

MIRA MESA HIGH SCHOOL

CLASSROOM BUILDING

SAN DIEGO UNIFIED SCHOOL DISTRICT

San Diego, CA





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1 EXECUTIVE SUMMARY

Mira Mesa High School, a part of the San Diego Unified School District (SDUSD), was originally erected in 1976. The campus, characterized by its minimal glazing and stark geometry typical of the era, comprised single-story masonry block buildings. Over the past five decades, the school has seen numerous alterations, modifications, and additions.

The latest additions to the campus, the Music Building and Classroom Building 700, were conceived as part of an SDUSD facilities bond program. This initiative aimed to revitalize district schools and their learning environments by renovating, repairing, and constructing new facilities. The projects included the construction of additional classrooms, upgrades to safety and security systems, plumbing enhancements, installation of solar panels, improvements to Visual and Performing Arts (VAPA) facilities, and upgrades to athletic facilities.

During the initial site assessment and master planning phases, input from faculty and the community significantly influenced the school's programming priorities. These discussions, held during District Design Task Force (DTF) meetings, saw parents and community members advocating for the replacement of portable classrooms.

The design team collaborated closely with the district to ensure an appropriate integration of the new Classroom Building, that was to replace 22 portable structures, into the campus plan. The resulting facility not only aligns with the school's academic vision but also serves as a catalyst for the development of a new classroom model on campus.

The completed building represents a simple yet ingenious solution to the need for a new facility that supports the collaborative nature of contemporary education models while integrating into the campus fabric. This project features 14 math classrooms, outdoor classrooms, lunch shelters, and an open performance area.



2 SCOPE OF WORK AND BUDGET

The scope of work for the Mira Mesa High School Classroom Building involved designing and constructing a new facility to replace portable classrooms and provide students with an improved educational setting. The new building is a single story building that opens up to the main quad of the campus with its u-shaped configuration and adds programmed outdoor student gathering areas.

Key Project Goals

- Replacement of 22 portable structures with 14 new classrooms
- Support the need for student lunch shelters.
- Support the school's need to student extracurricular outdoor activity.
- Provide a healthy educational environment that would integrate indoor/outdoor areas.
- Integrate collaborative study areas for student gathering.
- The building should fit within the context.

Budget Planning and Execution:

The budget for the project was meticulously planned and allocated across various components, including:

- Design: Ensuring the architectural and aesthetic aspects met the school's vision.
 - Construction: Executing the build with high-quality materials and workmanship.
 - Acoustic Treatments: Implementing advanced acoustic solutions to optimize sound quality.
 - Site Improvements: Enhancing the surrounding area to integrate seamlessly with the new facility.
- Cost-effective solutions were employed throughout to ensure the project stayed within budget while delivering high-quality results.

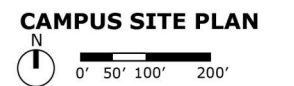


Completion Date September 2020
Owner San Diego Unified School District
Building Area 16,000 SF
Type New Construction
Construction Cost \$9.5M
Cost per Square Foot \$590/SF

- 100 ADMINISTRATION
- 200 CLASSROOMS
- 300 MEDIA CENTER
- 400 ARTS AND FOOD SERVICES
- 500 GYM
- 600 CLASSROOMS
- 700 CLASSROOM BUILDING**
- 800 MUSIC BUILDING
- PC PORTABLE CLASSROOMS

- 1. OUTDOOR STUDENT LEARNING
- 2. LUNCH SHELTER
- 3. AMPHITHEATER
- 4. ACTIVITY NODE
- 5. EXPANDED CENTRAL QUAD

- P COMMUNITY PARK
- C COMMERCIAL AREA
- R RESIDENTIAL AREA



3 SCHOOL & COMMUNITY RESEARCH AND ENGAGEMENT

Context

Mira Mesa is a diverse and vibrant community in San Diego, recognized for its dedication to education, cultural richness, and active community participation. This community highly values educational excellence and has a strong tradition of supporting arts and music programs in addition to its robust academic program. Mira Mesa High School (MMHS) stands as a true neighborhood school, hosting a culturally diverse population where more than 51% of students speak a language other than English at home. The students are actively engaged in academics and extracurricular activities, with over 1,900 students participating in athletics, AFJROTC, clubs, music, drama, cheer, or band.

Key stakeholders in the project included:

- Students: The primary beneficiaries who provided input on their needs and preferences.
- Parents: Involved in providing feedback and supporting the project.
- Faculty: teachers and school staff ensured the design met educational goals.
- School Administration: Provided strategic direction and oversight.
- Local Government: Ensured the project aligned with community planning and development goals.
- Community Organizations: Helped in mobilizing community support and engagement.

The main challenge during the design phase was finding new classroom locations within the existing facilities to support the reduction from 22 portable structures to 14 new classrooms.

Key Assets Leveraged in the Project:

- Ample open space on campus.
- Strong community support and involvement.
- A well-established and supportive faculty and school leadership.
- Experienced architects with expertise in designing educational and performance spaces.

Our Mission/ Vision/ ESLR

Mission Statement

The mission of Mira Mesa High School is to engage students in learning experiences that prepare them for college, a career, and life as responsible and productive members of the community.

Our Vision is embodied by our ESLR (Expected School-wide Learning Results)

Mira Mesa High School Graduates will be...

Motivated Learners who use text, technology, and other informational resources appropriately.

Meaningful Communicators who analyze verbal and written information and articulate their knowledge through oral, written, and technology-based mediums.

Helpful Citizens who are ethical, respectful, self-disciplined, contribute to school and community, and embrace diversity.

Solution Seekers who use critical thinking skills to accomplish personal and group goals with creativity, flexibility, teamwork, and a global perspective.

MIRA MESA MISSION STATEMENT



PORTABLES TO BE REPLACED

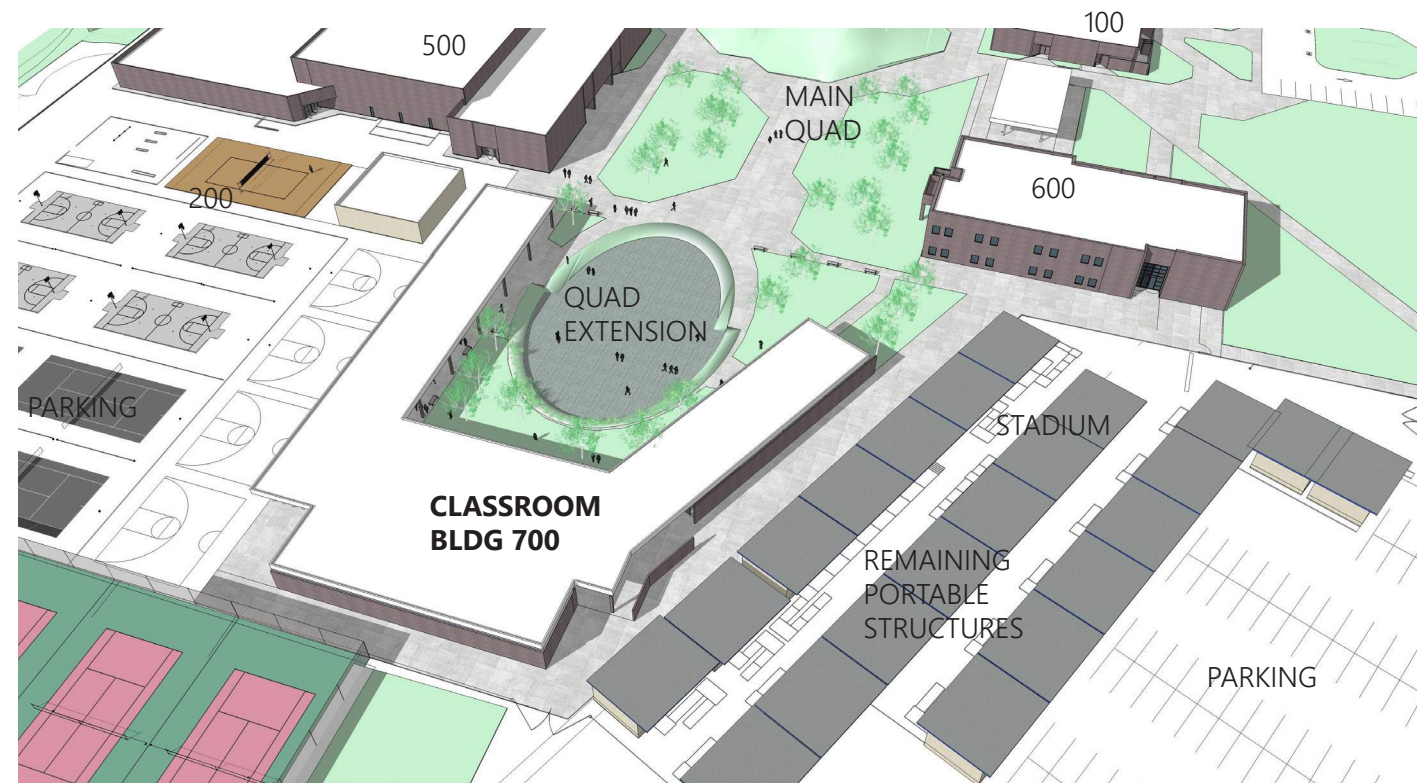
Process

The design team performed site assessment and early master plan concepts, as well as programming discussions with faculty and the community. The design team worked closely with the District to designate priorities to the campus program.

The dialogue occurred during parents and community outreach sessions, identified as District Design Task Force (DTF) meetings. The visioning process involved comprehensive community engagement through an additional series of meetings, workshops, and surveys. Stakeholders were actively involved in providing input on their needs, goals, and design preferences. This collaborative approach ensured that the project reflected the collective aspirations of the community.

The engagement process fostered a sense of ownership and pride among stakeholders. The project not only enhances the school's academic program but also serves as a cultural and educational hub for the community. The facility provides a venue for community events, performances, and other cultural activities, promoting inclusivity and diversity.

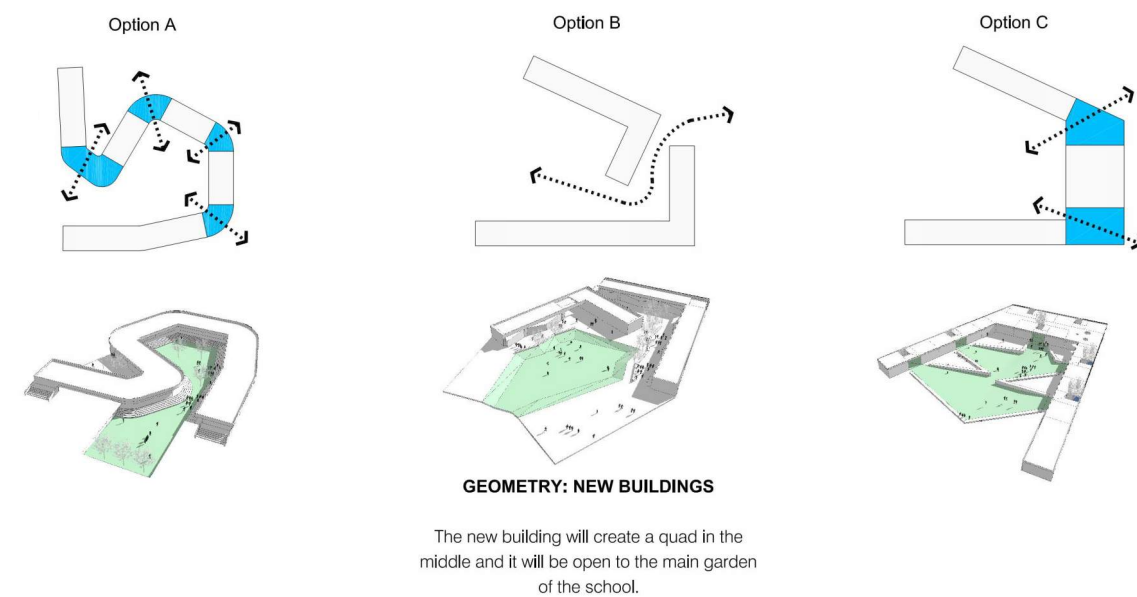
The design and engagement process prioritized accessibility and inclusivity. The facility includes features that accommodate diverse needs, such as accessible entrances, flexible spaces for various group sizes, and design elements that reflect the community's cultural diversity.



PRESCHEMATIC CAMPUS LAYOUT STUDY



EARLY PLANNING - COMMUNITY GROUP ENGAGEMENT



PRELIMINARY MASSING ANALYSIS FOR QUAD INTEGRATION

4 PHYSICAL ENVIRONMENT

Context

Project Overview

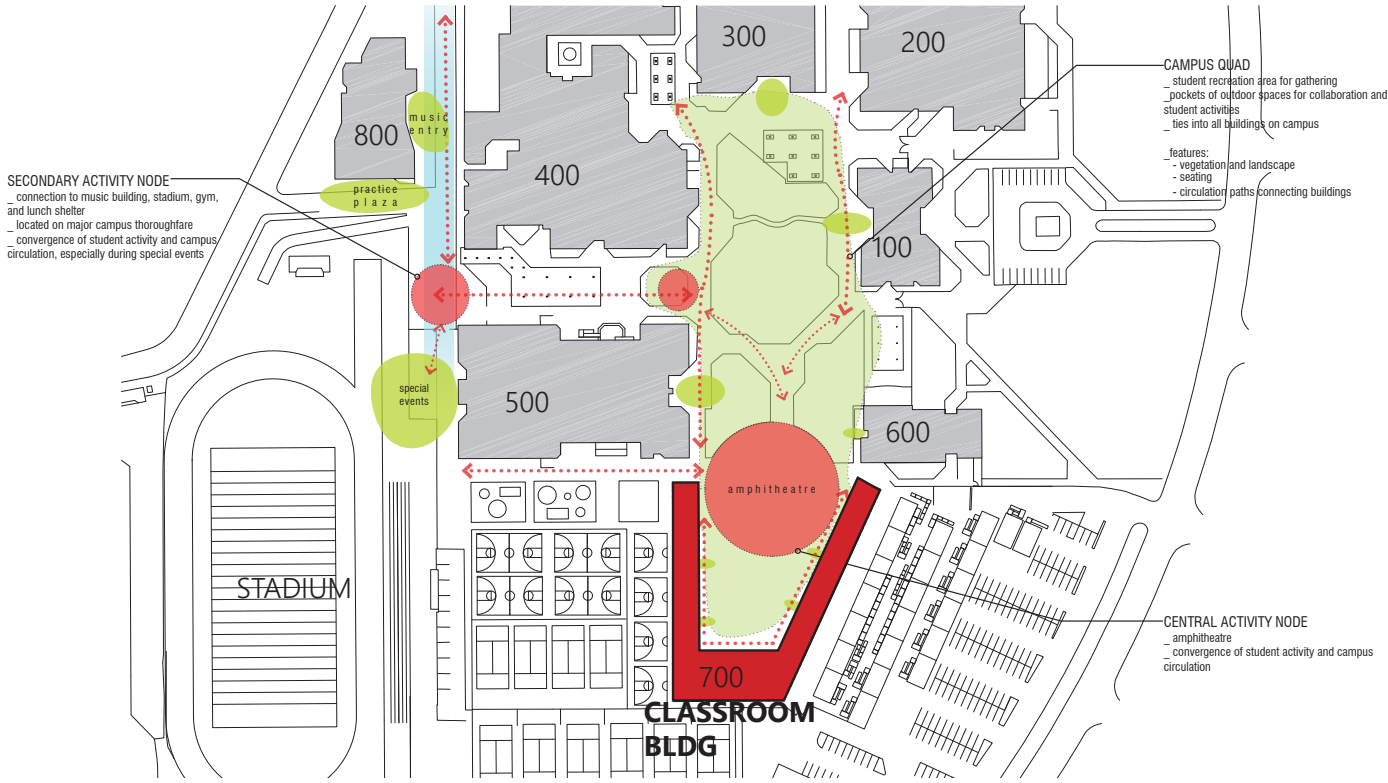
A new 16,000 sq ft classroom building was programmed and designed to enhance an existing high school campus built in the 1970s. Fluted masonry block was selected as the primary material for both the structural system and the building envelope to harmonize with the existing campus context. The building program includes 14 enclosed instructional spaces, 4 collaborative patios, 4 outdoor learning pods, and multiple areas for informal gatherings.

Inspiring Design

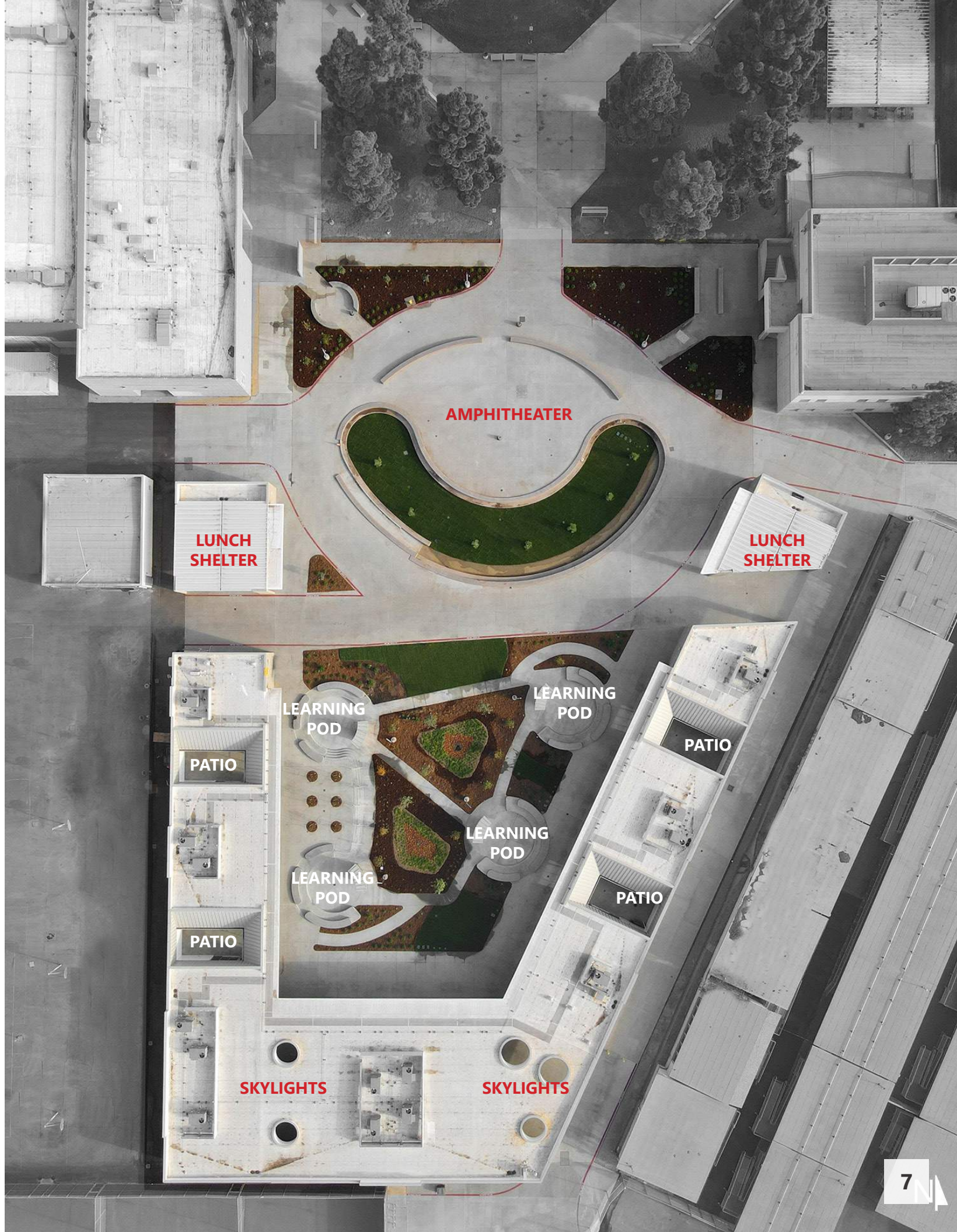
The building's design aims to inspire students and the community. The dynamic forms and integration of natural light and collaboration areas create an uplifting and motivating environment, encouraging creativity and excellence in academia. Additionally, the building materials are chosen to align with the rest of the campus, promoting inclusivity.

Innovative Features

- **Central Green Space:** The building footprint creates a central green, extending the existing campus quad. This central green serves as an amphitheater, outdoor study pods, lunch shelters, and features drought-resistant landscaping.
- **Elevation Design:** The original quad area has raised mounds in the center, while the extended quad recedes in elevation, allowing greater visual connection and aiding water/storm control.
- **Healthy Educational Environment:** The design integrates indoor and outdoor areas using operable partitions, large sliding doors, and extensive glazing. These features promote natural airflow and daylighting, while physical and visual connections create unique learning experiences.



QUAD AND OUTDOOR CONCEPT



Functional Layout

The plan layout is designed to optimize cross-collaboration between classrooms through open connecting patios, internal movable partitions, and strong visual connections between classrooms. Circulation is entirely exterior via covered walkways or cross paths along the quad area. Outdoor learning pods are interconnected, enhancing the flow and interaction between indoor and outdoor learning spaces.

Accessibility and Inclusivity

The facility is designed to be accessible and welcoming to all:

- Accessible Entrances: Ensuring ease of access for all students and visitors.
- Flexible Spaces: Designed to accommodate various activities and events, promoting different instances of student interaction.
- Inclusive Design Elements: Features that promote inclusivity and cater to diverse needs.

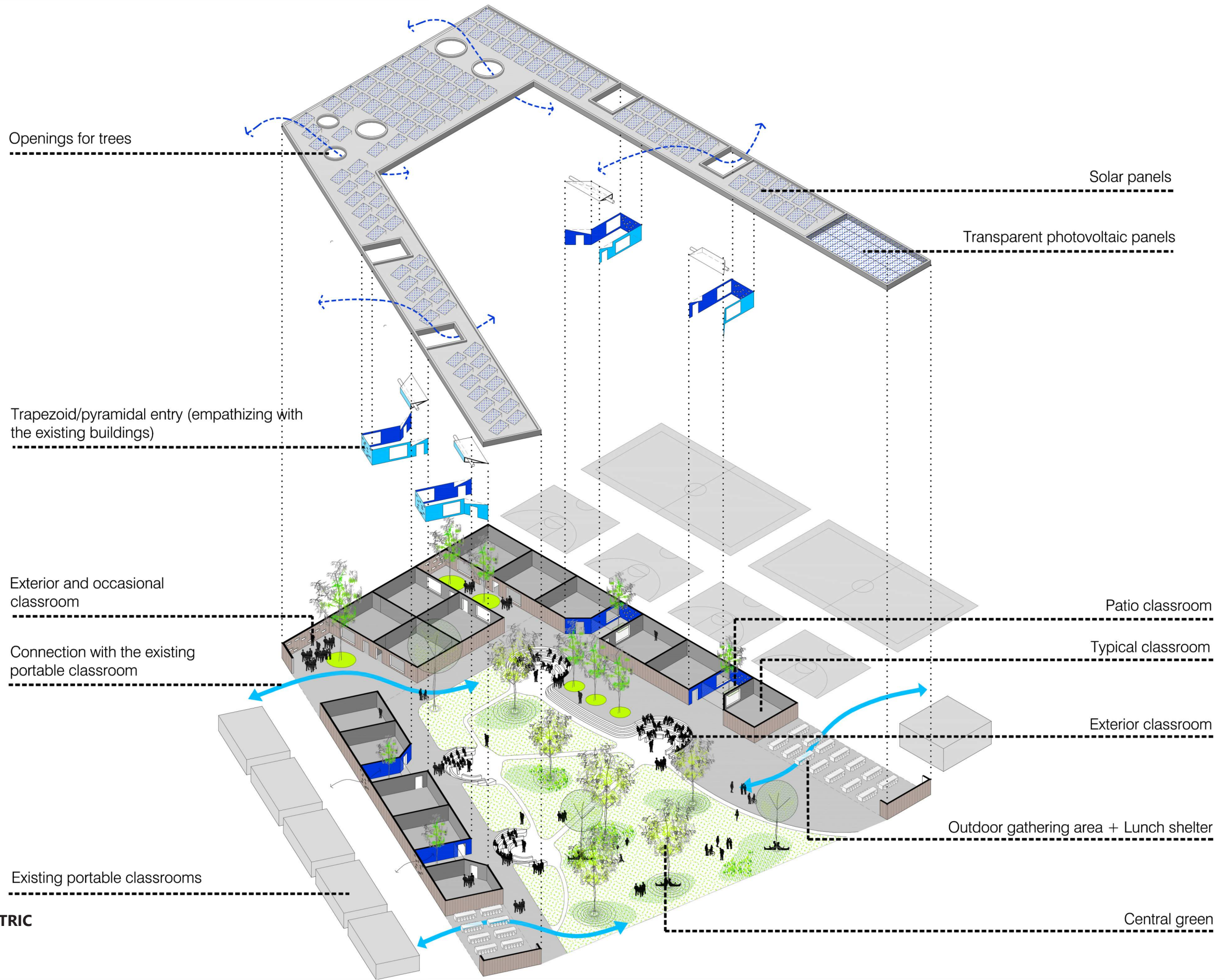
Sustainability and Wellness

The building incorporates sustainable practices to enhance the well-being of students and staff and to create a healthy, sustainable environment:

- Energy-Efficient Systems: Reducing the building's energy consumption.
- Sustainable Materials: Use of environmentally friendly materials in construction.
- Natural Daylighting: Maximizing natural light to create a pleasant and energy-efficient environment.
- Indoor Air Quality: Large operable sliding doors open directly to the exterior, allowing for natural airflow, which promotes health and welfare.

FLOOR / SITE PLAN

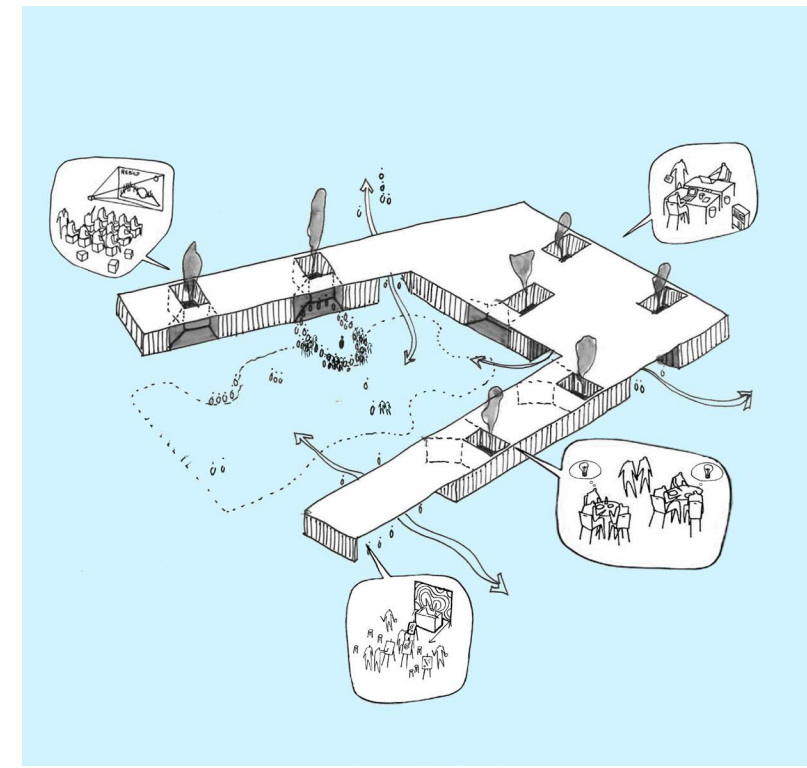
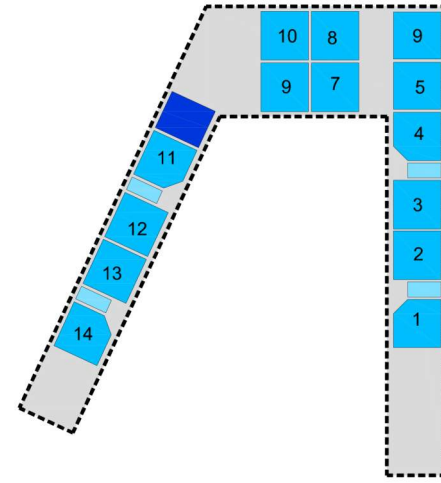
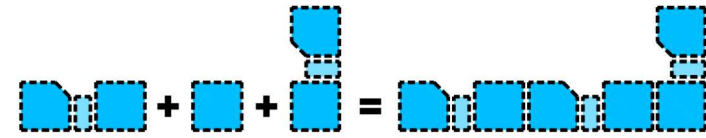




EXPLODED AXONOMETRIC

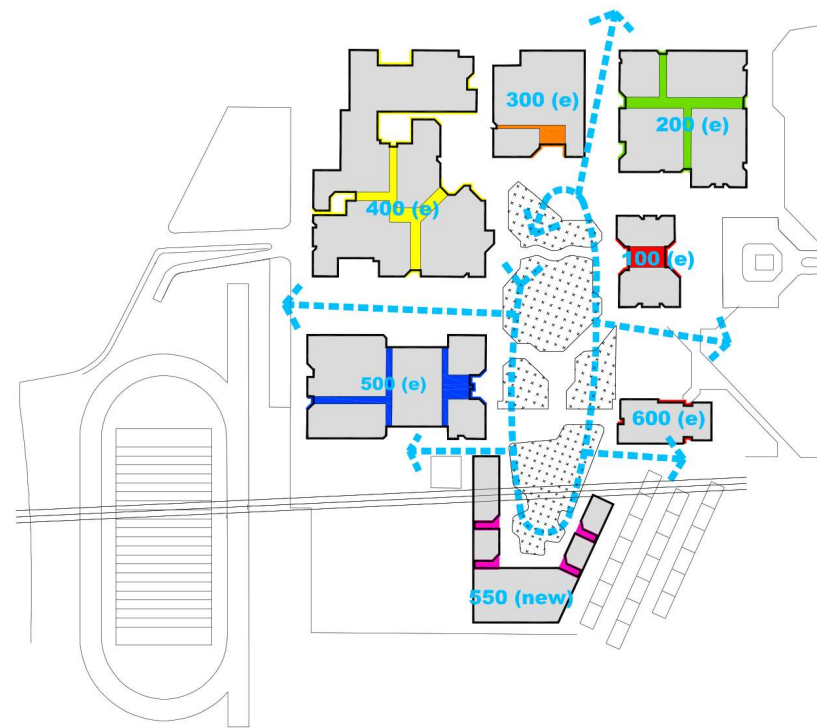
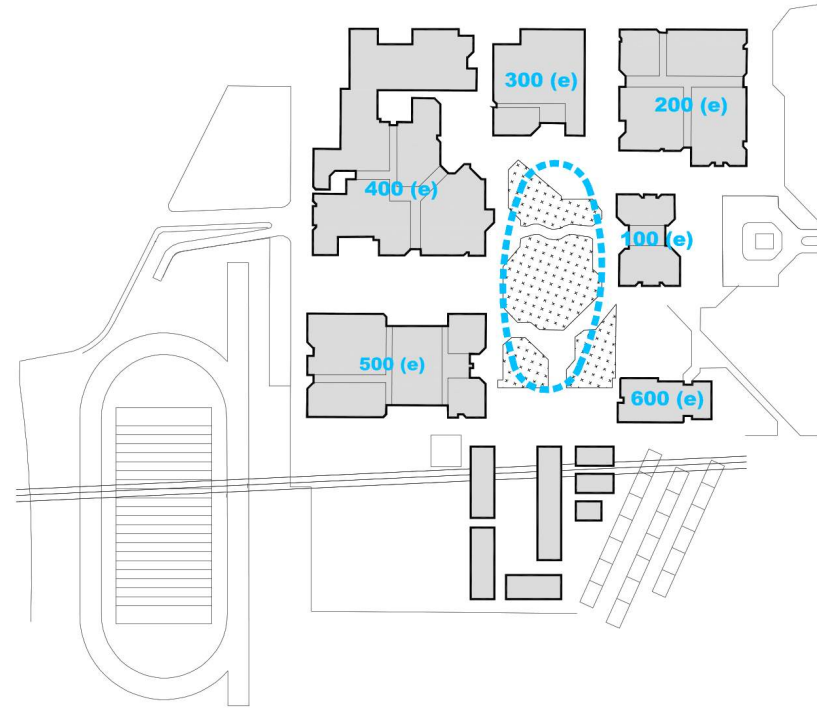
MODULAR UNITS

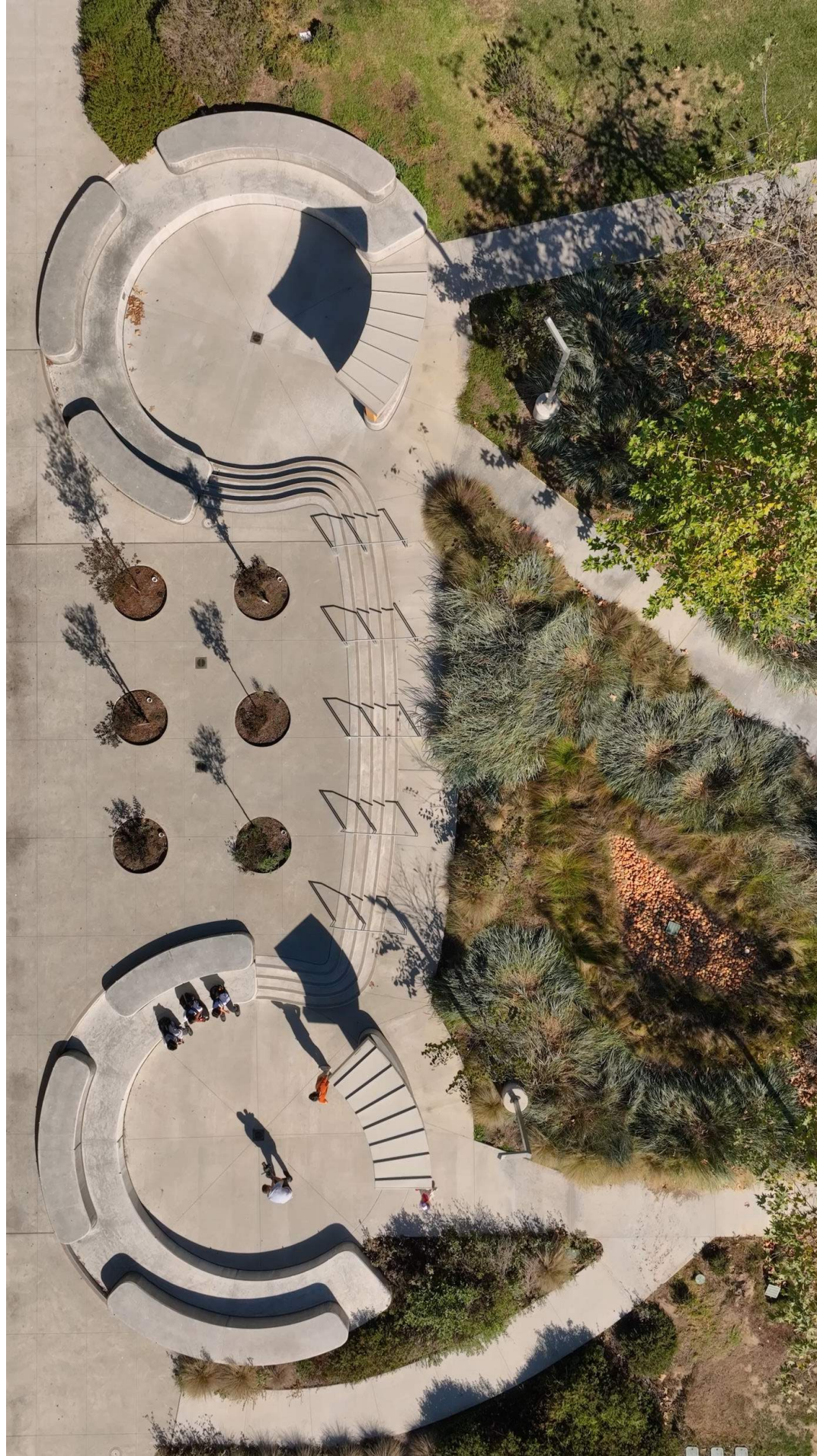
Each nucleus is continuously aligned with other nucleuses to create a U-shape that closes the Mira Mesa High School campus. More than a closed distribution, the new Mira Mesa High School classrooms are a system that allows possible growth in the future.



COMPLETE THE CIRCLE

The classroom building will be the last building to complete the open area by complementing with the existing buildings 100, 200, 300, 400 and 500.





QUAD, LEARNING PODS AND AMPHITHEATER



5 EDUCATIONAL ENVIRONMENT

Modern Classroom Design for Dynamic Learning

Traditional K-12 education buildings have historically consisted of partitioned structures promoting a single lecturer instruction style, resulting in mostly isolated classrooms. However, current teaching pedagogy has shifted the architectural dynamic to reinforce information distribution, team collaboration, and experiential learning. Teachers now assume roles as advisors or guides, facilitating students' efforts to research information and build their own knowledge bases. A new classroom model must respond by fostering creative, critical-thinking, and communication skills enhanced by a group dynamic. Consequently, the built environment must embrace diversity and the collaborative spirit of education through design that emphasizes flexibility, mobility, and dynamic learning.

Learning Environment Features

- **Collaboration and Flexibility:** The classroom configuration promotes collaboration through collaborative patios and large operable sliding doors between classrooms. Indoor-outdoor learning is emphasized to maximize airflow and promote a healthy learning environment, ideal for preventing airborne illnesses.
- **Dedicated Math Classrooms:** The building includes 14 classrooms specifically designed for math classes. Mathematical concepts inform the graphics, with colors inspired by school colors.
- **Natural Daylighting:** Maximized natural daylighting is a critical component of a healthy learning environment.
- **High windows** are used to maximize teaching wall space.
- **Views and Connectivity:** Views are created to connect with the natural landscape, providing a stimulating learning environment.
- **Flexible Furniture:** All furniture is either flexible in configuration or on casters, allowing desks to be used individually or combined to create collaborative workspaces.





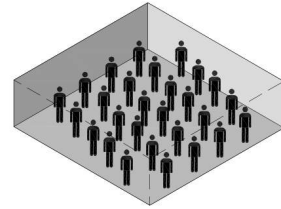
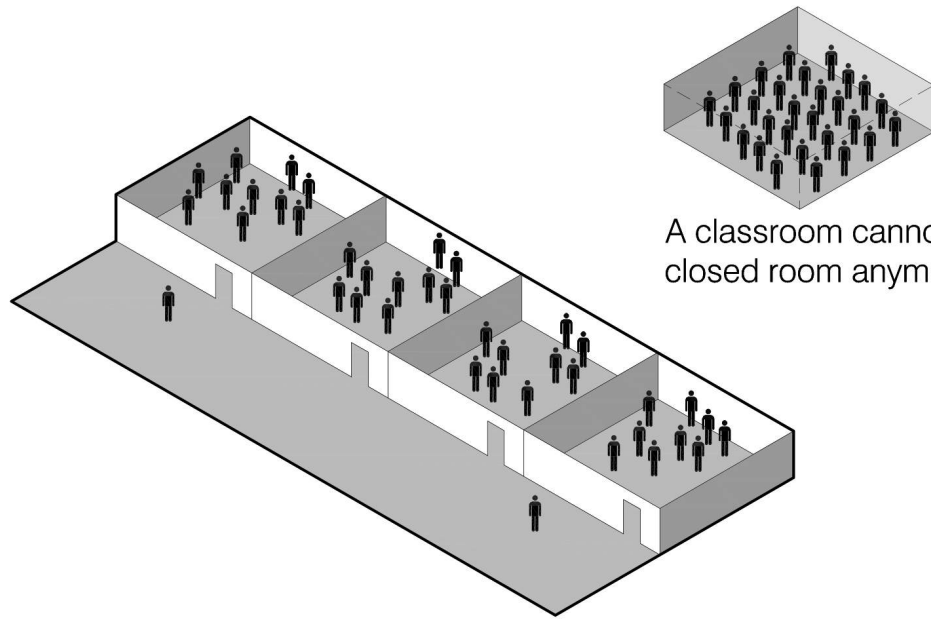
INDOOR/OUTDOOR LEARNING



CONNECTIVITY AMONG CLASSROOMS

TRADITIONAL SPACES vs FLEXIBLE SPACES

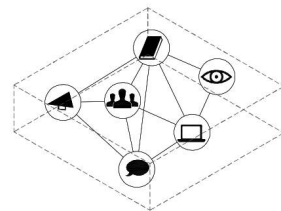
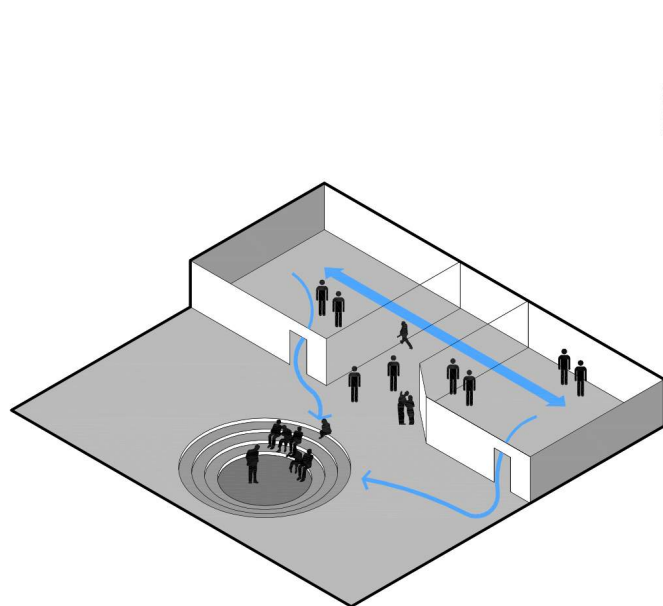
Traditional classroom: closed spaces that do not allow students to relate with other students or teachers from the other classrooms. The architecture is closed.



A classroom cannot be a closed room anymore



Proposal: a nucleus of spaces with flexibility that will allow active learning, spatial relationships and collaboration.

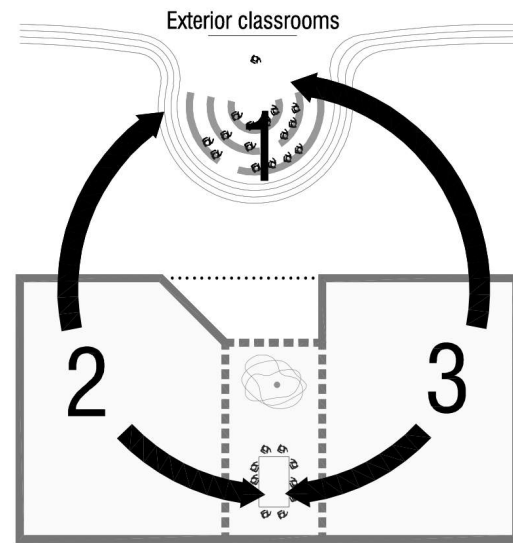


A school as interdisciplinary relationships

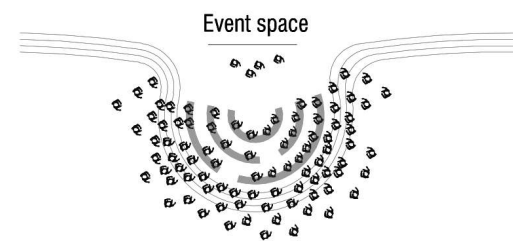


CLASSROOM & PRIVATE PATIOS & EXTERIOR

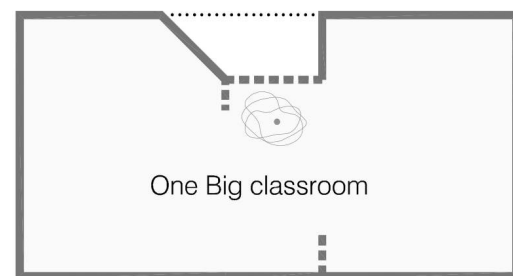
Interior classrooms, patios and outdoor classrooms will promote physical and visual connections to each other. The interior classrooms have a flexible layout that have the option of either expanding out towards the patio or separating into different spaces. The outdoor classrooms create separate educational environment of different sizes.



Private table collaborative

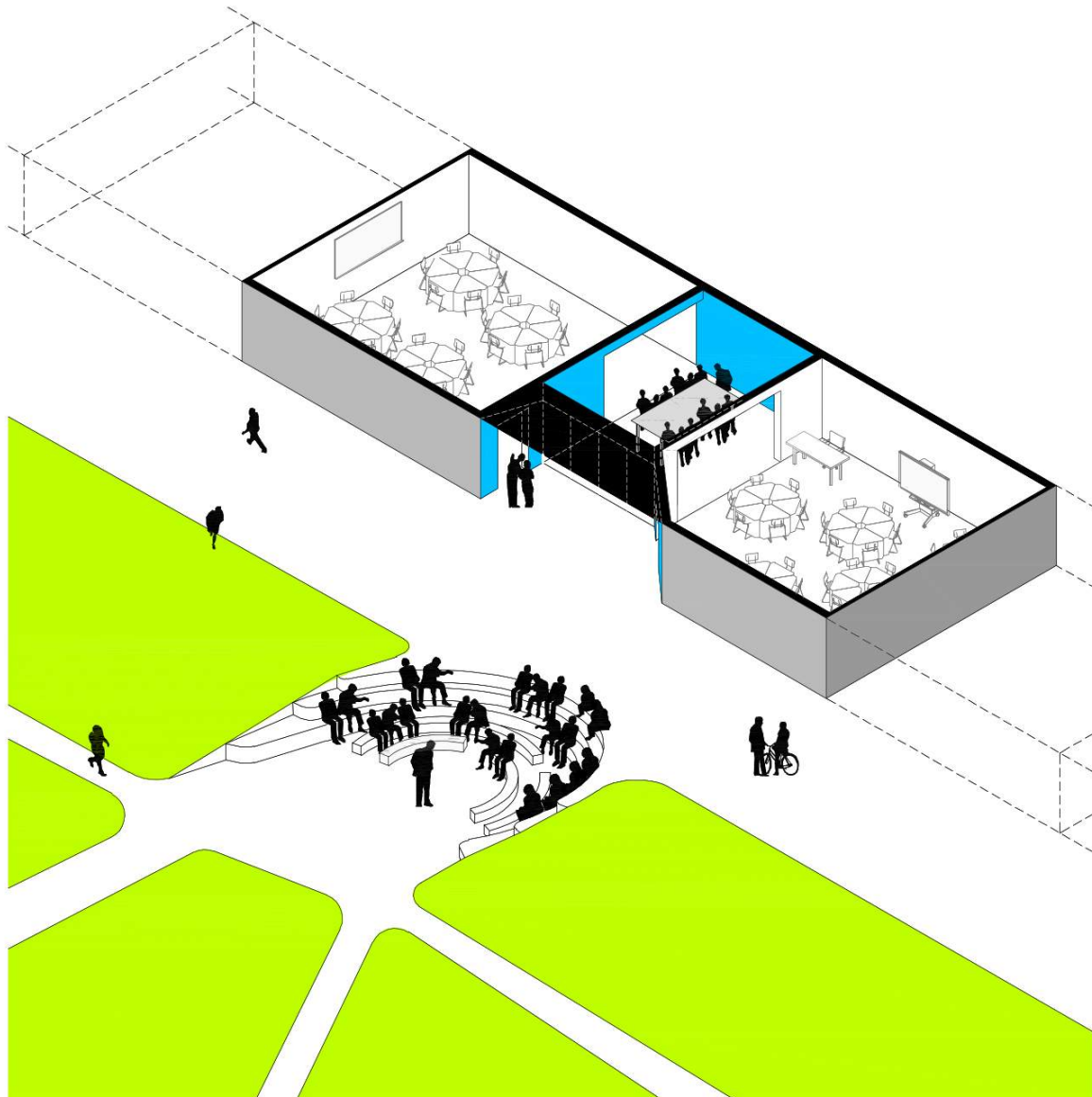


One Big classroom



CLASSROOM - PRIVATE PATIOS - OUTDOOR CLASSROOM

Shall provide the opportunity to collaborate between different classes and teachers and will have a visual connection with to the interior classroom through an indoor/outdoor experience.



6 RESULTS

The new classroom building design for the high school campus embodies a modern approach to education, supporting various teaching styles and group sizes. It enhances the learning experience by fostering collaboration, integrating indoor and outdoor learning environments, and promoting a healthy and stimulating atmosphere. This design ensures that the facility remains functional and relevant as educational practices continue to evolve, ultimately supporting the school's mission to prepare students for future success.

The project strengthens the community by providing a cultural and educational hub. It fosters pride and involvement among residents, creating a sense of ownership and belonging.

Positive outcomes include increased community interest in the academic program, enhanced school reputation, and the building's use as a venue for various community events and performances.

The project demonstrates good stewardship of financial resources by delivering a high-value facility within budget. The careful planning and execution ensured that the project maximized benefits for students and the community while staying within financial constraints.

The building promotes sustainability through energy-efficient design, use of sustainable materials, and natural daylighting. These features contribute to the well-being of students and staff, creating a healthy and sustainable environment that supports learning and performance.

