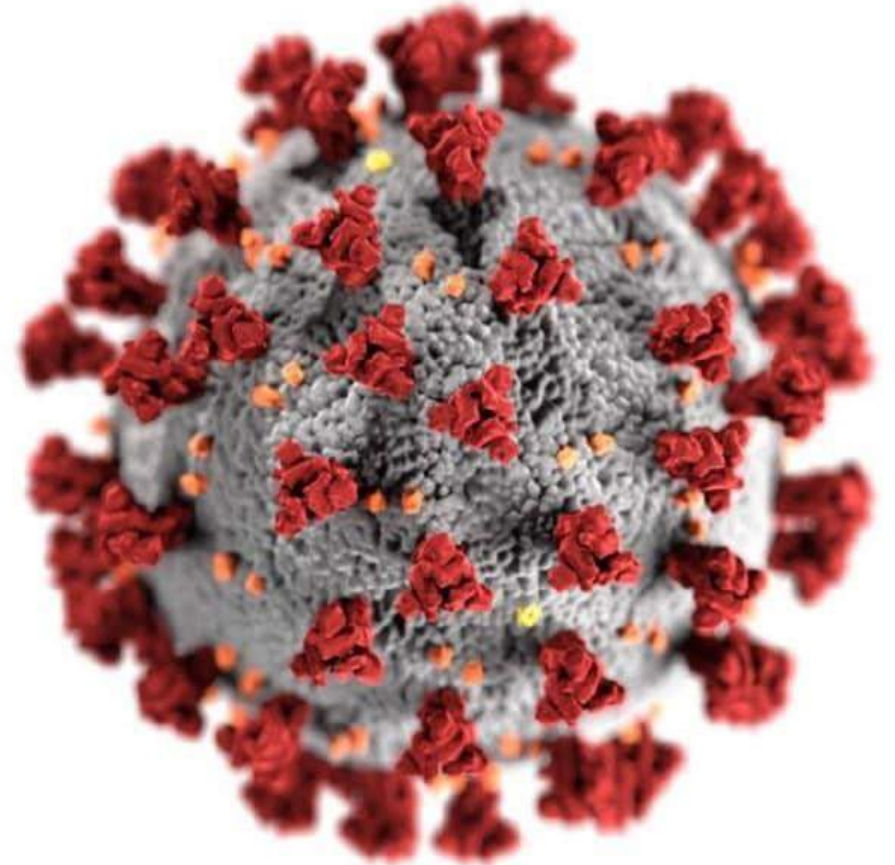
Realized the importance of being nimble



Infection control became a focus



Housing pod structure  
– controlled connections

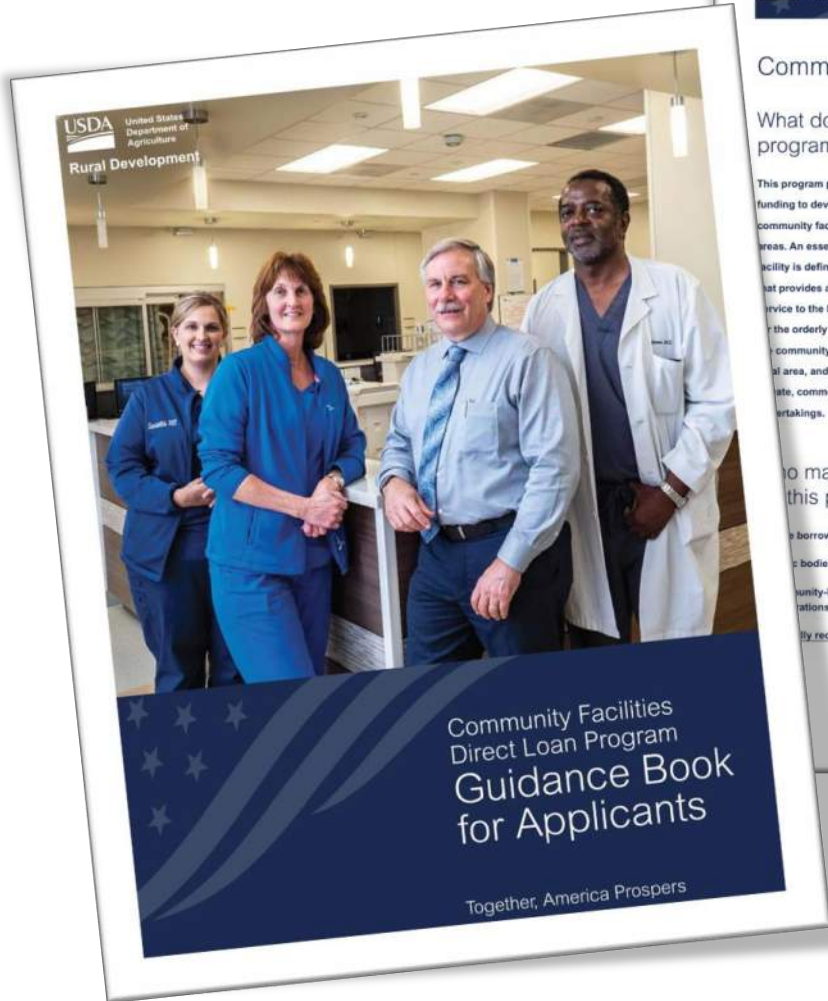


# VIRTUAL DESIGN

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# USDA FINANCING/CAPITAL CAMPAIGN



USDA Rural Development U.S. DEPARTMENT OF AGRICULTURE Together, America Prospers

## Community Facilities Direct Loan & Grant

### What does this program do?

This program provides affordable funding to develop essential community facilities in rural areas. An essential community facility is defined as a facility that provides an essential service to the local community for the orderly development of a community in a primarily rural area, and does not include a private, commercial, or business enterprise.

### Who may apply for this program?

Eligible borrowers include:

- Local government bodies
- Community-based nonprofit organizations
- Federally recognized Tribes

### What is an eligible area?

Rural areas including cities, villages, townships, and towns including Federally recognized Tribal lands with no more than 20,000 residents according to the latest U.S. Census Data are eligible for this program.

### How may funds be used?

Funds can be used to purchase, construct, and/or improve essential community facilities, to purchase equipment, and to pay related project expenses.

Examples of essential community facilities include:

- Healthcare facilities such as hospitals, medical clinics, dental clinics, nursing homes, or assisted living facilities
- Public facilities such as town halls, courthouses, airport hangars, or street improvements
- Community support services such as child care centers, community centers, fairgrounds, or transitional housing
- Public safety services such as fire departments, police stations, prisons, police vehicles, fire trucks, public works vehicles, or equipment
- Educational services such as museums, libraries, or private schools
- Utility services such as telemedicine or distance learning equipment

### What kinds of funding are available?

- Low interest direct loans
- Grants
- A combination of the two above, as well as our **loan guarantee program**. These may be combined with commercial financing to finance a project if all eligibility and feasibility requirements are met.

### What are the funding priorities?

Prioritize point system based on population, median household income.

- Small communities with a population of 5,500 or less
- Low-income communities having a median household income below 80% of the state nonmetropolitan median household income.

For a complete list see Code of Federal Regulations 7 CFR, Part 1942.17(c) for loans; 7 CFR, Part 3570.62 for grants.

Form RD 1942-39 (Rev. 2-98)

### PROCESSING CHECK LIST (Other Than Public Bodies)

Item No.	Type of Project	State	County	Form No.	To Be Prepared By	Target Date	Date Rec'd
1	Clearinghouse Document						
2	Clearinghouse Comments Preparation for Assistance (for Non-construction)						
3	Request						

(Guide 6) RD Instruction 1942-A

### PRELIMINARY ARCHITECTURAL FEASIBILITY REPORT

I **GENERAL**. The following may be used as a guide for preparation of the Preliminary Architectural Feasibility Report as required for Rural Development financed facilities.

A **Need for the facility**.

B **Existing facilities**. Describe - include condition, adequacy, suitability for continued use and other pertinent information.

C **Proposed facility**. General description of proposed facility including design criteria adopted for continued use and other pertinent information.

D **Building sites**.

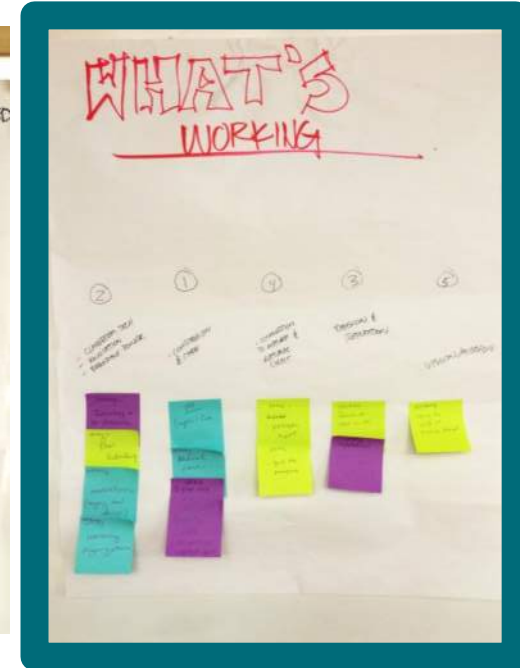
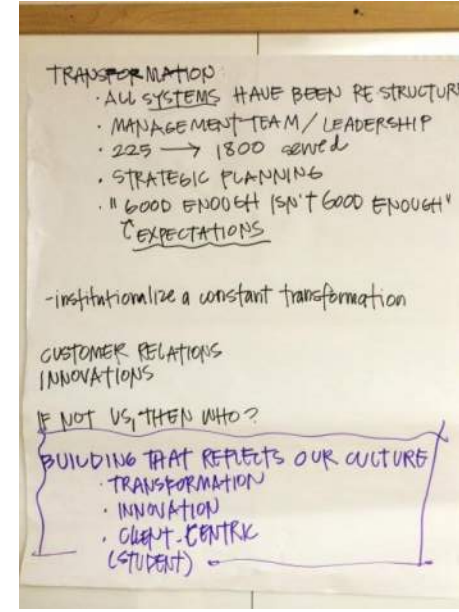
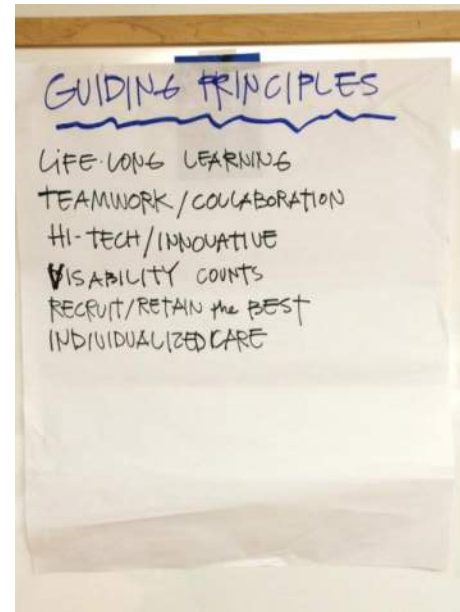
- Amount of land required.
- Location - Alternate locations.
- Site plan.
- Site suitability.

E **Cost estimate**.

- Development and construction.
- Land and rights.
- Legal.
- Architect fees.
- Interest.
- Equipment.
- Contingencies.
- Refinancing.
- Other (described).

(1-15-79) SPECIAL FN

# ADVOCATE ENGAGEMENT



Compassion & care



Connection to nature and natural light



Classroom technology, innovation, and power redundancy



The team has passion for what they do and a reputation of excellence



Vision/Mission: Embracing new ideas and change



# EXISTING BUILDING & CHALLENGES

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Spaces are disconnected, spread out, and offices are not located properly



Spaces do not facilitate teamwork & flexibility



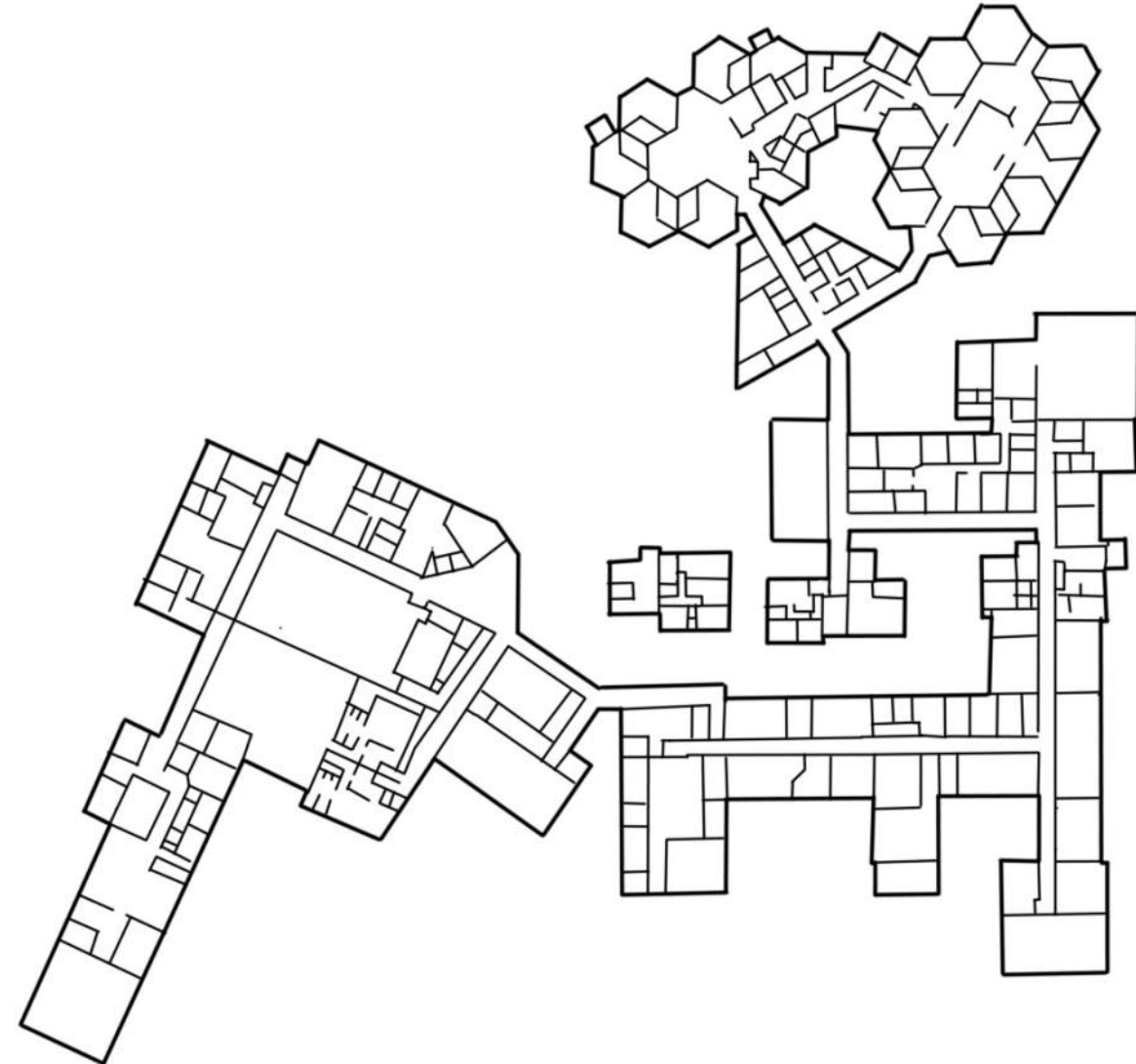
IT, communication, and heating/cooling infrastructure



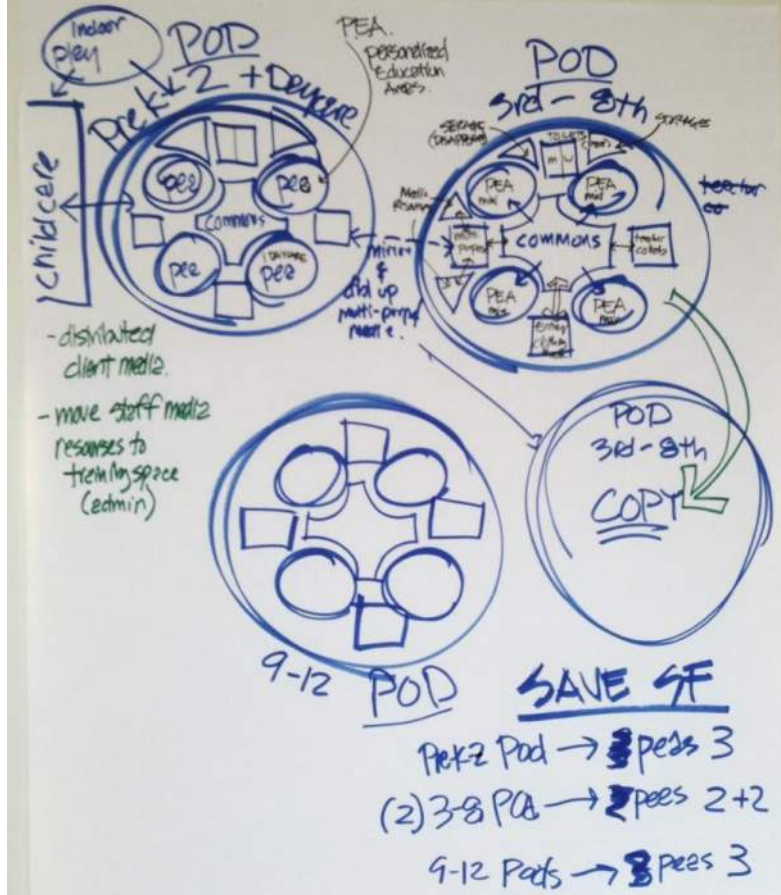
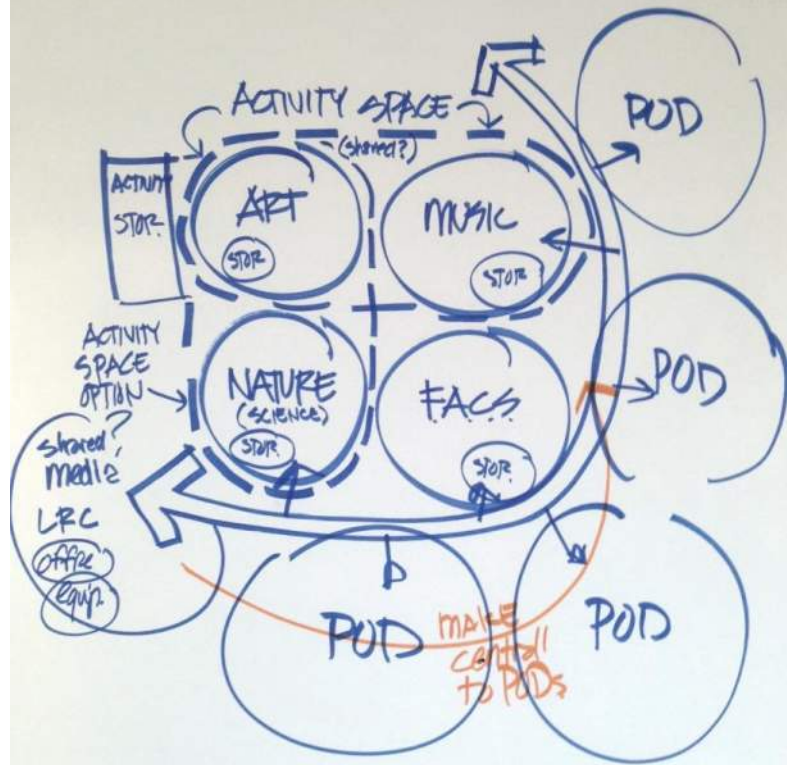
Transition spaces and sheltered access is lacking



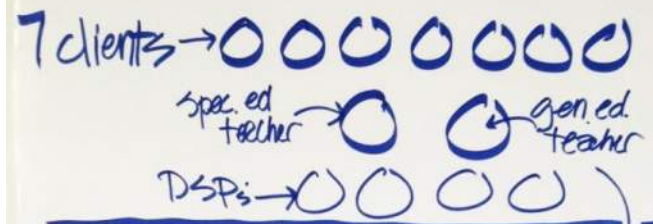
Safety and security



# LEARNING STUDIOS



# LEARNING PODS



	current	ratio to students	Per model
student	55		
staff	19	1 to 2.9	1 to 3.5
DSP	31	1 to 1.8	1 to 1.4 to 2.3
class room	PN	1 to 5.5	?
other	7	1 to 7.9	?

LEARN PODS 440s  
~~LEARN~~



# CURRENT & FUTURE NEEDS

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 **ENVIRONMENT OF CARE**  
ALONG FOR THE RIDE TO THE SAME DESTINATION

 **EVIDENCE BASED DESIGN**  
VALIDATES AND TESTS THAT WE ARE ON TARGET



CURRENT STATE

FUTURE STATE

LEAN IS THE METHOD OF GETTING US  
FROM **CURRENT STATE** TO **FUTURE STATE**



LEAN Approach



"Gemba" Walks



Improved quality of care and safety



Employee recruitment and retention



Not the work of a single person



Fundamental shift in organization culture

# DESIGN THINKING

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EMPATHIZE



DEFINE



IDEATE



PROTOTYPE



TEST

# EMPATHY

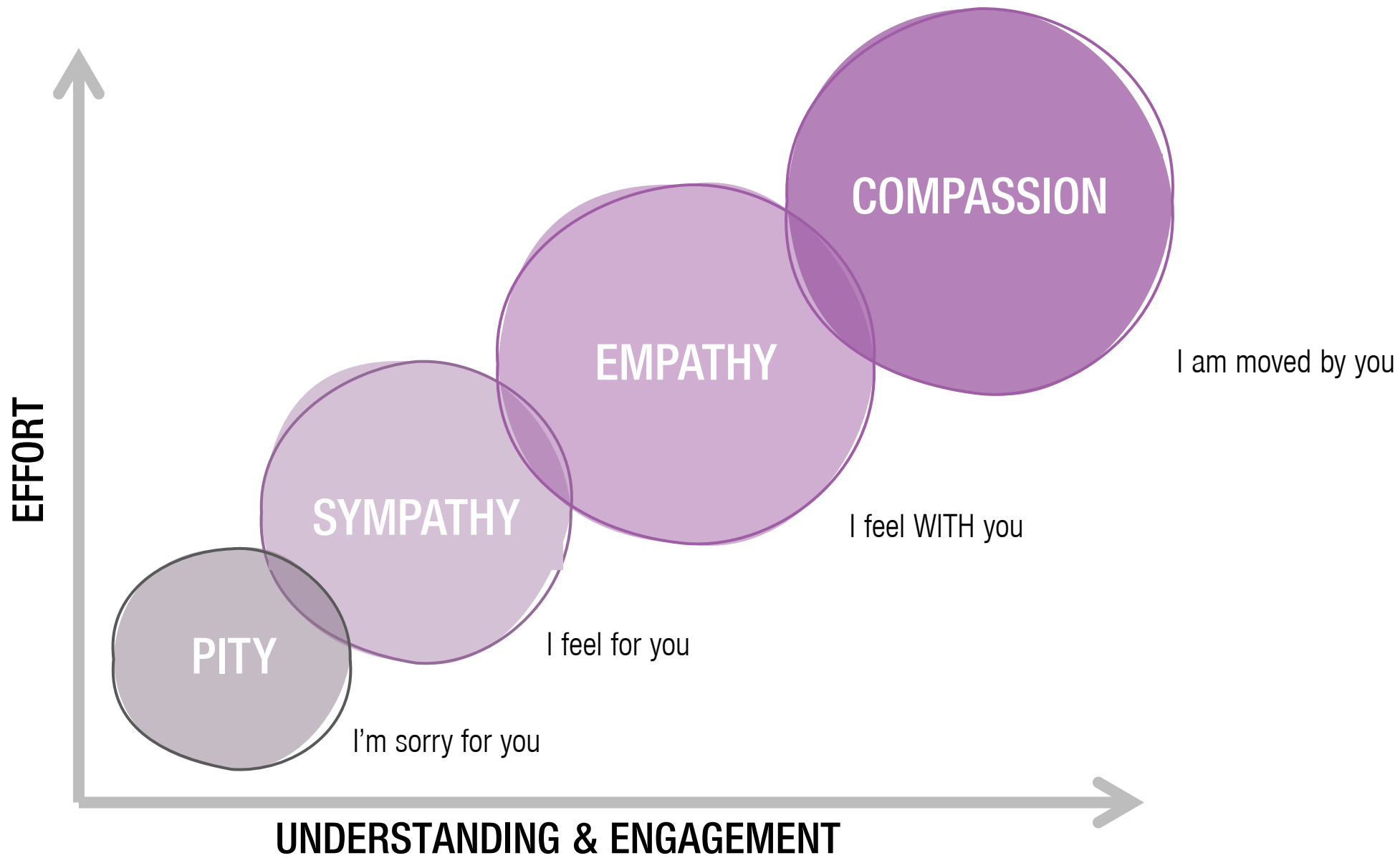
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EMPATHIZE

**empathy** / 'em·pa·thy / noun

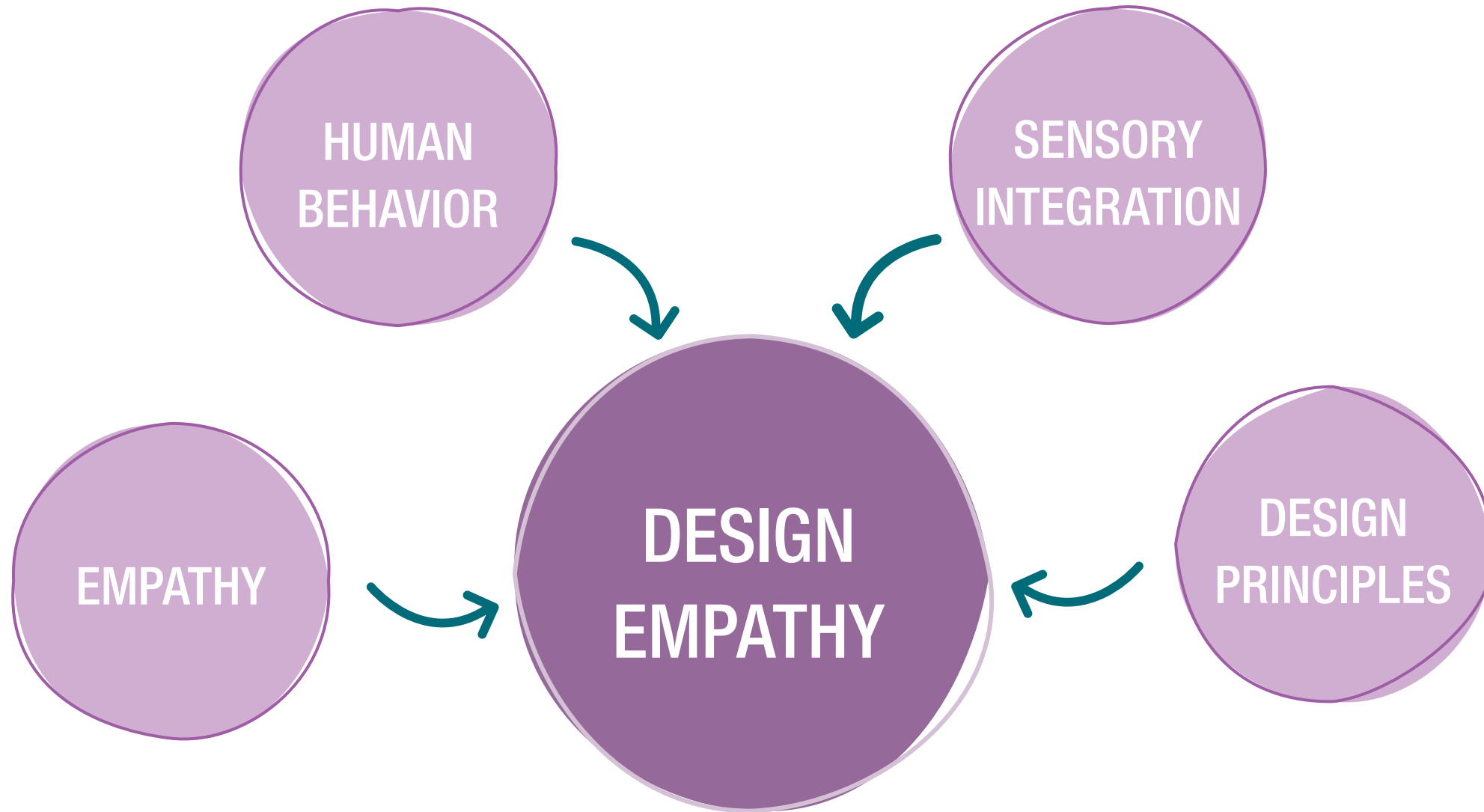
**1** the action of understanding, being aware of, being sensitive to, and vicariously experiencing the feelings, thoughts, and experience of another





“The real problem of autism is not that your child can’t learn, but that your child doesn’t learn from his environment the way most children do.”

- Dena Farbman, M.Ed.



**empathy mapping**/ 'em·pa·thy map·ping'/ verb

**1** visualizing the attitudes or behaviors of a user to better align outcomes and user needs or goals.

# USER STORIES – NON-NEGOTIABLES

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## Useable space

- Allocated work areas (centers, various group instruction, individual work areas, therapy treatment space)
- Space designed with independent wheelchair use in mind

## Playground

## Sensory areas in each POD

## Adequate Storage for Equipment and Educational Supplies

(standers, bikes, gait trainers, curriculum materials)

## Multiple Bathrooms/Student freshening areas in each POD

**Gym** (6,600 square feet is typical for an elementary school gym)

**Kitchen area** which includes a full-size stove, refrigerator, washer, and dryer for students to work on life skills

**Special lighting** (adjustable, non-fluorescent)

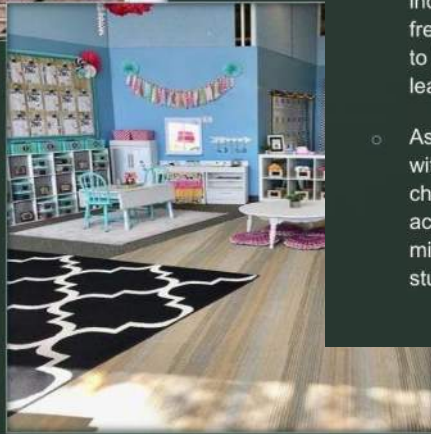
**Teacher workspaces** incorporated within the learning environment



# USER STORIES

## User Stories: As a teacher...

- I require a work area within sight of my students so that I can complete paperwork and lesson planning while maintaining appropriate staffing levels.
- I need enough space to have allocated areas for specific activities (small group, large group, individual work areas)
- I need adequate space allotted in my pod to complete non-violent crisis interventions in order to keep my students safe.
- As a teacher, I need the opportunity to collaborate with my co-workers in order to generate new and innovative ideas that strengthen my students educational experience.



## User Stories: Sensory Needs

- As a student, I require lighting that is adjustable to meet my sensory needs.
- As a student, I need an individual workspace that is free of distractions and noise to better concentrate on learning.
- As an educator of children with behavioral and sensory challenges, I need easy access to a sensory room to minimize the disruption of students engaged in learning.



## User Stories: As a student...

- I need entryways and doorways that meet at minimum the ADA regulation for width so that I can independently navigate my environment.
- I need enough space to navigate the classroom independently in over-sized wheelchairs without endangering myself or others.
- I need space within my educational environment to receive my therapy services so that I can learn skills in a more natural environment and have a better chance of generalizing the skills I have learned.



# AS A TEACHER I NEED...

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Minimize disruption



Work area with sightlines



Allocated areas – collaboration, media, gym



Non-violent crisis intervention space



Adaptable technology



# AS A STUDENT I NEED...

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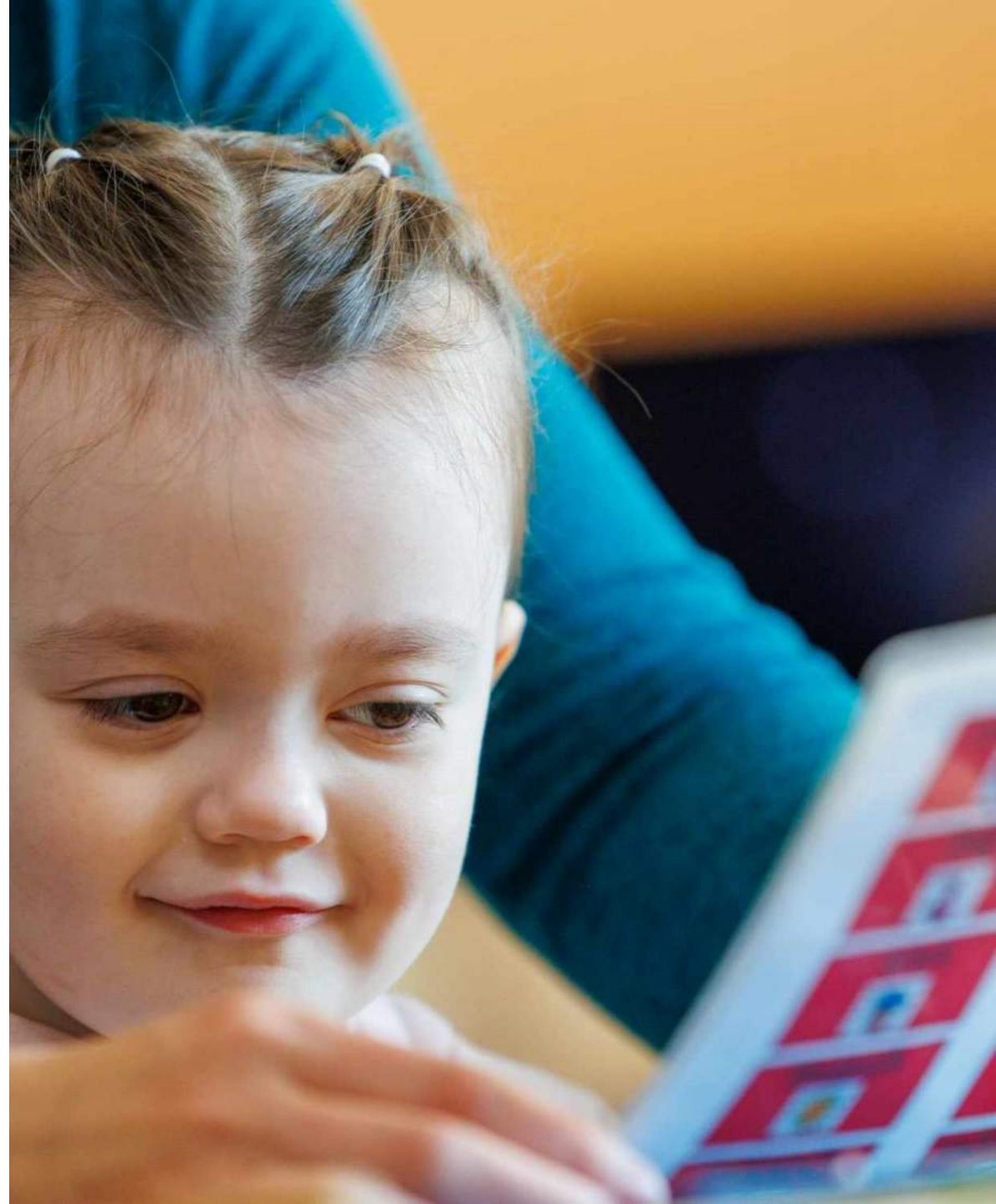
 Private area for treatments/assessments, multiple restrooms and freshening rooms

 Variety of spaces - media center, large indoor area, individual workspaces

 ADA compliant playground & entries

 Natural environment

 Adjustable lighting





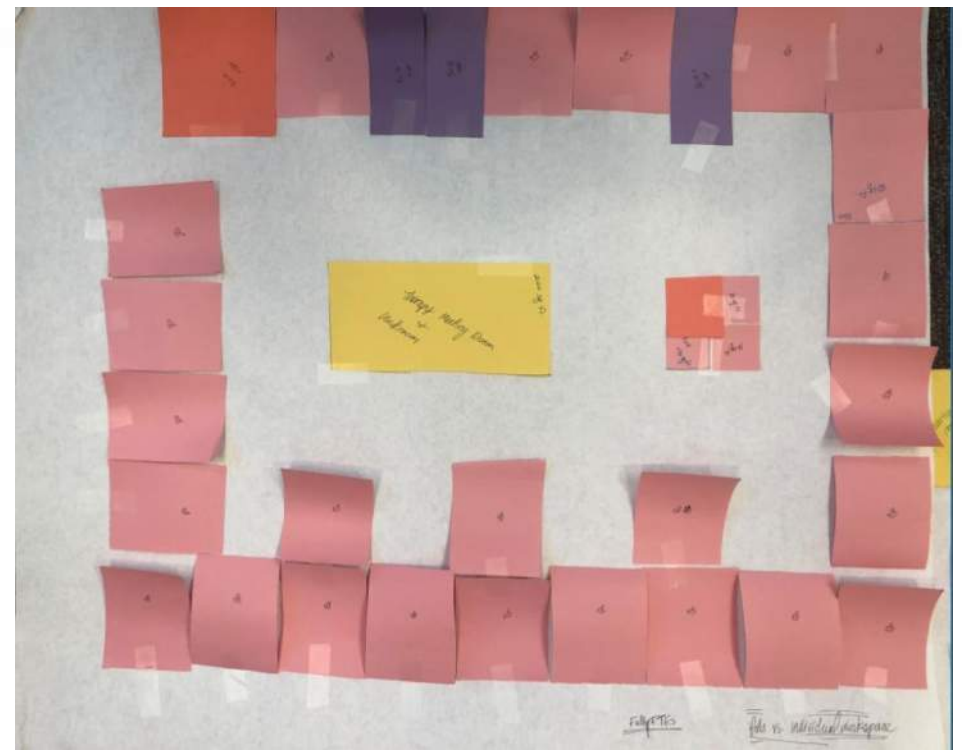
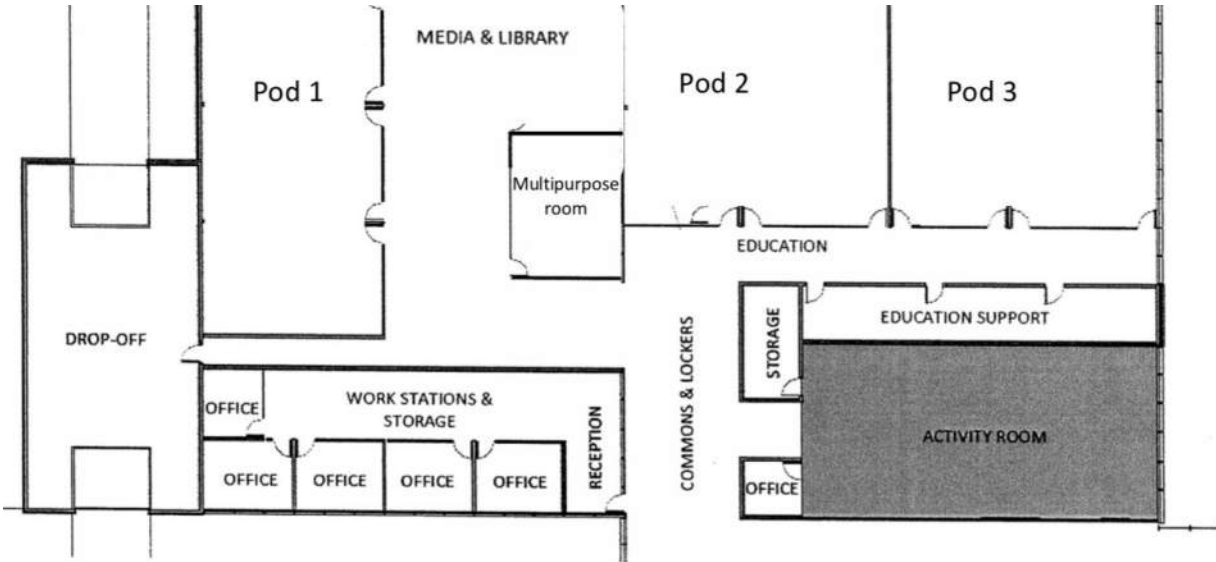
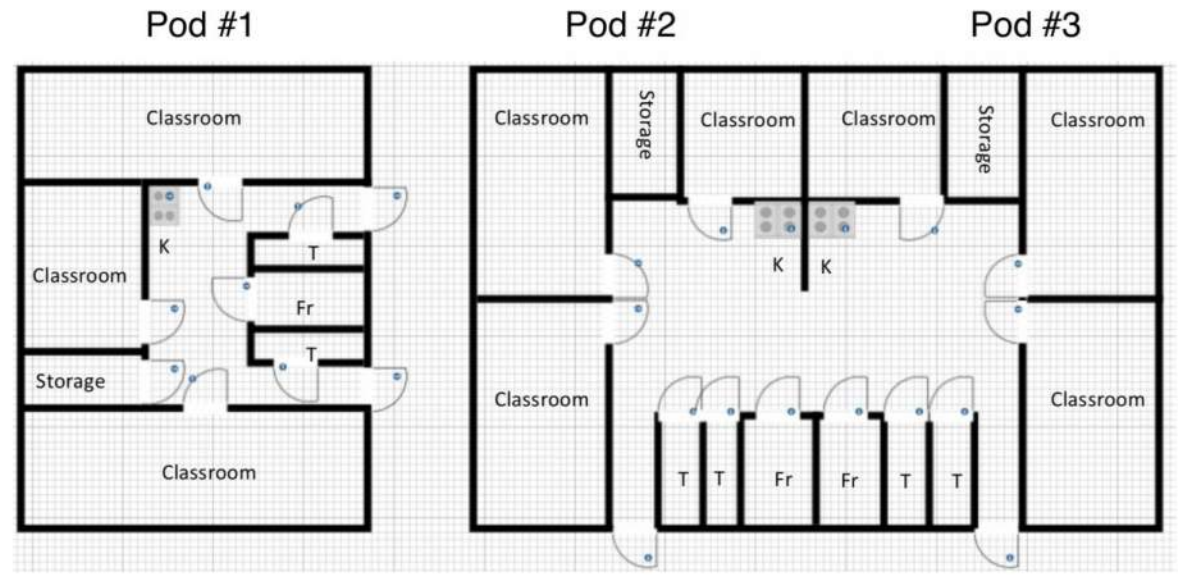
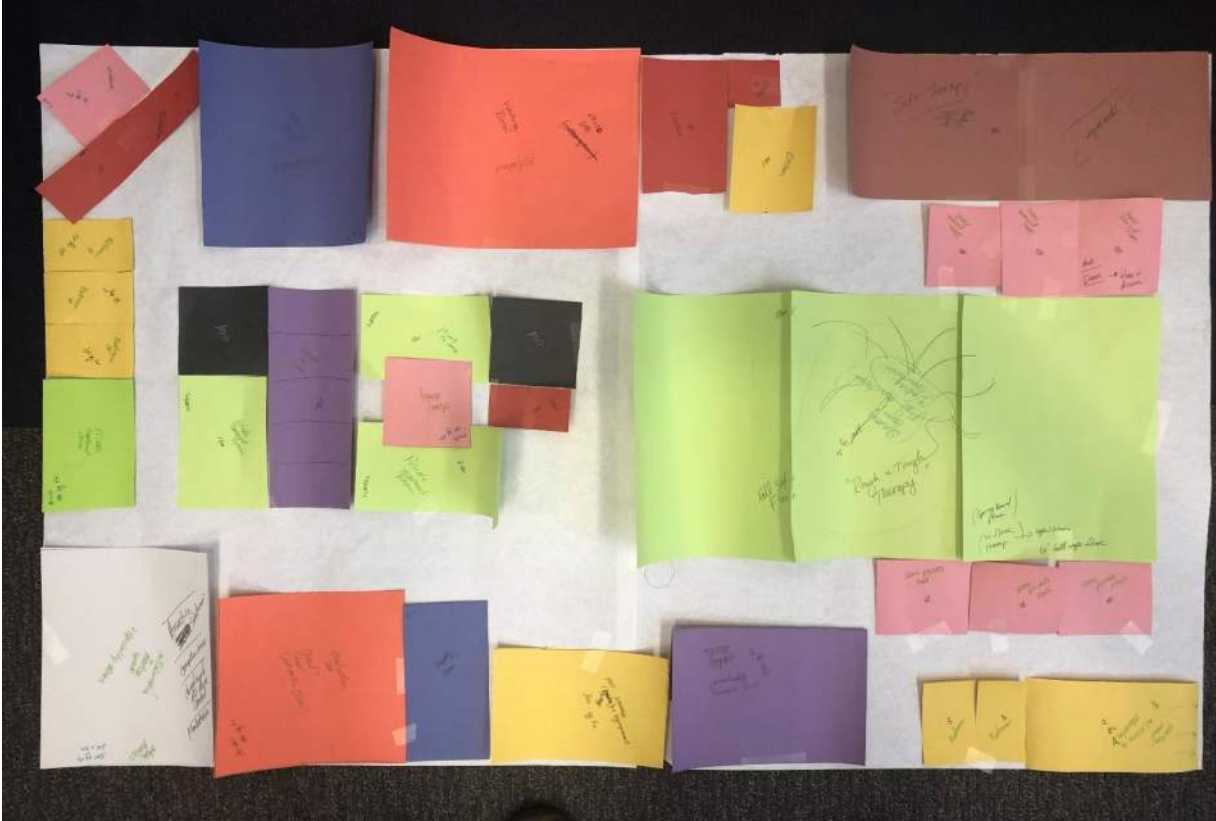




**BEFORE**



**AFTER**



# SUGGESTED DESIGN FEATURES

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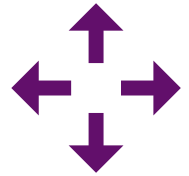
**Minimize  
overstimulation**



**Clear wayfinding**



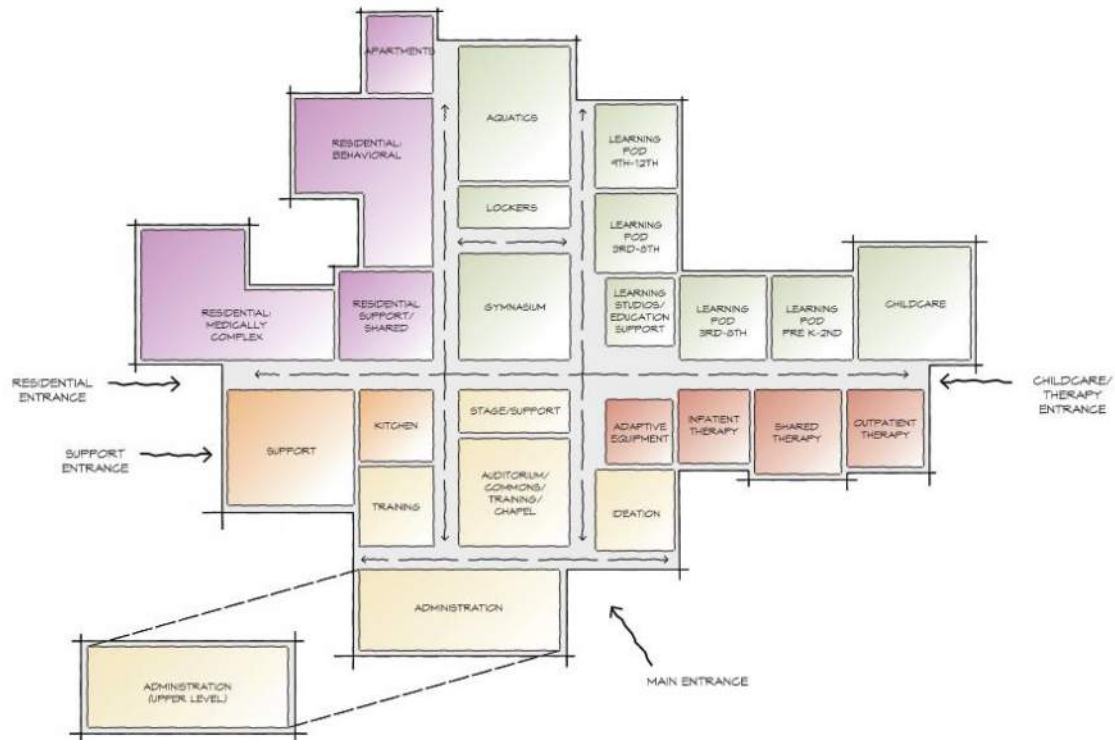
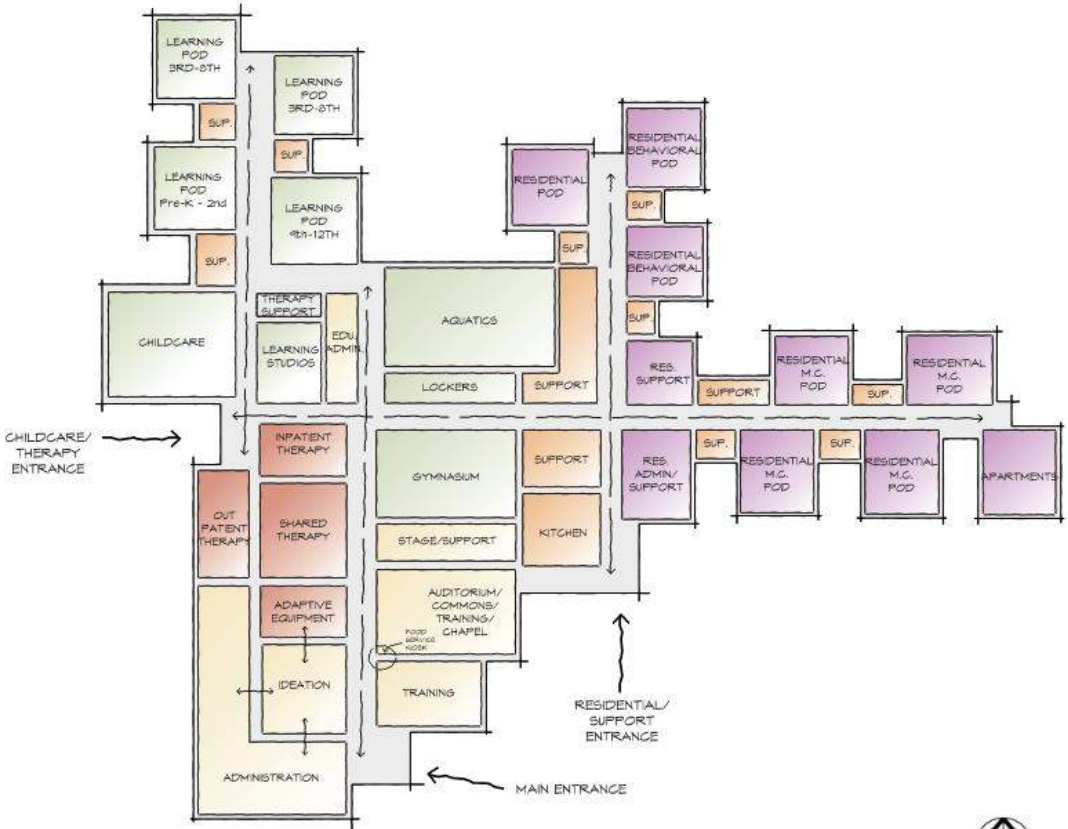
**Encourage  
independence**



**Maximize  
Space**



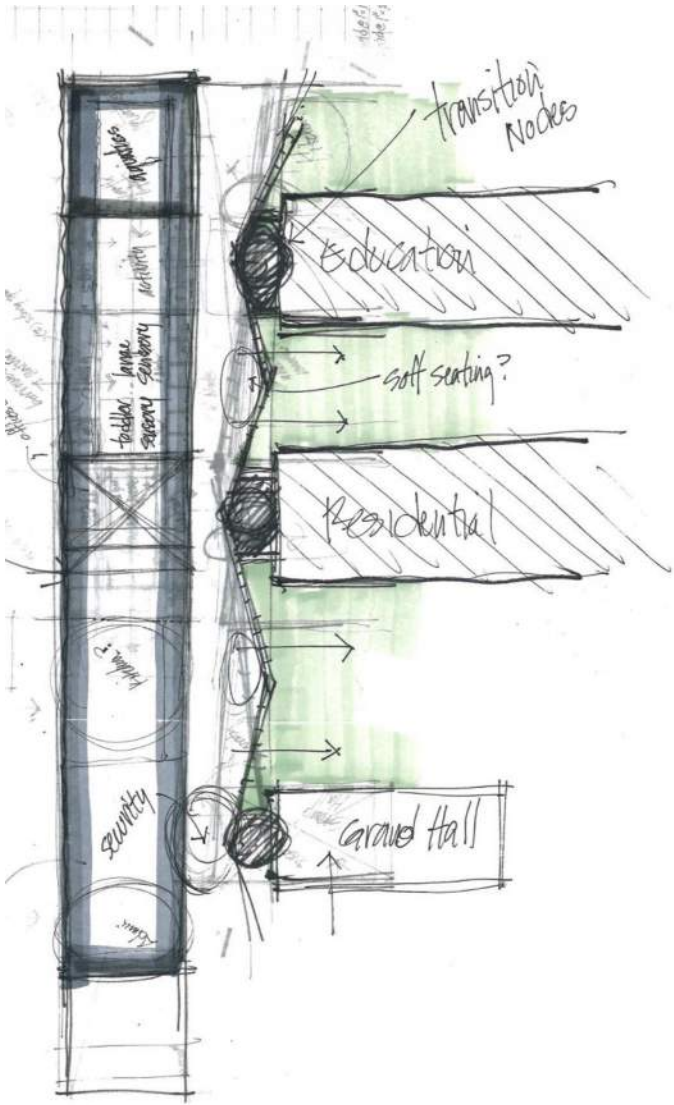
# EARLY CONCEPTS



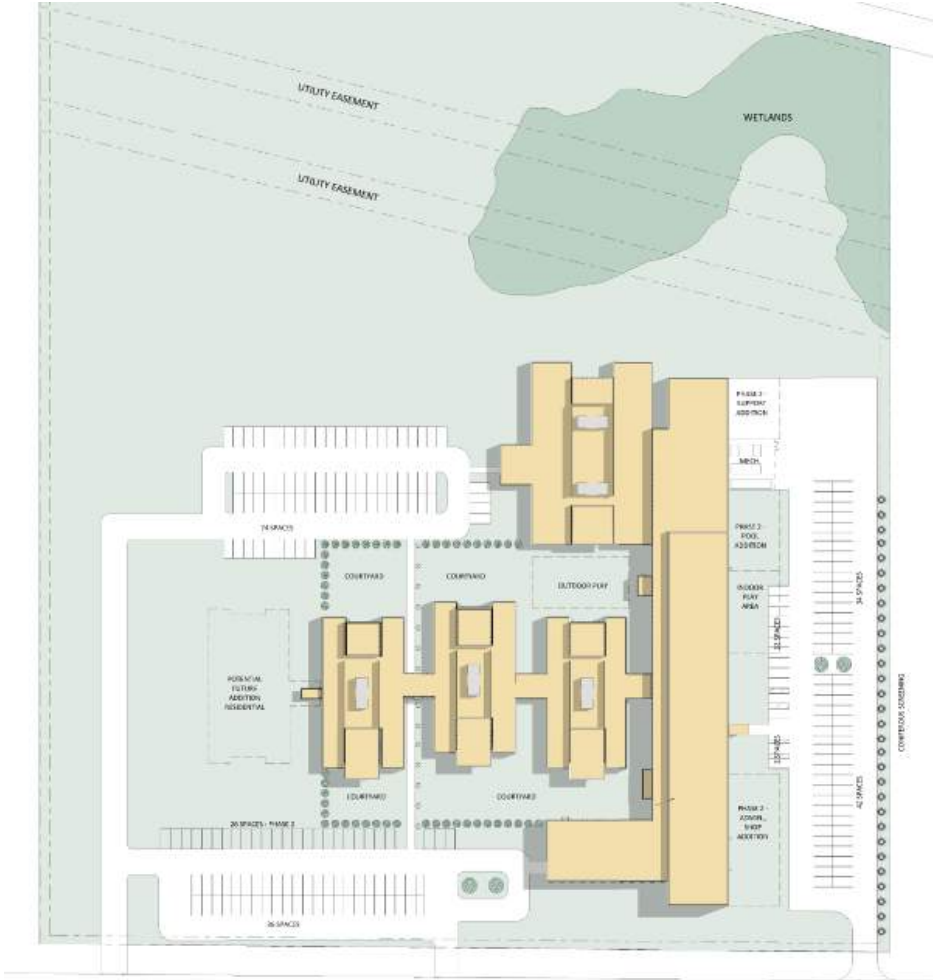




# EARLY CONCEPT REFINEMENT

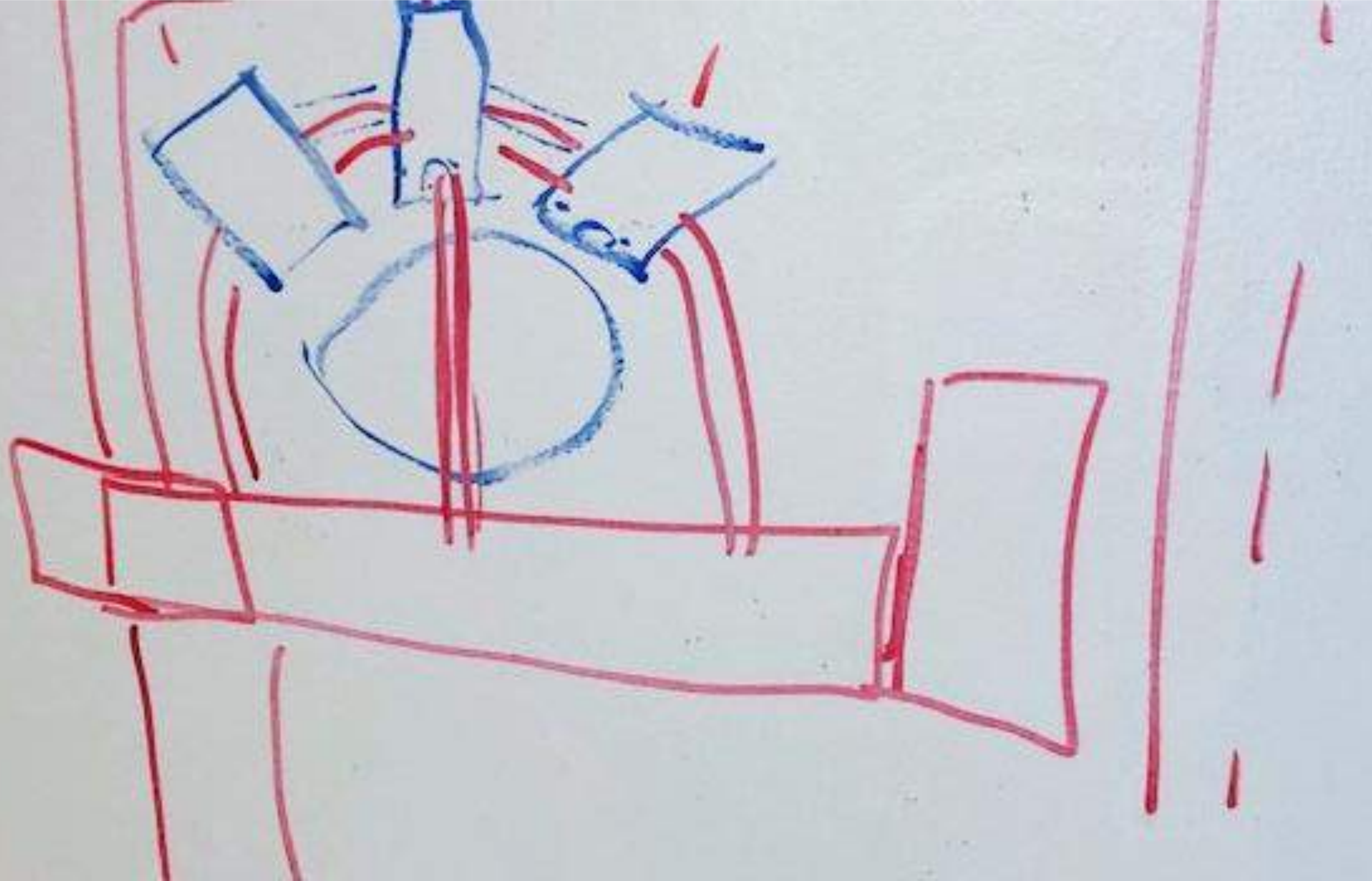


# SCHEMATIC DESIGN ESTABLISHMENT

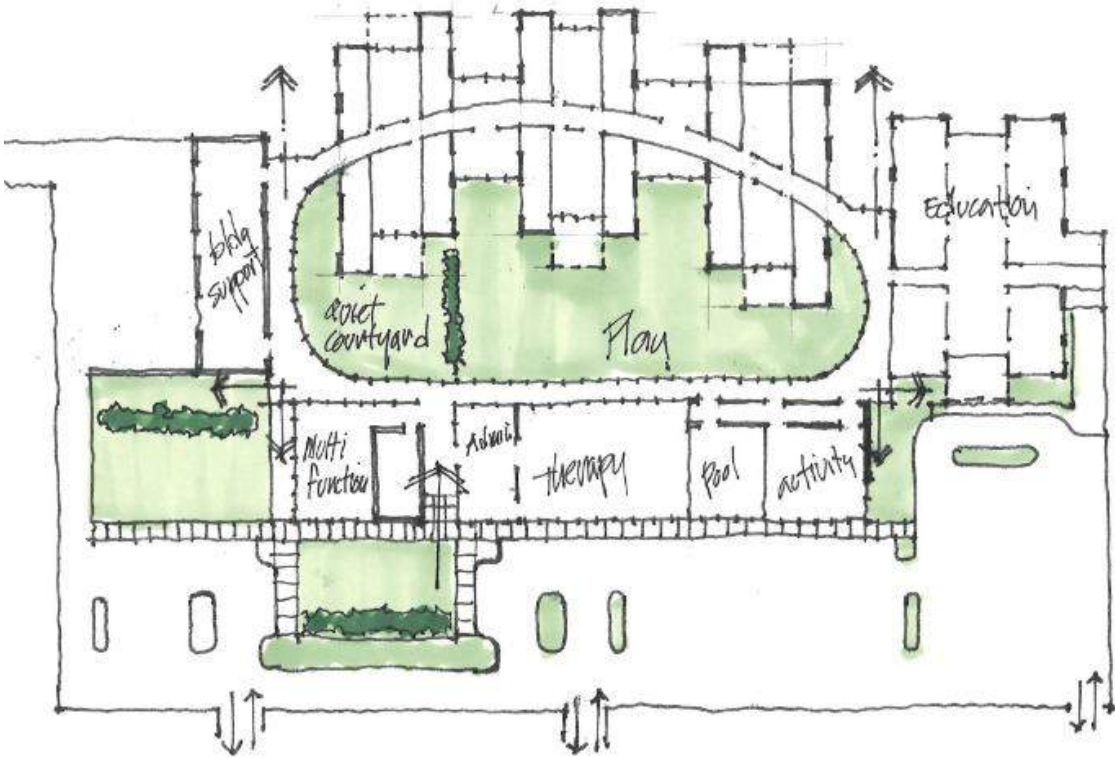




LET'S RETHINK



# SCHEMATIC DESIGN PIVOT







# COURTYARD

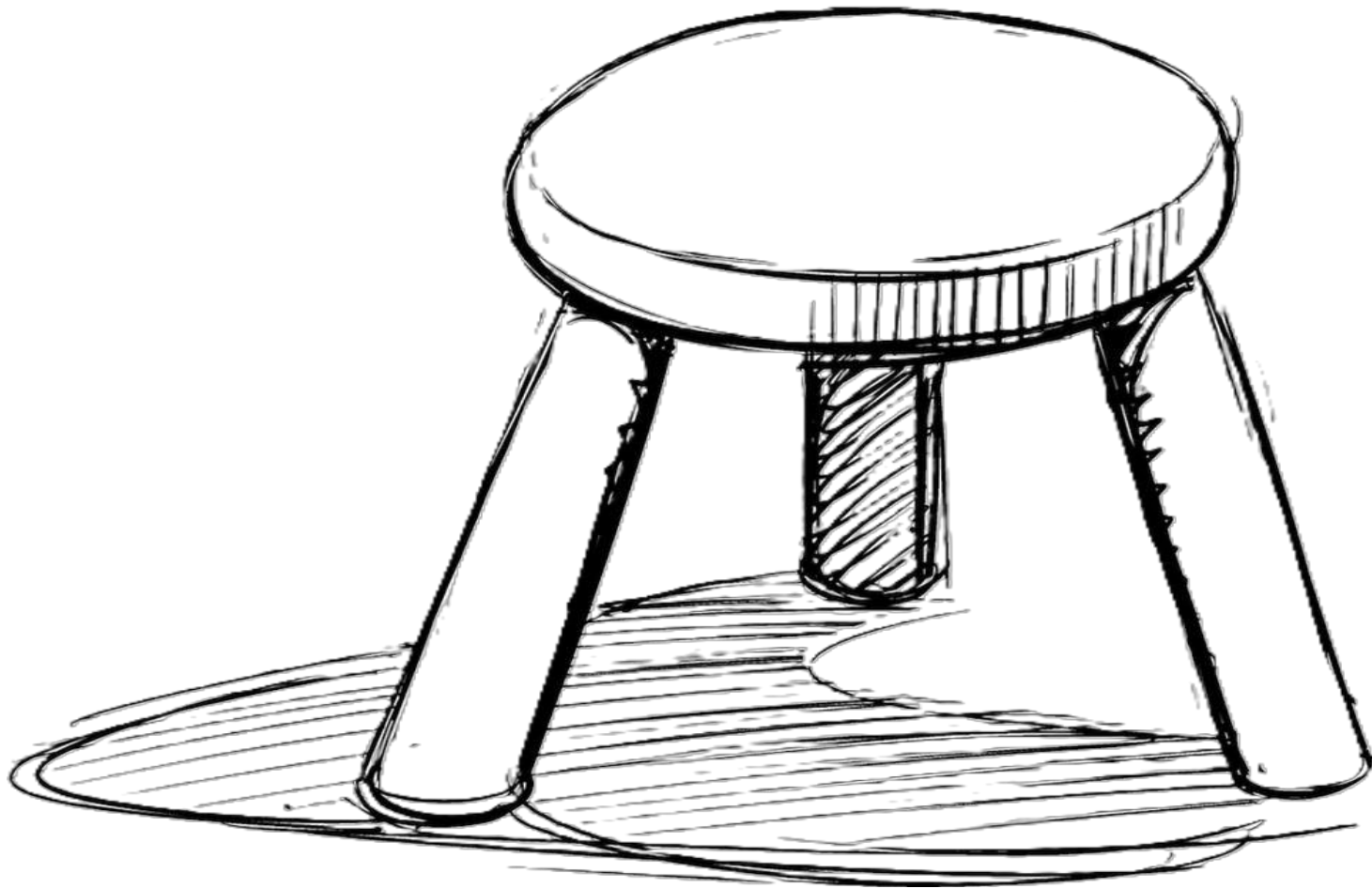


# ENTRANCES & MOVEMENT



# SECURITY & ACCESSIBILITY & INDEPENDENCE

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# EDUCATION WING

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Secure and streamlined entry



Common area with abundance of natural light



Easily accessible to resources



# THERAPY

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In-ground trampoline



Overhead swing attachments throughout the project



Multi-purpose room can be many things to many people



Moveable bottom pool



# RESIDENTIAL AREA

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Single, private bedrooms with hide-able headwalls



Each residential room to be neutral palette for kids to make the space their own



Higher ceilings in living/dining to let in more light so the space feels like home



Blending privacy with safety and individual with small group



Activity and education areas within residential. Play and learning doesn't need to stop





# Q & A



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