

Naturally
Enhanced
Environments



THE BENEFITS OF DAYLIGHTING IN ARCHITECTURAL DESIGN

Daylight Retrofit in Action: Five Examples of Successful Integration of Natural Light into Existing Buildings

Incorporating natural light into existing buildings is more than just a design upgrade—it's a strategic move toward improved energy efficiency, better occupant wellbeing, and architectural distinction.

In this knowledge article, we explore real-world examples of successful daylighting retrofit projects, each driven by unique challenges but united by a common goal: to create bright and inviting spaces for people to thrive in.



1. Replacing existing, low performing solutions with minimal disruption at Bloomingdales Beverly Center

Research has shown how daylighting can bring numerous benefits to retail spaces, including a more welcoming environment, the ability for consumers to see colors more accurately, and even increased sales.

The 30-year-old skylight at the **Beverly Center fashion mall** had reached the end of its lifespan and needed a replacement, and our **QuadSpan™** (formerly Quadwall®) system was the perfect solution for the mall.

Specified in ice white and white matte glazing, the new skylight was installed above the 41,000 ft². main floor in just seven days – to meet the store’s unveiling deadline – all while it was fully occupied, thanks to its removable skin technology.

2. Enhancing existing architectural features at the Click Rain and Lemonly headquarters

Another case study that demonstrates the power of enhancing what already exists is the **upgrade of an old spark plug factory into a modern office space for two dynamic creative and digital agencies.**

Architects at CO-OP Architecture exposed the building’s original sawtooth roof structure and restored its industrial character, while integrating modern daylighting solutions in the form of the **GridSpan™** system into the vertical slopes.

The system minimizes glare and solar heat gain while preserving the building’s open, factory-floor feel which was enhanced with key design details such as black-painted beams, restored concrete floors, and soda-blasted wood ceilings. This daylighting retrofit not only honors the building’s history but also demonstrates how natural light can transform neglected spaces into dynamic, people-focused workplaces.



3. Reviving a historic bank lobby into a light-filled urban oasis

The Emery Hotel in downtown Minneapolis occupies the landmark Midland Bank building, which ownership envisioned as a vibrant “green oasis” filled with natural light and lush plant life.

The challenge was formidable: the lobby, surrounded by parking ramps and high-rises, received virtually no direct daylight. To solve this, the design team retrofitted the space with 14 Solatube SkyVault M74 DS units equipped with Collectors and Amplifiers, strategically capturing and redirecting sunlight deep into the grand historic lobby. Seamlessly integrated into the ceiling, the daylighting system highlighted the building’s marble and granite bones while nurturing thriving greenery.

The result transformed a dark, closed-off space into a biophilic, inviting environment that embodies both historic character and modern well-being.

Case study: [Emery-Hotel-Case-Study-Rev2.pdf](#)

4. Adding new bespoke functionality as part of historic building renovation in Madrid

Palacio de Comunicaciones is one of the most famous buildings in the center of Madrid. Originally designed by architect Antonio Palacios and built in 1909, it was first used as a post office. However, since 2007, it hosts the Mayor of Madrid’s headquarters. The building was renovated in 2009. Most striking is the transformation of the inner court called the Village Hall into a covered atrium.

Due to the constraints of working within an existing historical building and the courtyard’s irregular shape, a free-form glass roof with a triangular mesh was selected. As everything needed to be tailor made, **Kingspan worked closely with the architectural team at Arquimática to design, manufacture and supply 89 bespoke-sized triangular windows** to be used for daily ventilation and smoke extraction. Thanks to their slim profile and hidden controls, they fitted in with the roof scheme seamlessly and the result is a striking juxtaposition between historical and modern architecture.



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5. Improving the energy performance of Texas' Allen High School

There is a wide body of research evidencing the profound impact that daylighting can have on pupil performance. Additionally, reducing reliance on artificial lighting can help schools lower their energy bills, and ensure they're better equipped to maintain functionality during grid disruptions or extreme weather events. So, when [Allen High School in Texas](#) was renovated in 2015, improving the building's daylighting was top of the agenda.

7,780 ft² of [QuadSpan™](#) (formerly Quadwall®) translucent skylight system was incorporated into the renovation design. Specified in ice white matte and ice white glazing, the system allows for an abundance of natural uniform daylighting to diffuse into the space below, while minimizing glare and heat gain within the building.

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