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THE KINDER BUILDING

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THE NANCY AND RICH KINDER BUILDING

THE MUSEUM OF FINE ARTS, HOUSTON (MFAH), CELEBRATED 2020 WITH A BANG FOLLOWING THE OPENING OF THE NANCY AND RICH KINDER BUILDING.

IMAGES: Peter Molick / Richard Barnes, Courtesy of the Museum of Fine Arts Houston

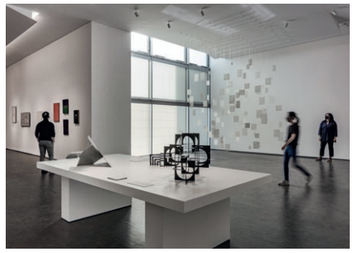
Designed by Steven Holl Architects especially for the display of the important and rapidly growing MFAH collections of 20th and 21st-century art, to which it dedicates more than 100,000 square feet of gallery space, the Kinder Building is the final component in the museum's eight-year $450 million project to expand and enhance its Susan and Fayez S. Sarofim Campus in the heart of Houston, the largest fine arts building development project of its time in North America.

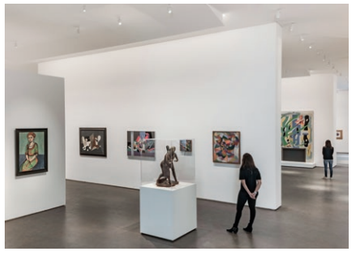
The Kinder Building is the third gallery building for the MFAH, and is named in honour of Richard D. Kinder, Chairman of the MFAH Board of Trustees, and his wife, Nancy Kinder.

Gary Tinterow, Director, the Margaret Alkek Williams Chair, MFAH, said: *"A century after the Museum's founding by a group of local art lovers, it is thrilling to place the finishing touches on the Susan and Fayez S. Sarofim Campus, the most complete expression of the Museum of Fine Arts, Houston. None of them could have imagined the scale, scope, and sweep of the Museum campus, nor the breadth of its collections.*

"But thanks to hundreds of generous donors, led by the Sarofims and Nancy and Rich Kinder, we have been able to construct magnificent new facilities for the display of the art of the preceding century and of our time, and to provide new plazas and gardens that will make the Museum of Fine Arts, Houston, the cultural hub of the region. I extend my gratitude and congratulations to Steven Holl and Chris McVoy and repeat my heartfelt thanks to the legion of patrons who made this vast undertaking possible." »

A LUMINOUS CANOPY OF CONCAVE CURVES – INSPIRED BY CUMULUS CLOUDS – PUSH DOWN ON THE ROOF GEOMETRY, ALLOWING NATURAL LIGHT FROM THE EXPANSIVE TEXAS SKY TO SLIP IN BY PRECISE MEASUREMENTS, BATHING THE THIRD FLOOR GALLERIES IN THE COVETED INDIRECT LIGHTING THAT CAN MAKE OVERCAST LANDSCAPES SO MAGICAL.





The Kinder building stands in complementary contrast to the museum's existing gallery buildings – the Caroline Wiess Law Building (designed in the 1920s by William Ward Watkin, with later extensions by Ludwig Mies van der Rohe) and the Audrey Jones Beck Building (designed by Rafael Moneo, opened in 2000), and in dialogue with the adjacent 1986 Lillie and Hugh Roy Cullen Sculpture Garden, designed by Isamu Noguchi.

It is characterised by its 'porosity' – the interchange between indoors and out, a key theme of the campus's interplay between nature and its built structures – opening the ground floor to all elevations. Seven gardens slice the perimeter, marking points of entry and punctuating the heights. The largest garden court, at the corner of Bissonnet and Main Street, marks a central entry point on the new MFAH campus.

A luminous canopy of concave curves – inspired by cumulus clouds – push down on the roof geometry, allowing natural light from the expansive Texas sky to slip in by precise measurements, bathing the third floor galleries in the coveted indirect, diffuse lighting that can make overcast landscapes so magical.

The undersides of the curved ceiling become light reflectors, catching and sliding the light across galleries in an experience that changes with every hour depending on the sky's mood. These curved slices of light shape the gallery spaces in an organic way that recalls the lush vegetation and serene water features that characterise the new campus. Rather than mechanical and repetitive, the light is flowing, echoing the movement through the galleries.

The open flow through galleries is punctuated by views into the seven gardens with green trellises offering shade from glare. The galleries are centred on an open forum, while the central gallery atrium provides generous spaces for the exhibition of art and vertical circulation to the upper floors. Prominent materials in the interior include honed concrete, terrazzo, end-grained oak floors, walnut panelling and millwork, as well as plaster ceilings.

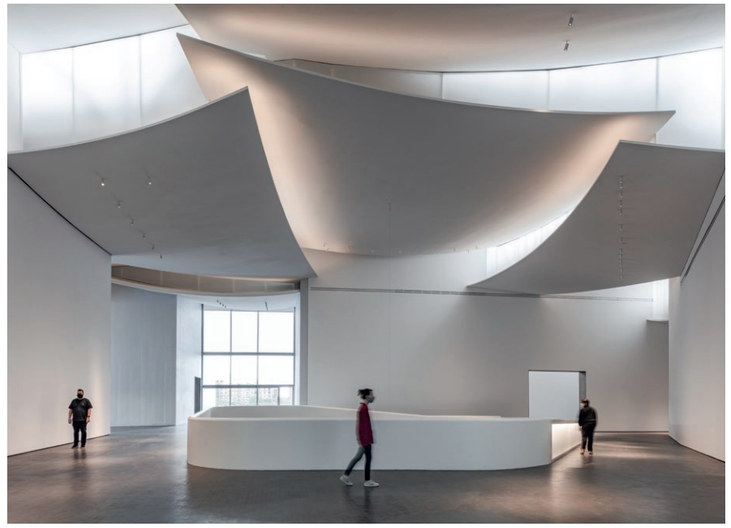
Externally, the Kinder Building's façade continues Steven Holl Architect's 40-year plus research into translucent material phenomena. The thick translucent glass facade creates the perception of trapped light, diffusing it internally and giving off a luminescence.

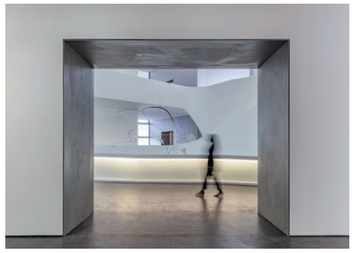
To achieve a thick translucency in a new way, Steven Holl experimented with semi-opaque shapes and textures in light. Using acrylic rods, which we cut in half and laminated to acrylic sheets, we discovered the internal glow and arcing variation of light and reflection across the curved surfaces that are now visible in the building.

On the west side of the building, where the tubes form an exterior arcade, they are left clear to make visible the refraction phenomena of light through solid medium. The open tops of the tubes give a continuously changing character to how the building meets the sky.

The tube facade was conceived with the surrounding lush landscape of live oak trees in mind. »

TO ACHIEVE A THICK TRANSLUCENCY IN A NEW WAY, STEVEN HOLL EXPERIMENTED WITH SEMI-OPAQUE SHAPES AND TEXTURES IN LIGHT. USING ACRYLIC RODS, WHICH WE CUT IN HALF AND LAMINATED TO ACRYLIC SHEETS, WE DISCOVERED THE INTERNAL GLOW AND ARCING VARIATION OF LIGHT AND REFLECTION ACROSS THE CURVED SURFACES THAT ARE NOW VISIBLE IN THE BUILDING.





The curved white surface of the facade acts as a screen for the trees' shadows in direct light and provides a satin reflection of the green landscape and blue sky in indirect light.

In all respects, the Kinder building stands as a monument to the luminous: The façade's liminal glass cladding; the third floor skylights' extraordinary meld of form and function; the playful light-based art installations that mask the pedestrian tunnels' subterranean nature; even the incorporation of a brand new LED lighting technology that has never been in a public installation before, completing the triumvirate of innovation in architecture, engineering, and technology.

On the first and second floors, it is a challenge to illuminate the 16-ft interior gallery walls in a manner consistent with the rest of the museum's airy relationship with light. However, the legendary lighting design firm L'Observatoire International proposed a solution from a small, solid-state-lighting technology start-up, QuarkStar, that had up till then only created prototypes based on one of their LED optical technology families... but one that had already won a number of trade and US Department of Energy awards as an emerging technology and with enough innovations to fill over 100 already granted patents.

This is what had attracted the interest of L'Observatoire and the MFAH. QuarkStar's Edge-X technology delivers something previously never seen before in the lighting world: evenly distributed sheets of light that easily span the 16-ft distance between gallery ceiling and floor, colour-tuning that can match natural daylight from a single fixture with only a single row of LEDs, all from a footprint so small that the museum was able to redesign the petal-like coves that echo the gentle swoops of its top floor skylights so that the light fixtures could be tucked away neatly into the architecture.

Handpicked by the MFAH's Chief Operating Officer, Willard Holmes, QuarkStar's linear gallery lights are one of the many ways that demonstrates the MFAH's dedication to an uncompromised vision of luminosity.

"It was truly an honour to have been selected to be a part of this landmark architectural project," says QuarkStar CEO, Louis Lerman. *"It came as a surprise to us, to have not only been nominated but then also to be selected; we ended up having to build a dedicated manufacturing line from scratch. It really shows how committed the MFAH was to creating a comprehensively immersive experience for their visitors, from the time they first set eyes on the campus to when they're positioned right in front of the artwork. It is top-to-bottom innovation of the luminous; from the skylights on the top to the installation art in the underground tunnels with the QuarkStar innovations in the middle, and all in service of the ultimate innovations on display – the art itself."*

The MFAH is all about innovations in light and lighting – in concept, in architectural design and materials, in technology, in artistic expression – and brings it all together into one cohesive and transcendent epicentre for the campus. By boldly exploring new ideas and innovations, the MFAH has created a crown jewel that has been rightly named one of the best buildings of 2020, and which will continue to serve them radiantly for many decades to come. Construction of the Kinder Building ran from August 2015 to November 2020. ■

To find out more, please visit **www.mfah.org**

INSIDE THE MUSEUM

A look at the technology that bridges the natural and the artificial in lighting.

> *[U]LTIMATELY IT'S ABOUT THE EXPERIENCE OF VIEWING ART TOGETHER WITH OTHER PEOPLE. IT'S A BUILDING FOR THE LONG RUN; THE LIGHT AND SPACE MUST WORK 100 YEARS FROM NOW.*
>
> **GARY TINTEROW** MFAH Director

What makes great lighting?

The average person may find it difficult to put into words, but they know it when they see it... literally. Light is essential to the human experience, and even without a technical vocabulary for lighting, nearly every person on earth can grasp whether a space is lit well or poorly within a single glance.

But being able to articulate what makes not just good, but great lighting, becomes paramount when working on one of the premier museums in North America. The Museum of Fine Arts, Houston's recently completed Nancy and Rich Kinder Building is not only an architectural marvel, but a supremely well-tuned instrument of light and lighting. Gallery lights here face some of the most rigorous challenges of quality, high-performance lighting that exist in the industry.

For instance, focus should be on the art, not the walls. The Kinder Building's 16-ft tall canvas of inner gallery walls need to be illuminated uniformly from top to bottom so that art pieces do not compete for attention against background gradations.

Color temperature doesn't just set the mood; good color mixing and matching is crucial for both the proper illumination of art and to seamlessly merge with natural light. The Kinder building's unique and pioneering architectural design seeks to tame the Texas daylight into a beautifully diffuse, ambient experience. It is essential that gallery lights be able to mimic and match it wherever they overlap.

The Q-Wall linear wall wash, based on QuarkStar's award-winning Edge-X technology, delivered on all of the above and more … all packaged into a fixture so small, when the museum saw it placed in a ceiling mockup, they chose to redesign the cove to take advantage of the empty space that was left behind.

This is what QuarkStar's Edge-X enables. An architectural vision such as the Kinder Building should not have to design around a fixture. Instead, the lighting should be integrated invisibly into the built environment and deliver an experience nearly indistinguishable from standing near a window or under a cloud-inspired skylight.

Above: Seamless integration of architecture and technology: The blending of natural sunlight with concealed luminaires creates the impression of daylight penetration far into the gallery space.

"The Kinder Building represents a glorious trinity of lighting innovation based on the interplay of the physics, engineering, and design of light: Reflection in how the skylight bounces light around until it's a wonderfully diffuse glow. Luminescence from what is emitted by the glass cylinders on the façade. And now a sculpting of light, which is what QuarkStar's Edge-X technology allows us to do, creating through refraction alone these beautiful sheets of indirect lighting. All these innovations were inspired by the human need for artistic expression, just as artistic expression itself inspires ever greater innovations. We have great confidence that in places like the MFAH this feedback loop of inspiration and innovation will continue long into the future." ■

LOUIS LERMAN CEO QuarkStar

To find out more, please visit **www.QuarkStar.com**

> *SOMEONE ASKED ME WHAT MY FAVORITE MATERIAL WAS. I SAID, IT'S LIGHT.*
>
> **STEVEN HOLL** Architect

Above: Q-Wall's diminutive size and best-in-class light distribution means curators can easily display art of multiple sizes and shapes throughout the galleries without worrying about hot spots or dark spots, while visitors are able to appreciate the collections from multiple viewpoints without distracting shadows or discomfort glare.

Left: As the sun sets, QuarkStar takes over, flawlessly maintaining consistent, even illumination on feature walls.