

# an **EDUCATIONAL** **OASIS**

## **Building Community**

The George E. “Buddy” West Elementary School is a point of pride for the community of West Odessa. The day the school opened marked the first time some of its students had ever been in a building with more than one floor or seen an automatic water fountain or elevator.

The community is on the western edge of the city of Odessa, in the heart of West Texas. It was primarily settled by resilient, hardscrabble oil field workers in the late 1970s, at the apex of a historic economic boom related to oilfield production. Reportedly, in the mid-’80s, mobile homes typified two thirds of the total housing stock. Tent cities, known as “man camps,” were also common in the area.

Due to poor quality water and even worse soil conditions, West Odessa remains to this day a dusty and hardened place without much vegetation. It hosts a population that has expanded and declined ever since, always at the mercy of the boom and bust cycle of the oil industry.







*Covered court*

Erratic student population cycles, driven by the volatility of the economy, demanded building flexibility. Interestingly, student-centered, project-based learning was not so much cutting edge pedagogy as it was common sense for families that were already accustomed to working together with their hands to earn everything they have. The building is modern, permanent and undoubtedly impressive to the people it serves. It is even more important as a statement by the school district of hope, opportunity and affirmation for the children of this area.

The Ector County Independent School District displayed vision and tenacity in introducing interactive, collaborative and student-owned learning at the early stages of their students' educational experience. Along with two other site-adapted elementary schools constructed at the same time, West Elementary responds, true to the famously expansive skies of West Texas, as a place where students' horizons are expanded well beyond the oil patch.

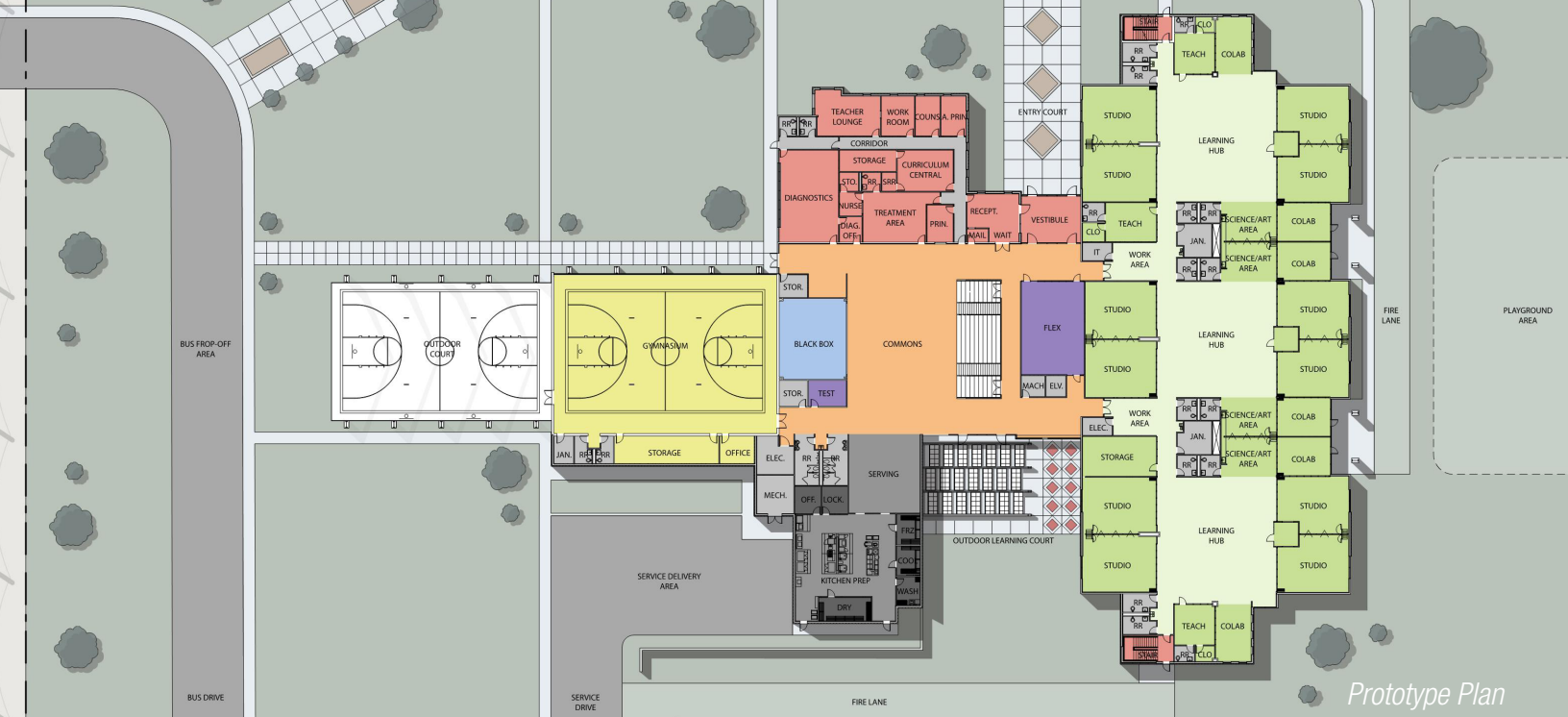
## Scope of Work

*George E. "Buddy" West Elementary School*

*Edward K. Downing Elementary School*

*Dr. Lee Buice Elementary School*

- Three site-adapted prototype schools built simultaneously for Ector County ISD.
- 254,100 combined square feet
- 680 students per school
- Eight months to design
- 14 months to build
- \$55 million



## Planning

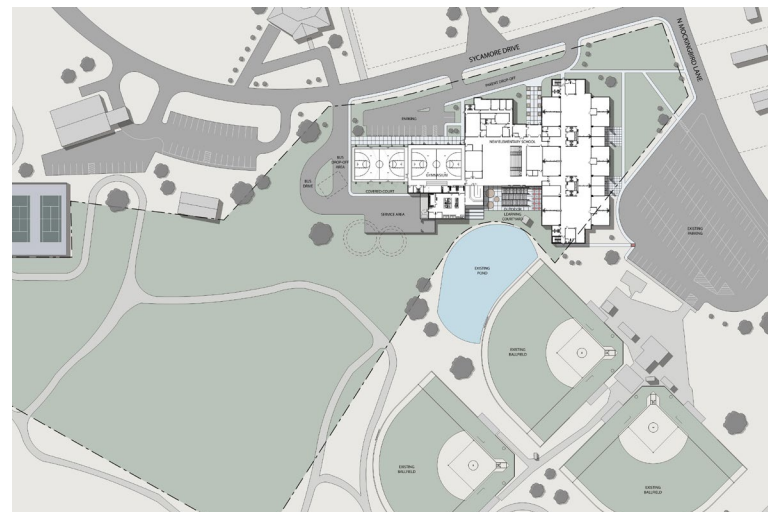
Collaboration characterized the creation of three new elementary schools for Ector County Independent School District (ECISD).

The district had a master plan but, more than anything else, they emphasized the need for flexibility in both space and pedagogy. The district envisioned project-based learning at the elementary school level, knowing that it would spark the awareness and expectations of students, parents, teachers and administrators all across the district. They knew this was the way to meet the variety of learning differences that were present in these low-performing schools.

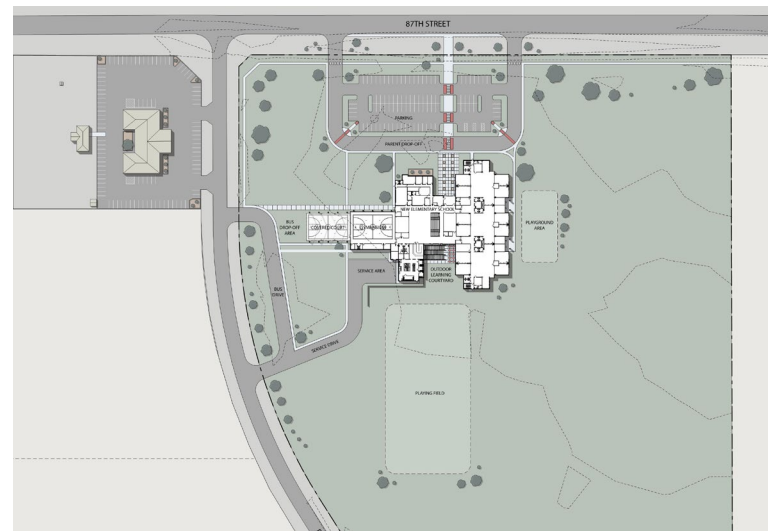
The district had three goals:

- Maximize space flexibility
- explore and implement state-of-the-art advancements in education
- facilitate a broadly enfranchising planning process

The district proceeded to propose and then pass a \$129 million bond that included the design and construction of three new elementary schools.



*Master Plan for George E. "Buddy" West Elementary*



*Master Plan for Dr. Lee Buice Elementary*





*Principal Charrette*

## Visionary Leadership

David Finley, District Chief Operations Officer and architect, was the chief catalyst to making these groundbreaking schools a reality. Because of his unique administrative role and professional expertise, Finley had the trust of the Board, the administration and the teachers. He was the ideal liaison between the district and the highly accomplished architectural firm he commissioned for the design. He masterfully orchestrated the entire programming and design process as a project-based learning proposition. It proved to be a highly engaging, broadly enfranchising and meaningfully interactive process. He wanted everyone impacted by the new schools to help determine the outcomes.

Before he commissioned the architects, he researched numerous award-winning school designs and found common adjectives used to describe their objectives and benefits. Examples included the words safe, integrated, discovery, collaboration, transparency and community. Finley included those words in a survey that he administered to the community through the district website. Those concepts became watchwords that guided the formation of the program all the way through to the end of construction.



*Teacher Charrette*



## Watchwords

The journey from hope to reality required courage. It also required the persistent engagement of all possible stakeholders. Using the watchwords identified, the architects worked closely with Finley to develop the program and educational specifications for the project. The design team included the superintendent and his highest ranking administrators (his cabinet) coupled with the architects. The architects brought specific expertise in highly collaborative spaces and integrated learning, and made a series of presentations to the cabinet and district board members.

The design team then engaged the board in an exercise using cardboard cutouts based on the agreed-upon program. This exercise served to both confirm the program and to begin the process of schematic layouts. The interactive work of the exercise equipped the participants as informed critics and eventual advocates for the emerging plan. The second group engaged was a citizens' group made up of leaders in the community. Shortly thereafter, the design team engaged with the Odessa Chamber of Commerce in a planning retreat. The design team continued interactions with the entire group of administrators from the district, then with selected teachers and students from the district.

Creating a floor plan was a hands-on experience. Participants manipulated cardboard cutouts representing each of the academic spaces to organize them in a way that made sense to them. Then each group explained why they shaped the building the way they did. Once they had figured out the academic area, they received another set of cutouts for the larger building elements such as the entryway, lobby, gym, cafeteria and kitchen area. The design team coached the groups along the way, reminding them of site constraints and opportunities.



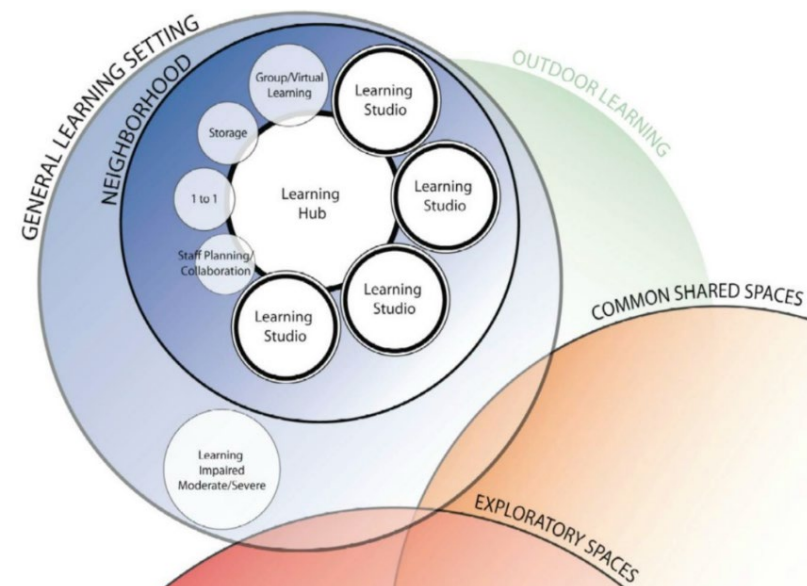
Astoundingly, after much animated small group work, each session resulted in consensus toward a consistent conceptual plan. It was organic in the best sense. Virtually every group agreed that the two-story portion of the academic building made the most sense. Concerns about safety issues and children hiding out in stairwells dissipated after the architectural designers implemented windows next to stairwells.

Finally, as the schematic design was emerging, the architects engaged a combined high school class with similar exercises. The class took on the design and integration of sustainability measures into the school design through a 10-day integrated learning project. The architects returned to hear the final presentations of the students and to offer input on the various solutions.

Schedule

Time	Period	Duration	Activity	Studio A Bilingual/Math	Studio B Math	Studio C ELA	Studio D Social Studies	Small Group	Colab 1	Colab 2	Hub A	Hub B Science/Wet Area	Outside Hub
7:30 AM		0:20	Teachers Arrive										
7:50 AM		0:10	Students Arrive										
8:00 AM		0:10	Group Meeting (Hub)								All All		
8:10 AM	1	0:45	Class	Math 22	RTI 12	ELA** 22	Social Sciences** 16	RTI 4		RTI 6	Social Sciences 6		Theater/Drama 22
8:25 AM			1st Movement (15)										
8:40 AM			2nd Movement (15)										
8:55 AM		0:05	Trans (Class Change)										
9:00 AM	2	0:45	Class										PE/CONFERENCE 110
9:15 AM			1st Movement (15)										
9:30 AM			2nd Movement (15)										
9:45 AM		0:05	Trans (Class Change)										
9:50 AM	3	0:45	Class	RTI 22	Math 18	ELA** 22	Social Sciences** 12	Math 4	Science 10		Social Sciences 10	Science 12	
10:05 AM			1st Movement (15)										
10:20 AM			2nd Movement (15)										
10:35 AM		0:05	Trans (Class Change)										
10:40 AM	4	0:45	Class		RTI 12	ELA** 22	Social Sciences** 16	RTI 4		RTI 6	Social Sciences 6		Theater/Drama 22
10:55 AM			1st Movement (15)										
11:10 AM			2nd Movement (15)										
11:25 AM		0:05	Trans (Class Change)										

Schedule of curricular flow



Adjacency plan

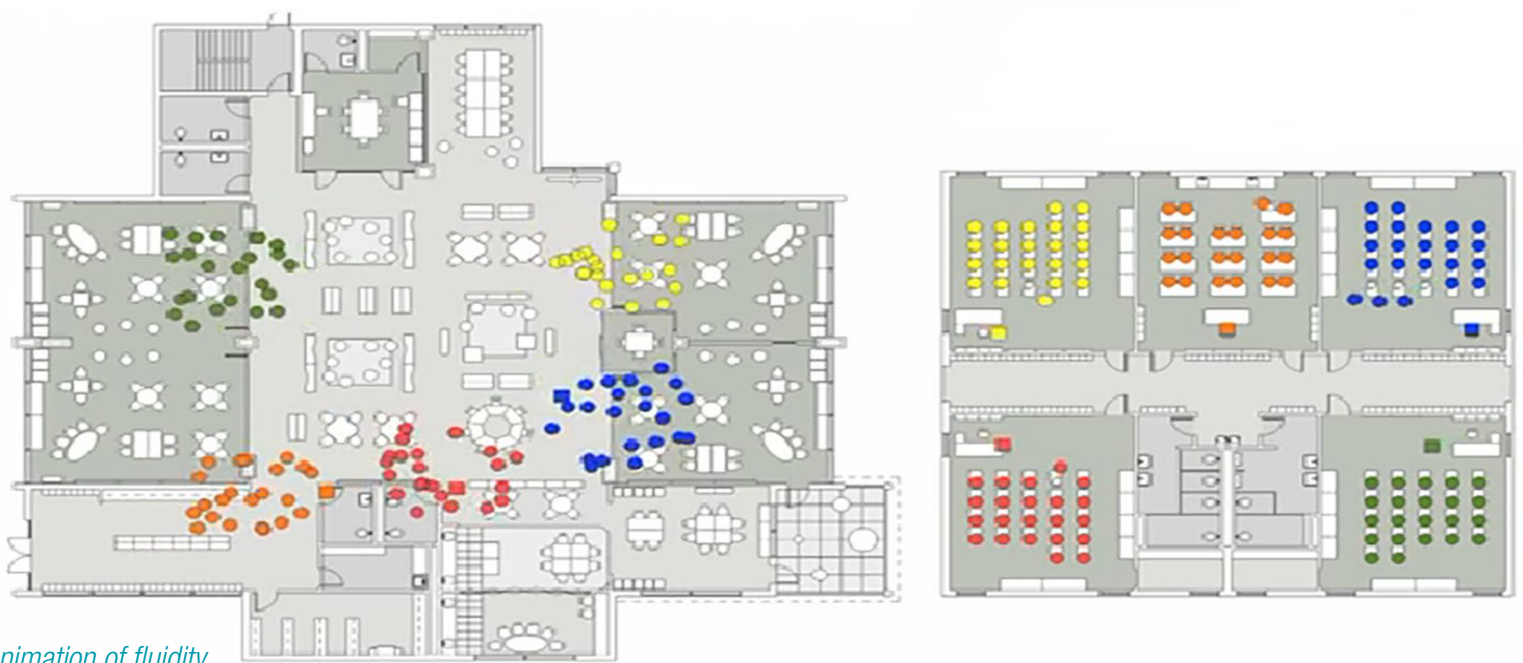
## State-of-the-Art Education

Guided by the watchwords, Finley and his Assistant Superintendent of Curriculum, Carolyn Gonzalez, began thinking about the curricular flow of the day in the schools. This work resulted in developing a matrix with the architects. Removing the constraints of traditional daily scheduling, the matrix influenced all three dimensions of the design. The matrix itself documented the fourth dimension – of time. The volumes of space and their adjacencies and interactions all came directly out of the matrix. The design was quite literally built around the curriculum rather than the other way around.

The two-story academic portion of the plan coalesced around two central hubs on both levels with three learning neighborhoods, each linked together by their hubs.

A variety of collaboration spaces, learning studios, teacher spaces and functional spaces would circumscribe the central hubs. The resulting space would be highly flexible in teaching styles for various ages and needs. The Commons would be a gathering space for dining or events.





*Animation of fluidity*

The design team created an animation of the design showing the fluidity and simplicity of flow for teachers and students throughout the day. The animation contrasted the design with a traditional school layout, illustrating the striking difference between fluidity and stasis.

The animation showcased a neighborhood floor plan, with educators shown as colorful squares, and students as colorful dots. The screen was split into two portions. On the right was a traditional setting in the life of a school day. On the left was the proposed design in which each educator and student moved about the neighborhood, forming large and small groups, all while walls opened and closed. The colorful dots gave an indication of how the different classes blended and how educators could teach in teams.

At a citizens' group meeting, the architects showed the animation for the first time to explain the concept. The reaction was spontaneous applause and the animation became a huge key in gaining approval from the community.



*Rendering of the learning hub*





*Learning hub*

## Maximize Space Flexibility

Making space flexible was necessary in the design of the schools. It positioned the district to respond to fluctuations in the school population year to year. Of course, the glazed and folding walls make collaborative learning possible as well. The students, teachers and administrators have responded well to these design features.

The district engaged their designated three principals a year before the schools opened, to help ease the transition. Once the schools opened, one of the principals stepped into the idea of class fluidity slowly. She allowed the teachers to ease into their new environment in their own way. Every six weeks, she introduced new directives, such as opening the movable walls at least two hours per day. Her patient approach is paying off. Teachers are continually discovering new ways to conduct learning. As one administrator put it, “One teacher told me that they will never go back to a traditional school.”

Teachers showed flexibility and a desire to meet challenges to be a part of this pioneering effort. A massive change in the accountability system occurred in 2013 due to state legislation – Texas House Bill 5. v bill, among other things, requires adopting rules that allow a student to complete a new, combined world history and world geography course to satisfy the social-studies requirement for the foundation program. It also allows a student with disabilities to substitute a



*Learning studio*

P.E. course credit for an academic course credit. It also requires a local committee to create criteria to rate the district and each campus on individual factors.

The ECISD administration embraced this directive for individualized instruction, knowing a simple truth: Every child learns in a different way. They were insistent in providing educational experiences related to student's strengths, knowing the more the child can be engaged, the better that child will do. Students had to feel safe, and have the ability to move. The building's flexibility maximizes teachers' ability to respond to individual learning needs.





## **On Track for Success**

The metaphor of a railway station emerged early in the design process. This idea grew out of a recognition that the Odessa/Midland area was settled in the late 19th century as a rail stop halfway between El Paso and Fort Worth. It gained traction as a design inspiration because of the parallels of train travel and education — the rail station is not a destination in itself but the means of connecting to the world beyond.

The steel structure supporting the roof of the gymnasium was inspired by train trestles. Orange, white and steel-colored tracks and a reference to a diesel engine wheel visually lead visitors to the entrance and continue to an outdoor learning space on the other side of the school. In the gymnasium, a pattern of colorful train “smoke” moves in the translucent panels. As part of the outside learning court, each school has circular, concrete sitting areas evoking train roundhouses. The floor plans resemble a diesel engine with trailing cars.

LED lighting throughout the schools is programmable and responds by supplementing daylighting with automatic dimming measures to minimize energy use. The learning spaces are programmed with

lighting scenes, which are programmed visual effects. Teachers can adjust the lighting for AV presentations and general classroom functions, as well as specific learning times. The lighting system, in tandem with the networkable controls, provides for a high level of controllability and use.

The Commons is a shared space that is the crossroads of the school. More than a dining area, it is a social space, a performance space, a gallery for student work, an audience space and a display area. Since this space is heated, cooled, and illuminated all day along with the other spaces, teachers can use it as an educational space.



## Safe Spaces

Security was a high priority in the initial survey and throughout the design process. The team determined that, dramatic headlines notwithstanding, the real and most probable dangers facing children every day result from a lack of transparency and supervision. Bullying and consequences resulting from students' bad judgment are a much larger concern every day. While the team seriously studied and implemented prudent measures to prevent harm in a lone shooter scenario, a great deal of attention was given to minimizing everyday harms. The design considers age-appropriate flow of students through core spaces for general gatherings, such as all-school assemblies and food service.

Natural dark corners were avoided by bathing all stairs with natural light. This feature also considerably improves the daily experience of circulating between spaces throughout the day. Smaller, distributed restrooms are conveniently placed at each learning neighborhood so students will not be wandering unsupervised.





***“We are very blessed to have a school with this technology.”***

*- Alicia Press, Principal, Lee Buice Elementary*

## **The Third Teacher**

Inspired by Loris Malaguzzi's work, the design team considered the buildings to be the third teacher, after teachers and fellow students. Malaguzzi believed that the design of the school can play a significant pedagogical role.

### **Lighting**

Glazing proliferates throughout the schools. Outdoor areas are also strategically placed for safe, sheltered learning opportunities.

### **Technology**

Alicia Press, Lee Buice Elementary principal, said that she limits the number of lectures and multiple-choice examinations administered to the students. Instead, teachers try to give the students as many opportunities to be creative and think independently as they possibly can.

For example, technology makes it possible for students to write plays and use software to diagram the plot and analyze character development.

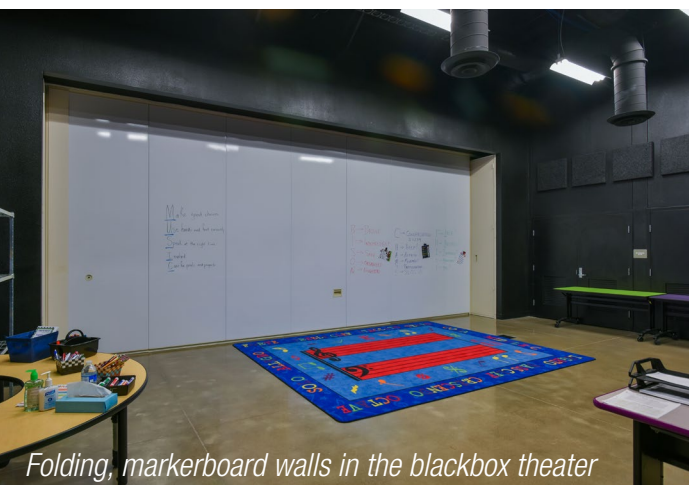
The schools enjoy a unique wireless umbrella, which supports students' need to move from space to space. About 120 electronic tablets are available for student use at a moment's notice. “We are very blessed to have a school with this technology,” Press said. Students and teachers use flat panels and have access to 100 laptop computers.



These classrooms are also equipped with marker boards, tack boards and smartboards. Students and teachers can write on the walls of the movable partitions. Large, mobile, interactive touch-screens are moved frequently between learning spaces.

### Color

The design team integrated a combination of bright colors, unusual shapes, patterns of light and a variety of textures. This strategy provides a welcome relief from the surrounding natural environment's palette of brown and beige. Bright green and fluffy carpet squares brighten the learning hubs. Panels of differently-hued, linear fluorescent light fixtures hang from the ceilings along with pendant lights. Outside, neon colors glow under the eaves of the roof. The steel-painted beams of the play area's soffit hold panels of gold, orange, red and blue.



*Folding, markerboard walls in the blackbox theater*



*Modular furnishings in the learning studios*





## Other Features

Every portion of the school was designed to utilize space wisely.

Glass folding partitions provide acoustic separation between learning spaces while allowing educators to monitor each space. Counseling, resource training, and community meetings are held in a diagnostic area.

Teachers have collaborative work space apart from the learning spaces. This offers teachers privacy and separation from student flow, promotes collaboration and team-teaching, and heightens the availability of the learning spaces.

Various types of lightweight, movable furniture proliferate throughout, including soft seating options to assist in early literacy skills, big cushioned platforms, furniture that moves, stools that promote student body movement and tables that adjust and integrate technology.

The covered court is adjacent to the gymnasium. It serves to extend the functionality of the gyms without adding conditioned space. This space has become a community center for the area in which each of the schools is located. Each cover features colorful soffit panels.



Entryway



***“The kids looked like they  
were going to Disneyland.”***

*- David Finley, COO, Ector County ISD*

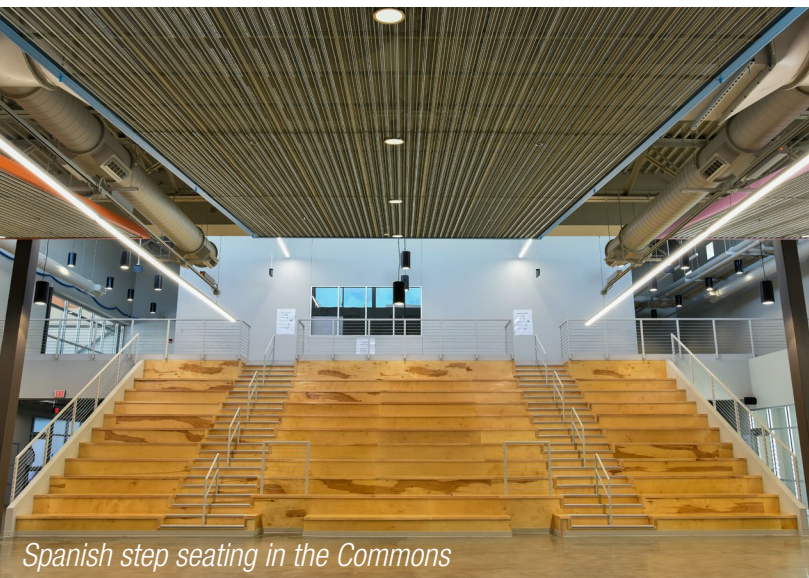


## **Student Impact**

The schools respond to the needs of a community that has faced significant challenges. More than half of ECISD students come from families of lower socioeconomic status. One of the schools is in Ector County's poorest demographic. "On the first day of school, the kids looked like they were going to Disneyland," Finley said. Some had never been in a two-story building, had never seen an elevator, or had never seen an automatic drinking fountain. "I mean very simple, tear-jerking things that you would never realize. I would talk to some of these little kids and say, 'What do you think?' And they'd say 'This is my school?' in disbelief."







*Spanish step seating in the Commons*

***“The teachers really inspire them to be creative... It’s been a pleasure to watch them learn and grow here.”***

*- Alicia Press, Principal, Lee Buice Elementary*

## **Moving forward**

The students embraced the transition from day one, said Press, who has three children of her own at the school.

She said her own children are enthusiastic about attending the school. They are excited about the independence that they have coming to this school. “They love being able to come out and read and do projects with some of the fun furniture that we have. I love that they’re eager and excited to come to school every day. I love that they’re thinking more independently because the teachers really inspire them to be creative, think outside the box and not settle for less than their best work. It’s been a pleasure to watch them learn and grow here.”

It’s been more of a transition for the adults. But the students were able to move right in with the concept, and were comfortable right from the beginning. “They thrive on that freedom,” Press said.





*The Commons at lunch*

## The Book Challenge

In order to meet demands of the Texas Education Agency, movable shelving is distributed around the hubs. Not including dedicated library space came with its own set of challenges, Finley said. “The idea of the library exploding is exactly what happened. We have books all over the building.”

Books are dispersed to all of the learning spaces. In addition to books, each student has access to a tablet. Technology allows the students to research in different ways, although some still do best with books. The students and teachers are encouraged to collaborate to help learn from each other.

Librarians are now Media Specialists, and concerned parents are adjusting their expectations. Finley had a vision for students to discover information in a comfortable chair with a smart phone or a tablet, which is what they do, he said. “I don’t think the answer is to build a library. And that’s been a challenge.”



***“The idea of the library exploding is exactly what happened. We have books all over the building.”***

*- David Finley, COO, Ector County ISD*





## Many Firsts

A 1979 city plan emphasized that the city should pursue joint park and school sites at some locations. The West School involved just such an arrangement, siting the building within an existing park.

The design team maximized views with an outdoor terrace overlooking the park's pond which presents unique educational opportunities of its own.

Most importantly, this was the first engaged learning space of its kind in the entire West Texas region.

## How it Inspires, Motivates

The flexibility, light, engaging technology and furniture all lend themselves to an inspiring environment for students of this area. Implementing advanced pedagogical possibilities makes these schools noteworthy.

The district endeavored to show the community what was possible and to raise the expectations of students, parents, teachers and administrators alike. The early end of the educational spectrum seemed to be the most effective place to begin.







## How it Achieves Goals

“Our whole concept to begin with was to let the building get out of the way of good teaching and learning,” Finley said. “It’s a learning curve, obviously. Things don’t happen immediately, but the building can get out of the way. We feel like we have a piece of excellence here and we need to celebrate even small steps of that excellence.”

Administrators at the schools celebrate that. The students create goals about where they want to be, how they want to perform and how they plan to go about getting there. School-wide iGrow parties celebrate student learning and student success.

According to Press, the parents are ecstatic about the new schools. One parent said, “My son loves Buice

Elementary. I’m excited that he’s excited about school again, and he has a smile every day.”

Finley said public education is changing at such a quick pace, we need buildings that can adapt. The goal is to teach students and to meet them where they are.

He summed it up best by saying, “I felt it was so important, especially in a school district like this that is low-performing, very poor, and very mobile; we need something spectacular. We need a center of community, we need a place. And I think that’s what’s happening.”

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*- David Finley, COO, Ector County ISD*