

Design and Construction for a New Era in Collegiate Athletics

Renovating older structures for modern comforts, constructing new practice facilities and pushing ahead with projects aimed at health and wellness, colleges and universities continue to focus on creating better experiences for their student-athletes, students, fans and recruits.

On the following pages are profiles of some of the major companies driving the recent surge in collegiate athletic facility development along with a listing of some of the major projects in progress today.

Populous proves brand activation has become the latest X-factor

How does an athletics program communicate culture? Tradition? History? Athletic directors, coaches and student-athletes live it, of course, but they also live in it. The spaces in which collegiate programs spend their time are greatly influential to recruits, sponsors, donors and more, and Populous' brand activation team provides a roadmap for that success.

In the same way that a revenue-generating venue isn't just a set of folding bleachers, impactful branding requires more than pinning up wall graphics and calling it a day. To tell the story of a program in a way that leaves a lasting impression on all who walk through a facility's doors, Populous uses immersive light, sound and texture to activate all the senses.

"Before winning games, collegiate programs have to win over recruits and donors. To do that they must leverage every advantage,

including their facilities," said Brian Mirakian, Senior Principal at Populous. "These spaces are more than a first impression. They're a blank canvas to tell the story of a program in new ways using a mix of materials and technology that create enduring memories which pay dividends on signing day, game day and beyond."

Because we are architects and designers first and foremost, we understand how to develop turn-key solutions that integrate seamlessly with a facility's architecture. The result is a cohesive mix of graphic design, materials and technology.

For the University of Oklahoma Barry Switzer Center, Populous' brand activation team created an interactive national championship trophy display that wows visitors immediately upon entering. Inspired by Bob Stoops' desire to motivate players by the numbers,



Populous added layers of finishing details to Oklahoma University's football stadium.

the "pursuit of excellence" theme is carried throughout the facility with branding that reflects the program's great number of All-Americans, bowl game appearances

and more.

Showcasing a program's history and outlook through compelling interactive and visual means can make all the difference in motivating student-athletes to perform and recruits to sign. In the case of Purdue University's new Football Performance Complex, the university's theme of "momentum" is embodied in powerful locomotive imagery and chevron patterns to encourage student-athletes to always push forward.

Populous' in-depth understanding of how branding and building weave together is about more than delivering a high-quality product. It's about minimizing change orders to reduce cost and time-to-market to create branded environments that are big on impact for maximum value.

For more on how Populous can elevate your university's brand, visit populous.com/collegebranding. ■

Using a mix of graphic design, materials and technology, we create branded environments that are big on impact for maximum value.

SEE HOW WE CREATE UNFORGETTABLE BRAND ENVIRONMENTS AT POPULOUS.COM/COLLEGEBRANDING

POPULOUS

Mortenson's 'lean construction' serves as model for industrialization

With 30 years in the sports industry and a track record of delivering every project on time and on budget, Mortenson has earned its rank as a leading sports builder.

Collegiate athletic programs across the country are benefiting from the builder's innovation in construction management, smart technology and energy solutions.

At Penn State, Mortenson developed fully immersive, virtual environments for multiple projects such as Pegula Ice Arena, the Lasch Football Building renovation and the Intramural Building renovation and expansion. Their 3D modeling technology consistently provides value by aiding in design decisions, driving fundraising efforts, and even supporting recruiting efforts for student-athletes and coaches.

"We completely build all of our facilities in the 3D environment prior to ever breaking ground," said Travis Noble, collegiate sports market executive for Mortenson. "This allows stakeholders to experience a building in the early stages of a project, particularly unique spaces such as locker rooms, player lounges and hydrotherapy areas. For Penn State's Intramural Building, our technology enabled stakehold-

ers to interact with the climbing wall during the design phase. We could change the formation of the wall, the colors and the aesthetics based on users' virtual experiences."

Cutting energy costs — one of the biggest expenditures for sports facility maintenance — has become top of mind for college athletic programs, leading schools to tap into Mortenson's long-time expertise through its Center for Energy Performance.

"Climate change, sea level rise and increased storm destruction are prompting a heightened focus on energy and infrastructure," said Logan Gerken, general manager of Mortenson's Sports + Entertainment Group. "We're seeing a growing demand for increased battery storage, as well as for renewable energy—whether that's wind or solar. The future is to create emergency power backup for campus, to send energy back to the utility grid and to provide more resiliency overall. Consider that sports facilities often serve as emergency evacuation shelters in local disasters. Technology has caught up so that we can create an island of electricity, if need be."

Mortenson has a long history of setting the standard for renewable energy across all industries. In fact, one out of every three wind turbines turning in the U.S. was built by Mortenson.

Mortenson is currently bringing its technology expertise to bear at Marquette University's new Athletic and Human Performance Research Center, integrating the building to back cutting-edge research that explores the relationships between exercise, fitness and overall health and well-being.

Mortenson's active collegiate sports projects span the U.S. The builder recently wrapped up an 18-month complete overhaul of Northwestern University's Welsh-Ryan Arena that will provide a world-class experience for student-athletes and fans. The firm is currently putting the finishing touches on an indoor football practice facility for the University of Arizona, set to open in early 2019. At the University of Missouri, Mortenson has a south end zone project under way, which will create state-of-the-art training facilities for Mizzou Football, as well as add premium seating opportunities and game-day enhancements for fans. At Arizona



Mizzou South End Zone Complex

State University, Mortenson is in the midst of planning a \$160 million renovation of Wells Fargo Arena and new adjacent hockey arena.

"Universities continue to focus on reconnecting with alumni and fans, bringing football and basketball back to campus. They're also looking for creative ways to fund these expensive projects, as exemplified by the partnership that Colorado State developed with New Belgium Brewing Co. And, lastly, they're doubling down on the student-athlete experience," said Noble. "We at Mortenson bring a level of expertise and innovation to help ensure the success of all our clients' goals."

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- Rebuilt for an exceptional fan experience
- Rebuilt to transform the game
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Mortenson

DLR Group's design talents showcased at historic LA Memorial Coliseum

DLR Group, an integrated design firm with clients across the globe, has taken on the monumental task of renovating and preserving the national historic landmark venue, the Los Angeles Memorial Coliseum.

University of Southern California, which took control of the facility three years ago, has called the LA Memorial Coliseum home since it opened in 1923.

The \$300-million makeover is amenities-driven, to bring to the 95-year-old structure the same comforts and modern expectations as competing area and national facilities, and to bring it up to par with other facilities in the Pac-12.

"The coliseum hadn't seen significant investments in years; it was hopelessly behind other stadiums across the country," said DLR Group Global Sports Leader Don Barnum, AIA. "The experience for everyone – from fans to student-athletes – will be improved."

Construction began in January, and Barnum expects the overhaul finished in time for the USC Trojans' and Los Angeles Rams' seasons in August 2019. The Rams will continue to use the Coliseum until their new Inglewood facility is complete

in 2020.

New seating, new sound, new scoreboards and ribbon boards start the list of changes, along with more aisles, more legroom, premium clubs and loge boxes. Three new levels of suites are included, two of them for Founders at the highest level of patronage and another level of club suites.

One of the most significant changes will be the south concourse, which will now more closely resemble the environment of newly built stadiums, giving fans views down onto the field.

"The coliseum is a national historic landmark, which added a significant level of constraints. We had to essentially create a seven-story building inside the seating bowl but have it remain recognizable as the original building," said Barnum. "For example, we were careful to exactly match the shape and slope of the original profile of the seating bowl with new seating areas. We've kept the iconic entryways. People can still identify their section as, say, 'Tunnel 7.' We worked hard to nestle those improvements into the bowl so they would fit the building's history and maintain its spirit."



Los Angeles Memorial Coliseum, built in 1923, is a designated national landmark.

With the Coliseum now serving primarily as a university venue, DLR Group found new ways to adapt the building to Generation Z and millennials.

"As spenders, millennials are pushing the Boomer generation out," said Barnum. "And they have a lot of avenues of interest, besides sports. Now that Gen Z has moved into college, universities such as USC are competing with their screens. It's important for colleges and universities – as well as pro teams – to appeal to students and recent grads. By only appeal-

ing to big donors and long-time alumni, schools and professional franchises run the risk of creating a gap in their future revenue streams."

For USC, the Coliseum now hosts club-like spaces for students, using tents on the concourse. Inside, USC built social decks overlooking the stadium as gathering points for students.

At the University of Nebraska's Pinnacle Bank Arena, DLR Group gave students a separate entrance, as well as their own concourse with rest rooms and concessions. The student section is directly behind the player benches.

And by sharing their experiences on social media, such as sending out a selfie taken in front of, say, the big red 'N' outside Nebraska's arena or the so-called 'Jack and Jill' statue at LA Memorial Coliseum, Gen Z students instantaneously share their affinity for the brand, a valuable affirmation that cannot be purchased.

"College athletics leaders are realizing they're in the entertainment business for a new generation. We're helping the next generation of sports facilities leverage those opportunities," said Barnum. ■

It's a new game day at LOS ANGELES Memorial Coliseum

Kick Off Fall 2019



Scholarship Club Tower

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DLR Group
Architecture Engineering Planning Interiors

Daktronics celebrates 50 years of cutting-edge technology

At its half-century mark, Daktronics has grown from two South Dakota State University professors building scoreboards in a garage to the international industry leader it is today.

"At the end of the day, we're an engineering company," said Jay Parker, vice president of live events and spectaculars. "Our goal is to continually innovate so that we can create and build at the level of our clients' imaginations."

For colleges and universities today, that means tackling three key areas: game-day entertainment and excitement, generating revenue through sponsorships, and creating an atmosphere for recruiting great athletes.

Colleges are following the pro leagues' footsteps, adding Daktronics LED displays with patented narrow pixel pitch (NPP) to indoor spaces – from clubs to locker rooms to the video wall in the conference room.

Daktronics LED products allow unsurpassed resolution quality and color enhancement and can be configured into almost any size or shape. Instead of a wall of separate video displays, the LED products can be installed as a single



University of Oklahoma Weight Room

massive display. The LED displays can be built to enhance the architecture of a space, for example, by wrapping a column with one continuous display with no distortion of video.

As colleges renovate stadiums, many are adding more premium seating and, taking a cue from the pros, adding more club space, including clubs for students.

"The clubs can entice fans to come out to the stadium on a cold day because they know they can find shelter," said Parker. "By using our LED displays, schools ensure that fans can be inside the club, out of the cold, but remain part of the action."

At Oklahoma State University's

football stadium, Daktronics recently took the unusual step of building a massive video board low to the ground and pushed forward in the bowl. The intimately placed board is visible from every seat, with fans barely needing to turn their heads.

The bigger Division I conferences are using Daktronics products to enhance their recruiting process. University of Oklahoma installed a massive LED board in its weight room to entice recruits. Daktronics is installing locker room video displays that allow athletic programs to personalize the board for each recruit.

"In some cases, we've installed a video board above each locker, so the school can change the names and players and recruits can watch video," said Parker. "We want to get a picture of you, the recruit, with that jersey on and our products can help recruits see themselves as part of the team."

At Power 5 schools, Olympic sports from swimming to equestrian, are receiving a larger slice of attention.

"If you used to swim for your school, when you give money as an alum, you want to see that

money go toward your sport," said Parker. "And you want your sport to have the same great-quality equipment as your school's other sports and as your competition's. In turn, if I'm a swimming recruit and I see a school that's committed to bringing the best for my sport, then I'm more willing to keep the competition alive for that university."

The Division II conference schools are a big growth area for Daktronics, said Parker. "Every college wants fantastic video displays. It's just a matter of finding the funding. And the colleges push hard to get it so they, too, can recruit the best athletes possible."

What's up next? In a new take on "follow the leader," Daktronics was tapped to build the nation's largest video display at a high school. It's in Texas — where everything's bigger, of course — at Weslaco ISD's Bobby Lackey Stadium. In a close second is McKinney ISD, with Daktronics' patented video technology, and for the first time at the high-school level, ribbon displays. Also included were the Sportsound® audio system and Show Control System, all products used by pro franchises such as the Houston Astros and FC Dallas. ■

EVERY MOMENT MATTERS

LEARN MORE ABOUT OUR NARROW PIXEL PITCH PRODUCT AT DAKTRONICS.COM/NPP



Ephesus shows “one size does not fit all” when lighting college arenas

If there is one part of the sports facility industry where one size does not fit all, it's the college sector. Whether it's the many different venue sizes and capacities, or the flexibility needed to host numerous events or the wide range of budgets among Power Five conferences, community colleges and everything in between, every college sports venue is unique.

This individuality is not as big a deal when deciding on the playing surface or which brand of cola you'll serve, but when it comes to sports lighting, the ability to choose an LED sports lighting solution that caters to the diverse needs and budgets of a college sports venue can be the difference between remaining in the dark or seeing the light.

For nearly 50 years, there was practically no innovation in sports lighting. Despite their limitations, metal halide lights were the standard. That is, until 2012 when the first sports arena was illuminated with LED sports lighting. And since that day, hundreds of new facilities have been built with LED lighting, while thousands of existing facilities, including hundreds on college campuses, have made the switch to an LED lighting solution. For most, it was a no-brainer to enhance the presentation of their game and cut energy costs by up to 75 percent.

But for many college facility operators, there are two things holding them back from making the move. For some it is limited budgets that will not allow them to purchase a system that has all the functionality they will need today and in the future. And for others it is the fear of buying a system that

will be outdated by next season.

This concern led to the advent of the new Ephesus Lumadapt LED Sports Lighting System, the industry's first fully adaptive, customizable LED sports lighting and controls system that allows facility operators to buy what they need today and then remotely update, adapt and expand the system as their needs change and new technologies and features become available. With the Lumadapt system, upgrading or updating the system is as simple as downloading an app to your cell phone or an update to your laptop.

“Lumadapt frees facility operators and owners from a one-size-fits-all approach that locks them into today's technology for decades,” said Mike Quijano, Director of Business Development and Product Marketing for Eaton's Ephesus Lighting. “Lumadapt unlocks the full power and connectivity of solid-state lighting by evolving and expanding as needs change and new functionality becomes available.”

Whereas most sports lighting system are a collection of individual fixtures only connected by control wiring to turn them on and off, Lumadapt's smart-cloud data approach is an interconnected system. This allows users to remotely monitor system health and instantly upload new features, functionality and system upgrades. The fully integrated system can expand with a wide range of a la carte options such as: RGBA color, beam tuning, color temperature tuning, remote health/status monitoring, and a dynamic scene builder with capability to make personalized scenes. As additional functionality



The University of Miami's Watsco Center depends on Ephesus Lighting to bring color and action to life.

is developed or updated, Lumadapt customers can pick and choose the functionality they need to upgrade the system.

Earlier this fall, AMALIE Arena in Tampa, the host site for the 2019 NCAA Women's Final Four, became the first major venue to install the Lumadapt system. It delivers a wide array of available features including beam tuning, which allows for a wider beam of light as fans arrive and a tighter beam at game time; color temperature tuning to give the arena a cooler look for hockey and a warmer look for events such as basketball; RGBA

color to provide colorful light shows and pre-programmed dynamic scenes for player introductions, goal celebrations and other fan entertainment.

Eaton manufactures its Ephesus line of high-output solid-state sports lighting solutions for a broad range of applications, from municipal ballfields to indoor and outdoor professional venues. These innovative advanced lighting solutions create brighter, more vibrant and sustainable environments.

For more information, visit www.eaton.com/ephesus.

NEW FACILITIES IN PROGRESS

ARIZONA STATE UNIVERSITY

Name of facility: Wells Fargo Arena
Description: Renovation; new adjacent hockey arena
Architect of record: N/A
Contractor: Mortenson
Est. cost: \$160 million
Start date: February 2019
Completion date: July 2020
Location: Tempe, Ariz.

CENTRAL MICHIGAN UNIVERSITY

Name of facility: Champions Center
Description: South end zone renovation and football training facility
Architect of record: Populous
Contractor: TBD
Est. cost: \$30 million
Start date: June 2019
Completion date: 2021
Location: Mount Pleasant, Mich.

FRESNO STATE UNIVERSITY

Name of facility: Bulldog Stadium
Description: Football stadium improvements
Architect of record: AECOM
Contractor: NA
Est. cost: \$60 million
Start date: October 2016
Completion date: October 2019
Location: Fresno, Calif.

INDIANA STATE UNIVERSITY

Name of facility: Hulman Center
Description: Arena renovation, new convention center
Architect of record: Ratio; HOK
Contractor: Hannig Construction
Est. cost: \$75 million
Start date: Fall 2018
Completion date: Fall 2020
Location: Terre Haute, Ind.

JAMES MADISON UNIVERSITY

Name of facility: JMU Arena and Convocation Center

Description: Basketball arena and practice facility
Architect of record: Moseley Architects; Populous (consultants)
Contractor: S. B. Ballard
Est. cost: \$90 Million
Start date: March 2018
Completion date: Fall 2020
Location: Harrisonburg, Va.

KANSAS STATE UNIVERSITY

Name of Facility: Tointon Family Stadium; new soccer stadium
Description: Football stadium renovation; new soccer stadium
Architect of record: BG Consultants
Contractor: Mortenson I GE Johnson
Est. cost: \$20 million
Start date: January 2019
Completion date: January 2020
Location: Manhattan, Kan.

MISSISSIPPI STATE UNIVERSITY

Name of facility: Dudy Noble Field
Description: NCAA baseball ballpark
Architect of record: Wier Boerner Allen; Populous (consultants)
Contractor: JESCO Inc.
Est. cost: \$43 million
Start date: June 2017
Completion date: March 2019
Location: Starkville, Miss.

NORTHERN STATE UNIVERSITY

Name of facility: TBD
Description: New football stadium and softball
Architect of record: CO-OP Architecture
Contractor: Quest Construction
Est. cost: \$33 million
Start date: Spring 2019
Completion date: Summer 2020
Location: Aberdeen, S.D.

NEW FACILITIES IN PROGRESS

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OHIO STATE UNIVERSITY

Name of facility: Covelli Arena
Description: New volleyball, gymnastics arena and wrestling practice facility
Architect of record: Moody Nolan; Populous (consultants)
Contractor: Gilbane
Est. cost: \$39 million
Start date: August 2017
Completion date: February 2019
Location: Columbus, Ohio

OLD DOMINION UNIVERSITY

Name of facility: Foreman Field
Description: Football stadium renovation
Architect of record: Moseley Architects; Populous (consultants)
Contractor: S.B. Ballard Construction
Est. cost: \$43 million
Start date: Fall 2018
Completion date: Fall 2019
Location: Norfolk, Va.

SYRACUSE UNIVERSITY

Name of facility: Archbold Gymnasium
Description: Student health and recreation center

Architect of record: Populous
Contractor: Hayner Hoyt
Est. cost: \$48 million
Start date: January 2018
Completion date: August 2020
Location: Syracuse, N.Y.

TEXAS TECH UNIVERSITY

Name of facility: Dustin R. Womble Basketball Practice Facility
Description: Basketball training facility
Architect of record: Populous
Contractor: Lee Lewis
Est. cost: \$29.5 million
Start date: Winter 2018
Completion date: Summer 2020
Location: Lubbock, Texas

UNIVERSITY OF ALABAMA AT BIRMINGHAM

Name of facility: Birmingham-Jefferson Convention Complex stadium
Description: New home football stadium
Architect of record: Populous
Contractor: N/A
Est. cost: \$175 million
Start date: 2019
Completion date: 2021
Location: Birmingham, Ala.

UNIVERSITY OF ARIZONA

Name of Facility: Cole and Jeannie Davis Sports Center
Description: Indoor sports center with a 90-yard field, 10-yard end zone, training and conditioning space
Architect of record: HOK; BWS Architects
Contractor: Mortenson
Est. cost: \$15 million
Start date: April 2018
Completion date: Spring 2019
Location: Tucson, Ariz.

UNIVERSITY OF CALIFORNIA, MERCED

Name of facility: 2020 Athletic Fields, Wellness Center and Aquatic Center
Description: Phased addition of center
Architect of record: HOK
Contractor: Webcor
Est. cost: \$34 million
Start date: October 2016
Completion date: Fall 2020
Location: Merced, Calif.

UNIVERSITY OF FLORIDA

Name of facility: TBD
Description: New baseball

stadium
Architect of record: Populous
Contractor: Brasfield & Gorrie
Est. cost: \$38 million
Start date: January 2019
Completion date: 2020
Location: Gainesville, Fla.

UNIVERSITY OF MISSOURI

Name of facility: University of Missouri Memorial Stadium
Description: Football stadium south end zone expansion
Architect of record: Populous
Contractor: Mortenson
Est. cost: \$98 million
Start date: February 2018
Completion date: June 2019
Location: Columbia, Mo.

UNIVERSITY OF SOUTHERN CALIFORNIA

Name of facility: Los Angeles Memorial Coliseum
Description: Football stadium renovation
Architect of record: DLR Group
Contractor: Hathaway Dinwiddie; Hunt
Est. cost: \$300 million
Start date: December 2017
Completion date: August 2019
Location: Los Angeles

Sculptor's art elevates the fan experience at sports venues

Erik Blome, well-regarded sculptor and owner of Figurative Art Studio, has long been considered a pioneer in the sports world with his dynamic bronze sculptures for clients such as the Chicago Blackhawks.

Colleges and universities are now beginning to follow in the pros' footsteps, adding Blome's signature bronze sculptures to strategic destination points, such as a bigger-than-life statue of legendary Boston University hockey coach Jack Parker, who, in his 40-year career, sent many athletes into the professional ranks.

When the Blackhawks tapped Blome to create a 75th anniversary

tribute at the United Center, it was the first time a sports team saw the value of incorporating world-class artwork in a sports venue. That was followed by a statue of hockey great Wayne Gretzky at STAPLES Center. STAPLES then commissioned a second statue depicting boxer Oscar de la Hoya.

"People at STAPLES Center were hesitant at first — 'is a basketball arena a sculpture kind of place?'" said Blome. "But that changed once the sculptures were in. Fans flocked to see them, even on non-event days."

Blome sees the sculptures for their ability to bond fans to their

teams, to start conversations and to serve as touch points, both physical and historical, for fans.

One of Blome's most recent works is for the Maple Leafs' Legends Row at Toronto's Scotiabank Arena. Blome sculpted a team of 14 Maple Leaf heroes, with each player wearing his uniform and carrying the equipment of his particular era.

"You have different players from different eras interacting with each other. At one layer, you see it as the Maple Leafs as one continuous team, all through time," said Blome. "At a second layer, you see that you, too, are part of that team. It



Boston University commissioned a bronze statue of its legendary hockey coach, Jack Parker.

pays a tribute to those fans' historical knowledge and devotion." ■

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