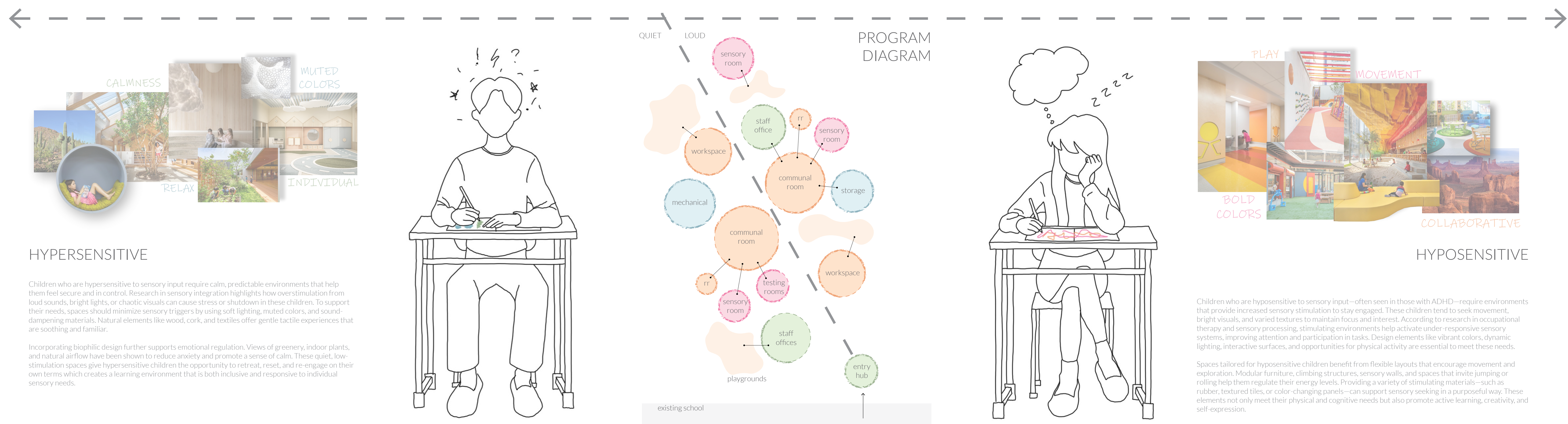
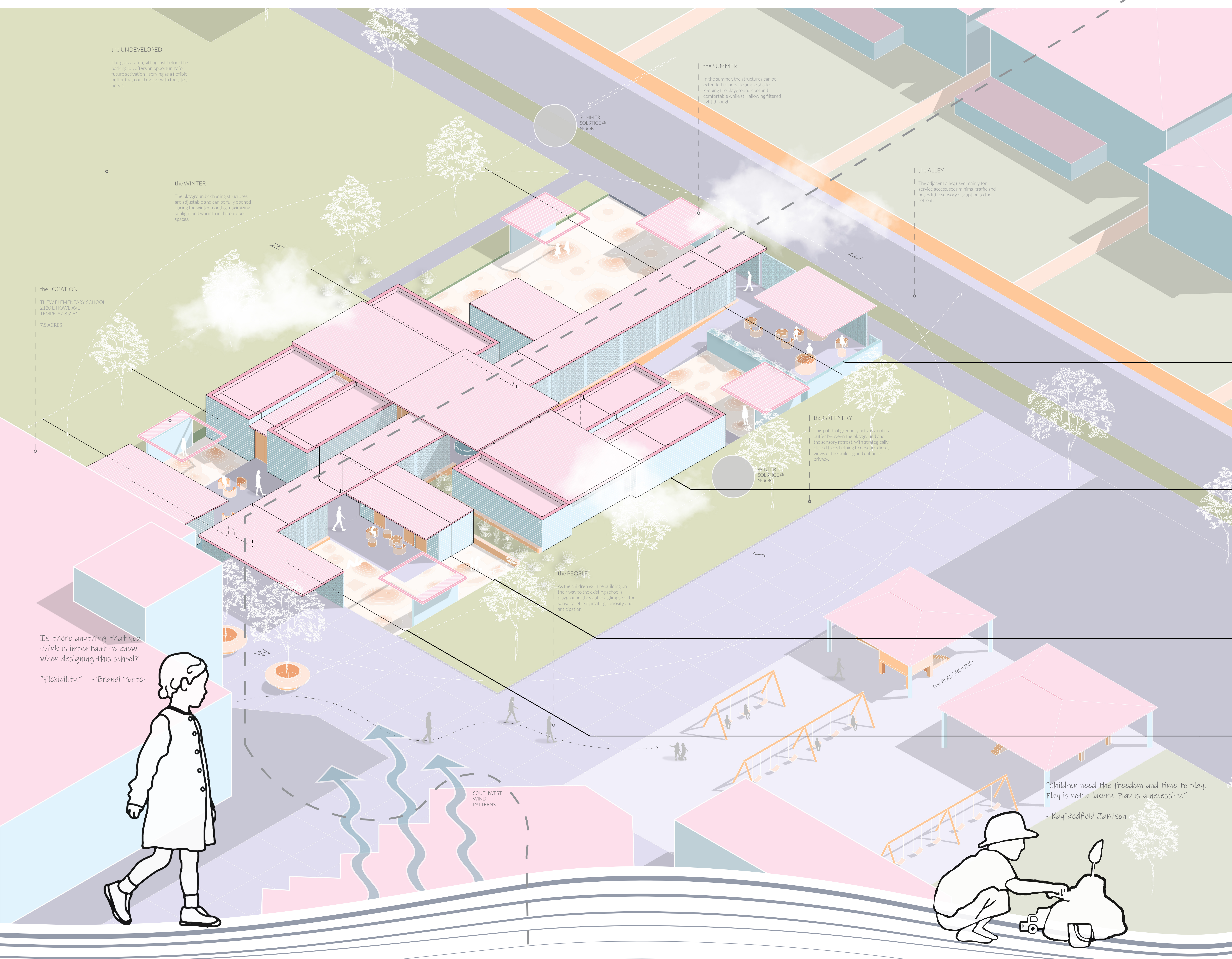
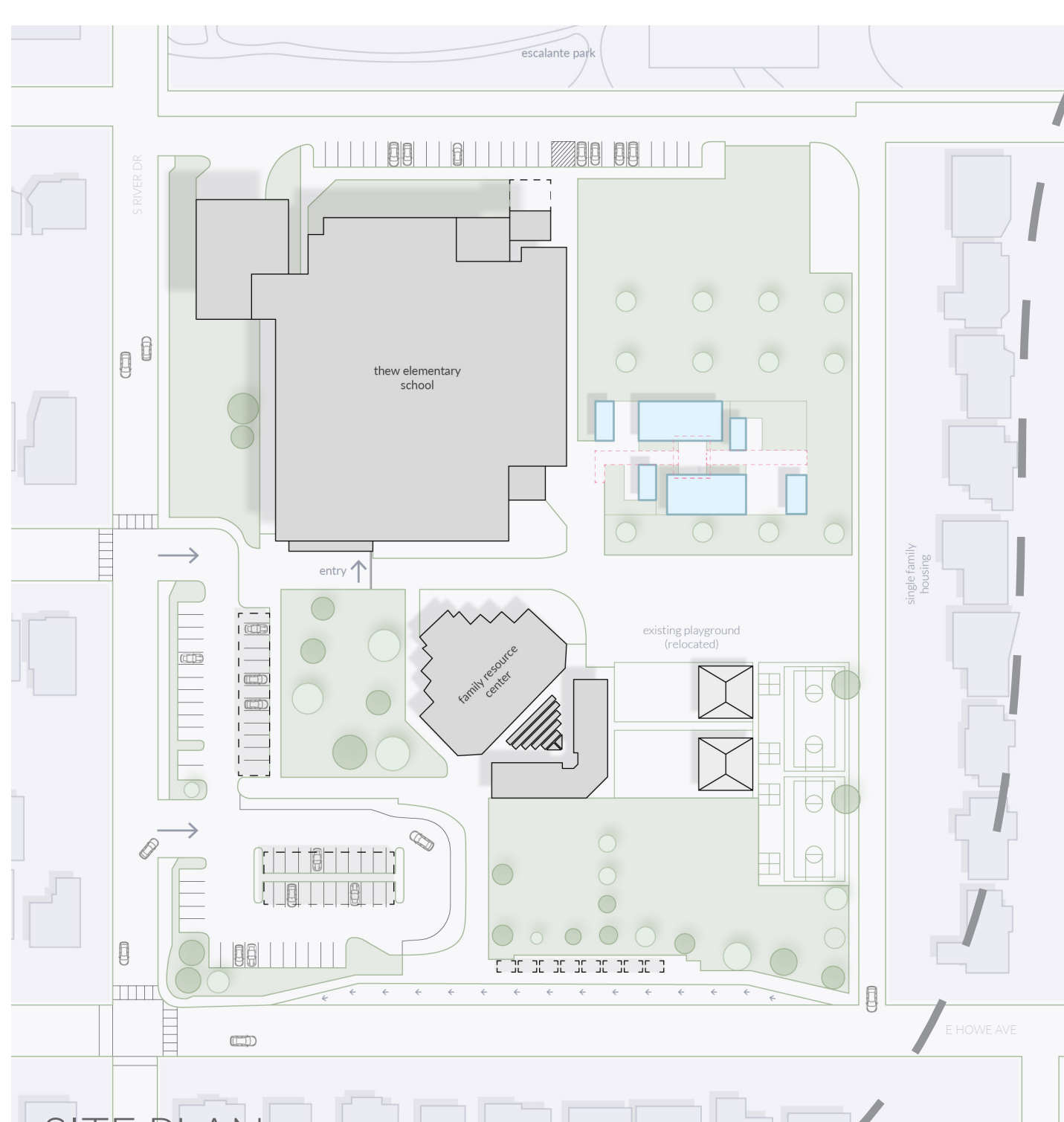
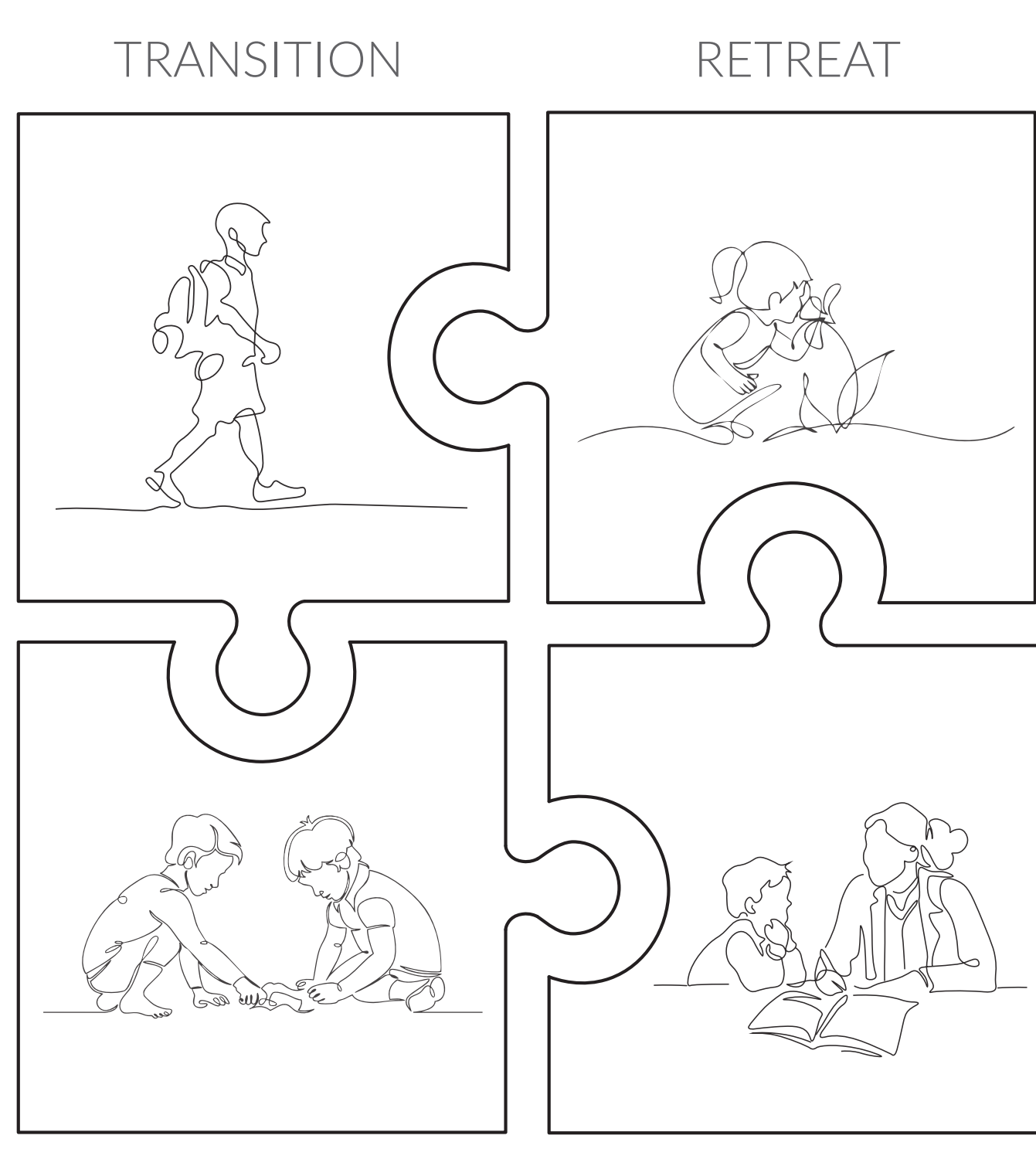
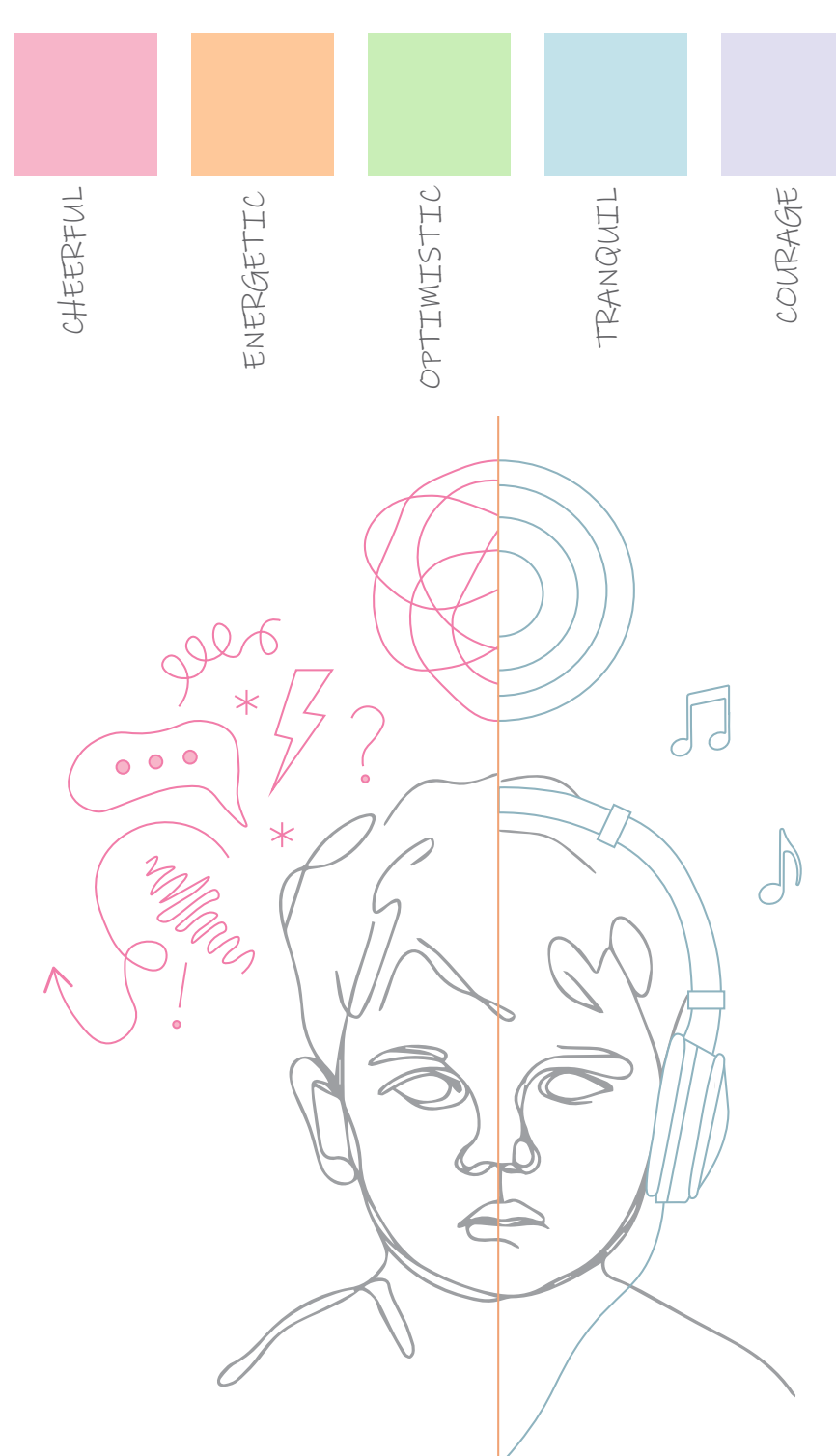


SENSORY RETREAT FOR INCLUSIVE EDUCATION

This project proposes a sensory-centered school extension for Thew Elementary School in Tempe, Arizona, specifically designed for elementary-aged children with learning disabilities such as ADHD and autism. These students often struggle in traditional educational environments that lack the flexibility and sensory support they need to thrive. The proposed design addresses this by incorporating adaptable spaces that respond to a range of sensory needs from calming, low-stimulation zones to more active and stimulating environments. Programmatic elements include flexible workspaces, the sports sensory rooms, communal gathering spaces, and an outdoor playground that encourages both exploration and self-regulation.

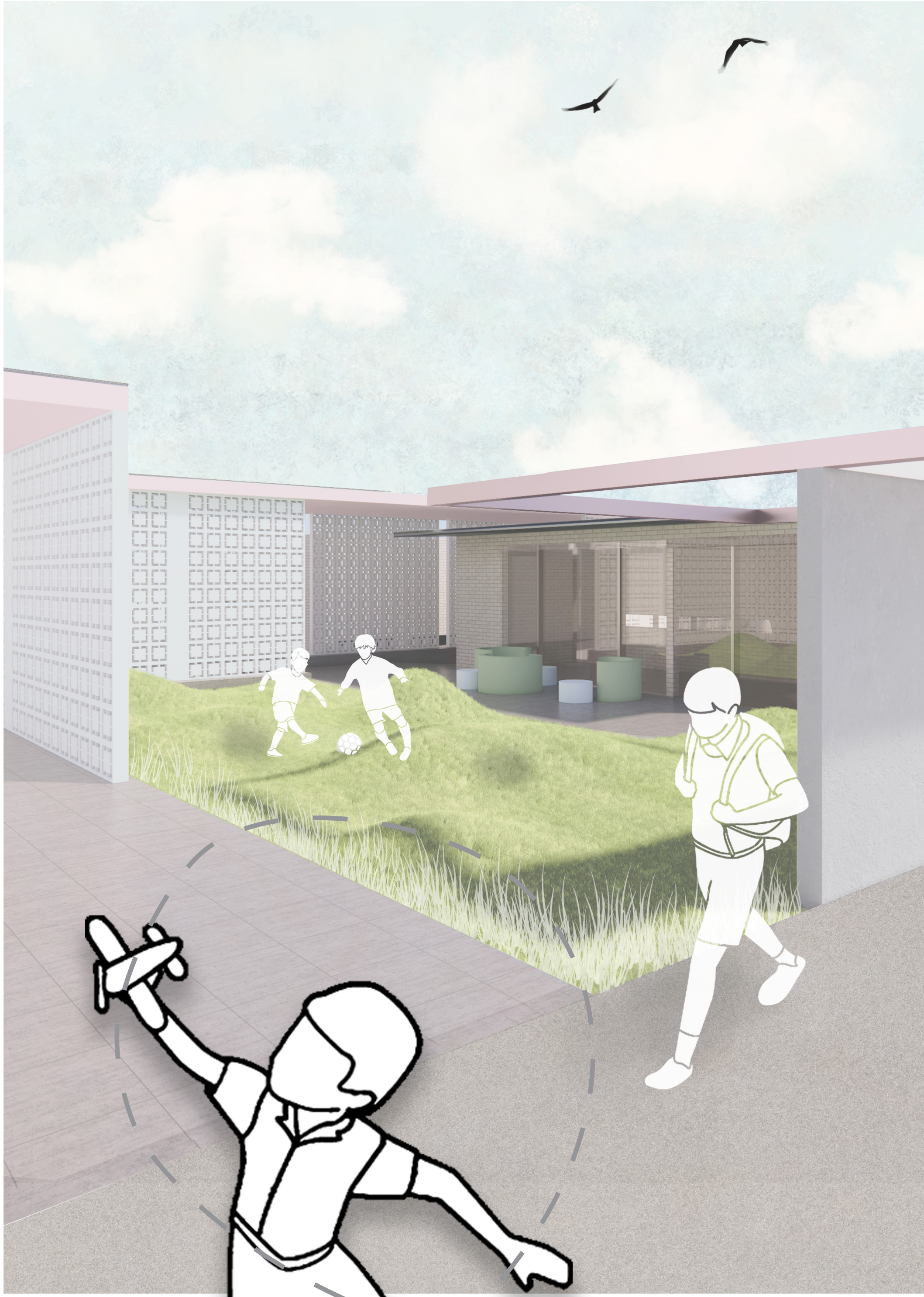
Thew Elementary, located in a socioeconomically disadvantaged area with limited access to educational and mental health resources, reflects the urgent need for environments that support neurodivergent learners. With a student population of 600 and only 25 teachers, many classrooms are overcrowded and under-resourced, contributing to high rates of absenteeism, especially among students receiving special education. This project not only provides a physical retreat for overwhelmed students, but also aims to bridge systemic gaps by creating an equitable, inclusive environment that improves mental health, reduces stress, and increases student engagement.

Rooted in the local historical, cultural, and environmental context of Tempe, the design incorporates natural materials, biophilic elements, and community-informed strategies to reflect the values of the surrounding neighborhood. Environmental interventions, such as microclimate control, thermal comfort, and adaptable furniture, further enhance the comfort and usability of the space. Ultimately, the project is more than a physical intervention; it is a tool for educational justice and emotional well-being, supporting children in developing the confidence, focus, and sense of belonging they need to succeed in and beyond the classroom.



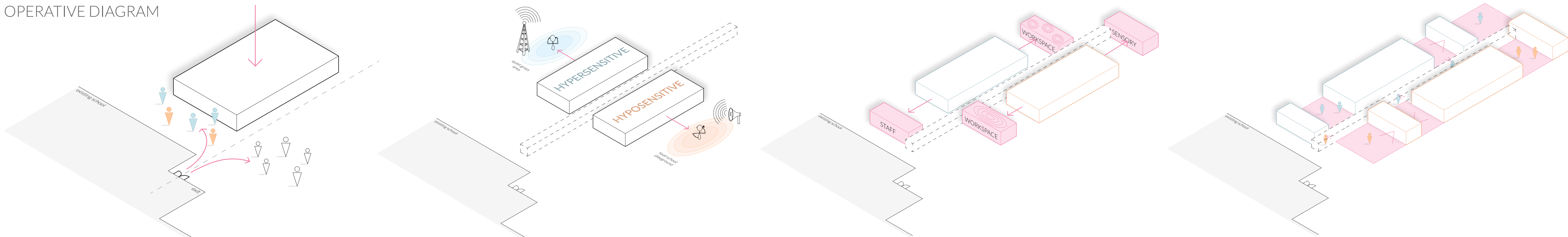
PROGRAMMATIC GOALS

- 1 DESIGN SENSORY SPACES FOR INDIVIDUAL REGULATION**
Specifically designed to support children in regulating focus by providing a calm, controlled environment when they become overwhelmed, overstimulated, or distracted, promoting emotional regulation and concentration.
- 2 CREATE FLEXIBLE SPACES FOR LEARNING**
A balanced mix of collaborative and individual time is essential when working with children with learning disabilities, as it supports both social development and personalized learning, allowing each child to engage in ways that suit their unique needs and processing styles.
- 3 PROVIDE PASSIVE AND ACTIVE EXPLORATIONS**
A thoughtful balance of interactive spaces for physical activity and secluded zones with calming views of nature supports both the social and sensory needs of children with learning disabilities. This spatial diversity encourages movement and engagement while also offering quiet moments for reflection, regulation, and individualized focus.
- 4 ENHANCE ACCESSIBILITY AND WAYFINDING AROUND THE SITE**
To ensure seamless access when needed, the design incorporates clear pathways and an intuitive, easy-to-navigate layout that supports independence, reduces stress, and allows children and staff to move through the space with confidence and ease.



"If you've met one person with autism, you've met one person with autism."
- Dr. Stephen Shore

OPERATIVE DIAGRAM



step one | the POSITION

The building is positioned offset from the elementary school exit.
WHY?
The building's placement takes into account two groups of students exiting the school: one heading to the playground and the other to the retreat area. By offsetting the building, I've created a direct and seamless path to both spaces, ensuring easy access to both the playground and the retreat, allowing for a smooth flow of movement between the two.

step two | the IDENTIFICATION

Identify the two primary program masses based on the research.
WHY?
The placement of the program masses is strategically informed by site analysis. Hypersensitive areas are located in the quieter zones to create a calming atmosphere, while hyposensitive areas are placed in the more active, lively zones to provide the necessary stimulation and engagement for students.

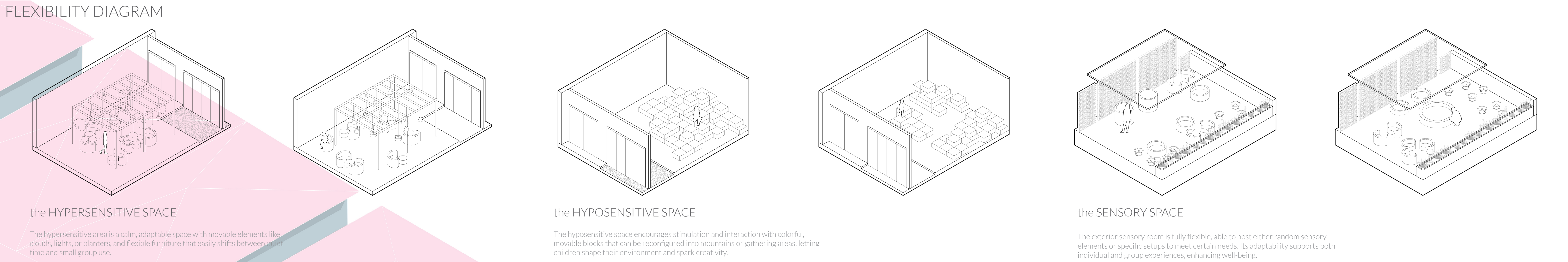
step three | the DISPERSE

The program is dispersed across the site.
WHY?
The layout intentionally breaks up the program to allow for strategic placement based on function and user needs. For example, staff areas are positioned near the entrance for effective monitoring of space access, while workspaces are thoughtfully separated to promote focus and reduce distractions, ensuring a more productive and organized environment.

step four | the GREENERY

Greenery is strategically placed between the buildings.
WHY?
The integration of greenery serves to connect the site, reinforcing a biophilic design that promotes natural well-being and a strong connection to the environment. Three distinct landscape forms—ground planting, elevated planters, and playable surfaces—offer varied sensory experiences while unifying the site through nature.

FLEXIBILITY DIAGRAM



the HYPERSENSITIVE SPACE

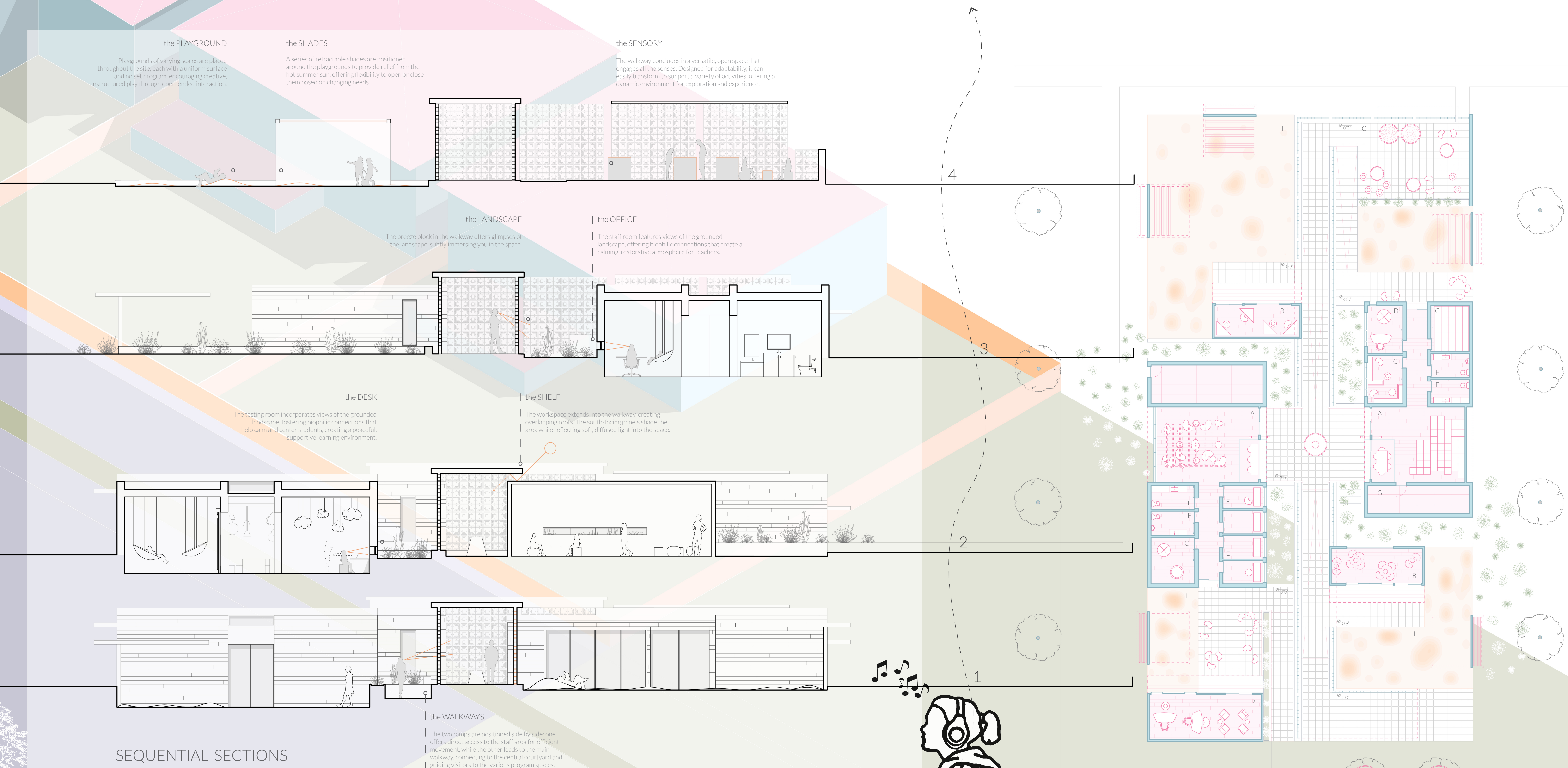
The hypersensitive area is a calm, adaptable space with movable elements like clouds, lights, or planters, and flexible furniture that easily shifts between quiet time and small group use.

the HYPOSENSITIVE SPACE

The hyposensitive space encourages stimulation and interaction with colorful, movable blocks that can be reconfigured into mountains or gathering areas, letting children shape their environment and spark creativity.

the SENSORY SPACE

The exterior sensory room is fully flexible, able to host either random sensory elements or specific setups to meet certain needs. Its adaptability supports both individual and group experiences, enhancing well-being.



SEQUENTIAL SECTIONS

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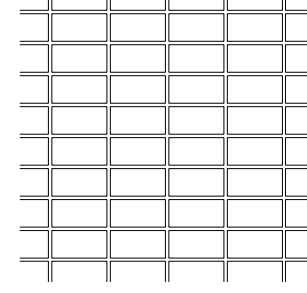
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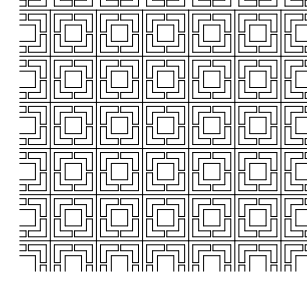
MATERIALITY

SPLIT FACE BLOCK



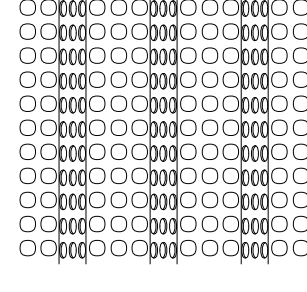
Split face block serves as the main structural and exterior material, offering durability while visually tying the project to the existing school's architecture.

BREEZE BLOCK



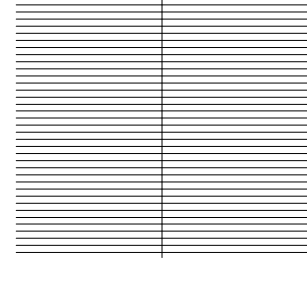
Patterned breeze blocks line the walkway, diffusing light and adding visual and tactile interest. Inspired by Hispanic architects, they reflect the area's cultural context.

PERFORATED METAL



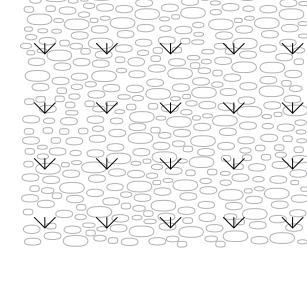
Perforated metal is featured at the center of the main space, offering both structural support and diffused light. It also allows for natural airflow, with wind passing through and being released upward.

CORRUGATED METAL



Corrugated metal is used for the roofing for its durability, weather resistance, and cost-effectiveness, while also adding visual texture to the design.

CORK FILL TURF



Cork-filled turf is used for the playground for its sustainability and softness, providing a safe surface for children to fall on or lay down comfortably.

MICROCLIMATE

In my project, I've implemented four key environmental strategies to create a comfortable and engaging microclimate for the children. First, the BREEZE BLOCK diffuses light and allows wind to pass through, providing natural ventilation and offering flexibility to open or close them based on changing needs. Second, the overhanging corrugated METAL PLANE diffuses light while maintaining an open feel, ensuring the space stays cool and inviting. Third, a FOUNTAIN is strategically placed in the sloped area, where it helps cool the space by drawing in hot air and releasing it in a more refreshing form. Additionally, NATURAL MATERIALS like a sand pit and landscaping allow nature to thrive, enhancing the environment and supporting a calming, restorative experience. Creating this microclimate is essential for providing a positive and sensory-rich environment that nurtures the well-being of the children.

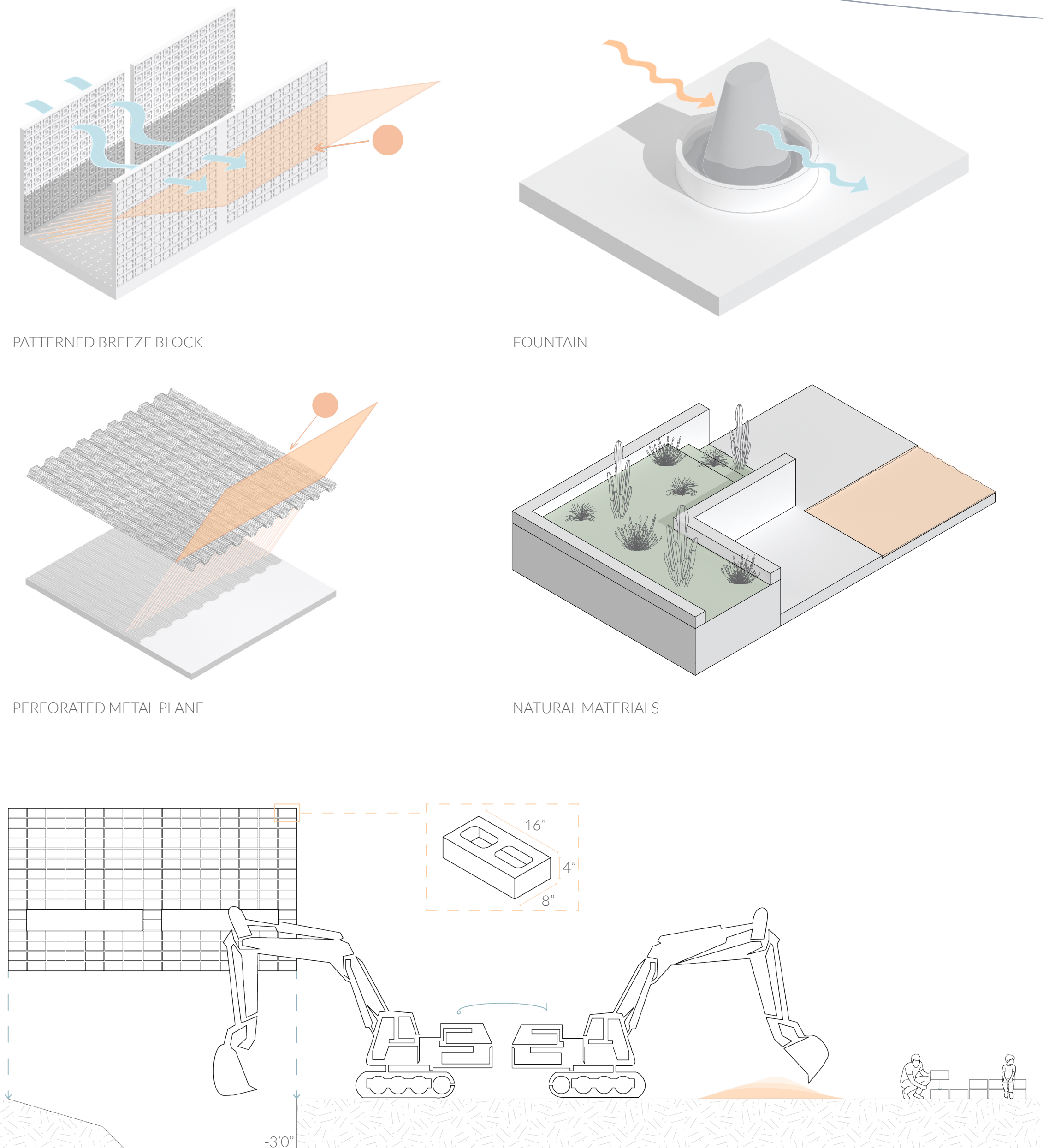
WASTE MANAGEMENT

The project minimizes waste by using 8 inch SPLIT FACE BLOCKS as the standard for all wall dimensions. Leftover blocks can be repurposed for TEMPORARY SEATING or other flexible uses, aligning with the adaptable nature of the space. Additionally, the 3-foot excavation provides soil that will be reused to create MOUNDS in the playground, reducing the need for external materials. This approach not only cuts down on waste but also fosters a circular design process, ensuring materials are repurposed within the project to enhance both sustainability and functionality.

THERMAL COMFORT

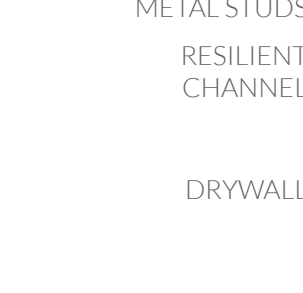
Thermal comfort is achieved through passive design and material choices. Split face block walls are paired with INSULATION, with extra insulation on the sun-exposed south and west sides to reduce heat gain. Microclimate elements like breeze blocks and perforated metal panels allow AIRFLOW while diffusing sunlight. A central fountain cools rising air, and natural materials like sand and planting contribute to passive cooling. These strategies work together to maintain comfortable temperatures indoors and outdoors year-round.

ENVIRONMENTAL QUALITIES



MATERIALITY

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BREEZE BLOCK



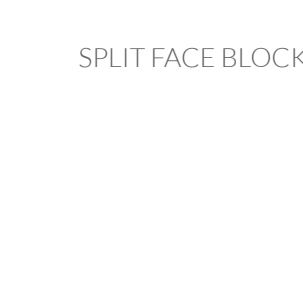
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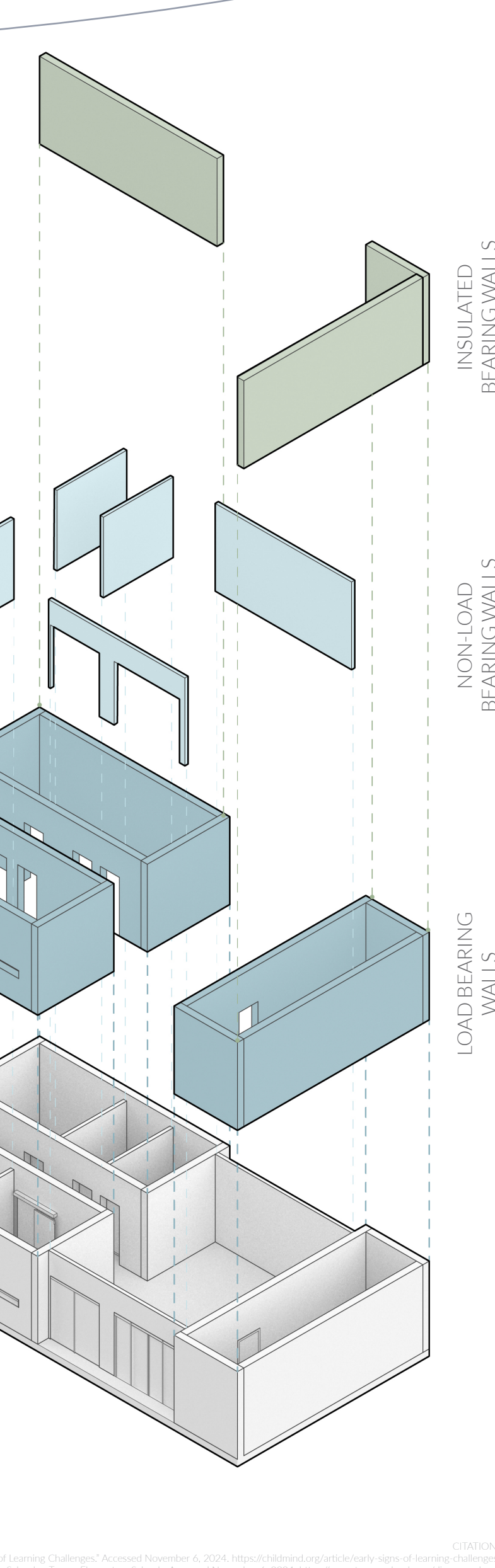
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ENVIRONMENTAL QUALITIES



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