# LEARNING HUB DESIGNS ACROSS ALL GRADE LEVELS

EDUCATION

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### NANAWALL SYSTEMS IN 21ST CENTURY SCHOOL DESIGN

EDUCATION SERIES: LUBBOCK COOPER SCHOOL DISTRICT

### → Flexibility

NanaWall systems enable dynamic classroom layouts on the fly. Merging one, two, or more classrooms into unifying, collaborative learning hubs.

### **Ease of Operation**

NanaWall opening glass walls feature stainless steel rollers that glide on stainless steel tracks to simplify operation regardless of size. Easy enough for teachers and students alike—even with an effortless push of a finger.

### Sound Control

Engineered with the success of students in mind, NanaWall acoustic glass walls can reach up to STC 45, offering distraction-free environments even with multiple classes happening at once.



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### Wellness

Glass walls maximize daylight to minimize reliance on artificial lighting. When opened, constant fresh air ventilation, alongside natural light, create healthy learning spaces that boost attention and retention.



NanaWall systems allow teachers to monitor students at all times. ADA compliant sills, advanced locking mechanisms, and impact-safe glass options, act as additional security measures where the safety of students is paramount.

### 174 OPENING GLASS WALLS — ONE SUCCESSFUL SCHOOL DISTRICT

### East Elementary—The Pre-K Wing

**The Challenge:** Present teachers with an instructional tool and readily available resources that facilitate the efficient introduction of early-developing academic skills such as the basis of collaboration to the youngest, evolving minds.

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### Lubbock Cooper East Elementary

**The Challenge:** Design 21st Century flexible teaching spaces centered around the ability to expand learning beyond traditional classroom configurations and into collaborative learning hubs.

### Lubbock Cooper High School

**The Challenge:** Establish a dedicated, multifaceted building for the Career and Technical Education program with flexible layout opportunities to simulate real-life vocational experiences.



We have nine facilities in our district, and every one has NanaWall [systems] across it. That was our vision—to provide maximum flexibility for what every teacher could use.



-LCISD Superintendent Keith Bryant

### PRE-K WING CONFIGURATION EMBRACES OPEN CORNER DESIGN

The versatility, visibility, and ease of operation presented by NanaWall HSW60 single track sliding systems facilitate a unique four-corner classroom layout at East Elementary's Pre-K wing. This pod-like design concept provides teachers with an additional instructional tool, offering a dynamic, collective learning approach for students at the earliest stage of their academic journey.

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### PRE-K LEARNING HUB LAUNCHES ACADEMIC JOURNEY

The Pre-K wing called for a different learning hub design approach to meet the visual and kinetic learning demands of the youngest students at East Elementary. As kids begin to explore freshly developed skills, including the basics of collaboration, the building was designed to act as an instructional tool where teachers could easily access resources within a fully contained, communal wing.

#### Four-Corner Design Increases Possibilities

Four individual classrooms were arranged in a quadrant design with their respective corners opening into the unifying hub and exits at either side forming a cross-like hallway space. Sliding glass walls installed at each corner offer clean sights between classrooms and unite them into the centralized hub for communal congregation, group instruction, or community member visitations.

### **Building Community Through Shared Resources**

The unique four-corner design acts as an additional safety feature as it facilitates the monitoring of students within a contained, safe environment. Bathrooms and cleaning areas are easily accessible, as well as sitting space for snack time—all teachers and students could possibly need without leaving the security of their pod. When the glass walls are opened, students come together in the centralized area and dive into hands-on projects while teachers share resources and unifying curriculums.

#### Easily Operable Panels Allow Space Maximization

The four classrooms feature four-paneled NanaWall HSW60 single track sliding glass walls. At roughly 9-feet tall, the top-hung systems feature an ADA compliant floor track, offering unobstructed transitions between spaces. Individual panels glide around corners with ease due to an intelligently guided head track while their specially designed rounded corner profile receives the perpendicular panel and offers a tight seal. Teachers effortlessly move the panels into compact stacks outside of the opening, maximizing classroom square footage.

### **Unlimited Design Flexibility**

The single track flexibility of NanaWall systems' HSW60 can solve virtually any design challenge. The individual panel system that slides on one single track is a completely top supported design where the number of panels is only limited by the supporting structure of your design. In interior applications where sound control is essential, HSW60 is an acoustic sliding glass wall tested and rated up to STC 43. For increased flexibility, swing doors can be integrated into any configuration though not required in this project's design.

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For Pre-K, the individual panels are an advantage. They are easy to operate, and they stack parallel to the opening and out of the way.

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—Michael Strain, Parkhill architect



Instead of a traditional linear installation, we strategized the open corner design to offer teachers as much wall space as possible for visual instruction and other teaching tools.

—Michael Strain, Parkhill architect



### **TO WRAP IT UP**

The Pre-K communal pod at East Elementary highlights the collective benefits of learning hub design within a 21st Century school district. The unique four-corner composition, enhanced by NanaWall HSW60, facilitates an endless exchange of resources, flexible classroom layouts, and new learning opportunities for the youngest, malleable minds with the simple sliding of a wall.









FLEXIBILITY

EASE OF OPERATION

SOUND CONTROL WELLNESS

SAFETY



## Flexibility is key in 21st Century school design. With NanaWall, not only do we have a high acoustical performance system, but the flexibility to change the space on the fly.



Michel Strain, Parkhill architect

### LEARNING "NEIGHBORHOODS" THROUGHOUT EAST ELEMENTARY

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Academic success requires an ideal marriage of curriculum and classroom design. Embracing this ideology, project architect, Michael Strain, envisioned a collaborative, space-efficient design strategy to implement "neighborhoods", or learning hubs, within each of the five grade levels. Central to that strategy was the application of 43 NanaWall SL70 folding glass wall systems.

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### **DESIGNING AROUND THE COLLABORATIVE LEARNING HUBS**

The strategic design of East Elementary acknowledges that every surface of the school poses a teaching opportunity. Each grade level was organized into six classrooms that open and share a communal, collaborative area. For teachers, this offers an opportunity to create lesson plans that expand beyond a traditional school setting. The flexibility of multi-paneled NanaWall opening glass walls gives way to various configurations with two, three, or more classes connecting at once.

#### **Reimagining Hallways as Additional Teaching Space**

In his book Blueprint for Tomorrow: Redesigning Schools for Student-Centered Learning, author and architect Prakash Nair dismisses hallways as single-purpose areas. He instead reimagines them as areas utilized for teaching and learning throughout the day. This forward-thinking design adds nearly 20 to 30 percent more usable square footage to the average school.

#### An adaptable Academic Environment

Several NanaWall SL70 folding glass walls were employed throughout the design to ensure adaptability of space. All systems vary in panel quantities and widths ranging between 7 ½ to 14-feet wide. The SL70 is designed for high performance commercial use with enhanced structural engineering to accommodate larger panel sizes. Even a pencil in the floor track will not cause the folding glass wall to bind. These floor supported systems were specified with surface mounted flush sills to ensure ADA compliance and seamless transitions between the classrooms and learning hubs.

#### Single-Handed Ease of Operation

The 9-foot-tall systems can be opened and closed in seconds, requiring minimal effort. A heavy-duty roller design on stainless steel rails places the weight on the floor and ensures smooth single-handed operationpractical enough for teachers and students alike. Each system has been independently tested for over 20,000 opening and closing cycles to ensure durability with successful results. As a commercially rated system, SL70 can be specified with swing doors to facilitate ingress and egress when the system is closed.

#### **Enhanced Visibility**

The glass systems are an integration of the security of the school where teachers can see anything happening in the corridor before it reaches their classroom. The transparent panels also maximize the amount of daylight that enters the building. A 1999 study conducted by Hesching Mahone Group found that students in classrooms with the most daylight learn 20 to 26 percent faster than those exposed to lesser amounts.

#### **Acoustic Performance Ensures Productivity**

The SL70 has proven to be the best available solution for several reasons, including its high STC rating of up to 43. In fact, Strain notes that the systems are more acoustically opaque than conventional fixed walls. The acoustic performance of the opening glass walls, combined with their ability to maximize daylight, ensures a productive, distraction-free environment where students effectively attain and retain information.

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We have some teachers who never close the systems. We have teachers who open and close it depending on circumstances such as when they are testing.



**EXPLORE MORE POSSIBILITIES** 



We design our neighborhoods to make sure a teacher can see everything from their classroom. Teachers like that visibility.



—Michael Strain, Parkhill architect



## TO WRAP IT UP

PARENGINEERING DESIGN PROCES

43 NanaWall SL70 folding glass systems facilitate the success of East Elementary's learning hub design program through space maximization and flexibility. The incorporation of hallway space significantly maximizes the square footage of each of the five neighborhoods (Grades 1 to 5) while encouraging multiple learning opportunities that extend beyond traditional classroom settings.



FLEXIBILITY



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**OPERATION** 





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SOUND CONTROL WELLNESS

SAFETY



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The ability for teachers to enlarge square footage by having walls that open and expand beyond their classroom was a key part of the design.

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-LCISD Superintendent Bryant



### FLEXIBLE GLASS WALLS OFFER AUTHENTIC CAREER EXPERIENCE

Career and technical education (CTE) introduces workplace skills with courses that focus on high-demand careers. At Lubbock Cooper High School, CTE offers an extensive selection of vocational courses, from marketing to restaurant management, for over 1,000 students. By leveraging dynamic glass walls, the newly developed CTE wing offers real-life career preparation that extends beyond traditional classrooms.

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### CULTIVATING BRIGHT FUTURES WITH CAREER AND TECHNICAL EDUCATION WING

Differentiating itself from the rest of the campus, Lubbock Cooper High School's 40,000 square foot Career and Technical Education addition simulates work environments with spacious laboratories and hallways rather than traditionally aligned desks of lecture rooms. While three of the classrooms within the wing leverage NanaWall opening glass walls to optimize space for hands-on courses like art and pottery, the Culinary Arts lab has been catered, pun intended, to offer students real-life experience into the world of restaurant business management.

#### **Designing Dynamic Layouts**

Almost every piece of furniture and equipment is on wheels to accommodate multiple configurations and hands-on activities. This dynamic flexibility extends to the 30-foot wide opening glass wall that welcomes students into the lab. NanaWall SL70 meets the space demands of career-oriented curriculum by expanding teaching space into the hallway and maximizing every square foot. "The glass walls are easy to operate," says CTE Director, Debbie Smith. "The kids know how to open and close the NanaWall systems, so they too have the ability to change space based on their needs."

#### Real Life Experience, Real Life Success

Throughout the year, special catering events are hosted where the folding glass system is opened to incorporate additional hallway space. This layout configuration gives way to a unique real-life restaurant experience almost never achieved in traditional teaching spaces. The flexibility of the opening gives way to an array of configurations based on the needs of the students and the events being hosted. The walls can be completely or partially opened giving way to customizable opening sizes.

"In the culinary center specifically, we want people to see what our CTE program has to offer," says Smith. "We often have community members visiting the career center as well as parents who are thinking of enrolling their kids in our school."

#### **Transparent and Easily Operable Solution**

The 10 panel NanaWall SL70 folding glass wall offers transparency and ease of operation. The almost 9-foot tall system is engineered to smoothly glide on stainless steel rollers and stack on each side of the opening. An active swing panel to the left featuring a commercial 10-inch kickplate facilitates ingress and egress when the NanaWall SL70 is closed. The thermally broken flush sill with insert ensures ADA compliance in a high-traffic educational area. According to Smith, the transparency of the walls is not only essential for enhancing sense of space but also to fully visualize and present the effectiveness of their CTE courses.

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When hosting catering events, the tables are rolled out and lined at the opening. Students serve guests in a layout similar to a real-life restaurant while learning business management skills.

Superintendent Bryant



CLICK HERE TO EXPLORE MORE POSSIBILITIES WITH SL70

## **TO WRAP IT UP**

As an educational tool that enables authentic work settings, the NanaWall SL70 is essential to the goal of Lubbock Cooper's Career and Technical Education program. The easily operable panels offer both teachers and students the ability to transform their career lab into a legitimate restaurant, eliminating the boundaries of traditional classroom settings and embracing the forward-thinking approach of 21st Century learning.









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-Debbie Smith, CTE Director





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### **Project Highlights**

- An outstanding 124 NanaWall systems installed throughout LCISD reinforce the district's 21st Century learning hub design strategy, with 50 more systems currently underway at a new campus.
- From East Elementary's distinctive "neighborhoods" to the High School's multifunctional CTE center, opening glass walls act as an academic tool that enable the optimization of academic spaces where every square foot poses a learning opportunity.
- This revolutionary design approach, enhanced by the NanaWall systems, supports a dynamic teaching strategy rooted in the essence of collaboration and flexibility ensuring the success of students one grade level at a time.