THE ARCHITECT'S NEWSPAPER

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A TEAM OF LANDSCAPE ARCHITECTS, GENETICISTS, AND BIOINFORMATICIANS ARE TRAWLING THE GOWANUS CANAL FOR SCIENCE

Go Go Gowanus

COURTESY BK BIOREACTOR

Thinking of a quick dip in the Gowanus? Perhaps not. After 150 years of industrial pollution, combined with sewage overflows and stormwater run-off, the canal is generally seen to be an undesirable place. However, one **continued on page 18**

THE LATEST UPDATE ON SEATTLE'S WATERFRONT TRANSFORMATION

Big Nature, Big City

Seattle, Washington's waterfront redevelopment, an endeavor James Corner Field Operations (JCFO) has been working on diligently for nearly a decade, is steadily moving closer to being implemented, as the $700 million project heads toward beginning construction this year.

The development cleared a major hurdle in August, when supporters of the project garnered over 80 percent of the cast ballots needed to reject an initiative that would have derailed the JCFO scheme. JCFO's vision for the two mile-long promenade would stitch together city's burgeoning downtown with its isolated, post-industrial waterfront, converting the space currently occupied by the Alaskan Way Viaduct into a broad **continued on page 18**

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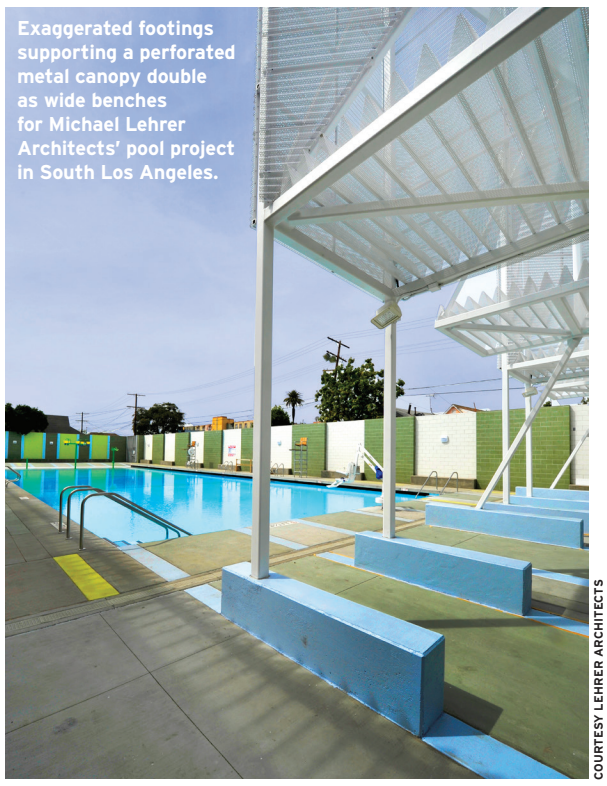

Exaggerated footings supporting a perforated metal canopy double as wide benches for Michael Lehrer Architects' pool project in South Los Angeles.

COURTESY LEHRER ARCHITECTS

LEHRER ARCHITECTS DESIGN A BREEZY POOL FOR SOUTH L.A.

LIGHT GUARDS

This summer, Lehrer Architects completed work on its latest public park project: the Central Park Recreation Pool in South Los Angeles. Designed to replace an aging aquatics complex, the 1.44-acre project was funded by the City of Los Angeles Department of Recreation and Parks, and is infused with Lehrer Architects' characteristic do-more-with-less architectural ethos. The project, consisting of a refurbished bathhouse and pool, aims to reactivate a vital **continued on page 12**

A GRASSROOTS ORGANIZATION HAS STARTED AN ENVIRONMENTAL MOVEMENT IN IOWA CITY

When the Levee Breaks

FEMA/SUSIE SHAPIRA/WIKIMEDIA COMMONS

One might not expect Iowa City, a midsize heartland town of 70,000, to be on the forefront of urban sustainability issues. But Iowa City has everything to lose if climate change isn't addressed. In 2008, a massive flood caused an estimated $64 billion in damage to the state, roughly equivalent to that caused by Hurricane Sandy. That flood was preceded by 239 tornados, which hit the Midwest **continued on page 14**

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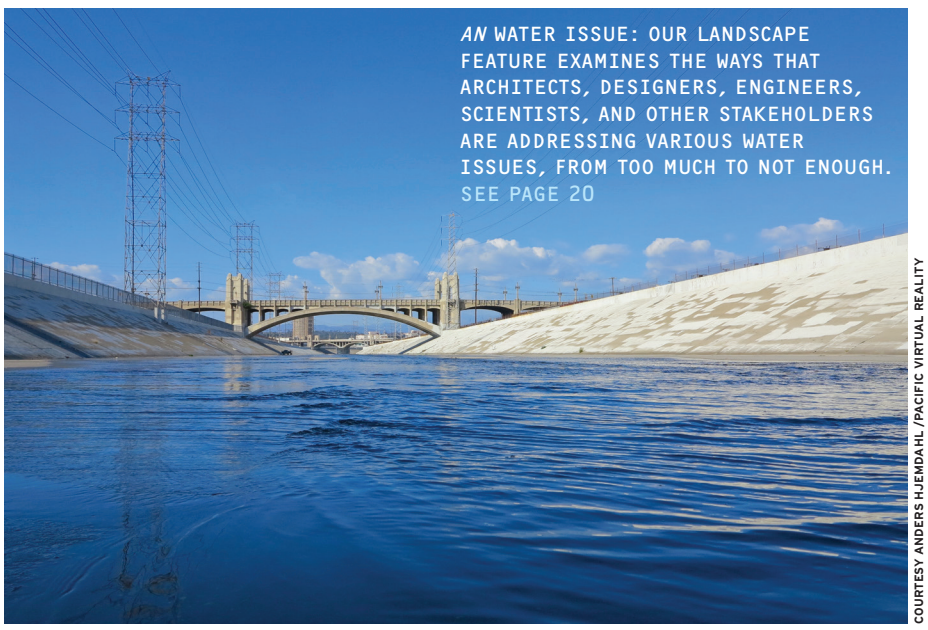

AN WATER ISSUE: OUR LANDSCAPE FEATURE EXAMINES THE WAYS THAT ARCHITECTS, DESIGNERS, ENGINEERS, SCIENTISTS, AND OTHER STAKEHOLDERS ARE ADDRESSING VARIOUS WATER ISSUES, FROM TOO MUCH TO NOT ENOUGH. SEE PAGE 20

COURTESY ANDERS HJEMDAHL /PACIFIC VIRTUAL REALITY

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VULNERABILITY IN RESILIENT URBANISM

The recent visioning scheme for Red Hook, Brooklyn, is a case study in the conflicting interests that contribute to any proposed change in New York neighborhoods. We all know the story of poor, underserved areas like Red Hook that are ignored for generations, and then suddenly become intense hot spots for development. This scheme proposes not just subtle adjustments, but instead hyper-development, which brings out conflict.

The shorthand to describe this process of change is the overused word "gentrification." But development in any New York neighborhood, let alone one like Red Hook, with spectacular views of the Verrazano Bay and Manhattan, is fraught with the prospect of winners and losers. All too often in New York City, the losers have been the poor and the winners the wealthy who want (and get) to live in these prime urban sites.

AECOM, the creator of this scheme, has presented a vision (identified specifically as not a "plan") that it claims was done in response to community demands for new investment and infrastructure. This vision encourages the public to visit AECOM's website and offer suggestions and critique. The project has the sense of being another top-down plan, where more valuable pieces of landscape are handed over to developers.

In fact, the vision seems to check off many of the much needed development boxes for southwest Brooklyn: three new subway stations, a bulked up manufacturing-commercial zone, and 11,250 new units of affordable housing.

One important new piece of this "non-plan" is its use of a resiliency paradigm to justify and promote the change. Red Hook is perhaps the lowest lying waterfront area west of the Rockaways and needs new physical barriers to save it from the increasing occurrences of flooding. In a recent study of the impacts of Superstorm Sandy, "resiliency" is defined by Leigh Graham, Wim Debucquoy, and Isabelle Anguelovski, as "the degree to which a complex adaptive system is capable of self-organization and can build capacity for learning and adaptation." The concept is usually presented in technical, engineering, and competitive business terms where social, political, and cultural issues are never a part of the equation. The AECOM vision states, for example: "Strategies could include both green and gray infrastructures that provide coastal protection and flood management as well as development of smart grids and distributed clean power generation to provide energy security and buildings that can deal with longer, hotter summers without requiring more energy use."

But the concept of resiliency is becoming a buzzword that animates otherwise pedestrian urban design schemes into relevant and apparently socially conscious initiatives for a more functional and healthy city. AECOM has proposed a creative resiliency plan here, but underserved communities are always wary of these code words because they often mean gentrification. Is resilience in this scheme potentially one of these words?

Many visions or plans for "resilient neighborhoods" consider only a limited number of factors in what they consider resiliency to mean for any particular neighborhood or stretch of coastline. Many advocacy groups are starting to question whether resilience in the scientific sense is enough and propose the use of the concept of "vulnerability" as a framework for understanding exactly what is at stake.

One such plan is "Equity in Building Resilience in Adaptation Planning," a guide produced by the NAACP, that aims to "provide a guide to localities to enable them to integrate an equity lens as they seek to build resilience in designing adaptation plans."

The NAACP report calls into question the politics behind physical resilience. They point out a long list of factors that should be considered when planning for environmental stresses on an urban area, in addition to purely engineering factors such as income/wealth, employment, literacy, education, housing stock, insurance status, and access to fresh food.

For designers, this list offers an opportunity to think beyond traditional architecture and planning modes of resilient design, and further challenge what it means to create an equitable, 21st century city—a city that is not easily definable in the face of such large environmental issues. Problematizing "resiliency" with an advanced understanding of "vulnerability" can lead to a more progressive understanding of a rapidly changing world and urban habitat at all scales. This resiliency vision for southwest Brooklyn might yet be one of these new ways of designing cities, but it needs further refinement in how it considers and represents the public. **THE EDITORS**

DARREN BRADLEY/AN

NATIONAL MUSEUM OF AFRICAN AMERICAN HISTORY AND CULTURE OPENS IN WASHINGTON D.C.

On September 24, perhaps the most important building of the 21st century opened: The National Museum of African American History and Culture (NMAAHC).

To truly appreciate how great this building is, let us start with the story of how it came to be. Exactly 100 years ago, the National Memorial Association was founded, which started a serious debate about some kind of monument or museum to African American history in the United States. The project received funding in 1929 from president Calvin Coolidge, but it fell through in 1933. Efforts continued, and from 1988 to 2003, congressman John Lewis introduced a bill every year to finalize the plans for such a museum. George W. Bush gave the final go-ahead in 2005, and in 2009, the winning team was announced.

The making of the museum, which is the newest building on the National Mall—the country's public commons—was a predictably daunting process of building consensus. Who decides on a building that represents an entire group of people?

2017 CHICAGO ARCHITECTURE BIENNIAL ARTISTIC DIRECTORS ANNOUNCED

The Chicago Architecture Biennial has announced Sharon Johnston and Mark Lee of L.A.'s Johnston Marklee as its next artistic directors. The duo announced "Make New History" as the title of the second biennial, which will focus on "the axis between history and modernity and the axis between architecture and art." Along with other sites around the city, the historic Chicago Cultural Center will again be the main hub. The founding sponsor, BP has also announced that it will once again host a design competition in conjunction with the event.

For a full critique of the NMAAHC and details on the Chicago Architecture Biennial, visit archpaper.com and search #october2016

LETTER

LESS IS MORE

Matt Shaw's editorial in the September 2016 issue contends that more regulation makes great architecture and that lack of regulation is holding the U.S. back from producing great architecture. Furthermore, Mr. Shaw says that the market-driven champions who believe we can innovate our way to greatness are wrong and that their position never seems to go away. But, the *New York Times* article he quotes says that "the innovation-driven growth in blue states creates broad positive externalities" and that "we should remember that the key drivers of growth are science, education, and innovation."

What Mr. Shaw gets wrong is that regulation doesn't make great architecture: Great owners make great architecture. Sometimes the owner is a public agency that embraces design excellence and sometimes the owner is an individual or institution that wants to leave a legacy. I have never seen a project that had a bad owner and a good building. Before we turn over our future to faceless regulators who would wrap us in more regulations, let's think twice.

KENNETH RICCI, FAIA

Wherever you look, you will find us. As you enter a school. Throughout the library. Gazing out a classroom window. From curtain wall and windows, to entrances and framing systems, our smart solutions are everywhere you need them to be, helping increase student productivity and performance while protecting what's inside. **We are here.**

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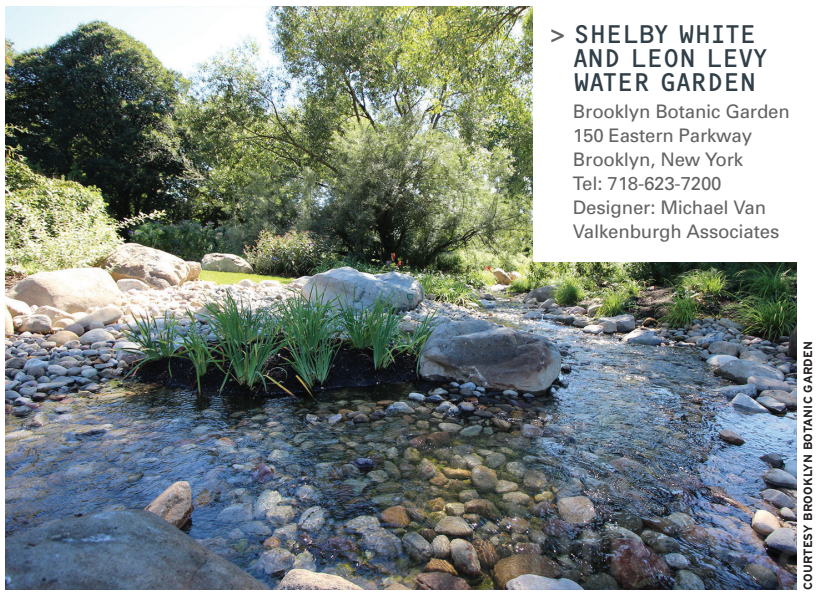
OPEN> WATER GARDEN



COURTESY BROOKLYN BOTANIC GARDEN

> SHELBY WHITE AND LEON LEVY WATER GARDEN

Brooklyn Botanic Garden
150 Eastern Parkway
Brooklyn, New York
Tel: 718-623-7200
Designer: Michael Van Valkenburgh Associates

The Brooklyn Botanic Garden (BBG) opened its new Shelby White and Leon Levy Water Garden, a 1.5-acre project inspired by the wetlands of New York. The new section of the park was designed by landscape architecture firm Michael Van Valkenburgh Associates and will act as a habitat for local wildlife. In addition to more than 18,000 new plants, the garden will also include a brook system, Belle's Brook, which will feature riparian flora that can adapt to different water levels. The garden is part of the BBG's innovative Water Conservation Project, an ongoing initiative to reduce its freshwater usage and cut down on stormwater runoff. BBG expects to cut water usage from 22 million to 900,000 gallons per year, and reduce discharge to the city's stormwater system from 8 million gallons to 2.5 million gallons per year.

MATT SHAW

OPEN> RESTAURANT

COURTESY ABRAMSON TEIGER ARCHITECTS/WONHO FRANK LEE

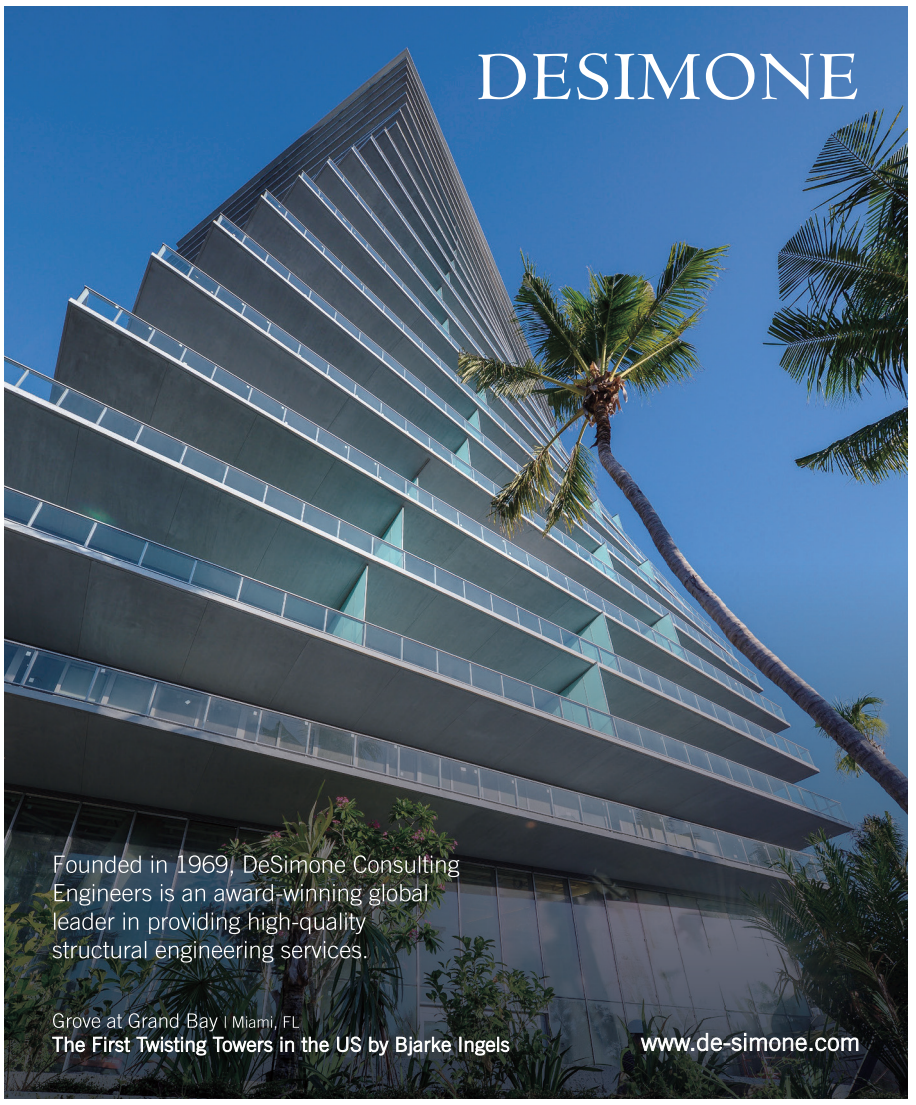
>MAINLAND POKE

252 S. Brand Boulelvard, Glendale, CA
Tel: 213-712-2683
Architects: Abramsom Teiger Architects

Mainland Poke, a fast-casual chain of chopped fish bowl restaurants in Santa Monica, California's, Third Street Promenade, recently opened a second outfit at the Americana outdoor pedestrian mall in Glendale, designed by Culver City, California–based Abramson Teiger Architects.

The firm utilized poke bowls' aquatic origin—a poke bowl is a dish of cubed fresh fish served over rice and topped with an assortment of flavorful toppings—and the traditional fish markets where one might go to acquire their ingredients, as inspiration: A polished concrete floor is topped by a medley of fine design objects such as minimalist chairs and tables and smooth marble countertops. The 200-square-foot store consists of a single brightly lit dining room facing the street, its mostly-glass storefront supplemented by a glass block transom window.

A decorative pattern comprised of variously recessed wooden blocks lines a main interior wall, while tessellated white tiles reminiscent of fish scales wrap the separate food preparation area. Design principal Trevor Abramson explained, "The white tiles and wood talk to materials found in a traditional fish market and are a perfect palette for the vibrant colors found in the fresh fish poke." **ANTONIO PACHECO**



EAVESDROP> THE EDITORS

TRUE STORY

In what seems to be an unintentional release of information, the floor count for two of Chicago's most anticipated towers was recently listed online. On an Epstein webpage, which has since been removed, the number of floors for Wolf Point East and Wolf Point South was listed as 64 stories and 70 stories, respectively. The page also described Wolf Point South as a mix of office and residential, information that seems to put to rest the rumor that the tower might include a hotel. Both towers were designed by **Pelli Clarke Pelli Architects**, and their heights, one of which may reach over 900 feet, have been the topic of much discussion. Wolf Point East is expected to break ground in 2017.

DRONE PARK

As unregulated drone technologies become more readily accessible, municipalities are coming together to ban the use of drones from their public places. The National Parks Service banned the flying camera bots in 2014, pending further study, and local municipalities have been incrementally following suit. Even Menlo Park, the tech-savvy Bay Area home to Facebook, is considering a ban on launching or operating drones from its public parks.

There might be hope on the way, however. At a recent panel discussion on virtual reality in Los Angeles, **Nels Long** of RotoLab, the "design innovation lab" spawned by Roto Architects, discussed one of the group's latest projects: a recreational drone research park. Planned to be located directly next to the San Francisco 49ers stadium in Santa Clara, California, the as-yet-unnamed project aims to unite recreational and research enterprises, creating a safe space for drone enthusiasts and technologists, alike.

QUARREL HILL

It turns out not everyone loves a pollution-free alternative to CO2-belching cars and overcrowded public transportation in Brooklyn. At a Community Board 6 meeting last month, one longtime Cobble Hill resident lashed out at a board member over the location of the neighborhood's new bikeshare docking stations. Even though the locations of the Citi Bike stations have been public knowledge for nearly a year, the resident was captured on video yelling at the member, who sits on the board's transportation subcommittee: "Is there a bike stand in front of your house? What are you gonna do? "You're gonna hit me? What are you gonna do?" An anonymous attendee called the NYPD to intervene but no arrests were made.

SEND DRONES AND KICKSTANDS TO EAVESDROP@ARCHPAPER.COM

OPEN> WATER COASTER

> MASSIV

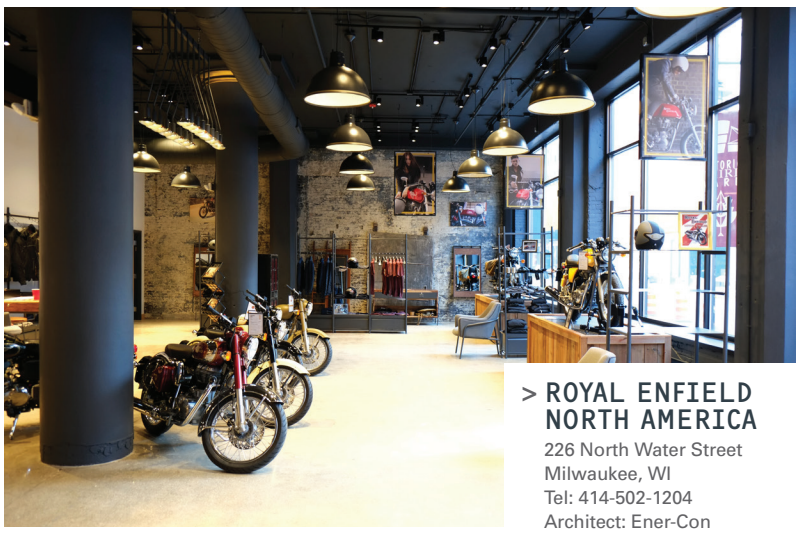
Schlitterbahn Galveston Island
2109 Lockheed Street, Galveston, TX
Tel: 409-770-9283
Designer: Jeff Henry

COURTESY SCHLITTERBAHN

This is not your everyday waterslide. This is MASSIV, the world's tallest "water coaster," 81 feet tall and newly opened at the Galveston Island location of Schlitterbahn Water Parks. The ride differs from a normal slide thanks to its four water jet-propelled uphill sections that propel riders in one- or multi-passenger rafts. There are four of these "blasts" that give the ride its appeal. The jet technology behind the "water coaster" typology is called the "Master Blaster," developed by "Wizard of Water" Jeff Henry and introduced at the original Schlitterbahn in New Braunfels, Texas.

The coaster's name comes from the German word for massive, while Schlitterbahn is named for the German word for "slippery road." If you can't make it to the Galveston Island location, there are Schlitterbahns in South Padre Island, Texas; Kansas City, Kansas; Corpus Christi, Texas; and the original in New Braunfels, which staked its claim as the first water resort in 1966. **MS**

OPEN> STORE



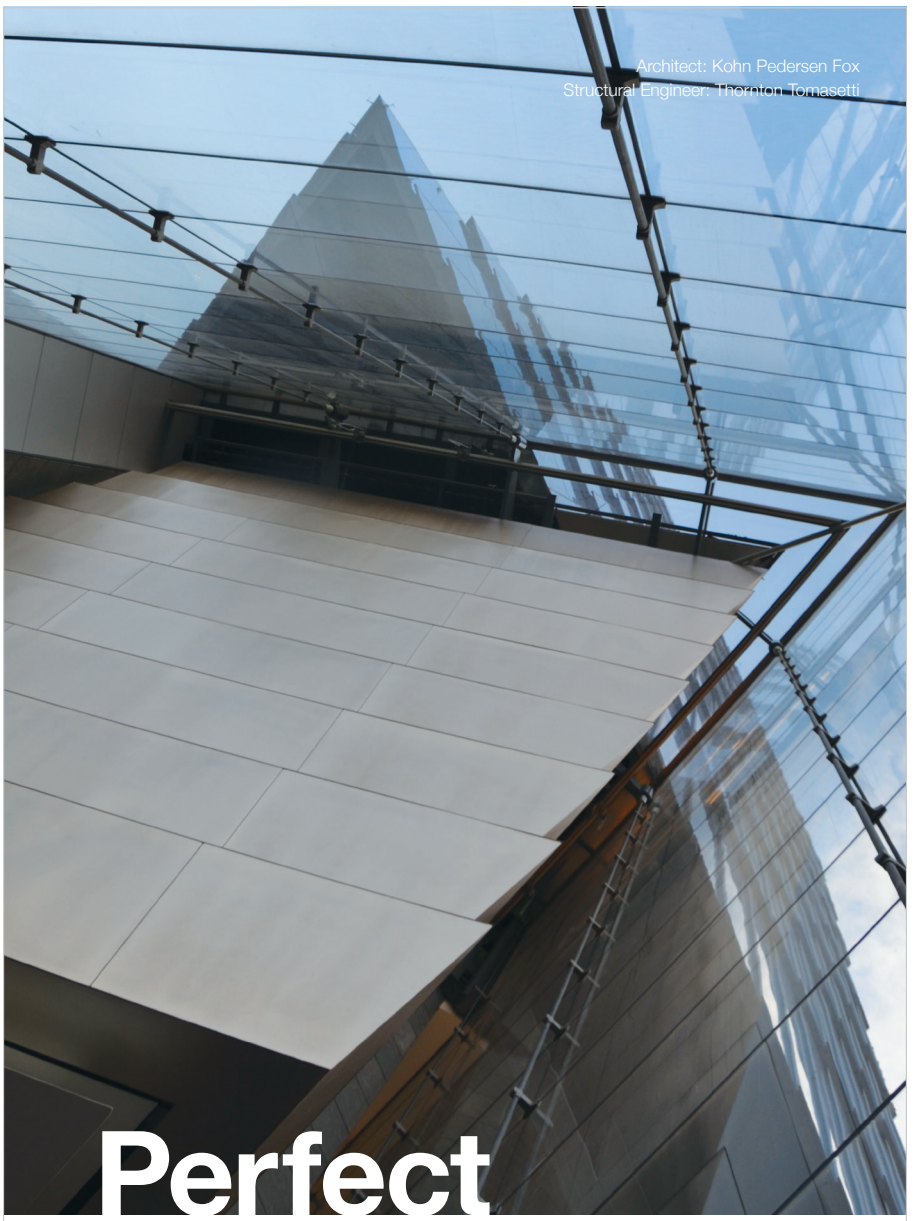
> ROYAL ENFIELD NORTH AMERICA

226 North Water Street
Milwaukee, WI
Tel: 414-502-1204
Architect: Ener-Con

Milwaukee may be known for its Harley-Davidson Motorcycles, but there is a new ride in town. Royal Enfield, a division of India-based Eicher Motors Ltd., has just opened its first company-owned U.S. dealership and North American headquarters in Milwaukee's Third Ward district. The new space is meant to be part of a greater push to move the 115-year-old motorcycle company into the U.S. market. Local management worked with Milwaukee-based Ener-Con developers, who own the building, to lay out the space for both sales and office.

The new store and headquarters in located on the first floor of the historic four-story Mitchell Leather building. The building is distinctly Milwaukee and is constructed out of the light-colored Cream City bricks that were once manufactured in the city. These bricks are featured in the showroom by way of exposed walls and a simple material palette for the space. A polished concrete floor gives the feel of a clean garage filled with the classically designed Royal Enfield motorcycles. Motorcycle parts are both for sale and used to adorn the space, including a striking chandelier made out of Royal Enfield headlights.

MATTHEW MESSNER



Perfect Ten

With a multi-faceted curtain wall meticulously crafted of ultra-clear Pilkington Planar glass, **10 Hudson Yards** has become a beacon of new life on Manhattan's West Side. Designed by **Kohn Pedersen Fox**, it is the first of 16 towers to be completed within the Hudson Yards Redevelopment Project—where collaboration between New York's design and construction leaders is adding a new dimension to the city skyline. Read more about it in **Metals in Construction** online.

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DEVELOPING LANDSCAPES OF RESOURCE MANAGEMENT

Above: Monsoon flooding season in Raipur, India. Below: Summer water scarcity, also in Raipur.

ALPA NAWRE

This presentation was part of the Landscape Architecture Foundation's The New Landscape Declaration: A Summit on Landscape Architecture and the Future held in Philadelphia June 10–11. The 25 speakers were asked to write a 1,000-word "declaration of leadership" and ideas for how landscape architecture can make its vital contribution in response to the challenges of our time and the next fifty years. These declarations were then presented at the summit.

With what are we welcoming our future generations? Piles of plastic? Polluted air and dirty water? Life in degraded environments with mismanaged resources is the normal human experience in many parts of the world. The statistics are staggering. Of the total world population of 7.2 billion, about 6 billion live in developing countries, where access to clean water, clean air, and efficient systems of waste disposal is a daily struggle. Water, especially, is a severely contested resource in these contexts, both in terms of quantity and quality. In India, for example, over 100 million lack access to safe water, and diarrhea causes 1,600 deaths daily. Where water mafia and water dacoits are a grim reality, where suicides, murders, and street-fights over water scarcity are a serious issue, and where commuting back and forth from work could involve wading through chest or knee-high flood-water, the problems associated with water management in India point to a crisis, which is only expected to get worse with impending climate change and rapid urbanization. And while some problems clearly fall outside the scope of a landscape architect, there are many issues that can be addressed through better water management landscapes. This is where the agency and action of landscape architects at both system- and site-scale become critical, applicable not only to water but also to other contested resources.

Today in developed countries, we are shocked and even resigned by reports and personal experiences of the air quality in Beijing, the water crisis in India, or the food scarcity in Africa. Conditions however, were not so very different in the 1950s and 1960s in North America when people wore gas masks in Los Angeles and decried the region's filthy rivers. When a small group of landscape architects gathered here in Philadelphia and crafted the "Declaration of Concern," noting the degradation of America's water and air, the world was not such a different place. If anything, the issues have become more global, critical, and widespread. And in this context of contested resources, landscape architects must step in to do what we can to restore and re-establish healthy relationships between humans and their environment. I entreat all landscape architects to rise above parochial discussions, territorial predispositions, and disciplinary comfort-zones to address the very real issues of water, air, food, waste, minerals, and energy, with which rapidly urbanizing and developing countries such as India now grapple.

The "Declaration of Concern" is a demonstration of the enormous responsibilities the profession attempted to take on. The last fifty years have seen the coming of age of the profession of landscape architecture. Landscape architects have drawn on formidable skills of research and analysis to understand and map multilayered issues, and conveyed this understanding to the general public through visualization of complex landscape systems spanning both scale and time. Many landscape architects have attempted to restore damaged ecosystems and designed better human and non-human habitats. Yet, we have just scratched the surface, and much remains to be done in the context of resource management, especially that of water, food and waste in developing countries.

From these countries, there are many lessons to be learned on alternative definitions, frames, paradigms, systems, and land-scapes of resource management, all of which are rapidly being transformed and degraded as we speak. We urgently need to understand the various ecologies of resource management in the developing world. What can we learn from cultures that designed multi-functional resource infrastructure and practiced community-ownership of landscapes to inform the design of resource management in industrially developed countries, and vice versa? Before we engage in design, we must understand and evaluate existing systems.

As designers, we have two avenues of intervention for addressing resource issues. The first is through design to improve existing resource landscapes, and the second is to create alternative paradigms for better resource management through the structuring of new built environments. The projected increase of the world's population to nine billion by 2050 will almost entirely be population growth in developing countries, ac-companied by rapid urbanization. For example, in the next 50 years, India's population will peak at 1.6 billion and the country will be adding more than 400 million to its urban population—about 20 more Mumbais! The development of urban territories to accommodate these millions desperately needs the expertise of landscape architects equipped to design urban landscape systems for better resource management. It also presents unprecedented opportunities for design experimentation. How do we take the lessons we have learned in the urbanization of developed economies and apply them in our design responses to the resource management problems of the developing world?

Part of the challenge ahead is not only to address resource management issues head on but also to make the general public, especially the decision makers in the developing world, aware of the contribution that we can make in improving resource management. In most parts of India, when I introduce myself as a landscape architect, people either catch only the first part and transform the phrase to "landscaping" or "gardening" or latch on to the familiar word "architecture." Not surprising — because there are very few landscape architects in India. About 800 landscape architects serve a total population of 1.25 billion and of this handful, fewer still engage with issues of resource scarcity and/or mismanagement. As landscape architects, we must actively make opportunities for engagement happen by better preparing ourselves with alternative design solutions and communicating them to the public.

Today's landscape architecture students live in a complex, networked world and must be prepared for a future defined by global professional practice, to meaningfully engage in and to craft the built environment of not only their own community but also of cultures dramatically different from their own — dealing with life-threatening issues related to water, food, and waste. These issues often fall outside a landscape architect's traditional scope, which is a missed opportunity for the discipline. Training the future generation of landscape architects to deal with these issues at different scales is the only way to make our discipline relevant in the coming 50 years.

It is an exciting time to be a landscape architect, but only if we embrace the opportunities and challenges ahead of us. There must be a crusading determination on the part of landscape architects to address the real issues of resource management if we are ever to permanently establish and realize the true potential of our discipline.

ALPA NAWRE IS AN ASSISTANT PROFESSOR OF LANDSCAPE ARCHITECTURE AND REGIONAL & COMMUNITY PLANNING AT KANSAS STATE UNIVERSITY AND PARTNER AT ALPA NAWRE DESIGN.

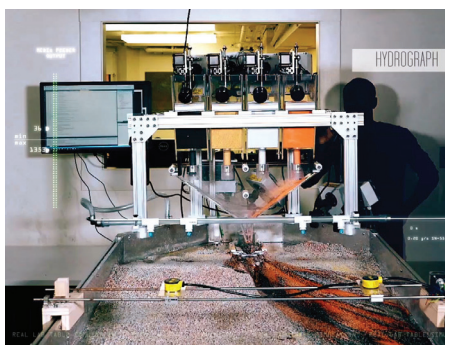
COURTESY BRADLEY CANTRELL

Reyner Banham, in his 1971 *Los Angeles: The Architecture of the Four Ecologies*, chose to view L.A. as an interwoven network of ecological systems: freeways, suburbs, mountains, and beaches. This urban expanse, even in the 1970s, was not only a landscape radically different than what people of Banham's time had seen before, but more importantly, presaged the prevailing type of urban geography that would become a defining characteristic of the late 20th century and beyond. This new type of urban region, where the lines between and among the city, its suburbs, and nature are increasingly blurred, defines the so-called "megalopolises" of today.

With Banham's Los Angeles in mind, landscape architects, geographers, and researchers came together at University of Southern California (USC), under the direction of Kelly Shannon, director of the School of Architecture, Landscape Architecture Program and assistant professor Alison Hirsch, for the Landscape as Necessity conference September 22–24 to focus on issues relating to the connections among megalopolis, nature, and the future of both on a rapidly warming planet.

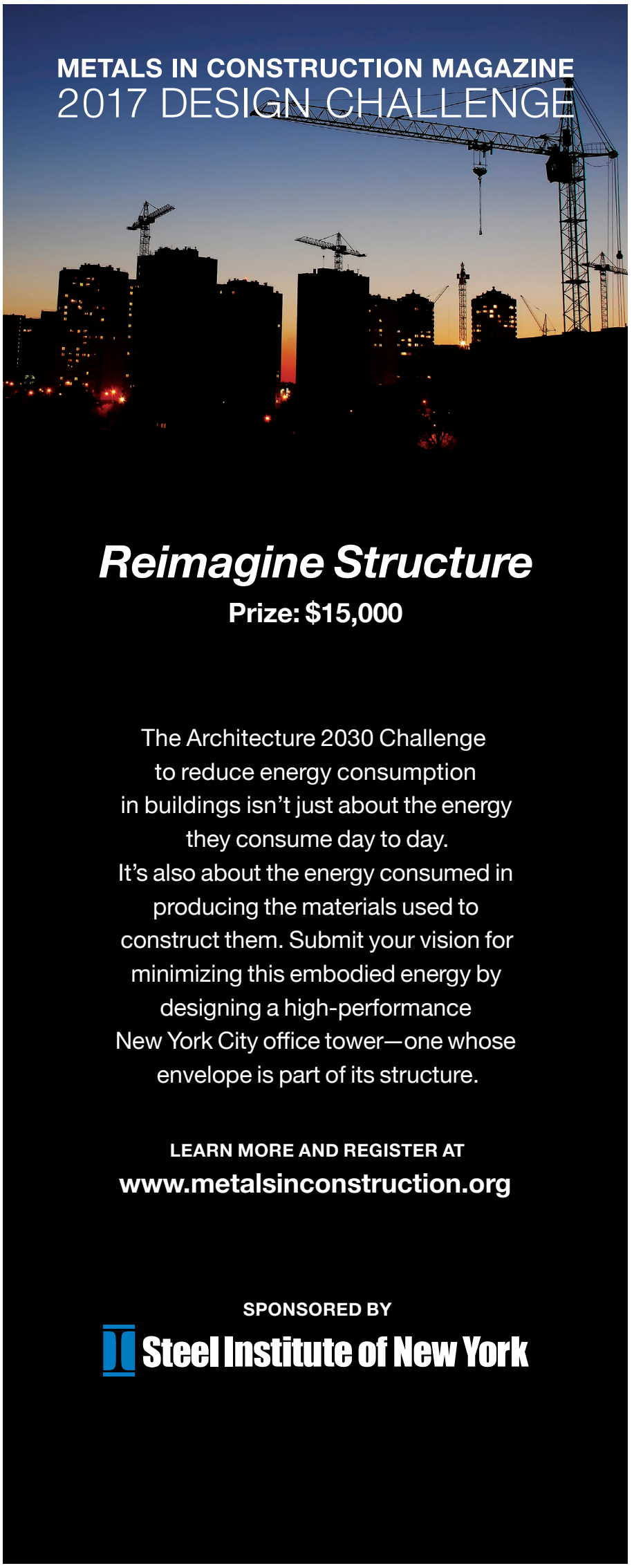
The three-day-long conference was built around the idea that the landscape architecture discipline is, as stated on the conference website, "uniquely able to synthesize ecological systems, scientific data, engineering methods, social practices, and cultural values, integrating them into the design of the built environment." It was organized around six prevailing themes: "Preemptive Territorial Design," "Cultural Agency," "Water Urbanism," "Landscapes of Infrastructure," "Productive Landscapes and Food Security," and "Energy Fields." These topics point to the ever-expanding mantle the landscape architecture discipline has increasingly embraced in recent years. This positioning has enabled landscape architects to achieve a new level of prominence in society, both in the rapidly urbanizing areas of the world and in legacy cities, where urban renewal, post-industrial society, and climate change mitigation are being harnessed in an effort to make cities more equitable and sustainable.

These considerations come heavily into play in the work presented at the conference, which was broadly based and featured research and projects from around the world. One panel discussion, called "Resource and Risk," mined the generative potential of "resource-strained geographies" and featured the work of Miho Mazereeuw, director of the MIT Urban Risk Lab, Edudardo T. De Mesa, chief of the Planning Division at the Los Angeles District of the United States Army Corps of Engineers, Kristina Hill, associate professor at University of California, Berkeley, and Gerdo Aquino of Los Angeles–based SWA landscape architects. Mazereeuw presented research from her project "Risk Ecologies–Haiti Evacuation System," a complex and multivalent study of the currently practiced strategies deployed in Haiti to adapt to the region's many climatic and social struggles. Aquino presented his firm's work for the Sava Promenada in Belgrade, Serbia, a project that introduces a one-kilometer long, variable urban waterfront that accommodates seasonal river flooding the Sava River.



Aside from panels, the conference featured paper presentations, such as "Preemptive Territorial Design, Energy fields, Infrastructures," and showcased work from experts such as, Barry Lehrman, assistant professor of Landscape Architecture at California State Polytechnic University Pomona, who presented a substantive hydrological analysis of his Los Angeles River research. It also featured work by Bradley Cantrell, a Harvard-based researcher who presented the robotic modeling techniques his team uses to create abstracted sediment simulations for riparian landscapes and that of Yusuf Zoheb Nazerali, an architect, landscape designer, and educator who presented his urban design project "Basha Wolde Chilot" for the city of Addis Ababa, Ethiopia, that seeks to stitch together old and new parts of the city through landscape infrastructure and economic re-orientation.

The lengthy and impressive grouping of presenters, which ran the gamut from heroes of the field to rising researchers and visionary thinkers, lent a sense of urgency to the conference's major themes, reinforcing Shannon's notion for the meeting, that, "More than ever, there is a fundamental necessity for landscape architects to continually expand the public realm, creatively repair polluted sites, and develop innovative hybrid programs." As conference attendee Kelly Majewski, principal at Los Angeles–based landscape architecture firm Superjacent said: "There was overall feeling from the conference of a call to action for landscape architects from Los Angeles and around the globe to get involved at all levels of the process from design to politics to funding." **AP**



WEISS/ MANFREDI

ALBERT VEDERKA/ESTO

Keeping your cool onstage is no mean feat, but one that students and performers at the Marshall Family Performing Arts Center needn't worry about, thanks to Manhattan firm Weiss/Manfredi's ice cooling system. The $26.5 million center, part of the Greenhill School in Addison, Texas, opened this past February.

The system involves storing ice and using it in conjunction with an air-cooled chiller; as ice melts throughout the day, cold water is pumped through cooling coils in an air-handling unit.

"The system—even in a place like Texas—makes sense," said Michael Manfredi, partner alongside Marion Weiss at the firm. "At night, when the outside temperature drops, the system can be replenished." Weiss noted that the production of ice at night is more cost effective due to energy prices being lower at that time. "It's a hybrid in some ways," she said.

Thermal regulation for the performing arts center, which includes an expansive triple-height lobby, a 2,600-square-foot studio theater, a 2,500-square-foot rehearsal space, and a 21,000-square-foot proscenium theater, requires careful planning. Each space has its own schedule and has to be calibrated, with adjustments made in advance. "The building is designed with a high level of flexibility," said Manfredi. "Each space can experience surges of 200 to 300 people at a time, and then just 20 at another."

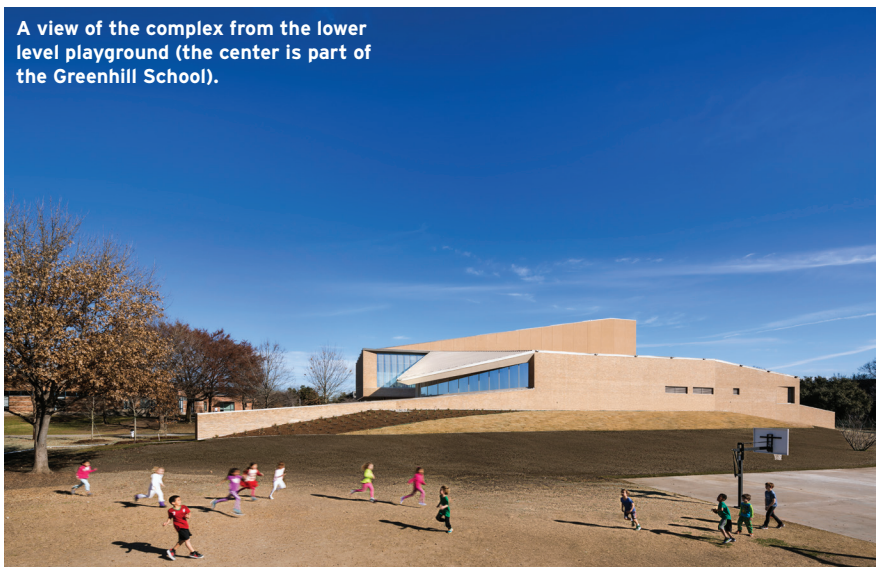
Weiss explained that "in performance spaces such as the proscenium theater, thermal ducts are located at lower levels so that they can be insulated by the earth and emerge around peoples feet. Here, air is released very slowly so as to avoid noise pollution during productions." The proscenium theater seats 600 people: 450 at orchestra level and 150 in the balcony. Underneath these seats, an under-slab air plenum and diffuser grilles form a displacement ventilation system, which releases cool air as needed. Meanwhile, multicolored upholstery creates the illusion of a full venue, even when crowd numbers are low, ensuring that the performers never break a sweat.

JASON SAYER

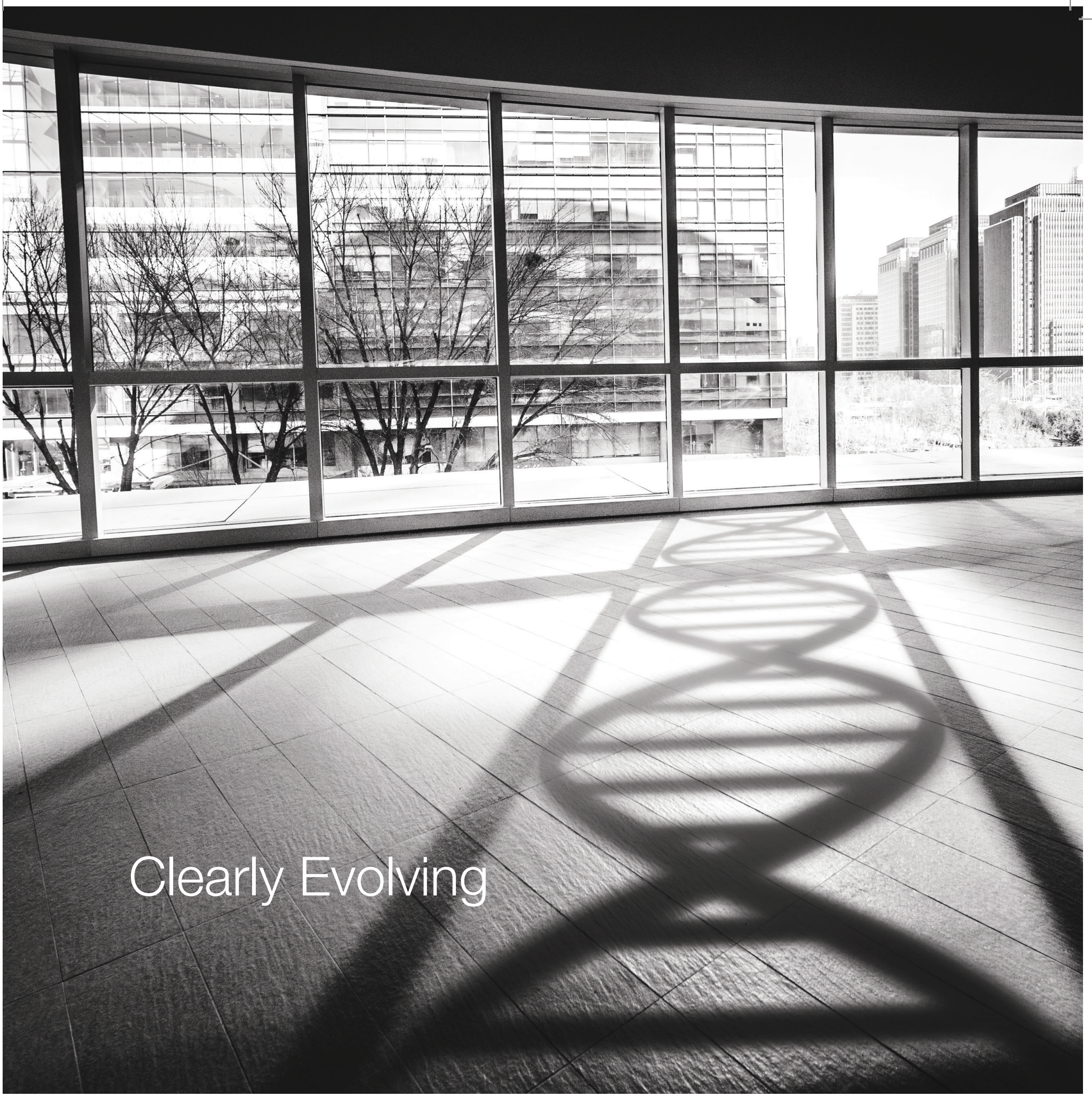
RESOURCES

Ice Cooling System:
Mechanical Electrical Plumbing and Fire Protection: Page
Glazing System: YKK AP
Glass Supplier: Viracon
Structural Engineer:
Magnusson Klemencic Associates
Acoustical/Audio-Visual Consultant:
Jaffe Holden
Lighting Designer: Tillotson Design Associates
Civil Engineer / Landscape:
Pacheco Koch Consulting Engineers

This image: Weiss/Manfredi utilized ice chillers to keep the building cool. Above: The main staircase in the Marshall Family Performing Arts lobby.



A view of the complex from the lower level playground (the center is part of the Greenhill School).



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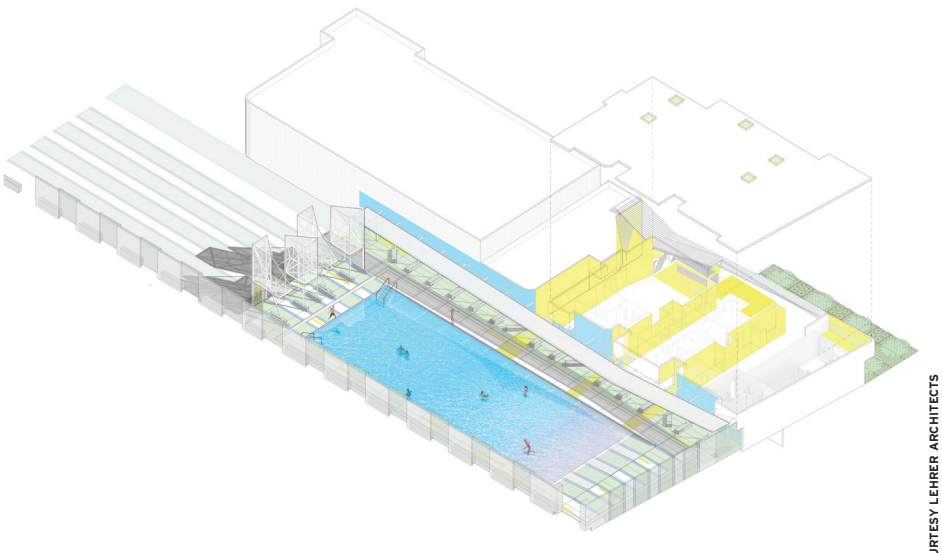

COURTESY LEHRER ARCHITECTS

Left: Lehrer Architects utilized a group of light towers to mark the pool's presence in the community while also creating additional seating. Right: Plans for the community pool also call for a refurbished bathhouse structure to complement the new aquatic facilities.

LIGHT GUARDS continued from front page

community gathering spot in what is one of the most park-poor areas of the city.

The bathhouse, a humble structure made of concrete masonry units, is wrapped by a segmented butterfly roof canopy made of tightly folded, corrugated white metal panels. The three roof pitches meet several times over the course of the building's main entrance on East 22nd Street. At each meeting point, a delicate armature of steel members, including W-beams and square tubing, joins the roof planes. The south-facing exposure, its CMU walls painted bright shades of lemon and lime, gathers and warms the light filtering through the canopies. A longer but similarly articulated form is mirrored about the bathhouse's central axis, where on the other side it shades the pool deck. At the foot of each of the columns supporting the canopy along this length, the firm has designed broad, monolithic concrete benches. The two benches on either end are cocked a half-turn inwardly, framing the type of communal, yet highly individualized public space that exists far too infrequently in Los Angeles.

Buried deeply into the far leg of an L-shaped site is a tetrarch of 20-foot tall towers, each housing a pair of concrete benches. The towers provide a different kind of social space that is simultaneously more intimate and public than the larger shaded area just mentioned. Shaped like parallelograms and wrapped in sheets of white perforated metal, the towers mark the recreation center's location in the community during the day, reflecting and catching the sun's light as it passes overhead. At night, the structures are lit up from within.

During a studio visit to Lehrer's Silver Lake offices, the principal described the sculptural qualities of the sentinels: "The light and shadow towers work to create a calibrated sense of civic monumentality by relating to the pool, to the larger park, and (most) importantly, to the surrounding neighborhood beyond." **AP**

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KEN LUND /FLICKR

The Lafayette Greens, designed by Detroit-based Kenneth Weikal Landscape Architecture, is an organic urban garden in the heart downtown Detroit.

DETROIT ENGAGES WITH ITS COMMUNITY TO SOLVE ITS RAW SEWAGE PROBLEM

Dampening Effect

The City of Detroit is solving one of its major problems with the help of one of its other problems. Detroit is experiencing combined sewer overflow, a messy, and often downright dangerous event that happens every time it rains too much. But by leveraging the abundant city-owned vacant land, Detroit may have found a way to alleviate at least some of the overflow.

Detroit, like many cities its size, has a combined sewage and rainwater sewer system. This means that when it rains, water is flushed into the same pipes that lead to the city's sewage treatment plant. But when it rains too much, this system can be overwhelmed, leading to massive discharges of untreated sewage into the waterways around the city. These sewer overflows are one of the largest polluters of the Great Lakes and also often flood residents' basements with sewage. The raw sewage, filled with bacteria, chemicals, and prescription drug waste, is also causing dangerous algae blooms in Lake Erie.

In cities like Chicago and Milwaukee, which have partial or fully combined sewer systems, there are epic underground caverns and reservoirs to tackle the overflows. And though this is not foolproof, it is not even an option at all for Detroit: The economically struggling city does not have the means to construct multi-billion dollar tunnels nor the time needed to dig one of these systems—Chicago's deep tunnel has been under construction since 1975.

So Detroit is turning to a more grassroots approach. One of the major issues of rainwater in any city is that so much of the ground is impermeable, forcing the water into drains instead of just soaking into the earth. As the City of Detroit controls nearly half of the land within the city limits, it has decided to actively ensure this land is permeable. Aside from simply breaking up many square miles of surface pavement, the city is working with communities to build bioswales, rain gardens, and marshlands.

Joan Nassauer, a landscape architect and University of Michigan professor, has already implemented a set of aggressive water retention prototypes. Working with a team of university researchers, she devised a system that is now in a pilot phase. After the Detroit Land Bank demolishes homes, the Detroit Water and Sewerage Department excavates the large holes formerly occupied by the houses' basements, fills them with sand and stones, and tops them with hardy, short plants. Each resulting bioretention garden collects storm-water from the street, stopping it from entering the overburdened drains. The plants are meant to be visually appealing without growing too tall and creating safety and visibility concerns. Four test sites were built in Detroit's Warrendale neighborhood; each can hold over 300,000 gallons of storm water per year.

In legacy cities like Detroit, Nassauer said, there's simultaneously an "opportunity to design super-efficient green infrastructure and immediately make people's neighborhoods better places...." But much hinges on political will: In Detroit, Nassauer's challenge to coordinate among institutions was greatly aided the mayor's office and political climate. "There are political forces and a lot of citizen energy [going] toward taking Detroit to a new level of desirability for a place to live and work," she said.

Along with Nassauer's prototypes, the city's flood mitigation plan is heavily based on the 2012 report *Detroit Future City*. Among other things, the report recommended changing the way the city thinks about infrastructure. Rather than focusing on hard infrastructure—roads, sewers, bridges—the report encouraged "landscapes as infrastructure." The benefits of the plan are varied, but one of the main advantages is the community-based nature of improvements. Not only can the public see the improvements, but they are able to enact their own changes within the system. Multiple nonprofits have taught residents how to construct rain gardens, while other groups already working in vacant lots to cultivate land for food production. More formal projects by the city include permeable sidewalks and streets, improvements that can be made when streets are already in need of repair.

Detroit has set a goal of 2029 to reform its water situation. This includes bringing the city's sewer system into line with federal standards, which it has not been for decades. It is not expected that this plan will completely solve the city's issue, but it represents a positive shift in its relationship with its sewer system. And who wouldn't prefer a flowering rain garden to sewage-filled waterways? **ZACHARY EDELSON/MM**

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ROSS BARNEY ARCHITECTS PROPOSES TURNING A STAGNANT ABANDONED WATERWAY INTO A COMMUNITY AMENITY

NICE ASS(ET)

Few people, architects or otherwise, have thought about the Chicago River as much as Ross Barney Architects. The firm's experience includes the ever-growing Riverwalk in Chicago's downtown, studies for the river as a transportation corridor, and extensive time spent working with the city on major infrastructural projects. When given a charge to propose a speculative project for the Chicago Architecture Foundation's *50 Designers, 50 Ideas, 50 Wards* exhibition, it took the chance to expand on a project that had been floating (pun intended) around the office. The result is an urban natural space where there is currently a smelly abandoned channel in the city's Little Village neighborhood.

The South Side neighborhood is one of the most underserved, in terms of public space, in the entire city. Even worse, the neighborhood has the Collateral Channel, which once connected the natural channel of the Chicago River to the Shipping and Sanitation Channel. The natural Chicago River no longer exists, so the stagnant body serves no one. As the canal is no longer used, it is no longer dredged, which has led to its polluted bed having a severe methane-leeching problem. This in turn has prompted the local nickname of Ass Creek, due to the intolerable smell that bubbles up and wafts over Little Village.

Ross Barney Architects saw more than just a putrid nuisance in the Collateral Channel, though. Instead, the office took the opportunity to connect to a project the Chicago Department of Transportation is already spearheading called the Little Village Paseo. The Paseo is planned to be a linear park that will take the place of a former rail line through the neighborhood. So Ross Barney envisioned turning Ass Creek into Ass(et) Creek, a place where the community could directly interact with the river. Ass(et) Creek proposes to continue the Paseo to the river via the channel.

Though Ass(et) Creek is a speculative proposal, the work on the channel and the movement toward the river is already beginning. The city has started to pump water through the channel, and other studies have been done in an attempt to counteract the smell. Yet if anyone has experience with working with the river in Chicago, it is Ross Barney. The office has spent well over a decade working the city's Riverwalk, navigating the politics and construction issues associated with building in water.

Ross Barney Architects see Ass(et) Creek as larger than just a luxury amenity. The big picture includes bringing access to clean recreation and athletic spaces to an area that needs it. From there, the firm imagines a new water-taxi stop at the site that would provide the neighborhood with a direct connection to the downtown. The relationship of Chicagoans to the river would be quickly reversed from odorous disdain to point of pride.

The vision of a Chicago River that is clean enough to swim in is shared by many, including the mayor and even President Obama. Though that day might not be right around the corner, it is coming, and Ross Barney Architects is ready to give everyone a place to jump in. **MM**

COURTESY ROSS BARNEY ARCHITECTS

Top: Ross Barney Architects envisions using the out-of-the-way nature of the abandoned channel as a way of giving the public an escape from Chicago. Above: The plan connects the unused channel to public space projects already completed or underway by the city.

USGS/ DON BECKER/WIKIMEDIA COMMONS

Discarded furniture marks the edge of a flooded road during the 2008 Iowa Flood in Cedar Rapids, Iowa.

WHEN THE LEVEE BREAKS

continued from front page over a nine-day period.

Iowa City, a UNESCO City of Literature, has a strong, culturally active citizenry, and now it is working to channel that energy into securing its environmental future. After the flood waters subsided, and the tornado damage was clear (damage from both of those events is still evident eight years later), a group of Iowa City residents began to seriously think about how design could be used to achieve a more sustainable urban center. "Ecopolis Iowa City" was organized to brainstorm urban restoration, biodiversity, local food, inclusionary and urban designs, renewable energy, and transportation initiatives for the future of the city. Initially holding informal meetings, Ecopolis Iowa City eventually started to sponsor forums that would use storytelling, music, and conversation to identify and generate ideas. From 2014 to 2016, the events eventually turned into a movement.

The city's 2015 fall election saw a progressive council majority win for the first time in nearly 50 years. In spring 2016, Mayor Jim Throgmorton issued a "Regenerative City" proclamation. The proclamation set goals to "replant native prairies and trees to store carbon in the soils; expand urban agriculture; to power our city and neighborhoods efficiently through green building designs and renewable energy; to expand citywide recycling and composting through a zero waste ordinance; to make low-carbon transportation choices; to grow green jobs and support companies actively greening their operations." By summer, the ideas from the Ecopolis Forums were worked into a proposed Iowa City Climate Action Plan.

The plan aims to expand and guide the regenerative city initiatives. Iowa City is already investing $60 million into raising a major route into the city above the 100-year flood level, but the plan calls for many more actions at different scales. From establishing protected "ecodistricts" to enforcing new sustainable building requirements, the plan may greatly affect the city's future fabric. The plan sets greenhouse gas emission and transit diversity goals through 2030, with an eye on changing the way average citizens understand their impact on the environment.

Though the Iowa City Action Plan has not been formally adopted by the city, Ecopolis points out that the six million sandbags Iowa City residents filled to try and save their city in 2008 is a sign they are ready and able to make major changes. And with Ecopolis founders now on the city council, the time is better than ever. **MM**

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AMERICAN GOLFSCAPE

SOME NOTABLE COURSES ACROSS THE NATION

GOLF IS HISTORICALLY epicentered at the Royal and Ancient Golf Club of St Andrews, Fife, Scotland, where the Old Course there dates back to the 15th century. When the sport crossed the pond in the 1700s, some early clubs were formed in New York and Charleston, South Carolina, but it developed more quickly in eastern Canada, where the Royal Montreal Golf Club, founded in 1873, is said to be the oldest surviving golf club in North America. By the 1880s, golf was becoming established by the establishment in the USA, especially at country clubs around New York City and Chicago. National trade associations and tournament organizations formed and set standards for courses and rules for the game. Chief among them is the United States Golf Association, whose membership today includes more than 10,000 of the 17,000 active courses in the country. What follows is a sampling of some of the more historic and otherwise notable golf courses in the USA.

See an online map of the American Golfscape at www.clui.org.

Coeur d'Alene Resort Golf Course, Coeur d'Alene, ID
This course opened in 1991, on the shore of Idaho's Lake Coeur d'Alene, and is unusual for having one of its greens, the 14th hole, on a floating island, entirely separated from the shore. To finish the hole, golfers get in a wooden boat that shuttles back and forth between a slotted dock on the shore, and on the island. There are a few other resorts on this scenic lake in Northern Idaho, including the Gozzer Ranch Golf and Lake Club, with a course designed by Tom Fazio.

Old Works Golf Course, Anaconda, MT
Some golf courses, especially municipal ones, are built on landfills or other unstable, undevelopable land. The Old Works course, in Anaconda, was built on the site of a copper smelter, the Upper Works plant, which processed ore from the mine at Butte, Montana. After a new smelter opened in town, this old one was idled, abandoned, and ultimately became a superfund waste site. In 1994, after years of planning, ground was broken on a Jack Nicklaus-designed course, themed around the old industrial site. The sand in the bunkers is black slag and old machinery is peppered about.

Pacific Dunes, Bandon, OR
The Bandon Dunes Golf Resort is on the southern Oregon coast, a landscape similar to the Scottish coast, where the sport originated. The first course opened in 1999, but it was the second course, Pacific Dunes, designed by Tom Doak, which opened two years later, that really put this place on the golf map. There are now five courses at the resort, which is known for a rustic simplicity, compared to most golf resorts. Though remote, it is a modern classic links-type course destination resort for golfers.

Pebble Beach Golf Links, Pebble Beach, CA
This may be one of the best golf courses in the country for scenic beauty and adventure, with nine of its holes on rocky bluffs on the ocean. Also notable because unlike most of the exotic courses in the country, it is not a private club, but is open to the public, albeit at a cost–around $500 for a round. It is not a municipal course, but owned by a private company, the Pebble Beach Company, which owns three other courses on the peninsula (the Links at Spanish Bay, Spyglass Hill, and Del Monte), and three hotels too. Five U.S. Opens have been played here.

Shadow Creek Golf Club, Las Vegas, NV
This course in the northern Las Vegas desert was built by the resort magnate Steve Wynn, and designed by Tom Fazio, one of the contemporary leaders in golf course design. Earth was bermed up around the 350-acre site to hide it from view, and a landscape of ponds, waterfalls, fountains, and gardens, including more than 20,000 trees, was created from bare desert ground, costing a reported $60 million to construct. It opened in 1990, and was very exclusive. Two large private homes were also built into the site, surrounded by the course, including one that was owned by Steve Wynn himself. The development has since changed hands and is now owned by MGM. There are close to 100 golf courses now in the Las Vegas region.

Torrey Pines, La Jolla, CA
One of the greatest public, municipal courses in the country, Torrey Pines is built on a pine tree studded bluff above the Pacific, in La Jolla, north of San Diego. It opened in 1957 and has two 18 hole courses. There are steep cliffs along its western edge, and behind it some of the most specialized high-tech and biological research facilities in the country, including the Salk Institute, Scripps, and General Atomics.

PGA West, La Quinta, CA
The PGA West facility in La Quinta is a stadium course, like the PGA's Tournament Players Course at Sawgrass, near Jacksonville, Florida. Courses of this type are built to host tournaments, and have stands and contoured slopes on the edge of the course to accommodate more spectators than other types of courses. This is also considered a very difficult course, which limited its tournament use, initially. It is one of a few courses at the La Quinta Resort, an old desert hotel and hacienda getaway that opened in 1926. It is located in the Coachella Valley, a resort belt that extends from Palm Springs to La Quinta, and exceeds even Las Vegas and Phoenix for the most golf-intensive desert landscape in the country, with around 120 golf courses, all within one of the hottest and driest places on the continent.

Desert Highlands Golf Club, Scottsdale, AZ
Most of the 420 golf courses in Arizona are private clubs, embedded in desert housing developments in cities in the Phoenix metro region, not unlike this one. Built in 1984, and designed by Jack Nicklaus, Desert Highlands is an example of a target golf-type course, which uses less land and landscaping, thus saving on water and groundskeeping outlays. This course meanders through the housing development with only 80 acres of irrigated landscaping, versus the usual 120 acres or more.

Sand Hills Golf Club, Mullen, NE
This course opened in 1994 in the rolling sand hills of western Nebraska, a classic links style course, like the shores of Scotland, though landlocked in the middle of the country, and in the middle of "nowhere." Sited in a bevy of natural grass and sand bunkers, this course was not so much built, as discovered, they say. The course was certainly built though, but at a cost much less than most. The greens here were formed on existing ground, costing just a few hundred dollars each to construct, instead of the elaborately engineered pads, with layers of specialty bedding and drainage, which typically cost around $40,000 to make. This course has become a destination for many golfers, and other courses in the region have been developed since, despite, and because of, its remoteness.

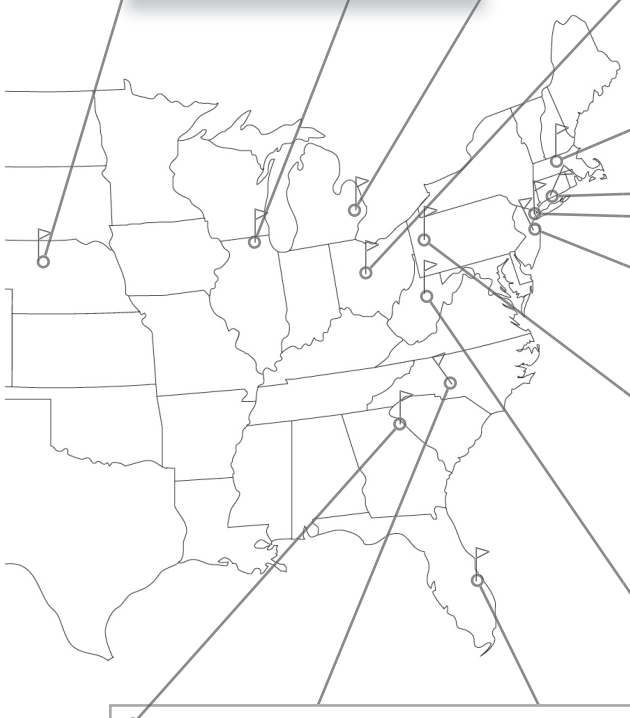
Butler National Country Club, Oak Brook, IL
This course, one of many in the office park suburbs west of Chicago, is notable for being the location where three golfers, including the champion Lee Trevino, were struck by lightning during a public tournament in 1975. Though they all lived, lighting remains a problem for golfers, as well as spectators. The course here is also notable as it surrounds a campus of the McDonalds restaurant company, including its training center known as Hamburger University. The corporate headquarters is across the highway.

Oakland Hills Country Club, Bloomfield Hills, MI
This country club's southern course is one of the classics in the nation. It opened in 1918, and was redesigned in the late '40s by Robert Trent Jones. The club is north of Detroit, and was established by two Ford Motor Company executives. Michigan has more than a thousand golf courses, ranking third, after Florida and California. This is likely due to several factors, including the timing of the growth of the auto industry in the region with the rise in popularity of golf among the executive class.

The Country Club, Brookline, MA
Known simply as The Country Club, this golf course in Boston's early suburbs is a short streetcar ride from the financial district and downtown. Members of this golf club were influential in establishing the United States Golf Association. The course here started forming in 1893, the same year Frederick Law Olmstead moved his landscape architecture firm into an old farmstead, a few meandering blocks away. Though his influence on golf course architecture is tremendous, he is not known for designing any courses himself.

Muirfield Village Country Club, Dublin, OH
Legendary golfer Jack Nicklaus became an even more legendary golf course designer, developer, and brander. Though he is often, but not always, directly involved in the design, his firm has produced hundreds of courses all over the world, and more than 200 in the USA. Most are part of private housing developments, like this one, north of Columbus, Ohio, Nicklaus's hometown. He was the original developer of this property, and has worked and reworked this course many times since opening it in 1974.

Van Cortlandt Park Golf Course, New York City, NY
This is generally considered to be the first public golf course in the USA, opening in 1895, in the North Bronx, near Yonkers. You can still take the Number One train from Times Square and play 18 holes for around $35.



National Golf Links of America, Southampton, NY
This is a links-type course designed by C.B MacDonald in 1911, following the early Scottish courses built more simply on sandy bluffs. Compared to more standard courses, this style is a bit more uneven, rustic, and open, generally without trees, and built near the shore. This club is next to the Sebonak Golf Club, and the Shinnecock Hills Golf Club, another links course, and is one of more than a dozen private golf clubs in the Hamptons.

Pine Valley Golf Club, Clementon, NJ
One of the best loved and toughest courses in the country, Pine Valley was laid out in 1918, and catered to the city of Philadelphia. Early golf courses tended to be constructed where there was sand, such as coastal bluffs, evoking its origins in Scotland, or in this case, in the Pine Barrens of New Jersey. Golf Magazine has called it the best golf course in the world on several recent annual rankings.

Oakmont Country Club, Oakmont, PA
The course at Oakmont, in a suburb east of Pittsburgh, was built in 1903, and is considered a classic in "penal" design, where the course's 200 bunkers (sand traps) are hard to miss. The Pennsylvania Turnpike also divides the course in half, though no holes span the highway, and high walls keep most stray balls from leaving the course. Two golf cart bridges over the turnpike connect holes two through eight with the rest of the course.

Augusta National Golf Club, Augusta, GA
The home of the annual Masters Tournament, one of the most important events in the sport, this course is considered by some to be the best in the world. Originally constructed in 1933 by Alister MacKenzie and Bobby Jones, the landscaping and features have been tweaked many times since by designers such as Perry Maxwell, Trent Jones, Jack Nicklaus and Tom Fazio. Despite its stature in the sport, and with a membership that includes business leaders such as Warren Buffett, Bill Gates, and Jack Welch, the club did not have any African American members until 1990, and no women until 2012, when former Secretary of State Condoleezza Rice became a member.

Greenbrier Resort, White Sulphur Springs, WV
Golf courses are typically part of country clubs, municipal parks, housing developments, or resorts. The legendary Greenbrier Hotel in West Virginia is one of the progenitors of resort-style golf, where people come and stay, and play. There are five courses now around the Greenbrier, including Oakhurst Links, which opened in 1892, one of the oldest in the land. It is being integrated into a new housing development owned by the Greenbrier, with a new course designed by three golf legends, Jack Nicklaus, Lee Trevino, and Arnold Palmer. The hotel is also famous for its secret continuity of government bunker, outed in the 1990s, as the place for members of Congress to head to in the event of a nuclear attack on Washington, from which they might emerge presumably, eventually, and play golf.

Pinehurst Resort, Pinehurst, NC
Pinehurst is an old health resort with eight golf courses around it now, including some of the most innovative and highly praised ones. The resort was developed in 1895 by James Walker Tufts of Boston, who hired Frederick Law Olmstead's firm to lay out the village. The first golf course was built in 1898, but it was the second one, which opened in 1907, that is hailed as one of the finest. It was designed by the Scottish course architect Donald Ross, who was the resident golf pro at Pinehurst, and whose firm designed around 400 courses in the USA in the first half of the 20th century. Pinehurst was also the location of the first miniature golf course in the country, which opened in 1916.

Seminole Golf Club, North Palm Beach, FL
Considered one of the country's most exclusive golf clubs, the course at Seminole is on the beach, and was designed by Donald Ross in 1929, but has been severely altered by others since then. Florida has around 1,500 golf courses, more than any other state.

THIS WAS ADAPTED FROM THE WINTER 2016 CENTER FOR LAND USE INTERPRETATION NEWSLETTER.

The canal has a reputation for being contaminated with sewage, pollutants, and detritus. Back at the lab, samples are analyzed for microbial genetic make up.

COURTESY BK BIOREACTOR

GO GO GOWANUS continued from front page team comprising of three New York practices—Nelson Byrd Woltz Landscape Architects, community bio-laboratory GenSpace, and the Gowanus Canal Conservancy—views it in a different light.

Earlier this year, urban design advocacy group Gowanus by Design launched the competition, "Axis Civitas," which asked participants to map conditions relevant to the Gowanus area and use that as a basis to design a publicly accessible Urban Field Station.

The BK BioReactor—a collaboration including core team members Ellen Jorgensen of GenSpace and Ian Quate of Nelson Byrd Woltz, as well as Dr. Elizabeth Hénaff of Weill Cornell Medical College and Matthew Seibert of Landscape Metrics—claimed first prize. Since then, the team has been getting to work and can be found kayaking along the canal's surface and even wading through its filth, cataloging and mapping the Gowanus's microbial communities. An interactive microbiological map has been produced (available online), locating all the different microorganisms; the vast majority of which are bacteria. "Many of the species identified in preliminary samplings are also found in the human gut (a result of raw sewage), while other species reveal influence of the canal's proximity to the ocean," the group states on its website.

Executive director of Gowanus by Design David Briggs stressed they had no time to lose. Now designated as a Superfund by the Environmental Protection Agency (EPA), the canal will be dredged and then have its waterways sub-aquatically capped over the course of the next decade. This process will involve isolating the canal's waste by coating it with a layer of soil or similar substance to prevent further contamination of the canal.

Briggs, an architect himself, spoke of the "dearth of community resources" in the Gowanus neighborhood. "If we could help with that and also work with the EPA, then we would really achieve something," he said. Such a proposal isn't out of the question either.

Hénaff spoke highly of the study so far: "There are only positives to conclude," she said. "Nature does fix itself, despite what we inflict on it, and our job now is to see how we can coax this currently optimal bioremediation solution to perform faster." She outlined two directions that could be taken: Tweaking the bacteria themselves and accelerating the rate of metabolism or "modifying the built environment through choices in materials and structures to provide an environment with which to select for the bioremediating functions in the extant microbiome."

Turning up the heat on the microbial melting pot that is the Gowanus is no easy task. As a landscape architect, Seibert believes that through "a data-driven understanding of place (via DNA sequencing of sediment samples and responsive environmental sensor installation), community engagement, and bioreactor cultivation prototyping," the team can begin to "offer site-specific proposals" for how this could be done.

Seibert explained how this would help traditional landscape architects "design and specify an optimized environment for a preferred planting palette (i.e. soil structure, amendments, irrigation, etc.)." Meanwhile a "microbiologically-leaning landscape architect might do the same for a microbiome privileging the populations of bioremediating microbes."

"I think the canal is a landscape rich in lessons in how we conceive of landscape, particularly landscape within an urban context," Seibert continued. "For one, it speaks to the dangers of divorcing the built and natural environments. In fact, I think there is sort of a novel bioethic that emerges from this that can encourage a new kind of stewardship. As toxic and ugly and ultimately embarrassing as the Gowanus Canal is to its community, it also provides this layered landscape to catalyze us into re-conceiving nature and our role intimately within and of it." **JS**

TOP AND RIGHT: COURTESY © MAGNUSSON KLEMENCIC ASSOCIATES BOTTOM: COURTESY JAMES CORNER FIELD OPERATIONS

A major component of Seattle's new waterfront scheme involves the reconstruction of a seawall, shown here at low tide.

BIG NATURE, BIG CITY continued from front page pedestrian-oriented waterfront park and roadway. The Alaskan Way Viaduct, built in 1953, is currently in the process of being replaced by a partially completed underground highway tunnel that would free up the city's coastline for public recreational activities. The redevelopment will be funded via a new tax levied on downtown businesses and will continue a nationwide trend of replacing or repurposing aging infrastructure with a mix of public amenities and new development.

Andrew tenBrink, a designer at JCFO who has been working on the project since it started in 2010, said the firm had been "struck by the 'big nature' of the area," as it developed a project for a city sitting "on the cusp of the wilderness, between the bay and mountains."

Aside from creating a new recreational spine for the city's downtown, the new route will also string together existing cultural destinations along the waterfront like the famed Pike Place Market to the south, the Bassetti Architects–designed Seattle Aquarium at its center, and the Weiss/Manfredi Architects–and Charles Anderson Landscape Architecture–designed Olympic Sculpture Park to the north.

The aquarium, built in 1977 on the waterfront's Pier 59, can currently only be reached via a disruptive landscape of viaduct overpasses and parking lots. In the new plan, it will be located at the end of a broad public plaza accessible by a scenic lookout designed in concert with the waterfront scheme, reconnecting it to the city center.

JCFO's redevelopment plan would also connect to the iconic Olympic Sculpture Park located at the northern edge of the development, connecting the city's network of bicycle and walking trails, currently divided between north and south, together along the waterfront. TenBrink described the history of the waterfront as something that has "constantly evolved" over its transition from native habitat to industrial area and transportation corridor. In the near future, Seattle's waterfront will transform once again to become a line between the "pristine nature of Pacific Northwest and a very manufactured (urban) landscape," said tenBrink.

Another major and partially completed component of the project entails rebuilding an existing seawall used to mitigate Puget Sound's constantly fluctuating tides. Between epic "king tides," monthly lunar tides, and other seasonally variable waves, the water's height can vary by as much as 12 feet, so the design team has deployed specially-designed panels, some codesigned with local artists, to create spots for tidal wildlife to live and grow. The wall also marks the area's mean, low, and high tides and contains walkway areas with embedded glass blocks that allow for daylight to permeate the water, as to not disrupt sensitive spawning grounds.

The remaining areas that feed into the promenade and roadway will also receive improvements to their streetscapes in order to facilitate the pedestrianization of surrounding areas while also inserting key landscape components. **AP**

COURTESY KEVIN SLOAN STUDIO

LANDSCAPE ARCHITECT KEVIN SLOAN ENVISIONS INTEGRATING DALLAS–FORT WORTH'S WATERWAYS WITH THE CITY

WELCOME TO THE JUNGLE

In March 2013, Kevin Sloan, founder of Dallas-based landscape architecture and urban planning firm Kevin Sloan Studio, attended a lecture at the Dallas Museum of Art at which professor Kenneth Frampton, of Columbia University, recited a phrase that had been illicitly written in the 1980s on a rendering of a 1950s utopian city displayed at the New York Museum of Modern Art:

> *There are no cities anymore.*
> *We are incapable of making cities anymore.*
> *The machine is incapable of making cities anymore.*
> *We'll have to get used to living in the jungle.*

Sloan is working on the Branch Waters Network. The concept is to make use of the waterway system in Dallas–Fort Worth (DFW) as a guideline for a new metropolitan urbanism. Back in 2013, he recognized Frampton's use of the word "jungle" as more than just a metaphor (although DFW is one of the largest cities in the United States for the trapping, banding, and study of urban wildcats). He interpreted it as a hint that the landscape and waterways could dovetail into the urban framework of a city.

Sloan wants to make use of DFW's "water branches," which span approximately 65 miles east to west and 45 miles north to south. He has outlined more than 300 potential miles of waterway that are primed for development. Sloan points out that more than 90 percent of natural drainage ways in Dallas County are currently intact and untapped. So far, his plan has been well received: According to Sloan, a current Dallas councilmember called it the "most sustainable concept he's yet seen for the Dallas Trinity River."

Successful examples of his water branch concept in practice can be seen at Turtle Creek Parkway, White Rock Lake, and the ongoing Trinity River Project. Part of city planner George Kessler's 1911 "City Plan for Dallas," the seven-mile-long Turtle Creek Parkway is, in Sloan's eyes, "a 100-year demonstration that nature can attract density in accordance with the edges of shaded and serene waterway.

"What is astonishing is that, in Texas, luxury and the good life are typically imagined to unfold on an expansive ranch or noble estate," continued Sloan. "Turtle Creek Parkway produced high-rise apartments and condominiums, as early as the 1960s, that gathered along the edge and are supported by nodes and enclaves of shopping and residential neighborhoods such as the Park Cities."

For his Branch Waters Network concept to work, Sloan argues that Americans' preconceptions of planning and notions of "nature" need to be challenged. He advocates replacing the "cultural preference for an Anglican landscape of irrigated turf grass, clipped hedge, and parterres—where all live like squires on a patch of England" with a "re-wilding nature project along the waterways and attendant areas. The forest is out one door. The avenue and the culture of the city are out the other.

"Whether 'nature' means living on a golf course, along a river, or in the mountainous environs of, say, Boulder, Colorado, one can draw a straight line between environments of natural beauty and economic value," he continued.

Sloan also calls for an alternative to Daniel Burnham's "Make no little plans." "What is a plausible strategy to guide an orderly restructuring of millions of acres of unplanned growth?" Sloan asked.

He and his studio have seen two projects realized that align with the Branch Waters concept. Located in Addison, north of Dallas, spring-fed Vitruvian Park—which occupies 17 acres, as part of a 112-acre master plan, also done by Sloan—lies on Farmers Branch Creek. So far, during its eight-year existence, the project has been what many consider a success, establishing a dense, urban pocket without the daunting qualities of a downtown center.

Another project, the Dallas Urban Reserve, is also doing well. A stone's throw away from White Rock Creek Trail, the 10.5-acre modern housing development made use of a site that was used for years as an illegal dumping ground. The site slopes asymmetrically to allow stormwater to enter a system of repetitive filtration beds, planted with bald cypress, pond cypress, and horsetail reeds. Only three of the original 50 housing lots that went up are still available, and, in 2011, the project won the ASLA Award of Excellence.

However, Sloan wants the Branch Waters Network to go further. "By using the entire waterway network as a natural attraction to form density, transit, and linkages, perhaps the anxiety and opposition to conventional planning, regulatory devices, and legislative actions can be circumvented," he said.

"The possibilities of the Branch Waters Network challenge architecture conventions. Chance operation replaces totalizing planning concepts and designs. In lieu of regulating plans and inflexible determinism, urbanism becomes a game, and the game is to aggregate along the branches." **JS**

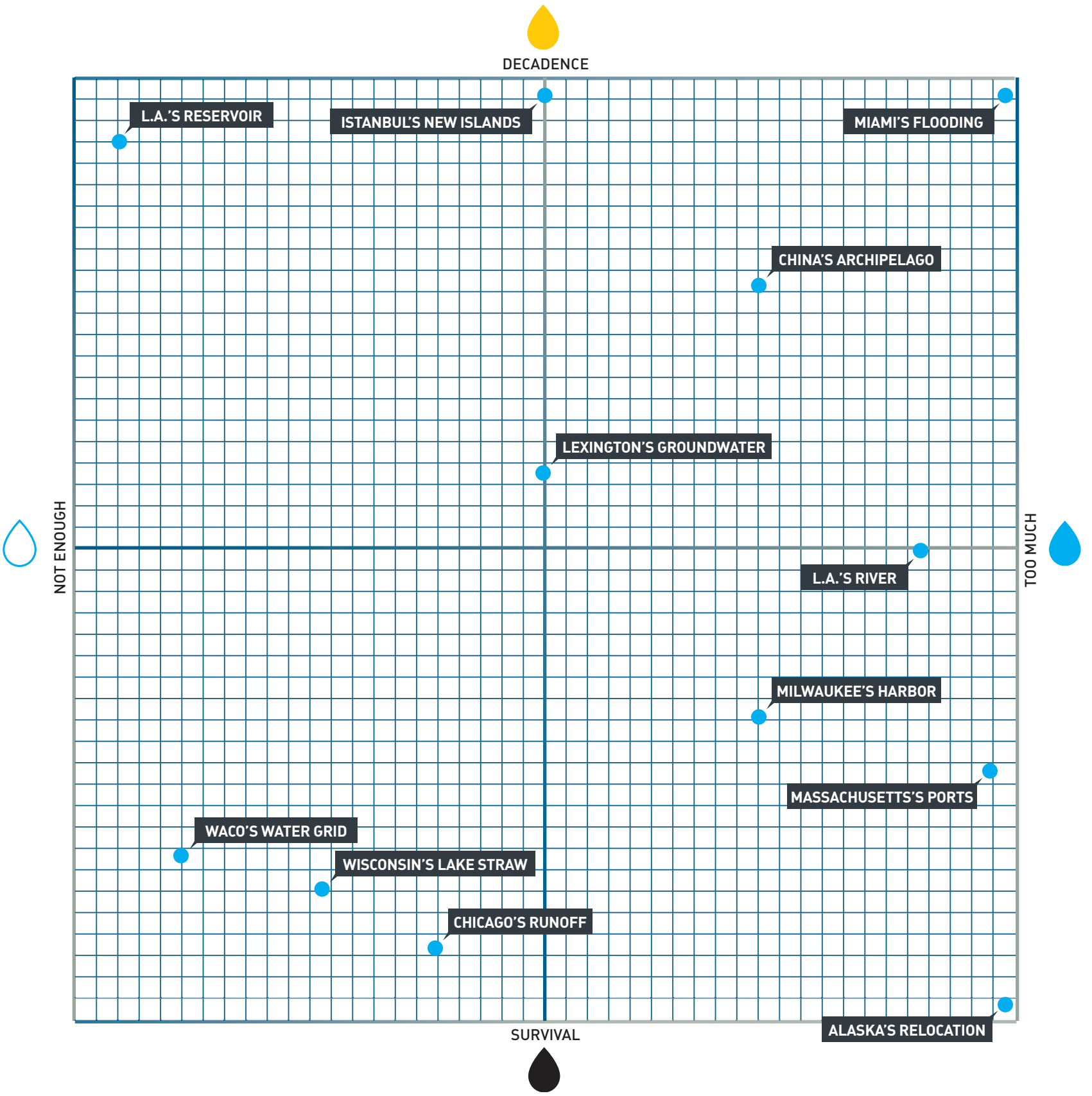
COURTESY KEVIN SLOAN STUDIO

COURTESY KEVIN SLOAN STUDIO

Clockwise from top: A rendering of the proposed Branch Waters Network by Dallas landscape architect Kevin Sloan, which would incorporate the waterway system into the city's framework; Sloan considers the seven-mile-long Turtle Creek Park to be a success story for branch water development in Dallas; Vitruvian Park offered Sloan an opportunity to put his ideas in action and has become a valuable green space in Addison, Texas.

RELATIONAL WATER LANDSCAPES

FOR LANDSCAPE ARCHITECTS TODAY, URBANISM AND WATER GO HAND IN HAND. WHETHER DEALING WITH ISSUES OF SEA LEVEL RISE, GROUNDWATER RETENTION, OR JUST PLAIN OLD WATER SUPPLY INFRASTRUCTURE, LANDSCAPE ARCHITECTS ARE WORKING WITH SCIENTISTS, ENGINEERS, AND POLICY MAKERS ON INCREASINGLY BIGGER PROJECTS THAT ENCOMPASS MORE EXTERNAL FACTORS AND LARGER NETWORKS OF PHYSICAL, BIOLOGICAL, ENVIRONMENTAL, AND POLITICAL NETWORKS. WE EXAMINE SOME OF THESE WATER LANDSCAPES AND HOW THEY RELATE TO EACH OTHER IN THE BROADER CONTEXT OF HOW RESOURCES AND CLIMATE-RELATED CHANGES ARE BEING MANAGED. TO PUT THESE PROJECTS IN PERSPECTIVE, WE HAVE POSITIONED THEM ON A GRID: THE X-AXIS RUNS FROM "NOT ENOUGH" TO "TOO MUCH" WATER AND THE Y-AXIS POSITS THESE PROJECTS AS EITHER BEING ROOTED IN NECESSITY OR DECADENCE. WITHIN THIS GRID, WE FOUND A SURPRISING VARIETY OF COMBINATIONS.



ANTHONY GEORGE

The Brazos River in the Brook Oaks neighborhood of downtown Waco, Texas. The Brazos intersects with the Bosque River, which flows into Lake Waco.

TEXAS PLANNERS ENVISION A COUNTY-WIDE "GRID" TO PROVIDE CLEAN WATER DURING DROUGHTS

WACO'S WATER GRID

In and around Waco, Texas, public officials are working to create a county-wide "water grid" that would enable various water suppliers to work together to conserve and share water during droughts.

According to the *Waco Tribune-Herald*, McLennan County, Texas, has launched a study to determine the best way to make sure water is available to the residents of Waco and the surrounding region by pooling the resources of various suppliers.

County judge Scott Felton, an advocate for sustainable water planning and conservation, is leading the effort. Last year, Felton brought together the McLennan County Water Resources Group to help communities plan for shortages of clean water and the advent of contaminated water. The group secured a $75,000 grant from the U.S. Bureau of Reclamation to help fund the study.

Others working with McLennan County on the study include cities in the region, water supply corporations, the Brazos River Authority, a groundwater conservation district, and local residents and businesses.

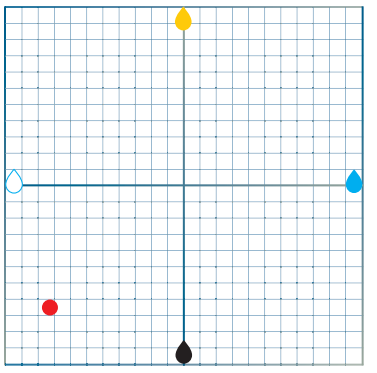
Felton told the *Waco Tribune-Herald* that good planning is necessary to make sure water is available when it's needed.

"Ultimately, the idea is not to waste water," he told the newspaper. "This grant allows us to customize a plan specific for our county and our different water districts on how we can better utilize… water and how to conserve water to be prepared for those very dry seasons like we've seen recently."

Even though the Greater Waco region's water supply is more plentiful than some areas in Texas, Felton warns that communities need to become less dependent on groundwater from the shrinking Trinity Aquifer, which extends across central and northeastern Texas.

"What's constant in this county is that our groundwater is going down, whether it's raining or dry," he said.

Tom Ray, water resources coordinator with Lockwood, Andrews & Newnam in Waco, the lead consultant on the study, told the *Waco Tribune-Herald* that the Trinity Aquifer is expected to drop between 250 and 450 feet by 2040. That's as much as 19 feet a year in the Hewitt and Bellmead areas, which are expected to see the biggest drops.



County and city leaders say they envision a network of pipelines that could connect water users around the county and allow them to share water as needed. The final cost of that pipeline network is still under study.

The completed plan will establish a process for monitoring short- and long-term water availability, predict the probability for future droughts, evaluate the risks and impacts of drought, and prioritize mitigation actions.

Other ideas under study, according to the planners, include reclaiming more treated water from a regional sewer plant, making use of extensive water rights that the city has held in the Brazos River since 1914 (but does not use), and making more use of the Bluebonnet Water System, which draws water from Lake Belton. **EDWARD GUNTS**

COURTESY MIA LEHRER +ASSOCIATES

A proposed conceptual scheme for the decommissioned Silver Lake Reservoir designed by Mia Lehrer + Associates would involve, among other things, artificially raising the reservoir's bottom to facilitate the development of estuary island habitats for roosting birds and the use of terraced landscaping to create riparian areas.

WHAT WILL ANGELENOS DO WITH A DECOMMISSIONED, 45-FOOT-DEEP RESERVOIR?

L.A.'S DRY RESERVOIR

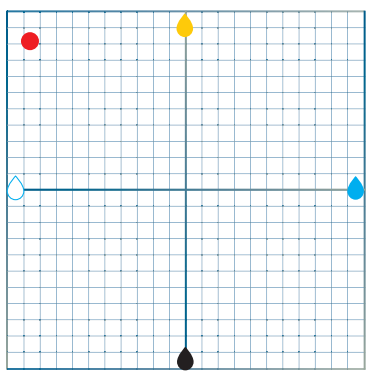
The tony neighborhood of Silver Lake on the periphery of Downtown Los Angeles is the latest of many contested sites in a city grappling with dual perils of increasing urbanization and water scarcity.

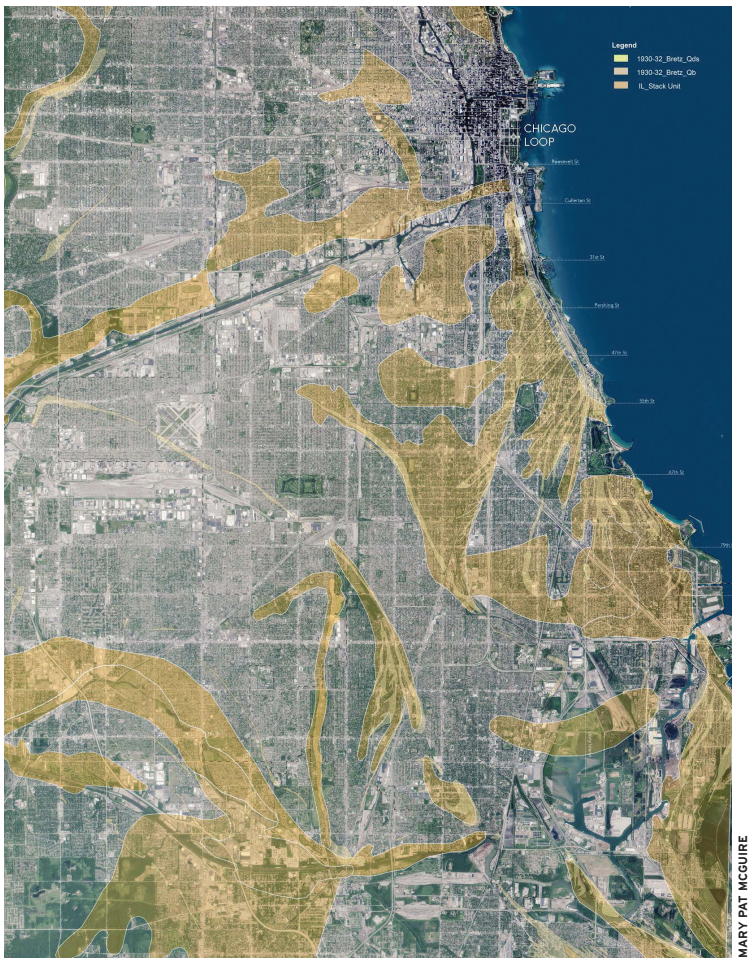
In this case Silver Lake's namesake reservoir, a grandfather of the city's pioneering urban water infrastructure system, is driving a wedge among neighbors and communities. The reservoir was decommissioned in 2006 when, in order to comply with new regulations from the United States Environmental Protection Agency, which banned open-air, potable water reservoirs, the Los Angeles Department of Water and Power (LADWP) owner of Silver Lake Reservoir, opted to build a new, underground water storage facility in the nearby San Fernando Valley. That project, the Headworks Reservoir, a 110-million gallon system located on a 43-acre site, robbed Silver Lake Reservoir not only of its infrastructural purpose, but also of its water. Ten years later and four years into a punishing drought, the decommissioned reservoir sits empty, its soft bottom sprouting scraggly tufts of new growth.

Fierce neighborhood rivalries have erupted over what to do about the 45-foot deep hole, especially considering LADWP has not published a workable plan for the future of the complex. Should the reservoir be refilled? If so, with whose water? If not, what happens to the land?

Silver Lake Forward, an organization of designers and activists who live in the area, has sprouted up to advocate for a more equitable vision of the future. The group is circulating a petition to persuade the LADWP to refill the reservoir sustainably, with an eye toward the delicate ecological balance necessary to maintain a healthy water landscape in Los Angeles. The group's conceptual plan, designed by Mia Lehrer + Associates, aims for the gradual reintroduction of natural landscape ecologies by artificially raising the reservoir's floor and converting the complex into a 31-acre park. The scheme features lookout points, boardwalks, and a series of small islands set aside for roosting water birds.

At a recent meeting discussing the project, Robert Soderstrom, cofounder and president of the organization, expressed hope for the group's plan: "The people of this city will rise to the spaces we build," he said. **ANTONIO PACHECO**





MARY PAT MCGUIRE

WHILE THE WINDY CITY DIGS DEEP TO FIGHT FLOODING, ONE LANDSCAPE ARCHITECT FINDS A NEW SOLUTION

CHICAGO'S RUNOFF

Landscape architect Mary Pat McGuire is working to tap a hidden asset in Chicago's fight against flooding: Forgotten sand deposits that could absorb rainwater. Coastal dunes were paved over as the city grew, but still exist underground. McGuire drew this map in collaboration with geoscientists from the USGS and ISGS to reveal the buried sand dunes.

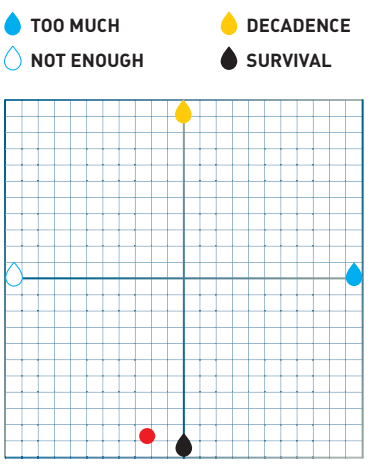
When it rains, Chicago faces challenges from above and below: With paved-over urban landscapes representing nearly 25 percent of the city, the earth is unable to absorb the onslaught of water. An aging sewer system causes regular flooding and even sewage discharge into nearby water bodies. The challenge is immense—for Chicago, one inch of rainfall citywide equals four billion gallons.

Until recently Chicago's answer to the problem has been no less than epic—read costly—in scale. But one landscape architect is leading efforts to change how the city can unlock its hidden potential for storm water management.

Chicago's Tunnel and Reservoir Plan (TARP), also known as the Deep Tunnel Project, is the latest of the city's massive water projects. Following in the footsteps of extensive canal digging around the turn of the 19th century, TARP is a 50-year project that started in 1975. Completed 19 years ago, phase one of the project includes over 100 miles of tunnels up to 33 feet in diameter. These tunnels are reservoirs for over two billion gallons of sewage overflow, waiting to be treated. Surface reservoirs are planned to hold another 15 billion gallons when the project is complete in 2029. In the past 30 years the project has had some success in mitigating the situation, but at a cost of $3 billion so far. Some feel there is another, more immediate way to help at the level of the neighborhood.

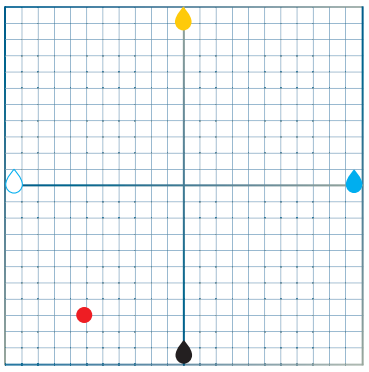
Mary Pat McGuire, landscape architect and assistant professor at the University of Illinois Champaign-Urbana, is working with students, architects, and geoscientists to map porous, naturally occurring sand deposits located just under Chicago's surface that could absorb rainfall. To find the best test sites for anti-flooding interventions, McGuire is matching the deposits, which can run 25 feet deep, with heavily paved areas that flood frequently. Next, she aims to find local partners—likely community advocacy groups—who will help her implement prototypes that could include de-paving, installing dry wells and monitoring equipment, and even introducing new absorbent materials. In her words, "the ultimate goal [is] designing water where it falls."

Yet parts of Chicago may not be getting the despite attention they need when it comes to flooding. According to McGuire, "first Chicago" gets preferential treatment while other areas are neglected: "There's a total inequity in terms of the ways [city government] is dealing with the situation." She believes community organizers and alderman in affected areas will need to push for a solution. "If Chicagoans understood the cause of their regular and widespread flooding," she added, "They might rise up and say 'City, you're not providing public works for us.'" **ZACHARY EDELSON**



A CONTROVERSIAL DECISION WILL ALLOW A WISCONSIN CITY TO DRAW WATER OUT OF LAKE MICHIGAN

WISCONSIN'S LAKE STRAW



Waukesha, Wisconsin, has a water problem. The deep wells of the state's fourth largest city are tainted with radium, a naturally occurring radioactive element. With a 2018 deadline to comply with federal drinking water standards, the city is scrambling to find a sustainable, long-term source of fresh water. A recent decision will allow the city to draw its drinking water from Lake Michigan, but tapping into the Great Lakes system is complicated, both politically and ecologically.

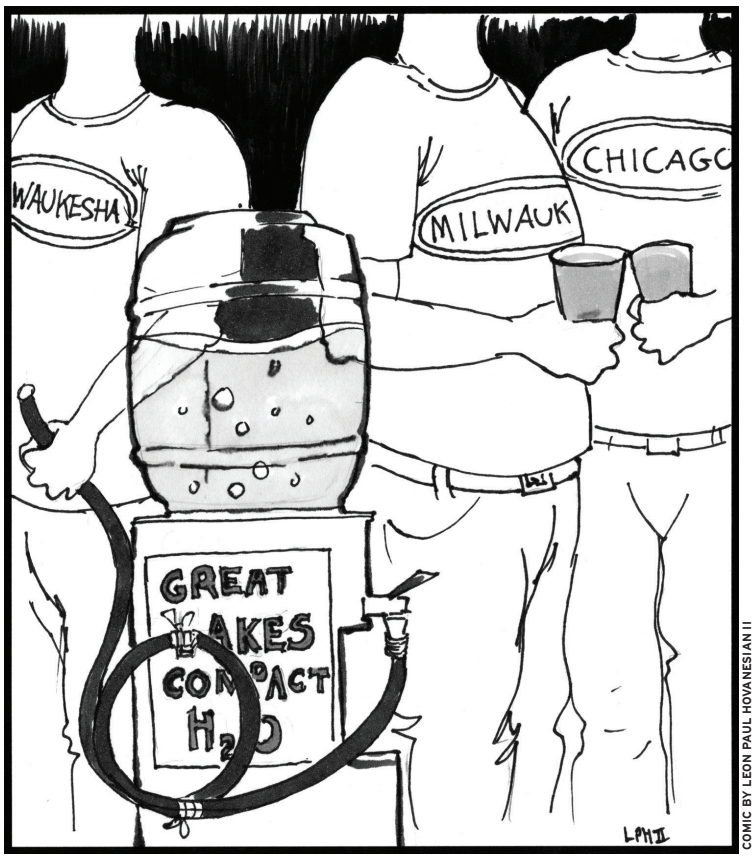
For over a decade, Waukesha has been studying and petitioning to have the right to draw water from the lake, which is only 20 miles east of the city. Restricting the city's access to the water is the Great Lakes Compact, a 2008 federal law that stipulates that in order to draw water from the lakes, a community must be in the Great Lakes watershed. Despite the city's proximity to the lake, it sits just west of the Saint Lawrence River Divide, outside of the watershed.

Two governing bodies maintain the Great Lakes Compact: the Great Lakes Council in the United States and the Great Lakes-St. Lawrence Water Resources Regional Body in Canada. The councils, consisting of governors from eight states and two Canadian provinces, would have to unanimously approve the city's request. After the initial application in 2010, the council and city negotiated for six years, until the councils finally approved the request this June. The approval is based on the fact that the City of Waukesha is in a county that straddles the divide and the city's aquifers are already partially naturally replenished from within the Great Lakes watershed. The decision also requires the city to return an equal amount of clean, treated water to the lake as it draws out. Not everyone is pleased with the decision though, and legal action is already pending.

The Great Lakes and St. Lawrence Cities Initiative (GLSL Cities Initiative) has issued a formal appeal to the Compact members to reverse the decision. The GLSL Cities Initiative is comprised of over 120 Great Lakes region city mayors, and it feels that a dangerous precedent is being set by allowing water to be taken from the lakes. It is also critical of the lack of transparency in the process of approval, which it says did not involve enough input from the public or local governments. The initiative has also written to U.S. President Barack Obama, Canadian Prime Minister Justin Trudeau, and the International Joint Commission, claiming the decision "exceeds the scope of authority granted in the Compact."

As it stands the Waukesha has begun the permit process to build a $207-million system of pipelines to draw and return water to the lake. The water would not come directly from the lake, but from a town near the lake. Water would be returned by way of the Lake Michigan tributary Root River. **MATTHEW MESSNER**

Some believe that allowing Waukesha to take water from the Great Lakes is setting a dangerous precedent for the future, when water may be scarce in other parts of the country.



COMIC BY LEON PAUL HOVANESIAN II

COURTESY SCAPE LANDSCAPE ARCHITECTURE

SCAPE TURNS LEXINGTON, KENTUCKY'S LONG-BURIED WATER INTO AN ASSET

LEXINGTON'S GROUNDWATER

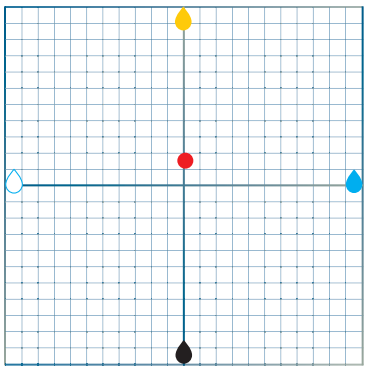
Most Lexingtonians don't know it, but the porous limestone landscape under their feet—called karst—created their bluegrass identity. The basic water that flows through karst reportedly makes their grass grow green, their racehorses grow strong, and their bourbon taste smooth. So when downtown Lexington held a competition to revitalize and re-pedestrianize the concrete, car-driven downtown, New York–based SCAPE Landscape Architecture chose to reveal and celebrate its geology. As SCAPE founder and partner Kate Orff said, the Town Branch Commons Corridor project is "a reinterpretation, a transformation of the karst landscape into public space."

The ambitious project, which just received a major $14.1 million funding boost from the U.S. Department of Transportation, will carve pedestrian and bike paths through the heart of Lexington, creating new green spaces and linking with regional trails at both ends. To create freshwater pools—SCAPE calls them "karst windows," in reference to similar naturally occurring formations—the design will tap old culverts (essentially large pipes) that previously kept Lexington's karst water out of sight.

The trail will be narrow in some areas, but wide for the Karst Commons, a new public plaza and park at the project's northern end that will feature multiple "habitat rooms," an amphitheater, and recreation areas. The park can flood safely in a deluge. "There's no site here, it's a hybrid project," said Orff. "Sidewalk here, empty lot there, parking lot there…The threat of water means each entity has to somehow come in contact with it and embrace it."

The road to realizing the project—now in schematic design—has been long. After wining the 2013 competition, SCAPE worked with the University of Kentucky and the Lexington Downtown Development Authority to foster public support. They created a large model of the city's hidden Town Branch Creek, paired with self-guided podcast tours, that generated excitement and helped propel the project. The karst, citizens realized, was part of the bluegrass identity they hold dear (and market to tourists). "Here it's all about finding a unique identity framed around a cultural and geological history of a place," said Gena Wirth, SCAPE design principal. "What's replicable is the multipurpose infrastructure that unites the city, its story, and its systems." **ZE**

The Karst Commons is the centerpiece of SCAPE's network of parks and paths that use a buried creek to revitalize Lexington, Kentucky's downtown.



COURTESY FORUM STUDIO

A COTERIE OF ISLANDS AND HIGH-RISES ARE PLANNED IN NORTHERN TURKEY

ISTANBUL'S NEW ISLANDS

Fourteen miles west of Istanbul's Atatürk airport on the coast of the Sea of Marmara, a pearl looks set to rise out of the water. Designed by Chicago firm Forum Studio, the mixed-use development covers 1,660,000 square feet, offering close to 1,500 residential units and a 500 boat marina.

The marina comprises a circular array of artificial islands. "The architectural concept derived both its form and defining character from the natural environment of the Marmara Sea coast," said Erik Andersen, design principal at Forum Studio. "The islands are conceived as an alternative to a utilitarian seawall; they harmonize with, and extend, the region's natural landscape."

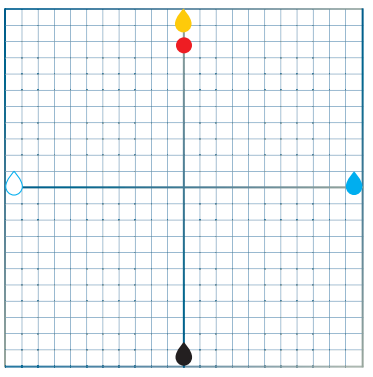
The development, called the "Pearl of Istanbul," features a light-spouting iridescent node nestled among low-rise volumes and vegetated spaces on the man-made islands in the Marmara Sea.

A "pearlescent" node that projects colored light beams into the air acts a visual focal point and hub in the center of the arrangement. The marina will also include an innovative botanical garden and a Marmara Sea research center that, according to Andersen, will "enrich the community with opportunities for research and learning."

Low-rise volumes and a host of landscaping features make up the majority of the marina, facilitating undisturbed views out to sea for those living in the high-rise dwellings on the natural shoreline. "Changes in scale—from the monumental to the intimate—accommodate a variety of uses that will include nightlife and entertainment as well as family-friendly activities and academic marine research facilities," said Andersen.

Andersen explained that a careful study of the ecology of the shoreline context "informed and inspired many landscape and sustainable design strategies." The "dense," pedestrian-friendly community is "organized around a network of landscapes that utilize native plants and natural storm water systems for collection and reuse." Andersen elaborated on Forum Studio's approach: "We studied the project as a series of interconnected systems similar to a living organism. Each system informs and supports the other. The intent was to optimize performance in the way nature does with every living organism and every natural ecosystem."

Currently, the project is going through initial municipal approvals for the land development. The schedule for ground breaking is yet to be determined. **JASON SAYER**



COURTESY STUDIO GANG ARCHITECTS

STUDIO GANG'S INTENSE, RESEARCH-BASED APPROACH TO ECOLOGICAL DESIGN RETHINKS THE SHAPE OF URBAN WATERFRONTS

MILWAUKEE'S HARBOR

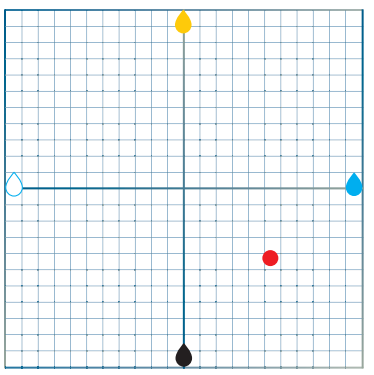
Studio Gang's plan for the Milwaukee Harbor connects the downtown with the lake and transforms the harbor into a multiuse utility and recreational space.

As Studio Gang gains respect as an office that builds formally and programmatically ambitious projects, one aspect in particular has helped the firm continue to be a major force: It is an office that does its homework. Every project that the studio does is accompanied by a body of research as well as collaborations with experts often outside of architecture. "As architects, we think of our role as being that of the translator," explained Claire Cahan, design director at Studio Gang. "Early on in the project we bring in experts from interdisciplinary fields to discuss the past, present, and future conditions of a site. Our job is to ask questions and translate ideas between disciplines." This becomes particularly visible in projects that involve water ecologies.

After a yearlong study in collaboration with the National Resources Defense Council (NRDC) and the Harvard Graduate School of Design (GSD), the studio released *Reverse Effect* (2011). The book explored urban and ecological implications of severing the link between the Chicago River and the Mississippi River, effectively reversing the flow of the Chicago River to its original direction (something that has actually happened three times). The book presented a new Chicago that embraced a reshaped river as part of its cultural and civic space.

"We're interested in the intersection between built and natural environments," said Cahan about the office's broader vision and approach. "While building projects typically have distinct property lines and boundaries, natural systems often intersect with property lines in a fluid way. Through research, which includes conversation, mapping, and analysis, we seek to understand the natural, cultural, economic conditions far beyond a property line."

A similar study, in collaboration with Milwaukee-based Applied Ecological Services and Edgewater Resources, looked at the 1,000-acre Milwaukee harbor. The Edge Effect master plan set out to establish a framework and logic for Milwaukee's waterfront development. The master plan envisions relocating the current active inner harbor to a new outer harbor, while bringing the city to the water's edge. The process would include softening the coastline to achieve a more complete and sustainable ecosystem by learning from stable natural coastlines and reefs. This concept is already being deployed in the Studio Gang–designed improvements to Chicago's Northerly Island, which has a similar geographic situation. **MM**



COURTESY URBANLAB

UrbanLab's master plan for the Yangming Archipelago includes water filtering islands and eco-boulevards in a new dense urban district.

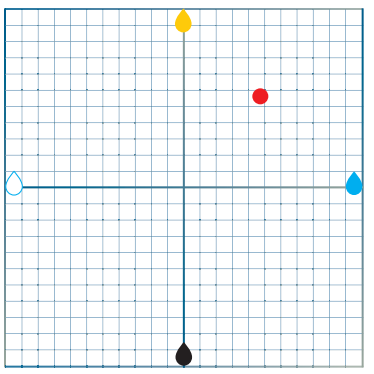
A MASTER PLAN CALLS FOR A BRAND NEW CITY TO ALLEVIATE CHINA'S WATER ISSUES

CHINA'S ARCHIPELAGO

Chicago-based UrbanLab has a knack for combining water infrastructure with architecture and landscape to find new urban forms. In the 2014 Venice Biennale, the studio presented the Free Water District (FWD), an urban-scale multiuse, multi-environment development that would encourage industry through a controlled, but free, use of Great Lakes water. In its latest commission, UrbanLab has been asked to address an even more complex urban situation in China.

The Yangming Archipelago in Changde, Hunan, China, will be a new district that will accommodate 600,000 people in five square miles. Changde is part of a larger program in China to implement large water-infrastructure projects in order to improve urban water quality. At the heart of the project is an island-filled lake, which will act as an ecological, as well as a social and cultural space. The Yangming Archipelago also includes a dense system of public transportation and housing, integrated into eco-boulevards.

Eco-boulevards, a concept that can be found in many of the studio's proposals, put water at the center of urban improvement. The idea is based on case-by-base performance-based infrastructural landscapes. These rich boulevards would come in many forms and sizes, but they would all function as more than a space for vehicular movement, providing social, ecological, and energy amenities. The boulevards would traverse the city with integrated water-filtration and water-retention technologies, both passive and active. The stitching of nature to the larger urban environment would connect formerly disparate parts of the city with a common civic space. **MM**



COURTESY ANDERS HJEMDAHL / PACIFIC VIRTUAL REALITY

L.A. RIVER RESTORATION KICKS INTO HIGH GEAR, RAISING HOPES AND EYEBROWS

L.A.'S RIVER

2016 has been big for the Los Angeles River's ongoing restoration process, as several of the multi-agency, intragovernmental urban water infrastructure projects surrounding its redevelopment have begun implementation.

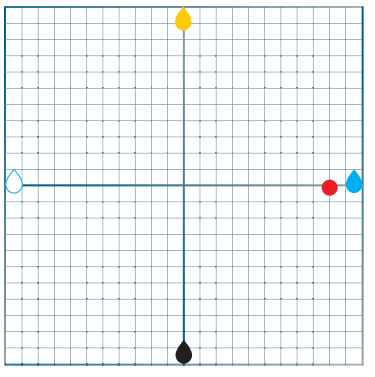
The 51-mile-long concrete channel currently known as the L.A. River was created in 1938 as a flood control measure, and has been the site of steadily growing public interest for decades. Activist groups started gathering around the idea of river as a social justice cause for the city back in the 1980s, exploring its hidden potential for creating an urban oasis. River-focused landscape architects like Mia Lehrer and organizations like Friends of the Los Angeles River (FoLAR), founded in 1986 by poet, filmmaker, and writer Lewis MacAdams, have been at the forefront of river advocacy for years and are responsible for keeping the river in the public eye. But suddenly, the project has gained international notoriety both as the poster child for the post-World War II era's ham-handed approach to urban hydrology, and, crucially, as an urban project the success of which could rewrite the future of America's second-largest city.

In 2004, the City of Los Angeles founded a nonprofit group, L.A. River Revitalization Corporation, to wrangle the ever-growing constellation of river-related programs, and ultimately hired Frank Gehry and Associates, landscape firm OLIN, and Geosyntec Consultants to create a master plan. The team is currently in the midst of working through the initial study phases and has held a handful of community meetings across the region to discuss on-the-ground concerns and to gather ideas, in the process creating the L.A. River Index, an online resource for sharing information with the public. The city also commissioned the development of a virtual reality app, L.A. River VR Experience, by partnering with interactive media producers Camilla Andersson and Anders Hjemdahl at Pacific Virtual Reality. Their app was released on October 8, timed with the 30th anniversary of FoLAR's founding.

Additionally, Gruen Associates, Mia Lehrer Associates, and Oyler Wu Collaborative were recently selected to design bike paths across the river's length in the San Fernando Valley. Their project will link to the existing, popular path along the river running through the Frogtown neighborhood just north of Downtown Los Angeles. That particular area has been the site of highly partisan anti-gentrification battles, as the development community quickly began to take note of an impending windfall if the river becomes a desirable location. Housing projects have begun to sprout up around this neck of the river, which is surrounded by a mix of sleepy residential and industrial areas. A forthcoming project by Rios Clementi Hale Studios aims to bring 419 apartments, 39,600 square feet of ground-floor retail space, and 18 acres of open space to a river-adjacent site.

In Downtown Los Angeles, Michael Maltzan Architecture (MMA) is working toward beginning construction on their new vision for the Sixth Street Viaduct. The project will replace a structurally compromised bridge from 1932 currently under demolition. MMA aims to work in parallel with the bridge's demolition, starting construction at the recently demolished eastern banks of the river and moving in the path of the old bridge. That project, a partnership with the City's Bureau of Engineering, is being designed explicitly to facilitate community access to the river along both banks, and is due to be completed in 2019.

Whether it's online, in virtual reality, or along the newly permeable banks of a beautified L.A. River, one thing is sure: L.A.'s River is changing very, very quickly. **AP**



A restored section of the L.A. River along Griffith Park in the Elysian Valley is becoming a natural habitat once again.

PLANNING THE FUTURE OF NEW BEDFORD'S FISHING INDUSTRY

MASSACHUSETTS'S PORTS

Working waterfronts along the Eastern seaboard are slowly dying out. As rising sea temperatures result in different fish migration patterns and locations, fishermen are struggling to adapt and keep up. The phenomenon is believed by many scientists to be due to climate change—the effects of which are most prominently evidenced on the East Coast according to a 2009 article, "Progress in Oceanography," which found that waters in the northeast saw their temperatures rise at twice the global rate between 1982 and 2006.

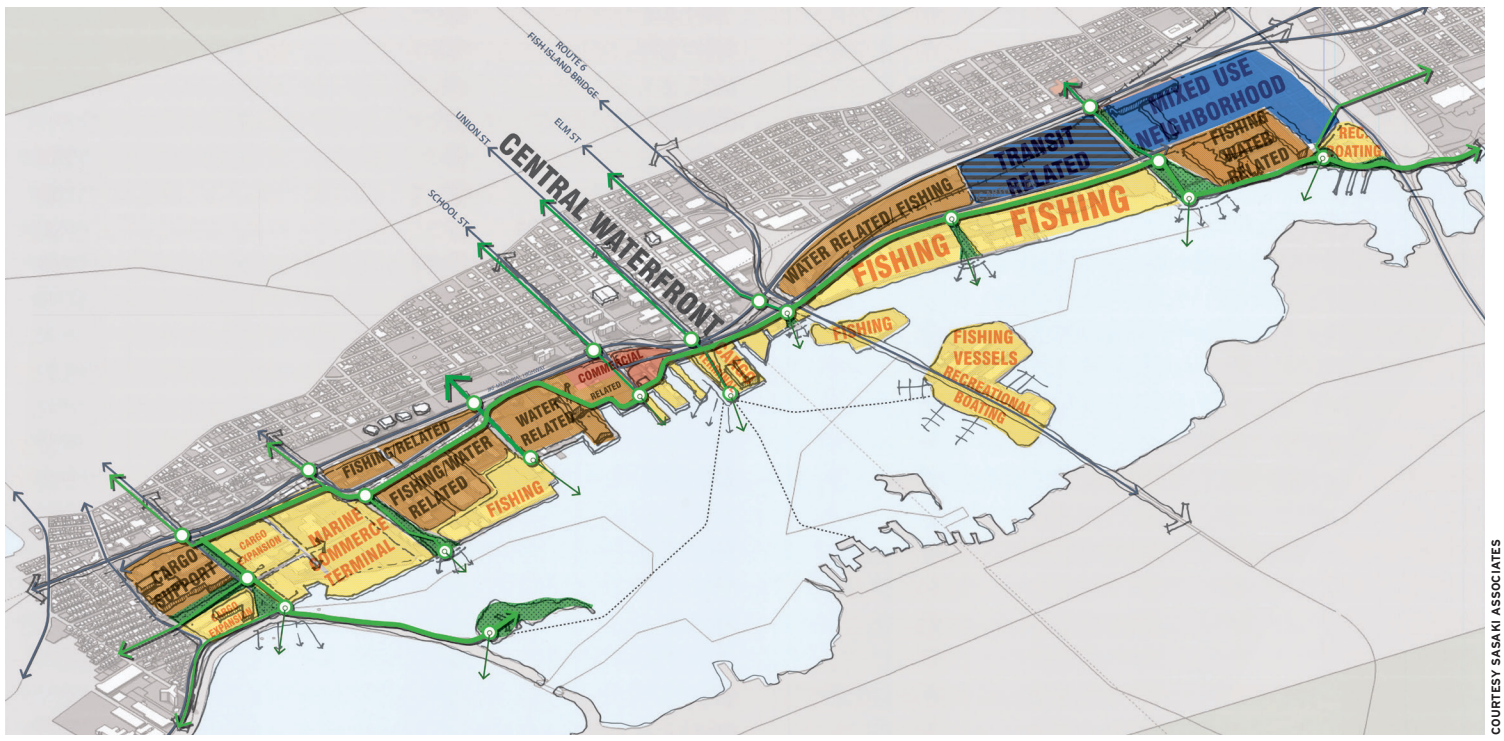
The port of New Bedford, Massachusetts, however, has remained strong. Since 1999 it has been the nation's number one fishing port, netting 40 million pounds of seafood valued at more than $329 million in 2014, generating economic activity surpassing $1 billion.

Sustaining this economic fruition is a different matter, though. Boston-based consultant Sasaki Associates has produced a study of New Bedford's waterfront, a scheme that seeks to further the area's economic longevity.

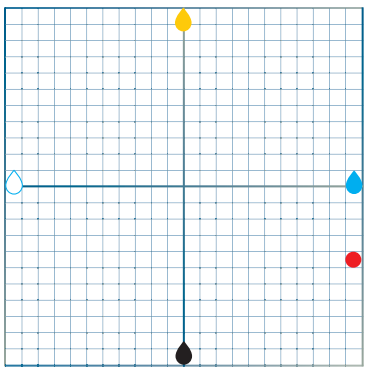
Proposals vary from advocating investment in particular areas and buildings to introducing other industries to the area. An example of the latter can be seen in the suggestion to enhance access—both public and private—to the Whaling City Seafood Display Auction where national and international buyers bid on fish. "A direct connection between fishing boats and the seafood auctions would improve the efficiency of getting fish to the consumer and make the process a transparent experience for the public," reported Sasaki. Additionally, this would allow tourists to witness fish trading, something that is popular in, London, Sydney, Tokyo, and even, as Sasaki points out, Chatham, Massachusetts.

As seen in the diagram, Sasaki sorted areas into "water dependency" zones, which helps to form a strategy for future development, allotting certain areas for public interaction and economic activity.

Urban planner and project manager at Sasaki Brie Hensold highlighted the city's State Pier as another opportunity, describing it as a "lynchpin." Hensold said that the pier is "heavily dependent" on the water and could be a crucial element for future tourism. In a similar vein as the auction house proposal, Sasaki advocates showcasing New Bedford's industrial heritage and contemporary operations to tourists and the public. Mystic Seaport, just 80 miles away in Connecticut already does this, charging visitors $26 to walk around the old port and sample its history. **JASON SAYER**



COURTESY SASAKI ASSOCIATES



ONE REMOTE ALASKA CITY IS SEEKING $200 MILLION TO FLEE THE RISING SEA

ALASKA'S RELOCATION

COURTESY BERING LAND BRIDGE NATIONAL PRESERVE

This summer, threatened by the rising sea, the citizens of Shishmaref, Alaska voted to leave their small island and relocate to the mainland.

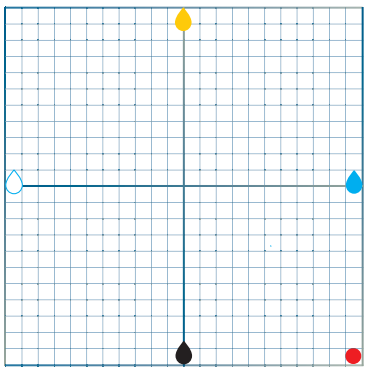
Echoing a great chronicler of the human condition, the tiny city of Shishmaref, Alaska, is asking whether it's better to suffer the slings and arrows of outrageous fortune or take arms against a sea of troubles to combat a looming climate change–driven disaster.

Shishmaref is located on an island five miles from the mainland, just north of the Bering Strait. For years, a reduced ice pack has hastened erosion that chips away at the island's shores and has already drawn buildings into the sea.

Over the past decade, the United States Army Corps of Engineers, a Native nonprofit, and local officials have applied short-term physical interventions to the island to curtail erosion, without success. Doubling down on damage control, the state of Alaska tapped global engineering firm AECOM to produce the "Shishmaref Relocation Site Selection Feasibility Study," a 300-page investigation that analyzes various scenarios for the City of Shishmaref to stay put or pack up.

Funded by a grant from the Alaska Climate Change Impact Mitigation Program, the study presents four options: Stay, or relocate to one of three different sites on the mainland. Shishmaref, a 607-person city, is majority Native and skews young—the median age is 22.5.

AECOM recommended that Shishmaref stay, citing the cost of moving and inhabitants' cultural connection to the sea. The city already has massive infrastructure, said R. Scott Simmons, emergency manager for AECOM in Alaska. He cited a $2.2-million, 200-foot riprap seawall at the west end of Shishmaref and a revetment funded by a state grant protect the city from erosion, plus a number of projects in the pipeline: Shishmaref intends to redo its airplane runway, expand the school, and rebuild its roads, with a plan to pave those that are heavily traveled.



Touting these assets, the study, released February of this year, notes that the mainland has more stable soil and less threat of coastal erosion but that a location far from shore would undermine an economy centered on subsistence hunting and fishing.

"Alaska Natives live off the land," said Simmons. "During annual freeze and thaw conditions, they can't travel, and that's the same time some of the sea mammals are migrating. If they live on the mainland, they won't be able to get across the ice that's forming—or not formed yet." He explained it's too dangerous at these times to travel to the island, which is the community's traditional access point to the open sea.

The community nevertheless voted 89 to 78 to leave. This is not the first time: In 1973 and 2002, the city's decisions to relocate unraveled because of logistic constraints. Now, however, it will cost $200 million to relocate homes and infrastructure to the new site, where, among other improvements, new roads, utilities, and a barge landing will need to be built. The state has granted the city $8 million toward the move; it remains to be seen how the rest of the cost will be covered. **AUDREY WACHS**

MAXSTRZ / FLICKR

Miami's real estate value continues to rise despite the chronic flooding risks on its waterfront. Even as local governments pour millions into tackling high tides and storm surges, deeper economic and infrastructural issues loom as threats to growth and prosperity. Here, flooding hits the crew of television show *Burn Notice* in low-lying Miami Beach.

MIAMI BATTLES RISING FLOODWATERS EVEN AS DEVELOPMENT BOOMS

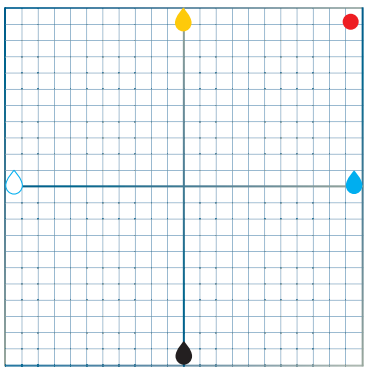
MIAMI'S FLOODING

In terms of cities and climate change, Miami Beach is the biggest canary in the coal mine. At approximately four feet above sea level, this 19-square-mile strip of artificial and natural islands faces frequent flooding during storms and high tides. (Last September's king tide—a colloquial term for high tide—reached 2.2 feet.)

The city is aggressively fighting the watery onslaught: Over the next five years, Miami Beach will spend $400 to $500 million in anti-flooding defenses that include pumps, raised roads, and seawalls.

This is money well spent. The Miami area sits on limestone that absorbs floodwaters and can force the deluge back to the surface, making flood control a special challenge. Still, environmental concerns aren't stopping new developments across Miami. The economic timeframe for developers (and the residents buying and renting) remains relatively short compared to the long-term threat.

In addition to flooding, another, more insidious threat looms: Miami maintains its Biscayne Aquifer by channeling freshwater from Lake Okeechobee to push back against saltwater intrusion, which means the region may have to choose between flooding or drinking salt water. By 2060, some estimates place sea-level rise at three feet. Farther down the line, questions of how federal and private insurers will provide flood coverage—and how eager banks will be to issue mortgages—may also arise. **ZE**



COURTESY ZUS

A LANDSCAPE ARCHITECTURE FIRM IS HELPING BRING DUTCH WATER EXPERTISE TO THE U.S.

ZUS BOLT

Senior editor Matt Shaw sat down with Rotterdam- and New York–based ZUS (Zones Urbaines Sensibles) partners Elma van Boxel and Kristian Koreman to see what the United States can learn from the Netherlands, a country that is almost half below sea level and leads the way in water management in landscape infrastructure design.

***The Architect's Newspaper*: You have a host of urban and landscape projects that are currently in the works, some of which are very large in scale. Are any of these explicitly dealing with water?**

ZUS: There are five water-related projects we are working on right now. The Almere Dune is an artificial dune landscape on the original polder (a piece of low-lying land reclaimed from the sea and protected by dikes), with 3,000 houses and a mixed-use core.

We are working on the world's largest sea lock, at IJmuiden, which means we are doing the landscape design and architecture of three control centers. A similar project we are designing is the Hoogwatergeul Veessen, a three-mile river bypass that serves as a river flood basin, with a dynamic flood-protection bridge berm. There is also the self-initiated Delta 3000 project, which is a utopia that imagines the Netherlands as a dune metropolis. We are proposing massive dunes to counter soil inclination and rising waters.

Here in the U.S., we are working together with AECOM and ORG on the execution of our winning competition entry for Rebuild by Design: New Meadowlands. It is a very exciting combination of coastal protection, green infrastructure, and public amenities.

What are some of the issues that designers and researchers are dealing with in the Netherlands today? Is climate change an important topic for designers in the Netherlands?

Yes, of course many issues are climate related, like sea-level rise, rising temperatures, and new migration patterns. We also face a more diffuse clientele, as governments are retreating and new markets and players emerge. Therefore, designers have to be more proactive to get interesting commissions.

One of the main issues is water. As half of the country is below sea level, every project has to respond to the challenges of water coming in more intensely from all sides: Sea-level rise, river floods, rain events, and groundwater.

How do you see working in the U.S. as different from working in the Netherlands? What are the differences in attitude about water and dealing with climate change?

We face many of the same issues: Climate adaptation, bureaucracy, big companies versus small offices, less and less risk-taking. In the Netherlands, there's a long tradition of spatial planning and the culture of design, where, for decades, they were by definition incorporated into policy making. In the last few years, a corporatism is emerging, where experiment is hardly possible. The good news is that, in the U.S., we feel an emerging interest in design in all fields. However, there is still a big gap between the academic world and the real world there, including governments and bureaucracy.

What do you think other countries can learn from designers in the Netherlands, in terms of designing for water and with water?

We would say to them: Take sea-level rise really seriously, and do it together. Only if all parties—governments, designers, scientists, contractors, engineers—collaborate can the challenges be faced and countered. Build with nature, meaning that we will never win against the water unless we embrace its presence and dynamics. Introduce different levels of safety, and spread risks along hard infrastructure, adaptive landscapes, and evacuation programs.

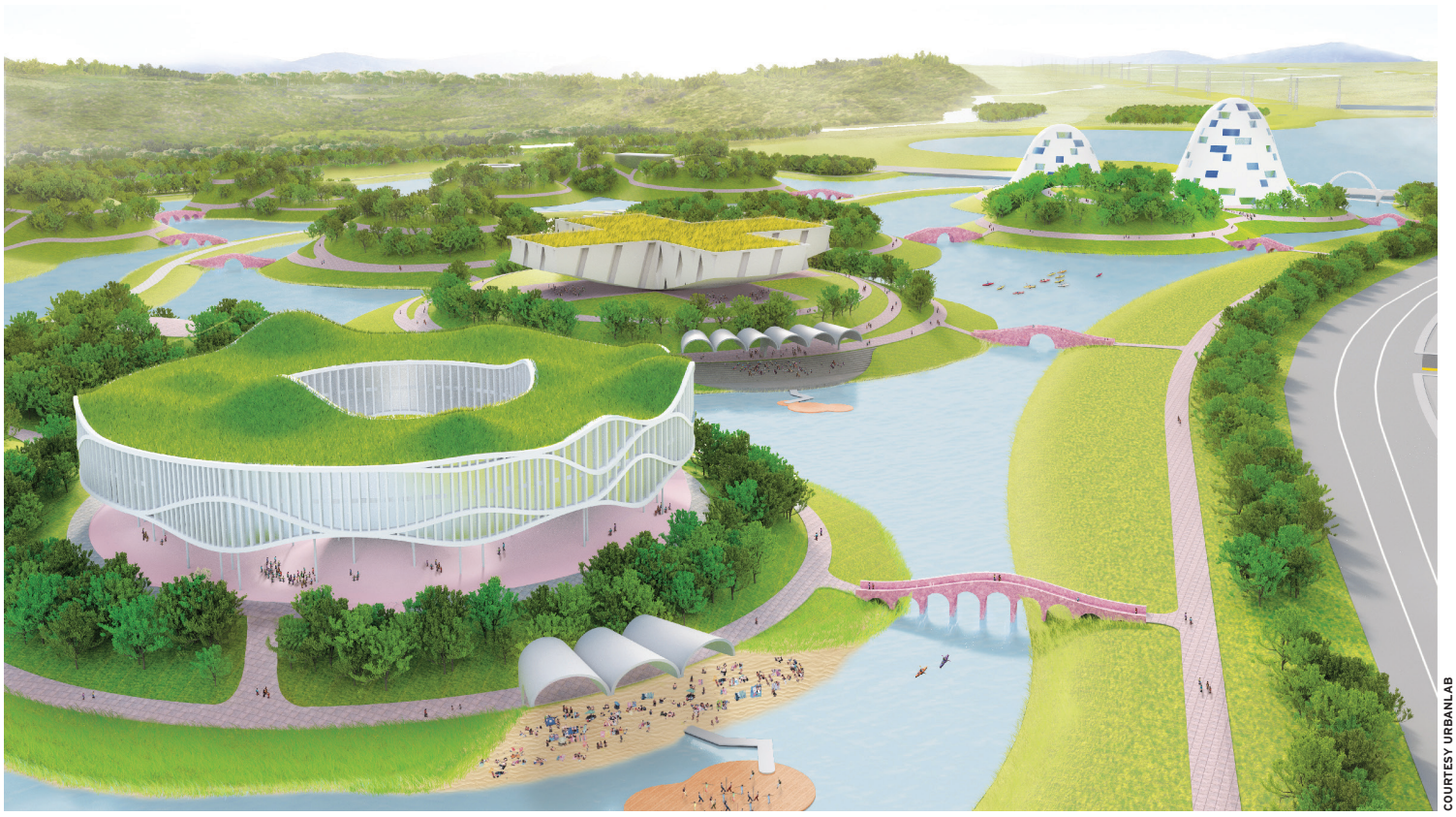
Are attitudes to waterfront development changing in the Netherlands? How do is that possible? On-site infrastructure? Off-site?

After having the top-down Delta Works (1953) for many decades, protecting the Netherlands from 10,000-year storms, our country established a rich apparatus of water boards, such as the National Water Authority and local governmental agencies, to think of the next big threats. The first Delta Works turned the Netherlands into one big bathtub.

In addition to sea-level rise, extreme river floods and rain events are also severe risks to the country. Therefore, Room for the River was introduced, and the new Delta Works, which directs new policies for more local adaptations. For example, Almere Dune introduces a public–private partnership for making more resilient urban districts. This means that the dunes, privately funded, are contributing to national safety. And they are also a new way to live above sea level. The IJmuiden sea lock is made for the 200-year forecast of sea-level rise, so large-scale infrastructure is made with great responsibility toward the future.

Off-site, we witness more adaptation measures, like water squares and retention basins to deal with extreme rain events. Nowadays, many of these projects come with multiple agendas with climate adaptation also taking a social responsibility.

COURTESY ZUS



COURTESY URBANLAB

The islands in the Yangming Archipelago will serve as cultural, social, and recreational spaces for the new district. The now-polluted lake will eventually be remediated and returned to a swimmable, clean body of water.

UrbanLab's approach to urban planning puts water at the center of a complex system of social and ecological concerns

LAB RESULTS

With work ranging from houses and storefronts to city-scale master plans, Chicago-based UrbanLab fluidly navigates architecture and urbanism. Regardless of scale, the studio addresses complex social and ecological issues with straightforward yet ambitious proposals—while managing to introduce a hint of levity in every design.

Midwest editor Matthew Messner sat down with UrbanLab to talk about the Yangming Archipelago and how the studio works with water as a design component.

***The Architect's Newspaper*: How does UrbanLab approach water as a resource for architecture and urbanism?**

UrbanLab: Water, we believe, is the primary infrastructural framework and life-support system of cities. We think water infrastructure has the capability to unlock questions of how to best shape urban form and support healthy lifestyles. Today, the ways in which cities address their water challenges will be critical to their ability to prosper and grow. We see water scarcity as typically the result of shortsighted or poor planning strategies (or lack thereof) that use water only once before relegating it to waste. In this simple, linear model, water is typically castoff after its first use, at which time it becomes successively more polluted. We think this is crazy: Water is rarely so toxic that it can't be salvaged and recycled again and again. As Buckminster Fuller remarked, "Waste is merely a resource in the wrong place." So too is "waste" water that is routinely ejected out of cities instead of being kept and put back to work. Alternatively, UrbanLab's water-based urbanism projects view water as part of a circular economy and ecology, where it keeps its value after each use, and ultimately returns to an original source.

How does this play out in the studio's projects?

Each of our projects is a "bowl" of varying size and shape in which water circulates in semi-closed loops. Shifting to looping circular models that store water, from linear models that discard water, can replace scarcity with abundance, and help solve challenges of long-term supply and demand. We're very interested to combine water infrastructures with architecture and landscape to find new urban forms.

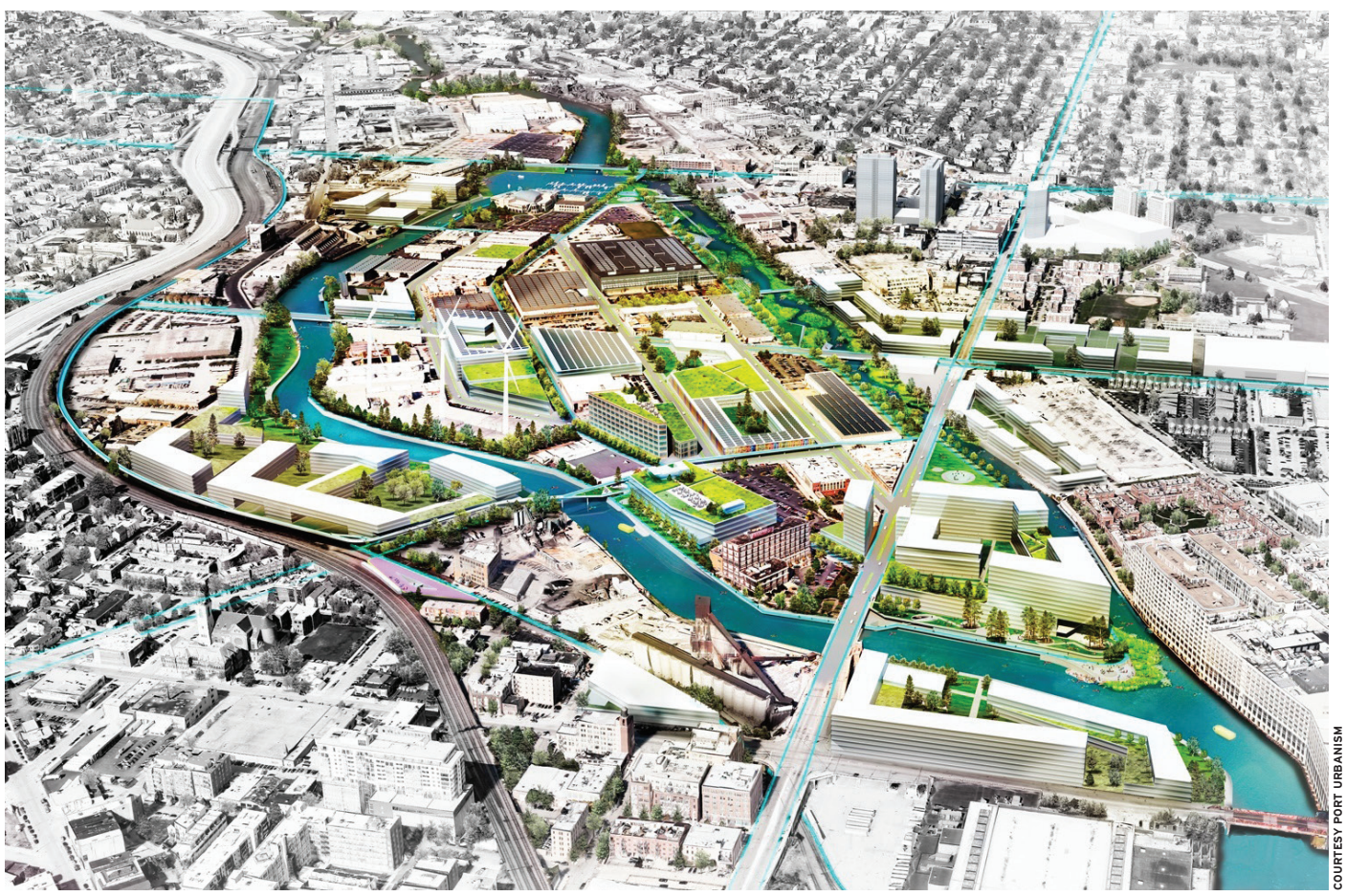
How is water-based urbanism deployed in the current Changde project?

Our client, Changde's planning bureau, aims to realize the plan in the next five to ten years. Currently, the project site is sparsely developed farmland bordered by high-density superblocks. At the center of the site is a highly polluted lake that is prone to flooding. Our primary design concept is a continuation of ideas we've been developing: To reimagine water as an amenity (not a problem) for people. The lake is re-planned as a bowl-shaped "central water park" for the entire city.

What are some the ecological aspects of the design?

To help clean the lake, water-filtering infrastructures, or eco-boulevards—an idea we've been working on through several projects—pre-treat storm water runoff. Eco-boulevards are connected to additional water-filtering infrastructures such as tree-lined feeder roads, storm-water parks, and in-block rain gardens. Together, the streets and open green spaces are a porous framework of sub-bowls that naturally absorb and clean rainwater before [it enters] the lake. A fine-grained urban grid accommodates a mix of transportation options within and between eight new subdistricts. Compared to contemporary, car-centric urban grids in China that encircle gated superblocks, the geometry of our compact grid allows for a highly efficient bus transit system, reducing energy use and pollution. Bus stops and transfer nodes are planned within a 10-minute pedestrian walk to all new developments. In the lake, a group of new islands is planned. The "Central Business District Island" contains the most prominent new commercial buildings, and a chain of "Cultural Islands" contains new civic venues and gardens. The islands filter lake water and naturally enhance biodiversity and the living environment.

COURTESY URBANLAB



COURTESY PORT URBANISM

Top: The future of Goose Island is not yet clear, but PORT, along with urbanism- and design-oriented developers, has set forth a vision of a more diverse and lively island. Renderings demonstrate straightforward connections between the island and the city. Below: Currently, Goose Island is an industrial park situated in a prime location just outside of Chicago's downtown.

Chicago and Philadelphia–based PORT Urbanism wants to redesign your city

COMING INTO PORT

PORT Urbanism is positioning itself to fill a very particular niche in the world of city making. The office is neither a landscape firm nor an architecture firm alone: It approaches projects with a vision that ranges from grand scheme master plans down to design at a human scale. With the recent addition of a new partner, it now has the pedigree and experience to engage in the high-stakes projects that are so often handed to firms many times its size. More and more often those projects involve the waterfronts of postindustrial cities across the country, and with a name like PORT, the firm is not surprisingly ready for the challenge.

PORT's new partner, Megan Born, comes to the firm from James Corner Field Operations (JCFO), where she spent eight years as a designer and project manager. While at JCFO, she was lead designer on the much-anticipated Waterfront Seattle Program master plan, as well as project designer on the Tsim Sha Tsui waterfront in Hong Kong. Her expertise will complement that of PORT partner Christopher Marcinkoski, who was a senior associate at JCFO before cofounding PORT. Marcinkoski, a licensed architect and a Rome Prize Fellow, also contributed expertise in waterfront design, as he was project lead on the Qianhai Water City district of Shenzhen, China, while at JCFO. Both work at the University of Pennsylvania in Philadelphia—Born as a lecturer and Marcinkoski as an associate professor of landscape architecture and urban design.

Currently working with the ambitious young R2 developers in Chicago, PORT is in the process of envisioning the future of Goose Island. An industrial island in the middle of the Chicago River's North Branch, Goose Island is poised to become one of the city's most dynamic neighborhoods. Currently, it is completely zoned for industry, but as the surrounding neighborhoods quickly develop, the smart bet is on it becoming more programmatically diverse. PORT's master plan takes into account the uncertainty of the island's future while proposing improvements that will benefit whatever eventually happens there.

The island was formed by a canal that was dug to straighten out the river, a common occurrence in 19th-century Chicago. Now, however, that canal is no longer navigable. PORT imagines that this wet, and currently polluted, stretch of water can become an integral and unique part of the river's rehabilitation into a recreational corridor. It is clear that it is only a matter of time before this prime location, just minutes outside of the downtown, will be more than a sleepy maze of shuttered warehouses and factories. PORT and R2 plan to be there to guide the way.

"Some of the largest attributes of water and waterfronts are their scale and connectivity," explained Andrew Moddrell, partner and cofounder of PORT. "You always have this edge that you can't completely occupy: the water. If you can connect the parcels along this edge, you'll be able to set up the means of an accessibility that is uninterrupted and that unlocks new territories of the city. Previously all of these places were productive industrially by maximizing this connectivity. Now they are ripe again to be reconnected."

Though PORT may be making a name for itself with waterscape projects, what defines the practice is its particular approach. Whether a waterfront, and urban park, or a former industrial district, PORT is not interested in simply drawing large arrows on maps and saying how great it would be to have a bike share program in the area. Instead it does the math, talks to the stakeholders, and designs a way to achieve their vision, down to the individual's experience. This separates them from other landscape firms that might only focus on the space around the buildings, as well as from the urban planner who so often provides bullet point guidance without a true design component. Add in the fact that two of the partners are licensed architects, and the firm's thorough approach begins to make sense. There are few firms that are able, or willing, to take on the complex types of projects that PORT has made its bread and butter. **MM**

Outdoor

Published by The Architect's Newspaper

www.archpaper.com

OUTSIDER IN

FOR AN'S ANNUAL LANDSCAPE ISSUE, WE'RE DELVING INTO WHAT MAKES PUBLIC AND PRIVATE OUTDOOR SPACES MEMORABLE AND ENJOYABLE. GREEN SPACES OFTEN MAKE A BUILDING'S FIRST IMPRESSION AND THESE STANDOUT LIGHTING, FURNITURE, AND PAVING PRODUCTS WILL HAVE A LASTING EFFECT.

BY BECCA BLASDEL

To see Dedon's AHNDA collection with designer Stephen Burks and other outdoor furnishings, turn to page 36.

COURTESY DEDON

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VIA 57 WEST

NEW YORK, NY

ARCHITECT:
Bjarke Ingels Group

LANDSCAPE ARCHITECT:
Starr Whitehouse Landscape Architects and Planners

LANDSCAPE CONTRACTOR:
BrightView

STRUCTURAL ENGINEERS:
Thornton Tomasetti

CUSTOM BENCH MANUFACTURER:
Southside Precast Products

LIGHTING MANUFACTURERS:
Delta Light, Jesco, BEGA, Selux

This page: The interior courtyard of Bjarke Ingels Group's VIA 57 West faces the Hudson River.

Bjarke Ingels calls VIA 57 West call it a "courtscraper"—part traditional high-rise, part European perimeter block, with a central outdoor space that is integral to the entire project. The shared green space is derived from the classic Copenhagen "urban oasis" concept and has the same proportions as Central Park…just 13,000 times smaller. The idea was to create a mini-ecosystem in the building's center.

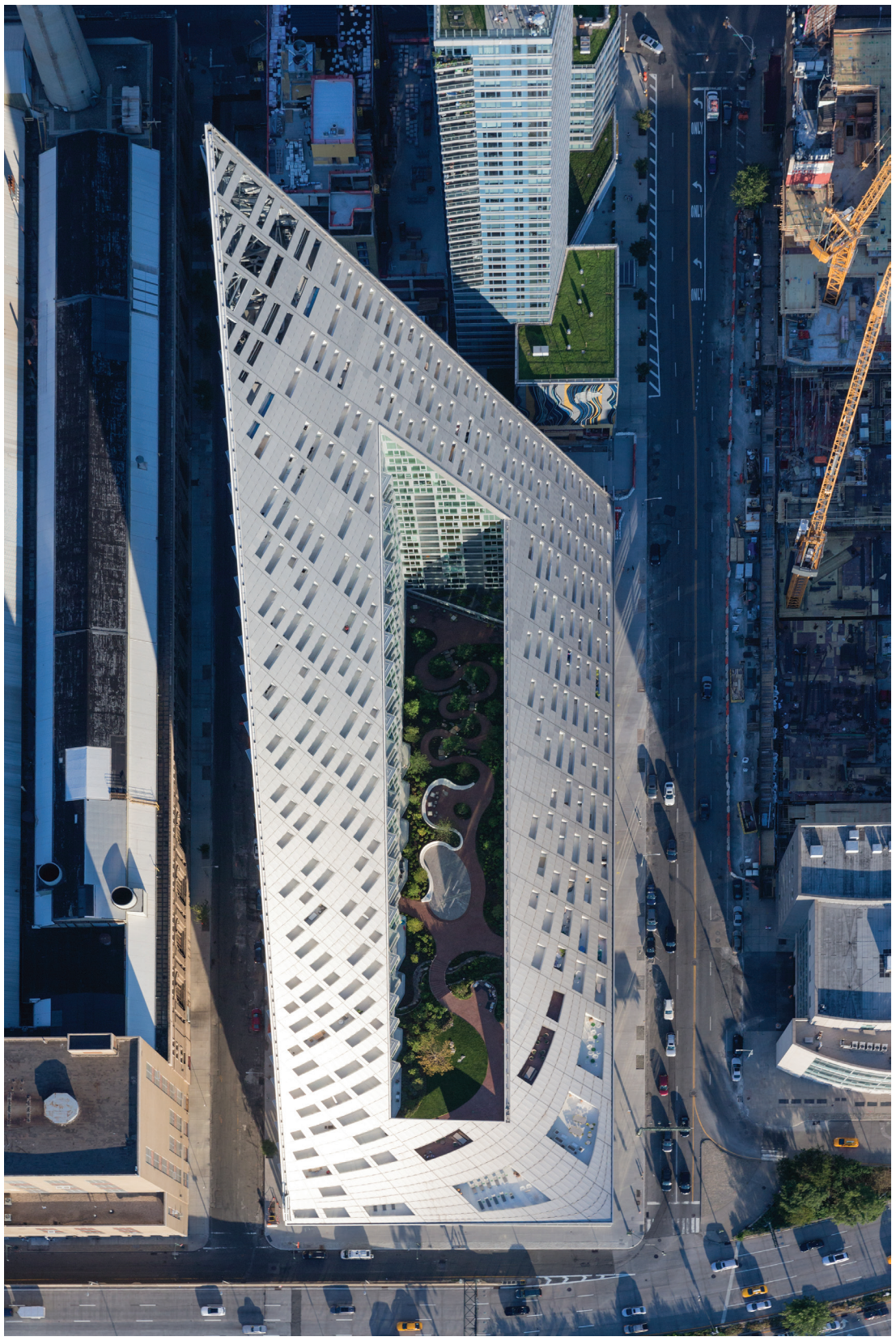
A winding redbrick path invites visitors to hike through a slice of the Hudson Valley. According to Laura Starr, partner at Starr Whitehouse Landscape Architects and Planners, the space is a "re-imagining of the basin of the Valley, that describes a journey from low to highland." Plantings were carefully chosen to create a succession of three landscape typologies native to the region. At the eastern end, moss, ferns, and birches sit among boulders to create a lowland birch grove. Moving up a level, a custom bench—fabricated by Southside Precast, in Buffalo, New York—a paved plaza, and flowering bushes create an open forest glade. Lastly, to the west, the highest courtyard offers sweeping views of the Hudson River, below, and features a grassy knoll, large boulders, coniferous trees, and a large locust tree surrounding barbecue stations and curving benches to create the sense of a mountain overlook.

The main challenge in creating this peaceful outdoor space, to be enjoyed by all the residents, was crafting a self-sustaining garden atop three ascending structural levels: Underneath the courtyard is a complex system of lightweight filler material, multiple drainage layers, and engineered soils and organic mulch from McEnroe Farm, in upstate New York. "The result is the sense that the landscape predates the architecture," said Starr.

COURTESY BIG ARCHITECTS

IWAN BAAN

IWAN BAAN



COURTESY BIG ARCHITECTS

Top: Residents enjoy views of the manicured courtyard, designed to be a slice of the Hudson Valley in the middle of Manhattan.

Left: A birds-eye view of the "courtscraper" shows the different terrains throughout the courtyard.

Below: A closer look at the custom benches by Southside Precast Products that meander along the central area of the courtyard.

COURTESY BIG ARCHITECTS

BURJ AL ARAB HOTEL

DUBAI, UAE

ARCHITECT:
Kudos Design, Sigge Architects

CONSTRUCTION MANAGER:
Admares

OUTDOOR FURNITURE:
DEDON

RESTAURANT FURNITURE:
Bross

CABANA GLASS PARTITIONS AND DOORS:
Kaune

WALL AND FLOOR TILES:
Florim USA

This page: Dedon lounges offer sweeping views of the Arabian Gulf at the Burj Al Arab hotel in Dubai.

Opposite, right: Light-colored Dedon fabrics were used to enhance the building's sail-like shape.

When designing an outdoor patio space for the iconic Burj Al Arab hotel, Kudos Design wanted to honor the building's existing structure and unique shape. The project included the design of the restaurant, 32 cabanas, a fresh water pool with a private beach, and a stunning infinity pool that blends into the surrounding Arabian Gulf.

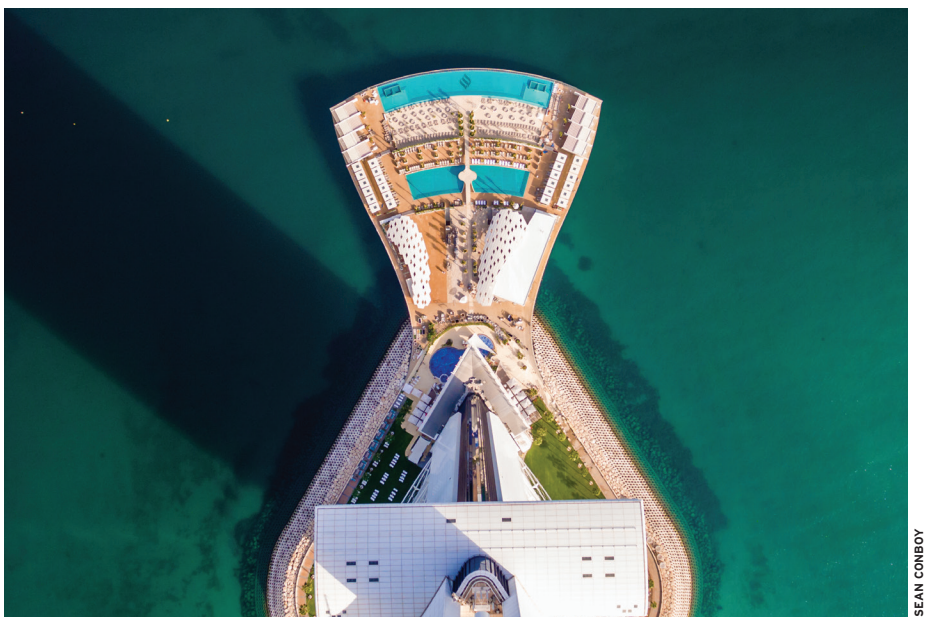
According to Pia Litokorpi, architect and partner at Kudos Design, the plan included "the fusion of elegant, contemporary structures and serene stretches of water, linked by a central walkway and lined on either side by white sandy beaches and the exquisite cabanas. The Terrace gives a choice between shade and sun, offering contrasting areas of canopied shade and warm light, reminiscent of the gentle feeling of exploring a forest." Designers approached this project specifically with the movement of the sun in mind: "It helps to take full advantage of the location, making it easier to accentuate beautiful sunsets or sunrises and maximize the views," said Litokorpi. "While the views can be what makes a location special, they can also provide challenges."

Strong sun, waves, and wind were also considered when choosing furniture for all of the outdoor spaces. Kudos opted for Dedon furnishings, and tried to keep the color palette neutral to direct attention to the hypnotizing colors of the sea. "We especially enjoyed the possibilities provided by Dedon's customizable colors, which fit perfectly into the space," said Litokorpi. "Dedon makes durable outdoor furniture, so the light colors will keep their beauty even in the scorching sun."

SEAN CONBOY

SEAN CONBOY

SEAN CONBOY



SEAN CONBOY

ADMARES

Top: Dedon barstools line the outdoor bars.

Middle: The view from above the hotel shows the unique shape of the island.

Left: Woven seats mirror the checkered canopy above.

SITTING PRETTY

SUCH STYLISH STREET FURNITURE OPTIONS MAY BE HARD TO DISTINGUISH FROM RESIDENTIAL FURNISHINGS, BUT BOTH ARE MADE TO TAKE THE HEAT (AND RAIN AND SNOW).

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COURTESY RESPECTIVE MANUFACTURERS

1 AHNDA
DEDON

Designer Stephen Burks immersed himself in the weaving culture of the Philippines to develop AHNDA's open weave. The chair's geometry is based on a circle to allow users to sit comfortably and interact with guests or curl up and recline. DEDON's weatherproof fiber can withstand harsh weather, so cushions may be left out in any condition.

dedon.de

2 NARA COLLECTION
ROYAL BOTANIA

French landscape architect Louis Benech, known for projects at the Tuileries Garden and Palace of Versailles, designed this collection, inspired by his travels, for Royal Botania. The teak pieces are bold yet classic and sure to remain timeless.

royalbotania.com

3 STRATA
LANDSCAPE FORMS

The classic style of this line gets an update with MeldStone (an ultra-high-performance concrete material), which allows a thinner cross section with higher abrasion resistance and lower permeability. STRATA benches are offered with or without backs and arms.

landscapeforms.com

5 HOPPER PICNIC
EXTREMIS

A new take on the traditional picnic table, Hopper has four pass-through zones that make it easy to get in and out without having to climb over others. Further modernizing the design, Extremis offers the legs in galvanized steel or powder-coated aluminum. Hopper is available in four sizes that can accommodate up to 10 people.

extremis.be

5 MMATERIAL
FERNANDO MASTRANGELO

Designer Fernando Mastrangelo has been using casting materials such as salt, sugar, sand, coffee, and corn in his sculpture practice for more than a decade. He is now applying his techniques to beautifully hand-dyed and poured cement furniture that adds sophistication to any space.

m-material.com

6 CASABLANCA
PAVILION FURNITURE

Inspired by the romantic styles of the 1940s, this collection features leather-look removable cushions and powder-coated aluminum frames that would work just as well in a living room as by the pool.

pavilion-furniture.com

Fermob

photography | Stephane Rambuad

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DANCING IN

WHEN NIGHT FALLS, OUTDOOR LIGHTING CAN PROVIDE A SENSE OF SAFETY OR ROMANTIC

1 LED FLOODLIGHTS
BEGA

The symmetrical light distribution of this product is ideal for illuminating squares, plazas, or other open areas. Additional single or twin adjustable, high-performance LED floodlights can be used to accentuate facades, trees, or other design elements. The fixtures are made of die-cast and extruded aluminum, available in four finishes.

bega-us.com

2 WIREMOLD OUTDOOR CHARGING STATION
LEGRAND

The perfect solution for college and corporate campuses, as well as other highly trafficked public spaces, Wiremold stations include combinations of standard GFCI power outlets and USB outlets, in addition to LED lighting. The stations are available with device storage shelves and come in three standard finishes, with custom options.

legrand.us

3 IPNOS LED OUTDOOR FLOOR/ TABLE LAMP
FLOS

Part sculpture, part mood lighting, Ipnos is modeled after traditional paper lanterns. A top plate could easily be attached to the ultralight metal box to turn this lamp into a table.

flos.com

4 ASHBERY
ROBERT A.M. STERN ARCHITECTS FOR LANDSCAPE FORMS

Robert A.M. Stern Architects was inspired by the archetypal gas lamps that illuminated America's streets and parks in the era before electric lighting—not in an overtly romantic way but rather aiming to reinterpret their purposeful elegance for our own time, according to Daniel Lobitz, a partner at the firm. A separate LED element set with an open metal frame resembles a flame and casts beautiful, even light.

landscapeforms.com

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THE MOONLIGHT

AMBIENCE, OR EVEN CHANGE THE DESIGN OF AN ENTIRE SPACE. THESE INNOVATIVE PRODUCTS OFFER ENDLESS APPLICATIONS.

5 KICK
ARCHITECTURAL AREA LIGHTING

The award-winning KicK collection has been expanded to include mini sizes, including new wall-mount and bollard options. KicK's unique design and fully shielded optical system make it the first angled luminaire capable of IES distributions without any uplight.

hubbelllighting.com

6 STEPLIGHTS COLLECTION
CSL

Available in bronze, silver, or white finishes, these step lights are UL listed for wet locations and range in size from 2.5 to 6 inches, to accommodate a variety of different spaces. For beachside applications, four of the nine styles have an amber-light option, making them sea turtle friendly.

csllighting.com

7 EDGE WET
PINNACLE ARCHITECTURAL LIGHTING

Building off of EDGE Evolution, Pinnacle created EDGE Wet to offer a clean, slim design in an indoor-outdoor luminaire that could withstand the elements. EDGE Wet is available in three- and six-inch apertures in both direct and bidirectional light distributions.

pinnacle-ltg.com

8 OUTSIDER OUTDOOR FLOOR
GLOBAL LIGHTING

When designer Jacco Maris discovered 500 headlights salvaged from Russian tractors, he was inspired to create his original line of interior floor lamps, which has now been translated to an outdoor version, available in black, silver, and white aluminum.

globallighting.com

COURTESY RESPECTIVE MANUFACTURERS

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and Planners PLLC
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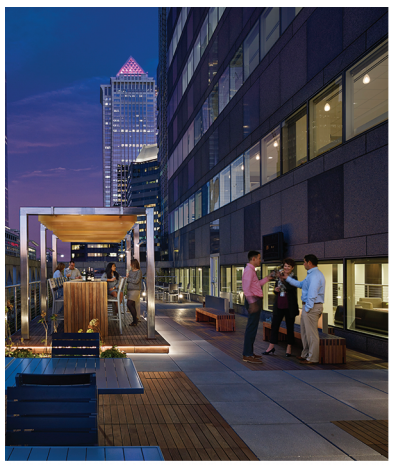

project: Confidential Global Professional Services Firm (Philadelphia, PA)
architect: Vocon (Cleveland, Ohio)
contractor: Turner Construction (Philadelphia, PA)
photography: Halkin Mason (Philadelphia, PA)

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COURTESY RESPECTIVE MANUFACTURERS

SHUFFLE THE DECK

NEW OFFERINGS IN PAVERS AND DECKS ARE INCREASINGLY DECORATIVE, SO DESIGNERS CAN CREATE A FLOW BETWEEN INDOORS AND OUT WITH FLOORING THAT FEELS WARM BUT ACTS TOUGH.

1 PLANK STYLE PAVERS
TECTURA DESIGNS

These hydraulically machine-pressed pavers provide the strength of concrete and the look of natural wood. They are available in all of Tectura's color and finish options, and lengths and widths can be custom-made to fit individual projects.

tecturadesigns.com

2 DEKTON TRILIUM
COSENTINO

The very first color option from Dekton to use recycled materials, Trilium emulates industrial oxidized steel. Dekton is highly UV- and scratch-resistant, as well as resistant to stains, fire and heat, ice and thawing, and abrasion, making it an excellent product for high-traffic areas.

cosentino.com

3 WIDE
REFIN

Available in five diverse neutrals, these large-size ceramic slabs (up to 94.5 by 47 inches) are suitable for indoor and outdoor applications, creating a seamless look.

refin-ceramic-tiles.com

4 AEXTRA20
CAESAR

These .87-inch-thick, single-piece porcelain slabs come with an antislip surface finish and are available in a 24-by-24-inch format in eight new colors, all inspired by natural stones.

caesar.it

5 STORY T_20
SUPERGRES

Inspired by centuries-old recycled French stone, Story is available in four color options (gray, ivory, dark, and bronze) and can be laid in a number of ways, including on top of gravel, grass, and sand, traditionally glued or raised on top of polypropylene supports. Available in multiple trims.

supergres.com

6 GARDEN
CROSSVILLE

The trio of colors in the Garden line—Belvedere, Arboretum, and Colonnade—take cues from Italian volcanic stone, porfido stone, and cobbled limestone. Each tile is treated with a Hydrotect coating, which has oxide-reducing, air-cleaning properties.

crossvilleinc.com

7 PERMEABLE PAVERS
BLACK LOCUST LUMBER

Permeable pavers provide a level walking surface for outdoor areas while allowing stormwater to recharge the groundwater system. The pavers are locked in place on steel mesh with iron screws, and any filler, such as sand, soil, or stone, can be used to seal the ADA-compliant gaps.

blacklocustlumber.com

8 WALKS
FLOOR GRES

Walks ceramic tiles mimic the aesthetic properties of quartzite and are made of extra-thick ¾-inch porcelain stoneware, pressed at 882 pounds. The same pattern is available in ⅜- and ¼-inch thicknesses so that it can be applied indoors to create continuity.

floorgres.it

COURTESY BIG ARCHITECTS

Pinnacle Architectural Lighting
pinnacle-ltg.com

Porcelanosa
porcelanosa-usa.com

Refin
refin-ceramic-tiles.com

Renson
renson.us

Robin Key Landscape Architecture
rklastudio.com

Rocersa
rocersa.es

Royal Botania
royalbotania.com

Selux
selux.us

Sixinch
sixinch.us

Southside Precast Products
southsideprecast.com

Starr Whitehouse Landscape Architects and Planners
starrwhitehouse.com

Street Furniture
streetfurniture.com

RESOURCES

Adea
adea.fi

American Hydrotech
hydrotechusa.com

Atelier Vierkant
ateliervierkant.com

BEGA
bega-us.com

Belgard
belgard.com

Benkert Bänke
benkert.info

Bison
bisonip.com

Black Locust Lumber
blacklocustlumber.com

Bross
bross-italy.com

BuzziSpace
buzzi.space

Caesar
caesar.it

Carlisle
carlislesyntec.com

Copley Wolff Design Group
copley-wolff.com

Cosentino
cosentino.com

Crossville Inc Tile
crossvilleinc.com

CSL
csllighting.com

Dedon
dedon.de

Delta Lighting
deltalight.us

DeSimone Consulting Engineers
de-simone.com

Dirtworks Landscape Architecture
dirtworks.us

Extremis
extremis.be

Fermob USA
fermobusa.com

Fernando Mastrangelo / MMATERIAL
m-material.com

Floor Gres
floorgres.it

Flos
usa.flos.com

Forms + Surfaces
forms-surfaces.com

Global Lighting
globallighting.com

Green Screen
greenscreen.com

Hanover Architectural Products
hanoverpavers.com

HAY
hay.dk

Hubbell Lighting Incorporated
hubbelllighting.com

JESCO Lighting
jescolighting.com

Kaune
kaune.fi

Kornegay Design
kornegaydesign.com

Landscape Architecture
landscapearchitecture.com

Landscape Forms
landscapeforms.com

Legrand
legrand.us

Pavilion Furniture
pavilion-furniture.com

Supergres
supergres.com

Tectura Designs
tecturadesigns.com

Tuuci
tuuci.com

Unilock
commercial.unilock.com

ADMARES

OCTOBER 2016

EAST

THURSDAY 13
LECTURE
By the People: Housing For All with Rosanne Haggerty and David Baker
6:30 p.m.
Cooper Hewitt, Smithsonian National Design Museum
2 East 91st St., New York
cooperhewitt.org

WEDNESDAY 19
EVENT
The Future of Urban Coastal Resilience
8:30 a.m.
The Center for Architecture
536 LaGuardia Pl.
New York
cfa.aiany.org

MONDAY 24
EVENT
Global Migration, Refugees, and a Role for Design
6:00 p.m.
The Center for Architecture
536 LaGuardia Pl.
New York
cfa.aiany.org

TUESDAY 25
LECTURE
Giancarlo Mazzanti: Playing Anomalies
7:00 p.m.
The Great Hall,
The Cooper Union
7 East Seventh St.
New York
archleague.org

WEST

THURSDAY 13
LECTURE
Sharon Johnston, Michael Maltzan, Francois Perrin: The Idea of Architecture
7:00 p.m.
The Geffen Contemporary Museum of Contemporary Art
152 North Central Ave.
Los Angeles
moca.org

FRIDAY 14
EXHIBITION OPENING
The Drawing Show
Architecture and Design Museum
900 East Fourth St.
Los Angeles
aplusd.org

FRIDAY 21
EXHIBITION OPENING
Michael Sorkin Studio and Terreform: Metrophysics
SCI-Arc Gallery
960 East Third St.
Los Angeles
sciarc.edu

TUESDAY 25
CONFERENCE
Meeting of the Minds 2016
5:30 p.m.
Craneway Pavilion
Richmond, CA
cityminded.org

MIDWEST

FRIDAY 14
LECTURE
Recent Work, DIGSAU
4:30 p.m.
School of Architecture and Urban Planning Building 170
University of Milwaukee
2131 East Hartford Ave.
Milwaukee
uwm.edu

WEDNESDAY 19
CONFERENCE
Infrastructure
8:00 a.m.
Hilton Garden Inn
410 Third St.
Manhattan, KS
aiacentralstates2016.org

TUESDAY 25
LECTURE
Christopher Marcinkoski: Speculative Urbanization and The City That Never Was
6:00 p.m.
Society of Architectural Historians
1365 North Astor St.
Chicago
mascontext.com

FRIDAY 28
LECTURE
Matthijs Bouw
6:00 p.m.
Kresge Theter,
Carnegie Mellon University
5000 Forbes Ave.
Pittsburgh
soa.cmu.edu

SOUTHWEST

FRIDAY 14
EXHIBITION OPENING
Seeing Nature: Landscape Masterworks from the Paul G. Allen Family Collection
New Orleans Museum of Art
1 Collins C. Diboll Circle,
City Park
New Orleans
noma.org

MONDAY 17
LECTURE
Craig Dykers: Habitat: Large and Small
5:00 p.m.
Jessen Auditorium, Homer Rainey Hall
University of Texas, Austin
200 West 21st St., Austin, TX
soa.utexas.edu

TUESDAY 18
LECTURE
Julie Campoli There Will Be Cupcakes: Gentrification and Displacement in Walkable Spaces
5:00 p.m.
College of Architecture and Planning
University of Colorado, Denver
1250 14th St., Denver
ucdenver.edu

SUNDAY 23
SYMPOSIUM
What Makes a City?
8:00 a.m.
The Latino Cultural Center
2600 Live Oak St., Dallas
dallascfa.com

COURTESY TIMOTHY TAYLOR 16X34, NEW YORK

ARCHITECTURE OF COLOR: THE LEGACY OF LUIS BARRAGÁN

Timothy Taylor 16x34
515 West 19th Street, New York
September 23–November 19

For the inaugural show of Timothy Taylor 16x34, the new New York outpost of London-based Timothy Taylor gallery, curator Oscar Humphries worked with the Barragán Foundation to create the *Architecture of Color: The Legacy of Luis Barragán*. Humphries paired pieces from the Barragán archives, such as furniture from Cuadra San Cristobal, an estate in Mexico City, with works by major artists who were influenced by Barragán such as Josef Albers, Sheila Hicks, Dan Flavin, Agnes Martin, Carl Andre, and Sean Scully, as well as famed Mexican artists Eduardo Terrazas, Chucho Reyes, and Jesus Reyes Ferreira. The collection, combined with cacti and walls painted the bright hues of the iconic Casa Barragán, transforms the space into a full embodiment of the architect's signature aesthetic.

FOR MORE LISTINGS VISIT WWW.ARCHPAPER.COM/CALENDAR

COURTESY ABRAHAM CRUZVILLEGAS/REGEN PROJECTS, LA

AUTOCONCANCIÓN

Regen Projects
6750 Santa Monica Boulevard
Los Angeles
Through October 22

Mexican artist Abraham Cruzvillegas's *Autoconcanción*, a collection of new sculptures, is on display at Regen Projects in Los Angeles. The collection of eight autobiographical, mixed-media installations uses the backseats from cars Cruzvillegas has used throughout his life and augments them with various apparatuses—lifting some on spindly stilts and shading others behind iridescent sheets of backlit, colored plastic. To these objects, the artist attaches radios that play reports from local stations. Each piece also contains some sort of native plant specimen perched somewhere, such as a palm tree still in its nursery bucket or a collection of oak saplings like those typically seen in Southern California freeway medians.

The work, meant to be a reflection on Cruzvillegas's life through Southern California car culture, is reflected via the Mexico City–based artist's title for the exhibition, which translates to "car with song."

COURTESY ACADIA

POSTHUMAN FRONTIERS: DATA, DESIGNERS AND COGNITIVE MACHINES

Liberty Research Annex Gallery
305 West Liberty Street
Ann Arbor, Michigan
Conference: October 27–29, 2016,
Exhibition: October 19–November 4

As part of the Association for Computer Aided Design in Architecture (ACADIA) 2016 Conference held at the University of Michigan's Taubman College of Architecture and Urban Planning, *POSTHUMAN FRONTIERS: DATA, DESIGNERS AND COGNITIVE MACHINES* will feature work that showcases the methods, processes, and techniques discussed at the conference.

The show, held in the 3,000-square-foot Liberty Research Annex Gallery in downtown Ann Arbor, Michigan, will be divided into two sections: A "Juried Projects Exhibition" and a "Curated Topic Exhibition." The juried portion of the show will display work that was part of an open call this past spring, while the curated half of the show will be comprised of video and physical project installations. The work will also be published in a full color catalogue.

The exhibition opening will coincide with the ACADIA 2016 Conference, with an opening reception on October 27 at 7:00 p.m. at the Liberty Research Annex Gallery.

COURTESY RICE GALLERY

CUBICLE

Rice Gallery
6100 Main Street
Houston
Through December 4

Jonathan Schipper creates a new installation for his latest exhibition, *Cubicle*: an office setting that will undergo subtle, yet inescapable changes over the course of two months. It is a continuation of his work that includes "The Slow Inevitable Death of American Muscle," in which two full-size automobiles crash into each other, simulating the force of a 30-mile-per-hour head-on collision, but over several days. The cubicle is meant to be a signifier of the not-too-distant past. Time has transformed the concept of the cubicle from a utopian vision of workplace comfort and privacy to an obsolescent remnant, giving way to the open office plan. Similarly, Schipper's *Cubicle* will undergo mechanical stress for the duration of the exhibition.

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Giacomo Matté-Trucco, innovative concrete spiral ramp system, Lingotto, Italy, 1926–1930.

COURTESY ACTAR PUBLISHING

STRAIGHT-UP

Vertical Urban Factory
Nina Rappaport, Actar Publishing, $64.95

This compendious, extensively illustrated slab of a book tackles, among other things, the development of the factory system, working conditions and working class resistance, utopian planning and modernist architectural design, the effects of suburbanization of industry, just-in-time production and containerization, fashion, urbanism, gentrification, and craft through such an onrush of dense information that it is often hard to ascertain exactly what the book is about. The nearest thing to a common thread—other than chronology—is an exploration of the factory in the city. That is, the role of industry in urbanism, what it means for a city to be a place of material production, how that production is housed and how its workers live and work, and, crucially, whether or not there is a future for urban manufacturing after 70 years of decentralization and inner-urban de-industrialization in Europe and the United States.

This central thread is so interesting that much of the rest of the book—basically a history of design and factories, familiar from the likes of Gillian Darley's *Factory*—could have been cut away to make the book more lean. The eclecticism of the source material could do with major pruning, and the editing is often careless: Robert Owen's Clydeside Utopia was New Lanark, not New Harmony, the account of Chicago slaughterhouses in *The Jungle* was written by Upton Sinclair, not Sinclair Lewis, to name two of several slips. Nonetheless, this excess might be the point—an appropriately daunting mesh of interlinked processes and stories.

The question of why the factory left the city is put down to wartime paranoia and social planning; Rappaport takes the Jane Jacobs line that zoning industry out of inner cities was unnecessary and damaging to urban economies, which may have been true, but as recent histories like John Grindrod's *Concretopia* might remind us, urban industry in dense 19th century cities like Glasgow was often extremely toxic and unsafe to the working class communities who had to live next door to it. However, her case here draws also on more radical sources, such as French Marxist philosopher Henri Lefebvre's assertion of the "right to the city," and especially the inner city, being cleared of undesirables in Lefebvre's 1960s Paris. The end result of "the removal of industries **continued on page 47**

From left: The "Single Shag" turret, "Flat to Flab" turret, and "Golden" turret all playfully subvert the Victorian turret typology.

COURTESY ENDEMIC ARCHITECTURE

TURRET TYPOLOGY

Mind Your Mannerisms
Jai & Jai Gallery
648 North Spring Street, Los Angeles
August 13–September 30

Oakland, California–based Endemic Architecture's most recent exhibition, *Mind Your Mannerisms*, at Jai & Jai Gallery in Los Angeles, examines the existential meaning behind San Francisco's variant of the Victorian turret, what the firm refers to as one of many "architectural darlings" that populate our world.

For the firm, "darlings" consist of fundamentally architectural symbols that convey meaning in built form universally, like the column, the pediment, or the chimney. These "darlings" are the elements that are both widely understood by laypeople as words used in architecture's formal language and simultaneously deployed (or subverted) by architects themselves to say, "this is (still) architecture."

In *Mind Your Mannerisms*, the selected "darling"—turrets—is poked, pinched, and puckered in an effort to not only lend a sense of intellectual rigor to its whimsical forms, but to also induce new layer of new meaning and understanding resulting from the manipulation of its symbolic, anachronistic geometries.

The firm utilizes collections of contextual photography showing the diverse manifestations of the turret typology in San Francisco's built environment as a starting point in order to generate generalized drawings of particular, observed tendencies. In the process, the darling gets redefined from an object made up of discrete architectural components into a collection of quasi-digital surfaces where a series of formal maneuvers have been applied to two disparate objects: the turret itself and the so-called "Victorian" building to which it is attached.

The firm uses these guiding considerations to generate interventions enacted upon a handful of existing and observed turret types, focusing on these aspects of each and amplifying or deforming their found conditions. These interventions are initially explored through a series of beguiling, shaded line drawings, side-by-side comparisons of found and manipulated elevation views displayed in gold-painted frames. The turrets take on the formal ambiguities of M.C. Escher drawings, as cornices become tangent to and sweep around rounded corners, conical roof forms loft to meet simply sloping ones and sections of walls are deleted or extruded up and down the form. Shingles and siding are along for the ride, too; they are scaled, alternated, and shifted accordingly.

The drawings are then taken into three dimensions via three large, ambiguously-scaled maquettes. Two of these objects are installed directly on the gallery walls, which have been painted with the black silhouettes of generic Victorian building forms. A third form is free-standing, its bulbous and rumpled masses sagging in an exaggerated, Uncle Eddy–style paunch. The turrets are lent a scale-less distortion by the firm's use of repurposed, full-scale turret windows salvaged from recently-demolished structures in the models. The relic windows, one with panes fritted, the other with a set of secondary, chamfered interior surfaces located just inside the window frame, again obscure the true nature of these sculptural objects. Is each one actually a turret-shaped building? Are they one-to-one mock ups of diminutive turrets? It's hard to tell, but that's partially the point. This transformation from orthographic drawing to object-in-the-round gives each turret conflicting, multiple meanings, as the physical properties of their material components clash with one another. One wall-mounted turret is clad in sheets of woodgrain veneer, cut out and styled so their ends curl up. The freestanding turret is topped with a tiara of faux-fur.

And if we can look past the Seuss-ian forms the turrets take and look at **continued on page 47**

STRAIGHT-UP continued from page 46
away from public view" was also the removal of certain groups of people. As counter-examples, she traces a history of integrated factory settlements, like Berlin's modernist Siemensstadt, to suggest that there were other possible approaches than zoning and suburbanization.

Beginning with the wartime U.S.—with its vast, single-story complexes like Willow Run—and continuing even through socially experimental factories like Volvo's more democratic, collaborative factory at Kalmar, the factory left the city and settled into sprawling, off-motorway sites, expansive of land and elusive of view. Perhaps the most exciting parts of the book are Rappaport's studies of some "vertical urban factories," as opposed to the flat, hidden, exurban factories where most things get made—in the west, at any rate. These go from 1820s Manchester, where, in Schinkel's words, "the life of the city runs along the massive houses of the cotton mills, to Manhattan's astonishing, multifunctional Starrett-Lehigh Building, where a train could enter the building from West 27th Street and proceed to the elevators located in the central core, load or unload onto trucks and the exit onto 28th Street," and to more recent examples like Zaha Hadid's BMW Leipzig, where workers walk past the souvenir shop on their way to work. These genuinely do feel like a better way of designing production into cities than placing "pancakes" on the edge of motorways—a means of planning that makes production and distribution networks (and their workers) visible, and by implication, changeable.

However, many cities outside of the U.S. and Europe really are made up of vertical urban factories even today—Shenzhen and Dhaka being a particular case in point. The 400,000-strong Foxconn factory, integrated with eight-to-a-room dormitories is one she describes at length, while the multi-story textile factories of Dhaka are sketched out more lightly, though the fact that the worst industrial accident in decades, at Rana Plaza, took place in a vertical urban factory would seem to temper its validity as a means to create fairer cities. Although Rappaport never loses sight of the consequences of design and industrial processes on actual workers' working conditions, the emphasis falls too much on best practices. These include the new vertical urban factories that exist in the west—craft beer breweries in Canada, bike factories in Detroit, American Apparel in the U.S.—which use a seductive combination of adaptive re-use, renewed craft traditions, and inner city sites, which somewhat masks the fact that they're just as much part of the process of inner-city gentrification as Willow Run was part of post-war suburbanization. None of them can even begin to offer the quantity of jobs once offered to the cities they stand in that the motor industry or textile industry once did; she points here to a gap between celebrated middle class "makers" and invisible proletarian "'workers." The last quarter of the book features many examples of beautifully designed, sustainable, semi-automated actories integrated into the city; but whether these could ever have the role in most people's lives that the factory once did is a very different matter.

OWEN HATHERLEY IS A LONDON-BASED WRITER, CRITIC, AND THE AUTHOR OF *LANDSCAPES OF COMMUNISM* BY THE NEW PRESS.

The "Golden" turret at the Mind Your Mannerisms exhibit at Jai & Jai Gallery.

COURTESY ENDEMIC ARCHITECTURE

TURRET TYPOLOGY continued from page 46
them for what they are—geometric abstractions—something clicks into place: Thenhaus and his team are using San Francisco's turret as a learning tool. By imposing an order and then manipulating that order, working to generate new forms that still fit the decided upon definition for what a turret is, the designers lend clarity to something that is otherwise shrouded in mystery. The question is: Are the new creations Victorian turrets, still?

It's hard to tell because Victorian architectural forms juggle many considerations simultaneously: They are typically proportioned in accordance with light and air, are aggressively ornamented, and do a great job of breaking down massive buildings into pleasant agglomerations of cute things like cornices, windows, porches, and yes, turrets. Victorian architecture makes no sense at all, however, from the point of view the rationalist, diagram-driven, methodology of contemporary practice that has been applied to its formal existence here.

By subsuming the particularities of the Victorian ecosystem of styles in this way, the researchers point out the barren lexical memory of their profession and the ways in which building components, once discrete, measurable and observable objects, have been replaced in contemporary discourse with digital modeling processes and "if, then" reactions, in which collections of dots, lines, and planes are swept, lofted, tweened, and booleaned to generate form. In both cases, meaning results from the processes undertaken in order to generate form and not, as is the case with Victorian architecture, from the symbolic and physical properties of the forms themselves.

Viewed through this lens, the works presented in the exhibition can be seen not merely as generative, architectural by-products begat from architecturally-focused observation, but as a part of that conversation in their own right. That is, Endemic's turrets, with their quizzical proportions, jiggery-pokery of material, and side eye toward playful formalism are as helpful in Endemic's attempt to define the turret typology as the observed turrets themselves.

ANTONIO PACHECO IS *AN*'S WEST EDITOR.

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Burnham and Root, Rookery, 209 South La Salle Street, 1887-88, alterations Frank Lloyd Wright 1905, and others later.

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Lobby of 1 North LaSalle Street, by Vitzthum and Burns, 1930.

PHOTO JON MILLER, © HEDRICH BLESSING

CONSTRUCTING CHICAGO

Building Chicago: The Architectural Masterworks
John Zukowsky, Rizzoli, $85.00

If there's any justice, history will recognize John Zukowsky for his singular place in documenting and disseminating Chicago's architectural history. He's produced several of the most significant visual records of the city, including the two-volume companion to the milestone surveys [*Chicago Architecture 1872–1922* and *1923–1993*] that he mounted at the Art Institute in the early 1990s; together the catalogues create an amazingly comprehensive chronicle of built Chicago. And, shortly before leaving the city in 2004, he published *Masterpieces of Chicago Architecture*, a visually breathtaking timeline of the city's greatest buildings.

An assessment of *Building Chicago*, Zukowsky's latest contribution to the canon, more or less demands the inquiry: Is it necessary? Given the increasing interest in the subject over the past couple of decades and the number of pictorial surveys of the city that others have published, do we really need another iteration of "Chicago's Greatest Hits?" And hasn't Mr. Zukowsky said it all already anyway?

The short answers are "yes" and "maybe, but so what?" Indeed, there is probably not much new to say on the subject that Zukowsky himself hasn't already said. (Beyond the fact—and this is not insignificant—that a dozen years have elapsed since Zukowsky's last compendium, and a lot has happened architecturally in the last dozen years.) But with architectural history, you can always find new ways to look at the material—not only conceptually, but visually. And in *Building Chicago*, Zukowsky has lucked into a whole new inventory of visual materials.The image collection of the Chicago History Museum (formerly known as the Chicago Historical Society) recently acquired rights to most of the spectacular archive of Hedrich Blessing, generally considered the world's greatest architectural photography studio, dating back to the 1930s through to 1979—in addition to the museum's already impressive collection of vintage photographs.

In his introduction, Zukowsky acknowledges he's revisiting much of the territory he covered in the 2004 work (also for the publisher Rizzoli), which drew mostly from the Art Institute's extensive collection of drawings, artifacts and photos. Here, Zukowsky's source for imagery, while almost exclusively photographic, is actually much broader than the Art Institute's and really makes for a much more vivid picture.

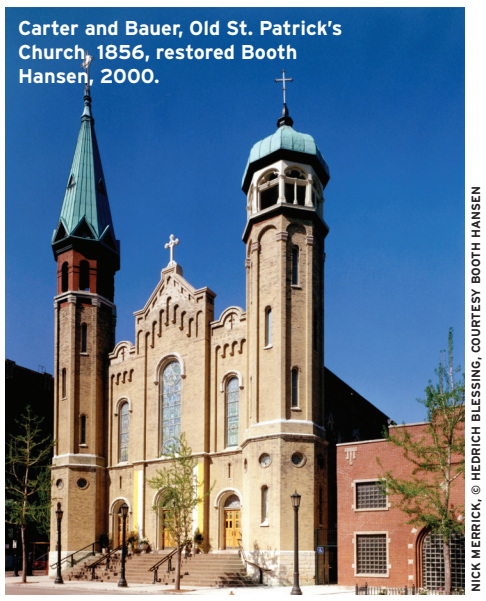
Zukowsky is a fine scholar, but the writing in *Building Chicago* is generally dry and uninspiring, particularly if you're well-versed in the subject matter. But you're not reading this book for the text. Like any picture book—and, while it's a serious historical work, *Building Chicago* is primarily a picture book—its success depends on the images. So it's particularly fortunate that Zukowsky was able to indulge his "curator's choice" and assemble a brilliant iconography of the most emblematic buildings in the city from the museum's collection.

Zukowsky admits that he didn't intend this as a comprehensive history of the city's built environment: It is, quite frankly, a look at the city's most important, influential and prominent structures. Aside from some high-profile apartment towers and one lake-front mansion, there's little about residential design, almost nothing ecclesiastical, and very little outside the city's core. The visual story Zukowsky is presenting here doesn't pretend to reflect anything beyond the public realm or show us much about the neighborhoods in a city that is supposed to be all about neighborhoods. It's about the architecture that has become a key element of the tourism industry and an economic engine on its own, celebrating the great, important buildings of Chicago that provide the city its one real claim to international distinction and are the source of boundless hometown pride.

Readers familiar with the cityscape will not be surprised here with the choice of buildings illustrated. But the book's real distinction is the historical selection from Hedrich Blessing—both in its great period photos of grand buildings now demolished (the Michigan Square Building) or recklessly remodeled (the Prudential Building lobby) and of projects far less glamorous: A 1944 photo of the Monroe Street Red Line platform and another of the newly finished Lake Shore Drive pedestrian overpass at North Avenue are particularly edifying.

It's hard to imagine a better compendium: *Building Chicago* is an important addition to any serious collection of books about the city.

PHILIP BERGER IS A FREQUENT CONTRIBUTOR TO *AN*.



Carter and Bauer, Old St. Patrick's Church, 1856, restored Booth Hansen, 2000.

NICK MERRICK, © HEDRICH BLESSING, COURTESY BOOTH HANSEN

COURTESY MONACELLI PRESS

Left: Institute for Personality Assessment and Research staff simulating the set-up of a Bingo Test, a situational procedure involving group interaction. Below, left: Lundy's Mosaic Construction Test design. Below, right: Philip Johnson's Mosaic Construction Test design.

In his new book The Creative Architect: Inside the Great Midcentury Personality Study, Pierluigi Serraino writes about a forgotten psychology study of well-known creative people that U.C. Berkeley's Institute for Personality Assessment and Research conducted in the late 1950s. In addition to writers and scientists, participants included Eero Saarinen, Louis Kahn, I.M. Pei, Philip Johnson, and dozens of other major architects of the day.

The Architect's Newspaper: **How did you find out about the studies that became the basis of this book?**

Pierluigi Serraino*:* From different sources. A large part of it was a result of spending time with Don Olsen when I was working on *NorCalMod: Icons of Northern California Modernism* and then on my monograph on him. Also, Jack Hillmer told me Charles Warren Callister was in the creativity study. The daughter of Fred Langhorst told me about her dad coming home from participating in the study and telling them about this absurd problem the study posed, how to put a third arm to use. Raymond Neutra told me that he had seen the study's files about his father and that he knew where they were.

Where was the material stored?

U.C. Berkeley has a large storage facility in Richmond, California. The archives are in a little room filled with file cabinets.

When I ran into Neutra, he told me that he had met Wallace Hall. Hall was the right-hand man to Donald MacKinnon, the director of the Institute of Personality Assessment and Research, a research institute at U.C. Berkeley, better known as IPAR. I called Hall. He was very old and in declining health. He said that they had wanted to do a book.

Hall was the gatekeeper of everything IPAR. He wouldn't give access to anybody. So when he died, no one had a vested interest any longer.

Why do you think the well-known architects of the day participated in the study?

It was largely due to the political clout of William Wurster, whom MacKinnon asked to reach out to the architects. Wurster was an important architect himself, and he was dean of the College of Environmental Design at Berkeley.

Who funded the study?

The Carnegie Corporation. IPAR applied for a large grant in November of 1955. The people who were at the top of the funding agencies for these kind of studies were in the Office of Strategic Services [OSS, precursor to the CIA] and worked at the same OSS station together during the war, performing assessment studies of troops. They assessed candidates for very delicate missions.

Why did the Carnegie Corporation want to do this study?

It was the result of the Cold War. The researchers changed gears completely. There was a shift from studying human effectiveness to studying creativity in general. There was a desire to identify the folks who were going to be the most creative people, so that the U.S. could have a competitive advantage against the Russians. It was deeply nationalistic, if you think about it.

Why was the study not published?

That is the biggest mystery of all. Territoriality and politics about authorship of the study, perhaps. I think they strung this thing along too long and they lost the momentum.

Also, in the 1970s, there was a shift in the conception of personalities: Maybe it's not just about the person, maybe it's also the environment. Psychologists started thinking they were giving too much credit to the individual.

Describe the Mosaic Construction Test.

The architects were given tiles and told to create an eight-by-ten-inch mosaic. They also had a form that they had to fill out, answering questions about the intentions behind what they were doing.

The mosaics reveal that the creative person explores colors and fields in a non-formulaic approach. Some very creative architects did some rather dull mosaics, so it's an imperfect procedure. For example, John Funk, who did the Heckendorf house in Modesto, did a very uninteresting mosaic. Victor Lundy's was really superb, just very lyrical. He was a fantastic architect. Louis Kahn used some rather gloomy colors—there's some darkness in it. I have to say, Neutra's wasn't interesting.

There is the famous story, reported by Charles Eames in 1963, about why Eero Saarinen used only white tiles. Apparently, Saarinen said, "I use only white, because I'm interested in texture."

Did the researchers come to a conclusion about creativity as a result of this study?

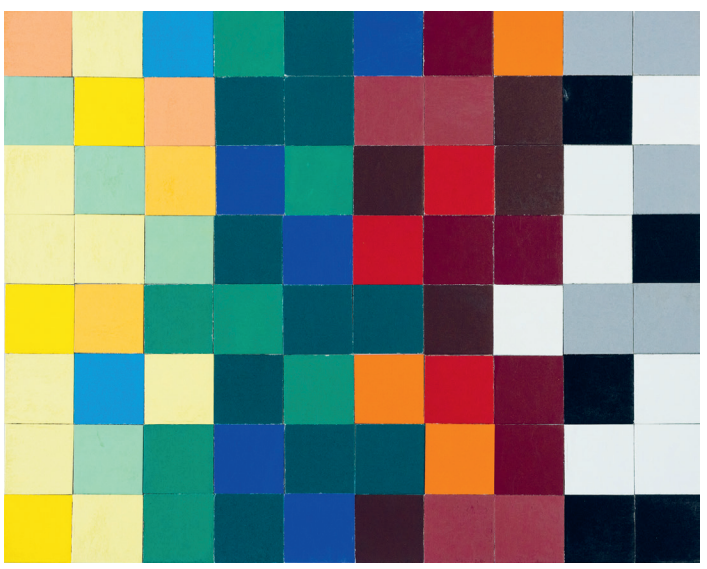
Yes, but the conclusions were broad. One of them was that the creative person is not teamwork material. And in corporate society, this doesn't sit well. What are we going to do with that? Are we going to have a bunch of people who do whatever they want?

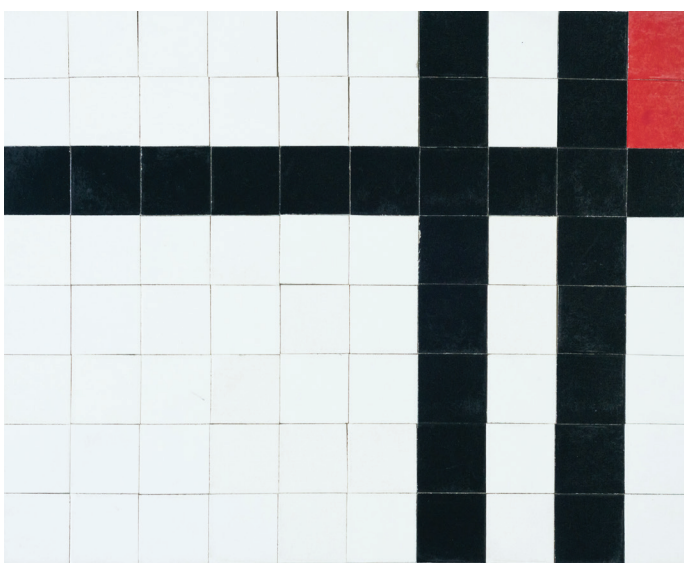
Courage may be the great differentiator. You can have the intelligence, the talent, the intuition. But you have to have the courage to act on your instincts. You have to create conditions to do the work that you deem necessary, based on your aspirations, your vision. The condition of creativity is that you have to sustain the vision that you have for very long time, because you have a very long period where people resist you.

So who is the creative person?

Everybody has a capacity to be creative. This is a capacity that we always have at birth and we lose. We lose the authenticity of who we are. In a way, the message of this book has to do with life choices. What do we want to do with our lives? The creative person is someone who picks one field and explores it to its full extent.

KENNETH CALDWELL CONSULTS ON COMMUNICATION ISSUES FOR ARCHITECTS.





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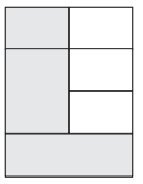

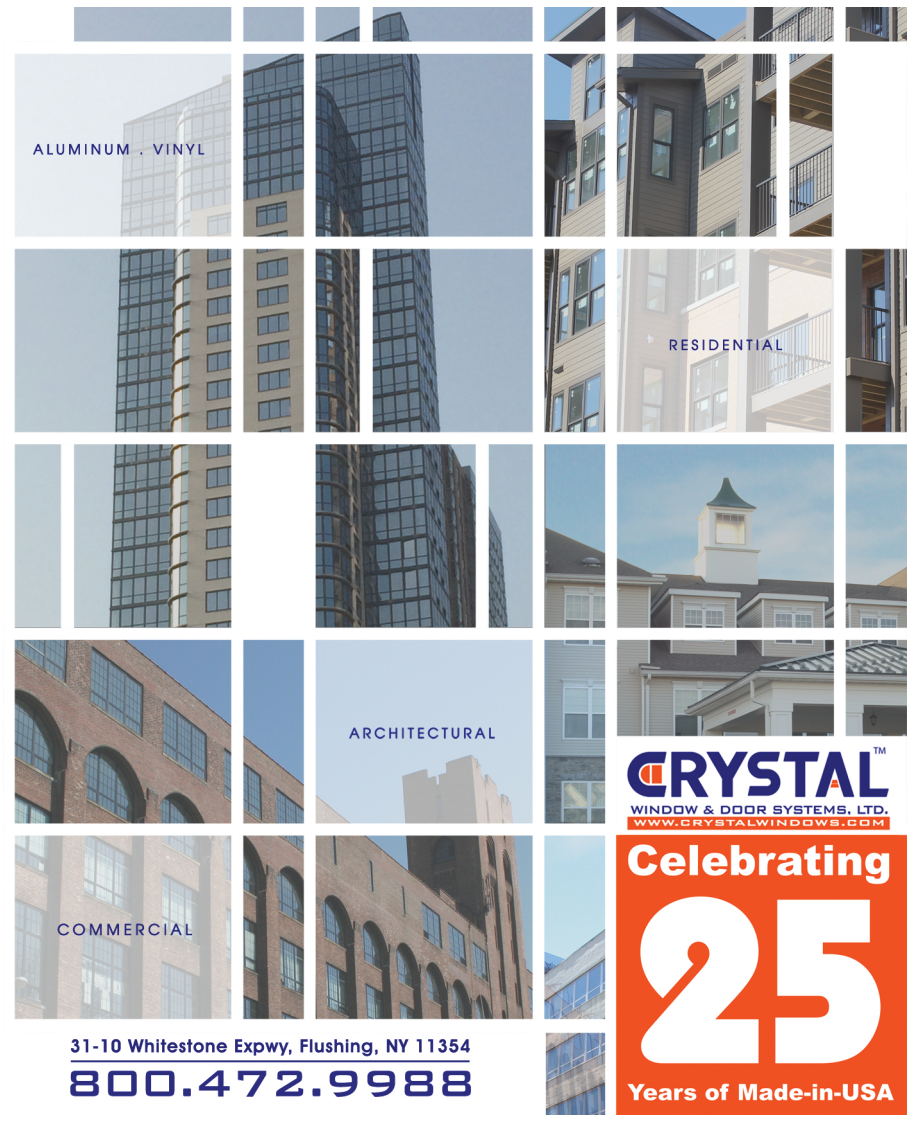

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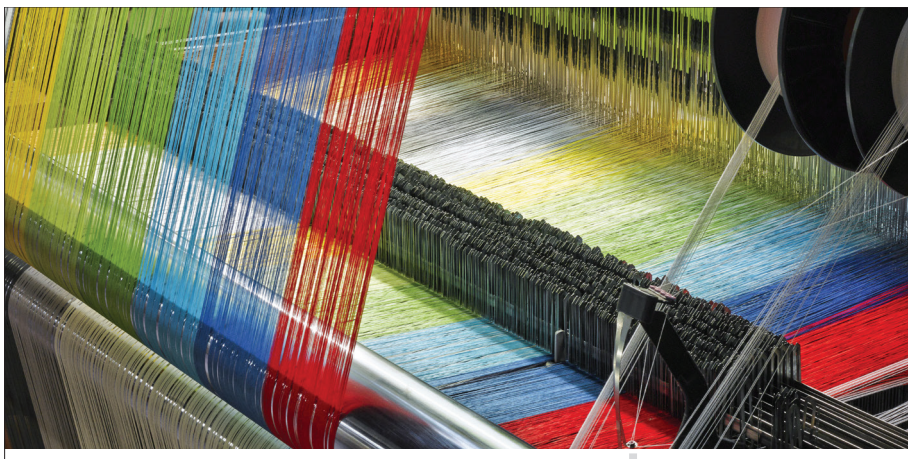

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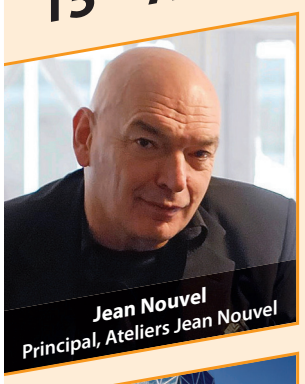
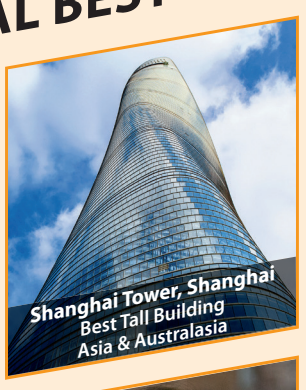
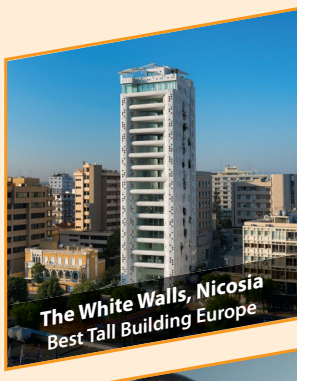

Jean Nouvel
Principal, Ateliers Jean Nouvel


Shanghai Tower, Shanghai
Best Tall Building
Asia & Australasia

Kai-Uwe Bergmann
Partner, Bjarke Ingels Group

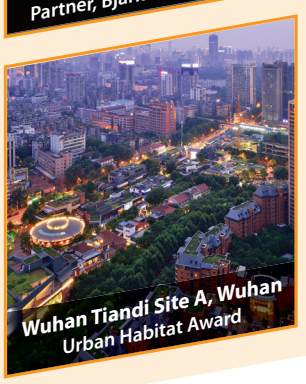
VIA 57 WEST, New York City
Best Tall Building Americas

Wolf D. Prix
Design Principal & CEO
Coop Himmelb(l)au


The White Walls, Nicosia
Best Tall Building Europe

Hearst Tower, New York City
10 Year Award

Dr. Cheong Koon Hean
CEO, Housing & Development
Board of Singapore


Wuhan Tiandi Site A, Wuhan
Urban Habitat Award

Ellen Lou
Director of Urban Design
& Planning, SOM

The Cube, Beirut
Best Tall Building
Middle East & Africa

Ron Klemencic
Chairman & CEO, Magnusson
Klemencic Associates

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"But we also need to design and make buildings that can breathe, that have a good environmental impact and minimize carbon emissions. *Being part of that revolution is also part of living architecture.*"
- Jason Long, Partner, OMA (Living Architecture Monitor, Volume 18, Issue 2)

Proposed 11th Street Bridge Park in Washington, DC. Image courtesy of OMA and OLIN.

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Gail Vittori, *Co-Director, Center for Maximum Potential Building Systems* will present on the human health benefits of integrated biophilic design.

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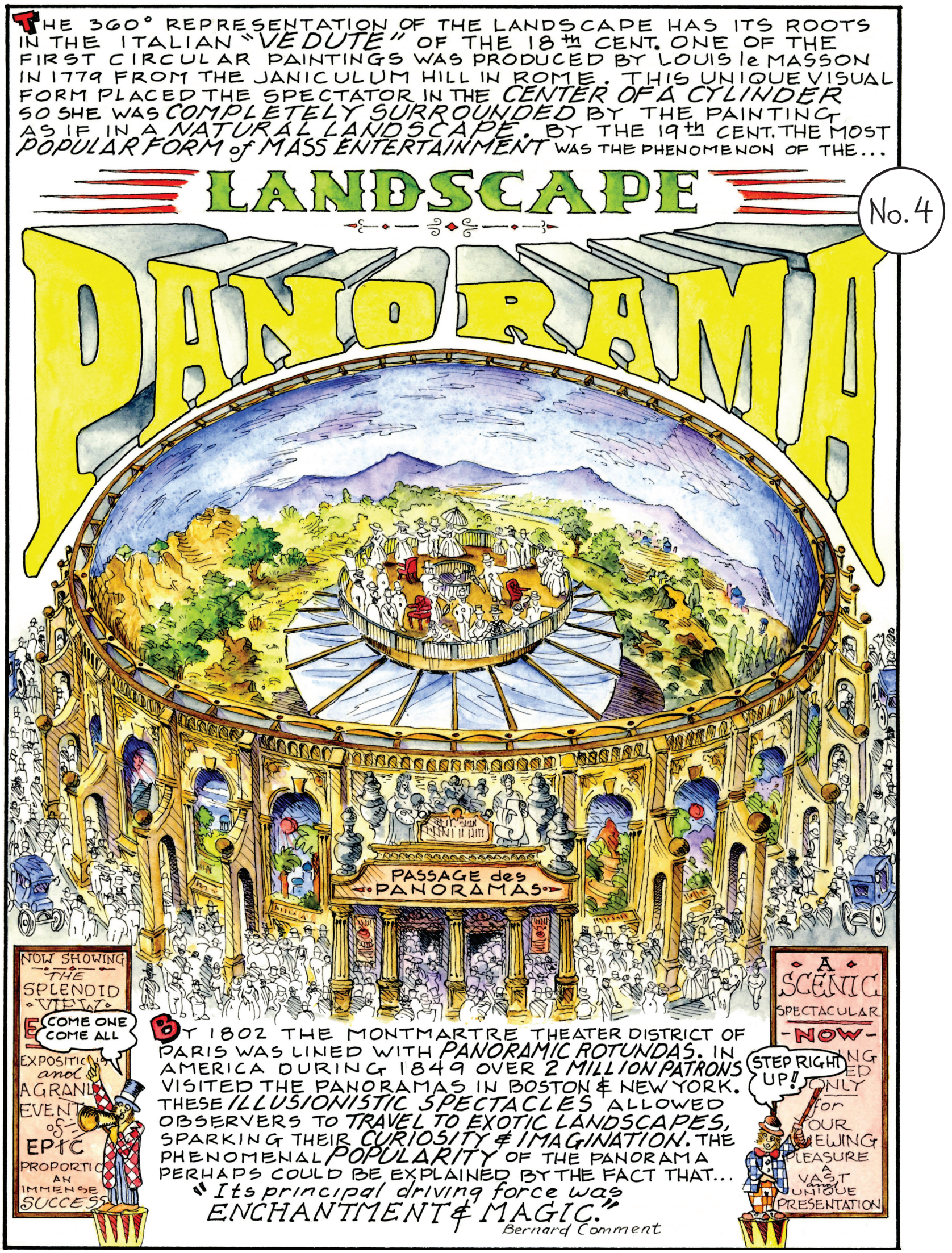

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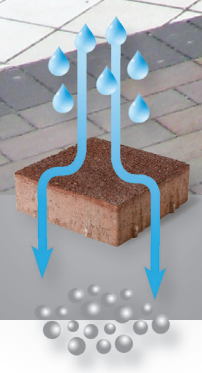

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