

TherAplay

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Concept

Our concept is to promote motivation and positive behaviors among children with special needs through **sensory integration**. By incorporating low arousal colors, visual cues and instructions, and minimal distractions. We aim to create a safe and engaging environment for children, while eliminating the traditional clinic feeling.

Sensory Room Case Study

Special Kids Therapy & Nursing Center – Murfreesboro, TN

“Snoezelen” room – a controlled area that is a multi-sensory environment

Includes equipment and manipulatives that incorporate different sensory systems such as hearing, pressure, seeing, and touch.



Sensory Room Case Study Cont.

Features:

- Wall and floor cushions – padding allows the children to safely explore
- Projector - Project simple changing shapes of color and gentle patterns. The child can relax with the image without needing to predict or decipher the shapes or patterns.
- Bubble tubes – Provide multi-sensory feedback and stimulate visual systems. Color changing promote color recognition. Bubbles may enhance relaxation. Provides tactile feedback with vibratory sensations.
- Bubble wall panel – a combination of bubble tubes and wall panels
- Fiber optics – Provide visual and tactile stimulation
- Color switch – Promotes choice and control. Helps with fine/gross motor skills and visual impairments
- Tent – Allows the user to feel secure while increasing attention to various activities.

Speech Therapy Case Study

Young Talkers Adult & Pediatric Therapy Clinic – Myrtle Beach, SC

Therapy rooms have observation rooms with one way mirrors or a camera system that allows the parents to observe the child's session.

Use a family-based approach

Use special augmentative aids, such as pictures and symbol communication boards and electronic devices to help people express themselves. (They are affiliated with Tobii Dynavox and Prentke Romich Company, who manufacture high tech AAC devices).





Occupational Therapy Case Study

Tumble N' Dots – Irvine, CA

Therapy sessions provided within the context of play, exploration, and fun

Therapists are trained in Ayers Sensory Integration

Provide areas for monitored play that are designed for children with all abilities.

Sensorimotor classes are designed to develop and promote sensory processing and motor planning skills

A photograph of a person riding a brown horse, with a woman in a blue polo shirt and sunglasses standing next to the horse, likely a therapist. The background is a blurred outdoor setting.

Hippotherapy Case Study

Three Gaits – Stoughton, Wisconsin

Provides individual 30 minute lessons, or lessons in small groups

Occupational therapists work with horse handlers to provide therapy by analyzing the client and directing the horse's movements

Children are much more inclined to positively engage and enjoy hippotherapy rather than similar motor or sensory therapy with clinical equipment.

Common diagnoses treated include ADD, Autism, Cerebral Palsy, Down Syndrome, Multiple Sclerosis, Muscular Dystrophy, Spinal Bifida, Traumatic brain injury



Therapy Room Case Study

Paso del Norte Children's Development Center – El Paso, TX

Students at The University of Texas at El Paso helped convert the rooms into therapy areas for sensory integration, gross motor skills, autism, and speech language services.

Steps and trampolines help with gross motor skills

Colorful floor mats are soft and durable, meaning kids can perform activities comfortably

Placed cork on the walls to minimize noise from adjacent rooms

Painted walls blue because of the calming effect it has on children.

EBD Color

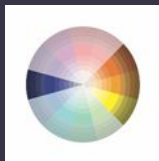
Monochromatic- “create a peaceful environment”(Cgpc, E., 2017, April 18)



Analogous- “create balance. For children with ASD, consider cooler colors” (Cgpc, E., 2017, April 18)



Complementary- “can be extremely stimulating and as a general rule, are less ideal in spaces for those with ASD.” (Cgpc, E., 2017, April 18)



- “Color palette should be adequately chosen, in order to create environments that provide a warm but not overstimulating atmosphere.” (Sánchez, P. A., Vázquez, F. S., & Serrano, L. A.,2011, September 06).

- low arousal colors** such as cream (not yellow or white) should be used for walls and patterned wallpaper should be avoided. (The National Autistic Society)

EBD Wayfinding

- “organize environment with clear visual and physical boundaries. These will help to create a definite context for each activity in association with a given space.” (Sanchez, P. A., Vázquez, F. S., & Serrano, L. A., 2011, September 06).
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- “Maximize visual structure: organize visual environment by means of concrete **visual cues**. This would comprise aspects as color coding, numbers, signs, labels, etc.” (Sanchez, P. A., Vázquez, F. S., & Serrano, L. A., 2011, September 06).
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- “Provide visual instructions: indicate the sequence of steps to be followed when performing certain activities –in the spaces where these are carried out– by means of not only written guidance, but also images, pictures, visual schedules, etc.” (Sanchez, P. A., Vázquez, F. S., & Serrano, L. A., 2011, September 06).

EBD Acoustics

- “Acoustics are taken into account, avoiding too polished materials, for instance. As Beaver says, sometimes it is difficult to combine this aspect with the need to clean the flooring –soft materials like carpet can be useful to absorb noise, but the downside is that they are harder to clean than shinier ones, whose acoustic behavior can be problematic.” (Sánchez, P. A., Vázquez, F. S., & Serrano, L. A., 2011, September 06).



VS.



EBD Materials

- “permanent visual reference along the circulation spaces in the building. Furthermore, the sense of calm and simplicity is not limited to the way in which the plan and sections have been designed, but also applies to the use of materials. same material is used for every element –pillars, floors, walls, etc.–, and suggests that, doing so, i.e., selecting a limited palette of materials, finishing.” (Sánchez, P. A., Vázquez, F. S., & Serrano, L. A.,2011, September 06).
- “**minimize the visual distraction** excessive detailing brings. Any unnecessary detail should be avoided, altogether with hard edges. Reducing the background visual stimulation to a minimum allows carers and teachers to introduce the precise degree of stimulation according to each child’s needs. Also, it is a good idea to consistently define heights of elements such as doors, handles, light switches and others.” (Sánchez, P. A., Vázquez, F. S., & Serrano, L. A.,2011, September 06).

FIGURE 3

Evidence-Based Design Checklist (See Appendix for Instructions and references)

Findings Scale:
Present (+), Absent (-),
More Information Needed (?),
Not Applicable (N/A)

Findings	EBD Goals and Furniture Features
	1. Reduce surface contamination linked to healthcare associated infections^{1, 2} a) Surfaces are easily cleaned, with no surface joints or seams. ^{3, 4, 5} b) Materials for upholstery are impervious (nonporous). ^{6, 7, 8} c) Surfaces are nonporous and smooth. ⁹
	2. Reduce patient falls and associated injuries¹⁰ a) Chair seat height is adjustable. ^{11, 12, 13, 14, 15} b) Chair has armrests. ¹⁶ c) Space beneath the chair supports foot position changes. ¹⁷ d) Chair seat posterior tilt angle and seat back recline facilitate patient egress. ¹⁸ e) Chairs are sturdy, stable, and cannot be easily tipped over. ^{19, 20, 21} f) Rolling furniture includes locking rollers or casters. ²² g) Chairs have no sharp or hard edges that can injure patients who fall or trip.
	3. Decrease medication errors²³ a) Lighting fixtures should provide 90-150 foot candle illumination and an adjustable 50-watt high intensity task lamp for furniture with built-in lighting that is used in a medication safety zone. ^{24, 25} b) Furniture is configurable to create a sense of privacy to minimize visual distractions and interruptions from sound and noise during medication transcription, preparation, dispensing, and administration activities. ^{26, 27}
	4. Improve communication and social support for patients and family members²⁸ a) Furniture can be configured into small flexible groupings that are easily adjusted to accommodate varying numbers of individuals in a variety of healthcare settings. ^{29, 30, 31} b) Wide-size and age variations are supported. ³² c) Acoustic and visual patient privacy are supported. ^{33, 34, 35, 36, 37, 38}
	5. Decrease patient, family member, and staff stress and fatigue³⁸ a) Materials suggest a link to nature. ^{39, 40, 41, 42, 43} b) Appearance is attractive and non-institutional. ^{44, 45, 46, 47} c) Furniture is tested for safe and comfortable use by all, including morbidly-obese individuals. ^{48, 49, 50}
	6. Improve staff effectiveness, efficiency, and communication a) Furniture is easily adjustable to individual worker's ergonomic needs. ⁵¹ b) Design enables care coordination and information sharing. ^{52, 53} c) Materials are sound absorbing. ^{54, 54, 56, 57, 58, 59}
	7. Improve environmental safety a) Materials do not contain volatile organic compounds (VOC), such as formaldehyde and benzene. ^{60, 61, 62}
	8. Represent the best investment a) Reflect and reinforce the organizational mission, strategic goals, and brand. b) Integrate new with existing furniture and objects for facility renovation projects. c) Pieces can be flexibly reconfigured and moved to support changing and emerging missions. d) Provide casters or glides to reduce floor damage. e) Check that there are no protuberances that may damage walls; check chair rail heights. f) Manufacturer provides results of safety and durability testing. g) Manufacturer describes the specific evidence that has been used to design the product. h) Manufacturer includes a warranty appropriate to use, such as furniture used all day, every day. i) Replacement parts are available. j) Repairs can be done in the healthcare facility. k) Manufacturer or local dealer can assist with furniture repair and refurbishing. l) Environmental services (housekeeping) staff can easily maintain furniture. m) A Group Purchasing Organization (GPO) can be used when purchasing furniture.

Source: Malone, E. B. & Dellinger, B. A. (2011). Furniture design features and healthcare outcomes. Concord, CA: The Center for Health Design

EBD Furniture

The Center for Health Design: Furniture Design Features and Healthcare Outcomes

EBD Furniture checklist was created using EBD research results, industry standards, and facility guideline institute requirements and recommendations

Focuses on things like reducing patient falls and injuries, improving communication through layouts, comfortable furniture to reduce stress and fatigue, etc.

EBD Lighting



LED Lighting

Lighting is one of the most important factors to consider when planning healthcare spaces

“Studies have found that lighting affects impressions of a room, perceptions of the people in the room, and the amount of self-disclosure (Designing healthcare spaces, n.d.)

Natural light has a positive effect on stress and feelings of anxiety

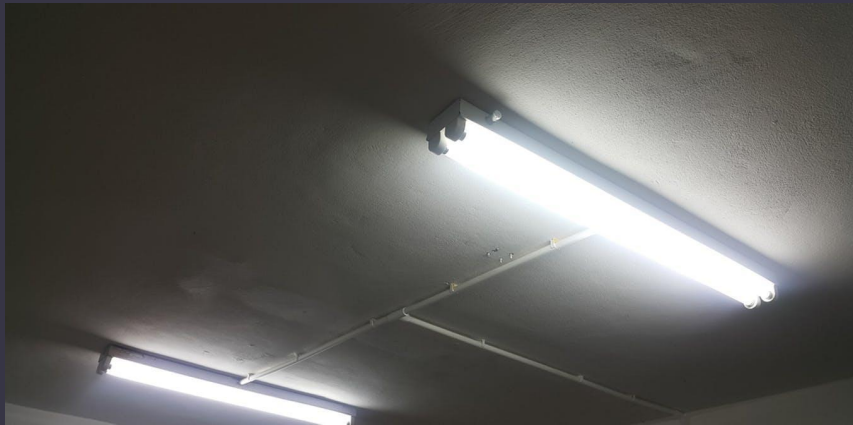
Dim and soft lighting is rated as more pleasant, relaxing, and calming than bright lighting

- Can also create a more favorable impression of the counselor

A combination if of soft lighting, full-spectrum light, and natural lighting has been shown to have a positive impression of the space

Using nonuniform lighting with diffused lighting closer to the client and brighter light farther away is suggested

Children with autism seem to have better behaviors in LED lighting versus fluorescent lighting (Kanakri)



Fluorescent Lighting

An Observational Study of Classroom Acoustical Design and Repetitive Behaviors in Children With Autism

This study examined the relationship between noisy acoustical environments and repetitive behaviors among children with autism.

Quiet VS. Noisy classrooms >35 Decibels = Quiet < 35 Decibels = Noisy

Behaviors Monitored

Repetitive movement, Repetitive speech, Covering the ears, Hitting response, Produce loud sounds, Blinking eyes, & Complaining

Results

Both schools tested saw correlation between decibel level and complain, repetitive speech, producing loud sound, repetitive motor movement, and covering ears, indicating as the decibel level increased, the occurrence of these behaviors increased.

Examples of Modifications

“Decibel level modification in the classroom may be key to reducing instances of aggressive behavior for some students.”

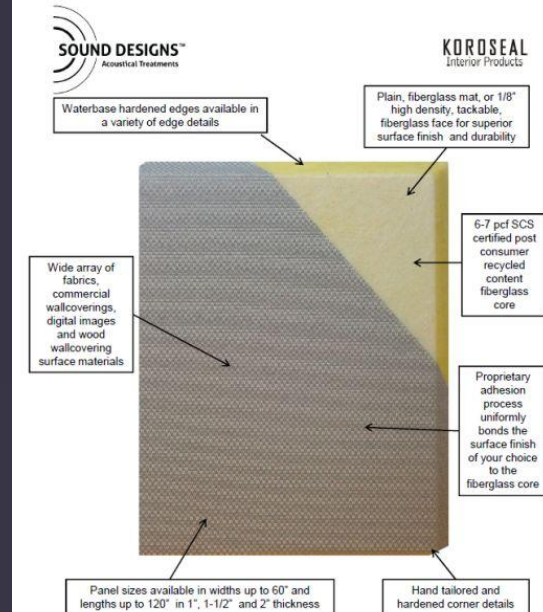
Use of a better HVAC system or alternative methods of air regulation; egg cartons fixed to the walls, carpet, and other sound-absorbing materials on the floors; a buffer between classrooms and exterior spaces; and attention to whether access to natural views enhances well-being or increases acoustic problems, & keeping the average sound level at approximately 50 dB or below

Recommendations for noise control in environments for children with autism include acoustical tiles, draperies, resilient flooring, padded seating, sound-absorbing ceiling materials, and distance from fluorescent lighting.

(Kanakri, 2016)

Decibel (dB) Range Chart

0dB	Threshold of human hearing
10dB	Breathing
20dB	Whisper, Light snoring
30dB	Quiet room
40dB	Moderate snoring
50dB	Conversation
60dB	Busy street, Alarm clock
70dB	Hairdryer, Noisy restaurant
80dB	Loud radio
90dB	Bass drum
100dB	Subway train
110dB	Industrial noise
120dB	Jet Plane take off
130dB	Gunshot, Metal concert





Clients Wants

Important elements implemented in floor plan design:

- Reception desk
- Donor wall
- Grad tree

Therapist entrance

- Storage space
- Separate door
- Barn style doors
- More natural material

Other places

- **Should not seem like a clinic**
- Don't go overboard or too much going on
- Natural materials
- No harsh colors
- More modern version of a barn

Parents want a space they can work in

Bathrooms need suitable changing tables

The clinic space needs to be separate from the parent space

Therapists have separate room for viewing

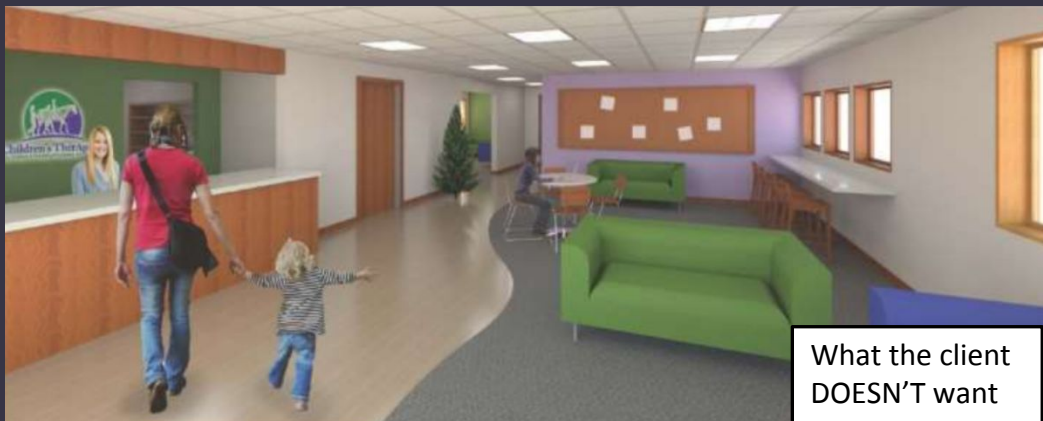
- They also need a private office for sensitive phone calls

Mud rooms near exits and entrances

Evaluation rooms should have flexible furniture and it will be used for multiple functions

Viewing room for parents

Volunteer entrance





This is a great example for what the client **DOESN'T** want.



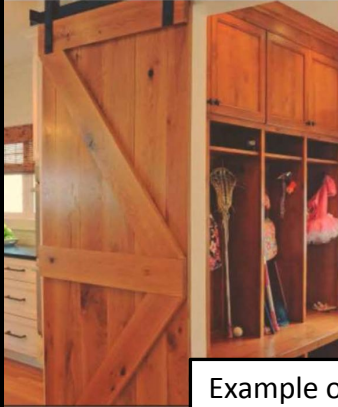
Example of what the client wants



This is a great example for what the client **DOESN'T** want.



This is a great example for what the client want.



Example of what the client wants

Staff Survey Summary

Therapy Rooms

As a work environment: lack of privacy, lack of storage, distracting, poor flow of traffic

Acoustics: loud, crowded, able to hear outside noise

Lighting: need diffused lighting, need options for dimming, too much fluorescent

Color: Colors can be distracting, more neutral, outdated

Flooring: dirt is tracked in, dirt causes slipping hazard

Hippotherapy

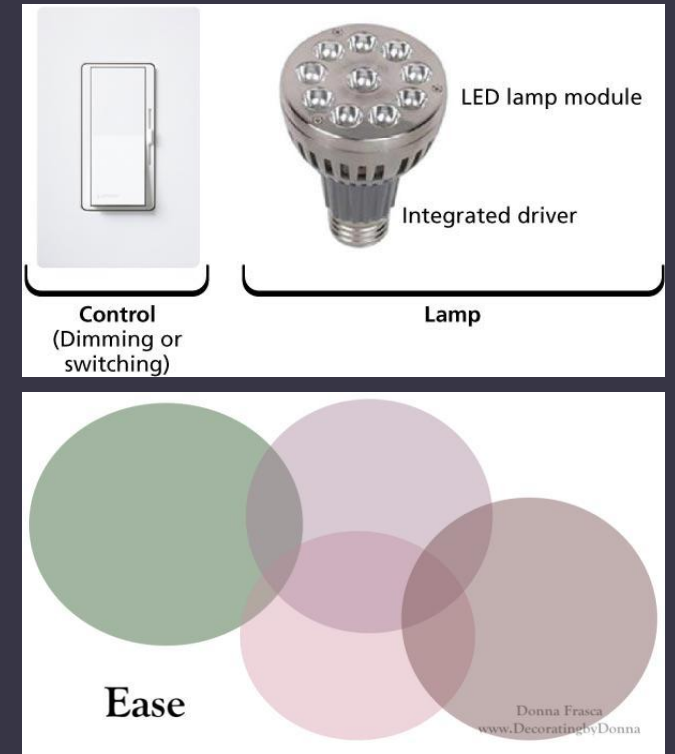
As a work environment: more natural views, sound/lighting harsh, safety concern, thermal/ventilation issues

Acoustics: echo, noises in arena can be heard in other spaces, rain, crying, etc. is carried/distraction

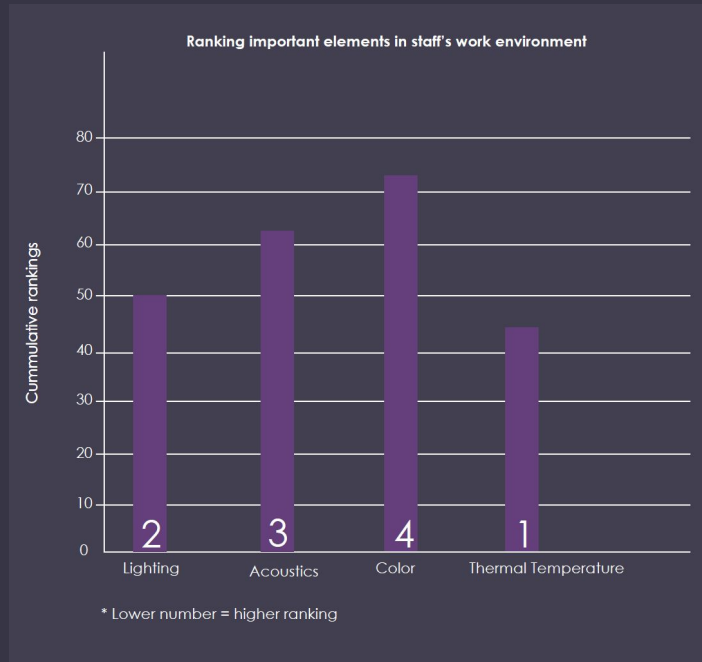
Lighting: dim/doesn't keep kids alert, more natural light, shades needed

Color: distracting, makes arena appear dark

Flooring: floors need to be watered/ brings in mud, mud room is needed

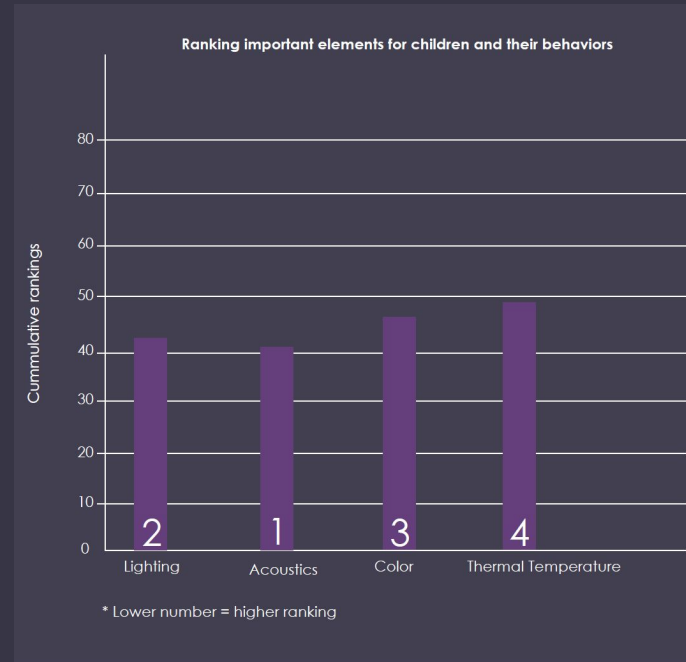


Staff Survey Summary



Importance to the staff in their work environment

- 1 Thermal Temperature
- 2 Lighting
- 3 Acoustics
- 4 Color



Importance for the children and their behaviors

- 1 Acoustics
- 2 Lighting
- 3 Color
- 4 Thermal Temperature

Parent Survey Summary

Therapy rooms:

- Generally satisfied
- Too small and dark
- Need to be updated

Arena

- Satisfied
- Common complaint: not being easily able to see child during therapy

Concerns ranked:

1. Acoustics
2. Light
3. Temperature
4. Color

Parent Survey Summary

Acoustics

- Most parents note that noises negatively affect their child's behavior
- Mostly loud, inconsistent, unexpected noises, echoes, or noises from other people
- Some kids just become withdrawn, others scream, cover their ears, cry
- Generally satisfied with noise during therapy
- Waiting area can get loud

Lighting

- Soft light is best
- Bright lights and glares can be distracting and bothersome
- Some kids prefer dark areas while some like it well lit
- Little physical reaction from lighting, but some will look away or cover eyes if needed
- Generally satisfied with current lighting, but some say it is too dark in some areas

Parent Survey Summary

Color

- Mostly neutral responses to the effect of color
- some positive responses for bright and colorful
- Current TherAplay colors are fine

Other comments

- Need more sound barriers to prevent sound from travelling
- Don't use fluorescent lights
- Provide dimmers for lighting
- Some parents want bright, playful colors, but others like neutral, less distracting colors
- Kids need more privacy during therapy to limit distractions
- Larger therapy spaces
- Bathroom closer to waiting area
- Waiting area needs better furniture, acoustics, and lighting
- Need better wheelchair accessibility

Floor Plan

Department Legend

- Administrative
- Primary Space
- Secondary Space
- Special Use
- Support
- Therapy Classrooms



Flooring Plan



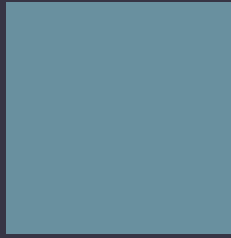
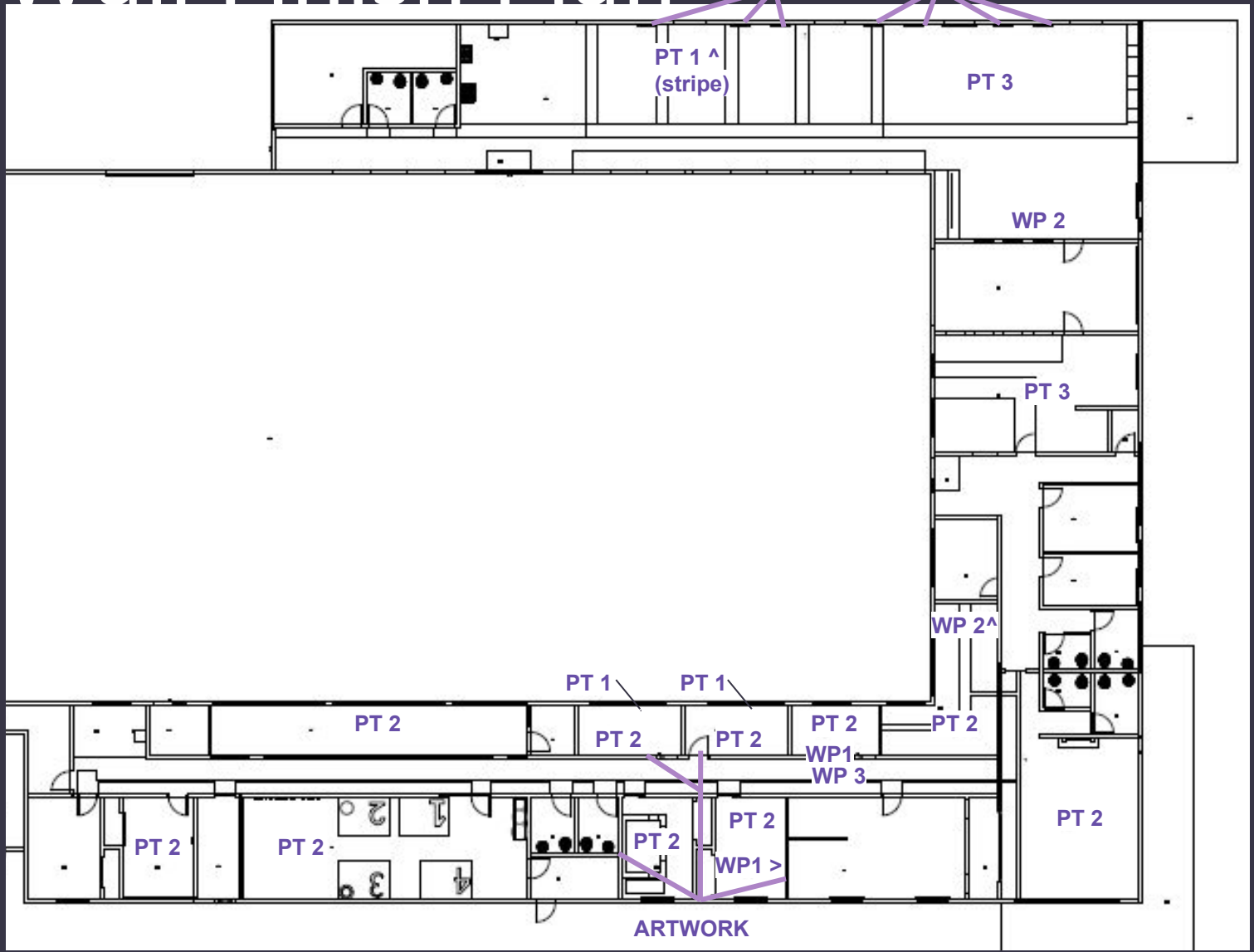
Flooring- Noraplan
Valua/Cashew

Flooring- Noraplan
Valua/Bluebell

Flooring- Noraplan
Valua/Pecan

Flooring-J&J
Accelerate/Increase

Wall Finish Plan



PT 1- Sherwin Williams Secret Cove



PT 2- Sherwin Williams Passive



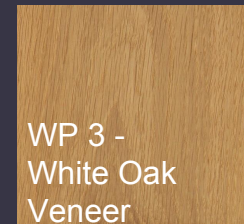
PT 3- Sherwin Williams Temperate Taupe



WP 1 -Modular Arts Interlocking Rock Wall Panels - Dunes

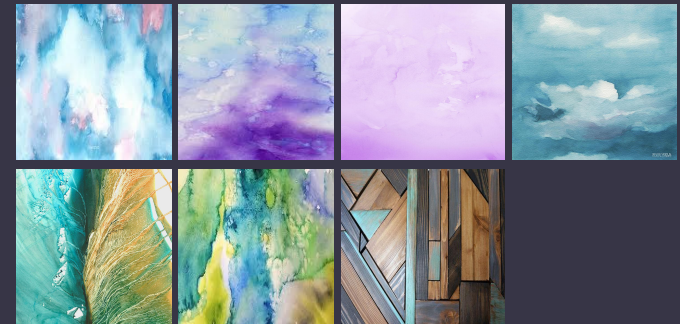


WP 2 - Reclaimed Wood

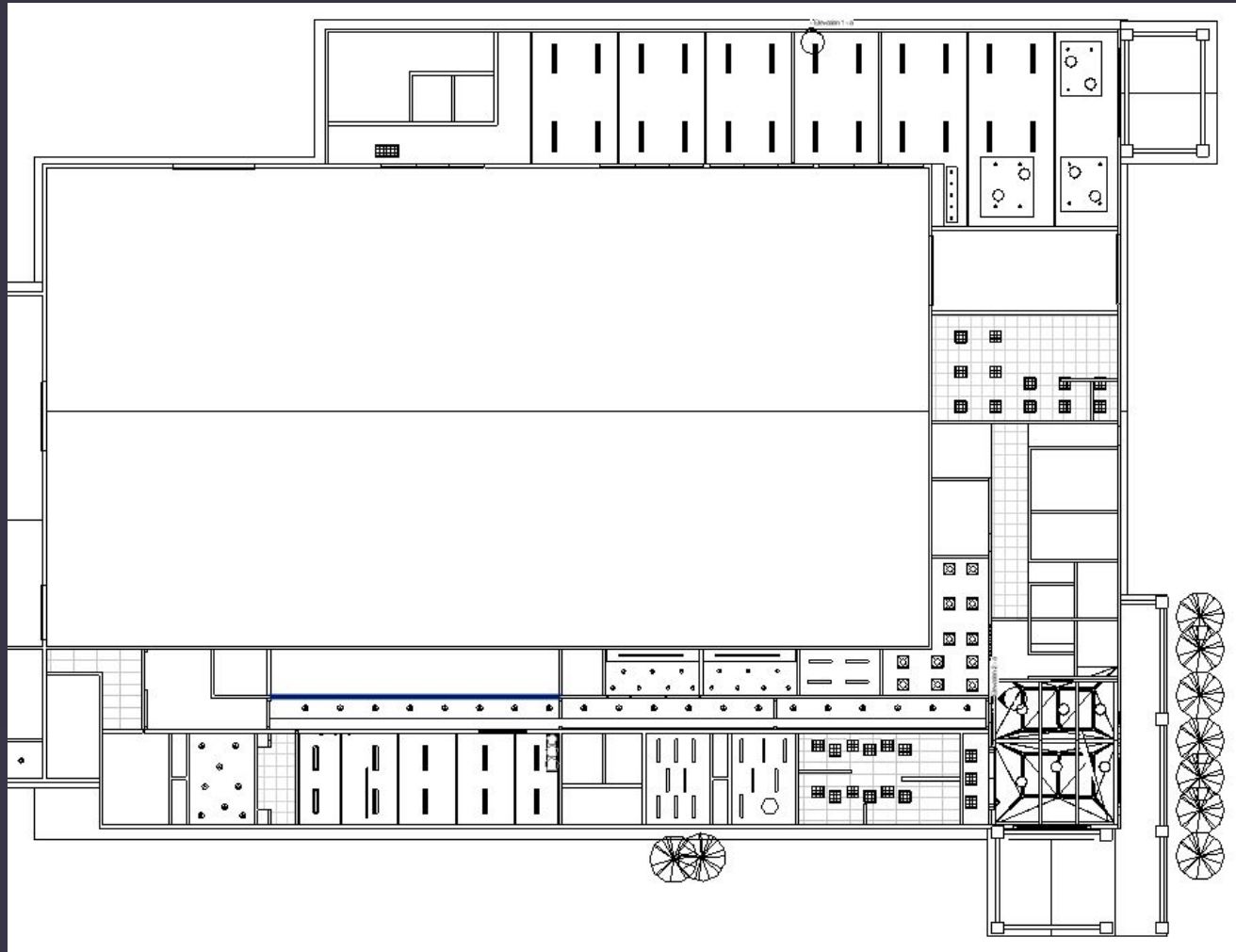


WP 3 - White Oak Veneer

ARTWORK



Ceiling Plan



Hermes



Delray Lighting



Lona S - Intra Lighting



Brayden Studio



Elesi Luce



Lumens

Wayfinding

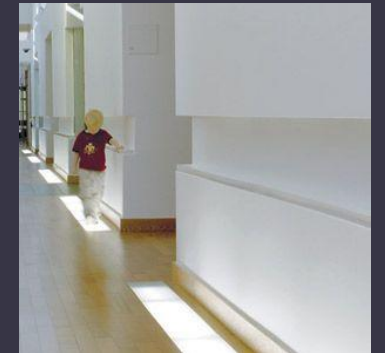


Corridor to Therapy Rooms

“Maximize visual structure: organize visual environment by means of concrete visual cues. This would comprise aspects as color coding, numbers, signs, labels, etc.” (Sanchez, P. A., Vazquez, F. S., & Serrano, L. A., 2011, September 06).



Inspiration



Treatment Room

Fabric- Designtex
Stratum/Blue Note

Flooring- Noraplan
Valua/Cashew

Counter-Formica
Fog Dust

Fabric- Designtex
Ulster/Sky

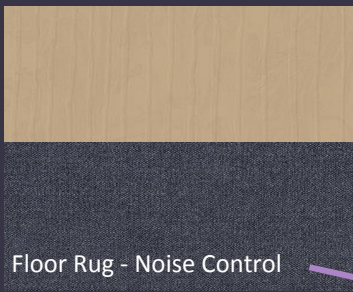
Fabric-Designtex
Everywhere texture
Soapstone

Paint- Sherwin Williams
Passive



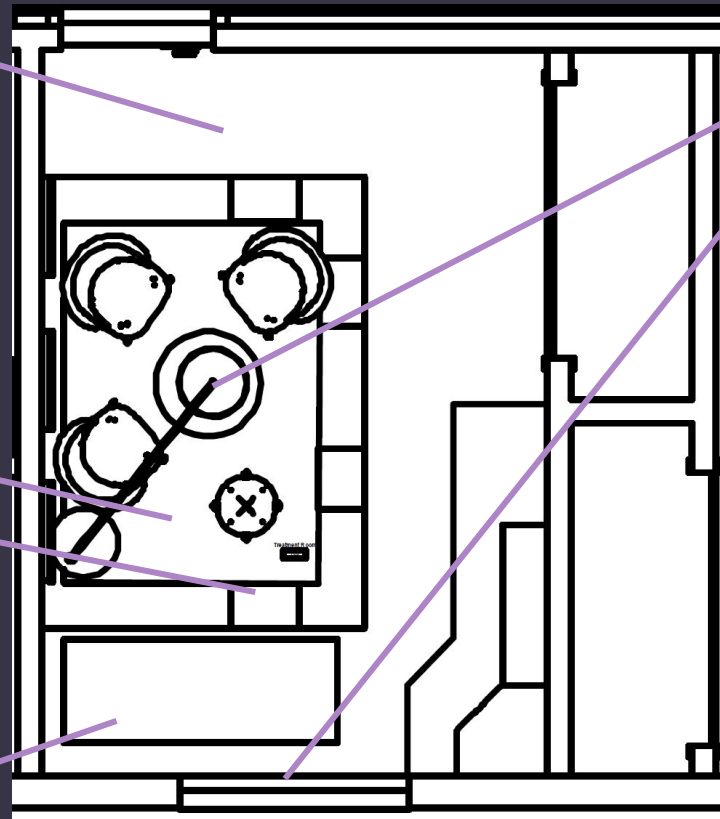
Treatment Room

Resilient flooring is recommended for noise control in environments for children with autism (Kanakri, 2016).



Floor Rug - Noise Control

“Maximize visual structure: organize visual environment by means of concrete **visual cues**. This would comprise aspects as color coding, numbers, signs, labels, etc.”, (Sanchez, P. A., Vazquez, F. S., & Serrano, L. A., 2011, September 06).



Treatment Table

Dim indirect artificial lighting and **avoid direct sunlight**/glare; lighting design for sharp contrasting dark corners; provide options to minimize outside view by providing curtains/blinds (Raghavan, J. 2018).



Delray Lighting - Dimming Linear LED

Uplighting



Brayden Studio- Reed arched floor lamp

Dimmer



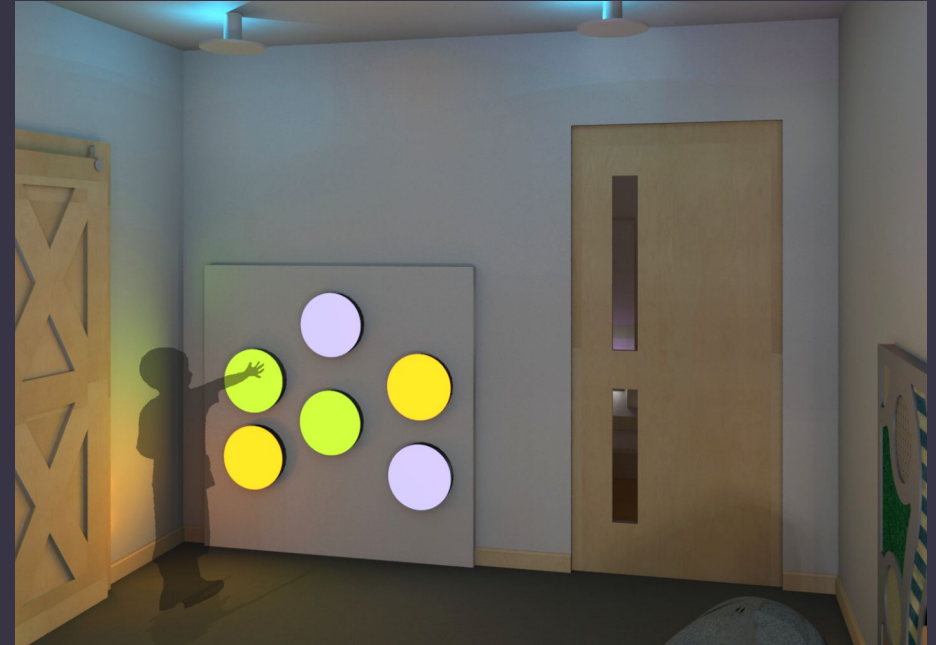
Draper- Motorized Flexshade®

Sensory Room

Flooring- J&J
Accelerate/Increase

Paint- Sherwin Williams
Passive

Fabric- Designtex
Everywhere texture
Soapstone



Soar
Bubble Tube



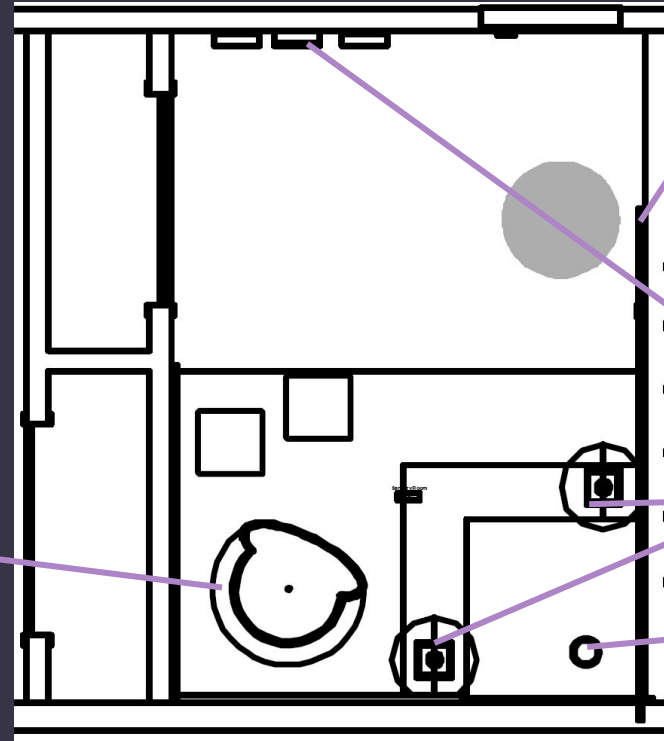
Mike Ayres Design
Touch Sound Light Panel

Sensory Room

Sensory Integration (SI) theory is based on the understanding that interferences in neurological processing and integration of sensory information disrupt the construction of purposeful behaviors. SI treatments target meaningful therapeutic activities characterized by enhanced sensation, especially **tactile, vestibular, and proprioceptive**, active participation, and adaptive interaction (Beth A., 2011)

Vestibular

Bubble Swing



Tactile

Tactile wall panel

Auditory and Visual

Touch Sound Light Panel

Light Cubes

Bubble Tube



Elesi Luce- LED dimmable uplighting

Gym

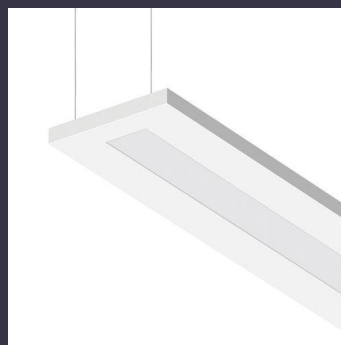
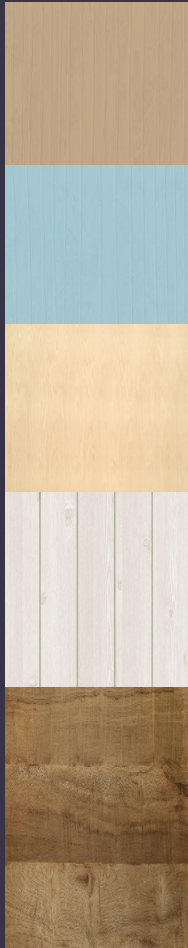
Flooring- Noraplan
Valua/Cashew

Flooring- Noraplan
Valua/Bluebell

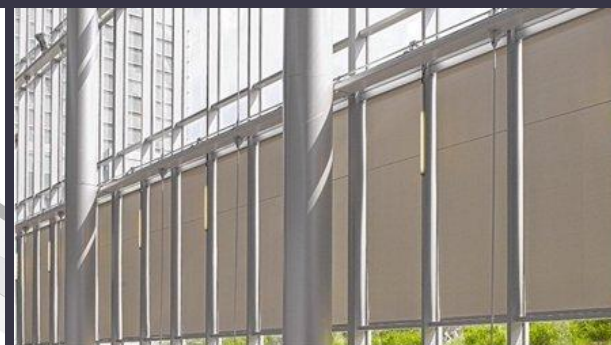
Rock Wall-Custom
White Birch

Ceiling-White Wood Panel

Ceiling-Exposed Beams
Oak



Lighting-Hermes LED/dimmable



Draper- Motorized Flexshade®



Bouncy Platform Swing

Gym

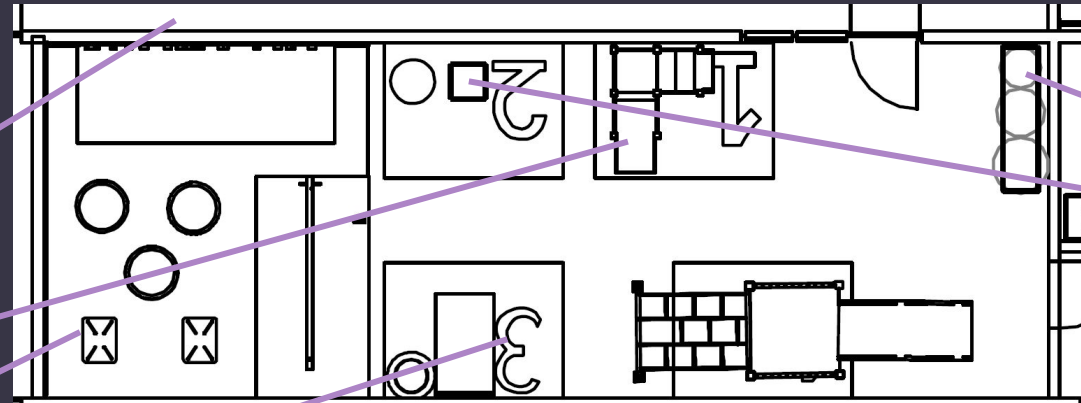
Sensory Integration (SI) theory is based on the understanding that interferences in neurological processing and integration of sensory information disrupt the construction of purposeful behaviors. SI treatments target meaningful therapeutic activities characterized by enhanced sensation, especially **tactile, vestibular, and proprioceptive**, active participation, and adaptive interaction (Beth A., 2011)

Vestibular

Rock climb wall

Stairs and slide

Rectangular platform swing

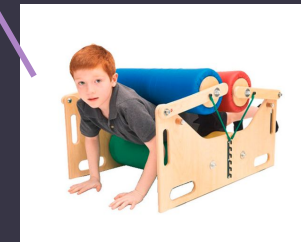


Proprioceptive

Weighted balls

Inclosed Cube

Squeeze Machine



“Maximize visual structure: organize visual environment by means of concrete **visual cues**. This would comprise aspects as color coding, numbers, signs, labels, etc.”, (Sanchez, P. A., Vazquez, F. S., & Serrano, L. A., 2011, September 06).

Evaluation Room

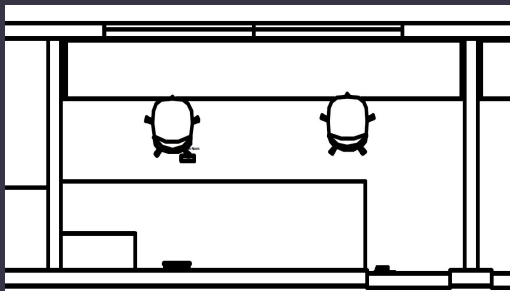
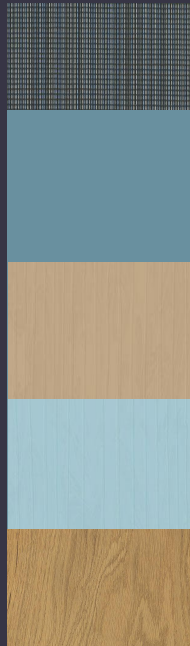
Fabric- Designtex
Stratum/Blue Note

Paint- Sherwin Williams
Secret Cove

Flooring- Noraplan
Valua/Cashew

Flooring- Noraplan
Valua/Bluebell

Worksurface- Custom
Oak



Steelcase
Universal Storage



Steelcase
Cobi

Waiting Area



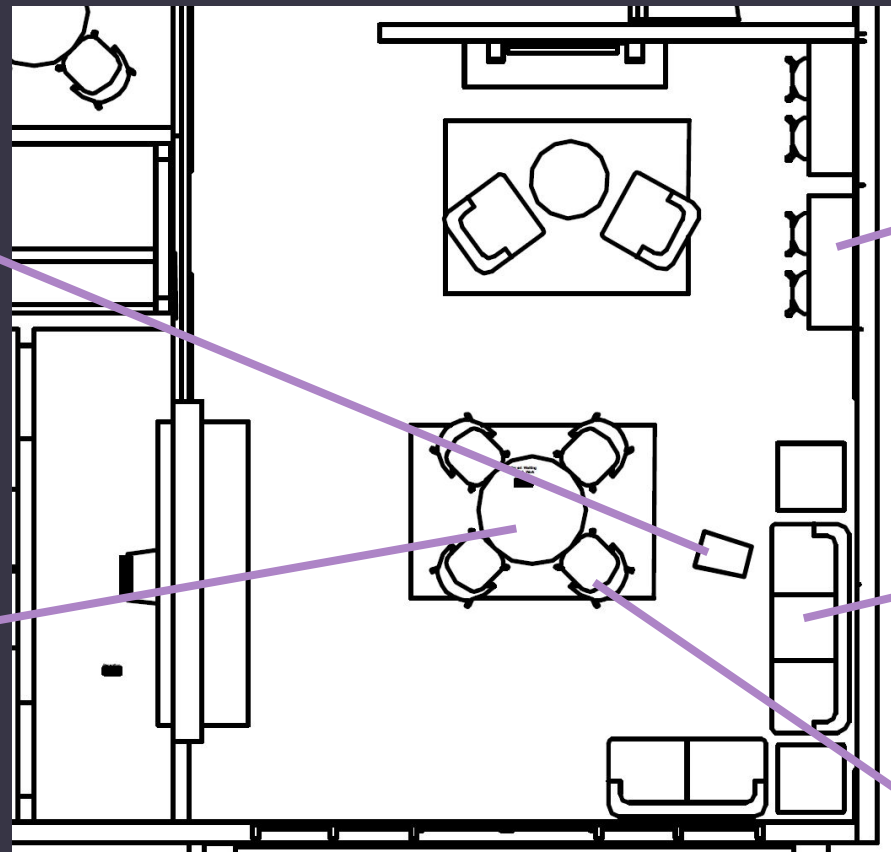
Chair Fabric -
Crossroads

Lounge Seating
Fabric - New
Brunswick

Work Surfaces -
Graphite on Ash

Flooring- Noraplan
Valua/Cashew

Waiting Area



Campfire Personal Table



Enea Table



Campfire Slim Table

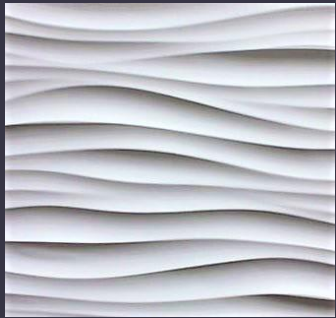


Thoughtful Lounge Seating

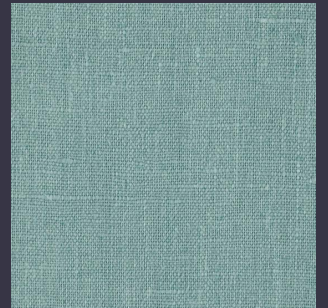


Capa Seating

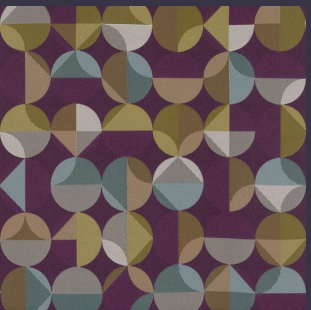
Occupational Therapy



Modular Arts
Interlocking Rock Wall
Panels - Dunes



Fabric- Designtex
Ulster/Sky



Chair Fabric -
Radius



Lounge Seating
Fabric - New
Brunswick



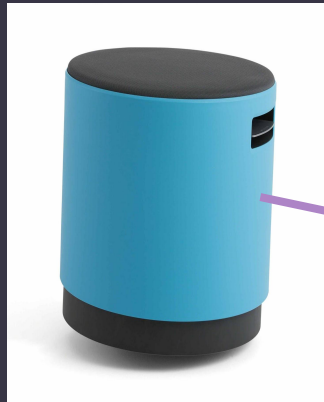
Work Surfaces -
Graphite on Ash



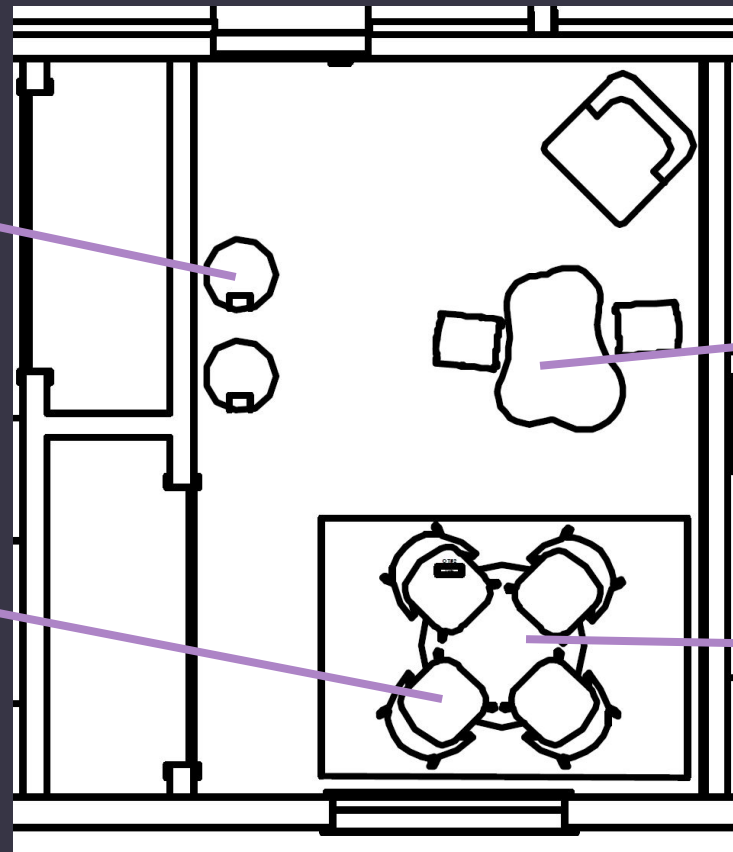
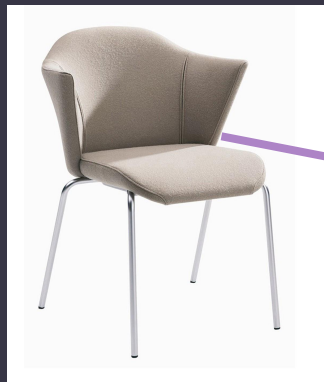
Flooring- Noraplan
Valua/Cashew

Occupational Therapy

Bouy Chair

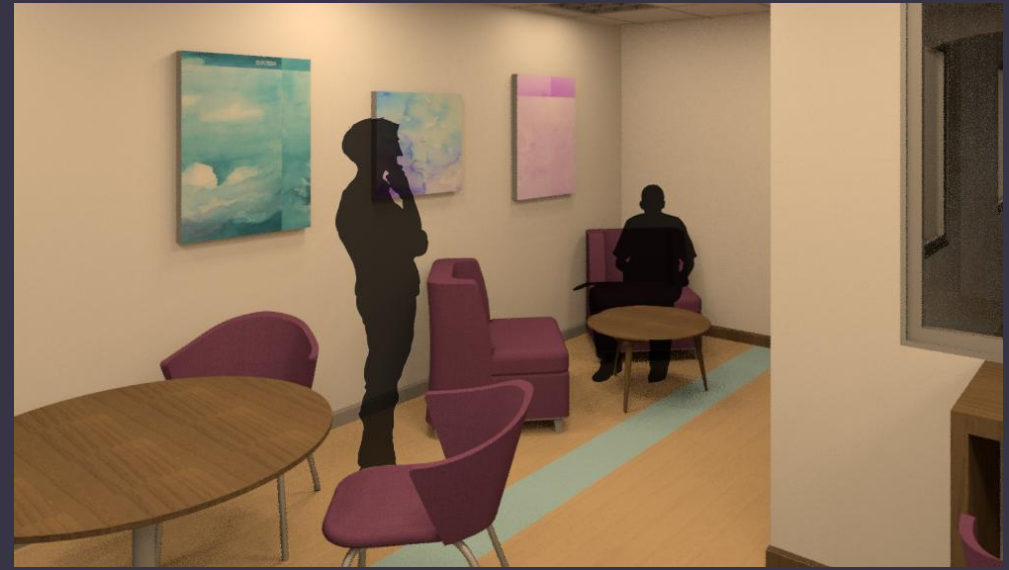


Capa Seating

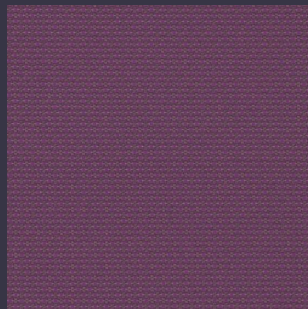


Enea Table

Viewing Room



Chair Fabric -
Radius



Lounge Seating
Fabric - New
Brunswick



Work Surfaces -
Graphite on Ash

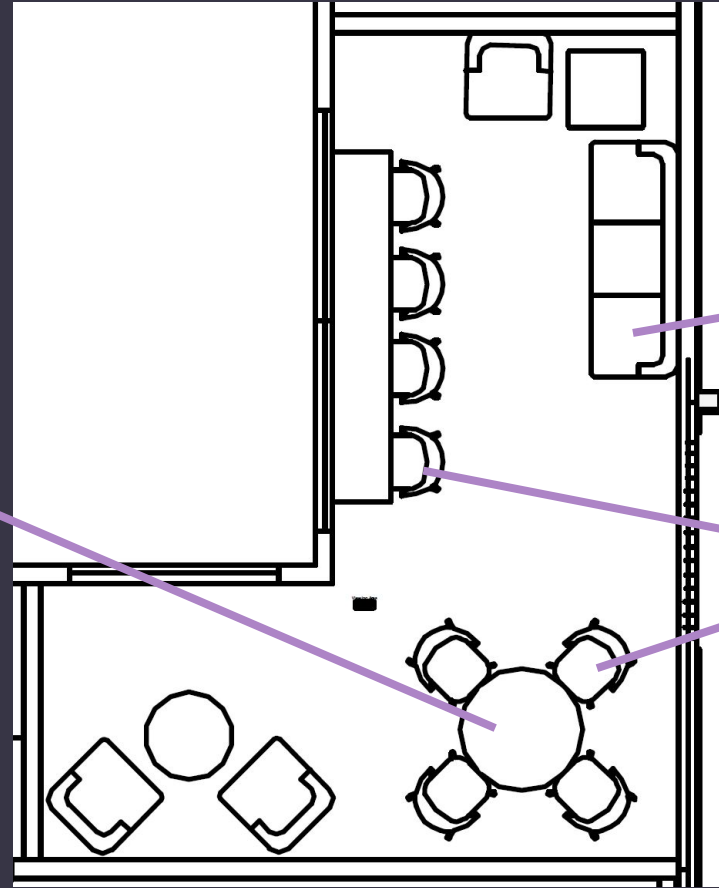


Flooring- Noraplan
Valua/Cashew

Viewing room



Enea Table



Thoughtful
Lounge
Seating



Capa Seating

Speech Room



Work Surfaces -
Graphite on Ash

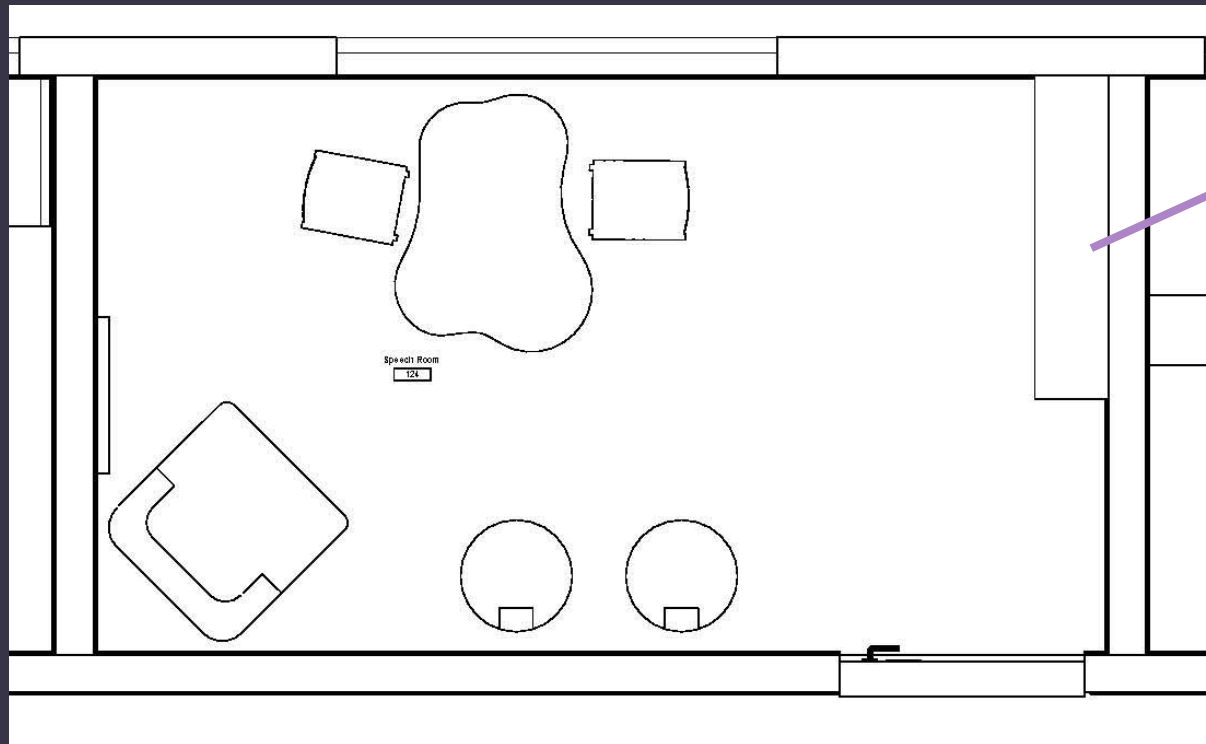
Flooring- Noraplan
Valua/Cashew

Paint- Sherwin
Williams Secret
Cove

Chair Fabric -
Crossroads

Speech Room

Knoll - Risom



Storage Unit

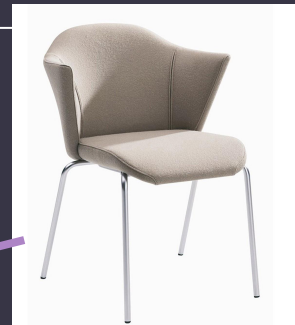


Bouy Chair

Fundraising Area



Enea Table



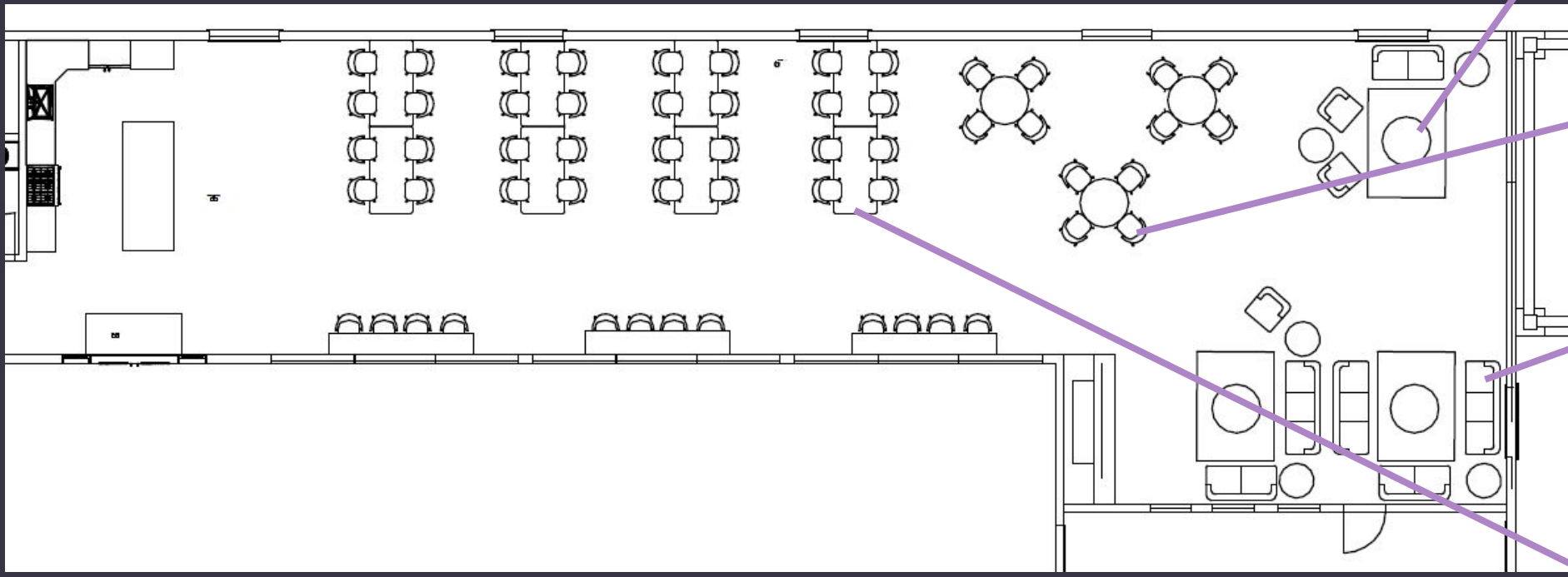
Capa Seating



Thoughtful Lounge Seating



Coalesse Dining Table



Fundraising Area



Flooring- Noraplan
Valua/Cashew

Paint - Sherwin
Williams Temperate
Taupe

Paint- Sherwin
Williams
Secret Cove

Chair Fabric -
Crossroads

Resources

The National Autistic Society - Environment and surroundings. (n.d.). Retrieved from <https://www.autism.org.uk/environment.aspx>

Cgpc, E. (2017, April 18). The official ENDURATEX™ blog. Retrieved from <http://enduratex.blogspot.com/2017/04/color-and-autism.html>

Sánchez, P. A., Vázquez, F. S., & Serrano, L. A. (2011, September 06). Autism and the Built Environment. Retrieved from <https://www.intechopen.com/books/autism-spectrum-disorders-from-genes-to-environment/autism-and-the-built-environment>

Designing healthcare spaces: The therapy room. (n.d.). Retrieved from <https://psychbc.com/clinical-blog/designing-healthcare-spaces-the-therapy-room>

Malone, E. and Dellinger, B. (2011). *Furniture Design Features and Healthcare Outcomes*. [PDF] The Center for Health Design. Available at: https://www.healthdesign.org/sites/default/files/FurnitureOutcomes_2011.pdf [Accessed 22 Oct. 2018].

Kanakri, S. M., Shepley, M., Tassinari, L. G., Varni, J. W., & Fawaz, H. M. (2016). An Observational Study of Classroom Acoustical Design and Repetitive Behaviors in Children With Autism. *Environment and Behavior*, 49(8), 847-873. doi:10.1177/0013916516669389

Menear, K. S., & Neumeier, W. H. (2015). Promoting Physical Activity for Students with Autism Spectrum Disorder: Barriers, Benefits, and Strategies for Success. *Journal of Physical Education, Recreation & Dance*, 86(3), 43-48. doi:10.1080/07303084.2014.998395

Raghavan, J. (2018). Design interventions for Sensory comfort of Autistic children (A. Gopal, Trans.). *Autism-Open Access*, 08(01). doi:10.4172/2165-7890.1000227

Beth A. Pfeiffer; Kristie Koenig; Moya Kinnealey; Megan Sheppard; Lorrie Henderson, *American Journal of Occupational Therapy*, January/February 2011, Vol. 65, 76-85. doi:10.5014/ajot.2011.09205

Young Talkers. (2018). What we do. Retrieved from <https://youngtalkers.com/what-we-do/>

Roush, KellyAnn. (2017). Sensory rooms and how they are used. *Special Kids Therapy & Nursing Center*. Retrieved from <http://www.specialkidstn.com/therapyandnursingblog/2017/3/13/sensory-rooms-and-how-they-are-used>

Tumble N' Dots (2018). Occupational Therapy Clinic. Retrieved from <https://tumblendots.com/clinic/occupational-therapy/>

Three Gaits, Inc. (2018). Hippotherapy. Retrieved from <http://www.3gaits.org/hippotherapy.htm>

Acosta, Laura. (2014). Occupational therapy students redesign children's therapy rooms. Retrieved from <http://news.utep.edu/occupational-therapy-students-redesign-childrens-therapy-rooms/>