

TROSIFOL
CASE STUDY

AMERICAN DREAM, EAST RUTHERFORD, NEW JERSEY

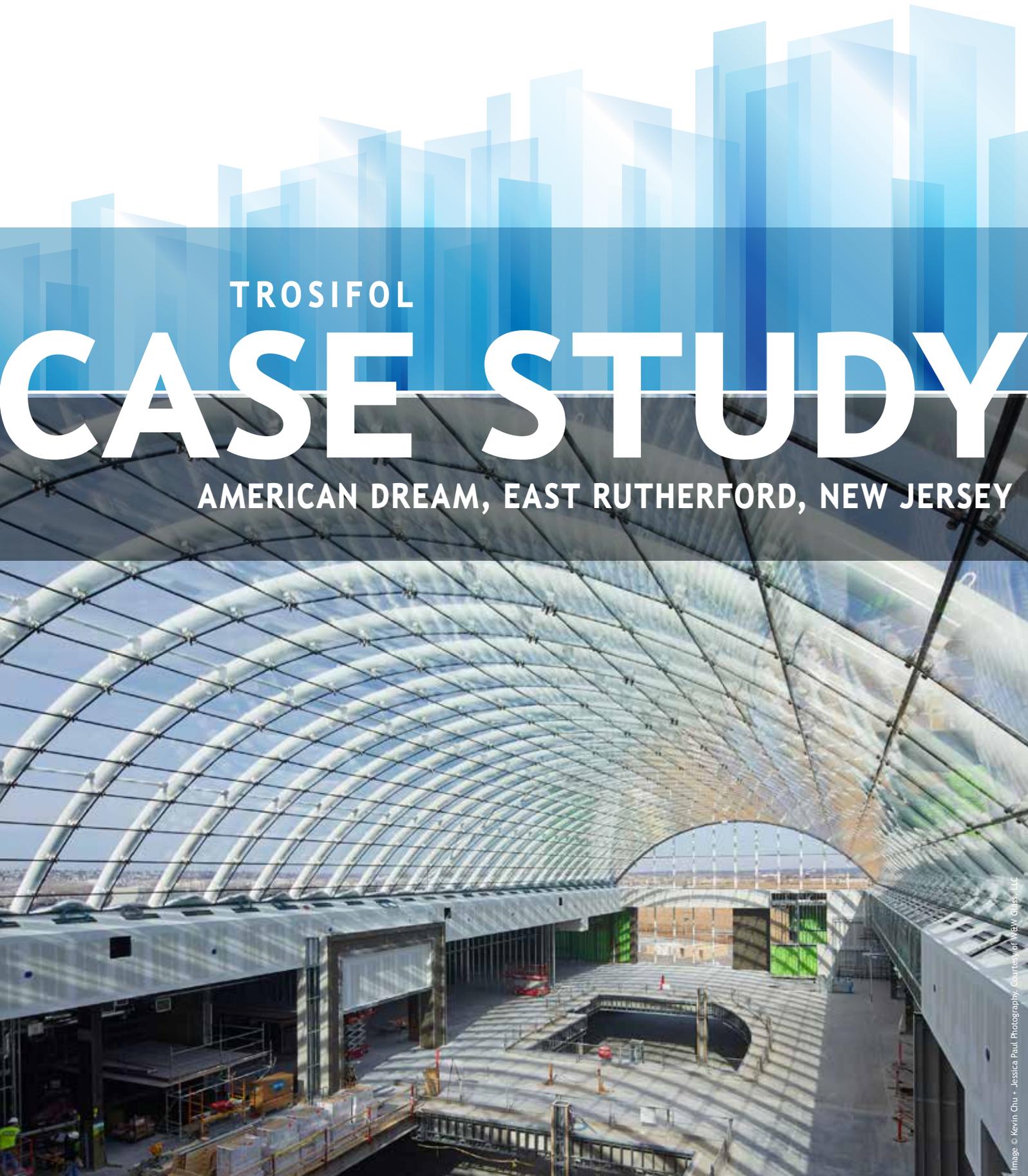


Image © Kevin Chu - Jessica Paul Photography. Courtesy of New Glass, LLC



EAST RUTHERFORD, NEW JERSEY/USA

This area of the mall houses many of the leading high-end retailers and the owners and architects wanted it to appear as an open, expansive space.

SENTRYGLAS®: LETTING THE OUTDOORS IN TO CREATE THE ULTIMATE SHOPPING EXPERIENCE

Opening in 2019, American Dream, a retail and entertainment complex in East Rutherford, New Jersey is finally becoming a reality after nearly 16 years of site planning and development, different owners and more than \$5 billion of investment.

It has certainly been worth the wait, with the impressive five million square foot (464,500 m²) structure housing both retail and entertainment/attractions/dining outlets – in a 45/55% split – along with a proposed plan to build North America’s largest indoor water park.

The external façade of the building, owned by Canada-based Triple Five Worldwide, has been completely

revamped, replacing the locally badged “eyesore” used on an earlier guise, called Xanadu. Of particular note – and dominating a large section of the building’s roofline – is the huge 99 x 239 ft (30 x 73 m) barrel-vault skylight, created using the Pilkington Planar™ system, with the glazing exploiting the functional and aesthetic capabilities of the SentryGlas® ionoplast interlayer from Trosifol™.



Project Design Firm	GH+A Design
Architect of Record	Adamson Architects
Engineer of Record	McNamara Salvia
Construction manager	PCL Construction
Façade construction	W&W Glass/Pilkington
Building Owner	Triple Five Worldwide

Image © Kevin Chu + Jessica Paul Photography. Courtesy of W&W Glass, LLC

According to Chris Lalonde of W&W Glass, LLC, the exclusive North American distributor of the Pilkington **Planar™** point-supported glass system: “This area of the complex houses many of the leading high-end retailers. The owners and architects wanted it to appear as an open, expansive space that brought the outdoors inside, but kept the environment comfortable for visitors. Light transmittance and solar control are important and with the low-e coating on the glass and the SentryGlas® interlayer, the panels let in plenty of light... but not too much.”

GH+A Design Studios, the project design firm for the complex, describes it as “a new model, a multi-dimensional, multifaceted family destination. The high-level vision was taking the bones of a retail center and reimagining it.”

According to Tony Pasqualino from Adamson Architects, the architect of record on the project: “The original design from GH+A called for a large open atrium, which let in a lot of daylight, in order to deliver an outdoor feel. We

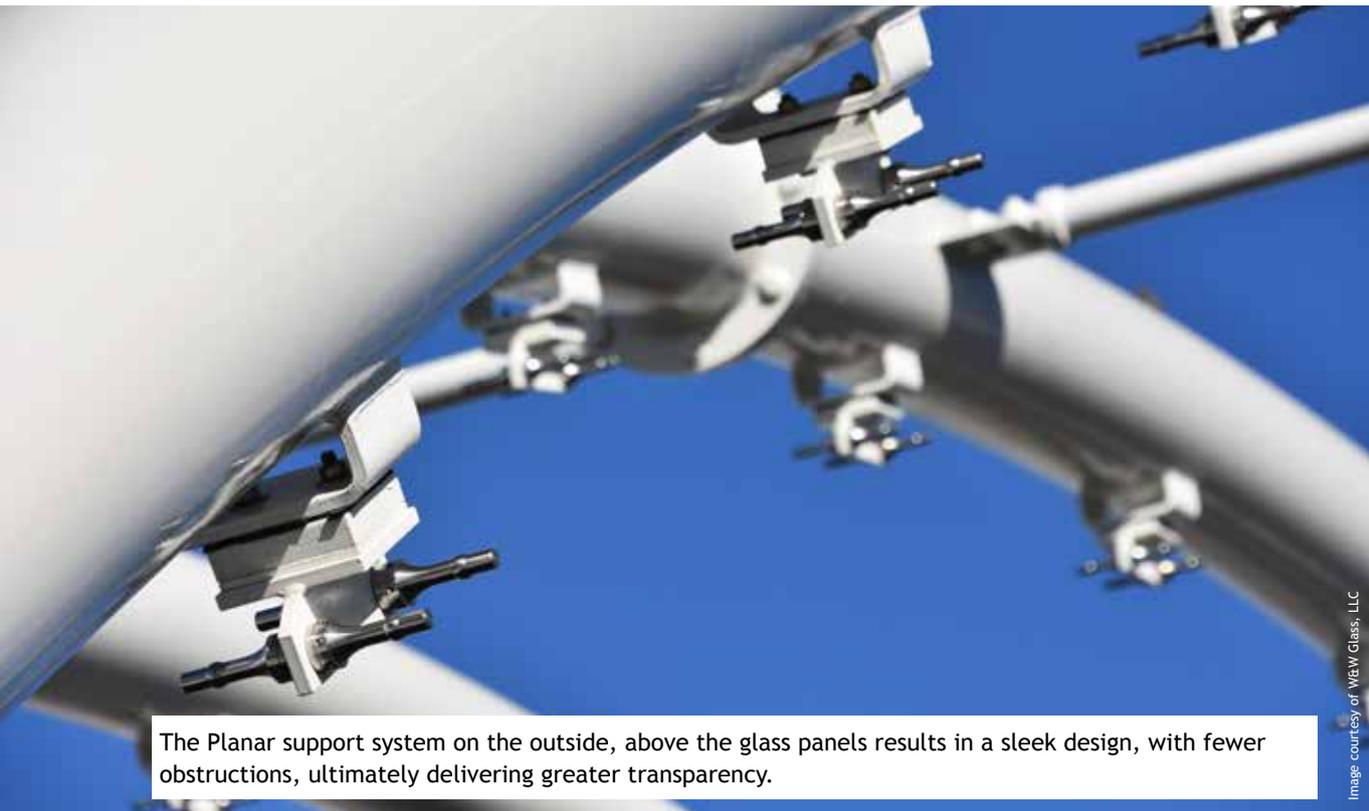


Image courtesy of W&W Glass, LLC

The Planar support system on the outside, above the glass panels results in a sleek design, with fewer obstructions, ultimately delivering greater transparency.



The Planar system uses four-points of support, so in this instance, resistance to self-weight and snow load deflection was essential.

took its atrium design concept and developed it on our Architectural drawings in conjunction with McNamara Salvia, the Engineer of Record and designer of the skylight steel support structure. The initial design had an internal steel support structure underneath the glass, and mullions skylight system, but this was superseded by the existing design, which deploys the Pilkington **Planar**™ point-supported system outboard of the glass panels and suspended from 16 in diameter rolled steel arches. This second iteration results in a much cleaner appearance, with fewer obstructions – utilising 726 7 ft x 4 ft 9 in (2.13 x 1.45 m) insulated laminated glass units – ultimately delivering greater transparency.

“The design team, client and construction manager, PCL Construction, worked very closely with W&W,” he continues, “after the creation of the first technical layout and then, after co-ordination with the building’s owners, we moulded the design, with W&W’s help, into an optimized structure that was feasible using the Planar glazing technology. The decision to go for a highly transparent low-e coated, low-iron, insulated laminated unit construction was very much based on previous W&W project experience and discussions with the building’s owner, who was adamant that we should not use frits or any dark coatings.”

Lalonde elaborates: “Due to its post-breakage strength, environmental capabilities and resistance to delamination, SentryGlas® is the obvious candidate for this type of construction, especially considering how high overhead the glazed panels are from the shopping levels. We had to balance clarity with strength and the fact that the Planar system panels use only four-points of support. In this instance resistance, to self-weight and maximum snow load deflection was essential, something that SentryGlas® addresses thanks to its excellent stiffness.”

The panels were fabricated and tested at the Pilkington Architectural facility in the UK, before being shipped to the USA for installation. “This was a turnkey project, which required a lot of engineering input from Pilkington and W&W,” Lalonde explains. “Due to the extensive engineering, testing and in-house fabrication of the high-quality materials used in the system construction, we were able to provide the owner with a Pilkington **Planar**™ 12-year comprehensive system warranty, which includes the design, engineering, materials, and labour. This is a crucial factor for many building owners who do not want to run the risk of inferior design engineering for an untested system, sub-par materials or a poor installation and then have to go through the pain of repairing or replacing



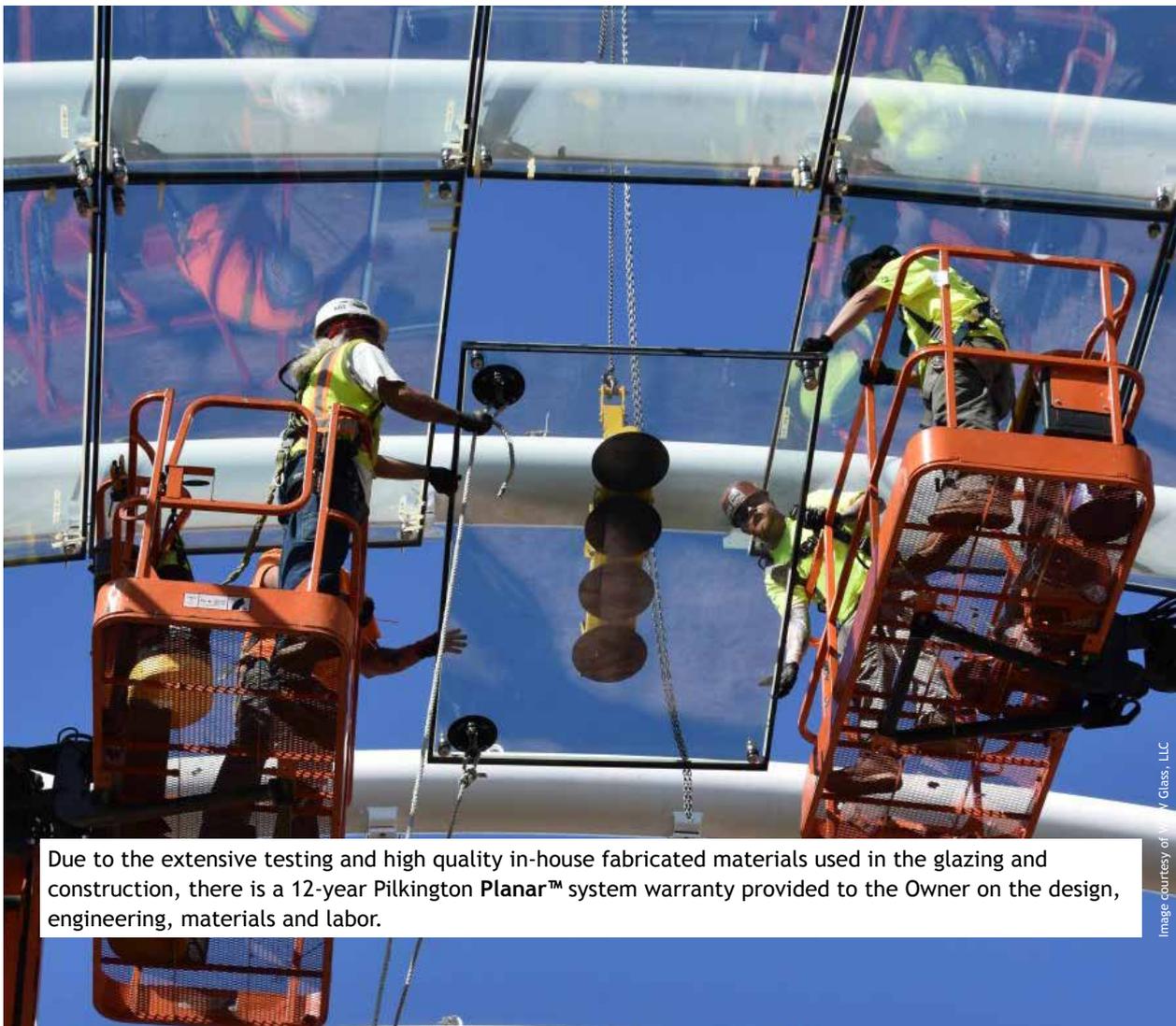
Trosifol™ is the global leader in PVB and ionoplast interlayers for laminated safety glass in the architectural segment. With the broadest product portfolio Trosifol™ offers outstanding solutions:

- **Structural:** Trosifol® Extra Stiff (ES) PVB and SentryGlas® ionoplast interlayer
- **Acoustic:** Trosifol® SC Monolayer and Multilayer for sound insulation
- **UV Control:** from full UV protection to natural UV transmission
- **UltraClear:** lowest Yellowness Index in industry
- **Decorative & Design:** black & white & colored interlayers

expensive installations after only a short period of time. This warranty gives the owner the confidence and peace of mind that the glazing will still look great, years after it is installed.”

This is another graphic example of SentryGlas® being deployed for a flagship project. Its combination of transparency, environmental resistance and post-breakage strength once again made it a prime candidate in an important structure, where aesthetics and structural capabilities had to work hand in hand to deliver the final concept envisioned by the owners and architects.

Image courtesy of W&V Glass, LLC



Due to the extensive testing and high quality in-house fabricated materials used in the glazing and construction, there is a 12-year Pilkington Planar™ system warranty provided to the Owner on the design, engineering, materials and labor.

Image courtesy of W&V Glass, LLC



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