

OpenBlue Healthy Buildings

Case Study Allegiant Stadium



New home for the Raiders captures the spirit and excitement of Las Vegas in a one-of-a-kind stadium experience.

A world-class fan experience that is safe, secure and connected

What weighs more than the Statue of Liberty, can seat 65,000 people and has 2,200 doors? If you guessed the astonishing, \$1.9 billion Allegiant Stadium in Las Vegas, Nevada, you'd be right. Allegiant Stadium is the new home for the iconic Raiders football team, the UNLV college football program and the sky-high expectations of millions of visitors who are expected to visit each year. But behind the 28,000 pounds of structural steel, the 2,100 light fixtures, and the 7,400 gleaming glass and metal panels lies a state-of-the-art security and life safety solution that ensures a safe, secure experience for fans and staff alike.



An outsized systems integration challenge

With a location adjacent to the world-famous Las Vegas Strip, Allegiant Stadium needed to reflect the spirit and excitement of Las Vegas in an equally unique stadium experience. The facility would be called upon to serve as a world-class sports and entertainment venue that could host a variety of events and experiences—from high-stakes football games to intimate live concert performances—while delivering a similarly class-leading level of security, connectivity and efficiency in every capacity.

To say the task of designing, delivering and integrating the various life safety and security systems required by the new stadium was "complex" would be an understatement. Adding to that complexity, Allegiant Stadium would also have to be configurable, with security and related systems that were flexible enough to easily match the event – regardless of whether that event is a college football game or a full-tilt rock concert.

Fortunately, the Raiders recognized early on that they wanted to engage partners who understood every facet of building a state-of-the-art sports and entertainment facility to ensure the technology deployed at the stadium would help deliver an enhanced fan experience, improved building performance, and the infrastructure necessary to ensure a safe and secure experience.

“It was important for us to work with partners who understand all aspects of technology integration and implementation to create a stadium that captures the spirit and excitement of Las Vegas.”



Creating such an environment was the job of Tom Blanda, Senior Vice President, Stadium Development and Operations, and Bob Stiriti, Director of Security for the Las Vegas Raiders. Together, they understood that safeguarding today's stadiums requires a proactive security mindset. Nothing has more of an impact on the venue—and on the guests and teams it serves—than providing for the safety of people and property. They also understood that building an entertainment district requires the ability to see the planning, design and implementation of technology with an enterprise-wide view that matches the security to the environment and the event, and that approaching the design with a future-ready mindset would be critical to achieving their goals.

Integrated solutions built from the ground up

Today's smart venues require a marriage of the building's digital and physical infrastructure, with advanced planning that brings together key stakeholders to define the building's purpose and vision before starting the project. Early engagement is the best way to uncover priorities while ensuring that technology is deployed and integrated in an orderly manner to achieve desired building outcomes. The process can save time, reduce risk, and decrease construction and operating costs.

One example of the benefit of early engagement was with Deer District in Milwaukee on delivery of the state-of-the-art Fiserv Forum, training facility, entertainment district and parking structure, under-budget and at just 28 months. For Allegiant Stadium, the Las Vegas Stadium Authority and the Las Vegas Raiders had a similarly tight timeframe of 31 months.

The Technology Professional Services process leveraged by Johnson Controls for technology planning and delivery helped to likewise facilitate the timely completion of Allegiant Stadium, and helped create an environment that is safe, comfortable, connected and efficient. Johnson Controls relied on this proven methodology to provide Allegiant Stadium with equipment and technologies that included configurable security management, access control, video management, vehicle security detection, and fire alarm detection and suppression. The Johnson Controls team, along with the Raiders and CAA ICON, chose technologies that would support the latest protocols and would enable interconnectivity with the Las Vegas Metropolitan Police Department for team viewing of shared, critical video feeds during stadium events.





Going further, a design/assist process was used to help the team at Johnson Controls understand what security and life safety outcomes the Raiders wanted to achieve to ensure the technologies chosen supported the stadium vision, while also communicating with each other and being flexible enough to handle future technology requirements. Through early engagement with stadium ownership and partners, Johnson Controls helped achieve the desired outcomes—both within the stadium and in the surrounding district.

In conjunction with the design/assist step was a “value engineering” process where engineers from Johnson Controls evaluated numerous variables to determine what kind of value-added options might help Allegiant Stadium stakeholders maximize time, money and resources. One result of this process was the placement of cameras in the concourse in a way that would provide optimal security coverage without using more cameras than necessary. By reducing the number of cameras required, costs and complexity could likewise be reduced.

As part of the effort to ensure Allegiant Stadium has a state-of-the-art security and life safety system, Johnson Controls also provided the A/V Command and Control design/build for the Stadium’s Gameday Operations Center and 24x7 Security and Fire Command Center. The Gameday Operations Center hosts about 15 to 20 operations personnel (including various agencies like the Las Vegas Metropolitan Police Department), while security agencies, Raiders operations, medical representatives, maintenance, parking and other staff can be found in the Command Center. In addition, Johnson Controls provided the design/build layouts to drive video feeding the large wall displays and touchscreen control, as well as wall displays and video workstations with dual monitor displays.



For the 24-hour, 7 days-per-week Security and Fire Command Center, Johnson Controls provided similar design/build technologies to support up to seven simultaneous operators (Stadium Security and Operations), as well as a remote connection system that allows other personnel to log in from the Security Conference room. Johnson Controls also provided design/build services for the security systems used in the Raider Image Stores inside Allegiant Stadium.

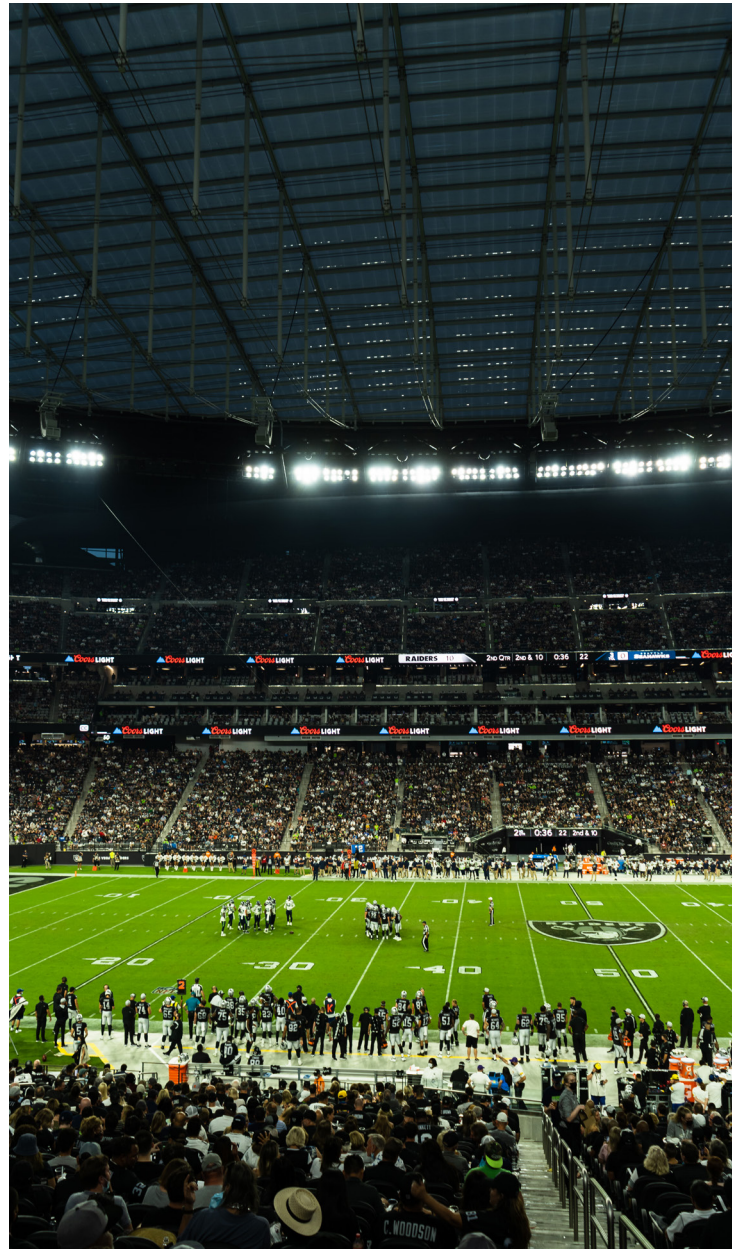
More recently, the Raiders expanded their relationship with Johnson Controls for their new, state-of-the-art training campus, headquarters—Intermountain Healthcare Performance Center—and 20,000-square-foot Raiderettes cheerleading squad facility, both located in Henderson, Nevada. As with the stadium, Johnson Controls provided the design/build for the 24x7 Operations Center at the training facility, which includes a Metasys® building management system, YORK® HVAC equipment, Simplex fire alarm, Software House C-CURE9000 access control, video management, intercom systems and vehicle security.

Results that change the game

Reflecting on the project, Tom Blanda, Senior Vice President, Stadium Development and Operations said, “This was a complex project that integrated a variety of technologies to create a one-of-a-kind stadium experience. It was important for us to work with partners who understood all aspects of building a stadium as we created a new home for the Raiders that captured the spirit and excitement of Las Vegas.”

“The expertise Johnson Controls has in stadiums and venues made them an ideal partner for this project.”

Having opened in 2020, and with over 40 events including sporting events, headlining music concerts, family shows, and community activities planned annually, Allegiant Stadium is well on its way to generating an economic benefit of \$620 million annually while creating 6,000 permanent jobs in Southern Nevada. In addition, Allegiant Stadium is continuing its partnership with Johnson Controls to receive ongoing system service and support, as well as more in-depth data analytics to help ensure the stadium continues to deliver on its mission.



Of course, the creation of a facility like Allegiant Stadium that truly captures the spirit and excitement of Las Vegas requires far more than steel and concrete. It requires state-of-the-art technology and seamless systems integration that delivers exceptional guest experience and convenience, and pro-active event security. It also requires the foresight, drive and partnership of an experienced, dedicated team to bring it all together. All of which seems fitting when you're building the new home for a world-class football team like the Las Vegas Raiders.

Integrated, innovative solutions deliver real-world results

Benchmarking the best-of-the-best from their venue experience across the country, the Johnson Controls team leveraged their expertise in making sports and entertainment venues smarter, safer, healthier and more connected through a series of integrated, innovative solutions that deliver real-world results:

- Integrated equipment and technologies including security management with per-event mapping, access control, video management, vehicle security detection, and fire alarm detection and suppression that deliver capabilities including:
- Integration of the video management system with the Las Vegas Metropolitan Police Department, which helps them identify and manage public safety events through built-in identification, alarming and notification systems that can act on the incident, alert the appropriate city responders to engage and provide orchestrated evacuations through site-wide paging and integrated digital signage and kiosks.
- Cameras with built-in analytics generate data from location-based services and occupancy heat maps to enable post-event scenario analysis for optimizing the response to future scenarios.

A state-of-the-art fire alarm and addressable notification system, unlike any other, with features including:

- Complete “self-test” feature performs the National Fire Protection Association (NFPA) required 100% system test of the notification devices without the need for a technician to spend hours walking the entire facility observing the test.
- Fire smoke control that responds to the event and interacts with the building’s systems to control the spread of smoke in the HVAC system, provide visitors with instructions via addressable digital signage in the event of an emergency and interface with a 42” digital graphical display to show all incoming events and their exact locations, enhancing first-responder efficiency.

Fully integrated Software House C-CURE9000 Access Management System with COVID-19 safety features:

- Reports show potential contact of staff in close proximity to a person testing positive for COVID-19 with access activity for the doors that person used and adjustable time parameters showing potential contact with other personnel before entering a portal.
- After-hours enabled card reader can require staff to pass through the main screening entrance once per day, disabling other card reader entrance portals for each card holder until they pass through the scanning entrance.

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