



# Renovation & Retrofit Solutions

Skylights + Walls + Canopies



## Quality Comes to Light®

Kingspan Light + Air | CPI Daylighting is an award-winning innovator of translucent daylighting solutions for high-performance building envelopes, headquartered just north of Chicago.

Since the 1980s, we have been a pioneer and leader of the daylighting industry. We continually innovate so clients never have to choose between efficiency, style, and safety, and our pledge to sustainability is instilled at every level of the company and at every step in the manufacturing process.

Our global team of highly-skilled and experienced professionals is a community of doers, ensuring we are the partner of choice for the ever-changing world of modern construction. Together, we leverage our knowledge and expertise to serve as the leading daylighting consultants for the architectural community and building industry.

Never Compromise. Always Innovate. Kingspan Light + Air.

## The **KLA** Advantage

We believe that good design can have a profoundly positive effect on the built environment, and improve the way that we work, learn, play and live.

Our mission is to set new, higher standards for the quality and versatility of daylighting technology, as we strive to advance daylighting design.

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### Collaboration is Key

As expert problem-solvers, we team up with architects, contractors and building owners to develop solutions that will enhance and optimize the role that natural light plays in building design. We are here to assist you through each step of the process – from preliminary design to the final installation of the system.

### Don't Compromise

You shouldn't have to compromise your design due to product limitations or the rigidity of some manufacturers. Our goal is to enable architects to achieve the highest levels of building performance without sacrificing the aesthetic quality of their design. This is why we have worked tirelessly to develop the most versatile daylighting system on the market.





▲ **Project:** Pembroke Lakes Mall id 39972  
**Location:** Pembroke Pines, FL  
**Contractor:** McLaughlin Erectors, Inc.

*Artificial lighting accounts for approximately 30-50% of a building's energy consumption.*

*Decreasing the need for artificial light can **reduce energy consumption by as much as 70%.***

**28%**

Increase in sales in retail environments with natural light

**20%**

Increase in performance for students in daylit classrooms

## Why Renovate?

Revitalize your environment by transforming an architectural eyesore into a modern daylighting system that optimizes building performance.

- Life safety - avoid imminent structural failure resulting from degeneration of the original daylighting system
- Improve energy efficiency - outdated or degenerating systems are underperforming, resulting in higher utility costs
- Discoloration is leading to a significant decrease in light levels
- Remove potential health risks from mold, bad odors, and depressing light levels and restore the benefits of healthy daylighting
- Deterioration is causing leaks and insulation issues
- Meet new regulations or code requirements
- Eliminate the need for maintenance or re-coating costs
- Correctly balance both daylight and solar heat gain levels required for your space
- Improve the aesthetics of a building to increase property value

# Renovation & Retrofit Solutions

We offer a variety of simple and effective turn-key renovation and retrofit solutions designed to reglaze, overglaze or replace existing systems that are underperforming or are in desperate need of repair due to damage or deterioration. Our two-panel system, with removable skin technology, ensures that your building envelope is not compromised in the future, as the interior panels will be able to remain intact indefinitely.

## We Offer...

- Removable Skin Technology (RST) - exterior skin is replaceable to extend the system's life cycle, without interrupting building operations
- Dry-glazed system eliminates the need for system maintenance
- Expert consultants to guide you through each step of the process
- Professional install by factory trained and certified installers
- Single-source warranty

*Advancements in daylighting technology have resulted in more efficient systems that can improve a building's energy performance, increase longevity and help cut costs.*

*Our systems are lightweight, highly durable, extremely versatile and have an almost unlimited life-cycle, making them the ultimate solution for daylighting renovations*

## We Renovate...



### Fiberglass

Fiberglass systems that have severely discolored or are experiencing structural degradation can be easily replaced. Our systems are designed with added color stability and UV protection to enhance longevity.



### Acrylic

Acrylic can become brittle, crack and leak, or may discolor over time. Our systems are often used to replace these underperforming acrylic units, many of which no longer meet strict fire codes. We offer Class A, B and C fire-rated systems depending on your building needs.



### Glass

We can reglaze, overglaze and replace glass systems that are leaking, or are otherwise compromised. Our systems offer glare-free diffused light which significantly reduces solar heat gain - a problem often associated with glass units.





▲ **Project:** Pecanland Mall id 11177  
**Location:** Monroe, LA  
**Architect:** Glo Designs

### **No more costly building closures due to skylight renovations.**

*Our removable skin technology (RST) ensures that building operations can remain uninterrupted. Once the interior panels are installed, the exterior panels can be independently removed at any time without compromising the integrity of the building envelope.*



### **Reglaze**

The glazing system will be replaced and the existing structure will be evaluated and reused when possible.

### **Overglaze**

Pentaglas® systems can be designed to envelop leaking systems if their performance is otherwise uncompromised. This option is typical for systems that provide enough light, but may be deteriorating, leaking or need additional insulation performance.

### **Replace**

The entire existing system is disassembled and removed and a new system will be installed in its place.

## Our Innovative Technology

### Two-Panel System

Our system is designed with two independent glazing panels that are mechanically connected to an internal support structure. No sealants are needed, eliminating maintenance costs. A key feature of this design is the internal cavity between the two glazing panels. The cavity can be filled with various inserts to customize the performance of the system based on the building's requirements. Rather than sourcing a different system for each type of daylighting application, utilize a single, trusted system that is designed to adapt to meet your building performance needs.

Our translucent daylighting system delivers outstanding performance, offering the best ratio of light transmission to insulation value in the industry, and is the ultimate in design freedom and flexibility.



### Removable Skin Technology (RST)

The system is designed so that the interior and exterior glazing panels are independent of one another. Once installed, the interior panels remain intact, and each of the exterior panels can be disengaged and removed without compromising the integrity of the building envelope.

Removable skin technology ensures that if there is a future need for updating the exterior, those panels can be changed without interrupting ongoing building operations. The flexibility to replace individual panels, rather than the entire system, adds another level of dimensionality to a system that is already extremely versatile.



### Longer Clear Spans

Due to the design of the internal support structure, the panel system can achieve longer spans and still comply with deflection and code requirements. The ability to span floor-to-slab minimizes the necessary support structure – reducing the cost of material and labor. It also improves the aesthetic quality of the system.



### Nano-Cell® Glazing

Our patented Pentaglas® translucent glazing is precision engineered with Nano-Cell® technology. This specialized panel extrusion results in the cells measuring smaller than 0.18 inches, and provides the panel with superior durability and prolonged resistance to impact. The unique cell structure also significantly improves the quality and balanced distribution of glare-free natural light.

### Multi-Color Panel Option

A different color can be selected for each of the two independent glazing panels that make up the system.

Each glazing color has an inherent solar performance. By varying the combination of the glazing colors, not only can you create unique visual elements, but you can also customize the solar performance of the system. The optional matte finish on the panels will increase their ability to diffuse light and eliminate glare.







▲ **Project:** Bow Lake Transfer Station id 27610  
**Location:** Seattle, WA  
**Architect:** KPG, Inc.

## Manufacturing Process »

- Delivery in 3-8 weeks
- Standard manufacturer submittal package
- Must meet pre-engineered design criteria for loading, unit size and curb construction

## Direct2Fab

### Pre-engineered, automated manufacturing of unit skylights

Direct2Fab is a fast delivery program for our adaptive-size unit skylights. Each D2F project moves directly from order entry to the fabrication floor. Our proprietary automated D2F engineering system essentially replicates the same methodology employed by skylight engineers using computerized technology. The D2F automation streamlines the process, eliminating weeks of engineering and submittal time, allowing Kingspan Light + Air | CPI Daylighting to provide unit skylights that are designed to accommodate existing opening dimension at the same cost as a standard size unit.





## Embassy Suites | San Diego, CA id 34534



Known for being a great beach town, San Diego attracts tourists from all over to enjoy the California sun. Unfortunately for those who have stayed at the Embassy Suites, a deteriorating fiberglass skylight caused the massive atrium space to be cast in shadow, resulting in a dark and gloomy environment. To improve this, an extensive remodel was set in motion, starting with a new skylight. We performed a daylighting analysis prior to construction to ensure that the desired light levels would be achieved by the new system. The existing structure was evaluated and it was determined that the structure could be reused, helping to save on costs. The brand new 4,200 sq. ft. Class-A skylight was then installed. The new system completely transformed the atrium, restoring it back to a bright and inviting space for guests to enjoy.

## SAS Institute | Cary, NC id 21392



**Problem:** The 19,000 sq. ft. ridge skylight over the main atrium was severely discolored and deteriorating, resulting in a dark and dingy workspace.

**Solution:** The system was replaced by KLA's Quadwall® skylight system, resulting in a dramatically improved work environment. The translucent glazing, with its matte finish, provides occupants with all of the benefits of natural light without glare and excessive heat gain.

Improved work environment promotes creativity and productivity.

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*"Our award-winning reputation as a great place to work is a testament that a positive work environment encourages creativity & loyalty, which in turn ensures that our customers are well served."*

Pete Flood - Construction Project Manager (SAS)





## Bogan Park Aquatic Center | Buford, GA id 33261

**Blue spectrum light** is responsible for the majority of the health benefits associated with natural light. Severely discolored systems block out blue light, and prevent occupants from gaining benefits like:

**Increased alertness, reduced depression and fatigue, improved memory and enhanced mood.**

**Problem:** After only 15 years, the skylight had completely degraded and discolored, resulting in a dark and grungy environment for pool patrons.

**Solution:** KLA successfully replaced 17,390 sq. ft. of translucent fiberglass roof covering and 2,490 sq. ft. of vertical walls. The existing support beams remained intact and were reused along with some additional structure. Meticulous and concise coordination resulted in a 40% reduction in install time.



## Hologic, Gen-Probe

San Diego, CA id 34563

After only 20 years, the original skylight weathered beyond repair and yellowed so severely that light was no longer able to penetrate through the glazing. What was once a design focal point had become an eyesore and maintenance nightmare.

Kingspan Light + Air | CPI Daylighting was contracted to replace the failed system with a 14,385 sq. ft., Class B fire-rated Quadwall skylight system, which completely rejuvenated the atrium space.



## 4063 Salibury Road Office Complex

Jacksonville, FL id 20738

**Problem:** The fiberglass entrance canopy at this corporate office complex had deteriorated and significantly yellowed.

**Solution:** A structural low-rise vault canopy system was designed to replace the existing fiberglass system. The existing structure remained in good condition, so it was repainted and reused. The blue translucent glazing provided a fresh new look and made the entryway much more inviting.

Hurricane (HVHZ) resistant systems that won't disintegrate in the harsh Florida sun

*These systems have been tested and certified per Miami-Dade code requirements, and have undergone 10 year weather testing in the harsh Florida sun to ensure both color stability and durability to impact.*



## Ridder Park Office Complex

San Jose, CA id 37542

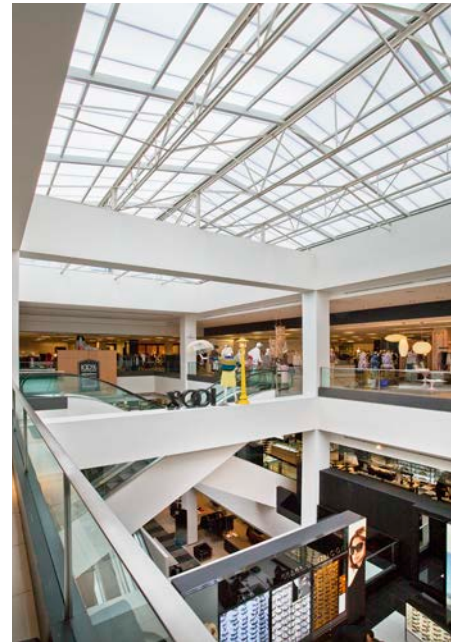


KLA replaced 9,000 sq. ft. of fiberglass skylight running the perimeter of the office building, that had yellowed and was leaking beyond repair.



## Bloomingdale's Beverly Hills

Los Angeles, CA id 35264



*"Changing those panels made a significant impact on the space at large...As far as the customer service side, our response has been extremely positive!"*



Tangela Stephens - Project Manager (Macy's Inc.)

**Problem:** The large 30-year-old fiberglass ridge skylight had completely yellowed and was casting a dark shadow on the flagship store's main floor area.

**Solution:** The 30-ft. by 80-ft. skylight was replaced with our two-panel Quadwall® system, because of its ability to maintain color stability in the intense California sun and its removable skin technology, which provides the system with a near unlimited life cycle.

## Quabbin Regional High School

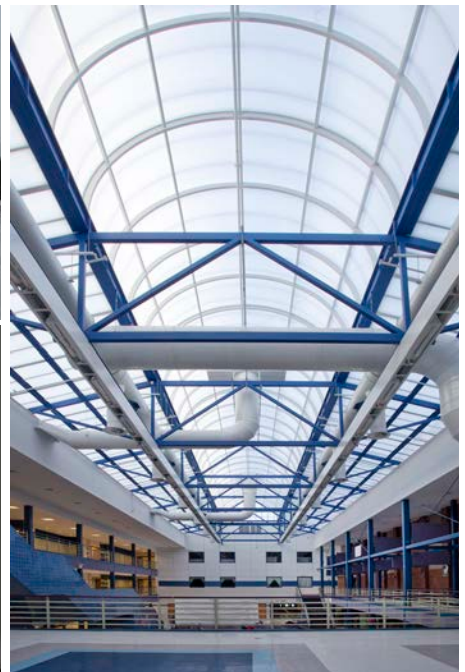
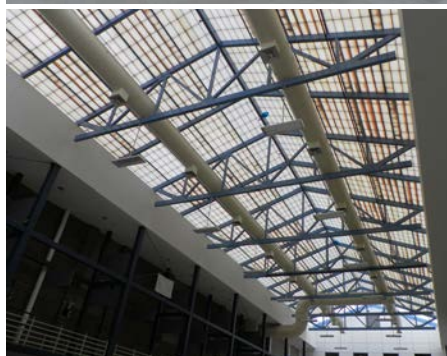
Barre, MA id 32526

After only ten years, the fiberglass ridge skylight had deteriorated beyond repair. Leaks and yellowing had compromised the system's performance to such a degree that it no longer complied with current energy and state building codes. As a result, we were commissioned to replace the failed skylight with a 5,000 sq. ft. Quadwall® barrel vault and adjacent single slopes running parallel on either side. The new system provided maximum daylight to the multi-purpose space below. Additional insulation was also added to ensure optimum thermal performance.

*"This is a huge skylight so the amount of energy that you save made a compelling argument. The school will probably make their money back within five to ten years...."*



Elvin Phillips - Boston Bay Architects



## Lakewood Center Mall

Lakewood, CA id 34214



*"Since the renovation, we've cut the run time of the AC units by four hours per day."*

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*Scott Cleveland, Operations Manager*

The aging single panel acrylic system created hot spots, glare and excessive temperatures - resulting in high energy costs and an uncomfortable environment for shoppers and tenants. These issues made the mall an undesirable location for central kiosk tenants, causing the mall to lose out on potential revenue. Today, the mall has been renovated with a KLA translucent skylight system, and is now thriving. The new skylights now provide occupants with glare-free, diffused light; this creates a pleasant shopping environment and improves the building's energy efficiency, bringing the return of kiosk tenants to the main corridors.

## Town Center at Cobb

Kennesaw, GA id 27224



**Problem:** The existing 26-ft. x 120-ft. acrylic barrel vault skylight had failed and was beginning to leak, which created a life safety liability for shoppers. The intense glare and poor light diffusion also created an unpleasant visual environment for mall-goers and tenants alike.

**Solution:** Fortunately, much of the existing structure remained, which helped curb the cost of the replacement. The skylight was then replaced with our Quadwall® system, which provided an even distribution of natural light that gave new life to the mall. The superior thermal and solar performance of the new skylight system also helped to better optimize building efficiency and substantially reduced utility costs.



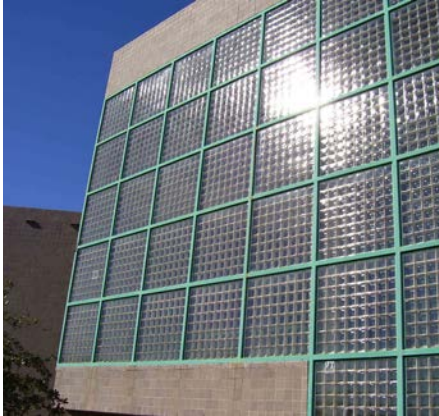
## Raleigh Memorial Auditorium

Raleigh, NC id 36730



## Mayde Creek High School

Houston, TX id 23249

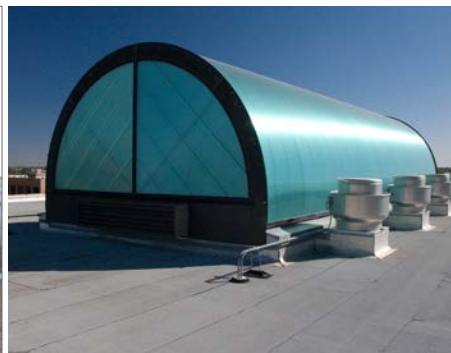


**Problem:** The School's main glass-block stairwell saw significant structural decline as a result of vandalism and maintenance challenges.

**Solution:** Approximately 7,500 sq. ft. of Kingspan Light + Air | CPI Daylighting's Quadwall® 2 3/4 in. thick translucent two panel system was used to replace the existing facade. The new translucent system significantly reduced the heat gain in the stairwell and provided an impact-resistant façade.

## University of Texas-Pan American

Edinburg, TX id 14649



**Problem:** Existing glass skylight had deteriorated and was plagued by water leaks at the horizontal joints.

**Solution:** The skylight glass was removed and the existing structure was reglazed with our two-panel Quadwall® translucent skylight system. The individual panel lengths span continuously, eliminating entry points for leaks.

## IntelaSun

### Dynamic Shading for Optimized Daylighting

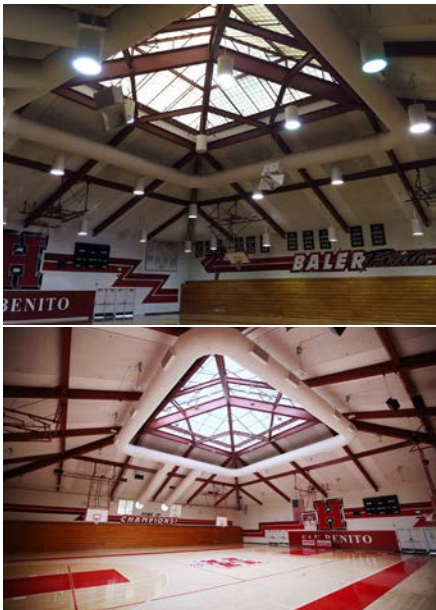


IntelaSun® is a dynamic shading system that adjusts based on the angle of the sun and user-controlled settings. IntelaSun effectively balances light-levels and eliminates solar heat gain and glare throughout the day. This dynamic system improves building efficiency by lowering peak loads and utility costs, and creates a comfortable environment for occupants. IntelaSun - the perfect solution for all your high-performance daylighting needs.



### San Benito High School

Hollister, CA id 40711



*"It offers features like sun control with the ability to darken the skylight. Because the intelligent daylight panel is sandwiched between two panels, it makes for an easy and clean installation.... It's a cost-effective alternative to other products on the market."*



Henrik W. Malinowski, AIA | Aedis Architects

**Problem:** The existing 40-ft. x 40-ft. skylight had discolored and was in need of replacement. Because the gym is used as a multipurpose space for a variety of different function, the new system needed to be able to control the amount of light allowed to enter the space.

**Solution:** The old skylight was replaced by Kingspan Light + Air | CPI Daylighting's IntelaSun® controlled daylighting system, which features a series of internal blades that rotate to control the amount of light within the space below.



## Holiday Inn Houma | Houma, LA id 27731

**Problem:** The existing wide-cell panel system was not designed to withstand hurricane force wind loads, which resulted in panel blowout due to the failure of the clamping bar connection.

**Solution:** The existing canopy structure remained in place, but the glazing system was replaced with KLA's 16mm Pentaglas® standing seam system. This system utilizes a double-tooth connection and is certified per Miami-Dade standards for use in High Velocity Hurricane Zones (HVHZ).

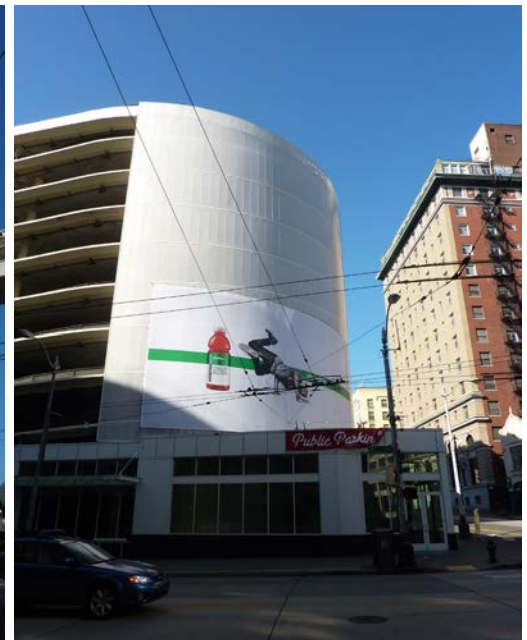


**Problem:** Needed a light-weight cladding system that could integrate with the existing structure and create a modern backdrop for adding signage in order to attract high-end clients to the retail level space.

**Solution:** As part of an urban revitalization project, 24,000 sq. ft. of single-panel Pentaglas® cladding was installed, creating a flush seamless aesthetic that has transformed this once architectural eyesore into an iconic structure in the heart of downtown Seattle.

## 3rd & Pine Parking Garage | Seattle, WA id 27205

## Transforming Urban Environments





To learn more, visit:

[www.cpidaylighting.com](http://www.cpidaylighting.com)  
[www.intelasun.com](http://www.intelasun.com)

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