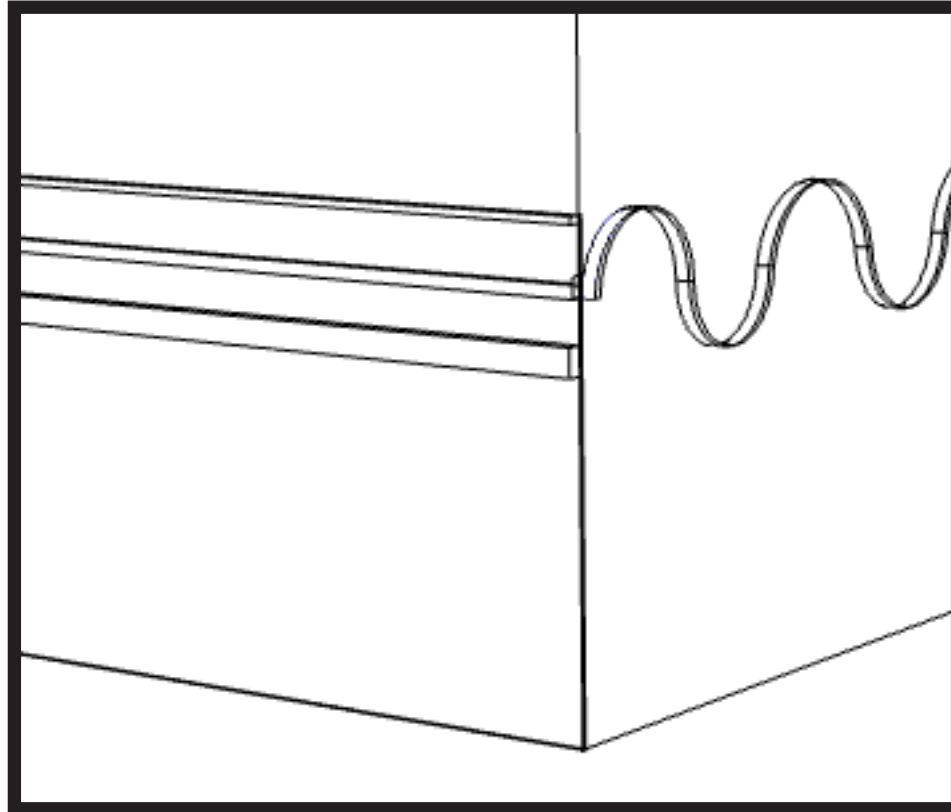


LANGUAGE OF ACCOMMODATION:

Reconsidering the early childhood center as a place
for removing debilitating barriers



VIRGINIA POLYTECHNIC INSTITUTE AND STATE

Ariana Smith

Thesis submitted to the faculty of the Virginia
Polytechnic
Institute and State University in partial fulfillment
of the requirements for the degree of

Master of Architecture
In
Architecture

Jim Jones
David Lever
Alicia Cohen

May 11th, 2022
Blacksburg, Virginia

Keywords: Early Childhood Center, Elementary
School, Universal Design, Disability Studies

Language of Accommodation:
Reconsidering the early childhood center as a place for
removing debilitating barriers

ABSTRACT

Language is a system of communication made up of syntax and semantics. The syntax of a language of accommodation is a series of design gestures made within the building, whereas the semantics are the meaningful moments created by these gestures. This thesis is an exploration of the language of accommodation in design. Accommodations in the building were approached through the social model of disability lens. The social model of disability is a framework in which to view the world developed by disabled activists. This lens is based on the idea that a physical impairment does not disable someone, but rather that the artificial barriers we, as a society, create are the factors that truly disable someone. If we as architects approach the world through the social model point of view, we can remove access barriers before they are ever built. We are in a unique position to shape the world around us so why not create an architecture that everyone can enjoy.

If we as architects designed with the social model as their point of view, there would be fewer debilitating barriers and no need to go back and make accommodations once needed. An inclusive building is one that includes disabled users, not one that goes back to adapt to users with different needs. A building that is designed for the group with the highest specialized needs, will work better for every user. This project aims to use language, a system of syntax and semantics, to discuss accommodation in architecture. Currently there is an abundance of inaccessible barriers in our public schools system. The early childhood center proposed in this thesis was designed to accommodate disabled users as the main users creating a building of inclusivity instead of accessibility.

Language of Accommodation:
Reconsidering the early childhood center as a place for
removing debilitating barriers

GENERAL AUDIENCE ABSTRACT

Language is a system of communication made up of syntax and semantics. The syntax of a language of accommodation is a series of design gestures made within the building, whereas the semantics are the meaningful moments created by these gestures. This thesis is an exploration of the language of accommodation in design. Accommodations in the building were approached through the social model of disability lens. The social model of disability is a framework in which to view the world developed by disabled activists. This lens is based on the idea that a physical impairment does not disable someone, but rather that the artificial barriers we, as a society, create are the factors that truly disable someone.

If architects designed with the social model as their point of view, there would be fewer debilitating barriers and no need to go back and make accommodations once needed. An inclusive building is one that includes disabled users, not one that goes back to adapt to users with different needs. A building that is designed for the group with the highest specialized needs, will work better for every user. This project aims to use language, a system of syntax and semantics, to discuss accommodation in architecture. The early childhood center proposed in this thesis was designed to accommodate disabled users as the main users creating a building of inclusivity instead of accessibility.

Universal Learning Environment:
Reconsidering the early childhood center as a place for removing disabling barriers

ACKNOWLEDGMENTS

I would like to thank the amazing staff of Greensboro Elementary School for their continued support and guidance throughout this project.

Additionally, I would like to thank my committee members Jim Jones, Alicia Cohen, and David Lever. I could not have done this without your passion, knowledge, and encouragement.

I would like to dedicate this project to my family and Prince. I could not have made it this far without you and for that, I am forever grateful.

TABLE OF CONTENTS

PART 1	BACKGROUND	
	Introduction	12-13
	ADA Compliance Data	14-15
	Introduction to the ADA	16
	ADA Standards in Schools	17
	Accessibility is not Inclusion	18-19
	Social Model of Disability	20-21
	Gesture Introductions	22-23

PART 2	SCALES OF SOCIAL INTERACTION	
	Gesture Introduction	24-25
	Site Selection	26-29
	Site Visit	30-31
	Greensboro Program	32-33
	Building Form	34-35
	Building Connection	36-41
	Community Scale	42-43
	Bathroom Scale	44-45
	Scale of Social Interaction	46-47
	Space with Ceilings	48-49
	Volumetric Spaces	50-51

PART 3	THE ARCHITECTURAL IMPACT OF A STRUCTURAL WALL	
	Gesture Introduction	52-53
	Rhythmic Structure	54-55
	Artwork Pinup Space	56-57
	Punched Out Space	58-59

	Storage Space	60-61
	Adaptability of Space	62-63

PART 5	ARCHITECTURE THAT RESPONDS TO THE SENSORY	
	Gesture Introduction	64-65
	Directional Daylighting	66-71
	Glare and Materials	72-75
	Way Finding	76-77

PART 6	THE RELATIONSHIP BETWEEN INSIDE AND OUTSIDE	
	Gesture Introduction	78-79
	Site Analysis	80
	Active Loud Spaces vs Passive Quiet Spaces	81
	Inside Outside Relationship	82-85
	Classroom Floor Plans	86
	Elevation Showing Interior Courtyard	87
	Lighting Simulations	88-89
	Classroom Floor Plans	90
	Elevation Windows	91
	Classroom Light Conditions	92-93

PART 7	ARCHITECTURAL DRAWINGS	
	Additional Drawings Introduction	94-95
	Additional Architectural Drawings	96- 103

“Accessibility allows us to tap into everyone’s potential”

- **Debra Ruh**

“Design has become a universal medium for expressing ideas, raising fundamental questions, and addressing social challenges”

- **Jens Martin Skibsted**

BACKGROUND

INTRODUCTION

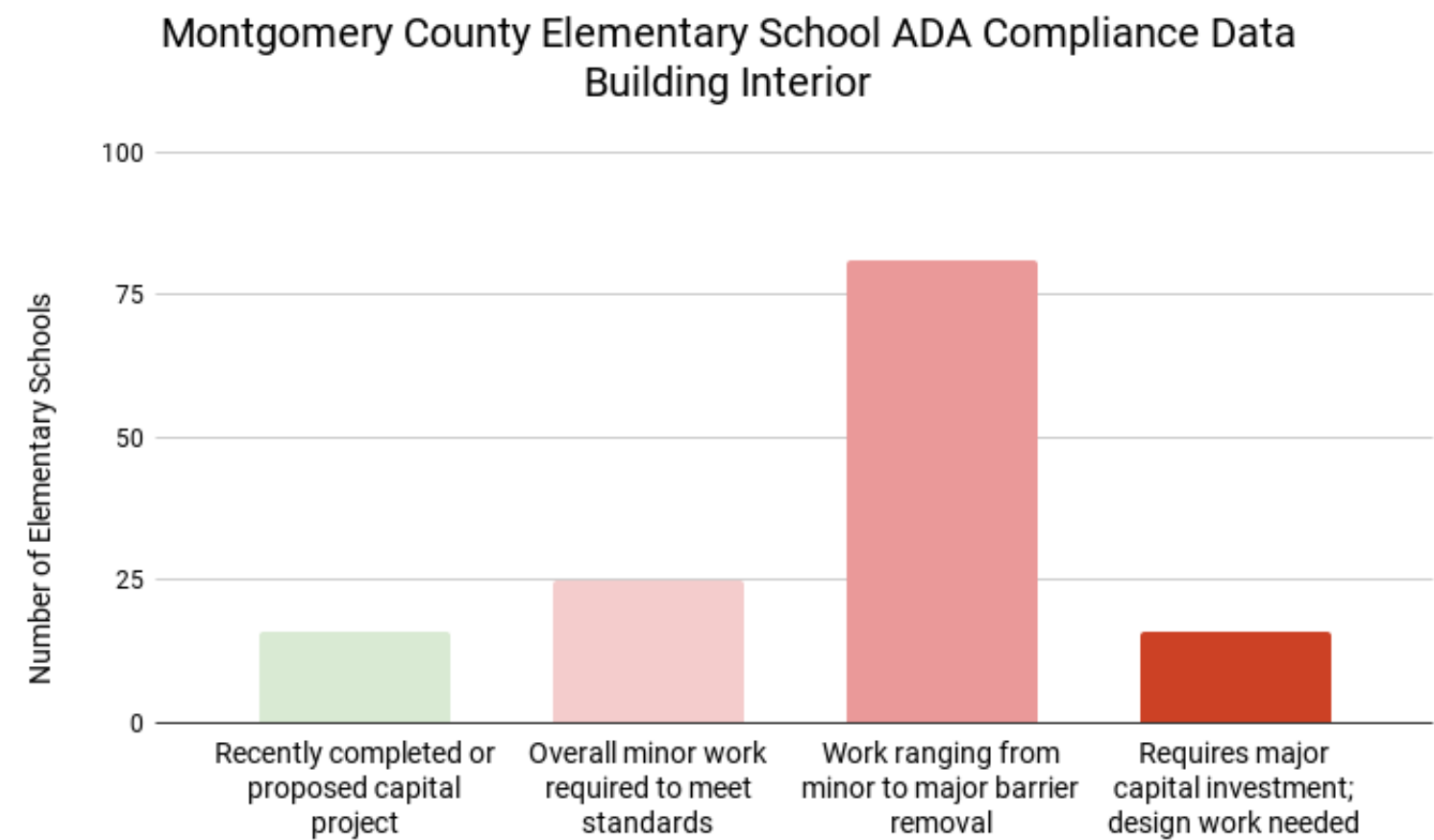
A language of accommodation is one of flexibility and adaptability. There are a series of moments within a building when these special considerations can be observed. In this thesis I will present a series of architectural considerations that each create individual moments within the building. A structural wall that provides flexibility to teachers through storage and a space to highlight the children's achievements. A walk along a long corridor that is one of sensory stimulation. The little and larger moments that make for gathering spaces of differing scales throughout the building, those for class, instruction, and comfort. The little moments created by introducing the outside to the children within the classroom. These are the memorable architecture movements that make up the design of the building. By keeping the social model of disability in the forefront of the mind as these architectural moves are taking place, a dialogue of the architecture of accommodation emerges.

As a graduate student employed in Virginia Tech's Office of Inclusion and Diversity working to advocate for the disability community on campus, I think I have a unique perspective of the way schools address access needs. This project allowed me the opportunity to create a series of moments that start a dialogue about accommodation in design.

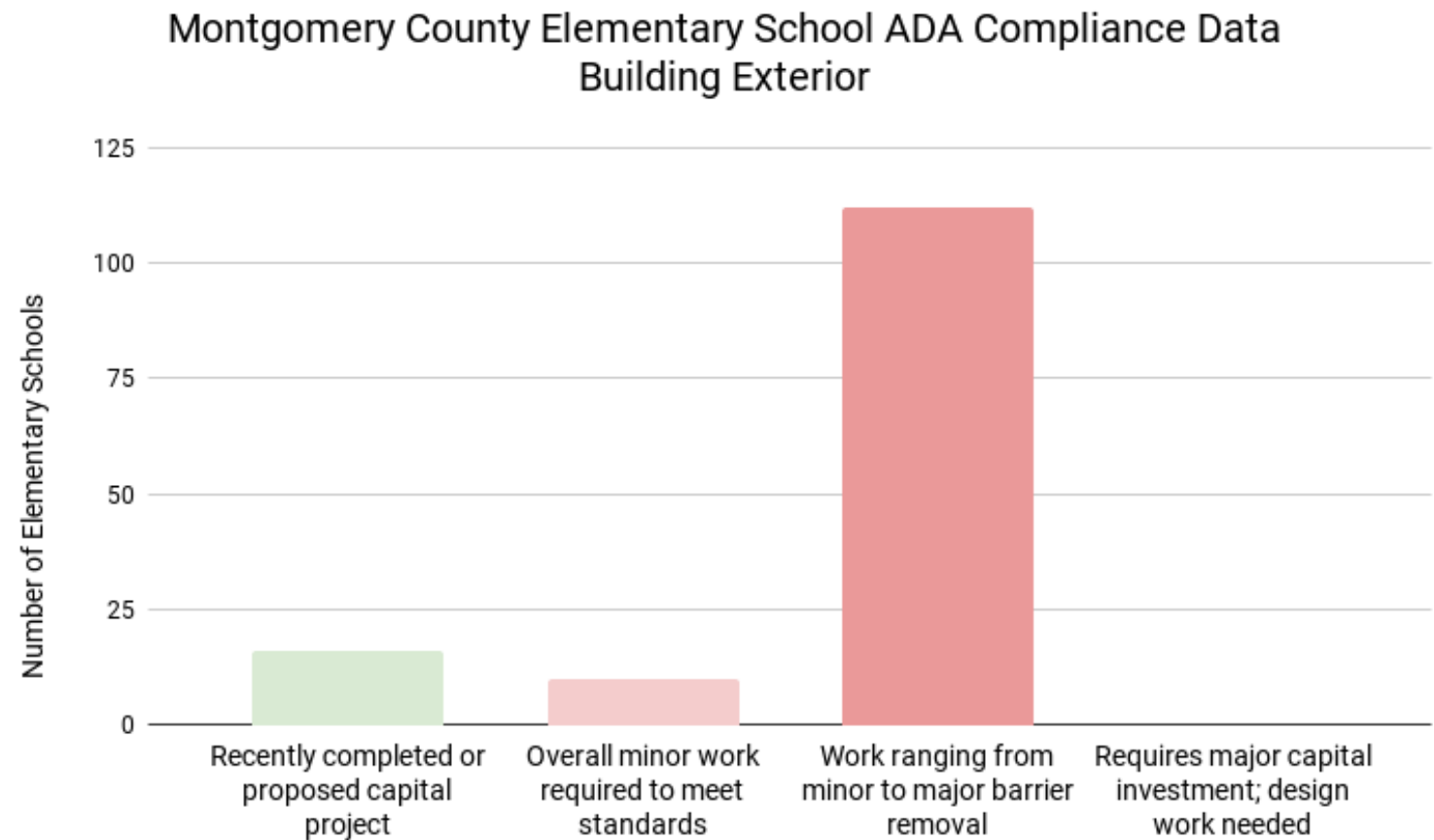


ADA COMPLIANCE DATA FOR MONTGOMERY COUNTY ELEMENTARY SCHOOLS

A neighboring school district to the selected site, Montgomery County, went through a compliance audit in 2019. The data shows that there are such a high number of schools across the county that are not in compliance with the ADA standards.

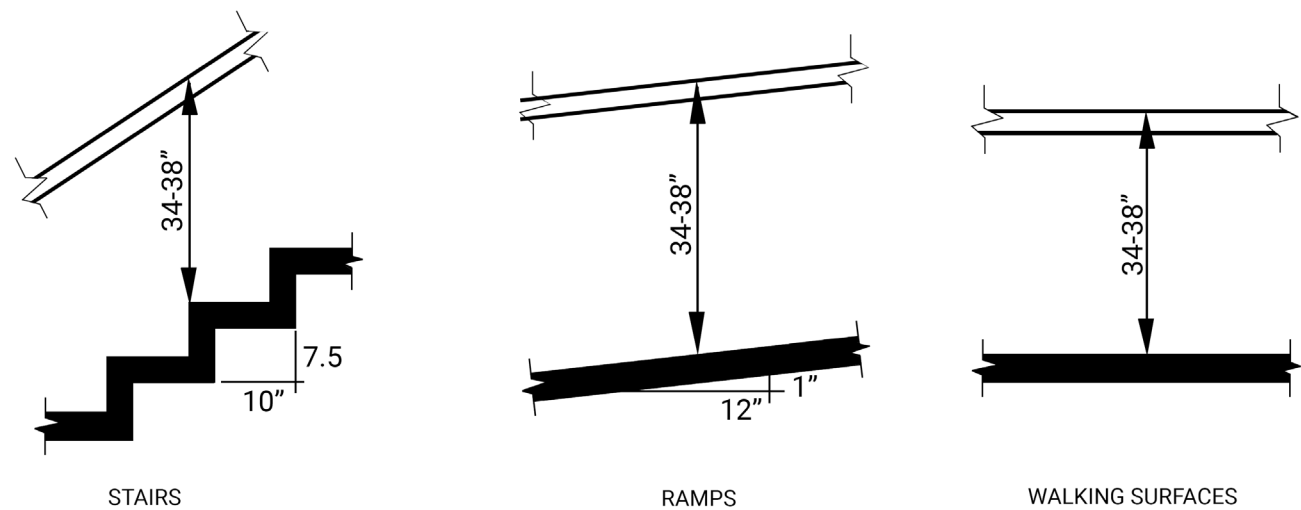


This chart highlights the problem of designing schools that are not inherently accessible as it is too expensive to bring all building violations up to code in a timely manner. The audit states, “[the county] will use the data to outline how barriers will be addressed and how accommodations can be made. **Barrier removal must be accomplished in phases, as funding becomes available** and to achieve a safe and stable learning environment” (montgomeryschoolsmd.org/departments/facilities/ada/).



INTRODUCTION TO THE ADA

The Americans with Disabilities Act, often referred to as the ADA, was signed into law in the early 1990s. This law is one of the country’s most comprehensive pieces of civil legislation that prohibits discrimination and guarantees equal opportunities no matter of ability level. The ADA is responsible for creating and upholding the ADA Standards for Accessible Design. The standards are an enforceable set of standards under Title II and III for new construction, alterations, program accessibility, and barrier removal. In the United States complying with the ADA standards is the bare minimum and doing anything less is illegal. Architects should never strive for the minimum standards when designing. This thesis aims to create architecture that goes above and beyond the bare minimum standards and strives to make accessibility a core principle of the design.



ADA STANDARDS IN SCHOOLS

Per Department of Justice Guidelines, people with disabilities should be able to arrive on the site, approach the building or facility and its amenities, and enter as freely as everyone else.

Interior and exterior common areas in public schools that are defined as areas of public accommodation including the elements specified below:

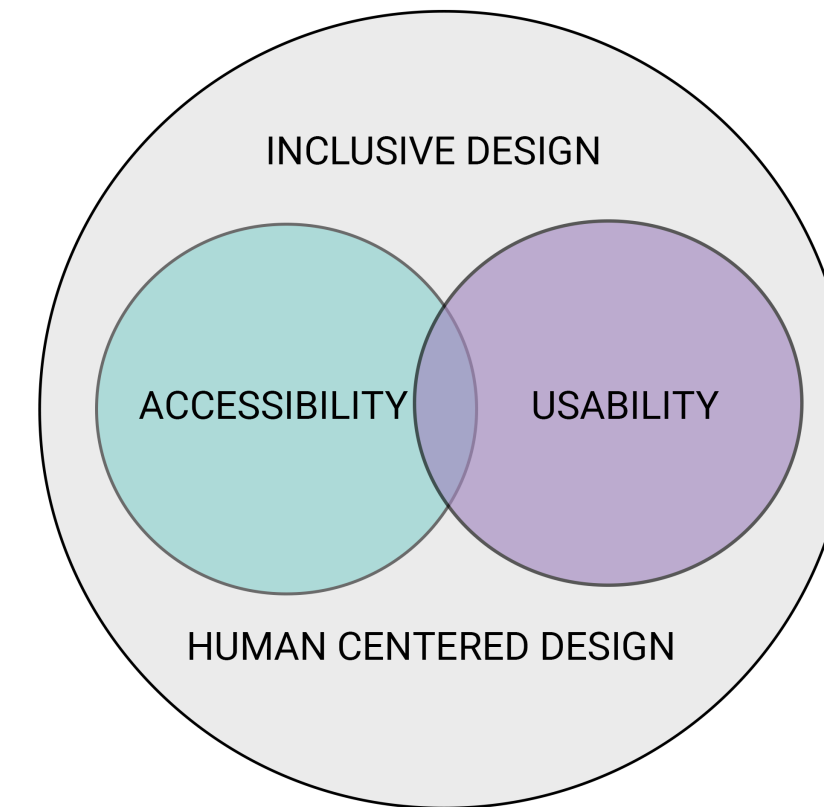
- Passenger loading zones
- Parking: van and standard car accessible stalls, signage, and markings
- Exterior accessible routes, including travel on vehicular ways, sidewalks and paths
- Interior accessible routes
- Ground and floor surfaces
- Ramps: size, distance, slope, rails and finishes
- Exterior and interior stairs which are part of the means of egress
- Elevators and platform lifts (wheelchair lifts)
- Entrances and exits to common areas

“I did not and do not have a disability, but experienced disability in my environments that could not accommodate and embrace my differences. What disabled me was the way my differences were treated in an environment that was hostile to some bodies and brains and not to others. Ability, disability and abnormality are not facts in the world but social constructs we create as a society.”

- **Johnathan Mooney**

ACCESSIBILITY IS NOT INCLUSION

Accessibility is designing a space that is usable by everyone. Accessible design addresses particular needs or problems of the occupant. Inclusive design goes one step further. It is the mindset that centers around understanding user diversity. When understanding user diversity, inclusive design recognizes that there is a wide array of people with different needs. Rather than fixing individual instances of compliance, inclusive design includes a toolbox of solutions that can fit the given context.



SOCIAL MODEL OF DISABILITY

The social model of disability is a way of viewing the world that was created by disability activists. The model says it is the artificial barriers created by society that disable a person, not their medical diagnosis. There is a wheelchair bound person who is unable to enter an old building because they cannot walk up the stairs, this viewpoint recognizes that the lack of ramp is the reason the wheelchair bound person is unable to enter the building. The fault is laid on the building and lack of ramp instead of the person's inability to walk. Adopting the social model viewpoint helps prevent bias and incorrect assumptions. Architects should adopt this viewpoint when designing to prevent creating unnecessary access barriers.

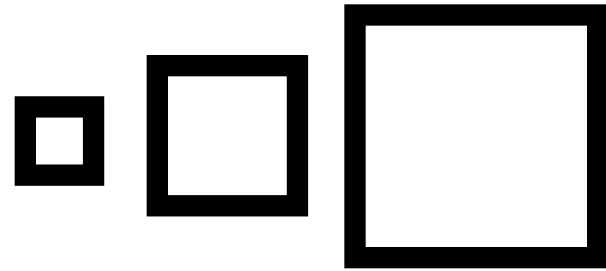


LANGUAGE OF ACCOMMODATION

FOUR ARCHITECTURAL GESTURES THAT RESPOND TO THE LANGUAGE OF ACCOMMODATION

This thesis will present 4 architectural gestures that are an exploration about accommodation in design.

SCALES OF SOCIAL INTERACTION



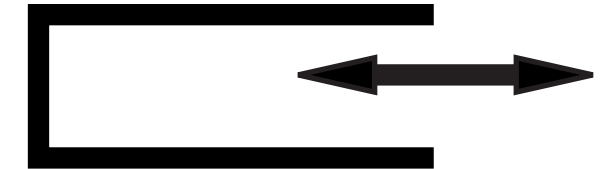
THE ARCHITECTURAL IMPACT OF A STRUCTURAL WALL



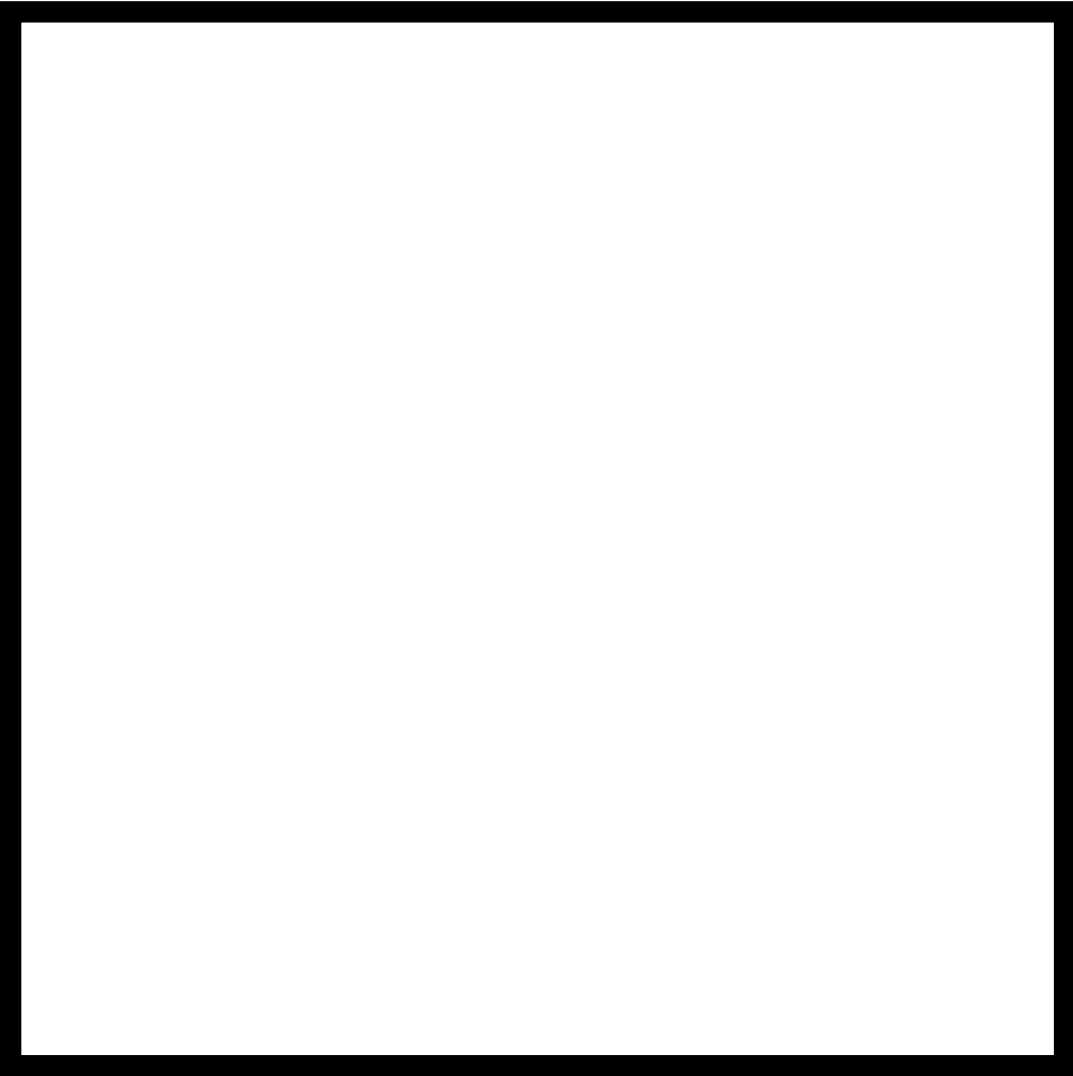
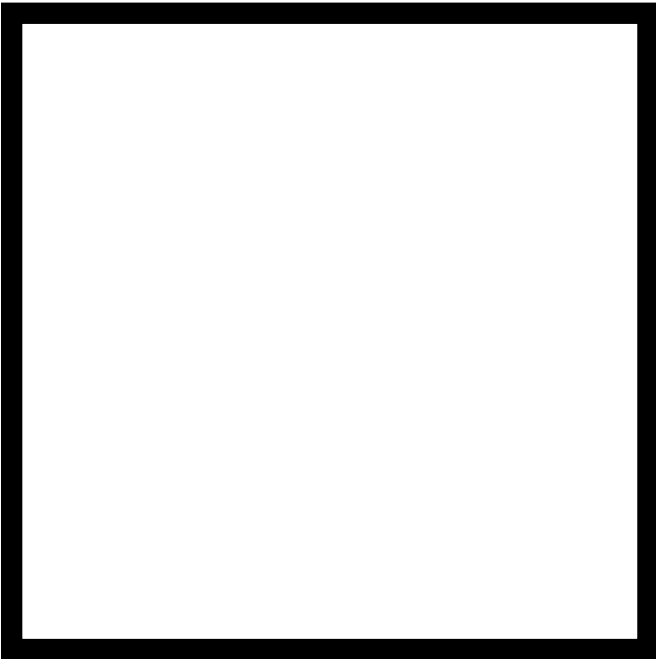
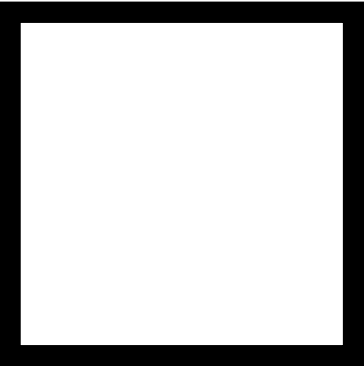
ARCHITECTURE THAT RESPONDS TO THE SENSORY



THE RELATIONSHIP BETWEEN INSIDE AND OUTSIDE

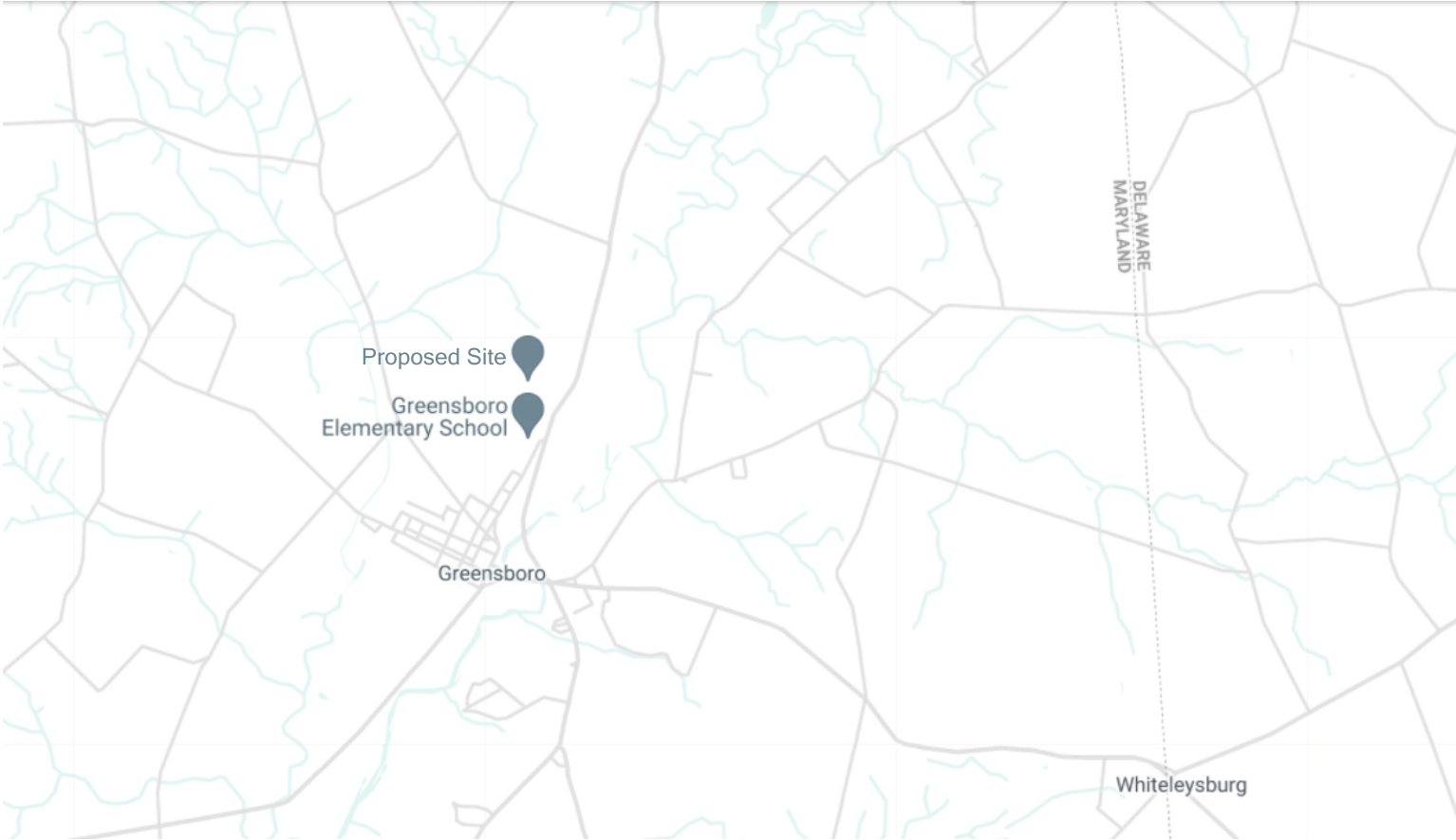


SCALES OF SOCIAL INTERACTION



SITE SELECTION

I have selected a site in Caroline County, a school district located in a rural county located in the state of Maryland on its Eastern Shore. This site currently houses Greensboro Elementary School, a school that serves 800 students K-6. As the farming industry in the area grows, Greensboro Elementary School could be quickly overwhelmed. This project proposes a second school, serving PreK – 1st grade open up adjacent to the original elementary school to help alleviate the overcrowding and better serve the student population.





Greensboro Elementary School on the selected site.



Greensboro Elementary School on the selected site adjacent to where the Early Childhood Center would be built.

SITE VISIT

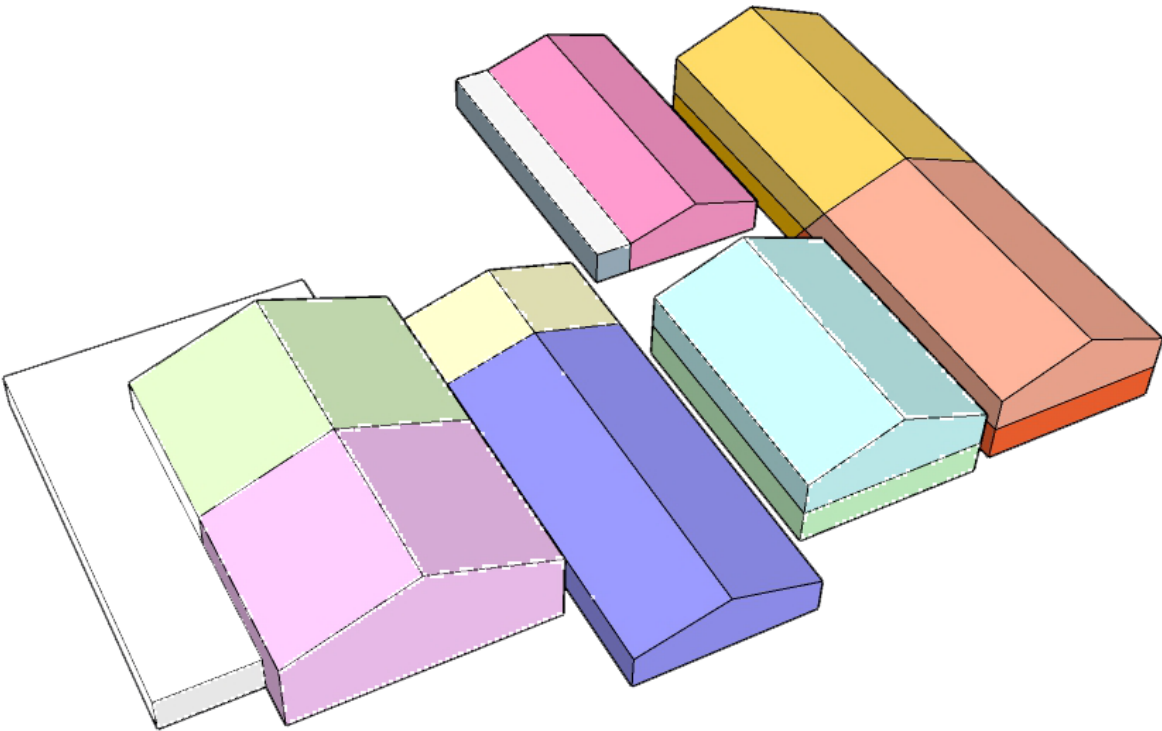


GREENSBORO PROGRAM



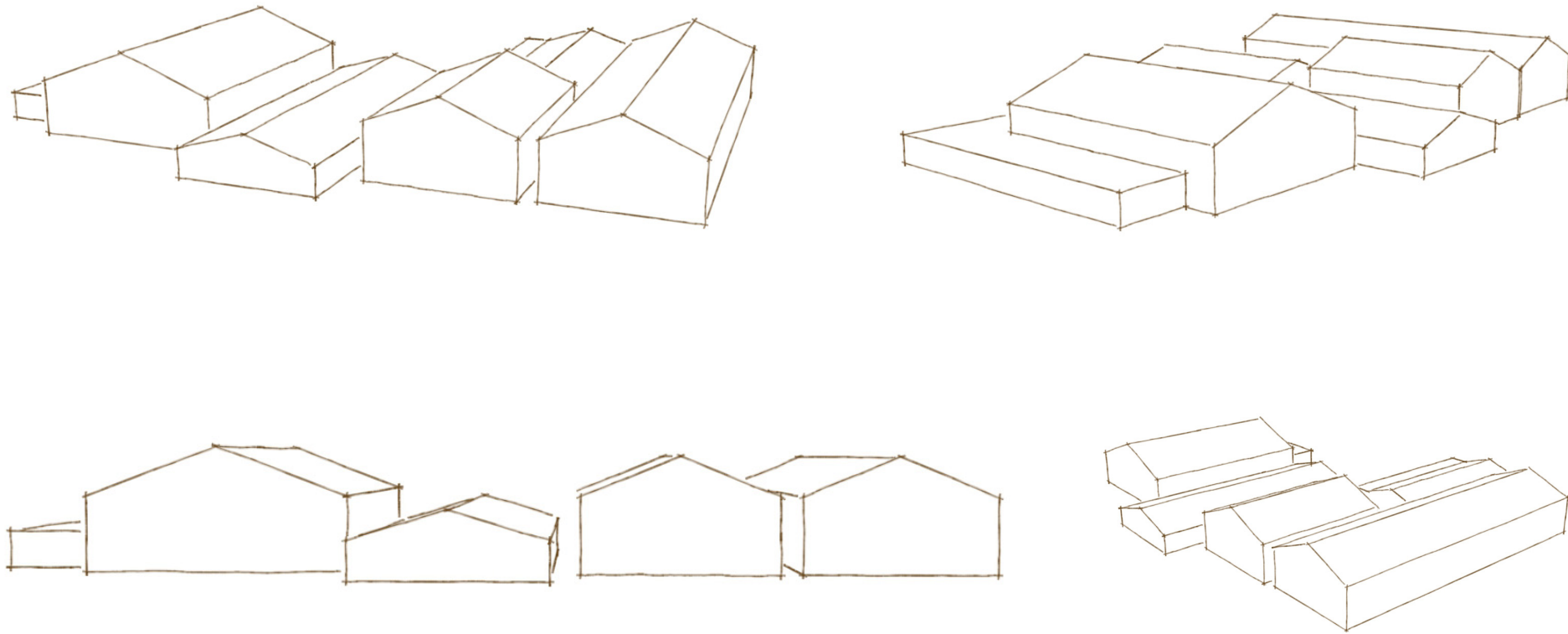
As it currently stands, Greensboro’s layout requires teachers that need an elevator to go to the programs upstairs, to find additional staff, separate students, and circumnavigate the school.

- CAFETERIA
- GYM
- OFFICE/ NURSE
- MEDIA CENTER
- PRE-K
- KINDERGARTEN
- FIRST GRADE
- SECOND GRADE
- THIRD GRADE
- FOURTH GRADE
- FIFTH GRADE

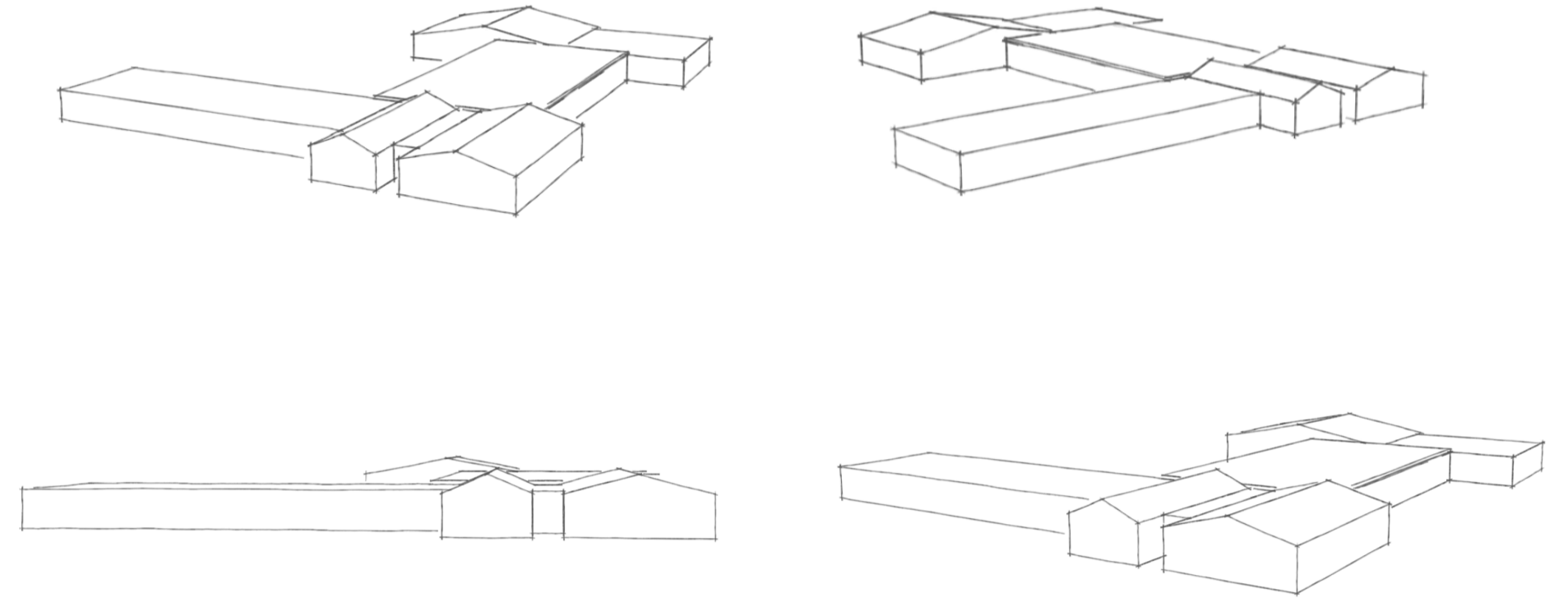


BUILDING FORM

GREENSBORO

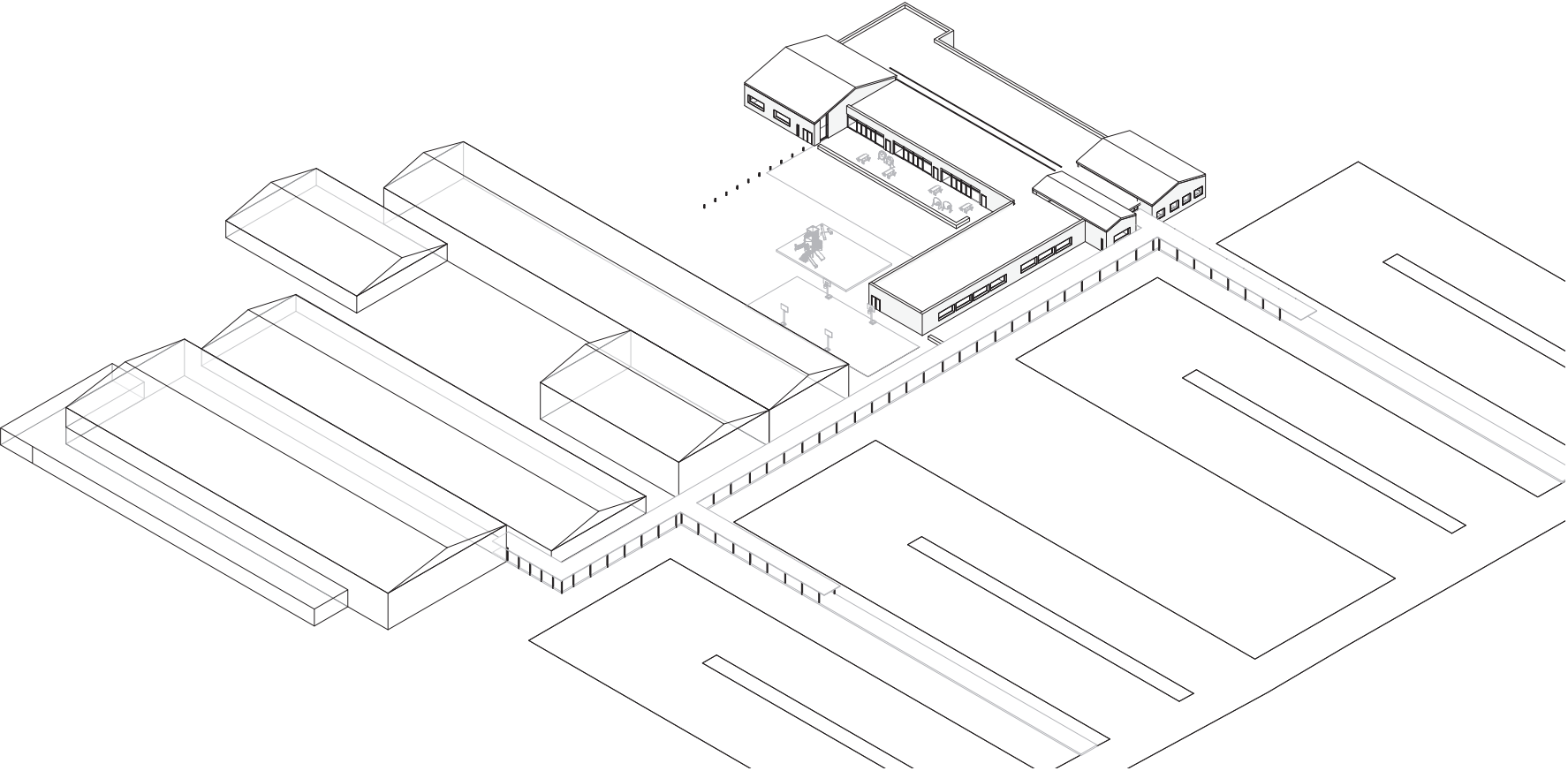
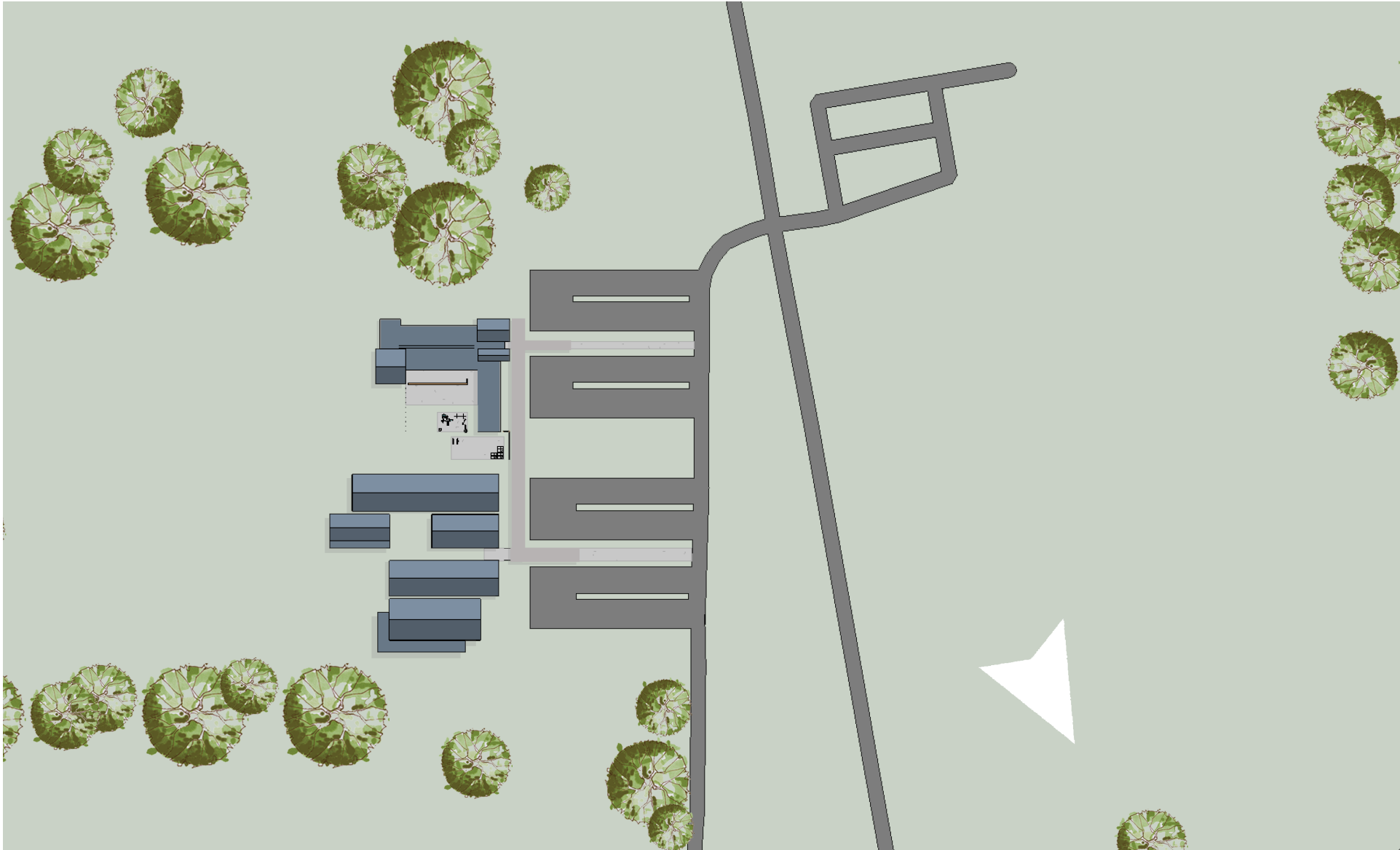


EARLY EDUCATION CENTER



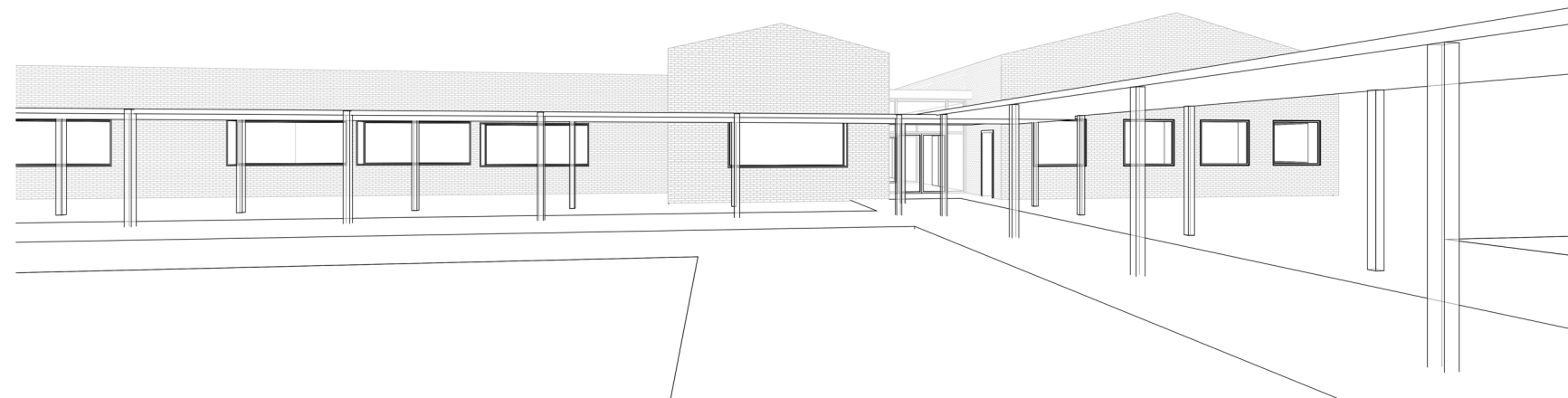
The Early Education Center is informed by the Greensboro Elementary School building form. The Early Childhood Center is more compact and only a single floor to allow for easy navigation.

BUILDING CONNECTION



Greensboro Elementary School's Title 1 School title grants them additional funding to provide community resources. The Early Childhood Center acts as an annex to the existing elementary school and can use its many resources rather than having duplicates. To access these resources, there is a covered sidewalk connecting the two schools.

COVERED SIDEWALK



The sidewalk has no grade and the covering has wide spacing between the structure to allow for easy navigation within the covered sidewalk.

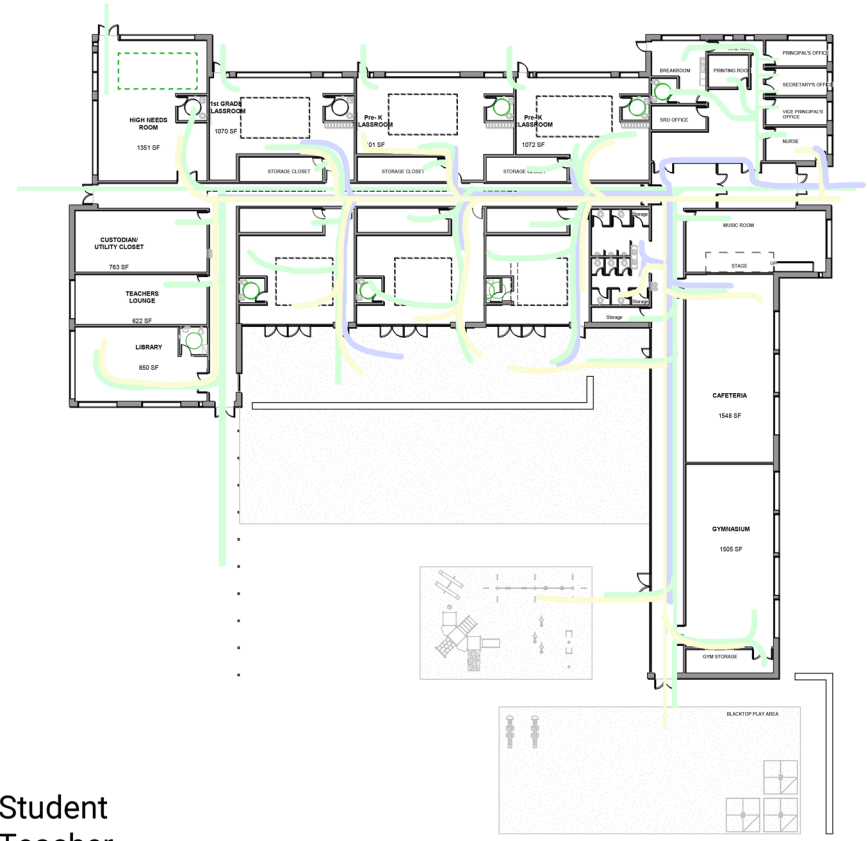
PROGRAM



- Learning Spaces for the students
- Spaces for community use
- Functions to keep the school in operation



CIRCULATION

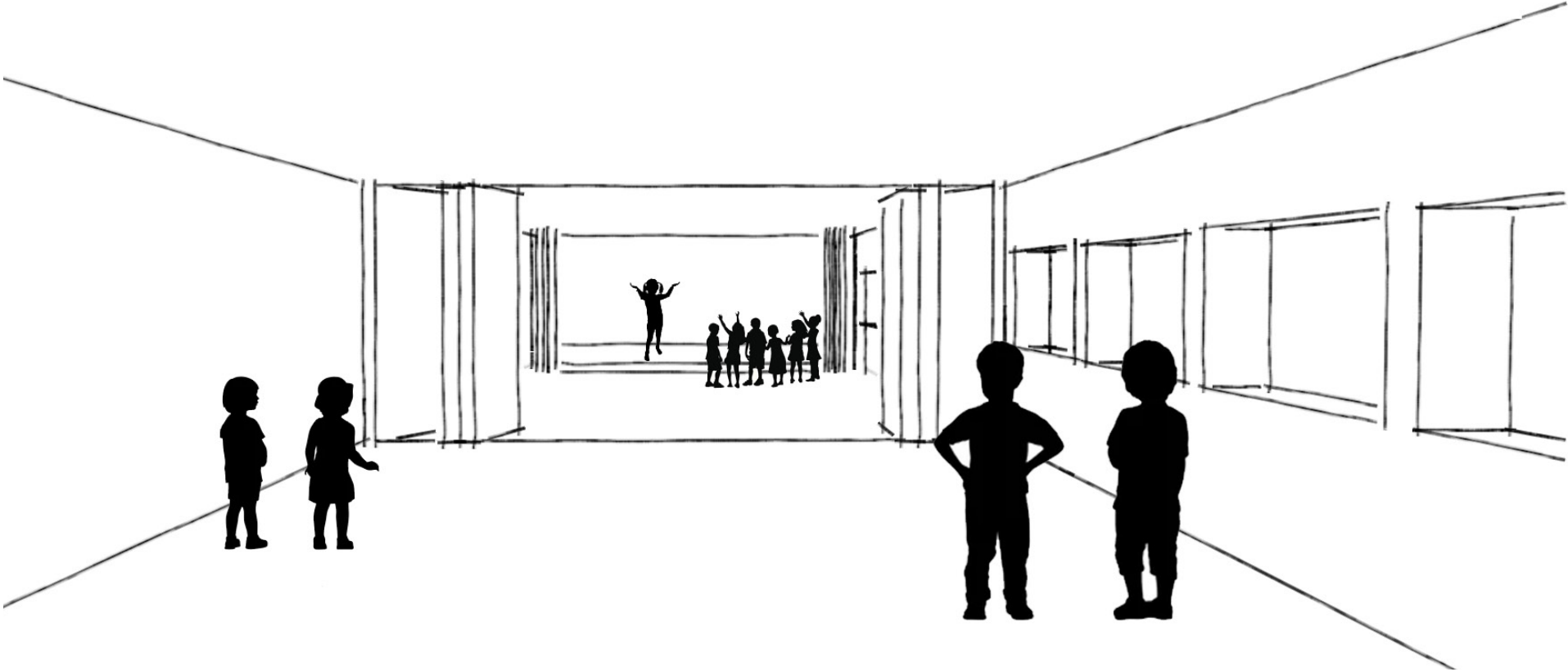
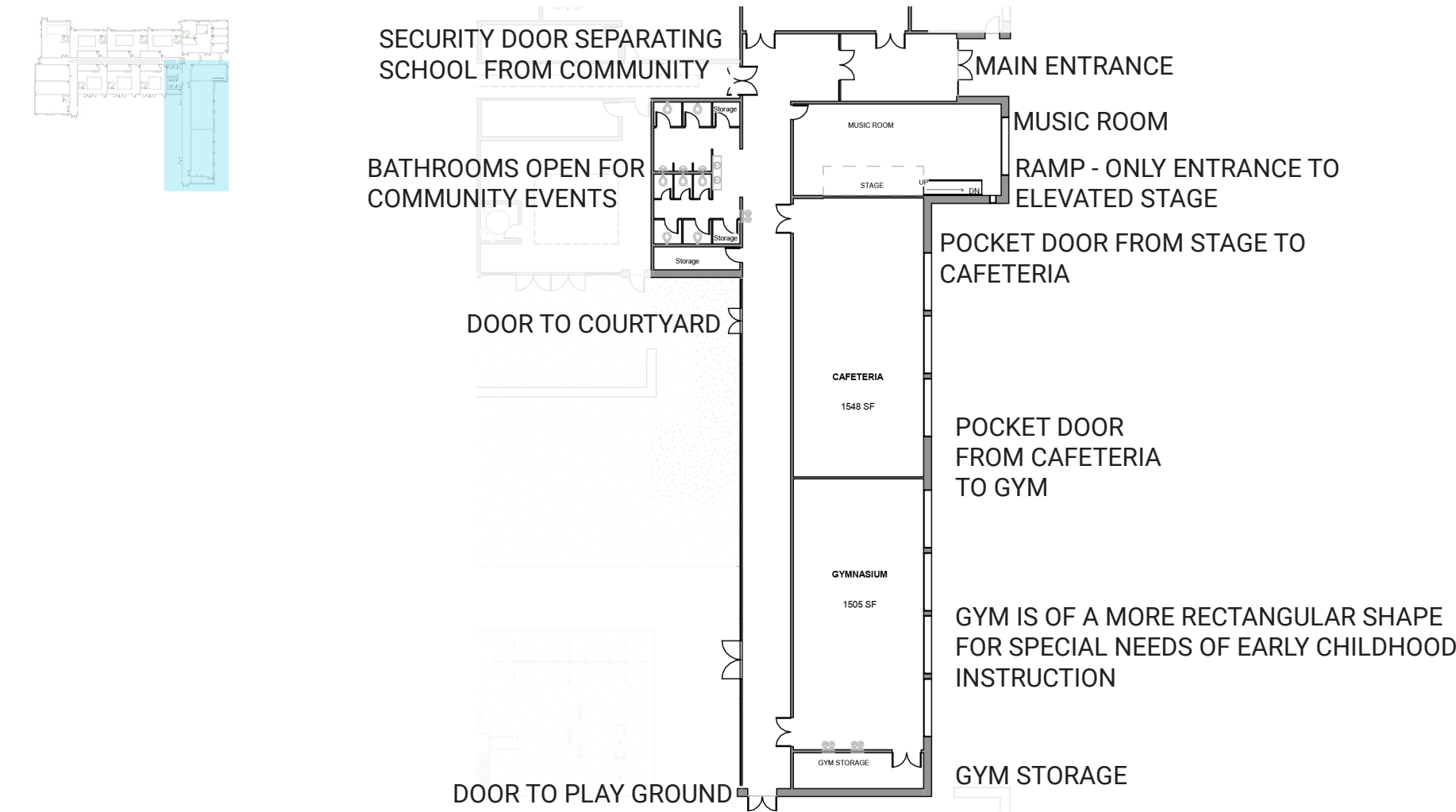


- Student
- Teacher
- Parent



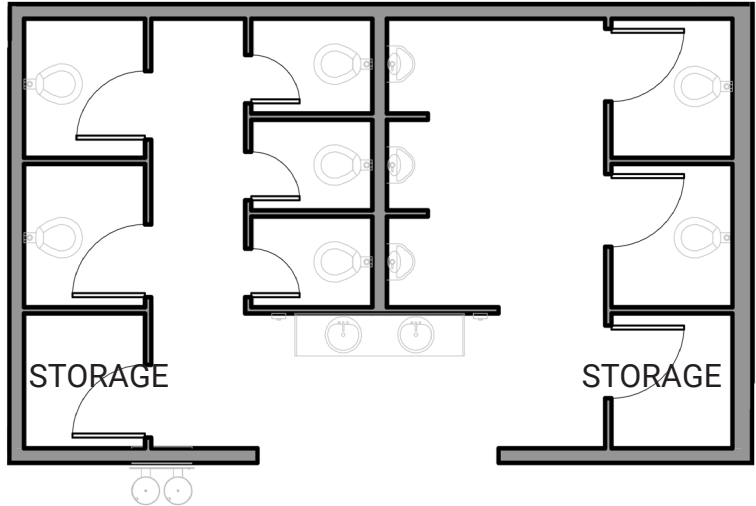
COMMUNITY SCALE

The proposed early childhood center lies adjacent to the large Greensboro Elementary School. Greensboro Elementary has significant infrastructure and resources due to the role it plays within the Title 1 school district. For this reason, The Early Childhood Center was designed to rely on many resources of the larger neighboring school so as to not be redundant and wasteful.

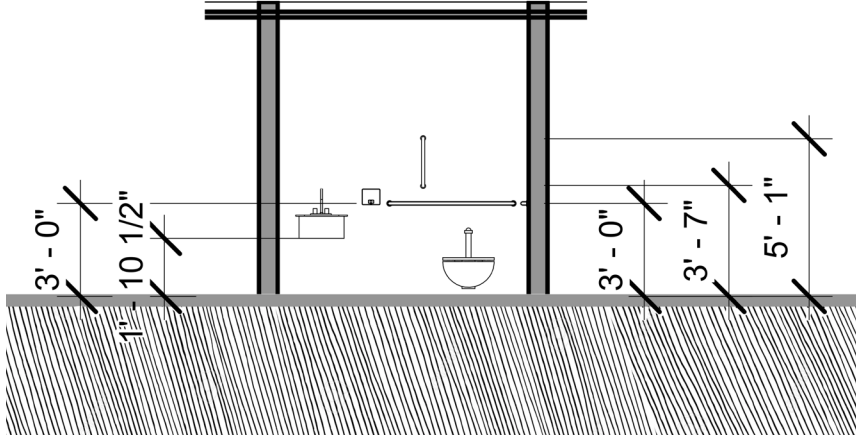
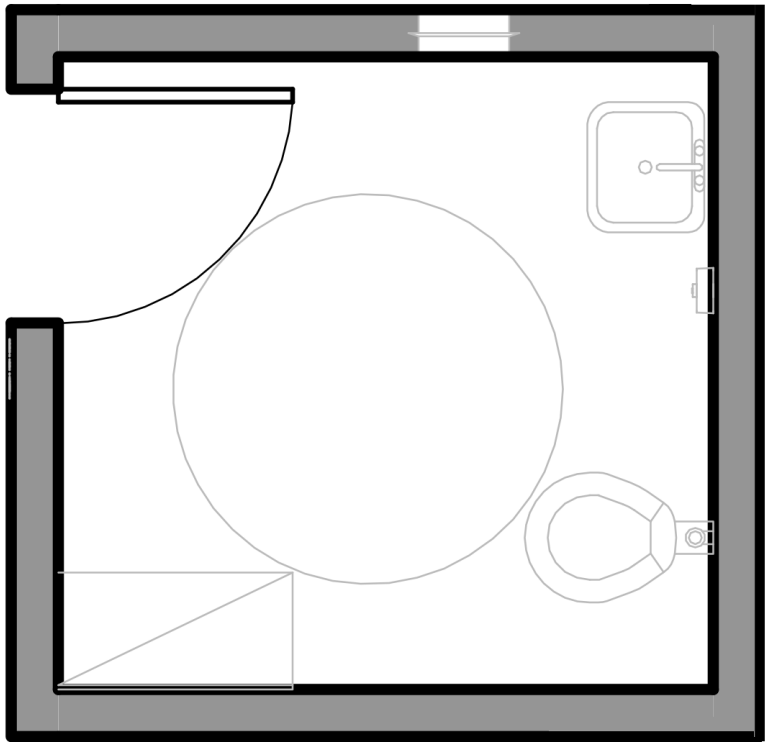


THE SCALE OF BATHROOM FACILITIES

CHILDREN’S AND PUBLIC BATHROOM

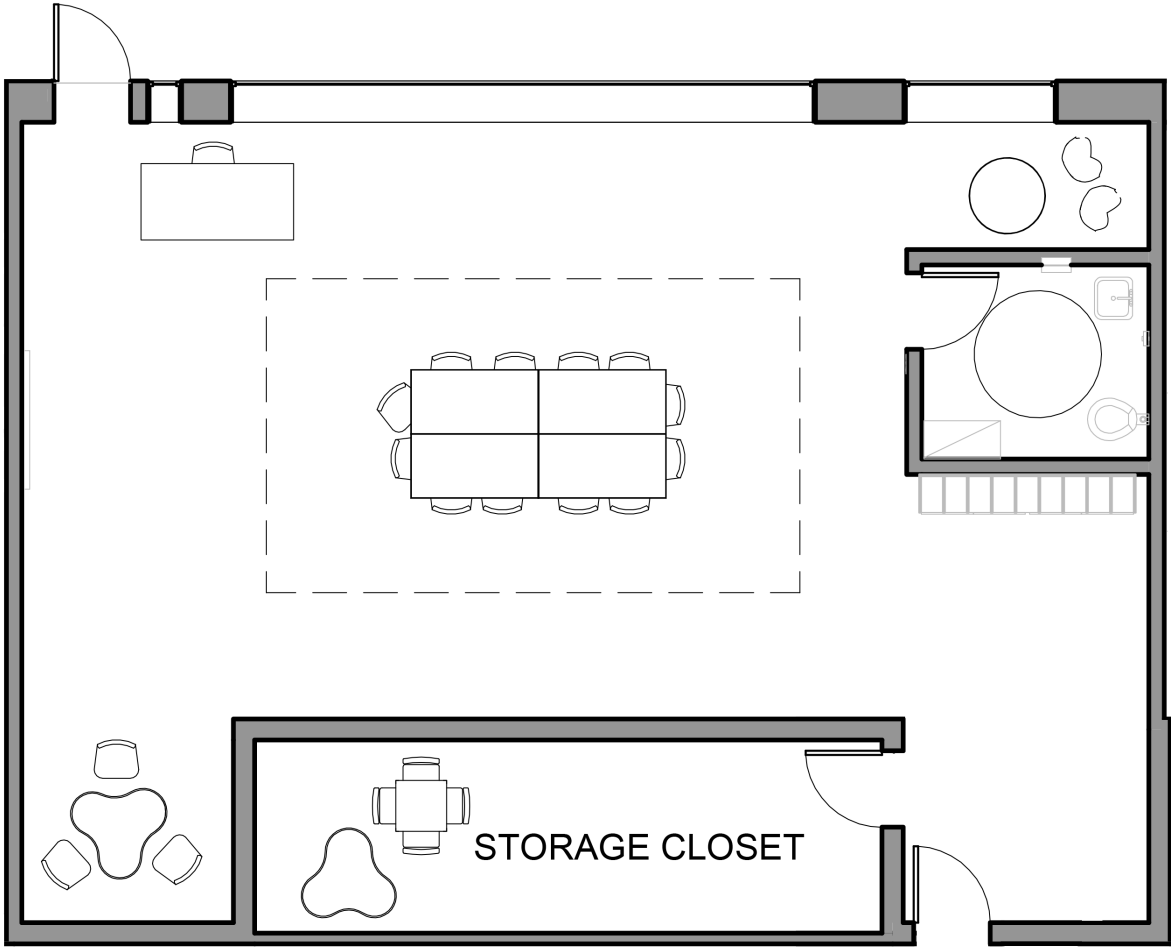


CLASSROOM BATHROOMS

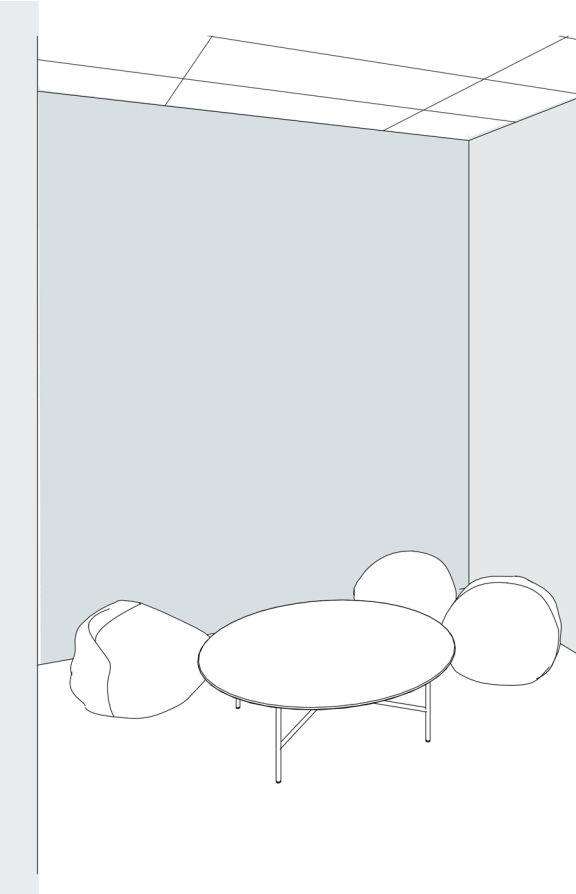


SCALES OF SOCIAL INTERACTION

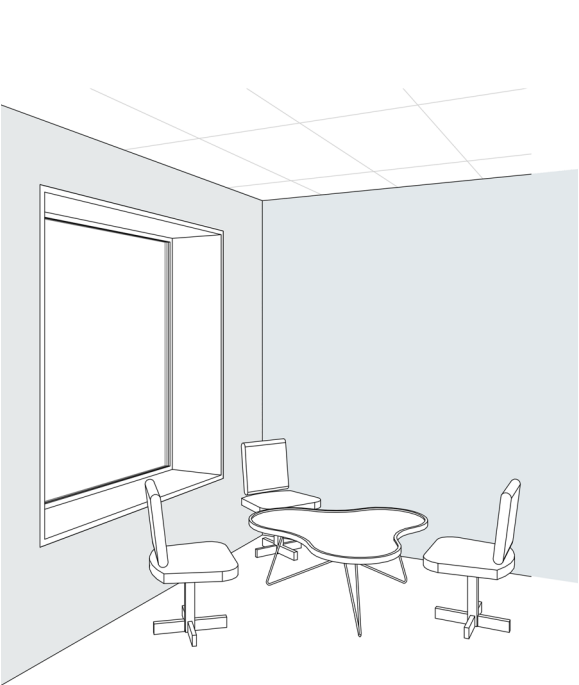
The classroom’s architecture accommodates 3 scales of social interaction: individual scale, small group discussions, and large group classroom instruction.



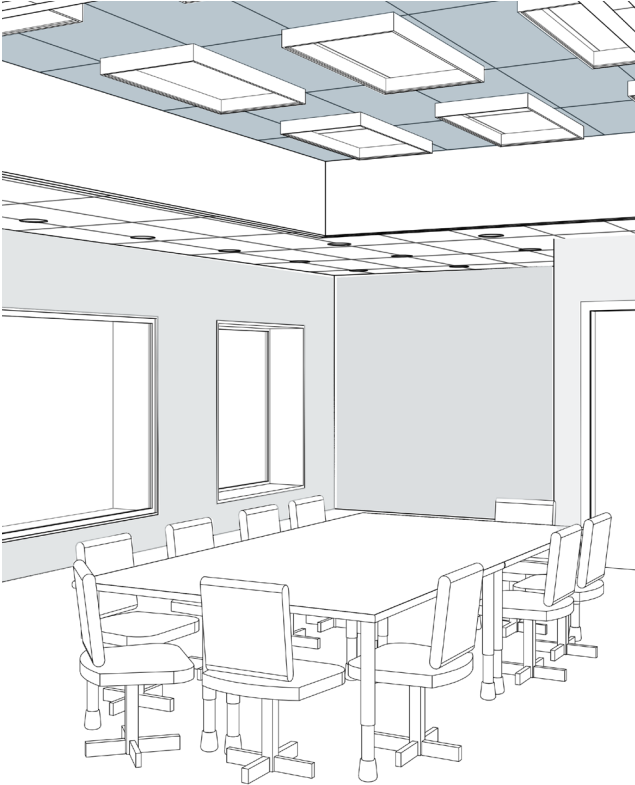
Cornered in spaces accommodate space at an individual scale. Individual decompression space is important for those with sensory disabilities.



Blocked out divided spaces accommodate a small scale group. ESOL and special ed teachers have a specialized space for instruction without having to remove students from their peers.

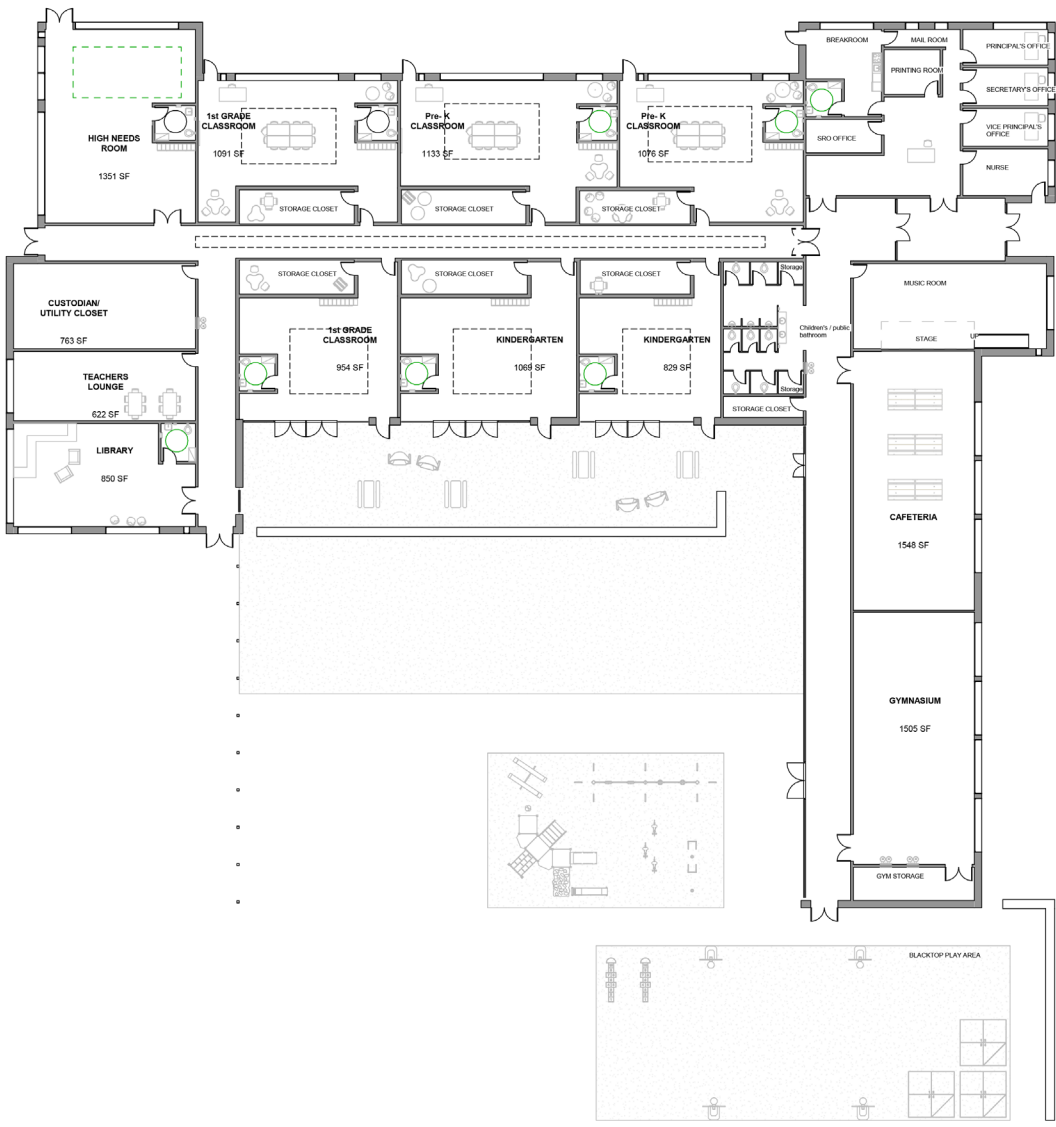


Volumetric details accommodate large class activities. The architecture encourages central gathering, reinforcing the teacher’s classroom scale activities.

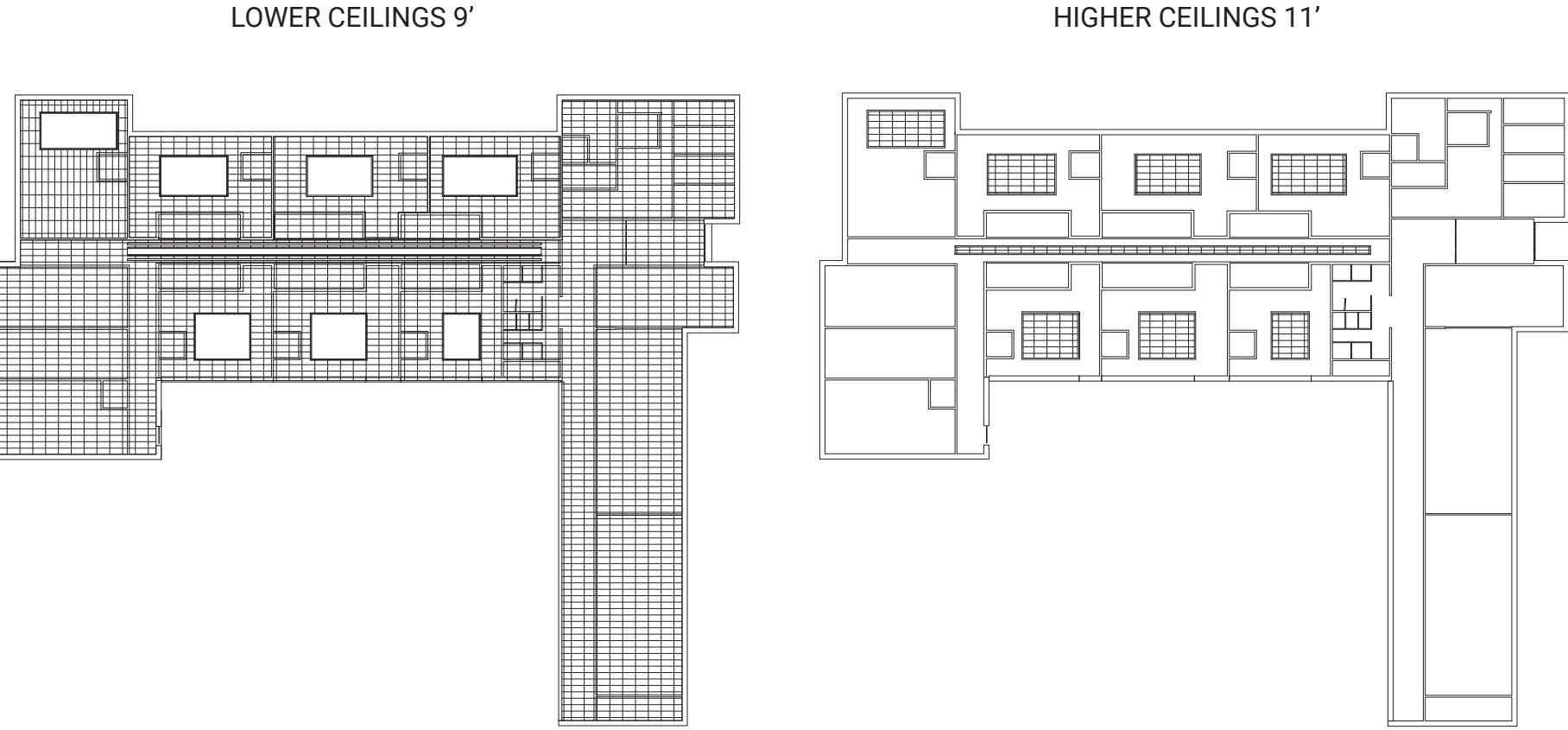


CREATING A SENSE OF SPACE WITH CEILINGS

FLOOR PLAN

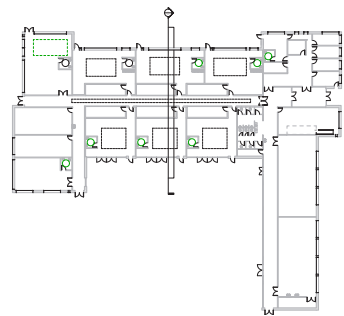


CEILING PLAN

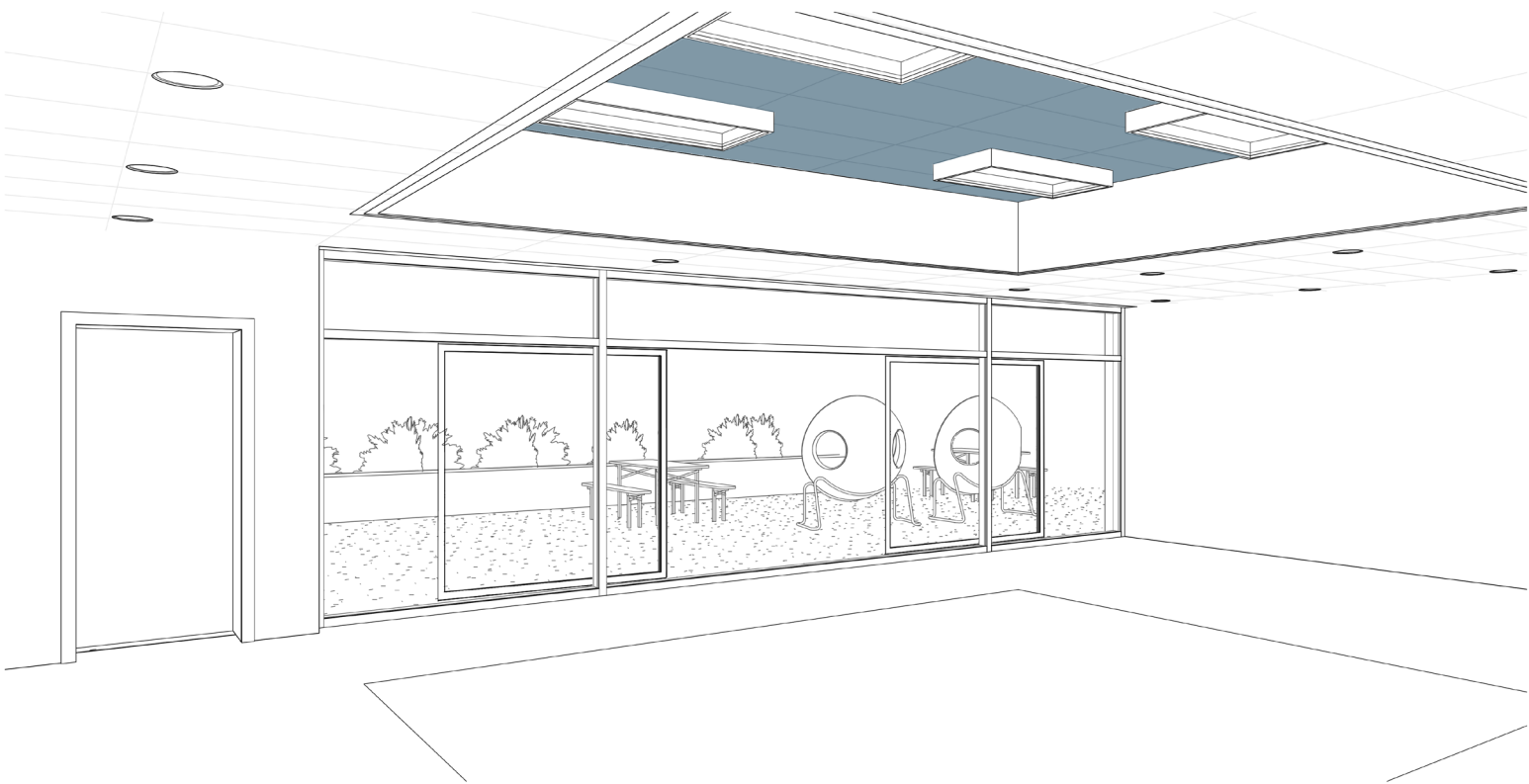
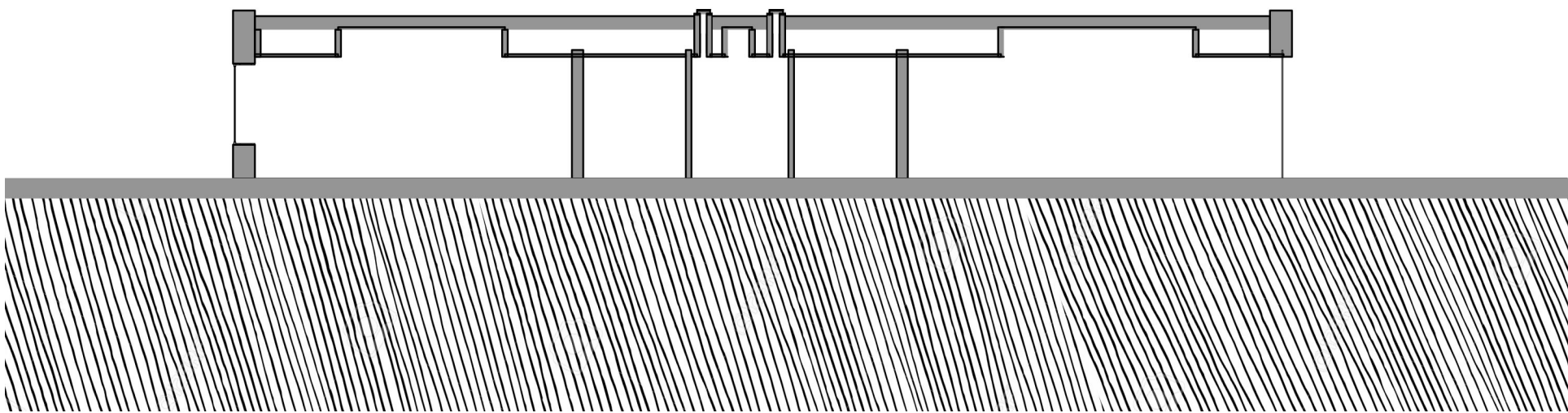


SCALE 1/8"=1'

VOLUMETRIC SPACES



The architecture accommodates larger gathering spaces through place making. The ceiling condition changes in the center of the classroom to denote a place of gathering.

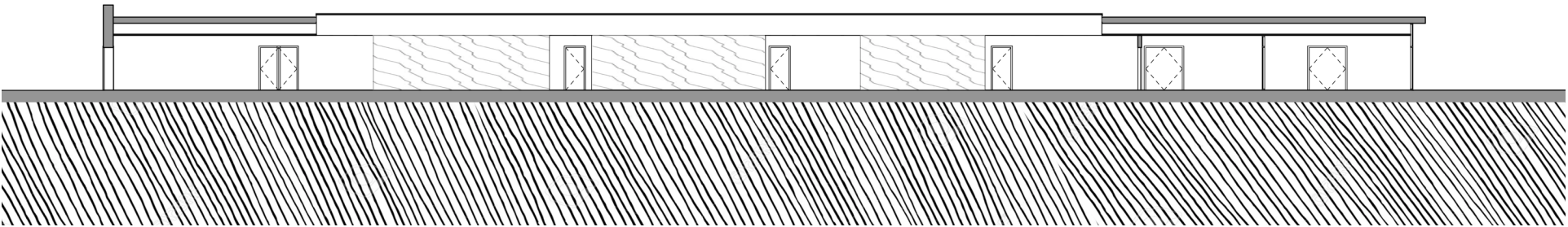
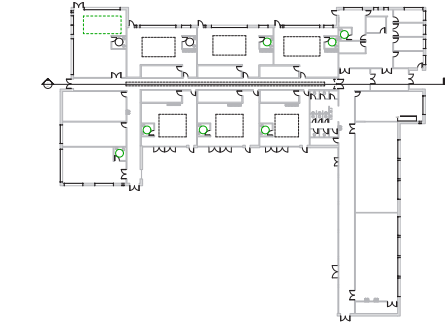
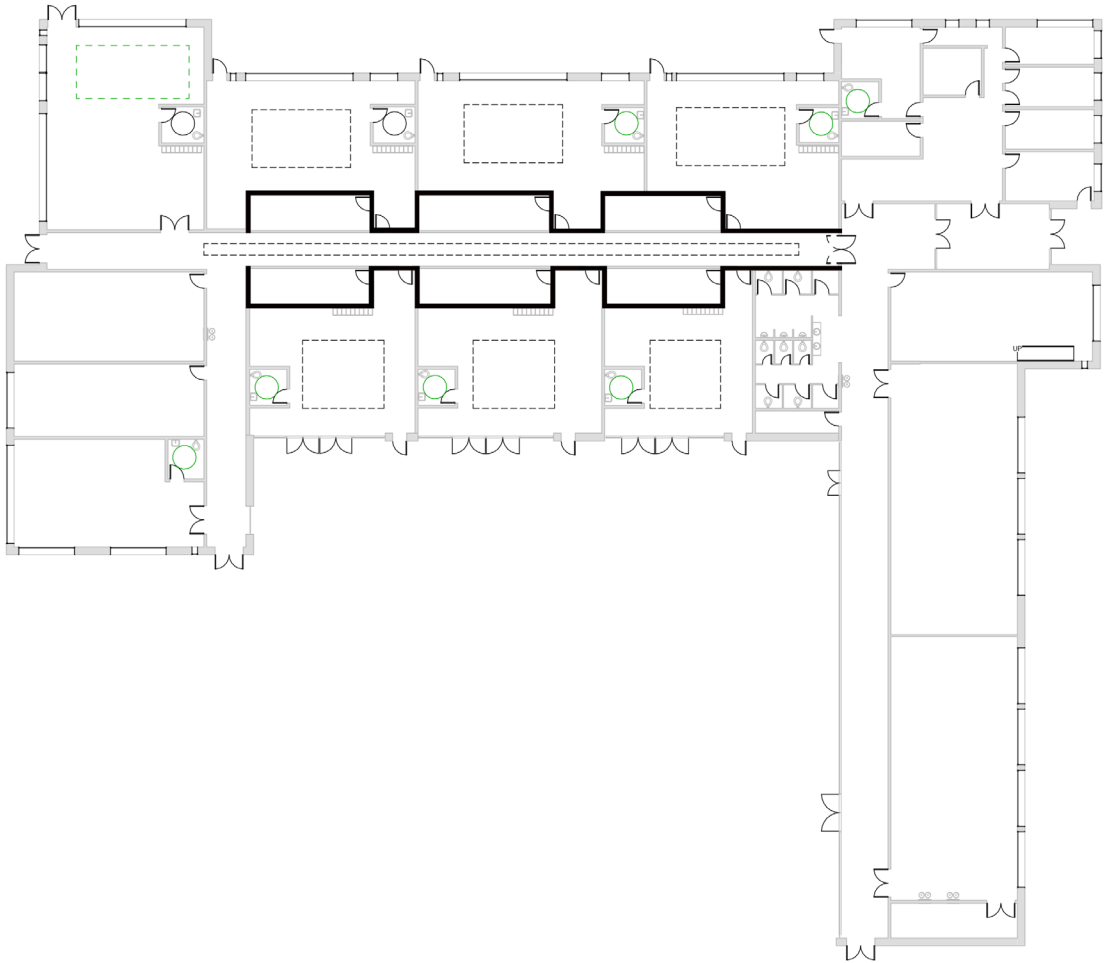


THE ARCHITECTURAL IMPACT OF A STRUCTURAL WALL

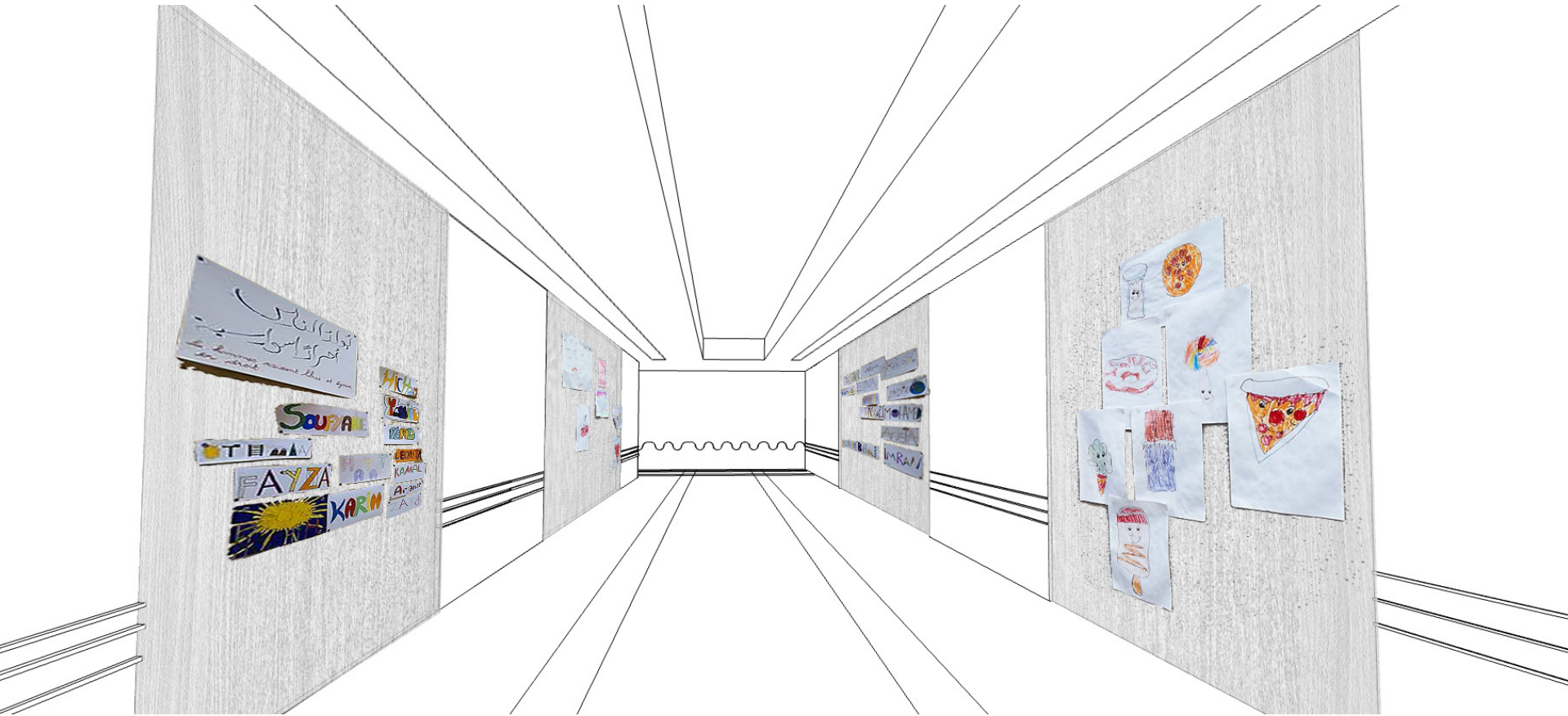
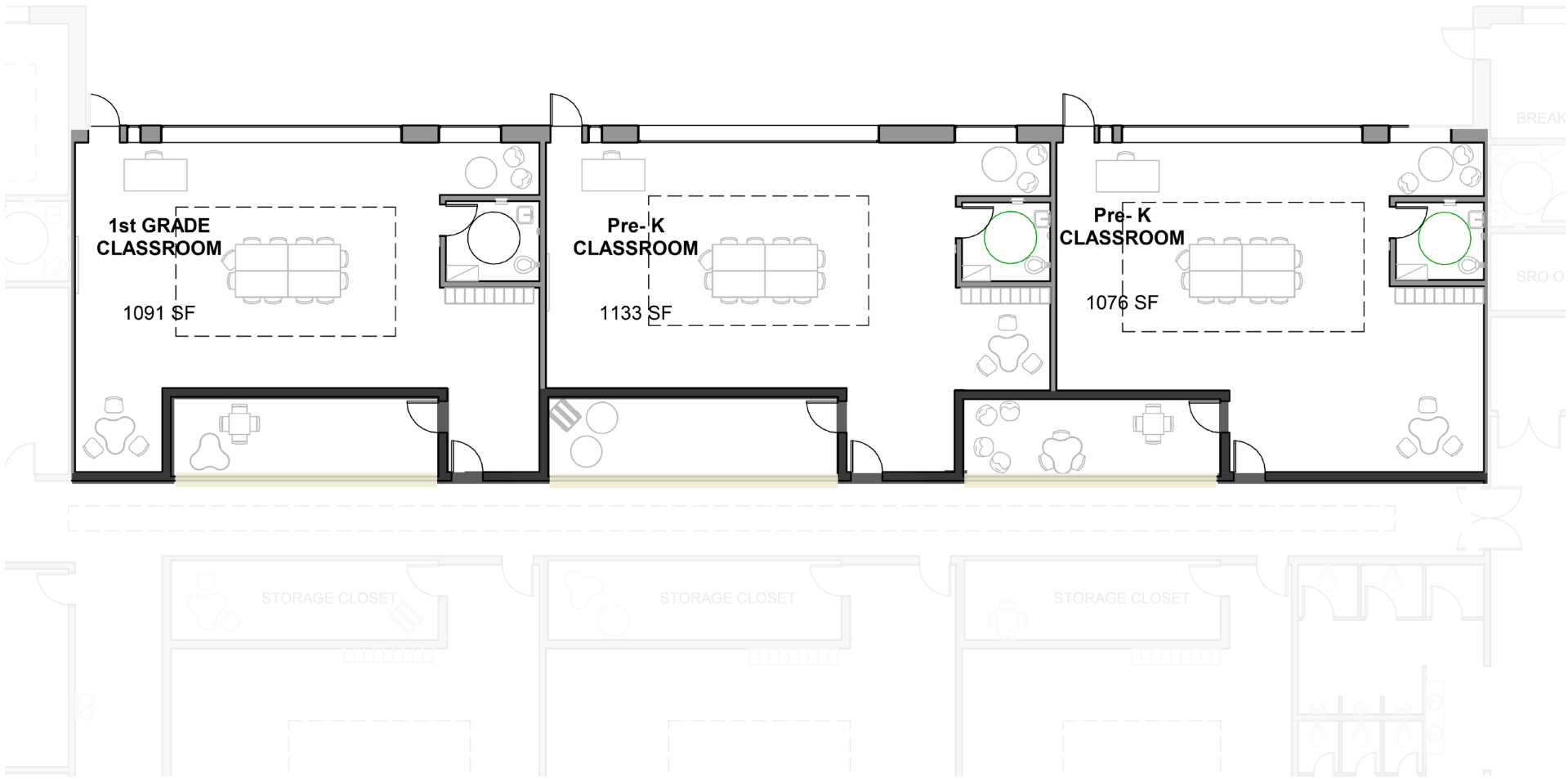


RHYTHMIC STRUCTURE

There is a rhythmic flowing shape to the structural walls that run along the main educational corridor. The gesture of the wall creates a series of related moments.

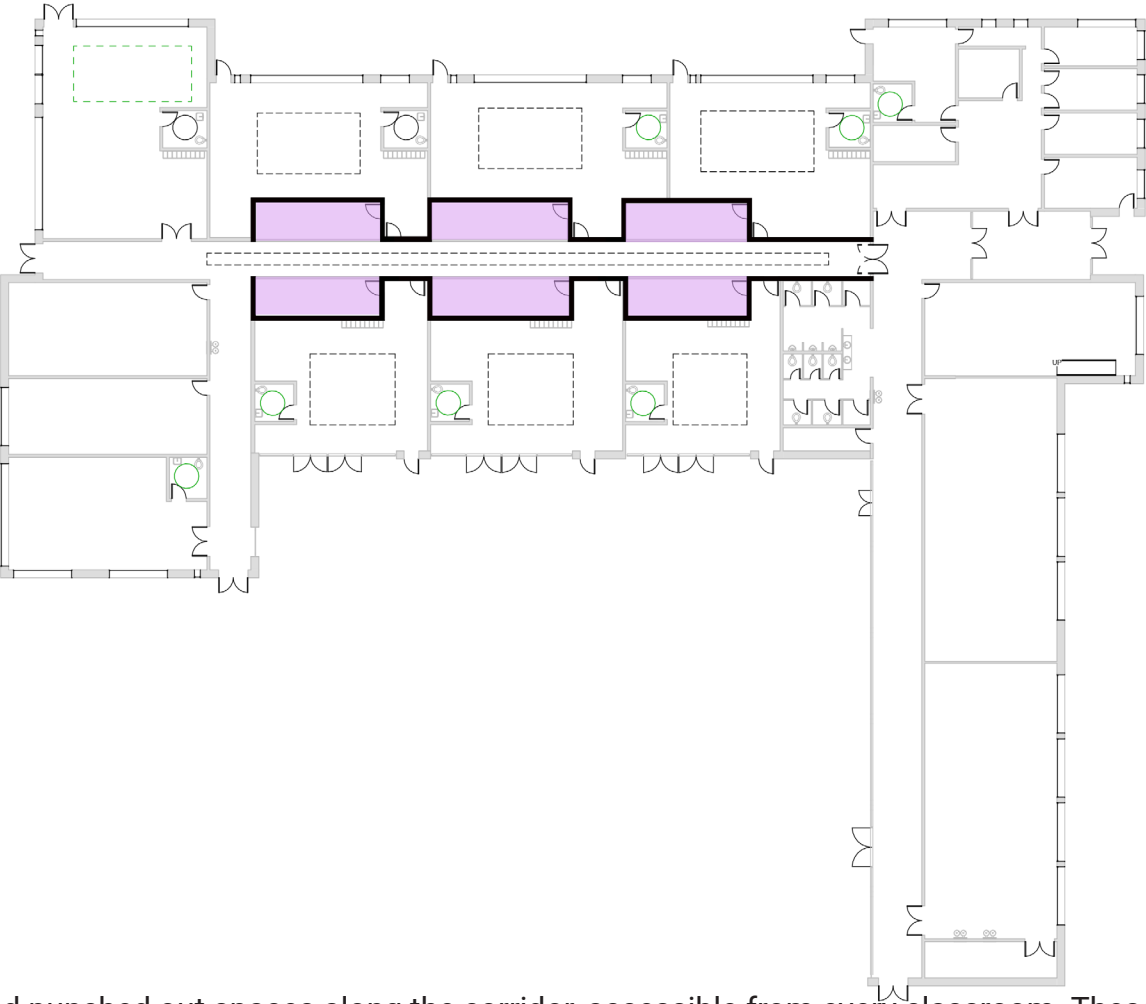
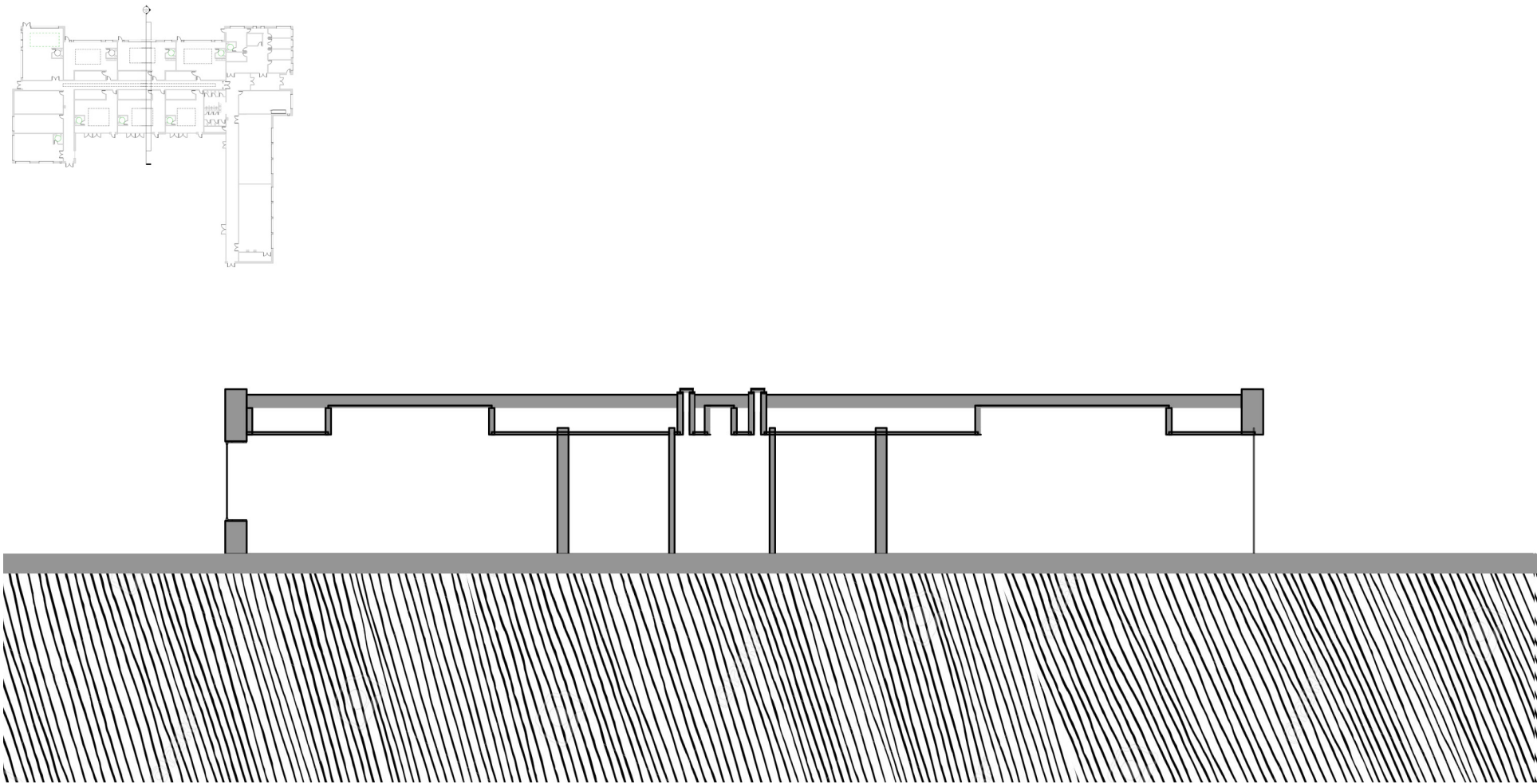


ARTWORK PINUP SPACE



As the wall moves in a rhythmic pattern down the hallway, a pattern of walls starts to emerge. This exploration led to a pin up space, creating a gathering moment within the hallway, refocusing the attention to the students work on the pin up space.

PUNCHED OUT SPACE



The gesture of the wall created punched out spaces along the corridor, accessible from every classroom. These spaces can act as storage allowing teachers to adapt their spaces to accommodate various students needs in various activities throughout the day.

UTILIZING CLASSROOM STORAGE SPACE

ADDED STORAGE SPACE ALLOWS FOR FLEXIBLE USE OF FURNITURE THAT ADAPTS TO INDIVIDUAL NEEDS



Kids Wobble Chair
Antimicrobial protection, an anti-roll safety ring on the base prevents tip-overs and falls. Wobble chairs give just enough wobble to allow kids to move around without being distracting to others around them.



Wiggle Disk Seat Cushion
The disk mimics both the movement and shape of the ball in any seat. The disk cushion can be used on the floor for balance and strength training.



Bean Bag Rocker Chair
Moving around gives vestibular input and proprioceptive input, both of which can be very calming and help with sensory input needs. Serves as active seating in a sensory room or classroom. Can be used for individual sensory decompression.



Wheelchair Accessible Folding Bench Cafeteria Table
The cafeteria table accommodates wheelchairs alongside benches so that students can eat next to their peers.



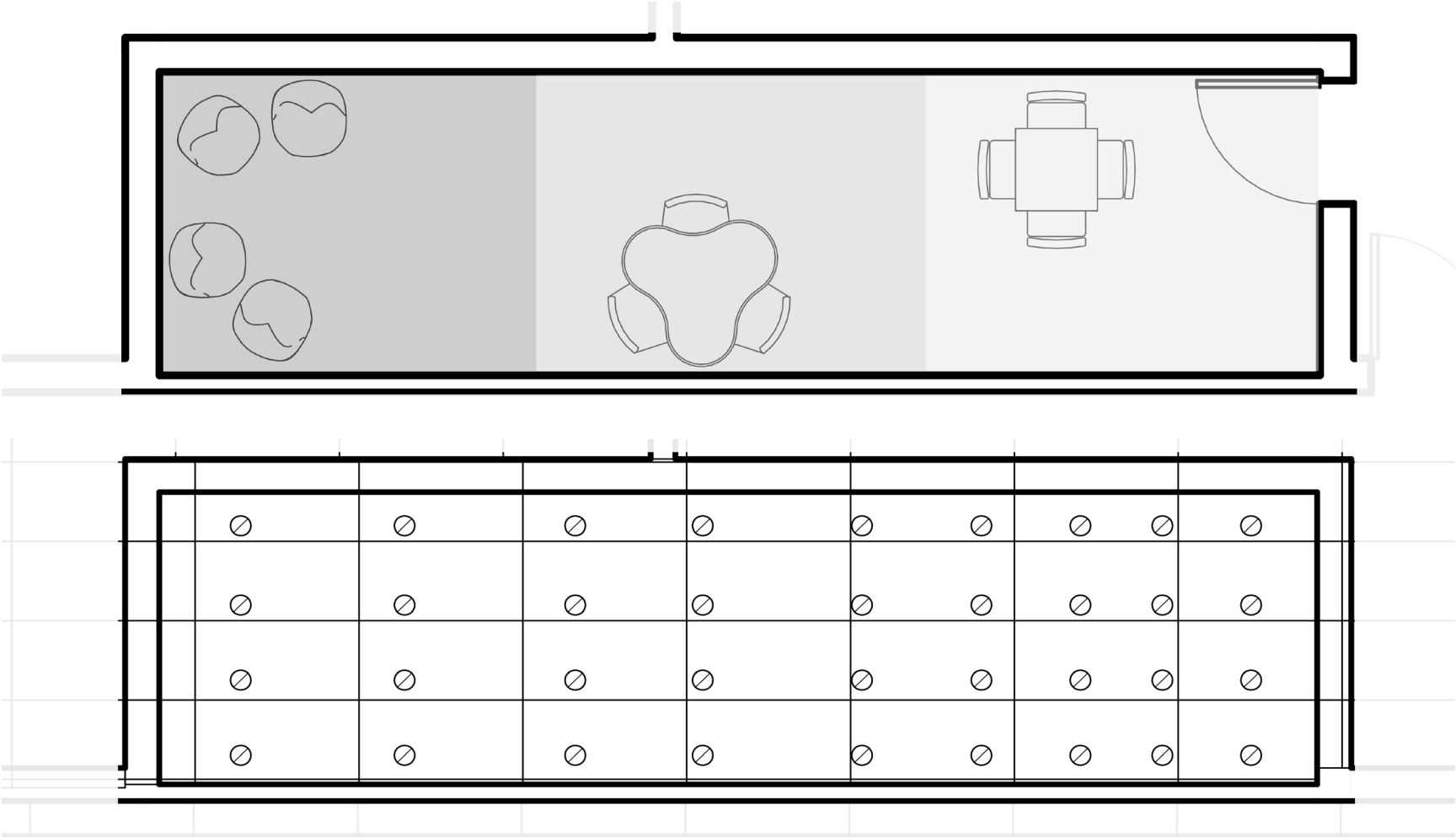
Clover Adjustable Wheelchair Accessible Activity Table
This table has a knob on the side to change the height of the table. The table can be adapted for specific users or activities.



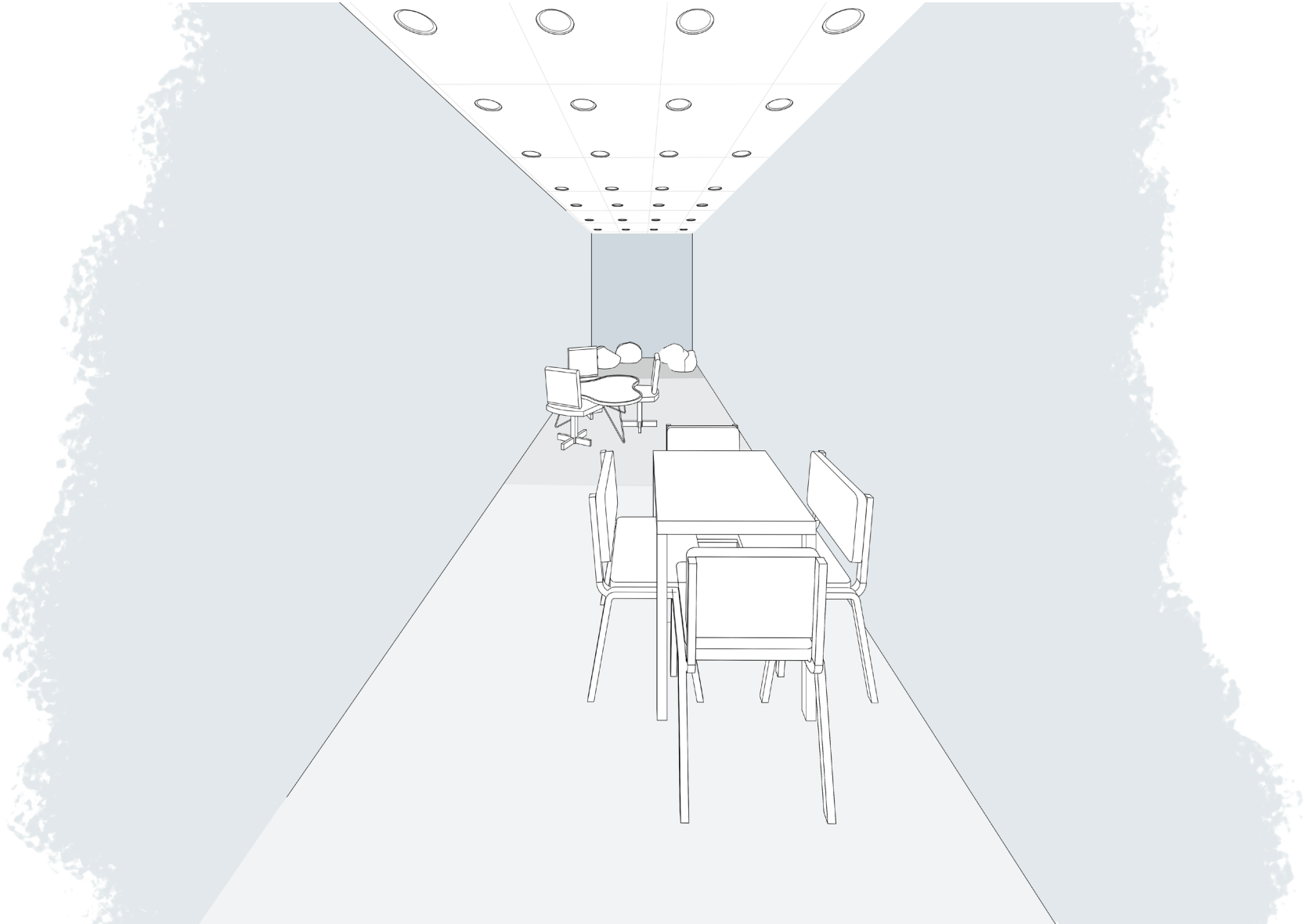
Horseshoe Wheelchair Accessible Activity Table
The table is shaped to accommodate wheelchair users. The table has an adjustable height to accommodate medical equipment.

ADAPTABILITY OF SPACE

The spaces the rhythmic walls create can not only be used as storage, but can also be used for calm down spaces, small group instruction, or English to Speakers of Other Languages (ESOL) instruction. Calm down spaces are designated rooms specifically for decompressing and calming down, where a student cannot hurt or disrupt their class. The space is divided into three areas, entry zone, small group space, and relaxing seating area. These zones are defined by changing floor colors and lighting conditions.



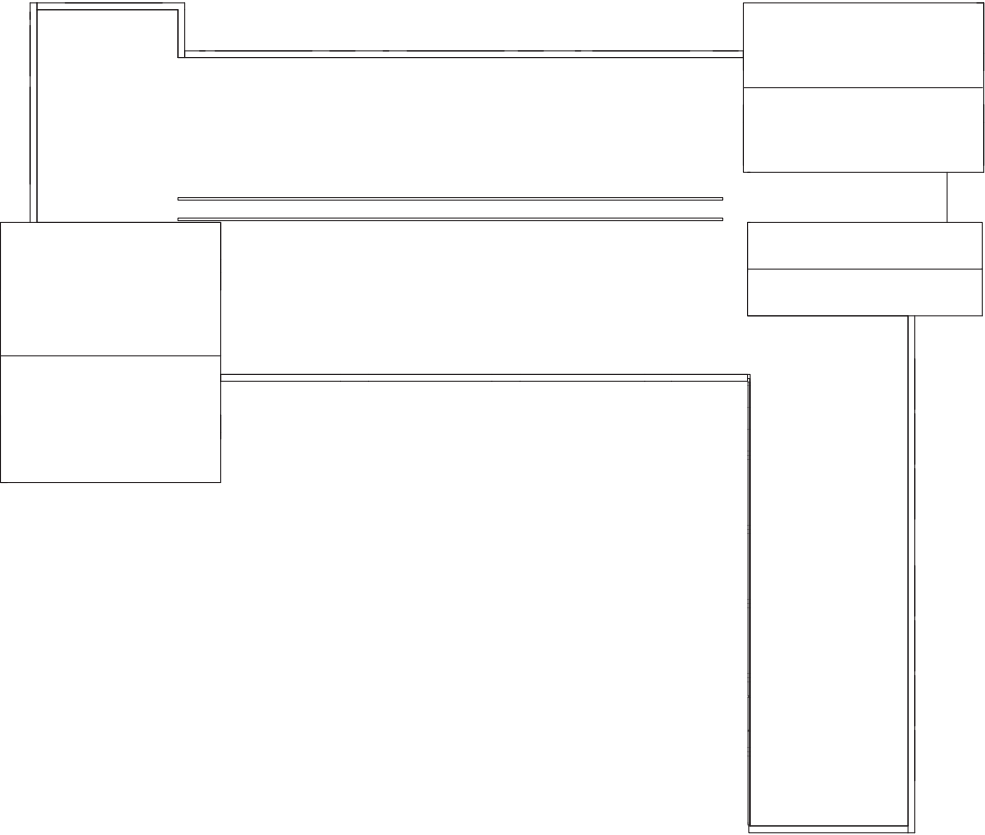
ZONES OF SPACE



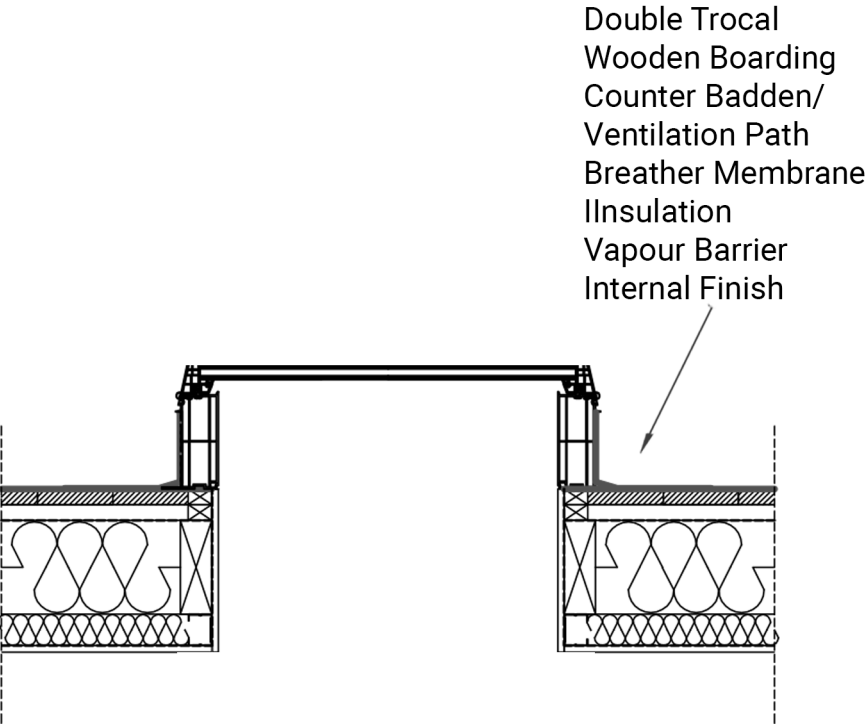
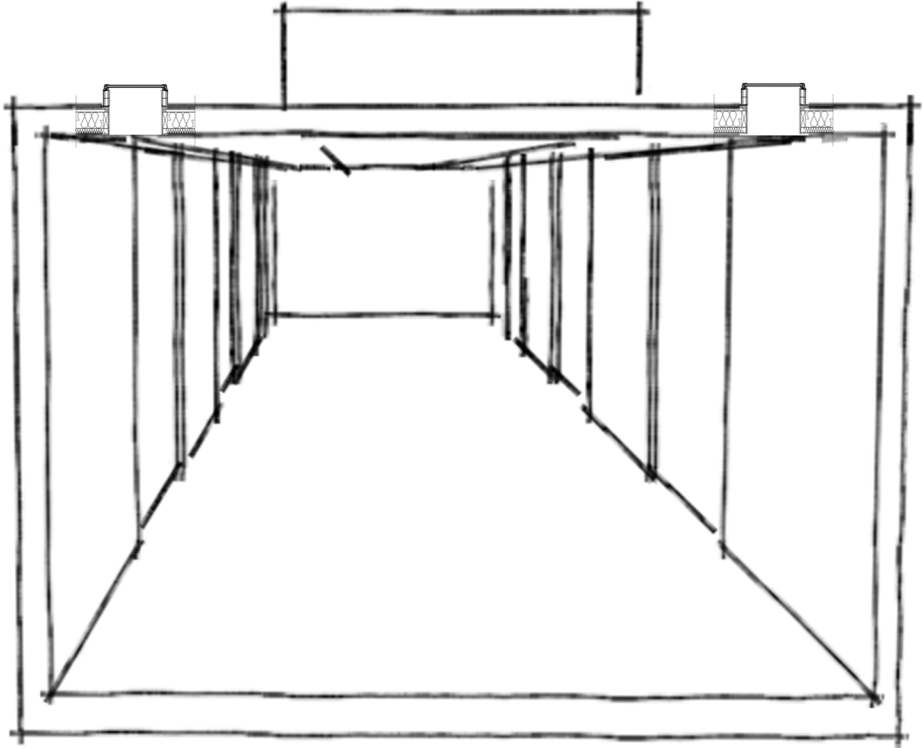
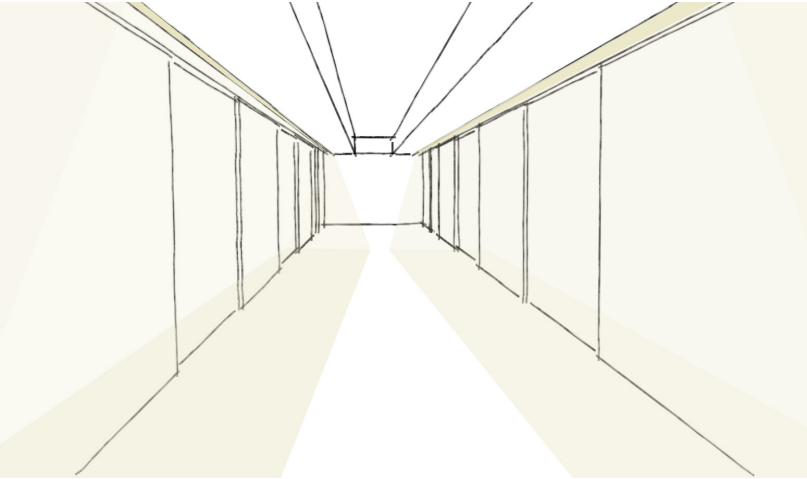
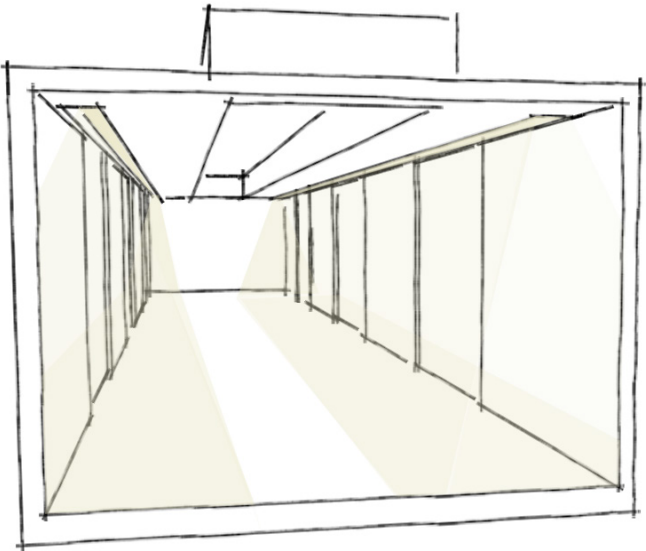
ARCHITECTURE THAT RESPONDS TO THE SENSORY



DIRECTIONAL DAYLIGHTING

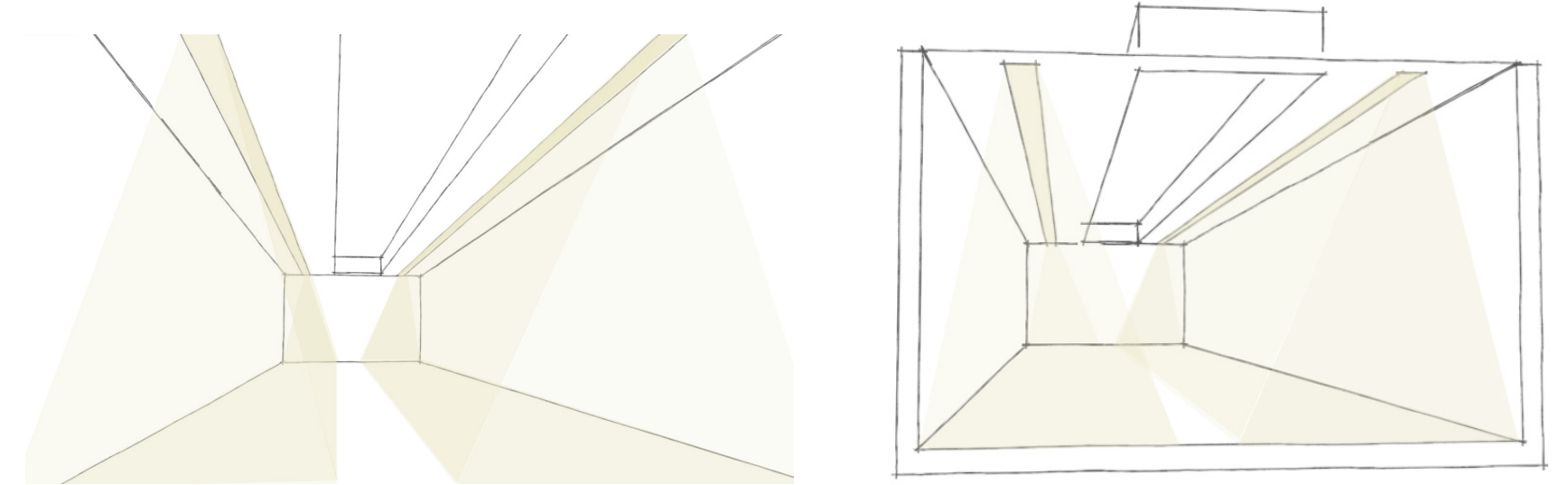
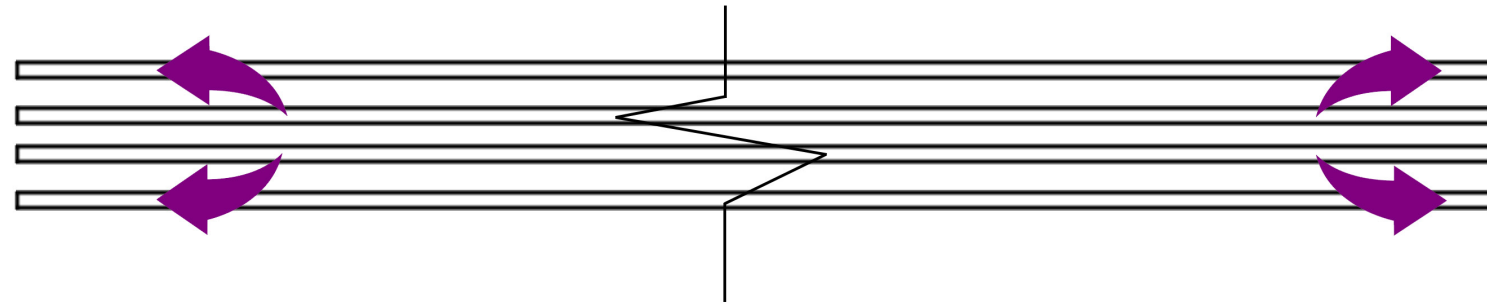


There are long, linear, sky lights that illuminate and draw students down the hallway.



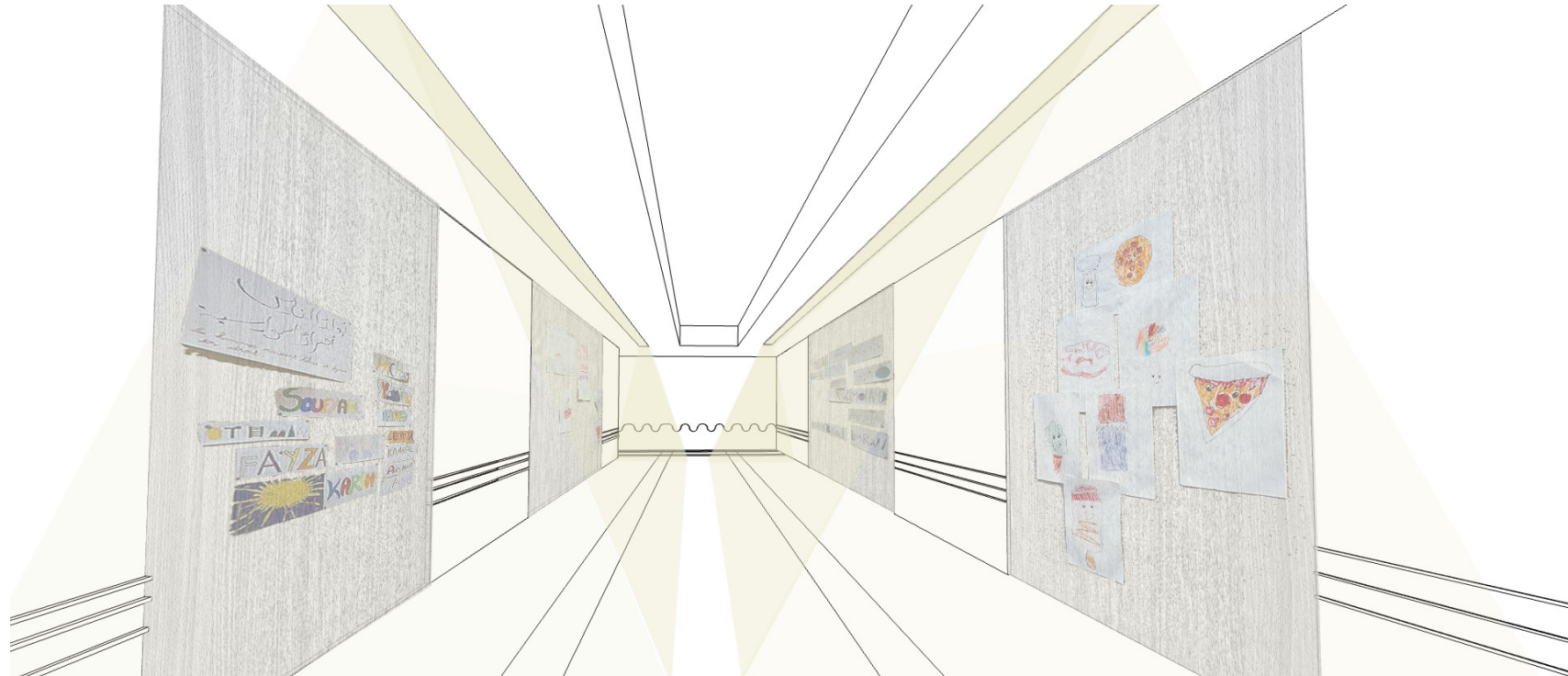
Double Trocal
Wooden Boarding
Counter Batten/
Ventilation Path
Breather Membrane
Insulation
Vapour Barrier
Internal Finish

DIRECTIONAL DAYLIGHTING PROCESS

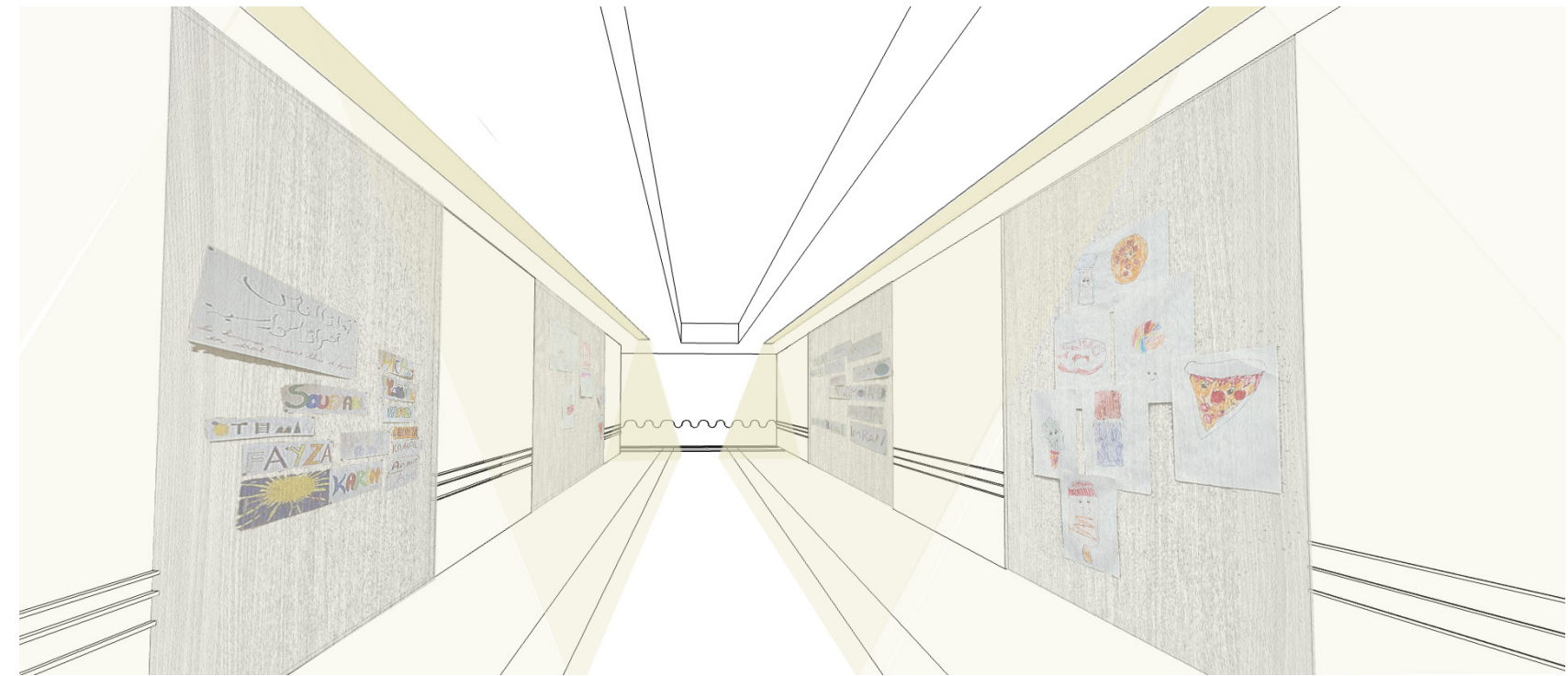


Moving the skylights closer to the wall to illuminate the children's pin up spaces

SKYLIGHTS LOCATED FURTHER FROM THE WALL



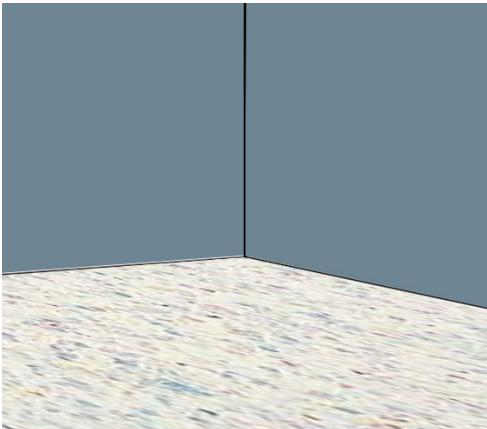
SKYLIGHTS LOCATED CLOSER TO THE WALL



GLARE AND MATERIALS

SELECTING MATERIALS TO PREVENT GLARE

Discomfort glare is when someone experiences physical discomfort from a light source in their visual field. Disability glare is the loss of retinal image contrast as a result of intraocular light scatter or straylight created by light elsewhere in the field of vision.



Luxury Vinyl Tile (LVT)
Not only is LVT very durable with good noise absorption, it also absorbs light rather than reflecting it. This light absorption helps reduce visual glare.



Adjustable Window Covering
Glare can come from a direct beam of sunlight, its reflections, or from the window itself, even when no direct sunlight enters. When it is brighter outside the window than inside the classroom, the window can be a potential glare source. Window coverings can be used to reduce this



LED Lighting
Research has shown that 50% of autistic individuals have a severe sensitivity to fluorescent lighting. LED lights will be used for their adaptability and flexibility.

SENSORY STIMULATION AND MATERIALS

SELECTING INTERIOR FINISHES TO PREVENT OVER STIMULATION

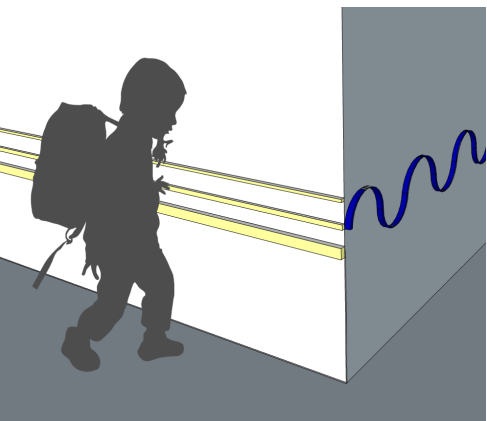
Sensory processing disorder is a neurological condition that describes the brain’s incorrect processing of external information such as light and sound. This incorrect processing results in over stimulation. This is common in children with ADHD, autism, or brain injuries who are prone to sensory processing difficulties.



Lighting Colors
LED lights will be used as they are adjustable for not only brightness, but also color temperature. A cool-toned blue light can be placed close to the wall to produce a soothing cool wash of blue color.



Colors
Research has shown that 85% of children with autism see colors with greater intensity than non-autistic children. Blue is a calming color and the muted tone limits over stimulation.



Texture and tactility
Tactile inputs through touching textures can help with focus, soothe anxiety, and help students cope with over stimulation.

SELECTING FLOOR FINISHES TO PREVENT OVER STIMULATION

In young grades, classroom activities frequently have students sitting on the floor. A specific material selection for floors has been made to accomodate students with sensory sensitivities from feeling over stimulated during these classroom activities. The floor is also a large square footage area that can affect the acoustics of a space.



Luxury Vinyl Tile Sheets
LVT absorbs ambient classroom noise and can help dampen the overwhelming noise level within a classroom. Sheet are larger than tiles and therefore have less seams. These seams can be distracting to a student.



Area Rugs
Area rugs allow for flexibility within the classroom and can easily be rearranged by a teacher. Area rugs can be cleaned easily and removed from a classroom individually. The rug can act as a space maker to allow students to feel more enclosed in decompression spaces.



Neutral Color Palette Rugs
Area rugs can help dampen noise to create better acoustics within the classroom and prevent sensory overload. The rugs should be a neutral color palette to prevent additional over stimulation.

SELECTING WALL AND CEILING MATERIALS TO PREVENT OVER STIMULATION

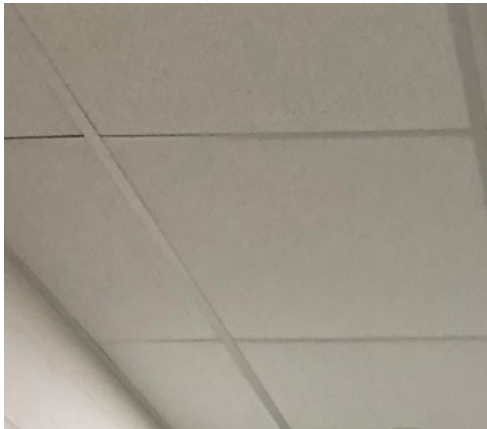
Schools are noisy places that can easily become distracting or overwhelming. To create a quieter space, noise absorbing materials have been selected for the floor and ceiling, two large surface areas within a classroom.



Quiet Rock
Quiet Rock is made of a viscoelastic material sandwiched between two gypsum layers. The gypsum board has the mass to block sound waves, while the viscoelastic material damps the wave vibrations.



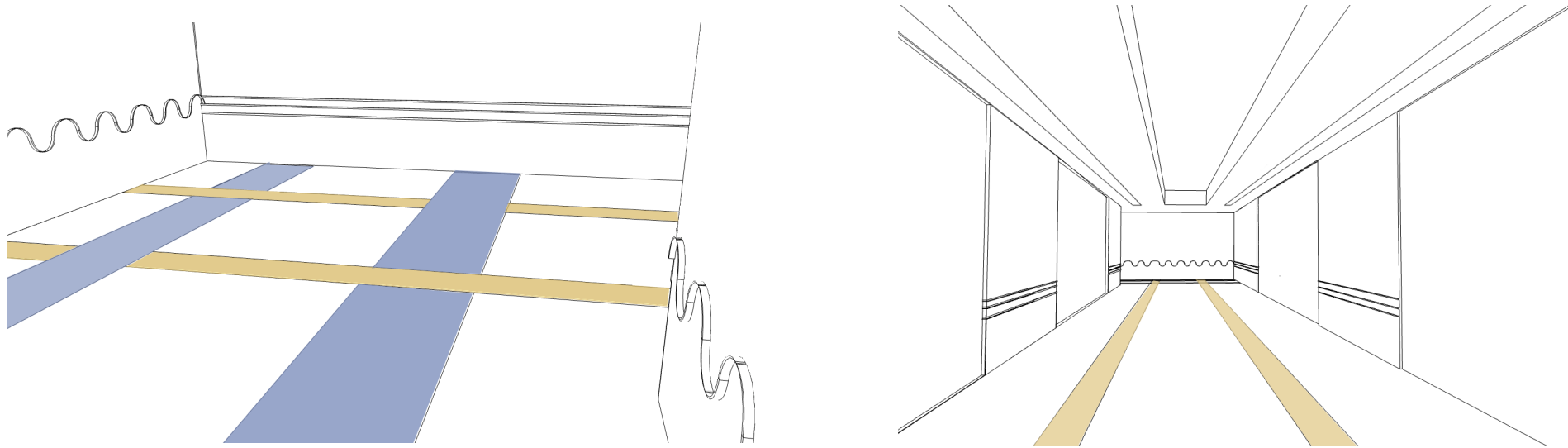
Green Glue
The most cost effective soundproofing material is Green Glue. Its distinctive properties dissipate the vibrations caused by sound waves as they travel through ceilings, walls and floors.



Acoustical Drop Ceilings
Acoustical drop ceilings can help provide soundproofing preventing sounds from bouncing around the room, by absorbing sound waves and by blocking sound from traveling to an adjacent room.

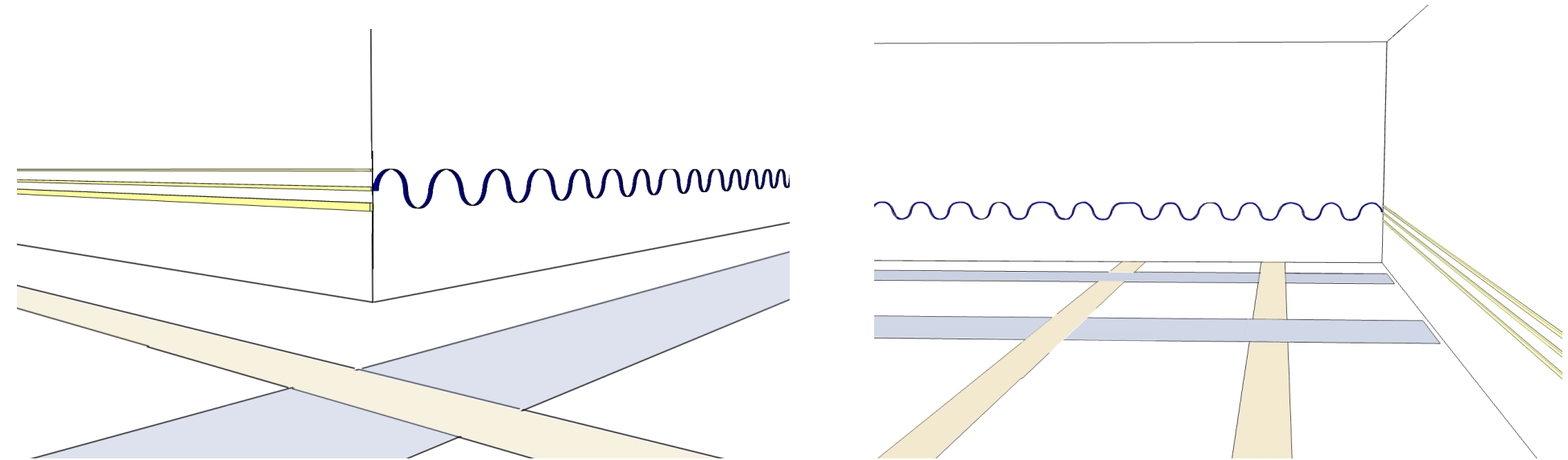
WAY FINDING

COLOR CODED HALLWAYS



As students traverse down the hallway the classes can practice walking single file along their way finding marker. The young students are not able to read yet so color coded hallways help students to develop way finding skills.

TACTILE SENSORY DIRECTIONAL DETAILING

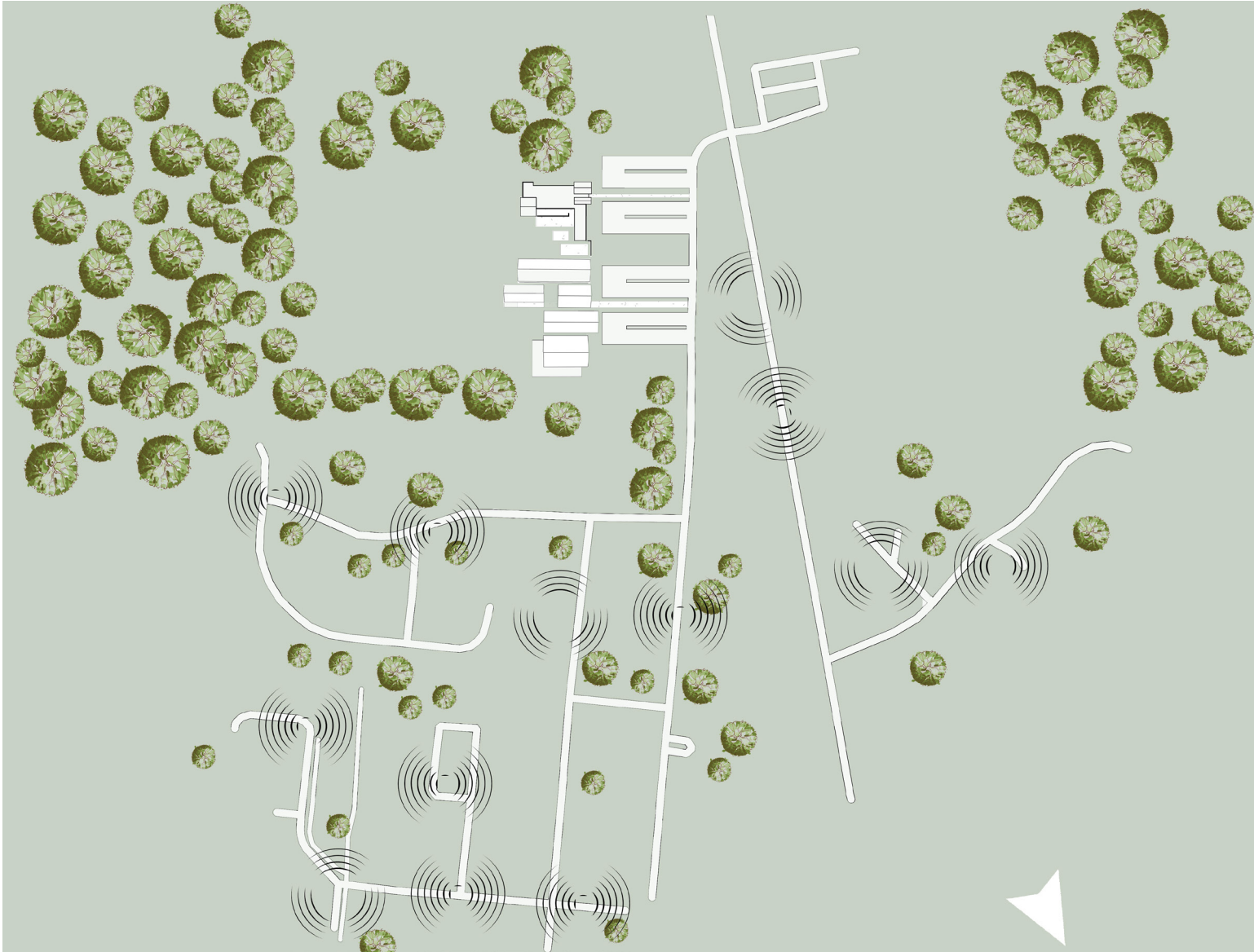


For those who cannot see the way finding colors or need additional sensory input, there is sensory molding detailing along the hallways. Students can run their hands along the detailing to center themselves and cope with the loud, over whelming, busy hallway.

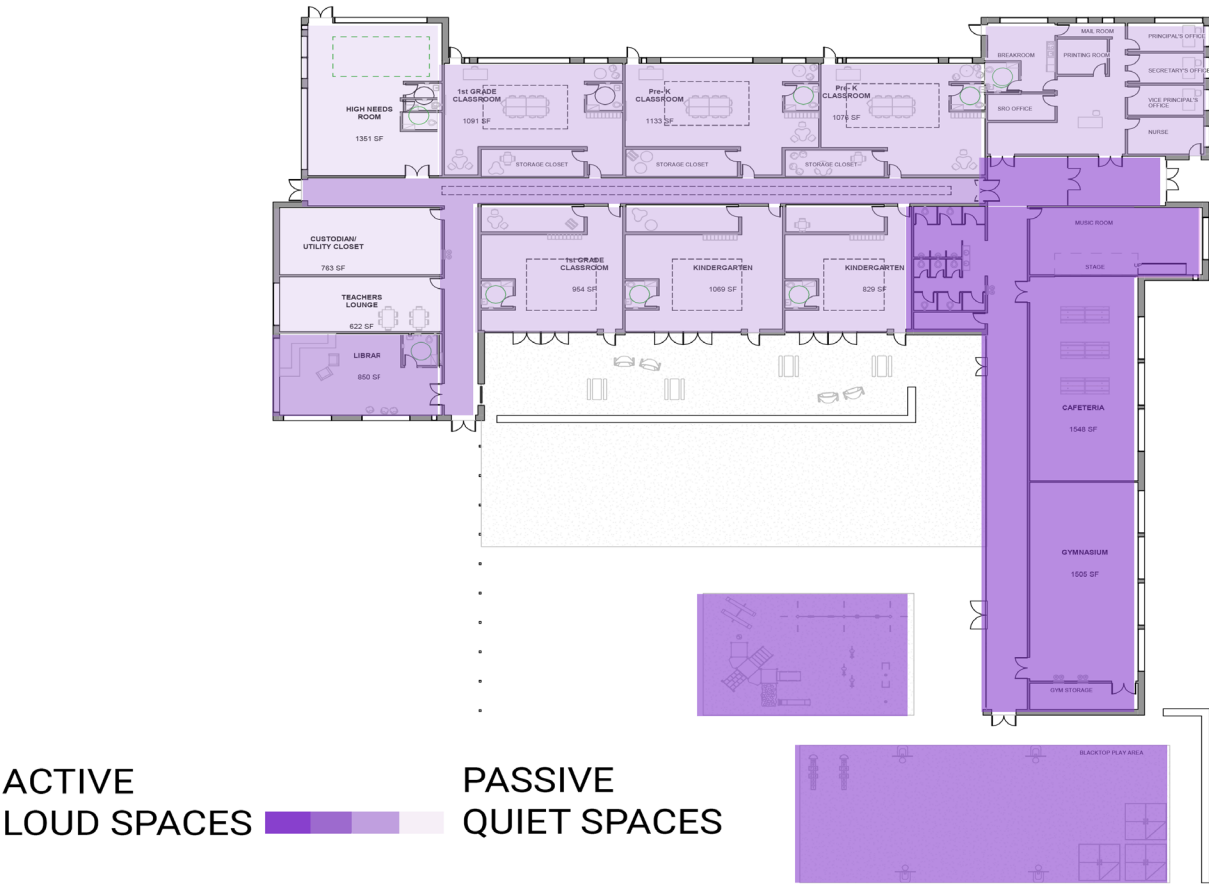
THE RELATIONSHIP BETWEEN INSIDE AND OUTSIDE



SITE ANALYSIS

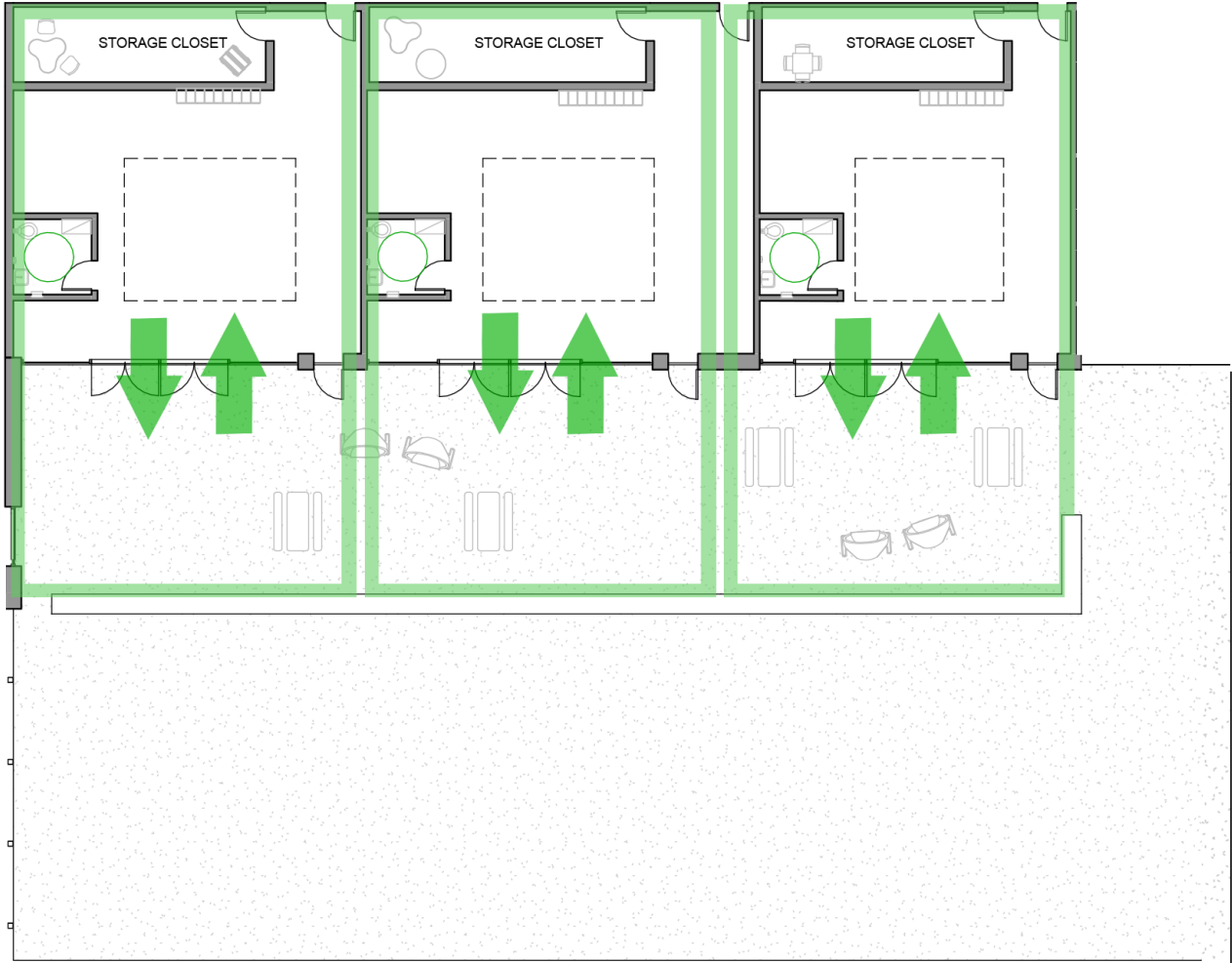


ACTIVE LOUD SPACES VS PASSIVE QUIET SPACES



The building's passive spaces are oriented towards the quietest part of the site, shielded by the loud active spaces.

INSIDE OUTSIDE RELATIONSHIP

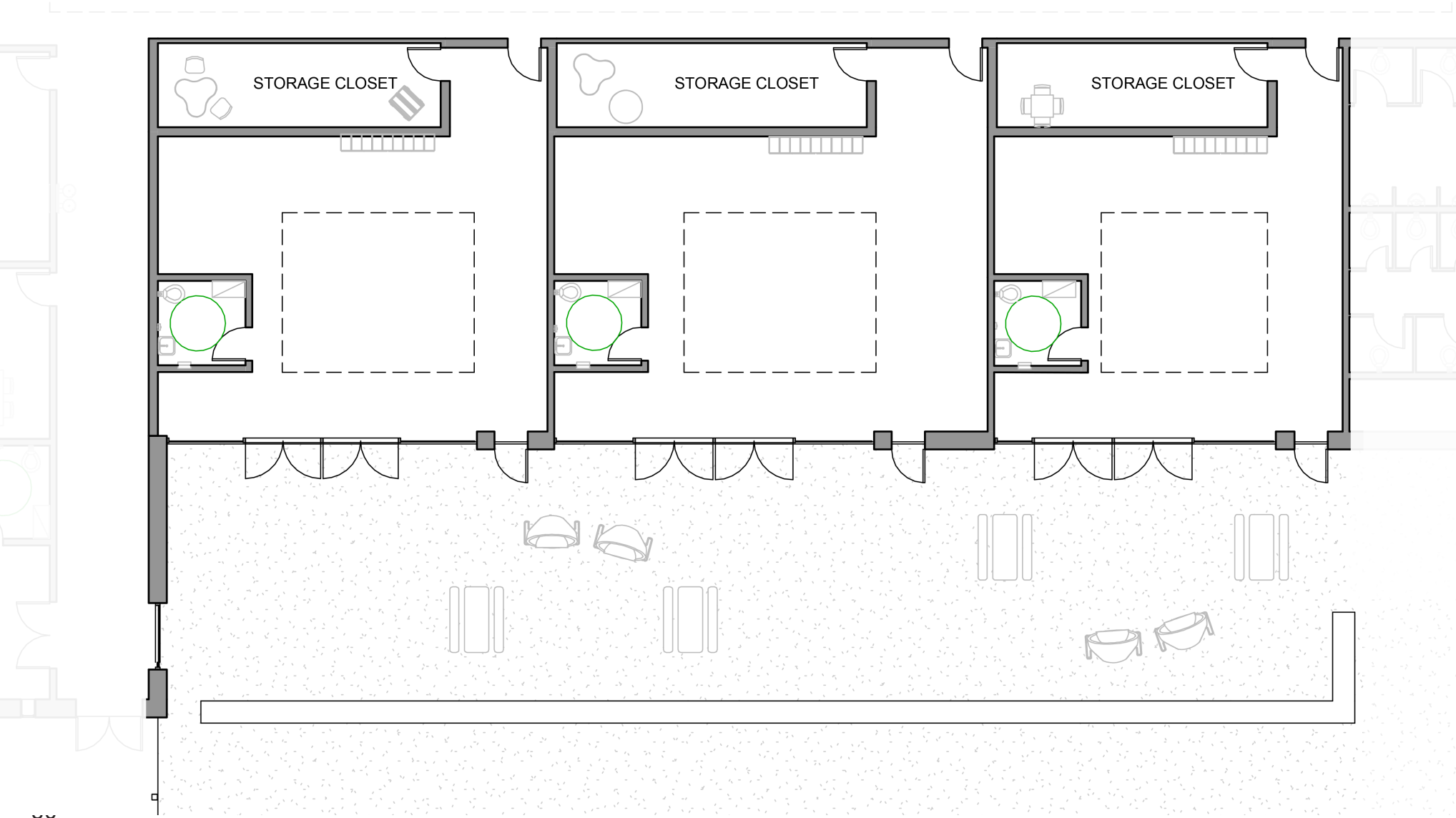


Three of the classrooms have large curtain walls that face the interior courtyard. This allows the class to explore the outside as the classroom puts into question the boundaries between inside and out.

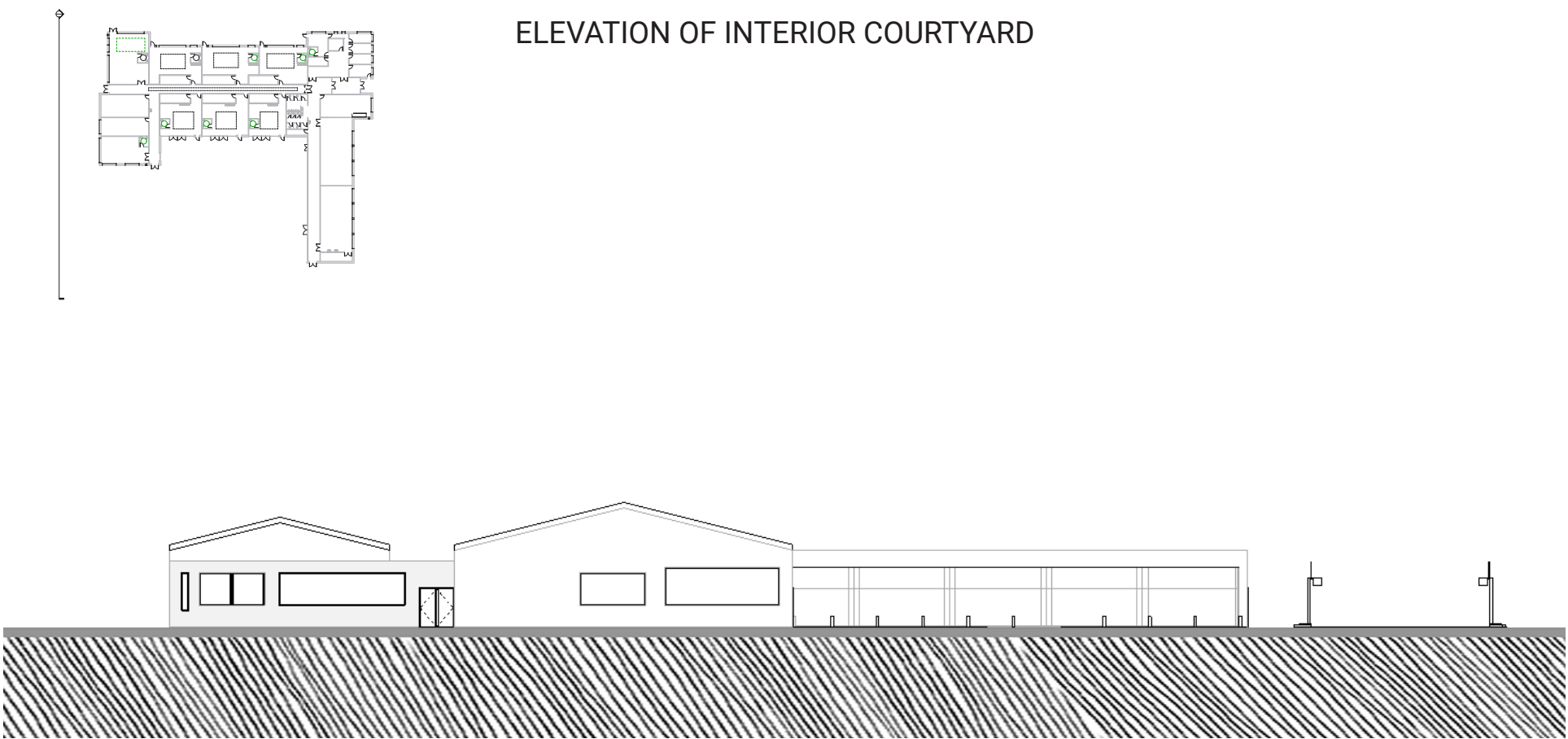


There are planters suggesting a second boundary to the classroom. The plants within the planters block the student's line of sight preventing distractions, while being short enough for a teacher to have a full line of sight.

CLASSROOM FLOOR PLANS



ELEVATION OF INTERIOR COURTYARD



DESIGN PROCESS LIGHTING SIMULATIONS



Natural daylight is the only lighting in this room. The light from the clerestory is dependent on the weather and time of date making this unreliable lighting. The lighting can not be adjusted for comfort or to accommodate various activities.



Interior can lights with a clerestory creates a very bright environment. The light provided by the clerestory is not adjustable and depends on the weather. The can lights provide a small percentage of the light but are adjustable.

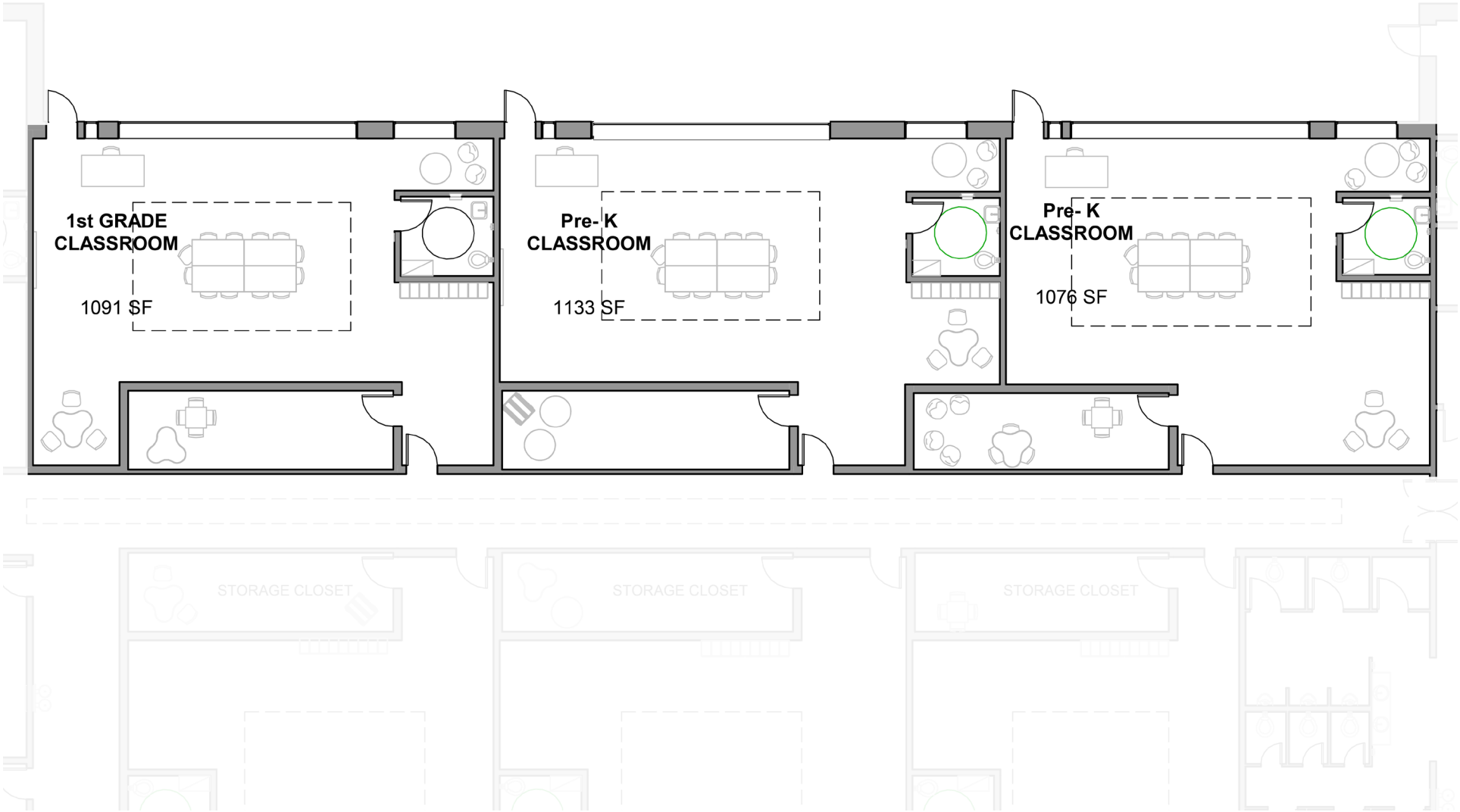


Interior can lights is too dark. Artificial light is adjustable for visual comfort and to accommodate various activities.

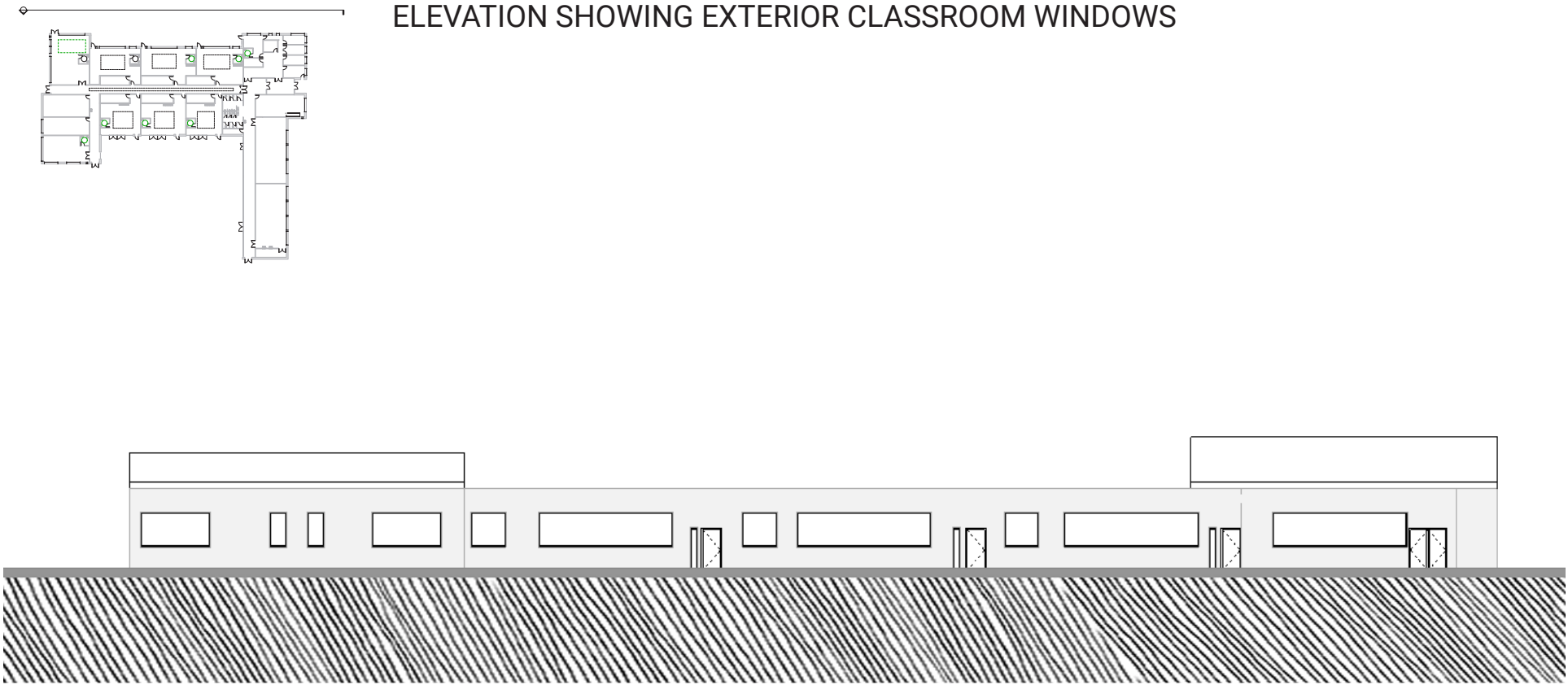


Interior can lights with area lights within the gathering area is adjustable to accommodate various activities and weather, making for the ideal classroom lighting. The bright task light in the center reinforces the sense of gathering.

CLASSROOM FLOOR PLANS

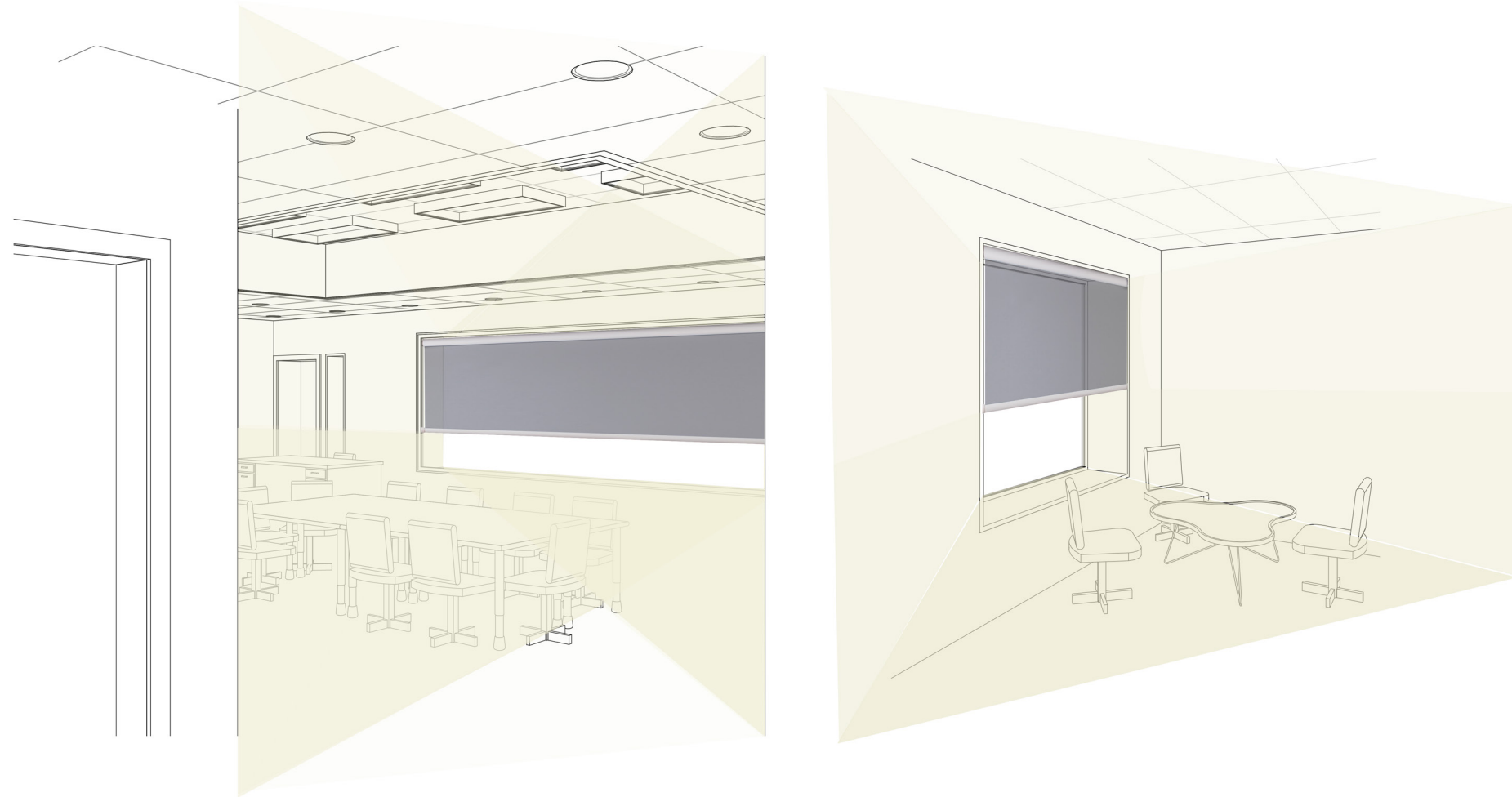


ELEVATION SHOWING EXTERIOR CLASSROOM WINDOWS



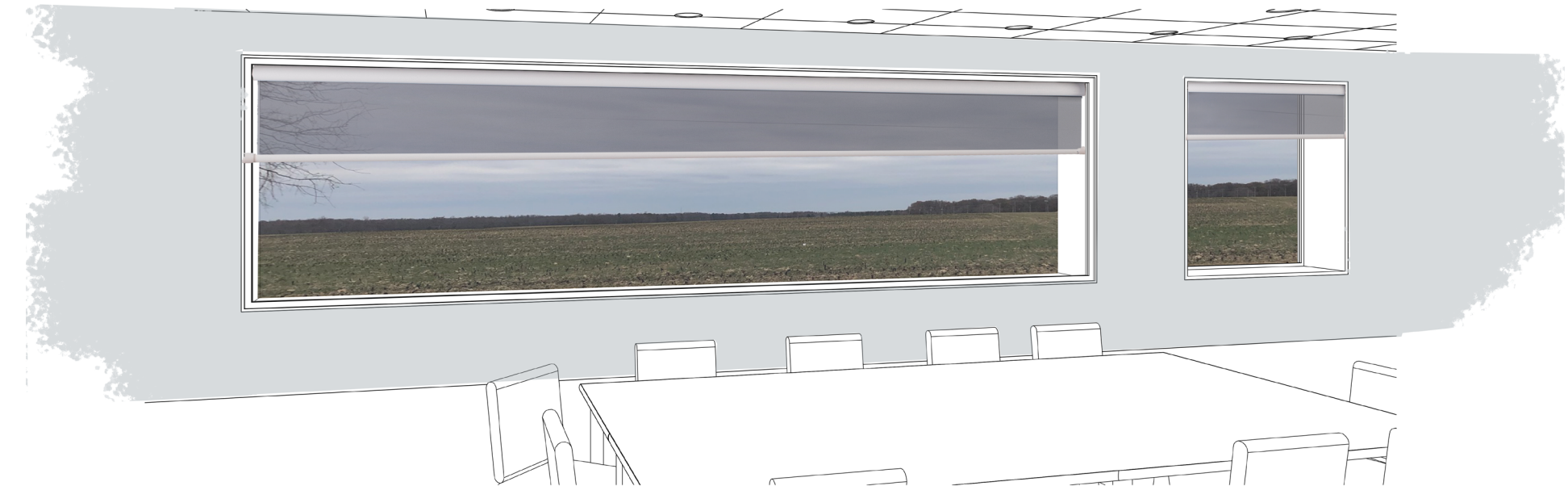
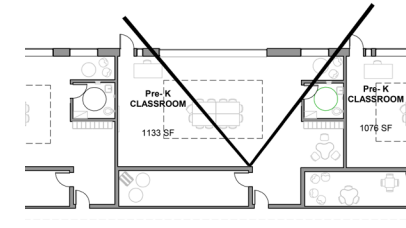
Three classrooms are on the quieter side of the building, shielded from the loud activities of the site. These classrooms are better suited for highly distracted students.

CLASSROOM LIGHT CONDITIONS



These classrooms receive bright, southern exposure that can be blocked out by adjustable window coverings.

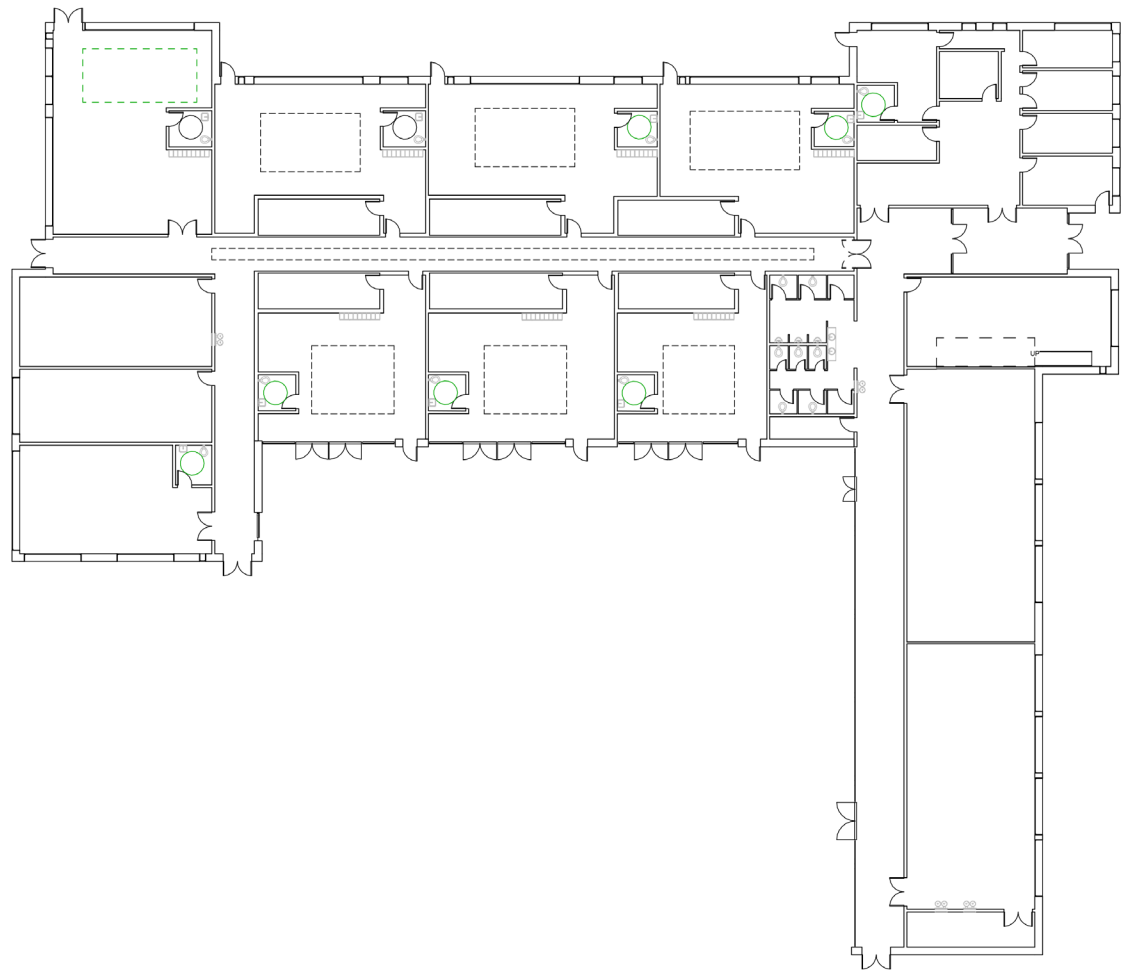
CLASSROOMS FRAMING VIEWS



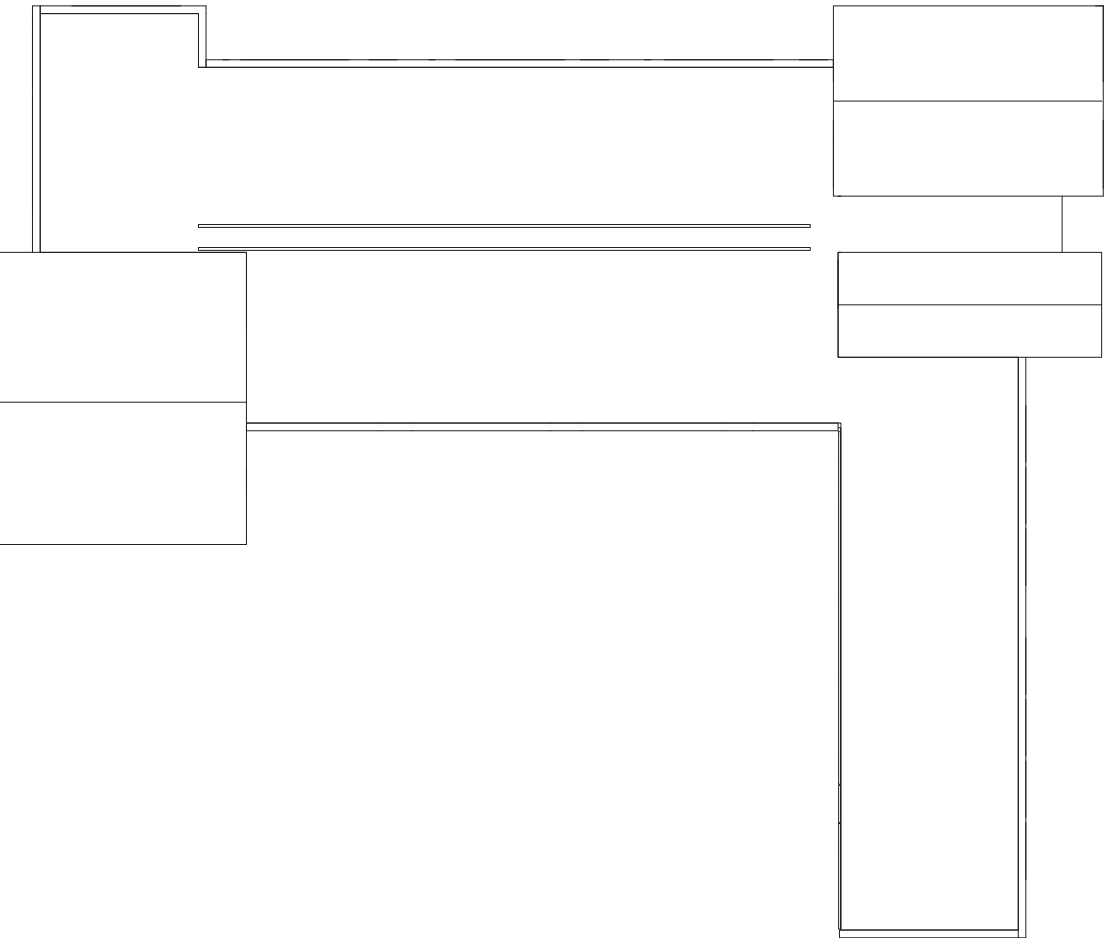
The windows frame the rural landscape as to provide a nice view, while not being too distracting.

ARCHITECTURAL DRAWINGS

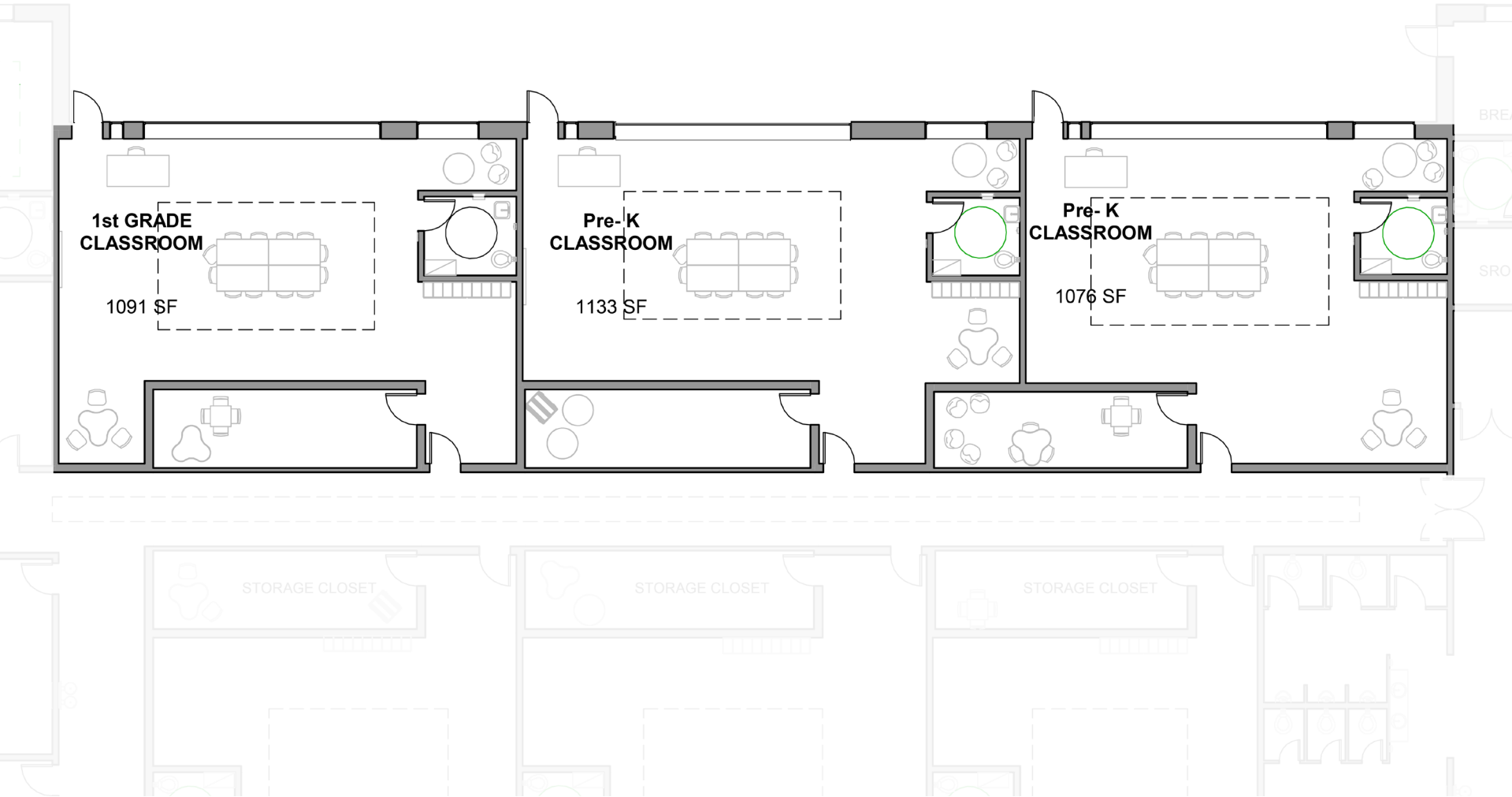
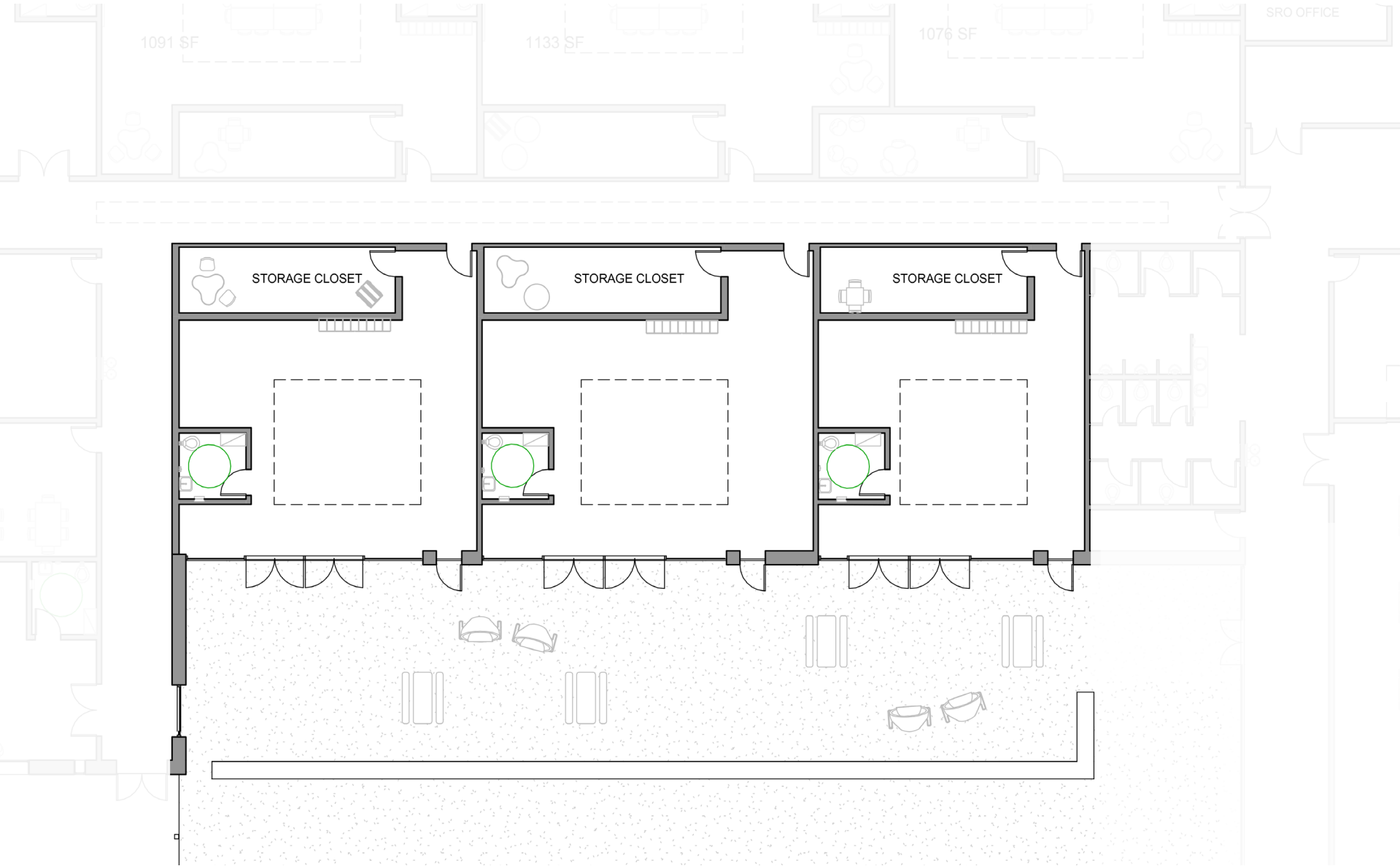
FLOOR PLAN



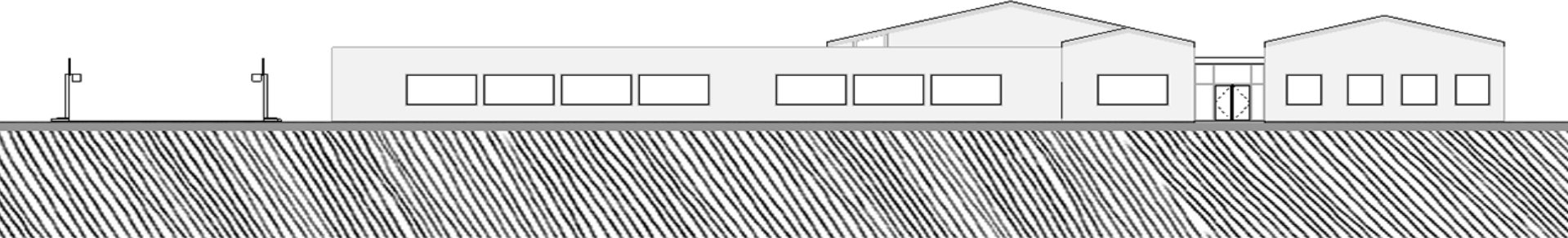
ROOF PLAN



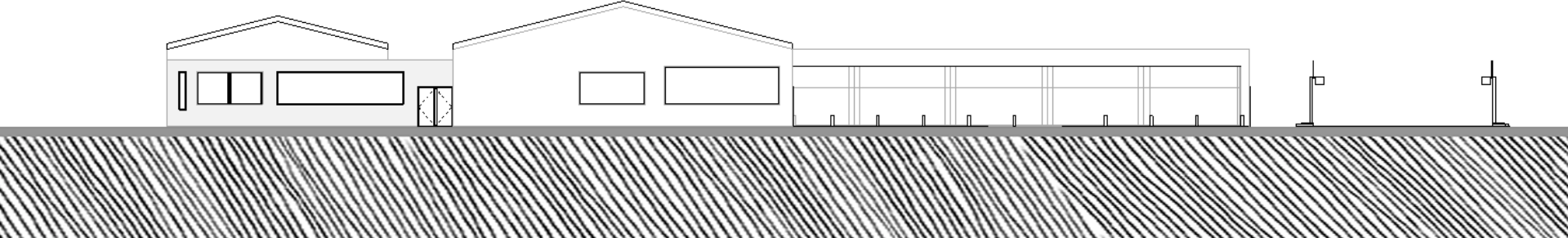
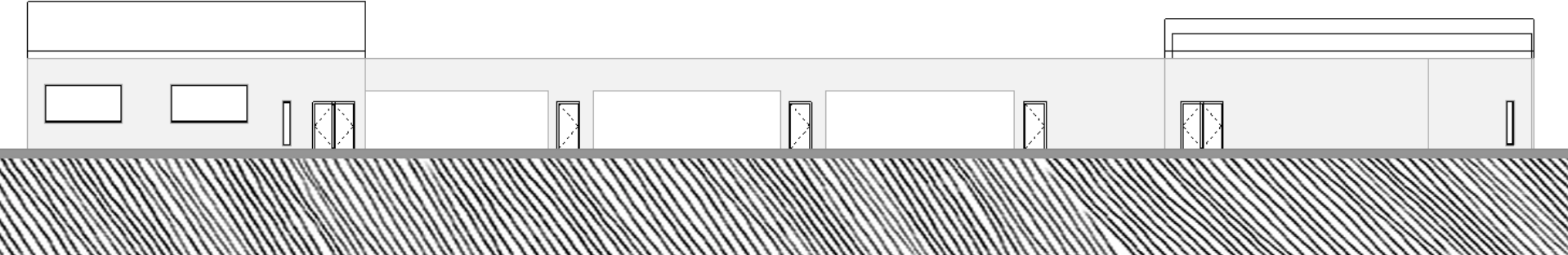
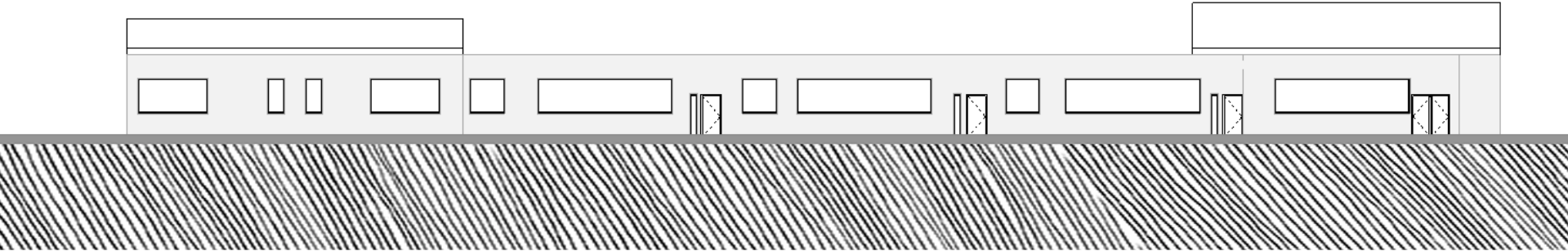
CLASSROOM FLOOR PLANS



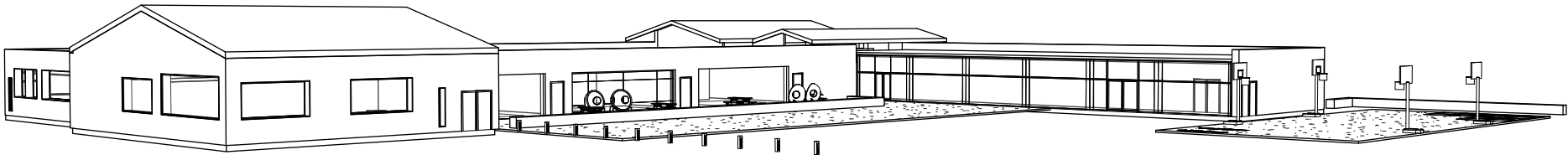
ELEVATIONS



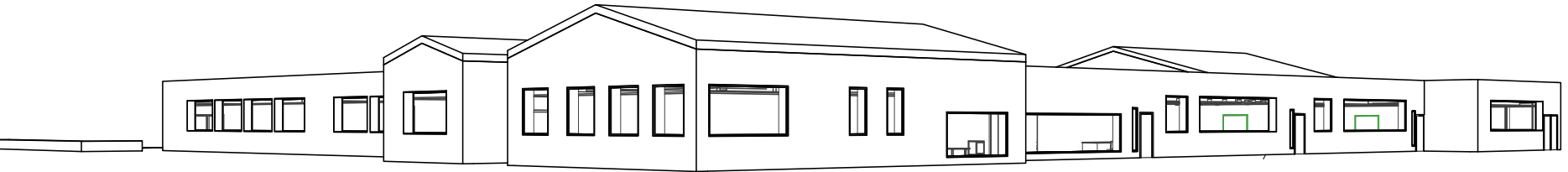
ELEVATIONS



PERSPECTIVES



PERSPECTIVES



BIBLIOGRAPHY

https://blog.brookespublishing.com/12-great-udl-quotes-to-pin-tweet-and-share/

https://www.myeasternshoremnd.com/times_record/schools/schematics-for-new-ges-building-approved/article_5ad42f12-7682-5a75-b952-1c61e-b3e5b30.html

https://ww2.montgomeryschoolsmd.org/departments/facilities/ada/

https://www.accessibleplayground.net/united-states/virginia/?doing_wp_cron=1644365899.4587979316711425781250

https://www.ppgpaints.com/paint-colors-for-autism

https://www.keyliteroofwindows.com/architects/cad-drawings/

https://www.quietrock.com/products

https://www.especialneeds.com/shop/furniture.html

https://www.schooloutfitters.com/catalog/default/cPath/CAT10_CAT186

https://files.eric.ed.gov/fulltext/ED573404.pdf

https://www.eleven-marketing.co.uk/blog/inclusivity-accessibility-difference#:~:text=Inclusiveness%20differs%20from%20accessibility%20in,that%20given%20environment%20or%20context.

https://blog.prototypr.io/inclusive-design-and-accessibility-50718a3ac768

https://www.bigtoys.com/product/elevated-sand-table

http://abadiaccess.com/ada-accessible-stairs/

https://www.floortrendsmag.com/articles/99615-choosing-flooring-products-for-education-settings#:~:text=Commercial%20carpet%2C%20vinyl%20sheet%20or,in%20classroom%20settings%2C%20expressed%20Tester.

https://www.lighting.philips.com/main/support/connect/lighting-technology/lighting-design-and-quality/how-glare-causes-visual-discomfort#:~:tex-t=Glare%20sources%20include%20windows%2C%20glossy,in%20candela%20per%20square%20meter.

“ADHD Light Sensitivity: The Link with Hypersensitivity & Sensory Processing.” TheraSpecs, www.theraspecs.com/blog/adhd-light-sensitivity-hyper-sensitivity-sensory-processing/#:~:text=Although%20any%20type%20of%20light,sensory%20processing%20disorders%20or%20hypersensitivity.

Alescia Ford-Lanza MS OTR/L, ATP. “Sensory Lighting - What Helps and What Doesn’t.” Harkla, Harkla, 6 June 2019, harkla.co/blogs/special-needs/sensory-lighting.

Henry, Christopher N. “Designing for Autism: Lighting.” ArchDaily, ArchDaily, 19 Oct. 2011, www.archdaily.com/177293/designing-for-autism-light-ing.

“Light Sensitivity and Autism Spectrum Disorder.” TheraSpecs, www.theraspecs.com/blog/light-sensitivity-autism/.

“Why Is Classroom Design so Important – and How Can You Make Changes to Yours?: Latest News.” Edu, www.edu-quip.co.uk/blog/why-is-class-room-design-so-important.

Johnathan Mooney quote

