



CASE STUDY

Arch Nexus is a people driven design firm. Through purposeful design, people are inspired to achieve greatness and become active stewards of the built and natural environments.

ARCH | NEXUS

EXTREME LEADERSHIP IN THE BUILT ENVIRONMENT

Arch Nexus is a multi-disciplinary architecture firm committed to regenerative design. According to its philosophy, to design is to create, which is to cause an increase. Spaces wrought into existence by this organization are meant to inspire both unity and harmony. To express its core values of inspiration, stewardship, and regeneration Arch Nexus chose to embrace the Living Building Challenge for its Sacramento California Office.

The Living Building Challenge is an international green building initiative meant to exemplify sustainable design by encouraging new developments to emulate nature by replicating the net resource efficiency of a flower.

“We sought a Living Building certification because we felt that it was simply the best way to exemplify the values we strive for as a company and as individuals. We wanted to prove that inspiration, stewardship, and regeneration, weren’t just empty buzzwords, but a real, breathing philosophy of our design work. We want to show that buildings must be a solution to human health and climate challenges, rather than a problem.”

// Patty Karapinar, Director of Sustainability for Arch Nexus

A PERFECTLY SUITED PARTNERSHIP

To meet their objective of a Living Building Challenge certification, Arch Nexus decided to retrofit an existing warehouse and office space for renewal. The goal became to transform this space into a power positive and water independent work space without any harmful Red List chemicals in its materials. Deemed Arch | Nexus SAC, the new installation would live at the cutting edge of sustainable building design. However, it soon became clear that to achieve the sustainability benchmarks Arch Nexus desired, and additional unexpected hours of manpower would need to go towards selecting, vetting, and cataloguing a myriad of potential building materials to screen for harmful substances.

To bring their vision for the next level of sustainable building design forward, Arch Nexus brought in Valley Communications Inc. as a contractor to install their low voltage cable applications. With over 30 years of experience designing and implementing integrated technologies in California and Nevada, Valley knew that the project would require robust and reliable solutions capable of powering enterprise level data and voice arrays. The difficulty then became locating readily available cables with a Red List free chemical composition.



Superior Essex cabling powers both the hardware and network used by these workstations.

¹ Superior Essex CAT6+ LSHF hybrid data cable.

Enter Superior Essex. As a large-scale communications cable manufacturer with over 30 years of leadership experience, Superior Essex products could easily handle the load required. The true selling point however, came in the Environmental and Health Product Declarations, EPDs and HPDs respectively, that Superior Essex had already made available for all its products. With these documents in hand, the Arch Nexus and Valley teams could simply scan them against the existing Red List of over 800 harmful chemicals designated by the International Living Future Institute to make decisions about the overall safety of the building. This was a massive boon for productivity, and when coupled with the fact that Superior Essex holds a deep commitment to advancing sustainable projects like this one, the partnership was a no brainer.

Arch Nexus came to rely on Superior Essex as a trusted confidant in executing their vision, choosing their Cat6+ Low Smoke Halogen Free (LSHF) cable as the backbone of their telecommunications systems.

Since then, Superior Essex has achieved the Living Product Challenge Certification (LPC), a rigorous multi-product product certification from the International Living Future Institute. A Living Product Challenge certification determines that a product is certified to be Red List free and fully transparent of chemical composition, along with verified reduced embodied carbon, made from a Zero Waste to Landfill facility. Within Living Building Challenge projects, LPC certification counts as two declare labels within the Responsible Industry Imperative requirements.

Learn more about Superior Essex Living Product Challenge Certification here: <https://living-future.org/lpc/case-studies/superior-essex-cat6>

“Superior Essex was ahead of the curve in providing the full chemical composition of their products. Most manufacturers simply don’t know or won’t tell you about that, which makes projects like these a lot more difficult. Superior Essex was very forthcoming.”

// Patty Karapinar, Director of Sustainability for Arch Nexus

A ROCK SOLID SOLUTION

The Superior Essex Category 6+ LSHF CMR cable solution is designed for Power over Ethernet applications requiring a Low Smoke Halogen-free (LSHF) construction for which it meets IEC 62821 requirements for toxicity, acidity, and smoke. As a Category 6 cable, it is near the peak of current data transmissions standards and It features a solid annealed copper conductor and multiple thermoplastic insulation tubes in a flame-retardant jacket which, in the event of fire, will not leak any hazardous chemicals into the air. Its sustainability benefits also include a contribution toward LEED, WELL and Living Building Challenge certification through Environmental Product Declaration, Third-Party verified Health Product Declaration and Living Product Challenge certification.

The high level of data and power output, unparalleled safety measures, and environmentally conscious composition of this cable made it the perfect match for the Arch | Nexus SAC data, voice, and camera systems.



With special focus on air quality and lighting, Arch Nexus SAC hopes to have a positive effect on the health and wellness outcomes of its inhabitants.



ARCH | NEXUS SAC PRODUCES
170%
OF THE ENERGY IT USES.



ARCH | NEXUS SAC USES
23.8%
OF THE WATER OF A
CODE-MINIMUM BUILDING

CHALLENGE EXCEEDED

Arch | Nexus SAC is now the 1st Living certified project in the world that is an adaptive reuse of an existing building. It has also gained the LEED v4 certification of the highest rank, Platinum, while also being currently evaluated for WELL certification. The building generates more power than it expends thanks in part to Superior Essex low smoke halogen free CAT 6+ cable, which connects and powers 40 client computer work stations, three private offices, and two conference rooms on top of security systems, and handles data for the entire complex.

Not only did choosing Superior Essex products help to keep the building's energy consumption to a minimum, Arch Nexus also saved untold hours of legwork due to our complete transparency in materials disclosure while also gaining contributions toward its LEED, WELL and Living Building certifications.

As shown here and in other green building projects, Superior Essex communications cable products demonstrate leadership in sustainable building in the vision of a healthier, more sustainable future. //

"I'm very grateful to have a company like Superior Essex that not only supports green building initiatives ideologically, but also creates the products that make them a reality."

// Patty Karapinar, Director of Sustainability for Arch Nexus



Superior Essex is a trailblazing ally in the vision for more sustainable buildings and infrastructure.