

ROARK EARLY EDUCATION CENTER

Play-Based Learning Environments

Willis Independent School District

Willis, TX





01

EXECUTIVE SUMMARY

"To new beginnings and new memories in our new building."

—Collynn Scates
Special Ed Teacher

Early Beginnings

A local legend, Jennie C. Roark, dedicated 27 years of her life to nurturing the young minds of Willis, Texas. She served as principal of the Willis Independent School District (ISD) Elementary School in the 1940s, inspiring the community to build the Roark Early Education Center (EEC) as a memorial to her service in 1955.

Roark's daughters continued her legacy with the school district, at testament to the community's investment in educating its children. At more than \$16 million in today's dollars, the original building's significant financial investment also shows Willis ISD's commitment to a bright future for its youth. The facility has evolved over the years to serve as a campus for first through sixth grades, pre-K through third grade, only fifth grade, pre-K and kindergarten, headstart and early childhood programs, and a district-wide parent center.

In 2019, Willis ISD assessed the building's long-term functionality and found that it did not meet many present-day standards for size and could not be economically updated. There had already been several major additions and renovations to add and improve classrooms, kitchen and cafeteria space, air conditioning, security systems, roofing, front office space, library, lighting, paint, carpeting and tile, a PA system, and a covered walkway.

It was clear that the successful pre-K program housed in this space needed a new home. Willis ISD envisioned a new facility—one that embraces outdoor learning with a progressive, play-driven curriculum. With the help of the 2020 Bond Election, the community once again rallied around the Roark EEC to bring forth a space designed for the future in honor of its history.



Project Goals and Outcomes

Willis ISD wanted an Early Education Center that was forward-thinking. The successful existing early education program had outgrown its old, repurposed building, and the District rooted its design for the future in flexible space and state-of-the-art facilities. The overall goal? Reshape early childhood education to nurture a sense of belonging and greater connectedness to community, introduce outdoor education, and integrate the sensory learning experiences that encourage curious, confident kids.

Play is a critical way children figure out how to live in our communities. In the Roark EEC, the entire school is a playing and learning tool. The interior space is designed as a “big city.” It brings together different spheres of a child’s life—their homes, their community, and the wider world, in a way that connects their learning across different situations and environments.

One of the few standalone EECs in Texas, Roark offers secure outdoor spaces that give kids the chance to climb a log, tell time on a sun dial, and tend a garden. Natural elements increase children’s spatial-cognitive awareness, physical competence and skills, socialization, and imagination. The school is designed to foster exploration and safe risk-taking in the real world. It also encourages movement, with walking trails and a miniature park.

This sensory experience keeps kids engaged. Inside and outside, everything has texture: plant foliage, rocks, paving, flowers, bark, and the overall branching pattern. Combating digital days filled with screen time, teachers get to instruct using a play-driven, nature-integrated, holistic curriculum. The school is designed for future growth to accommodate 400 students, with 270 currently enrolled. Roark EEC largely serves 4-year-olds as well as children from 3-5 years old with special needs.

02

SCOPE OF WORK & BUDGET

"Our building reflects the understanding that PreK sets the foundation for a lifelong love of learning by integrating technology and ample flex space for extended learning!"

—Melodie Sharpen, PreK/Inclusion Teacher

The Roark EEC started out as a one-story brick frame building in 1955, becoming a one-story brick and steel frame structure after the 1975 additions. The campus saw over a dozen major renovations and additions in its 65-year life. The former 18,000-square-foot facility on a 10-acre site hit a point where vital systems like roofing and air conditioning had reached their life expectancies, and more improvements weren't practical.

A new facility would accommodate future growth and take this pre-K program into future. In addition to student classrooms, it housed a cafeteria, administrative offices, a faculty lounge, and nurse's office. The new facility would need to accommodate each of these functions. Willis ISD capitalized on a site already owned right across from the existing facility, and this space provided lower impact to impervious cover, as parking was already included.

Scope of work:

- School for 400 students including 20 classrooms, flex areas, cafeteria, gymnasium, motor skills lab, community room, administration, and secure outdoor learning courtyards
- Designing and building the new campus comprised of classroom pods, motor labs, outdoor learning courtyards, a community room, dining space, clinic, event space, a city park, playground, and gym
- Additional circulation required for direct connection to the outdoor learning spaces

Budget:

Notwithstanding the project being tendered during historically high 20% inflation in the construction market, the Roark EEC met Willis ISD's budgeted \$351/square foot. However, the final cost was \$2,821,000 over the total budget because the facility was programmed for 50,000 square feet and \$17.75M. Pre-design discussions revealed the community's desire for a larger kitchen, an open layout and additional circulation required for direct connection to the outdoor learning spaces. The final facility was 58,000 square feet. Willis ISD adjusted the funding for other projects to accommodate the additional 8,000 square feet, prioritizing the quality of the learning environment over the additional cost.

Construction cost: \$20,371,000

03

SCHOOL & COMMUNITY ENGAGEMENT

*"It is a beautiful school with a bright future!
I can't believe it is only for pre-K students.
I wish I could have gone to a school this cool!"*

—Roark EEC parent



About the Community

Roark EEC was made possible by its devoted community members. Voters in Willis ISD passed a \$100 million bond to improve educational facilities, which included the EEC.

Located in a residential pocket, Roark EEC sits in a centralized location in the middle of Willis. It is woven into the community. As such, the campus needed to reflect the heart of the District, incorporating the features that matter most to the neighbors and students that share the space.

The superintendent spent over a year working with a long-term planning committee comprised of 40 community members to brainstorm the new EEC, identifying wants and needs. They evaluated facility age and status, attendance numbers, and demographic studies of District growth.

Willis is a growing community with significant residential and commercial expansion. Master planned neighborhoods and mixed use developments are drawing in families with plenty of pre-K-aged children. Based on the 2021 Population and Survey Analysts demographic update, Roark EEC is estimated to nearly double in projected students by 2031.

The community and school engagement effort brought a clear priority to the forefront of EEC design and planning—outdoor learning. Aligning well with the access of public parks and nature, Roark EEC's indoor biophilic elements and outdoor courtyards start early learners off with a deep appreciation for the community that has invested in their bright futures.

Meet the Stakeholders

Once the Willis ISD 2020 bond was called, the District leadership and design team came together to discuss and formulate the project goals. The team was comprised of teachers, District leaders, and administrators. The stakeholders' goal in that workshop was to brainstorm what the Roark EEC facility would be like 50 years from now, and what priorities would be important at that time. Since the existing Roark facility was a repurposed building, the stakeholders decided it was critical for the District to design a one-of-a-kind facility that looks to the future of early education.

In addition to the 400 early learners that Roark EEC can comfortably accommodate, the stakeholders involved include parents and caretakers, school board members, teachers, administrators, and other community members who live in the district's boundaries.

Willis ISD put out a call for the long-term planning committee on its website and social media to engage these neighbors and solicit their input in the planning process. A team of district Roark campus administrators and district curriculum leaders represented the campus in meetings, providing a lifeline to the community that would vote this critical facility into existence.





Challenges

Since project took place during the pandemic it was designed remotely (w/meetings) with exception of materials selection and bid during very high inflation and material shortages. Alternate structural systems were explored to save on costs.

The site is on a hill that drains to wetlands. The building was stepped down in three elevations to accommodate the slope of the site.

School needed to be opened by fall in spite of challenges

Available Assets

Instead of spending funds on new land, Willis ISD leveraged an existing space adjacent to the former EEC. This creative solution transformed a portion of grass practice fields that did not see daily use into a state-of-the-art learning facility. Students still have space to practice on remaining fields, and the District saved significant costs by keeping the project footprint within its existing assets.

Value of Process & Project to the Community

This project reignited the community's sense of pride in the Roark EEC name. Neighbors rallied together to pass the bond that brought their ideas for this school from concept to reality. Its innovative design connects the child's journey to school with their place in the world.

Classrooms are designed like a home. Circulation pathways are designed like roadways and crossings they see outside every day. Dining is a central park green space encouraging communal gathering. The campus fosters a sense of belonging and place—a community within the community.

Willis ISD can also open Roark EEC's community room independently from school operations. It has already hosted parent and campus staff meetings.

A study published *Educational Researcher* showed that kids who attended a high-quality preschool program were 11 percent more likely to graduate high school. They were also 8 percent less likely to be held back or placed in special education. Roark EEC functions as a microcosm for pre-K students to learn and practice critical life skills in their own little world.

THE EEC PROVIDES AN OPPORTUNITY TO ENGAGE IN:

- ✓ *A stimulating and meaningful environment outside an ordinary classroom*
- ✓ *Inquiry experiences which enhance higher order thinking skills*
- ✓ *An environment where skills and knowledge are applied in the real world*
- ✓ *A connection to the great outdoors*

LEARNING ENVIRONMENT 04



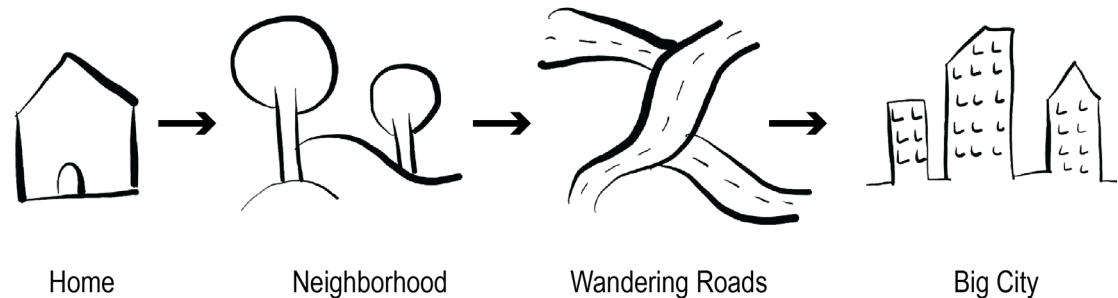
Educational Vision and Goals

At Roark, our VISION is Little Learners building BRIGHT futures. Our MISSION is to set the foundation of learning by developing social/emotional and academic skills for ALL students.

Roark EEC's overall aim is to provide an early learning environment that sets students up for future success. The school is inspiring education providers to rethink how we teach children with its unique approach to outdoor learning.

By connecting indoor classrooms to outdoor courtyards, it's easy for teachers to carry their lessons outside. From learning about local plants with landscaping native to the community to telling time on a sun dial, kids with otherwise limited access to parks and nature get the chance to experience this vital learning tool in their day-to-day lives.

As a society, we are now rethinking ways to help young children to tap their vast learning potential. Play is one of the most important ways in which young children gain essential knowledge and skills and for this reason, environments that promote play, exploration and hands-on learning are at the core of effective early childhood programs. At Roark EEC, the entire school is a playing/learning tool. We designed the interior space around the concept of a "big city," with the classrooms acting as "homes," the learning communities simulating "neighborhoods," the corridors serving as "roadways," and the larger, dynamic, and colorful space designed for the dining is analogous to "city" and is surrounded by graphics designed to highlight the Houston skyline. A central principle of learning through play is bringing together the different spheres of a children's life – their homes, their community and the wider world, in a way that there is continuity and connectivity of their learning processes over time and across different situations and environments.



How the Environment...

...SUPPORTS THE CURRICULUM

Roark EEC is all about learning through hands-on techniques that focus on connecting the students with the world around them.

Educators in the school are now integrating the outdoor elements as learning tools. Students are counting logs, watching sun angles, observing water collection and irrigation, comparing natural v/s artificial elements, and watching the seasons change. Access to natural phenomena builds the early learner's awareness of their surroundings and life cycles.

...SUPPORTS A VARIETY OF LEARNING AND TEACHING STYLES

As kids learn to navigate their days with more independence, teachers at Roark EEC provide them the tools to grow into their own learning styles.

Inspired by studies that show movement and physical activity can help students' learning, Roark EEC features a large outdoor play area with age-appropriate equipment, plants and vegetation, and a range of multi-sensory play opportunities and safe surfaces.

While environments that encourage kids to play and explore are key to early childhood education, there is merit in the quieter side of school too. Roark EEC's design uses the warmth of wood to invoke a sense of home. There are peaceful niches for kids to curl up with a good book.

In addition, motor skills labs help students catch up on critical skills, like holding a crayon or sculpting with play-dough. Equipped with two-way mirrors, the rooms let teachers observe students' progress in an organic manner.

...IS ADAPTABLE AND FLEXIBLE

The classroom pods meet in a neighborhood—an outdoor collaboration area that can server several purposes such as a stage for presentations or plays.

The dining room and gymnasium were designed with a large glass operable wall between them which can be opened for large community and school events.

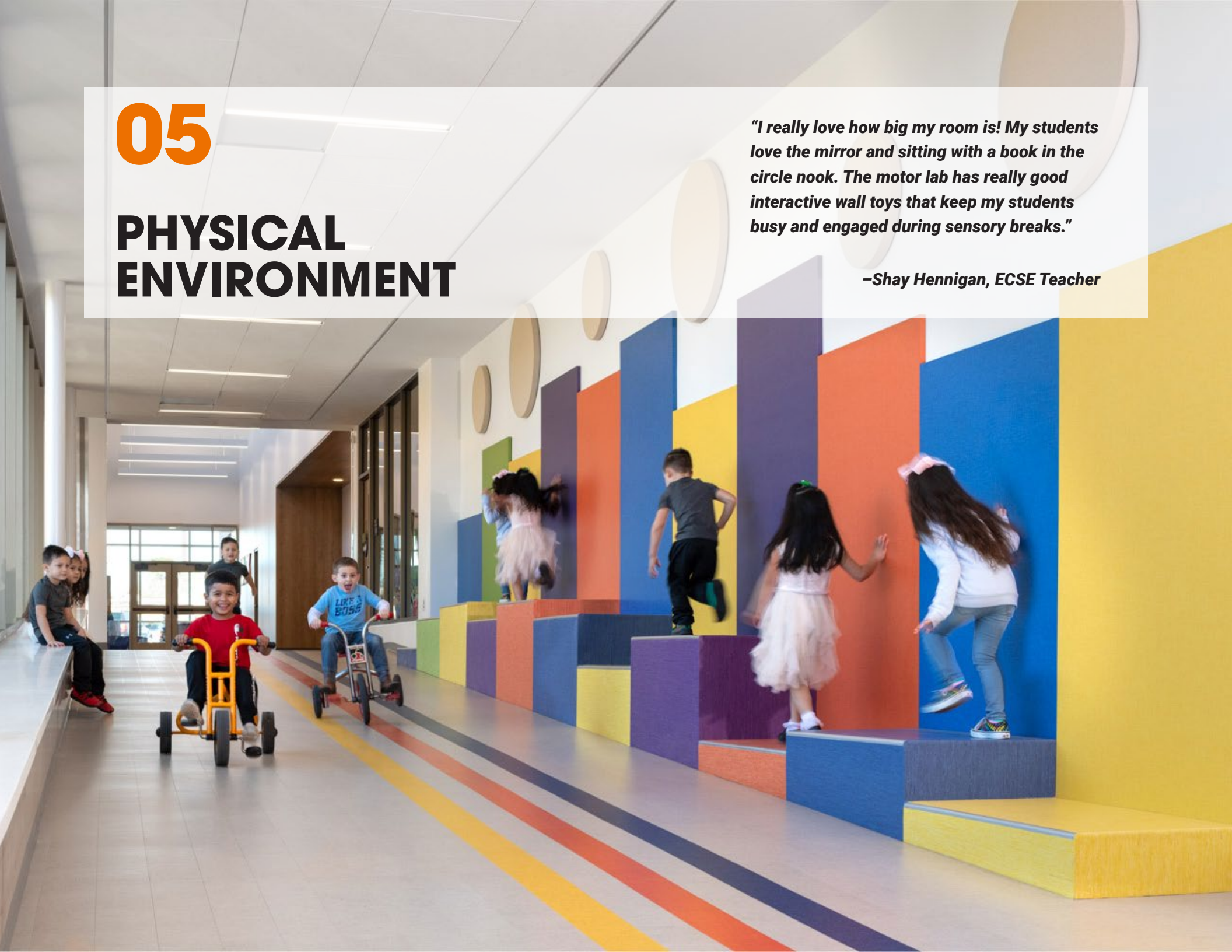


05

PHYSICAL ENVIRONMENT

"I really love how big my room is! My students love the mirror and sitting with a book in the circle nook. The motor lab has really good interactive wall toys that keep my students busy and engaged during sensory breaks."

—Shay Hennigan, ECSE Teacher





Physical Attributes of the Environment

Learning environments designed to provide a wide variety of colorful elements, textures, smells, temperatures, and sounds will stimulate the early learner's senses. Roark EEC puts these ideas into practice by using tactile finishes with different temperatures to the touch in the interior design—like wood or stone on walls. Texture provides variety, adds interest, and creates contrast in the interior design.

Outside, contrasting texture in the landscape design includes combining fine and coarse surfaces for plants and materials. Roark EEC encourages direct interaction with the natural environment with accessible sources of water and soil, and natural elements that students can manipulate such as rocks, shells, pinecones, or wood.

The courtyards are designed with elements such as wooden trunks for stepping, small boulders to climb, and small turfed hills to climb or roll down. The primary feature in the east courtyard is a cistern that can be used for science experiments and to discuss water preservation. The west courtyard has a colored glass tower that creates color and pattern on the ground as the sun passes over.

Interactive exhibits have also been integrated into the interior of the building. Colored stepping blocks have been placed next to the sloped hallways. The students immediately gravitate to the exhibit, climbing and stepping from block to block.

The school highlights floor patterns designed to work as a wayfinding tool for early learners who can make the connection between the different colored flooring lines and their own classroom pod's color.

The physical environment influences the way children develop their ability to learn and interact with others, and Roark EEC provides opportunities to engage around every corner.





How the Facility / Project...

...FITS WITHIN THE LARGER CONTEXT OF THE COMMUNITY

The school is located in the heart of the District, providing easy access for young parents within the Willis community. During the master planning design stages, a site was identified within the limits of one of the District's main campuses, near an elementary school and middle schools. The campus had a generous amount of parking available as a result of one of the middle schools being a high school previously. The use of this existing parking as part of the new design of the Roark ECC helped to reduce the overall cost of the project.

The location of the building also influenced some program elements in the facility. The District's committee expressed a need for a community room, so one was added at the front of the building adjacent to the entry lobby. This room can be used as art room for the students and by the community after school hours and has access to a separate restroom facility. The dining room and gymnasium were designed with a large glass operable wall between them which can be opened for large community and school events. These spaces were placed on the south side of the building to take advantage of the view to the natural setting of the existing trees.

...INSPIRES AND MOTIVATES

Providing a safe space for early learners to discover and explore, the courtyards feature planting, mounds, logs, a cistern, and a sun tower, drawing attention to environmental features. These interactive features engage children, while fostering commitment and respect for the environment and providing them with opportunities to practice independence.

Natural elements added to the outdoor environment increase children's spatial-cognitive awareness, physical competence and skills, and socialization. Time spent in green spaces, including parks, play areas, and gardens also reduces stress and mental fatigue. Additionally, early experiences with the natural world are positively linked with the development of imagination and the sense of wonder.



06 RESULTS OF THE PLANNING PROCESS & PROJECT

"It has been incredible watching how excited our Roark students are to come to school everyday! All of the windows in our building allows natural light in that puts smiles and a readiness to learn in all of our littles."

--Calandra Lewis, Roark EEC Principal

Planning and Visioning Meeting #1

- A Day at Roark Early Education Center: Mission and Student Profiles at the early education center. By Principal Calandra Lewis, Coordinator
- Willis Early Education in 2040: Let's review our insights from the postcards of the future. How has Willis changed?
- Activity Mapping: What actions / activities promote future-ready skills?



How the Project Meets...

Educational goals: The District identified several educational goals and visions after the initial workshop with the stakeholders. The main focus was to plan for the future by designing an accessible and flexible campus that would enhance the learning experience for the early learners. The new campus provides ample opportunities for teachers to integrate outdoor learning environments into curriculum as well as hosting classes outdoors. The new design successfully supports early learners' growth and builds a inherent sense of place and belonging. The campus also motivates staff and teachers to innovate, collaborate, and revamp teaching.

District goals: The foremost goal for the District was to open the Roark EEC on time and on budget along with maintaining the identified shared vision for the facility. The design, construction, and District teams collaborated and strategized to get the campus opened on time. This was at a time when supply chain issues in construction were creating a large backlog on construction materials. The new campus is a landmark and sets an example for what early education learning environment should be like as the child graduates to attend an elementary school.

Community goals: The new Roark EEC provides full-day school for students in the District. The central location of the campus is close to many of the District's other educational campuses and administrative offices, which is ideal for working parents. The center also provides the community with a facility to hold events after hours and future partnerships to share the parking and park facilities.

Unintended Results & Achievements

Willis ISD's forward-thinking leadership inspired the faculty and design team to actively partner together in unplanned ways. When the design team was developing the courtyard layout, the teachers were also having their own meetings to identify the elements they wanted most, then brought those ideas back to the design team. This collaboration resulted in a campus that much more attuned to the students and teachers it serves.

The teachers are also learning new ways. Past practices like hanging posters over windows or filling empty surfaces with objects were ingrained in their culture. But blocking natural light and cluttering a blank slate ready for play are counterproductive to Roark EEC's mission. Since implementing the new ways, the entire faculty is rethinking how they teach and collaborating with each other to keep up with the learning environment.

As an added bonus, the District and the community have been inspired to raise the bar for its other schools. Appreciating Roark EEC, they see the need to upgrade other facilities so that students moving to first grade and beyond continue to receive a premier education experience.

