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JULY/AUGUST 2020 | VOLUME 23, NUMBER 5



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cover image

Latitude Dining Commons, UC Davis, Calif.

Photo Credit: Kyle Jeffers

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Stantec recently welcomed new Sector Development Leader **Kandice Lee** to its growing Science & Technology (S&T) team. Lee will lead business development strategy while providing account management to ensure design excellence and delivery for the firm's laboratory and technology work. She has more than 18 years of experience in strategic planning and leading high-level business development initiatives and account management. She belongs to the International Society of Pharmaceutical Engineers (ISPE), the Northern California chapter of International Institute for Sustainable Laboratories (I2SL), and the Design Build Institute of America.



International technology, consulting and engineering firm **Ross & Baruzzini** has named veteran engineer **Brian Grimes** office director for its regional office in Indianapolis. Grimes joined Ross & Baruzzini in 2019 as leader of the Higher Education & Research market for the Indianapolis region. He offers specialized expertise in phased demolition, renovation, and replacement of mechanical systems in higher education facilities, including teaching and research labs, classroom buildings, student housing, dining and athletic venues. Grimes holds a bachelor's of science in mechanical engineering from Purdue University. He is a registered professional engineer.



VLK Architects has announced that **Sarah Gardner** AIA, NCARB, has been promoted to the position of architecture director for the Fort Worth, Texas, office; she has also been promoted to associate. Gardner holds a Bachelor of Science in Architectural Studies and a Master of Architecture from Louisiana Tech. She has worked on many of VLK's most notable projects such as Arlington ISD's Dan Dipert Career and Technical Center and the district's Agricultural Science Center, Allen ISD's STEAM Center, Denton ISD's New Denton High School as well as Guyer High School Athletic Additions and Renovations project, and Sherman ISD's new Sherman High School.



Chicago-based **Wight & Company** recently announced that **Scott Steffes**, AIA, has joined the architecture, engineering and construction firm as a project director, leading integrated teams on large-scale multi-sector projects. He was most recently an associate director/studio head at the design firm Skidmore, Owings & Merrill, where he played a key role in high-profile mixed-use, educational, commercial and cultural projects across the globe. A graduate of Iowa State University with a degree in architecture, Steffes is also an active member of the American Institute of Architects, U.S. Green Buildings Council and the National Council of Architectural Registration Board.



Quattrocchi Kwok Architects has named **Joel Williams** to head its Pleasanton, Calif., office as project manager and studio lead. In his previous position as project manager at LCA Architects, Williams oversaw multiphase projects in the East Bay, including modernization and new construction at Oakland's Fremont High School. His 15 years of experience — including over a decade specializing in public and private school projects — range in scale from university master plans to small classroom renovations. His design approach integrates recycled and renewable resource strategies with innovative structural solutions to bring high-performance, sustainable learning spaces to life.



Photo Credit: Dewberry

Oklahoma State University Starts Build on New \$50 Million Academic Facility

TULSA, Okla.—Construction has begun on the new \$50 million North Academic Building at Oklahoma State University's (OSU) Center for Health Sciences downtown campus in Tulsa.

With a completion date slated for fall 2022, Dewberry is the architect on the impressive project. Flintco is the construction manager.

In 2018, Dewberry completed initial programming and conceptual design for the new North Academic Building and the Office of the Chief Medical Examiner (ME). By relocating and upgrading services from multiple buildings currently in the center of campus, this new building is the first phase of a master plan focused on health and advancement in research and education.

"The \$50 million design of the ME autopsy laboratory has raised the bar internationally for safety, workflow efficiency, and evidence preservation. When completed, this office will be among the most technologically advanced in the world specific to advanced postmortem diagnostic imaging," commented Dewberry Principal and Project Manager Bruce Henley, AIA. "As OSU continues to provide top-tier education and training for students across a variety of subjects, the Center for Health

Sciences has an opportunity to set the university apart as a nationally ranked health care training institution."

This new building will also house the Center for Rural Health, Center for Health Systems Innovation, and dedicated anatomy and neuro-anatomy laboratories.

Additional amenities will include classroom, conference, study, and administration areas. The firm's designs incorporate a similar material palette in the interior and exterior as the A.R. and Marylouise Tandy Medical Academic Building, completed in 2017, and expand the aesthetic connecting the new and older parts of the campus.

Once complete, the ME office will be one of just a few nationally that is directly and physically connected with an academic health center.

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Managing Capital Construction project and program budgets at schools is immensely challenging. The issues range from overcoming antiquated spreadsheet tools to juggling countless vendors and contracts to order to comply with district and stakeholder requirements. Add the balancing act of multiple funding sources, and it's easy to see how even the savviest project manager can become overwhelmed.

Of course, there is expensive software available to manage all the aspects of a project, and these typically include budget management capabilities as well. However, these tools are generally designed for big general contracting firms—and as they're designed to be all-in-one solutions, are very complex tools. Include the cost and commitment of system set-up and staff training, and these products are simply impractical for many projects.

Fortunately, there is a powerful and affordable solution that is laser-focused on solving the project budget headaches that schools, school districts, owner's reps and developers face every day when managing school construction project budgets. It is a tool that has been used to successfully manage over \$1 billion in school capital project spend but is still unknown to most across the industry. Introducing budget4cast. This secure, cloud-based app is designed to do one thing very well, and that is managing your construction projects. Starting at just \$49 per month per project, it is extremely friendly to the pocketbook. Yet, budget4cast provides you all the features you need to make you and your team more efficient in running your project, as well as providing great reporting to your stakeholders.

The Staff at [a rapidly growing Colorado School District's] Construction Management office, myself included, were spending many hours every week, managing our various projects. We had just passed a 248-million-dollar bond, and we were using Excel spreadsheets. In addition to the data entry efforts, I was also spending countless hours managing filters and macros, in an attempt to make the process more effective.

We knew we needed to implement something more efficient and user friendly. The District Construction Management/ Finance Department started down the path of purchasing a software program. We did our research and found a few options. Several programs seemed to be very complex, and had more functions than what we truly needed. Then we were introduced to budget4cast. We fell in love with the program, it provided everything we were looking for.

— Maribel M

With budget4cast, you can easily set up the budget codes and budgets for your



project, enter contracts, track Change Requests and Approved Changes, and track invoices. You can filter and report by date, vendor, budget code, etc. Not only can you provide detailed and professional reports to your clients, you can also grant them direct access to top-level data, with their own restricted-access accounts. (budget4cast provides for **unlimited data** and **unlimited users**, for the same low monthly subscription.)

In our 35 years of overseeing the design and construction of schools, we have now found the perfect solution for tracking all-inclusive budgets from inception to closeout. I would highly recommend budget4cast to any owner in need of accurate, concise tracking of budgets including hard costs, soft cost and contingencies.

— Michael Hall, Founding Partner, Inline Management

Even beyond the great project budget management features, budget4cast provides very powerful Cash Flow planning and management tools. Every part of your project's budget can have its own cash flow plan. Reporting at the total project and budget group level is fast and easy. And, of course, with bond-funded projects, the ability to accurately plan cash flow, and reserve and invest monies not needed until later in the project, is HUGE.

As if that were not enough functionality for such a small price, budget4cast also has the capability to plan, track, and report on an unlimited number of Funding Sources. This can be critical when managing a school district project, as the funding may be a combination of taxpayer-backed bonds, facility management budgets, General Operating Fund monies, etc. With budget4cast, it is fast and easy to associate budgets, forecasted, and actual costs, to each particular Funding Source.

budget4cast took our company from 90-day-old information to real time budget to actual and forecasting data at our fingertips. The ability to run reports on any budget line item at the click of a button and send that to our clients within minutes has not only saved our company time and money, but has increased our reputation as well.

— Lana Nicoles, VP Operations & Finance, at Highmark Development

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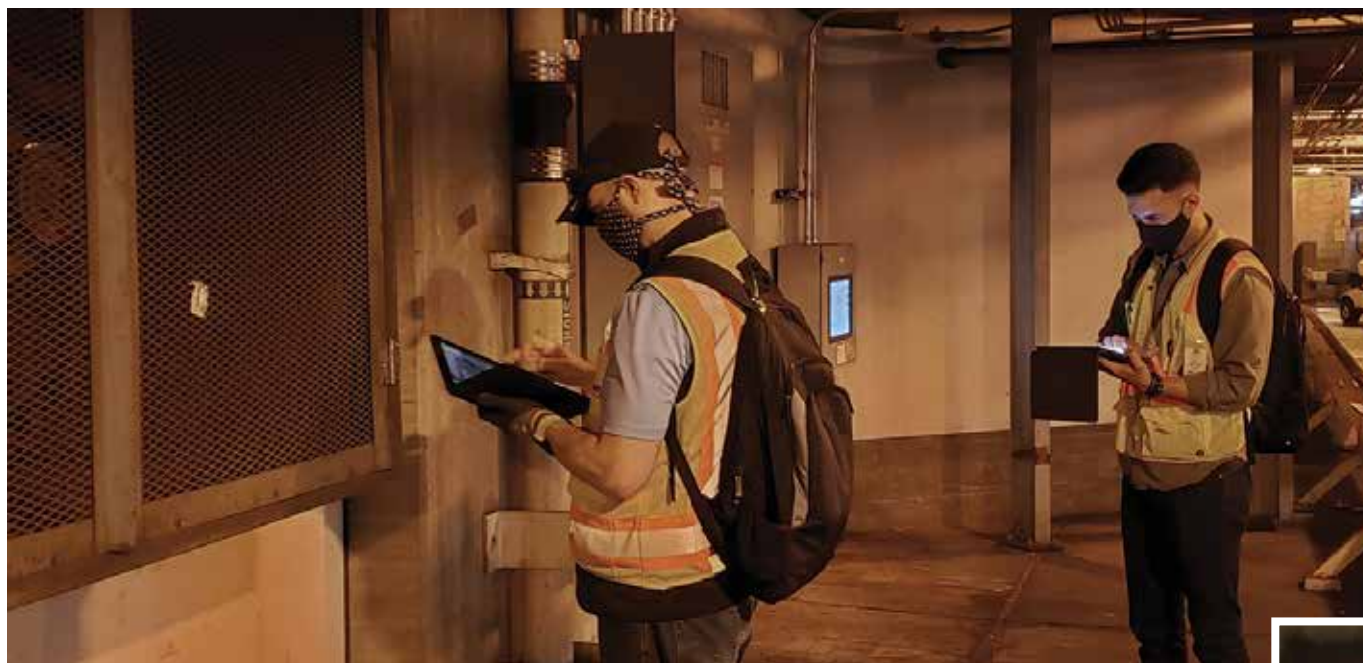


Photo Credit (all): McKinstry

Assessing mechanical systems and temperature controls are crucial steps in preparing a school campus to safely host students and staff.

Safely Reopening Today's School Facilities

By Leslie Larocque

As administrators develop plans for students to return to school, the safe operation of a building is at the center of this discussion. Decision makers face tough questions around steps they can take to accommodate social distancing requirements and reduce the spread of airborne illnesses such as COVID-19. How will school facilities continue to promote educational success and contribute to overall student, teacher and staff wellness, while recognizing that classroom instruction may never be the same? Moreover, with many school districts facing steep declines in revenue, administrators want to understand how new sanitation and social distancing requirements will impact budgets.

These are all great questions, especially since many buildings have been shut down or operating in a limited capacity for several months now. Staff will need to inspect mechanical, temperature and water systems before occupants are cleared to safely return. Systems not placed back in a mode that meets initial design intent may be at risk of equipment failure, false system reporting, indoor air quality (IAQ) issues or increased maintenance costs.

The Importance of IAQ

IAQ standards typically involve systems that impact indoor air temperature and humidity, filtration, and building pressure. IAQ will remain a hot topic – and for good reason. If a school is perceived as unhealthy or unsafe, fear will creep in and confidence in the decisions made to protect students, teachers and staff can deteriorate quickly.

The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) recently reported that “ventilation and filtration provided by heating, ventilation and air-conditioning systems can reduce the airborne concentration of SARS-CoV-2 and thus the risk of transmission through the air.” School districts should prioritize the regular cleaning and replacement of media filters. While clogged

filters will not promote the spread of viruses, they will compromise IAQ, shorten the life of the ventilation system over time, and decrease system performance.

School facility teams should get in the habit of documenting filter changes, both in writing and with pictures. Filters with a minimum MERV 8 rating should be used; however, those with MERV 17 ratings or higher will remove at least 99.97% of all particles less than .03 mm in diameter (which can include airborne viruses).

Mechanical Systems

Mechanical systems consist of condenser coils, evaporators, pumps, fan motors, and outdoor air and return dampers, to name just a few. Prior to turning on mechanical systems, a visual inspection is necessary to identify equipment that requires cleaning or repair. An assessment can also help to surface any blocked vents, troubling noises, vibrations or odors that require further diagnosis; however, some equipment may require a more focused eye. For example, look for leakage and cross contamination on heat recovery wheels. In addition, drain pans and condensate drains should be clear from obstruction and standing



Larocque

water, while cooling towers and loops should receive chemical treatment as required.

We recommend implementing strategies that limit moisture accumulation and the potential for mold growth that can result from any water filtration of condensation within buildings. Balance is needed to limit the growth of pathogens and maintain relative humidity levels conducive to occupant health and well-being.

Temperature Controls

After assessing mechanical systems, the evaluation of temperature controls and control strategies can drive efficiencies, reduce maintenance requirements,

Prior to turning on mechanical systems, a visual inspection is necessary to identify equipment that requires cleaning or repair.

and decrease operating costs. Repair or replacement of old or non-functioning temperature controls, whether pneumatic, electric or digital, is often one of the most impactful changes a facility can make.

In preparation for the first day back at school, teams should evaluate temporary temperature and humidity setpoints against future application needs. Schools with air handling units should ensure controls are programmed to have a 100% outside air flush strategy prior to occupancy. Operable windows can complement this effort and increase the outdoor air flow. It will be important to incorporate this variable without sacrificing occupant comfort but still addressing concerns about airborne illnesses. Schools with unit ventilators and simple controls can manually flush the system over time.

Other control schedules should also be considered, such as disabling demand control strategies and keeping outside air dampers open 24/7 at minimum speed. In addition, economizers can be used to control the regular change of air in the building.

Water Systems

Finally, one area that is often overlooked – but just as critical to safely reopening a school – is the building’s water system (potable, non-potable, cooling

towers, evaporative HVAC equipment). Most building operators aren’t accustomed to dealing with health risks from these systems. However, in school buildings that have had low or no use for extended periods of time, there is significant risk of bacteria such as legionella building up. This build-up puts students, teachers and staff at risk of exposure to Pontiac Fever, an acute nonfatal respiratory disease, or Legionnaires Disease, a type of pneumonia caused by inhaling bacteria from water – and the deadliest waterborne disease in the United States.

The Centers for Disease Control and Prevention (CDC) has issued guidance advising building operators to test water before occupants return – and to have a plan in place to test and maintain water quality. Time and temperature are natural enemies to chlorine levels in water that keep bacteria from blooming. In an overabundance of caution, the CDC also recommends that building operators take the step of flushing the system to ensure the bacteria, biofilm build-up and stagnant water is removed, and chlorine levels are appropriate to keep blooms from developing.

The Time is Now

While schools sit vacant and administrators weigh decisions for the next school year, the time is right

to ensure buildings and systems are ready for safe, sustainable operation and focused on the well-being of students, teachers and staff. Providing a safe and healthy learning environment is paramount, and reopening schools will require focus, adherence to specific procedures, and expertise to establish the right strategy for each system and piece of equipment.

Leslie Larocque is Vice President, Energy & Technical Services – Mountain Regions for McKinstry, where her responsibilities include managing the strategic direction, market growth and delivery of McKinstry’s offerings in Arizona, Colorado, Nevada and Utah. She has been providing energy and environmental solutions to both public and private sector customers throughout the U.S. and internationally since 1991.

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Photo Credit: HPI Architecture



New Long Beach City College Venue Designed for LEED Gold

LONG BEACH, Calif.—Construction has begun on a new 96,000-square-foot, multi-disciplinary facility for Long Beach City College. The three-story facility is the first design-build project funded by the state of California and will house a variety of academic programs including language arts, career technology education, computer and office studies, student success center and support programs. Designed to be a 21st century learning environment and achieve LEED® Gold Certification, the new facility is anticipated to reach completion in November 2021.

C.W. Driver Companies is the general contractor on the \$48.2 million project. HPI Architecture is the architect.

Located on the Liberal Arts Campus, the project will include the demolition of two existing classroom buildings, as well as all associated utilities, hardscape, irrigation, and landscaping.

The new facility will be constructed as a single

steel frame structure complete with classroom, study, and administrative spaces. Key spaces include a lecture hall, reading and writing focus areas and breakout rooms. The project will be built around existing community courtyards where students can connect, study and socialize.

“We’re honored to lead the first design-build project funded by the state of California, which will introduce a much-anticipated multi-disciplinary facility at Long Beach City College,” said Tom Jones, Project Executive at C.W. Driver Companies, in a statement.

The facility will feature a design that nods to the historic framework and character of the Liberal Arts Campus, while creating a modern multi-disciplinary community. The blend of these design concepts will create an atmosphere that embraces the campuses’ Spanish colonial revival style while introducing contemporary elements with their own

sense of place and time.

To achieve LEED® Gold Certification, the team will integrate sustainable design practices and features with a focus on water efficiency, indoor environmental quality, fuel-efficient transportation, and material resources.

Key features include dedicated parking spaces for carpooling and fuel-efficient cars; light colored hardscape; overhangs, balconies, and shade structures to mitigate heat island effect; storm water infiltration; low-flow efficient plumbing structures; HVAC strategies for improved air quality and more.



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Left: The new dining commons serves as one of the campus gateways for UC Davis.

Below: Comprising 500 seats and 33,000 square feet, the new facility was designed by HED and built by Otto Construction.

Uncommon Commons

Dynamic New Dining Facility at UC Davis Takes Local Inspiration

By SCN Staff

While the current pandemic has hamstrung the full-fledged use of the facility, it's hard to picture a more dynamic dining facility than one unveiled earlier this year in the Golden State.

Designed by HED and built by Otto Construction, the venue is the new, 500-seat, 33,000-square-foot on-campus Latitude Dining Commons at UC Davis. The design is inspired by the verdant Central Valley spread between the Sierra Nevada and coastal mountains. The program includes full commercial kitchen capability and provides multiple international food platforms as well as retail grab-n-go and convenience options.

The building picks up on the agricultural roots of the region and the shed/barn vernacular, providing students a place to eat, meet, study, and lounge. And the space represents the food and farming culture of the region and the institution itself.

The building includes a two-level area that includes front of house public functions (dining, serving, queuing, and retail), and a one-level mass that includes all back of house functions. The double-height dining space includes a mezzanine level to the south that faces a view garden. The project will also include a loading dock for deliveries, outdoor seating opportunities, circulation, site improvements, and bicycle parking. The HED development team's integrated approach combines the University of California Davis' minimum requirements with its own innovations to achieve LEED Gold certification.

Otto and HED saw the budget as a shared design challenge and took equal responsibility for that. Otto and HED proved to be a cultural fit, and the team members connected around an ethos of transparency, honesty, and authenticity. And they had fun with the Farm to Fork theme: Agendas for client meetings had a menu theme (including a bill for the budget meeting).

The design is inspired by the Central Valley spread between the coastal mountains and the Sierra Nevada. Within the sun-drenched agricultural heart of the state and the nation, a simple and functional design vernacular has developed. Structure is exposed, roofs are pitched, and materials and details are straightforward and functional.

The new building is sited between Tercero residential buildings to the south across Tercero Drive, future science buildings across Bioletti Way, and connects a major campus street, Hutchison to the North. In the future a new campus pedestrian path will connect the project site to the eastern reaches of the campus. The project is therefore both a focus for the residences and the sciences as well as a gateway building for the entire campus.

The landscape is contoured to allow multiple pathways to link the bounding sidewalk with dining and retail entrances. A continuous band of active public terraces



shares views with pedestrians and cyclists along Bioletti Way. Tables and chairs, benches and generous steps encourage students to hang out, wait for friends or eat a bite purchased at the Retail facility as they study under the trees. Bike parking is located at the south and north ends of the site so that conflicts between bikes and pedestrians are minimized.

A light metal clad folded roof floats up above large glass walls and extends out to shade entrances and terraces or folds down into cement plaster clad walls to at once embody lightness on the one hand and connect to the ground on the other. While this roof form is redolent of a barn roof, its fluid shape and expressed movement is intended to create a strong presence befitting an important campus student center.

The double-height dining space is divided by a mezzanine level into a south area that faces a view garden and future site of a new residence building, and a dining area that faces east to Bioletti Way and its activities. The mezzanine connects second level exterior terraces at the east and south facades which in turn shade terrace area and the main dining entrance below. From the mezzanine one has views to the retail so that the collective energy of both spaces is shared. Painted steel stairs between the first and second levels stand free in the space creating a "see and be seen" dynamic that adds to the public theater of this important student hub. The second level exterior terraces have distinct views and characteristics: at the southwest corner, the terrace shades the main dining entry and has views to the south as well as up the future campus pathway to the east. It is in turn shaded by a generous soaring extension of the roof plane above. At the north end of the mezzanine seating area, a smaller terrace is defined on its eastern edge by the canopy of a pair of mature and stately oaks.

The direct expression of the building's structure—exposed and painted columns support clear finished glulam beams and cross laminated wood decking—brings an at once modern and rural spirit to the space. Large windows with clear anodized frames offer views and bring in glare free natural light. Interior colors are derived

Photo Credit (all): Kyle Jeffers



High ceilings and ample natural light are hallmarks of the recently opened venue.

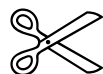
Glazing on the western elevation is minimized to that deemed necessary to provide a sense of the exterior and a sky view to the mezzanine seating area. Large expanses of glass on the eastern and southern elevations allow views to street, garden and patio, and connect interior and exterior campus activity. A ceramic frit is utilized on specific areas of these facades based on sun path analysis to minimize interior glare and energy use while also minimizing requirements for artificial lighting during the day.

Glulam beams spanned by cross laminated timber ensure an integrated and efficient structure. The essence of the building and its systems are expressed without need of additional finishes and materials. A commitment to sustainability is inherent in their beauty; these beams and deck are fabricated from certified wood from sustainable forests. Both the standing seam metal roof on the sloped areas of roof and the single ply roof material employed on flat areas are energy star rated to reflect a maximum amount of light and minimize interior heat gain through these surfaces.

A report from HED contributed to this article.

from herbs and vegetables found in regions across the four platforms but are background to the color of the food itself. Pendant lighting is complemented by special or unique lighting to highlight particular

areas within the rooms. Stair rails and guardrails are painted-steel railing with stainless steel cable infill. The nature of the materials is expressed by their direct and unadorned use.



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| <input type="checkbox"/> ADA Compliance | <input type="checkbox"/> Coating/Water Proofing | <input type="checkbox"/> Construction Materials | <input type="checkbox"/> Food Service/ Commissary | <input type="checkbox"/> Landscape/Irrigation | <input type="checkbox"/> Music Rooms/Systems | <input type="checkbox"/> Recycling/Waste Management | <input type="checkbox"/> Storage |
| <input type="checkbox"/> Architectural/Engineering/CM Services | <input type="checkbox"/> Clocks/Time Keeping Systems | <input type="checkbox"/> Drainage/Irrigation | <input type="checkbox"/> Furniture | <input type="checkbox"/> Laundry Equipment | <input type="checkbox"/> Outdoor Athletics/Surfaces | <input type="checkbox"/> Roofing | <input type="checkbox"/> Transportation |
| <input type="checkbox"/> Auditorium/Assembly | <input type="checkbox"/> Clothing/Uniforms | <input type="checkbox"/> Drinking Fountains | <input type="checkbox"/> Framing Systems | <input type="checkbox"/> Lighting | <input type="checkbox"/> Partitions | <input type="checkbox"/> Science/Lab Equipment | <input type="checkbox"/> Walls/Solid Surfaces/Materials |
| <input type="checkbox"/> Audio/Visual | <input type="checkbox"/> Communications A/V | <input type="checkbox"/> Doors/Frames | <input type="checkbox"/> Gymnasium | <input type="checkbox"/> Lockers/Benches | <input type="checkbox"/> Pest Control | <input type="checkbox"/> Scoreboards | <input type="checkbox"/> Washroom/Toilets/Sinks/Accessories |
| <input type="checkbox"/> Bleachers/Seating | <input type="checkbox"/> Compact Equipment | <input type="checkbox"/> Energy Management | <input type="checkbox"/> HVAC | <input type="checkbox"/> Locks/Hardware | <input type="checkbox"/> Piping | <input type="checkbox"/> Security | <input type="checkbox"/> Windows/Glazing/Coverings |
| <input type="checkbox"/> Carpet | <input type="checkbox"/> Computer Hardware & Software | <input type="checkbox"/> Facility Services/Integration | <input type="checkbox"/> Industry Associations & Events | <input type="checkbox"/> Maintenance | <input type="checkbox"/> Playground Equipment | <input type="checkbox"/> Signage | <input type="checkbox"/> Wire Management/Electrical |
| <input type="checkbox"/> CCTV | | <input type="checkbox"/> Fencing | <input type="checkbox"/> Insurance | <input type="checkbox"/> Metal Detectors/Scanning | <input type="checkbox"/> Plumbing | <input type="checkbox"/> Skylights | |
| | | <input type="checkbox"/> Fire/Life Safety | | <input type="checkbox"/> Modular Classrooms/ | <input type="checkbox"/> Project Management | <input type="checkbox"/> Software/Technology | |

JULY/AUGUST 2020



Photo Credit (all): Robert Benson Photography

A towering bouldering wall is a highlight of the venue's climbing center.

PLENTY in STORRS

An aquatics center includes both lap and recreational pools.



An Adventure Center provides the chance to rent camping gear, climbing tools, mountain bikes and other items.



New UCONN Rec Venue Has It All

By Zach Chouteau

Students looking to stay fit at the University of Connecticut (UConn) in Storrs can now enjoy state-of-the-art offerings ranging from hoops and racquetball to rock climbing, track and aquatics—all of it under one roof.

The robust new facility officially dubbed the University of Connecticut Student Recreation Center (USRC) includes a 20,000-square-foot fitness center; activity spaces for cardiovascular and strength training; racquetball courts; a four-court volleyball/basketball gymnasium and a two-court MAC gym; a running track; a 7,000-square-foot aquatics center; fitness studios; climbing center with bouldering wall and 58' climbing wall; outdoor adventure center; and flexible space for events and activities for the students and the greater UCONN community.

Of course, a facility of this type doesn't take place overnight, and the USRC's origins date back to 2015, when UCONN selected the team of JCJ Architecture and Moody Nolan to spearhead design for a new Student Recreation Center. Designed to be a thriving hub at the epicenter of the 105-acre Storrs campus, the 191,000-square-foot facility that debuted in August 2019 replaced the previous 25,000-square-foot Rec Center and profoundly boosted the institution's capacity to offer comprehensive programs, facilities, and services that enhance personal growth and wellness.

Partnering with UCONN leadership, the JCJ team held an interactive multi-day workshop with students, administration, staff and faculty to gather key input for the design team to envision an efficient, dynamic and multi-functional Rec Center. Since funding for the Center was approved by students and is supported from an additional student surcharge, listening to the student voice was a critical element of the design strategy.

Design Insights

A Q&A with JCJ Architecture Principal and Chief Architectural Officer Jim LaPosta, FAIA, LEED AP, on the big UCONN project.

From a design perspective, what do you think is the most interesting or unique element of the new UConn Rec Center?

Ingeniously leveraging the University's mandate to eliminate all exterior rooftop mechanical units, the design team made the decision to create a visual feature that would anchor the building along Hillside Avenue. Locating units in a compact two-story space above the Rec Center's main entry, the mechanical tower is clad in spandrel glass and incorporates a fully programmable LED light system. After opening, the potential of the system was quickly recognized by students who nicknamed it "the Cube" and began to request that it be lit in colors to express or acknowledge significant dates and events. Completely unanticipated by the design team and Rec administration, the center now maintains a schedule so the entire campus can rally around and remember important dates—from celebrating the Chinese New Year to remembering the anniversary of 9/11 and marking the unfortunate passing of Kobe Bryant—the Cube is now a visible and tangible part of how the UConn community expresses itself and comes together.

Did this project fit any important key trends with college athletic/recreational venues?

Research has shown that university recreation programming is a key consideration in choosing an academic institution, and that students who engage in these activities are more likely to become socially engaged, to be academically successful, and to complete their degree studies. Responding to these findings, the university sought to create a varied, flexible, dynamic and multi-functional space to reduce social isolation and bring together the entire campus community around activities related to health, wellness and fitness.

From day one, the core mission was to build a community destination that would provide a tangible sense of belonging and an environment that values, embraces and enriches individual differences. Rec center administrators see the building as an integral part of the campus environment. From creating experiential learning opportunities for students, employee wellness programs, or creating links between faculty, staff and students, the Rec Center was designed to impact the whole community.

What kind of feedback have you heard from the university since the opening of this venue?

From the time the doors opened on August 26th, there were nearly 112,000 individual usages of the facility in the first month, including 9,000 on the first day. Of those usages, more than 100,000 have been by UConn students. These numbers were completely unexpected—not only double the daily participation from the University's existing facility, but falling closer to expectations for a facility that has been in use for 3-5 years. Cyndi Costanzo, the USRC's executive director, has noted, "We have doubled our daily participation from our old facility. Typically, what new recreation centers experienced at other schools was a gradual increase of users. What we saw was literally an overnight increase. We always knew that we had an active community here at UConn and that people were waiting for these services. We are not changing a culture; we are truly meeting a need."

In addition to UConn students, over 400 faculty, staff, and community members have purchased a membership for the recreation center. The revenue produced by memberships in the first six days of operation was equal to 50% of the normal annual revenue from memberships in previous years.

How did the collaborative aspects of this endeavor go? Any key partners in particular?

JCJ Architecture collaborated closely with the entire UConn community through an ongoing series of open design charrettes. Students, administrators, staff, regulatory officials, and campus facilities professionals all participated in a series of programming and design workshops over a period of months to evaluate site and building options. Moody Nolan, one of the nation's premier designers of collegiate sports and recreation facilities, was a key partner and collaborator with JCJ through the entire course of the project.



project data

Facility Name: University of Connecticut Student Recreation Center
Type: Student Recreation Center
Construction Budget: \$75.3M
Start Date: May 2016
Completion Date: August 2019
Area: 213,000 gross square feet
Owner/Operator: University of Connecticut, Student Recreation Department
Project Manager: Gilbane Building Company
Architect: JCJ Architecture with Moody Nolan
Construction Manager: Turner Construction Co., Inc.
Mechanical Engineer: BVH Integrated Services
Lighting Design: BVH Integrated Services
LEED Consultant: Atelier Ten
Landscape Architect: Copley-Wolff Design Group
Site/Civil Engineer: Langan Engineering & Environmental Services



The vibrant new campus hub comprises 191,000 square feet.

A dusk exterior shot showcases the facility's appealing modern aesthetic.

The space was designed to be highly adaptable to new programs, bolstered by the knowledge that student needs are constantly evolving. Aiming to nurture inclusivity for all students, a universal design was implemented, making the Rec Center approachable, accessible, and easy to navigate. With a desire to provide options that would attract all members of the campus community, JCJ and Moody Nolan created a variety of 'fitness neighborhoods' that accommodate different equipment and a range of spatial characteristics.

"To create places that engage a diverse range of people, the project features four fitness neighborhoods with differing equipment and spatial characteristics," remarked JCJ Architecture Principal and Chief Architectural Officer Jim LaPosta. "A climbing center with bouldering area and unique 65' climbing wall; functional training, fitness and mind-body studios; an aquatics center with lap and recreational pool; racquetball courts; MAC courts and gymnasiums; a 3-lane 1/6 mile indoor track; a robust outdoor adventure program that supports activities beyond the boundaries of the Rec Center."

The venue was also designed to create a place not only for physical fitness but also to be a vibrant social hub for the campus. The Rec Center is located within a five-minute walk of 75 percent of the on-campus residential community, making it highly accessible.

JCJ Architecture's LaPosta explained that the new venue's central location provided a challenge that spurred some intriguing solutions.

"The project is set along the University's main student thoroughfare—Hillside Avenue—and is a true campus hub, surrounded on all sides by key academic, research, athletic, and student life programs. While the site was in an important and highly visible location, it was also very tight for the design to accommodate an ambitious program and meet the targeted square footage of 213,000 square feet," he remarked. "The team worked with the campus community through multiple iterations

to create a compact and highly efficient building organization, without compromising aesthetics or functional requirements."

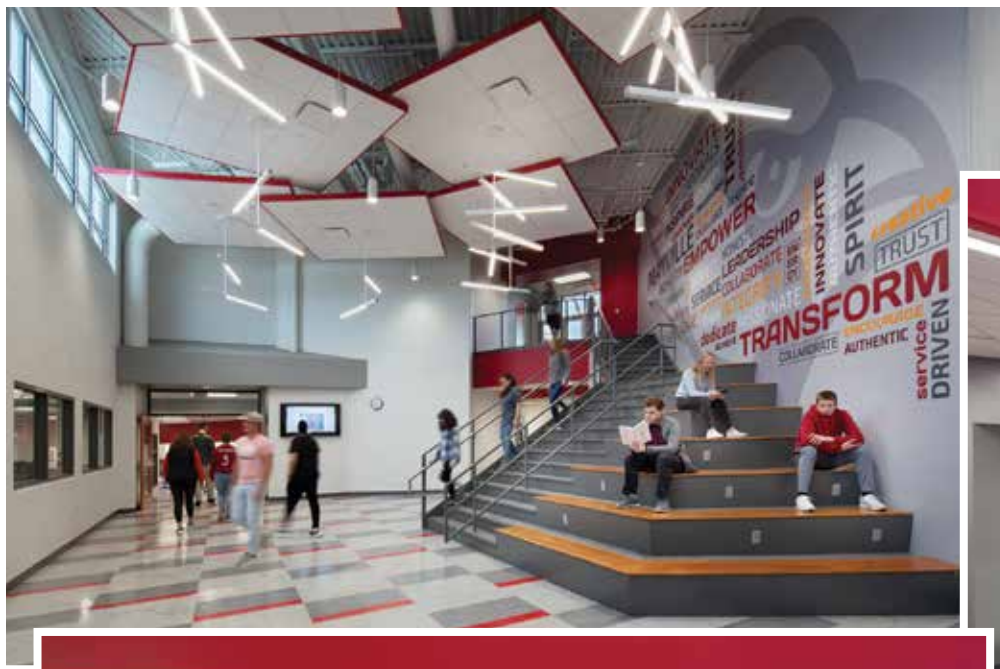
LaPosta also said the team worked to create a highly activated exterior environment—one that would support expression of the USRC as a dynamic campus hub.

"The existing quad and parking between the SRC's north side and the Neag Business School was completely reimagined and renovated," he told SCN. "Key components of the site design included the removal of parking and drives, preservation of trees, planting of native species and balancing of pedestrian pathways with green space. Plantings and materials were considered equally along all edges of the building, and strategies were employed to strengthen pedestrian connections and outdoor gathering spaces. Along Hillside Ave., landscape and building elements were artistically blended to create an inviting and unique transit stop."

In addition to a tremendous variety of spaces for fitness and recreation, the facility incorporates spaces to socialize, to grab a quick meal and to access a variety of wider wellness resources. The physical environment is intended to create an inclusive environment where all members of the UCONN community can find a comfortable place that supports their specific fitness needs.

The center conforms to Connecticut High Performance Building Code regulations and is anticipated to achieve LEED GOLD and SITES certification. Beyond providing a new state-of-the-art facility, the student recreation center has created another energized locus for campus activity—smoothly integrating with the surrounding campus buildings and pedestrian walkways.

Through research, teaching, service, and outreach, UCONN's institutional mission is to embrace diversity and cultivate leadership, integrity, and engaged citizenship in students, faculty, staff, and alumni. And now, via its remarkable new recreation hub, the school can nurture physical fitness and student camaraderie as well.



Left: A drastically overhauled lobby now includes a learning stair and inspirational messaging.

Right: Some of the reimagined current buildings were enhanced by new support spaces, a concessions area and dramatically improved hallways.



The school's Innovation Center is part of the 25,000-square-foot addition at Mayville High School.



Photo Credit (all): Harper Frisch

A brand-new Technical Education classroom includes resources for learning about woods, metals, automotive and manufacturing.

Bigger AND Better

Impressive Renovation Transforms 1960s School

By SCN Staff

In April 2017, the Mayville School District successfully passed a \$24.5 million facilities referendum to address district-wide capital maintenance needs along with major additions and renovations to Mayville High School. J.H. Findorff & Son Inc. (Findorff) and Bray Architects (Bray) were hired by the District to facilitate pre-referendum planning, design, and construction services.

Over the course of several years, the project team worked with the Mayville School District to identify and address facility needs. The first projects to be completed were at the elementary and middle schools. Both buildings lacked air conditioning and required various capital maintenance updates and repairs. The largest scope of work that Findorff and Bray completed was at the high school which began in April 2018 and was completed in August 2019.

"I'm not sure people were prepared for the transformation they would see at the ribbon cutting ceremony," said Christin Mlsna, Director of Education Market & Communication Services at Findorff. "Seeing the faces of students, staff, and community members as they walked through what felt like a completely different school is a night our team won't soon forget."

Construction included extensive exterior site improvements, building envelope repairs, and MEP upgrades. Additionally, the project team built a 25,000-square-foot addition that includes:

- Technical education space for woods, metals, automotive, and manufacturing;

and a dedicated physical education/fitness area

- Innovation Center for STEAM including breakout space and computer lab
- Agriculture classroom, small animal lab, and greenhouse

The more extensive work included reimagining existing space to better support the District's curriculum and student learning. The project team renovated and repurposed 83,000 square feet to include:

- Updated classrooms, science labs, support spaces, and locker rooms
- Enlarged classrooms with adjacent small group instruction spaces
- New main offices with secure entrance
- New band, choir, and show choir spaces
- Refreshed auditorium space with new seating, finishes, lighting, rigging, sound system, and better accessibility

- New student services offices, concessions, school store, and life skills lab

"Our team was privileged to work with the District to help them reimagine their existing spaces and reinvest in their community," said Kate Egan, Project Architect at Bray. "It was exciting to see the transformed spaces come to life, and how the students and teachers are able to come together to learn and collaborate more effectively."

The updated and renovated schools provide unique learning opportunities to empower, innovate and transform their learners. Because of the hard work of the Mayville School District administrative team, School Board, and their project partners, Findorff and Bray, the students, staff and community of Mayville have access to spaces that will meet their needs for generations to come.

HOT PRODUCTS

Project Management Tool

Improve your team's efficiency and accuracy in managing project budgets. budget4cast is laser-focused on your construction project budget management, at a very affordable price. Your first project is FREE for an entire year, and additional projects are as little as \$49/month for unlimited users. Join the over \$1 billion in capital projects being managed with budget4cast to see what a truly collaborative, totally secure, cloud-based environment can do for you — managing funding sources and contractual uses, developing cashflow projections, tracking invoices, forecasting costs to complete, and more.



budget4cast
budget4cast.com
Reader Service #200

Self-Contained Ductless Workstation

The MicroFlow I Workstation is a ductless carbon filtered workstation equipped with activated carbon filtration, designed to collect small amounts of non-hazardous fumes and odors. The workstation is self-contained and can be easily moved from station to station. Completely self contained with integral recessed work surface to contain spills. Clear hood surround with safety viewing sash for user. Sash can be conformed for use with a microscope. Variable speed fan control provides the option of high and medium speeds, or low flow for sensitive operations. Operates on 115v AC, or 230v International, conforms to UL, CSA, and CE requirements. Electrical cord port exits left side.



HEMCO
www.hemcocorp.com
Reader Service #201

Compact Emergency Phones

The same strength and reliability shown by Viking's standard ADA-compliant emergency phones is now available in a compact chassis. When the button is pressed, the compact emergency phones automatically dial a pre-programmed emergency phone number or central station number. The phones will roll to the next number if there is a busy signal or no answer and will continue to dial until the call is answered. The red "Call Connected" LED is built into the button and can be initiated manually or automatically to indicate the call was received. Viking's compact emergency phones meet ADA standards for handsfree emergency communication in elevators, areas of refuge, or any place an emergency phone is needed.



Viking
www.vikingelectronics.com
Reader Service #202

Unique Spectator Seating

Michigan-based seating manufacturer, Interkal, has formally announced the launch of POLARIS, a unique spectator seating option combining both a bench and chair. Interkal's POLARIS offers a combination of comfort and structural integrity, suitable for stadium and arena seating. The backrest has just the right amount of elasticity and lumbar support to ensure a comfortable patron experience. POLARIS utilizes double walled blow-molding. This design is both comfortable and durable. Available in matching or contrasting colors, the contoured, blow-molded components offer unsurpassed comfort in a 13.5-in. (343mm) deep bench seat.



Interkal
www.interkal.com
Reader Service #203

Classroom Health Shield

Alumni Classroom Furniture now offers a line of sturdy, crystal clear plexiglass shields for use with student classroom desks. They maintain a physical barrier while allowing visual interaction.

The objective is to contain the student and the throw of their breath without limiting their ability to communicate, allowing social interaction with other students.

The shields are designed with three panels, held together by living hinges, which allow the panels to be folded for storage and transport. The panels are held in place on the desktop with special reusable adhesive pucks, left, right and center. A Shield on each desk equals multiple layers of protection for each child.



Alumni Classroom Furniture
www.alumnicf.com
Reader Service #204

Wellness Divider

Integra Seating has unveiled its new Wellness Divider. The divider reflects the enhanced personal safety requirements needed for today's commercial interior environments.

The divider provides a barrier to assist in stopping airborne germs between users. It is specifically designed for seated guests in any waiting area, lobby or lounge. The divider is easy to clean and maintain, and also provides safety and comfort for users without being overbearing. It is free-standing for complete flexibility. Only weighing 26 lbs., the divider can be easily carried and moved. These features enable the divider to be thoroughly cleaned and sanitized as needed.



Integra Seating
www.integraseating.com
Reader Service #205

Photo Credit: Courtesy Goodfellow AFB



Regardless of the type of surface area, deep cleaning is a must when it comes to infection control.

Intensive cleaning, such as the use of fogging disinfectants, is considered more crucial than ever during the COVID era.

Architect Urges Better Protocols and Building Modifications

Is Reviving the 'Deep-Cleaning Era' Key to Re-Openings?

By SCN Staff

While the country enters a new school year, little agreement has emerged over how or when to safely reintroduce students and teachers to classrooms and other in-person education settings.

According to academic facilities expert Mark A. Sullivan, AIA, an architect and partner with integrated design firm JZA+D, Princeton, those working to make actionable plans are both modifying their buildings and reviving “deep-cleaning protocols” not widely used since antibiotics came into common use in the 1950’s and 1960s, after which the world seemed to take cleanliness for granted.

Administrators, public officials and parents of schoolchildren have conferred with Sullivan — a father of three elementary school-age children himself — on the importance of both in-person learning and meeting new standards of hygiene and infection control.

“Kids need to go back to school, not just because parents need to go back to work, but also because the in-person component of instruction is critical for learning and development—and so is the social-emotional learning aspect of being around one’s



Sullivan



Photo Credit: Photo by Michael Slack, courtesy JZA+D

peers,” opined Sullivan, who has worked and collaborated on K-12 and university facilities throughout his career.

“Realistically, many learning environments aren’t set up for a paradigm that requires social distancing,” he continued. “Most schools were built for the opposite: teachers and students working closely together. What we need to reopen is separation, infrastructure for online learning, and especially the building finishes and surfaces that can stand up to the CDC-recommended deep-cleaning protocols that will ensure safe learning environments during the pandemic.”

Sullivan notes that before the advent of widespread availability of antibiotics and antimicrobial soaps, such protocols were quite common—and schools were constructed to accommodate them. Fear of disease spreading through surfaces meant there was a greater effort made to clean to prevent the spread of contagions, including frequent cleaning and mopping.

“Assuming federal leadership makes the additional funding available—which they must,” Sullivan added. “School boards should instruct facilities managers and administrators to implement as many proven strategies as possible.”

He suggests the following actions be strongly considered:

- Replace wood and carpeted floors with hard surfaces like tile, stone, thin-set terrazzo, or even sheet rubber;
- Install baseboards that will tolerate regular mopping/automatic scrubbers;
- Swap out shared desks and audiovisual/IT components for individual ones;
- Apply locker protocols that leave them open and empty overnight to be sanitized;
- Introduce handwashing/sanitizing stations in classrooms, protocols for washing before entering the classroom;
- Increased outdoor learning — this may mean altering the school year to take advantage of the warmer months, and emphasizing remote learning during the winter;
- Robust ventilation strategies that cycle more air from outside (overnight air flushing is worth investigating); and
- Technology upgrades to support remote learning, whether students are at home or socially distanced in schools.

“Realistically, many learning environments aren’t set up for a paradigm that requires social distancing.”

—Mark Sullivan, JZA+D



Photo Credit: HMC Architects

With its sweeping views of California's Pacific Ocean the new Malibu Middle School school's coastal environment offers many sustainable design opportunities that echo throughout the design.

Urgency Drives Energy-Efficient School Operations

By Lisa Kopochinski

In the past decade, energy policy, access to new technologies, affordability, and ease of implementation have been among the biggest catalysts of change. It was just 40 years ago that California enacted the first energy efficiency standards in the U.S. responding to energy vulnerabilities and energy supply chain fragility. Despite legislative actions, between 1980 and 2010 the building sector's energy consumption grew by 48 percent and contributed nearly 75 percent of annual global greenhouse gas (GHG) emissions.

"Where compliance ends, the thirst to improve performance, financial solvency, and resiliency starts," said Eric Carbonnier, PhD., associate principal and vice president of sustainability with HMC Architects, a design firm with offices in California and Arizona. "The biggest change beyond policy are readily accessible tools for sustainability that place building science into the hands of architects. Never has the tech industry responded with so many environmental assessment tools for architects. The tools allow for scenario-base solutions exploring a multitude of options to across multiple areas of interest from daylighting, views, glare, energy and water to carbon reduction with cost in mind."

Anisa Heming is the director of the U.S. Green Building Council (USGBC) Center for Green Schools. She said the level of energy efficiency generally accepted as possible in K-12 schools has dramatically changed in

the past decade, and that one way to see how remarkable this change has been is to look at the Advanced Energy Design Guides, created collaboratively by ASHRAE, AIA, IES, USGBC, and the Department of Energy.

"In 2010, we were just getting schools educated about the guide that illustrated strategies that could be used for 30 percent energy savings over baseline," Heming explained. "At that time, the guide for 50 percent savings was under development, and architects and engineers around me were saying that 50 percent savings just weren't possible to achieve."

Today, the most current Advanced Energy Design Guide is illustrating how schools can achieve net zero energy.

"Discovery Elementary School in Arlington, Va., was one of the first LEED Zero buildings of any kind in the world," continued Heming. "It achieved the LEED Zero Energy certification, which means the building's

source energy use balance was zero over a period of 12 months. This is a promising leap forward when it comes to building technology, design know-how, and sophisticated operation of school buildings."

K-12 vs College

While the basic strategies for energy efficiency are similar in the construction of PreK schools vs college construction—in that a tight building envelope, good building layout/orientation, and efficient mechanical systems are essential—there are also significant differences too.

Susan Tully is the K-12 Center of Excellence senior project manager/market leader at Gilbane Building Company, a national and international construction management company. She said the nature of the K-12 vs college construction market sectors generally drive the primary differences in energy-efficient considerations.

Energy policy, access to new technologies, affordability and ease of implementation have been among the biggest catalysts of change.



Photo Credit: Gilbane Building Company

NeoCity Academy in Osceola County, Fla., was developed as a 21st-Century, immersive learning, STEM-focused, net zero energy school.

“While both market sectors benefit from standardized designs for HVAC, electrical and low voltage systems, K-12 school designs more often focus on efficiency from a single building standpoint, whereas college buildings are tied into centralized campus systems, so their designs focus on efficiency from a campus standpoint.”

Tully also explained that student wellness considerations contribute to differences in high performance building and energy efficient considerations in the two market sectors.

“For example, Pre-K and elementary wellness considerations prioritize efficiency in lighting and HVAC control systems which help sensory and cognitive learning, while high school and college wellness considerations prioritize monitoring CO2 levels as they contribute to alertness in students,” she remarked.

Overall, buildings account for 40 percent of energy usage in the United States today. Tully said school districts in the country spend \$6 billion each year on energy—second only to salaries.

“On average, high-performance schools and colleges—that is, schools that focus on optimization of building energy performance—can use between 65 percent to 80 percent less energy than conventionally constructed schools, and the remaining energy required is supplied by renewable energy,” she said. “While design of building energy systems is obviously an important consideration, ensuring building envelope tightness from a construction perspective—keeping air in and water out—has the most impact on overall energy performance for both K-12 schools and colleges.”

HMC Architects’ Carbonnier said that at a fundamental level one would think that achieving human physiological and psychological balance of thermal, visual, and auditory experience would result in the same energy efficient solutions, but it doesn’t.

“Different energy solutions emerge as a function of people served, operational hours, types of spaces, and

an unlikely and unpredictable participant — the utility agencies. A survey conducted by the U.S. Department of Energy’s Energy Information Administration reports energy use intensity (EUI) of various building types across the nation. An EUI is a barometer of energy performance based on a buildings total area and the total energy consumed in a year. The lower the number, the better the efficiencies. The EUI for PreK is 48 and for colleges is 84.”

There are several reasons why Pre-K energy consumption is nearly half that of college.

“Pre-K hours of operation are far shorter than colleges,” explained Carbonnier. “College facilities typically offer larger lecture spaces, science classrooms, and many nighttime activities that require more lighting, heating ventilation and air conditioning (HVAC), which increases energy consumption to achieve thermal comfort. While the EUI is a valued participant in the design process, so is the cost of energy.”

Commendable Projects

Ideally, architecture should be an extension of nature into the built environment. The new Malibu Middle High School—that HMC Architects designed—is an excellent example of this.

With its sweeping views of the Pacific Ocean, the school is perched on a hillside a quarter mile from California’s Pacific Coast Highway. The coastal environment offers many sustainable design opportunities that echo throughout the design.

“Form and function follow environment — energy efficiency is a result and not the inspiration,” explained Carbonnier. “The design steps the building gently into the slope rather than craving away the earth. While limited, the earth is coupled with heavy mass walls to dampen solar gains during warm summer and fall months. Radiant heating was coupled with the heavy mass floors such that the radiant fields and convective air streams warm people rather than heating volumes of

necessary air at great expense.”

Originally the school was conceived without air conditioning and relied on operable windows to take advantage of a sea-air breeze to naturally cool and ventilate spaces. However, rising urban heat island effects and climate change have made summer months and early fall months unbearable.

“Each façade responds to the environment differently and invites the environment to play safely with the occupants and the building,” Carbonnier elaborated. “Southwestern façades have tall marching shade fins that act as a second skin to the building protecting occupants from unwanted daylight and glare that impair learning and reduce heat gains to limit cooling demand. Deep trellis overhangs protect entry points, shade windows, and offer an armature for transparent photovoltaic glass. The combination of PV glass and the rooftop array offers 200,000 kwh/yr of on-site renewable energy.”

Tully is especially proud of NeoCity Academy, a new, 500-student, net-zero energy, K-12 public choice STEM high school, located on the NeoCity Campus in Osceola County, Fla., for which Gilbane was the general contractor.

“Of the 4,517 public schools in the state of Florida, NeoCity is the first and only K-12, net-zero, high performance, energy efficient facility,” said Tully. “This new urbanist development sits at the epicenter of a boom in the high-tech, advanced manufacturing industry that central Florida is currently experiencing. This rapid growth—coupled with the state’s easement of regulation on solar energy production—has created opportunities for the creation of new, high-performance, zero-energy facilities to educate and train the next generation workforce.”

The Gilbane team was given a mandate to design the new public high school within the state legislated budget and space requirements. NeoCity Academy was developed as 21st-century, immersive learning, STEM-



Photo Credit: USGBC

Dr. Martin Luther King, Jr. School in Cambridge, Mass., is LEED Platinum and became the prototype project for the district's Cambridge Green Schools Initiative.

focused school that will offer students three curriculum paths: engineering, biomedical, and cybersecurity.

Built to use 76 percent less energy than a typical public school in Osceola County, this project is located in the heart of a new advanced manufacturing corridor within the NeoCity Masterplan.

"The School District of Osceola County has formed

and led to new district-wide policies around plug loads, maintenance, waste and other areas of sustainability."

The actual site Energy Use Intensity (EUI) was measured at 24kBTU/sf/yr, with a net site EUI of 16 KBTU/sf/yr once the production from 1600 PV panels are included.

"The building is being used as a teaching tool

my answer remains similar, I foresee a different tone to the conversation around energy efficient operations. Tight local and state budgets will bring new urgency to energy savings, and schools and districts will need to be creative about how they achieve savings without funds in the near term to invest in improvements."

Carbonnier said energy legislation will continue to ratchet performance expectations and renewable energy technologies and micro-grid technologies are advancing at record pace lowering the price and opening market access.

"Why would you not consider a micro-grid such that facilities can operate at a reduced cost or no cost? Most appealing is coupling micro-grid technology and resiliency plans that respond to environmental stress," he explained. "Should the utility grid be interrupted by fire, wind, earthquake or inclement weather the concept of micro-grids provides standby power to minimize school day disruptions and maintain educational delivery while maintaining the health and safety of students, teachers, and administrative staff."

Added Tully, "The overall drive to improve energy efficiency as a resource will continue. The total number of zero energy buildings has grown from 21 verified net zero buildings in 2012 to 81 in 2019. We see this trend continuing, as we continue to move from achieving zero energy in buildings to net-zero energy to positive energy status."

"The overall drive to improve energy efficiency as a resource will continue."
—Susan Tully, Gilbane Building Company

a partnership with University of Central Florida to evaluate STEM pedagogy for the creation of a national instruction model," added Tully. "This project has proven that designing and building high-tech, energy efficient educational facilities is not only possible, but is also affordable, practical, and necessary for the advancement of sustainable practices and the future of Florida education."

Heming cited the Dr. Martin Luther King, Jr. School in Cambridge, Mass. as both an impressive case study and project.

"It was carefully designed to be net zero energy ready, is LEED Platinum and became the prototype project for the district's Cambridge Green Schools Initiative," she said. "The project helped change the way the district thinks about energy in all of their buildings

and includes informative signage and views into the building's wall systems and mechanical room to improve students' understanding of and relationship to energy," Heming explained. "It even provides a better environment for teachers and staff to work. One teacher told the design team; 'My life is better because I teach in this building.'"

What's Next?

As for what the next three to five years holds in terms of energy-efficient operations in the education sector, Heming said, "Six months ago, I would have said that I foresee an increase in dedicated staff for energy efficiency in school districts. The current pandemic changes everything for school districts, though, and the impact will be felt for years. Although

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