LAS VEGAS CONVENTION CENTER

PHASE TWO EXPANSION
NVUCA-19421
This Project is the winning scheme for the design competition to create a major expansion and campus-wide upgrade to the Las Vegas Convention Center. The design team was a unique collaborative effort involving a team of five architects, bringing local, national, and international experience to create a design that captured the vision and brand of the Las Vegas experience, while at the same time fulfilling the complex functional requirements of the competition brief. This 1,440,000 SF, fast track project budgeted at $860,000,000, is well into construction and on schedule to host the 2021 CES convention.

The design begins with visual reach and experience that unifies the campus across the distance from the Strip to the South Hall. Access and program punctuate the campus between those two endpoints; nodes made cohesive by a “Ribbon” of circulation. Echoing the region’s mountains, the Ribbon is amplified at significant points to unite, announce entry and celebrate the act of gathering; an orienting path for the eyes, the feet and the mind. The Ribbon is a way-finding landscape of seamless connection and graphic activation from end to end, continuous and customizable to announce and activate the LVCC and make it a visible player from Las Vegas Boulevard and its hotels; an artery of Vegas experience piped straight from the Strip.

The Design creates a compact, economical arrangement of program to for the flexibilities that result from leaving much of the site open; an advantage for outdoor exhibit local to the Strip, for further expansion and response to surrounding development.

Programmatically, the exhibit hall is efficient and structurally repetitive, designed for steel construction speed to market unencumbered by surmounting structure or by scheduling dependencies of the adjacent concourses and conference center. Those are free to proceed on their own sequence in steel or concrete, however market influences advantage them. The circulation Ribbon incorporates separate major lobbies so that separate entries can serve separate exhibit events in divided hall arrangements. Meeting program is stacked adjacent to the exhibit hall such that it functions in concert with exhibit or separately as an independent facility when the hall is unoccupied. It incorporates multiple spaces for inside/outside function. Its circulation is organized to create and emphasize intersections and moments of rest for chance encounters.

The competition was won through the design team’s ability to collaborate and share ideas openly; testing the program and understanding the importance of this project to reinforce and enhance the city’s brand in the world.
Sustainable Design Intent and Innovation

The LVCVA committed early in the design process to set aspirational goals for sustainable design and operation of the project and to use two different green building third party certification systems, LEED and Green Globes, to validate that the building will perform as it was designed. The Las Vegas Convention Center will be the first facility of its kind to achieve both certifications and will be setting a high bar for competing convention centers to follow. The wide variety of program areas coupled with an extremely high volume of convention visitors during shows presented some unique challenges to implementing certain conventional sustainable design features like daylight harvesting and bicycle storage with shower facilities. The project team sought out GRN VISION as a consultant to be able to achieve sustainable design features and performance targets, which include:

Sustainable Site Design

- The site was designed to maximize ride-sharing resulting in a reduced Parking footprint of 40%
- Brownfield redevelopment: The site is located on previously developed retail and hotel property which required remediation of contaminated soil from a demolished dry cleaning facility
- Electric Car Charging: Reserved parking with dual port high speed charging stations
- Automated People Mover: The remote parking areas will be connected to the main entrance and to Las Vegas Boulevard over a 1.5 mile underground mass transit system

Energy Management & Efficiency

- Energy efficient central plant with variable speed pumps and fully automated Building Energy Management System designed to perform 15% above the minimum energy code
- High efficiency LED light fixtures with occupancy sensors and integrated dimming controls will be used throughout the facility
- Digital sub-meters to monitor indoor and outdoor lighting and process loads independently
- Efficient Building Envelope: High efficiency glazing and curtain wall system; High SRI TPO Cool Roofing membrane
- Rooftop Photovoltaic System: The project will deploy approximately 2 Megawatts of PV panels that will offset a significant portion of the building energy consumption and overall carbon footprint

Water Efficiency

- The site was designed with drought-tolerant plant materials adapted to the Mojave climate with digital sub-meters to monitor use and leak detection
- Low flow Water Sense approved plumbing fixtures with automated controls designed to reduce indoor water use by 15%

Indoor Air Quality

- CO2 sensors
With a site that acts as a connector between Las Vegas Boulevard and the existing convention center, the Phase Two Expansion opts to forgo the extravagant nature of many of the Strip properties, and rather offer a more subdued exterior appearance. By doing this, it allows the multitude of events that will be hosted here, to turn the interior into the visual highlight of the experience. The building will be the neutral container for the varying, vibrant contents that will change constantly, as each event will project its individual personality onto the blank canvas provided.

Taking inspiration from the surrounding mountain landscape of the Las Vegas Valley, as well as the concept of movement – movement of people, ideas, goods – the grand gestures of the connective element of the project required a material that could accommodate the different angles, and eventually, curves, that made up its design. Metal panels which resist heat absorption – allowing the building to cool down faster – were chosen to clad this element.

Low emissivity glazing mark the main entrances, allowing the events housed inside to be showcased, and draw attendees inward. Once inside, high-traffic, durable flooring made of recycled materials, make up the majority of the spaces. The material selection for the interior of the space reflects the architectural elements of the exterior. Materials were chosen in a neutral palate as to maintain a classic look with a timeless design that would not look outdated in 5 or 10 years.
The Las Vegas Convention Center is an integral component of the city's atmosphere, growth, and evolution. Las Vegas exerts forces on the project site that must be documented and understood. Likewise, the interior function of the building will exert certain forces on the city, and the design of public buildings is about understanding and balancing these forces.

The site sits within a contextual fabric that has ample accommodation for visitors as well as retail, dining, and entertainment venues. However, this level of provision is underdeveloped along Convention Center Drive, just south of the site. Future potential for more retail, dining, and entertainment venues along this street can act as a catalyst for development and establish a strong entry presence for the new facility.

New resorts adjacent to the site, Resort World Las Vegas and The Drew, will support walkability and pedestrian access to the new expansion. Additionally, the sprawling and uniquely-shaped site will require elements that both visually and physically tie together the Las Vegas Boulevard frontage, the expansion, and the existing Convention Center.

Current popular access from the south on Paradise Road and from the future light rail on Maryland Parkway will require adding significant entry and access points for both the expansion and the existing facility.
Design Concept

The dynamic shape of the connective element that spans from Las Vegas Blvd to the existing convention center captures the concept of movement - reflecting the movement of people, goods, and ideas inside the convention space - while at the same time evoking the silhouettes of the mountains that encircle the Las Vegas Valley.
Competition Explorations
Competition Concept

Main Entry Lobby
Final Concept

Exterior Lounge
Final Concept

Exhibit Hall
Final Concept

Construction Progress

Exhibit Hall Exterior