



SOAR

a center for neurodiversity

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Neurodiversity

Neurodiversity: the diversity of the human brain including differences such as ADHD, Asperger's, Autism, dyslexia, dyspraxia, Tourette Syndrome, etc.

Neurodiversity includes all of us though, as no two brains are exactly alike. Its about embracing our differences, acknowledging the strenghts and weaknesses different brains have to offer, finding power and progress through the collaboration of diversity and not pathologizing a brain because of a difference, but honoring the strengths from a positive paradigm.

There are many different forms of diversity in the world. Like ethnicity, sexuality, and culture. There is also diversity of the human brain. Embracing this aspect of human diversity honors our shared humanity and makes us stronger collectively.

There are millions of people in our communities and schools and workplaces who have divergent brains. What is available in schools does not address all of the students' social, emotional and cognitive needs or teach behavioral strategies.

“Special-education departments tend to focus on helping students with learning disabilities. But kids with Asperger’s often don’t need academic support. They need help navigating social interactions.”

-Amy Mackin, parent

11%

of all children in U.S. aged
4-17 diagnosed with ADHD

The CDC reports that 11 percent of all children in the U.S. aged 4-17 had been diagnosed with ADHD by 2011.

3.5+

Million Americans with
Autism Spectrum Disorder

More than 3.5 million Americans live with an autism spectrum disorder.

2

Franklinton, Ohio

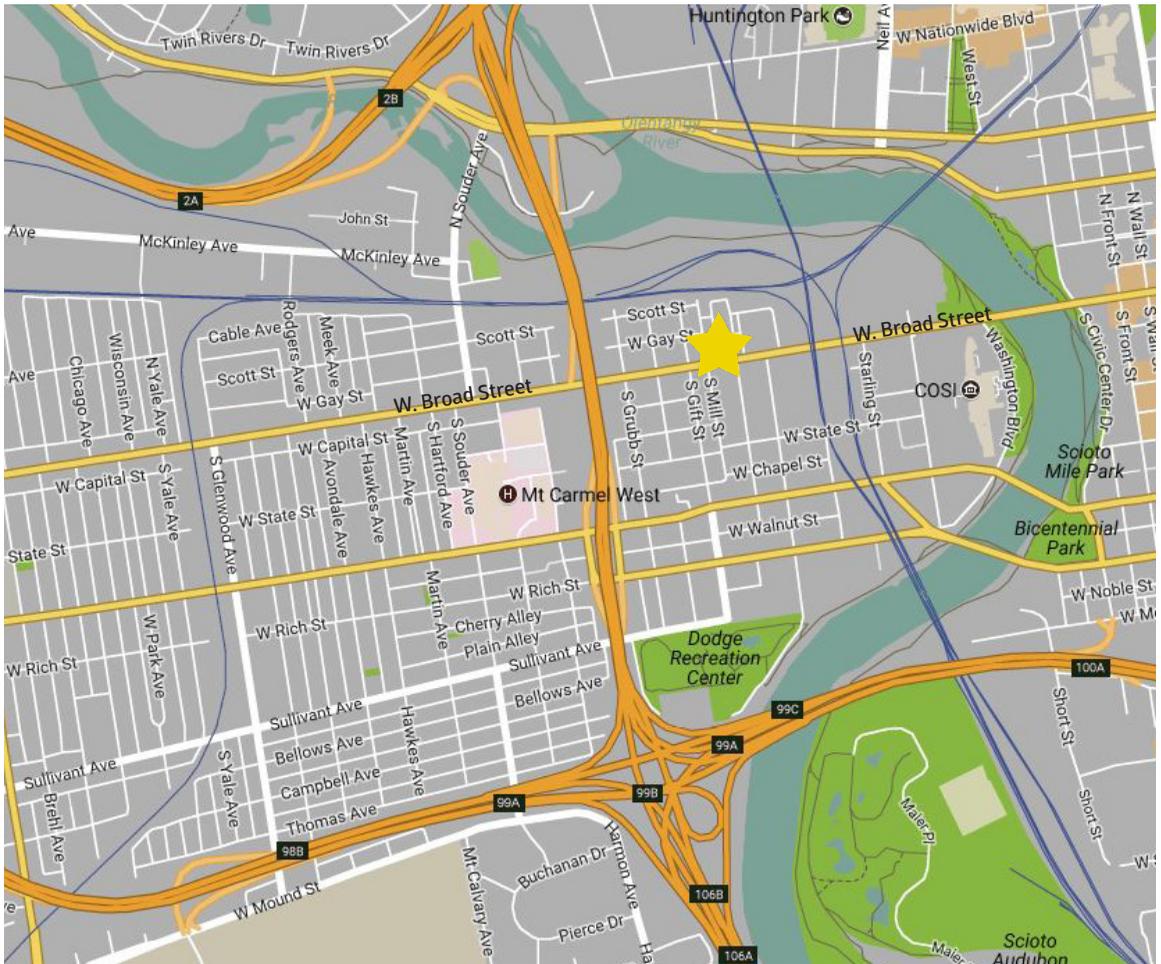
Franklinton is also home to neurodivergent folks. Many of them facing the challenges of poverty on top of a diagnosis. Having a neurodivergent brain can make navigating life more challenging, but add in poverty and life can be exceedingly difficult, exacerbating issues and symptoms.

Many schools are not equipped to meet all of the needs of the ND students. If parents can not afford additional, private and most often expensive specialists then the help students need is simply not available.

“Franklinton has the lowest median household income (**\$23,316**), and the highest poverty rates in Franklin County with **37%** of households below poverty level, and over **77%** of households below self-sufficiency.”

37%

Households below poverty level in Franklinton



3 People



Robert

Robert is a 12 year old student with ADHD. He may need to keep his brain active with intellectually stimulating projects and the opportunity to move around frequently. He is interested in making and building parts and models in the woodshop, and is creative and bright. He struggles with impulsivity and needs help learning how to manage this and his emotions.



Kim

Kim is a 15 year old student with Asperger's and ADHD. She struggled to get a diagnosis as a female and often feels unable to connect with those around her. Until recently, she had never met another peer like herself and wishes she knew how to make more friends. However, she struggles to understand social cues and norms and would like to learn how to interact socially with the help of a coach.



Jordan

Jordan is an Autistic 8 year old student. He is sweet and loving, but can not verbally communicate and uses a tablet to help him speak. He is often overwhelmed by loud noises and wears headphones to decrease the volume his environment. Jordan needs a lot of one on one assistance to learn, grow and manage his sensitivity to stimuli which he can receive at SOAR.

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Research / Case Studies

Alt School - Sensory Room - Japanese Kindergardens - The Center for Neurodiversity -
Ideal ND Classroom by Nancy Harrod - Local Elementary Classrooms



Alt School

The Alt School is a silicon valley start up that puts technology at the center of it's foundation. Using a digital hub each child is taught to look at their student profile which contains lessons and assignments for different subjects. Students decide which lessons to accomplish first and can work at their own pace. Teachers are available to make sure students receive help when needed and are progressing. It is an excellent example of how individualized plans can happen for each student if we use innovative tools and technology.

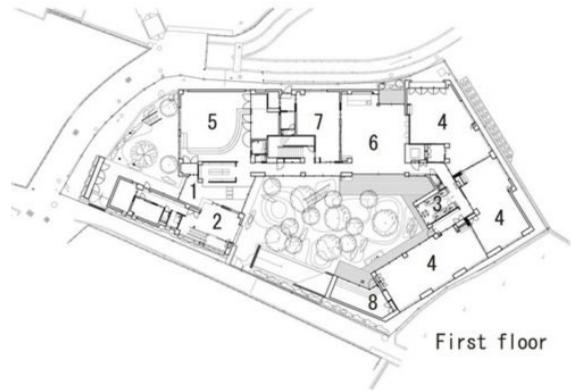
Case Studies



Hanover Elementary Sensory Room

At Hanover Elementary School in Meriden, CT there is a room designed for students on the spectrum to help them deal with sensory processing needs.

Case Studies



1. entrance
2. office
3. restroom
4. childcare room
5. gymnasium
6. dining room
7. kitchen
8. atelier



Kids Mayumi Kindergarden - Osaka, Japan

Japanese kindergardens are intuitively designed spaces with the core value of understanding the nature of children at the core of the design. Instead of asking children to conform to a building or regiment, they design the space for the kids. There is an open space in the middle where kids are welcomed to run free as often as they wish in a green space and can wonder back to their homeroom when they are ready for a rest.

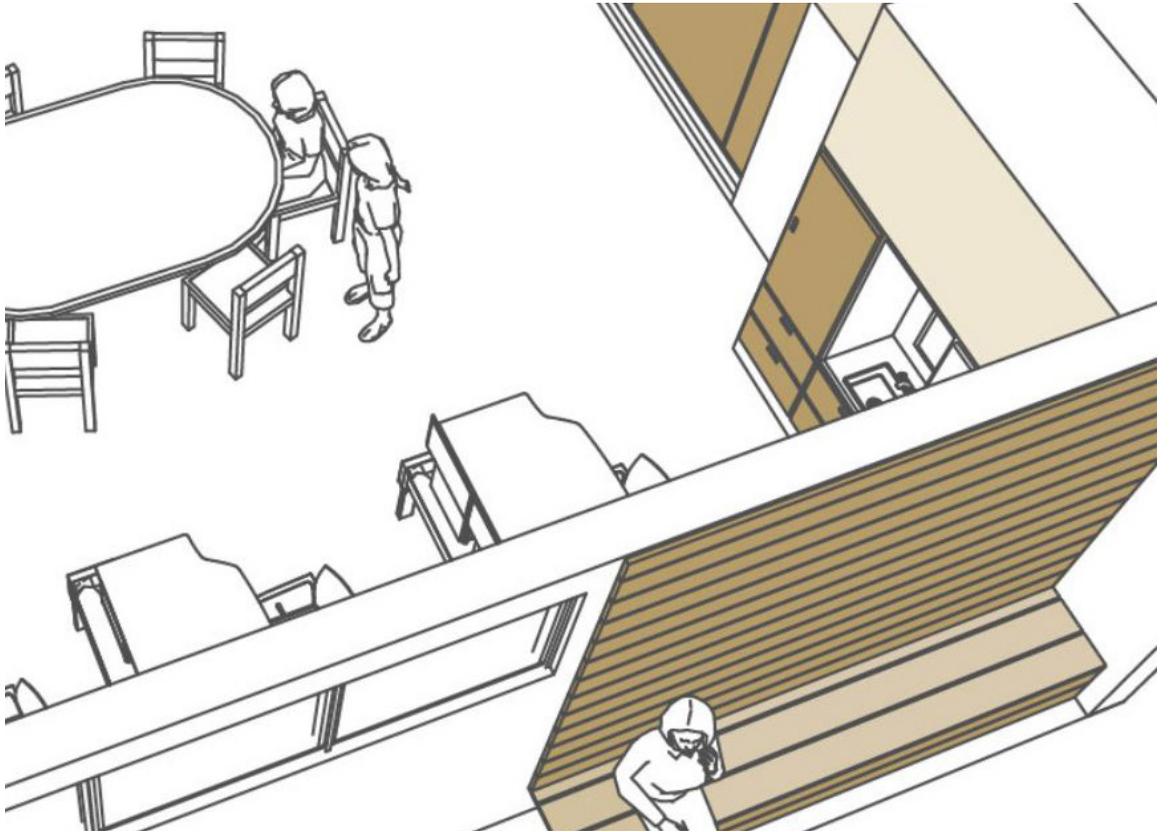
Case Studies



Front Range Center for Neurodiversity

The Front Range Center for Neurodiversity is currently being designed for a location in Colorado. It has not yet been built, but plans to offer a wide range of support primarily for those with Autism as well as advocacy and training.

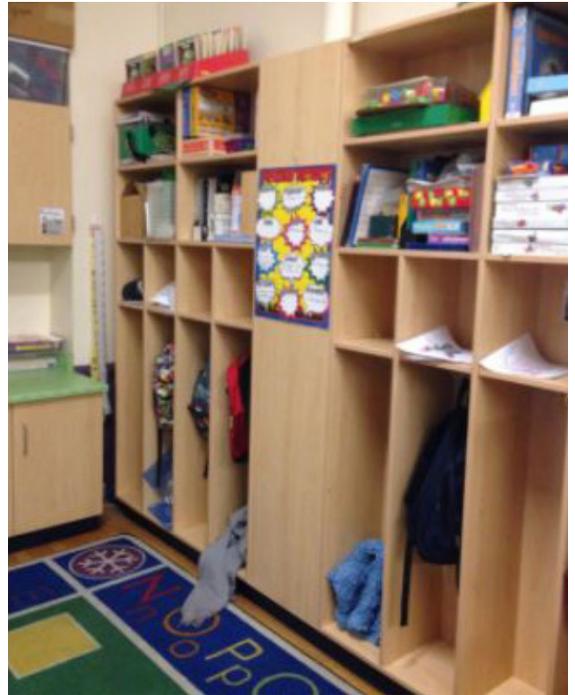
Case Studies



Ideal Classroom by Nancy Harrod

Nancy Harrod is an Interior Designer who has focused her career on designing for those with different needs. Included in her portfolio is her design of the ideal classroom for those on the spectrum.

Field Observations



Avondale Elementary - Franklinton, Ohio

Individual Story: Autistic child was neglected at home including hygiene and bedtime not enforced. He was very tired at school. He is nonverbal which made dealing with his lack of sleep even more difficult. He would often sleep during the day.

Field Observations



New Albany Primary School - New Albany, Ohio

Individual Story: Parents of an autistic child refused to accept his diagnosis insisting that he does not have autism. They were only allowing the school system to give the diagnosis so they he would qualify for extra academic help.

5

Concept

SOAR, a center for neurodiversity, is a place that offers tailored educational opportunities and encourages **community** for neurodivergent students (K-12) in the underserved neighborhood of Franklinton, Ohio. SOAR is a **positive, optimistic** space that encourages and teaches students from a **strength-based** perspective. SOAR assists parents in caring for and educating their child to help alleviate caregiver fatigue. Trainings are offered for families and the community-at-large to help everyone better understand neurodiversity.

Problem

Neurodivergent students are often misunderstood. This can lead to social isolation. It can be taboo to talk about this part of one's identity making it hard to build community with fellow neurodivergent brains.

Often times people focus on the weaknesses of neurodivergent students. The curriculum and environment is not adapted to help them focus on and develop their strengths. Students are given little to no understanding of their brain or how to create and utilize behavioral strategies.

Additionally, parenting a neurodivergent child is an additional and time-consuming challenge especially for lower income families.

Need

Students with ADHD, Asperger's and Autism need:

1. additional facilities, support and skill building tailored to their needs/strengths/weaknesses
2. the chance to understand their brain and develop a positive neurodivergent identity
3. opportunities to meet others like themselves and build community.

4. A supportive community to assist parents in caring for their neurodivergent children.

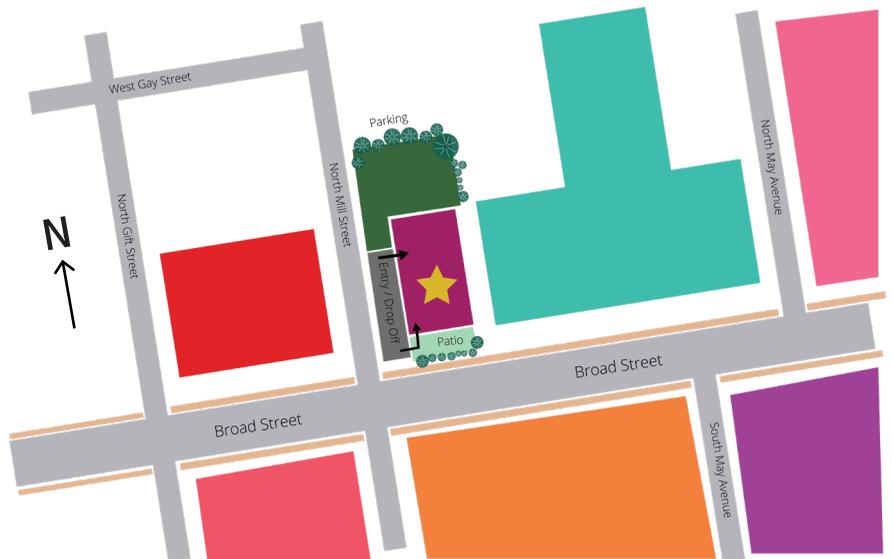
Solution

1. Design Neurodiversity Micro Hubs that can offset the needs that are not being met at school and at home.
2. Create a space that is uniquely designed for neurodivergent brains.
3. Offer educational opportunities with neurodivergent needs and strengths in mind.
4. Use technology to better meet the needs of these students.
5. Provide a safe space for relationship building among the neurodivergent community.
6. Offer after school and weekend programs to assist parents.

Thesis Statement

To design a space that addresses the sensory, educational and social needs of neurodivergent individuals and help support their families by offering after-school and weekend programs.

5.2 Building



Site Map



Engine House Number 6

This project will utilize and renovate Engine House #6. The building is well suited to house a neurodivergent space because of 2 levels, plenty of room for public and quieter private space, a small yard in the back of the building and large windows for plenty of natural lighting.

5.3

Visual Positioning Collages



Community Room A

To begin creating a vision and visual concept, collages were created as preliminary ideas. Wood, bright, cheerful colors and natural lighting are some of the features that will be included.



Community Room B



Community Room A



Upstairs Project Workspace

5.4

Criteria Matrix

Spaces Needed:

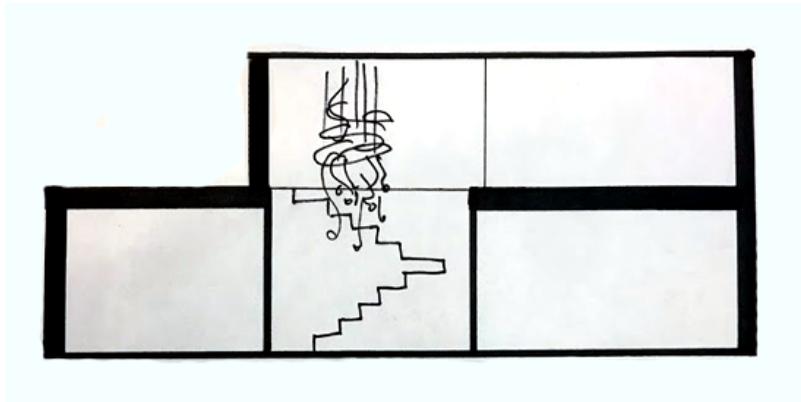
Atrium / Entrance	Kitchen
Community Room A (older kids)	Restrooms
Community Room B (younger kids)	Elevator
Small Group Room	Basement with space for storage
Transition Spaces	
Movement / Therapy Room	
Project Workspace	
Training Room	
Counseling Rooms	

Criteria Matrix for Franklinton Neurodiversity Center		Sq Ft Needs	Adjacencies	Public Access	Daylight and/or View	Privacy	Plumbing	Special Equipment	Special Considerations
1	Community Room A	700	3, 11	Y	H	N	N	N	
2	Community Room B	720	4, 5, 7	Y	H	N	N	N	
3	Small Group Rm C	300	1, 11	M	I	M	N	N	
4	Sensory Products Rm	200	2, 6	N	N	N	N	Y	
5	Transition / Mindfulness Spaces	100	1, 2, 6, 7	Y	I	Y	N	N	
6	Movement / Fitness Room	730	7	L	H	M	N	Y	structural support/ hardware for swings
7	Restrooms (3+)	60	central, 2	Y	N	H	Y	N	
8	Individual Work Areas	300	3, 10	L	I	H	N	N	
9	Entry Way / Reception	200	central	H	Y	N	N	N	
10	Library/Art/Projects Rm	850	7	L	H	M	Y	N	
11	Kitchen Area	300	1, 3	L	M	M	Y	N	
12	Counseling Rooms (2-3)	100	7	M	I	H	N	N	

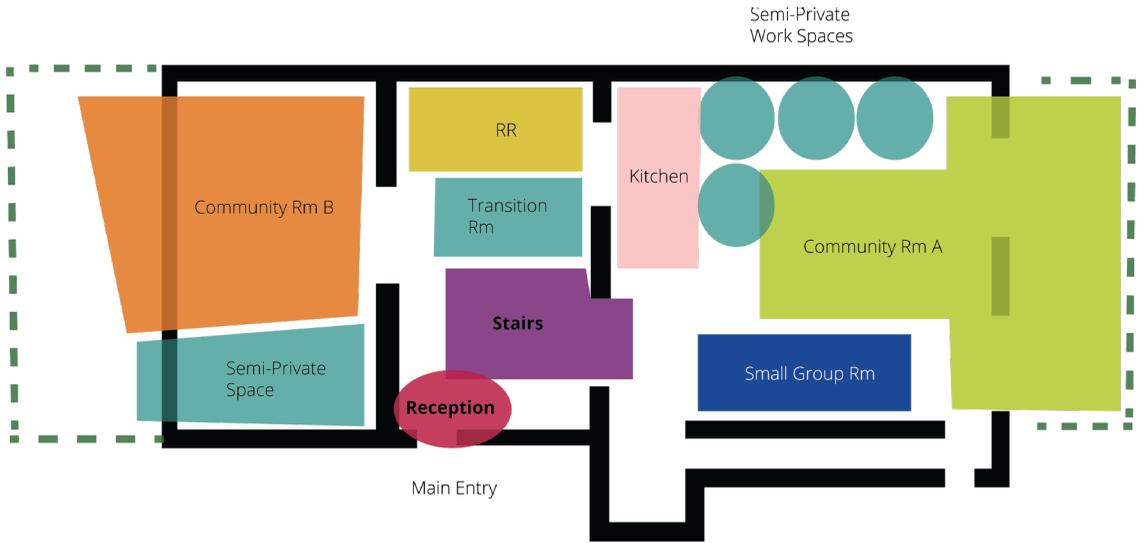
Legend Total Available: 4933 Sq. Feet Total Needed: 4560 Sq. Feet

- Immediately Adjacent H High
- * Important Adjacency M Medium
- X Reasonably Convenient L Low
- Unimportant Y Yes
- Remote N No / None
- I Important but not required

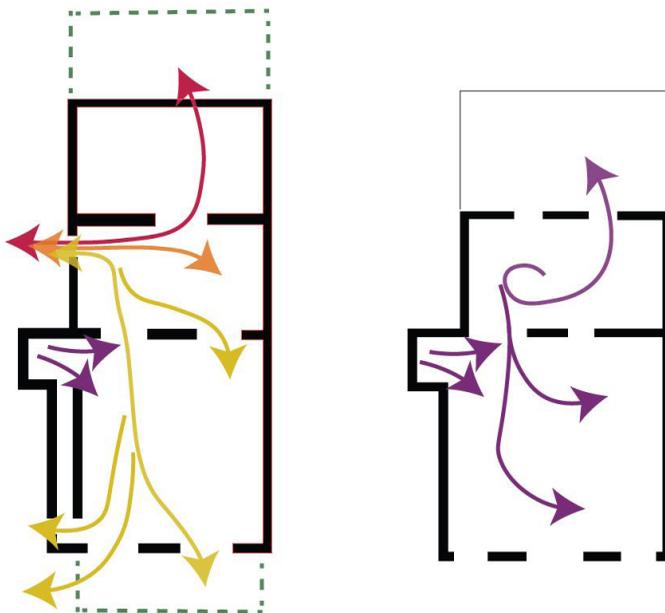
5.5 Diagrams



Elevation Sketch



Bubble Diagram
First Floor



Circulation Diagrams
Left: First Floor. Right: Second Floor.

5.6

Programming

Room: Community Room A

Activity Description: Space for older kids to socialize, relax after school, homework help

Occupants: enrolled, local students of SOAR

Space Adjacency: Small Group Room, Distraction Reduced Work Station, Restroom

Design Qualities: Comfortable, Relaxing, Inviting, Cheerful, Optimistic

Behavioral Qualities: Both interactive zones and quiet zones

Acoustics: Absorbing materials, quiet, reserved

Illumination: natural lighting, ambient luminescence, Dimmable Switches

Furniture & Equipment: Comfortable lounge seating, couches, blankets, bean bags

Room: Community Room B

Activity Description: Space for younger, elementary aged kids, relax, projects, socialize

Occupants: enrolled, local students of SOAR, teachers

Space Adjacency: Restroom, Kitchen, Outdoor Play Area, Reception/Entrance

Design Qualities: Comfortable, Relaxing, Inviting, Kid Friendly

Behavioral Qualities: Both interactive zones and quiet zones

Acoustics: Absorbing materials, quiet, reserved

Illumination: natural lighting, ambient luminescence, Dimmable Switches
Furniture & Equipment: Cabinets/storage, cubbies for backpacks, tables, chairs, bookshelf, blackboard, art supplies, books, blankets, deep pressure sensory pod, headphones

Room: Small Group Room

Activity Description: Space for small groups of students or parents to meet for workshops
Occupants: enrolled, local students and/or parents, teachers
Space Adjacency: Community Room A
Design Qualities: Inviting, Cheerful, Relaxing, Productive
Behavioral Qualities: Quiet
Acoustics: Absorbing materials, quiet, reserved
Illumination: natural lighting, ambient luminescence, Dimmable Switches
Furniture & Equipment: Tables, chairs, blackboard, projector, screen

Room: Movement, Dance and Sensory Therapy Room

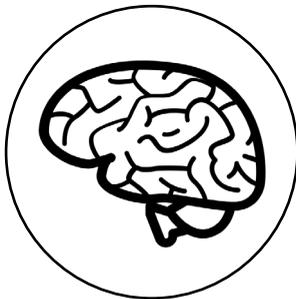
Activity Description: space for students to participate in sensory therapy, dance, swing
Occupants: enrolled, local students of SOAR, therapists
Space Adjacency: Art/project work room, transition zone, hallway, elevator
Design Qualities: Serene, Relaxing
Behavioral Qualities: Quiet or Interactive depending on current activity
Acoustics: Absorbing materials, quiet, reserved
Illumination: natural lighting, ambient luminescence, Dimmable Switches
Furniture & Equipment: Sensory products, swing, net swing, small trampoline, exercise balls, play tunnel, mat, area rugs, bean bags, headphones, yoga mats, spin seats

Room: Training Room

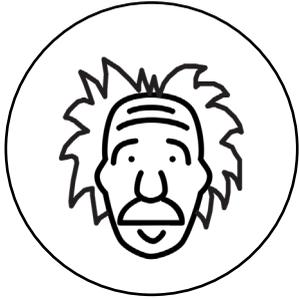
Activity Description: Space for workshops for the community-at-large
Occupants: Trainers and invited guests (i.e police officers, teachers, parents, etc.)
Space Adjacency: Two-Story atrium/Entrance, hallway, counseling rooms
Design Qualities: Positive, cheerful, optimistic, inviting
Behavioral Qualities: Group discussion and presentation atmosphere
Acoustics: Absorbing materials, mid-level noise
Illumination: natural lighting, ambient luminescence, Dimmable Switches
Furniture & Equipment: Tables, chairs, projector, screen

6 Design

SOAR offers after-school and weekend programs to supplement daytime schooling, assist parents and educate society.



Teach students about their brain and behavioral strategies from a strength-based perspective



Individualized projects, pace and environment (i.e social skills, job or college readiness, homework help, etc.)



Art, dance and sensory therapy, Sensory products, Distraction reduced spaces, Dimmable Lighting, Cozy Nooks, Transition Spaces



Understanding and supportive community of mentors and peers



Awareness and education for parents, teachers, and society (i.e police, etc.)

6.1

Renderings

Right: Entrance / 2- Story Atrium





Community Room A / Small Group Room



Movement / Dance / Therapy Room



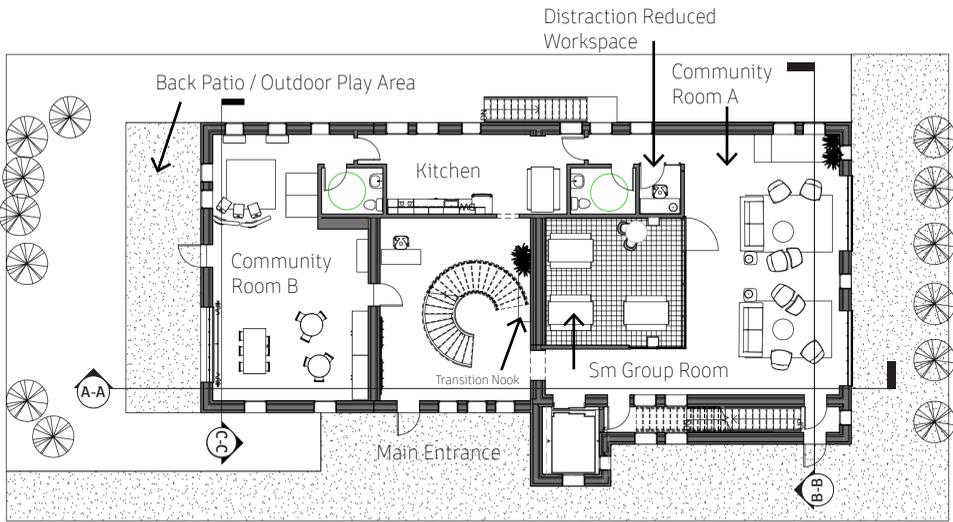
Community Room B



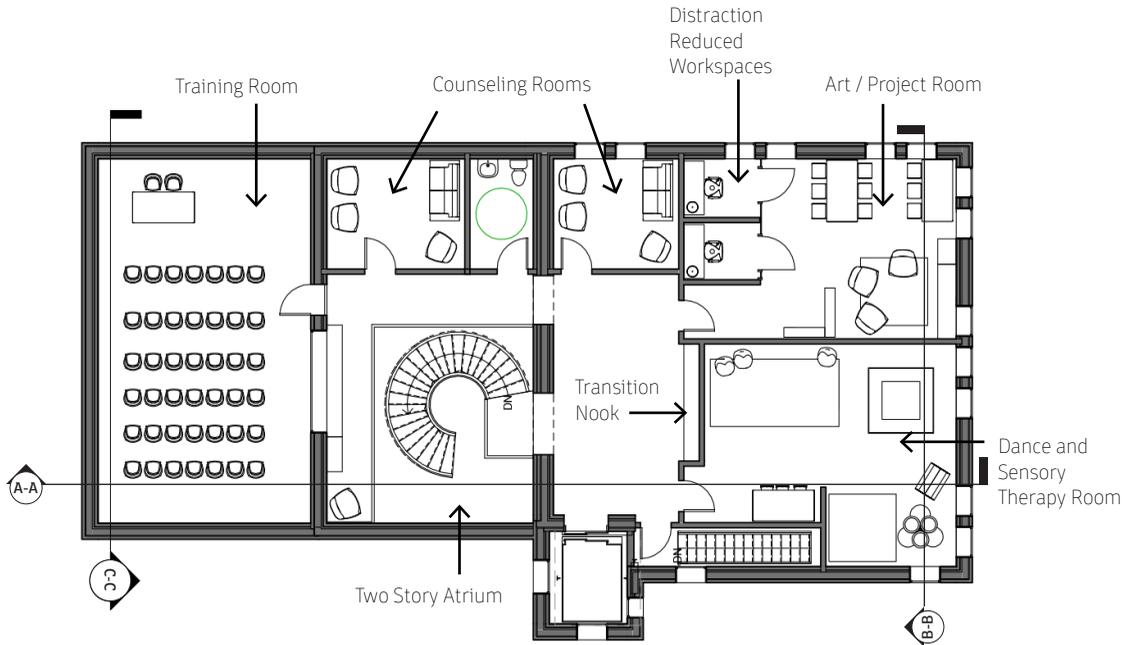
Community Room B

6.2

Floor Plans

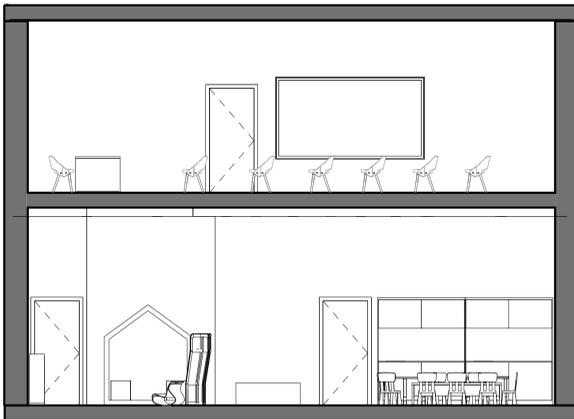


Floor Plan Level One

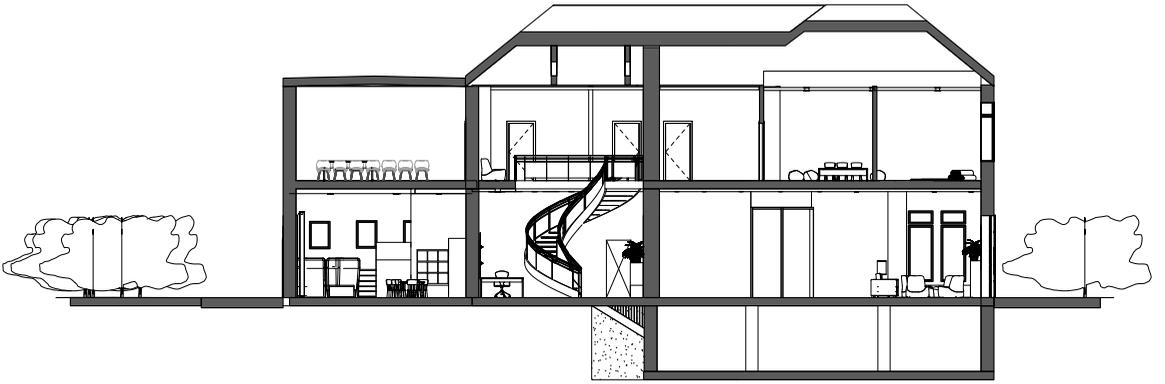


Floor Plan Level Two

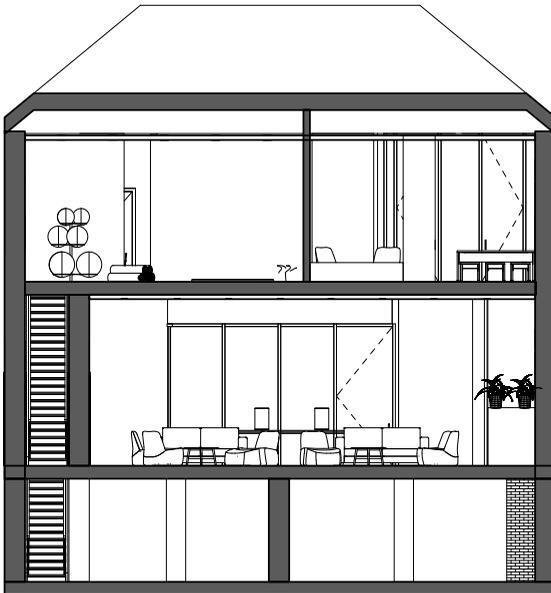
6.3 Elevations



Section C-C



Section A-A



Section B-B

6.4 Model





7

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5. Concept

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