ASPIRATION TO REALITY:
Designing Spaces for Students with Severe Impairments

ASSOCIATION FOR LEARNING ENVIRONMENTS | 2024 SOUTHEAST REGION CONFERENCE

LEARNING OBJECTIVES

Identify **challenges inherent to planning and designing** a school for students with complex medical conditions and severe intellectual, physical, emotional, hearing, vision, and learning impairments.

Identify key **stakeholders to engage** during planning stages to build partnerships within the community.

Identify educational space **programming and design requirements** specific to students with disabilities.

Identify **budget challenges** associated with designing a special needs school.

AIA

SPEAKERS

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Deputy Director
myFutureNC

Allison Shockley, AIA
Education Practice Leader
Becker Morgan Group

Deanne Meadows, Ed.D.
Superintendent
Columbus County Schools

PARTICIPATION QUESTION #1

UNITED BY DESIGN
BRIDGING STATES FOR BETTER LEARNING ENVIRONMENTS
APRIL 22 - 24
LEARNING ENVIRONMENTS
Enhancing the Educational Experience

Join at menti.com | use code 6621 6024

What is your role in educatio facilities?

fast bold creative

PARTICIPATION QUESTION #2

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LEARNING ENVIRONMENTS
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What characteristics or consider space make you most comfortab learning?

leader transpiration

FEDERAL & STATE REGULATIONS

Federal law protecting **students** (birth-21) with disabilities:

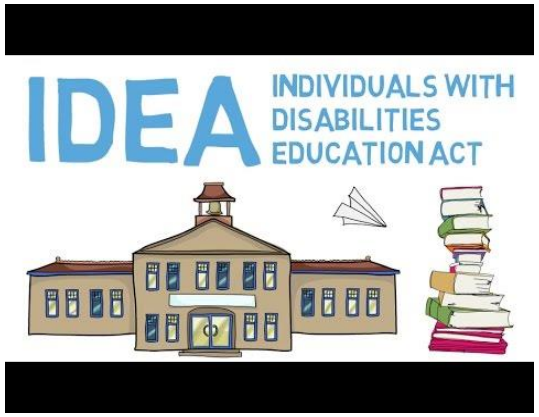
- Individuals with Disabilities Education Act (**IDEA**)
- Guiding Principle: Students with disabilities are general education students first.
- Requirement: Least Restrictive Environment

State law protecting **students** (birth-21) with disabilities vary (can be more restrictive).

Federal law protecting **all individuals** with disabilities (regardless of age):

- Rehabilitation Act | **Section 504**
- Americans with Disabilities Act (**ADA**)

DISABILITY RIGHTS NORTH CAROLINA



ADA
Americans with Disabilities Act

STUDENT POPULATION

Population served?

- Students aged **0-21** yrs.
- Complex **medical conditions**.
- Severe intellectual, physical, emotional, hearing, vision, and learning impairments.

Who could be Eligible for IDEA?

Autism | Deaf-blindness | Deafness | Emotional Disturbance
Hearing Impairment | Mental Retardation | Multiple Disabilities
Orthopedic Impairments | Specific Learning Disability
Speech or Language Impairment | Traumatic Brain Injury
Visual Impairment Including Blindness

STUDENTS WITH DIVERSE ABILITIES & NEEDS

INSTRUCTIONAL ENVIRONMENTS

Individualized Education Plan (IEP) team determines educational placements based on the Least Restrictive Environment for each student.

Placements are based on the amount of time students are removed from non-disabled peers.

Examples of Educational Placement Options on an IEP:

- **Regular Setting**
- **Resource Setting**
- **Separate Setting**
- **Home/Hospital Setting**
- **Public Separate School**
- **Private School (At Public Expense)**

STATISTICS | 2021

Students served under IDEA:

- **3%** enrolled in **separate schools** (either public or private) specifically designed for students with disabilities: **216,000 of 7.2 million** receive special education services.
- **1%** placed by their parents in regular **private schools**.
- **<1% homebound**, **hospitalized**, or in separate **residential facilities** both public and private.
- **95-96%** in **public schools**.
- **2/3** of the **7 million** students with disabilities **spend 80% or more** of their time in regular classrooms.
- Students with disabilities who are **fully included** in general education are **11% more likely** to be employed after high school.

ASPIRATIONS

- All students have an **equal opportunity** to learn.
- **Programming** is based on academic, physical, social, and emotional needs of students.
- **Stakeholders** include administrators, teachers, service providers, support staff, students, and parents.
- Zip codes do not determine **access to services**.
- Schools are **flexibly designed** for engagement and instruction.
- **Funding** does not limit programming requirements.

PARTICIPATION QUESTION #3

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What elements should be considered when designing schools for students with disabilities?

DESIGN CONSIDERATIONS

Inclusivity & Accessibility

Flexible Learning Spaces

Sensory Considerations

Visual & Auditory Impairments

Outdoor Spaces

Technology Integration

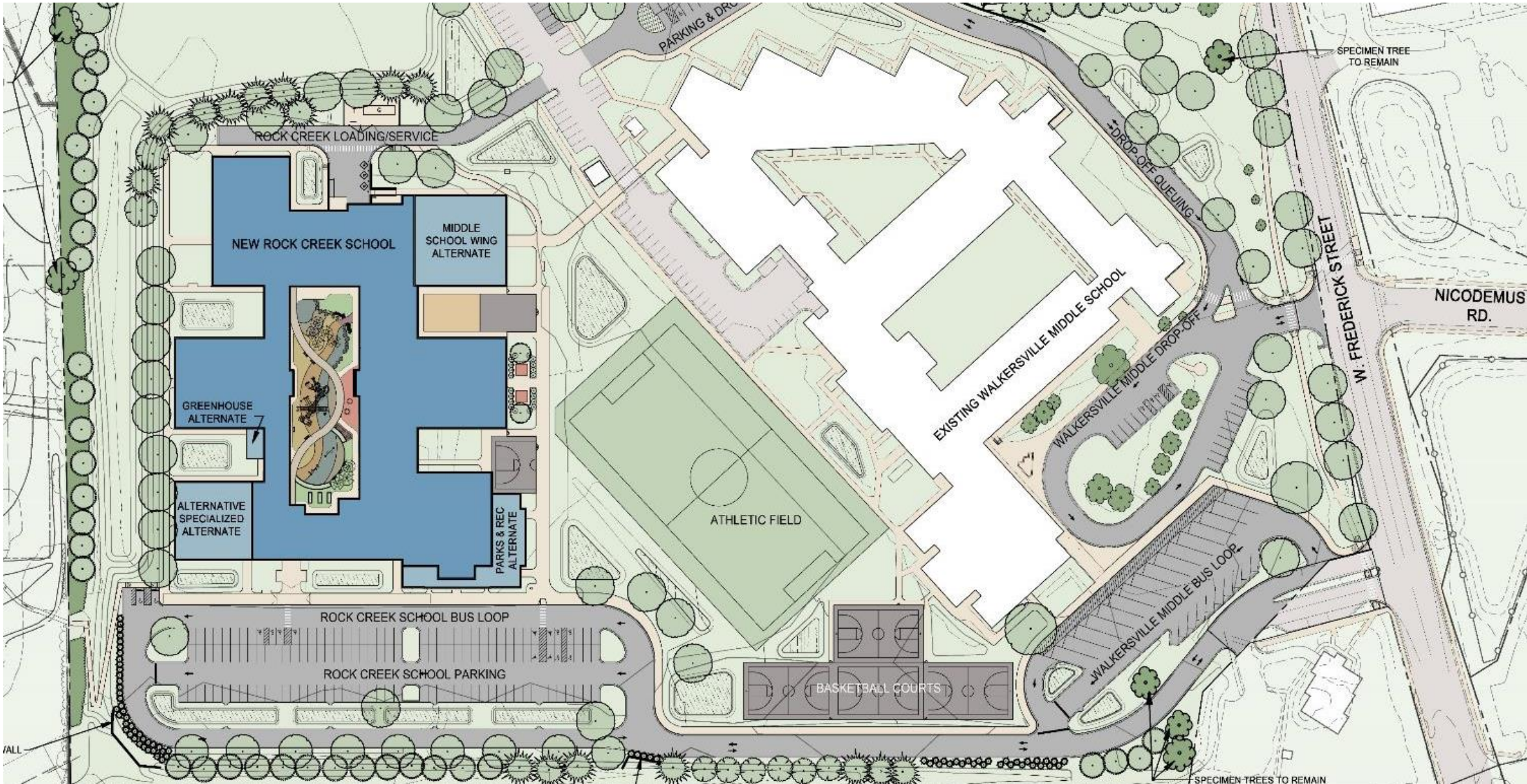
Health & Well-Being

Security

Site Access & Design

Programming

CASE STUDY: PRINCIPLES IN ACTION



PRINCIPLES IN ACTION: ROCK CREEK SCHOOL

Community Environment

Rock Creek FAMILY

Individualized Special Education | Ages 3-21

Staff is Vital and Dynamic

Pride in Learning Environment

PRINCIPLES IN ACTION: ROCK CREEK SCHOOL

Inclusive Opportunities	Provide **purposeful inclusive opportunities** for meaningful engagement with age-appropriate peers from other schools and the supporting communities.
Communication	Create **pervasive opportunities for communication** which are integrated throughout the school day.
Student Engagement	Maximize student engagement in daily life via **opportunities for self-expression and individual choice.**
Movement	Support **freedom of movement and ease of movement** for all capacities and age groups – within personal space and throughout public spaces.
Sensory	Provide a **multi-sensory, flexible environment** that offers students individual control of, and access to, a full spectrum of sensory engagement in learning.
Independence	Foster **maximum independence** in authentic activities of daily living in vocational opportunities and in education.
Responsiveness	Accommodate individual learner abilities and needs via a **flexible, adaptable learning environment.**
Continuous Learning	Support continuous improvements in teaching and learning via provisions for **professional development, family support and collaboration.**

INCLUSIVITY & ACCESSIBILITY

IDEA emphasizes inclusive education for students with disabilities to accommodate diverse need range.

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Challenge:

Providing classrooms, shared spaces, and support service areas accessible to, adequately sized, and accommodating program needs for students with and without physical, sensory and mobility impairments.

INCLUSIVITY & ACCESSIBILITY: PRINCIPLES IN ACTION

Solution:

Incorporate ADA compliant ramps, elevators, wider doors and corridors, large classrooms, support service areas, tactile cues, and wayfinding systems.

Reality:

Need for medical lifts, changing tables, privacy curtains, ADA + bathrooms. Added cost for increased square footage, specialized finishes and equipment.

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SENSORY CONSIDERATIONS

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Challenge:

Providing sensory-friendly spaces, with minimal distractions and noise.

SENSORY CONSIDERATIONS: PRINCIPLES IN ACTION

Solution:

Soft, dimmable lighting, acoustical treatments, sensory rooms and classrooms with calm corners, soft seating and flooring.

Reality:

Added square footage, cost and infrastructure support for multi-sensory elements such as therapy swings, Snoezelen rooms, furniture and acoustic elements.

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Challenge:

Transitions between lecture-style, individual and collaborative learning.

FLEXIBLE LEARNING SPACES: PRINCIPLES IN ACTION

Solution:

Modular furniture, movable partitions, and flexible layouts allowing teachers to adapt the environment as needed.

Reality:

Budget, space, and technology to support various arrangements.

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FLEXIBLE LEARNING SPACES: PRINCIPLES IN ACTION

Shared Resource Space

Courtyard Access

Flexible Seating

Activities Alcove

Changing Room

Calm Room

Acoustic Considerations

VISUAL & AUDITORY IMPAIRMENTS

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Challenge:

Ensuring proper lighting, contrast, and acoustics for optimal learning experiences.

VISUAL & AUDITORY IMPAIRMENTS: PRINCIPLES IN ACTION

Solution:

Use natural light, high-contrast materials, soft colors, textures, and sound-absorbing surfaces.

Reality:

Auditory trainer devices for hearing impairment and cues, voice assisted technology, tactile maps, customized programming.

Theme | Creek Ecosystems

Butterfly Paw Prints Foliage Sun Flowers

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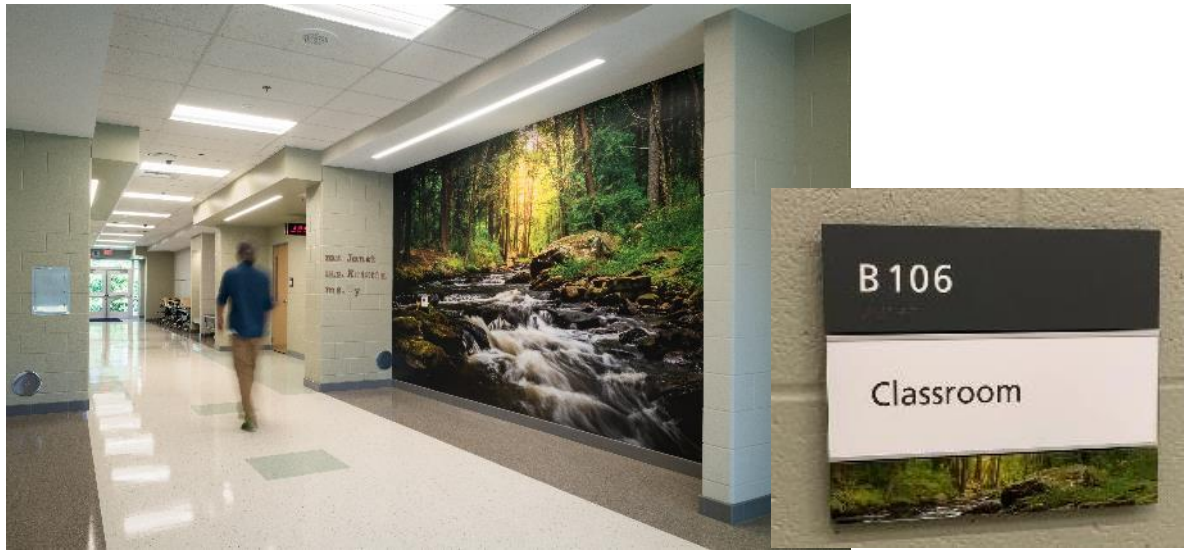

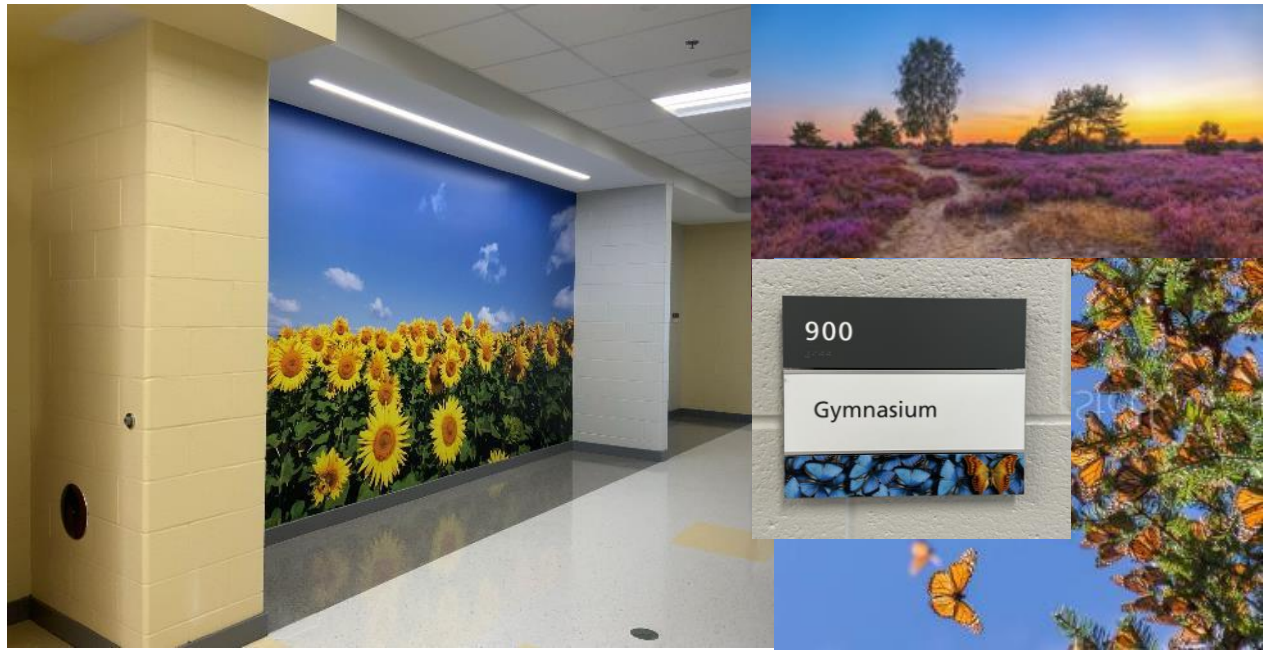

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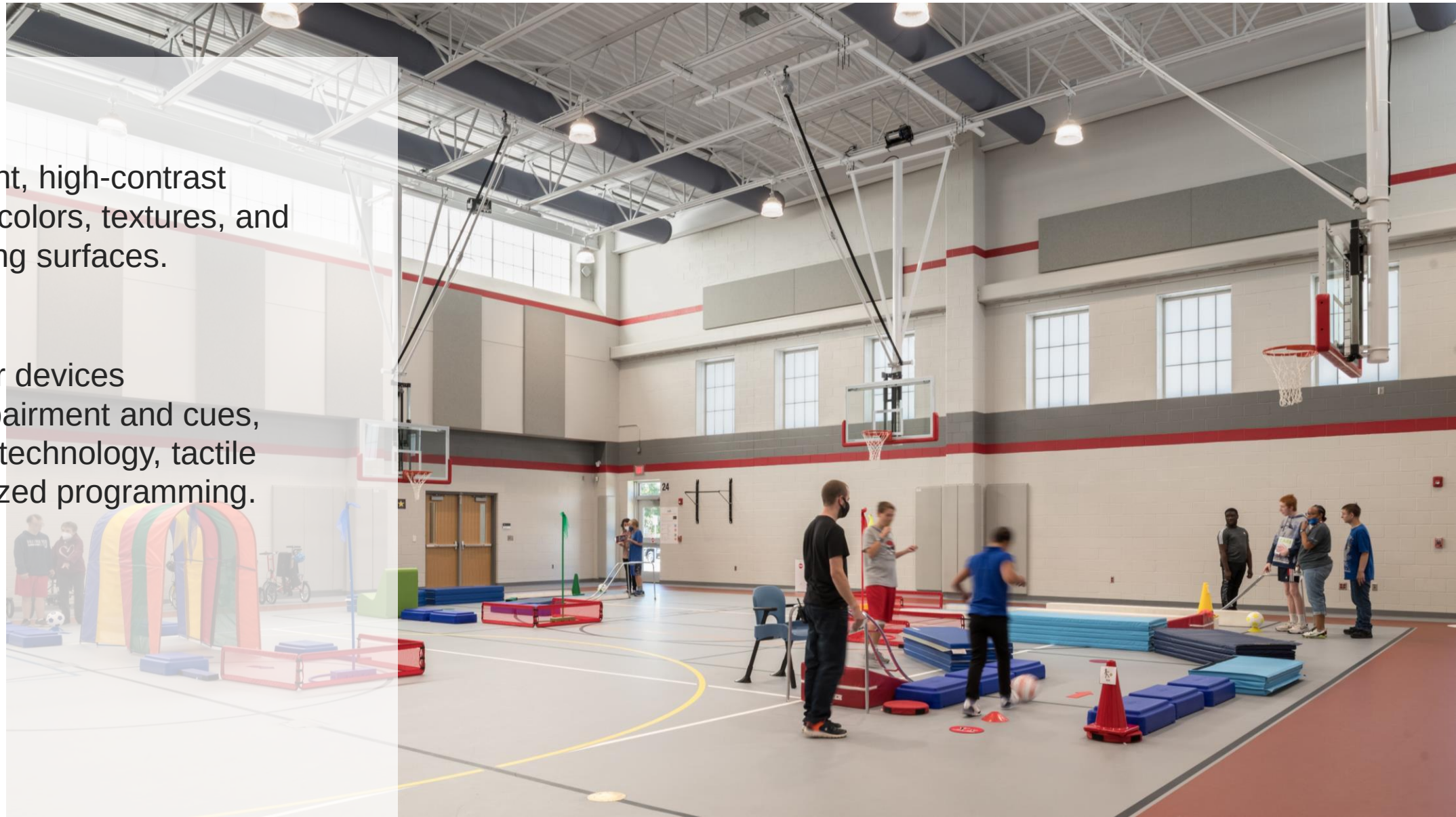

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TECHNOLOGY INTEGRATION

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Challenge:

Providing specialty devices, visual display surfaces and assistive tools without overstimulating the space.

TECHNOLOGY INTEGRATION: PRINCIPLES IN ACTION

Solution:

Concealed wiring, user-friendly interfaces, planning correct locations and mounting heights for flexibility. Requires multiple means of engagement for independence and connection.

Reality:

Preparedness for remote learning, custom computer stations, and evolving technology standards. Training and user-friendly systems for staff and students. Extends to outdoor learning spaces.

OUTDOOR SPACES

IDEA recognizes outdoor areas are critical for learning, physical activity, social and emotional interaction.

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Challenge:

Designing safe, inclusive, and engaging outdoor spaces.

OUTDOOR SPACES: PRINCIPLES IN ACTION

Solution:

Accessible surfaces, sensory gardens, and inclusive play equipment. Areas for rest and experiment.

Reality:

Added planning and cost for shade structures and covered walkways. Assistive technology, wayfinding and tactile elements extend to outdoor areas. Programming for individualized student needs and therapy benefits.

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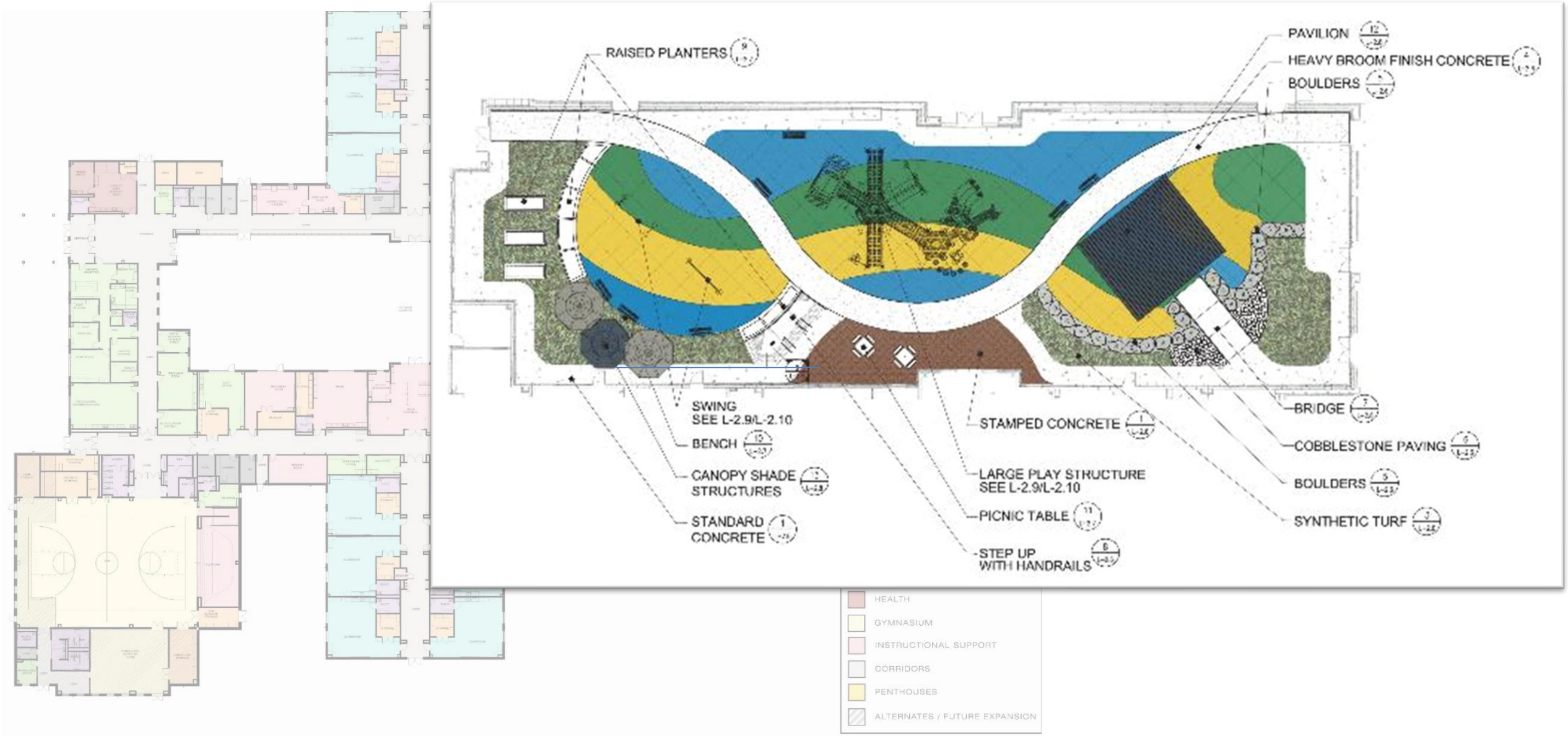
OUTDOOR SPACES: PRINCIPLES IN ACTION

LEGEND

- CLASSROOMS
- RESTROOMS
- STORAGE
- ADMIN. SPACES
- MAINTENANCE
- KITCHEN / CAFETERIA
- HEALTH
- GYMNASIUM
- INSTRUCTIONAL SUPPORT
- CORRIDORS
- PENTHOUSES
- ALTERNATES / FUTURE EXPANSION

OUTDOOR SPACES: PRINCIPLES IN ACTION



HEALTH & WELL-BEING

IDEA emphasizes the correlation between conducive environments, students' well-being and learning outcomes.

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Challenge:

Providing social and emotional connections and comforting spaces.

HEALTH & WELL-BEING: PRINCIPLES IN ACTION

Solution:

Prioritize views and access to nature, mental health spaces and a school culture of community, connection, equity and purpose.

Reality:

Staff spaces for professional development, respite of physical and emotional stress is also critical and contributes to staff retention. Healthy materials and universal design elements benefit all.

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SECURITY

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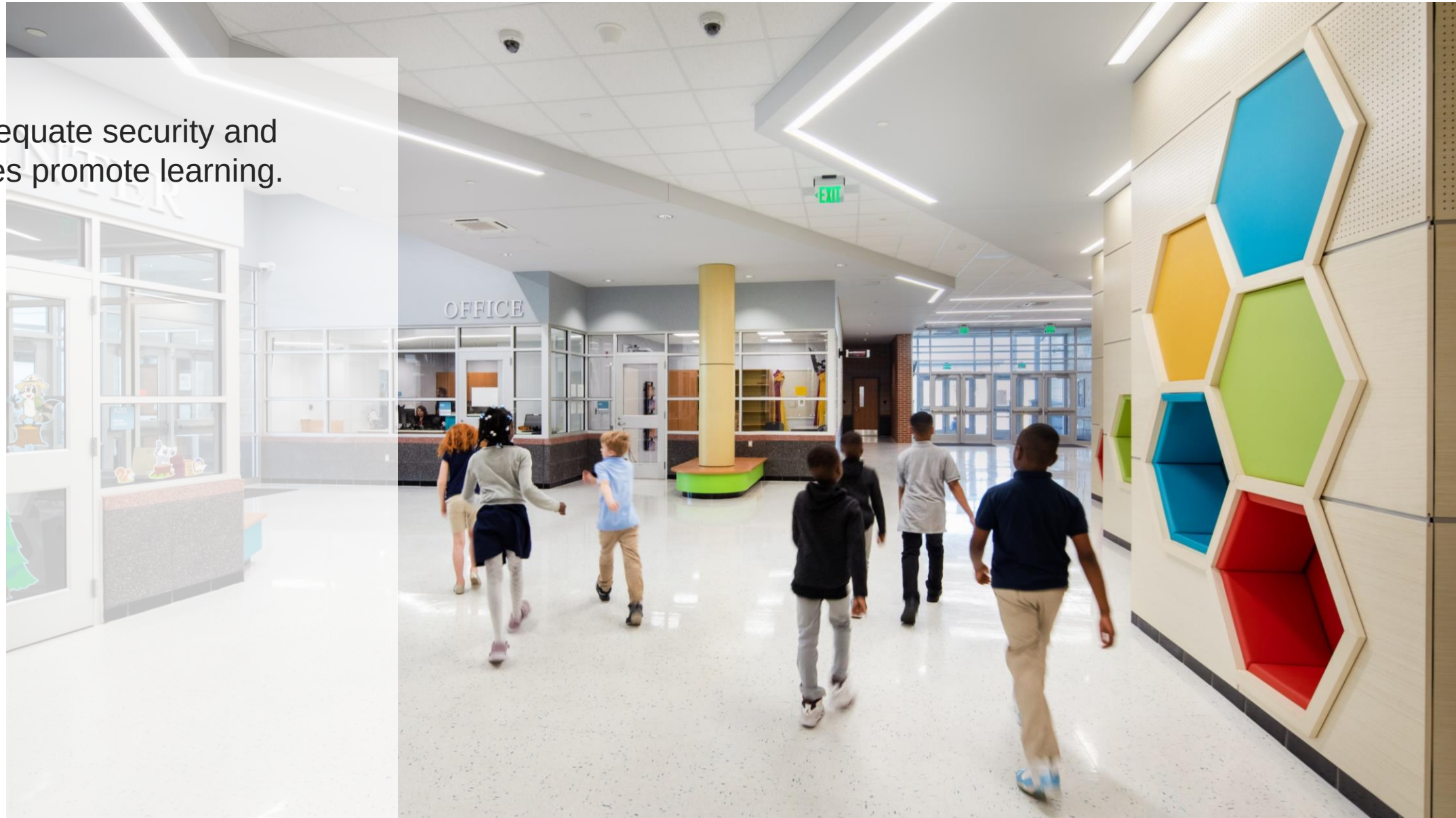

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Challenge:

Balancing secure and safe environment for students and staff without perception of barriers.

SECURITY: PRINCIPLES IN ACTION

Solution:

Visibility to all spaces, reducing corridor lengths, security cameras and wayfinding. Door hardware provisions for ease of egress.

Reality:

Specialty communication devices and emergency alerts for all senses. Health suite proximity to main entrance. When students feel safe, they are more engaged in learning.

SITE ACCESS & DESIGN

IDEA requires availability to all buildings, play and athletic fields, and amenities to ensure least restrictive environment.

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Challenge:

Maintaining independence and accessibility for entire site.

SITE ACCESS & DESIGN: PRINCIPLES IN ACTION

Solution:

Canopies at bus and vehicular entrances, wider and more gradual pathways and curb cuts. Accessible pathways to all buildings and fields.

Reality:

Additional infrastructure is costly and adds impermeable area. Partnership opportunities and shared resources with adjacent school. Larger bus and vehicular drop off zones.

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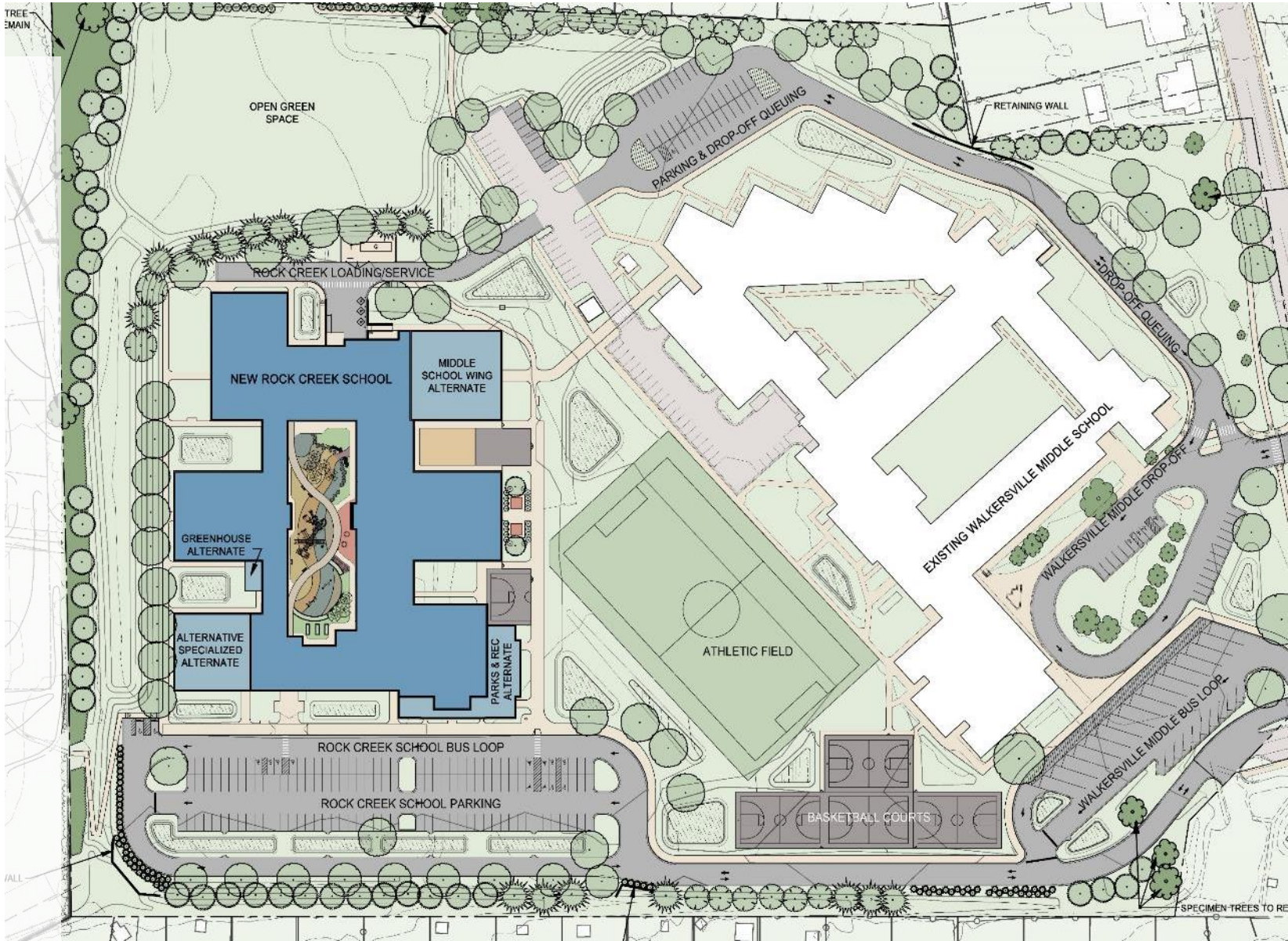
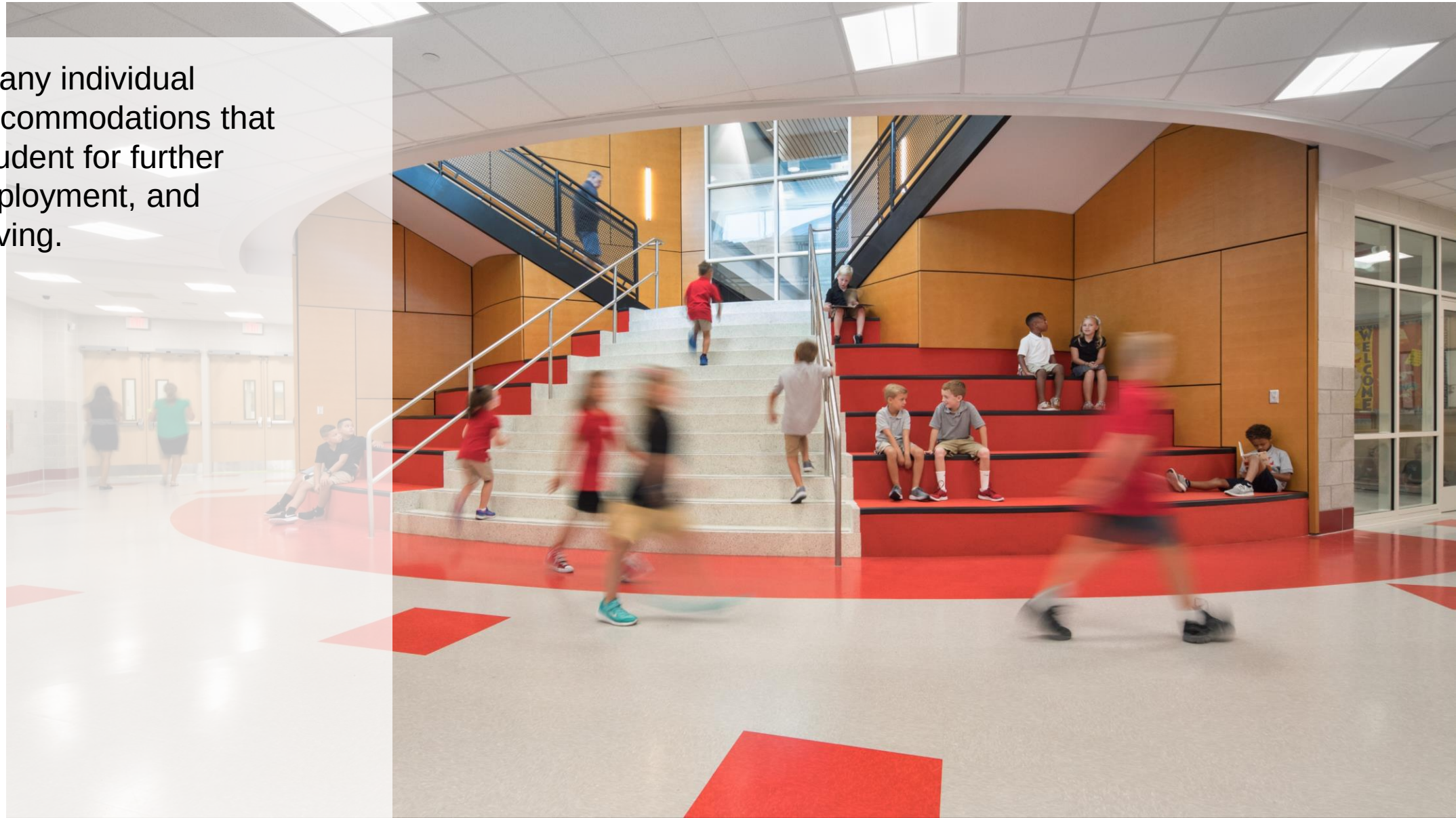


PROGRAMMING

IDEA expects any individual appropriate accommodations that prepare the student for further education, employment, and independent living.



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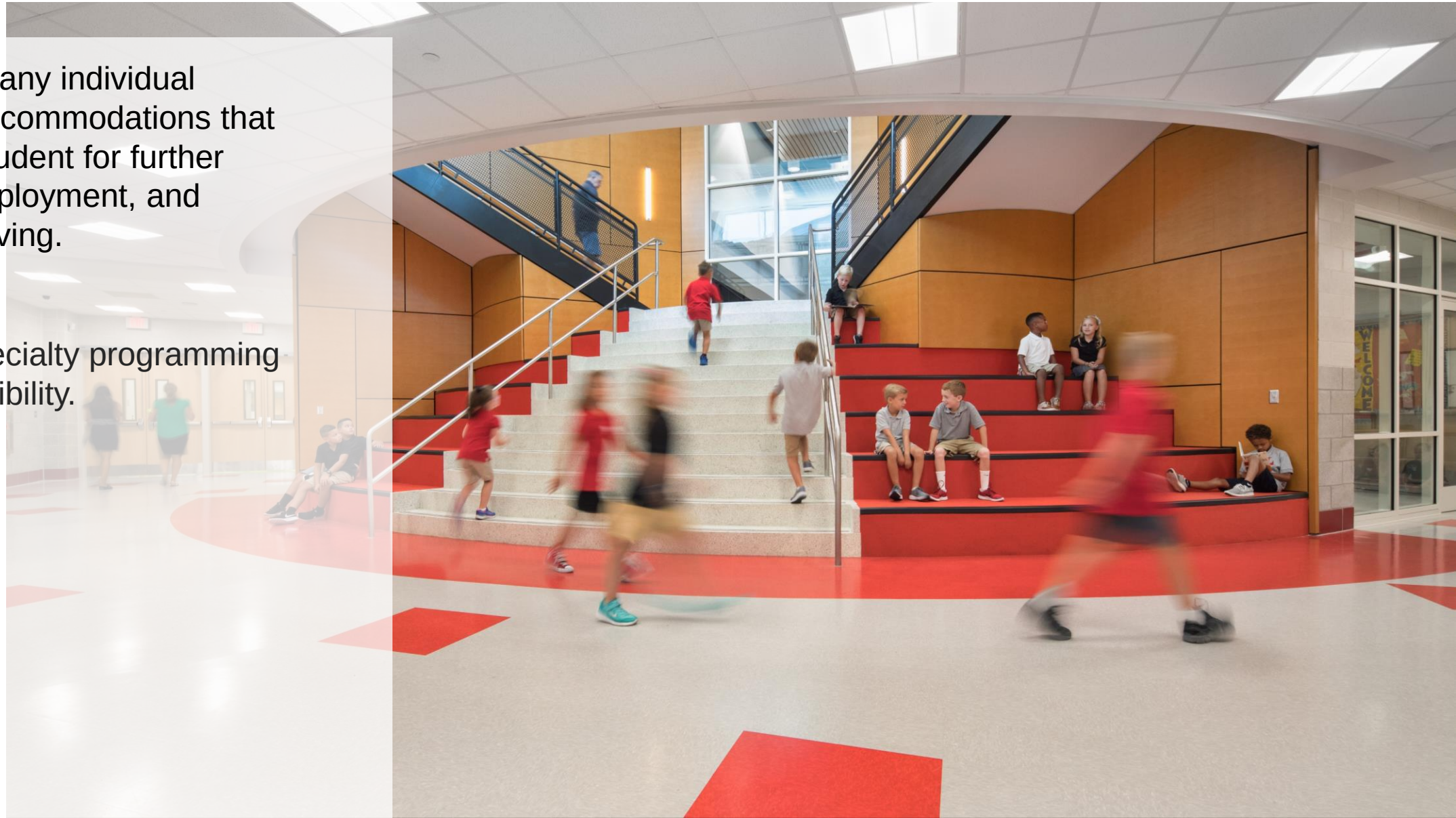
Challenge:

Prioritizing specialty programming and future flexibility.



PROGRAMMING: PRINCIPLES IN ACTION

Solution:

Provide spaces for multiple therapy forms, medication distribution and storage, life skills training, and specialized services.

Reality:

Budget constraints and wide range of related service provider and staff engagement to coordinate.

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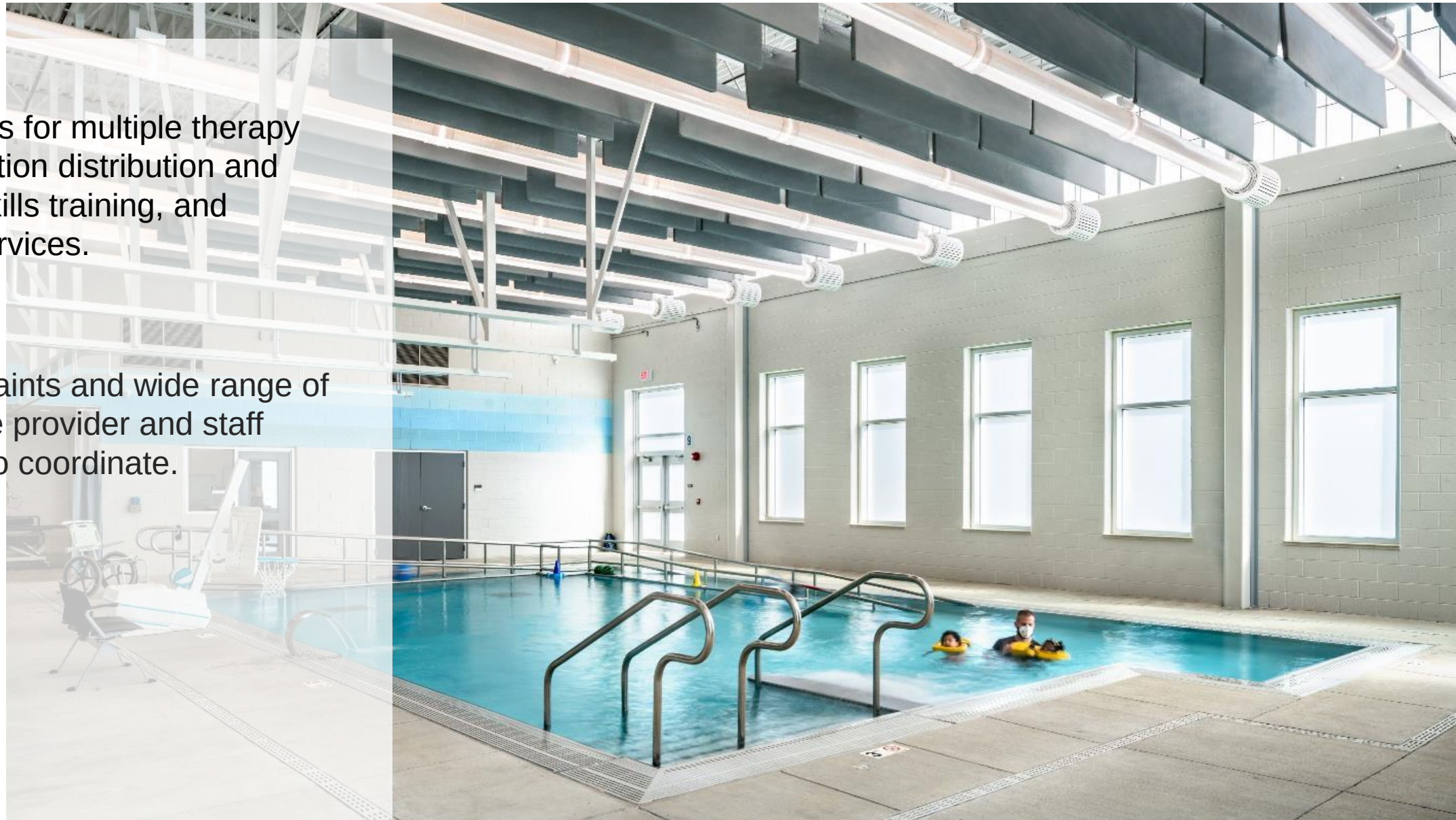

KEY TAKEAWAYS

Stakeholder engagement is paramount to success of the project.

- **Convey the Vision for the Community**
- **Workforce Development Opportunities**
- **Parent & Guardian Involvement**
- **Transparency & Trust**

Role of the **architect to advocate** throughout design and engagement process.

Focus on opportunities for **STUDENTS**.

Equity & **Inclusion**.

All students benefit from **thoughtful design**.

ASPIRATIONS	REALITY
All students have an equal opportunity to learn.	Specialized schools are the exception, not the rule.
Programming is based on academic, physical, social, & emotional needs of students.	Programming is based on traditional school buildings: new & renovated. Not all programming requirements are accommodated in a least restrictive setting.
Stakeholders include administrators, teachers, service providers, support staff, students, and parents.	Stakeholder participation is limited.
Zip codes do not determine access to services.	Zip codes determine access & programming.
Schools are flexibly designed for engagement & instruction. Funding does not limit programming requirements.	Limited budgets impact design decisions, flexibility, space & programming opportunities.

QUESTIONS?