

### PRIVATE UNIVERSITY PRODUCTS AND NEWS

FEBRUARY 2024 PUPNMAG.COM

### THE IMPACT OF FURNITURE ON BOTH THE UTILITY AND AESTHETIC APPEAL OF UNIVERSITY COMMON SPACES

### TOOLS OF EMPOWERMENT: A MASS SHOOTING SURVIVOR'S PERSPECTIVE ON PREPARATION

SMARTFLOR RAISED FLOOR POWERS UP THE MISSION AT BUSH COMBAT DEVELOPMENT COMPLEX

THE GROWING INFLUENCE OF LEED CERTIFICATION IN HIGHER EDUCATION

# A Passion for Songbirds AT HENDRIX COLLEGE

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According to Sean Farrell, senior project manager at Layton Construction, establishing collaborative relationships is key to successful construction projects. One of the best examples of this maxim is a multi-phase university project for which Layton Construction is serving as construction manager. Layton, part of the STO Building Group, is a nationally-ranked commercial contractor with ten offices around the United States. The firm specializes in healthcare, industrial, warehousing, and higher education projects. As construction manager, Layton hires the sub-contractors and manages and oversees the project as part of a team.



Since we were building windows and doors to make a brand new college, we needed a company with the methodology to produce the product like it was done 100 years ago." — Sean Farrell, Sr Project Manager Layton Construction

Hope's Brian Whalen, Vice President of Sales, acknowledges that the project was a real test of Hope's capabilities. He is especially proud that they Hope's was able to expedite the schedule even in the face of design changes and in the midst of the Covid-19 pandemic. The shop drawing approval process – including preparation of blueprints of windows and doors with all setting conditions, sizes, customized designs, and required testing – took longer than normal. Changes were made along the way that might have pushed back the delivery schedules for some, but Hope's made adjustments during the production process to deliver all materials on time. Whalen gave a nod to Joey Riggan and the team at Alexander Metals, the frame and glass installer team, saying the overall project went extremely smoothly once the frames were on site.

Says Whalen, "It was a fantastic collaboration among all the parties. Hope's worked closely as the manufacturer to fulfi I the architect's design vision, and then the installer worked closely with us to make sure everything was installed executed properly."



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### The Growing Influence of LEED Certification in Higher Education

A prominent study suggests that the majority of students look at "commitment to environmental issues" when considering prospective colleges and universities. That's just one reason more and more campuses are striving for the holy grail of LEED-certified buildings. Find out what's driving a nationwide transformation.

### The Impact of Furniture on Both the Utility and Aesthetic Appeal of University Common Spaces

Common spaces represent the heart and soul of a university with media centers, cafeterias, unions, and more supporting various aspects of student life. Furniture in these rooms needs to withstand everyday use without compromising aesthetic and operational benefits.

### SMARTflor Raised Access Floor Powers up the Mission at Bush Combat Development Complex

The Bush Combat Development Complex ("BCDC"), part of the Texas A&M University System, is paving the way towards national security innovation for the United States of America.







## COLUMNS



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### 8 A Passion for Songbirds at Hendrix College

As the Judy and Randy Wilbourn Odyssey Associate Professor of Biology and Chair of the Environmental Studies Program at Hendrix College, Maureen McClung is passionate about her research in animal ecology. By involving students in every aspect of the research process, she is changing lives—the lives of the wildlife populations in her lens as well as those of her students, many of whom choose to follow in her footsteps.

#### TOOLS OF EMPOWERMENT



Ivy Schamis was a Social Studies teacher at Marjory Stoneman Douglas High School in Parkland, Florida when a mass shooting took the lives of 17 people. Recalling that horrible day, when the shooter aimed directly into her classroom, she shares her perspective on safety tools and protocols that can help campuses better prepare for the unthinkable.

# Editor's Letter

FEDRUART 2024

A STATE OF THE OPEN

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Dear Readers,

As we embark on another exciting edition of *Private University Products and News*, I am thrilled to announce our focus on facilities, particularly delving into the intricate world of furniture and design functionality. On every campus, these elements play a pivotal role in shaping the student experience and fostering an environment conducive to learning and growth.

When students step onto a college campus, they are not just entering a space of education; they are immersing themselves in a community that becomes their home away from home. As such, the design of campus facilities, from classrooms to common areas, holds profound significance. It's not merely about aesthetics; it's about creating spaces that inspire, facilitate collaboration, and foster a sense of belonging.

In this edition, we explore how furniture and design functionality contribute to the holistic campus experience. From ergonomic seating in lecture halls to versatile furniture in study areas, every aspect is meticulously crafted to enhance comfort and productivity. We will uncover the latest trends and innovations in campus design, shedding light on how institutions are adapting to meet the evolving needs of students and faculty.

Moreover, we can't overlook the paramount importance of sustainability in modern campus architecture. LEED certification has emerged as a gold standard, signaling a commitment to environmental responsibility and resource efficiency. Buildings designed with sustainability in mind not only reduce carbon footprints but also inspire a culture of environmental stewardship among the campus community. In this issue, we will delve into the significance of LEED certification and its impact on campus sustainability efforts.

Design also influences campus culture and identity. From iconic landmarks to innovative spaces, architecture serves as a reflection of institutional values and aspirations. By embracing forward-thinking design principles, campuses can cultivate a sense of pride and connection among students and alumni alike.

As we navigate the ever-changing landscape of higher education, it is crucial to recognize the symbiotic relationship between design and academic excellence. A well-designed campus is more than just a backdrop for learning; it is a catalyst for innovation and inspiration. By prioritizing functionality, sustainability, and inclusivity in our facilities, we lay the groundwork for a vibrant and thriving academic community.

Join us on this journey into the intriguing world of campus design and facilities management, where form and function intersect, and thoughtful design can transform the educational experience for generations to come.

Warm regards,

Ed Bauer, Publisher Private University Products and News Magazine ed@pupnmag.com

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### As a student at Hendrix, McClung researched fish; she later focused on yellow-eyed penguins in New Zealand while earning a postgraduate diploma in Science. She has also studied bees, butterflies, and tamarin monkeys—and she's currently running a game-camera project to assess the effects of urbanization on wildlife in and around Little Rock, Arkansas. Her primary focus, however, is researching how songbird behavior and populations are influenced by the ways humans are changing landscapes.

#### **Collaborative Colleague**

In every project she undertakes, McClung seeks opportunities for collaboration. She co-teaches, conducts a plethora of meaningful research projects with students, and she pursues research projects with off-campus partners, as well. One such research partner is Matt Moran, professor emeritus of Biology at Hendrix College and ecologist at the Eternal Children's Rainforest in Costa Rica. McClung was his student during her undergraduate years at Hendrix, and when she returned to the school as a professor, the two

### "started working on a bunch of projects," as Moran says; these include butterfly research and some big data papers. They each bring different skill sets to their shared research, and having two ecologists working together "really helped to boost research productivity," Moran says. McClung is planning to take students on a research trip to Costa Rica to develop long-term monitoring programs aimed at assessing biodiversity levels in the region.

#### **Getting Students Involved**

McClung hopes to get students into natural spaces early in their time at Hendrix. One way that she does that is by co-teaching "Nature and Well-Being," a freshman seminar which focuses on the importance of connecting to and taking care of nature. Students perform service days at the nearby Hendrix Creek Preserve during which they remove invasive species and trash.

Lindsay Kennedy, Professor of Psychology at Hendrix, is McClung's co-teacher in the class. "[McClung] really gets in there with

### A Passion for Songbirds at Hendrix College

#### BY CYNTHIA MWENJA, PhD

Maureen McClung—Judy and Randy Wilbourn Odyssey Associate Professor of Biology and Chair of the Environmental Studies Program at Hendrix College—researches animal ecology, specifically how human-caused changes to the landscape impact animals. Throughout the course of her career, she has studied a variety of animals through this lens.

> them, encourages them to engage fully and get a little messy, and stops regularly to show and explain to them the amazing nature all around," Kennedy says. "What's really special about that service day is seeing the students who have been quiet in class come alive as they engage with nature and their classmates." McClung hopes this outdoor experience will encourage students to continue enjoying outdoor spaces throughout their years at Hendrix.

> Kennedy has noticed how McClung's enthusiasm and encouragement pull students into her world. "I dare anyone to be outside with her and not get swept up in her enthusiasm for nature—birds, especially." Many students have been pulled into a love for nature and a passion for birds through working with McClung. One of these is Kevin Krajcir, conservation biologist and grants coordinator for the Arkansas Natural Heritage Commission. He says he got drawn in through bird-watching trips and bird walks on campus that she organized, and he "fell in love with birds" thanks to her. McClung



became Krajcir's academic and research advisor, and he is still pursuing the research project he began as an undergraduate using online data collection to project the effects of natural gas and oil development on breeding bird population trends. In his current position, he spends about half of his time doing field research and the other half focusing on grants administration, and he appreciates the opportunity to experience "what applied conservation looks like."

Hannia Valero, a Biology major who will graduate from Hendrix in 2025, started participating in the Hendrix Naturalists Club during her freshman year; McClung is the faculty advisor. During that first year, through activities led by McClung such as butterfly tagging and fossil hunting, Valero steadily gained interest in conservation and biology. Valero took a research position under McClung, spending last summer bird banding at Stone Prairie Wildlife Management Area, and she is now working on the urban wildlife project, with cameras capturing photos of wildlife living around Little Rock. It was McClung's Conservation Biology class last semester, though, that opened Valero's eyes to a variety of potential career paths. McClung brought career professionals to speak with the students about what they do and the importance of conservation work. Valero says that she is still deciding, but she knows she will work in conservation, perhaps in a museum setting or maybe as an educator or biologist.

Additionally, Valero is involved with the campus radio station, KHDX, where McClung serves as faculty advisor. At the station, Valero has the opportunity to host radio shows and talk about science. This combination shows Valero the value of liberal arts—that it's "okay to study science and do creative things."

#### Student Research: Bird Window Strike Project

Once students begin to get interested in issues of conservation, McClung concentrates on drawing them into conducting field research with her. Moran admires the way

continued...

"What's really special about that service day is seeing the students who have been quiet in class come alive as they engage with nature and their classmates." McClung hopes this outdoor experience will encourage students to continue enjoying outdoor spaces throughout their years at Hendrix. McClung "really gets the students involved in research—it's not superficial." He says the students design the experiments and learn to write up their results for publication. They get the full process and even bring research ideas of their own to McClung. Moran says that McClung's students are far ahead of most of their peers when they get to graduate school because of the rich research experiences they have had under her guidance. Two current projects focus on gathering information about birds on campus.

In one ongoing initiative—the Bird Window Strike Project—students systematically survey the campus for window collisions. McClung says this sort of investigation is a major trend in bird research, helping to show how birds are navigating the built environment. She reports that campus oak trees draw in warblers, among other species, on their spring migration from March through May. The migrating warblers tend to be fatigued and hungry, and they are attracted to the insects living in blooming oak flowers. The emerging flowers and leaves on campus are very bright, and the tired birds may confuse the reflections of these plants in the glass for the plants themselves. In many cases, the resulting window collision causes the bird's death. Even if a bird is only stunned, it is more vulnerable to predation until it recovers.

To find out more about how many birds are affected at Hendrix, McClung is currently recruiting students to repeat the research that students conducted in 2023. Starting in April, when spring migration is beginning to peak, three teams of trained student researchers will survey twice weekly for birds that have collided with glass and been stunned or died. By collecting and analyzing this data, McClung hopes to learn which sides of buildings produce the most collisions and which windows are the most hazardous for the birds. With this information in hand, she can then make evidence-based mitigation recommendations to the college. McClung points out that window collision mitigation can span price points. On the less-expensive side are solutions like window-collision tape or strips of paracord hanging outside of windows. A higher cost option can be installed during renovations: bird-friendly glass appears clear to humans, but birds can perceive that the panes are there. She also says that solutions are advancing rapidly—the American Bird Conservancy's website offers many strategies for mitigating window collisions, and their list continues to grow.

The window-collision researchers also collect the dead birds for use in another project in which the birds are prepared to be included in a museum collection. Valero is part of this group of student researchers, and the work sparked her love for birds. She is now much more aware of how architecture affects bird species, and she says this research is what drew her into bird conservation.



McClung wants to go beyond simply involving students in research; she also wants them to learn about the processes of science developing research protocols, defining a conservation issue to research, and being agents of change by using science to inform recommendations that will benefit nature.

#### **Student Research: Bird Banding**

While the bird window strike project will provide essential data to allow collision mitigation on campus, McClung notes that working with dead and stunned birds can be sobering. Bird banding can offer "more delight," she says. McClung has federal certification to be a bird bander. As she points out, "This kind of work is heavily regulated," needing "proper approval and training." When conducting bird banding events, she makes sure that "all birds are captured and handled with appropriate training and institutional, state, and federal permits."



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To gather birds for banding, researchers erect mist nets—nearly invisible pieces of mesh of about twelve meters by three meters, strung between two poles. The birds are caught in the mesh, then gently extracted. The researchers try to determine whether each bird is male or female and how old it might be. They then place a metal band with a unique number on one leg. If the bird is caught again, McClung says, they can begin to understand something about its movements.

McClung leads bird banding workshops each spring at Hendrix Creek Preserve, a conservation easement adjacent to the college campus that was created around 2012 by multiple public and private stakeholders. The preserve features a restored wetland along with a pine forest and a retention pond; walkways and bridges allow visitors to view a variety of wildlife, including birds, squirrels, butterflies, and bees. Many migratory species pass through the preserve, as well. For the workshops, McClung spends several days in May teaching students the process of bird banding: how to set up the mist nets, how to handle the birds, how to assess sex and age, and how to band the birds. She points out that people spend a great deal of time and money to gain these skills, but she is committed to making sure that students learn them.

McClung was recognized with an internal grant at Hendrix; starting in June, she will be renewed as the Odyssey Professor. In this role, she will spend three years expanding the current banding program, and she will add a fall banding program, as well. Her goal is to establish baseline information about how birds are using the Hendrix College campus and the Hendrix Creek Preserve.

#### Habitat Management

McClung is also planning to write grants for habitat management at Hendrix Creek Preserve, with a goal of removing invasive plants and cultivating native species. She says that these changes will be "good for the preserve and good for the birds." The project is currently in the early planning stages— McClung and her partners are determining what the needs are ecologically and what the stakeholders want.

McClung continually looks for ways to fold the students into all activities involved in research. She hopes to work with four students each year so that they learn what the field science process is, beginning with writing grants and including speaking and working with community members and project managers. Then, of course, the budding field scientists must also track how the wildlife is responding to the changes that have been made.

#### **Support for Academic Passion**

McClung appreciates the support, resources, and academic freedom she enjoys at Hendrix. "When I've had a dream I wanted to pursue," she says, "I have been given resources and encouraged. Having that support keeps me here." She also points out that allowing faculty members to stoke a passion helps that passion spread to students; former students are now ornithologists because she was allowed to pursue that passion.

Krajcir also keenly appreciates the support McClung has received, and he would encourage college administrators to invest in such professors to "let them shine." He points to the "massive impact" that McClung has had on students like him through the kinds of outreach activities and research opportunities he experienced. He notes that these opportunities continued to grow as Hendrix continued to support McClung's dreams, now including conference attendance for students, a bird class for non-majors, and the bird banding program. He points out that many of McClung's mentees "have gone on to do amazing things," and he is happy to have been her advisee and student-and now collaborator and friend. Moran mentored McClung, and they now research together; McClung now works with former students like Krajcir in turn. The support they have all received from Hendrix is tangibly changing lives-and making strides in improving the natural world, as well.





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### **Tools of Empowerment: A Mass Shooting Survivor's Perspective on Preparation**

BY IVY SCHAMIS

Dear educators, administrators, and stakeholders in the realm of private higher education,

My name is Ivy Schamis and I survived a mass shooting in my classroom. I taught Social Studies at Marjory Stoneman Douglas High School in Parkland, Florida for almost two decades. Parkland is a residential town with a close-knit community where I raised my children, and we all thought it was the safest place to live and go to school. Until it wasn't.

On Valentine's Day, 2018, a former student managed to get into the school through an unlocked fence, brandishing a tote bag with an assault rifle inside. He made his way to the building where he began his ambush of innocent, unsuspecting students and teachers.

Seconds after my juniors, seniors, and I heard gunshots in the hallway, the gunman was shooting through a glass panel in my classroom door aiming at anything and everything inside. The students and I crouched low to the ground, trying to protect ourselves and each other. We were totally unprepared. We never had an active shooter drill. We never had stop-the-bleed training. There was a shooter with a gun, and we had nothing to protect ourselves.

As we approach the solemn 5th anniversary of the Parkland MSDS shooting February 14th, it is incumbent upon us to reflect on the past, assess the present, and diligently strive to fortify the safety of our academic sanctuaries. It is imperative that each of you embrace a multifaceted approach to campus security, drawing on a range of tools and strategies to create a resilient shield against potential threats.

In the quest for enhanced safety, I would urge all campuses to consider investing in advanced surveillance systems and artificial intelligence-driven threat detection. These technologies offer a proactive means of identifying and responding to potential risks, providing an invaluable layer of security. Establishing robust communication systems, such as mass notification platforms and real-time update apps, ensures that critical information reaches everyone, especially professors and staff, swiftly during emergencies. This offers time to prepare for the DHS response protocol of "Run. Hide. Fight," and for leaders on campus to initiate safety procedures in a timely manner.

Ballistic protection tools like Hardwire Emergency Response Shields (ERS) are tangible assets. Much like fire extinguishers are staples for any safety-conscious environment, these shields serve as mobile tools, providing physical barriers against gunfire until help arrives, or as supportive tools if first responders do not have the proper equipment on hand to execute their response protocol. While policy change works its way through our legal system, there are tools like these available to protect where before there was nothing. Having these shields available is part of a broader strategy to fortify our educational institutions and create a deterrent as assailants tend to zero in on soft targets. It cannot be stressed enough how important this tangible ballistic protection aspect is to a holistic active-shooter safety plan.

At a time when I had nothing, when my students had only a textbook to shield themselves, something that could stop bullets in real time could have been a gamechanger for the survival of my class. The ERS, paired with other tools like window film, locked doors, and key card entry in a layered defense, could help buy precious time. Window film is a At a time when I had nothing, when my students had only a textbook to shield themselves, something that could stop bullets in real time could have been a gamechanger for the survival of my class.

wonderful tool that keeps glass from shattering when shot. This delays the entry of the intruder, creates more decision space, and offers time to inform emergency responders before an assailant can enter the building. Preventative security measures like window film and locks are great additions to a holistic approach in slowing the progress of an assailant, but when it comes down to the wire and victims are faced with an active shooter, a bulletproof shield is worth its weight in gold.

Fostering a culture of preparedness is equally crucial. Regular emergency response drills and simulations acclimate students and staff to effective procedures, reducing panic, and promoting a coordinated response in times of crisis. Inform your community of security updates and tools available for emergency situations. Collaborating with local law enforcement agencies to conduct a thorough threat assessment, share information about potential risks, and plan joint emergency response drills further strengthens our defenses. When everyone is on the same page—staff, students, and law enforcement—there is a greater chance of fluidity in response protocol and ultimately survival. There is strength in numbers when everyone knows what to do, where to go, what

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the vulnerabilities are, and how to utilize tools they have at their disposal.

Being vocal about your school's security measures also acts as a deterrent for assailants. A hardened target is less appealing to those

who wish to do harm. For example, the New York Police Department (NYPD) used to suffer frequent casualties from officers being assassinated in their vehicles. Once the NYPD started armoring their vehicles, the attacks stopped. Criminals would not even attempt



to shoot the police vehicles because they knew it would be of no use. There was common knowledge that attacking officers within their vehicles was ineffective. This model of prevention can also be applied to higher education campuses: having visible protection like cameras, shields hung on walls around campus, signs, and surveillance monitors where people can see themselves entering a space creates an intimidation factor that can keep assailants at bay.

In addition to physical security measures, prioritizing mental health and emotional well-being cannot be overstated. Providing access to counseling services, fostering a sense of community, and promoting mental health awareness contribute to a campus culture that values the well-being of every individual.

As we remember the lives lost at Parkland MSDS, let us honor their memory through action. By embracing a holistic approach to campus security, integrating cutting-edge technologies, fostering preparedness, and prioritizing mental health, we can create an environment where education thrives without fear. It is time for each of us to actively contribute to the creation of a secure and nurturing space for learning.

In unity and commitment, Ivy Schamis

ABOUT THE AUTHOR: Ivy Schamis is a former teacher at Marjory Stoneman Douglas High School in Parkland, Florida and is a survivor of the mass shooting that took the lives of 17 people in 2018.

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### The "Fire Extinguisher for Gunfire" is available: Hardwire's Emergency Response Shield (ERS).

In recent years, the escalating threat of gun violence has become an alarming concern for educational institutions across the United States. With mass shootings on the rise, it is imperative for private higher educational institutions to proactively address the safety of their staff and students. Recognizing the urgency of the situation, a comprehensive and immediate solution is essential. One such solution gaining traction is the implementation of Emergency Response Shields (ERS), a proactive measure designed to protect against active shooter incidents on campus.

### **Ensuring Immediate Protection:**

Just as fire safety protocols have been ingrained into the infrastructure of public buildings, a similar approach is crucial for addressing active shooter scenarios in private educational institutions. The ERS serves as the "Fire Extinguisher for Gunfire," offering immediate protection against assault rifles, shotguns, handguns, as well as blades and blunt force weapons. By empowering faculty and staff with this advanced tool, private higher educational institutions can bridge the gap between an incident occurring and the arrival of first responders.

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### Aligning with Best Practices:

The ERS aligns seamlessly with established safety protocols recommended by authoritative bodies such as the Department of Homeland Security's Active Shooter Preparedness Program (Run, Hide, Fight) and the Advanced Law Enforcement Rapid Response Training (ALERRT) principles (Avoid, Deny, Defend). This integration ensures that the use of defensive measures is in accordance with nationally recognized standards, maximizing the effectiveness of emergency response strategies.

### Derived from Military-Grade Technology:

The technology behind Emergency Response Shields is derived from armor technologies initially developed for Department of Defense Programs and extensively fielded on United States military vehicles. These advancements have been integrated into federal law enforcement body armor, assuring a high level of protection for educational institutions against potential threats.

### Creating a Secure Learning Environment:

Beyond the immediate safety benefits, the implementation of ERS has shown to contribute significantly to mental health and well-being within educational communities. As students and staff feel empowered and protected, a renewed sense of security and confidence permeates the campus environment. The visible presence of protective measures can also act as a deterrent, dissuading potential attackers from targeting wellprepared and armored educational institutions.

In the face of increasing threats, private higher educational institutions must prioritize the safety and security of their campuses. Emergency Response Shields offer a proactive and effective solution, aligning with established safety protocols and utilizing cutting-edge military-grade technology. By investing in these defensive measures, institutions can foster a secure learning environment, providing both students and staff with the confidence that their safety is a top priority.

# **The Growing Influence of LEED Certification in Higher Education**

BY DAVID VINSON, PHD

Higher education plays a significant role in guiding society towards a sustainable future. It does so through research and community engagement, and by cultivating the knowledge, skills, and attributes of students that will empower a new generation to address emergent ecological and climate crises around the world. Education provides students with the tools to take responsibility for their lifestyles, nurturing a healthy human-nature relationship.



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Across the country, universities have recognized the adverse effects of former practices, subsequently overhauling their curriculum, research, estate management, and community engagement to create a more sustainability-directed campus culture. Campus sustainability is no longer deemed a luxury but rather a core institutional value, one that reaches across all domains of campus life.

The built environment has a profound impact on our natural environment. In the U.S., buildings account for 39 percent of carbon dioxide emissions and 71 percent of total electricity consumption. With roughly 240,000 buildings spread across public and private universities-those spread across more than 4,300 higher education institutions—higher education benefits from making green building a central element of sustainability planning. Central to campus sustainability are the continued efforts to design and construct LEED-certified buildings, those which prioritize six key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection, indoor environmental quality, and innovation in design. As the nationally accepted benchmark for the design, construction, and maintenance of high-performance green buildings, LEED provides building owners and operators the necessary tools to have an immediate and measurable impact on their buildings' performance.

Moreover, the social and economic benefits of LEED certification are many. For instance, certification shows the community that the university is serious about adopting environmentally responsible building practices. This not only enhances the university's reputation with the public, but it also serves as a vital recruitment and retention tool for students, staff, and faculty alike. There are also numerous financial benefits to LEED certification. According to the U.S. Green Building Council (USGBC), LEED buildings may qualify for a host of incentives, including tax rebates; thousands of buildings save institutions money, using less energy and reducing maintenance costs by nearly 20 percent. Outside of higher education, the USGBC reports that 87 percent of companies which adopted LEED retrofits experienced higher productivity, 81 percent saw better retention rates, and 75 percent reported better employee health. Also, 79 percent of company employees say they would choose a job in an LEED-certified building versus an uncertified one. The same benefits extend to higher education—imagine, for example, the impact of LEED buildings on boosting the desirability and occupancy of student living spaces, classrooms, libraries, and administrative workspaces, among many others.

#### **LEED-Certified Recreation and Wellness Facilities**

An ongoing shift in campus-based culture, one set in motion most of all by the desires and expectations of the student body, is located at the intersection of sustainability and recreation and wellness facilities. Students recognize, perhaps inherently, the reciprocal relationship between notions of wellness and

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**LEED**-certified recreation and wellness facilities adopt an ethos that can be summarized as "healthy buildings, healthy bodies." Central to such facilities are green features, energy-saving lighting fixtures that can be adjusted based on the availability of natural light, and heating and air conditioning units that are run on low-energy usage.

sustainability. LEED-certified recreation and wellness facilities accentuate an institution's commitment to health and wellness, just as they satisfy student concerns about sustainability and climate change. Students care deeply about optimizing their physical and mental health, and their awareness of the dangers of climate change are as heightened as ever. Research shows that students view recreation and wellness facilities as communal spaces, as those which nurture a sense of connection and belonging. These are facilities that are integral to student life, and LEED certification only strengthens students' sense of togetherness and the feeling of shared values. Studies also persuasively demonstrate the correlation between improved well-being and student achievement in the classroom. LEED-certified learning spaces be a game changer in terms of enhancing student achievement and happiness.

LEED-certified recreation and wellness facilities adopt an ethos that can be summarized as "healthy buildings, healthy bodies." Central to such facilities are green features, energysaving lighting fixtures that can be adjusted based on the availability of natural light, and heating and air conditioning units that are run on low-energy usage. The installation of low-flow plumbing systems and waterless urinals further reduces water consumption. Other eco-friendly features may include the use of reclaimed lumber and the incorporation of new technology like biometric scanners, those which cut down paper waste and generate utility savings. Irrigation needs of facilities are frequently met through 100 percent recycled water. For instance, numerous LEED-certified facilities include a pool discharge and on-site greywater system for collecting and treating water for landscape irrigation. Displacement ventilation systems, LED lighting, and photovoltaics offset building energy consumption and energy cost. A common practice in certified facilities also includes robust recycling policies for cardboard, aluminum, plastic bottles, light bulbs, paper, batteries, lost cell phones, even eyeglasses found on site.

### Procedures for Earning LEED Certification

While LEED certification is a widely known, internationally recognized sustainable building certification, it is useful to revisit what the acronym stands for: Leadership in Energy and Environmental Design. Certification involves a rating system for the construction, design, maintenance, and operations of environmentally responsible buildings. Projects align with several certification pathways: Building Design and Construction (BD&C), Operations and Maintenance (O&M), Interior Design and Construction (ID&C), in addition to Homes and Neighborhood Development (ND). LEED certification works on a points-based system. The higher the score, the more sustainable the building-and therefore, the higher level of certification. Each category has its own rating system. For example, the O&M certification includes points for location and transportation (alternative transportation), sustainable sites (rainwater management, light pollution reduction, etc.), water efficiency (indoor water use reduction, water metering, etc.), energy and atmosphere (minimum energy performance), materials and resources (ongoing purchasing and waste policy, solid waste management, etc.), indoor environmental quality (minimum indoor air quality performance), innovation (LEED Accredited Professional), and Regional Priority (schools, data centers, and so on).

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The four LEED certification levels are Certified (40-49 points), Silver (50-59 points), Gold (60-79 points), and Platinum (80 or more points). Despite the challenges, universities are achieving Platinum certification. Consider, for instance, Columbia University's sustainable design and overall project plan for its 17-acre Manhattanville campus. Columbia earned Platinum status for Neighborhood Development, the first certification of its kind in New York City. Columbia is also home to over 15 Gold-certified LEED buildings. At Georgetown, one of its residential buildings—located a few blocks from the U.S. Capitol and steps away from Georgetown Law and the School of Continuing Studies—was the first at the university to achieve Platinum status. At the University of Miami, the Phillip and Patricia Frost School of Music achieved Platinum certification with a remarkable array of sustainable features: modulated electrochromic glazing on windows that reduce glass and heat; mold and stain-resistant framing materials for air-quality protection; light and heat sensors with override capabilities; active-chilled-beam, energy-efficient air conditioning technology; rooftop photovoltaic panels and rainwater harvesting cisterns that dramatically reduce water and electricity usage; smart glass that can be electronically tinted or cleared to optimize daylight; solar energy; and finally, anti-smog coating on facades, which help to clean the air and make exterior surfaces easier to clean over time.

With an increasingly competitive higher education market, campus-based environmental initiatives remain a major factor in students' enrollment decisions. As reported by the College Hopes & Worries Survey Report, nearly 70 percent of 10,000 Princeton Review respondents said that having "a way to compare colleges based on their commitment to environmental issues" would contribute to their decision to apply. Higher education has taken note, and the LEED revolution is well underway.



ABOUT THE AUTHOR: David Vinson, PUPN staff writer, has a PhD in English with specializations in transatlantic literature and cultural studies. He is a committed scholar, teacher, husband, and dad. If you ever meet David, avoid the subject of soccer. His fandom borders on the truly obnoxious.



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# The Impact of Furniture on Both the Utility and Aesthetic Appeal of University Common Spaces

BY LEO DEDERING

Think about how students begin their journey on a college campus. Many start with a tour before applying, some may wait for an admitted students' event, and a few will have their first in-person experience with a campus at orientation. Regardless of when they first arrive, where they are introduced is almost always in some kind of common area.



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Many schools have prioritized these first-encounter spaces with projects like equipping media centers with the latest technology or upgrading the menu in dining halls, but the personality of these spaces often makes as much of an impact as what bells and whistles they offer.

It's hard to overstate the importance of thoughtful design in open-use areas such as cafeterias, media centers, student unions, and even dorm lobbies. These are the rooms where students go to eat, study, spend time with their friends, and generally enjoy the freedoms of being in college. They don't just create the first impression; they set the tone for a large portion of a student's college experience and should be designed with four key factors in mind to do so in the best possible way.

#### 1. Functionality

Furniture that suits more than one need is important in almost any space. In many applications, this means furniture can be moved into several setups for different kinds of use. While most rooms will stay in the same basic layouts to serve their primary functions, the way students interact within the space creates a need for nuance in the design.

The college environment is unique in that many students live most of their life on campus while school is in session, and even commuter students will likely have considerable downtime spent on the property. Furniture pieces need to meet their needs by supporting both collaborative and individual workspaces, and they need to be relaxed enough for recreational use.

This is especially true for common spaces, which are increasingly becoming multi-functional. Designing a common space on a college campus requires flexibility for multiple formats in one system. Within one basic layout of a media center, cafeteria, union, or other space, students should feel welcome to study alone, study in a group, chat with friends, grab a quick bite or use it in any other way they need.

### 2. Visual Appeal

In addition to the functionality of the furniture, the look of the space needs to draw students in. Even the most useful common spaces also need to be inviting. "Design makes a huge difference on how people perceive a space," says Teri Wilson-Ruggles, director of PH Design at full-service furniture and design firm Palmer Hamilton. "Walking into the dining area of a nice restaurant has a completely different effect on a person than waking into the cafeteria of a prison. Ultimately, these two serve the same purpose of feeding people, but the ambiance and aesthetics of the environments could not be more different. They create two opposite ends of a visual appeal spectrum, and, unsurprisingly, most colleges want to be more on the restaurant end of that spectrum."



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To avoid appearing institutional, furniture should look comfortable and welcoming, reflecting the possibilities of how students can interact with the space before they even come in. This should also carry through into the design, with accent pieces to reflect the personality of both the space and the university as a whole. A student may not even notice how the feel of the space comes together, but they should get the right feel when they enter the room.

Consistency is also key in common spaces. While the functional design of a media center will be different than that of a dining hall, keeping design motifs generally consistent throughout campus creates a more unified feel and helps shape the identity of the university community.

#### 3. Durability

The economic side of a furniture and design project also has a major role to play in decision making. Most colleges want their furniture investments to last at least 10 years before needing replacement, presenting a bit of a challenge for furniture manufacturers. College students are rougher on furniture than office workers, for example. Furniture is dragged, set outside, stacked and pushed around in ways you just don't see in any other environment.

In the past, building furniture that could withstand this treatment required heavy-duty materials such as solid wood and basic sherpa vinyl fabrics. While this improved durability, it limited flexibility, aesthetic appeal, and comfort of the furniture with solid, blocky pieces that could not be moved anywhere without strenuous effort.

With modern technology and building materials, universities can have the best of both worlds. New construction methods offer pieces that are durable but more attractive and movable. Working with manufacturers who utilize these modern methods allows colleges

to choose pieces that best fit individual space requirements and appeal to students without having to worry they won't last long enough to justify the investment.

#### 4. Collaboration

The benefits of finding the right manufacturer extend beyond durability and design. There are many companies that can deliver a design and furniture package to fit a space, but the best choice is a full-service company that goes beyond a one-size-fits-all business model.

A good furniture company will take the time to get to know the school and design spaces in collaboration with key decision makers from various populations. Beginning any thorough design process means collaborating with the people who will actually be using the space, most importantly students. Many administrators will try to put themselves in a student's shoes to ascertain what would appeal to them,

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but bringing students in for their input is a much easier and more accurate way to determine what they are looking for in the redesign. This is particularly important in universities, where the students are customers and their willing participation in the school is critical. Testing student responses will help administrators and designers understand how the space is used, how it could be used, what design motifs students will respond to positively, and other important information.

Student input can go even further. Many schools and manufacturers will open up the design process to student submissions, allowing the more creative university attendees to lend their talents to the space. This allows students to take further ownership of campus and feel represented in the community as a whole.

In addition to openness to the community, a furniture manufacturer needs to start with a solid basis of knowledge. Balancing functionality, visual appeal, and durability is not easy, but working with a company that understands furniture and the university market can be a huge help. In addition to understanding all the factors listed above, the manufacturer needs to know how decisions are made in a university structure. Colleges often have people on staff specifically for acquisitions of this nature. Salespeople who come in expecting to act in an advisory capacity rather than a collaborative one are vastly underestimating their audience's expertise and misunderstanding how best to work with them.

A furniture manufacturer with experience in universities knows how to build lasting working relationships that are mutually beneficial. Ultimately, that's the goal. Colleges are consistently working to upgrade the many buildings within a campus, making the challenge of finding a good furniture and design supplier nearly constant. A manufacturer that can reliably deliver functional, attractive, durable spaces with a collaborative business model is a valuable resource and potential partner for future projects.



ABOUT THE AUTHOR: Leo Dedering is the Midwest regional sales manager and manufacturer's representative for Palmer Hamilton specializing in furniture and space design in the education market. He can be reached by email at Idedering@ palmerhamilton.com. For more information on Palmer Hamilton, visit www.palmerhamilton.com.



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# **SMARTflor Raised Access Floor Powers up the Mission at Bush Combat Development Complex**

#### BY MIRA KORBER

The Bush Combat Development Complex ("BCDC"), part of the Texas A&M University System, is paving the way towards national security innovation for the United States of America. The newly renovated, on-campus Fusion Lab leverages the power of SMARTflor raised access flooring and SMARTdesks computer tables. The mission? Harness real-time data and fine-tune military testing operations more quickly and precisely than ever before.

SMARTdesks computer tables with integrated power modules, in concert with SMARTflor computer tiles, facilitate real-time data at the BCDC Innovation Proving Ground ("IPG"). Unique to any military research site in the country, the IPG is a 134-acre, outdoor testing site with obstacles for military weapons evaluation. The most unique feature of the IPG is its ability to engage in collaborative data visualization using a mesh communication system that streams live video, sensing and telemetry data, and real-time situational understanding to the Fusion Lab, where data is projected onto large screens. Analysts in the Fusion Lab can then study, react to, and adjust testing processes almost instantly.

IPG data is transmitted initially through fiber optic infrastructure, and then through SMARTdesks flooring and furniture. First, the mesh WiFi network sends data to analysts' computers back in the Fusion Lab. Next, the SMARTdesks power and data integration system and the SMARTflor computer floor allow testing evaluators to plug in their laptops to HDMI ports, conveniently embedded into computer tables, that transmit live data to the Fusion Wall. The entire system is integrated with SMARTdesks Seminar 205 Series Tables with T-shaped legs and wire management. Ethernet and HDMI run through the table's wire management system, into strategically placed power and data boxes in the raised access flooring, SMARTflor. The instant, tidy transmission of data through this system allows testers and evaluators to assess equipment such as tanks, rifles, strikers, shooters, and radios, and alter testing procedures according to what they see projected on the Fusion Wall. As Brian McHugh, Director of Testing at the IPG, explained, "We can start evaluations early on the test, and what that allows us to do is visualize and and understand what's happened, decide what we need to do to fix any issues that we're having, and then direct those in real time. It's a game changer in testing."

Prior to the integrated SMARTdesks installation of raised computer flooring and computer furniture, the Fusion Lab suffered from disorganized wire management, which created

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trip hazards, and an insufficient number of ethernet and HDMI ports for analysts to access and use to project their testing data onto the Fusion Wall. These obstacles prevented BCDC from accomplishing its mission critical goal: getting technology to the military industry as quickly as possible. When McHugh began to look for a solution, he knew it was necessary to eliminate clunky power towers and cables running above the floor to the control room in the Fusion Lab. He also knew there was a need for many more than six ports that were available. That is when he came across the SMARTdesks product, SMARTflor, which is a raised technical floor that allows reconfiguration of wires and power ports into the carpet tiles themselves. After McHugh opened the dialogue, the SMARTdesks Design Team provided several versions of schematics for thirty-six power, data, and ethernet ports, as well as multiple furniture configurations the SMARTflor could accommodate to meet BCDC goals.

As McHugh said, "We wanted a raised floor

where we could run wire under the floor, and then in each desk we wanted to put ethernet, HDMI, and power ports. This way, people wouldn't need extension cords and we didn't have to run wires everywhere. And even if wires were running places, they would be running under the floor rather than across the floor." The SMARTflor elevated floor system provided the perfect solution for McHugh's conundrum. Because the tiles were installed directly over the existing floor, there was no need to do demolition work or engage in core drilling to install a raised access floor that hid wires from sight, creating a safer and more aesthetic environment. SMARTflor, as a modular access floor, allows reconfiguration of the power and data boxes, should BCDC decide to arrange the computer tables differently or if the need arises to access connectivity in a different part of the room.

One of the main benefits that the integrated SMARTflor raised access floor and SMARTdesks computer lab tables gave BCDC was more efficient testing processes. In



enables analysts in the Fusion Lab to review data streamed in over the mesh network almost instantly. As McHugh said, "this allows us to bring the data in real time from the field and integrate it (data) into whatever device we're using to project it, so the Test Team can all visualize the event in real-time. The whole idea is that as you see the data, you can make decisions based off what you're seeing and then make in-stride adjustments to what's happening in the field to get better data. That's the collaboration piece."

The simple, yet effective, power and data integration that SMARTdesks provided for BCDC was customized with the help of the Design Team at SMARTdesks, which matched the high-pressure laminate computer tabletops to existing boardroom furniture on-site, and selected the gray carpet to complement BCDC's desired aesthetic. Jeff Korber, SMARTdesks Founder and CEO who was deeply involved with the project. McHugh said, "He was excellent, very user-friendly, and very professional. He helped guide me through this process, not trying to upsell me, asking what I really needed, and talking to me about what he thought could meet that requirement." SMARTdesks provided installation services for the SMARTflor raised access floor, which was installed in one day, ensuring that BCDC operated with limited downtime.

According to McHugh, "Using the SMARTflor raised floor itself is applicable in any environment where people need to access connectivity. The ability to get those wires out of the way is key. I could imagine SMARTflor installed to improve numerous facilities I've worked at throughout my career."



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ABOUT THE AUTHOR: Mira Korber serves as Chief of Strategy for SMARTdesks®. She is also the founder of a tutoring company and has advised EdTech companies on strategic product planning. She holds a Master's of Public Policy, with a focus in K-12 education, from Vanderbilt University's Peabody College.

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