PARKS PLANNED FOR FORMER COAL PLANTS

REGENERATION

Chicago’s Fisk and Crawford coal plants closed in August 2012. Now, as they await the identity of a developer to buy and remediate the former industrial sites, local groups have begun to outline plans for green space along the Chicago River. In the coal plants’ wake, residents saw an opportunity to improve prospects for both clean manufacturing and green public spaces in Pilsen and Little Village, two predominantly Latino neighborhoods on Chicago’s southwest side. The Pilsen Environmental Rights and Reform Organization (PERRO) polled the plants’ neighbors, who resoundingly preferred the group pursue mixed-use solutions over all-green or all-industrial redevelopment plans. Architecture for Humanity and local firm Latent Design produced concepts and renderings imagining the future of the sites, as well as a booklet summarizing PERRO’s vision and neighborhood surveys. “This is a direct reflection of some...continued on page 6

LANDMARK HOTEL IS REBORN AS AFFORDABLE, GREEN HOUSING

NEW HARVEST

While restoring Chicago’s Viceroy Hotel, workers sandblasted a XXX-movie advertisement from the building’s eastern facade, revealing a brick-pattern architectural embellishment from the West Loop structure’s better days. The art deco building had fallen into disrepair, mirroring the misfortune of its clientele, many of whom struggled to pay the single-room occupancy’s rate of $20 per night. And like the building itself, the new tenants of 1519 West Warren Boulevard are making the most of a second chance. Built in the 1930s as the Union Park Hotel, the six-story structure is on the National Register of Historic Places. Chicago’s Landon Bone Baker Architects, working with First Baptist Congregational church and Heartland Housing, did not stop at restoration—they reinvented the building as Harvest Commons, a sustainable low-income housing community. A solar-thermal hot water system and geothermal heating continued on page 8

MINNEAPOLIS LAW MAY ALLOW ACCESSORY DWELLINGS

Bringing Granny Back

They’ve been called “granny flats,” “carriage houses,” and “in-law suites.” And if discussions among the members of Minneapolis’ planning commission move forward, they could be an old-fashioned solution to the city’s modern urban issues like a ballooning population, limited affordable housing, and a lack of accessible senior living options. According to Tom Streitz, the city’s director of housing and policy continued on page 5

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Earlier this year I met an architectural engineer whose frequent business trips to China spurred an impromptu experiment. From Chicago to Beijing and back, he took regular air quality measurements with a handheld, professional-grade monitor. His readings turned heads, especially on the airplane, but what piqued the most interest was the data he gathered.

He looked for particulate matter—microscopic solids and liquid droplets suspended in the air. PM 10, about 1/15 the width of a human hair, can gum up lung tissue and aggravate breathing problems. With the even smaller PM 2.5, those problems are even more acute. On the streets of Beijing, particulate matter readings regularly exceeded 500 micrograms per cubic meter, or a “hazardous” level on the air quality index—its highest level of concern. For PM 10, some street readings were on par with readings taken back in Chicago while standing next to a smoker.

China’s bouts of atrocious air quality are no secret. In January, Beijing’s “apocalypse” grabbed headlines and upped public pressure on the issue. There is even an iPhone app that tracks the Chinese air quality index. (One reviewer raves, “Great app that allows me to determine if it is prudent to exercise outside!”) Urban centers in India and the Middle East face a similar challenge.

But this engineer’s readings were telling in another way. In controlled environments—inside the airplane, a Beijing cab with the windows up, a new office tower—particulate matter readings dropped dramatically, at times almost to zero. Indoor air quality, the engineer concluded, is a pressing design challenge.

“You see a different set of eyes and you see a whole different city,” he said. “You see a whole different world in buildings, too.”

Carpet floors, for example, emit more particulate matter than bamboo flooring. But the difference diminishes six feet above the floor. Elevation reduces the concentration of particulate matter pollution, too, but not at a constant rate. Broader solutions to particulate matter levels in the general environment are beyond the scope of any single project, but controlling air quality in the built environment is a design frontier ever more important in a continuously growing and urbanizing world.

Unfortunately, indoor air quality is often addressed through compliance with minimum code requirements. But not always; some solutions double as interior design centerpieces. A landscaped green wall covers 1,420 square feet of the Edmonton International Airport in a kind of living art installation whose 32 species of plants humidify and clean the air. Drexel University boasts the largest “BioWall” in the U.S.—a 22-by-80-foot swath of plants that is actively integrated into the building’s air handling system.

Other interventions are less flashy, but no less important. The proliferation of low-VOC materials and efficient ventilation systems, for example, has steadily improved indoor air quality. Beyond piecemeal approaches, there are alternative metrics. Both Passive House and Living Building Challenge standards integrate design and up the ante for indoor air quality.

Not surprisingly, the highest concentration of particulate matter in China occurs in the east, where the concentrations of coal plants and dense urban environments are greatest. Burning fossil fuels remains the ultimate source of much of this particulate matter pollution. Architects have no direct control of that industry. But they can improve the built environment every day.

CHRISS BENTLEY

New plans for Chicago’s Purple Hotel site don’t have their predecessor’s color, in any sense of the word, but many may view the mixed-use “town center” plaza as the antidote to the site’s lurid history. The quirky midcentury hotel in suburban Chicago seemed to escape its fate last year when architect Jackie Koo drew up plans to save the site’s boxes, the hotel and its distinctive color scheme.

But demolition on the Purple Hotel in Lincolnwood, Illinois, began last month. Organizers of the village’s end-of-summer festival apparently raised $5,000 for the local library through sales of purple brick salvaged from the old structure.

Renderings made public this week show a “new urbanist” plaza from Antonovich Associates that do not include anything purple. Instead, the 11 acres at 4500 West Touhy Avenue would be home to an open-air shopping mall, functional space, 110 apartments, a grocery store, and a new 210-room hotel. About one third of the development’s parking spaces will be hidden underground.

The design avoids village plan commission hearings.

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NEW PLANS FOR A NEW URBANIST PURPLE RAIN
River North’s converted lofts and basement clubs have helped build a 24/7 atmosphere downtown, but those looking for slumber now have more options, too.

Aloft, a Starwood Hotels member, is one of three hotel brands to call a new block of hotels home. They share the complex known as Clark and Grand Hotels with two other brands—Hyatt Place and Fairfield Inn and Suites—in the area bounded by Clark, Dearborn, Grand, and Illinois avenues. In all, the hotels total 621 rooms across three buildings, White Lodging, which manages all three properties, and developer Friedman Properties aimed to offer tourists reasonable rates in a district known for its nightlife.

The Aloft building’s glassed facade seems more in line with the neighborhood’s new energy than some of its brick-clad neighbors. Its blue glass surface is accented by a repeating pattern of dark, T-shaped S-shapes. With HOY’s flair, the brand’s “different by design” maxim becomes apparent. Visitors enter beneath a kinked metal awning bearing rainbow stripes. A blue neon marquee advertises Aloft to the North and South with a tiled zigzag profile that calls to mind a midcentury advertisement.

The rooms themselves continue that vocabulary; bands of bright color on couches and cylindrical throw pillows pop out against a subdued palette that is more common among contemporary hotels. Floor-to-ceiling windows open portions of the rooms to expansive views.

**LET THEM DRINK CHAMPAGNE, DADDY**

Art fairs serve three groups of clientele: the rich, who buy the art, curators and museum folks, and the poor—students, freelance writers, party-crashers.

You can probably guess that Eavesdrop is in the latter, not the former, so imagine the disappointment when champagne was going for $19 per glass on opening night of Expo Chicago. Seriously, what happened to the days of all-you-can-drink Grolsch or Basil Haydens way back in Art Chicago’s past? The sticker shock should be from the gallery price lists, not the bar. While standing in line, Eavesdrop was flattered to be recognized by James Geier of 555 International, who hinted at a slew of new projects and fall openings. Hopefully those openings will allow the 99 percent to imbibe. The art fair’s environment, layout and scheme, was designed by Studio Gang, although we can’t say that we were able to discern a noticeable imprint.

**WAKEUP SLEEPY HEAD, IT’S TIME FOR DESIGN**

DePaul University lays claim to many superlatives, like Largest Catholic University and other stuff. We have one. The Largest College Architectural Snoozefest. That is until now. On the heels of the University of Chicago’s Logan Center for the Arts, DePaul recently cut the ribbon on its new Theater School, designed by Pelli Clarke Pelli. The new building is quite literally—excuse the cliché—a breath of fresh air, clad in materials other than brick veneer.

**BRINGING GRANNY BACK continued from front page**

Development, expanding Minneapolis’ policy to allow accessory dwelling units (ADUs) is under active consideration for the first time in many years.

“It’s really trying to get at this multi-generational demand for housing that existed for a long time and then sort of went out of vogue. For lots of reasons it’s becoming more popular again,” Streitz said. “There are a bunch of demographic and other factors that are compelling us to look at this.”

The move would add Minneapolis to the growing ranks of communities giving these dwellings a second look in recent years.

In Seattle, backyard cottages got the okay in 2009. Last year, legislation passed in Salt Lake City that allowed for ADUs within a half mile of local light-rail stations. And officials in unincorporated Johnson County, Kansas, approved new parameters for the units in March.

“People wanted to bring their parents to live with them or they wanted to bring their children back home,” said Dean Palos, Johnson County’s planning director. The new rules require that detached units (say, over the garage) be no larger than 900 square feet; one of the two residences must be owner-occupied; and the properties must be at least two acres to accommodate both structures. Architectural standards, too, were paramount in the deliberations. Accessory dwellings must mirror the primary structure in character and materials.

“I think in part because of the recession there’s a greater awareness that there’s a need for this,” said Palos. “There’s a better understanding for how this can be accomplished without adversely affecting neighboring properties.”

In other cities, architecture firms that focus on these specialized dwellings are popping up. The Cleveland Urban Design Collaborative at Kent State University has proposed the units in planning projects as one possible tool to deal with the city’s increasing vacant land. In Minneapolis, urban planner Jim Graham is pleased to see the idea he’s pushed for years getting the consideration he said it deserves. Graham works with the city’s Ventura Village neighborhood, the only area of Minneapolis where ADUs are already allowed. In the early 2000s, Graham and his colleagues drew up designs he said could have added an estimated 10,000 accessory units without impacting the “texture of Minneapolis at all.”

Officials had previously shied away from allowing the units, Streitz said, because they feared some landlords might take advantage of the policy.

“Bottom feeder landlords who want to make a few extra bucks will take a closet out back and make it into an apartment,” he said. In order to employ enough inspectors to regulate conditions, Streitz said the commission may work out a fee structure for the construction of the units. “It’s a risk we’re willing to take,” he said. “We just have to be careful about how we craft [our policy].”

Streitz said he expects an official resolution to come through the commission in the next few weeks and if the motion is approved most likely the changes would go into effect at the beginning of next year.

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The glass-walled arena located at East Cermak Road and Indiana Avenue will be called the McCormick Place Event Center. It is low-slung and light-filled—apparently an attempt to address concerns that the arena might “crash land” in the dense South Loop neighborhood. Hirsch said the building’s street frontage will only be about 45 feet above street level, said the building’s street frontage will only be about 45 feet above street level, or roughly even with the trees on Cermak’s median. The billowy roof’s edges flatten or roughly even with the trees on Cermak’s median. The billowy roof’s edges flatten or roughly even with the trees on Cermak’s median. The billowy roof’s edges flatten or roughly even with the trees on Cermak’s median.

Another hotel, this one with 500 rooms, will anchor the arena’s northeast corner on Prairie Avenue. McPier still needs to acquire some of that land. The development is near to a new CTA Green Line stop designed by Ross Barney Architects, which is slated to open in late 2014.

Five other architects competed for the project: John Ronan, Krueck + Sexton, Ross Barney, Grimshaw, and OMA. Officials hope to complete the project in Fall 2016.

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NEW HARVEST continued from front page help cut the building’s energy use 33 percent. Composting, on-site food production, and a green roof helped the project secure Enterprise Green Communities certification.

The city signed off on $3.2 million in tax increment financing dollars for the project, with an additional $3.2 million in the form of federal Historic Preservation tax credits. To get those tax credits, the project’s architects agreed to restore the building’s historic plasterwork and sculpted terracotta tiles. “As we uncovered some of the lobby elements,” said Hume An, Heartland’s director of real estate development, “it was great to see a lot of the motifs were plants—ears of corn, flowers—that fit with some of the things we were doing elsewhere.” Bamboo flooring conceals the original lobby floor, which was ruined over years of misuse. Original tile work survives in the entryway, however, and Heartland is working to replicate its ruddy earth tones for a full restoration of the area around the building’s two elevators. Heartland wanted larger rooms than the SRO arrangement afforded, so it expanded the units. In the process it brought down the capacity from 150 to 89. Historic preservation provisions, however, required much of the existing look, so dummy doors dot the hallways. Eighteen units are specifically reserved for women who have recently left the Illinois prison system. Toney Evans moved in at the beginning of August, just five months after being released from jail, where she spent 13 years for aggravated battery. Like many residents, the 38-year-old makes regular visits to the nearby Michael Barlow Center, a program of St. Leonard’s Ministries, which has helped former felons find jobs since the 1960s. Evans is apprenticing in culinary arts. It’s a skill she’ll apply as a barista in Harvest Commons’ own café—Gracie’s, a “social enterprise café” built as part of an addition to the original building. “I’ll have no reason to be late,” Evans joked. The addition also features a commercial-grade teaching kitchen, where Heartland plans to employ a dietician to run cooking workshops for residents. “I’m eager to get back on my feet. I’ve always wanted to learn more about cooking. So when the opportunity presented itself I just took it,” Evans said. “It gives a person like me a chance to be productive... It makes me feel like a part of society.” A triangular garden seems more like an urban farm than a resident-centered thing,” Snyder said. During a tour of the building, he peered down from a studio unit and asked if the building’s addition had roof access. A small space tucked into one of the H-shaped building’s recesses could fit a few honeybee hives. Compared to some other projects he has worked on, Snyder said, “[Harvest Commons] is unique because it’s so tied to the residential experience.” The garden, easily visible from the street, also meets the surrounding community in a patio space that could host a public farmers market if its sliding door is opened to Warren Boulevard.

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When they open their dorm room windows, Loyola University sophomores living in the college’s new Center for Sustainable Urban Living won’t glimpse another brutalist high-rise; they’ll look out onto the massive greenhouse that contains the building’s atrium, lobby, and agricultural lab.

“This building is really a tool to teach sustainability and the ethics of conservation,” said Devon Patterson, one of the project’s lead designers with Solomon Cordwell Buenz (SCB). “At one point the greenhouse was a small part of the building, a demonstration. But it really became the heart of the building.”

Trusses 62 feet long curve over the space, breaking with the classic symmetrical arc of most farmland greenhouses. Instead, the dynamic shape shrugs wind and rain off to the building’s east, nourishing its natural ventilation and greywater recycling systems.

In the midst of a building boom, Chicago’s Loyola University asked SCB to add residence halls, classrooms, labs, and offices to a new chunk of its lakeshore campus in Rogers Park. To sort out the many programs, the architects took inspiration from Thomas Jefferson’s “academical village” at the University of Virginia. The Founding Father organized dormitories and classroom buildings around a central lawn, promoting interaction among an intellectual community.

Likewise SCB’s design folds an existing high-rise building on Sheridan Road into a plan that links its 10 stories to more freshman dorms on the site’s south end, with labs, classrooms, and a student lounge populating the buildings’ lower floors. The northern structure is now home to the Institute for Environmental Sustainability. Between the two taller structures is an atrium space that serves as the building’s “lawn” in the design team’s Jefferson analogy. It is a greenhouse and learning lab that will also supply food to the new dorm’s café.

The project boasts the largest geothermal heating and cooling system in the city. About 215,000 square feet spread across two acres, the predominantly low-rise complex is well-suited to geothermal; a higher density development wouldn’t be able to pull off the 15-year payback the system promises Loyola. LCD screens display temperatures in real time above several of the many pipes that send water through the building’s 91 geothermal wells, each 700 feet deep. As students and visitors traverse the lobby, they see the building’s pipework through several glass casings.

They also glimpse the base of a green wall meant to cover and shade the sophomore dorms that run along the lobby and greenhouse building’s east side. Thanks to tall ceilings, from which ring-shaped “modern chandeliers” hang, the street-level lounge also offers views of a green wall and an area for fruit trees next to the greenhouse space overhead.

New labs room outfitted with all-bamboo casings house Loyola’s Solutions to Environmental Problems program, which gathers students from diverse majors and asks them to solve an environmental problem on campus. Within sight of the new classrooms is the product of one of those classes: a small biodiesel refinery of sorts that converts campus fryer waste into enough fuel to offset 10 percent of the gas used by the university’s bus fleet. Homemade biodiesel will also run a boiler to heat the facility for a few days a year when the geothermal system is scaled back to allow underground heat to replenish.

Loyola’s biodiesel production is the only university-based program licensed by the federal government to sell its product. Filling only a fraction of its new home in the Institute for Environmental Sustainability’s new Clean Energy Lab, the biodiesel program will seek waste grease from other area universities in an attempt to increase output from 3,000 to 100,000 gallons per year.

As with the building’s geothermal pipe-work, SCB invites visitors to inspect the biodiesel program’s guts. Brightly colored pipes and large windows open toward Sheridan Road and onto the Institute for Environmental Sustainability’s atrium. A lattice reaches up past labs and walls colored red, orange, and green for wayfinding. A small vegetable garden will grow at its base, while hop plants climb three stories to the building’s skylight.

SCB will measure the building’s performance during its first month of operation. The firm is hoping that the facility’s energy use comes in at more than 70 percent below ASHRAE standards. ca

ARCHITECT DESIGNS SECOND ARTS BUILDING
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HOLL-OTTA ART

Steven Holl Architecture’s new Visual Arts Building at the University of Iowa will be an instrument for art, its designer said—a loft-like, light-filled tower of studio spaces that provides an architectural counterpoint to its celebrated neighbor. The new building complements an adjacent Holl structure completed in 2006, Art Building West, which is a horizontally oriented steel structure with a large cantilever over a lagoon. “It’s a rare opportunity to make a new campus work next to a previous work,” said Chris McKay, who led project design along with Holl. “We wanted to make a building that was complementary to [Art Building West], but also quite different.”

Adapting the “porous design” strategy of its neighbor, the new Visual Arts facility has a series of vertically connected spaces. Open sightlines and ample windows connect the stacked spaces to the surrounding environment and a large light well carved out of the floorplates lets in natural light and ventilation. The floorplates slide past each other, creating balconies and exterior working spaces.

“Light and nature carve into the building,” said McKay. “If you make generous spaces with great light that changes through the day, it’s much more conducive to greater thinking.”

Seven vertical cutouts, dubbed “light courts,” are meant to encourage interaction between disciplines and studios spread out across the building’s four floors and penthouse. Studios on all floors are visible from the bottom of the main light court (“the forum”) at the building’s center. That space also connects to the “art meadow” green between SHA’s new building and Art Building West, as well as north to River Street and the rest of campus.

Circulation throughout the light courts follows a series of large landings and seating areas. “The circulation becomes a place of exchange, interaction, and education,” said McKay. “It’s very exciting making a new studio building at a time when art is more and more working across disciplines and across media. Really this building is dedicated to the evolving art practice.”

A green roof is among the 126,000-square-foot building’s LEED-point-earning features (it’s aiming for Gold). Operable windows allow natural ventilation throughout, while hollow spheres in the 12-inch-thick floor slabs cut down on material use. The slabs are also outfitted with a radiant heating and cooling system. Construction is underway and the new building is scheduled to open in 2016. ca
Preservation architects are turning to new technologies to help rebuild historic structures damaged by natural disasters. “Access to digital and 3D data can make certain projects possible,” said Lisa Ackerman, executive vice president of the World Monuments Fund.

One such project is at the Arts Centre in Christchurch, New Zealand, where Holmes Consulting Group (HCG) is using 3D scanning equipment to stabilize, repair, and strengthen the former Canterbury College buildings, a complex of late-19th century Gothic stone masonry structures that were severely damaged by earthquakes in 2010 and 2011. HCG faced several challenges with working on these landmark buildings, including the fact that there were no modern architectural or engineering drawings that accurately reflected the current state of the buildings. The firm used high definition scanning equipment to generate detail point cloud data, and then used IMAGINiT’s Scan-to-BIM software, which easily integrated with Autodesk Revit. Scan-to-BIM allowed HCG to interact with point clouds, assisting with the automated recognition and placement of architectural elements and enabled the firm to create working models.

Today, the HCG team has made models for all the buildings on the site that were damaged in the earthquakes. The models are allowing the structural engineers to analyze how each building behaves to determine its strength and how it will move in future earthquakes. “In the end we are getting far more detail than we thought possible and that helps immensely in the preservation process,” said Tony Fitzwater, HCG’s national drafting manager, in a statement. Engineers and architects are not only using 3D scanning technology to respond to natural disasters, they are applying these technologies to prepare for future strikes. The not-for-profit organization CyArk is committed to “preserving cultural heritage sites through collecting, archiving, and providing open access to heritage data created through laser scanning, digital modeling, and other state-of-the-art technologies.” The organization is creating a free, 3D online library of the world’s cultural heritage sites, which Ackerman said “records the most minute detail of a place, allowing it to be studied, rebuilt, or admired.” CyArk has documented sites worldwide, including Ancient Thebes, Angkor Wat, Pompeii, and Mesa Verde. In October 2013, the organization is kicking off a campaign to digitally preserve 500 cultural heritage sites over the next five years. LIZ MCKERNAN

**History**

120 years of design and manufacturing is a significant number, no matter what the industry. For LAUFEN, Swiss producers of contemporary bathroom products, its history is precisely what keeps them current. That is not a paradox, nor is it lip-service – it is the benefit of LAUFEN’s on-going commitment to improvement.

Placing a high priority on environmentally-friendly production, LAUFEN uses energy and raw materials sparingly at all levels of production – from development to marketing. The Swiss factory has carried the label of the Swiss Energy Agency for Industry (EnAW) since 2006, which recognizes it as a company that is actively committed to voluntary climate protection. All the LAUFEN production facilities are now certified with the Environmental and Quality Management Systems ISO 9001 and ISO 14001. LAUFEN’s products feature the latest energy and water-saving technologies, such as the newest generation of water-saving toilets: several LAUFEN toilets flush using an optional 4.5 or 3 liters dual flush system as opposed to 6 or 3 liters for conventional toilets.

**Product Innovation**

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LAUFEN's Research Director, Dr. Werner Fischer had long wanted to improve upon the centuries old ceramic recipe and for over two years he worked to perfect a new ceramic, which he calls SaphirKeramik. While the exact recipe is a closely held secret for LAUFEN, the properties of the material are quite convincing: the Federal Institute for Materials Research and Testing in Berlin (BAM) examined the flexural strength of SaphirKeramik and it measured an average of over 120 kp/mm² – which is comparable to steel and twice as high as that of vitreous china. The greater hardness permits thinner walls which in turn results in less material, lower weights and benefits in terms of sustainability: fewer raw materials required and lower energy used in production.

**SaphirKeramik in Use**

Some SaphirKeramik designs are best seen in the new Kartell by Laufen Collection, an innovative collaboration between the iconic brand Kartell and LAUFEN; curated by Roberto and Ludovica Palomba. The washbasins made of SaphirKeramik have revolutionized washbasin design. Sleek, geometric shapes are used in combination with Kartell’s seating, mirrors, accessories and shelving.

LAUFEN’s living square collection of washbasins has also been updated using SaphirKeramik. These sleek, ultrathin washbasins are the perfect complement to many contemporary bathroom projects.

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Law office designs rarely stray from convention. Large firms need lots of separate offices, with upper-level staff typically claiming the window frontage, and they need to convey an air of professionalism. That has translated into stodginess for some corporate offices over time—a pitfall Skidmore, Owings & Merrill hoped to avoid in fashioning a new home for Canadian legal heavyweight Davies Ward Phillips & Vineberg. "Our client was very specific about wanting to create a space that was timeless, very restrained," said SOM Design Director Jaime Velez. After decades elsewhere in downtown Toronto, Davies Ward was drawn to the Royal Bank of Canada Centre, in part for its LEED Gold ranking. RBC’s open floor plan, however, posed challenges.

The building’s underfloor air distribution system transmitted too much sound throughout the space for an office whose core needs include acoustical privacy. Acoustical consultant Cerami & Associates helped SOM tamp down the sound between rooms. A double-size conference room with two large conference tables can be divided with a retractable skyfold wall that reaches from floor to ceiling.

But privacy wasn't the only goal. Spread across four and a half floors, totaling about 150,000 square feet, the office layout isolates internal circulation from spaces frequented by visiting clients and guests. A staircase conveys employees to two pantries, a lounge and lunchroom. Its attractive mix of materials is meant to encourage use and chance interaction.

"We debated a lot should the stair be on the public side or the private side," said Velez. "The whole idea is there's a public face to the firm and there's a private face, and they don't mix."

Dark strips of oak appear at first to be steel, spaced close enough together to partially obscure an onlookers’ vision of who is using the staircase. Aluminum treads satisfy the building’s requirement for sustainable materials with a modern feel. A walnut enclosure, echoed throughout the office, lends the law firm a traditional touch of wood, albeit sparingly. "The practice of law has a tendency to be isolating because of how much time you spend in your office," Velez said. "They wanted to strengthen the sense of community."

On the walls throughout, cords and computer monitors take a backseat to Davies Ward’s extensive collection of Canadian art. Buttons on conference room tables will reveal monitors, but at first glance the spaces aren’t overwhelmed with technology. Instead, light bounces off the 11-foot-high exposed concrete ceilings onto uncluttered spaces.

The large rooms double as event spaces (for cocktail parties, lecture series) and auditoriums of a sort for the several dozen law students completing “articling” internships—year-long legal apprenticeships that are part of Canada’s track for young lawyers. Small inboard offices absorb each class of students with a mix of single and shared spaces.

Although the building wasn’t designed to house a law firm, you might not know it from the handsome walnut enclosures that clad the conference rooms. Floor-to-ceiling glass lets in light, which can penetrate open corridors and large rectangular clerestories on the sides of many offices and conference rooms. On the 40th floor, with few neighbors tall enough to block views, employees and guests are greeted with ample light and clear sightlines to Toronto’s skyline, including the CN Tower.

RESOURCES:

- Flooring
  - Shaw Spun Tile
  - shawcontractgroup.com
  - Alumaflor
  - aluminumfloors.com

- Ceiling
  - Decoustics Cellencio
  - decoustics.com

- Lighting
  - Delray Lighting
  - delraylighting.com
  - Edison Price
  - epi.com
  - Lightolier
  - lightolier.com
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Chicago’s Rosenwald Apartments are a perennial presence on preservationists’ most endangered lists, so speculation swirled when it was announced last year that city funds would help revive the massive Bronzeville complex. The 1920s affordable housing project was built with money from Sears Roebuck and Co. leader Julius Rosenwald. A massive multifamily development, the four-story complex encloses a private two-acre courtyard.

Vacant for a decade, the building’s glass conservatories to complement rooftop greenhouses.

That project (dubbed the Julius Rosenwald-Booker T. Washington Gardens) isn’t getting built. But Cunningham has gathered a group of black designers committed to “evangelizing and apostilizing energy efficiency, sustainability, and green technology to urban Chicagoan.”

“We realized this community was underrepresented,” Cunningham said. “The vision is that people would start changing their lifestyles by eating fresh food, and we would see young people embrace our agrarian roots.” Cunningham’s own parents followed the Great Migration patterns that millions of African-Americans took to Chicago at the start of the 20th century. His parents came to Chicago’s stockyards from Arkansas and Texas, where they grew up as sharecroppers.

With his firm Architectural Services Group, Cunningham holds patents on several small-scale components of what he believes could help affordable housing become environmentally sustainable. They include a closet-unit gardening system and a solar-powered, low-voltage street lamp that charges electric vehicles.

Cunningham met horticulturalist Richard Dobbs and the other designers who comprise a group they call BUILD BOLD a few years ago while they were studying for LEED certification.

Dobbs, who has worked with the Chicago Botanic Garden and nearby urban garden Eden Place, said the neighborhood’s historical significance is unappreciated. “People take it for granted,” he said. “But it’s a potential goldmine. It’s just untapped.”

In addition to Eden Place, community gardens have sprung up on residential lots throughout the neighborhood, from the Bronzeville Community Garden on 51st Street to Sacred Keepers Sustainability Lab at 48th and King Drive, which is reserved for young gardeners.

In convening local designers under BUILD BOLD, Cunningham is tapping into a broader effort to rebrand and revitalize Bronzeville.

Paula Robinson, president of the Black Metropolis National Heritage Area Commission, has been part of the neighborhood’s bid for national recognition since 2004. With the Chicago Metropolitan Agency for Planning, they released a feasibility study for the idea in September. The designation would qualify the area for matching federal funds to build on development in the area.

“This is not just something we’re doing to share jazz history, blues, those kind of cultural achievements,” Robinson told WBEZ. “We intend to be a sustainable destination.”

To do that, they’re focusing on the neighborhood’s open spaces. 367-acre Washington Park, the city’s largest, and Burnham Park, home to the recently rebuffed 31st Street Harbor. At the northern tip of the state’s ambitious Millennium Reserve plan to consolidate and develop open spaces in the region, Bronzeville could serve as a gateway from the city to forest preserves further south.

They’re also pushing transportation. Part of the effort to establish bike lanes and promote pedestrian-friendly streets has been motivated by necessity—the CTA Red Line is a major neighborhood train route for six months. Robinson told WBEZ that they are looking at establishing a “historic bike trail” down State Street.

As the third component of their bid to rebrand the area, Robinson and others are reaching out to the Illinois Institute of Technology (IIT) and the University of Chicago. IIT professor Blake Davis runs a class in the college of architecture called IPRO, which directs students to design solutions for neighborhood problems. Previous efforts led to the creation of the nationally lauded urban agriculture program. The Park. His students are now looking to turn an abandoned rail line along 40th Street into an urban agriculture innovation cluster.

Segregated communities cut off by highways and other dividing lines aren’t sustainable, the designers of BUILD BOLD argue. Instead of relying on outside inputs for economic development, Bronzeville could capitalize on its assets as a cultural destination, building a sustainable community from the ground up.

“Bronzeville is the perfect site,” said Cunningham. “We have this housing stock that lends itself to repurposing.” For Bronzeville’s real estate market, overcoming the legacy of public housing and its negative perceptions has been difficult. A study released last year by students at the University of Illinois at Urbana-Champaign compared the neighborhood to Pilsen, where development and gentrification have picked up.

But development has not stalled. Earlier this year a $46 million shopping complex broke ground, anchored by a 41,000-square-foot Wal-Mart. “Neighborhood Market” store focused on groceries.

Neighborhood investment could help accelerate efforts by community members like Robinson, who hope Mayor Rahm Emanuel, while he pours millions into marketing campaigns aimed at increasing tourism, will look to the South Side, where few of those dollars are spent or reinvested. It could also help Cunningham’s vision for a green, self-sufficient neighborhood. “We want 47th Street to be the lead in this,” he said. “Can you imagine driving down Michigan Ave. from 22nd Street all the way through 75th and seeing wind turbines, permeable pavement, all of that?”

Emanuel’s office identified Bronzeville as one of the city’s “opportunity areas” for economic growth. Touting hundreds of millions of dollars already spent on or committed to projects in the area, including a new CTA stop near the Philadelphia School District’s McCormick Place Convention Center, the mayor’s announcement echoed Robinson’s call for “T3”: tourism, transportation, and technology.

“People are involved in different aspects of this, but our job is to pull it all together,” said Robinson. “That’s when sustainability is going to mean something.”
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IF WE ask the right questions we can change the world.
These products will keep your next project from being an energy guzzler. By Emily Hooper

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   ultimateair.com

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   URBAN GREEN ENERGY
   At just six feet in height, the Eddy wind turbine features a dual axis design that evenly distributes horizontal and vertical forces along the length of the axis for durability. In moderate wind speeds, it produces approximately 750 kWh of solar-ready power. In addition to IEC certification for Wind Turbine Safety, Noise Levels, and Power Performance, Eddy is also ISO and UL certified.
   urbangreenenergy.com

3. WEBCTRL
   AUTOMATED LOGIC
   This web-based building automation system integrates major electrical systems, mechanicals, backup generators, fire systems, and building elevators. The program can also generate work orders for building system maintenance, bills for tenant’s off-hours use, and real-time pricing structures. Energy use trend reports and thermographic floor plans also tie into effective conservation features, such as setpoint optimization, optimum start times, and short-term demand reduction.
   automatedlogic.com

4. PARANS SOLAR LIGHTING
   WASCO
   For interior spaces without access to natural light, there is the Parans Solar Lighting system. Solar receivers mounted on the exterior of a structure channel solar energy along thin, flexible fiber optic cables that can be wound through a building’s infrastructure. The light is expelled through specially designed luminaires that deliver all the illumination benefits of natural sunlight, without electricity.
   wascoskylights.com

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   lutron.com

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   DUO-GARD
   A turn-key approach to photovoltaic architectural canopies: Solar energy is harvested for charging and lighting energy, or configured for energy credits. A steel frame, fabricated in-house, features a three-coat polyurethane epoxy finish for durability. The continuous canopy can be specified in Charcoal Gray or Blue, and in a sloped or ridged style.
   duo-gard.com
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Concrete and steel enabled the advent of the skyscraper, and in just about a century they helped that form reach mountainous heights. But these materials have an environmental impact that can’t be ignored. That fact is driving a new generation of designers to reconsider wood.

Concrete and steel production is responsible for about 8 percent of the world’s emissions of carbon dioxide, the greenhouse gas mainly to blame for climate change. The majority of both materials go to fuel the construction boom in China, which nearly doubled its use of steel in the last ten years.

Asia’s ongoing building boom is mostly in response to the extreme demand for housing created by its growing and rapidly urbanizing population. More than a billion people will move or be born into Asian cities in the next 20 years. Billions more are already homeless or living in slums. While the density of high-rise living cuts down on transportation and energy emissions, the carbon content of concrete and steel somewhat tempers the savings.

Looking at a California redwood, which can stand nearly 40 stories tall, it is not hard to imagine a wood structure reaching such heights. And its carbon profile is not just less than competing materials; it is potentially carbon negative. As the poet Bill Yakes wrote, “Trees are our lungs turned inside out.” That is, they grow by drinking up carbon dioxide, exhaling oxygen in return. Every cubic meter of wood stores more than three quarters of a ton of carbon.

Canadian firm Michael Green Architecture just broke ground on what, at seven stories with plans to expand to 20, will be the tallest wood building in North America. Designers in Europe and Australia have also gone above wood’s traditional three- or four-story limits. But in the U.S.—where code constraints, economics, and a social stigma prevent construction—the idea has been slower to catch on.

Since they helped set off a flurry of interest in the topic of tall wood construction about ten years ago, a pioneering few designers and engineers have seized on the potential of manufacturing breakthroughs to give one of the world’s oldest construction materials new life. They say urbanization, population, and climate change are on course for a head-on collision that architects have a responsibility to help avert, and wood construction is how.

Seeds to buildings
When British architects Waugh Thistleton set out to build the Stadthaus building, now called the Graphite Apartments, in the east London borough of Hackney, they weren’t stacking two-by-fours. Apart from a reinforced concrete plinth and fiber-cement facade panels, the entire building is made from cross-laminated timber (CLT).

Manufacturers like KLH Massivholz in Austria, where 80 percent of CLT is still made, pile up sheets of wood at 90-degree angels and paste or glue them together into something resembling a jumbo piece of plywood. “Our biggest job talking to code officials and the fire department was making sure they distinguished between stick-frame and CLT,” said principal Andrew Waugh. “You’re dealing with a more solid robust material. With a stick-frame system you’re relying on the guy on site.”

CLT is assembled in the factory, which cuts down on construction errors and time. The Graphite Apartments, a nine-story mixed-use building, was built in just under one year—months less than expected.
A layer of drywall over the thick CLT panels helped the structure earn a fire resistance rating between 60 and 90 minutes, passing code. Heavy timber and cross-laminated timber actually have built-in fire protection; dense wood will burn slowly, charring instead of catching fire all at once. Part of bringing a wood building up to code is providing enough wood so that even after fire produces a “char layer,” there is still enough left to support the structure.

On Green’s forthcoming Wood Innovation Design Center in Vancouver, a pre-charred cedar exterior dramatically improved its fire rating.

Acoustics, another traditional failing of wood construction, is also heartier in CLT towers. An air gap, compressed insulation, and a floor slab totaling about 14 inches overall helped the Graphite Apartments meet stringent UK acoustics requirements.

CLT is not produced in the U.S., nor are newer iterations of high-rise-ready timber panels, like laminated strand lumber (LSL) or laminated veneer lumber (LVL). But as more high-rises are built with wood, Waugh hopes his firm will find a U.S. client.

“The more you build with timber, the more you realize how steeped in concrete we really are,” he said. “It’s still a relatively conservative industry, the construction industry, but when contractors build one they want to build more.” Waugh built his own CLT home with three friends. He said the wood imparts an emotional value. “It’s a beautiful place to live. You know you’re living in a space captured by a natural material.”

**Timber towers**

Michael Green, Waugh Thistleton, and several European firms—Berg | C.F. Møller Architects and Dinell Johansson—have proposed a 34-story “ultra-modern residential high-rise building” for Stockholm—are the face of the timber tower movement, but they recently added a company

to replicate the landmark building’s structure. They focused on reducing the weight of the floors, where most of the material weight is contained. Wood high-rises already built in Europe, such as the Graphite Apartments in London, use a lot of load-bearing walls to hold up the structure. But that would limit the building owner’s options for renters, Johnson said, as would the immovable columns placed throughout.

To make the Dewitt-Chestnut system work without drastically shrinking the floorplate or beefing up the structural system, SOM zeroed in on what engineers call the boundary condition—its mathematical pressure point. To illustrate, Johnson built two stacks of tile samples and placed a ruler on top to span the distance between. He balanced a can of soda water on the ruler, the building’s floor in this example. The ruler bowed beneath its weight, but its edges also flared up, making a slight u-shape. But with a few more tiles placed on each stack to pin down the ruler, it held its shape.

In his example, the ruler is a solid timber floor, while the tile stacks are reinforced concrete wall joints and beams. Without concrete,
SOM’s engineers determined the Dewitt-Chestnut would need custom 13.5-inch CLT panels to support the floorplate’s core-to-window span. That would be too expensive and would use more material in just the floors than the whole of the original building. “It just started solving all these problems for us,” Johnson said. “You have the concrete to hold it all together—basically all this timber coming together and concrete sealing it at the joints.” It would take about 12 million cubic yards of timber to build, the report estimated—less than one-hundredth of one percent of the annual North American timber harvest.

Scaling back
Even if engineers can solve these problems, there is still a stigma involved with tall wood structures. Antony Wood, executive director of the Council on Tall Buildings and Urban Habitat, counted timber towers among the “quiet revolutions” happening in tall building design.

“I think the fear of timber is that it’s an organic material,” he said. “It’s not manufactured to provide a structural member like steel or concrete is.”

Wood rots, so it must be kept out of the rain. SOM’s system swaps wood for a steel frame at the building’s base to prevent water damage during flooding.

Most critics worry about fire. Tall timber skeptics seized on a structural fire at the job site of a six-story wood building in Richmond, British Columbia, in 2011. In the city just south of Vancouver, what would have been the first wood-frame six-story building in Richmond, British Columbia, in 2011. In the city just south of Vancouver, what would have been the first wood-frame six-story building in Canada burned to the ground on May 3. Steel companies were quick to blame the wood frame’s flammability. But Canadian Wood Council President Michael Giroux pushed back, noting the construction team hadn’t yet installed safety features, including fire sprinklers.

“To suggest that the outcome of the May 3 fire at the Remy project in Richmond would have been the same if the building had been fully completed, is not plausible,” he wrote.

Even tall timber’s champions concede the material isn’t suitable for super-tall buildings. But they say building codes, which in many places restrict wood to only low-rise construction, isn’t up to date with structural engineering advancements. “It’s time to reconvene and reconsider what we’re doing,” Waugh said. “We need to densify our cities to leave ground for agriculture and wildlife. Condensed cities are much more efficient places. But I don’t think these Babel-sized towers are the way.”

And some go as far as to say the threat of climate change means wood high-rises are our only choice.

Wood world
In 2009, the government of British Columbia endorsed a “culture of wood,” requiring designers of public buildings to prove they can not use wood before considering other materials. With millions of acres of forests in the U.S. and Canada devastated by mountain pine beetles, it was a prudent move for a province home to one of the world’s busiest forestry sectors. But if wood construction is going to take off on the scale envisioned by its pioneering architects, Michael Green said, the “wood first” policy will have to become “carbon first.”

“We need to create incentives around climate change instead of seeing it all as a hindrance,” he told AN. “Let all industries benefit—it allows the concrete and steel industries to make their case. By no means is one exclusive of the other. Let’s use all materials where it’s most appropriate.”

While at MGB (mcfarlane green biggar ARCHITECTURE + DESIGN), Green released an open source platform for wood tower construction—a structural system to engineer tall buildings 12, 20, or 30 stories high. Several iterations later, his wood-based structural systems have started a conversation...
Green said the warmth of wood interiors and scaling back the height of buildings could help solve another problem of modern high-rise construction: social sustainability. Whereas many residential skyscrapers are isolating, new typologies developed with wood in mind—not traditional forms grafted onto wood frames—could change the mindset.

As with British Columbia’s “wood first” policy, the UK’s performance-based code has created an opportunity for timber construction, while U.S. code remains constrictive. But it wasn’t novelty that ultimately built Waugh Thistleton’s Graphite Apartments. At a cost of about $2,200 per square foot, the building was 15 percent cheaper than if it had been made from concrete.

By 2050, concrete use is predicted to reach four times its 1990 level. And production of steel and concrete are on track to balloon, eclipsing advances in recycling and materials science that could shrink their carbon footprints.

“We need to really hit reboot on how we build environments,” Green said. “As architects we owe it to ourselves to push these boundaries.”

Chris Bentley is AN’s Midwest editor.
**THE ARCHITECT’S NEWSPAPER OCTOBER 9, 2013**

**OCTOBER**

**TUESDAY 10**

**LECTURE**

Historic Pullman Facade Legacy Project
12:00 p.m.
AIA Chicago
35 East Wacker Dr., #250
Chicago
aiachiago.org

**FRIDAY 11**

**EVENTS**

AIA Northern Minnesota Dinner Cruise & Guest Speaker Duluth Seaway Port Authority Tima TBD
1200 Port Terminal Rd.
Duluth, MN
aia-mn.org

Sam Green and Yo La Tengo
7:00 p.m. and 9:30 p.m.
Walker Art Center, McGuire Galleries 1750 Hennepin Ave.
Minneapolis
walkorgart.org

**SUNDAY 13**

**EXHIBITION CLOSING**

Detroit: A Cultural History
1:00 p.m.
Taubman College, University of Michigan
2200 Bonitaest Blvd.
Ann Arbor, MI
taubmancollege.umich.edu

**TUESDAY 15**

**SYMPOSIUM**

Incorporating Energy Managing Theme: Culture
5:30 p.m.
AIA Chicago
35 East Wacker Dr., #250
Chicago
aiachiago.org

**LECTURE**

2013 Pritzker Prize Winner Toyo Ito Presents "Architecture After 3.11. The Buffer-VanderLinden Lecture on Architecture" 6:00 p.m.
The Art Institute of Chicago, Rubloff Auditorium
230 South Columbus Dr.
Chicago
artic.edu

**THURSDAY 17**

**EVENT**

Site Cast Tin-Up Concrete Construction: A Real Energy Envelope Solution
12:00 p.m.
AIA Kansas City Office
1801 McGee St., Ste. 100
Kansas City
aiaok.org

**FILM**

Mobile Homestead
7:00 p.m.
Detroit Institute of Arts
5200 Woodward Ave.
dia.org

**FRIDAY 18**

**LECTURE**

Marshall Brown: The Speculative City
6:00 p.m.
Taubman College, University of Michigan
Architecture + Architectural Education 2000 Bonitaest Blvd.
Ann Arbor, MI
taubmancollege.umich.edu

**EXHIBITION OPENING**

Sarah Ann and Andy Sturdevant Minneapolis Institute of Arts, MAEP Galleries 2400 Third Ave. South Minneapolis
artmnia.org

**SATURDAY 19**

**EVENT**

Open House Chicago
9:00 a.m.
Chicago Architecture Foundation
224 South Michigan Ave.
Chicago
openhousechicago.org

**SUNDAY 20**

**EXHIBITION OPENING**

Dreams and Echoes: Drawings and Sculpture in the David and Celia Hilliard Collection
The Art Institute of Chicago
111 South Michigan Ave.
Galleries 124-127
Chicago
artic.edu

**TUESDAY 22**

**LECTURE**

The Architecture of Benjamin Marshall
Glenser House Museum
1800 South Prairie Ave.
Chicago
Glenserrhouse.org

**THURSDAY 24**

**CONVENTION**

2013 Central States Region Convention & AIA Oklahoma Convention
The Skirvin Hilton Hotel
1 Park Ave.
Oklahoma City
aiaok.org

**TOUR**

Glenser House Museum, Its Past and Present
6:00 p.m.
Glenser House Museum
1800 South Prairie Ave.
Chicago
aiachiago.org

**FRIDAY 25**

**EXHIBITION OPENING**

Fotografia Europa
1840 to the Present
Detroit Institute of Arts
5200 Woodward Ave.
Detroit
dia.org

**FRIDAY 25**

**EVENT**

Designnight: 58th Annual Design Excellence Awards 5:30 p.m.
Navy Pier, Grand Ballroom
600 East Grand Ave.
Chicago
aiachiago.org

**TUESDAY 29**

**WORKSHOP**

Innovative Solutions for Designing Net-Zero Buildings
8:15 a.m.
AIA Chicago
35 East Wacker Dr., #250
Chicago
aiachiago.org

**WORKSHOP**

Working with a Green Architect
6:00 p.m.
Chicago Center for Green Technology
445 North Sacramento Blvd.
chicago
greentech.org

**WEDNESDAY 30**

**LECTURE**

STEM to STEAM Program: Rachel Armstrong Talk
7:00 p.m.
Indianapolis Museum of Art
400 Michigan Rd.
Indianapolis
imamuseum.org

**THURSDAY 31**

**EVENT**

STEM to STEAM Program: Ceremony & Dinner
10:00 a.m.
AIA Illinois
1801 McGee St., Ste. 100
Kansas City
aaiok.org

**SATURDAY 2**

**EVENT**

Designing: Film, Discussion, Reception 10:00 a.m.
Art Institute of Chicago, SAIC, Columbus Drive Auditorium
200 South Columbus Dr.
Chicago
artic.edu

**FRIDAY 4**

**CONFERENCE**

2014 AIA Convention
7:00 p.m.
Contemporary Art Museum St. Louis
2000 Forest Park Ave.
St. Louis, MO
stlouisaiachicago.org

**MONDAY 10**

**CONFERENCE**

10th Anniversary of AIA Illinois
7:00 p.m.
Contemporary Art Museum St. Louis
2000 Forest Park Ave.
St. Louis, MO
stlouisaiachicago.org

**FRIDAY 11**

**EVENT**

Planning in a “Post-Racial” Society (7): New Directions and Challenges
9:00 a.m.
University of Michigan Museum of Art
529 South State St.
Ann Arbor
caupt.umich.edu

**TOUR**

Lilly House Tour
2:00 p.m.
Indianapolis Museum of Art
4000 Michigan Rd.
Indianapolis
imamuseum.org

**EXHIBITION OPENING**

Michelle Grabner: I Work From Home
Cranbrook Art Museum
3931 Woodward Ave.
Cleveland
moclevelandland.org

**SATURDAY 2**

**EVENTS**

Designing: Film, Discussion, Reception 9:00 a.m.
Art Institute of Chicago, SAIC, Columbus Drive Auditorium
200 South Columbus Dr.
Chicago
artic.edu

**SATURDAY 2**

**EVENT**

Walking: A Cultural History
7:00 p.m.
Contemporary Art Museum St. Louis
2000 Forest Park Ave.
St. Louis, MO
stlouisaiachicago.org

**THURSDAY 3**

**EVENT**

Construction: A Real Foundation of Benjamin Marshall: The Speculative City
16:00 p.m.
Indianapolis Museum of Art
400 Michigan Rd.
Indianapolis
imamuseum.org

**SUNDAY 5**

**LECTURE**

Integrative Design: Towards Whole Systems Thinking
5:30 p.m.
Arts Club of Chicago
201 East Ontario St., Chicago
artclubchicago.org

**WEDNESDAY 6**

**EVENT**

The Shades of Green
6:30 p.m.
Masonry Institute
1429 South Big Bend Blvd.
St. Louis
aia-stlouis.org

**THURSDAY 7**

**EVENT**

CTBUH Awards Symposium, Ceremony & Dinner
10:00 a.m.
AIA Illinois Institute of Technology Hermann Hall Auditorium & S.R. Crown Hall
Chicago
ctbuh.org

**EXHIBITION OPENING**

Currents 36: Dirk Strebler
Milwaukee Art Museum
700 North Art Museum Dr.
Milwaukee
mam.org

**OF WALKING**

The Museum of Contemporary Photography’s exhibition Of Walking explores how the simple act of walking gives rise to countless intimate thoughts. Although walking may be perceived as one of mankind’s most simple acts, it triggers a series of emotions and contemplations. Of Walking shows that it is not just about putting one foot in front of the other, nor is it solely the motion from point A to point B. The curators sought to demonstrate how the process of thinking is made possible by the act of walking. To illustrate this concept, the exhibition goes back to the history of photography by showcasing famous streetwalkers and photographers such as Eugène Atget and Garry Winogrand. It focuses on navigation through space to determine how walking becomes a foundation of the natural landscape and computer-generated imagery. By transforming CAM’s building into a compelling projection screen, Steinkamp brings digital media into the mainstream of contemporary art.

**JENNIFER STEINKAMP: STREET VIEWS**

Contemporary Art Museum St. Louis
3750 Washington Blvd. St. Louis, MO
October 11 to December 23

On October 11th, The Contemporary Art Museum of St. Louis will inaugurate Street Views, an exhibition featuring a series of works by digital installation media artist Jennifer Steinkamp. As part of the 10th anniversary of CAM’s building, the museum will be turned inside out, as its exterior will be transformed into a gallery with large-scale video art being projected onto its facade. Through the use of powerful video projections and interactive computer systems, Steinkamp will transform the museum’s metallic and concrete structure into a dynamic garden capturing a meaningfully natural environment. Her utilization of video and new media enables the viewer to explore different ideas about architecture, design, motion, and interpretation. The use of vernacular imagery conveys the power of nature and enables visitors to perceive the building through a different lens, thus providing them with a new awareness of the environment.

This innovative outdoor moving image series strikes a balance between the natural landscape and computer-generated imagery. By transforming CAM’s building into a compelling projection screen, Steinkamp brings digital media into the mainstream of contemporary art.
The steel-and-glass giants that populate Chicago's storied skyline have long been synonymous with giants of the architectural world. Our collective conscience, for the most part, recalls a litany of revered one-name wonders—Sullivan, Burnham, Holabird and Roche—whom we credit with delivering our soaring structural legacy to us on a neatly drafted platter. But, of course, the evolution of Chicago skyscrapers wasn't nearly so simple.

The penchant for building skyward in Chicago skyscrapers wasn't nearly so simple. In 1871–1934, Chicago's storied skyline have long been traditionally left under-examined with the most influential authorities preferring instead to focus on the larger-than-life visionaries behind the buildings. Accordingly, Leslie's study looks to fill in the holes his predecessors, like scholar Carl Condit, left gaping—from reconstruction following the Great Fire of 1871 to the Great Depression of the 1930s. It is a meticulous effort. Leslie fills his deceptively dense pages with the reverberating impact developments like iron-reinforced skeletal framing, increasingly efficient elevators, electric lighting, fireproofing, and a volatile economy had on the city architecturally. Iconic structures from Burnham & Root's 1882 Montauk Block to Howells and Hood's gothic 1925 Tribune Tower sprung forth in a trial-and-error manner, Leslie shows, as the building climate, available materials, and current technological advances aligned. When massive brick skyscrapers, for example, gave way to hybrids of skeletal metal and brick, as in Holabird & Roche's 1889 Tacoma building, the Tribune reported that Chicagoans had "an idea that it is a mere shell set up on pins, and that if two wide-awake blizzards should ever happen to meet in Chicago it would come down with a great flop from its high perch." That led the architects to create more substantive-looking buildings for their next projects. Illustrative instances like this are numerous in the book, likely too numerous for a casual reader, but they accomplish the author's goal of presenting a nuanced and collaborative Chicago architectural environment throughout these crucial decades.

Leslie's thorough and well-cited work, however, gets problematic in places where solid arguments are diluted with excessive supporting detail. Chapters, organized by periods of development, continued on page 24.
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Gwendolyn Purdom is a writer and producer for the Chicago Tribune.

Our Man in Washington continued from page 23 researching these dealings. He discovered a letter from Brown to his dying mom in which he punctiliously included the exact titles of the lenders.

Full credit is given to Brown’s ability to think up and doggedly pursue successful shows, as well as his keen instinct for promotion. The director’s phenomenally successful screening at the NG of the 13 episodes of Kenneth Clark’s “Civilization” television series is a striking example. The author doesn’t stint however on the downside of these and Brown’s other achievements.

From the beginning, the blockbusters were described as “intellectually vacuous,” and certainly many got higher marks as crowd pleasers than as scholarly accomplishments. Brown oversaw I. M. Pei’s East Wing expansion of the museum (1978), but a measure of the Gallery’s priorities under him is the ungenerous exhibition spaces in the addition compared with the huge atrium in which elaborate fund-raising events fare better than the mediocre art commissioned for it. The atrium set an unfortunate precedent for many subsequent museums.

Harris also notes that Brown was never very successful at acquisitions despite his efforts at what he called “stalking the prey.” And finally, Brown’s thirty years as chairman of the capital’s Fine Arts Commission (1971–2002) saw mixed results. While his role in enabling the construction of Maya Lin’s controversial Vietnam War Memorial is laudable, a great many mediocre buildings were built under his tenure (among them the Rayburn Building, the Watergate complex, and the D.C. Convention Center).

The author skillfully exploits the personalities of those involved with the NG in addition to Brown to evoke its history. Nowhere is this better exemplified than in “Trouble in Paradise,” a chapter describing Paul Mellon’s summary embargo on conservation in 1977. Reputed to be self-effacing, Mellon reveals a very different side of his nature and his relationship to the museum in this story. Thanks to similar episodes, the book is constantly revealing, entertaining, and often very amusing.

Victoria Newhouse is an architectural historian and writer. Her most recent book is Site and Sound: The Architecture and Acoustics of New Opera Houses and Concert Halls published by the Monacelli Press.
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Talk about lofty ideas. Chicago-based Shankar Nair, senior vice president at exp US Services, and former chairman at the Council on Tall Buildings and Urban Habitat, has spent his career looking up—that is, working as a structural engineer, researcher, author, and lecturer with an expertise in skyscrapers and, in recent years, super skyscrapers. As towering buildings like Dubai’s Burj Khalifa keep climbing toward the sky, Gwendolyn Purdom caught up with Nair to talk about where architecture has left to go if it turns out the sky’s not the limit after all.

Gwendolyn Purdom: How would you say skyscraper design specifically has changed in your more than 40 years in this field?

Shankar Nair: In the 60s and 70s, any building more than about 30 stories was a very big deal. Now, buildings up to 60 to 70 are quite routine. In fact, it used to be that the structural engineer was the central player in the design of skyscrapers because getting the building to stand up at that height was something that was fairly difficult with the technology of the time. It’s not that the technology didn’t exist, it’s just that it hadn’t been done very much. Now anything the architect and the owner want to do, we can make it work.

You have given lectures on findings you’ve calculated on what is possible, in skyscraper design and construction. Tell me a little about that and how that research came about.

Research may be too strong a word for what I’ve done, but I have brought some analogies and I have enough experience in this area that I can make some fairly good predictions and projections. But I use that knowledge, and those silly, brief calculations, to find out how tall could we go in a building with today’s technology. That means, with today’s massive analysis and design, and today’s materials, and with enough space left inside for things other than the columns and walls, for the building to be useful.

So with all that, I was able to come up with some fairly approximate limits to how tall we could go in steel and concrete, again, using today’s materials, not some exotic material that no one has invented yet. And the different shapes: the building going straight up and down is the most challenging, because that puts the biggest loads on the base of the building. And then if it’s tapered, then we can go even taller. Because as you go up, the area that gets exposed to the wind gets to be less, which helps, and also the weight to be supported gets less as you go up because the floors are getting smaller. And with all that I found you can go several miles tall, in both steel and concrete. But again, this is with today’s technology.

But you’ve said that’s probably not plausible.

That is right for several reasons. One is, will there ever be a demand for something like that? I’ve found that a building at the limit of what can be done structurally would have some 60 billion square feet of floor area, and would cost much more than the GDP of this country. So, no one would want to put that investment in one building anytime soon, so there’s certainly not going to be a demand for it. And then, when I say that this kind of building is possible structurally, that doesn’t mean that it’s possible from other points of view. Getting in and out, evacuation, mechanical systems—you’d need pressurization providing air to people up there, of course, because this is up above the range that aircraft fly. All kinds of technologies get involved. So the point is the structure is not the limit. The structure is the simplest thing to design in something that tall.

It seems like buildings keep getting taller and taller. Where do you think the cut off would be and why?

Let us assume that we stay with our way of living, meaning people don’t spend their whole lives in a building. They go in and out every day, because they don’t live and work and shop and play and all that in the same building. They use a building only for one of those uses. That means at least once a day you have to go in and out. And, given that constraint, and given the fact that elevators cannot go faster than a certain speed, that’s going to limit height to not much taller than where we are today. A few years ago, I thought the limit might have been well below Burj Khalifa, I thought it would have been around 2000 feet, but a building like Burj stretches the limit. Because, for one thing, it is so sharply tapered. There’s so little space at the top that the elevator demand becomes much less. Now if it went straight up and down, so that whatever the size was at the base carried that all the way up to the 2,600 feet or so that that building is, then to serve all that space you would need a huge amount of elevator capacity. The building would be pretty much full of elevators which wouldn’t make sense. And, in fact, in these large buildings a large part of the top is both very skinny and often unoccupied, it might be just decorative. The other limit right now I would say is usefulness.

How did these calculations come about?

I got interested in this when I was chairman of the Council on Tall Buildings in 1997 to 2001. In fact, my term ended just before 9/11. But one of the questions people asked the chairman of the council was how tall can buildings go. So, I did some numbers then and I’ve kept them updated over the years.

What do you think fascinates people so much about supertall skyscrapers?

It’s just the idea of size and height. People like records, which can be good and bad. And people like to make a statement—owners, designers, and maybe even countries. There was a time when some people and companies in the U.S. tried to show their power and strength by building tall. Like the Sears Tower had the company’s name on it when it was the tallest in the world. But then, in the 1970s and 80s, the style here changed where the companies were no longer making big statements like that. They wanted to show that they treaded more lightly on the earth, and they weren’t that oppressive. So, for instance, Sears moved into the suburbs into low-rise buildings. And so that’s been the passing in the U.S. In Asia, on the other hand, they are where we might have been a generation ago, where some of the newly developing countries there still using their ability to build very tall skyscrapers as a calling card. They have arrived.

Once we do reach this height limit, how do you think skyscrapers will evolve? How will they out-do each other when they can’t go higher?

They might try to get greener. In the U.S., we don’t make any serious effort, for instance, towards having tall buildings be naturally ventilated. And in Europe, there are some tall buildings that are naturally ventilated but not at least part of the year. I can see more progress in that direction, toward being more environmentally friendly, and more livable. And the limits that I talked about of around 3,000 feet, again, that assumes that each building is stand-alone. If you had a whole cluster of buildings with connections at different levels and so on, then the limit gets a little higher, as you wouldn’t have to come all the way to the ground everyday. You might live on the 200th floor and work on the 200th floor of a different building and go directly across from one to the other.
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