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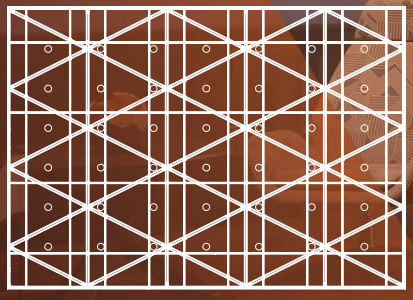

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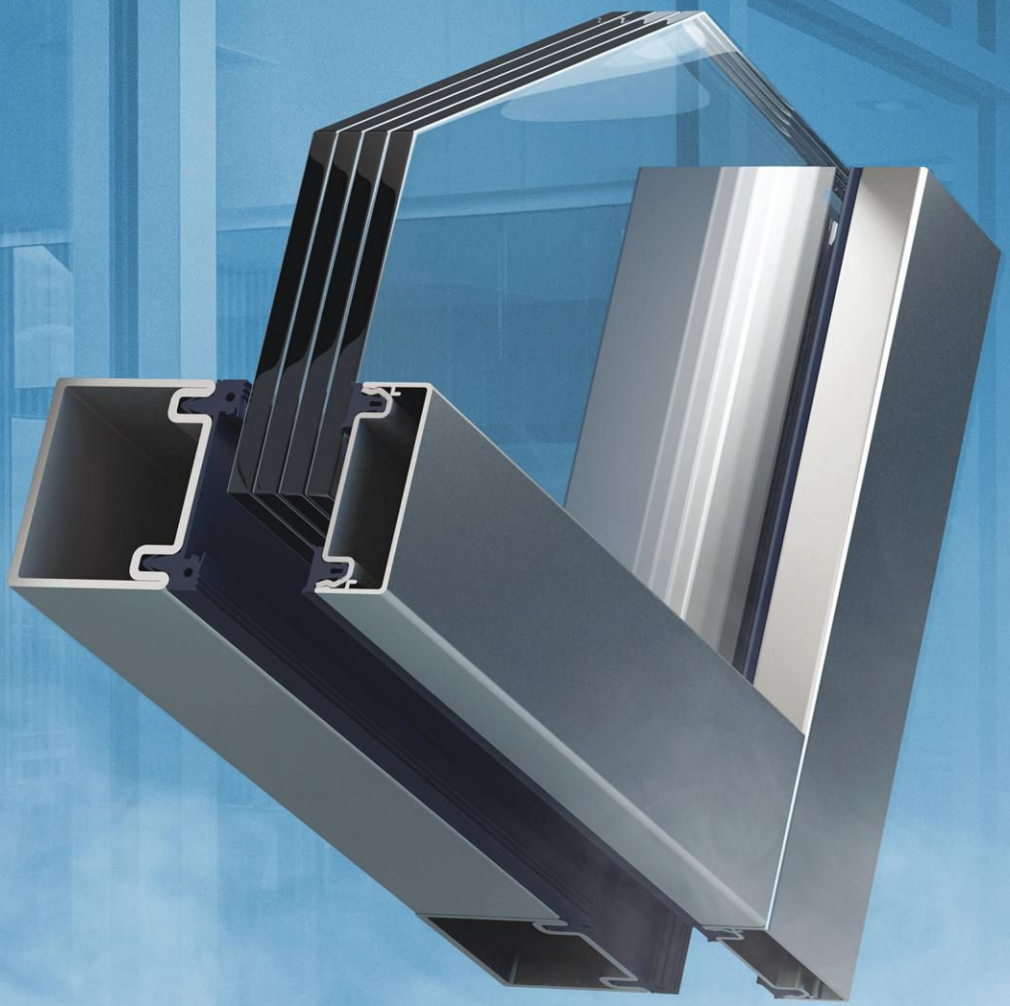

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Periodicals Postage Paid at Troy, MI and at additional mailing offices.

POSTMASTER: Send address changes to: ARCHITECTURAL RECORD, P.O. Box 16387 North Hollywood, CA 91615.
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COVER: PEARLING PATH VISITORS CENTER, BAHRAIN, BY VALERIO OLGIATI ARCHITECT. PHOTO BY LAURIAN GHINITOIU.

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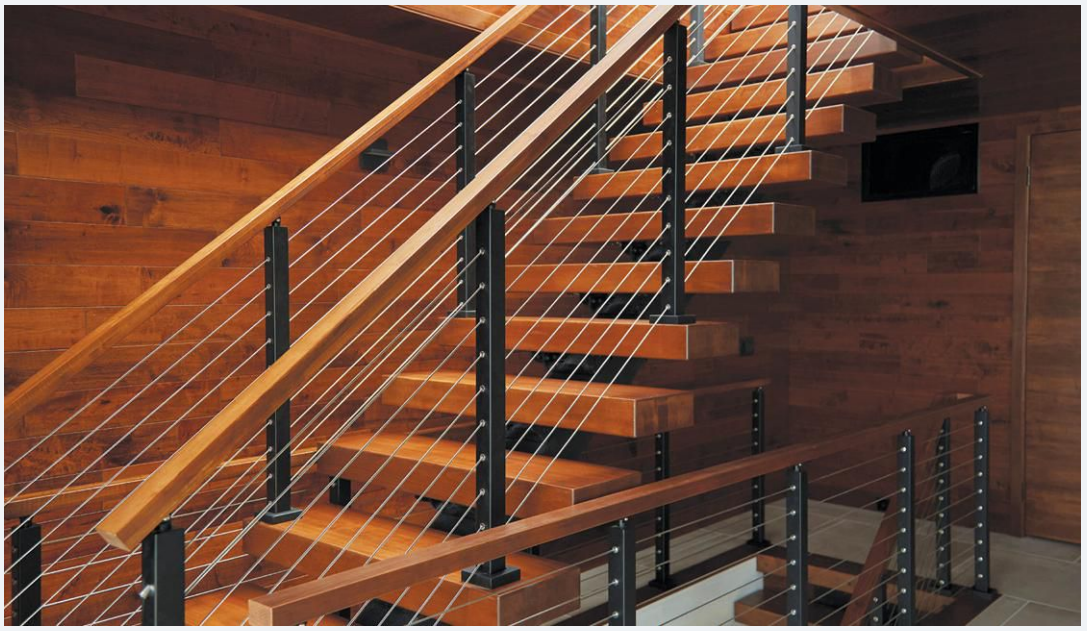

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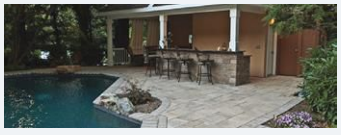

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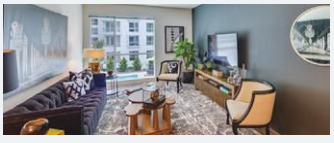

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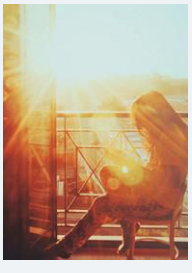

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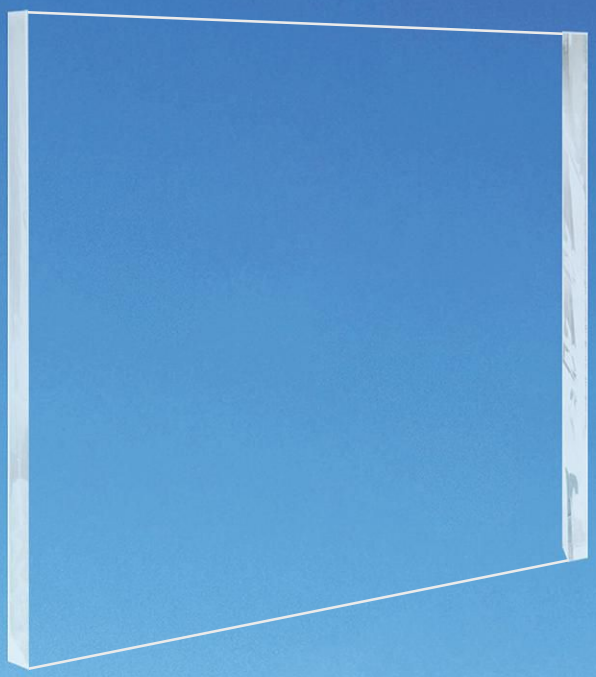

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U.S. EMBASSY IN HONDURAS BREAKING GROUND THIS SPRING

Construction on the New Embassy Compound in Tegucigalpa, Honduras, designed by SHoP Architects, is slated to begin in April. See more renderings of this project and other forthcoming State Department buildings online. [NEWS]

TOURING THE FORD FOUNDATION

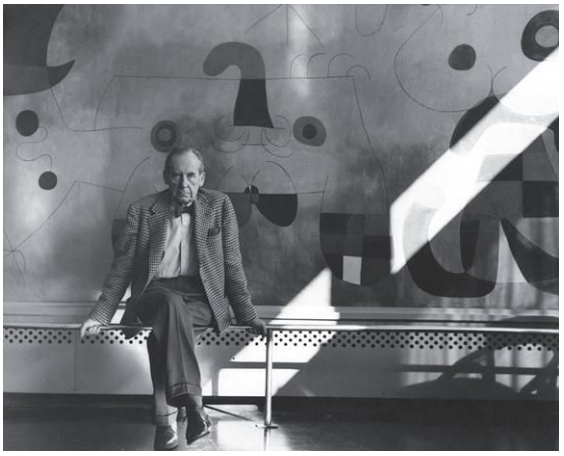
Three years after our first video in 2016, ARCHITECTURAL RECORD visits the renovated Ford Foundation Center for Social Justice in New York with Darren Walker, the organization's president. Watch on YouTube or on our website, and read more about the project in the February 2019 issue.

DAVID ADJAYE CONSIDERS MEMORIALS IN NEW SHOW

Making Memory at the Design Museum in London explores the role of contemporary monuments. Read our review of the exhibition, which runs through May 5. [NEWS]

MUST DEFENSIVE DESIGN BE HOSTILE?

The designers of recent public projects, including Hunter's Point South Park (RECORD, August 2018) in New York, at left, and the Bentway (page 35) in Toronto, weigh in on how to keep visitors and landscapes safe while avoiding "hostile architecture." [NEWS]



THE BAUHAUS AND HARVARD

A new exhibition at Harvard University, running through July 28, showcases the institution's vast Bauhaus collection, including this photograph by Hans Namuth of Walter Gropius with a Joan Miró mural. Read our review online. [NEWS]

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Crime and Punishment

Can architecture make a difference in prison reform?

IN LATE JANUARY, with a polar vortex blasting the wintry East Coast, the power went out in part of the Metropolitan Detention Center in Brooklyn, New York, a federal facility for inmates awaiting trial. For the next week, according to a flurry of news reports, an untold number of the 1,600 prisoners in the infamous jail remained locked in dark cells, shivering in freezing temperatures, with little or no heat or hot water—and no idea about what was going on. Reportedly, medication was not regularly dispensed, and food, when delivered, included a supper of undercooked oatmeal. On top of that, lawyers, family members, reporters, and even lawmakers could get few answers during the blackout. After Congressman Jerrold Nadler toured the jail, he decried "an absolute lack of urgency or caring on the part of the leadership, particularly the warden." The U.S. Justice Department said it would investigate.

When we talk about civic architecture—which is featured in this issue (page 91)—we usually mean places like courthouses, libraries, or community centers. Yet prisons are civic buildings, too—albeit a category that offers the least transparency or public accountability of any institution paid for by tax dollars.

Here in the U.S., we seem to need a lot of prisons. America has 2.2 million inmates—more than any other country on earth, with a highly disproportionate number, about half, who are people of color. These prisoners are locked up in 1,800 federal and state penitentiaries, as well as in 3,163 jails and 1,852 juvenile-detention centers, places that range from the somewhat comfortable minimum-security prisons, to which white-collar criminals beg to be sentenced, to those that are unspeakably squalid, overcrowded, and dangerous. Recidivism rates are high in our country—as much as 50 percent for federal inmates—with penal facilities largely designed for punitive retribution, not rehabilitation.

But attitudes toward imprisonment show signs of shifting, as a bipartisan spectrum of elected officials begin to acknowledge the crisis of mass incarceration. The FIRST STEP Act, passed by both houses of Congress and signed by the president in December, is, well, a first step: by ending extreme mandatory-minimum sentences for federal crimes, it will shorten the prison stays of many inmates. At the same time, the overall prison population—including the much larger share in state facilities—is also slowly dropping.

Yet reformers are pushing for far more profound changes. They want to create a criminal-justice system that is fairer and more humane, geared toward restorative justice and to helping inmates successfully reenter their communities and not head right back into jail.

Can architecture make a significant difference in the movement to reform our prison system? We asked this question in a special report (page 81) and found a variety of perspectives. Some architects, like Raphael Sperry—the president of Architects/Designers/Planners for Social Responsibility, who has tried, and failed, to get the AIA Code of Ethics amended to prohibit the design of solitary-confinement cells or execution chambers—believes mass incarceration is a policy problem, not an architectural one. But some architectural firms that engage in prison work—such as RicciGreene Architects and HDR—are using design to improve conditions, by employing softer materials and colors; using larger windows, without bars, to bring in natural light, ventilation, and, where possible, views of nature; and creating suites of cells without doors that open onto common spaces.

Last fall, the nonprofit Vera Institute of Justice released a compelling report, *Reimagining Prison*, after 18 months of consulting with a wide range of experts, historians, and ordinary people on whom incarceration has had an impact. The report delves into the pervasive history of racism in America's justice and prison systems, and proposes that "human dignity be the foundational, organizing principle of the nation's corrections system." (It applies to the corrections officers and crime victims who were studied, as well as inmates themselves.) Further, Vera invited the Boston-based MASS Design Group to explore the history of prison design and propose a radical rethinking. MASS's concept design (page 89) was inspired in part by the humane prisons in places like Norway, where the loss of liberty is considered punishment enough for most crimes. But Michael Murphy, cofounder of MASS, says his firm would face a moral dilemma before accepting a real commission in prison design today. "Can we actually reform the system as it exists through architecture?" he asks. "That's a valid question, which we have to ask on a case-by-case basis."

While human-centric design can clearly help improve prison conditions, architecture can't upend the deeply embedded culture that has led to America's dreadful first place in mass incarceration. But architects do have a unique perspective to offer in the wider and urgent call for far-reaching change.

Cathleen McGuigan

Cathleen McGuigan, Editor in Chief

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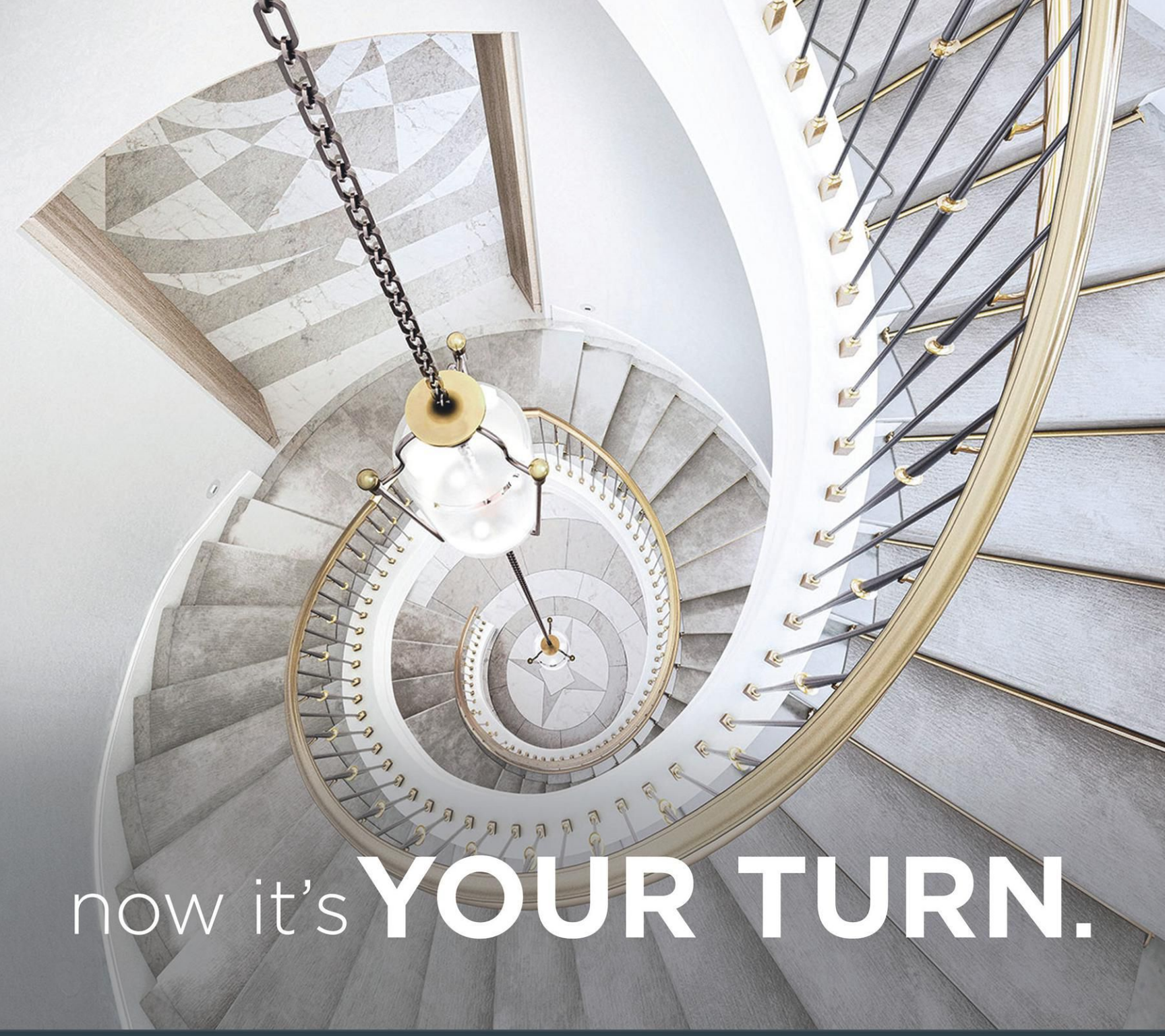

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—Mayor Bill de Blasio's response to the news that Amazon abandoned plans to build its HQ2 in New York.

Weiss/Manfredi Unveils Plan for U.S. Embassy in New Delhi

BY MIRIAM SITZ

DESIGNING AN EMBASSY that meets the needs of one country while respecting the context of another would be a challenge for any architect; add an existing landmark building, such as Edward Durell Stone's 1958 Chancery Building, to the mix, and the stakes become even higher. Marion Weiss and Michael Manfredi address this challenge with their design for the forthcoming U.S. Embassy in New Delhi's diplomatic enclave of Chanakyapuri. Their scheme for a cohesive new campus on the 28-acre site uses forms, materials, and landscape to link existing historic structures (namely, the Chancery) to contemporary ones.

Envisioned as a two-phase construction plan lasting seven to eight years, the project will break ground this spring on a new support annex, housing functional facilities such as a health unit and offices. After that, a second phase will see the construction of a new office building (NOB), to contain offices for the Ambassador and staff, as well as space for ceremonial functions. "A wandering garden path joins the two precincts to create one legible campus," says Weiss. "The idea of this connective landscape became our thesis, to not make one garden pavilion after another, but one unified diplomatic campus." The firm has also designed five small entry pavilions.

After receiving the commission from the State Department, Weiss/Manfredi began the master planning process in 2014. (Other ongoing U.S. embassy projects include those in Mexico City, designed by Tod Williams Billie Tsien Architects/Davis Brody Bond; Tegucigalpa, Honduras, by SHoP Architects; and Brasilia, by Studio Gang.) "Our goal was to establish a campus that was safe and secure but didn't have the affectations of a fortresslike compound," says Manfredi. "To do that, we drew upon traditional garden elements like walls, moats, and reflecting pools that provide a level of security but also, more importantly, provide a real connection to the great legacy of Indian architecture."

The buildings will be clad in a series of interwoven precast-concrete fins, recalling the *jali* screens of vernacular Indian architecture. "They establish a pattern across the facade with links to the Edward Durell Stone building, but also to much more ancient traditions," says Manfredi. The panels, embedded with chips of white Makrana marble, also function as a brise soleil, creating deep shadows to help keep interiors cool while framing occupants' perspective on the surrounding landscape. "They kind of kiss and bundle up at the floor slab, and then they open up where the views are," says Weiss.

The top of a flowering tree peeks out of a sunken courtyard that brings light into the below-grade passages connecting the new office building (above, at right) to Edward Durell Stone's 1958 Chancery Building (above, at left). Weiss/Manfredi's plan unifies the 28-acre campus (left).

The design responds to New Delhi's climate, which can be very hot, very wet, and very dry over the course of a year. At the entrance to the NOB, a deep roof overhang and a reflecting pool will provide shade and evaporative cooling. A variety of Indian stone, including Golden Teak sandstone, Kota limestone, and Ambaji white marble, will be used throughout the project. "Stone is very economical to use in India," Weiss says, "and the craftsmanship is so well done." The original round reflecting pool in front of the Chancery will be adapted to store some 1 million

RENDERINGS: COURTESY WEISS/MANFREDI

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The deep roof canopy of the new office building protects the entrance from both rain and sun, while the reflecting pond provides evaporative cooling (above). The architects placed benches in shady spots throughout the lushly landscaped campus (top, right).

gallons of water in a subsurface cistern, for landscaping and graywater reuse.

The architects' restoration of the Chancery will "allow the building to be opened up and rejuvenated to Edward Durell Stone's original vision," says Weiss, by connecting it to the new office building via below-grade passageways. "There's a series of spaces that are illuminated by sunken courtyards," explains Manfredi, "allowing a much more integrated approach, without glomming new construction onto this beautiful historic building."

"What we often describe as 'honorific space,' the State Department describes as 'representational,' and what's very beautiful about that word—representation—is that these are spaces that truly represent the face of diplomacy," says Weiss. "That term has been in our mind throughout this process." ■

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Gehry's Design for Toronto's New, Tallest Towers Moving Forward, Says Developer

BY ALEX BOZIKOVIC

THE BIGGEST project of Frank Gehry's career is moving ahead in his hometown of Toronto—and reaching new heights for the architect and for the city.

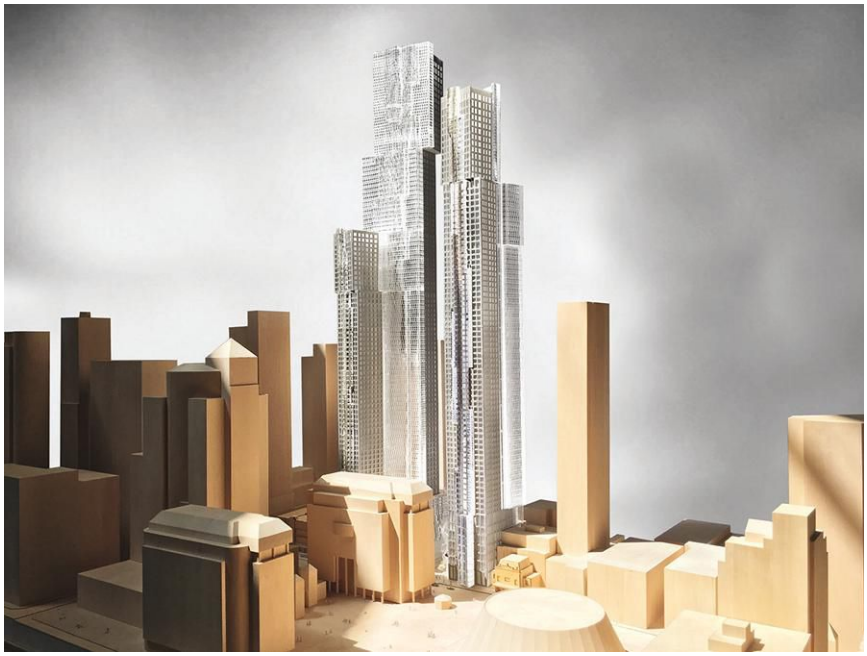
Known as Mirvish + Gehry, the mixed-use complex reached a milestone in January when developers submitted a final version of the scheme for city approval. It features a pair of irregularly shaped towers that dance their way up to 1,079 and 990 feet tall.

The project was launched in 2012 by David Mirvish, a theater producer and art collector whose father, retailer Ed Mirvish (a longtime friend of Gehry's), began acquiring the downtown property half a century ago. David Mirvish's initial proposal for three towers faced vocal opposition from city planners for its density in this crowded area and because it would have meant demolishing the 2,000-seat Princess of Wales Theatre. After Mirvish reduced the project to two towers and agreed to save the theater, he won city approval in 2014. Mirvish sold the development to Great Gulf and its partners Westdale Properties and Dream corporation in 2017.

If completed, the 1.84 million-square-foot complex would be the largest and the tallest Gehry has built so far, substantially taller than his Spruce Street tower in New York, which is 890 feet high. The two buildings, 91 and 81 stories respectively, will have a dominant place in the skyline—edging out a planned Foster & Partners tower called the One, slated for completion in 2022, and the 1975 First Canada Place office tower by Edward Durell Stone—to become the tallest buildings in Toronto.

Gehry was born Frank Goldberg in the Canadian city in 1929, and lived there until moving to Los Angeles in his teens. For him, the project has personal resonance. "I feel good about Toronto and about my Canadian roots," he said in an interview. "My DNA still wobbles when I get here."

PHOTOGRAPHY: COURTESY GREAT GULF



The 81- and 91-story structures, planned for the heart of downtown Toronto, will become the city's tallest buildings (left). Sculptural canopies will emerge from one side of each tower's base (opposite).

Gehry has imagined two distinct and distinctive towers, reaching out to each other with sculptural canopies that span a side street. Each is basically L-shaped in plan but expands as it rises, with cantilevered bumpouts. Both buildings comprise offset blocks that evoke the form of nearby lofts. "I'm trying to break it up and show that you can do towers that relate to the scale of the old city of Toronto," Gehry said.

The design of the complex sees the architect in a collagist mode. The facades include flat curtain wall, a rippling metal surface that Gehry likens to a waterfall, and metal cladding (either titanium or stainless steel) with punched windows. "The variety of materials was important, so the buildings don't read like every other skyline glass thing," said Gehry, "and I think having the two buildings talk to each other—that's an opportunity you don't get very often."

Luxury condos will occupy the bulk of the towers, along with a 209-room hotel in the west tower. The development also includes a theater, studios, and classrooms for OCAD University's (formerly the Ontario College of Art and Design) visual-arts program, and retail space. David Nam, a partner at Gehry Partners who is overseeing the project, compares it to Rockefeller Center in its scale and variety of uses.

The project's long gestation has raised questions about whether it will actually proceed; now the developers say they plan to begin marketing condo units this year. The other concern is whether meaningful architecture can survive the cost pressures of the development process. "It's tight, but it can be done," Gehry said. "Most developer clients are just afraid of the unknown. If you do something slightly different, they ask, is this going to have a cost impact? But if you can prove it won't, and if the changes you make are adding value, which they are, then why not?" ■

[NEWSMAKER]

Stephen T. Ayers

BY DEANE MADSEN

STEPHEN T. AYERS, FAIA, retired last fall from his post as Architect of the Capitol. "People often said to me, 'The Architect of the Capitol? It was designed over 200 years ago—what do you do?'" As he explains, his office oversees 18.5 million square feet of space in 36 buildings and an annual budget of $730 million. ("That's a Fortune 500 company!" he says.) Ayers, 56, who won the AIA's Thomas Jefferson Award for Public Architecture last year, spoke with RECORD about his three decades of public service, what the job requires, and his plans.

The U.S. Capitol is the most prominent symbol of our democracy. What goes into maintaining it?

People don't understand what it takes to make that machine work—just the daily churn of keeping everything running, keeping occupants cool or warm, keeping the food available, processing the events, making the hearings happen, making sure more than 300 elevators work, and keeping the trains running. That is $400 million every single year. And on top of that, we reinvest another $330 million of capital improvements in our buildings.

How do you balance the evolving needs of the building with its preservation?

While the Capitol Building might be a museum, so to speak, it's really a working office building every day. It requires a plethora of cabling and all of the most modern fire and life-safety interventions. While you may see a sprinkler head in some building elsewhere that's prominent, ugly, and obtrusive, you'll never see that on Capitol Hill. Every single sprinkler head is very carefully planned—where and how it enters the space, what it looks like, what color it is—and carried out in the most sensitive way. We make the investment to not surface-mount any of that infrastructure. It is all buried in the walls. As our own authority, having jurisdiction, we're able to make the decisions to balance preservation and life safety in a way that's best for everyone. The Capitol is 225 years old, so it doesn't meet modern building code. We don't have the egress capacity in the Capitol that you'd have in a new, modern museum. So we have to very carefully regulate who is where, and how many people are in the building at any given time.

One of the major projects completed during your tenure was the Capitol Visitor Center. What was it like working on it?

We had finished the design, construction contracts were awarded, and shovels were in the ground when 9/11 hit. [Ayers joined the office of the Architect of the Capitol in 1997, working in several roles until his appointment as AOC in 2010.] That changed the world for architects, engineers, and security professionals. We went completely back to the drawing board and redesigned that building for fire, life-safety, and all manner of security issues—not at the 11th hour, but at the 13th hour. They were absolutely massive changes, to the tune of more than $100 million.

Your former deputy, Christine Merdon, will serve as acting Architect of the Capitol until the Senate confirms your successor. What advice do you have for the person who fills the role?

You have to be strong enough to make long-term decisions. You're going to get a lot of pressure to make short-term shortcuts in preservation and other issues, but you have to be strong enough and confident enough to make long-term decisions for the institution.

What's next for you?

I'm going to push the reset button on life and be open to what life brings and has to offer, and I'm excited to do that. I'm sure I'll continue to be involved in the built environment: architecture and history and preservation are what I love. For so many years in a high-profile job, I needed to know every detail. I'm looking forward to changing that perspective in my life. ■

PHOTOGRAPHY: COURTESY ARCHITECT OF THE CAPITOL

noted

New Design for AT&T Building Renovation Receives Approval

The New York City Landmarks Preservation Commission has approved Snøhetta's revised "preservation-led" plan to renovate Philip Johnson and John Burgee's 1984 building, now landmarked and called 550 Madison. The original scheme, which would have replaced part of the granite facade with glazing, faced strong opposition. The renovated tower is slated to reopen in 2020.

AIA Issues Statement in Support of Green New Deal Framework

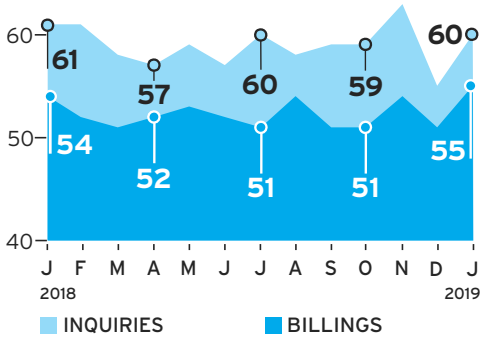
"We applaud the efforts of Congress and its committees . . . to find new ways to support achieving a carbon neutral future by 2030," writes 2019 AIA president William Bates, encouraging Congress to "address the dire consequences we're facing" by swiftly enacting policy. Buildings consume nearly 40 percent of U.S. energy.

Chicago Architecture Biennial Announces Theme for 2019

The event, titled "*. . . and other such stories*," will consider questions of land, memory, rights, and civic participation. Artistic director Yesomi Umolu says participants will be announced in March. The Biennial kicks off September 19 and will run through January 5, 2020.

Honors, Awards, and Commissions

The AIA issued Johnathan Marvel a Presidential Citation for his work in San Juan, Puerto Rico, after Hurricane Maria; the Serpentine Gallery announced Junya Ishigami to design the 2019 Serpentine Pavilion; Elizabeth Diller and Ricardo Scofidio were awarded the 2019 Royal Academy Architecture Prize.



Architectural Billings Still Rise

The Architectural Billings Index rose from 51.0 in December to 55.3 in January, marking 16 straight months of growth. (Scores over 50 indicate an increase in billings.) The project inquiries index jumped from 55.4 to 59.6. The design contracts index also increased from 52.5 to 53.9. (The AIA has now seasonally adjusted all data from 2018.)

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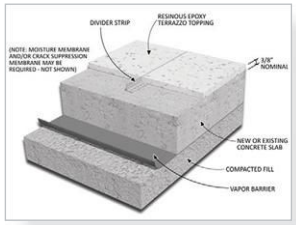

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Florence Knoll Bassett, 1917–2019

BY FRED A. BERNSTEIN

"EVERYTHING I DID was based on my architectural training," said Florence Knoll Bassett, who died in January, at 101, in a 1983 interview with *The New York Times*. Best known for her work as a furniture designer, she was also an architect who studied with some of most important architects of the 20th century, and an entrepreneur who helped architects expand their practices into furniture design, greatly extending the reach of Modernism.

In 1964, a year before she left Knoll to live quietly in Florida, the *Times* called her "the single most powerful figure in the field of modern design."

Orphaned at an early age but already interested in architecture and design, Florence Schust attended Kingswood, the girls' school at the Cranbrook Educational Community, in Bloomfield Hills, Michigan, and later the Cranbrook Academy of Art. The academy's president, Eliel Saarinen, and his wife, Loja, practically adopted her; she spent summers with the Saarinen family at their home in Finland. One summer, she recalled, the Saarinens' son, Eero, seven years her senior, "decided to give me a course in architectural history," illustrating his impromptu lectures with sketches of Greek and Roman buildings.

From Cranbrook, she went on to study at the Architectural Association in London. In 1939, as war descended on Europe, she moved to Cambridge, Massachusetts, where she worked for Walter Gropius and Marcel Breuer. In 1941 she enrolled at Chicago's Armour Institute (later the Illinois Institute of Technology), where she studied under Mies van der Rohe. Mies, she said, had a profound effect on the clarity of her later work. Then moving to New York, she took a job with Harrison and Abramovitz. "Being a woman, I was given interiors," she told the *Times*.

Florence Knoll Bassett (above) designed a series of modern sofas and tables (bottom, left) and commissioned the Womb chair by Eero Saarinen (bottom, right).

After meeting Hans Knoll (whom she married in 1946), she helped turn his small furniture company (redubbed Knoll Associates) into a powerhouse. She designed a number of tables, chairs, and sofas that went on to become classics, and worked with well-known architects on pieces that came to define the 20th-century corporate office. Early on, she commissioned Eero Saarinen to design "a chair that is like a basket full of pillows . . . something I can curl up in." She and Saarinen persuaded a fiberglass-boat builder in New Jersey to manufacture what became known as the Womb Chair. (An image of the Knoll showroom with that chair was featured on the cover of ARCHITECTURAL RECORD in November 1948.) A decade later, Saarinen, reportedly vowing to eliminate "the slum of legs" found under conventional tables and chairs, developed his pedestal collection, with its gently curved bases, for Knoll. (The chair in the collection is often called the Tulip.) And Knoll persuaded her former teacher Mies to give her the rights to produce his Barcelona chair (designed with Lilly Reich in 1929). She was one of Mies's most important protégés and exponents.

Florence's project—carried on alone after Hans died in a car accident 1955—was about more than isolated objects. She often said that she designed furniture not for its own sake but to make modern interiors possible. It was thanks to her, the *Times* said, that "modern architecture in the United States started to become a furnished reality."

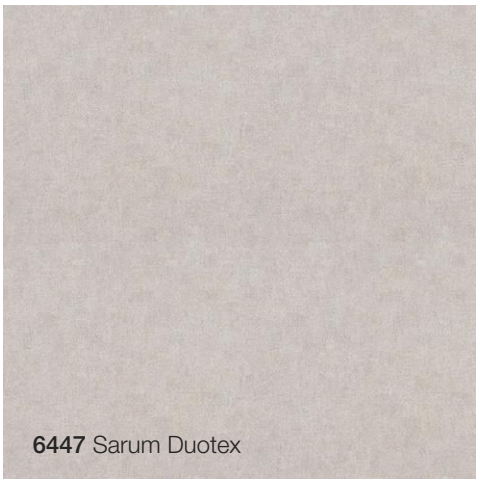
Indeed, at the same time she was designing furniture, she was running the firm's Planning Unit, which was responsible for hundreds of interiors. Among the best known were the offices she designed for CBS founder William Paley and 1,000 or so of his employees, in the office tower known as Black Rock (1965) designed by Saarinen before his death in 1961.

Knoll was renowned for her presentation method, which involved the (then) novel idea of gluing swatches of real fabric and images of wood and stone at scale onto her plans and elevations. As she explained to her friend the design writer Paul Makovsky for a 2017 article, samples of materials like teak, silk, wool, and leather were "something an executive could identify with, especially if he was hesitant about embracing a Modernist aesthetic."

While completing the CBS offices, she moved to Florida to be with her second husband, banker Harry Hood Bassett. It was there that the *Times* interviewed her in 1964 for an article that, typically for the era, devoted several column inches to her looks. Among other observations: "Her hands, with their short, unpainted nails, are the used hands of a busy, creative person, but the enormous emerald solitaire looks perfectly at home guarding her wedding band."

Did that trivialize Florence Knoll's accomplishments? The same article, citing an unnamed authority, described her as "surely the most successful woman architect anywhere." In fact, the owner of the enormous emerald solitaire may have done more to promote Modernism than any other woman or man. ■

PHOTOGRAPHY: © ILAN RUBIN (BOTTOM, RIGHT); COURTESY KNOLL ARCHIVE (2)



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perspective **house of the month**

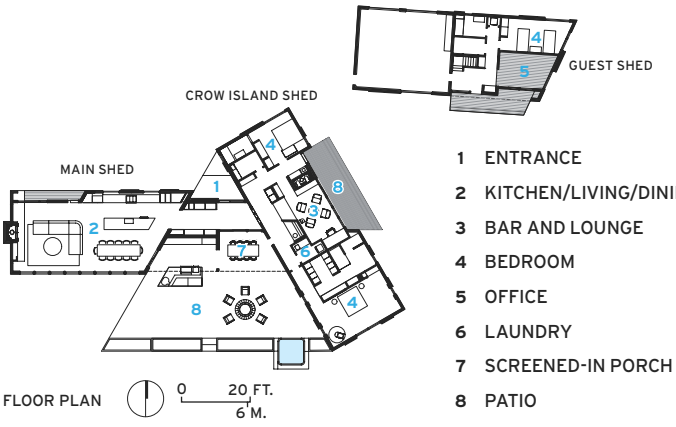
A THREE-VOLUME VACATION HOUSE BY ACRE ARCHITECTS FRAMES DRAMATIC VIEWS AND EVOKES THE VERNACULAR. **BY MIRIAM SITZ**

ON THE RUGGED, windswept coast of New Brunswick, Canada, a new house by Acre Architects perches atop a rocky outcropping, overlooking the Bay of Fundy, where the water levels can change 26 feet between high and low tide. With subtle nautical references and a material palette that defers to the vernacular tradition of the area, the Sheds of Charlotte County, as the residence is called, reflects both the maritime context and the owners' interests.

Inspired by an old gabled fishing shed—which, clad in weathered eastern cedar shingles and located just across the narrow causeway from the site, belonged to the client's father—the wood and steel-frame house is broken into three volumes or "sheds," each with a distinct program and aesthetic. "One of the client's initial requests to us was that it didn't feel like a giant summer home, and that it was more knitted into the community," says Stephen Kopp, who cofounded Acre Architects with Monica Adair in 2010 in Saint John, New Brunswick.

The architects, who are married, situated the open-plan kitchen, dining, and living room in the main shed, notable for its 20-foot-tall cathedral ceiling, whitewashed oak flooring, bright white walls, and floor-to-ceiling windows facing the bay. A large triangular window, nestled beneath the apex of the gabled roof, rises above a fireplace. Just outside, an outdoor kitchen on the large, stone-paved patio provides another place for communal gatherings. "Looking out over the bay, this cove feels like being on the bridge of a ship," says Adair.

A passageway at the front entrance connects the main structure with the more intimate Crow Island shed, named for a nearby island. Warm western cedar planks wrap the walls and ceiling—with the exception of one wall, where silvery eastern cedar shingles cladding the house's exterior extend inside.



1 ENTRANCE
2 KITCHEN/LIVING/DINING
3 BAR AND LOUNGE
4 BEDROOM
5 OFFICE
6 LAUNDRY
7 SCREENED-IN PORCH
8 PATIO

Generous glazing in the main volume (above) and guest shed (right) reveals views of Crow Island and the Bay of Fundy.

The Crow Island shed, with still darker millwork and navy interior walls, contains the master and guest bedrooms, a laundry room, and a bar and lounge. A second patio separates the Crow Island shed from the third volume: the guest cottage. It contains the garage, another spare bedroom, and an office/sewing room on the lower level, while upstairs is "the kids' place, gone wild," says Adair. Individual curtained bunks for the couple's three children each have their own skylight and built-in storage areas. This shed's interiors are all spruce, which is very much a New Brunswick camp tradition, explain the architects. "This volume feels like a playhouse, while the living room is more about entertaining," says Adair.

To Adair and Kopp, this project represented more than meeting a client's needs. "We're interested in reinterpreting the way Atlantic Canada is being shaped and understood in terms of architecture connecting to place," says Adair. ■

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PUBLIC WORK TRANSFORMS A ONCE DESOLATE STRIP OF LAND UNDERNEATH A TORONTO HIGHWAY INTO A NEW URBAN PARK. **BY CATHERINE OSBORNE**

LAST OCTOBER, some 30,000 Toronto residents descended on the Bentway, the city's newest urban park, to experience a nighttime illumination by Dutch designer Daan Roosegaard that rippled like an oceanic current overhead. Titled *Waterlicht*, the LED projection was a poetic way of bringing awareness to rising water levels.

It's hard to imagine *Waterlicht*'s happening at that spot a few years ago. For decades, this mile-long ribbon of unused land—the underbelly of the elevated Gardiner Expressway that aggressively cuts the downtown core from its prized lakeshore—was a virtual dead zone to everyone but the homeless and vandals. The turnaround was sparked by the thinking of urban planner Ken Greenberg of local firm Greenberg Consultants, who envisioned its potential as a kind of shared backyard for the high-rises springing up around it. He brought the idea to philanthropists Judy and Wilmot Matthews, who jump-started the project by donating $19 million. Now a charitable organization, the Bentway receives additional funding from the federal and city governments to help with maintenance and to support a robust all-season program of activities and events.

Designed by local landscape architecture firm Public Work, the 10-acre site links seven neighborhoods, home to approximately 70,000 condo dwellers. Principal Marc Ryan describes it as "the knuckle," where pathways for pedestrians and cyclists connect to a host of formerly disjointed public assets, including the CN Tower and Fort York National Historic Site to the north and Harbourfront and Lake Ontario to the south. "It's very porous," says Ryan. "There's really no front door—you can enter the park from any direction."

Officially opened in January 2018, the park

The new park connects previously disparate neighborhoods with pathways that are made from local recycled materials (top). A small performance terrace with timber bleachers is a venue for outdoor performances (above).

PHOTOGRAPHY: © NIC LEHOUX

Highway bents create a cathedral-like atmosphere. Large stenciled numbers serve as visual cues for wayfinding (right).

is by no means showy. Instead, Public Work implemented minimal interventions, many of which will hardly be noticed—for example, the design team flattened topography and bulldozed landfill into grassy knolls to create areas for seating and picnics. The main feature is a 700-foot-long ice-skating loop, already so popular that, on weekends, skaters shuffle rather than glide around its figure eight form (though no one seems to mind); in the summer, the rink becomes part of the path network. The most recent addition is a small terrace with a half-dozen rows of timber bleachers for audiences to watch outdoor performances or film screenings. More phases, including the construction of a suspended pedestrian bridge, are planned, although they have not yet been fully funded.

In keeping with the understated aesthetic, amenities are either made from salvaged or off-the-shelf materials and are designed to be as durable as possible. Picnic benches, for instance, are mounted on wheels for easy maneuvering, and the walkways are a composite of asphalt, porcelain, and glass bottles reclaimed from a local landfill. During an early morning tour, Ryan pointed out over 1,000 feet of ¾-inch steel cables strung overhead, clamped to the Expressway's towering support columns as theater rigging that can bear up to a ton of weight, for suspending various objects and event props.

By far the Bentway's most striking feature is what was already there: those 55 soaring concrete columns (also known as "bents") that support the highway, which Public Work has left unadorned, adding only giant gold-stenciled numbers to each for wayfinding. With their heights reaching as tall as five stories, the bents are magnificent expressions of an earlier era, and the park a stellar example of urban reinvention. What was once a forgotten strip of land now offers strollers en route to the lake a protective rooftop that buffers sound, rain, sun, and snow. ■

Catherine Osborne is the former editor of Azure *magazine, and an architecture and design writer and editor based in Toronto.*

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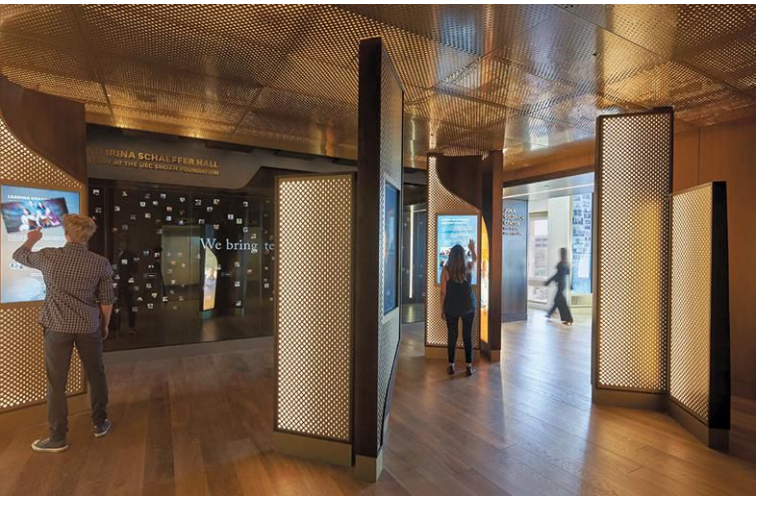
HAGY BELZBERG'S HOME FOR THE USC SHOAH FOUNDATION SUPPORTS PERSONAL, SCHOLARLY, AND PUBLIC REFLECTION. **BY SARAH AMELAR**

TWENTY-FIVE YEARS AGO, when Steven Spielberg finished directing the movie *Schindler's List*, he realized his work was not done. Many Holocaust survivors' stories still needed to be told—to preserve their memories, to bear witness, to learn from the past. He soon established the Shoah Foundation, dedicated to capturing such personal narratives on video. The organization has since archived more than 54,000 recordings in 43 languages and expanded its mission to seek out testimonies from genocides in Rwanda, Cambodia, Guatemala, Armenia, and elsewhere. Educational organizations worldwide subscribe to the archive. But the institute had no publicly accessible headquarters until last November, when Santa Monica, California–based Belzberg Architects (BA) converted the top floor of a University of Southern California (USC) library into the foundation's 10,000-square-foot "mother ship."

Now called the USC Shoah Foundation (USCSF), the institute began, in 1994, in trailers at Universal Studios, joining USC in 2006 and moving to cubicles on campus. Lacking was accommodation for visitors, teamwork, or programs that could include distinguished speakers, outreach to school children, and scholarly research residencies. The staff needed an open, collaborative environment with flexibility, and respite from the emotionally intense work.

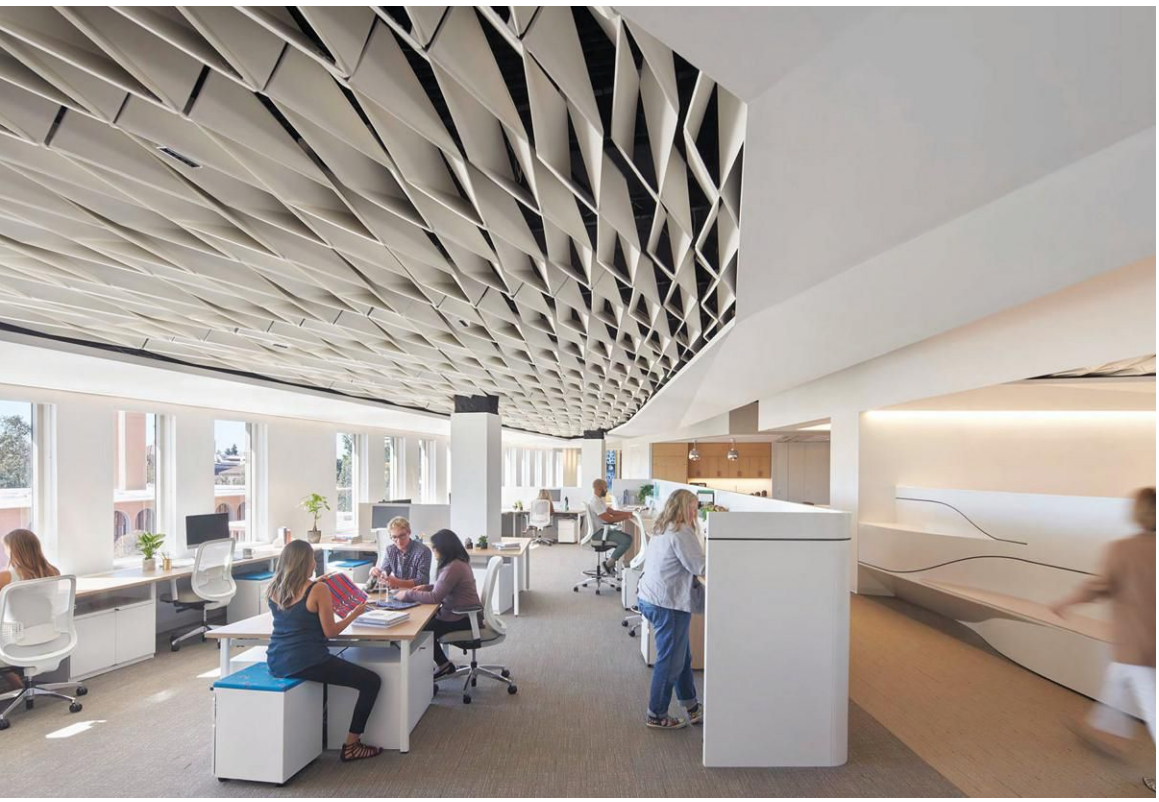
BA principal Hagy Belzberg, knowing his own family's Holocaust history, understood the importance of a safe-feeling, comfortable setting, particularly for survivors who might visit, work here, or come to record testimony. Now the elevator doors open directly into a soothing atmosphere, distinct from the existing library beneath. The lighting is subdued, sobering, filtered overhead through amber metal mesh. A forest of pillars—digital kiosks—invites individuals to explore USCSF's offerings, as live lectures, or other content, animate a large, interactive back wall. While immersive, the space also connects with views outdoors, a conscious measure, across the entire floor, to keep it from ever seeming confining.

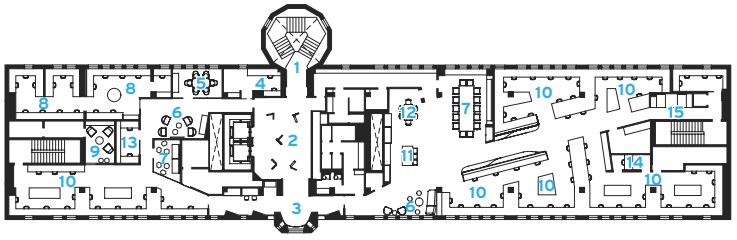
Bordering this entry hall is a daylit zone, with a suspended word-sculpture integrating phrases from one survivor's



PHOTOGRAPHY: © BRUCE DAMONTE

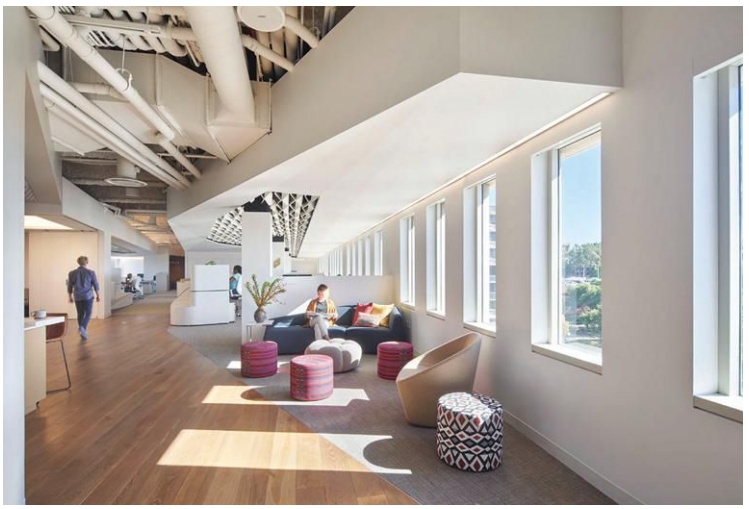
Elevator doors open directly into the entry hall (above), with its subdued lighting, digital kiosks, and interactive back wall. Beside this dimly lit space is a bright daylit one—with a suspended "word sculpture" by artist Nicola Anthony (right)—where visitors can access survivors' stories on video.





FLOOR PLAN

1	STAIR ENTRANCE	6	VISITORS LOUNGE	11	KITCHEN
2	ENTRY HALL	7	MEETING ROOM	12	INSTRUCTION/STUDY
3	DAYLIT PUBLIC ZONE	8	RESEARCH	13	EDITING ROOM
4	RECEPTION	9	INTERVIEW LOUNGE	14	PHONE BOOTH
5	GUEST SUITE	10	WORKSTATIONS	15	THINK TANKS



Textured acoustic material overhead and carpeting underfoot help define work "neighborhoods" (top, left). Daylight and views balance the emotionally challenging work. Warm oak floors, living room furniture, and textiles from countries represented by USCSF (above and top, right) lend the place a homey feel.

testimony. With glass doors leading into other spaces, this area has a welcoming, luminous transparency, but unauthorized visitors can go no farther. "Given the subject matter's sensitivity," says Belzberg, "it needed high security without losing the feeling of openness. It's a subtle balance."

The west wing includes meeting and research areas, plus places the public can experience by invitation or tour. One room offers a survivor-led, virtual-reality walk through a concentration camp while, in a lounge, visitors can converse, via artificial intelligence, with a videoed Holocaust survivor, who appears life-size, onscreen.

The east wing provides staff workstations, with a diagonal layout that maximizes openness and options ranging from group to individual areas, from conventional desks to standing or mobile choices. Work counters along the windows face outdoors, and slide-away glass walls can convert enclosed conference rooms into wide-open "town hall" configurations. The scheme is a collage of "neighborhoods," defined by changes in flooring (from hardwood to carpeting), in texturally rich, acoustic material overhead, and in textiles from countries in USCSF's orbit. Along with the patterned fabrics and oak floors, an open kitchen and furnishings such as sofas and poufs convey an intentionally homey feel.

"It's phenomenal," says USCSF managing director Kim Simon. "This design supports the very difficult work we do, both together and apart. There's peacefulness and serene light; nothing is superfluous—everything's here to meet a need. That has real integrity, and giving voice to people who have suffered has integrity. It's rare to match your physical space with your mission. Yet that has been accomplished here." ■

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Design to the Music of Our Time

Frank Gehry at 90 talks about his early days, what matters now, and the secret to a long life.

BY CATHLEEN MCGUIGAN

WHEN FRANK GEHRY first made a splash decades ago, his work was inspired by the contemporary artists working in Los Angeles, where he lives. That was especially evident in his own house in Santa Monica (1978), a 1920 Dutch Colonial that he famously recreated as an assemblage of humdrum materials like chain link and plywood, juxtaposed in entirely unexpected ways. Later, as his architecture evolved, he began to work in the world of music, designing what is arguably his greatest building—alongside the Guggenheim Bilbao—the Walt Disney Concert Hall (2003) in L.A., as well as the New World Center in Miami Beach (RECORD, May 2011) and the Pierre Boulez Saal in Berlin (RECORD, March 2017), where he planned to celebrate his 90th birthday at the end of last month. He spoke to RECORD's editor in chief, Cathleen McGuigan, about that occasion.

You're marking your birthday with music—that's become a big part of your work and your life.

Well, it's interesting, because I'm not a musician—I can't read music. But over the years, I've gotten involved with the culture of music because I love doing concert halls, and very much enjoy the musical friendships that have come from that. I like spending time with these musicians and hearing their struggles. They're artists!

The birthday concert venue in Berlin, Pierre Boulez Saal

At the start of your career, you were particularly inspired by visual artists.

I still am. I haven't abandoned visual artists at all. It's just that there are these intriguing opportunities with concert halls: they are about creating spaces where the art, the space, and the people all come together, in one place at one time, all within an hour or two. You can see the relationships between the musicians and the people when they're in the hall, when they're experiencing the music, and how the musicians feel when they get positive feelings in the room. It's empowering.

So the Pierre Boulez concert hall in Berlin, the venue for your birthday party, came out of your friendship with the conductor Daniel Barenboim.

Yeah, that was special because of the youth orchestra he put together with [the late scholar] Edward Said, focusing on music as a way of communication between the disparate cultures of Israel, Palestine, Lebanon, Syria, Egypt, and so forth. These young musicians from different backgrounds have the ability to not just play together but to eat together and spend time together.

So how did your birthday concert come about? Did Daniel Barenboim ask you if you wanted any particular pieces to be played?

No, he didn't offer me that. He just called and said, "Frank, your birthday's coming up. We'd love to dedicate this concert to you. Could you come?" I said yes, and that was it.

Longevity seems to be a bonus for very successful architects, like the other Frank, Lloyd Wright. You're 90, you're in great shape, and you haven't even slowed down. What's your secret?

Well, the only secret is, Philip Johnson [who lived till 98] told me to keep working. And one of my best friends, who also lived into his late 90s, forbade me from retiring.

OK, since you're not retiring, let's talk about what you're working on. You're building two condo towers—as high as 91 stories—in Toronto (page 20). And you're designing more concert venues, for the expansion of the Colburn School of Music in L.A., and there's talk of a Gehry concert hall in Wimbledon, outside London. And what about the art center in Arles, in the South of France?

Yes. Arles has involved a special relationship with [Swiss patron] Maja Hoffman. She's a very hands-on

Arts Resource Building, Luma Arles, Parc des Ateliers, France, last November

client, and we had the luxury of being able to try things along the way.

What kinds of things?

Well, I said I would like to paint with light, but here, specifically, I got into the texture of the wall. On the exterior, we made these blocks out of stainless steel and set them slightly off each other. They cast a light, and the facade is like a painting. At one point, you actually get the light that's similar to what Van Gogh got in *Starry Night*. He was painting in the same light.

What do you think are the biggest misconceptions about your work?

When I started using chain link, I was only interested in it because I knew that everybody hated it, and I was trying to get a handle on denialism. We live in a city, and people complain about it. I thought if I could work with it and make it more acceptable, I could overcome that chain link hatred. I was just curious where the line of denialism was.

I was playing with things that were normal to culture, like corrugated metal—things like that were being done in various ways in the community that were not liked. And if you could use them—and certainly Robert Rauschenberg was an inspiration, using things like that, and so were other artists, like Gordon Matta Clark. So it was something to explore. Those works have become high art. Look at Basquiat, who used to hang around our office in Venice before he was well known.

And art continued to inspire your architecture.

Right, the artists were doing it—the architects weren't. The architecture world at that time hit a dead end with Modernism, and then along came Postmodernism. I think that was triggered by Arthur Drexler's Beaux-Arts show at MoMA [in 1975].

That opened it up for everybody. And it was seductive—I loved it. So that's when I thought, well, the buildings of the past are based on Greek temples, which are anthropomorphic. I said, "If you have to go back then, why don't you go back 300 million years, before man could fish?" And then I realized I was looking for ways to express motion. Our time was different than the time of the Beaux-Arts because of planes, trains, cars—things were moving. So I thought that maybe there was something in the expression of forms that were moving. And fish forms are for the most part very architectural. I went off on that for a while. I still make fish lamps.

And you still make buildings that, you could argue, have sort of shiny scales on them.

You could sum up my career as something pretty fishy.

Is there a building type you haven't done yet that you would really like to do?

I like doing social housing. We're trying to do that as part of the L.A. River project we've been working on with a couple of developers. We

also want to design veterans housing. And I've always wanted to do elementary schools, but in all the years I've been practicing, the fees are just terrible. Today, we could do it as philanthropy.

You focused your last studio at Yale on rethinking prisons. You said at the time you learned as much from the studio as anybody.

I think we just tapped the surface of it. We were asked by a group related to the Soros Open Society Foundations. They were interested in recividism and prison culture. We took the studio to tour Scandanavian prisons, to see the other side of that coin—how they treat people in a humanistic environment and the rewards of returning these people back to being human beings again. I don't know if we'll ever accomplish that here, but there is an example we need to follow.

Prison design is a big topic for us to get involved in, but it can't be treated as designing with the current programs as a given. You need to become part of a group that's willing to make changes, to figure out ways to humanize the prison, to engage people through design.

There are architecture firms that are trying to improve what already exists But it's not a real rethink the way the Scandinavians have done (see page 81). This prison question is really important, but, tell us, aside from social ideas, what do you think is the most important issue facing architects today?

I came into architecture thinking it was an art. That's why I tended to get involved in the artist culture—I hung out with artists in those days. I think architecture has been chronically morphed into engineering and social issues and involvement—and that's a good thing. But I think young people coming in want to choose where they want to play, where they're challenged. We're desperate for the art of architecture in our culture. It would be nice if it would be recognized as an aspiration and not diminished by a stupid word like starchitect.

We're desperate for the art of architecture in our culture. It would be nice if that were an aspiration and not diminished by a stupid word like starchitect.

So what advice would you give to a young architect about his or her career?

I think an individual has to be his or her self. Everybody's different. I'm not saying you will be Frank Lloyd Wright or Mies van der Rohe, but at least you will be yourself, and chances are that will be rewarded. It will be exciting, because it will be original thinking. It means it's not necessary to look like someone else or follow a philosophy or discourse, like they do in the university, which gets all tied up in verbal constructs that are not even translatable. My idea is, if you can't talk the talk, at least you can draw.

Thank you, Frank, and happy birthday.

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-Clarice Jones, Project Architect, Catania Engineering Associates

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In 1762, Scottish architect **Robert Adam** renovated Syon House, in west London. Built in the 16th century, the house needed upgrading. Adam's interiors, such as the Long Gallery (left), proved to be influential in promulgating an aesthetic drawing on the architecture and decorative arts of Pompei and Roman antiquity as well as the Gothic and Baroque periods.

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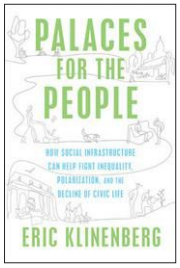
The Power of Public Places

Palaces for the People: How Social Infrastructure Can Help Fight Inequality, Polarization, and the Decline of Civic Life, *by Eric Klinenberg, Crown Books, 288 pages, $28.*

Reviewed by James S. Russell, FAIA



A PAEAN to public architecture and the buildings and places that bring us together, Eric Klinenberg's *Palaces for the People* shows how modest undertakings and subtle, insightful design can strengthen communities. The book makes the connection between the much decried decline of civic life and the spaces that help us support each other—especially in neighborhoods where social connections have been severed by population decline, joblessness, abandonment, and disinvestment.

In *Palaces for the People*, Klinenberg, a sociologist and director of New York University's Institute for Public Knowledge, builds upon his 2002 book, *Heat Wave*. That work reported social isolation and neighborhood breakdown as key reasons so many people died in Chicago during one torrid week in the summer of 1995. He found many fewer deaths in areas with strong communal ties forged by shared gathering places.

Klinenberg calls settings that boost communities and foster mutual-assistance networks "social infrastructure." His new book devotes considerable attention to libraries, which have reinvented themselves with services such as computer training and job-preparedness programs. Public events at libraries bring the isolated into contact with others and bring together diverse communities. Teens with tumultuous home lives find a place of refuge to study and hang out with friends.

Subtleties are important. Klinenberg describes a spot in front of his own children's school that has turned into a natural meeting place for parents. Playgrounds are social condensers, of course, but spaces that invite multiple generations, like community gardens, are better.

The book makes the case that social infrastructure combats crime by providing alternatives to idleness. Klinenberg also argues that it can help alleviate distrust of law enforcement, highlighting Bjarke Ingels Group's design for New York's 40th Precinct. It has a glass-fronted community room to reduce tensions between residents and the police.

Social infrastructure can be destroyed by disasters—or rebuilt by such events, as happened in New Orleans after Hurricane Katrina, when strong bonds established over decades to survive poverty aided community rebuilding and drew a vast diaspora of former residents back to help. Now several cities are fitting out public buildings to survive calamities and serve as emergency shelter and recovery-coordination centers.

Klinenberg was the research director of Rebuild by Design, the Obama Administration design competition initiated following Hurricane Sandy. It generated shoreline-protection and community-enhancing schemes, such as the project by landscape architect SCAPE for New York's Staten Island. It will include beach pavilions for community meetings and education that will engage people in safeguarding their environment.

The book's observations echo those of a research team I led over three years at the New York City Department of Design and Construction. Our work found other building types that could enhance social infrastructure—neighborhood health facilities, for example, or networked police stations, courts, probation offices, and social-services centers. Such coordination can improve outcomes for the incarcerated.

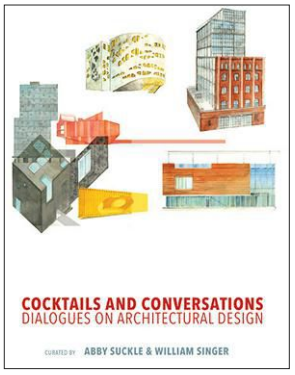
Palaces for the People shows that a little social infrastructure could be really big. ■

James S. Russell, FAIA, a journalist and consultant, served as director, Design Strategic Initiatives at the New York City Department of Design and Construction.

Let's Drink to That

Cocktails and Conversation: Dialogues on Architecture and Design, *by Abby Suckle and William Singer. AIA New York Chapter, 186 pages, $25.*

Reviewed by Wendy Moonan



"ARCHITECTS LIKE to talk about design, and architects like to drink," declares architect William Singer, AIA. His observation is behind the program at the New York AIA focused on these two obsessions—and now there is a book documenting its success. The series "Cocktails and Conversation" began six years ago when Singer and Abby Suckle, FAIA, began to invite architects and landscape architects to share their ideas about design over cocktails at the chapter's Center for Architecture.

On Friday evenings, an architect and a journalist or critic were joined by a mixologist, who created a "signature" drink inspired by the designer's work. Architects included Brad Cloepfil, Jeanne Gang, Charles Renfro, Marion Weiss and Michael Manfredi, Deborah Berke, and Enrique Norten. Among the interlocutors were Michael Kimmelman, Barry Bergdoll, Alastair Gordon, and (full disclosure) RECORD's Cathleen McGuigan and Suzanne Stephens.

The evenings began with the bartender's mixing his custom concoction in front of the audience, and the transcription of each evening's dialogue begins with the drink's ingredients. The "Monty Daisy," for instance, created for architect Belmont (Monty) Freeman, combined Plymouth gin, orgeat syrup, orange curaçao, Aperol, and more. After cocktails were passed to the audience, the conversation commenced.

They covered a wide variety of relevant topics. Freeman, for example, advises high school students interested in the profession "to go to a liberal arts college and study everything except architecture as an undergraduate . . . Your clients will be doctors, lawyers, and financial people, and you need to be able to understand their language."

Some architects talked about the creative spark. Massimiliano Fuksas revealed that folded wrapping paper on a gift he received inspired a roof design. Tom Kundig pointed to the fragility of the landscape. "I always try to convince clients who might think they want something large by saying, 'No, you bought this place because of the landscape; you didn't buy it because of the architecture,' " he said.

Several architects stressed the importance of drawing. Billie Tsien of Tod Williams Billie Tsien Architects said, "I think that drawings are not about beauty; they're about trying to find the answer." Frank Harmon added, "Drawings are a way to see."

The conversations, illustrated with photos, sketches, and lush watercolors by the architect Bishakh Som, make this a lively if informal compendium about many issues architects face in design and practice. The cocktails are missing, but you have the original recipes. ■

Wendy Moonan is author of New York Splendor: The City's Most Memorable Rooms *(Rizzoli).*

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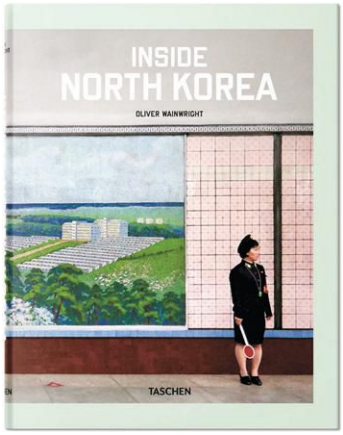
Stranger in a Strange Land

Inside North Korea, *by Oliver Wainwright. Taschen Press, 300 pages, $60.*

Reviewed by Sean Anderson



OUR CAPTIVATION by the Democratic People's Republic of Korea (aka North Korea) may rely in part on our not having seen what it looks like. In 2016, London-based architecture and design critic for the *Guardian* Oliver Wainwright was invited to the capital, Pyongyang, with other journalists and has now produced a volume of his photographs and texts, in English, German, and French, focused mainly on the city. The tantalizing compendium provides a snapshot of a "reclusive country in all its kaleidoscopic color," including lavish interiors he describes as "fascinating stage sets."

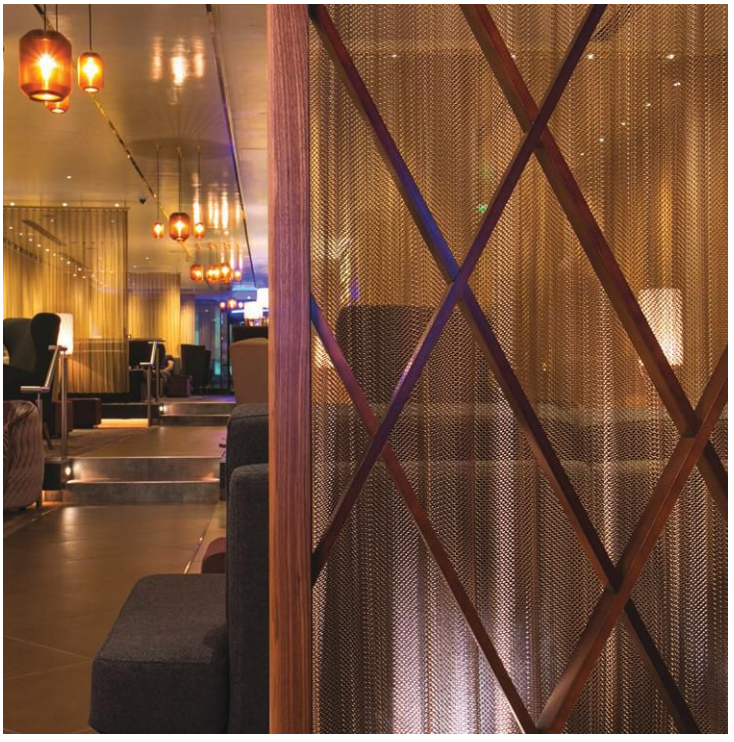
Pyongyang was entirely rebuilt under the leadership of the Eternal President Kim Il Sung following the city's destruction by U.S. bombing during the Korean War. When Pyongyang was replanned, a Moscow-trained architect named Kim Jong Hui left 25 percent of Pyongyang devoted to buildings. The rest emulated aspects of early modern Western urban planning—with gardens, long axes, and expansive squares (along with easy access for the military).

From 1953 to his death in 1994, Kim Il Sung was invested in using architecture as a means of communicating power and to help define a state ideology of self-reliance. Successors to his rule, son Kim Jong Il and grandson Kim Jong Un, have followed suit. Such works as the quietly neoclassical Moranbong Theatre of 1954 or the Kamsusan Assembly Hall of 1977—later converted into a mausoleum for Kim Il Sung—are contrasted with muscular stadia, monumental squares, and bulky housing blocks, supplemented by polychrome interiors of theaters and gleaming hotel lobbies.

Wainwright has organized his exceptional, sometimes haunting photographic documentation of this "socialist fairyland" around six key sections: views of the city as a whole and housing in particular; monuments; museums and arts facilities; sports and education buildings; leisure and hospitality structures; and the stations of the Pyongyang Metro. While the journalist was not granted access to most areas outside Pyongyang, he includes a few visual surprises, such as the curvaceous Changgwang Hotel and Recreation Complex (1980) along the Pothong River.

Yet we cannot escape the overt political nature of North Korea's built environment. In addition to the glimmers of hyperbolic color found amid Pyongyang's bold public buildings, the images in this handsome volume reveal a city and country in which architecture signals its own kind of ceaseless expression of power. ■

Sean Anderson is associate curator of architecture in the Department of Architecture and Design at the Museum of Modern Art in New York.



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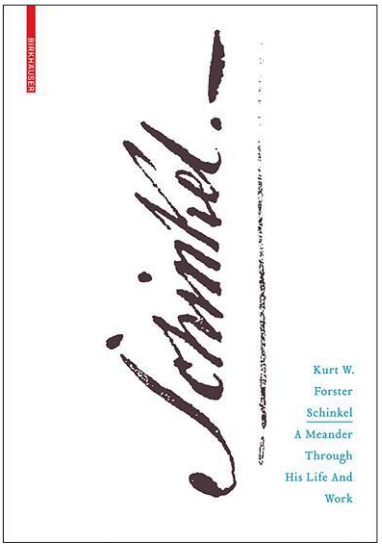
Inside a Painterly Architect's Mind

Schinkel: A Meander Through His Life and Work, *by Kurt W. Forster. Birkhauser, 415 pages, $59.95.*

Reviewed by Anthony Vidler

KURT FORSTER'S book on the influential German architect Friedrich Schinkel breaks decisively from the traditional formats of either a chronological biography or a systematic analysis of an architect's work as it develops from "early" to "late" periods. In assessing Schinkel's legacy, Forster cuts through the art-historical categorizations such as "neoclassicism" or "classical-romanticism" by which Schinkel is usually identified (e.g., his Altes Museum in Berlin, 1830, or his Court Gardener's House of 1833 at Sanssouci in Potsdam.)



Instead, Forster looks for generative principles underlying the great architect's creative output, framing the book as a series of punctuated moments in Schinkel's life. Each one is treated as some kind of archeological dig and subsequent reconstruction, and each linked to the next in a kind of montage.

This, however, is no Proustian exercise of imagining the architect's memory or a soliloquy on the springs of creativity (although we encounter both along the way). These juxtapositions remind us of the literary fragments assembled by Walter Benjamin in his unfinished *Arcades Project* of 1927 through 1940 or, more recently, W.G Sebald's in *Austerlitz*, where a narrator's long walks and encounters with an art historian are much like Forster's own "meander" with Schinkel.

Forster's ability to seemingly channel the thoughts of the architect impels us to feel that we are deeply immersed in Schinkel's mental processes. And Forster evokes the social and intellectual circles in which the architect and artist moved, and the recollections of friends—sculptors, painters, and archeologists—who knew him well. As an artist, Schinkel, as early as 1808, executed *The Panorama of Palermo*, 15 by 135 feet, in Berlin, and at the end of his life, had plans to create a panorama that showed a history of architecture. It didn't happen, as we learn from Forster's interrogation of Schinkel's life, where he details the illness that led to its end, at 60.

The book is an entirely distinctive genre within the world of architectural monographs; Forster's investigation alights with wit on topics appealing to his subject's imagination, and he finds meaning in the slightest signal. An example: Schinkel as a builder was naturally interested in stones (along with such materials as cast iron). Like his contemporary Johann Wolfgang von Goethe, his curiosity led to an interest in the new and emerging science of geology and, like Ruskin later, directed him to a study of the forms of mountains and, recursively, to the forms of stone buildings and their monumental history.

We might link the cubic form of Schinkel's historic Neue Wache in Berlin (1818), supported at the rear with pylons, and at its front with a developed Doric portico, and set in a gridded miniature forest, to the first primitive altar stone, called out by Hegel as the essential "symbolic" form of architecture. Similarly, we can, with Forster, trace the history of antiquity literally collaged in fragments onto the walls of the garden court of his Schloss Glienecke (1829) in Potsdam, which grew into a museum of sorts with the expanding collection of Prince Karl of Prussia.

This reading of history into and through the walls is performed again in Schinkel's brilliant yet understated restoration of a country house, "Schlösschen," in Tegel, for historian Wilhelm von Humboldt, in 1826. Here the original four defensive turrets at the corners were inscribed with bas reliefs from the Temple of the Winds in Athens (100–50 B.C.E) and the entryway staged as a "restoration" of an antique atrium.

With its color illustrations laid out, framed, and cropped as so many mnemonic guides to an architect long thought to be dry and academic, perhaps the greatest gift of this book is the excitement it conveys about Schinkel and his work. ■

Anthony Vidler is an architectural historian, theorist and critic, and an educator. He is the author of The Scenes of the Street and Other Essays.

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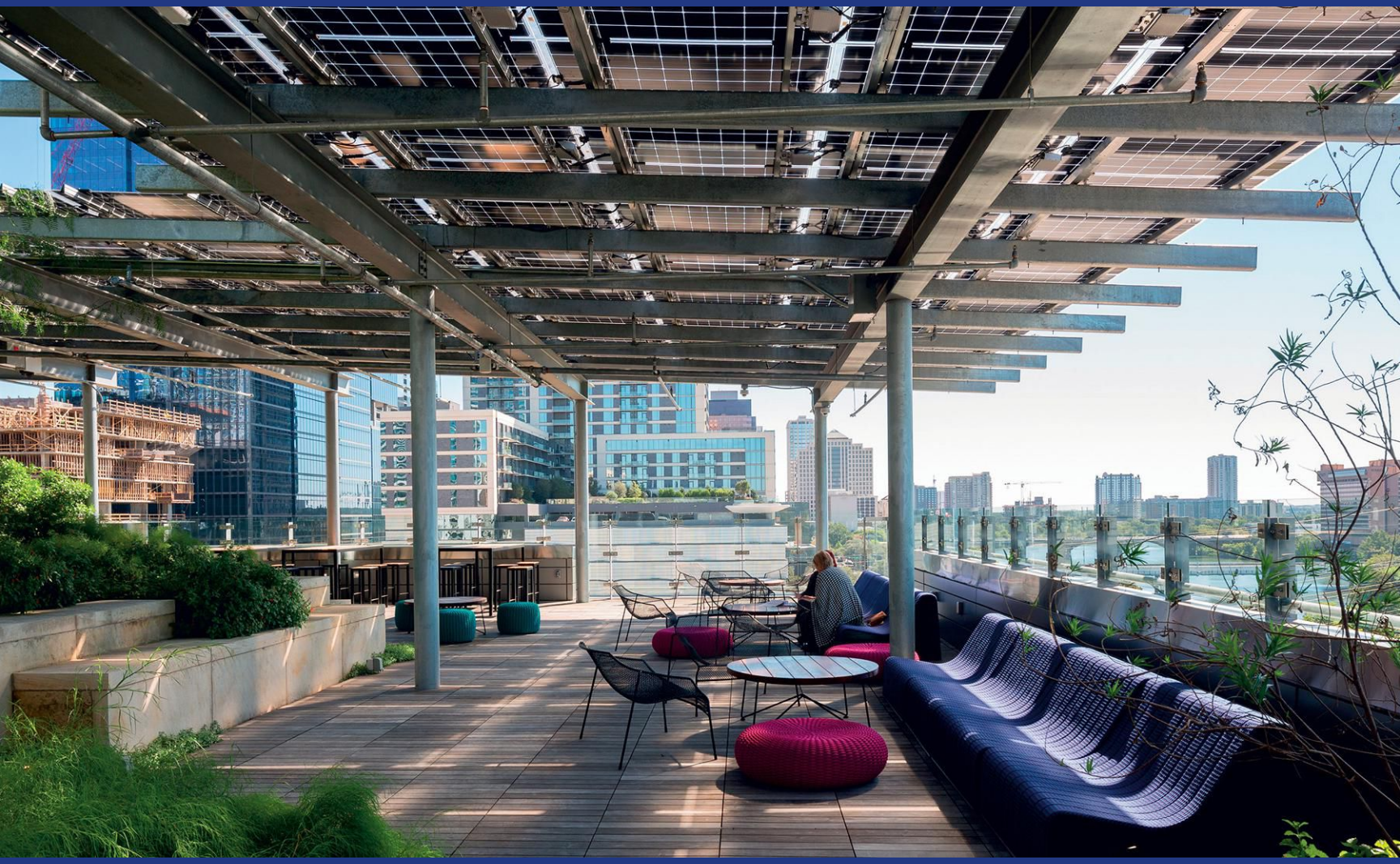

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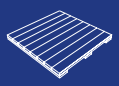

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Building Blocks

Two American architecture firms employ top-notch design standards, along with local talent and materials, to create beautiful new schools—one in Senegal, the other in Rwanda—that elevate the quality of life and learning in their rural African communities.

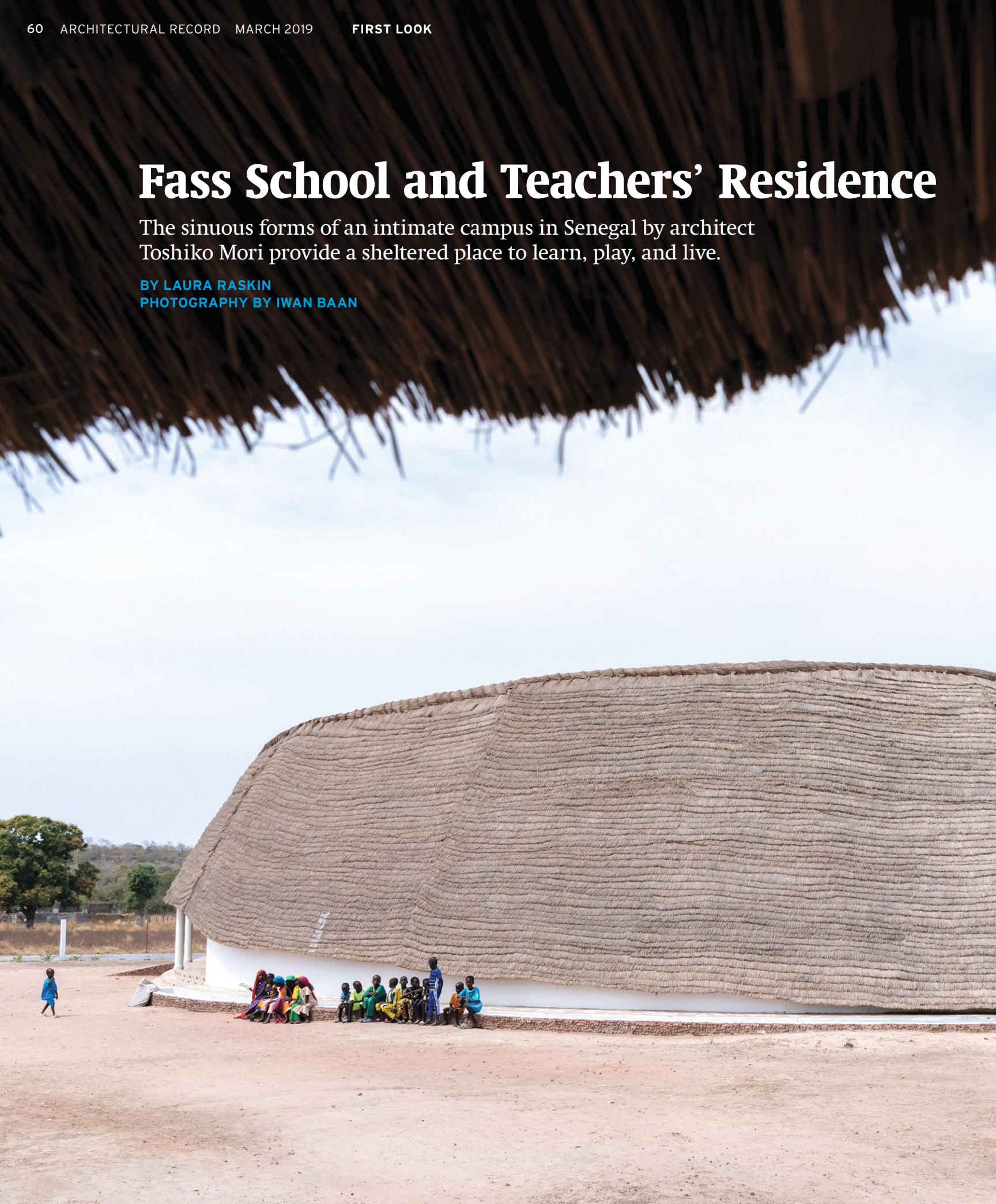
PHOTOGRAPHY: © IWAN BAAN

FASS SCHOOL AND TEACHERS' RESIDENCE BY TOSKIKO MORI ARCHITECT

Fass School and Teachers' Residence

The sinuous forms of an intimate campus in Senegal by architect Toshiko Mori provide a sheltered place to learn, play, and live.

BY LAURA RASKIN
PHOTOGRAPHY BY IWAN BAAN



ON FEBRUARY 2, a new elementary school designed by New York–based Toshiko Mori officially opened in the remote west Senegalese village of Fass—the first in a region, consisting of 110 villages, to teach children how to read and write in their native language, Pulaar, as well as French.

The landmark school represents seven years of negotiations with local Muslim leaders and Nicholas Fox Weber, the executive director of the Josef and Anni Albers Foundation and founder and president of Le Korsa, a nonprofit dedicated to creating medical centers and schools in Senegal. The sensitive discussions resulted in an agreement that the Fass School would teach boys and girls literacy, practical skills like sewing and carpentry, physical education, and history, while continuing traditional Quranic instruction.

"One of the things that's made Toshiko so great for this project is that she sees architecture as a big vision—its impact on humanity—not just building buildings," says Fox Weber. The Fass School can serve up to 300 students from ages 5 through 10.

Mori designed an oval building with an inner courtyard for the school, borrowing its shape from an ancient compound in the region, and used the local workers with traditional skills and materials to build it (a necessity since it is located seven hours from Dakar, across the Gambia River). Small steel members and bamboo support mud-brick walls, painted white to deflect the sun's heat. The structure has a bamboo and grass-thatched roof, the outer ring draping the exterior walls, the inner dipping to leave the courtyard open but partly shaded, with the two joining in a ridge above the enclosed areas. Mori inserted six interior walls within the "donut" to create three classrooms and three indoor-outdoor spaces.

The roof shape is a parametric inversion of the traditional pitched one. It helps divert rainwater from flash floods into a

Architect Toshiko Mori borrowed the Fass School's oval shape (left) from an ancient compound in the region. A bamboo and thatched-grass roof dips down over the school structure to provide shade and funnel rainwater (above).

channel that encircles the building and empties belowground toward an existing aquifer. A similar, smaller structure on the site provides housing for two teachers.

The materials and forms are ones that Mori explored in her award-winning Thread project (RECORD, June 2015), also funded by the Josef and Anni Albers Foundation and Le Korsa, and located about an hour's drive from Fass in Sinthian. The artists' residency and cultural center complements existing medical clinics, a kindergarten, and a farming school on the site. Its name was inspired by Anni Albers's work as a textile designer and weaver.

The Fass School design, essentially a one-room schoolhouse, was also inspired by the Alberses, says Mori, because Josef had previously taught in one himself. Mori imagines the school as a place for members of many local tribes to come together, like a family. The structure creates a comfortable place to learn and take shelter, in an area where temperatures soar. Air circulates quickly and easily around the interior. "We wanted to de-institutionalize school and not make it imposing, scary, or foreign," says Mori. Quranic studies typically take place in concrete-block buildings with corrugated metal roofs; when it's hot, the buildings are stifling, and when it rains, the sound drowns out instruction, says Mori.

How does Fox Weber think he was able to ultimately come to an agreement with the community's leaders to teach literacy in a new school? "They felt my respect," he says, "and that I was not coming in to tell them I knew better or that I wanted to convert people to another religion. And I think they came to see my motive: quite simply, in the world today, there's no reason for people not to be able to read or write." ■

credits

ARCHITECT: Toshiko Mori Architect – Toshiko Mori, principal; Jordan MacTavish, architect

ENGINEER: Schlaich Bergermann and Partners (structural)

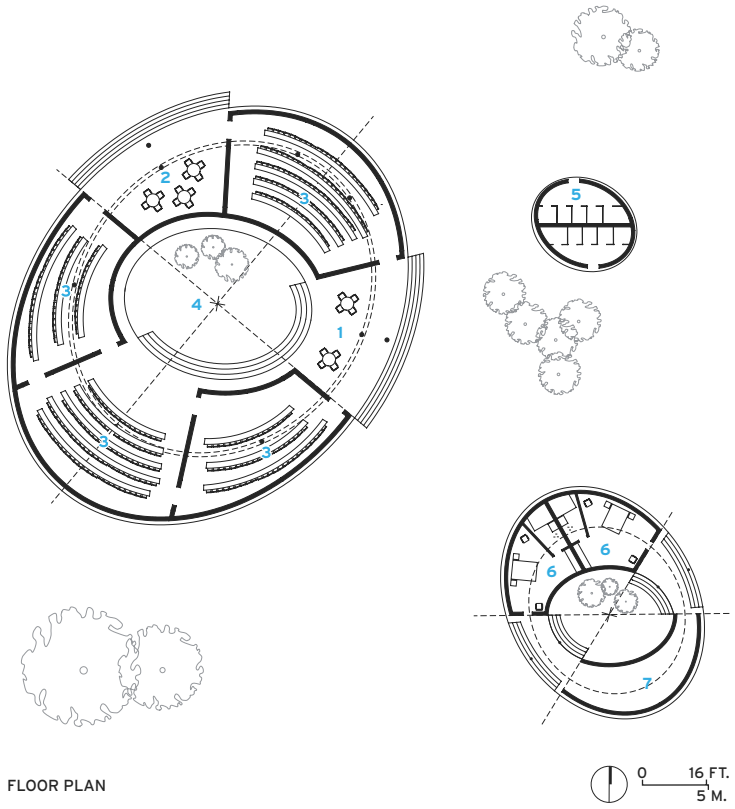
GENERAL CONTRACTOR: Dr. Magueye Ba

CLIENT: Le Korsa

SIZE: 7,635 square feet

COST: withheld

COMPLETION DATE: 2018



FLOOR PLAN

1 ENTRANCE
2 FLEX SPACE/CLASSROOM
3 CLASSROOM
4 AMPHITHEATER/PLAYGROUND
5 RESTROOM
6 TEACHER RESIDENCE
7 STUDY/COMMON AREA

An aerial campus view (opposite, top) reveals the school building in the foreground, a small residence for two teachers, and an even smaller bathroom that continues the striking series of round forms. Mud brick walls are painted white and sealed to deflect sunlight and heat (opposite, bottom). Open-air multipurpose spaces between classrooms spill out into the courtyard (above). The peaked, parabolic bamboo roof can be seen in this classroom (left), as well as the building's randomly tiled floor and pixelated-wall openings for airflow.

Ruhehe Primary School

The transformation of a Rwandan facility by MASS Design Group's African Design Centre is a model for local education.

BY LAURA RASKIN
PHOTOGRAPHY BY IWAN BAAN

"THERE IS NO system in place to subsidize architectural projects with impact in rural economies," says Michael Murphy, a cofounder and principal of the nonprofit MASS Design Group.

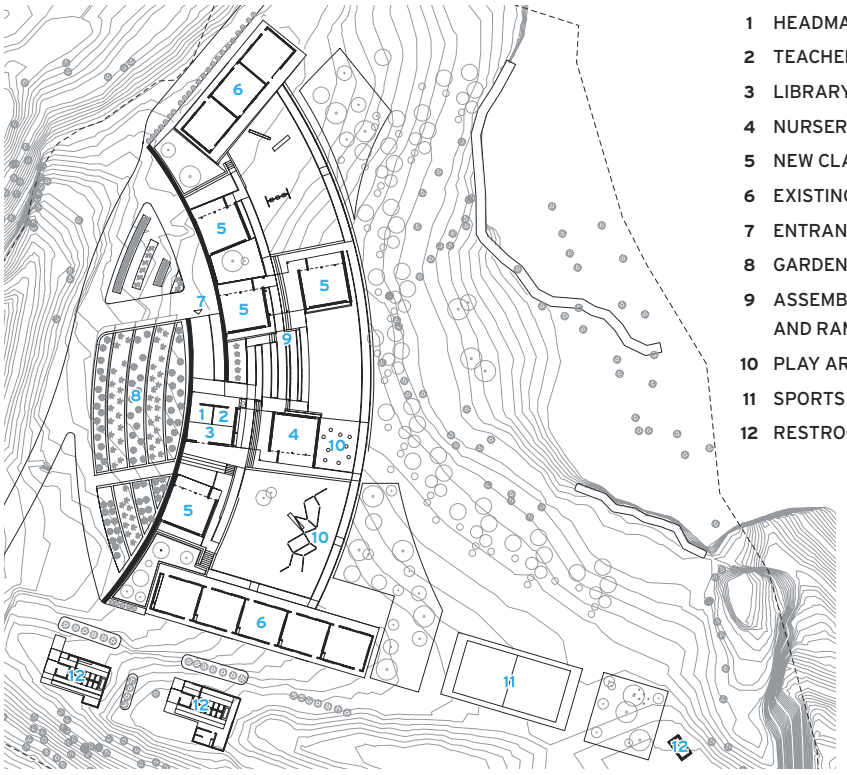
The idea that thoughtful, integrated architecture is too laborious and expensive to provide to other small nonprofits motivated the Boston-based MASS to prove otherwise; it started a kind of educational and apprenticeship arm in Africa, where much of the firm's work is located. The African Design Centre (ADC) opened in September 2016. Headquartered in Kigali, Rwanda, and run by MASS principal Christian Benimana, the center selects fellows and treats architectural projects as curriculum. The fellows approach projects as theses, researching systemic social, economic, and environmental challenges before they design and build.

Now the ADC has completed its inaugural project, the Ruhehe Primary School, in Rwanda, a much-needed renovation and addition to a group of existing classrooms and administration buildings. The school lacked the appropriate infrastructure to support the demands of a growing institution, which serves 1,120 students through grade six, with 20 teachers and support staff. Backed by an education-focused charitable foundation, M², the ADC worked with the local District of Musanze to choose a school that was the most likely to benefit from investment. "If we can start from an existing school and demonstrate how to improve it and incentivize performance, that situation is more applicable to the local conditions," says Benimana.

Two curving perimeter walls mark the entrance to the Ruhehe Primary School campus (right). An aerial view (above) reveals the plan: four new buildings branch out from the walls to the west and contain classrooms, as well as a library, nursery, headmaster's office, and teachers' room. Two existing classrooms flank the northern and southern borders of the campus.


PrimarySchool

New structures have volcanic-rock-clad end walls and clay-tile roofs (opposite, top). Breezeways allow students and staff to pass through as they navigate the sloped campus (opposite, bottom left). Vividly painted light shelves in classrooms deflect direct sunlight from polycarbonate skylights (opposite, bottom right). Woven bamboo-and-bark doors animate classroom buildings and assist natural ventilation (above).



SITE PLAN

The ADC's and MASS's elegant solution for Ruhehe was to create two gently curving 16-foot-high parallel boundary walls from which four new one-story classroom and administration buildings branch toward the west. This plan separates the classrooms from a busy walking path that runs between a health center and a local government office on the north and south sides of the school, protecting students from distractions and creating a sense of an enclosed campus while preserving the school's connection to the community. The walls dip and peak like a child's drawing of waves—the peaks line up with the slope of the classroom roofs, and the walls, in turn, become the eastern elevations of the classrooms. A campus path cuts through breezeways in longer classroom buildings.

Consulting with experts from Nous Engineering, MASS decided to use concrete and steel for the boundary walls, cladding them with local volcanic rock. "These kinds of walls exist in the region, but not at this height, because they are typically constrained by dry-stack construction," says Murphy. Ruhehe is in a seismic zone, so the concrete and steel were necessary, but expensive and not easily attainable; the architects tried to limit their use. Volcanic rock is a common building material in the area, and MASS and local builders are familiar with it; MASS had previously used it in their Butaro District Hospital (2011), and in their subsequent doctors' housing in the Burera District of Rwanda's Northern Province (RECORD, March 2013).

The team used this rock for the end facades of the classroom buildings but employed fired-clay bricks for roofs and other walls. Steel trusses support the classroom roofs. Inside, vibrantly decorated light shelves below the ceilings diffuse daylight that penetrates polycarbonate skylights.

Ruhehe is the third primary school that MASS has completed in Rwanda since the country expanded access to education, having eliminated school fees in 2006. The architects think they now have a model for school infrastructure that supports the district's goals, increasing student retention and improving learning outcomes. "This entire process is replicable," says Benimana. "The way we build allows for a phased approach and a projection for how any school can renovate." ■

credits

ARCHITECT: MASS Design Group – Sierra Bainbridge, Christian Benimana, Sarah Mohland, Michael Murphy, Alberto Cumerlato, Rosie Goldrick, Harriet Kirk, Obed Sekamana, Theophile Uwayezu, design team; Jeremiah Oonyu, Lydia Kanakulya, Maame Prepeh, Mtamu Kilio, Yemi Kacoutie, Victor Iyakaremye, Tshepo Moholo, Thandizo Kachiza, Mawa Moses, Zani Gichuki, ADC fellows

CONSULTANTS: Nous Engineering; Ubatsi (structural); Oak Consulting Group (civil); Transsolar (environmental)

CLIENT: M^2 Foundation

OWNER: Musanze District, Northern Provence, Rwanda

SIZE: 6,000 square feet

COST: $350,000

COMPLETION DATE: October 2018

Under the Banyan Tree

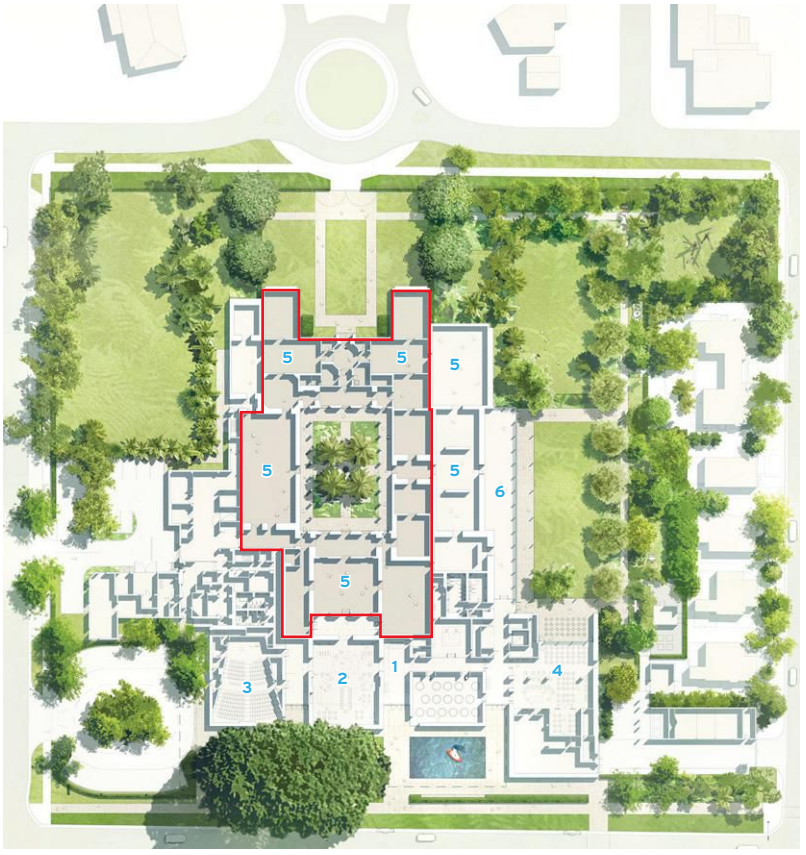
Foster + Partners brings clarity and crispness to the expansion of a Florida museum.

BY WENDY MOONAN
PHOTOGRAPHY BY NIGEL YOUNG

WHEN FLORIDIANS first heard that Norman Foster had agreed to take on the expansion of the Norton Museum of Art in West Palm Beach, they were impressed. It seemed surprising that the Pritzker Prize–winning architect, renowned for the Apple headquarters in California, the Gherkin in London, and the airport in Beijing, would accept a commission from a small museum specializing in American and European painting and Chinese works of art.

But the pairing was kismet. In 2010, Norton director Hope Alswang was in New York discussing a possible addition with museum trustee Gil Mauer, COO of the Hearst Corporation. Mauer asked which architect would top her wish list. Feeling cocky, she answered: "Norman Foster." To which he replied, to her utter surprise, "I'll call him right now." Alswang didn't realize that Mauer was the executive instrumental in bringing in Foster to design the new Hearst headquarters (2006) in which they were sitting.

Now, more than eight years later—"warp



THE NEW EXPANSION IS OUTSIDE THE RED LINE.

1 MAIN ENTRANCE
2 GREAT HALL
3 AUDITORIUM
4 RESTAURANT
5 GALLERIES
6 NEW SCULPTURE GALLERY

speed in museum time," says Alswang—the Norton has been transformed. Not only does the museum have 35 percent more gallery space, but it has a new address, fronting South Dixie Highway. Foster explained why he made the change at a preview before the reopening last month.

While visiting the old museum in 2013, he approached what should have been the front door, facing the main road, and saw a sign that read, "Oops! This is not an entrance. Please follow the sidewalk to the south-facing entrance." This made no sense to him, as the plan of the original Marion Sims Wyeth Art Deco building, completed in 1941, was organized on an east–west axis.

So Foster reestablished the original axis by building a wing along the west, with the new entrance on the highway (though in fact the

OOPS! The museum's entrance canopy is carved out to accommodate a banyan tree (opposite, top), and it shelters the *Typewriter Eraser* sculpture (opposite, bottom). Foster + Partners designed a new garden (right).

LONG SECTION

1 MAIN ENTRANCE
2 GREAT HALL
3 GALLERIES
4 COURTYARD GARDEN
5 ORIGINAL GALLERIES (1941)
6 ORIGINAL ENTRANCE (1941)

INSIDE LOOK
The Great Hall features *Eikón*, a tapestry by Los Angeles–based artist Pae White (above). One current exhibition is *Going Public: Florida Collectors Celebrate the Norton*, which consists of nearly 50 works from private South Florida collections (right).

museum's first entrance had been on the east facade, facing a garden and the Intracoastal Waterway). The West Wing is topped by huge metal letters on the roof that announce the museum's name to anyone driving down South Dixie. "It redefines the museum's relationship with the city," Foster said. But the defining feature of the new street frontage is a 43-foot-high cantilevered canopy of polished aluminum, cut in a razor-sharp curve to accommodate an 80-year-old banyan tree that Foster described as "the protagonist" of the project.

To reach the new entrance under the canopy, you cross a generous paved courtyard with a signature sculpture set in a shallow reflecting pool: the 19-foot-tall *Typewriter Eraser, Scale X* (1999), by Claes Oldenburg and Coosje Van Bruggen—an artwork the computer generation may well find puzzling.

The 42,000 square feet of the white stucco West Wing is comprised of four double-height volumes. A soaring lobby leads to the new spaces, including a dramatic 3,600-square-foot "Great Hall." This public area, accessible without buying an entry ticket, is furnished with Eames/Saarinen lounge chairs, a coffee bar, book carts, and a grand piano. It features a spectacular oculus tucked into its 43-foot-high coved ceiling. In addition, Foster + Partners added an indoor/outdoor restaurant, a room for special events, a 210-seat state-of-the-art auditorium, and two classrooms. In collaboration with CBT Architects, Foster's team also completely renovated the old galleries beyond the lobby and clarified the circulation throughout.

A separate new extension wraps around the south side of the 1941 building, with glass walls and a covered walkway, geared to protect art in the sunny climate. That leg of the addition looks out onto a 37,200-square-foot sculpture garden, the first landscape Foster + Partners has designed for an institution.

The Norton expansion is just the first phase of a Foster + Partners master plan that will ultimately transform the museum's entire 6.3-acre campus. "As an architect, it's fantastic when you get a green site," said Foster, who was deeply involved in this project, "but it's equally interesting and perhaps more challenging to take old buildings and bring a sense of cohesion, order, and clarity to them." ■

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By Kelly Beamon

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By Kelly Beamon

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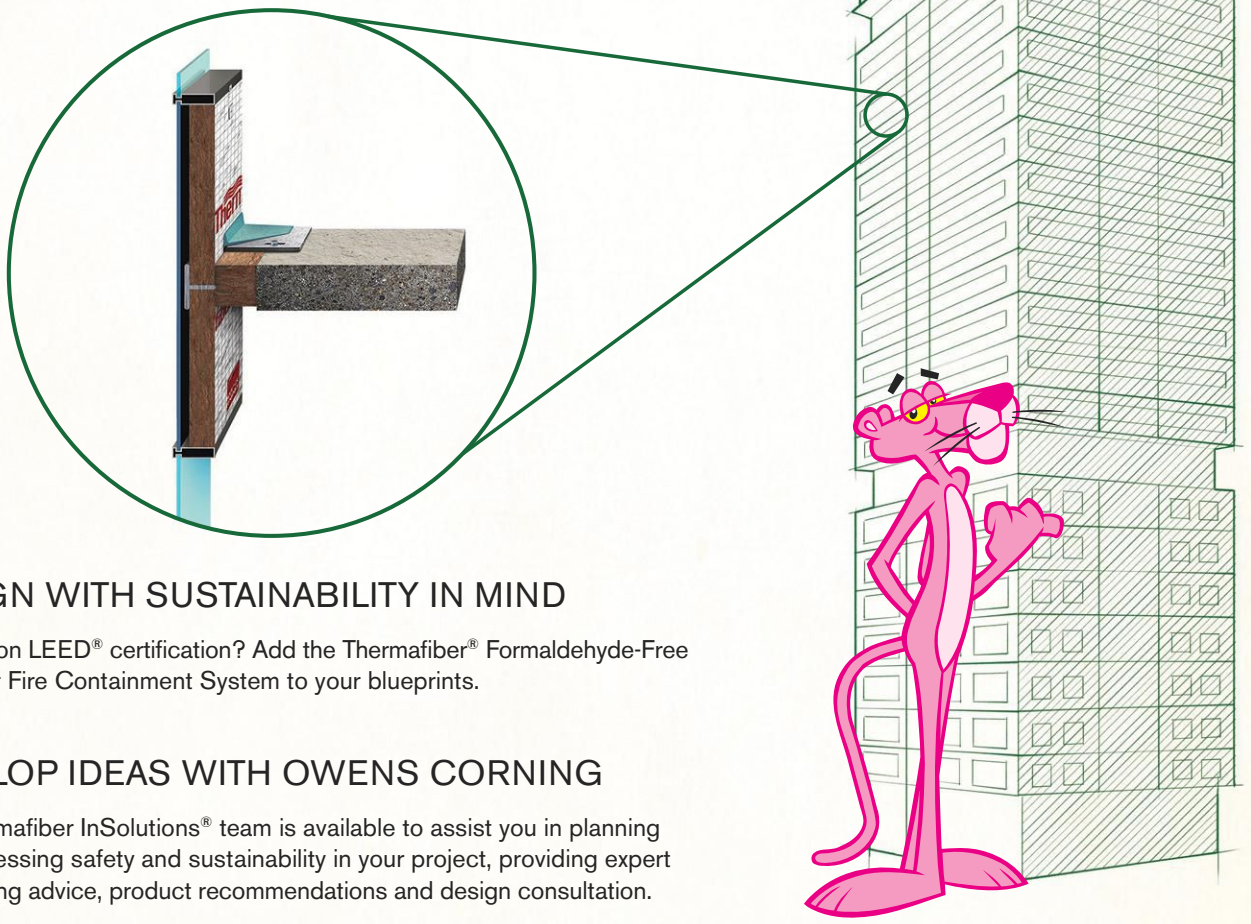

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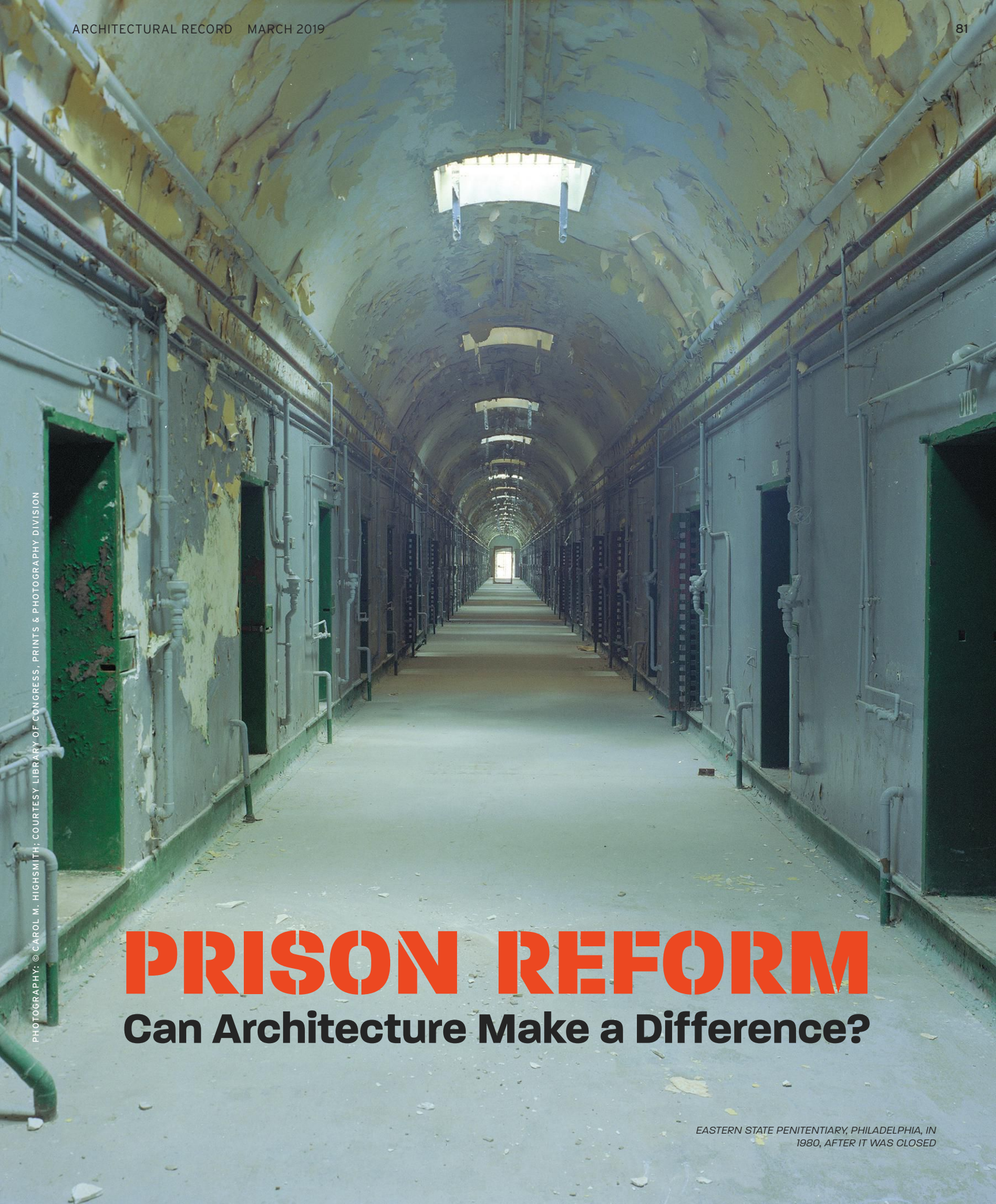

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PRISON REFORM

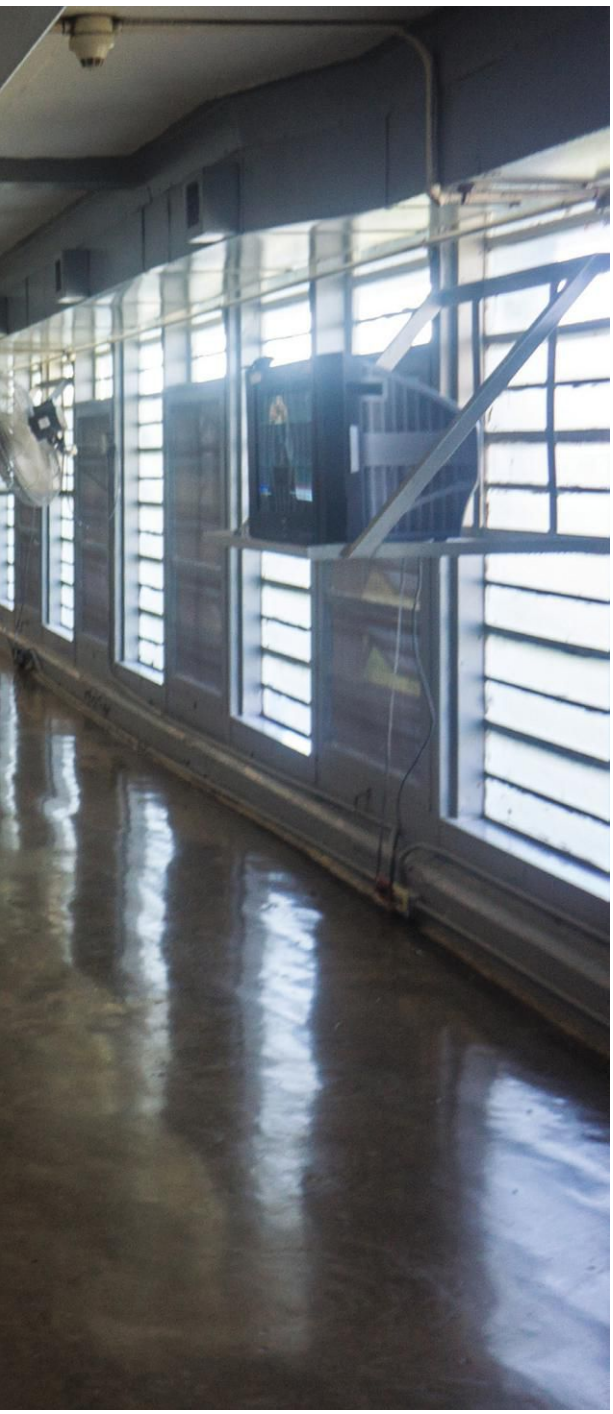
Can Architecture Make a Difference?

EASTERN STATE PENITENTIARY, PHILADELPHIA, IN 1980, AFTER IT WAS CLOSED

BY JERRY ADLER

"No one truly knows a nation until one has been inside its jails," Nelson Mandela once said—and who should know better?—except perhaps Dostoevsky, who said the same thing a century earlier. By that standard, the justice system of the United States, with more people behind bars than any other country in the world, doesn't even measure up to the society under which Mandela lived, which in 1993 locked up its citizens at a rate of 368 per 100,000, compared to 655 in the U.S. as of 2016. The U.S. even imprisons black men at a higher rate than South Africa did under apartheid.

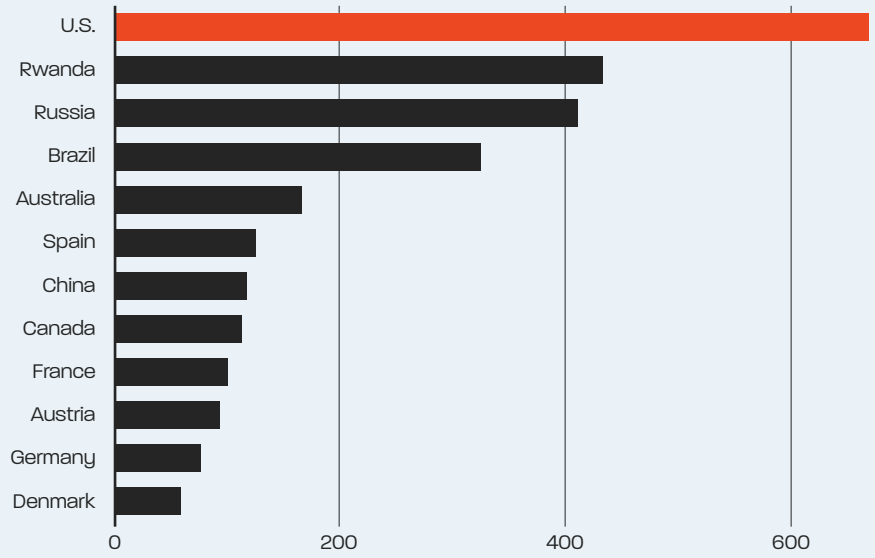
But the number of Americans in jails and prisons—around 2.2 million—is now at a 20-year low and still falling, as crime declines and the FIRST STEP Act, signed by President Trump in December, has cracked open the door to parole for victims of the mandatory-minimum sentencing laws passed in the 1990s. But the law only benefits people convicted of federal crimes; 90 percent of American prisoners are held in state prisons and local jails. Parallel efforts are under way in many states, including New York, where a



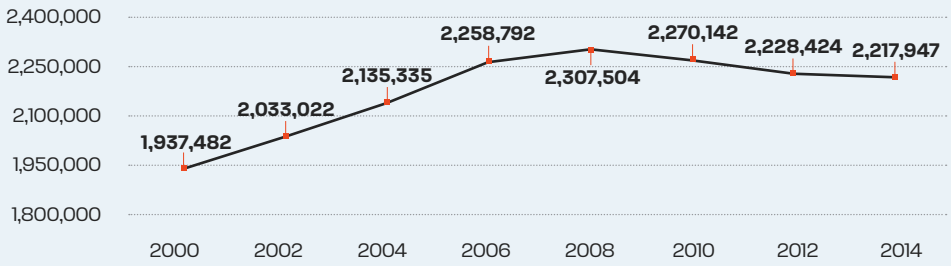
PHOTOGRAPHY: © GILES CLARKE/ GETTY IMAGES

Angola (above) in Louisiana is the largest maximum-security prison in the United States, with over 5,000 inmates. State officials are exploring a more humane redesign of the facility.

International Rates of Incarceration per 100,000



U.S. Prison Population Total



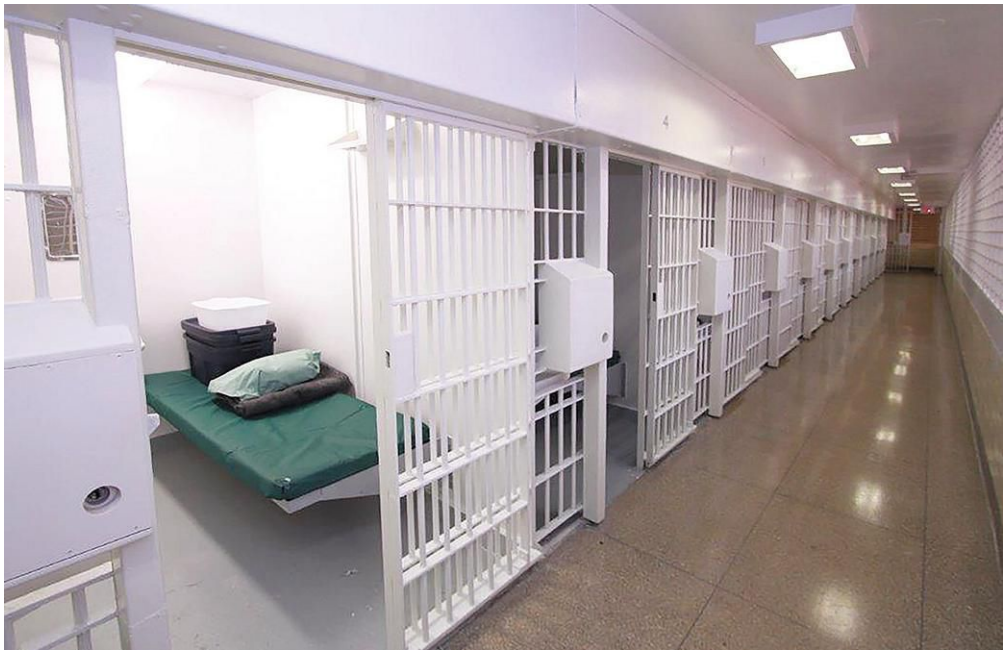
DATA SOURCE: INTERNATIONAL CENTRE FOR PRISON STUDIES

report by a commission headed by former chief judge Jonathan Lippman has recommended reforms, including as a "top priority" ending cash bail. "Almost a third of the people admitted to jail are released within four days, suggesting that many should not have been jailed at all," Lippman wrote.

The moment, says Stanley Richards, a former inmate of New York City's notorious Rikers Island and now executive vice president of the prisoner-advocacy group Fortune Society, presents "a historic opportunity" to rethink America's prison system, comprising more than 1,800 federal and state prisons, 3,163 jails (housing short-stay inmates and those awaiting trial or sentencing), and 1,852 juvenile facilities—in some cases from the ground up.

Architects are responding to this challenge in a variety of ways. At one end of the spectrum is Raphael Sperry, the president of the San Francisco–based Architects/Designers/Planners for Social Responsibility, who has long advocated that architects should boycott prison design altogether. "The problem of mass incarceration is a policy problem—it's not at its root a design problem," Sperry insists. His idea that the resources devoted to imprisonment should go instead to "justice reinvestment"—medical and social services, housing, and education—may seem utopian, but the belief is widespread among reformers that the prisoner population expands to fill the cells available.

Privately owned prisons, which, as of 2016, housed 128,000 state and federal inmates, around 8.5 percent of the total, obviously require prisoners to stay profitable, an incentive that gets translated into policy, sometimes corruptly—in the infamous case of two Pennsylvania judges who took bribes to hand out long sentences to juvenile offenders—but typically through legal campaign contributions. Private prison PACs donated hundreds of thousands of dollars to Congressional candidates last year, according to a report by the nonprofit *Prison Legal News*. And state prisons are an important source of jobs in many rural counties, so legislators have an interest in keeping them open—even if, as in New York State, it means inmates' families may have to travel many hours by bus to reach them for a visit.



A cell at Rikers Island (left), to be closed eventually in favor of smaller, commuity-based jails. The once-crowded conditions at California State Prison-Lancaster in 2011 (below).

For architects who do design such facilities, there is a real opportunity to make contemporary prisons more humane and responsive to a goal of rehabilitation. The longtime dream of reformers to close Rikers Island, New York City's main jail complex, is finally on the horizon, part of a 10-year plan that envisions reducing the total number of jail beds in the city to around 5,500, about 3,000 below the current census—which includes jails on Rikers and in the boroughs. That 5,500 figure itself is way down from a peak of 21,674 in 1991. "It's called building our way to a smaller system," says Richards, a way to ensure that a future mayor won't be able to reinstate the zero-tolerance policies that filled cells with turnstile jumpers, pot smokers, and other petty offenders in the 1990s.

Closing Rikers is just one step in a long process of reform, according to Elizabeth Glazer, director of the Mayor's Office of Criminal Justice. The first step is to reduce the number of inmates. "The second," she tells ARCHITECTURAL RECORD, "is to change the culture inside: how people treat one another: whether we prepare them for leaving jail, whether we connect them to support services in the neighborhoods they're returning to." Finally, the city will reconnect inmates to their communities by putting them in jails in their boroughs. The architecture firm Perkins Eastman was awarded $7.6 million in 2018 to undertake a study of how the city can expand and update existing borough-based jails, or even replace them entirely. "We think it promotes the goals of a fairer and safer system to have our jails closer to where families live and where their lawyers and the courts are," says Glazer. "It's an old model to build prisons on islands like Rikers, on the edge of town, out of sight and out of mind."

The city's plan will spell the end of such borough jails as the one in Manhattan still called the Tombs, although the original 1838 building whose Egyptian Revival facade inspired the nickname is long gone. Another that won't be missed is the Brooklyn House of Detention, built in 1957 on the edge of downtown Brooklyn, a hulking white monolith that presents a grim, barred visage to the street. The challenge for architects will be to design secure, safe facilities that fit into neighborhoods. Perkins Eastman hasn't released its report, so the city has yet to issue an RFP for the new facilities. The Brooklyn, Queens, and Manhattan jails will occupy the existing locations, close to the county courthouses, and the one in the Bronx will be built on a brownfield site about two miles away. "Our principle is that the jail building should be community-facing, a civic and community asset," says Richards, enunciating a simple but startlingly novel idea: the jail as community facility, integrated with the surrounding neighborhood. "We should communicate to people who have not been convicted: You are still a member of our community and still a human being. And to the officers, medical staff, civilian employees: You're not a tool." Is there a reason why some inmates, properly vetted and supervised, can't play basketball with a local school team? Teach chess to eighth graders? Be tutored by retired teachers? "Think about the visiting experience," Richards urges. "If you go to Brooklyn on a visit day, you see a line of

Many countries in Europe regard imprisonment itself—the loss of liberty and separation from society—punishment enough for most crimes.

At the Bastøy Island prison in Norway, inmates live in wood cottages (above) and in dwellings with cozy common rooms (below). Bastøy claims a recidivism rate of just 16 percent and is a model for many reformers in the U.S.

people around the block, because there's no place inside for them. They should have lockers, a comfortable place to wait inside, vending machines. They're not criminals, and most of the people they're coming to visit haven't been convicted of anything yet either."

Elsewhere around the country, new jails are also planned, even if crime continues to fall, and some existing prisons will be renovated. Even the notorious Angola penitentiary in Louisiana, with over 5,000 inmates the largest prison in the U.S., is now trying to live down its reputation for violence and brutality. State officials are exploring a major redesign of Angola, in informal consultation with the Vera Institute for Justice, whose 2018 report, *Reimagining Prison*, is a bible of the prison-reform movement, and MASS Design Group, a nonprofit architecture and design firm. The discussions are only at the idea stage, says Michael Murphy of the Boston-based MASS, who is approaching the possibility of a commission gingerly. "If we were awarded a contract to redesign a prison, we'd have to seriously consider the moral and ethical dimensions of doing so," he tells RECORD. "The question at the forefront of the moral dilemma is, can we actually reform the system as it exists through architecture? I think that's a valid question, which we have to ask on a case-by-case basis."

One of the first steps in redesigning Angola was the closing last spring of the infamous Camp J, a solitary-confinement unit for inmates so unmanageable that corrections officers have resigned rather than work there. Solitary confinement has become a lightning rod in the debate over prison design. Sperry, who has lobbied unsuccessfully to amend the American Institute of Architects' code of ethics to specifically prohibit designing solitary units or execution chambers, estimates that state and federal prisons hold 80,000 inmates in solitary cells, typically measuring some 70 square feet. Some are there for their own safety, or to punish specific infractions ranging from "being unsanitary or untidy" up to murder, but mostly for "administrative segregation," a euphemism for imposing control on uncooperative inmates. Most penologists doubt that solitary works, a view endorsed by Richards. "As someone who spent time in solitary, it never once deterred me," he said. It is a cautionary irony that solitary, when it was introduced at the Eastern State Penitentiary in Philadelphia in 1829, was considered a salutary reform, removing inmates from the bedlam of the prisons of the day to repent and study the Bible in silence. The actual effect, of course, was to drive them mad, and it's still doing that; a report by the U.S. Department of Justice shows that nearly 30 percent of prisoners in solitary suffer "severe mental distress." At a Senate hearing in 2012, *The New York Times* reported, Dr. Craig Haney, an authority on incarceration, testified that "a shockingly high percentage" of prisoners in solitary confinement are mentally ill, and that the brutal form of punishment leads to "a profound level of

PHOTOGRAPHY: COURTESY NEW YORK CITY DEPARTMENT OF CORRECTION (OPPOSITE, TOP); © GARY FRIEDMAN/GETTY IMAGES (OPPOSITE, BOTTOM); MARCO DI LAURO/GETTY IMAGES (THIS PAGE)

what might be called 'ontological insecurity,'" Haney said. "They are not sure that they exist and, if they do, exactly who they are."

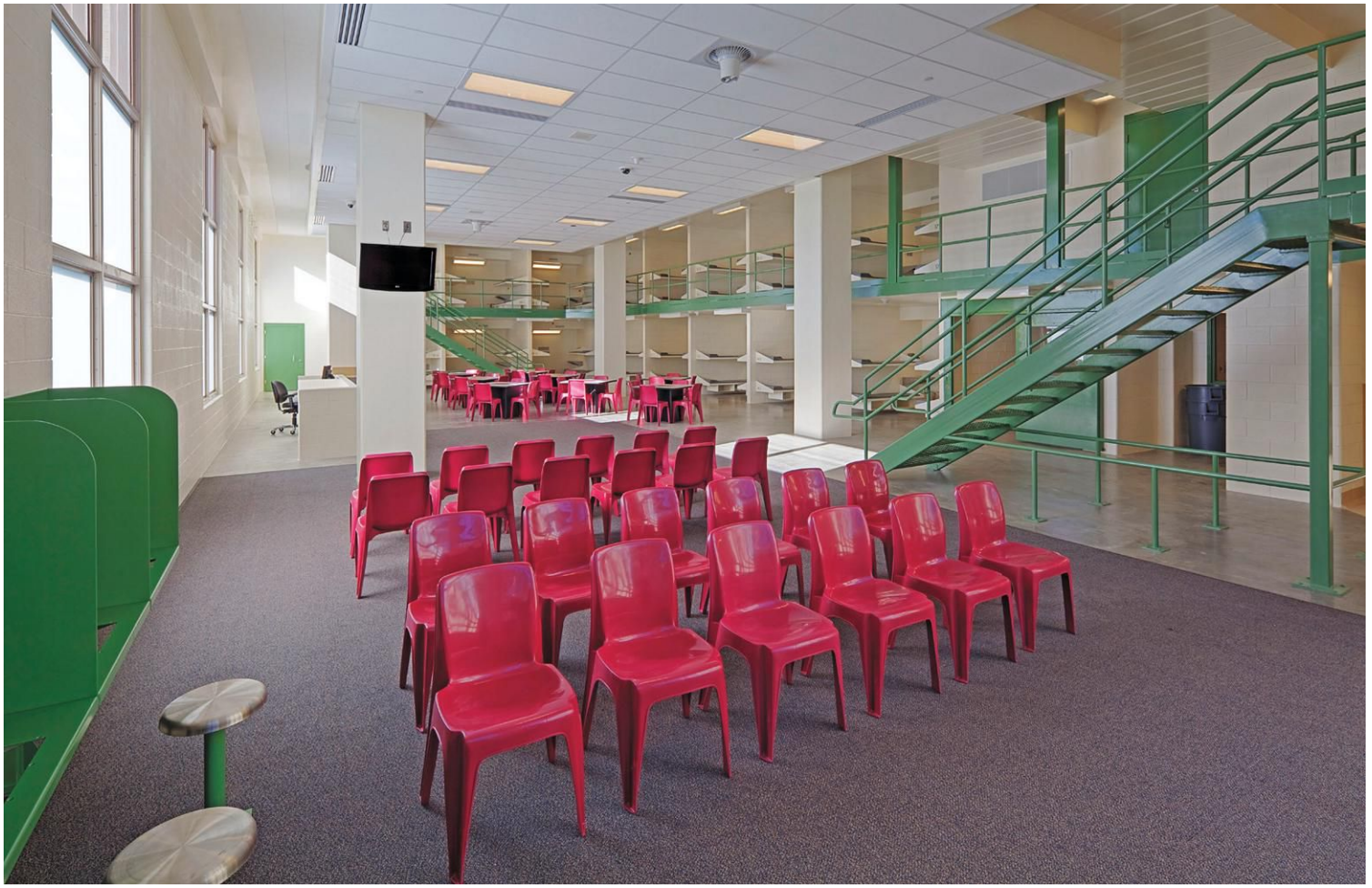
Increasingly, inmates are already mentally ill when they arrive in prison. A well-intended reform, the closing of state mental hospitals, beginning in the 1950s, meant that "a lot of people who are supposed to be in mental-health facilities end up in jails," according to David Bostwick, justice principal of HDR, the Omaha-based architecture firm with an extensive justice and health practice. Mental-health experts hailed antipsychotic drugs as a way to make mental hospitals obsolete, but failed to consider that people might stop taking them. "Jails are the largest mental health provider in any community," Bostwick says. "We are starting to design jails as treatment facilities rather than containment facilities, and any new jails will more than likely have a mental-health component."

Kenneth Ricci of the New York firm RicciGreene Architects, a practice devoted entirely to criminal-justice facilities, has thought a lot about how the justice system can avoid making mental illness worse. It should begin with an evaluation at the time of arrest or arraignment, so those who need treatment can get it. As for jail design, Ricci says, "Environment cues behavior. You maximize safety by designing for good sight lines, reasonable decibel levels, and daylight and exterior views, especially of nature, which measurably reduces adrenaline levels." Ricci put those principles into practice in his award-winning 2008 design for the Union County Juvenile Detention Center in New Jersey, a one-room-deep building which arranges all the spaces along a glass-walled corridor that wraps around a one-acre outdoor courtyard. The concept was his, but he was encouraged by the mayor of Linden, New Jersey, who told him, "I don't want to see any fence around this building."

Increasingly, inmates are mentally ill when they arrive in prison. And a 'shockingly high' number end up in solitary confinement.

Some of these goals can be achieved with technology, including acoustic engineering and the use of security glazing, which permits larger windows unobstructed by bars. ("Sixty-minute glass," says Ricci—meant to withstand an hour of battering by a 4-pound hammer.) Centrally controlled doors eliminate the incentive for inmates to attack guards to steal their keys.

But some are questions of design. Brutally functional designs and the use of cold, hard materials both inflict psychological harm on inmates and staff, and symbolically shape and reflect the public perception of prisoners as cold, hardened criminals, as reports by Vera and MASS point out. "If you imagine a prison," Ricci says, "you probably think of the movies, where tiers of cells are arrayed along a catwalk." But new prisons mostly aren't like that, and existing ones are being renovated on the "podular" model, which was conceived in the 1970s but fell into disuse during the 1990s, the era of mass incarceration, when every other



The Union County Juvenile Detention Center in New Jersey, by RicciGreene, features generous glazing and a central courtyard (opposite). The firm's design for a Denver facility includes an open-plan dormitory unit (above). Daylight, acoustic ceilings, and carpeting contribute to lower stress levels. HDR's redesign of a jail in downtown Columbus, Ohio, seen in this rendering, is similarly open and daylit (right).

goal was subordinated to building cheap warehouse-like prisons fast, and turning amenity space into cells as prisons became vastly overcrowded.

Now that prison populations are leveling off or falling, corrections officials are revisiting the podular model, which comes in many variations. The basic element is a suite holding from about 16 to 40 inmates, who can be surveilled by a single corrections officer. Meals are brought to inmates in the pod, which ideally has outside views and includes a day room, toilets, showers, and counseling and medical-exam rooms all within the locked perimeter. This minimizes the need to move inmates around the facility and gives prison officials flexibility to, say, keep members of rival gangs apart—or, as Bostwick suggests, group together inmates with shared back-

IMAGES: COURTESY RICCIGREENE ARCHITECTS (TOP AND OPPOSITE); COURTESY HDR (BOTTOM)

grounds and problems, who can support one another, such as military veterans.

But the pod system isn't just an operational convenience; it is meant to help model normative behavior by inmates and represents the beginning of a changing philosophy, away from the punitive model that has prevailed for centuries. Many countries in Western Europe regard imprisonment itself—the loss of liberty and separation from society—adequate punishment for most criminals; terrible living conditions aren't required to reinforce the message. Over the last half-dozen years, Ram Subramanian of the Vera Institute has led three fact-finding tours of American corrections officials to prisons in Germany and Scandinavia. On one of these, in 2015, Leann Bertsch, the director of the North Dakota Department of Corrections, visited Norway's Bastøy Island prison, a model for many reformers, which claims a recidivism rate of just 16 percent (compared to around 50 percent in the U.S. federal prison system). She came away impressed enough to open a minimum-custody transitional-housing unit for selected inmates nearing release. It houses 36 residents, each in individual rooms that they can lock themselves, and includes a kitchen in which they can prepare their own meals (without knives, Bertsch notes, although "you do see those in Norway").

> **Prison administrators can only do so much to redress the social and political failures that have created the current situation.**

"Prisons don't have to be so hardened and cagelike," she points out. "I've always said about American prisons, they're efficient" at keeping people locked up "but not effective" at rehabilitating them. "What I saw in Norway was a completely different approach. They make prison as normal as possible, as much like outside as possible, to make the transition smooth."

Prison administrators can only do so much to redress the social and political failures that have created the current situation. Sperry insists that mass incarceration is inherently incompatible with the goal of rehabilitation and upholding prisoners' humanity. "Once you commit the fundamental injustice of putting somebody in prison who doesn't belong there, you can't make up for it with better conditions or design," he says. But other professionals believe architectural ideas can contribute significantly to reforming prisons and the justice system. Michael Murphy opposes mass incarceration, but he doesn't dismiss the potential of architecture to improve society. "Architecture is always shaping behavior," says Murphy, whose reimagined prison, described in the report MASS produced for Vera, is a campuslike cluster of low-rise dorms, carpeted and pine-paneled, on a grassy suburban plot (see sidebar). "It's on the spectrum of behavioral science and art form. No architecture more so than prisons proves that's the case." ■

Jerry Adler is a former senior editor of Newsweek *who wrote about architecture and other subjects. Ben Adler and Alex Klimoski contributed reporting and research to this article.*

IMAGES: COURTESY MASS DESIGN GROUP

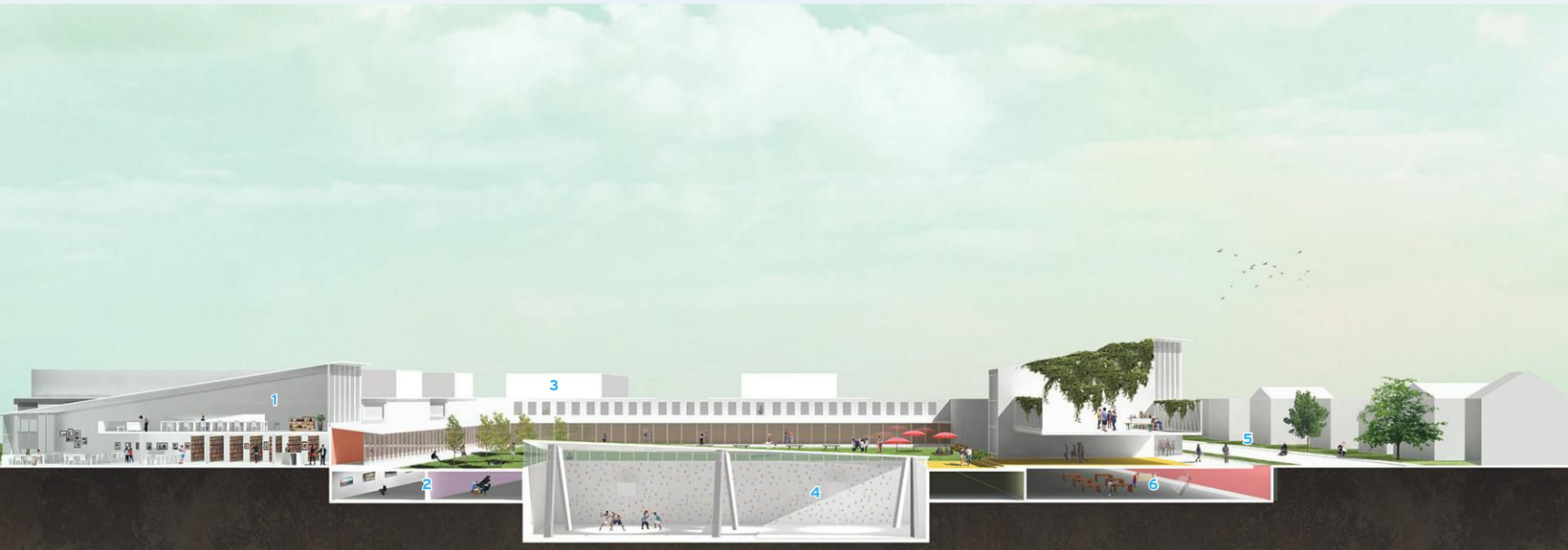
Prisons Reimagined

IN JUNE 2016, the Vera Institute for Justice, a nonprofit national research and policy organization, launched an 18-month initiative called "Reimagining Prison" during an event at the Eastern State Penitentiary—the birthplace of solitary confinement in the United States. The goal of the campaign was to seek answers, said Nicolas Turner, the Institute's president and director: "What are we trying to achieve when we put people in prison? What are the values that underlie the use of incarceration?" The project unfolded in the form of symposia, research, publications, and podcasts. As part of the program, Vera partnered with MASS Design Group to place prison architecture in historical context, and to imagine how future facilities could operate differently and what they might look like.

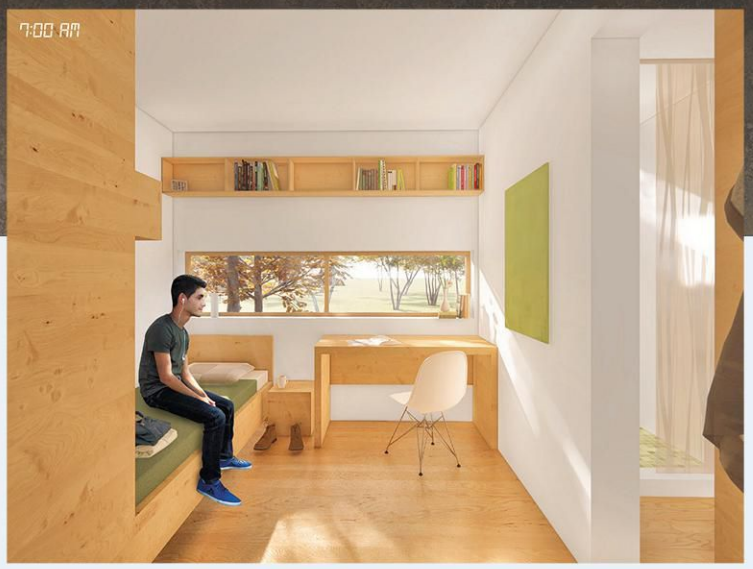
Released last year, the resulting report, on design strategies (a companion to Vera's *Reimagining Prison*), is a scholarly quest to "understand how we got to where we are now," says Michael Murphy of MASS. "We wanted to show how, in the past, prison policy and architecture have aligned, and to reveal what has gone awry, particularly with the acceleration of mass incarceration." The MASS report for Vera charts the evolution of carceral typologies, develops a framework for evaluating the current landscape of prisons, and culminates with a vision for a "reimagined system" in which the mission and objectives of the current model are shifted from a retributive, punitive, and sequestering approach to a restorative and therapeutic one—one which many experts believe could greatly reduce the high recividism rate and help former inmates succeed in reentering their communities.

MASS's concept, inspired by the rehabilitative goals instated in countries such as Germany, the Netherlands, and Norway, is best described as a theoretical prototype: renderings paint a picture of what seems more akin to a college campus than a prison. The reimagined facility is located within a community, is human-scaled, and distributes space proportionally between housing, health care, education, and training. Rooms for socialization, learning, playing games, and making art feature generous wood surfacing and bountiful natural light—a stark contrast to the grim depictions seared into collective memory. While the report sets a "foundation for a point of view from which, with the right partnership or client, real ethical change could emerge," says Murphy, the intent was not to propose something to be built but to lead a discourse. "The question is: how do we have enough information, data, and context to ethically engage in prison architecture today, in conditions where there are deeply unethical structures?

"There is a moral quandary that needs to be addressed in architecture," Murphy says. "If an architect's only ethical choice is to refuse designing prisons, that might be good for his or her conscience, but it certainly doesn't assist those who are incarcerated. Our organization is saying that we need to participate in this conversation . . . If human dignity is at the core of what we believe as a society, then architects have an enormous role to play." *Alex Klimoski*



1 LIBRARY
2 MULTIPURPOSE ROOM
3 HOUSING BLOCK
4 GYMNASIUM
5 PUBLIC PLAZA
6 WORKSHOP



Section (top) of a hypothetical exurban facility; renderings of MASS's final reimagined facility where each unit is capped at 6–8 residents, reflecting a smaller-scale and community-based concept.

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Left, Located on Barrington Avenue, in West Los Angeles, Shubin + Donaldson Architects, Inc. used Fortina as a visual element to revitalize the façade and create a fresh architectural identity to this existing brick warehouse. Fortina Louvers in Aging Metal finish.

Above, a few of the profiles in Vent Walnut, Earl Walnut and Rokko Cedar.

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CIVIC BUILDINGS

PHOTOGRAPHY: © ALAN WILLIAMS

STOREY'S FIELD COMMUNITY CENTER AND EDDINGTON NURSERY, CAMBRIDGE, ENGLAND, MUMA

Helsinki Central Library Oodi | Finland | ALA Architects

Ode to Enlightenment

A bold addition to a city's cultural center fosters the exchange of ideas and inspires creativity.

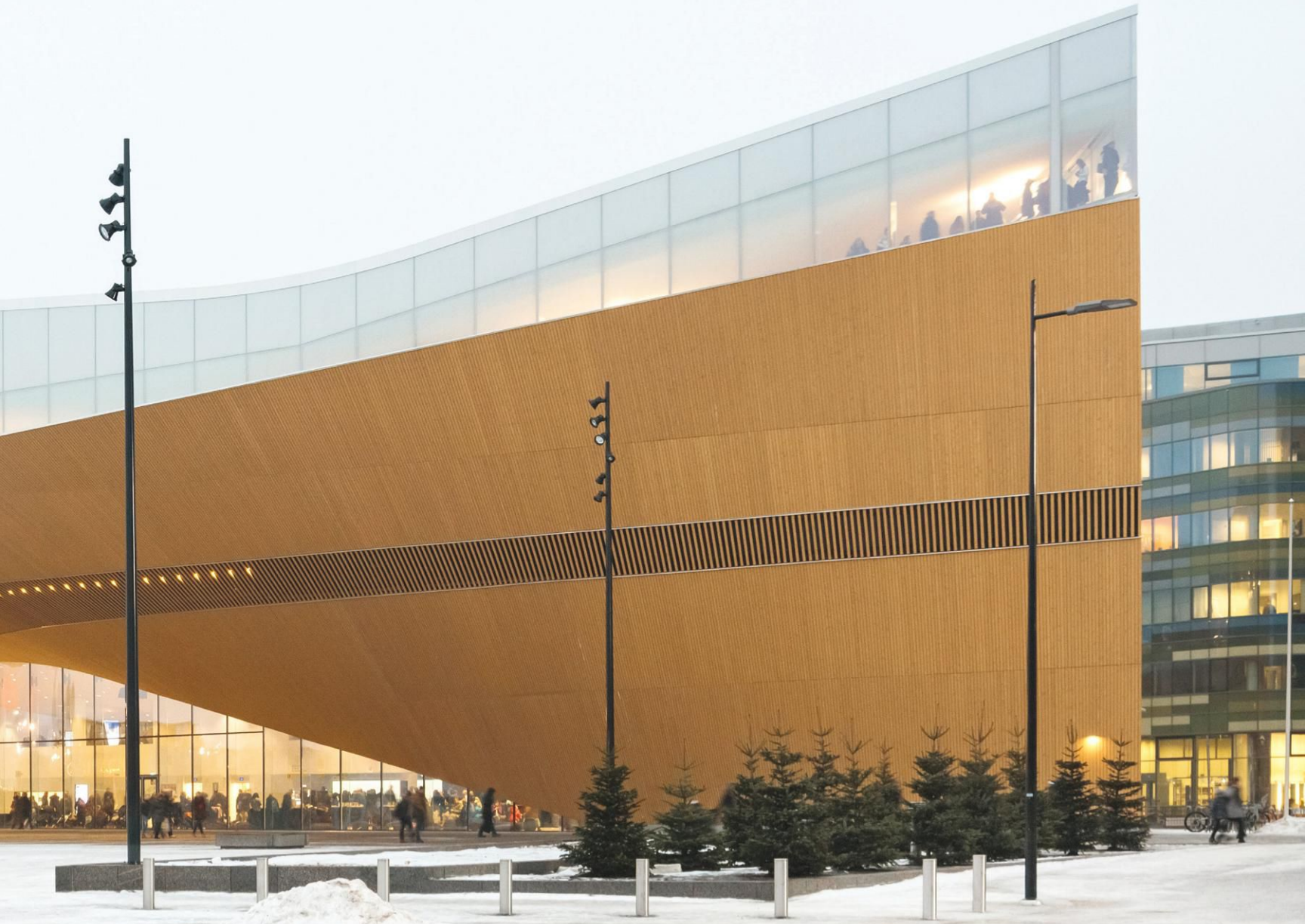
BY PETER MACKEITH

PHOTOGRAPHY: © TUOMAS UUSHEIMO

On a January mid-morning in Helsinki—marked by a bracing cold, cerulean blue skies, and a pale-gold eastern light—Oodi, the city's newly opened Central Library, gleams and glows from its seat in the cultural heart of the Finnish capital. A "people's gift" to celebrate the centenary of independence for this most literate of nations, Oodi (which means "ode" in Finnish) is a monumental spruce-clad structure that lifts skyward with its luminescent glassy upper levels and, inside, hums with activity.

Designed by Helsinki-based ALA Architects, the public library forms the final framing element for the long-envisioned "Kansalaistori," or Citizens' Square, at the southern end of the city's Töölö Bay. Oodi's 325-foot-long form—rectilinear on three sides and twisted and torqued on its civic face—bounds the eastern edge of this cultural center, which includes Kiasma, the contemporary art museum (Steven Holl Architects, 1991); Sanoma House, the Helsinki news corporation's headquarters (SARC, 1993); and the Helsinki Music Center (LPR Architects, 2011). The energy and symbolic character of the square are amplified by Eliel Saarinen's adjacent Helsinki Railway Station (1915), as well as J.S. Siren's nearby House of Parliament (1929), and Alvar Aalto's Finlandia Hall (1974), with interiors by Elissa Aalto.

Approaching the commission, ALA sought to address the complex



FREEZE FRAME The library bounds the eastern edge of the "Kansalaistori" cultural center, which showcases an array of iconic architecture.

FORGING AHEAD
At its southern end, the building assumes the appearance of a ship's prow (above). The lobby's slatted spruce ceiling swells at its center (left). A double-helix-like central stair (opposite) spirals up from the lobby to the floors above. It is inscribed with phrases that welcome people from all walks of life.

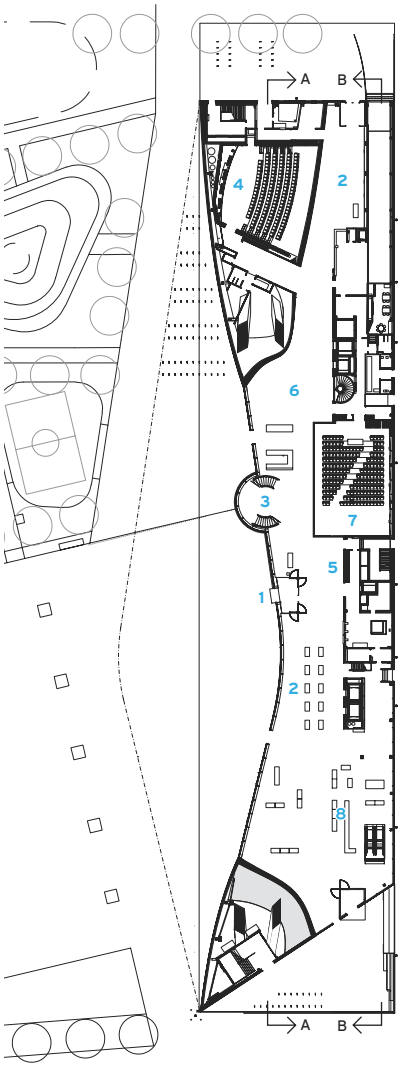
urban ensemble and the high ambitions of the existing architecture with characteristic directness. As principal Antti Nousjoki says, "The challenge was to take full advantage of every opportunity of this unbelievable situation—its urban presence, and possibilities for program experimentation, structural innovation, public engagement, and so on. We were determined to be positively, optimistically fearless." ALA's bold solution rises to this challenge and, in so doing, provides a contemporary library reenvisioned as an "urban living room" for the exchange of ideas and information and, with its ample studio spaces, as a public workshop to encourage creativity within the community.

Glass entries in the building's dramatically double-curved wood-clad front facade —as well as those at the north and south corners—admit visitors into the column-free expanse of the ground level, which holds book-return counters, exhibition areas, a flexible performance space, a café and restaurant, a children's area, and an auditorium. The horizontal expanse of this level is punctuated with an immense, double-helix-like concrete-and-steel stair that spirals up to makerspaces and meeting rooms on the middle level (called the "Attic" by the designers) and to the reading room, or "Book Heaven," above that.

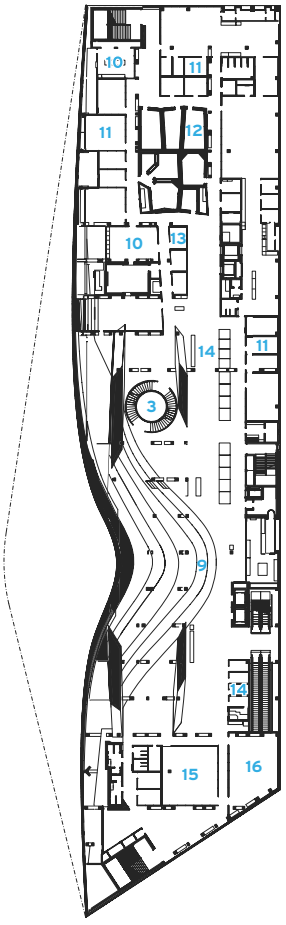
The middle "Attic" level reveals the robust structure enabling the open expanses above and below. Here, an innovative arching steel truss spans the building's long axis, and is tied back into a reinforced-concrete tension slab. Imperceptible from the exterior, the complex construction dictates the Attic's compressed interiors—lounges, workshops, rehearsal rooms, recording and production facilities, as well as corridors and fire stairs, which are all threaded in and around the structure. In contrast to the upper and lower levels, the inward-looking Attic has minimal daylighting, which is appropriate for the workspaces here, some of which require full enclosure and opacity for acoustic reasons.

Ascending from this floor to the top-level "Book Heaven" has a restorative and uplifting effect. The ranks of books on bookshelves here communicate that the intimate acts of browsing and reading are still valued. The expansive, luminous reading room is illuminated and visually extended to the outdoors through floor-to-ceiling walls of fritted glass and a composition of skylights. Each of these apertures, which perforate the undulating white ceiling plane floating above, spotlights one of 10 potted whitewood trees,

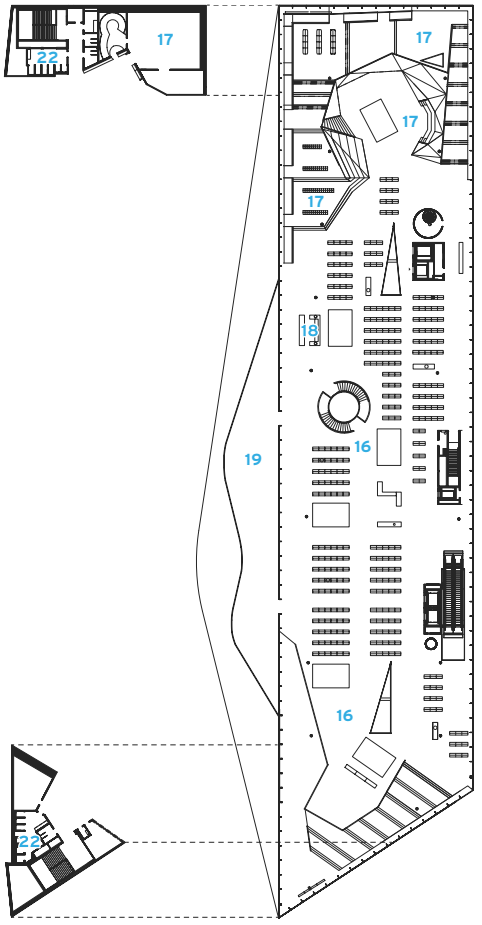
PHOTOGRAPHY: © TUOMAS UUSHEIMO (OPPOSITE, TOP); IWAN BAAN (OPPOSITE, BOTTOM AND THIS PAGE, TOP); DANICA KUS (THIS PAGE, BOTTOM)



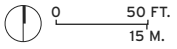
LEVEL-ONE PLAN

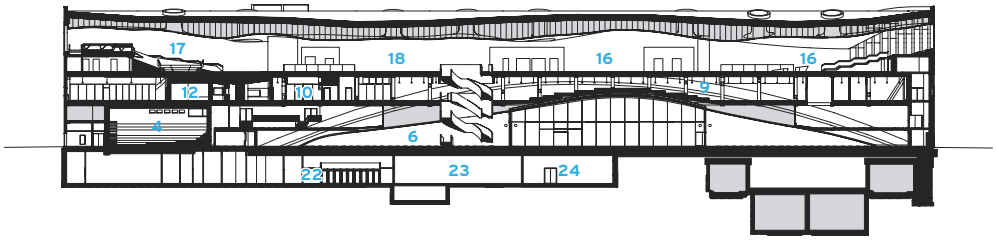


LEVEL-TWO PLAN

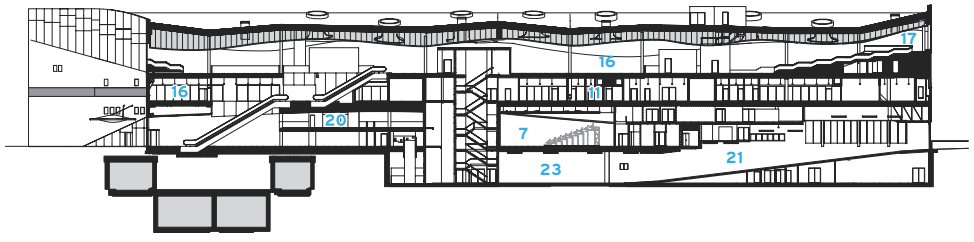


LEVEL-THREE PLAN





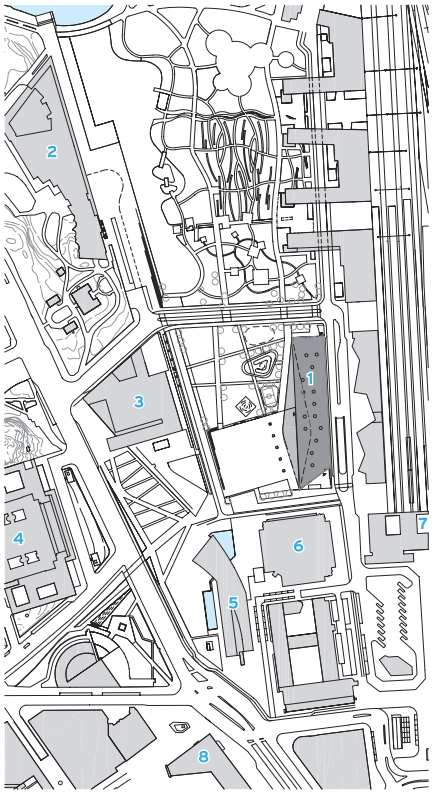
SECTION A - A



SECTION B - B

1 MAIN ENTRY
2 LOBBY
3 CIRCULAR STAIR
4 CINEMA
5 BOOK RETURN
6 RESTAURANT
7 MULTIPURPOSE HALL
8 INFORMATION
9 STADIUM SEATING
10 LEARNING SPACE
11 GROUP ROOM
12 STUDIO
13 GAME ROOM
14 WORKSTATION
15 EVENTS
16 READING ROOM
17 CHILDREN AND FAMILIES
18 CAFÉ
19 BALCONY
20 EXHIBITION
21 VEHICULAR ACCESS RAMP
22 RESTROOM
23 SERVICE
24 BOOK STORAGE

WHAT LIES BENEATH
Maker spaces and stadium seating are woven between the steel structure (unclad arches and birch-clad trusses) on the middle floor (left), which enables the column-free expanses above and below. A reading nook occupies the space under a raised wood "deck" in the children's library on the top floor (bottom).



SITE PLAN

0 300 FT.
100 M.

1 CENTRAL LIBRARY
2 FINLANDIA HALL
3 HELSINKI MUSIC CENTER
4 PARLIAMENT OF FINLAND
5 MUSEUM OF CONTEMPORARY ART KIASMA
6 SANOMA HOUSE
7 HELSINKI CENTRAL RAILWAY STATION
8 AMOS REX ART MUSEUM

PHOTOGRAPHY: © IWAN BAAN (TOP); TUOMAS UUSHEIMO (BOTTOM)

LEARNING LANDSCAPE The top floor's main reading room (above and opposite) receives abundant daylight, which flows through broad expanses of glass and skylights cut in the undulating acoustic ceiling. The floor plane is like a topography, lifting upward with ramps and stairs at its northern and southern ends.

which will grow over time. The team designed the top floor as a contoured wooden terrain—a kind of "forest space"—whose oak flooring ramps and steps upward at the north and south ends, lifting dramatically to form plateaus, terraces, and overlooks.

For all its ambitions as a reading room, right now in the winter cold, the "Book Heaven" functions much as a community center, almost overwhelmingly active. The faceted wooden floor surfaces are alluring as a playground, and children gaily slide down their faces, while parents hover nearby. Animated conversations resonate from the central café on this level, and a constant parade of sightseers circumnavigates the space's perimeter amidst the study tables and reading chairs. Still to come when good weather arrives is the opening of the west-facing terrace on this level, surely to become one of the city's top viewing platforms.

The mission to reimagine the public library beyond its function as a repository for books was apparent in ALA's 2014 competition entry as well as in the final programming of the building, which reflects intense input from the library staff and the public. The new role for the building type also is apparent in the library's parallel redesign of staffing and services, which dictated an absence of administrative offices (now located in a suburban sister library) and the addition of improved technologies for book handling (checkouts, returns, and shelving). These moves will help maximize staff availability to the library user, a necessary strategy, given that the facility anticipates 10,000 visitors per day and 2.5 million annually. "It's deeply rewarding to see the library in use now," says Nousjoki. "There's such a wide cross-section of Finnish society visible there—the complete spectrum of age, gender, income, and background—making full use of every floor and resource."

PHOTOGRAPHY: © TUOMAS UUSHEIMO (OPPOSITE AND THIS PAGE)

The library's efficiency in planning and operations can also be seen in its overall passive-energy design approach; the use of Finnish spruce and glass expanses for the facade is sensitive to local climate conditions and maximizes the admission of daylight. The design's thermal performance and energy consumption have been calibrated through intensive BIM to a nearly Net Zero Energy Building level.

Combining the intimacy of a community library with the ambitions of a state-of-the-art center for contemporary culture, Oodi's powerful architecture projects the institution as a place of civic importance and social engagement—one that prompts intellectual curiosity and creativity while reinforcing the country's civic identity and aspirations. ■

Peter MacKeith is Dean of the Fay Jones School of Architecture and Design, University of Arkansas, and Knight, First Class, of the Order of the Lion of Finland.

credits

ARCHITECT: ALA Architects – Juho Grönholm, Antti Nousjoki, Janne Terävirta, Samuli Woolston, principals; Niklas Mahlberg, executive architect

INTERIOR DESIGN: ALA Architects – Heikki Ruoho, interior architect

ENGINEERS: Ramboll Finland (structural, HVAC, energy technology); Rejlers Finland (electrical); Sipti Infra (geo); Granlund (AV, theater technology)

GENERAL CONTRACTOR: YIT Rakennus

CLIENT: City of Helsinki

SIZE: 186,000 square feet

COST: $112 million

COMPLETION DATE: December 2018

SOURCES

WOOD CLADDING: Timbeco, Timberpoint

CURTAIN WALL, WINDOWS: Windoor

SKYLIGHTS: Warmeco, Klaasimeister

DOORS: Jaatimet, Jeld-Wen, Geze

CEILINGS: Rockfon

WALLCOVERINGS: Kvadrat

FLOORING: Pandomo Floor, Mero

LIGHTING: Erco, Fagerhult, Wästberg, Led Linear, Cariitti, Regent, Planlicht, Gradus, Bega

CONVEYANCE: Otis


PODER JUDICIAL DE LA FEDERACIÓN

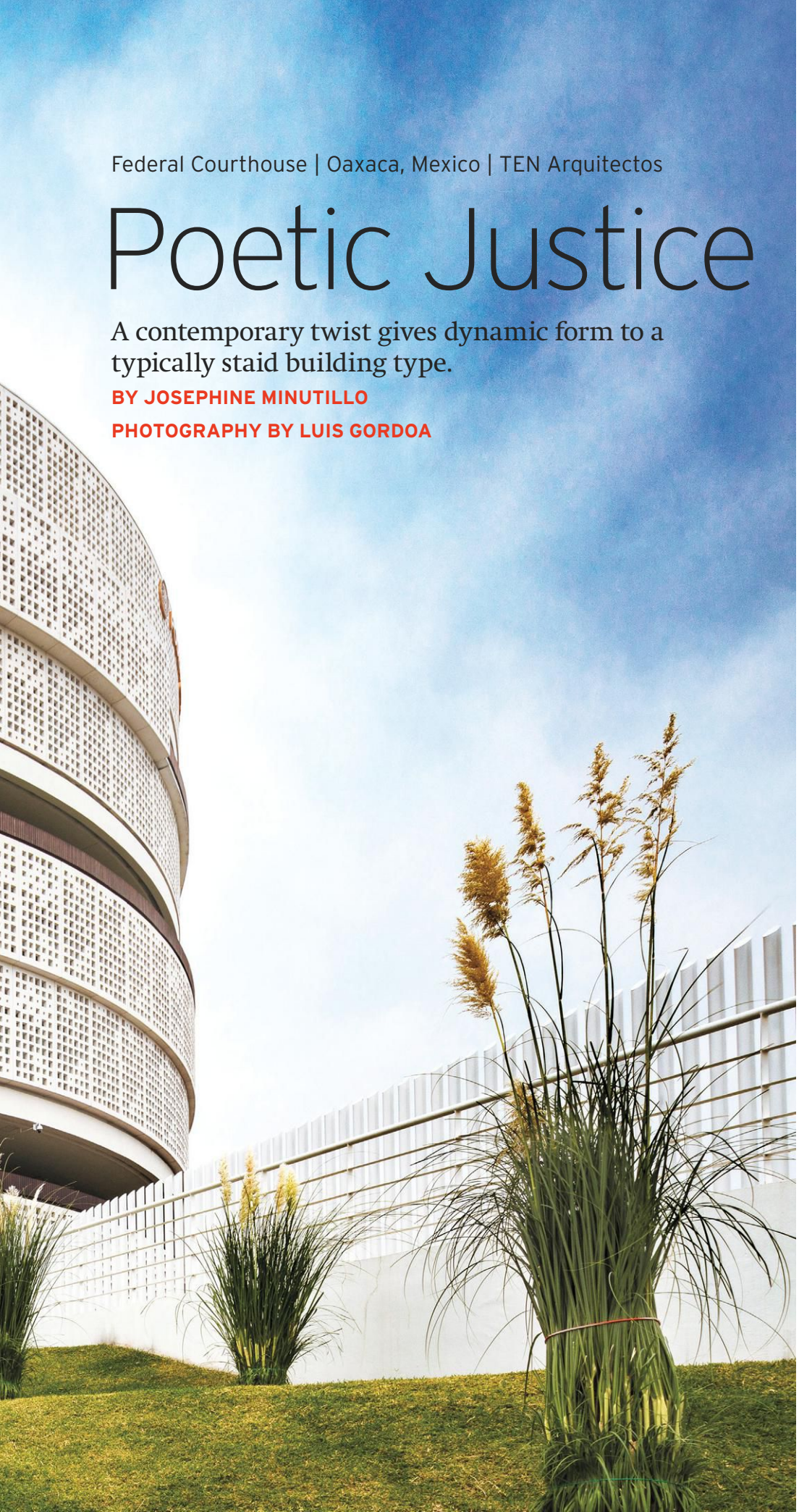
Federal Courthouse | Oaxaca, Mexico | TEN Arquitectos

Poetic Justice

A contemporary twist gives dynamic form to a typically staid building type.

BY JOSEPHINE MINUTILLO

PHOTOGRAPHY BY LUIS GORDOA



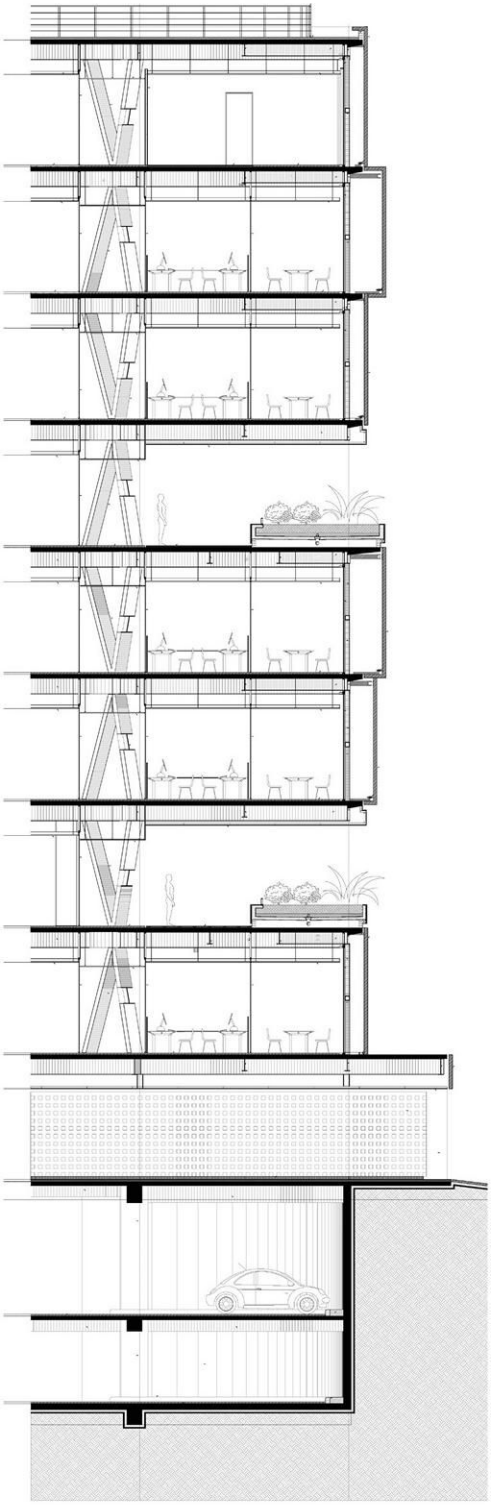
With the exception of a few imposing stone church towers, often at one end of a large square, almost everything in Oaxaca stays pretty close to the ground. The colorful one- and two-story buildings that line the streets of this central Mexican city conceal charming and varied courtyards, many rich in plantings or architectural details. Leave the dense, rigid grid of the center and the same low scale holds true.

A regional municipal complex about a half hour's drive from the city, near the town of San Bartolo Coyotepec, comprises several typically squat and, frankly, unremarkable structures—for a specialized hospital, an AIDS clinic, and a criminal court, among other government offices. The exception here however, is the collection's latest addition. At 10 stories, the new courthouse is the tallest structure for miles. Its height, combined with its startling round shape and striking perforated facade, has turned this bureaucratic building into a beacon in the mainly agricultural landscape.

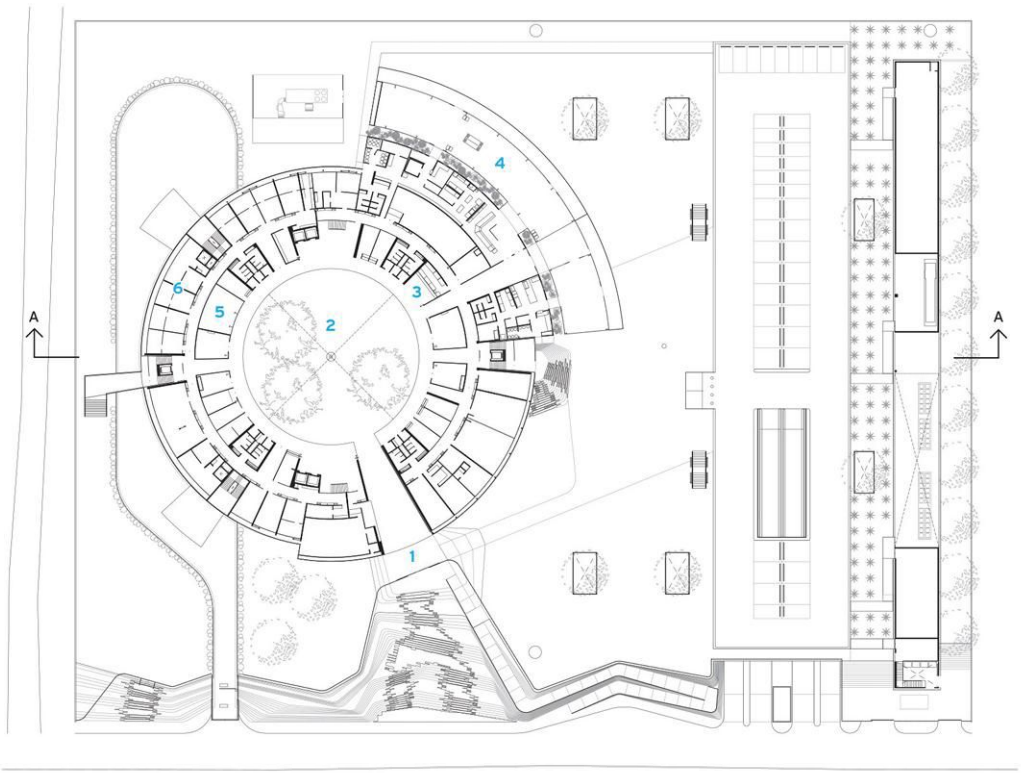
"This is clearly a building as object," says its architect, Enrique Norten, of Mexico City– and New York–based TEN Arquitectos, which won an invited competition for the project. "It is so isolated from everything; there's no sense of urbanity."

While many of the 750 workers within the new building lament the move from dispersed locations within the center of Oaxaca, the new centralized facility allows cases—which deal primarily in constitutional and civil law—to move along more efficiently by allowing faster communication between judges. In total, nine of the 11 federal judges within the state of Oaxaca serve here. A small percentage of criminal cases are handled in this building, but the main criminal courthouse is next door, separated by a landscaped yard and 10-foot-high wall. Nevertheless, entrance inside is strictly limited, so most people will only get to experience the new courthouse as an object in the landscape.

The building's circular form grew around the desire for a central courtyard, or *patio*, so essential in traditional Mexican architecture. But here it is made completely contemporary. That soaring space, like most *patios*, is lined with greenery and open to the sky. Within that roofless atrium are the most accessible parts of the building. The planted, teak-clad ground floor at the center, with café seating

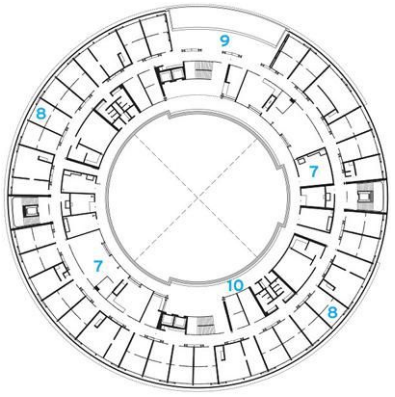


SECTION DETAIL



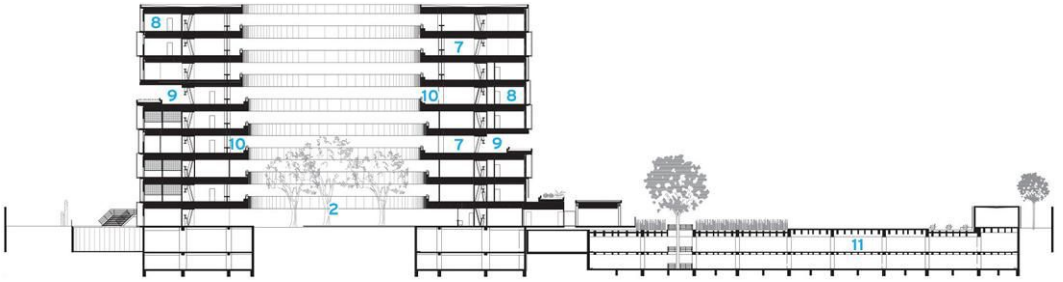
GROUND-FLOOR PLAN

0 50 FT. 15 M.



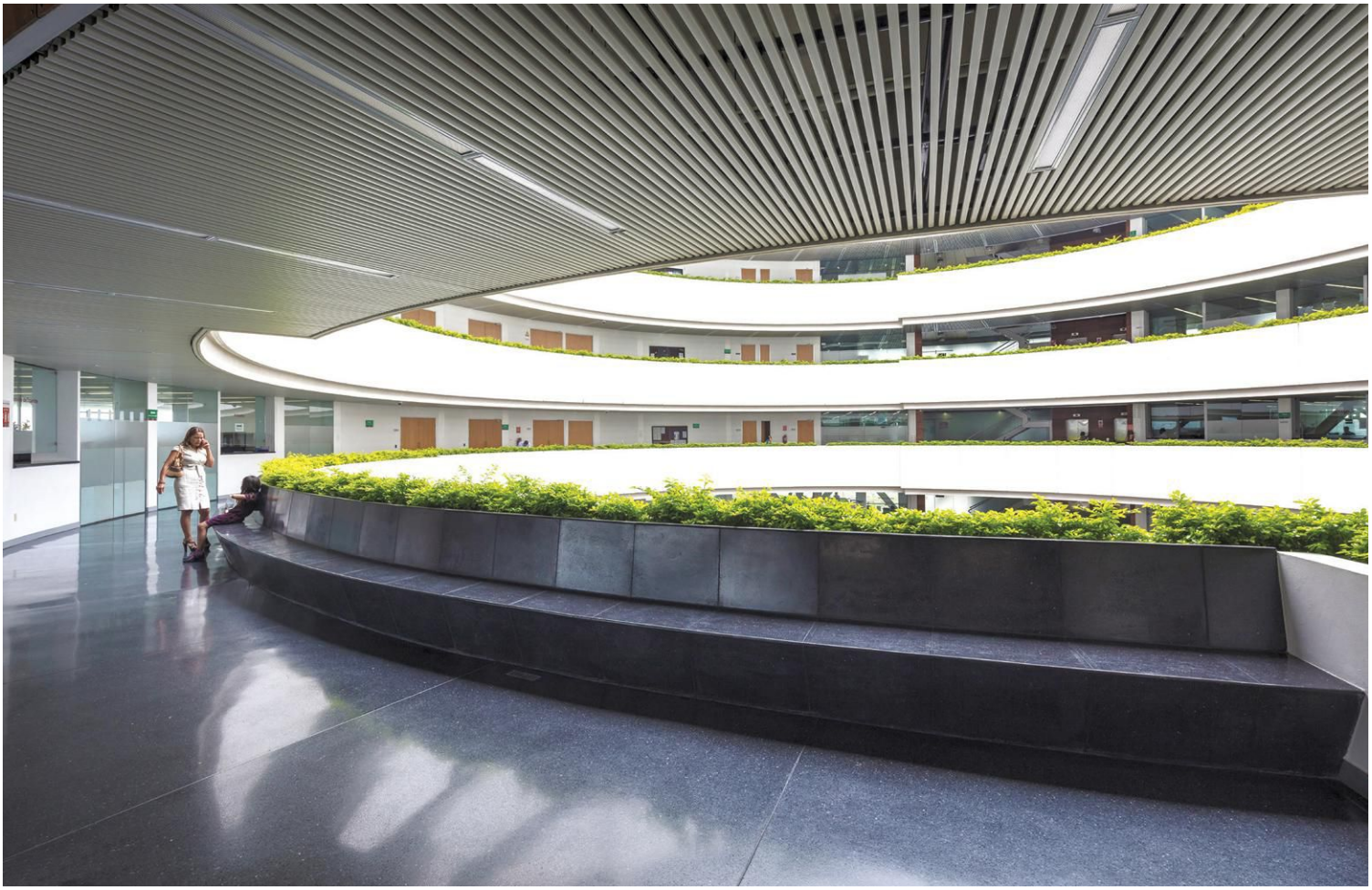
TYPICAL-FLOOR PLAN

1 ENTRANCE
2 COURTYARD
3 VISITOR CAFÉ
4 EMPLOYEE CAFETERIA
5 INFIRMARY
6 MAIL
7 PUBLIC OFFICES
8 PRIVATE OFFICES
9 TERRACE
10 WAITING AREA
11 PARKING

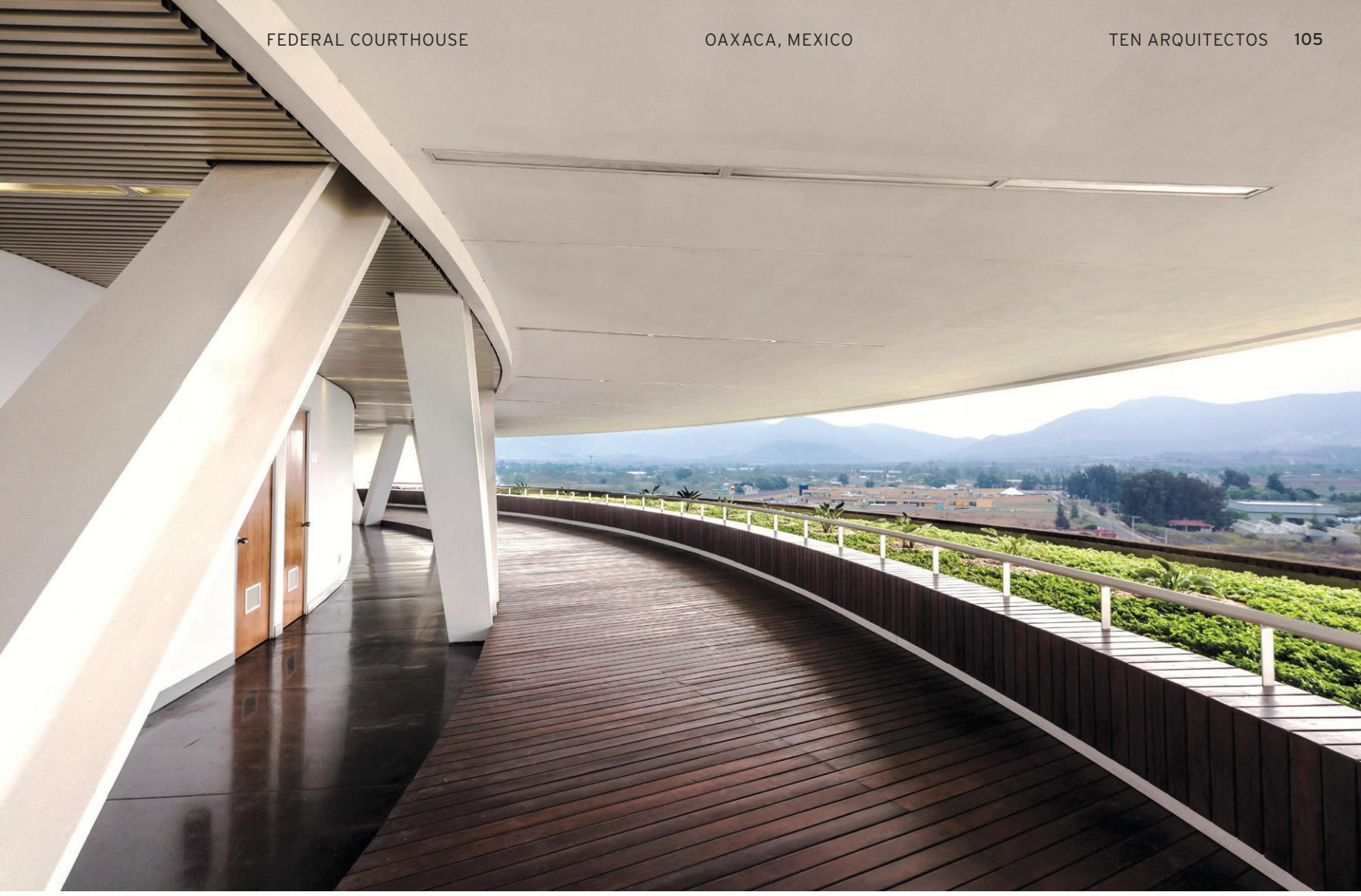


SECTION A - A

IN THE ROUND
The central courtyard is open to the sky (above). Each level is encircled with planters featuring a local flower, green here but since grown to a bright yellow bloom. The ground floor mixes planks of a local teak with planted areas (left).



SWEEPING CURVES
The same black terrazzo of the circular corridors' floors is used in the built-in seating (top). A dining hall extends from the circular plan at grade, where there are light wells for the underground parking (left). Partial terraces on each floor offer panoramic views over the fields and to the mountains in the distance (opposite).



for visiting attorneys and the curving terrazzo-clad corridors above it, serving mainly as circulation and waiting areas, are exposed to the elements, though within this climate that often means a soft gust of wind rather than much chance of rain.

Spaces become increasingly private as one moves away from the center toward the perimeter of the donut-shaped plan, where glazed offices and judge's chambers are located. Positioned behind the perforated facade, these rooms feature either operable windows that allow breezes, or fixed glazing with air-conditioning. "We gave the option to the users," says project architect Melissa Fukumoto. "Many judges preferred to be closed in. I suppose it has to do with how they work."

For moments when they want a break from that work, each floor is equipped with a large terrace, planted and lined in the same durable teak as the floor of the interior courtyard. Says Norten, "The terraces are for conversations, for looking at the mountains on one side and the valley on the other." The position of these "outdoor rooms," as Norten calls them, changes in plan at each level, so that the spiraling openings along the facade add dynamism to the otherwise platonic cylindrical form.

The perforated concrete panels of the facade were precast at a Mexican facility and installed as modules, with the 14-foot height of each panel corresponding to a full story. Eight different geometric patterns were developed—the ones that are more open were used to clad offices and, those that are less open, more secure areas.

The overall effect is bold, playful even, considering what goes on inside. But, more than anything, the use of the precast panels was incredibly clever. Norten's office developed the design of the building knowing it would not be able to oversee construction. Each element, including the structure—concrete combined with a steel ring truss around the building's core—was kept as simple as possible.

Norten's office had certain advantages and disadvantages building the new courthouse. Because it's a federal building, TEN Arquitectos had a bigger budget for its design but less control over the finished product. In the end, though, it worked out well. This is a building entirely of its place yet one that, literally and figuratively, rises above much of what's been built there in recent years. ■

credits

ARCHITECT: TEN Arquitectos – Enrique Norten, partner in charge; Melissa Fukumoto, project architect; Ernesto Vázquez, Eduardo Ezeta, Daniel Hernández, Aarón Pérez, Carlos Salas, Emelio Barjau, Elvia Navarrete, Roberto Cerezo, Edgar Durán, Salvador Arroyo (project team)

ASSOCIATE ARCHITECT: Daniel López Salgado

ENGINEERS: CTC Ingenieros Civiles (structural); High Tech Services (m/e/p)

CONSULTANTS: TGC Geotécnia (soil); Ideas en Luz (lighting)

GENERAL CONTRACTOR: Secretaría de la Defensa Nacional

CLIENT: Consejo de la Judicatura

SIZE: 689,000 square feet

COST: withheld

COMPLETION DATE: February 2018

SOURCES

GLAZING: Vitro

PRECAST CONCRETE: Fapresa

ACOUSTICAL CEILINGS: Hunter Douglas, Armstrong

PAINT: Comex

FLOOR TILE: Interceramic

BATHROOM FITTINGS: Helvex

INDUSTRIAL KITCHEN: Grupo Delia

Worcester Blackstone Visitors Center | Worcester, Massachusetts | designLAB architects

Industrial Evolution

A visitors center on a former factory site signals a new direction for its up-and-coming city.

BY ALEX KLIMOSKI

PHOTOGRAPHY BY CHUCK CHOI

Dotted with tumbledown relics of urban Americana—empty storefronts with faded signs; vacant lots and factories; the occasional retro diner—it might be surprising to learn that Worcester, Massachusetts, is New England's second-most-populous city; the once thriving industrial town was largely abandoned when its manufacturing jobs dissolved or migrated elsewhere in the decades following World War II. But amid this blight, a robust downtown core shows signs that things have been changing; tech and biomedical businesses have established a foothold here, generating new construction and services in this affordable alternative to Boston, just a 45-minute drive to the east. Among a slew of publicly funded projects, a new visitors center embraces the city's forward-thinking agenda, seeking to reclaim a rich legacy tarnished by years of economic and environmental freefall.

The Blackstone Visitors Center—an 11,000-square-foot steel-and-glass building bookended by outdoor recreational space—sits on a 4.5-acre sliver of land flanked by train tracks and busy thoroughfares, and divided by the Blackstone River, which flows from Worcester down to Providence, Rhode Island. From the mid-1800s up until the 1970s, the site was home to the Washburn & Moen Company, a prosperous metal and wire manufacturer that produced steel cable used for, among other things, the Brooklyn Bridge.

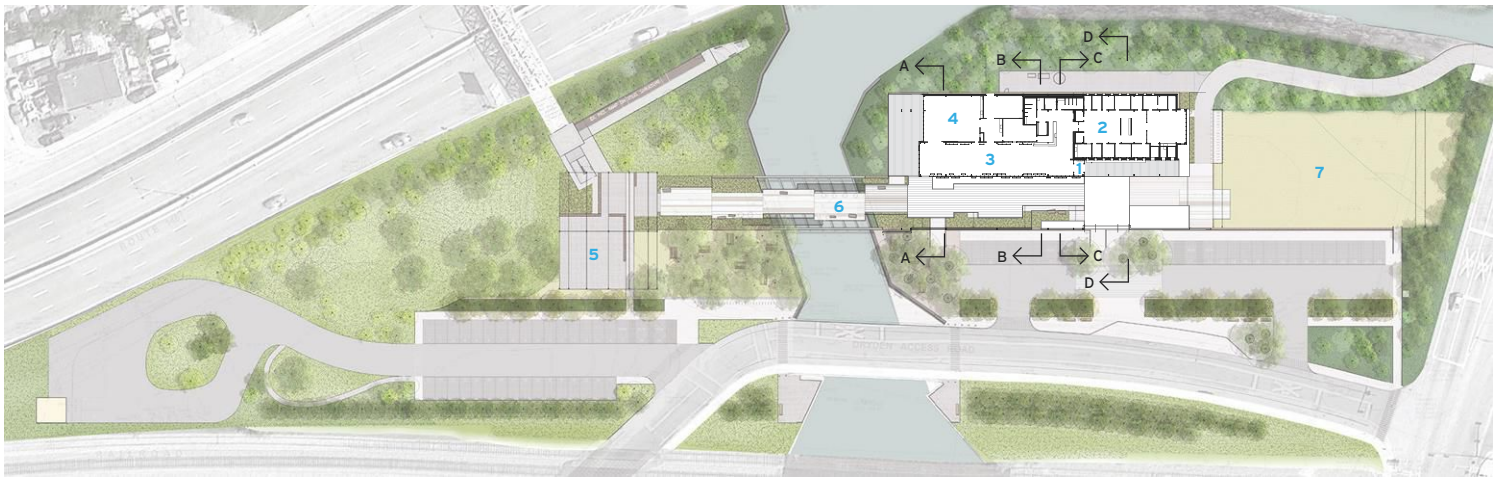
GUIDING PRINCIPLE The new building, flanked by outdoor recreational space, takes cues from the site's original brick-and-steel factories (opposite). A series of steel frames, which proceed over a newly built steel-grate bridge, guide pedestrians from one end of the site to another (top and above).

The project is the latest of seven visitors centers to be built along the 48-mile-long route that follows the river, known as the Blackstone Heritage Corridor; its completion coincides with that of the northernmost phase of the adjacent Blackstone Bikeway trail, an ongoing project that, when completed, will serve as a major recreational resource as well as an alternate mode of transportation, connecting New England's second- and third-largest cities. Recent initiatives to revitalize the region—widely recognized as America's industrial birthplace—are the product of three decades of public investment aimed at cleaning up the river, once one of the most polluted in the country, and restoring the historic properties along its banks.

The diminutive one-story visitors center has quickly established itself as a valuable amenity for bicyclists using the path, as well as a venue for various community programs and for events run by the local college and financial supporter, Holy Cross. Its main public space, an airy, light-filled gallery lined with douglas fir, features rotating exhibits and interactive displays that highlight Worcester's culture, and bring awareness of the region's illustrious history. "One of the main purposes is to bring people in to tell them to go someplace else," Devon Kurtz, executive director of the Blackstone Heritage Corridor, has said. The Heritage Corridor, along with the Department of Conservation and Recreation (DCR), both have offices in the building.

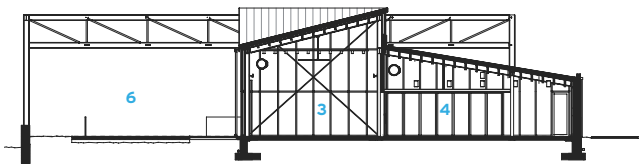
For Boston-based designLAB, completing the project proved to be a test of endurance. The firm first became involved in 2008, when it was selected to transform the last of the three original brick-and-steel buildings remaining on the site into a facility that would house the Blackstone Visitors Center and the Worcester Historical Museum. In 2010, the team had just completed construction documentation when a fire destroyed the old structure, leaving no salvageable remains. The next year, a study commissioned by the National Park Service gave the architects the opportunity to envision how a stand-alone visitors center (minus the museum) could work on the now vacant site; the team then submitted a new RFP to build the project, which they were again awarded.

Where the previous project occupied the northern edge of the site, this blank slate allowed the team to place the new facility to the south, across the narrow river bend, for better visibility from the adjacent highway. This move also enabled the building to function as a hinge between the two main recreation spaces: an open field next to the beginning of the bike path, and a pavilion for outdoor concerts and events on the other side



GROUND-FLOOR SITE PLAN

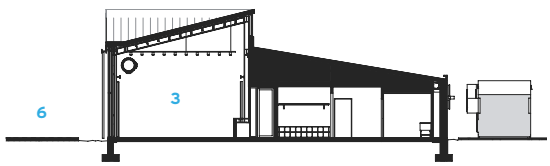
0 80 FT. 25 M.



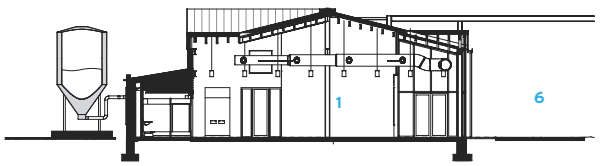
SECTION A - A

0 16 FT. 5 M.

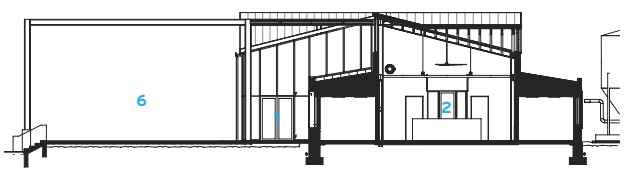
1 ENTRANCE
2 OFFICES
3 EXHIBITION SPACE
4 CLASSROOM
5 PAVILION
6 HERITAGE WALK
7 PARK



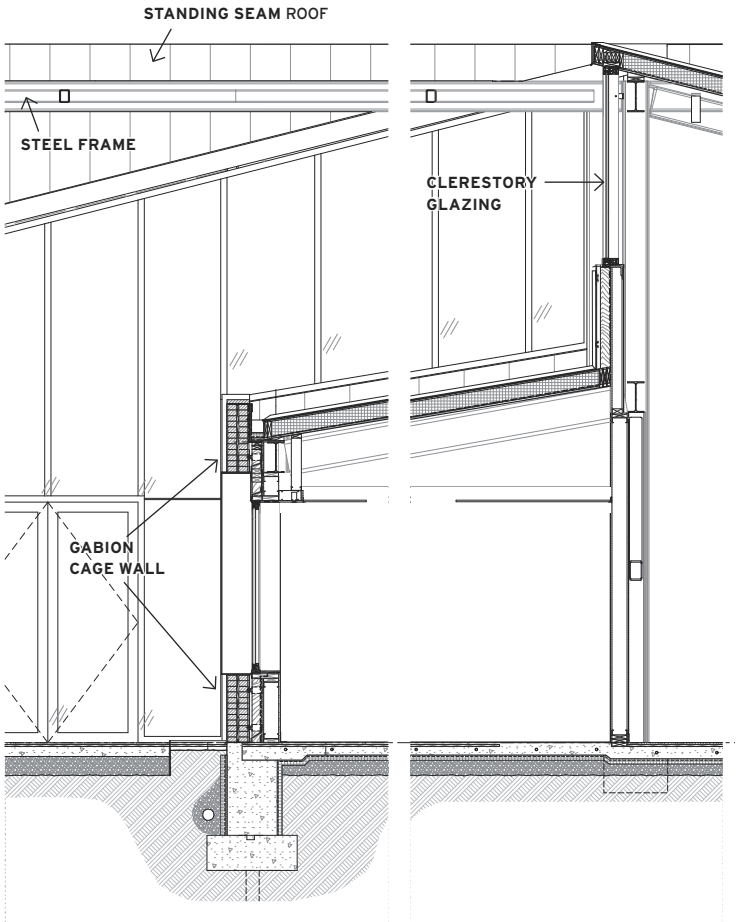
SECTION B - B



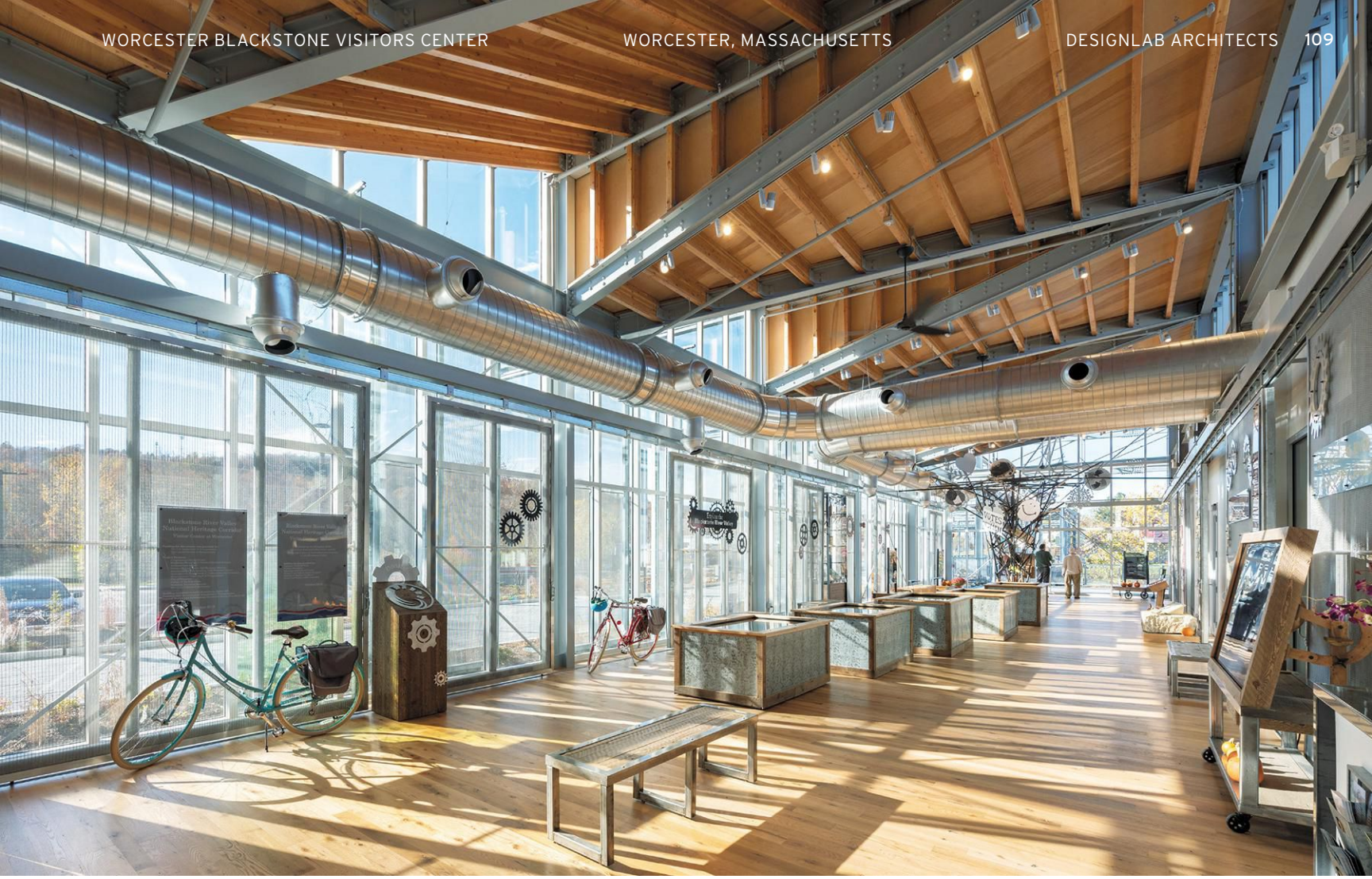
SECTION C - C



SECTION D - D



SECTION DETAIL



PAST AND PRESENT The exhibition hall, which contains interactive displays that celebrate Worcester's culture and heritage, features generous glazing. In reference to the site's industrial history, the architects left ducts exposed to lend rawness. Douglas fir surfaces provide a warm contrast.

(PVs atop this structure will provide an estimated 70 percent of the building's electricity, say the architects). According to partner Sam Batchelor, one of the main challenges was linking these three elements to create a coherent whole at a pedestrian scale. As a solution, the team conceived a procession of steel frames that form a 40-foot-wide by 640-foot-long "Heritage Walk"; this walkway passes alongside the building to extend over a newly constructed steel-grate bridge above the river. In addition to creating a sense of continuity across the whole site, the frames support lighting and other infrastructure for special events and performances.

While the overt use of steel here pays homage to the original buildings by nodding to their industrial past, so, too, does the use of brick, reclaimed from local historic mills and employed for the visitors center and along parts of the Heritage Walk. The goal, says designLAB founding partner Robert Miklos, was to create an "invented archaeology." "We wanted to reference without recreating," explains Batchelor. Where not fully glazed, the building's front features a wall made of these bricks, held in place only by gossamer gabion baskets—another reference to the wire-manufacturing industry. This steel latticework is also used as screening on the facade, and appears again inside as sliding exhibition panels. The most prominent connection to the site's heritage is the building's sawtooth profile, which riffs off the original factory roofline but in a modified form that admits less daylight. To simplify construction, the architects devised a design that mimics the form but functions as a traditional roofing system, with a continuous spine. To get this effect, the team took a standard shed roof, and, out of this, they popped triangular clerestories for a serrated expression.

Over a decade in the making, the visitors center is a long-anticipated amenity and symbol of change for this corner of Worcester that has been among the last to benefit from recent improvements. And, situated at a major entry point to the city, near the Massachusetts Turnpike, it has quickly become a new gateway and a source of pride for local residents. "It's a critical piece of the revitalization effort," says Batchelor. "Having something that celebrates the city's heritage while also recognizing its tremendous transformation emphasizes how it is repositioning itself as a great place to work and live." ■

credits

ARCHITECT: designLAB architects – Sam Batchelor, Robert Miklos, Mary Ann Upton, Jason Van Ypren, Austin Ward, project team

ENGINEERS: Structures Workshop (structural: building); AECOM (structural: bridge, civil, landscape); Architectural Engineers (mep/fp)

CONSULTANTS: Landworks Studio (landscape); Exp Design (exhibit)

GENERAL CONTRACTOR: Daniel O'Connell's Sons

CLIENT: MassDOT

SIZE: 11,000 square feet

COST: $14 million

COMPLETION DATE: October 2018

SOURCES

ROOF PANELS: VMZINC

WIRE SCREENS: GKD

GLAZING: Guardian

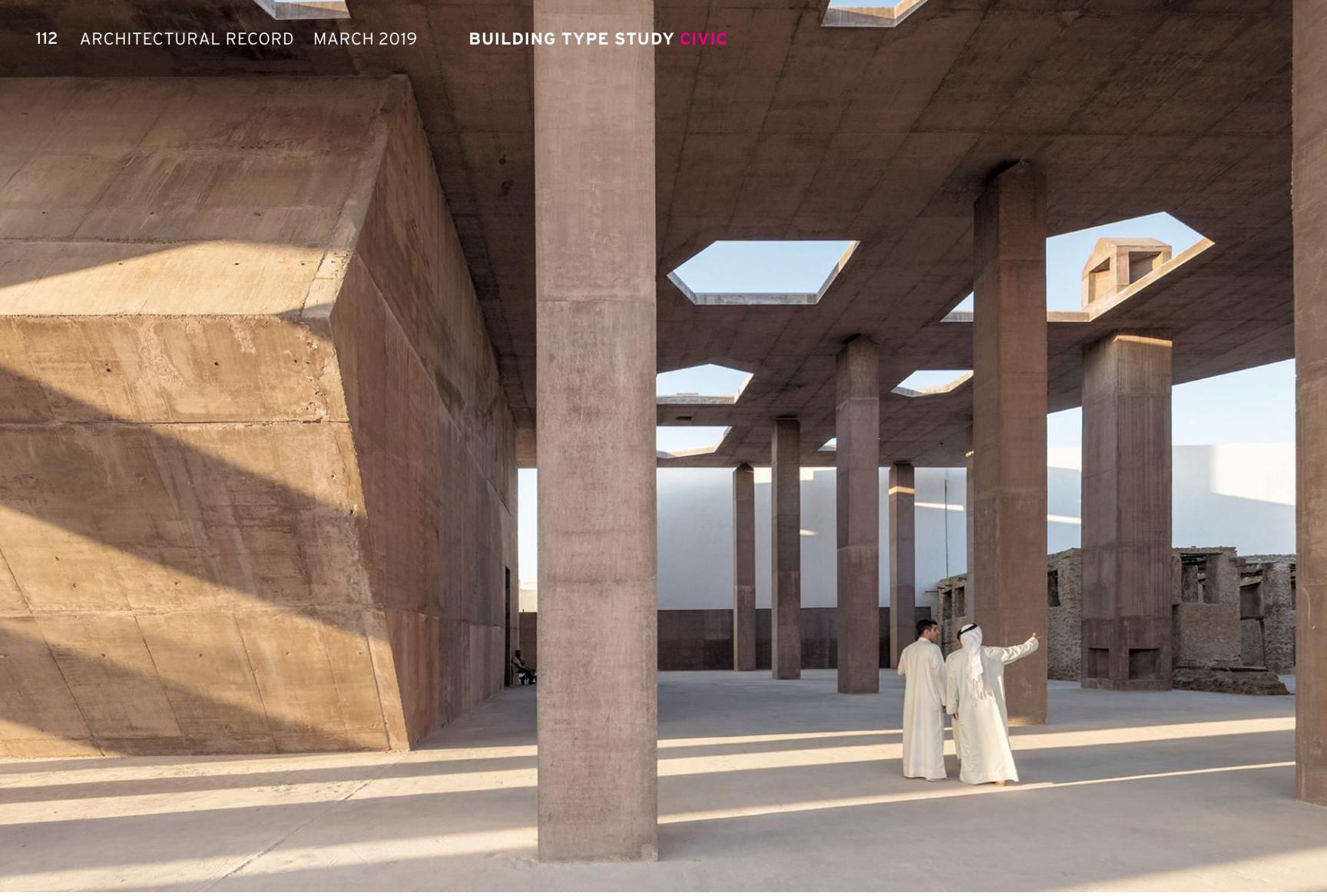
Pearling Path Visitors Center | Muharraq, Bahrain | Valerio Olgiati Architect

Foreign Object

An enigmatic structure welcomes tourists to a historic Persian Gulf site.

BY ALI ISMAIL KARIMI

PHOTOGRAPHY BY LAURIAN GHINITOIU



After a frenetic six-month construction schedule, the Pearling Path Visitors Center, designed by Swiss architect Valerio Olgiati, opened to the public in November. It is the largest new construction to date on the UNESCO World Heritage site in Bahrain—an area from the 19th and early 20th centuries tied to the island nation's pre-oil wealth, defined by the extraction and trade of pearls. The center is part of the Bahrain Authority for Culture and Antiquities' effort to preserve parts of the historic city of Muharraq while also creating notable works by international architects that has resulted in a steady increase in tourism.

In recent years, Olgiati has become a cult figure in architectural circles, known for the technical and conceptual rigor of his built works. His second project outside Europe, the 72,000-square-foot Pearling Path Visitors Center is his most ambitious civic project yet.

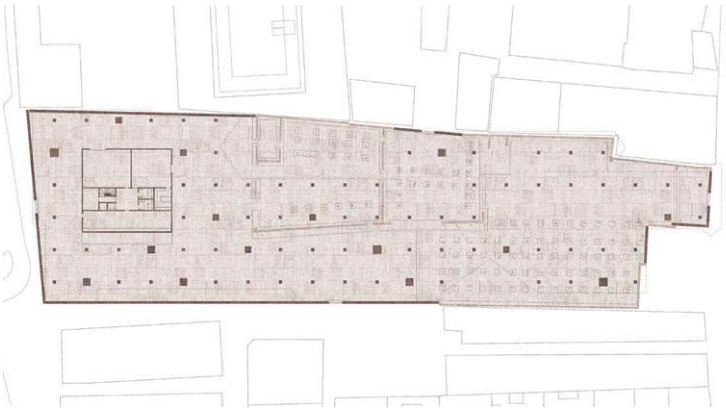
As one crosses the bridge from Bahrain's capital, Manama, into Muharraq, the center's triangular wind towers loom over their neighbors, signaling arrival in the historic city. The visitors center is a single architectural gesture in concrete, its roof plane lifted by columns over the ruins of a historic structure called an *amara*—a combination of warehouse, factory, and market. Olgiati describes the project as an act of urban generosity: the nearly 500-foot-long burgundy roof plane provides shade from the Middle Eastern sun while, underneath, a "public foyer" is created within a concrete wall that encircles the site.

To enter, the visitor steps through the gates and under the roof, where the *amara* dock once existed. The enclosed part of the center houses a small auditorium, café, and exhibition room, but the most dramatic space is the outdoor hypostyle hall, with its fenestrated roof plane. This colonnade of dappled shadow and light covers various parts of the old *amara*: the storage areas, the *madbasas* where date honey was made, and the eastern gate through which visitors entered the market.

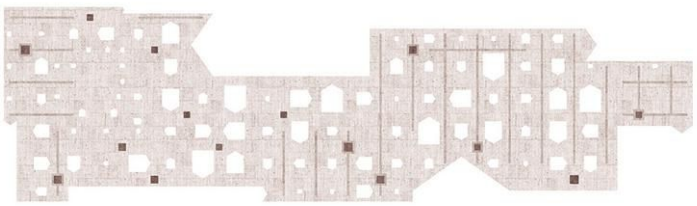
The roof, cutting and jutting out along the edges of the site, is made porous by the deletion and addition of figures shaped like pitched roofs. The rotation and changing direction of the openings allow the roof to be read not as a plane with a single vector, but as a patchwork of different trajectories. The varied widths of the columns and the moments they pierce through the roof to become wind towers give the roof plane a sense of lightness and movement, as if it had floated down and settled at the top of the triangular ends of the columns.

The building borrows few visual cues from its surroundings—the pitched roof/pyramidal motif is foreign to the Bahraini context but, rather, is part of the architect's pursuit of a new formal language, evident in other recent works such as his Céline flagship store in Miami (2018) and an office building currently under construction in Basel. As the project architect, Sofia Albrigo, puts it, "The building makes an effort to rid itself of semantic associations."

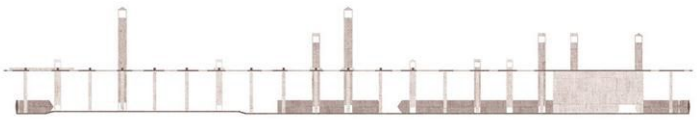
Yet the columns and wind towers are more contextual: they read as abstractions of the *amara*'s repetitive rectilinear structure and as a visual reference to the minarets and wind towers of Muharraq. The wind towers here open at the bottom to allow airflow and create seating, while several of them also conceal pipes for drainage during the rare rainy day. The use of the poured-in-place concrete continues



FLOOR PLAN



ROOF PLAN



LONG SECTION

CROSS SECTION WEST

CROSS SECTION EAST

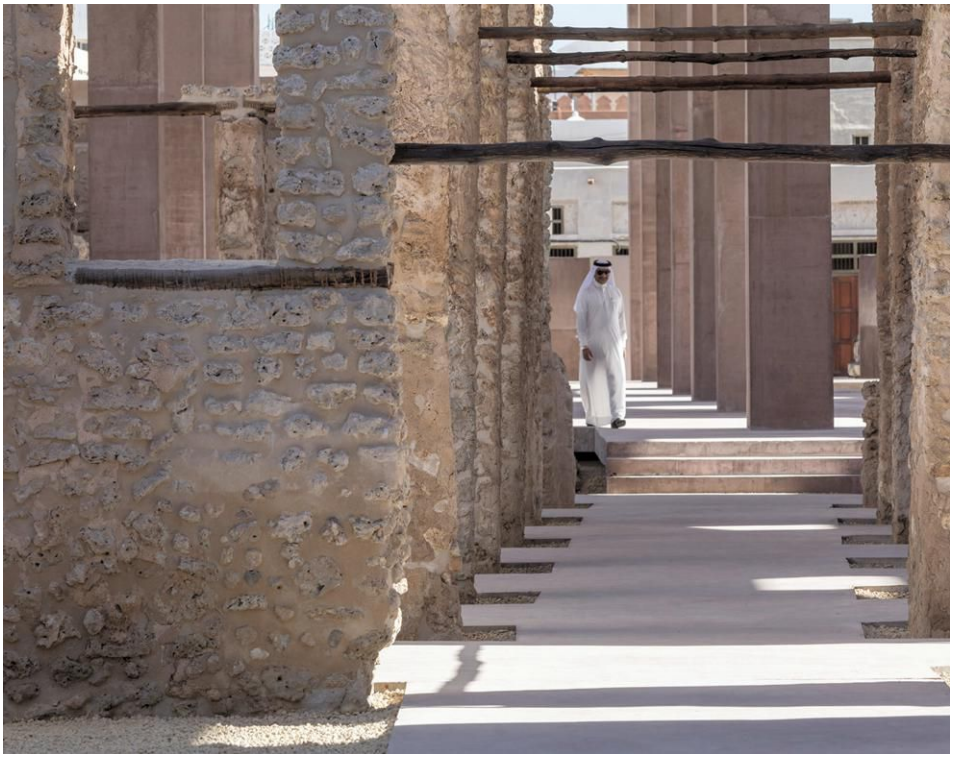
EN PLEIN AIR While much of the porous new building is open to the elements (opposite), an enclosed area contains space for exhibitions. The current show is of pearls from the Hattar jewelry house, Cartier, and the museum archive (above).

to the floor, which is a 10-inch-thick structural slab that sits around some of the ruins upon 50-foot-long piles.

Given the expedited timeline of the construction, the building is far from the Swiss standard for which Olgiati is renowned, with aggregate, rebar, and staining visible in some parts of the concrete. Olgiati remarked that the poor finish of the concrete gives it an honest local quality, and it is true that the roughness contributes to the monumentality and texture of the building. The reddish pigmented concrete stands in contrast to the largely white, sandy color of the city, as well as to the ruins beneath it. It gives the building a living quality as its hue changes from orange, to yellow-gray, to dark maroon, depending on the quality of light and dust in the air.

The visitors center's nonreferential forms, its grand scale, and the coarseness of its construction make its architecture seem far more inscrutable, and as a result, far older than the ruins, which are overpowered. While the center and the *amara* coexist as two distinct entities—a product of Olgiati's efforts to avoid any heavy-handed attempts at the dramatically contextual or explicitly didactic—the new construction seems largely indifferent to the UNESCO site it houses. Although it is intended to be the first experience in Muharraq before seeing the rest of the sites, the scale of the center is far greater than any other architectural work in the old city. The new building's monumentality raises the architectural datum of the visitor experience to a height that runs the risk of flattening all subsequent variations in scale experienced in the rest of Muharraq. And although the colonnade of the visitors center is meant to be a gallery for the ruins, the architecture is neither quiet nor neutral: the columns become architectural objects of varying widths, as irregular as the openings in the roof. As a result, the regular bays of the ruins and their smaller scale end up becoming the backdrop for the visitors center rather than the other way around. It's almost as if the *amara* is a humble intervention in an ancient monumental architecture.

Construction has continued on the Pearling Path Visitors Center since its soft opening in November, with completion expected this month. But it is already a stunning building and will definitely rank among the



finest cultural spaces in the region. As a singular architectural work, the center is a beauty. However, the relationship between the visitors center and the ruins makes one question its success as a part of the Pearling Path master plan. On a cloudy day, when the light is soft and the shadows absent, the visitors center turns a warm brown and slips into the background, allowing the *amara* to come to the fore. But on most days, Olgiati steals the spotlight. ■

Ali Ismail Karimi is a Bahraini architect. He was a co-curator of the Kuwait Pavilion at the 2016 Venice Biennale.

credits

ARCHITECT: Valerio Olgiati Architect – Valerio Olgiati, principal; Sofia Albrigo, Anthony Bonnici, project team

ASSOCIATE ARCHITECT: Emaar Engineering

GENERAL CONTRACTOR: Almoayyed Contracting Group

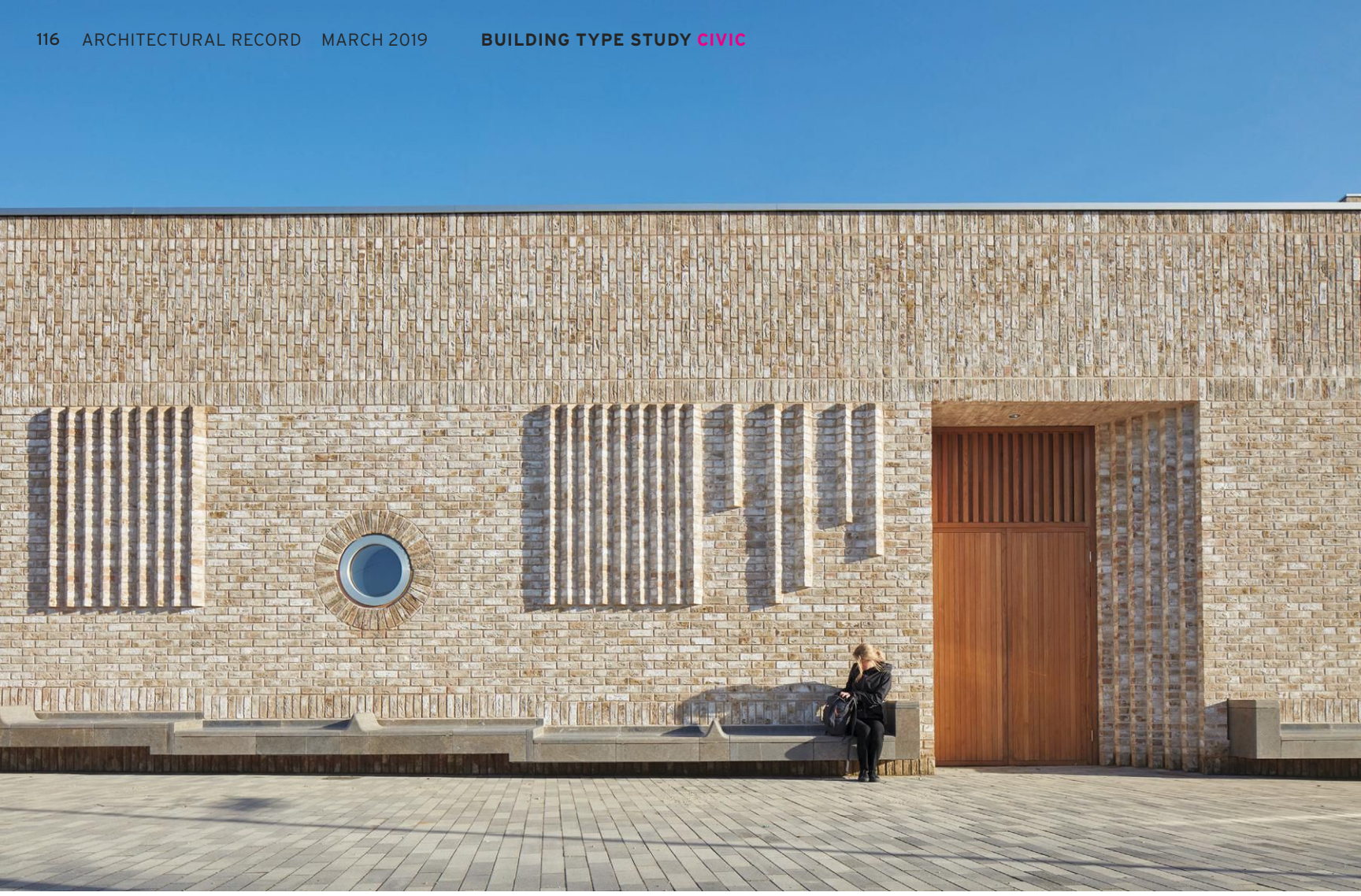
CLIENT: Bahrain Authority of Culture and Antiquities

SIZE: 72,000 square feet

COST: withheld

COMPLETION DATE: February 2019

OLD AND NEW
The wind towers open up at the bottom to allow air flow and to create a ledge for seating (above). The scale of the new building is far greater than the ruins it houses (opposite, top and bottom) and the adjacent buildings in the historic city (right).



Storey's Field Community Center and Eddington Nursery | Cambridge, England | MUMA

Boundary Condition

Reinventing medieval typologies, a thoughtfully detailed building anchors a new development.

BY HUGH PEARMAN

PHOTOGRAPHY BY ALAN WILLIAMS

There's the old Cambridge of ancient university courts (never called quads, as they are at rival Oxford University), the medieval King's College Chapel, and students languidly boating on the River Cam, but there is another side to Cambridge. Away from the tourists and film crews, expanding fast in several directions, this is a new southeast-England town in all but name. Recent districts include Eddington, a planned development in the northwest corner of the city, where there is a refined new civic structure by London-based architects MUMA, combining a theater and community meeting rooms with a daycare center.

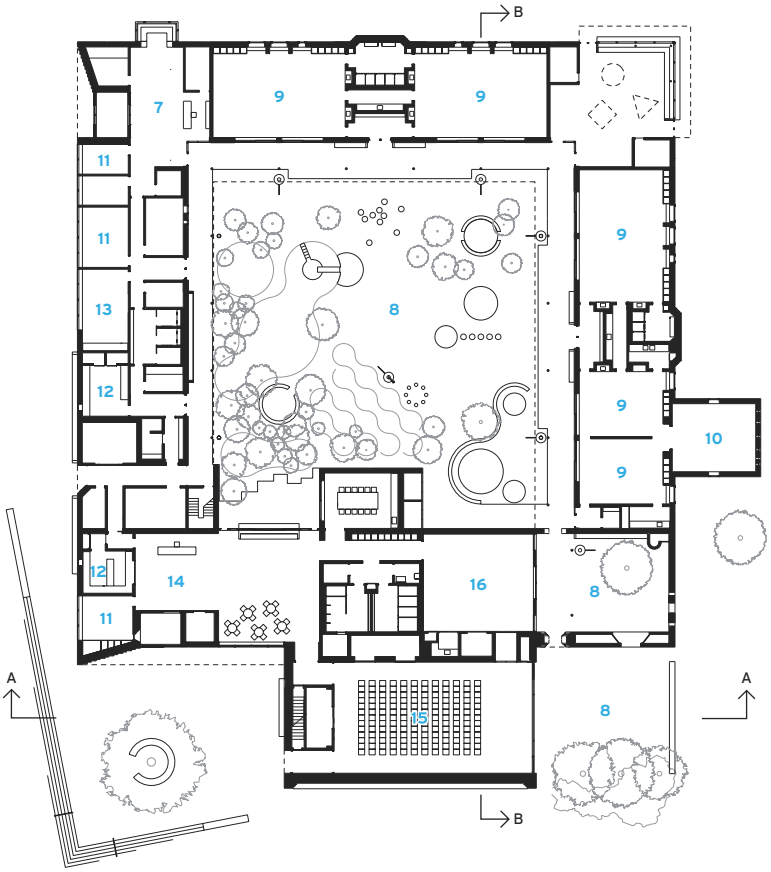
If Manchester's Whitworth Art Gallery extension of 2015 was MUMA's breakout project (RECORD, February 2016), then this community center is their first significant all-new public building. Constructed on farmland squeezed between existing suburbs and a highway, it sets out to accomplish a tricky task—provide an anchor for a place that did not previously exist.

You arrive in Eddington by its new market square, surrounded by apartments, a hotel, shops, and a supermarket, with MUMA's building, Storey's Field Centre (named after the field it overlooks) set on its eastern edge. Around this building is a dense new mid-rise academic precinct—developed by the university itself to provide affordable rental housing for staff and postgraduate students, condominiums, and R&D facilities for high-tech companies, a Cambridge specialty. MUMA

TALL TIMBER MUMA's refined brickwork and limestone benches enliven the facade of the nursery's administration wing (opposite). The main hall, in pale timber and textured brick, commands views of Cambridgeshire's agricultural landscape (above).

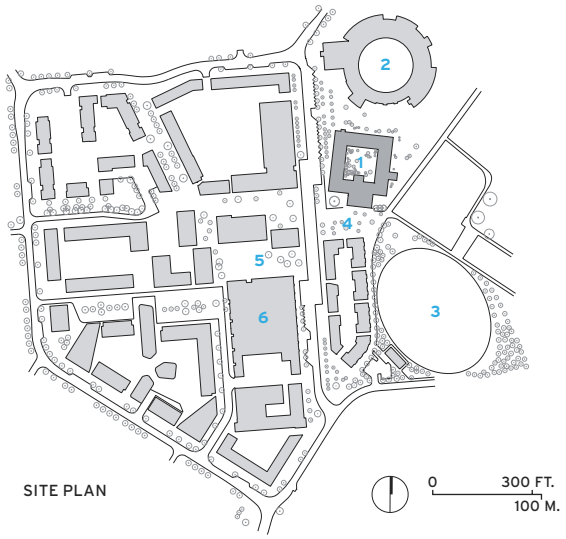
worked within a master plan developed by AECOM but succeeded in tweaking it, to make the community center slightly taller than the other new buildings and angling it a few degrees off the planning grid. This arrangement provides for smaller public gathering spaces, both at the entrance to the center and between its nursery and a neighboring circular elementary school by Marks Barfield Architects. The calm rectilinear forms of the complex, with their textured—and in places perforated—brick, provide civic gravitas.

Since the project is two buildings in one—the center, including the multiuse theater, with one entrance, and the nursery with another—they drew on two famous typologies of the university, as MUMA partner Stuart McKnight explains: the chapel or hall, and the cloister or court (both Cambridge and Oxford universities were originally monastic foundations). Characteristically, in the old colleges, such larger buildings adjoin grass-covered or paved courts, which often have cloister-like perimeter arcades. Same here: the height of the big hall is similar to those in Cambridge's historic center, while the ground-hugging nursery adopts the form of the cloistered court. The enclosed outdoor area, designed by Sarah Price Landscapes, includes mature gnarled fruit trees "rescued" from commercial orchards, and is both a garden and a secure kid's playground. The building's chosen



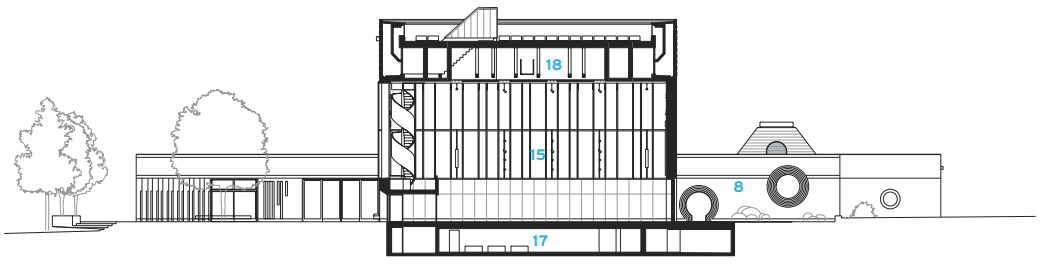
GROUND-FLOOR PLAN

0 30 FT. 10 M.



SITE PLAN

0 300 FT. 100 M.



SECTION A - A

SECTION B - B

0 15 FT. 5 M.

1 COMMUNITY CENTER/ NURSERY
2 PRIMARY SCHOOL
3 CRICKET FIELD
4 COMMUNITY SQUARE
5 MARKET SQUARE
6 SUPERMARKET
7 NURSERY RECEPTION
8 GARDEN
9 CLASSROOM
10 NAP ROOM
11 OFFICE
12 KITCHEN
13 STAFF ROOM
14 COMMUNITY CENTER RECEPTION
15 MAIN HALL
16 MULTIPURPOSE
17 VENTILATION LABYRINTH
18 ATTENUATION ZONE

credits

ARCHITECT: MUMA

CONSULTANTS: AECOM (structural, civil, m/e/p, nursery acoustics, accessibility); Sarah Price Landscapes (landscape); Sound Space Vision (theater); Lumineer (lighting)

GENERAL CONTRACTOR: Farrans Construction

CLIENT: University of Cambridge

SIZE: 24,000 square feet

COST: $10.8 million

COMPLETION DATE: January 2018

SOURCES

BRICK: Weinerberger

TIMBER STRUCTURE: Neue Holzbau

CURTAIN WALL AND SKYLIGHTS: Wicona Glazing, Prism Architectural

WINDOWS: Uniform, Velfac

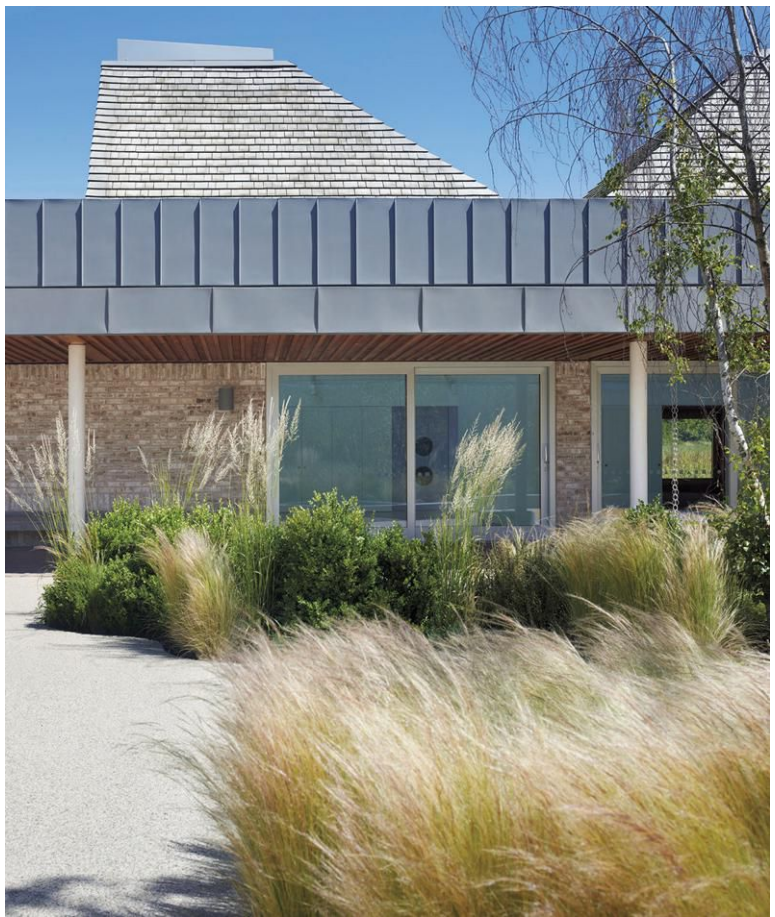
METAL ROOFING: VM Zinc

TIMBER WALL PANELING: CW Fields & Son

PERFORATED CEILINGS: Knauf

RESILIENT FLOORING: Forbo

SOLID SURFACING: DuPont Corian



NEW URBANISM The center sits on the edge of the new district of Eddington and has access to a network of cycling paths (above). Peaked roof classrooms and a cloistered arcade define the nursery's playground (left). A circular air inlet set into a hollow garden wall (opposite) provides ventilation for the main hall.

materials are hard-wearing and well crafted: a pale cream textured brick is set off by a mid-gray fossiliferous limestone, used for the long, built-in external benches and the foyer flooring in the community center. Paneling, doors, and interior details are pale oak, while external details, such as copings and rainwater downspouts, are made of stainless steel. The daycare center sparingly uses terrazzo in its lobby rather than limestone; its material and color palette has a greater emphasis on visual and acoustic softness.

In the community center, the main event is the large hall (though hardly huge, with a capacity of 180 seated or 270 standing). This is naturally ventilated: fresh air is brought in from a labyrinthine void below the hall and exits through an attic above. Both spaces also contain acoustic insulation. The fresh-air intake is itself a piece of architecture, taking the form of a large stainless-steel "rose" set in a hollow of a courtyard garden wall.

The hall is acoustically adaptable in a low-tech way. Its natural double-cube-long reverberation time is tempered by a system of motorized blinds and curtains. The internal textured brick is designed to diffuse rather than reflect sound. Visually, the verticality of the design, with lean timber portal frames, is distinctly chapel-like—as is the slender plywood spiral stair disappearing upward

LIGHT PLAY Inside the classrooms, perforated acoustic ceilings rise to skylights. A clerestory, positioned above the cloister roof outside, admits additional daylight.

from a mezzanine gallery into the roof void, where the lighting-rig mechanisms are housed. You half expect to find a belfry.

The attention to detail throughout the community center is exemplary. The aesthetic is of crisp juxtaposition of durable materials, with occasional splashes of bright color. In the nursery, the scale reduces to toddler size, but there are sensible touches such as lofty, tapering perforated acoustic ceilings with skylights. One room, projecting eastward from behind a run of classrooms, with a constellation of tiny round window lenses, is just for sleeping. Another, busier room features large primary-hued nooks, with windows that are triangular, square, or circular; through these, the small kids can look across to their bigger siblings in the adjacent elementary school. The outdoor arcade around the court links the various rooms and spaces, avoiding internal corridors.

If the inspiration is medieval English, the outcome is distinctly Scandi-modern. This is intelligent, humane architecture of a high order. If only all new town centers enjoyed this level of design attention. ■

London-based Hugh Pearman is the editor of the RIBA Journal.

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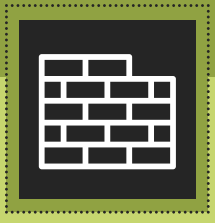

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Garage Band

Parking facilities riff on new uses as the automobile's role evolves.

By Katharine Logan

THE WAY people get around is undergoing a revolution—three revolutions, in fact: electrification, automation, and shared mobility. One of the far-reaching implications of this coming change is that a staid, stolid, and largely unloved building type, the multilevel parking garage, will require a radical rethink.

By 2040, more than half of the miles traveled in the U.S. could occur in shared autonomous vehicles (AVs), which would rarely need to park, according to a 2016 study by Deloitte, a financial and risk-management consultant. Dense urban areas in particular—likely to be well served by public transit, AV fleets, ride-sharing, and other transportation options—can expect to see demand for parking plummet while the need for new kinds of spaces, such as pickup and drop-off zones, electric vehicle (EV) charging stations, and AV hubs, emerges. The question for architects, says Amy Korte, a principal with Boston-based Arrowstreet, "is how quickly can we, as design professionals, run through the possible scenarios to help cities and municipalities plan for them?"

Prominent among these scenarios is the potential blight of surplus parking structures. "The prediction that garages aren't going to exist anymore isn't quite accurate," says Korte. Some may transform into docking hubs where AVs can be charged, cleaned, and serviced. City planners typically advocate for locating these stations on the outskirts of the city. However, Korte says entrepreneurs exploring the business model want such garages located centrally. That way, travel time while empty is minimized, and the vehicles are able to return more quickly for servicing.

For garages that don't find new life as trans-

Carl Turner Architects turned Peckham Levels, a former parking garage in southeast London, into a community amenity, with cafés (above), workspaces, galleries, and artists' studios (top, right).

IMAGES: © TIM CROCKER (OPPOSITE AND TOP); COURTESY ATELIER HU AND CARL TURNER ARCHITECTS (RIGHT)

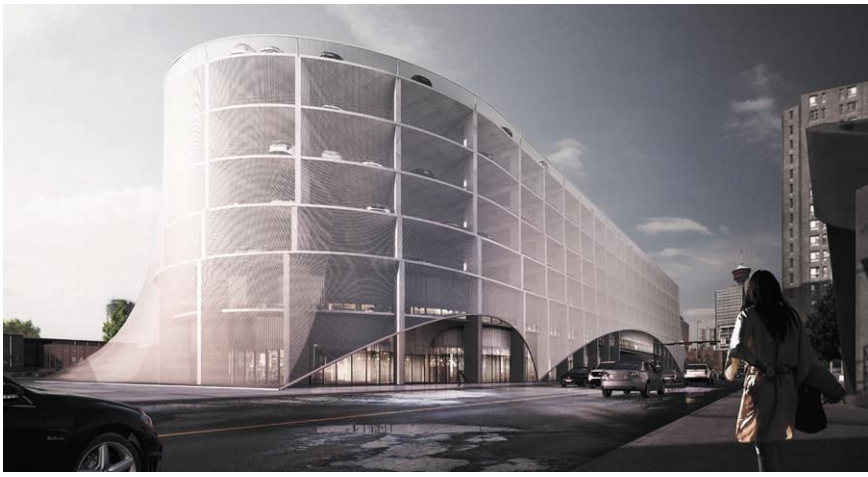
port hubs, the municipalities that are often the owners of these hulking, low-ceilinged, slope-floored structures may be hard-pressed to know what to do with them. Peckham Levels, a multistory, split-level, early 1980s garage located in a bustling area in southeast London, offers one promising example.

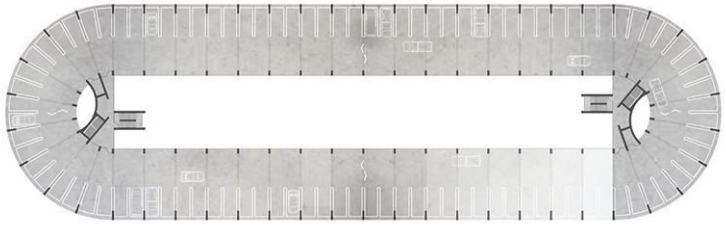
Winner of a 2018 New London Award for best "meanwhile" project (one intended for interim use, in this case 15 years, pending development of a long-term plan), "Peckham Levels has taken a disused carpark that, for decades, was a site of antisocial behavior and made it a popular town-center venue," says Paul O'Brien, an associate at London-based Carl Turner Architects (CTA), designers of the project.

The transformation of 95,000 square feet of the garage's midlevels (the upper levels are leased seasonally as a bar and patio, while the ground floor is a multiscreen cinema), completed in 2017, provides the neighborhood with much-needed community space and affordable workplaces. Public program elements include a play area, event and gallery space, food and drink outlets, and a yoga studio and hair salon, while the workspaces include various sizes of customizable shells, with shared service areas, that have enabled local artists, makers, and entrepreneurs to create their own jobs.

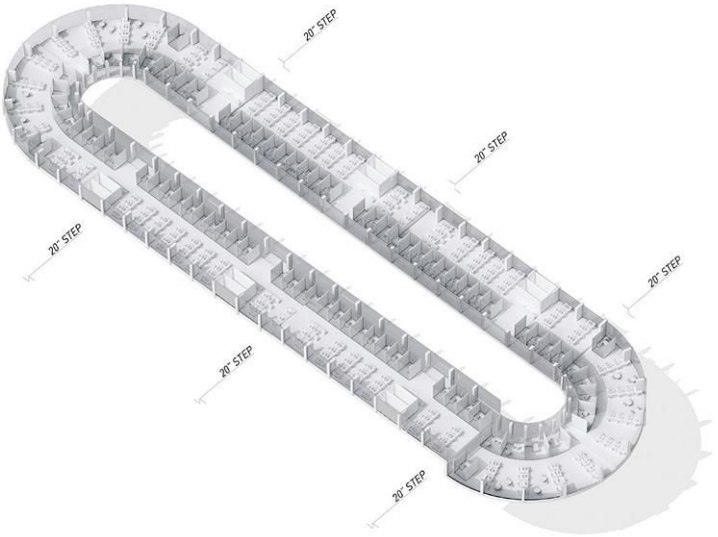
The design brings a light touch to the conversion. "There was no point trying to cover

PECKHAM LEVELS EXPLODED AXONOMETRIC





9TH AVENUE PARKADE BASE PARKING PLAN



9TH AVENUE PARKADE OFFICE CONVERSION AXONOMETRIC

Designed by 5468796 architecture and Kasian Architects, the 9th Avenue Parkade is a garage sheathed with a metal mesh (above, right) planned for the East Village neighborhood in Calgary, Canada. Shaped like a racetrack, the building will have five upper levels of parking stalls that are designed to be converted for residential (above) and commercial uses.

everything up and make it feel as though you weren't in a carpark anymore," says O'Brien. "That was the charm of it." The approach also suited the budget, about $42 per square foot. Major interventions are limited to enclosing the open-sided building, with new windows and insulation, and installing mechanical, electrical, and plumbing systems. Concrete structure and services are exposed overhead. Parking spaces are still marked on the floors. Partitions of oriented strand board on wood studs separate the perimeter workspaces, and translucent polycarbonate panels admit daylight to the former drive aisles, which are now corridors.

The main difficulty of converting the garage revolved around the low ceiling height (7½ feet to the underside of beams) and floors sloped to drain. Locating partitions beneath beams, and running ducts parallel to them, makes the most of the limited height. In larger coworking spaces, plywood floors on leveling battens allow people to sit around a long table without their pens rolling away. But the big move was the choice of program. People on their feet, moving around, making things, are more likely to appreciate the rough-and-ready aesthetic and less likely to notice the slight floor incline, says O'Brien: "It would have been very difficult to bring it up to a comfortable standard for housing."

The surprise challenge, however, was structural capacity. With such a hefty concrete structure, it would be easy to assume that it could support any load. But cars are full of air, so they're not very heavy for their footprint, and, unlike crowds in a bar or music venue, they don't dance. With advice from the project's structural engineer, Eckersley O'Callaghan, CTA repositioned the program's heavier loads to locations where adding carbon-fiber reinforcement to the underside of existing beams was straightforward. "If we were asked to design a carpark now," says O'Brien, "we would ask the clients or the engineers whether we could potentially future-proof it in terms of loading and ceiling height."

That's exactly what two projects now in the works are doing—a freestanding public structure in Calgary, Canada, and a below-grade

IMAGES: COURTESY 5468796 ARCHITECTURE

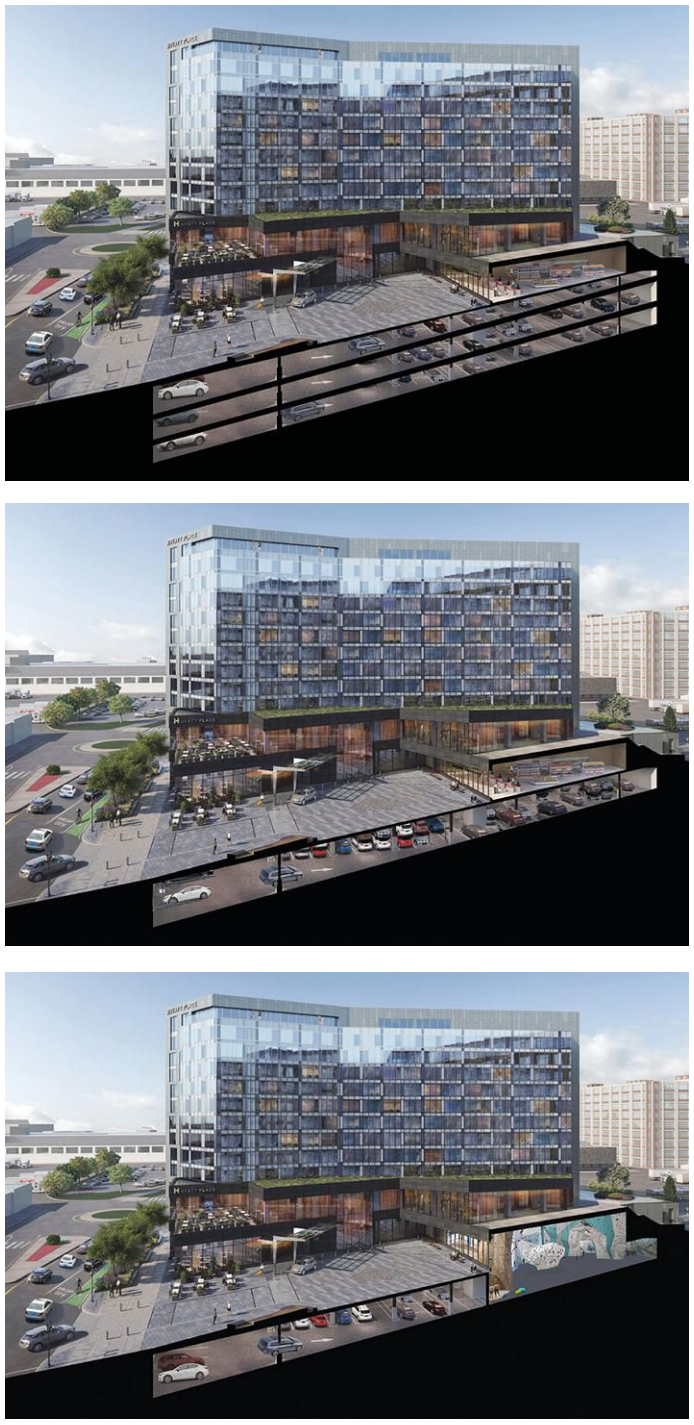
"parkade" that is part of a mixed-used development in Boston's Seaport neighborhood.

Calgary has a reputation as a city with a strong car culture, says Johanna Hurme, principal at Winnipeg-based 5468796 architecture, designers, in collaboration with the local office of Kasian Architects, of the 9th Avenue Parkade. Even so, "the municipal parking authority came to us with the idea that this would be the last parkade they ever built," says Hurme. "For them to say that perhaps car ownership and parking are not the future set the tone for the project."

Located in the city's East Village, where it will serve a new central library designed by Snøhetta (RECORD, January 2019) as well as local businesses in the revitalizing neighborhood, the $40 million, metal-mesh-draped project comprises a mix of uses. The ground and second floors house a 55,000-square-foot innovation center, named Platform. Similarly to Peckham Levels, Platform will provide multipurpose spaces for makers, entrepreneurs, and community members. The upper five decks, which in the immediate term will provide 510 parking spaces, are designed to facilitate conversion in the longer term to residential or commercial uses.

Of the four most common garage floor types (ramping, split level, flat with helical ramps, flat with perimeter ramps), the flat-floor types are the most easily adaptable, yet their separate ramps constitute a distinct retrofit expense and take up valuable space. So the 9th Avenue Parkade's floor type is a hybrid. The initial ramp from street level will be suspended from the structure for easy removal. For the upper levels, the site is large enough that a continuous slope of just 2 percent achieves the required floor-to-floor rise. Future uses on the shallow slope will be built in terraced segments.

Additional provisions for adaptability include a racetrack-shaped plan with a 40-foot-wide atrium bringing daylight to the narrow (40-foot) column-free floor plates to either side. The post-tensioned structure is sized to accommodate residential or light commercial uses in the future. And the parkade's ceiling heights provide between 12½ and 14 feet clear. Hurme estimates that the building's future-proofing measures represent a surcharge of about 10 percent in construction costs.



Arrowstreet's plan for Parcel K in Boston originally had three levels of below-grade parking (top). The firm later settled on just one (middle) and imagined a scenario where parts of the parking level and the ground floor can turn into a double-height space (bottom).

While it's easy to imagine any number of possibilities for an aboveground structure such as the 9th Avenue Parkade, alternate uses for layer below layer of underground parking are tougher to come up with. In 2015, Parcel K, a ½ million-square-foot mixed-use project in Boston's Seaport district, then in design development, had three levels of below-grade parking planned. Then Tesla achieved a self-driving milestone with its Autopilot software, and Uber hit a billion rides—and then 2 billion just six months later—and all that parking began to look like a dubious investment. So the project's architect, Arrowstreet, came up with a more flexible solution.

Deleting two of the parking levels saved about $18 million in construction costs, reduced the construction schedule by an estimated six months, and eliminated future maintenance expenses on excess capacity. For the remaining level, the design provides for a parking-space count that could range from 197 to 420, achieved with valet parking and a mix of stackers (devices that lift vehicles to enable more to be parked beneath), striped spaces (conventional spaces painted on the floor), and drive-aisle parking. For additional flexibility, the parking level's floor-to-floor height was increased to 15 feet, 6 inches, and a scenario envisioned where a future double-height space could be created to allow new uses on the parking level that would engage with street-level retail space on the floor above.

Improved adaptability will make the parking garage a more versatile building type, but even as a garage it can be made more efficient, pleasant, and environmentally responsible. The Parksmart rating system, administered by Green Business Certification Inc. (GBCI), recognizes parking structures that implement best practices. These include reducing environmental impact, improving energy efficiency, managing parking spaces effectively, encouraging alternative mobility options, and strengthening community relationships.

The Center Street Parking Garage, an eight-level, $40 million, net zero energy facility in Berkeley, California, replaces a smaller, seismically inadequate parking structure from the 1950s, and is expected to certify at Gold, Parksmart's highest level. "The City of Berkeley understood that parking is crucial in making a viable downtown," says Raju Nand-

IMAGES: © ARROWSTREET

The Center Street Parking Garage in Berkeley, California, sports a facade designed by local firm Marcy Wong Donn Logan Architects (above). It consists of folded and perforated metal panels that weave across the building's exterior and are illuminated by programmable colored lighting.

wana, vice president at International Parking Design (IPD), the Oakland-based architect for the project, "but they also had the political will to put in the attributes and qualities that exemplify what parking could be."

A dynamic facade, designed by local Marcy Wong Donn Logan Architects, contributes to the liveliness of the city's arts district: folded and perforated metal panels form a fluid pattern on both exposures of the through-block building, and programmable colored lights add verve. Ground-level art-exhibit space, a café, and a curbside micropark animate the building's street fronts. Care for the pedestrian experience of the garage shows in its open, safe, and inviting stairs, its clear graphics that support wayfinding, its public restrooms, and a state-of-the-art security system.

With 720 spaces, the new garage provides a 70 percent increase in capacity compared to the previous one, and increased functionality. A camera-based parking-count system directs drivers to available spaces, saving time, frustration, and gas. Fuel-efficient vehicles enjoy preferred parking, and electric-vehicle charging and tire-inflation stations are provided.

Beyond cars, the garage supports a range of mobility options that integrate it into a multimodal transportation network. Located less than a block from a commuter-rail station, the facility includes 350 bike spaces, a free bike valet, and a Bike Station (a secure bike parking facility for commuters, complete with a bicycle-equipment repair shop). The parkade also hosts car- and bike-share hubs for those with no need to own. And, by enabling a reduction in street parking, it even makes room for wider sidewalks.

The building takes its environmental responsibilities as seriously as its civic and operational ones. A 500-panel photovoltaic array on its rooftop enables the garage to meet all of its own power needs, and the structure is sized to support an expanded array in the future. Energy-efficient sensor-controlled lighting, low-VOC paints, recycling receptacles, water-conserving restroom fixtures, and rainwater catchment and filtration systems round out the project's environmental credits. "This is an example of what we would ideally like to see all parking garages become," says Nandwana.

While the mobility revolution suggests that the days of America's vehicles sitting parked 95 percent of the time will soon be over, the Center Street garage hints at the potential for centrally located parkades to evolve into multifunctional hubs in a diversified transportation system—just as Peckham Levels, 9th Avenue, and Parcel K suggest ingenious possibilities for the evolution of the building type in completely new directions. ■

Katharine Logan is an architectural designer and a writer focusing on design, sustainability, and well-being.

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Learning Objectives

1 Discuss the implications of autonomous vehicles, or other innovations in forms of transportation, for parking garages.

2 Describe how disused parking garages could be repurposed, including structural retrofit challenges.

3 Outline ways new parking garages can be future-proofed to minimize structural and other modifications for conversion to different uses.

4 Discuss best practices in parking garage design, including those for energy efficiency, wayfinding, and safety.

AIA/CES Course #K1903A

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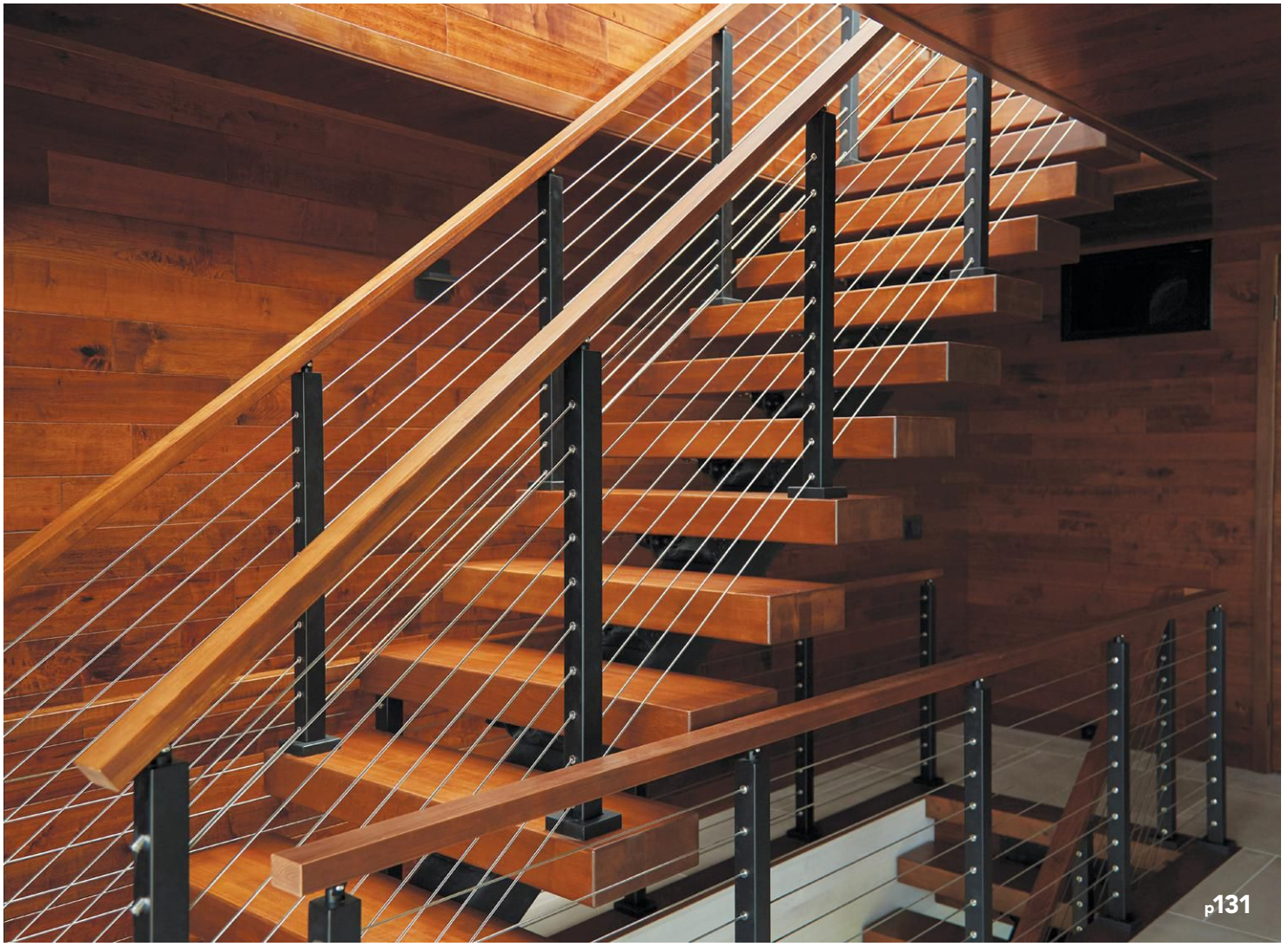
p131

Photo courtesy of Viewrail

The Beautiful, Modern, Budget-Friendly Floating Staircase

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CATEGORIES

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Course may qualify for learning hours through most Canadian provincial architectural associations.

"In the past, it has taken us weeks to months to pull together a stair system as elegant as this one," says Lowell Smith of Dunes Development. "On the first flight of stairs, we had a bit of a learning curve, and it took us all of two days. We installed the second flight of floating stairs in one day."

All photos courtesy of Viewrail

The Beautiful, Modern, Budget-Friendly Floating Staircase

A closer look at tips and trends for designing with this new staircase style

Sponsored by Viewrail | *By Jeanette Fitzgerald Pitts*

There is a common misconception in the marketplace that dramatic, beautiful, and unique staircases must be expensive, time intensive, and complicated to incorporate into an interior. While, historically, staircases of note have been large, sweeping, architectural wonders constructed in marble or mahogany, today, contemporary design demands interiors that are streamlined and stripped back, so staircases have been revamped and redesigned to contribute to this minimalistic aesthetic. In the process, manufacturers created modern staircase solutions that could offer a simplified design process, be produced quickly, feature stunning materials, and be easily installed in as little as one day. The result of these streamlining and engineering efforts is a new type of modern staircase that satisfies mid-market project budgets in the commercial and residential space and offers a more attractive alternative to the concrete or drywall-encased stairways that so often find themselves hidden on the perimeter of a building.

This new type of modern staircase creates drama and visual interest with air and openness and features a footprint so small, and structural supports that are so hidden, that the element practically floats in the space, which may explain how it came to be named a floating staircase.

CONTINUING EDUCATION

1 AIA LU/HSW

Learning Objectives

After reading this article, you should be able to:

1. Explain the differences between floating and conventional staircases that enable floating staircases to allow people to safely travel between floors while requiring a much smaller footprint, supporting open-area design, and preserving views to the outdoors instead of obstructing them.
2. Describe the floating staircase configurations that are available to meet the unique elevation and available space requirements of a project.
3. List the International Building Code (IBC) criteria that the design of a floating staircase must satisfy to be considered code compliant.
4. Compare the design approaches of using a local metal fabricator vs. a manufacturer to produce a floating stair system, and discuss the implications on the design process, delivery timeline, and ease of installation.

To receive AIA credit, you are required to read the entire article and pass the test. Go to **ce.architecturalrecord.com** for complete text and to take the test for free.

AIA COURSE #K1903B

Floating staircases are modern solutions that can be produced quickly, installed in as little as one day, and feature stunning materials.

THE ANATOMY OF A FLOATING STAIRCASE

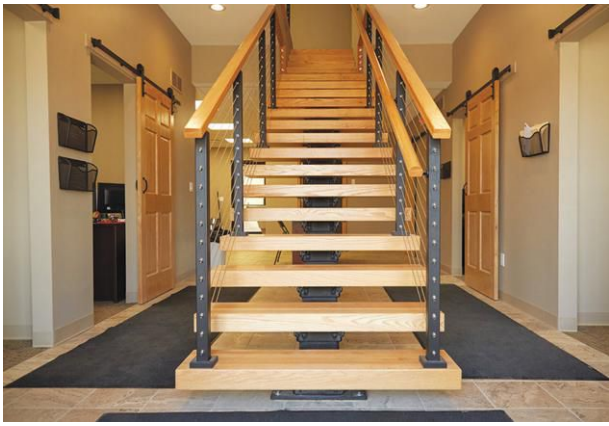
A floating staircase is, essentially, an aesthetically deconstructed staircase, where the extraneous parts and pieces have been removed to reveal the basic components a staircase must possess to enable people to climb and descend safely throughout a space. The entire floating stair system is comprised of four key elements: a mono stringer, treads, brackets, and the railing system.

Instead of using two stringers to support the staircase on its right and left sides, which is the approach most commonly found in commercial and residential construction today, a floating staircase uses a single, central stringer for the necessary support. This type of stringer is referred to as a mono stringer. The mono stringer is a heavy-duty, mild steel tube that serves as the central beam running underneath the stairs from the top to the bottom of the staircase. One mono stringer supports one flight of stairs.

The use of one central stringer, instead of two stringers that flank the length of the staircase, eliminates the need for many of the finishing elements that are typically used to make the more visible stringers running alongside each staircase more aesthetically appealing. For example, a floating staircase does not need stringer fascia, the finished inside vertical surface of the stringer, or stringer capping, the finished surface that runs along the top of the stringer.

The treads are the horizontal surfaces of the stair, which provide the surface on which people step as they go up and down. Traditionally, stairs have been constructed with treads providing horizontal surfaces and risers providing the vertical surface between each tread. The tread-riser-tread-riser-tread-riser configuration creates that completed ribbon appearance that most stairs possess. Floating staircases do not include risers, allowing each tread to stand alone and enabling space, air, and view to travel through and around the staircase. Each tread is then fastened securely to the mono stringer with a bracket.

The last component of the floating staircase is the railing system. The railing system is constructed of the handrail, posts, and infill. The handrail is the part of the railing system that a person holds as while walking up or down a stair. The posts are the vertical structures that connect the handrail to the staircase and provide the support necessary to withstand the lateral force applied to the handrail when a person uses it. In a floating staircase, the posts are installed either directly into the treads or attached to the side of them. The infill is the material that fills in the open space between the posts and the treads and the handrail, creating a safety barrier along the staircase.



Floating staircases do not include risers, which allows light and view to travel through and around the dramatic structure.

Railing systems have been built from a variety of materials over the years and constructed with varying degrees of detail, depending upon the application. The most distinguishing factor about the infills used in floating staircases is that, while meeting safety requirements, they offer an incredible openness that allows light and views to travel unobstructed throughout an interior. Commonly constructed from cables, rods, or glass, these materials create beautiful, effective, and modern railing systems that do not have visual barriers that break up a room.

THE AESTHETIC DIFFERENCE: FLOATING VS. CONVENTIONAL

The combination of the mono stringer, standalone treads, brackets, and transparent railing system used in the floating staircase creates a minimal and modern aesthetic that is dramatically different from the fully encased appearance so often created with conventional staircases. Conventional staircases are regularly designed to appear as if they are nestled into the larger building.

Continues at ce.architecturalrecord.com

Jeanette Fitzgerald Pitts *has written nearly 100 continuing education courses exploring the benefits of incorporating new building products, systems, and processes into project design and development.*

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New and Upcoming Exhibitions

Répétiteur
New York
March 2–10, 2019
This site-specific installation by visual artist Jorge Otero-Pailos will draw attention to the material residue left on the surfaces of a room by dancers. The residue is cast in latex and illuminated in boxes, throwing the rehearsal room into a meditative light, with each box generating a sound collage. At the New York City Center. Visit nycitycenter.org.

HOOPS
Washington, D.C.
March 9, 2019–January 5, 2020
This exhibition will present photographer Bill Bamberger's images of private and community basketball courts around the United States and abroad. A selection of photographs will take viewers from the deserts of Arizona and Mexico to the playgrounds of South Africa. At the National Building Museum. Visit nbm.org.

Lost and Found
New York
March 15, 2019
The inaugural exhibition at Snark Park—an immersive installation space created by design studio Snarkitecture in Hudson Yards—will invite visitors to a labyrinth of large cylinders. Some spaces are large enough to occupy, while others are intended to be viewed from outside. Each experience is meant to be a unique exploration of materials, activities, and retail. Visit snarkpark.com.

Nature—Cooper Hewitt Design Triennial
New York and Kerkrade, Netherlands
May 10, 2019–January 20, 2020
More than 60 projects will be featured at this joint exhibition between the Cooper Hewitt, Smithsonian Design Museum and Cube design museum. The exhibition will demonstrate how designers are collaborating with scientists, engineers, environmentalists, academics, and other stakeholders to find inventive and promising solutions to the environmental and social challenges confronting humanity today. More information at cooperhewitt.org.

Ongoing Exhibitions

In Practice: Other Objects
New York
Through March 25, 2019
This exhibit presents works, by 11 artists and artist teams, that probe the slippages and interplay between objecthood and personhood. From personal belongings to material evidence, sites of memory, and revisionist fantasies, the artists highlight curious and ecstatic moments in which a body becomes a thing or a thing stands in for a body. At SculptureCenter. For more information, visit sculpture-center.org.

Design and the Just City in NYC
New York
Through March 30, 2019
The exhibition asks viewers whether design can help correct urban injustice in cities. It features research from the Harvard Graduate School of Design's Just City Lab and examines five case studies in New York, using an assessment tool that includes 50 indicators and values that contribute to realizing the "Just City." An interactive map invites visitors to plot a collective manifesto for the Just City in New York. At the Center for Architecture. See centerforarchitecture.org.

Derrick Adams: Interior Life
New York
Through April 20, 2019
Inspired by a tenet of Catholic theology that describes "a life which seeks God in everything," this exhibition is a meditation on the inti-

mate spaces of one's mind and home, each an analog for the other. It includes new portraits on paper from the artist's ongoing "Deconstruction Worker" series, which is installed on custom wallpaper depicting imaginary domestic environments. At Luxembourg & Dayan's New York gallery. More at luxembourgdayan.com.

The Whole World a Bauhaus
Elmhurst, Illinois
Through April 20, 2019
In celebration of Bauhaus100, the centenary anniversary of Germany's influential Bauhaus school of art and design, this traveling exhibition displays a range of work from masters including Mies van der Rohe, Walter Gropius, and Marcel Breuer. The show is split into eight themes, each also highlighting Bauhaus student projects, the school's impact on the international avant-garde, and how students and instructors sought to rethink their world. At the Elmhurst Art Museum. More information at elmhurstartmuseum.org.

Dimensions of Citizenship: Architecture and Belonging from the Body to the Cosmos
Chicago
Through April 27, 2019
The official U.S. entry at the recently concluded 16th International Architecture Exhibition of the Venice Biennale is on view for the first time in the United States. Devoted to exploring the notion of citizenship today and the potential role of architecture and design in creating spaces for it, *Dimensions of Citizenship* comprises seven unique installations, each created by a team of architects and designers. At Wrightwood 659. For more information, visit wrightwood659.org.

The Sea Ranch: Architecture, Environment, and Idealism
San Francisco
Through April 28, 2019
The exhibition brings together original sketches and drawings from the designers of this Modernist beach development on the Northern California coast. Archival images, current photographs, and a full-scale architectural replica are also on display. At the San Francisco Museum of Modern Art. For more information, visit sfmoma.org.

David Adjaye: Making Memory
London
Through May 5, 2019
Through the British-Ghanaian architect's

work, the exhibition addresses how a building can shape the public's perception of events and how architecture, rather than words, can tell stories. At the Design Museum. More information at designmuseum.org.

Patchwork: The Architecture of Jadwiga Grabowska-Hawrylak
New York
Through May 18, 2019
The exhibition presents the work of one of the most important Polish architects of the 20th century. Through models, films, and photographs, visitors can learn about Grabowska-Hawrylak's studies in the 1940's and her involvement in almost all stages of the reconstruction and creation of Wrocław, in what is the first comprehensive presentation outside Poland of her work. At the Center for Architecture. Visit centerforarchitecture.org.

Nari Ward: We the People
New York
Through May 26, 2019
The exhibition features over 30 sculptures, paintings, videos, and large-scale installations throughout the Jamaican artist's 25-year career. It also highlights the continued importance of New York, particularly Harlem, to the material and thematic content of his art. At the New Museum. More at newmuseum.org.

Hugh Kaptur: Organic Desert Architecture
Palm Springs, California
Through June 17, 2019
The exhibition explores the visionary designer's body of work and places him in the context of his Desert Modern peers, through archival drawings, models, sketches, slides, period photographs, and ephemera. At the Palm Springs Art Museum. For more information, visit psmuseum.org.

Secret Cities: The Architecture and Planning of the Manhattan Project
Washington, D.C.
Through July 28, 2019
The exhibition delves into the innovative design and construction of three cities born out of the Manhattan Project, tracing their precedents in the Bauhaus and other early modern schools of architectural thought. The show looks at daily life within those cities and how it was shaped by their physical form. At the National Building Museum. Visit nbm.org.

Prisoner of Love
Chicago
Through October 27, 2019
The exhibition, which examines the heights and depths of human experience by capturing the intensities of love, fear, and grief, features artist Arthur Jafa's *Love Is the Message, the Message Is Death*, a film that explores the African-American experience in the 20th and 21st centuries. The work is set to the gospel-infused song "Ultralight Beam" by rapper Kanye West. At the Museum of Contemporary Art Chicago. See mcachicago.org.

Lectures, Conferences, and Symposia

Spotlight on Design: Allied Works Architecture
Washington, D.C.
March 7, 2019
Brad Cloepfil, Allied Works' founding principal, will shed light on the firm's current work, which includes the new National Veterans Memorial and Museum in Columbus, Ohio. At the National Building Museum. More information at nbm.org.

dates&events

Teddy Cruz and Fonna Forman
Los Angeles
April 3, 2019
The principals of San Diego–based Estudio Teddy Cruz + Fonna Forman will discuss their work—much of which involves investigating issues of informal urbanization, civic infrastructure, and public culture in Latin America—at the University of Southern California's School of Architecture. More information at arch.usc.edu.

Mundaneum XIII-International re_UNION on Architecture: Pan Americas
New York
April 4–5, 2019
The conference will focus on current social, environmental, urban, cultural, and architectural issues in Latin America. Twelve prestigious Latin American architects and urbanists will lecture, including Mónica Bertolino, Guillermo Garita, Orlando García, architecture critic Fredy Massad, and Columbia University professor of architecture Pedro Rivera. At the City College of New York Bernard and Anne Spitzer School of Architecture. More at ssa.ccny.cuny.edu.

Living Future '19
Seattle
April 30–May 3, 2019
This conference on regenerative design will bring together leading green thinkers and practitioners to share their insights on building socially just, culturally rich, and ecologically restorative communities. Over 1,100 from around the world are expected to attend. See unconference.living-future.org.

Competitions

MK:U International Design Competition
Deadline: March 6, 2019
The Milton Keynes Council, together with Cranfield University and Malcolm Reading Consultants, invite architects to design a master plan for the site and first buildings of a new model university. More information at competitions.malcolmreading.com/mku.

Future Library
Deadline: March 10, 2019
This competition challenges designers and architects to design learning spaces of the future and support the technological vision of the University of Genoa in northern Italy. More information at competitionsfordesigners.com.

California Mass Timber Building Competition
Deadline: March 18, 2019
Applicants are encouraged to present viable and repeatable mass timber solutions for commercial or multifamily projects in California. A total of $500,000 in grants will be distributed between two or more winning project teams. The grants will fund activities that include cost studies, permitting fees, and information-exchange sessions with code officials. More information at govops.ca.gov.

Lyceum Fellowship: A Sanctuary
Deadline: March 22, 2019
Founded in 1985, the awards program has a mission to advance the profession of architecture by engaging students in design and travel. Prize money is targeted for travel grants during their academic study years. This year, candidates are asked to design a place of refuge and protection. More information at lyceum-fellowship.org.

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snapshot

PROJECT XIQU CENTRE
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IN 1998, Hong Kong's chief executive Tung Chee-hwa had a bold vision for 100 acres of reclaimed land in West Kowloon—to turn it into a cultural district with performing-arts venues, an arts center, and an exhibition space. The initiative has slowly come to life, most recently with the construction of the 320,000-square-foot Xiqu Centre opera house, designed by Canadian firm Revery Architecture (formerly Bing Thom Architects) and Hong Kong–based practice Ronald Lu & Partners. Drawing inspiration from qi—which, in Chinese, translates to "flow"—the architects devised the building's curvilinear aluminum exterior and carried the conceit inside. Below the elevated 1,000-seat Grand Theatre, the team carved out a swoopy atrium. At its center, a pedestal-like performance area rises 11-feet from the sloping floor and is topped with a cloudlike ceiling fashioned of white-painted aluminum ribbons; the space currently displays an installation inspired by traditional theater pavilions. Here, visitors can enjoy *xiqu*—Chinese opera—demonstrations even if they don't have tickets to catch a full performance. "There is this 'flow' in the way people dance and in the way the music is played in Chinese opera," says Revery's design principal Venelin Kokalov. "We wanted to create an atmosphere that brings out this feeling." *Justin Chan*

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