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2022 Architectural Portfolio

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ARCHITECTURAL PORTFOLIO

SPECIAL FEATURE

ON THE COVER

Ave Maria University School of Law, Cancro Family Wellness Center
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Architect: Victor J. Latavish Architect PA
Photo: Victoria Latavish

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VIEWPOINTS

ALSO IN EVERY ISSUE ...

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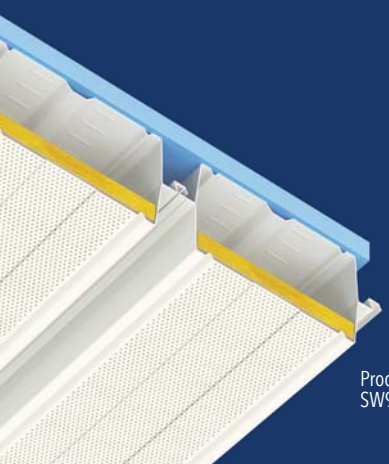

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Product: SW9A

Karcher Middle School – Burlington, Wisconsin Architect: Plunkett Raysich Architects – Milwaukee, Wisconsin

Delivering on Promises

By Mike Kennedy

November is election season, and among the issues that many voters typically decide this time of year is whether to approve millions, and in some cases, billions of dollars for constructing and renovating education facilities.

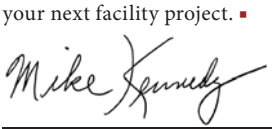
Some school systems need to add classrooms to accommodate growing enrollment; some need to renovate or replace facilities that no longer meet the needs of the modern student. When such questions appear on a ballot, the context is financial—should we spend this amount of money to build a new school facility? The new facility may be depicted in an artist's rendering, but voters who authorize funding for facilities must take it on faith that when the concrete is poured and nails are hammered and the ribbons are cut, the new or renovated school will deliver on its promise of providing an improved learning environment that can inspire students and the community at large.

The projects entered in American School & University's 2022 Architectural Portfolio provide tangible evidence that many education institutions are designing and constructing facilities that meet or exceed those goals—that taxpayers are getting their money's worth. Looking through the projects displayed in the pages that follow, you can see numerous examples of designs that create safe and healthful learning spaces that are aesthetically pleasing and address the needs of a diverse student population.

Five jurors—a mix of architects and education administrators—devoted many hours to delving into the dozens of K-12 and higher education projects that submitted entries. After weighing in with their initial judgments, the panel gathered via video conference, as has become the norm in a post-Covid world, and dedicated the better part on a September afternoon to debating which school spaces stood out from the rest.

Sixteen projects impressed Architectural Portfolio jurors enough to be awarded Citations for their design. The top K-12 award—the William W. Caudill Citation—was bestowed on the King Open/Cambridge Street Upper Schools & Community Complex, a facility in Cambridge, Mass., that includes two schools and space for social and family service programs. The top higher education award—the Louis I. Kahn Citation—was given to the expansion and renovation of Michigan State University College of Music's Billman Music Pavilion in East Lansing.

Those noteworthy education facilities will join the hundreds of projects that have taken part over the years in the Architectural Portfolio (find them at SchoolDesigns.com). Browsing some of those projects may give architects and administrators a sense of how school designs have evolved and may spark ideas that you can incorporate as part of your next facility project. ▪



Mike Kennedy, senior editor, has written for *AS&U* on a wide range of educational issues since 1999.

STOP Vehicle Attacks

The most popular vehicle access deterrent used at educational and health facilities are Delta Scientific portable barriers and portable bollards. They can be towed into place and set up in only 15 minutes. When completed, they reset into their portable configuration to be towed to their next event. To learn more about Delta educational and health campus solutions, visit us at **www.deltascientific.com**.

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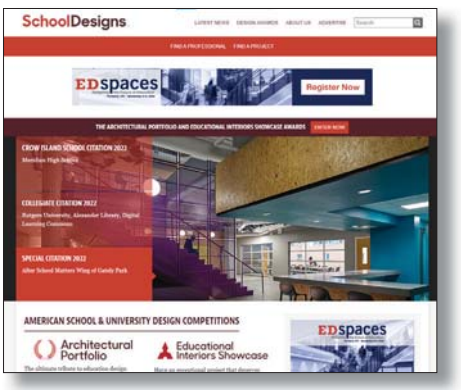
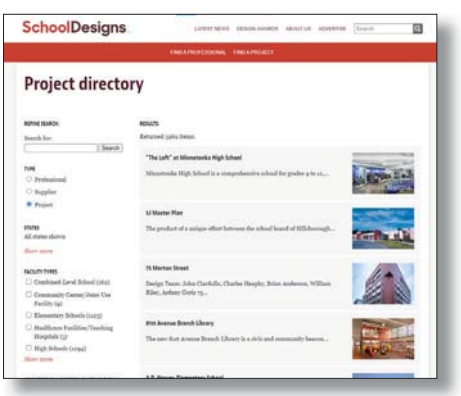
Your Web Source for Education Design

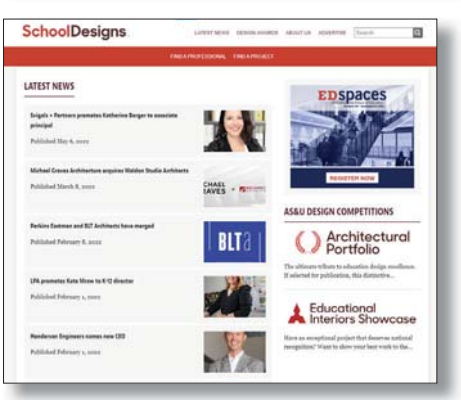
Design competition information and Citation recipients from previous years.



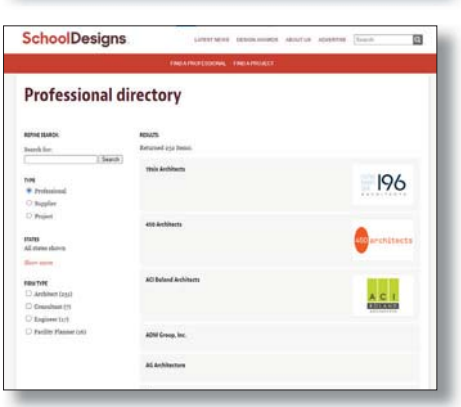
Searchable database of almost 6,000 educational facility projects with photos, descriptions and data.



Find the latest news about architects and design firms.



Find an architect, including links to that architect's projects on the site.



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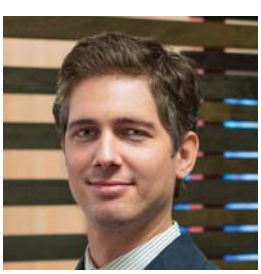
Distinguished Designs

At the beginning of September, American School & University gathered five educational design professionals on a video conference session to begin evaluating the school and university projects entered in the 2022 Architectural Portfolio. The jurors—architects and education administrators—reviewed the entries on their own over several days, then reconvened virtually to discuss and debate which projects impressed them enough to be award Citations for exceptional designs.

As they assessed the projects that design firms and education institutions submitted for the Architectural Portfolio, the jurors articulated some of the key characteristics they would be looking for as they determined those that stood out from the rest. Among them:

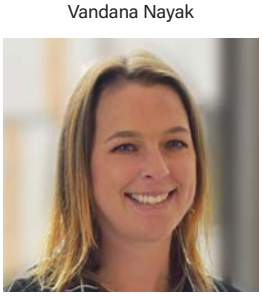
- Positive effect on the school community
- Design that enhances learning
- Beauty and delight
- Adaptability and flexibility
- Sustainability
- Achieving the intended design goal
- Efficient use of funds and resources
- Effectively conveying the identity and spirit of a project ■


Paul Kweton


Jill Leckner


Vandana Nayak


Jeff Vandel


Maria Welch

"The building brings light, joy and excitement. The thoughtful approach to separating public and private areas of the building while connecting it to the community is quite successful."

WILLIAM W. CAUDILL CITATION, P. 22-23

"Uses daylight so well. The materials, the proportions of this building are so nice and so clean. The simple volumes resonate with the programming on the interior."

LOUIS I. KAHN CITATION, P. 24-25

"The designer has been able to capture the context and use simple moments of circulation to create identity. Some really memorable moments throughout."

SPECIAL CITATION, P. 26-27

"A beautiful project...spectacular to look at it and see how it responds to the context and the site."

SPECIAL CITATION, P. 28-29

"Stunning. The detailing of this project is maginificent. Every detail in there is really thought through."

SPECIAL CITATION, P. 30-31

"The architecture is consistent in all the details from the outside to the inside. This can be a jewel piece for years to come."

SPECIAL CITATION, P. 32

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PAUL KWETON

Office Design Leader, DLR Group
Houston, Texas

Paul is an Austrian architect and designer who has been living and working in Houston for the past 16 years. He is currently serving as Office Design Leader at the DLR Group Houston office. He received his bachelor's and master's degrees in architecture and urban planning with honors from the University of Technology in Vienna and a Master of Architecture at Rice University. Since joining DLR Group, he has led design on educational projects, workplace environments, and cultural institutions. His professional accomplishments include international, state and local design awards. In the past, Paul also has served as adjunct professor and co-coordinator at the professional level at the University of Houston, College of Architecture and Design. He has taught design studios at both undergraduate and graduate level, as well as undergraduate thesis.

JILL LECKNER

Principal, SLAB Architecture
Instructor, University of Kentucky
Lexington, Kentucky

Jill is a registered architect in New York, New Jersey and Kentucky and is a LEED Accredited Professional. She received her Master of Architecture in 1995 from Columbia University and her Bachelor of Architecture in 1993 from Ball State University. As co-principal of SLAB, Leckner has extensive architectural design and construction experience in the New York City area with over 25 years of professional practice experience. The office has completed multiple award-winning projects ranging from large commercial office renovations to art galleries, music performance venues and urban design proposals. Since 2016, Leckner has been teaching both undergraduate and graduate courses at the University of Kentucky College of Design. Leckner brings her extensive knowledge of design and construction to the classroom and shares her expertise with the students on a variety of project types and scales. Leckner's teaching emphasizes the importance of design research, site history, conceptual narratives and the poetic intersection of the built environment and nature in a quest to produce meaningful architectural form and space.

VANDANA NAYAK

Southwest Regional Practice Leader, Education Practice
Perkins&Will
Dallas, Texas

Having worked with educational clients for more than two decades, Vandana has a unique ability to understand her clients' intentions and aspirations beyond simply listening to the words they say. She can navigate through the many voices, create a clear vision, and translate that into a built facility that exceeds expectations. She has successfully led many innovative, forward-thinking projects that have received national recognition. Vandana's favorite part of a project is planning and programming – when clients have a dream, but they don't yet know the full possibility of what it can be. She and her husband live in Coppell, Texas, and are proud parents of two boys. Vandana is a member of the American Institute of Architects and the Association for Learning Environments.

JEFF VANDEL

Executive Director of Facilities
North Kansas City School District
Kansas City, Missouri

As executive director of facilities, Jeff manages all aspects of

design and construction at North Kansas City Schools. At 21,000 students, it is the second largest school district in Missouri. There, he works with world-class design teams to create sustainable and equitable state-of-the-art facilities for all students. Prior to his position at North Kansas City Schools, Jeff served as the director of planning, design, and construction for the University of Missouri-Kansas City, and has served two terms as a school board member in his local district. Jeff is a graduate of Kansas State University, holding a degree in Architectural Engineering. In addition to being a licensed Professional Engineer, Jeff is a LEED Accredited Professional, a Certified Energy Manager, and a Certified Educational Facility Professional. Additionally, he is a member of the Association of Physical Plant Administrators (APPA) and the Association For Learning Environments (A4LE).

MARIA WELCH

Design Specialist, Associate, Bray Architects
Milwaukee, Wisconsin

As a design specialist, architect, and associate at Bray Architects, Maria has worked on over a dozen K-12 schools, developing solutions that cultivate unique learning environments, solve functional concerns, and celebrate each school's identity. Maria holds a Master of Architecture and a Bachelor of Science in Architectural Studies from the University of Wisconsin–Milwaukee. In 2020, she was recognized as a Rising Young Professional by The Daily Reporter.

Q&A with Charlotte Pipe and Foundry

Edge HP Iron™ for Aggressive DWV Applications

Why do schools and universities need a specially coated cast iron product for their drain, waste and vent (DWV) lines?

Charlotte Pipe has been making cast iron soil pipe and fittings for 120 years. In that time, the iron itself has not changed significantly. However, DWV systems have seen significant design changes, in the past couple of decades in particular. Here are a few examples:

- Low-flow fixtures lead to less line carry and therefore effluent sits in the pipe.
- Higher-pH cleaning chemicals are commonly used to sanitize buildings, and again with less flushing.
- Improperly maintained grease interceptors mean that fats, oils and greases sit in commercial kitchen drain lines.
- More aggressive snow and ice melt chemicals are now used, leading to corrosion on the outside of pipe in parking garages.

All of these factors, and certainly others, have contributed to aggressive environments where enhanced protection is needed.

Experience is the best teacher. If a facility has experienced corrosion issues in certain types of projects or applications, then it is likely an aggressive application that requires coated cast iron.

What makes Charlotte Pipe's Edge HP Iron different from other DWV piping solutions?

Edge HP Iron has three different coating layers on both the inside and outside. The first layer of protection is a zinc phosphate corrosion inhibitor. Then, the pipe has two layers of e-coat. The fittings have a layer of e-coat followed by a layer of epoxy acrylic powder. As a result, Edge has superior salt spray and pH test performance. These tests instill confidence in facilities personnel and engineers that the DWV piping system will meet their rigorous demands.

Coatings are only good if they remain intact with the pipe. Due to the e-coat application method, Edge coatings are not susceptible to delamination. The only way to remove e-coat is to literally remove iron. On the other hand, there are serious challenges with spraying a coating direct to metal.

Also, we have a full line of 2"–15" no hub and service pipe and fittings consisting of more than 580 SKUs.

What is e-coat and how does the process work?

E-coat is short for electrocoating and is a method of painting that uses electrical current to deposit paint. The fundamental principle that makes electrocoating work is that opposites attract—known as electrodeposition. This is made possible by a DC rectifier to create voltage between a conductive part and counter-charged electrodes that are immersed in an electrocoat paint tank.

E-coating provides 100% coverage of the OD and ID of the part; the coating has a uniform thickness and superior edge coverage with no drips or runs.

While this solution is capital intensive, it is the most environmentally friendly epoxy-coating process available. Its uniform coating thickness and superior corrosion resistance coupled with a low environmental impact is the reason it is employed by all high-end automotive manufacturers.

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Q&A with Armstrong Ceiling Solutions

Anne P. jennings, P.E., Healthy Spaces Segment Manager, discusses the 24/7 Defend™ Air Purification Portolio

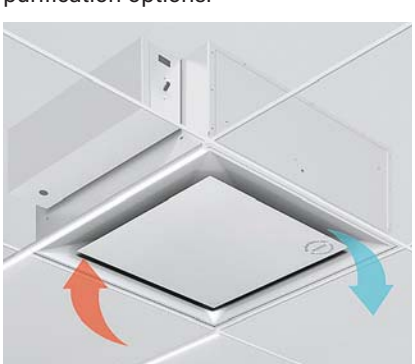
Why do schools and universities need to be concerned about indoor air quality beyond the pandemic?

By the time a student graduates from high school, they will have spent an estimated 15,600 hours in a school building. The built environment directly impacts a student's ability to learn and perform. According to the Lancet COVID-19 Commission, we know that schools are chronically underventilated and improving indoor air quality (IAQ) is essential to students' health and well-being.

The good news is, the recent Clean Air in Buildings Challenge presented by the White House and EPA has prioritized ways to improve IAQ. Air filtration with recommended MERV 13 filters or air disinfection with UV-C air cleaning technology are two options to purify the air.

Does Armstrong offer products to improve IAQ?

Yes! Armstrong is a trusted building materials manufacturer, known for acoustical ceiling tiles, and we've continued to expand the portfolio of ceiling and wall solutions to include the 24/7 Defend™ Air Purification portfolio. The portfolio offers both filtration and UV-C purification options.



The StrataClean IQ™ Air Filtration System

The StrataClean IQ™ Air Filtration System in Panther Valley Elementary School in Jim Thorpe, PA

The quiet Armstrong StrataClean IQ™ Air Filtration System captures airborne contaminants, allergens, and particulates using proven MERV 13 filtration.

The Armstrong VidaShield UV24™ Air purification system uses scientifically proven (and shielded) UV-C air-cleaning technology to neutralize bacteria, viruses and allergens.

Why are in-ceiling air purification products a great long-term solution?

When considering school facility improvements and improving the air quality, you can start by looking up. The ceiling is an ideal place to retrofit or install air purification technology. When air-cleaning technology is installed in the ceiling, it eliminates the tripping hazards and lost floor space from portable air purification units. The unobtrusive, in-ceiling air purification technology also draws the air up and away from kids sitting at their desks and then recirculates clean air back into the room.

Improving indoor air quality by purifying the air will not only remove contaminants from the air, but it will also contribute to healthier spaces by minimizing allergy and asthma triggers. Now is the time to focus on improving school facilities and creating healthy buildings with improved indoor air quality for students and staff.

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BEFORE...

...AND AFTER with Ultima® Lay-In panels and the StrataClean IQ™ Air Filtration System

USE YOUR SCHOOL RENOVATION $$ TO IMPROVE INDOOR AIR QUALITY

Considering a ceiling refresh that's more than cosmetic? The 24/7 Defend™ air purification portfolio offers in-ceiling air cleaning solutions, both MERV 13 air filtration and UV-C air disinfection. These products are easy to install and retrofit and do not require HVAC integration. Pair with Armstrong® acoustical ceiling tiles to improve overall indoor environmental quality in the classroom.

Learn more at **armstrongceilings.com/healthyschools**

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Solutions for Healthier, Safer Spaces

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CEILING SOLUTIONS

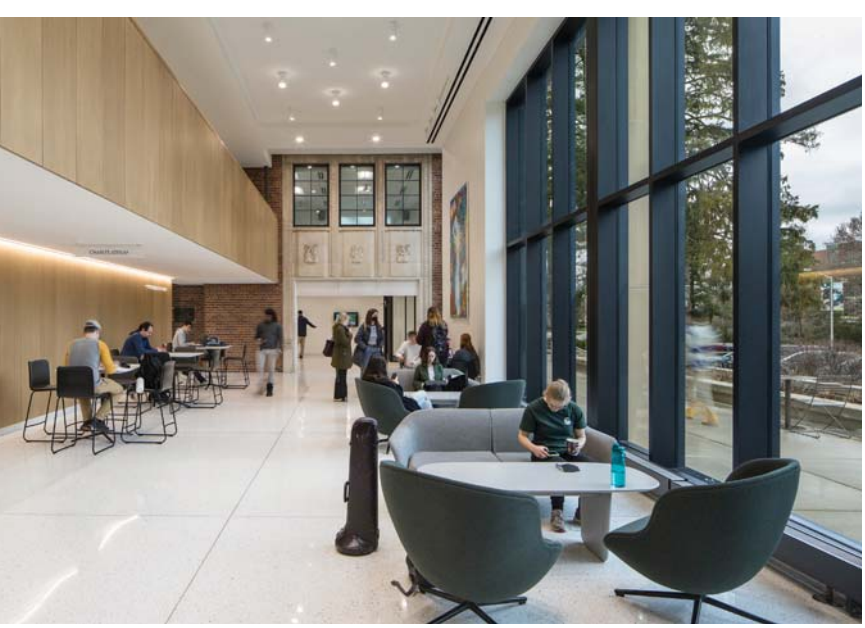
MAIN WINNERS

WILLIAM W. CAUDILL CITATION

ARROWSTREET
KING OPEN/CAMBRIDGE STREET UPPER SCHOOLS & COMMUNITY COMPLEX
Cambridge, Massachusetts.....p. 22-23

"The building brings light, joy and excitement. The thoughtful approach to separating public and private areas of the building while connecting it to the community is quite successful."
— 2022 JURY

LOUIS I. KAHN CITATION



TMP ARCHITECTURE INC.
COLLEGE OF MUSIC, BILLMAN MUSIC PAVILION
East Lansing, Michigan.....p. 24-25

"Uses daylight so well. The materials, the proportions of this building are so nice and so clean. The simple volumes resonate with the programming on the interior."
— 2022 JURY

SPECIAL CITATION

FLANSBURGH ARCHITECTS
AMERICAN SCHOOL
FOUNDATION OF GUADALAJARA
Guadalajara, Mexico ..... p. 26-27

"The designer has been able to capture the context and use simple moments of circulation to create identity. Some really memorable moments throughout."
— 2022 JURY

SPECIAL CITATION

FLANSBURGH ARCHITECTS
INTERLOCHEN CENTER FOR THE
ARTS | LEWIS DANCE BUILDING
Interlochen, Michigan p.28-29

"A beautiful project...spectacular to look at it and see how it responds to the context and the site."
— 2022 JURY

MAIN WINNERS

SPECIAL CITATION

FLANSBURGH ARCHITECTS
THE NORTHFIELD MOUNT HERMON SCHOOL | THE GILDER CENTER
Gill, Massachusetts ..... p. 30-31

"Stunning. The detailing of this project is magnificent. Every detail in there is really thought through."
— 2022 JURY

SPECIAL CITATION

ESA
THE FISHER CENTER FOR THE PERFORMING ARTS AT BELMONT UNIVERSITY
Nashville, Tennessee ..... p. 32

"The architecture is consistent in all the details from the outside to the inside. This can be a jewel piece for years to come."
— 2022 JURY

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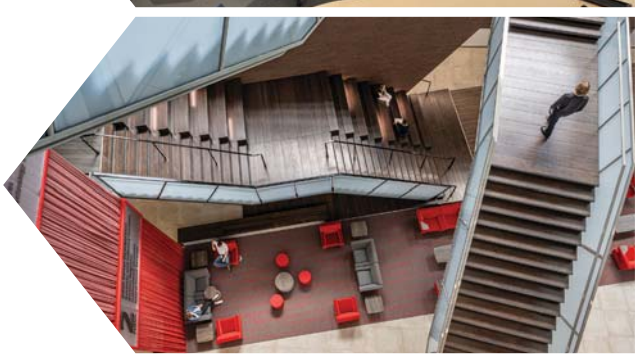
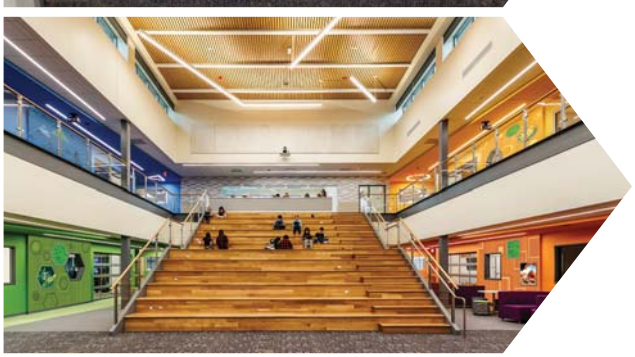
Educational Interiors Showcase



2023 CALL FOR ENTRIES

BE AMONG THE BEST OF THE BEST

- Entry forms due March 10. Online portfolios due April 26.
- Discounts for multiple projects.
- Twenty-six entry categories for every type of project.
- Open to projects completed since January 1, 2018.
- Free print-ready PDF for multiple entries and multi-page projects.
- Larger circulation, including expanded reach to school boards and industry partners.
- National recognition for you, your project, and the school or university.
- Featured in the August 2023 Educational Interiors Showcase issue, full-screen galleries on SchoolDesigns.com, and our e-newsletter.

ENTER TODAY! Early-Bird Discount for Entry Forms Received by January 13

Contact Heather Buzzard at hbuzzard@endeavorb2b.com or visit SchoolDesigns.com for details.

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KING OPEN/CAMBRIDGE STREET UPPER SCHOOLS & COMMUNITY COMPLEX

CAMBRIDGE, MASSACHUSETTS

"The building brings light, joy and excitement. The thoughtful approach to separating public and private areas of the building while connecting it to the community is quite successful."
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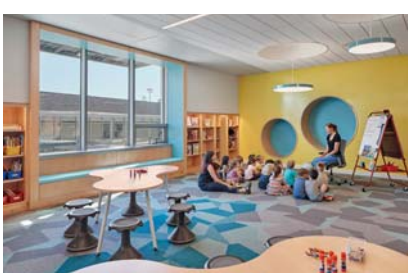


The King Open/Cambridge Street Upper Schools & Community Complex establishes a new model for school design. It integrates two separate schools (The King Open Elementary and Cambridge Street Upper School) with social and family service programs to create an integrated social support system for students, their families, and the entire community.

The building is designed to support wellness as an essential part of childhood development. The indoor climate, universal design, safety, and social equity are all crucial components of childhood development supported by this building. All materials inside the building were evaluated for their impact on health, and the majority are Red List Free (do not contain harmful chemicals). The community complex is the first Net Zero Emissions and the first LEED v4 Platinum school in Massachusetts.

The project creates a welcoming, highly sustainable, and healthful community resource that offers much-needed open

Arrowstreet

Design Team
Arrowstreet in association with William Rawn Associates (Architect); W.T. Rich/KBE Joint Venture (Construction Manager); Garcia, Galuska & DeSousa Inc. (MEP/FP Engineer); LeMessurier Consultants Inc. (Structural Engineer); Nitsch Engineering (Civil Engineer); Copley Wolff Design Group (Landscape Architect); Acentech (Acoustics & AV); Crabtree McGrath Associates (Food Services); Aquatic Design Group (Pool Design); Point Line Space (FF&E); Kalin Associates (Specifications); In Posse (Energy/Net Zero); Soden Sustainability Consulting (LEED); HLB Lighting Design (Lighting); VHB (Traffic); R.W. Sullivan Engineering (Code); VJ Associates (Cost Estimating); CDM Smith (Geotechnical); Stephen Turner Inc. (Commissioning)

Client
City of Cambridge

Area
230,000 sq. ft.

Total cost
$130,000,000

Capacity
2,071 (total); 975 (students)

Space per student
236 sq. ft.

Cost/square foot
$476

Completion
August 2019

Images
Robert Benson Photography; Anthony Crisafulli; William Horne

space and provides Cambridge's youngest citizens a safe and inspiring learning environment. The result is an equitable, inclusive, and striking community resource for this diverse, and urban community. ■

COLLEGE OF MUSIC, BILLMAN MUSIC PAVILION

EAST LANSING, MICHIGAN

TMP Architecture served as architect-of-record for the expansion and renovation of Michigan State University College of Music's practice, teaching, rehearsal, and technology spaces, officially named the Billman Music Pavilion. MSU's College of Music is a leader in nurturing musical excellence, and the existing 1940s facility no longer met basic 20th-century expectations or 21st-century demands. The college wanted to significantly enhance its facilities for teaching, practicing, and rehearsing to attract and retain students and faculty members.

Additions and renovations extend to

TMP Architecture Inc.

Associated firm:
Bora Architects

Design Team
Kirkegaard Associates; Peter Basso Associates; Structural Design Incorporated; Beckett & Raeder; Schuler & Shook

Client
Michigan State University

Area
45,500 sq. ft.

Total cost
$32,690,280

Capacity
600

Space per student
75 sq. ft.

Cost/square foot
$718

Completion
September 2021

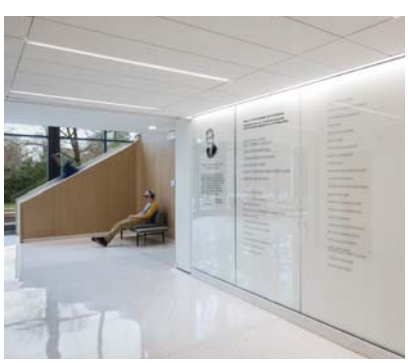
Images
Lara Swimmer

all parts of the program, truly reflecting the quality of music within and ensuring a modern learning environment for all. The renovation and expansion add much-needed specialized rehearsal spaces, practice rooms, a large lecture hall, faculty studios and offices, a recording and multimedia room, and a public gathering space with a café.

Climate control and improved acoustics enhance all performances, and larger, flexible practice areas accommodate ensembles, choirs, and seminars.

"Uses daylight so well. The materials, the proportions of this building are so nice and so clean. The simple volumes resonate with the programming on the interior." — 2022 JURY

Purpose-built spaces for student-faculty studio collaboration and improvements in hearing protection for musicians also highlight the attention to functional design within the space. ■



AMERICAN SCHOOL FOUNDATION OF GUADALAJARA

GUADALAJARA, MEXICO

Flansburgh Architects

Associated firm:
GVA Arquitectos

Design Team
David Croteau (Principal-in-Charge); Kelley Banks (Project Manager/ Architect)

Client
American School Foundation of Guadalajara

Area
188,400 sq. ft.

Total cost
$18,000,000

Cost/square foot
$95

Completion
March 2021

Images
Robert Benson

The new high school is a bold and forward-looking approach to serving 1,500 students at the American School Foundation of Guadalajara (ASFG). As surrounding properties grow taller with new development, the seven-story open-air structure follows their lead by doubling ASFG's academic space, maximizing green space, and providing state-of-the-art facilities that support 21st-century education.

The project's use of bright colors, sculptural form, natural materials, and crisp design is inspired by Guadalajara's cultural heritage and rich combination of traditional and modern architecture. Drawing from Mexico's cortile buildings, courtyards, and public sculptures, the school's design embraces the city's architectural history and fosters community identity through themed colors.

The project connects the school to the outdoors, incorporating lush green space and using Guadalajara's climate in its sustainable design. Plantings are deployed strategically, using water-intensive plants sparingly and placing low-water native plants in secondary garden areas. Sustainability is integrated in all aspects of the building's design and construction process, focusing on energy-efficient daylighting, solar control, passive cooling, natural ventilation, and durable materials.

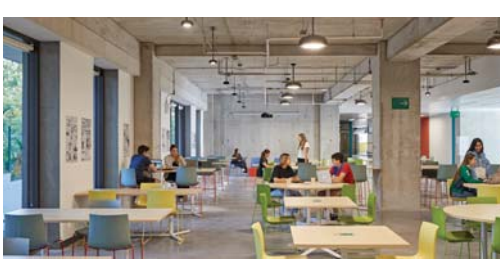
The new school includes many flexible academic spaces that support ASFG educational goals and various teaching and learning styles. Indoor classrooms have acoustical wood panels and glass walls, establishing verbal and visual connec-

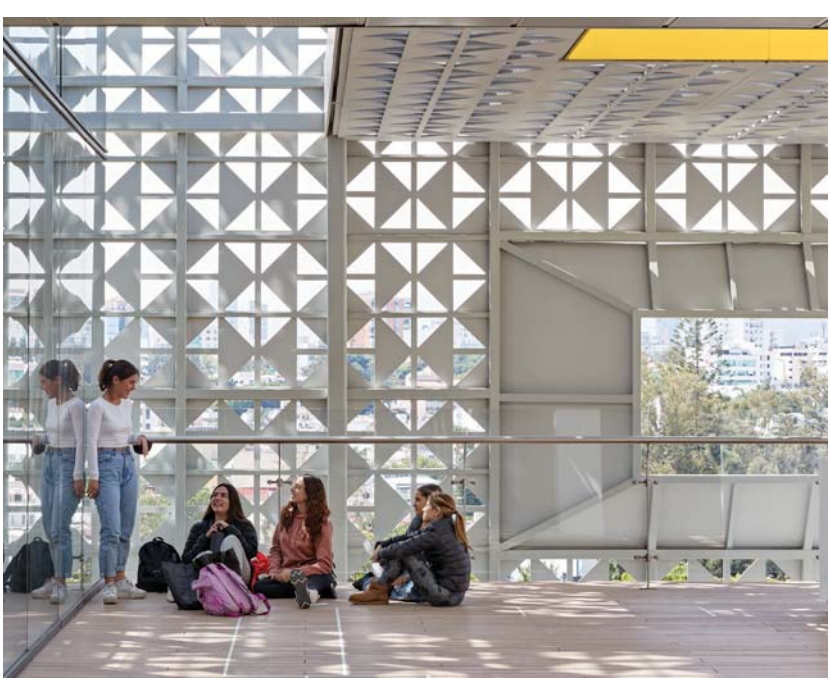
tions between students and faculty both inside and outside the classroom. A new library, maker space, hands-on science lab, tiered presentation area, and collaborative common spaces create an interactive and engaging academic environment. Motivating a sense of freedom and community connection, students reflect, restore, and energize in outdoor classrooms, garden balconies, and rooftop terraces.

The result of the project is a distinctive, location-based learning environment that celebrates its place in a fast-growing city. The modern facility ultimately encourages positive education, community involvement, creativity, and environmental consciousness. ■

"The designer has been able to capture the context and use simple moments of circulation to create identity. Some really memorable moments throughout."

— 2022 JURY





INTERLOCHEN CENTER FOR THE ARTS | LEWIS DANCE BUILDING

INTERLOCHEN, MICHIGAN

Founded in 1928, Interlochen Center for the Arts has inspired generations of artists on its scenic Michigan campus. Students study music, theater, visual arts, film, creative writing, and dance, guided by outstanding faculty and guest artists. This project involves renovating and expanding the existing dance building to provide five studios, changing rooms, offices, and other support spaces. The project also includes structural and mechanical upgrades to the existing masonry and wood-framed building. The design was developed through an inclusive process involving staff, dancers, faculty, board members, and donors. The project ensures ceilings are tall enough for dancers to lift one another, and the floor is large enough for long passes. Studios are non-rectangular to mitigate sound reflections. Interlochen's transparent design creates a peaceful, open space for artistic expression. The studio addition takes its cues from the Kresge Auditorium, a mid-century outdoor amphitheater with an open-air feel and exposed steel structure. Surrounded by glass walls, each studio is strategically placed with sweeping views of the lake. Studios

Flansburgh Architects

Design Team
David Croteau (Principal-in-Charge)
Kelley Banks (Project Manager)
Betsy Garcia (Project Architect)

Client
Interlochen Center for the Arts

Area
21,500 sq. ft.

Total cost
Not provided

Completion
January 2021

Images
Gabe Border

have acoustical metal decks to absorb sound, as well as access to outdoor decks and performance areas. Corner windows frame the sky, inviting sunlight to shine along studio walls.

Studios are organized around two new lobbies: an upper studio lobby and a lower dancer seating area. The arrangement visually connects all spaces and enables viewers to see multiple rehearsals at once, fostering a sense of community.

The new dance facility harmonizes with Interlochen's rich setting. Serving as the last building on Interlochen's Avenue of the Arts, visitors enjoy gazing across the lake from the terrace. The building's exterior façade elicits the look of tree bark, blending in with the natural environment.

"A beautiful project...spectacular to look at it and see how it responds to the context and the site." — 2022 JURY

Aesthetically integrated with pristine water and quiet pines, dancers feel at home, and visitors feel immersed in Interlochen's beautiful campus. ■

THE NORTHFIELD MOUNT HERMON SCHOOL | THE GILDER CENTER

GILL, MASSACHUSETTS

The new Gilder Center is a home for Northfield Mount Hermon (NMH) students to develop a lifelong love of learning. The science center honors NMH's rich architectural history while providing a modern educational environment.

The Gilder Center has a dual relationship to the campus. The traditional, granite façade sits solidly on the green, reflecting NMH's "well-grounded" motto. Inspired by the work of H.H. Richardson, the façade is rusticated and Richardsonian. The stone arch harmonizes the structure with the campus's existing chapel and symbolizes a gateway to the sciences. Behind the granite façade, the contemporary building gestures toward the Connecticut River Valley. Lifted above glass walls, the upper slate-clad exterior seems to float above the landscape. Drawing from Industrial Revolution mill buildings, its quintessentially New England design resonates with the region's history of technological innovation.

The Gilder Center has a variety of academic spaces, including a faculty hub, maker space, lobby/presentation area, central collaboration zones, small group meeting spaces, 10 math classrooms, 10 science labs, and five mini-labs/prep rooms. The spaces accommodate multiple uses, stimulate creativity, and encourage interaction amongst students and faculty. Embracing the school's engaging academic environment and beautiful campus, the bright and airy interior provides transparent views to indoor and outdoor areas. Exposed systems reveal the building's anatomy and create a high-tech atmosphere that demonstrates the science of construction.

The project uses cross-laminated timber as the floor and roof structure. This renewable resource reduces embodied carbon, supporting the school's commitment to minimizing its carbon footprint. Glass walls maximize natural light, and the slate-clad exterior decreases the use of carbon-intensive manufactured products.

By combining traditional and modern architecture, the Gilder Center celebrates NMH's heritage while providing a modern home for its innovative educational approach. ■

Flansburgh Architects

Design Team
David Croteau (Principal-in-Charge)
Kelley Banks (Project Manager)
Joseph Marshall (Project Architect)

Client
The Northfield Mount Hermon School

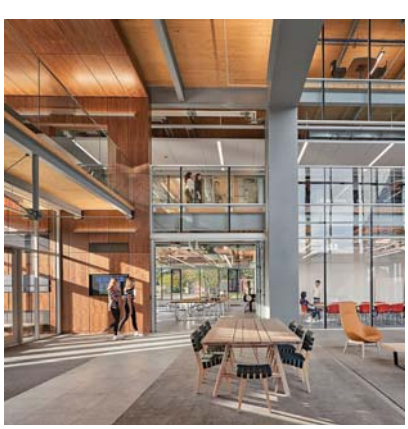
Area
42,000 sq. ft.

Total cost
Withheld

Completion
May 2020

Images
Robert Benson

"Stunning. The detailing of this project is magnificent. Every detail in there is really thought through." — 2022 JURY



THE FISHER CENTER FOR THE PERFORMING ARTS AT BELMONT UNIVERSITY

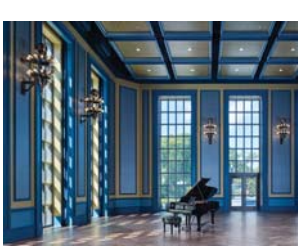
NASHVILLE, TENNESSEE

Belmont University commissioned ESa to design "the finest performing arts center on a university campus." The classically designed 1,700-seat, multipurpose proscenium theater has a proscenium connection to a 90-foot tall, 7,800-square-foot stage house, an 1,800-square-foot warm-up/rehearsal room, dressing rooms, and full back-of-house capabilities. Students perform in a world-class facility and technical theater students hone their skills for future use in such a facility.

"The architecture is consistent in all the details from the outside to the inside. This can be a jewel piece for years to come." — 2022 JURY

Classically inspired but modern in its execution and interpretation of historical elements, the entrance elements are not on the centerline, which allows for an 8,000-square-foot lobby flanked by two 3,500-square-foot recital halls with different acoustic capabilities. Combined, these spaces can accommodate 900 seated guests.

- Challenge 1: A 60-plus-foot grade change from front to back of the site with the main façade lobby entrances at the lower end.
- Challenge 2: A compressed timeline of 4½ years, resulting in completion of the project in exactly 4 years and 5 days. Typical build time is 6 to 7 years.
- Challenge 3: The project was constructed during the worst part of the Covid-19 pandemic. ■



ESa

Associated firms: Akustiks, Theatre Projects

Design Team
David Minnigan (Principal, Design Manager); Randy Nale (Principal, Senior Project Manager); Darrell Lambert (Senior Project Manager); Janet Wennerlund (Interior Designer

Client
Belmont University

Area
155,000 sq. ft.

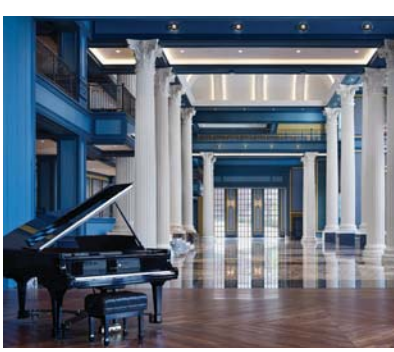
Total cost
$163,000,000

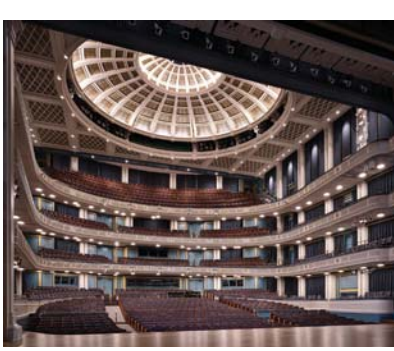
Capacity
1,700

Cost/square foot
$1,052

Completion
September 2021

Images
Nick Merrick (c), Hall + Merrick 2021





OUTSTANDING DESIGNS

FOREST HILL ELEMENTARY SCHOOL

GERMANTOWN, TENNESSEE

Initiated by a strong pre-design engagement with the community, the design provides clarity in response to complex demands, site characteristics, available resources, educational equity and an esprit de corps among policy makers, funding bodies, and the neighborhood... all committed to educational excellence.

After identification and analysis of multiple sites, the architect assisted Germantown Municipal School District in choosing a picturesque 36-acre site that exudes a true "campus" persona.

Embraced by a canopy of mature trees, the campus provides views to the north of a pond shadowed by a 300-year-old tree. The site serves as an extension of the classroom, transitioning into nature while providing safety for students and the neighborhood in a heavily trafficked area.

Tasteful materials and emergent technology create dramatic, transparent, daylighted geometries integral to the curriculum. Transparent academic spaces are oriented around an external tree bosque that provides daylighting and access to outdoor classrooms and playground.

Classrooms are linked to multipurpose and administrative spaces via double-loaded corridors adorned in bright, contrasting colors that promote both external views and internal security. ■

A2H - Engineers ▪ Architects ▪ Planners

Design Team
Stewart Smith, AIA; Chris Herring, AIA; Adam White, Lisa Starzynski; Kat Gates; Robert Taylor; Michael Howell, PE; Chet Winstead, ASLA; Sherry Hoover, PE; Nathan Stewart, PE; Cody Rumburg, EI

Client
Germantown Municipal School District

Area
110,000 sq. ft.

Total cost
$22,148,500

Capacity
800

Cost/square foot
$201

Completion
July 2019

Images
Creation Studios; R. Spencer Johnson Photography

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GUDY GASKILL ELEMENTARY SCHOOL

CENTENNIAL, COLORADO

Previously known as Franklin Elementary, Gudy Gaskill Elementary School is named for famed Coloradan mountaineer Gudy Gaskill. Littleton Public Schools wanted an innovative and inspiring campus that was architecturally safe for students, modernized and technologically advanced, yet one that would reflect the uniqueness of Colorado. The campus and surrounding grounds fully incorporate the four-season, active Colorado lifestyle. The featured "learning trail" design element is inspired by the Highline Canal Trail that aligns with the school's property. It is one of the longest trails in urban Colorado, stretching 71 miles and crossing through 11 governmental jurisdictions. Curved ceiling and flooring patterns create a trail-like feel throughout the campus. Earthy colors and materials, such as boulders for flexible seating, enhance the rugged mountain motif. These design elements flow through the entire campus and connect classroom pods with outdoor flexible areas.

The building was designed with student safety as the topmost priority and for this, the design team intentionally

Jacobs Engineering Group

Associated firms:
Howell Construction (General Contractor); Hord Coplan Macht (Architect); BCE Interiors (Furniture)

Design Team
Hord Coplan Macht (Architect)

Client
Littleton Public Schools

Area
90,000 sq. ft.

Total cost
$30,757,374

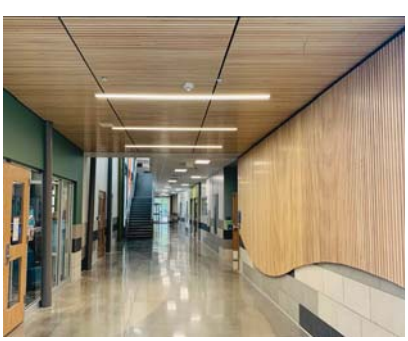
Capacity
600

Cost/square foot
$342

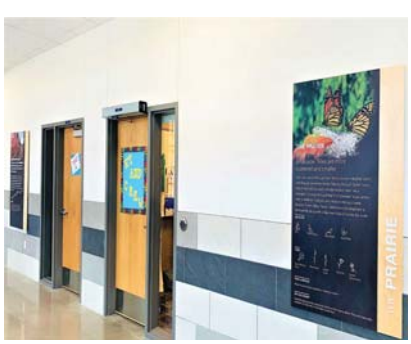
Completion
August 2022

Images
Aditi Chaurasia; MB BIM

spread the educational and administration wings around a long-curved corridor with heavy-duty security doors at each intersection. Each educational wing has classrooms with electric garage doors that open to an outdoor breakout area for interactive group sessions. The library features a large curtain wall that overlooks the expansive campus and provides natural light inside the building. Such large windows have been placed at regular intervals throughout the campus for better human-to-nature connectivity. A dynamic performance platform connects the cafetorium and the music room, showcasing creative, adaptive, and multifunctional space utilization. The



school district and the surrounding community had concerns regarding the history of surface water runoff from the site. Factoring in the lot size, its surrounding, landscape and the jurisdiction requirements, the design team engineered an integrated detention pond to address those concerns. ■



HICKORY RIDGE ELEMENTARY SCHOOL

HARRISBURG, NORTH CAROLINA

Designed to take advantage of a steeply sloping site, Hickory Ridge Elementary forms a two-story structure that steps down with the terrain. The building and site fit harmoniously into the suburban area; the project does not overpower the site but instead meanders throughout the natural ridges and valleys. Although designed for 940 students, the school is divided into smaller, grade-level wings, which are easier for administrators and educators to manage. These wings provide students with a more intimate classroom environment while establishing a connection to the larger school community when students are occupying the shared common spaces.

The interior architecture/design concept revolves around the history of the railroad line and junctions that still run through the town. The floor plans reflect the theme of a railroad station, represented by the common spaces, with rails extending out, represented by the classroom wings. The floor patterning and wayfinding maps also reflect the railroad heritage. The bold colors branding each grade-level wing and inclusive graphics throughout give students a heightened sense of belonging and community, especially in the common spaces. ■

YCH Architects

Design Team
Mike Chreitzberg, AIA; Dennis Yates, AIA; Bill Hughes, AIA, LEED AP; Katie Martin; Ben Schneider, LEED AP

Client
Cabarrus County Schools

Area
126,878 sq. ft.

Total cost
$28,911,578

Capacity
940

Space per student
135 sq. ft.

Cost/square foot
$228

Completion
June 2019

Images
Nathan Cox Photography

IVAN G. SMITH ELEMENTARY SCHOOL

DANVERS, MASSACHUSETTS

Smith Elementary boasts a robust arts and music program in which students express ideas and emotions as they develop creative thinking and problem-solving skills. The building integrates these creativity-focused courses with space for separated and combined learning as well as breakout and small group areas for the project-based curriculum.

A split-level design weaves the school's distinctive commons into a compact floor plan with generous sightlines and easily accessible after-hours spaces.

Students enter through the soaring lobby, a welcoming and bright space as they prepare for a day of learning. The wide, gently curved corridor is flanked by folding glass partitions highlighting music and art. Arriving at the central axis, the building divides with views into the learning commons and STEAM lab.

These shared areas celebrate the creative pedagogy by displaying projects and performances. Expansive "learning corridor" hallways are visually clear, functional and engaging; acoustic linoleum flooring creates distinct zones.

A two-sided stage connects the gymnasium and cafeteria for diverse events. Echoing the art-focused curriculum, sprawling graphics and distinctive colors and materials embellish throughout. ■

Tappe Architects

Associated firms: Warner Larson (Landscape Architect); Frank Locker (Educational Programmer); Nitsch Engineering (Civil + Site); Engineer's Design Group (Structural)

Design Team
Charlie Hay, AIA (Principal in Charge): Chris Blessen, AIA (Design Principal); Wendy Hynes, IIDA (Interior Designer); Jen Littlefield, AI (Construction Administrator); Matt Barnhart (Project Architect)

Client
Danvers Public Schools

Area
82,719 sq. ft.

Total cost
$40,678,125

Capacity
465

Space per student
178 sq. ft.

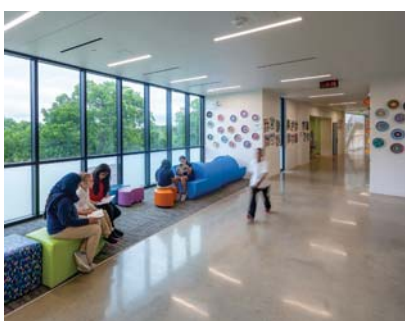
Cost/square foot
$495

Completion
June 2021

Images
Ed Wonsek ArtWorks

JILL STONE ELEMENTARY SCHOOL AT VICKERY MEADOW

DALLAS, TEXAS



Jill Stone Elementary School at Vickery Meadow is a neighborhood school that is both a replacement campus and a relief school for a second elementary. The campus was relocated closer to the heart of its vibrant community and is built on a heavily treed site that afforded unique opportunities for outdoor engagement.

The architectural form follows an arc to serve three distinct functions: minimal site disturbance, maximum views to nature and daylight on the north, and a welcome embrace of the community to the south. These functions occur under a single monolithic gesture, a floating roof that shelters three levels of instructional space. This modern "tree fort" offers students and educators playful opportunities to connect with nature.

Collaborative environments support the rigorous curriculum that is the standard for this school. Flexible furniture is situated in the main corridor, under stairwells and near classrooms to enhance choice, collaboration and relationship-building. Covered and uncovered outdoor areas enhance physical resources for learning, community events and student engagement. ■

Huckabee

Associated firms: Pacheco Koch Consulting Engineers; True North Consulting Group; Purdy McGuire

Client
Dallas ISD

Area
81,883 sq. ft.

Total cost
$27,063,250

Capacity
600

Space per student
136 sq. ft.

Cost/square foot
$331

Completion
February 2022

Images
Grant Van Hoose, Huckabee

LUDINGTON ELEMENTARY SCHOOL

LUDINGTON, MICHIGAN

Ludington Area School District was looking to consolidate its three elementary schools into one centralized facility and replace aging buildings that would have required significant renovations. This new facility creates a hub for the community, fostering inclusion and encouraging relationship-building that promotes a sense of community pride. The school was designed to serve not only as a flexible and transitionally appropriate learning space for each age group, but also as a community amenity. Recognizing that learning doesn't happen only in the classroom, Ludington Elementary was designed with outdoor learning areas, dedicated extended learning areas, and hallways that function as an accommodated learning space. The innovative design broke down the classroom wings into smaller, grade-level-centered neighborhoods. Shared amenities and special programs are organized along a central spine that connects all neighborhoods together. Technically, there are no corridors in the entire building, yet compartments are thoughtfully broken down; egressing and exiting occurs in a natural flow. The design is adaptable to support growth for the present and the future. ■

GMB Architecture + Engineering

Associated firm:
The Christman Company
(Construction Manager)

Client
Ludington Elementary School

Area
154,820 sq. ft.

Total cost
$40,000,000

Capacity
900

Space per student
172 sq. ft.

Cost/square foot
$258

Completion
December 2021

Images
Jason Keen

A NEW ELEMENTARY SCHOOL FOR THE NORTH CENTRAL AREA

KERSHAW, SOUTH CAROLINA

Evaluation of three outmoded rural schools led to a consolidation and creation of this elementary school on the North Central area campus. The basis of the design revolved around 600 students, with administration, media center and multipurpose gym centrally situated. The building provides flexibility to accommodate varying student populations and was designed to be easily expanded. The rear classroom wing, which houses early childhood programs, was situated to create a visual barrier between age-specific play areas. Classrooms were separated by joint-use storage rooms and work areas, which also double as refuge areas for students and teachers if threatening situations arise.

To celebrate the history of the three predecessor schools, a historical gallery was placed just inside the front door, where artifacts from each of the former schools will be on display for occupants and visitors. ■

Pike - McFarland - Hall Associates Inc.

Associated firm:
UWPD Architecture
(Educational Consultant)

Design Team
Hood Construction Inc. (General Contractor); ADC Engineering Inc. (Civil); Weatherly Engineering LLC (Structural); Mechanical Design Inc. (Plumbing and Mechanical); Sims Group (Electrical); Foodesign Associates Inc. (Food Service Consultant); Shepard & Associates Inc. (Roofing Consultant)

Client
Kershaw County School District

Area
75,063 sq. ft.

Total cost
$20,872,864

Capacity
600

Space per student
125 sq. ft.

Cost/square foot
$278

Completion
October 2021

Images
Oswald Design+Creative

ST. GERTRUDE THE GREAT ELEMENTARY SCHOOL, NEW CLASSROOM AND STEM LAB

BELL GARDENS, CALIFORNIA

Kluger Architects was selected to provide design, construction documents, entitlement, and construction administration services for the new St. Gertrude the Great Elementary School, part of the Archdiocese of Los Angeles.

The school facility includes a STEM lab, transitional kindergarten, kindergarten and first-grade classrooms along with a teacher lounge, staff eating area and a multipurpose room. The design is contextual to the existing campus with an added modern flair using bold colors and shapes. The layout of the rooms was influenced by the faculty that would be using the spaces. The architect held multiple design meetings before finalizing the building design. ■

Kluger Architects

Design Team
Chuck Kluger AIA; Giovanni Salas, Associate AIA; Juan Pablo Onate, Luis Iniestra, Associate AIA

Client
St. Gertrude the Great Elementary School

Area
6,528 sq. ft.

Total cost
Not provided

Capacity
225

Space per student
29 sq. ft.

Completion
November 2021

Images
Kluger Architects; St. Gertrude

PARK STREET ELEMENTARY REPLACEMENT

MARIETTA, GEORGIA

Nestled in a historic district of Marietta, Georgia, the new Park Street Elementary is a three-story K-5 school built to accommodate up to 675 students. Designed to replace and modernize an aging facility, the school was constructed on the playground of the existing site, while students attended classes as scheduled on the old campus. The design honors the aeronautical influences that the original school's design drew inspiration from.

The original Park Street Elementary opened in 1944 to meet Marietta's significant population increase resulting from the establishment of a Bell Aircraft plant during World War II. The original entrance to the school was heavily influenced by Aeronautical Design and the Streamline Moderne architectural movement. The important historical elements have been preserved and made a focal point in the design of the new school.

Completed in December 2020, the new school features a state-of-the-art media center with smart furniture, a gymnasium with auditorium and full-sized basketball court, and a community collaboration room. The event entry corridor leads to a grand stairway that serves as a secondary presentation platform overlooking the cafeteria, which boasts a multi-monitor presentation system. The cafeteria also features a garden wall where students can grow herbs and explore their culinary and scientific curiosities.

Breaux & Associates Architects

Design Team
Kate Fijalkowska (Project Manager); Jessica Winstead (Lead Designer); R.K. Redding Construction Inc. (Construction Manager)

Client
Marietta City Schools

Area
84,370 sq. ft.

Total cost
$16,500,000

Capacity
675

Cost/square foot
$196

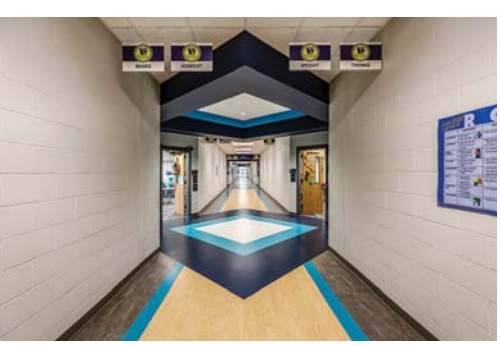
Completion
December 2020

Images
Karl L. Moore/Mooreshots LLC

Classrooms wings are subdivided into neighborhoods, consisting of four classrooms within each cluster. Each wing has its own color identity, helping students and teachers to easily navigate their space.

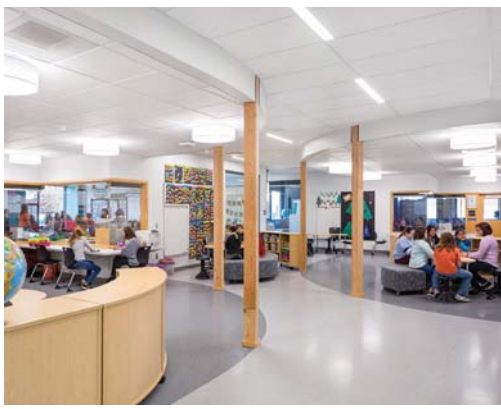
Park Street Elementary's STEM hands-on learning lab, art design lab, and innovation lab provide an environment where the school mission "Learn, Grow, Thrive" is nurtured, and the vision to provide a collaborative foundation for successful learning and living is easily achieved. ■

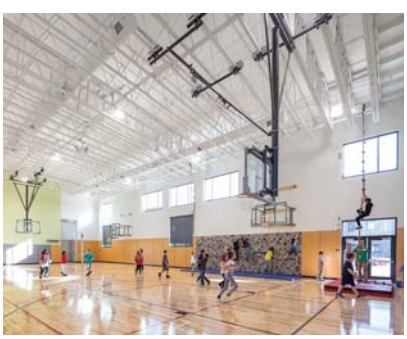
"Park Street Elementary's design allows for a collaborative and inquiry-based environment where students can thrive. As functional as it is beautiful, it has greatly enhanced student learning." — CHUCK GARDNER, CHIEF OPERATIONS OFFICER, MARIETTA CITY SCHOOLS



TEMPLETON ELEMENTARY SCHOOL

TIGARD, OREGON





Templeton Elementary is a 600-student replacement school. It serves grades K-5 in the Tigard-Tualatin district outside Portland, Ore. The original building failed to meet many requirements of a modern learning environment. It lacked exterior windows; offered undersized, hexagonal classrooms that could be accessed only from an exterior door; and provided no internal common areas for teacher-student collaboration or project-based learning support. Replacing the old Templeton Elementary was a high priority for the district and community.

The new school facility is wood with a single two-hour building separation. Forced-air mechanical systems provide ventilation and heating, as well as air conditioning in select spaces. Construction began in spring 2017 on the occupied elementary school site and completed in August 2018.

In conversations with the community, one concept emerged to drive design

IBI Group

Design Team
Rebecca Stuecker, Levi Patterson, Mathew Braun, Rebecca Grant, Marta Lilly, Raymond Martin

Client
Tigard-Tualatin School District

Area
75,220 sq. ft.

Total cost
$28,700,000

Capacity
600

Space per student
125 sq. ft.

Cost/square foot
$382

Completion
August 2018

Images
Josh Partee

decisions: People learn differently, and this school must support all learners. In response to these varied needs, the design team created a diagram of the learning neighborhood as a sequence of student experiences, from individual to group ownership and from less to more autonomy.

Classrooms are set up as large group learning zones, but flexible furniture quickly changes the configuration to support multiple small groups. Each classroom has a built-in window bench nook where students can spend quiet time alone. Built-in desks just outside the classroom door enable students to work alone or in pairs while remaining visible to educators. Flexible furniture supports small group work zones and is organized around built-in anchor walls that may contain marker boards, tackable surfaces or flat screens. Interior windows between classrooms and the extended learning area provide transparency, implied supervision, and serene outside views.■

"I knew the new environment would change student behavior, but what I didn't expect was that it would also change the way I teach."

— FOURTH-GRADE TEACHER, TEMPLETON ELEMENTARY

YORK ELEMENTARY SCHOOL, NEW BUILDING

RALEIGH, NORTH CAROLINA

The most important goal for this project was to create an enhanced environment for student-centric learning. A variety of learning spaces encourage differing educational methodologies and promote the development of 21st-century skills, including communication, collaboration, creativity, critical thinking, problem solving and global citizenship. Flexibility and adaptability within and between grade-level classrooms and through adjacencies with learning commons are key elements to supporting a student-centered learning experience that is inviting, engaging, relevant, robust, and dynamic.

Another major design catalyst was the existing topography and keeping the existing building in use during construction. This change in elevation along with the number of at-grade classrooms results in a building that steps down the slope. Maintaining the existing forested area provides an environment that most new schools must wait years to attain.

Classrooms provide a good visual connection with shared collaborative areas, both indoors and out. A large learning stair is situated at the heart of the building and links the media center above to the cafeteria and multipurpose room below. ■

Skinner Farlow Kirwan Architecture

Associated firm:
SMMA (Associate Architect & Educational Planner)

Design Team
CLH Design (Landscape & Civil Engineer); Lynch Mykins (Structural Engineer); Progressive Design Collaborative (PME Engineers); Atlas Engineering (Roof & Envelope)

Client
Wake County Public School System

Area
119,084 sq. ft.

Total cost
$34,080,405

Capacity
636

Space per student
187 sq. ft.

Cost/square foot
$286

Completion
December 2021

Images
Jim Sink

MIDDLE SCHOOL

CITATION

MCCARTY HOLSAPLE MCCARTY ARCHITECTS INC.
Webb School of Knoxville, Middle School Innovation Center
Knoxville, Tennessee p. 50

"Everything is filled with natural light. I felt like I wanted to study in those spaces and be in those spaces."
—2022 JURY

OUTSTANDING DESIGNS

JACKSON - JACKSON & ASSOCIATES INC.
Elkhorn North Ridge Middle School
Elkhorn, Nebraska p. 51

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PLUNKETT RAYSICH ARCHITECTS LLP
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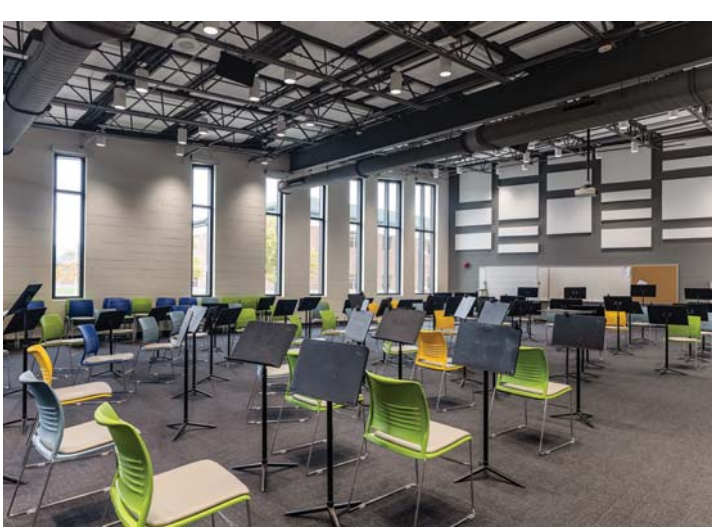


WEBB SCHOOL OF KNOXVILLE, MIDDLE SCHOOL INNOVATION CENTER

KNOXVILLE, TENNESSEE

"Everything is filled with natural light. I felt like I wanted to study in those spaces and be in those spaces." — 2022 JURY

The project is based on a desire to integrate technology and hands-on making with core academic subjects. It offers students a variety of spaces to collaborate, innovate, and explore.

The plan offers flexible spaces for changing curriculum and technologies. A new entrance establishes a front-to-back two-story spine along the existing building, putting the library on full display. The space features a deep gray wall of books with sliding white boards. Penetrating this wall, the building is organized by placing labs and maker spaces to the perimeter with a common core featuring storage, offices, and a broadcast studio. Outside, patio spaces are used for study, shop, and robotics.

Sustainability goals were achieved through enhanced envelope performance for new walls, high-efficiency glazing with vertical sunshades, local materials, and higher-efficiency systems and lighting. Bright greens are a playful twist on the school's colors, and the interiors reflect an attitude of creative whimsy, which is at the core of the facility's design. ■

McCarty Holsaple McCarty Architects Inc.

Associated firms:
Vreeland Engineers Inc.; Haines Structural Group; Bedinger Consulting Engineers; Cannon and Cannon Civil Engineers; Hedstrom Landscape Architecture; Johnson & Galyon Inc.

Design Team
Margaret Butler, Aaron Miller, Justin Hare, Alli Montgomery, Jennifer Bradley, John Hockensmith, Paul McCall, Richard Foster, Whitney Manahan, Kevin White, Hannah Starnes

Client
Webb Middle School

Area
15,010 sq. ft.

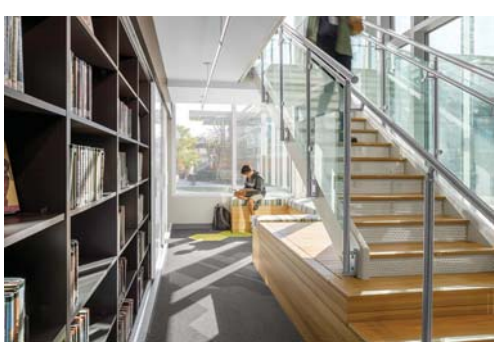
Total cost
$5,608,600

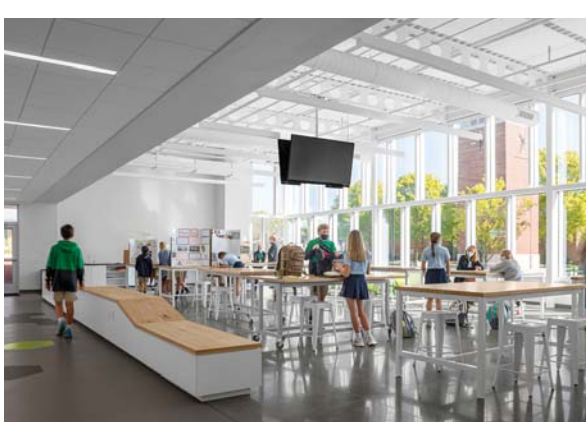
Capacity
300

Cost/square foot
$373

Completion
August 2020

Images
Morgan Nowland; Denise Retallack





ELKHORN NORTH RIDGE MIDDLE SCHOOL

ELKHORN, NEBRASKA

This new middle school prototype was constructed adjacent to one of Elkhorn Public Schools' new elementary schools. To limit the footprint of the building and maximize the efficiency of the site, a two-story design was used. Two wings, each with two stacked pods, were provided to support sixth, seventh, and eighth grades, as well as a pod for exploratory classes including art, industrial technology, and family & consumer science.

The exterior of the building was developed as a representation of the history and growth of education. Historical development of education is represented by the strong, rustic textured base of the building rendered in monumental rock face concrete masonry. This base supports a brick layer that embodies traditional school construction with a contemporary dark finished brick. Above the brick is an insulated metal panel skin that represents the future of education. This progression is similar to the development that students undergo within the school building, where they will further develop a solid educational foundation that will support their future endeavors. ■

Jackson - Jackson & Associates Inc.

Design Team
Eileen Korth (Project Manager); April Kick (Project Architect and Designer); Alvine Engineering (Mechanical & Electrical); InfraStructure LLC (Structural Engineer); Big Muddy Workshop Inc. (Landscape Architect); Lamp Rynearson & Associates (Civil Engineer)

Client
Elkhorn Public Schools

Area
153,588 sq. ft.

Total cost
$29,836,225

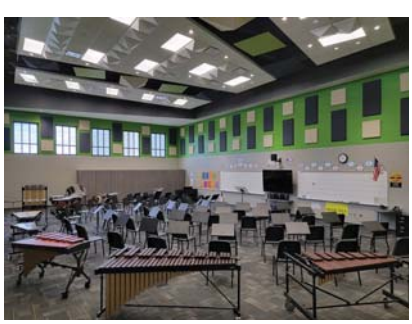
Capacity
900

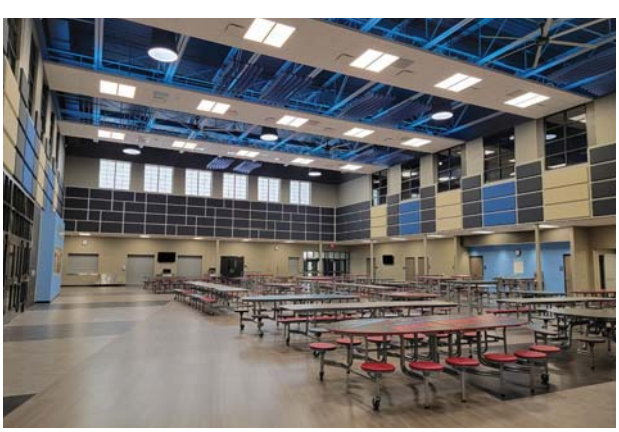
Space per student
171 sq. ft.

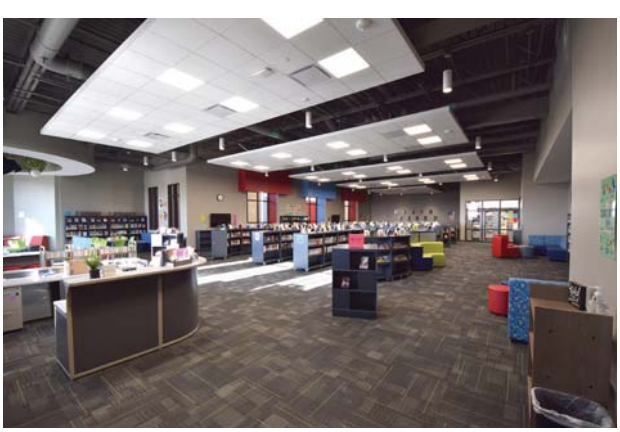
Cost/square foot
$194

Completion
August 2021

Images
April Kick; Nolan Stevens







DELAWARE CITY SCHOOLS, DEMPSEY MIDDLE SCHOOL

DELAWARE, OHIO

Triad Architects Ltd.

Design Team
Brent Foley (Principal-In-Charge); Kevin Kindy (Project Manager); Morgan Mitchell (Project Design Lead); Rachael Hill (Architectural Designer)

Client
Delaware City Schools

Area
29,400 sq. ft.

Total cost
$5,800,000

Cost/square foot
$197

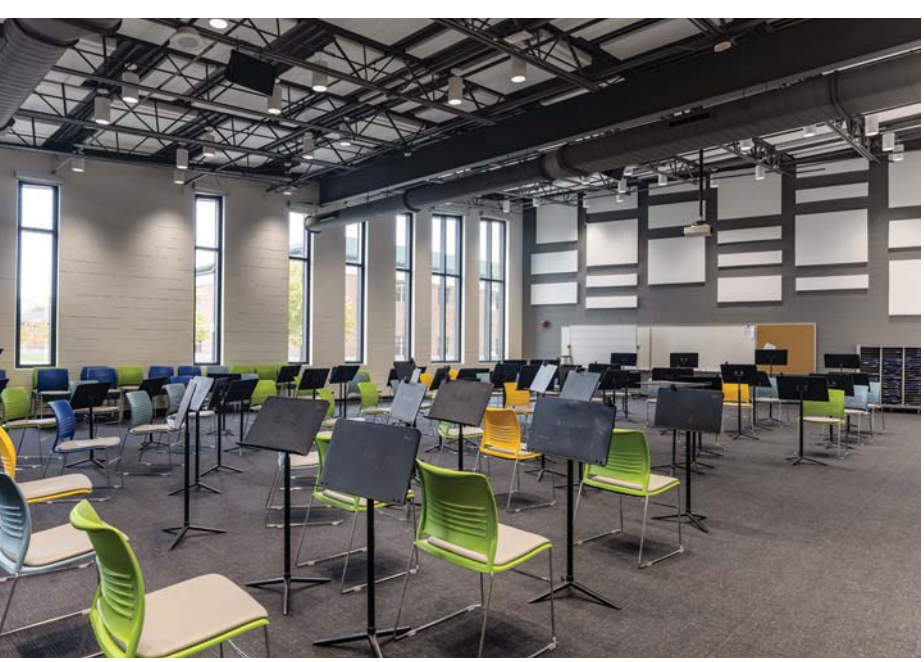
Completion
July 2021

Images
Kate Horgan Photography

Dempsey Middle School in Delaware, Ohio, is a 136,246-square-foot school for students in grades six to nine. The Triad team was charged with renovating 26,200 square feet of the space and designing a 3,200-square-foot addition. The renovation consisted of a two-story academic corridor with a flex lab. The addition is an orchestra performing space.

The addition juxtaposes the traditional design of the existing building with contemporary architecture and materials. The new space is flooded with natural light and bright, fun colors, providing inspiration and a sense of playfulness.

The school's new flex space acts as an extended learning area during school hours and as an after-school program space at the day's end. The design team gave the room a fun, energetic atmosphere by incorporating colorful, soft seating, activity tables, and two learning walls that boast large televisions and marker boards to support collaboration and real-time work sessions. To support after-school programming, the space also has a kitchen and ample cabinetry for equipment storage. The main staircase is open to the second floor and features a floor-to-ceiling wood paneling system that wraps through the entry vestibule and continues onto the exterior façade of the

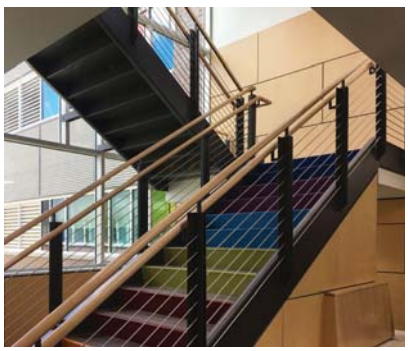


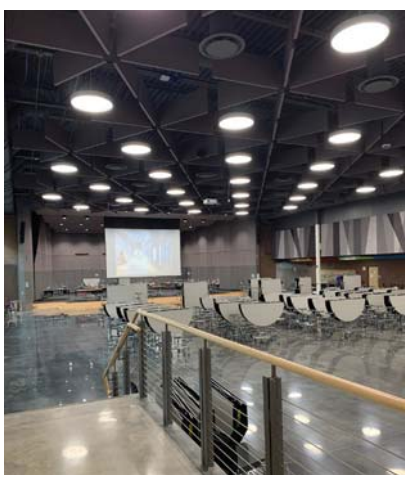
orchestra addition. The space contains large pendant lights, bright natural light and bold splashes of color throughout the renovated corridors.

The orchestra addition is a large, two-story space shaped to enhance acoustics. The space includes a large office, an instrument storage area and vocal practicing rooms. Acoustic panels on the walls and ceiling create an ideal environment, enabling sound to bounce and dissipate. The panels double as a visual element in the room, wrapping from wall to ceiling in an appealing pattern. Yellow, green, and light- and dark-blue student seating for 200 infuses color into the space. ■

HILLSIDE MIDDLE SCHOOL, ADDITION AND RENOVATION

NORTHVILLE, MICHIGAN





Formerly the district's high school, Hillside Middle School provides a flexible learning environment for students in grades six to eight. A unique feature of Hillside Middle School is its "community-centric" design—fostering small communities within the larger school community based on grade levels. Breaking the large school population into smaller learning communities provides a sense of belonging and fosters stronger interpersonal relationships among equals with an added sense of security and an enhanced learning atmosphere.

Collaboration zones were designed to offer a balance between supervision and independence while collaborative learning takes place. In addition to this being a place for collaboration, the learning commons acts as a refuge that is comfortable, safe, supervised, and relaxed. In the heart of the school, a multifunctional high-bay space forms the student commons, incorporating an elevated stage area with theatrical lighting for presentations and plays, and built-in bench seating to socialize with classmates. Flexible furniture in classrooms allow for quick adaptation that promotes collaboration in the environment but also still allows for social distancing. ■

TMP Architecture Inc.

Client
Northville Public Schools

Project area
194,787 sq. ft.

Total cost
$35,000,000

Capacity
1,200

Space per student
162 sq. ft.

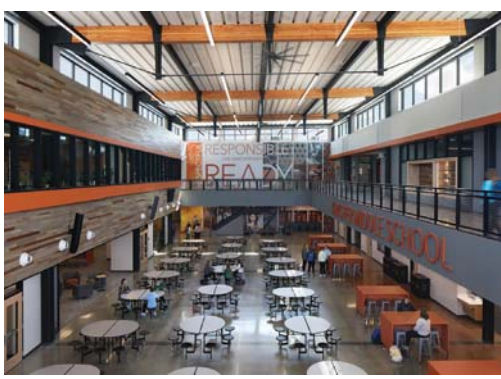
Cost/square foot
$179

Completion
September 2021

Images
David Rose Photography; TMP Architecture Inc.

KARCHER MIDDLE SCHOOL

BURLINGTON, WISCONSIN



Burlington Area School District engaged the architect in 2014 to complete a districtwide facility study and educational space analysis. This effort identified replacement of the middle school as a primary need. With support from the community, a $43 million referendum passed in 2019, enabling the district to complete major security and HVAC renovations to each of the elementary schools and construct a 600-student middle school for grades six to eight.

Constructed on the same site as the former building, the new Karcher Middle School uses the existing topography to its advantage. It has an upper-level entry with dramatic views overlooking the student commons, which serves as the heart of the school.

Clerestory windows provide ample daylight to this and other interior rooms. Collaborative, flexible and adaptable learning environments that support future pedagogy—a key project objective—are provided throughout. These principles are supported in art rooms, science labs, core classrooms and electives through the use of easily operated sliding glass partitions, purposeful sight lines and flexible furniture. ■

Plunkett Raysich Architects LLP

Associated firms:
GRAEF USA Inc.; raSmith Inc.; E.H. Kanning & Associates; Quast Consulting & Testing Inc.

Design Team
Nicholas Kent, AIA, NCARB, LEED AP; Devin Kack, AIA, NCARB, LEED AP; Daniel Effenheim, ASID, NCIDQ; Nicole Dryden, AIA, NCARB, LEED AP B+C

Client
Burlington Area School District

Area
143,166 sq. ft.

Total cost
$32,700,000

Cost/square foot
$228

Completion
May 2021

Images
Tricia Shay Photography

HIGH SCHOOL

CITATION

HMFH ARCHITECTS
Bristol County Agricultural High School
Dighton, Massachusetts ..... p. 58

"Simple, elegant and responsive architecture makes this project a delight. Beautifully executed. Play of light and volumes gives each building an identity and cohesion on campus."
—2022 JURY

OUTSTANDING DESIGNS

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BRISTOL COUNTY AGRICULTURAL HIGH SCHOOL

DIGHTON, MASSACHUSETTS

The renewal of Bristol County Agricultural High School's campus connects seven career technical education (CTE) programs with outdoor learning spaces along a vibrant pedestrian thoroughfare, uniting individual buildings into a close-knit community and integrating traditional academics with CTE programs. Driven by a culture of hands-on learning and a unique curriculum rooted in a science and environmental education, the campus functions as a learning tool and showcases its highly sustainable design. Building systems, including heavy timber framing, solar panels, and green roofs, maximize educational impact and an all-electric, net-zero-ready dairy barn exemplifies Bristol Aggie's commitment to environmental stewardship.

Expansion from 450 to 640 students required a mix of new construction, additions, and renovations that provide state-of-the-art labs and specialized learning spaces tailored to the technical needs of each program. The design encompasses six new and updated buildings: the new Center for Science and the Environment, the new Student Commons, renovations and an addition to an academic building, a new landscape/arbor building, a renovated agricultural mechanics building, and a new dairy barn. ■

"Simple, elegant and responsive architecture makes this project a delight. Beautifully executed. Play of light and volumes gives each building an identity and cohesion on campus." — 2022 JURY

HMFH Architects

Design Team
Laura Wernick FAIA, REFP, LEED AP (Project Director); Robert Williams AIA LEED AP (Project Manager); Devin Canton AIA (Project Architect); Alicia Crothers AIA, LEED AP (Project Architect); Suni Dillard AIA, LEED AP BD+C (Project Architect); Peter Rust AIA (Project Architect)

Client
Bristol County Agricultural High School

Area
113,500 sq. ft. (new construction); 82,500 sq. ft. (renovation)

Total cost
$84,548,305

Capacity
640

Space per student
306 sq. ft.

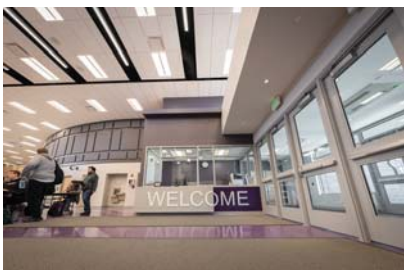
Cost/square foot
$431

Completion
June 2022

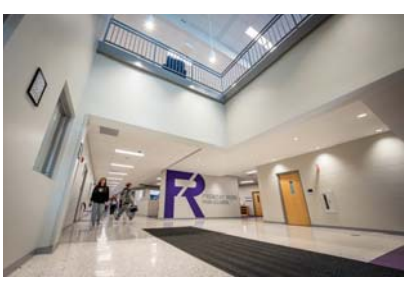
Images
Ed Wonsek Artworks

FREMONT ROSS HIGH SCHOOL

FREMONT, OHIO



Fremont Ross High School is situated in the rural town of Fremont, Ohio. The high school is part of a plan that adds five new schools to the community, fostering academic advancement throughout the region. The design, striving for a LEED Gold certification, was developed in conjunction with the district and community to celebrate their rich history of excellence in the arts, athletics, and academics. A 700-seat performing arts center hosts school concerts and theatrical productions. The existing track was expanded to accommodate regional events, and a new 12,000-square-foot competition gymnasium seats 1,200 spectators.



To support Fremont's strong economic impact on the region's agriculture industry, the school features an Agricultural Career Technology Center where students can receive an industry-recognized credential for agriculture-focused careers.

Balancing the community's traditional values while providing flexible learning environments was key in building programming. The classrooms are arranged in a traditional double-loaded corridor, and the corridors open to large extended learning areas, including outdoor learning spaces, a collaborative media center and project labs. ■

ThenDesign Architecture (TDA)

Design Team
Scott Alleman, RA, NCARB (Project Manager); Lindsey Burke, NCIDQ, LEED Green Associate (Interior Design Lead); Lyle Satterlee (Construction Administrator); Matt Hallal (Design Team); Jim Quandt, RA (Design Team)

Client
Fremont City School District

Area
215,000 sq. ft.

Total cost
$49,500,000

Capacity
1,200

Space per student
179 sq. ft.

Cost/square foot
$230

Completion
December 2021

Images
ThenDesign Architecture

HILLCREST HIGH SCHOOL
MIDVALE, UTAH

Hallmark programs at Hillcrest High School include the International Baccalaureate and award-winning Performing Arts. Special consideration and creative design solutions were employed to further enhance and situate both prominently in the new school. This visibility showcases the programs and encourages student participation.

New program amenities include an athletic field house with an artificial turf practice area and a banquet hall overlooking the stadium, a black box theater with a professional-level tension grid, and a vibrant student commons with stunning mountain views.

The steel and masonry structures are clad in brick masonry, curtainwall, and a patinated copper composite panel that celebrates school spirit. V-shaped structural bracing is exposed and highlighted in the student commons, illustrating the lateral system in this seismic region. Hillcrest school spirit is on display with an exterior wall panel depicting the Husky school mascot. The mascot artwork conceals a large mechanical louver and is seen from the stadium. Fritted glazing

FFKR Architects

Design Team
Greta Anderson, AIA (Principal-in-Charge, Senior Principal Architect); Elizabeth Morgan, AIA, ALEP (Senior Designer, Principal Architect), Goran Ilic, AIA (Project Architect, Senior Associate Architect); Sam Hunt, AIA, NCARB, LFA, WELL AP (Project Manager, Associate); Abram Nielsen, PLA, AICP, ASLA, LEED AP (Campus Land Planner and Landscape Architect, Senior Associate)

Client
Canyons School District

Area
407,000 sq. ft.

Total cost
$115,240,000

Capacity
2,213

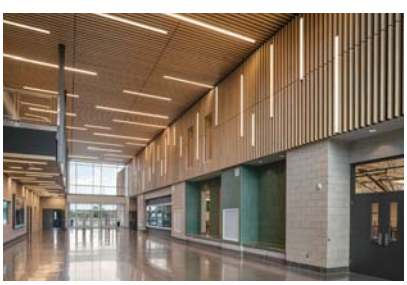
Space per student
185 sq. ft.

Cost/square foot
$283

Completion
August 2021

Images
Tobin Rogers; Shutter Scorpion

"Hillcrest High School's design improved the learning environment for all students by displaying our learning practices, providing light, open spaces, and safe, clear hallways." — GREGORY LEAVITT, PRINCIPAL, HILLCREST HIGH SCHOOL



on the academic wings decreases solar loads, which allows for a reduced chiller size and fewer radiant panels.

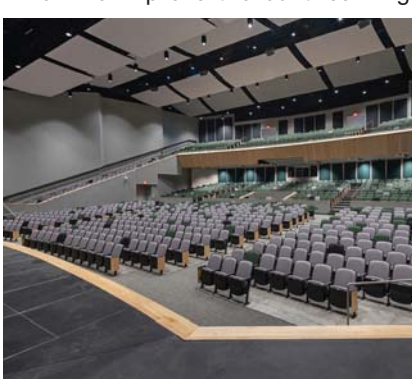
The site design greatly improves access to the campus, which is surrounded on two sides by a canal, part of which is now buried. Creatively designed outdoor areas entice students to socialize on an easily supervised campus. The new design shifted the school east with an impressive four-story classroom wing that captures mountain views and connects users with nature. The bright, modern design complete with daylighted touchdown and collaboration areas creates an atmosphere conducive to learning as students work together in teams. ■

Q&A with Greta Anderson, AIA, ALEP

Senior Principal Architect and K12 Studio Director | FFKR Architects

What have you learned about education architecture in the past 25 years that you applied to the design of your high school?

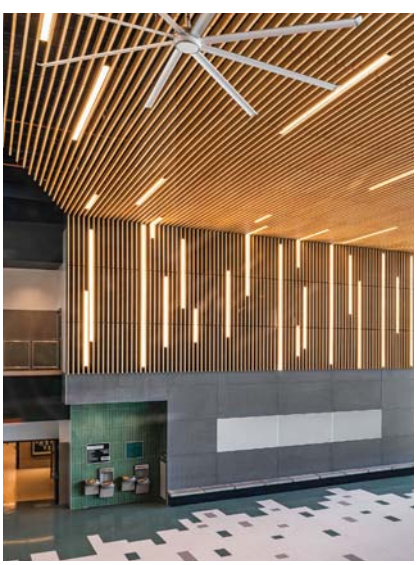
I was fortunate enough to be selected to redesign my own high school. The original Hillcrest High school structure in Midvale, Utah, was built in 1962. It was designed away from the road, facing a storage unit facility. It was turned inward and had an enclosed courtyard that was always locked off. We now know that outdoor learning, natural daylight, and connection to nature have an impact on learning and can improve short-term memory, decrease negative emotions, and increase cognitive ability. These are proven facts that were not in the knowledge base of architects in the 50s or 60s. We are so fortunate as modern designers to have this research and incorporate it into our everyday designs. When we improve the built learning environment, the students benefit in social-emotional development as well as academic performance.



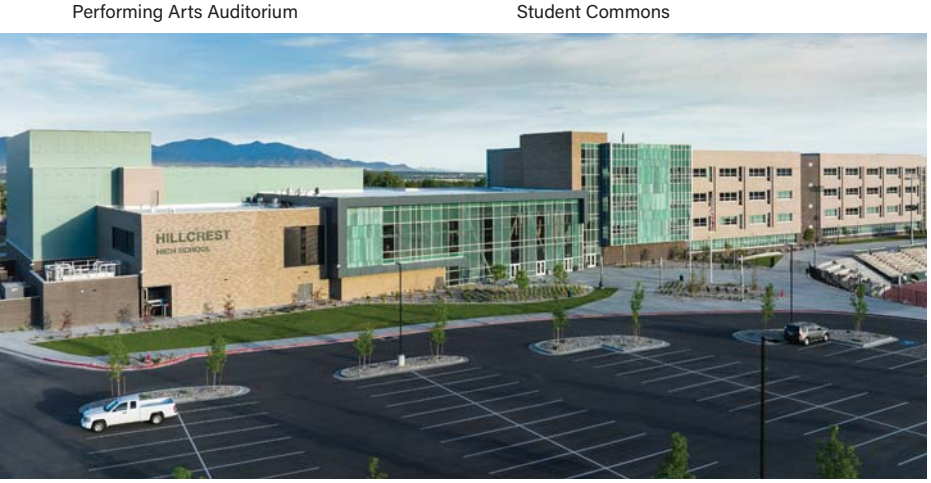
Performing Arts Auditorium

How did you solve deficiencies of that old design in the new design?

Hillcrest High School's new design focuses on mountain views; we incorporated windows and natural daylight in every learning space for more effective outcomes. The importance of designing for the whole child means addressing their physical, emotional, and overall well-being. Including a variety of collaborative learning spaces supports peer-to-peer interaction, social learning, and improves cognitive performance.



Student Commons



Hillcrest High School, Midvale, Utah

Greta Anderson, AIA, ALEP

What were the benefits of redesigning your own high school?

My institutional memory, understanding the history and legacy of the school, was a considerable advantage in the design approach to this high school. There was also a lot of pressure. During the community outreach events my fellow alumni were present and shared their sentiments about the design. I felt a huge sense of responsibility to deliver a school that would support the programs and honor the history of the school. Specifically, the award-winning performing arts program that has been a centerpiece of the community for decades. Hillcrest High School will serve generations of students well.

I am honored and privileged to have become a part of my high school's ongoing legacy.

FFKR ARCHITECTS

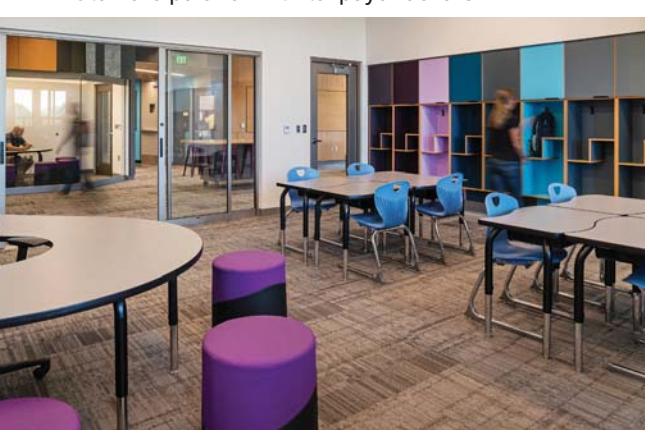
FFKR Architects
801.521.6186 | FFKR.com
Salt Lake City, UT | Scottsdale, AZ
k12studio@ffkr.com

Q&A with Elizabeth Morgan, AIA, ALEP

Principal Architect | FFKR Architects

Why is communication with the owner and the community so important to the design of learning facilities?

In my experience, I have found the designs are very unique to our clients. The end product needs to reflect who the owner is and what the community values are. Having that buy-in and input brings an essential component to the design that meets not only the needs of the educational community but the neighborhood as schools are not exclusively used just for learning; they become community centers utilized for a variety of other public functions. More often than not, educational facilities in Utah are paid for with taxpayer dollars. Community input may help future bond elections succeed because taxpayers know what they are paying for with their limited resources. As architects, listening with empathy is a strength and a vital piece to a successful design.



Is the power of a community strong enough to change a plan?

On a recent project, Polk Elementary, the school district contemplated replacing a 100-year-old school to reduce operational and maintenance costs and create a modern learning environment. However, the District faced major criticism when that idea was proposed to the community. The community felt that the school reflected the history of the city and was an anchor in the neighborhood. The initial bond to pay for the replacement school failed. The following year we worked with the District to revise the plan to restore the existing structure and add a modern addition, which resulted in a design taxpayers could get behind and support. The outcome is an effective and functional facility that is woven into the fabric of the neighborhood and carries on the legacy of the original school.

Polk Elementary School, Ogden, Utah

Elizabeth Morgan, AIA, ALEP

How do you incorporate Community and District needs into one educational building?

School districts often house many programs in one school. It would be shortsighted to offer a premade design or prototype that doesn't reflect the District pedagogy and how the community want their children to be taught. Through the programming process we work to innovate learning environments that are responsive to our client's needs. Solutions include flexible, multi-use space which will adapt over time as requirements evolve and programs are added. That is why we rely on valuable input from all shareholders early on to help ensure the final design is unique to every community.

FFKR ARCHITECTS

FFKR Architects
801.521.6186 | FFKR.com
Salt Lake City, UT | Scottsdale, AZ
k12studio@ffkr.com

HIGHLINE HIGH SCHOOL

BURIEN, WASHINGTON

Bassetti Architects

Design Team
Dan Miles (Principal-in-Charge); Mark Smedley (Project Manager); Michelle Yates (Architect); Lindsay Crawford (Architect); Alan Dodson (Architect)

Client
Highline School District

Area
230,350 sq. ft.

Total cost
$117,000,000

Capacity
1,500

Space per student
154 sq. ft.

Cost/square foot
$508

Completion
September 2021

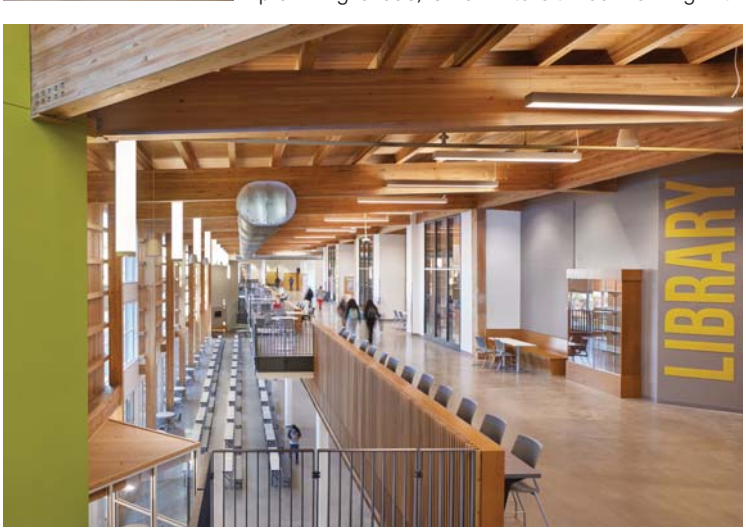
Images
Benjamin Benschneider

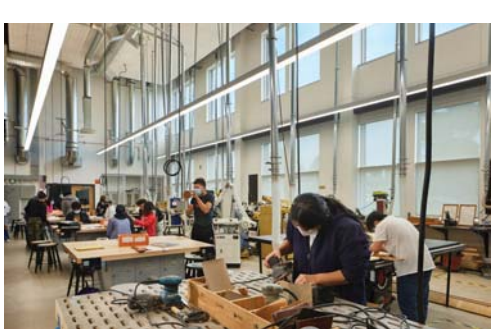
Three powerful concepts shaped Highline High School—community engagement, project-based learning, and contextual place-based design.

The guiding principles developed through the district-led visioning process included welcoming, student-centered, community-focused, and safe outdoor learning spaces. By placing the commons at the heart of the school, the design creates a central gathering place for student and community events.

The layout is based on learning communities. General classrooms, seminar rooms, teacher planning areas, small classrooms, and science labs are clustered around a small learning commons. Career and technical education (CTE) programs are adjacent to each of the learning pods. As part of the design theme of "Romancing the Trades" (a term created by the visioning committee), the CTE spaces are placed strategically to provide visibility from the building exterior, the commons, and for displaying student work.

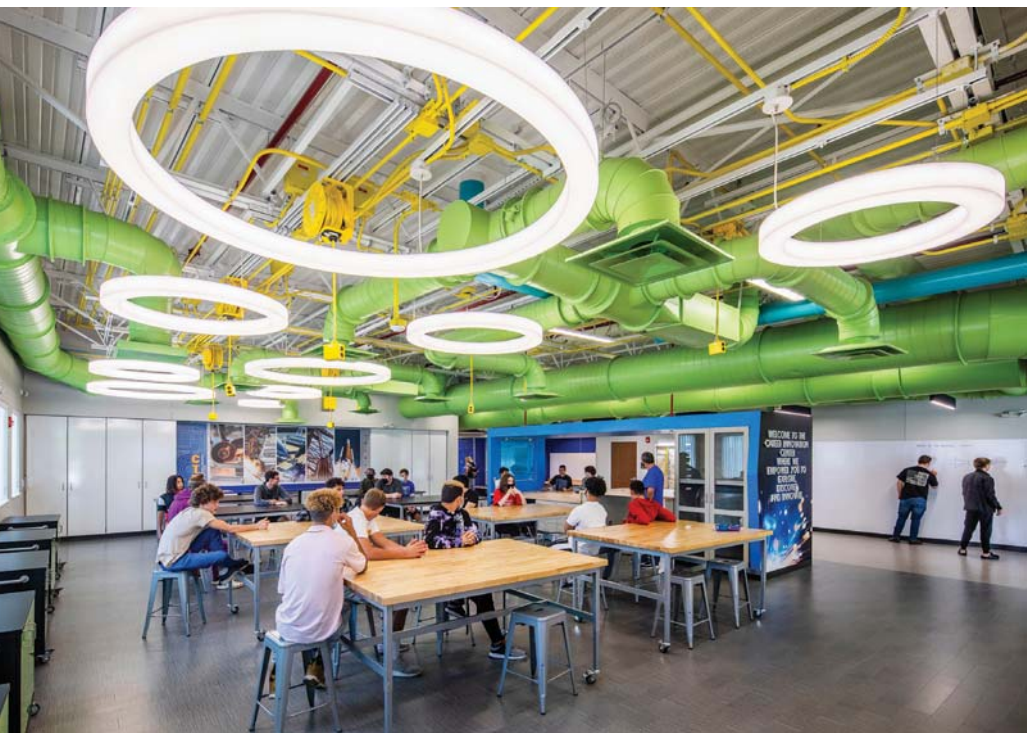
The commons feature timber framing with glue-laminated columns and beams, wood decking, and purlins for a biophilic approach that reduces embodied carbon. Finally, outdoor learning, rain gardens, athletic fields, and arts facilities ensure that Highline integrates seamlessly into the heart of the community. ■

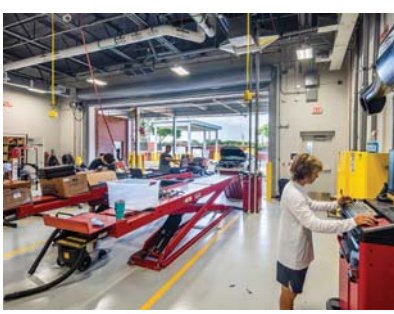




LYMAN HIGH SCHOOL, CAREER INNOVATION CENTER

LONGWOOD, FLORIDA





BRPH

Associated firms: Kaleidoscope Interior Design; Matern Professional Engineering; KlimaWeeks Civil Engineering

Client
Seminole County Public Schools

Area
22,400 sq. ft.

Total cost
$7,700,000

Capacity
186

Space per student
120 sq. ft.

Cost/square foot
$348

Completion
June 2021

Images
Chad Baumer

Lyman High School's Career Innovation Center (CIC) is a showcase facility for Seminole County (Fla.) Public School's Career & Technical Education program, designed to:

- Drive student collaboration, creativity and innovation;
- Provide the space and tools to promote mentorships and work placement; and
- Cultivate the skills learners need to be successful in the workforce.

The CIC expanded the existing Academy of Building and Design and created new facilities for the academies of engineering and automotive technology. The heart of the CIC is the "Collaboratorium"— a space for students, owned by students. Designed to empower learners to engage with one another, this versatile space is equipped with a maker bar and plentiful seating, including open benches with writeable tabletops.

Activated hallways encourage collaboration anywhere and everywhere. Two high-bay labs and covered exterior areas are ideal for work with large-scale automotive and construction tools. Acting as both teaching tools and design elements, the building's HVAC, plumbing, electrical and fire protection systems are exposed and color-coded, and windows provide views of the inner workings of the mechanical and electric rooms. ■

MARK RICHARDSON CAREER TECHNICAL EDUCATION CENTER & AGRICULTURAL FARM

SANTA MARIA, CALIFORNIA

19six Architects

Design Team
Alan Kroeker (Principal-In-Charge); Federico Cortez (Project Architect); Above Grade Engineering (Civil and Electrical); Stork Wolfe & Associates (Structural); 3C Engineering (Mechanical/Plumbing); Collings & Associates (Fire Protection); Oasis Associates (Landscape Architect); DMH (Food Service)

Client
Santa Maria Joint Union High School District

Area
42,177 sq. ft.

Total cost
$22,000,000

Capacity
606

Space per student
70 sq. ft.

Cost/square foot
$523

Completion
February 2020

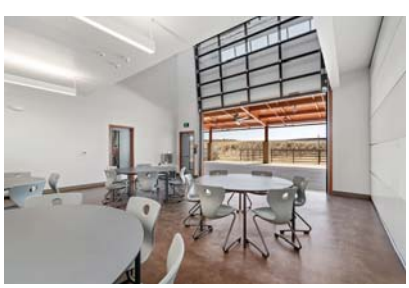
Images
David Lalush

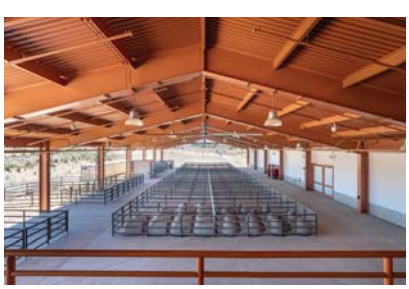
The new 25.3-acre Santa Maria Career Technical Education (CTE) Center & Agriculture Farm campus features four CTE workshops, an ag pavilion, livestock barn, and student agricultural fields.

At the workshops, students will earn certifications in various manufacturing fields. The workshops are focused on diesel mechanics, engineering design and environmental engineering, residential and commercial construction, and machining and forming technology programs. Each workshop is just over 4,500 square feet, combining for a total of over 18,000 square feet of technical education teaching space.

The ag pavilion houses a culinary arts kitchen, two flexible classrooms, an office, restrooms, and an outdoor presentation area that can be used by faculty and students, and for special events. This new industrial kitchen will enable students to get hands-on culinary arts experience practicing catering and food prep in a professional setting.

A 16,000-square-foot livestock barn contains a teaching space, covered animal pens, feed storage, animal washing and grooming stations, weighing station, and general animal care areas along with demonstration spaces for training and show exercises. ■



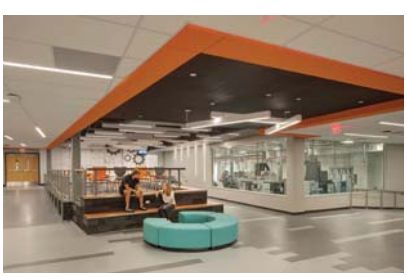


MCHENRY COMMUNITY HIGH SCHOOL DISTRICT 156, UPPER CAMPUS EXPANSION AND RENOVATIONS

MCHENRY, ILLINOIS

The new addition is poised to enhance the educational synergy resulting from science, math, and industry technologies, leading to a range of potential career pathways. Added and renovated spaces go beyond the traditional models of learning environments to approach the diverse needs of every student. The entire facility encourages exploration of unique opportunities by nature of the innovative program offerings and through intentional transparency into learning environments so students can see project-based and hands-on activities to pique their curiosities. Advanced programs require specialized environments and amenities to mimic real-world spaces, and classroom and lab spaces have the flexibility and mobility to evolve with new ideas.

Students can leverage the extended learning areas with a seamless relationship to classrooms, so supervision and connectivity are possible when moving through the facility. These varied settings for different learning choices cater to the district's blended learning model and enable students to customize their educational experiences and optimize technology resources. Through strong local partnerships, the district also has aligned the curriculum with mentoring and internship opportunities. ■



Wold Architects & Engineers

Design Team
Jonathan Kuzynowski, Wold Architects and Engineers (Project Designer)

Client
McHenry Community High School District 156

Area
375,000 sq. ft.

Total cost
$34,206,000

Capacity
1,800

Space per student
208 sq. ft.

Cost/square foot
$91

Completion
July 2021

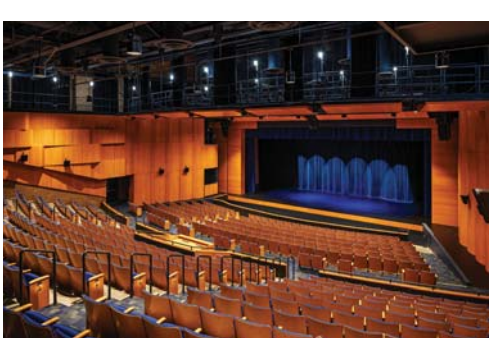
Images
Troy Thies; Kristin Rajotte

MORENO VALLEY HIGH SCHOOL PERFORMING ARTS CENTER

MORENO VALLEY, CALIFORNIA

John Sergio Fisher & Associates is the architect of record, theater consultant and acoustician for this performing arts center with support spaces, a band/orchestra classroom, a choir classroom and drama rehearsal/classroom spaces. The project also includes a scene shop and lobby/gallery.

The building is constructed of exposed concrete masonry units, which gives it the desired noise attenuation and an energy-saving thermal time lag. The building was designed using a participatory design process whereby the students, faculty and administration were involved in the design and made the final design decisions. The artwork on the south elevation depicting band, choral, theater and dance was designed and executed by the students. The convex curves on the exterior and interior optimize the acoustical disbursement, which is adjustable. ■



John Sergio Fisher & Associates Inc.

Design Team
John Fisher, AIA; Joaquin Varela Ferrer, AIA; Faye Liu, ASA; Duke Jackels; Hanan Asfoury; Joe Monteadora, AIA

Client
Moreno Valley Unified School District

Area
26,250 sq. ft.

Total cost
$22,546,822

Capacity
625

Cost/square foot
$859

Completion
January 2022

Images
Ciro Coelho

PROSSER HIGH SCHOOL
PROSSER, WASHINGTON

This replacement school, built on a new site, was designed to meet the educational program requirements and to be a source of pride and place of gathering for the community.

The sloping and irregularly shaped site created challenges, including shallow bedrock and an exposed irrigation canal. Multiple concepts were investigated, resulting in a hillside building on the shallow bedrock, which preserved level land for sports fields and parking. The result was a multilevel building with a commanding presence over the existing football field and a subdued welcoming main entry.

The commons was created as the central connector. Public spaces were consolidated near the main entry. Athletic spaces are down one level, enabling views and access into the gymnasium via an elevated walking track.

The design creates an open relationship between interior spaces, which promote visual security and provide a welcoming, bright, and connected facility. The majority of the exterior building envelope and structure consists of insulated, textured pre-cast concrete sandwich panels. Glazing systems mixed with metal panels create a lightness that contrasts with the heavy concrete panels differentiating functional areas. ■

Architects West Inc.

Design Team
Architects West: Steve Roth, AIA, LEED AP (Architect); Keith Dixon, PLA, ASLA (Landscape Architect); Coffman Engineers: Sandra Anthony, PE (Civil Engineer); Eclipse Engineering: Brian Hanson, PE (Structural Engineer); MSI Engineers: Jess Stauffenberg, PE, LEED AP (Mechanical Engineer); Connetix Engineers: Jeff Gray (Electrical Engineer)

Client
Prosser School District No. 116

Area
163,630 sq. ft.

Total cost
$53,256,277

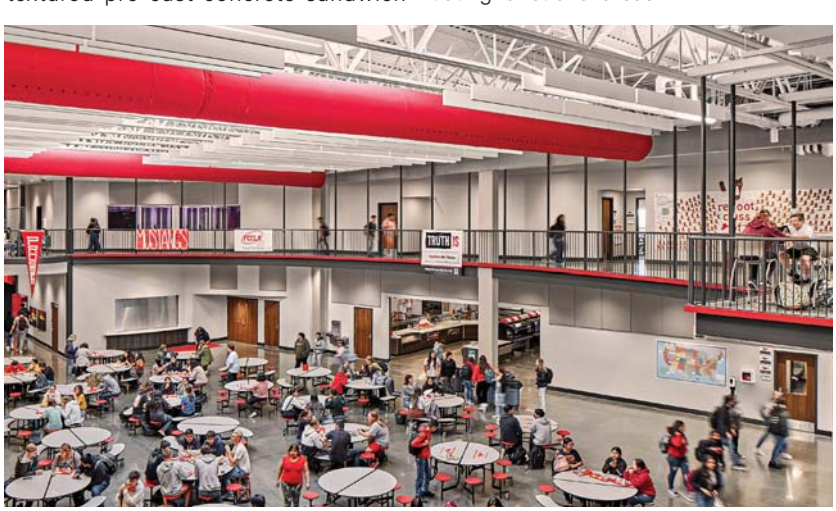
Capacity
1,200

Space per student
140 sq. ft.

Cost/square foot
$316

Completion
August 2021

Images
Firefly Solutions



RAMSTEIN HIGH SCHOOL

RAMSTEIN AIR STATION, GERMANY

Ramstein High School represents the next generation of schools for the Department of Defense Education Activity. It replaces an outdated building with a technology-rich learning environment for students.

The dynamic activity commons in the central core of the campus is a three-story space that stitches the academic neighborhoods to the gymnasium, administration and support spaces. The commons is host to a variety of functions and blurs the edges between instructional and common space. At every level, the activity commons engages with students and creates an active, inviting space to gather and collaborate.

The academic spaces are housed in innovative learning neighborhoods. They create a new classroom paradigm that blends pedagogy, technology and space to create an active studio environment. Each neighborhood has studios and staff collaboration areas that open into a larger learning hub, equipped with flexible furniture and technology to accommodate a variety of teaching and learning modalities.

The school's media center has been transformed into a global resource center. The center is a highly collaborative, technology-rich environment where students are connected to the larger world with an opportunity to discover, explore and seek information. The space is filled with daylight, making it comfortable for projects, research and studying. ■

SchenkelShultz Architecture

Associated firms: CH2MHill (Design Project Manager and Engineer); Dorsche Gruppe (Architect of Record)

Client
Department of Defense Education Activity (DoDEA)

Area
274,850 sq. ft.

Total cost
$98,800,000

Capacity
1,100

Space per student
250 sq. ft.

Cost/square foot
$359

Completion
August 2021

Images
Chad Baumer Photography

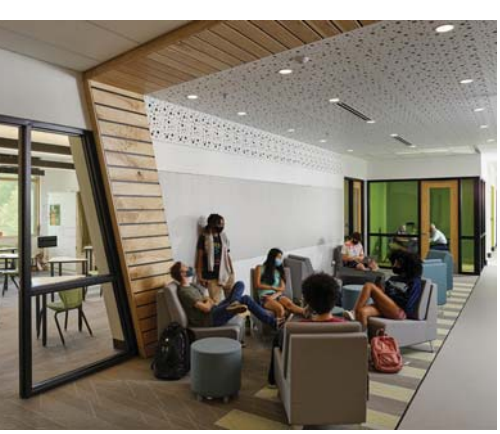
SANDY SPRING FRIENDS SCHOOL, PEN Y BRYN UPPER SCHOOL

SANDY SPRING, MARYLAND

As the first high school in the United States and the third school globally to achieve WELL Gold Certification, The Pen Y Bryn Upper School at Sandy Spring Friends School is a progressive coed college preparatory learning facility that serves 150 students in grades 9 to 12.

The Upper School was planned to honor and support the school's Quaker values by combining time-honored teaching and learning traditions with contemporary learning spaces and common areas. The project sought to understand the task at hand in its largest context—both with regard to the stewardship of the facilities and vision for the community.

Culturally, the school is rooted in the theory that collaboration engenders achievement, which is traced to the Quaker heritage and values of simplicity, peace, integrity, community, equality, and stewardship. These concepts shaped the biophilic design strategy by highlighting the need for an energy-efficient building that conserves resources and promotes wellness for the occupants and the community, which resulted in a net-zero energy ready facility. ■



Stantec

Design Team
Stantec: Matthew Kavanaugh (Senior Project Architect and Construction Administrator), Haidi Liu (Architectural Designer), Kim Currano (Civil Engineer); Keller Brothers Inc.: Phillip D. Keller, Jr. (General Contractor); Brian J Stephenson + Company LLC: Brian Stephenson (Landscape Architect); Keast & Hood Co.: Robert Boris (Structural Engineer); 2rw Consultants Inc.: Lucas Hoffman (MEP Engineer); Delos Living LLC: Anna Obraztsova (WELL Building Consultant)

Client
Sandy Spring Friends School

Area
42,029 sq. ft.

Total cost
$13,491,474

Capacity
396

Space per student
106 sq. ft.

Cost/square foot
$321

Completion
October 2020

Images
Tom Holdsworth Photography

SOUTHSIDE HIGH SCHOOL ADDITIONS AND RENOVATIONS

FORT SMITH, ARKANSAS

Risley Architects

Design Team
Risley Architects; HSA Engineering Consulting Services; Myers Engineering; Mickle Wagner Coleman; Sarah Howe Interior Design; VP McKay

Client
Fort Smith School District

Area
18,087 sq. ft. (administration addition); 34,308 sq. ft. (freshman wing); 2,482 sq. ft. (administration hub); 24,885 sq. ft. (kitchen/dining)

Total cost
$19,284,850

Completion
August 2021

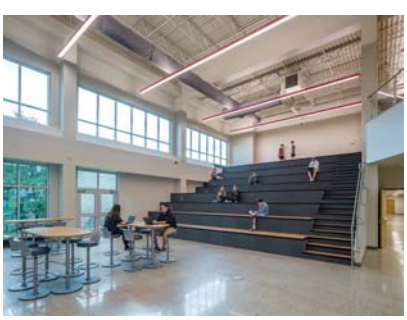
Images
Ken West Photography

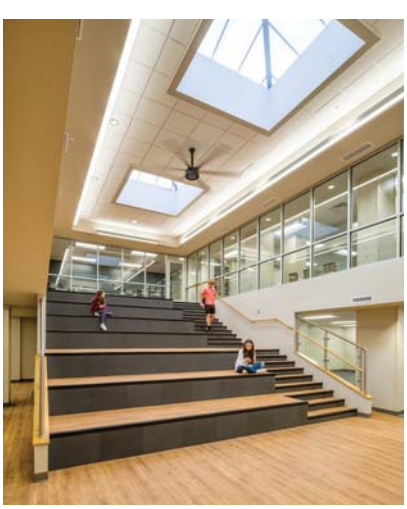
Southside High School was built in the early 1960s. For this project, the architect was tasked with creating two major additions—an administration and freshman wing. The gymnasium was converted into a cafeteria, and the administration and library spaces were converted into a media arts center/coffee shop.

The administration addition is now the face of Southside High School. The design created a two-story space and a drop-off/pickup drive. To the right of the main entry is the administration addition, which has floor-to-ceiling glazing. On the second level, above the administration wing, is the classroom addition. It's anchored by a stone-clad stairwell as it ties back into the original classroom wing.

The freshmen wing is the secondary entry. It joins the two existing classroom wings to create a full circulation loop. As the students go through the space, they enter a two-story space with a large gathering area.

The existing administration area had low ceilings with little daylight. The space has been converted into a bright gathering space similar to the freshmen wing with circulation to the second-level media arts center. ■





UPPER MERION AREA HIGH SCHOOL

KING OF PRUSSIA, PENNSYLVANIA

The Upper Merion Area High School design sought to provide career- and higher education-level learning spaces to prepare students for achieving their greatest potential once they graduate. The new 9-12 high school will provide enriching opportunities for students to take advantage of higher-level courses at the secondary level. The organization of the building provides the flexibility to move away from traditional content or age configuration to be more centered on student aptitude and career interests.

To promote self-motivated learning, socialization, and collaboration, the student commons at the heart of the facility will be used throughout the day for multiple activities. After hours, the commons space will provide pre- and post-activity support for the athletic and performing arts complexes.

A three-story academic wing supports the core academic programs with a STEAM-based center, multiple project and team-based spaces, and a three-story learning stair. The learning stair connects the academic building vertically. Visual transparency between the teaming spaces and classrooms further promotes the cross-pollination of learning activities. ■

SCHRADERGROUP

Design Team
Snyder Hoffman Associates (MEP Engineering); Renew Design Group (Site/Civil Engineering and Landscape Architecture); William H. Lane Incorporated (Construction Manager); Wallover Architects Inc. (Aquatic Design Consultant)

Client
Upper Merion Area School District

Area
345,000 sq. ft.

Total cost
$138,000,000

Capacity
1,500

Space per student
230 sq. ft.

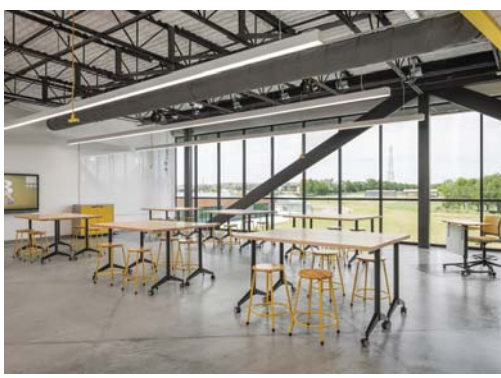
Cost/square foot
$400

Completion
August 2022 (building)
August 2023 (site with athletic fields)

Images
SCHRADERGROUP

VANGUARD ACADEMY OF BROKEN ARROW

BROKEN ARROW, OKLAHOMA



The Vanguard Academy of Broken Arrow is a unique facility for Broken Arrow Public Schools, designed specifically for next-generation learning in all areas of study using science, technology, engineering and mathematics principles. The main building houses the administration, four 100-person learning communities, and a maker space/commons area. Flexibility and adaptability were major design themes from the early phases of conception and design. The initial phase is designed for four career paths but can accommodate differing programs as the district evolves. Each learning community can be used to teach any one of 140-plus STEM fields of study. ■

WRA Architects

Client
Broken Arrow Public Schools

Area
60,015 sq. ft.

Total cost
$16,509,596

Capacity
400

Space per student
150 sq. ft.

Cost/square foot
$275

Completion
July 2021

Images
Mel Willis

COMBINED LEVEL SCHOOL

CITATION

O'CONNELL ROBERTSON
Ann Richards School for Young Women Leaders
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"The quality of the interior spaces tries to promote community and has an abundance of natural light."
—2022 JURY

OUTSTANDING DESIGNS

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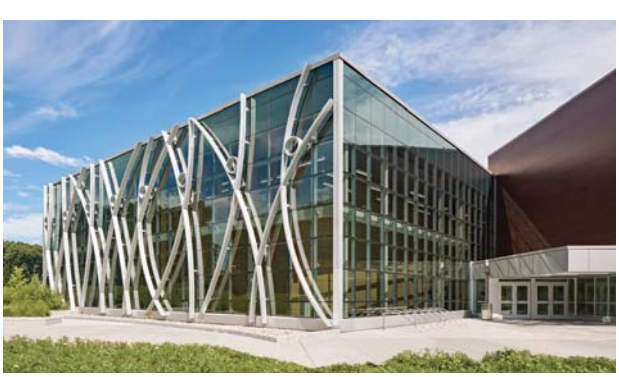

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ANN RICHARDS SCHOOL FOR YOUNG WOMEN LEADERS

AUSTIN, TEXAS

The new Ann Richards School is a unique 6-12th grade, all-girls public school that provides students, staff and visitors an innovative and inspiring place developed with the school's core values and distinctive STEM/maker culture in mind. Filled with natural light, common areas that flex for multiple uses, small breakout rooms, reflective nooks and creative design elements, this school maximizes its 15-acre site with a sustainable, intentional design.

The phased replacement campus was constructed on the existing campus while school remained in session. This required careful coordination and communication with the school and neighbors. The design involved extensive engagement with students, staff, parents, and community to create a facility that embodies the school's mission.

Features like the library's spiral slide, shared art and engineering outdoor workspace and a courtyard overlooked by a heritage tree make the campus a memorable step on the journey to develop the skills necessary to pursue college educations and careers. ■

"The quality of the interior spaces tries to promote community and has an abundance of natural light." — 2022 JURY

O'Connell Robertson

Design Team
Amy Jones, President; Jarrod Sterzinger, AIA, LEED AP BD+C, Principal; Jayna Duke, RID, LEED AP, Principal; Becky Winovitch, RA, CDT, Associate Principal; Misela Gonzales-Vandewalle, AIA, Senior Associate; Casey Nicholson, RA, Senior Associate; Doug Dawson, RA, Associate

Client
Austin Independent School District

Area
184,000 sq. ft.

Total cost
$57,400,000

Capacity
1,050

Space per student
175 sq. ft.

Cost/square foot
$312

Completion
October 2021

Images
Sterling Stevens

THE FESSENDEN SCHOOL, SCIENCE CENTER

NEWTON, MASSACHUSETTS

CBT Architects

Design Team
Paul Viccica, Lauren Gauthier, Lonnie Ash, Meagan Kelley, Daniel Guzas, Michelle Oishi, Howe Engineers, Langan Engineering, Rist-Frost-Shumway Engineering, Boston Light Source

Client
The Fessenden School

Area
11,000 sq. ft.

Total cost
$3,300,000

Capacity
230

Space per student
20 sq. ft.
(science classrooms)

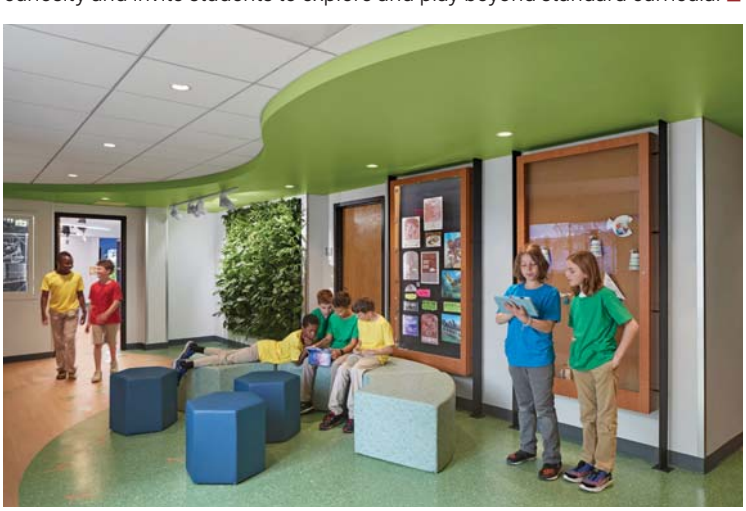
Completion
October 2021

Images
Robert Benson Photography

The reimagined science wing at the Fessenden School in Newton, Mass., transforms once enclosed corridors into an open and welcoming environment. Learning flows out of the traditional classroom into hallways and breakout spaces focused around a new collaborative core.

Designed over two floors, the science wing features scientific discovery and hands-on learning at every turn, engaging children of all ages—from kindergarten through grade nine—with vibrant graphics, improved technology, interactive displays, and ample demonstration and collaborative space.

The design strategically repurposes existing support and utility space and reconfigures existing labs and classrooms to introduce a series of visually connected and adaptable spaces that allow for flexible learning, a rotating curriculum, and new opportunities for scientific exploration embedded within the architectural and interior design itself. Unique and engaging features such as a living green wall, functioning prism wall, live nature-cam displays, and teaching topics integrated into floor-finish patterns foster a sense of intellectual curiosity and invite students to explore and play beyond standard curricula. ■



CREC ANA GRACE ACADEMY OF THE ARTS MAGNET SCHOOL

BLOOMFIELD, CONNECTICUT

Since 1966, the Capitol Region Education Council (CREC), working with and for its member districts, has developed a wide array of cost-effective and high-quality programs and services to meet the educational needs of children and adults in Greater Hartford. The CREC Ana Grace Academy of the Arts Magnet School

Friar Architecture

Associated firms: Capital Region Education Council (CREC); Connecticut Department of Administrative Services; Consulting Engineering Services; Freeman Companies; Santo Domingo Engineering; RJS + Associates; Bartlett Brainard Eacott Inc.

Design Team
Robert Roach, AIA (Principal-In-Charge); Michael Sorano, AIA (Principal Designer); Bryce Sens, AIA (Associate Principal/Principal Designer); Nicholas Mundo, AIA (Architectural Project Manager); Cristin Auten, NCIDQ (Senior Interior Designer); Jose Ramos (CAD Coordinator)

Client
Capital Region Education Council (CREC)

Area
157,142 sq. ft.

Total cost
$83,020,000

Capacity
876

Space per student
179 sq. ft.

Cost/square foot
$528

Completion
December 2021

Images
Robert Benson Photography

is a new building that serves 876 students in pre-K through grade 8.

The 30-acre site provides an extensive amount of open space for playscapes, play fields, walking trails and an area of protected wetlands. This high-performance building meets LEED Silver equivalent criteria; this was achieved by employing strategies such as in-floor radiant heat, solar photovoltaics, and chilled beam cooling. The HVAC system and solar arrays reduce energy usage and contribute to the building's sustainability.

Designed to celebrate the arts through light and spatial experience, the facility invites students to participate in dance, music, theater, sculpture, and painting as a foundation for their educational curriculum.

Reflecting these ideas through architecture, sculptural mullions on the façade represent dancers casting shadows that move with the angle of the sun. Students add to the experience through the display of their artwork in the two-story gallery space outside the black box theater. Volumes rotated about a main axis create a dynamic space surrounding the black box theater.

Teaching and sculpture courtyards are central to the school and are extensions of the arts and media specialties. This multi-use venue enable teachers and students to explore several types of performance. ■

KLA ACADEMY
MIAMI, FLORIDA

The KLA Academy school in Miami's urban core is part of a pioneering network of Reggio Emilia-inspired preschools that have expanded into elementary education. An important concept in Reggio Emilia schools is that the built environment plays a prominent role in a student's academic and social development. To that end, the design of the preK-5 facility, from its outdoor spaces to its indoor instructional spaces, honors this concept.

Built on a half-acre acre lot in The Roads neighborhood of Miami, the five-level school fronts a public park and is adjacent to Interstate 95. The tight urban site precipitated the need for a vertical campus design. The ground level provides independent lobbies for each educational cohort, a 200-plus-seat performing arts theater, an internal pickup and drop-off drive, and structured parking for 45 vehicles. The upper levels provide instructional rooms, an indoor play area for toddlers, a common cafeteria and three distinct "piazzas" that serve as the school's "public spaces." The piazzas occur on the second through fourth levels and are designed for maximum flexibility as instructional spaces and recreational activity zones. The three piazzas face the public park and provide students with a visually powerful connection to the natural environment—a characteristic that often informs the nature of the activities that take place in those spaces.

In addition to the indoor play area on the second floor, the facility has a 30,000-square-foot outdoor play area on the fifth level. This amenity, essential to the Reggio Emilia concept, has multiple surfaces and spaces that accommodate a variety of outdoor activities. The rooftop offers spectacular views of downtown Miami and the Brickell Avenue neighborhood, providing students in this urban school with another distinct and memorable connection to the city beyond. ■

Civica LLC

Associated firm:
BDI Construction

Design Team
Rolando Llanes, AIA, Principal-in-Charge; Julio Guillen, AIA, Senior Associate/Project Manager; German Delgadillo, Architectural Associate

Client
KLA Elementary LLC

Area
131,337 sq. ft.

Total cost
$18,000,000

Capacity
600

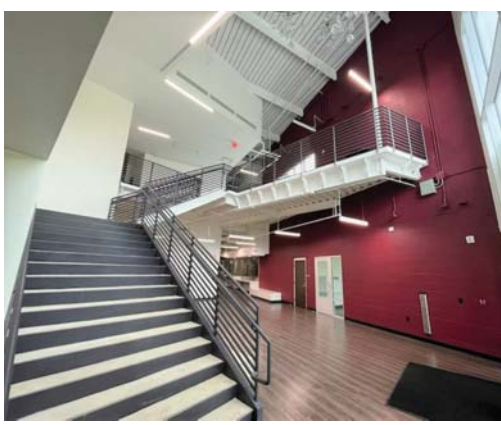
Cost/square foot
$137

Completion
April 2022

Images
Miami in Focus; KLA

FSU SCHOOL STEAM BUILDING

TALLAHASSEE, FLORIDA



This new STEAM (Science Technology Engineering Arts Mathematics) teaching, learning, and research facility at Florida State University School is on the Southwood Campus in Tallahassee, Fla. The new facility provides multifunctional, flexible, and collaborative learning spaces for students, faculty, and staff. It also has teaching laboratories, instructional spaces and classrooms in the disciplines of science, technology, engineering, art, health education, and media production. A multipurposed auditorium with support spaces is sized for 750 occupants. Renovations and repairs were made to adjacent areas to support this project and the overall complex. ■

BFrank Studios LLC

Client
Florida State University School

Area
45,000 sq. ft.

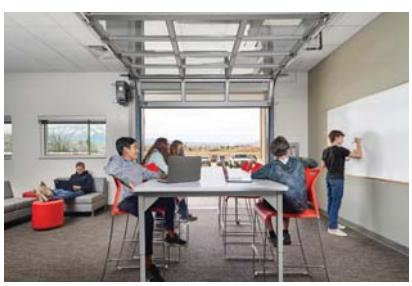
Total cost
$12,750,000

Completion
April 2022

Images
Larry Rubin; Culpepper Construction

LA VETA PK-12 SCHOOL

LA VETA, COLORADO



The new La Veta PK-12 School was born from a desire by the district to unify its separate campuses within a singular modern learning environment where all are welcome and where all students of diverse backgrounds could thrive.

The architect sought to design environments that grow with the students as they progress in their educational journey. The inclusion of spill-out spaces at the elementary media center, cafe commons, and MS/HS team center ensures access to the outdoors. Daylight-filled classrooms and corridors that double as team centers, transparency between spaces, age-appropriate and technology-rich media center and information commons, and shared community spaces like the cafe commons and gymnasium that celebrate the views to the nearby Spanish Peaks mountains all contribute at various scales for different types of learners.

The district's continual focus on authentic student and community engagement truly has resulted in an efficient, flexible and sustainable facility that will continue to engage, support and celebrate generations of students to come. ■

TreanorHL

Design Team
Chad Novak, Patrick Johnson, Stephanie Grose, Kelly Denker, CarrieBeth Ruzicka, Danielle Latza, Rich Jarecki

Client
La Veta School District

Area
75,365 sq. ft.

Total cost
$36,299,574

Capacity
475

Space per student
159 sq. ft.

Cost/square foot
$482

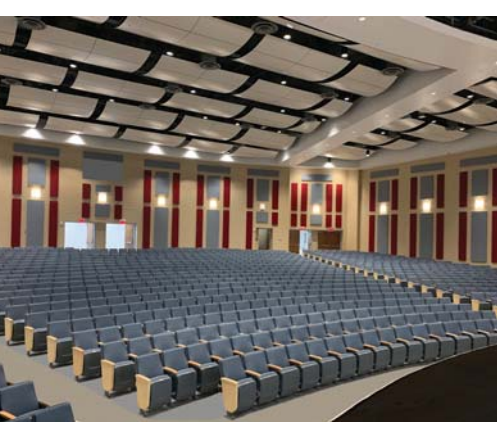
Completion
March 2022

Images
Brad Nicol Photography

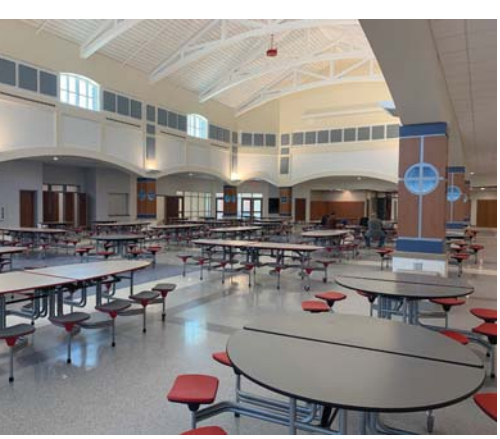
MECKLENBURG COUNTY MIDDLE-HIGH SCHOOL

BOYDTON, VIRGINIA

This dramatic new school complex is the pinnacle of years of planning based upon the necessity of preparing students for future careers. Ballou Justice Upton Architects collaborated with Mecklenburg County Public Schools and all its stakeholders to design the consolidated school complex in Boydton, Va. This facility replaces four outdated schools and provides customized learning spaces that meet student needs for the future. Additionally, the complex is outfitted with a sophisticated security system that will aid in protecting students, staff, and visitors.



With the honor of being designated as one of the first Virginia lab schools, Mecklenburg's vision is being celebrated as a model of innovation. This vision includes four key elements establishing a comprehensive educational foundation for each learner: career literacy, strengthened academics, development of career & technical skills, and community engagement. Within the schools, six career academies have been established, with 16 career clusters including health & human services, environmental sciences, STEM, law & leadership, advanced technology, and international business & culture. ■



Ballou Justice Upton Architects

Associated firm: Glave & Holmes

Design Team
Billy E. Upton, AIA, REFP; Eddie Evans, AIA; Dian Paulin, NCIDQ, ALEP; Jack Moye, Ed.D.; Glave & Holmes; PACE Collaborative (MEP Engineering); Alpha Corporation (Structural Engineering); B&B Consultants (Civil Engineering); Hurt & Profitt (Civil Engineering); Convergent Technologies Design Group (Technology); Culivary Advisory (Food Service)

Client
Mecklenburg County Public Schools

Area
354,568 sq. ft.

Total cost
$124,950,000

Capacity
2,800 (high school, 1500; middle school, 1,300)

Space per student
127 sq. ft.

Cost/square foot
$352

Completion
August 2022

Images
BJUA

PINECREST ACADEMY WESLEY CHAPEL CHARTER SCHOOL

WESLEY CHAPEL, FLORIDA

Pinecrest Wesley Chapel Charter School is situated in Avalon Park, a planned residential community in Pasco County, Fla. The two-story facility is designed to serve students in kindergarten through eighth grade. The school is on a campus with an existing church that has served the community for decades; they share parking and other infrastructure. Local stormwater retention criteria required the construction of a large pond on the site. The school was designed to frame the pond, creating a visual amenity for students and staff. Spaces such as the science and art labs, the lunch spill-out area, and outdoor play courts have views and adjacency to the pond.

The linear classroom wing is perpendicular to the special area annex that contains the cafeteria and miscellaneous laboratories. These two elements are connected by way of a second-level bridge that also provides a framed view of the classroom wing and pond as one enters the campus. ■

Civica LLC

Associated firm:
RD Michaels Inc.

Design Team
Rolando Llanes, AIA (Principal in Charge); Julio Guillen, AIA (Senior Associate/Project Manager); Tomasz Modzelewski (Architectural Associate); Sheila Corzo (Support Staff)

Client
Avalon Park School Initiative III JV LLC

Area
62,122 sq. ft.

Total cost
$8,808,032

Capacity
1,000

Cost/square foot
$142

Completion
August 2020

Images
Pinecrest Academy Wesley Chapel

RICHMOND HILL K-8 SCHOOL

AUGUSTA, GEORGIA

The newly constructed Richmond Hill K-8 School replaces two older middle and elementary schools built in the 1960s. Its design is focused on a core space that incorporates the cafetorium, gymnasium, media center, chorus, band, and visual art space, all commonly used by all students. Three classroom wings are radiating, housing kindergarten through second, third through fifth, and sixth through eighth-grade classrooms. The K-2 and 6-8 classroom wings have their own drop-offs to minimize interaction between middle and elementary students. The vibrant design of the school uses three brick colors, five colors of ACM panels, and large expanses of storefront and translucent glazing to create vibrant, light-filled spaces for learning. The school was designed to accommodate the future addition of four classrooms, at the end of each wing, for a total of 12 additional classrooms. ■

Studio 3 Design Group

Design Team
Samuel D. Beaird, Jr. AIA, NCARB; Jacob Matherly; Lauren Matherly; Sela Filipovic; Lydia Schwab, NCIDQ

Client
Richmond County Board of Education

Area
120,731 sq. ft.

Total cost
$22,000,000

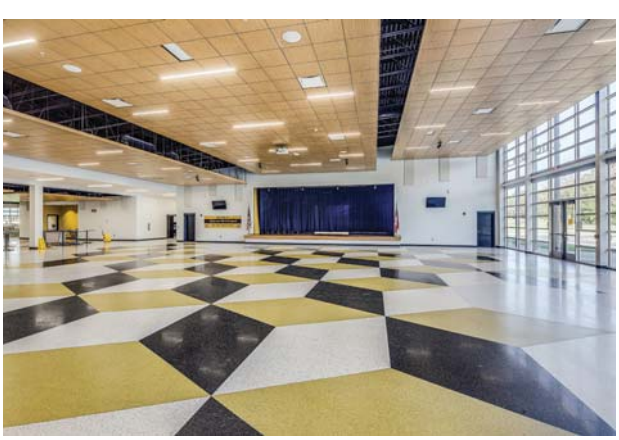
Capacity
800

Space per student
150 sq. ft.

Cost/square foot
$182

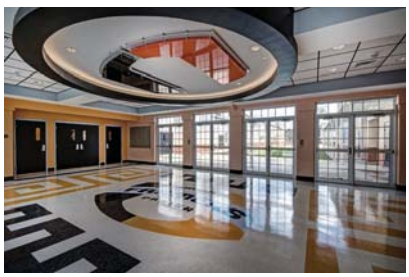
Completion
August 2019

Images
Steve Bracci Photography



UNION PARISH MIDDLE AND HIGH SCHOOL

FARMERVILLE, LOUISIANA



Union Parish Middle & High School in Farmerville, Louisiana, provides educational services for the entire Union Parish School District student population. The Greek revival architectural language of the facility was intended to convey a purpose of higher education and standards to the students. The facility provides for middle and high school administrative space for principals, assistant principals, secretaries and bookkeepers. It also has spaces such as testing facilities, first aid, work rooms, lounges, conference rooms and visitor and guest reception areas.

The facility provides over 60 classrooms, three science labs, three business education classrooms, an art classroom, and three computer labs on a two-story learning house concept for a planned student capacity of 1,200 students. The campus also has a 5,000-square-foot media center, with media and video production capabilities. For student extracurricular activities, the campus has a main event gymnasium that seats 1,500 spectators, a secondary gymnatorium with elevated stage, and a band and choir hall. The athletic facilities have conference rooms, coach and physical education instructor offices and lockers, physical therapy space, a weight room, and locker and shower areas for up to 300 students.

The kitchen and cafeteria for the project are designed to serve up to 350 students in one sitting and to serve the entire student population within a two-hour window at 30-minute seating intervals. ■

M3A/McElroy Architecture

Design Team
William McElroy, AIA, NCARB, Principal/Managing Member; M3A Design Team

Client
Union Parish School District

Area
151,000 sq. ft.

Total cost
Not provided

Completion
September 2017

Images
David M Donovan

WALTER P. CARTER/LOIS T. MURRAY ELEMENTARY/MIDDLE SCHOOLS

BALTIMORE, MARYLAND

This new LEED Gold public school building in Northeast Baltimore combines the student populations of two existing elementary/middle schools and co-locates the Murray School, which serves students with significant cognitive disabilities from across the district.

The project site has steep topography rising well over two stories. The urban context, topography, existing building, and need for onsite drop-off, parking, and service access resulted in a constrained area for potential building footprint. The solution—a wide floorplate—nestles the building into the center of its site and instills spatial efficiency and flexibility.

The size and placement of windows indicate function: larger windows for gathering spaces, smaller for classrooms, and articulated slots to mark vertical circulation. Contrasting light and dark brick brings a modern character to a traditional school building material. The angles of the building's wings partially enclose outdoor rooms containing playgrounds, an outdoor classroom, and community plaza.

The two co-located school programs have separate entrances, distinct but both approached from a shared public plaza with a lush, constructed wetland. The plan organization enables the schools to operate independently and the community spaces to function after school hours. ■

Newman Architects

Associated firm:
Penza Bailey Architects, a studio of PRIME AE Inc. (joint venture partner)

Design Team
Dan Bailey (Principal in Charge); Richard Munday (Design Principal); Steven Orlansky (Managing Principal); Laurie Dickeson (Programming/Project Architect); Michelle Newman (Director of Interior Design); Pritthijit Kundu (Project Manager)

Client
21st Century Schools/Baltimore City Public Schools

Area
150,000 sq. ft.

Total cost
$55,000,000

Capacity
798

Space per student
188 sq. ft.

Cost/square foot
$367

Completion
January 2021

Images
Francis Dzikowski

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POST SECONDARY SCHOOL

CITATION

TMP ARCHITECTURE INC.
Dance Building
Ann Arbor, Michigan .....p. 92-93

"Really clean and nice scenery. Uses daylight well and has a nice feel inside."

—2022 JURY

CITATION

KIRKSEY ARCHITECTURE
San Jacinto College, Anderson-Ball Classroom Building
Pasadena, Texas p.94-95

"The mass timber framing is fantastic; it creates some really stunning interiors that are so warm and delightful that you want to be in those spaces."

—2022 JURY

CITATION

RDG PLANNING & DESIGN
Creighton University, Virginia G. Piper Charitable Trust Health Sciences Building
Phoenix, Arizona ..... p. 96

"Beautifully executed. It takes the health and wellness of the professionals being educated in the building as seriously as their education."

—2022 JURY

OUTSTANDING DESIGNS

BENTEL & BENTEL ARCHITECTS/ PLANNERS
Couch Academic Center
Glen Cove, New York ..... p. 97

CORDOGAN CLARK
Columbia College, New Hall
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Jane and Robert Gunn Hall
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MATZ COLLABORATIVE ARCHITECTS INC.
Student Central, Bunker Hill Community College
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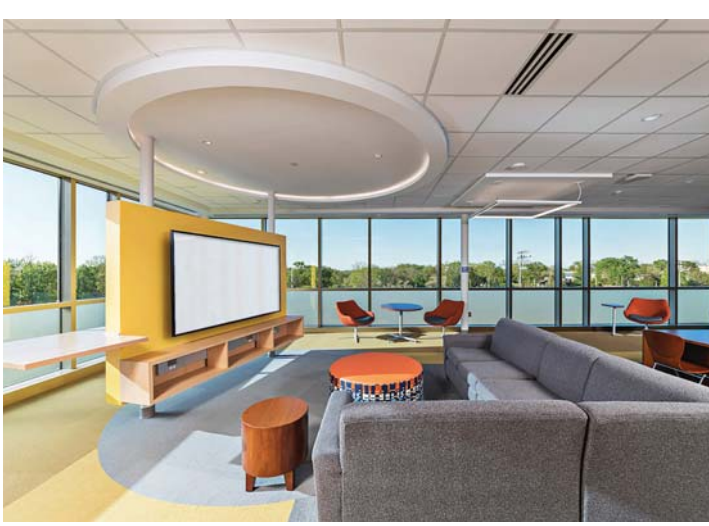
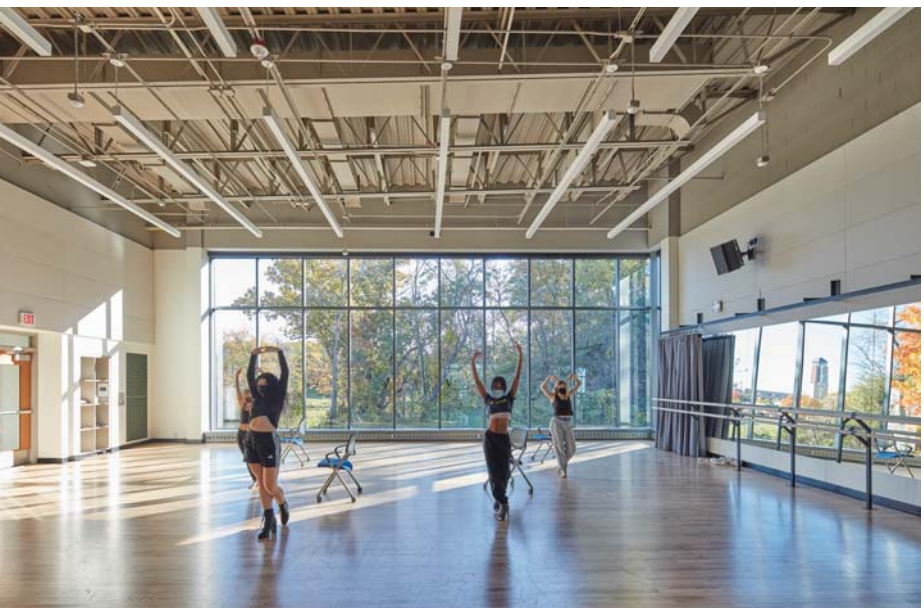


DANCE BUILDING
ANN ARBOR, MICHIGAN



TMP Architecture Inc.

Associated Firm: Ballinger

Design Team
Peter Basso Associates Inc. (MEP); Becket & Raeder Inc. (Civil, Landscaping); Kirkegaard Associates (Acoustics and AV Design); Structural Design Inc. (Structural Engineering); Schuler Shook (Theatrical Design: Rigging, Lighting, Dance Floor); Catalyst Partners (LEED Consultants)

Client
University of Michigan

Area
28,893 sq. ft.

Total cost
$19,000,000

Capacity
80 students; 20 faculty; 2 staff

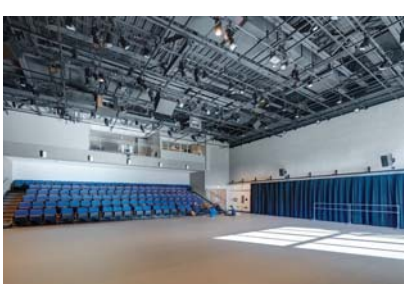
Space per student
361 sq. ft.

Cost/square foot
$658

Completion
September 2021

Images
Jim Haefner

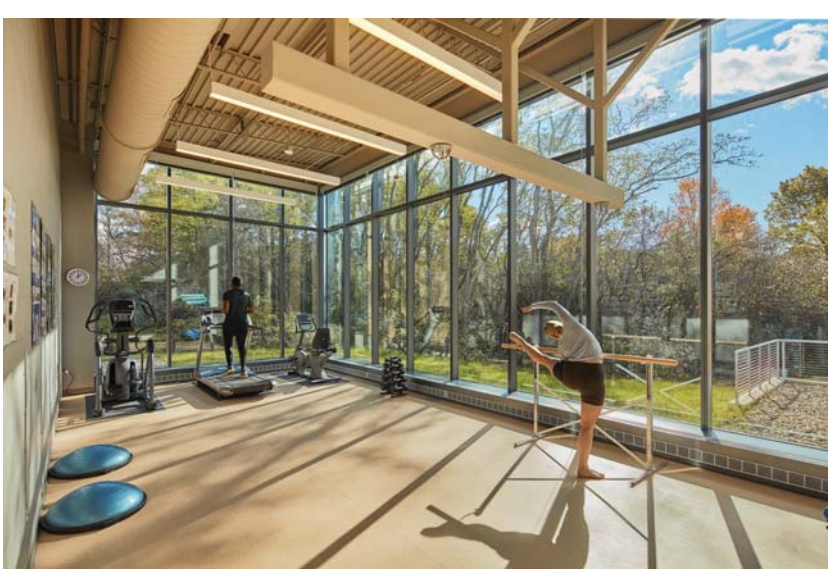
The first dedicated facility for the Department of Dance in University of Michigan's history, the facility joins other creative disciplines in the North Campus. Serving performers and patrons, the building has a 100-seat performance venue, dance studios, locker rooms, and administrative space.



Much like the art of dance itself, this project balances structure, environment, and aesthetic. The challenging program of performance, rehearsal, and teaching spaces demands system sophistication. Accommodating a range of dance genres including screen dance, hip-hop, ballet, and jazz, the structure is flexible and quiet. Multiple rounds of programmatic modeling ensured efficiency of layout, massing, adjacency, audience movement, and performer comfort and accessibility. The highly responsive learning/teaching environments maintain noise separation, mechanical/electrical noise control, adaptive sound system design, natural spatial acoustical feedback, and spatial isolation to achieve optimal acoustics.

Nature is on display throughout the facility. Site planning sensitively preserves existing natural elements and turns them into a feature. Bright and airy, dance studios are strategically positioned to provide maximum views and sight to the surrounding woodlot, with high-efficiency glass introducing ample natural light.

To achieve a high level of energy efficiency, envelope analysis led to a tightly



"Really clean and nice scenery. Uses daylight well and has a nice feel inside." — 2022 JURY

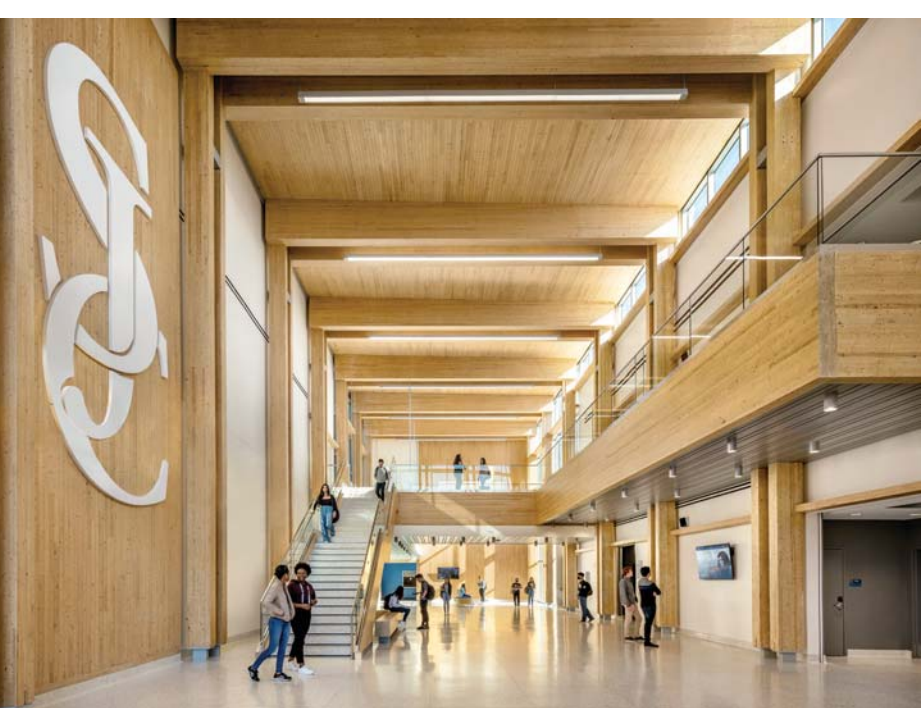
sealed rain screen system with a terra cotta tile exterior. This provides a beautiful patina and a durable exterior finish. The building is prepped for the addition of solar panels sufficient to provide full electrical support for all but performance lighting. All lighting systems are LED, including the performance/theater lighting systems. Utility systems are extended from the adjacent School of Music Building to minimize site disruption, and to provide added energy efficiency. Site drainage is heavily managed to eliminate erosion and any polluting runoff, and to control and manage storm discharge. ■

SAN JACINTO COLLEGE, ANDERSON-BALL CLASSROOM BUILDING

PASADENA, TEXAS

"This project was innovative in a host of ways and couldn't have been accomplished without the active communication and technical excellence of everyone who participated." — CHARLES SMITH, ASSOCIATE VICE CHANCELLOR OF FISCAL INITIATIVES AND CAPITAL PROJECTS

The new San Jacinto College Classroom Building is the latest addition to the school's Central Campus. As the nation's largest mass timber classroom building, it exhibits the mass timber structure throughout all public spaces and on its exterior façade. The building looks to educate not only in the classroom, but also through educational plaques that highlight the building's sustainable features.



Situated at the previous site of the Anderson Tech and Ball Tech buildings, the Classroom Building reuses the existing foundation and attaches to the existing Davison Building. During demolition, façade elements such as a bas-relief panel and marble panels from the two previous buildings were installed in public spaces.

The building has two wings with a two-story lobby. Instructional spaces consist of 56 classrooms, a robotics lab, and a lecture hall. Student gathering spaces are formal—enclosed study space and huddle rooms—and informal—open col-

Kirksey Architecture

Design Team
Gary Machicek, Michelle Old, Kevin Giuseppetti

Client
San Jacinto College

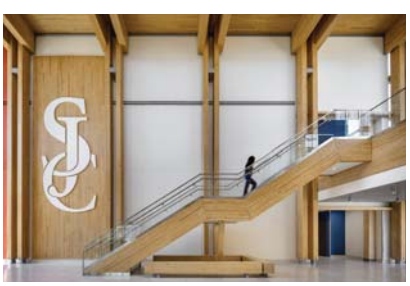
Area
122,000 sq. ft.

Total cost
$42,000,000

Cost/square foot
$344

Completion
February 2022

Images
Joe Aker



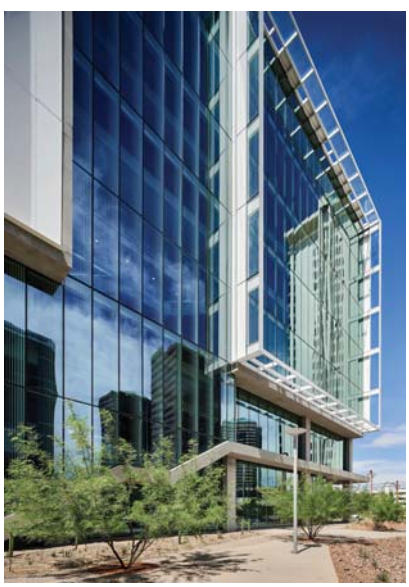
"The mass timber framing is fantastic; it creates some really stunning interiors that are so warm and delightful that you want to be in those spaces" — 2022 JURY

laborative zones at ends of the building and the lobby.

This is a high-performing building with several sustainable strategies, such as the reuse of existing building foundations, electrochromic glazing, grey water reuse, tubular daylighting, photovoltaic panels on the roofs, and mass timber. The building's mass timber structure consists of glue laminated beam and columns and cross-laminated timber for floor decks and roof decks. ■

CREIGHTON UNIVERSITY, VIRGINIA G. PIPER CHARITABLE TRUST HEALTH SCIENCES BUILDING

PHOENIX, ARIZONA

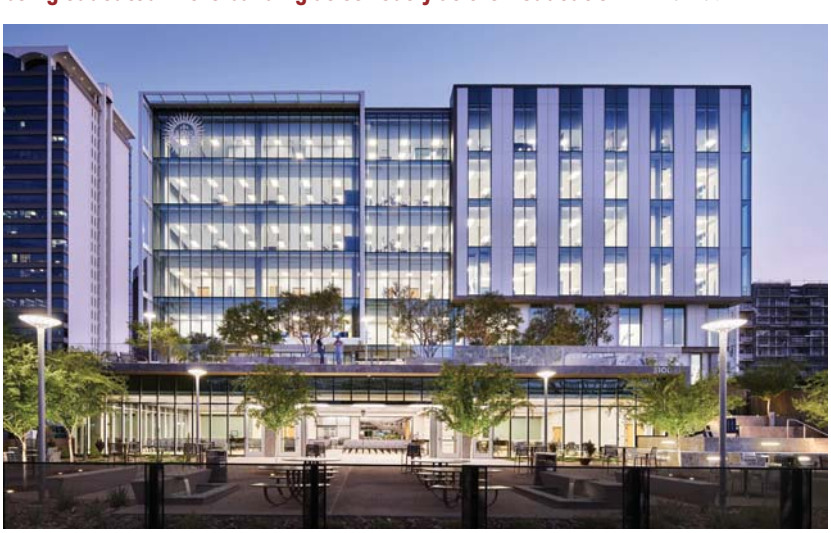


The Virginia G. Piper Charitable Trust Health Sciences Campus in Phoenix, Arizona, has established new principles of interdisciplinary, experiential, and active learning pedagogies. The campus provides dynamic, flexible, technology-rich learning environments for over 900 medical, nursing, and allied health students. The design of this building reinforces a holistic approach to education, sustainable and WELL building strategies, and distinctive collaborative pedagogy.

The site selection, access to public transportation, and response to the urban condition supported the building's response to its city and carbon reduction. Slight shifts in the building's mass and fenestration express the program within, and the building's glazing reflects its urban and mountainous atmosphere.

The design of the building's human movement centers on well-being spaces that allowed for access to natural ventilation, outdoor study environments, vertical connections, and diverse technology; these enhance the learning environment and emphasize collaborative pedagogy. The facility's medical simulation environments, standardized patient suites, classrooms, research and laboratory environments, "vertical learning commons" of interconnecting stairways, atriums, and gathering spaces create collaborative environments with framed views. ■

"Beautifully executed. It takes the health and wellness of the professionals being educated in the building as seriously as their education." — 2022 JURY



RDG Planning & Design

Associated firm:
Butler Design Group Inc.

Design Team
Benjamin Kroll, AIA, LEED AP; Mike Houston; Joe Lang, AIA; Brian Halsey, AIA, LEED AP; Scott Lundberg, AIA; Eric Winkler, AIA

Client
Creighton University

Area
183,000 sq. ft.

Total cost
$76,000,000

Capacity
2,500

Cost/square foot
$415

Completion
August 2021

Images
Michael Robinson Photography

COUCH ACADEMIC CENTER

GLEN COVE, NEW YORK

A tuition-free naval architecture college housed in a 1912 Gold Coast mansion on a historic campus needed to expand. The design task was to add 30,000 square feet of state-of-the-art teaching space without harming the view of the mansion or the handsomely landscaped site sloping down to Long Island Sound.

The architect's concept was to create a "non-building" hidden under a grassy terrace behind the mansion, facing the Sound, offering the students broad views of the water and passing vessels as a connection to their naval studies. The new construction, topped by a planted roof, preserves the landscape and view corridors of the historic campus while providing the students a lesson on environmental responsibility.

The building consists of design-lecture classrooms and a gathering space for the entire student body of 125. Four double-size classrooms embrace an exterior courtyard, which serves as an additional teaching space. Arcades surround the courtyard and shield the classrooms from direct sunlight. A historic garden-wall remains inside as a hallway linking the classrooms, and a tunnel provides a hidden connection to the mansion. ■

Bentel & Bentel Architects/Planners

Design Team
AMA Consulting Engineers PC; KAA Structural Engineers; Richard W. Loeffler (Landscape Architect)

Client
Webb Institute

Area
30,000 sq. ft.

Total cost
$13,000,000

Cost/square foot
$430

Completion
December 2020

Images
Webb Institute IT

COLUMBIA COLLEGE, NEW HALL

COLUMBIA, MISSOURI

Cordogan Clark

Design Team
Dennis Young, JC Reardon, Greg Goebel, Greg Hielsberg, Elizabeth Felton

Client
Columbia College

Area
60,000 sq. ft.

Total cost
$20,000,000

Capacity
458

Space per student
131 sq. ft.

Cost/square foot
$333

Completion
September 2019

Images
Aaron Gipperich

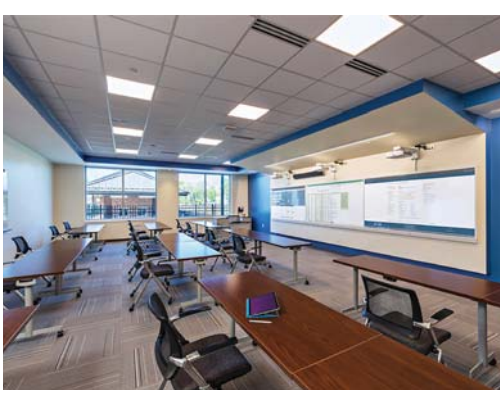
Opening to rave reviews from students, faculty, and staff, this institution's newest facility provides modern living and learning spaces to support the growing needs of the college. The building features state-of-the-art classrooms, an event center, conference rooms associated with the business school, and 76 residential suites on the three upper floors that provide living areas for up to 150 students.

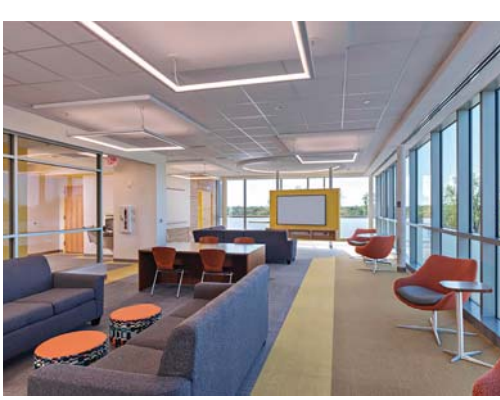
The new construction reflects a strategic effort to enhance the student experience and improve a less developed section of campus. The building acts as a new gateway from adjacent parking and provides a second point of entry to the college.

With around a quarter of all degrees granted by the college coming from the business school, the first floor provides curriculum space for the most popular academic programs on campus. In addition to six new classrooms, some of which double as a storm shelter, new multipurpose areas encourage local and regional businesses to meet with students to further hands-on learn-

ing. With these amenities, the building has become a community hub for the campus, accommodating social engagements of various sizes for diverse campus programs.

Realizing that it is often easier for students to succeed academically when they live on campus, the college chose to place its first new residential rooms in over 50 years on the building's upper levels. The residential floors feature double-room suites connected by full bathrooms, community kitchens and student lounges. An outdoor terrace provides gathering and collaboration spaces for students.■





HIGHLANDS COLLEGE
BIRMINGHAM, ALABAMA

TURNERBATSON

Design Team
Dave Reese (Principal); Gary Larson (Project Architect); Anne-Marie Gianoudis (Project Interior Designer); Structural Design Group (Structural Engineer); Pinnacle Engineering (Mechanical/Plumbing Engineer); Jackson, Renfro & Associates (Electrical Engineer)

Client
Highlands College

Area
294,000 sq. ft.

Total cost
$37,700,000

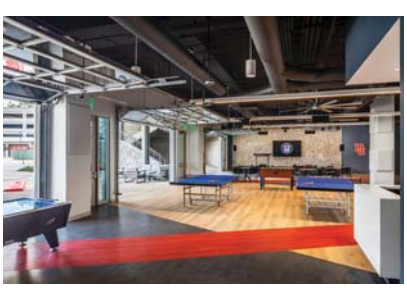
Capacity
1,354

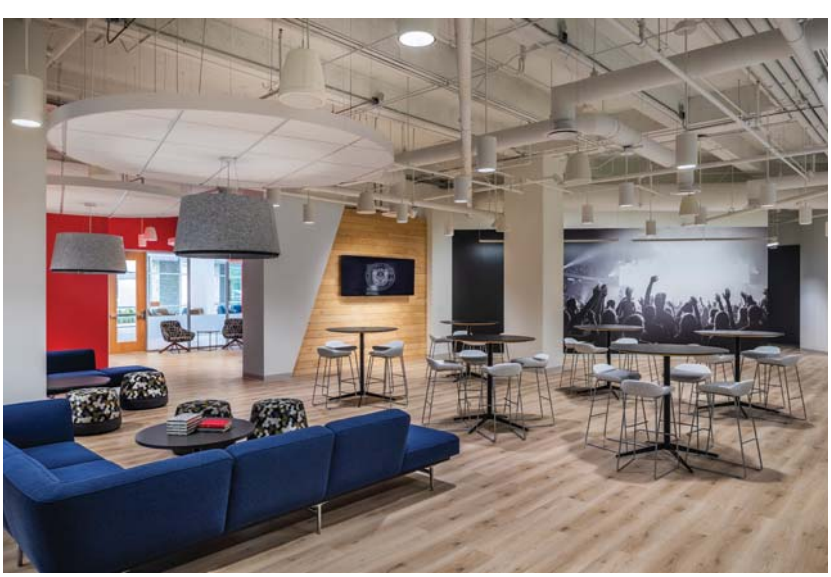
Cost/square foot
$128

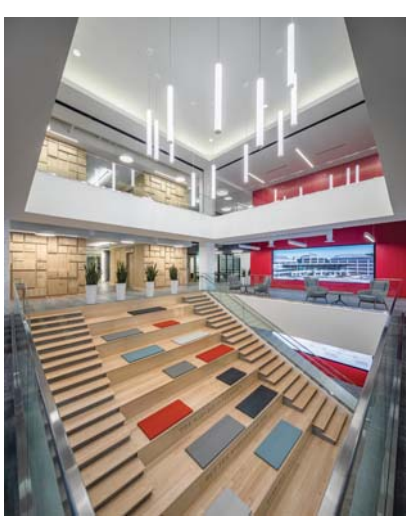
Completion
December 2021

Images
Chad Baumer Photography

Highlands College is a biblical higher education institution that exists to train and empower leaders to fulfill the Great Commission. Through an incredible opportunity, the college was able to purchase a 62-plus-acre former corporate headquarters in a prime Birmingham suburb. The project includes a new glass curtainwall addition and a comprehensive renovation of a three-story facility to create collaborative and relational place for the students and faculty. Each floor features an open, light-filled circulation space connecting learning studios, practicum spaces, and faculty offices. The design intent for these "living laboratories" was to provide a sustainable, engaging facility that connects the users with their environment and with one another. This includes large expanses of glass to "share God's light" and to provide unobstructed views of the outdoors, and natural materials such as wood and concrete to create a tactile, grounded, and organic foundation. The use of strong graphics, vivid colors, and patterns in textiles and furniture invigorate areas and reinforce the Highlands College brand, creating a vibrant and welcoming college atmosphere. ■







JANE AND ROBERT GUNN HALL

DALLAS, TEXAS

On a beautiful 20-acre tract on the east side of Dallas Baptist University sits Ford Village, the university's residential college. As part of Ford Village, Robert and Jane Gunn Hall houses students from a variety of academic pursuits who share a common purpose—developing knowledge, establishing character, and practicing servant leadership principles in preparation for their professional endeavors.

Each housing unit in Gunn Hall is led by a faculty mentor who arranges planned activities throughout the course of the college journey. Residents and their mentors engage in Bible studies, community meals, travel study trips, guest lectureships, and guided discussions.

Amenities include spacious living and dining areas with abundant natural light, a large kitchen featuring a bar height island and high-end appliances, a utility room with washer and dryer, and four large bedrooms with attached bathrooms.

Gunn Hall provides a unique environment on the campus for students to grow academically and spiritually alongside their peers, in order to develop Christian leaders who serve with excellence.■

BMA Architects

Design Team
Andrew Booher, BMA (Principal-in-Charge); Walter P Moore (Civil); Studio Green Spot (Landscape Architect); Click Engineering (Structural); ME Engineers (MEP)

Client
Dallas Baptist University

Area
10,500 sq. ft.

Total cost
$3,000,000

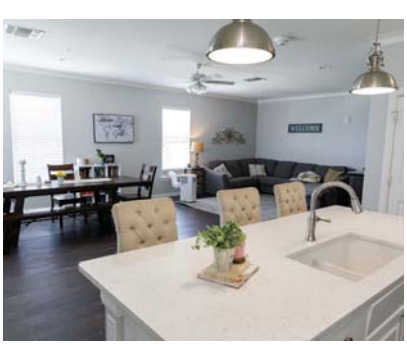
Capacity
32

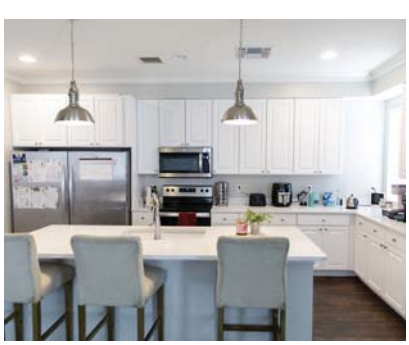
Space per student
328 sq. ft.

Cost/square foot
$286

Completion
August 2020

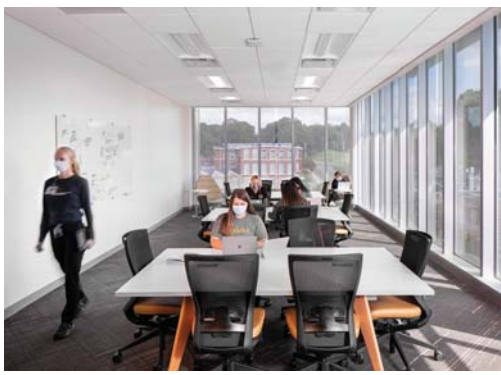
Images
DBU Marketing





PFEIFFER UNIVERSITY CENTER FOR HEALTH SCIENCES

ALBEMARLE, NORTH CAROLINA



The new Center for Health Sciences on Pfeiffer University's satellite campus in Albemarle, N.C., prepares future health care workers and instills in them a passion for providing health care for rural communities. Designed using a collaborative and integrative process, the state-of-the-art center accommodates the university's expanded Master of Physician Assistant Studies and Master of Occupational Therapy programs. The four-story building contains classrooms, offices, a simulated hospital (ICU, surgical suite and an ER trauma bay), a cadaver lab and an outpatient health clinic. With support from grants and a property exchange, the center has also breathed new life into the quiet city of 16,000, kickstarting a long-sought revitalization. Known locally as the "Pfeiffer Effect," the center's success has led to economic and social growth and celebrates the community's rich history. Both Pfeiffer University and the city of Albemarle are looking ahead to bring more education programs, restaurants, entertainment, retail businesses and housing to the downtown area. ■

Little Diversified Architectural Consulting

Associated firms: Chambers Engineering, Stokes Construction

Design Team
Shannon Rydell, Adam Caruthers, Ken Shappley, Carolos Nieves, Eddie Voyzey; Matt Schronce; Eddie Chang; Dan Wray

Client
Pfeiffer University

Area
41,100 sq. ft.

Total cost
$12,100,000

Cost/square foot
$294

Completion
June 2020

Images
Sterling E. Stevens Design Photo

SCIENCES COMPLEX ADDITION AND RENOVATION

INDIANAPOLIS, INDIANA

The Science Complex Renovation and Expansion at Butler University is all about connections. At the most literal level, the Levinson Family Hall Addition project connects two 1970s-era buildings—Gallahue Hall and Holcomb Building—without erasing their distinctive international style. But it also calls for gathering dispersed departments and programs under one roof, marrying historically significant science programs with modern lab and classroom facilities, and creating spaces where students and faculty can collaborate formally and informally. Before the renovation, Gallahue Hall and Holcomb Building offered confined spaces dedicated to specific uses. Unfortunately, that glimpse of history does little to attract and retain the best researchers and students. To create a more welcoming space, the team designed open and bright modular labs that permit greater flexibility to adapt to future research needs. Designs enable laboratory spaces to expand and contract as required and accommodate highly specialized and broad research. Classrooms were designed around active learning, technology, and, again, flexibility, and they were positioned to enable greater connection and collaboration among students and faculty. ■

BSA LifeStructures

Associated firms: Browning Day; Heapy Engineering; Cripe Architects + Engineers; Fink Roberts & Petrie; JBH Lab Planning LLC; Design 27; RTM Consultants Inc.; Cardno Inc.; Blundall Associates; Pepper Construction

Client
Butler University

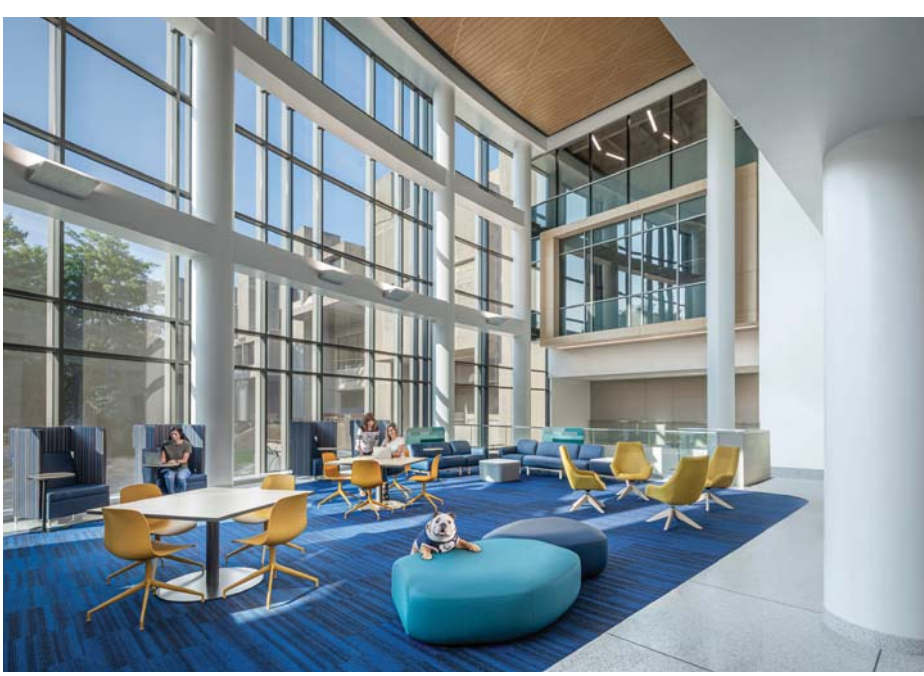
Area
265,000 sq. ft.

Total cost
$84,700,000

Cost/square foot
$317

Completion
August 2021 (phase 1); January 2023 (phase 2)

Images
Caleb Tkach AIAP; BSA LifeStructures/Browning Day



STUDENT CENTRAL, BUNKER HILL COMMUNITY COLLEGE

BOSTON, MASSACHUSETTS

Student Central, formerly known as the Building B lobby, is the main entry point to the entire campus. This renovation creates a modern sense of place that greets students, staff and visitors as they enter the campus. A new café and lounge space with a variety of seating options creates a social space for students to gather. A variety of study spaces serve varying student needs from private study rooms to an open seating space for group work. The main "welcome desk" is designed to handle surges in demand. It may be properly staffed with just one person, but it is capable of handling surges of up to 14 staff members during peak periods.

Self-service kiosks, charging stations, touchdown work counters, and a media wall for announcements create an environment focused on the needs of a student body that is hard working, fast-paced, and eager to resolve issues on their own and quickly if possible.

Administration service spaces are designed to be adjacent, connected, but controlled to provide quick access for issue resolution. ■

Matz Collaborative Architects Inc.

Associated firm:
BLW Engineers

Client
Bunker Hill Community College

Area
17,430 sq. ft.

Total cost
$4,114,000

Cost/square foot
$236

Completion
January 2019

Images
Joshua Touster; Matz Collaborative Architects Inc.

CITATION

EWINGCOLE
The Graham Athletics & Wellness Center
Philadelphia, Pennsylvania..... p. 106

"A building for wellness that celebrates wellness."
—2022 JURY

OUTSTANDING DESIGNS

SPM ARCHITECTS INC.
Evergreen Park Community High School Athletic Fields
Evergreen Park, Illinois ..... p. 107

TBA STUDIO
Louisiana Tech University, Origin Bank Softball and Soccer Complex
Ruston, Louisiana..... p. 108-109

VICTOR J. LATAVISH ARCHITECT PA
Ave Maria University School of Law, Cancro Family Wellness Center
Naples, Florida..... p. 110

SPM ARCHITECTS INC.
Mannheim Middle School Gymnasium Renovation
Melrose Park, Illinois ..... p. 111

THE GRAHAM ATHLETICS & WELLNESS CENTER

PHILADELPHIA, PENNSYLVANIA

"A building for wellness that celebrates wellness." — 2022 JURY

William Penn Charter School, the oldest Quaker school in the country, strives to create a learning environment where arts and athletics flourish side by side with scholastic achievement. To accommodate over 900 students, Penn Charter needed to build a facility to support one of the most extensive athletic programs of Pennsylvania Independent Schools as well as serve the needs of the broader student population, including K-12 physical education.

The center accommodates multiple wellness programs in addition to various recreational and competitive athletic programs. Two competition-level basketball courts, four practice cross courts, recreation and training facilities, a climbing wall, a concessions area, and a nutrition center support the school's belief that these activities enable students to become "strong, creative, resilient and flexible people." Support spaces include locker rooms and team rooms, a training room with hydrotherapy, and an athletics administrative suite. Additionally, the wellness program is anchored by an open multistory lounge space flanked by a nutrition bar and flexible classroom spaces that are used for a variety of purposes, including traditional instruction and team meetings.■

EwingCole

Client
William Penn Charter School

Area
Not provided

Total cost
Confidential

Completion
December 2020

Images
Halkin/Mason Photography LLC

EVERGREEN PARK COMMUNITY HIGH SCHOOL ATHLETIC FIELDS

EVERGREEN PARK, ILLINOIS

With an eye on remaining a competitive athletic program in an area with many private school options, the Evergreen Park district wanted to improve its athletic facilities to align with its great curriculum offerings to help attract student-athletes. The conversion of the baseball and softball fields to synthetic turf achieves this goal. In recent years, the football field has been converted to synthetic turf, and the positioning of each ball field has been adjusted. Press boxes and team locker rooms have been placed above new dugouts, and a concession stand with permanent indoor washroom facilities has been added. Repositioning the entryway to the facility has created a common path to all fields and amenities. A large common area between both ball fields allows for circulation between the fields as well as many seating options for spectators. ■

SPM Architects Inc.

Design Team
EPCHS District 231: Thomas O'Malley (Superintendent), Terry Masterson (Director of Facilities); Team Reil Inc.: Tim Cederlund; Midwest Sport and Turf Systems: Jody Factor; SPM Architects Inc.: Michael Markham (Partner)

Client
Evergreen Park Community High School District 231

Area
223,557 sq. ft.

Total cost
$4,300,000

Capacity
850

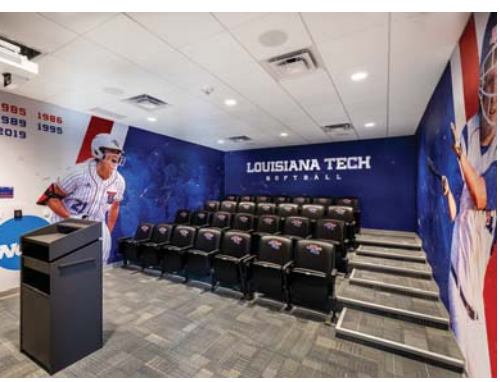
Cost/square foot
$19

Completion
September 2021

Images
Cultivate Studios

LOUISIANA TECH UNIVERSITY, ORIGIN BANK SOFTBALL AND SOCCER COMPLEX

RUSTON, LOUISIANA



After a tornado swept through Ruston, La., in 2019 and destroyed the women's softball and soccer fields, Louisiana Tech University sought out the help of TBA Studio to quickly create new top-of-the-line facilities to get the Lady Techsters back on their fields. TBA Studio moved the soccer field back to what had been its original home during the program's first season in 2004; that created an opportunity to connect these two Lady Techster fields with a new fieldhouse.

The Origin Bank Softball & Soccer Complex is a two-story fieldhouse that stands between the Dr. Billy Bundrick Field (softball) and the Robert Mack Caruthers Field (soccer), housing the

TBA Studio

Design Team
Alliet, Fenner, Jolly, & McClelland Inc. (MEP and Structural Engineer); CARBO Landscape Architecture; Lincoln Builders of Ruston Inc. (Contractor)

Client
Louisiana Tech University

Area
50,052 sq. ft.

Total cost
$15,708,765

Capacity
482 (softball) 489 (soccer)

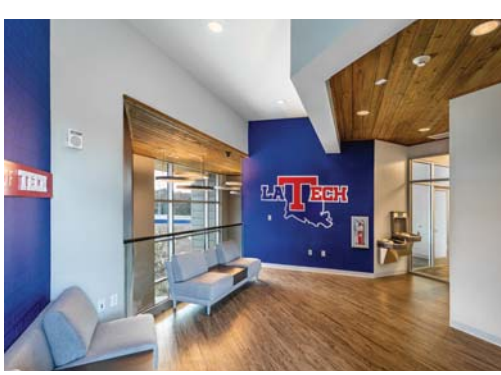
Cost/square foot
$314

Completion
March 2021

Images
Mathew Cassidy

operations for both programs. The first floor features an athletic training room that serves both Lady Techster teams daily with treatment tables, rehab equipment, offices, and cold tubs. The level also holds a softball player's lounge, a shared equipment and laundry room, and a fully conditioned indoor hitting facility that has three oversized lanes for hitting and pitching. The lanes, once pulled back, create an enclosed space that can be used for other types of training. There are spaces designated for the umpires, referees, and coaches. Team meeting rooms with theater-style chairs are adjacent to each team's respective locker room and nutrition area.

The Dr. Billy Bundrick Field, "The Billy," boasts an all-turf playing surface surrounded by large grandstands, turf berm, and press box. The Robert Mack Caruthers Field, "The Mack," has a new playing surface as well as grandstands and press box. Following the completion of the project, the Lady Techsters were eager to play on home fields again and make use of the new fieldhouse. They went on to achieve new goals for Louisiana Tech and even a Conference USA title the following season. ■



AVE MARIA UNIVERSITY SCHOOL OF LAW, CANCRO FAMILY WELLNESS CENTER

NAPLES, FLORIDA

Ave Maria University School of Law believes in a total formation of mind, body and spirit, and the goal of this project is part of that mission. The law school needed a fitness center, gymnasium, and 3v3 soccer field. The building site was extremely tight, and the budget was even tighter, necessitating the use of a pre-engineered metal building.

The actual use of the gymnasium and its ordinary construction is not readily apparent until entering the spaces, which mix indoor with outdoor environments under a metal roof. The enclosed fitness center at the north end features large windows and doors shaded on all sides. White aluminum sunshades cast deep shadows below, providing cross-ventilation in the open-air gymnasium. The south wall shields the basketball courts from the sun and weather and creates an apse for the covered assembly space.

Nobody could have known of the impending Covid-19 pandemic when the project was conceived, or the benefit of having a large covered outdoor space available for outdoor student and faculty assemblies, including Mass. ■

Victor J. Latavish Architect PA

Design Team
Victor J. Latavish, AIA (Project Architect); Tyler Thorp (Construction Documents); Michael Thomas (Construction Administration); Brian Liebl, PE (Structural Engineer); Steven Stafford, PE (MEP Engineer); Michael Delate, PE (Civil Engineer)

Client
Ave Maria University School of Law

Area
18,800 sq. ft.

Total cost
$2,446,123

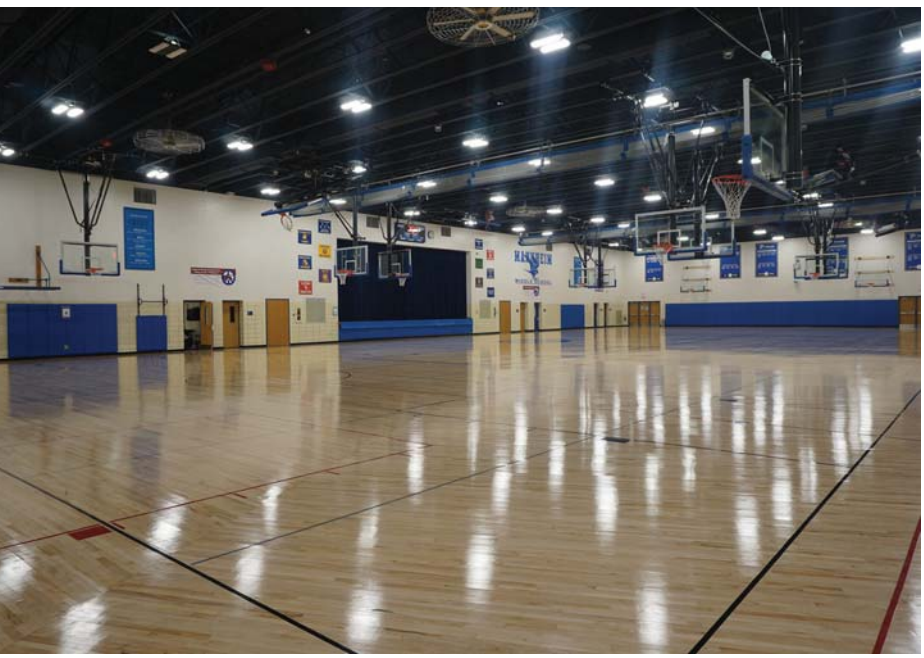
Cost/square foot
$130

Completion
February 2020

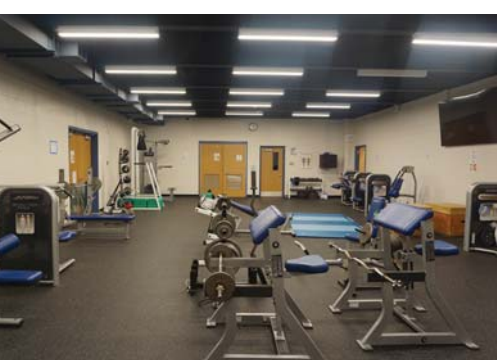
Images
Victoria Latavish

MANNHEIM MIDDLE SCHOOL GYMNASIUM RENOVATION

MELROSE PARK, ILLINOIS



The gymnasium at Mannheim Middle School was constructed in 1966 and has had minimal upgrades since then. The school wanted to update the gymnasium for the student body as well as its athletic teams, as the gymnasium hosts several events yearly. The original wood floor was refinished, and workers upgraded the court layouts and added school logos. New gym equipment was added to the space, along with drop-down curtains to separate the large gymnasium space into three smaller classroom spaces. LED lighting and controls were provided, and windows were added to the west elevation to bring in natural light. The existing dropped ceiling was removed, and existing construction was left exposed for a more industrial look. Adjacent classroom spaces were retrofitted to provide additional exercise and weightlifting spaces. A new mechanical mezzanine space was provided to accommodate energy-efficient mechanical equipment including an air handler, boilers, and water heaters; this brought air conditioning to the gymnasium for the first time. Large industrial fans were provided in each classroom bay to circulate air. ■



SPM Architects Inc.

Design Team
Ron Carleton (Director of Buildings, Grounds, and Transportation), Mannheim School District 83; Guenther Schmidt (Partner, Architect of Record), Michael Bober (Project Manager), SPM Architects Inc.; Tom Mazur (Construction Manager), Mazur & Son; Ed Chrzastowski & David Deering (MEP Engineers), Consolidated Consulting Engineers

Client
Mannheim School District #83

Area
20,000 sq. ft.

Total cost
$3,780,000

Capacity
165

Space per student
121 sq. ft.

Cost/square foot
$190

Completion
September 2021

Images
Michael Bober, SPM Architects Inc.

CITATION

BELL ARCHITECTS PC
Garrison Elementary School
Washington, District of Columbia
.....p. 113

"A school transformation in an urban context that celebrates light, play and connections to nature and the outdoors."

—2022 JURY

OUTSTANDING DESIGNS

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Bartlett High School
Bartlett, Tennessee p.114

ATSR PLANNERS, ARCHITECTS + ENGINEERS
Cathedral High School STEAM Addition
St. Cloud, Minnesota p.115

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Western Carolina University, Brown Dining Hall
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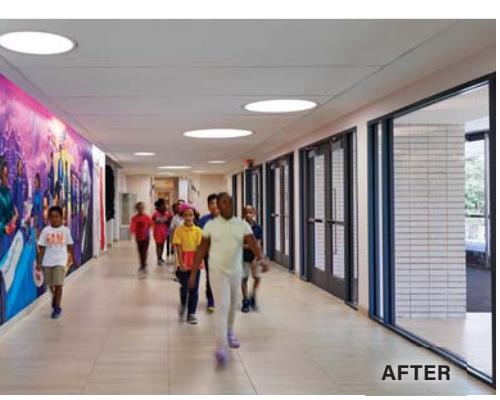
GARRISON ELEMENTARY SCHOOL

WASHINGTON, DISTRICT OF COLUMBIA

"A school transformation in an urban context that celebrates light, play and connections to nature and the outdoors." — 2022 JURY

BELL Architects teamed with Newman Architects to modernize Garrison Elementary School in Washington, D.C. The project entailed a full modernization of the 61,000-square-foot building with an addition and extensive improvements to the 3.67-acre brownfield site.



The modernization enlarged classrooms to accommodate 30 students, enabling teachers to organize spaces for a range of approaches and providing flexibility for small breakout areas. Operable windows, daylight harvesting, and views enhance the students' and teachers' wellness.

An exterior urban oasis of native plants, a bioretention garden, and wooden stools harvested from dead street trees create opportunities to use outdoor spaces as classrooms. Art scattered throughout the grounds engages visitors, and interior murals enliven transitional spaces and offer colorful inspiration of historical narratives.

The complex now provides a warm and welcoming environment to nurture, support and inspire students in a city where the majority of the students come from disadvantaged households with economic circumstances that might hinder their ability to learn.

The project has achieved LEED Gold accreditation. ■

BELL Architects PC

Associated firm:
Newman Architects

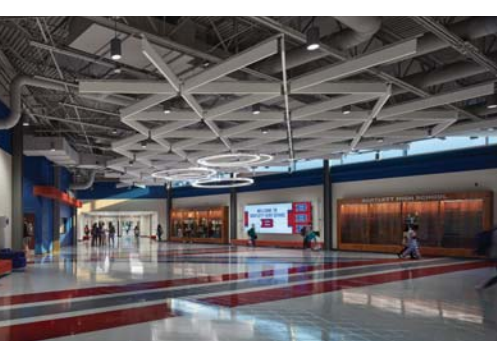
Design Team
Newman Architects (Joint Venture); DC Department of General Services, DC Public Schools (Client); A2 Services (Commissioning Agent); GCS Inc. (General Contractor); Silman (Structural Engineer); Global Engineering Solutions (MEP/FP); ESP (IT, AV, and Security); Polysonics (Acoustical Consultant); Wiles Mensch (Civil Engineer and Land Surveyor); Landscape Architecture Bureau (Landscape Architect); ECS (Environmental Consultant and Geotechnical Engineer); Greenshape (LEED Consultant); TCT Cost Consultant (Cost Estimator); After Architecture (designed portals); Davis McCarty (designed spire); Valerie Theberge (designed mosaic benches); Vinnie Bagwell (designed portal relief sculptures); Luis Peralta (designed entry mural)

Client
DC Public Schools and DC Department of General Services
Area
70,000 sq. ft. (modernization); 160,000 sq. ft. (site planning)
Total cost
$35,200,000
Completion
January 2018
Images
Tom Holdsworth; BELL Architects

BARTLETT HIGH SCHOOL

BARTLETT, TENNESSEE

When Bartlett City Schools inherited the Bartlett High School campus, which dates to 1885 when the school was founded, the district set out to improve the learning environment, address capacity, and inject a new identity into the lifeless buildings. This extensive renovation touches nearly every function and core space of the campus, including expanded classroom and instructional space, new administrative offices, expanded classroom and lab space for career and technical education, new fine arts classrooms, and renovated STEM classrooms. Enhancements to the school's common spaces include a 2,500-seat competition gymnasium, a 700-seat cafeteria, and a 1,000-seat performance auditorium. New student commons, entry towers, and circulation routes connect all the buildings for the first time and improve accessibility in the school. New athletic spaces include basketball, volleyball, football, and wrestling locker rooms, weight rooms, and a wrestling practice room. Exterior improvements include a new main entry, a complete transformation and unification of the building facades, expanded parking, updates to the existing football stadium, and updated landscaping. ■



Fleming Architects

Associated firms: Flintco/Linkous (Contractor); Chad Stewart & Associates (Structural); Barham/Cain/Mynatt (Mechanical/Plumbing/FP); DePouw Engineering (Electrical); Fisher Arnold (Civil); Dalhoff Thomas Design (Landscape); Memphis Audio (Audio/Visual)

Design Team
Michael Winter, AIA; Curt Pierce, AIA; Scott Fleming, AIA; Millie Quinn, NCIDQ; Veronica Tansey, NCIDQ, IIDA

Client
Bartlett City Schools

Area
403,000 sq. ft.

Total cost
$72,105,500

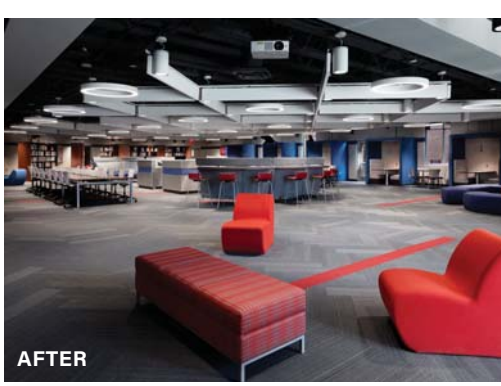
Capacity
2,250

Space per student
179 sq. ft.

Cost/square foot
$179

Completion
August 2021

Images
Jeffrey Jacobs Photography; Fleming Architects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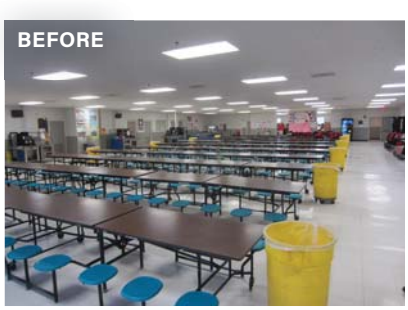

BEFORE

CATHEDRAL HIGH SCHOOL STEAM ADDITION

ST. CLOUD, MINNESOTA

A STEAM addition was added to an existing urban campus. The addition made a flowing connection between two existing buildings set at multiple levels. The double-story commons is the new hub of the building; it is filled with natural light and takes advantage of beautiful views overlooking the nearby Mississippi River.

Students can work collaboratively in small group rooms or break out into a variety of seating arrangements in the commons and overlooking balcony. Transparency and overhead doors create connections between classrooms and into the commons.

The addition has five science labs, two art studios, maker space, classrooms, administration, student commons, staff lounge, and school chapel. Math classrooms are nearby in the existing building.

ATSR provided full-service architectural, mechanical, electrical, technology, interior design, and construction administration services. During the planning phase, the design team gave tours of existing schools to test current concepts in educational design with the staff, students, and overseeing committee. Interactive computer models were used to develop and visualize the design options, receive feedback from the community and gauge direction. ■

ATSR Planners, Architects + Engineers

Design Team
Dean S. Beeninga, Peter Lacey, Kara Rise, Blayne Parkos, Nick Achina

Client
Cathedral High School

Area
38,000 sq. ft.

Total cost
$14,600,000

Capacity
650

Cost/square foot
$384

Completion
August 2020

Images
Corey Gaffer Photography

ESSEX COUNTY WEST CALDWELL SCHOOL OF TECHNOLOGY, ADDITIONS AND RENOVATIONS

WEST CALDWELL, NEW JERSEY

West Caldwell Tech, originally a factory, was converted into a school in 1976. The district had done its best to repurpose the facility, but the spaces had become inadequate and outdated. It was ultimately determined that the most practical plan was to renovate and expand the existing building, including a new second floor in the front of the building.

Several new and expanded career and technical education spaces were created, including a cosmetology lab, agricultural science lab, graphics arts, automotive shop, music performance and production, and business technology. The construction and building trades department features a common construction area for carpentry, electrical and plumbing, and building construction technology. The culinary sciences department includes a teaching kitchen and bakery lab for culinary arts and chef training. Various other traditional program spaces were provided, including general academic classrooms, science labs, computer labs, and a media center.

A 3,600-square-foot environmental courtyard also was created to provide outdoor seating and teaching spaces, and to serve as a supplementary area for the agricultural science program. ■

Di Cara | Rubino Architects

Design Team
Germano Rubino, AIA (Project Principal); Roderick Watkins, AIA (Senior Project Manager); Allison Sroka, AIA (Project Manager); Greg Kowtko (Job Captain); April Leddy, CID (Interior Designer); Jonathan Terrero (Construction Administrator)

Client
Essex County Schools of Technology

Area
100,672 sq. ft.

Total cost
$34,500,000

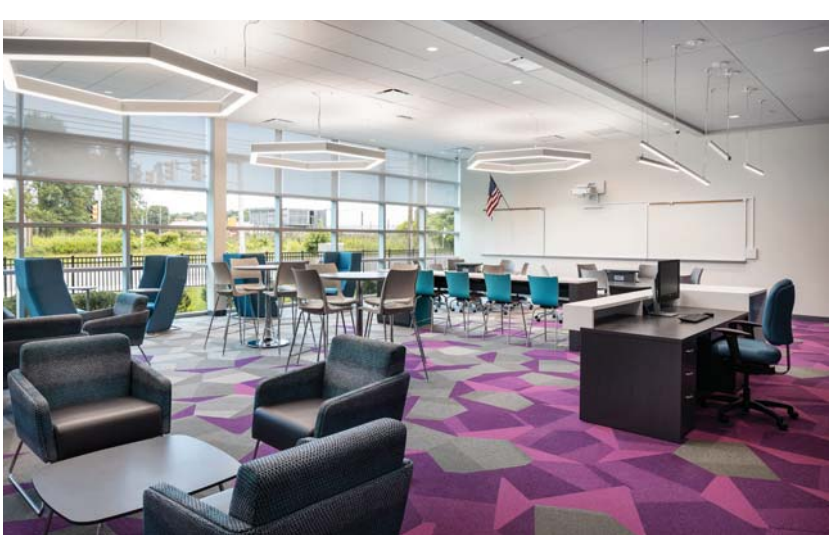
Capacity
375

Space per student
268 sq. ft.

Cost/square foot
$343

Completion
December 2020

Images
Mike Van Tassell; Allison Sroka



THE FESSENDEN SCHOOL, ELFERS CENTER FOR THE ARTS

NEWTON, MASSACHUSETTS

The performing arts center at the Fessenden School in Newton, Mass., needed a renovation that would renew the school's focus on the arts and support expanding programming.

The new Elfers Center for the Arts breathes life into underused spaces and provides new opportunities for the school's robust visual and performing arts curriculum. The addition of an entry canopy and expansive glass stage wall of the new 125-seat recital hall revitalizes the exterior façade and gives a new identity to the building within the campus. Inside, a modernized, 246-seat, tiered theater, new art studios, and multipurpose common areas allow for community engagement.

Outdated and underused spaces in the building's lower level were transformed into classrooms and studios for students working with traditional media, graphic design, ceramics, and woodworking. The entryway and circulation plan, designed to improve flow and function, create a cohesive blend of the diverse artistic disciplines. On the upper floor, reconfigured hallways and a second-floor gallery and exhibition space enable students to showcase their work providing valuable community gathering spaces. ■

CBT Architects

Design Team
Paul Viccica, Eileen Casciari, Daniel Guzas, Meagan Kelley, Lonnie Ash, Lauren Gauthier, Howe Engineers, Rist-Frost-Shumway Engineering, Stantec, Boston Light Source, Martin Vinik Planning for the Arts

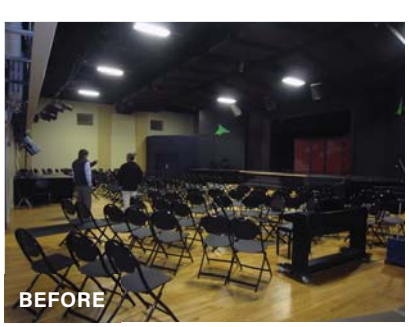
Client
The Fessenden School

Area
20,450 sq. ft.

Total cost
Withheld

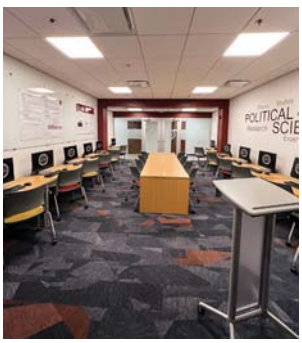
Completion
February 2019

Images
Anton Grassl Photography; CBT Architects



FLORIDA STATE UNIVERSITY, BELLAMY BUILDING FIFTH FLOOR, POLITICAL SCIENCE RESEARCH LAB

TALLAHASSEE, FLORIDA



Florida State University is a distinguished research institution, and the Department of Political Science houses a dynamic research community that cultivates collaboration. The Department of Political Science envisioned providing a space to further encourage research and collaboration. A small lab space with computers was available, but it was an enclosed space on the interior side of the building, set back from the main corridor, without windows, or a view to the corridor. It also lacked any sort of identity or community among the students.

The existing space was expanded to accommodate more students, and a storefront system was used at the entrance to create an inviting space that will encourage students to stay longer as well as assist with recruiting efforts. The signage, graphics, colors, and patterns were used throughout the space to provide a sense of community and branding. Magnetic glass boards also were incorporated to display student work and will provide recognition and identity. ■

Florida State University Facilities Design & Construction

Associated firm: McGinniss & Fleming Engineering

Design Team
Samantha Untea, NCIDQ (Interior Designer); Sean Mitchell, NCARB (Architect of Record); Brian Cannady (Project Manager); Jon Barber, PE (Mechanical Engineer of Record); Brian Wallace, PE (Electrical Engineer of Record)

Client
Florida State University

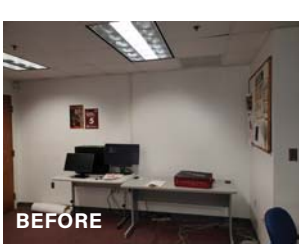
Area
438 sq. ft.

Total cost
$101,773

Cost/square foot
$232

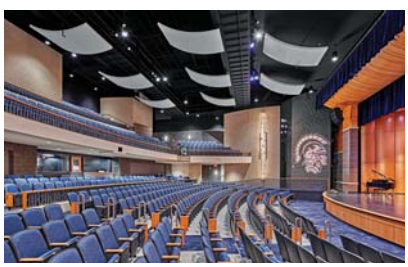
Completion
April 2022

Images
Marisa Szymanski; Samantha Untea



FRUITPORT HIGH SCHOOL

GRAND RAPIDS, MICHIGAN



Fruitport High School expanded over the years from its original 1955 construction to include additions in 1963, 1999, and 2005. Although newer portions were in fair condition, original portions were outdated and connected by long, narrow corridors. TowerPinkster conducted a facility assessment and determined that the best solution for transformation, while staying within budget, called for removing much of the older, poorly functioning areas in the center, and connecting the newer additions at either end of the building with an appropriately scaled two-story academic wing. This new addition opens onto a student commons area featuring two clearly defined entrances—one for visitors and students arriving by bus, and the other for staff and students arriving by car. Accordingly, bus, car and pedestrian circulation zones have been reorganized for safety and security. Features of the new two-story academic addition include offices, an auditorium, woodshop, kitchen, and cafeteria, locker commons, science and computer labs and classrooms with shared learning space.

This project has received international attention for being one of the first schools in the world with design elements that support student creativity and collaboration while also working to reduce the harm that could be caused in an active shooter situation. Some specific features of the building:

- Curved corridors to reduce the sight lines of an active shooter.
- Wing walls that stick out perpendicularly about four feet from main walls in corridors and in classrooms to reduce sight lines and serve as a place for students to hide.
- Glass coated with impact-resistant film and an access control system enabling administrators to lock down the entire building with the push of a button. ■

TowerPinkster

Design Team
Matt Slagle, Tom Kaywood, Patrick Noyes, Ben Rambadt, Yvonne VanWormer, Perry Hausman, Joe Chapman, Scott Smith, Scott Garberick, Ryan Schwartz, Aaron Riess, Alexis Orr

Client
Fruitport Community Schools

Area
231,709 sq. ft.

Total cost
$48,600,000

Capacity
1,000

Space per student
232 sq. ft.

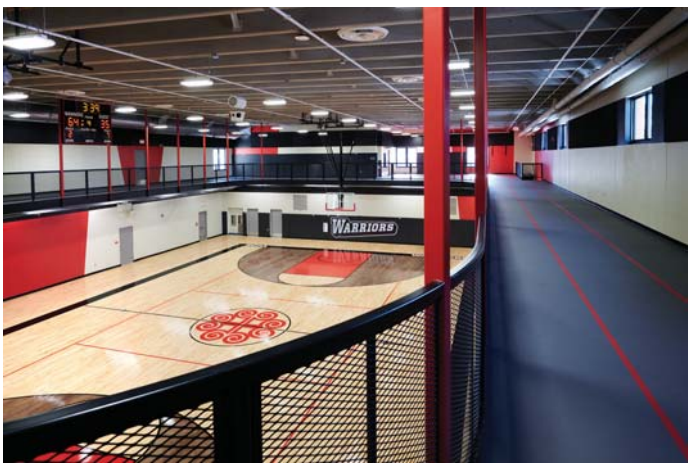
Cost/square foot
$210

Completion
August 2021

Images
Jason Keen

HMONG COLLEGE PREP ACADEMY PHASE V ELEMENTARY ADDITION AND REMODELING

SAINT PAUL, MINNESOTA



Hmong College Prep Academy aimed at building a middle school addition to its campus while expanding the lunchroom, improving circulation, and creating unstructured learning areas.

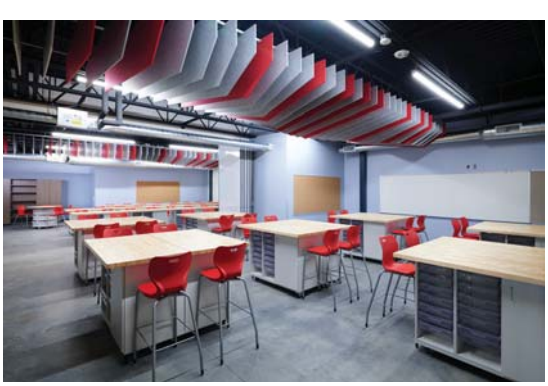
At the existing building, a one-story central area was replaced by a two-story structure that creates a commons area as a connection point for the three school wings.

Within the commons, a large, daylighted seating area greets students, and new stairs and hallways ease congestion and simplify circulation. A skylight and lightwell add natural light to the lunchroom. A central coffee bar serves as a focal point.

In the middle school, 41 new classrooms along with numerous pullout spaces increase learning options. In addition, another gym with an upper running track increases exercise opportunities during Minnesota winters.

A robotics wing engages students into the STEM curriculum. Three classrooms focus on different age levels, and a competition area hosts regional events.

Connecting everything is a skyway. Prior to its construction, crossing guards escorted classes to buses and gym, but were ineffective. With the skyway, the children are safer and warmer. ■



Kodet Architectural Group Ltd.

Associated firms: Mattson Macdonald Young Inc. (Structural); Emanuelson-Podas Inc. (M/E); Hansen Thorp Pellinin Olson Inc. (Civil); M.A. Mortenson Company (Construction Manager)

Design Team

Edward Daniel Kodet III, AIA (Principal in Charge), Teri L. Nagel (Project Manager), Sean Leintz (Project Lead), David Greco, Quinlan Klett, Randy Newberg, Kodet Team; Adam Pawlelk, HTPO; Aaron Blazich, Mason White, Brad King, Kim Zwald, Joe Pritzkow, Mortenson; Brian Ringven, PE (Mechanical), Cory Meier, PE (Electrical), Emanuelson-Podas; Christianna Hang (Superintendent); Paul Yang, David Kloskin, Luke Mead, Fu Hang, Hmong College Prep; David Hedberg, Ken Green, MMY

Client
Hmong Education Reform Company

Area
114,942 sq. ft.

Total cost
$24,244,511

Capacity
650 (middle school); 2,250 (campus)

Cost/square foot
$211

Completion
December 2021

Images
Ryan Siemers; Kodet Architectural Group

INSTRUCTIONAL MEDIA CENTER

FLEMINGTON, NEW JERSEY

SSP Architects

Client
Hunterdon Central Regional School District

Area
19,000 sq. ft.

Total cost
$2,890,000

Capacity
270

Space per student
70 sq. ft.

Cost/square foot
$152

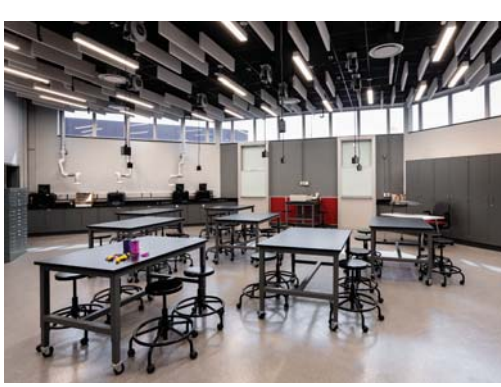
Completion
April 2022

Images
Jay Rosenblatt Photography LLC

Hunterdon Central Regional High School's media center was stuck in the early 2000s. With plenty of space for bookshelves and computer labs, the district was struggling to incorporate mobile learning and STEM/STEAM activity zones. A master planning process redefined how the space should be used, transforming it into a true Instructional Media Center (IMC) as well as serving as the "main street" of the multibuilding campus. A two-phase plan enabled the district to work within its budget cycles and keep portions of the space operational at all times.

Phase one transformed previously underused computer labs and "out of the way" corners of the IMC. Breakout rooms were created, transparent to the balance of the space through the use of expanses of glass, but also self-contained to provide the ability to use these spaces independently. STEAM education was taken out of a back nook and showcased front and center in a new home.

Phase two completed the transformation, and the entire process resulted in the new main street circulation path, multiple small-group breakout spaces, and areas for art display and soft seating. The entire process resulted in a transformation and modernization of this critical part of the high school campus. ■



PERCIVAL HALL

FITCHBURG, MASSACHUSETTS

Matz Collaborative Architects Inc.

Associated firms: BLW Engineers, Boston Building Consultants, Seacoast Structural Engineers

Client
Fitchburg State University

Area
32,000 sq. ft.

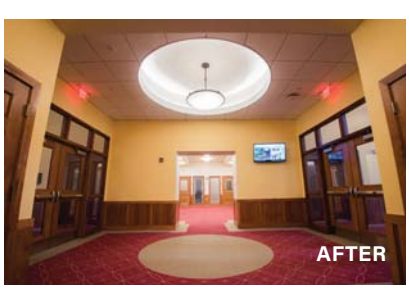
Total cost
$8,576,000

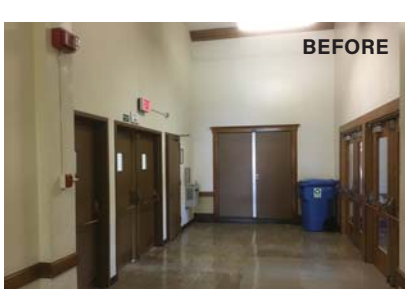
Cost/square foot
$268

Completion
December 2020

Images
Keitaro Yoshioka; Joshua Touster; Matz Collaborative Architects Inc.

Percival Hall holds a significant position both physically and historically on the campus of Fitchburg State University. The building was constructed in the early 1900s to serve as an on-campus elementary school for teacher education. This project has modernized the 100-plus-year-old facility to serve as the home for the university's business school. Although the project features advanced presentation spaces, modern case room lecture facilities and classrooms, the design of interior spaces enhances and restores the historical character of this important place on campus. The project takes advantage of existing passive ventilation shafts to support return air for a modern energy recovery unit installed in the attic. It replaces the existing steam radiator system and provides modern ventilation and cooling throughout. The existing auditorium space was repurposed to serve as a presentation suite with two case rooms and two smaller advanced presentation classroom spaces. A "board room" space serves as collaboration area, classroom, and simulated board room space for student use. Significant access improvements throughout the building enlarge classroom entries and provide access on both sides of the building to create a modern facility welcoming to all students. ■





SAINT PAUL PUBLIC SCHOOLS EDUCATION AND OPERATIONS SERVICES

SAINT PAUL, MINNESOTA

TKDA

Design Team
Kathryn Poore-Larson (Project Manager/ Architect); DJ Heinle, Jon LeNoble (Architects); Calista Sullivan, Ben Kurth (Architectural Designers); Michelle Gallagher (Interior Designer); Kraig Klund (Civil Engineer); Marc Prasch, Luke Wangsness (Civil Designers); Heather Boyko, Robert Melle, Cody Neubarth, Fred Pasno, Robert Schweich (Electrical Designers); Clayton Kruger, James Kilborn, Milton Quintanilla, Daniel Rossow (Mechanical Designers); Heather Erickson, Moses Mutanda (Structural Designers)

Client
Saint Paul Public Schools

Area
50,000 sq. ft.

Total cost
$8,900,000

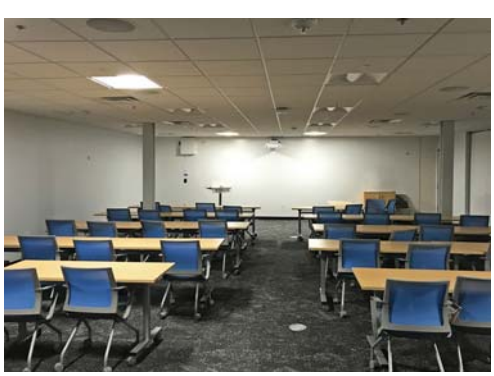
Cost/square foot
$178

Completion
August 2021

Images
TKDA

TKDA provided design services to Saint Paul Public Schools to convert district warehouse spaces into offices and a training center. The addition and renovation added large exterior windows and a flexible, open office layout to maximize the impact of the views and daylighting. Extensive evaluation of the existing building, space, systems and site was provided, and upgrades were made to promote an enhanced and effective work environment.

Collaboration and training spaces were a primary program component, requiring flexible meeting spaces, both formal and informal, as part of the layout. Common, collaborative spaces, along with informal meeting and dining spaces, are along the perimeter. Adjacent to these common areas are flexible, open workstations with minimal separation to encourage interaction, easy access, and the use of common spaces. Any enclosed offices, breakout collaborative areas, or larger meeting spaces were situated internal to the layout so that light and views were not blocked. Glazed fronts enabled daylighting to reach further into the interior. A clear, separate public access to these meeting spaces was included in the design. ■



WESTERN CAROLINA UNIVERSITY, BROWN DINING HALL

CULLOWHEE, NORTH CAROLINA

This renovation restores a long-unused 1960 university dining hall to the core of campus life. Oriented toward hilltop dormitories, the building turned its back toward the campus as it expanded into the valley. By introducing a pedestrian spine, organized along a locally quarried stone-clad wall, this LEED Silver project reorients the existing building, creating a gateway that links upper and lower campuses. Dining is arranged along the spine in syncopated spaces that encourage social engagement. An outdoor dining terrace, an upper plaza and a stepped hillside respond to a campus culture that embraces the outdoors year-round. Care was taken to maintain the integrity of the original building, both inside and out. The original clerestoried dining hall was maintained, with all new finishes and systems. The servery and kitchen were moved from their original locations to the west. The servery was placed at the south end of the clerestory space, and the kitchen fully within the existing south wing, in order to open the western end of the dining room to mountain views. ■

McMillan Pazdan Smith Architecture

(formerly Watson Tate Savory)

Design Team
Michael Watson, FAIA, LEED AP; Tom Savory, FAIA, LEED AP; Jana Hartenstine, AIA, LEED AP BD+C; Mitch Newbold, AIA; Matt Allen, AIA

Client
Western Carolina University

Area
64,392 sq. ft.

Total cost
$23,509,288

Capacity
1,323

Space per student
48 sq. ft.

Cost/square foot
$365

Completion
May 2017

Images
Gary Matson

SPECIALIZED FACILITY

CITATION

ENNEAD ARCHITECTS LLP
The Westminster Schools, Barge Commons
Atlanta, Georgia..... p. 126-127

"The planning is very clean and simple. Light and airy. The simplicity is really compelling. It feels so effortless, even though a lot of effort went into it."

—2022 JURY

CITATION

ADVENT
Student Welcome Center
Eugene, Oregon .....p. 128

"The project is so fun. The branding, the tactile nature of the interiors. It almost reminds you of the joy of being a student."

—2022 JURY

OUTSTANDING DESIGNS

PIVOT NORTH ARCHITECTURE
College of Southern Idaho, Veterinary Technology Building
Twin Falls, Idaho .....p. 129

JMA ARCHITECTS
ECHO Educational Enrichment Center & Dr. Debra Parrish-Hooks Administrative Center
South Holland, Illinois.....p. 130-131

MATZ COLLABORATIVE ARCHITECTS INC.
Olney Chemistry Teaching Laboratory
Lowell, Massachusetts .....p. 132

CIVICA LLC
South Florida Autism Charter School
Hialeah, Florida..... p. 133

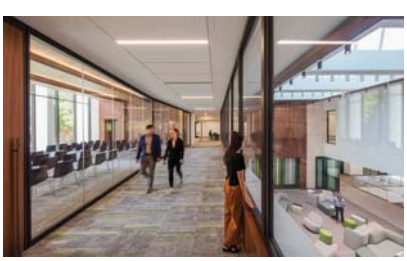
THE WESTMINSTER SCHOOLS, BARGE COMMONS

ATLANTA, GEORGIA

"The planning is very clean and simple. Light and airy. The simplicity is really compelling. It feels so effortless, even though a lot of effort went into it."

— 2022 JURY

Situated at the main entrance to Westminster School's Upper School Campus, Barge Commons acts as a gateway to the historic grounds and mitigates a 14-foot grade change between the entrance road and the main campus quadrangle. The building is designed as a convening facility, a place that local, national, and global not-for-profit organizations are welcomed to use as a conference center in exchange for pro-



Ennead Architects LLP

Associated firms: BDR Partners—Anna Forgey, Ace Barghi; JE Dunn Construction (Construction Manager); Andropogon Associates (Landscape Architect); Uzun+Case LLC (Structural Engineer); The Integral Group LLC (MPE/FP); Eberly & Associates Inc. (Civil Engineer); Conspectus Inc. (Specifications); Jensen Hughes Inc. (Fire/Life Safety); Sky Design Graphics (Signage Designer); Waveguide LLC (AV/IT); Threshold Acoustics (Acoustics); KAIZEN Foodservice Planning & Design Inc. (Food Service); GeoHydro (Geotechnical Engineer)

Design Team
Molly McGowan (Management Partner); Tomas Rossant (Design Partner); Todd Van Varick (Project Architect); Greg Clawson (Project Architect); Minh Tran (Project Manager); Billy Erhard (Project Designer); Gary Anderson, Edward Chang, Luccas Dias, Eileen Dirks, Janice Leong, Mariel Mora Llorens, David Monnar, Nikita Payusov, Karl Pops, Mat Strack, Trevor Hollyn Taub, Ursula Trost (Team Members)

Client
The Westminster Schools

Area
48,770 sq. ft.

Total cost
$22,000,000

Capacity
1,498

Cost/square foot
$451

Completion
June 2021

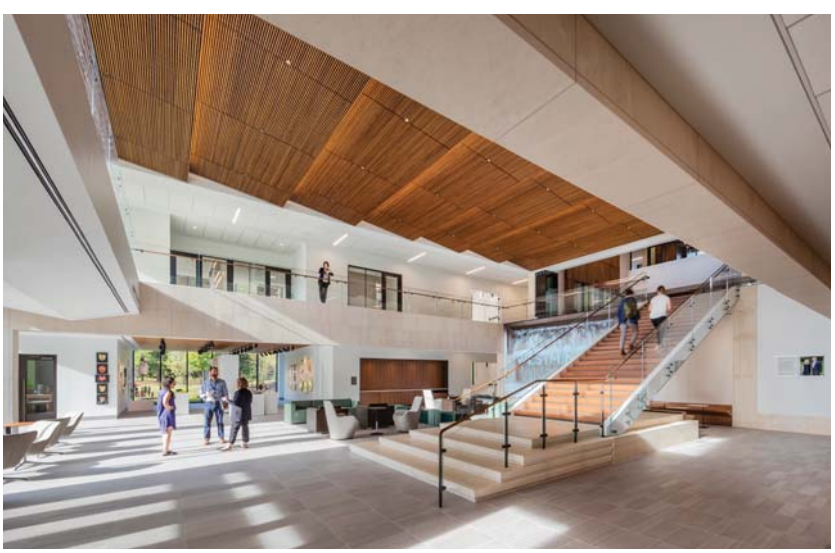
Images
Jeff Goldberg/Esto; Ennead Architects

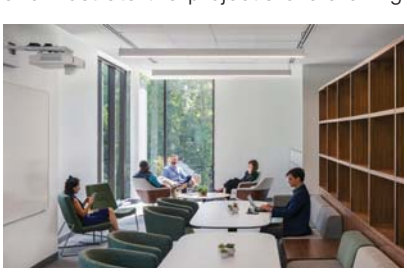
"As school is an extension of the community, Ennead designed Barge Commons to be an intentional nexus where The Westminster Schools welcomes and serves its students, families, and Atlanta."

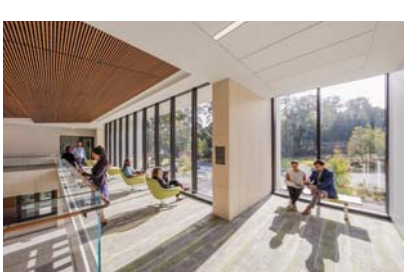
— TONI BOYD, VICE PRESIDENT FOR FINANCE AND OPERATIONS, THE WESTMINSTER SCHOOLS

viding leadership seminars and lectures to the student body. The project houses six general purpose classrooms so that classes can be held synchronously with conferencing events, thus generating spontaneous and productive collisions between students and established public-interest thought-leaders.

Two large-scale gathering areas, one at the lower level, and one at the level of the main quadrangle, act as hubs to the building. These spaces are designed to be flexible and constantly changing to support varied activities and to foster intellectual exchange within the building. The facility is complemented by additional "outwardly facing" programs that create an ecosystem of mutual purpose and illustrate the project's overarching mission: to put leadership on display and present novel and engaging educational opportunities to Westminster's students. ■







STUDENT WELCOME CENTER

EUGENE, OREGON

"The project is so fun. The branding, the tactile nature of the interiors. It almost reminds you of the joy of being a student." — 2022 JURY

Home is a place where young people are comfortable being themselves. For the University of Oregon (UO), home is where students are encouraged and supported no matter their identity, background or interests. Home is where people might feel cozy, but it's also where they're comfortable being quirky or silly. Oregon values the unexpected and rewards curiosity. That's why there are so many opportunities for discovery. Open a locker in the gear display or pull a book off the shelf. You never know what you'll find at UO—an illuminating moment can be anywhere.

The challenges:

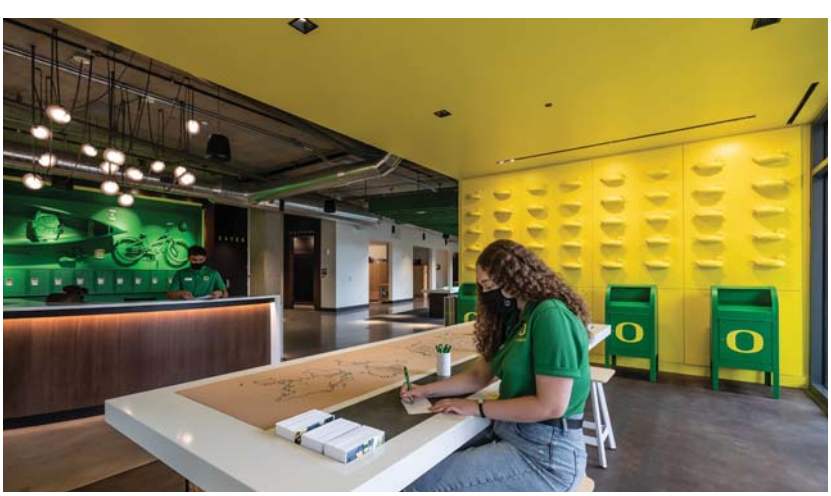
- Create an experience that drives choice for prospective students and parents.
- Encapsulate the boldness and strength of the UO brand.
- Create surprising and high-touch moments throughout the welcome center.

The process:

- Conducted StoryMining and creative exercises with a cross section of Oregon staff in marketing, student life, and housing as well as UO students.
- Applied story themes and story attributes throughout physical space.
- Collaborated with UO to create digital and static touch points.

The solution:

- Created an "enchanted book" featuring page-by-page digital projections, filled lockers with campus artifacts to show the breadth of the UO experience, and created an interactive library to highlight faculty and alumni.
- Integrated the UO brand voice in stories that highlight inclusive, extraordinary, progressive, and irreverent themes.
- Rewarded visitor curiosity with "Easter egg" content throughout the experience. ■



Advent

Design Team
Dustin Waltke, Reese Stevens, Lauren Duke Patterson

Client
University of Oregon

Area
8,900 sq. ft.

Total cost
$750,000

Cost/square foot
$84

Completion
January 2022

Images
Yeah Yeah Creative

COLLEGE OF SOUTHERN IDAHO, VETERINARY TECHNOLOGY BUILDING

TWIN FALLS, IDAHO

The Veterinary Technology Program for College of Southern Idaho was relocated from a tired and inadequate building in downtown Twin Falls to a clean and modern facility on campus that is directly adjacent to the large animal facility.

The program space includes a treatment lab, multiuse classroom, student commons, dog, cat, and exotic animal housing, pharmacy, radiology, pack prep room, surgery, office, and other support spaces.

Unique challenges included integrating the facility into the existing campus, tying in the agricultural style of surrounding architecture, and creating a state-of-the-art modern facility with durable and timeless finishes on a strict budget. The team responded with a design that not only adhered to the budget and schedule, but also surpassed the college's expectations on design. The facility serves to bolster the program's recruitment efforts. ■

Pivot North Architecture

Associated firm:
Animal Arts Design Studios, Sean McMurray

Design Team
Clint Sievers (Project Architect)
Richard Carlos (Project Manager)
Michael McHugh (Project Designer)

Client
College of Southern Idaho

Area
6,000 sq. ft.

Total cost
$1,700,000

Capacity
20 to 30

Space per student
200 to 300 sq. ft.

Cost/square foot
$283

Completion
March 2021

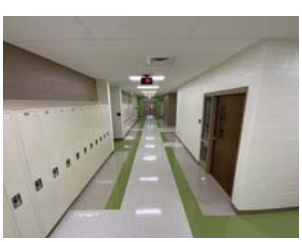
Images
Tobin Rodgers

ECHO EDUCATIONAL ENRICHMENT CENTER & DR. DEBRA PARRISH-HOOKS ADMINISTRATIVE CENTER

SOUTH HOLLAND, ILLINOIS

"We recognized the importance of providing stability for our students and staff. This facility establishes a future for the special needs children in our area."

— DR. SANDRA THOMAS, SUPERINTENDENT, ECHO JOINT AGREEMENT



The ECHO (Exceptional Children Have Opportunities) Educational Enrichment Center & Dr. Debra Parrish-Hooks Administrative Center is a specialty educational facility that serves special needs individuals from kindergarten through 21 years of age. The facility is run by the ECHO Joint Agreement, a cooperative of 17 school districts in the South Cook County region of Illinois.

The facility houses six specialty programs:

- (ABLE) Adaptive Behavioral Learning Environment Program: serves students who have needs related to autism spectrum disorder and intellectual disabilities or who are experiencing issues with verbal and nonverbal communication, social interactions, sensory processing/regulation and academic progress.
- (CD) Communication Development: serves children who have speech or language deficits that interfere with their educational achievement in a general education setting.
- (DHH) Deaf and Hard of Hearing: serves students who have mild to profound hearing loss.
- (EASE) ECHO Academic Skills Education Program: serves students who have multiple complex disabilities, including cognitive, language, physical, health or vision needs.
- (FEP) Family Enrichment Program: serves at-risk expecting parents and families by providing early, continuous, intensive, and comprehensive child development and family support services focusing on increasing self-esteem and academic achievement.
- (PACE) Providing Alternatives For Continuing Education: serves students with varied behavioral, emotional, and academic needs by providing a therapeutic, emotionally safe environment geared toward increasing self-esteem, reinforcing socially appropriate behaviors, and achieving academic success.

Each of these programs had been housed at various schools

throughout the districts and had to change locations about every three years. With a goal of creating stability and continuity, the challenge was to bring six independently functioning programs, with strict requirements, into one building. JMA worked with each program team to develop an overall building program. The design goals:

- Providing educational space that maintained each program's autonomy and functionality while taking advantage of the efficiencies and synergies of a central facility.
- Designing flexible space arrangements that would provide safe and effective educational environments for the diverse student population.
- Using land owned by the cooperative to situate the new facility near the existing ECHO School.

The result is a two-story facility that provides each program area with a "school within a school." Common areas, such as cafeteria, gymnasium, and media center, are used by each program, and specialists unique to each program have dedicated space within that program's block. Flexible conference and small group areas are available for all to use. The team can bring all students together or maintain their individuality. The result is the forming of a cohesive community that provides the desired safety, stability, and continuity. ■

JMA Architects

Associated firms: Millies Engineering Group; McCluskey Engineering; WT Engineering

Design Team
Jim Maciejewski (Principal Architect); Wayne Babiak (Architect); Edvin Mertdogan (Architect)

Client
ECHO Joint Agreement

Area
99,735 sq. ft.

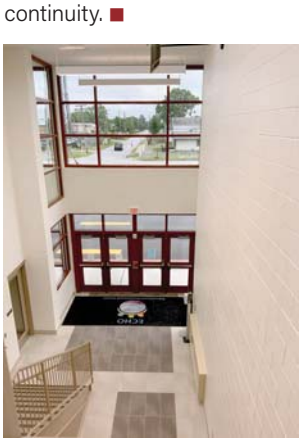
Total cost
$19,859,878

Capacity
400

Cost/square foot
$199

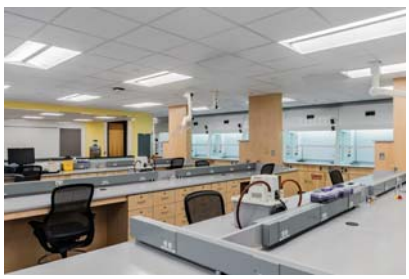
Completion
March 2022

Images
Felipe Cajigas; Jim Maciejewski



OLNEY CHEMISTRY TEACHING LABORATORY

LOWELL, MASSACHUSETTS



This renovation modernizes the main chemistry teaching laboratories for UMass Lowell's North Campus. The space focuses on clear, unobstructed sightlines to enable instruction and supervision while also making possible a flexible teaching and lecture style. Work benches are designed to respond to a variety of teaching styles with individual and group spaces for students and groups to work together. Fume hoods are organized along the perimeter wall to enable clear supervision. A flexible lecture space is designed to be set up in various layouts to accommodate demonstration, lecture, presentation, and testing. Flexibility and adaptability were considered in all aspects of the design. Low-volume airflow fume hoods, energy-efficient building systems, and variable air volume controls were used to maximize the energy efficiency of the laboratory space. Light materials are used to brighten the space and provide a warm environment. The space connects with support spaces renovated in the previous project the summer prior. Access was improved and conveniently integrated throughout the space to provide a truly accessible experience for students of all abilities. ■

Matz Collaborative Architects Inc.

Associated firm:
BLW Engineers

Client
University of Massachusetts Lowell

Area
2,030 sq. ft.

Total cost
$1,230,000

Capacity
20

Space per student
100 sq. ft.

Cost/square foot
$606

Completion
December 2019

Images
Keitaro Yoshioka

SOUTH FLORIDA AUTISM CHARTER SCHOOL

HIALEAH, FLORIDA

South Florida Autism Charter School is dedicated to providing education and therapeutic services to individuals diagnosed with autism spectrum disorders who reside in Miami-Dade or Broward counties. The school serves students who have communication deficits or behavioral challenges and who may require training in self-help skills.

The two-story classroom facility is part of a five-acre, suburban campus that serves 400 students from kindergarten through 12th grade, and individuals up to 21 years of age. The facility has typical classrooms, training rooms, independent living rehearsal spaces, offices, and ancillary functions.

The school's plan is organized along a central circulation spine that connects administrative, social, and therapeutic program elements with the linear, two-story classroom wing.

A linear outdoor recreation space provides a layer of separation from the busy roadway to the building's south. Both the internal simplicity of the plan organization and external forms create a physical environment centered on clarity and flexibility, enabling staff to mold spaces to each student's unique needs.

Bright, colorful surface treatments at vertical circulation elements are derivative of the organization's brand symbol, creating an internal and external ensemble of playful and memorable forms and spaces. ■

Civica LLC

Associated firm: Turin Construction Corporation

Design Team
Rolando Llanes, AIA (Principal-in-Charge); Ivan Fajardo (Senior Associate/ Project Manager); Rudy Castillo (Architectural Associate); Sheila Corzo (Support Staff)

Client
South Florida Autism Charter Schools Inc.

Area
60,750 sq. ft.

Total cost
$13,371,160

Capacity
400

Cost/square foot
$220

Completion
April 2021

Images
Miami in Focus

ADAPTIVE REUSE

OUTSTANDING DESIGNS

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Oklahoma City, Oklahoma p. 135

COMMUNITY USE

OUTSTANDING DESIGNS

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CLARA LUPER CENTER FOR EDUCATIONAL SERVICES

OKLAHOMA CITY, OKLAHOMA

The former Central National Bank, a vacant three-story office building constructed in 1959 and 1978, was selected to be transformed into a new headquarters for Oklahoma's largest school district. The main building has numerous offices, conference rooms and collaboration areas for about 160 employees. New amenities such as training rooms and a staff lounge were added in the basement. The original bank vault was stripped of its safe deposit boxes and converted into a storm shelter that can accommodate all building occupants.

An addition, in a complementary and contemporary design style, contains the main entrance and reception area, conference and meeting rooms, and a large multipurpose room, which is used for school board meetings, professional development sessions and community events. With limited resources available, new life was breathed into an unused building to create an environment thoughtfully designed for the district's needs and aspirations.

The building is named in honor of Clara Luper, a local civic leader who led sit-in protests that helped end segregation laws and promote racial equality in Oklahoma City. ■

GSB Inc. Architects & Planners

Design Team
Ryan Eshelman, AIA, LEED AP (Design Architect); Brent Clark, RA (Project Architect); Frances Bates (Interiors Lead); Paul Nybeck, RA, CCS, CCCA (Specifications Architect); David Stanton (Construction Contract Administration); Wallace Design Collective (Structural & Civil); Allen Consulting Inc. (M/E/P); CLS & Associates (Landscape Architecture)

Client
Oklahoma City Public Schools

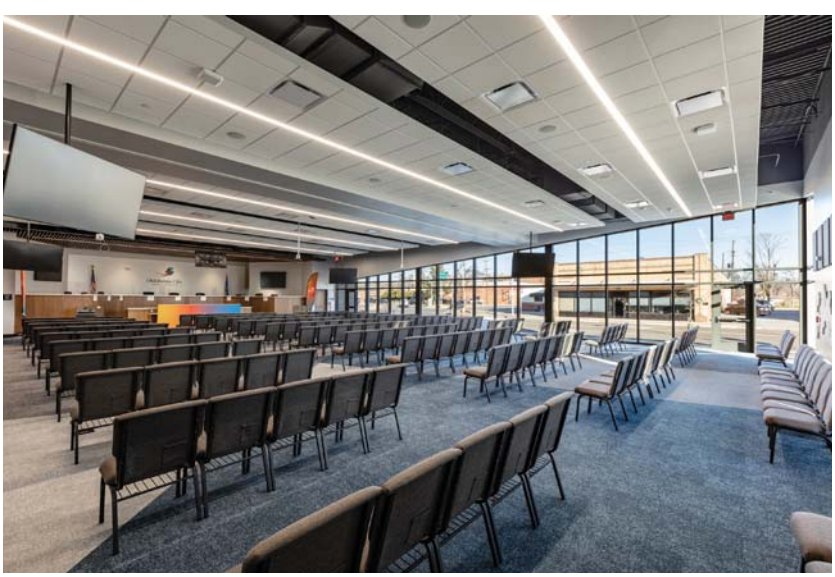
Area
50,619 sq. ft. (39,985 sq. ft. renovation, 10,634 sq. ft. addition)

Total cost
$8,800,000

Cost/square foot
$174

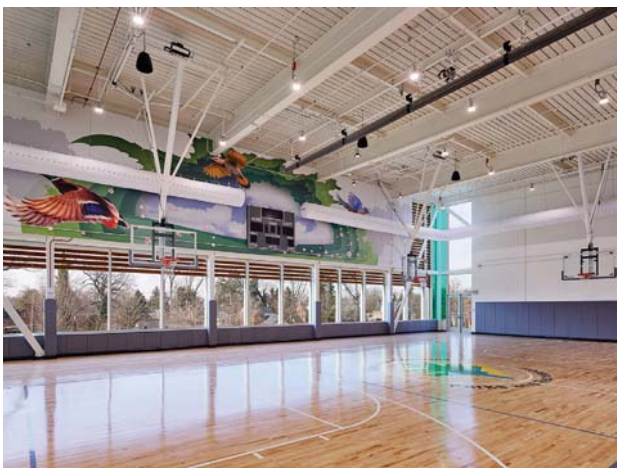
Completion
July 2020

Images
Simon Hurst



SHEPHERD PARK COMMUNITY CENTER

WASHINGTON, DISTRICT OF COLUMBIA



BELL Architects modified portions of the 1930s historic Shepherd Elementary School and designed a 12,634-square-foot addition. The addition transforms an asphalt and inaccessible weeded slope into a multipurpose facility.

The Shepherd Park Community Center addition meets another challenge: It now facilitates a weekday educational program with afterhours community activities.

The project successfully integrates mandates from three Washington, D.C., agencies while providing the community with substantial opportunities for diverse uses. The approach created a pavilion in the park as an addition to the school. It is scaled to fit the neighborhood along a steeply sloped residential street.

Through smart technology, the addition flips in the evening for the community's use, providing a 5,640-square-foot gymnasium, fitness center, multipurpose room, and two dedicated kitchens. The project exceeds LEED Silver goals, and is aiming for LEED Gold certification.

The center provides shared spaces for school and community activities with close to net-zero energy performance. ■

BELL Architects PC

Design Team

Contractor: MCN Build (Design-Build Contractor); Dan Triman (LEED Consultant); Genesys Impact (IT/Security Consultant)

A-E team: BELL Architects (Architect); S Street Structural Engineering (Structural Engineer); Wiles Mensch Corporation DC (Civil Engineer and Landscape Architect); Global Engineering Solutions (MEP Engineer); Cerami & Associates (Acoustical Consultant); Nyikos Garcia Associates Inc. (Food Service Consultant); Associated Spec Consultants (Specification Writer); ECS Capitol Services PLLC (Geotechnical Engineer); WSP USA Buildings Inc. (Envelope Consultant); KTA (Commissioning Agent); Lightbox Energy (Solar PV Contractor)

Artists: Andrew Antonaccio, Caren Frost Olmsted, Luis Peralta Del Valle, Shaunte Gates, Jennifer Wagner

Client

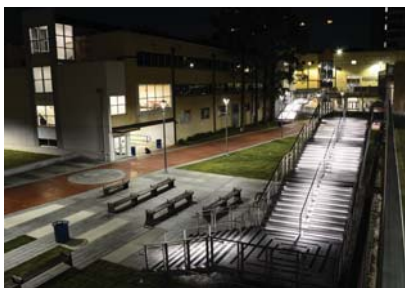
DC Department of General Services, DC Department of Parks and Recreation, DC Public Schools

Area	Total cost	Cost/square foot
17,500 sq. ft.	$10,500,000	$600

Completion	Images
January 2021	Tom Holdsworth; BELL Architects

GEORGIA STATE UNIVERSITY KELL HALL, LIBRARY NORTH QUAD

ATLANTA, GEORGIA



The Georgia State University (GSU) Kell Hall-Library North Quad, also known as the Greenway, is the first traditional campus greenspace to be created for the university's Atlanta campus.

As an urban university in the heart of a major city, GSU does not have the traditional campus plan that many might imagine when thinking of the tree-lined quads of a classic college campus. This new quad is the realization of the heart of the campus envisioned in the 2012 campus master plan. To make way for the quad, Kell Hall, a former parking deck turned classroom building, along with rambling elevated plazas beyond, parking lots below, and a mishmash of temporary "fixes" needed to be razed to open the campus to the city.

The master plan suggested a bold move to demolish buildings and structures, at no small cost, to create this quad/greenway and open new opportunities within adjacent classroom buildings. The quad was immediately popular when students returned to campus for the fall 2021 semester. ■

Pond & Company

Associated firms: Rochester & Associates; Gleeds; FS360

Design Team
Doug Hannah, AIA, LEED AP BD+C (Principal-In-Charge); Matt Wilder, PLA, ASLA (Vice President, Landscape Architecture); James Schoen, AIA, LEED AP BD+C, WELL AP (Architect); Jason Bach, P.E., LEED AP (Civil Engineer)

Client
Georgia State University

Area
52,272 sq. ft.

Total cost
$7,000,000

Cost/square foot
$134

Completion
July 2021

Images
Not credited

Q&A with Michael Blake AIA, ALEP, CNUA, LEED AP BD+C

Vice President | Moseley Architechs

What do you like about working with independent schools?

Working with independent schools provides a distinctive perspective that we find invigorating as designers. Every independent school has a unique mission and style or offers unique programs that are an important part of their history and success. The challenge of new programs we are unfamiliar with is what drives our creativity to design with a fresh perspective and an open mind. Additionally, independent school communities are very engaged and involved in their school. Participating in a design process that allows us to immerse ourselves in the unique attributes of the school's culture and community and develop a strong architectural vision that is complimentary to the distinctive style of the school is especially rewarding.

Moseley Architects has offices in multiple states. What advantages are there with having this type of network to draw from?

We provide our clients with a one-firm concept, where we can bring the strength and expertise of a large firm with personalized local firm management. Every month, all the disciplines in our K-12 sector gather to share industry related information, discuss ways to improve our designs, and review lessons learned on recent projects. The meetings include our architects, engineers, interior designers, marketing coordinators, sustainability and energy analysts, and construction contract administrators who are dedicated to K-12 educational planning and design.

Also, twice yearly, our K-12 managing principals from all our offices gather for a collaborative workshop to discuss relevant topics and share best practices in K-12 design. Recent discussions included expanding our range of K-12 professional services, space programming analysis, designing safer schools with Crime Prevention Through Environmental Design (CPTED) principles and analyzing our design process to provide higher quality solutions for our clients.

SEED School of Maryland, InfoArmor Cyber lab.
Image courtesy of Kevin Weber Photography.

What do you see as key changes in educational design in the next ten years?

We are seeing the results of the early adopters of 21st Century learning environments migrate through all grade levels and throughout more and more school systems as teachers and administrators support their design through more exposure and older schools get replaced or renovated. It's an exciting time to be involved in educational design, requiring an open-minded approach to not only designing the environments in which the students learn, but also creating the flexibility within those environments that will allow for new ways of learning well into this century, possibly even within 10 years from now.

Michael Blake, AIA, ALEP, CNUA , LEED AP BD+C
Vice President

Envision an environment that allows new things to be done in new ways. Tomorrow's students will have grown up in an incredibly fast-paced world. They want to have email and instant messaging always available and random access to information and multiple data streams as part of their learning needs. Tomorrow's students will want high performance workspaces that are attractive, flexible, and responsive to those needs and will desire environments that allow them to interact with teachers and other adults in respectful and engaged ways.

NorthBay Environmental Education Center.
Image courtesy of Paul Burk Photography.

MOSELEYARCHITECTS

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YESHIVA OF GREATER WASHINGTON, BOYS DIVISION EXPANSION

SILVER SPRING, MARYLAND

Moseley Architects

Design Team
Michael Blake, Dane Lawrence

Client
Yeshiva of Greater Washington

Area
52,000 sq. ft.

Total cost
$20,000,000

Capacity
250

Space per student
208 sq. ft.

Cost/square foot
$384

Completion
To be determined

Images
Moseley Architects

The Yeshiva Boys Division is for boys in grades 7 through 12. Yeshiva's curriculum consists of three levels of high school courses—regular, honors, and A.P. classes—as well as a college preparatory program and Judaic studies such as Gemara, which is focused on Chumash, Jewish law, and Hebrew language.

The expansion project involves constructing a gymnasium, dining, and classroom addition to the existing school building along with a dormitory building that will enable the campus to operate as both a day and boarding school. The dormitory is directly connected to the academic building to create a live/learn-style environment. Unique aspects include site improvements to provide separate access points for the middle school, high school, and dormitory entrances along with a new 240-seat Beis Medrash—"House of Learning"—designed to be used by both students and the school community at large. ■

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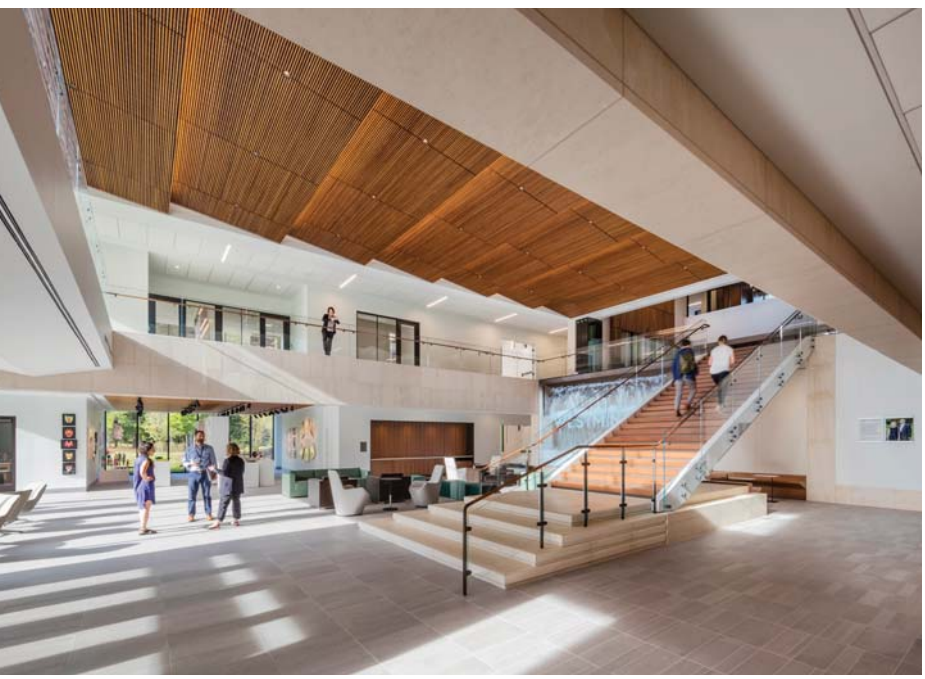

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www.gmb.com
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Minneapolis, Minnesota 55403
612-377-2737
www.kodet.com
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1617 Walton Way
Augusta, Georgia 30904
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YCH ARCHITECTS
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www.ycharch.com
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Building Community

Flexibility and choice are key elements of the inclusive, modern classroom.
Image credit: FGM Architects

Creating campuses focused on equity, inclusion, safety, health, and wellness.

By Carol Stolt and Jan Behounek

The importance of building community on college and university campuses has never been more crucial. A vibrant campus community creates opportunities for human connection among a diversity of individuals; it is the perfect incubator for developing and exchanging ideas. The design of a campus is an important tool in establishing an environment where the community feels safe, welcome, and ready to share and learn. Many higher education leaders are seeking to address problems on their campuses regarding equity, inclusion, health, wellness, safety, and community.

Engaging environments

Campuses exist to bring communities together. Human connections can be supported through learning, exchange of ideas, and research, but not everyone experiences these connections the same way. Race, gender, religion, sexual preference, ability, and culture are all unique lenses through which spaces are viewed.

Kaskaskia College in Centralia, Ill., is working on several projects to modernize its campus, including a re-imagined student services area focused on improving the student experience. The design abandons the existing "customer counter" model in favor of a "town square" approach. Access to natural light, acoustical privacy, and creating an equitable experience were paramount design goals.

Immediately upon entering the space, students feel welcomed as part of a community—they are greeted upon arrival by Student Service Ambassadors. The ambassadors help students determine their specific needs and then arrange for the appropriate staff members to meet with individual students in a welcoming, open, and light-filled space.

Glass front walls bring in daylight and provide views to the outside from each room. This biophilic approach creates opportunities for respite in what often is a stressful process for new students.

Inclusive and equitable

Building community on campus begins with designing inclusive and equitable spaces to create engagement while ensuring the well-being of students.

As some students continue remote learning, this can be challenging because of the disconnect from students who are on campus. Many factors create inclusive and equitable communities; looking beyond the physical location is essential.

Community is something that is experienced. Each person must have a sense of belonging for a community to thrive. Colleges today have a physical presence, but the full community is much larger

than the campus, extending online and into every location where remote learning takes place. All students need to feel equally included, engaged and involved.

Dominican University has created a Center for Cultural Liberation on its River Forest, Ill., campus. The university has a long history of inclusive policies and has been nationally recognized for graduating a large population of economically disadvantaged students—the largest of any institution in Illinois.

The vision for the center is to create a comfortable, safe and inviting space that is respectful, inclusive, and reflective of the Dominican mission of "Truth in Love." The center offers students academic, mental, and emotional support.

Flexibility

Campus spaces—both physical and virtual—need to reinforce campus culture, inspire collaboration, and build interpersonal connections. Contemporary academic spaces are not stagnant. Students and staff need the ability to customize their space to meet their evolving needs and the requirements of the task at hand.

Any new space must be designed for existing needs but allow for change as needs evolve. Carefully planned infrastructure pathways can accommodate future expansion or reconfiguration. Tables can be moved together to facilitate discussion or create a formal arrangement for a special event.

The principles of proper illumination, appropriate display technology, camera coverage, and sound reinforcement enable spaces to function as hybrid or remote learning environments alongside daily use as flexible, in-person learning environments.

Resilience

Facilities must play a role in the preparation for pandemics, natural disasters, man-made shocks and stressors, and the health and well-being of all participating in their spaces.

All of these heighten the need for higher education institutions to preserve a sense of community with inclusion, equity, and safety. The goal of resilience in designed space is to support the recovery from these events and enable students to continue to thrive.

The urgency in building campus communities of equity and inclusion that also promote safety, health, and wellness was brought to light by Covid-19. The goal of inclusive, equitable, safe, and empathetic design is to enable all students to reach their full potential.

A community space provides an area on campus where students can share ideas, engage and thrive.
Image credit: FGM Architects

A re-imagined Student Services space can focus on equitable student experience.
Image credit: FGM Architects

Challenges to building community

As the world begins to recover from the Covid-19 pandemic, higher education leaders must determine the best way to create community and maintain safety in hybrid learning situations. Students who continue learning remotely may experience a disconnect from students on campus simply because they are not on site. The resulting challenge is to design programs and environments that help remote students feel as engaged as their on-campus counterparts.

Humans are wired with the desire to be part of something bigger than themselves, and community is established through relationships with one another. Campuses and the spaces within can provide a container for those many and varied relationships.

Solutions for building community

A design with an empathic eye considers the needs of unique individuals in a variety of situations and the way they experience campus facilities. At its center is the desire to create a space that responds to the breadth of students:

Purposeful use of material, texture and color assist those on campus with wayfinding.
Image credit: FGM Architects

Technology-rich classrooms can help create equitable experiences for all learners.
Image credit: FGM Architects

neurodiverse, neurodivergent and neurotypical in these environments. Solutions begin with the process of perspective—taking a step back to visualize perspective before taking steps forward.

Technology can improve the quality of learning, provide equitable access, and enable varied teaching and learning styles; all can help students thrive. In a recent university classroom modernization project, the goal was to design classrooms with inclusivity and equity for all. The project featured traditional college students (just out of high school), international students, adults returning to college, as well as non-traditional students seeking certification or career changes.

Each group had different needs, and everyone needed to feel comfortable in the classroom. The main teaching wall had a large, interactive monitor that enables students to display their work in real time. Remote learners can interact with the class in the same way that in-person learners do. Monitors placed around the room ensure that everyone has access to the information. Ceiling speakers and cameras ensure that remote learners can follow along with the discussion.

For students with **visual** challenges, using textures and colors purposefully can make it easier for them to navigate through campus spaces. Solutions might include textured walls in corridors to help those with visual challenges know they are nearing the desired classrooms. A flooring change can signal to students they have entered a space with a different function. Color can be used to identify specific programs or locations as well as help with wayfinding. Niches with various lighting and colors along corridors enable students to step away from the crowds, sit down, and rest. Environmental graphics can feature colors and context.

Adding a variety of **furniture** types in a classroom helps people of different sizes, shapes, and abilities be comfortable and focused on learning. A classroom for 25 to 45 students might include tables and chairs of differing sizes and heights along with lounge seating; a lecture hall may feature high-top tables so those in the back can see over the students in front of them; lounge chairs and laptops might be preferred by those who don't want to share a table. Easily movable furniture also helps accommodate various teaching and learning styles.

The **acoustics** of a space is a crucial consideration so everyone—including those who are hearing-challenged or participating from remote locations—can hear the instructor and student discussions clearly. It is important to ensure sound quality is ideal for both in-person and remote learners. Controlling sound should focus on ambient noise, excessive background noise originating from outside the space, and reverberation. Good acoustic design can result in more accurate verbal interaction. Proper selection of materials, such as specialized ceiling treatments, flooring and wall treatments that provide a higher level of acoustical quality, are ways to achieve proper sound characteristics in a space. Such design decisions render high levels of inclusivity, health and wellness, as well as enhanced academic performance.

Lighting plays a critical role in building community. Specialized lighting can be used to enhance wayfinding by illuminating approaches and offering visual cues as to the type of spaces to be encountered. Circadian rhythm lighting in conjunction with daylighting can be used to enhance rest and sleep and to improve overall sense of well-being. Color-changing and dimming lights used in the late afternoon and evening support natural circadian rhythms and may result in better sleep.

HVAC systems play a role, providing proper air exchanges and filtering for health and safety. Filtered **water** systems encourage students to stay hydrated.

Materials used in design and construction should be safe and documented. High-touch surfaces should be non-porous and easily cleaned. Introducing biophilic materials can improve air quality, reduce stress, improve mental well-being, promote cognitive function and enhance mood and creativity.

Safer, more equitable campuses

Campuses exist as incubators for ideas. Students will thrive when they feel included, engaged and empowered to actively participate. A campus community must allow students to experiment—and sometimes fail—without being judged or made to feel vulnerable. Spaces must be both inclusive and equitable. Colleges and universities should embrace an empathic approach and process to design spaces that engage and inspire all.

The culminating reality is an environment where students can fulfill their potential. ■

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Student-Centered Spaces

By Paul Erickson

(This is part three of a three-part series)

Educators and architects have been breaking new ground in best practices for school spaces that support student-centered learning. Activity-based learning and a school's ability to support "learning everywhere" have led to profound innovations to a school's core services.

Learning commons: Gathering and sharing knowledge is the core function of the learning commons (formerly termed "library" or "media center"). Historically, libraries were designed mostly with book access and storage, study carrels, and tables for gathering information. Because so much information is accessible online through digital devices, schools have fewer books and need less space for that function.

The learning commons invites active learning with comfortable spaces, encouraging engagement, collaboration and coaching. Easily reconfigured spaces for individual study, small group work, and presentations are essential for a learning commons. These spaces incorporate quiet reading areas with soft seating, group work tables with chairs on casters, maker spaces, small group nooks, studios, and large group presentation areas, all arranged with sound control, technology access, markerboards, media screens, and portability.

Student dining facilities: To maximize use of this space, incorporate acoustic control, noise reduction, furniture arrangement variety, technology, daylighting, feature lighting, fireplaces, and other elements. Through creative design, dining facilities can support presentations, large group activities and community events. If designed as a central "marketplace" with floor level variety, flexible seating arrangements, and access to adjacent circulation paths and outdoor areas, this space can become a central hub for student-centered learning.

Administrative space: Strategically designed to serve students, this space looks different from the past. Although it is essential for security reasons to situate main administration space at the building's main entry, blending decentralized smaller units of office space with teacher-student support areas throughout a facility brings everyday student-life experiences closer to administrators. Putting guidance and career spaces near student dining areas increases opportunities for administrator-to-student engagement. Office units placed strategically near learning clusters increase recognition and approachability for students and staff.

Physical education spaces: Student-centered learning in the physical education curriculum is about engaging all students to learn about themselves, one another, and how to collaborate in groups. Programs focus on developing self-esteem and self-discipline through activities and levels of competition for optimal engagement. Provide a variety of spaces responsive to each student's unique interests, abilities, and developmental needs.

Spaces should support students in managing their own fitness plans, providing opportunities for peer teaching skills. Spaces may include gyms, strength and fitness space, black box for dance, aerobics and calisthenics, swimming pool, rock climbing area and outdoor areas. Also, hallways, classrooms, and other areas should be designed to support selective physical education activities.

Blending spaces creates opportunities for multiuse functions – a gym could open to circulation space furnished with flexible seating for school-day usage and spectator events; a learning stair open to the gym could be used for viewing and physical education activities.

Wellness/calming centers: The standard nurse health office is being reimagined to serve mental health, trauma, personal issues, as well as physical illnesses. This space is where professionals help students to destress, de-escalate aggressive behavior, and refocus to learn. A calming room includes comfortable seating, swings, tactile surfaces, and biophilic design elements.

School store and coffee shop: These spaces give students a chance to engage in operations as part of their business education. Integrate spaces with a school's main circulation routes, the "marketplace," learning stairs, and learning commons so that students can see and be seen.

Furnishings include product displays, high-top tables, chairs, soft seating, seating nooks, sound systems for music, and equipment for business transactions. They provide students with an outlet to socialize and engage with their peers.■

Erickson (*perickson@atsr.com*) is past president of ATSR Planners/Architects/Engineers, a firm specializing in school planning and design. Erickson has 45 years of experience in school planning, design, and construction.

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$78.5 million allocated for residence hall renovation at University of Cincinnati

The University of Cincinnati Board of Trustees has allocated $78.5 million for the renovation of a student housing facility.

Image credit: University of Cincinnati

The News Record, the university's student newspaper, reports that work on Siddall Hall is set to begin in January.

The 11-floor residence hall can house as many as 570 residents and now offers singles, doubles, triples and quads, all in the traditional style.

The renovation will reconfigure rooms and spaces on all floors. The upgrades also will result in a new common lounge space, study areas, laundry, kitchen and a housing office suite

The building improvements also will provide new finishes on the building's frame, and new mechanical, electrical, plumbing, fire suppression, fire alarm, and technology systems.

The university had already allocated $6.5 million in August 2021 for Siddall Hall's preconstruction design process.

The Siddall Hall renovation is set to be completed in July 2024, and it will be open to students in the fall 2024 academic year.

Massachusetts earmarks $100 million in grant funding for improving indoor air quality in schools

The state of Massachusetts says it is making $100 million in grant funding available for school districts to improve the ventilation and indoor air quality in their facilities.

The Department of Elementary and Secondary Education says in a news release that the grants will be targeted to schools with high concentrations of economically disadvantaged students, English language learners and communities disproportionally affected by the Covid-19 pandemic.

More than 20 school districts are eligible for up to $1 million, and several districts qualify for several million dollars. Boston Public Schools, the state's largest district, is eligible to receive up to $15 million.

"This grant funding will address the needs of school facilities and will support important repairs to improve ventilation and indoor air quality," said Massachusetts Gov. Charlie Baker.

Among the areas that the state grants can be used for:

- Needs assessments of existing school environments, HVAC systems, and indoor air quality
- Feasibility studies to develop long-term indoor air quality plans that improve fresh air exchange rates and reduce or eliminate reliance on fossil fuels
- Design, bidding assistance and construction phase services for projects to upgrade HVAC system.

$227 million business college facility planned for University of Tennessee

The University of Tennessee at Knoxville is planning to build a $227 million facility for its Haslam College of Business.

The Knoxville News Sentinel reports that the 306,000-square-foot building will be erected across the street from two existing business college facilities. It will be built where Dunford, Greve and Henson Halls now stand. Those buildings, which house offices for various university departments, will be demolished.

In the new building, space will be allocated this way: 50% classroom space; 29% office and meeting space; 12% public and amenity space; 8% research and innovation space; and 1% building support space. The building exterior will mimic the campus' brick Collegiate "Tennessee" Gothic style.

About $100 million of the cost of the project will come from donations. The state of Tennessee is providing $83 million, and $44 million will come from university funds.

Image credit: University of Tennessee at Knoxville

The demolition of the three buildings could begin as early as fall 2023. The university anticipates completing construction of the new facility by the end of 2027.

The Haslem College of Business is home to more than 6,000 undergraduate students and 150 full-time faculty members.

Long-term school facility plan in Stamford (Conn.) district has $742 million price tag

The plan to fix school buildings in the Stamford (Conn.) district will take 20 years and cost the city about $742 million.

The Darien Times reports that the architectural firm SLAM Collaborative presented those figures to district officials at a recent meeting. The plan calls for closing four schools—Dolan and Cloonan middle schools, Toquam Magnet Elementary School and KT Murphy Elementary School—while expanding Roxbury and Westover Magnet elementary schools into K-8 facilities, and building a new K-8 Hart Magnet Elementary School. An additional K-8 school would be created in south Stamford, and improvements would be made to all other school buildings, including major renovations for Turn of River Middle School and Stamford High School.

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SCHOOL SECURITY & SAFETY

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ENDEAVOR BUSINESS MEDIA

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Modern Systems for Enhanced Campus Security

Upgrading a security system may feel daunting but there are options to fit most retrofit budgets **By Rick Taylor**

Schools are counting on security technology more than ever to help them mitigate risk to students and staff.

Most schools today have adopted electronic access control and video surveillance systems as part of their campus security. However, since many schools have added these systems over several years, they often have multiple different systems that do not share information or use outdated technologies that now have known vulnerabilities. This results in systems that are complicated, expensive to maintain, and difficult to use. After a while, the technology becomes obsolete and needs to be replaced. Campuses can spend significant time fixing their system or implementing workarounds, and maintaining the status quo becomes very expensive.

Keeping campus security systems up to date with modern security standards is easier when you implement a unified security platform. A unified platform is easier to use, more effective, and may even cost less over time, thanks to lower maintenance costs.

Actionable Insights for Faster Responses and Efficient Operations

Disparate security systems make it hard to see the big picture of your campus security operations. With a unified platform, you can view and interact with data from all of your systems in a unified platform dashboard.

When all components of your security system, including access control, video surveillance, sensors, and license plate readers, are monitored and controlled within the same intuitive software interface, security teams can respond quickly and work more efficiently.

Nuisance alarms, for example, can be reduced with a unified platform that combines data from door sensors with live and recorded video from the cameras. With the additional information from these systems, your team can have more control over when the system should alert staff. Both systems may tell you that a door has been opened for longer than usual, but only the system with unified video surveillance and analytics can let you quickly see if there's an obvious reason why. With more context about what's happening, you can decide whether or not someone needs to investigate in person.

If certain kinds of nuisance alarms are especially common you can even configure the system to be more selective about when to sound the alarm. For example, automated alerts

can be set if a door is left open for more than a specified number of seconds or only if the door is open and no person is present within the field of view of a camera positioned at that door.

Intelligent analytics can help you optimize security, allocate resources more effectively, and reduce the load on staff. You can see which doors or sensors set off alarms most frequently, and pull in data from video cameras, sensors, and other systems such as license plate recognition, to get a better understanding of why this is happening. You can also set up automated reports to identify hardware that isn't working properly or behavioral trends on campus that help your facilities managers address recurring or potential problems.

Video Surveillance Balanced with Privacy Protection

When there is an event that requires investigation, such as vandalism or a report of an assault on campus, intelligent analytics allows security teams to go back and reconstruct what happened by pulling recorded video from that time and location, as well as any other relevant data from access control or license plate readers that might help identify the people involved. If the event is happening in real-time, security personnel can use this data to guide first responders, so they have real-time situational awareness before they arrive on the scene.

With so much data available at your fingertips, modern security systems must also consider privacy protection as a fundamental aspect of operations. Privacy isn't just important in sensitive areas on campus such as locker rooms and residence halls. Nobody wants to feel "watched" while moving through their daily routines.

Thankfully, it is possible with today's technology to protect individuals' right to anonymity. Campuses don't have to compromise security for privacy. Instead, modern video management software (VMS) can be configured to pixelize or mask individual identities by default. Permissions can be granted to select staff members to depixelate the footage if the video needs to be reviewed for an investigation. The system can require multiple people to sign off on the request as a further check to ensure personally identifiable information is protected, the unified platform will report on which personnel retrieved the recorded video.

If video footage must be shared with police investigators, media, or members of the public, faces can also be unmasked for officers with the appropriate permissions. For example, the version shared with the public may have almost all faces blurred, while police or legal teams can be assigned secure credentials to view the original unaltered version. By requiring the video to be viewed only through a secure platform, your campus security can keep track of who has seen, downloaded, or shared the video, and can adjust permissions on a dynamic basis.

Access Control Management Through Automation

Another important aspect of modern security systems is access control. In a unified system, access can be defined by role and can be granted or revoked easily as needs change. For example, access control can be linked to faculty, staff, and student profiles. When a student changes majors or residence halls, or a staff member changes office locations or roles, their permissions are reassigned automatically.

On college campuses, professors can even be given the authority to temporarily grant after-hours access to labs, libraries, or practice spaces to students as needed. If a student drops a class or graduates, the system can automatically remove access as well.

For visitors, access can be granted on a temporary or location-specific basis. For example, a guest speaker may have access to select campus spaces for the day they are scheduled to present, but this access will automatically be removed after the allotted time has expired.

Upgrading with Scalable Security Systems

Unified platforms are built to be scalable and modular so you can upgrade or scale gradually as your campus's needs change. A unified system can serve a small K-12 school with a couple of hundred cameras and dozens of access points or a sprawling university complex with 20,000+ cameras and hundreds of access points — and everything in between.

Furthermore, a unified platform allows you to integrate elements such as automatic license plate recognition, sensors, and video analytics that monitor the outer perimeter of your campus. This helps you expand a "net of safety" beyond the walls of the building. The sooner you can detect something out of the ordinary, the more time your team has to respond to potential threats.

Upgrading to a modern security system may feel daunting but the good news is that in many cases, you won't need to replace the equipment you've invested in over the years. With a unified, open-architecture software solution, you can often reuse many hardware components you already have in place. This allows you to prioritize upgrades or plan a gradual transition one step at a time. The result will be not only a safer campus but also a more efficient and effective security operations team. «

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Campuses Strive to Strike a Balance Between **Technology and Policy**

Photo: SDI Productions / 462576863 / Getty Images

Experts agree that technology is useless unless properly implemented with a comprehensive security strategy

By Tim Kridel

Districts, colleges and universities must strike a balance between responding to parents' and students' concerns about the latest headline-grabbing incident while still devoting enough resources to other risks.

There's something to be said about a two-way radio blaring in a hallway or classroom — and it's not all good. On the one hand, the chatter continually reminds students that their safety is a top priority. But on the other, the cacophony disrupts the learning and teaching environment.

Radios are just one example of how schools and higher-ed institutions have to weigh the additional security of technology or policy against side effects such as disruptions and restrictions that faculty and students find onerous.

"PreK-12 school administrators have walked a tightrope for decades trying to balance having reasonable security and emergency preparedness measures with a welcoming, supportive climate conducive to their mission as child-oriented educational community centers," says Kenneth S. Trump, National School Safety and Security Services president. "This challenge has intensified as mass school shootings, as well as other 'unknown unknowns,' present growing challenges to creating and maintaining secure and prepared campuses."

Those considerations prompted Olathe Public Schools to issue CrisisAlert badges to faculty and staff, which they can use to put their entire building on lockdown. This enables

them to respond immediately rather than waiting minutes to reach an administrator, explain the situation and finally get a lockdown.

"Obviously, our No. 1 priority is to keep our students and staff safe, but student learning is right behind that," says Jim McMullen, the Olathe assistant superintendent who oversees safety services. "Finding that balance of a welcoming environment for kids and teachers while also providing the safest environment that you can is really our end goal. That's why we felt this product was great."

And unlike a radio, the alert is shared silently.

"We were a district that was very heavily reliant upon building radios, especially at the elementary level," McMullen says. "This takes the place of the need for as many radios within a building. If a teacher needed assistance, anyone in the building could hear who needed assistance and why. That can be a disruption and a privacy issue, as well."

Districts, colleges and universities also must strike a balance between responding to parents' and students' concerns about the latest headline-grabbing incident — such as a mass shooting — while still devoting enough resources to other, more everyday vulnerabilities. That's another reason why Olathe chose CrisisAlert: Eight pushes trigger a lockdown, but fewer ones send an alert to the office.

"[We have] the ability to utilize this product not only in a worst-case active shooter scenario but also on crises that happen every day in schools across the country: behavioral, medical, the occasional fight, that sort of thing," says Brent Kiger, Olathe executive director of safety services.

Besides CrisisAlert and walkie-talkies, districts also can leverage a device that every member of the faculty and staff already owns: a smartphone. In theory, which sounds like a great idea because means the security budget doesn't have to fund thousands of specialized devices. In reality, their effectiveness is at the mercy of coverage: the mobile operator that each employee uses and the district's Wi-Fi network. Dead spots can become — literally and unfortunately — dead spots.

"There are a lot of things that pretty quickly rule out certain products for me," Kiger says. "Some of those are if it's heavily reliant upon Wi-Fi or cell phone coverage. Those are huge barriers for me."

Security Obscurity

Olathe uses CrisisAlert to control a locking mechanism on the bottom of doors that drops a pin into a floor plate.

"It really provides an opportunity for staff members with vulnerable kids to lock down quickly and provides a barricade without having to move furniture, file cabinets, etc," McMullen says. "No one really even knows it's there."

Hidden locking mechanisms and badges that look like ordinary ones are ways to hide new security and safety tools, so they don't disrupt the learning experience. But doesn't "out of sight, out of mind" also make students feel vulnerable? Possibly, but opting for high-profile measures such as metal detectors can backfire.

"A skewed focus on security products, hardware and technology often result in more 'security theater' than it does a meaningful, comprehensive school safety strategy," Trump says. "Target hardening may make people feel more emotionally secure, but it doesn't necessarily mean that it will actually make them safer. As a civil litigation expert witness on school safety lawsuits, while the facts and merits of each case vary, a common theme is that they involve allegations of failures of human factors — training, policies, procedures — than they do alleged failures of security hardware and equipment."

Cameras Shouldn't Be the Only Eyes

People are another example of how the most effective security measures often are hiding in plain sight.

"We like to recommend technologies to enhance school safety, but you can't replace that human factor in awareness," says Bob Klausmeyer, education safety coordinator at the Missouri School Boards' Association (MSBA) Center for Education Safety. "First and foremost, it has to be that change in culture to where everybody makes themselves more aware of what's going on."

One example is training faculty and staff about how not to inadvertently undermine technologies and policies.

"You can put lockdown devices in doors, but if somebody props it open, then what good is it?" Klausmeyer says. "They become so reliant upon it [that] they become less aware because they believe that's going to keep them safe, and it doesn't."

Another example is creating an environment that facilitates trust and is thus willing to share information, such as with SROs.

"The first and best line of defense is a well-trained, highly alert staff and student body," Trump says. "The No. 1 way we find out about weapons, kids who have plotted to cause harm and individuals who are considering self-harm is from students who come forward and tell an adult that they trust."

Olathe agrees.

"When they have a trusted adult, they will report things that they've seen online," McMullen says. "We have students send things on to teachers or coaches that they see online at night. We get that to Brent and our safety services division, and they work with local law enforcement. We get things taken care of well before school starts the next day.

"The welcoming environment and the relationship pieces are critical. Without that, you just lose that communication and trust, which is essential to preventing the crisis in the first place."

Faculty, staff and administrators also should be encouraged to say something when they see something.

"I've got five board members that live on social media," says Mark Skvarna, Montebello Unified School District interim superintendent. "They'll say: 'Such and such said this. This group said that.'"

Bring in the Experts

All security/safety technologies and policies share one vulnerability: If people are unwilling or unable to use them, they'll look for ways around them, which can result in even greater risks. To avoid that problem, get input from all types of end users.

"When they're developing emergency operation plans, we recommend that they bring teachers, custodians, everybody in as a part of that development process to get their ideas and their experience," Klausmeyer says. "Make it so it works for everybody because it's not going to be good if they're uncomfortable with it or if it inhibits their jobs."

For example, teachers might ferret out problems with a technology's user interfaces and other aspects that otherwise would remain hidden until after implementation.

"If you're an administrator, and you haven't been in a classroom for 15 years, your teachers might think of something that you hadn't thought about," says Amy Roderick, director of the MSBA's Center for Education Safety.

But others caution against extending the feedback process with a trial, such as a couple of schools or a handful of campus buildings.

"I have been in law enforcement 38 years and director here for 17," says Kevin Grebin, University of Sioux Falls director of campus safety/security. "I learned early on that if we would float out the trial balloon, the process would get delayed and most likely never applied. We do look at other universities for information on new technologies and processes to hopefully see what problems to avoid on our end."

Finally, scrutinize feedback and other input instead of simply incorporating it at face value. That's one lesson learned from Columbia College's panic button implementation.

"Everybody wanted panic buttons on their desk," says Klausmeyer, who was head of campus safety before joining MSBA. "We put a few and we were very careful where we put them. But even so, we received so many false alarms because somebody either knocked them with their knee or just played with them. It became that cry wolf situation: 'Here we go again.'"

Photo: gradyreese / 909472296 Getty Images

Olathe Public Schools have issued CrisisAlert badges to faculty and staff, which they can use to put their entire building on lockdown.

Some districts and colleges also look at other professions for ideas. For example, Montebello's Skvarna consulted his brother, who is the police chief at Burbank Airport.

"I did a lot of research on how they were handling open spaces, entrances, exits, hallways, and what type of locking equipment they use," he says.

Many hospitals require visitors to wear a badge, which enables staff to identify at a glance people who have snuck in. Some districts are applying this model. For example, about four years ago, Olathe implemented the Raptor visitor management system. When visitors check in at the front office, the system scans their driver's license so it can add the person's picture to a badge that they must wear. At the same time, Raptor also runs a check against the sex offender registry list.

"That's another layer of security," McMullen says. "It allows us to catch them on the front end. When a staff member sees an adult in the building that they don't recognize, they need to have a badge on."

Shuffling Priorities

Another balancing act is prioritizing budgets, staff and other resources. For example, shootings are relatively rare, but they also can dominate to the point of distraction.

"It's easier for them to lose focus on other potential threats or hazards that could occur — and might be more likely to occur — than an event like an active shooter," Klausmeyer says. "There are other things as simple as a gas leak or a fire that could be just as devastating. They need to focus on the broad spectrum of potential hazards and threats instead of just one area — even as devastating as that one event could be."

High-profile events can completely upend how a district or college looks at security.

"Funding school safety initiatives and strategies usually isn't number one in the budget," Roderick says. "So then when you respond to situations such as Uvalde, now it's become important, and you're trying to figure out how to fund what you want to do without having previously thought about that.

"Whether a major event triggers that or not, it just needs to be in the normal course of your annual budgeting: what our needs, whether it's perimeter fencing or radios or fire sprinkling systems. If you're doing renovations or adding on to the structure, you've got to think about those safety measures and budget for that."

Similar considerations and challenges apply at the collegiate level.

"The administration will be reactive to such events, but they also are

very supportive of my introduction of preventive measures, too, [such as] increased staffing, collaborating with our Neighborhood Watch groups, increased training, new surveillance techniques," Grebin says.

Even so, it's not necessarily a bad thing when high-profile events push certain upgrades up the priority list. For example, in August, a sex offender scaled a chain-link fence around a Riverside, Calif., elementary school and attempted to assault a student in a restroom. That prompted Montebello to replace its fences with ones that can't be scaled.

"It actually looks better than your standard chain link," Skvarna says. "It doesn't make it look like an institution, yet you can't get over it."

Uvalde also prompted Montebello to make changes — major ones.

"I believe that there was such a lesson with the failures in Texas that it couldn't be ignored," Skvarna says. "I didn't believe it to be an overreaction to consider this. I think it's in our best interest to be proactive, and it's going to cost money: $6 million or $7 million.

"The board did not get involved where they said, 'We want you to do this.' I went to the board and said, 'We need to consider an emergency resolution.'"

One initiative is a complete overhaul of Montebello's surveillance network. That's also an example of how a major event can lead to funding for long-overdue projects that might otherwise continue to languish.

"We had cameras that were very, very old," Skvarna says. "We had ones that weren't working. We just had a hodgepodge of a bunch of junk. All of that is being replaced. We're also adding new cameras where they're needed."

Whether it's new cameras, new fencing or something else, it also helps to educate the public about how their votes directly affect safety.

"We're very fortunate our community supported a bond issue last March," says Olathe's McMullen. "We had four threads to that bond, and one was safety. It has been on every bond we've passed in recent memory, so our community really supports safety measures and initiatives. We've also received some state grants, and we're currently looking at a couple on the national level. I think you have to be creative." «

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If the school district has not conducted a risk and vulnerability assessment, a security consultant can educate the school district on the importance of conducting a threat, risk and vulnerability assessment prior to making any physical security technology changes to their security program.

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Schools Must Assess Risk Prior to **Implementing a Plan**

Creating a strategic security roadmap helps administrators understand critical shortcomings needing to be addressed

by Jim Townzen, PSP, CPP

We are often contacted by school administrators with a Request for Proposal (RFP) to provide professional physical security consulting services. When we review the RFP, we learn that they want to add some type of physical security technology enhancements for their school district. Once we have been selected as the consulting firm for the project, one of the first questions we ask is, "Can we review the most recent threat, risk and vulnerability assessment?"

Often, we learn that the school district has not conducted a threat, risk and vulnerability assessment to ascertain what the real threats, risks and vulnerabilities are to their district. In other words, we are being asked to specify and design physical security technologies for their district without understanding first what risks we are mitigating. This process of not knowing what the true needs of the school district are can be expensive for the district when poor decisions are made and oftentimes does not address the real

issues for "we do not know what we do not know" at this point. Oftentimes, school districts are reacting to public opinion to do "something quickly" following a recent catastrophic event. The Uvalde School District incident in Uvalde, Texas is a recent example.

If the school district has not conducted a risk and vulnerability assessment, we do our best to educate our contact with the school district on the importance of conducting a threat, risk and vulnerability assessment prior to making any physical security technology changes to their security program. All too often we are told that the money set aside for the physical security technology enhancements does not include funding for a district-wide threat, risk and vulnerability assessment. We are usually told that an assessment has already been conducted by the school administration, and they just need someone to assist them in the creation of an RFP, hire a contractor, and project manage the installation and testing of the systems. In our thirty-plus years in this industry, we have rarely seen this scenario turn out well.

Why should a school district conduct a district-wide threat, risk and vulnerability assessment prior to making changes to their existing security program?

A threat, risk and vulnerability assessment is an evaluation by a physical security professional of the district's current security program. This process includes a careful and methodical process to identify the district's risks through a thorough fact-finding and evaluation process that includes the identification of the district's tangible and intangible assets including people (in the eyes of the public, particularly the parents, the number one asset are the children and the families.), facilities, equipment, intellectual, critical issues, applicable standards and reputation as a community resource, as well as the development of mitigation strategies that are appropriate for the district's culture and capabilities and the risks within their environment.

The consultant will review the district's security program to identify those threats, risks and vulnerabilities faced by the district that are either not optimally addressed or addressed at all. Once these risks are identified, the consultant will analyze the potential effect of these threats and exploited vulnerabilities in terms of likelihood of occurrence and severity of impact to determine and prioritize the most effective actions for mitigating risk. Other critical aspects of the assessment process include taking a holistic approach to evaluate the entire program from security technologies, the people involved in keeping

the district safe, and the processes/training in place to ensure everyone knows their roles and responsibilities in emergency situations.

What should your school district expect during an assessment and what involvement will be required from your staff?

- The firm that is selected will take a deep dive into your existing security policies and procedures looking for any improvements that can be made based on current best practices.
- Stakeholder interviews are very important in understanding if security practices currently in place are working/not working as well as get a firsthand understanding of the real-life implementation of district security policies.
- Physical review of the schools before, during and after school hours to get an understanding of circulation patterns (people and vehicles) from the outermost part of school property into the classroom.

The assessment team will review the physical security technologies in place to see what is in use and what gaps may be inherent in the design of the system and if there are any opportunities for improvement. Systems that would be reviewed include:

- Electronic Access Control
- Visitor Management
- Video Surveillance
- Intrusion Detection
- Mass Notification
- Metal Detection
- Weapons Detection

Last, but certainly not least, is a thorough review of the property to assess lighting, sightlines, perimeters, areas of concealment, remoteness, accessibility, surrounding properties, fencing and public access after school hours.

What is the value of a risk and vulnerability assessment for your school district?

Plain and simple – it serves as a roadmap. Once the team has conducted a thorough assessment, the district will receive a report that goes into detail identifying the security gaps found and recommendations on how to mitigate those gaps. The assessment report provides a holistic view of the district's entire current security program and not just one aspect of the program. A successful security program consists of the right mix of people, policy, and technology.

> A threat, risk and vulnerability assessment are an evaluation by a physical security professional of the district's current security program.

The road map will prioritize the recommendations to help the district determine short-term, mid-term and long-term planning needs that can be incorporated into their overall district master plan. Although it is tempting to use internal staff, local law enforcement, parents, or an online tool to conduct an assessment of the security program, the benefit of using a firm that does this every day and has the expert knowledge on how to best mitigate risk in a school environment brings tremendous benefit to the district.

Conclusion

By reacting to pressure and not taking a holistic view of your security program you are, albeit inadvertently, doing a disservice to students, staff, parents and visitors who enter one of your campus buildings. A security program is a multi-dimensional approach to addressing your known threats, risks and vulnerabilities so without conducting a threat, risk and vulnerability assessment you're not looking at the entire picture.

Invest in a professional security consulting firm with experience commensurate with your school district. Pay close attention to the credentials of their team and make sure you hire a firm that specializes in physical security consulting. Keep your threat, risk and vulnerability assessment report separate from your facility master planning as you may have information in the report that needs to remain confidential for the protection of students, staff, and visitors. Make sure that any plans that require construction or construction enhancements are shared with the architect who is implementing your facility master plan so that they can be executed as part of other budget items in the facility master plan.

As administrators, be honest and open with your assessors and encourage your staff to do the same. Bringing outsiders into your 'house' and sharing your known vulnerabilities is and can be uncomfortable but keep in mind the more honest you are the better solutions your assessors can provide you with mitigation methods and best practices. It is in your best interest that you use an outside firm to conduct this assessment as it will bring merit to those items you have been bringing up for years, but it also could bring to light other items of which you were unaware.

In conclusion threat, risk and vulnerability assessments are a vital part of every security program and should be used to guide your security program as well as your security budget. Hire an experienced firm, be open and honest, integrate your security plan into your facility master plan as necessary, and conduct these assessments at regular intervals every three to five years. «

About the author: *Jim Townzen, PSP, CPP is a Staff Consultant for Security Risk Management Consultants, LLC in Ohio.*

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School Security INSIGHTS:
Project Planning and Implementation

K-12 security and technology experts weigh in on strategic cybersecurity planning and organization **By Katherine R. Reeves**

The best place to start a security program is to seek out help from others for planning. This can mean professionals from other districts, security integrators as well as academics, and IT from within the district.

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Have you ever gotten "Google Overload"? Have you ever searched for a symptom and found out that you're dying of a real disease? If you've ever tried searching online for advice on security planning, your experience was most similar. The best advice always comes directly from industry professionals. Two K-12 security experts were asked to give advice on starting a security plan from the ground up.

We talked to Chris Montgomery, who is the Network Services Manager for Tomball, Texas ISD and has been with the school district for more than 26 years, along with Troy Neal, currently the Executive Director of Cybersecurity and Operations for Spring Branch, Texas ISD. Neal has worked as a cybersecurity professional in the K-12 school sector for more than 13 years.

> The first step to building a security plan is to figure out the scope of your project.

If a new school district approached you, how would you advise them on the best way to start a security program?

Chris Montgomery: "You need a scope. Realize that you are not a security professional and that you will need help to develop a comprehensive security program. Reach out to other local school districts and ask about systems and partners. Reach out to your local law enforcement as they often have resources dedicated to helping develop these programs. Reach out to the other departments and your administration to ensure cohesion and integration with the different parts and systems in the plan. A good partner will help you determine your technology needs, such as camera types, video storage, switching ports, and bandwidth

requirements. A good partner will also assist with knowledge of any federal/state money that can be used to implement your plans."

Troy Neal: "You have to have a philosophy first. Take physical security and cameras in general. What are you trying to solve? Is it just building security? Physical security, technology, academics, and operations all have to be on the same page and discuss it together versus one person making all the decisions. That's where a lot of failures happen between academics and technology. We should be true partners. From there, then, what's your strategy? How do you want to get there? What are your long-term costs? Can you scale it? Can you manage it? Who's going to own it? The biggest problem we have in technology alone is, "Who owns it?" If somebody doesn't own it, it's always going to fail. Who's your executive sponsor? It's true project management from the start. All of our projects are done by a project charter. Bring in industry experts. Talk to other school districts and find out what they do. Find out what fits the organization and then plan where you want to go with it. Size means a lot. Run it like an enterprise. From a technology and security standpoint, you're never in the way of things. And I think that's where it starts."

The best place to start a security program is to seek out help from others for planning. This can mean professionals from other districts, security integrators as well as academics, and IT from within the district. All parties involved should be on the same page and meet regularly to ensure the security program is meeting the needs of everyone. The next step is working within the budget. Funding for K-12 is limited, so accounting for needs versus wants also requires the help of everyone at the table.

> Storage upgrade requirements and yearly pricing increases in subscription-based software are limited by the strict budgets of K-12 schools.

If money were no object, how would you build out your security plan and in what order would you implement it?

Montgomery: "Develop a thorough scope that will solve your security needs. Choose a partner that understands your needs and has resources available to assist you. Determine which systems you will use to solve your needs and build an infrastructure that will support them now and in the future."

Neal: You've got to look at local policy and legal policy because we have to follow all of that. You have state laws and federal laws. You have to figure out those parameters first. What are your basics? Cameras, you want to be able to see who comes in and out. You want people to badge in and out. Fire alarms, all the mandatory stuff. Then, how do you start tying in other things? The problem in K-12 is that there are certain systems we have to use, whether we like them or not. And some of those are not built to an enterprise standard. They don't develop it, they don't have the life cycle and so you're dealing with some of this great-looking software, but you can't get data out of it. You can't move data. Data drives everything; same with security. The more data points I have, the better holistic view I have of the organization. Our biggest challenge in K-12 is money. Especially with so much of this cloud-based software. We are not funded to pay for that. The subscription-based software is the hardest thing for me to pay for because that comes from general funds. In schools, 85% of your budget is spent on salaries. It's people which are the most important piece of education. How do you find those mechanisms?"

The first step to building a security plan is to figure out the scope of your project. Then verify the legal requirements. Next, move to planning for the basics like cameras, access control and fire alarms. Make decisions now that will solve your current needs, but also continue to work in the future without compromising your philosophy.

What changes have you seen over the last few years after security upgrades and integration?

Montgomery: "The number of resources used by our security devices (storage, bandwidth) has increased greatly on a scale that we have found ourselves unprepared for."

Neal: "A lot of security software has gone cloud-based and subscription-based. This is where schools are really struggling. The way our budget cycles and planning is, we start budget conversations in October for the next school year. The biggest problem is the cloud part of it. Second, is the complexity of the software. You need a certain level of talent to get people to be able to own it and manage it. If you don't have a philosophy or roadmap, someone is going to want this shiny object. Then it's this next siloed system that you've got to manage and maintain. So, you start building out these cool things, but then they become despaired again. Ideally, there would be a holistic integrated kind of system

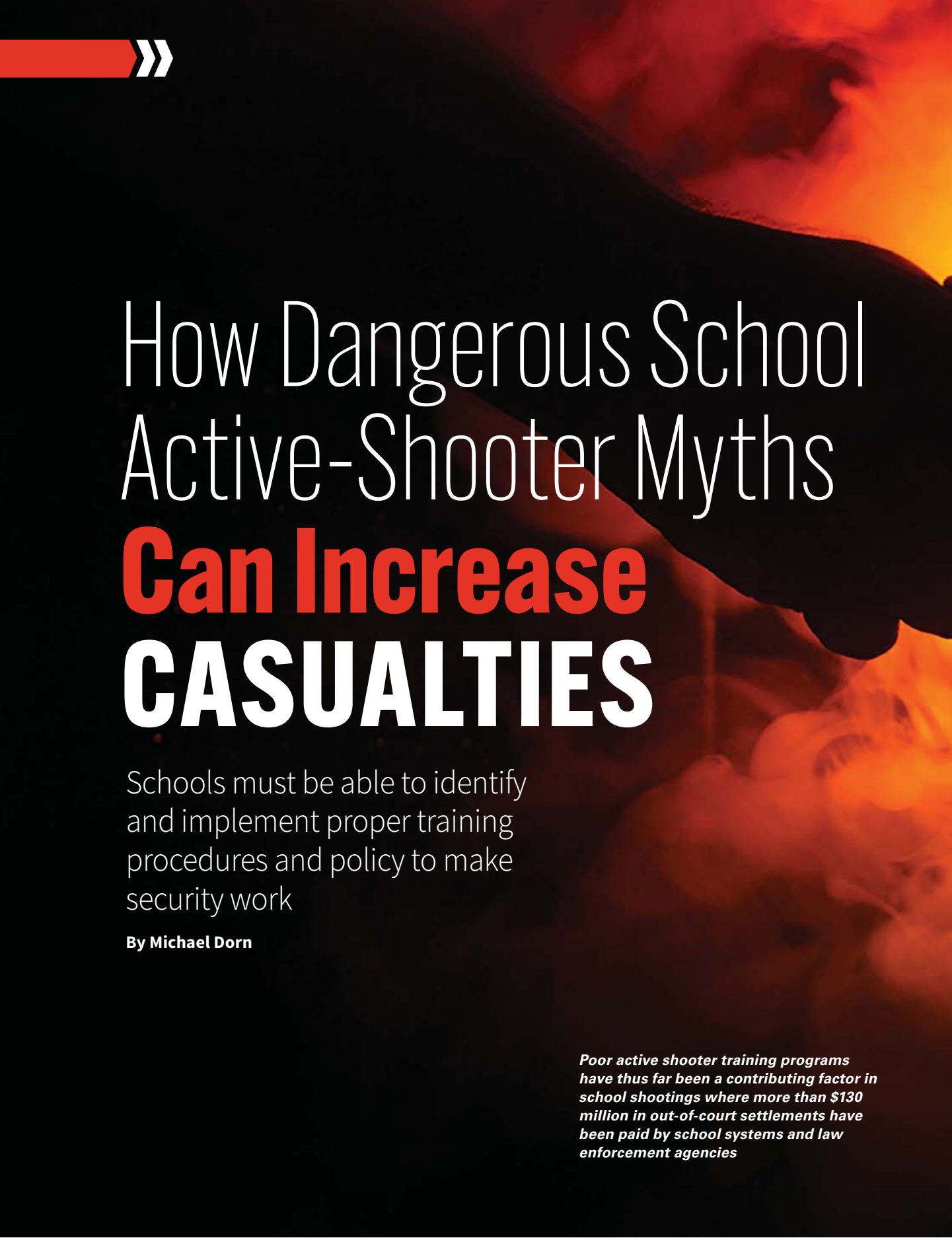
from the start. You have to have a different model for us to pay for things, especially in regard to the licensing for K-12."

"In regard to changes in physical security, a lot has helped because a lot of it now talks together. The hurt is, they still don't have industry standards. Just like we update standards in education and in the world, you've got to have very basic standards that things talk to one another. Especially in physical security, things don't talk to each other by design, and that's a problem. We need industry standards that force organizations and companies to say, "look you need to be able to talk based on this protocol." So, then I can take this information and use it in another system. Going back to data and physical security, the most important part is protecting the entrance of a building and ensuring there is no unwanted person or thing coming through a building. Access control technology and simple things like badging and turning off alarms have all grown. In schools, a lot of them are not there yet. You've got schools built in the '50s and up. The cost to redo all of this even from a cabling standpoint is a lot. Standards are the number one thing. Just build it to an industry standard that's then safe and secure."

Planning, and planning early is of the utmost importance when considering upgrades in security. Storage upgrade requirements and yearly pricing increases in subscription-based software are limited by the strict budgets of K-12 schools. Avoid getting caught up in buying software that can cost more money than originally budgeted for. Although many improvements have been made, more efforts should be made to push for industry standards in physical security that would benefit everyone.

Schools have always been the place where members of the community come together to collectively educate and protect children, and their futures. Having a plan for creating a safe school starts with designing and building out a security plan. Planning should involve communities coming together from local school districts, law enforcement agencies and security integrators alike. When these groups can have vulnerable, productive conversations, real changes can be made for everyone's benefit. Involving voices from many spheres to share their successes, and more importantly, failures will only strengthen security in schools to protect our future generations to come. Now go, be vulnerable and reach out; build the security program your school needs. «

About the author:
Katherine R. Reeves is the Marketing and Communications Coordinator for Preferred Technologies, LLC. Preferred Technologies Inc., Houston, is a physical security and data networking company that offers the latest expertise and credentials to fully address the changing world of security system specifications.



How Dangerous School Active-Shooter Myths **Can Increase CASUALTIES**

Schools must be able to identify and implement proper training procedures and policy to make security work

By Michael Dorn

Poor active shooter training programs have thus far been a contributing factor in school shootings where more than $130 million in out-of-court settlements have been paid by school systems and law enforcement agencies

Upon hearing the instructions to lock down, a teacher and students move briskly to place chairs, desks and tables in front of the door to their classroom to prevent an active shooter from forcing entry to their classroom. Next, the students and teacher arm themselves with books and other objects to throw at the attacker's face and prepare to "swarm" the attacker. Sadly, this is not just a hypothetical example of how some schools with the best of intentions are spending precious time, energy and budget to increase rather than decrease the risk of harm to students and staff.

The various active shooter training programs that teach these types of approaches that have increased casualties in multiple school shootings provide but one example of the types of popular but dangerous approaches that are causing increased fatalities in U.S. K-12 schools. In fact, these types of active shooter training programs have thus far been a contributing factor in school shootings where more than $130 million in out-of-court settlements have been paid by school systems and law enforcement agencies – in just a few of the school shootings our center's analysts have worked - with litigation for other shootings ongoing.

Unfortunately, our experience providing official post-incident assistance for 23 active assailant and targeted shootings in K-12 schools in three countries, show that actions such as these clearly increase rather than decrease the danger to students and staff in most K-12 school shootings. But how could these alleged "best practice" approaches increase rather than decrease danger?

Know The Drill!

For starters, having timed well-practiced teachers and high school students who barricade in this fashion, we have found that it takes an average of more than 120 seconds to accomplish the above actions, which keeps occupants in an exposed position for longer periods than it took the attacker at Marjorie-Stoneman Douglas High School to shoot his first 24 victims. In fact, the majority of the victims who have been shot in the 23 attacks we have

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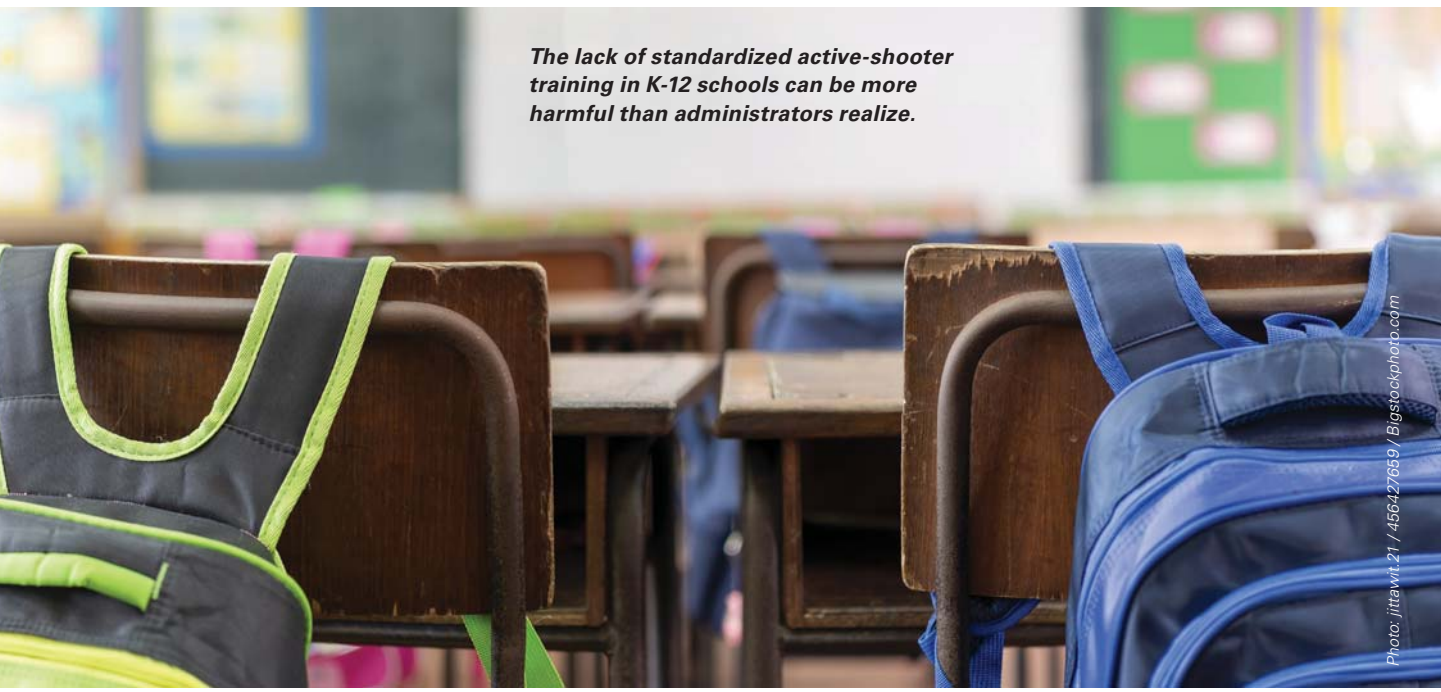

The lack of standardized active-shooter training in K-12 schools can be more harmful than administrators realize.

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worked on were shot in less than 90 seconds with many victims shot within the first seven to 43 seconds of a gun being observed.

The reality is that there has only been one K-12 school shooting in the United States where an attacker has forced entry into a locked classroom and subsequently killed occupants. In fact, the approaches taught in several of the more popular active shooter training programs fail to mitigate predominant attack patterns. Even though the "mega study" of school shootings recently conducted by the National Institute of Justice found that more than 50% of the people shot on K-12 school campuses around the country in the last 25 years, more than 650 that occurred were *outdoors* when they were shot, these training programs fail to address the far more important reverse evacuation tactics.

This severe training disconnect resulted in a catastrophic failure in a shooting on an elementary playground that personnel from our center observed as an expert witnesses. The litigation following this tragedy resulted in five sizeable out-of-court settlements in state and federal jurisdictions. There are no easy answers to this complex problem in a nation with more students in school each day than the combined populations of Canada and Australia. Continuing to seek simple solutions to complex and challenging societal problems that lead to on-campus shooting ensure that more tragedies will occur unless realistic active-shooter strategies are embraced.

Misguided Active Shooter Training and Security Technology Implementation

Flawed active shooter training programs are not the only critical problem seen from well-intentioned, but misguided school safety efforts. Oversimplified and canned emergency preparedness plans, unreliable emergency phone apps, dangerous emergency door locking devices, gun detection systems that do not work as advertised, incredibly expensive wearable panic buttons that are prone to malfunction and an array of other unsafe solutions have created havoc on school safety as fear-based mitigation methods have become more popular.

Our staff has also noticed school officials who are implementing security technologies that exceed the fiscal and staff resources over the long term. One extremely expensive and unreliable wearable duress button system incurs a yearly cost close to the initial installation cost. Most school districts or non-public schools will be unable to maintain the system over time. Many schools are less safe because precious limited time, energy and budget are being expended on solutions that are unreliable or fail to provide a viable benefit in relation to cost and staff time.

The time, energy and budget wasted on marginal types of security and safety solutions may also lead to preventable serious injuries and fatalities. Technology solutions that don't work are increasingly being used as powerful objective evidence against school officials in litigation. Common examples of solutions that fail to address significant risks are as simple as improving student supervision with training and electronic hall-pass systems or enhanced pre-employment screening and properly confronting traffic safety in parking lots. Other

boxes that can be checked include proper implementation of student threat assessment and management processes, use of effective self-harm prevention measures, upgrades to facilitate more rapid reverse evacuation from outdoor areas (if it is not safer to move away from the school in a particular event) and improving internal and internal public address capabilities.

Misconceptions

One of the most critical observations derived from our more than seven decades working full-time in the field is that many of the perceptions surrounding school safety are seriously out of balance with reality. These misconceptions have been systemic since the tragic shooting at Columbine High School in 1999 and have become even more pervasive with every inaccurately publicized mass casualty attack.

Much too often, the severe disconnect between perceptions and facts that have given birth to the common refrain that there is an "epidemic of school shootings" in the United States, is an objectively false descriptor that can have serious ramifications in litigation if relied upon for determining school safety priorities. An "epidemic" is a public health term that defines a dramatic and rapid increase in a public safety threat over a short period of time. To be historically accurate, we would require an increase of thousands of school shootings in one or two school years to be truly considered a health crisis. This is not the case and among the reasons, the public health community has not declared school shootings to be an epidemic.

Much of the discussion and debate about reducing school violence oversimplifies complex societal problems. Comprehensive, locally tailored, assessment based and data-driven solutions to school safety may not make good media sound bites or be easy to implement but they are the most efficient way to create safe, welcoming and effective schools. In a nation with more quality free training, assessment and school safety planning tools than any place on earth, American school and public safety officials should not be negligent in utilizing them to develop practical and sustainable school safety strategies. «

> The reality is that there has only been one K-12 school shooting in the United States where an attacker has forced entry into a locked classroom and subsequently killed occupants.

About the author: The author of 28 books in his field, Michael Dorn serves as the Executive Director of Safe Havens International, the world's largest K12 school safety center. Michael's work has taken him to eleven countries during his 41-year career in the campus safety field.

What Can We Do to Fix a Broken School Security Blueprint?

By Steve Lasky

I have been writing about school shootings for more than two decades. As heinous and bone-crushing as each of them are, the most recent (up until this writing that is) in Uvalde, Texas seems to have shaken most security professionals to the core. Count me among them. The epic failure of local and state law enforcement during and after the shooting to address the threat, the utter confusion of school administrators to assess and react, combined with the shocking lack of basic security technology countermeasures created the perfect storm of chaos, coverup and carnage.

Over the years there has evolved a dual path of thinking related to school shootings, active-shooter protocols and preemptive security. One is couched in training and response and the other embraces technology implementation. My assessment is that both are critical to mitigating campus crime and violence, but there must be a symbiotic relationship between policy and hardware.

In the wake of the Uvalde shootings, this past June, Carnegie Mellon University's Biometrics Center hosted an online forum of experts in school security, law and technology for a special "School Safety Emergency Summit." (https://vimeo.com/723133604/3e34e1c42c). While one of the technology sponsors discussed the benefits of facial recognition as a lead element in a burgeoning AI-based technology environment for school and campus security solutions, veteran security professionals like Guy Grace, Vice-Chairman of the Partner Alliance for Safer Schools and a Unified K12 Life Safety consultant, was a bit more holistic.

"There is tremendous aftermath for years after a shooting. Uvalde is going to be dealing with this for the rest of their life. It's a cascading effect and it's all about how we mitigate that. Our mitigation is an all-hazards-type response [including] technologies that we use to support the response but also to support the aftermath of how we deal with these situations. Technology that empowers, it's a tool that we use to deal with the aftermath of these situations. It's multi-faceted when we're dealing with these emergencies. The technology measures… are there to detect, deter and deny… there are other security components that we need to have in place to nullify the effects or impact of a failure of one component. We have to be comprehensive when we're putting in these technologies not to just address an active threat situation, so we have to be thinking in an all-hazards sense in schools," stresses Grace.

Michael Matranga, the CEO of M6 Global security consultancy, a former U.S. Secret Service agent and a past director of security for Texas City ISD was adamant that the first responder to these types of events is not necessarily the law enforcement officer or the medical professional

"It's the person in the classroom right next door or in the hallway; we have to empower them for self-sustainability because we know that seconds matter in all of these things, whether it be in a school, whether it be in a grocery store, or in a shopping mall," he says.

Grace continues: "Everything we implement and purchase for schools, they are tools. They are going to be a unified life and safety system. The most important piece is going to be the people and how do the people use those tools that we as security practitioners provide to our school districts and our communities to protect them."

Carnegie Mellon Bossa Nova Robotics Professor of Artificial Intelligence, Electrical and Computer Engineering Director Marios Savvides, Ph.D., provided an insight into the value of video surveillance used to help the FBI apprehend the Boston Marathon terrorist bombers. He laments that the data supplied was after-the-fact information and that today's goals are to prevent such incidents before they occur.

"While the killings are unacceptable no matter what you term them and are an unspeakable tragedy for the impacted families and communities, we have yet to acknowledge and clearly state: the senseless murder of Americans going about their daily lives should be addressed with the same focused and coordinated determination that our national security enterprise exhibits in preventing transnational and domestic terrorist attacks on the homeland. Let us not forget, the whole concept of homeland security gained prominence after 9/11 because of the need to protect Americans against the terror of attack as we went to work, traveled, and lived our lives," says Dr. Savvides.

He concludes: "It has been 10 years since the carnage at Sandy Hook elementary school. Following that mass shooting… we were part of the interagency team working at the White House, contributing to the President's plan to protect our children and our communities by reducing gun violence. Sadly, a decade later, mass shootings have increased exponentially. We have reached a point where this epidemic needs to be addressed as a significant risk to the homeland." «

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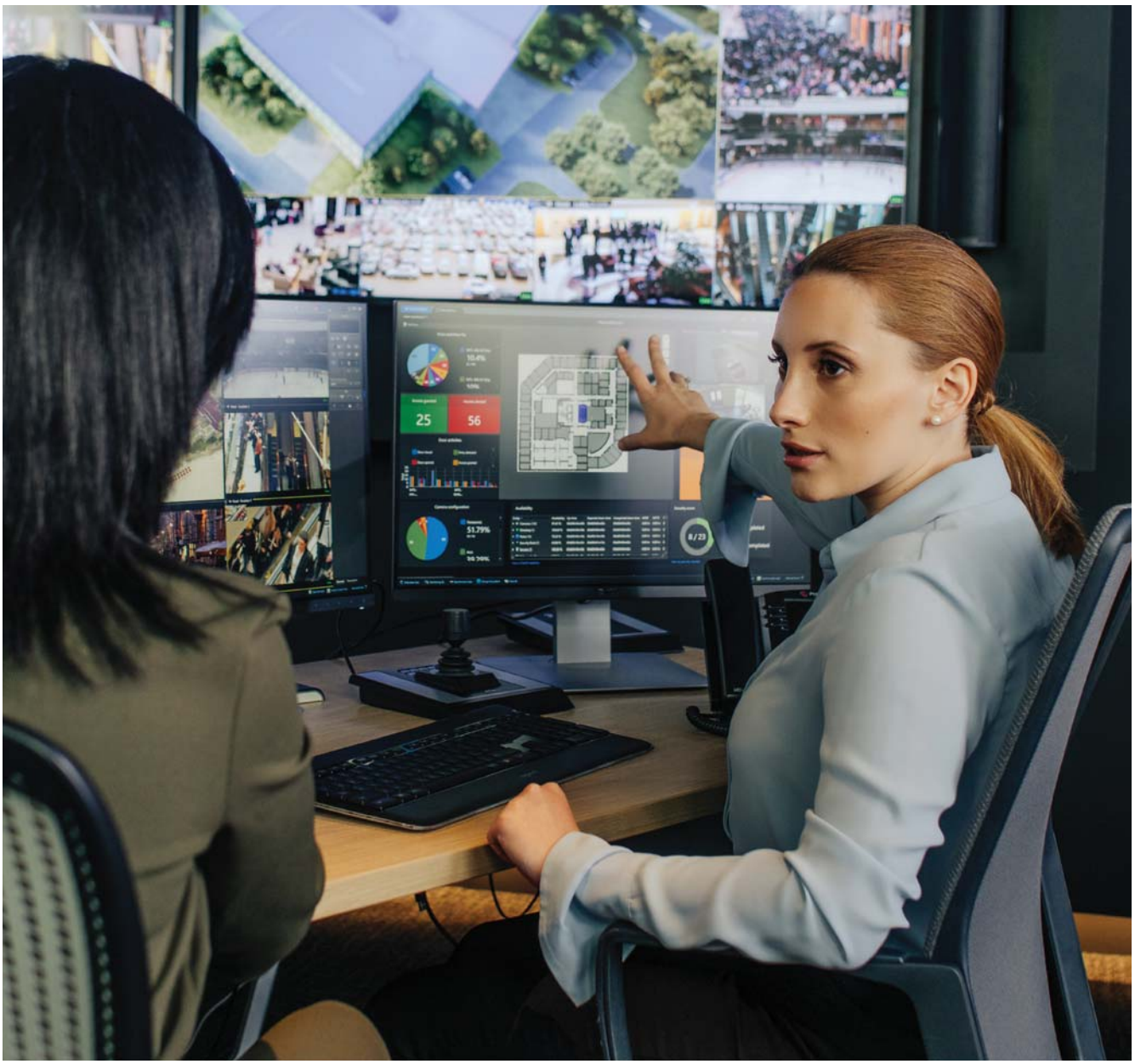

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