**Snorthetta Reveals Updates to SF Arena**

**Playing Ball**

The same week that it unveiled its design for a grand stair at the San Francisco Museum of Modern Art (SFMOMA), Snøhetta revealed updated designs for the Golden State Warriors arena, located on a 13-acre site at Piers 30–32 on the City by the Bay’s waterfront. The plans, presented after a year and a half of talks with citizens and city agencies, now include an entertainment pavilion and waterfront plaza.

The new design features a smaller footprint for more public space. The new design also reduced the size of the arena to 695,000 gross square feet, with space to accommodate just over 18,000 seats, and expanded the open public space at pier level to just under four acres, with total open public space at eight acres. Parks, plazas, and paths with water views will provide views of the bay. The new design reflects a desire to attract not only basketball fans, but also a wider audience.

Opponents objected to a “wall on the waterfront.”

**SF Embarcadero Project Voted Down After Seven Year Fight**

**Not On My Waterfront**

In early November, San Francisco voters rejected two measures to allow the construction of 8 Washington, a complex of 134 luxury condominiums along the Embarcadero developed by Pacific Waterfront Partners and designed by SOM. The project had been seeking city approval for the past seven years. It needed an exemption from the city’s 84-foot waterfront height limit (Proposition C) and a referendum in favor of the development (Proposition B).

The complex was to be sited on a 3.2-acre triangular plot on the city’s central waterfront on land continued on page 7

---

**Return of the King**

**Related Brings Frank Gehry Back to Grand Ave Project**

Back in October Frank Gehry promised a crowd assembled at the Disney Concert Hall that he would be returning to the Grand Avenue Project—Related Companies’ long-stalled effort to build a major retail, hospitality, and residential complex in downtown Los Angeles. His firm designed the multi-phase continued on page 3

---

**Ken Smith Master Plan for Orange County Park Altered**

**Great Park or Great Golf?**

Though less than one-fifth of the 1,360-acre Orange County Great Park in Irvine, which was master planned in 2006 by New York landscape architect Ken Smith, has been completed, it has already become one of the most significant recreation centers in the Los Angeles region. Now, however, it appears that Smith’s master plan is on the verge of being largely dismantled. Late in November, Irvine City Council approved a deal allowing Orange County developer Five Point to finish continued on page 5

---

**New Tricks for an Old Material: Glass**

SEE PAGE 11
Hidden in Plain Sight

Clear fire rated solutions that blend seamlessly

Products: SuperLite II-XL 60 in GPX Framing
Project: CCTC Health Sciences Building (Sumter, SC)
Architect: LS3P Associates   Glazier: Charlotte Glass

888.653.3333
www.safti.com

© 2013 SAFTI FIRST
Every publication under the sun is delivering its best of the year roundups, from books to movies to cars. So I conducted an informal poll of readers to see some of the most pressing issues for the year ahead. I reached out to some friends on social media, and to organizations like AIA/LA and SPUR, so you can even call the responses (relatively) inclusive, or even open source. So without further ado, here are the topics—let’s call them goals—for 2014. We’ll be tracking them in the year ahead.

2. Streamlining entitlement and permit procedures in Los Angeles.
3. Addressing the troubling lack of affordable housing in San Francisco, and countrywide.
5. Improving Continuing Education Credits, which one reader called, “psycho-devastating money and time pits with no professional benefit.”
6. Reforming the prison industrial complex, and architecture’s role in it.
7. Investigating how to localize development in Los Angeles and elsewhere relating to transit growth.
8. The increasingly tenuous economic situation of the architecture profession.
9. The impacts and solutions to architecture’s marginalized role in society.
10. How to temper San Francisco’s “hysterical historical” planning process.
11. How to turn around America’s biggest wasted space: LA’s Pershing Square.
12. The remarkable transformation of Los Angeles through transit and densification.
13. The soulless “packaging” of architecture in the high-end residential market.
14. How to clean up LA’s Skid Row in a humane way.
15. Getting a train to LAX. Finally.
16. Removing old infrastructure in favor of greenways in cities nationwide.
17. Preserving character in San Francisco in the wake of extreme gentrification.
18. Encouraging adaptive reuse in downtowns across the west coast; could this be the future?
19. Making the AIA more relevant to architects.
20. Examining how office architecture is driving the transformation of San Francisco, with landings that will let visitors explore the waterfront by foot and by bike.

The park features several “garden rooms” for different kinds of activities.
TROJAN STYLE?

USC president Max Nikias is curious. Since taking over in 2010 he has held the torch for past president Steven Sample’s beloved “California Romanesque” style on the campus, resulting in the red brick and tight arches of buildings like AC Martin’s Ronald Tutor Campus Center and George Lucas’ School of Cinematic Arts. Now he’s shifted a few years in the future to Collegiate Gothic. AC Martin has been commissioned to design a Gothic-style building for the business school, and other firms are competing for a similar project, we hear from our moles. Perhaps he will move into French Renaissance next? Get ready for some chateaux!

GREAT PARK OR GREAT GOLF?

Part of Ken Smith’s vision will make way for a golf course and homes. Smith released a letter this week to the residents of Irvine, where he lives, informing them of the changes. Smith has estimated at $172 million. Sherman said that his team wanted to follow the spirit of Smith’s plans, but acknowledged that there had been some changes, mostly due to budget constraints. The new budget is less than a third of the original, he said. The biggest change is the addition of the golf course, while others include less intensive land forming and changes to the overall shape of the project.

“You’re not going to get the level of intensity that was originally intended. You can get a lot of it if you’re really smart about how to spend a dollar,” said Sherman, who hopes to “push [Five Point] as far as they can swallow,” in terms of design. One aspect the firm will try to maintain is the connectivity that Smith delineated in his master plan. The remaining acres of the park, which are in limbo pending funding, focus largely on cultural facilities.

Five Point failed to respond to requests for comment as of press time. Local voters first approved The Great Park, sited on the former El Toro Marine Corps Air Station, in 2002. Smith’s original plan envisioned linear parks, recreation fields, amphitheaters, a wildlife corridor, the man-made canyon, and a large lake. The recession and the abolition of California’s redevelopment agencies quickly stalled many of these plans, although almost 230 acres have been built.

Supporters of the Five Point plan say that due to monetary constraints, this is the only legitimate option for the project. “The situation in Irvine has changed and we need to change along with it,” said councilman Jeff Lalloway, who voted in favor of Five Points’ plan. He argued that the new scheme is “generally consistent with the master plan.” Councilwoman Beth Krom countered that there was no reason to take this deal now, when public money could be forthcoming in the future. “I don’t support private developers being given control of 688 acres of public land,” she said. “Our backs are not against the wall. That was a false narrative created by the developers. It’s not easy to push vision over profit here in Orange County.” SL

AN INSIDE SCOOP

Gossip about new projects is back! First we hear that Steven Ehrlich and Fred Fisher are teaming up for a major renovation of the Otis campus, on LA’s West Side. Next we hear a shortlist is close to being named for Metro’s West Side expansion subway line. We’re all waiting with bated breath to see the renderings of LA firm Johnston Marklee’s addition to The Menil in Houston, which is now set to be unveiled in January. And then there’s the expansion of the Museum of Contemporary Art San Diego’s La Jolla campus. A shortlist has indeed been chosen, but museum spokesperson Leah Straub tells AN, “We don’t want to damage anyone’s reputation should they not be selected.” Wow, who knew being on a shortlist could be damaging?

SEND GROIN VAULTS AND EXTRA HANKIES TO EAVESDROP EAVESDROP@ARCHPAPER.COM

OPEN NIGHT CLUB

Swaying 1970s London is impossible not to love. So it is about time that a Los Angeles club embraced it. Hooray Henry’s, put together by design build firm Built Inc., is inspired by this slang rebuff of an entitled wealthy kid. It generates the atmosphere of the British capital by using textures, furnishings, and artifacts—such as a picture of the King and Queen, trophies, and horsehead lamps—sourced from London. Ribbed booths and silver shadow paint were inspired by vintage Rolls Royces and blue paint was inspired by old Jaguars. Other apropos accents include wood paneling, brass accents, smoky mirrors, red and blue neon, vintage televisions, and old ashtrays.

“It took on a life of its own,” said Built Inc. designer Sormeh Azad. “It started off as an English Manor, and went to the rich boy and his friends take over the manor and they’re having a party.” The space encourages hardcore partying. The booths, for instance, are built to encourage and withstand high heels on top of them. A 3D projection wall, which is apparently the first of its kind in Los Angeles, takes on concave, convex, and hexagonal shapes. An array of scenes, from psychedelic imagery to nudity, are projected upon its variegated surface. “The space is a sensory overload, but in a positive manner,” said Azad. SL

MORLEY BUILDERS

Trust. It’s Built In.

United Artists Building / ACE Hotel
Architect: Killefer Flammang Architects
morleybuilders.com

Designer: Built, Inc.
Tel: (310) 274-7500
Los Angeles
RETURN OF THE KING continued from front page project—which occupies three acres directly across from the concert hall—for Related more than five years ago, but the plan was scuttled during the economic downturn. Gehry wasn’t bluffing. On November 28, Related submitted a new conceptual design by Gehry Partners for the project to the Grand Avenue Authority, a Joint Powers commission of the county and city of Los Angeles. Encompassing one parcel (known as Parcel Q), Gehry’s $650 million to $700 million plan focuses on connectivity, weaving the open office areas have an easy flow, and the architects designed the triangular tables with splayed legs. These, like the building, were locally sourced and fabricated. Scarpa intended for Metalsa to make the aluminum skin, but it proved cheaper to go to another factory in Monterrey. He was also challenged to reuse the structural frame that a local architect had designed before Metalsa decided to hire a more prominent designer. Sustainability is a hallmark of Brooks + Scarpa buildings, and here the challenge was extreme. The temperature routinely tops 100 degrees in the summer, and one reached 118 degrees in April. Passive technologies are combined with this double-skin panels. The building is cooled and warmed by tapping into the city water supply and feeding pipes through a heat exchanger to exploit the difference in temperature between the water and the earth. Gray water is stored in a cistern below a sunken garden to the north and the public spaces open onto this green oasis through a roll-up industrial door in the exposed glass curtain wall. Like the visionary workplaces created in the early years of the modern movement, Metalsa combines efficiency, humanity, and expressive design in exemplary fashion.

Michael Webb
SNAP FIT

The Los Angeles County Metropolitan Transportation Authority (Metro) is ready for a new look. With multiple rail-line extensions in the works, the agency recently hired LA firm Johnson Fain to help it reshape its identity through a “kit of parts” design that can be applied to any of the three station types.

According to architect Brian Knight, Metro had three primary concerns. The first was to streamline maintenance and materials procurement. Second, Metro sought a stronger brand. “Right now each station is so different it’s really hard to say, ‘This is a Metro station,’” said Knight. Finally, Metro wished to elevate the quality of station design. “They really wanted to raise the bar,” explained Knight. “There will still be areas for local art components, but overall the design is going to be the stations themselves.”

Johnson Fain began work on the project two years ago, with a system-wide audit of Metro’s rail stations. They also looked at about 180 stations around the globe, identifying eight as exemplars of modern transportation architecture. Back in Los Angeles, the team combined what it had gleaned overseas with an awareness of Metro’s emphasis on maintenance, materials, identity, and design quality.

The design combines a glass canopy, a steel structure (to be painted white), and a concrete spine running down the middle of the rail platform. “[The concrete] acts as a sort of collector of all the [electronic] components you find in a typical station,” said Knight. “Right now those components are placed ad hoc. We developed a system of plug and play into the concrete collector.”

Metro approved Johnson Fain’s design concept one year ago, and the firm has since completed drawings that Metro will pass on to the builder. “The drawings we developed are much further developed than what Metro hands off to a design-builder now,” said Knight. The agency’s previous directive drawings were “very schematic,” he said, and allowed the builder a lot of leeway. It was exactly this station-to-station variation that created problems with maintenance and brand identity in the first place.

Elements of Johnson Fain’s “kit of parts” will be incorporated into the Regional Connector Transit Project. The first full station redesign will take place at Wilshire-Western on the Purple Line, with construction beginning early 2014. Stations along the Crenshaw/LAX Transit Project will follow.

NOT ON MY WATERFRONT—continued from front page
cleared by the removal of the Embarcadero Freeway. Consisting of housing, retail, restaurants, and recreation, it included 552,000 general square feet in a massing that stepped up to a maximum height of 190 feet. With large windows deeply recessed into light colored walls, the project took its cues from the area’s historic buildings. Most of the buildings featured green roofs.

The plan incorporated 30,000 square feet of public open space designed with PWP Landscape Architecture, including the new Pacific Park, the redesigned Jackson Commons, and a series of new pedestrian corridors. The scheme also involved 40,000 square feet of private recreation functions, including an enlarged and renovated new exercise and aquatics facility.

The San Francisco Planning Commission, Board of Supervisors, and the mayor all gave their approval to the complex. But a large group of opponents voted down the referendum, calling the project a “Wall on the Waterfront” that would limit access to the area. “The developer only wants to ‘open up’ the waterfront to one thing: massive development and tall towers from the ferry building to Fisherman’s Wharf,” said the group on its web site, nowallonthewaterfront.com.

“This is a plan that’s been in the works for almost eight years and undergone many revisions to reflect a very extensive public planning process. To have that all upended because a group of wealthy opponents didn’t like the result does not bode well for the public process of future projects,” commented Pacific Waterfront Partners spokesman PJ Johnston. According to Gabriel Metcalf, executive director of the San Francisco Planning and Urban Research Association (SPUR), the project’s rejection is ironically a sign of the city’s emergence from the recession.

“In addition to the business cycle, San Francisco has a political cycle in which voters become more open to projects during recessions and against them in economic booms,” said Metcalf. “To me this is a return to the status quo of San Francisco. It’s not surprising at all. What’s surprising is during the recession a bunch of projects got approved that are now under construction.”

According to Metcalf, the rejection of the project is also an example of individuals’ ability to stop projects they don’t like through legal means. SOM declined to comment on the project. Johnston said that he could not comment on specific plans for the site. “We’ll see what we’re going to do,” said Johnston. “The project sponsor still has the exclusive negotiating rights to the property.”
Digital printing directly to glass provides customization options as broad as the imagination of the architect or designer. Bespoke patterns or imagery can be specified, in addition to a selection of bright and monochromatic colors and patterns for glazing, curtain walls, or interior applications. Fully opaque backing is also available, enhancing the contrast and crispness of any printed design.

generalglass.com

3Form's Pressed Glass is newly available in the Strand pattern, a compressed interlayer of fine gauge threads in three monochromatic colorways. It can be further customized through color matching, etching, and fritting options. Available in widths as large as 48 inches and lengths of 120 inches, it can be specified in either a 5/16-inch or 1 5/16-inch gauge thickness. Its inherent strength meets ANSI Z97.1 standards.

3-form.com

Digital printing directly to glass provides customization options as broad as the imagination of the architect or designer. Bespoke patterns or imagery can be specified, in addition to a selection of bright and monochromatic colors and patterns for glazing, curtain walls, or interior applications. Fully opaque backing is also available, enhancing the contrast and crispness of any printed design.

generalglass.com

3Form's Pressed Glass is newly available in the Strand pattern, a compressed interlayer of fine gauge threads in three monochromatic colorways. It can be further customized through color matching, etching, and fritting options. Available in widths as large as 48 inches and lengths of 120 inches, it can be specified in either a 5/16-inch or 1 5/16-inch gauge thickness. Its inherent strength meets ANSI Z97.1 standards.

3-form.com

Digital printing directly to glass provides customization options as broad as the imagination of the architect or designer. Bespoke patterns or imagery can be specified, in addition to a selection of bright and monochromatic colors and patterns for glazing, curtain walls, or interior applications. Fully opaque backing is also available, enhancing the contrast and crispness of any printed design.

generalglass.com

3Form's Pressed Glass is newly available in the Strand pattern, a compressed interlayer of fine gauge threads in three monochromatic colorways. It can be further customized through color matching, etching, and fritting options. Available in widths as large as 48 inches and lengths of 120 inches, it can be specified in either a 5/16-inch or 1 5/16-inch gauge thickness. Its inherent strength meets ANSI Z97.1 standards.

3-form.com

Seven designs from KnollTextiles are rendered on glass through two production techniques: Eco-etch achieves varying levels of opacity, and AST Digital Glass Printing introduces color to partial transparency. These options provide for customization of classic patterns like Divine and Enchantment, designed by Dorothy Cosonas, or the mid-century Cyclone and Fibra, designed by Eszter Haraszty.

skydesign.com

As the buzzword “transparency” gains greater meaning in product specification, glass is an energy-saving, sustainable, and aesthetically pleasing option. By Emily Hooper
**SUNGUARD SUPERNEUTRAL 68 TRIPLE GLAZED**

Guardian’s triple-glazed insulated glass units help retain energy in colder months and repel heat gains in warmer conditions with SunGuard SuperNeutral 68 treatment on the Number 2 and Number 5 surfaces. The product provides visible light transmission of 52 percent and a solar heat coefficient of .32. It can also be laminated for noise depreciation and hurricane protection. sunguardglass.com

**SUNGATE 600**

This double-glazed insulated glass unit boasts an efficient configuration tailored to the region of application. In climates where heat gain is optimal, coating on the Number 3 surface blocks heat loss for a U-value of 0.33, while maintaining a 0.65 SHGC and visible light transmittance of 71 percent. For higher insulation values, the Sungate 600 coating can be placed on the Number 4 surface when combined with a solar control low-e glass, for a net gain in U-value of 20 percent. ppgidealspaces.com

**OLIVIA**

JOEL BERMAN GLASS STUDIO

The circular, three-dimensional pattern of Olivia is enhanced with subtle reflectivity to inflect motion into any space. Back painting options are available in a range of colors on panels measuring 53 by 108 inches. Produced for interior applications, it can be tempered for safety and impact resistance on exteriors as well. jbermanglass.com

**DYNAMIC GLASS**

VIEW GLASS

Insulated glass units as large as 5 feet by 10 feet feature programmable electrochromic levels of 60, 40, 20, and 4 percent tinting with user controls from a smart device app to reduce heating and cooling loads, electric lighting, and solar glare. An intelligent setting can be programmed for sensory occupancy to optimize energy usage as well as user comfort. All four tint levels can be achieved in one unit, with adjustment times akin to the passing of a cloud overhead. viewglass.com

**BISTRO GREEN**

VETRazzo, the recycled glass division of Polycor, has been diverting glass from the waste stream since 1996. The surfacing material uses consumer beverage containers, waste from glass manufacturers, building demolition, traffic light lenses, windshields, shower doors, and more. It takes nearly 1,000 bottles to make one 5- by 9-foot panel that is 85 percent glass by volume and bound with Portland Cement. Sixteen of Vetrazzo’s product lines are Cradle to Cradle certified. vetrazzo.com

**LIQUIDKRISTAL**

LASVIT

Designed by Ross Lovegrove, Liquidkrystal was inspired by dynamic forms found in nature. The design was first modeled digitally to simulate thermo induction, which can imbue the qualities of water to glass under very high temperatures. A large-scale mold system was formed from the study’s results, to produce multiple pattern variations over multiple sheets. In addition to interior applications, Liquidkrystal is also suitable for glazing and facades. lasvit.com

**SAGEGLASS SIMPLICITY**

SAGE ELECTROCHROMICS

This electronically tintable glazing is available in a solar-powered, wireless format. In lieu of low-voltage wired connections, a strip of solar photovoltaics interfaces with a low-profile electronic controller and battery pack that can provide power for up to two days without a charge. The wireless system also configures with light and building management programs from Siemens, Lutron, Schneider, and Johnson Controls. sageglass.com

**SUNGUARD 600**

PPG

This double-glazed insulated glass unit boasts an efficient configuration tailored to the region of application. In climates where heat gain is optimal, coating on the Number 3 surface blocks heat loss for a U-value of 0.33, while maintaining a 0.65 SHGC and visible light transmittance of 71 percent. For higher insulation values, the Sungate 600 coating can be placed on the Number 4 surface when combined with a solar control low-e glass, for a net gain in U-value of 20 percent. ppgidealspaces.com

**DYNAMIC GLASS**

VIEW GLASS

Insulated glass units as large as 5 feet by 10 feet feature programmable electrochromic levels of 60, 40, 20, and 4 percent tinting with user controls from a smart device app to reduce heating and cooling loads, electric lighting, and solar glare. An intelligent setting can be programmed for sensory occupancy to optimize energy usage as well as user comfort. All four tint levels can be achieved in one unit, with adjustment times akin to the passing of a cloud overhead. viewglass.com

**BISTRO GREEN**

VETRazzo, the recycled glass division of Polycor, has been diverting glass from the waste stream since 1996. The surfacing material uses consumer beverage containers, waste from glass manufacturers, building demolition, traffic light lenses, windshields, shower doors, and more. It takes nearly 1,000 bottles to make one 5- by 9-foot panel that is 85 percent glass by volume and bound with Portland Cement. Sixteen of Vetrazzo’s product lines are Cradle to Cradle certified. vetrazzo.com

**LIQUIDKRISTAL**

LASVIT

Designed by Ross Lovegrove, Liquidkrystal was inspired by dynamic forms found in nature. The design was first modeled digitally to simulate thermo induction, which can imbue the qualities of water to glass under very high temperatures. A large-scale mold system was formed from the study’s results, to produce multiple pattern variations over multiple sheets. In addition to interior applications, Liquidkrystal is also suitable for glazing and facades. lasvit.com

**SAGEGLASS SIMPLICITY**

SAGE ELECTROCHROMICS

This electronically tintable glazing is available in a solar-powered, wireless format. In lieu of low-voltage wired connections, a strip of solar photovoltaics interfaces with a low-profile electronic controller and battery pack that can provide power for up to two days without a charge. The wireless system also configures with light and building management programs from Siemens, Lutron, Schneider, and Johnson Controls. sageglass.com
Pilkington Planar™
The World’s Leading Structural Glass System

It’s All About The Glass...

We specialize in highly engineered structural glazing systems. With over 30 years of experience we can bring a solution based approach to your next point supported glass project.

Available exclusively through

W&W GLASS, LLC
1.800.452.7925
wwglass.com

Glass Fin Walls  Cable Nets  Canopies
Tension Rod Facades  Skylights
When architect Rob Wellington Quigley asked residents of San Diego what they wanted out of their New Central Library, one refrain stood out: They wanted an iconic building. Quigley delivered. His firm, in collaboration with San Diego–based Tucker Sadler Architects (TSA), designed a nine-story, 366,673-square-foot building with a soaring concrete gravity arch in the lobby, an exterior distinguished by a modern steel dome, and lots of glass, especially in the library’s three-story reading room, which nests under the dome.

Using so much glass in a library is tricky. Natural light is great for reading, but UV radiation damages library materials. “The reading room is physically a glass cube on top of the building’s 8th and 9th floors,” said Quigley. “Of course, it’s a library; you have to be very, very careful with respect to the sun.” This concern defined the relationship between the glass reading room and the dome, which Quigley compares to a protective straw hat. The dome’s steel-mesh latticework provides dappled shade only when and where needed, such that the dome is left incomplete. “It’s clearly in the act of becoming a dome, becoming something,” said Quigley.

Quigley and TSA turned to Alameda-based Architectural Glass & Aluminum (AGA) for the glazing in the New Central Library. In California, some of AGA’s other projects have included the Griffith Observatory in Los Angeles (Hardy Holzman Pfeiffer), the De Young Museum in San Francisco (Herzog & de Meuron/Fong & Chan Architects), and AT&T Ballpark, also in San Francisco (HOK Architects).

AGA used 22 types of glass in the New Central Library, the majority of which was supplied by Minnesota glass manufacturer Viracon. On the building’s bottom two stories, AGA used four categories of glass: clear insulated or insulated laminated; low iron insulated or insulated laminated; low emissivity insulated or insulated laminated with a green coating; and low emissivity insulated laminated with a green coating and silkscreen. The library’s middle stories are dominated by low emissivity insulated or insulated laminated glass with a green or bronze coating. In the reading room, AGA used three categories of glass from Viracon: clear insulated or clear insulated laminated; low iron insulated or insulated laminated; and low emissivity insulated and insulated laminated with a white silkscreen. To provide unobstructed views from the floor of the reading room, AGA drafted a local manufacturer to custom-fabricate ½-inch-thick solid monolithic glass panels.

Thanks to all that glass, the experience of the New Central Library’s reading room is at once awe-inspiring and intimate. Looking up, one has the impression of standing inside a giant prism. Yet sitting at one of the reading room’s large tables is not unlike sitting under a shade tree on a sunny day. There’s plenty of light to see by, but it has been softened and textured by the dome.

**SAN DIEGO PUBLIC LIBRARY**

**SAN DIEGO, CALIFORNIA**

**Architects:**
Rob Wellington Quigley
roquigley.com
Tucker Sadler Architects
tuckersadler.com

**Glass fabricator and installer:**
Architectural Glass & Aluminum
aga-ca.com

**Glass supplier:**
Viracon
viracon.com

Three case studies showcase the performance, programmatic, and decorative potential of contemporary glass.
Grimshaw’s recent renovation of the Queens Museum of Art involved the task of unifying a previously divided building under a single program. The institution used to share its walls with an ice skating rink. The museum occupied the north half of the building—originally constructed as the New York pavilion for the 1933 World’s Fair—and the rink the south half. When, in 2008, the rink moved into the newly completed Handel Architects–designed Flushing Meadows–Corona Park Natatorium and Ice Rink, which was part of New York City’s 2012 Olympic bid, the museum had the opportunity to stretch out, occupying the entire 105,000-square-foot building for the first time since being founded in 1972.

The architects saw the opportunity to greatly improve the museum’s somewhat confusing circulation scheme, as well as support its mission of bringing the community together around art. By shifting the main entrance away from where it had previously been off the north parking lot, at the narrow end of the rectangular plan, to the center of the longer west facade, they were able to usher visitors directly into the building’s cavernous central volume. By arranging temporary exhibition galleries around this space, which functions as a large works gallery, the architects created an easy to navigate experience where figuring out where to go next is simply a matter of looking around.

Glass played a key role in supporting Grimshaw’s design concept and in creating a bright and airy experience on the interior. Both eastern and western faces of the building were opened up with glass walls that let daylight in, welcome the community, and create a view corridor that passes straight through the space from the Grand Central Parkway to the Unisphere—the great, globular icon of Flushing Meadows–Corona Park. The west facade features a screen that can be animated by a color-changing LED system. A variety of artists will be invited to program the system over time.

Even with the glass facades, the large works gallery, with its soaring ceiling,
promised to be a dark space. This could be solved with skylights, but then skylights, without control measures, can create tricky daylighting conditions for museum artifacts, many of which deteriorate in direct sunlight. In addition, the architects wanted to create a seamless experience, where visitors could go from outside, into the great hall, and then into the galleries without perceiving the difference in light level. “On a bright day, it’s 10,000 foot-candles outside,” said Mark Husser, managing partner for Grimshaw’s New York office. “We had to step that down to about 2,000 foot-candles.”

We attempted to do that without glare or shadow.”

In order to accomplish this effect, Grimshaw designed what is unofficially referred to as the “Hanging Lantern,” a daylight chandelier of sorts composed of canted glass louvers suspended by stainless steel cables around the great hall’s central skylight. The glass louvers, which range in width, are built up from two 5mm-thick pieces of low iron tempered glass that are laminated together with an SGP interlayer. The down facing sides of the louvers are acid washed, to catch and diffuse daylight, while the up facing sides are left glossy, to make them easier to clean as well as to create a shimmering effect on the inside of the lantern. The edges of the glass louvers are polished, post lamination, a delicate process that removed a mere 1/64-inch of material to clean up the edges and create a sparkling, diamond-like effect. The louvers are etched at different angles to catch sunlight entering from the skylight, which also features louvers, and direct it to the galleries, whose ceilings are outfitted with louvers of their own that further diffuse the light. “We did sun studies to determine the angles of the louvers,” said Casimir Zdanius, Grimshaw’s head of industrial design. “When direct sunlight hits the pieces of glass they light up like a halogen.”

Grimshaw designed the Hanging Lantern, which combines daylighting and structural design, with consulting engineer Michael Ludvik. The tempered glass louvers, which handle some structural loads, are attached to inner and outer sets of steel cables that drop down from the ceiling with machine finished 304 stainless steel connections. At the bottom of the lantern, which hangs more than 31 feet down from the ceiling, is a ring beam made up of 6-inch-diameter solid steel billets fastened together with heavy-duty bolts. At 20,000 pounds, the ring beam pulls the cable system into tension. While the 8mm-diameter outer cable carries most of the load, the 6mm-diameter inner cable attaches to the ring beam via a spring connection that allows the pendulous structure to sway without breaking the glass. The inner cables are also tuned to achieve a sensuous curving profile on the inside of the lantern.

Grimshaw also designed a glass-treaded feature stair that encircles the lantern. The stairs are composed of four piles of ¼-inch-thick low iron annealed glass laminated together with SGP interlayers. The upper surface features an acid etched non-slip surface and the structure was designed so that even if all four piles break the interlayer will continue to carry the live load. Annecled glass was chosen, as opposed to tempered, so that the edges could be polished down flush without shattering, a detail that gives the edges of the treads a jewel-like translucency.

AARON SEWARD

Architect:
Grimshaw Architects
grimshaw-architects.com

Architect and engineer of record: Ammann & Whitney
ammann-whitney.com

Engineer:
M.Ludvig Eng’g
mludvik.com

Glass fabricator:
ANGORA
agnora.com

Stair glass installation: M Cohen and Sons
mcohonandsons.com

Lantern Fabrication and Installation: AMG Design
amgdesign.net

Ohio State University South Campus Central Chiller - Columbus, OH

Ohio State University’s south campus central chiller is a utilitarian powerhouse. It pumps cool water to more than half of the campus’ buildings. It is also host to a dynamic light show, thanks to an array of glass fins affixed to its concrete facade.

“Rather than just showing the pipes, we wanted to represent energy itself,” architect Carol Ross Barney told A/V when the project was first announced in 2010. Now complete, the 95,570-square-foot building sports dichroic glass, composed of multiple micro-layers of fused metal oxides. A coating just 30- to 35-millions of an inch thick can contain up to 50 layers of these materials, which condense on the glass after being vaporized by an electron beam in a vacuum chamber.

Those tiny bits of metal reject certain wavelengths of light, so the dichroic fins reflect and transmit different colors simultaneously. Which colors pass through and which bounce back depends on the angle of view. The end result is a constantly shifting array of colors that dance across the building exterior. Previously it hadn’t been affordable to laminate dichroic film between layers of glass. Ross Barney Architects worked with glass manufacturer Goldray Industries to laminate the dichroic film, which was originally developed by NASA for use in space. The exterior application created concerns for the longevity of the film, so Goldray tested several glass products to sufficiently protect the film without distorting its ability to transmit light. Based on its success, Goldray has since used similar fins on projects from Indianapolis to Istanbul.

Structural shapes and welded plates hold the glass fins perpendicular to the building’s precast panels. The incandescent fins themselves convey a sense of energy, Barney said, but clear sightlines into the mechanical innards of the chiller plant also put the building’s utility front and center. Still, no moving parts are visible. Instead, the precast plates that make up the ten-story building are punctuated with varied rectangular windows, complementing the geometry of the glass fins. Oldcastle manufactured the aluminum curtain wall window system, whose insulated exterior panels also cut down on energy use. Inside, equipment decks are graced for natural cooling so the chiller, which anticipates LEED certification, won’t have to be chilled itself.

To hear the designers tell it, in a rundown of their research and development process, “the building becomes an ethereal expression of the functional process of releasing thermal energy into the air to produce chilled water.” Cool.

CHRIS BENTLEY

Architect:
Ross Barney Architects
r-barc.com

Glass fins:
Goldray Industries
goldrayindustries.com

Curtain Wall:
Oldcastle
oldcastle.com

Left and below: Dichroic glass fins, composed of multiple micro-layers of fused metal oxides, create a colorful display across the chiller building’s facade both day and night.
THE INTERNATIONAL SURFACE EVENT

PRESENTING:
the only event for flooring, stone and tile - The International Surface Event. Uniting the Industry in 2014, TISE is being launched in conjunction with SURFACES and StonExpo/Marmomacc Americas. Together, these three world-class trade shows create the ultimate, unparalleled event essential to flooring, stone and tile professionals around the globe. No other event compares to the mega show.

Experience four impressive days of the newest products, hands-on demos, inspiring trends, key manufacturers, industry suppliers, along with unmatched education and networking. Elevate your business, your profits, your future.

The International Surface Event - we've got you covered!

Registration is now open. Register online using promo code G24 for your chance to WIN $1,000*

*Contest rules at www.SURFACES.com

EXHIBITS: JANUARY 28-30, 2014
EDUCATION: JANUARY 27-30, 2014
Monday Bay Convention Center • Las Vegas

ON VIEW NOVEMBER 14TH, 2013 - JANUARY 19TH, 2014

A+D HOFMANN FARBE / COLOR

A+D Museum | 4032 Wilshire Blvd. Los Angeles CA 90034 | 323.922.9393 | www.splusd.org
Car Trouble?
The Car in 2035: Mobility Planning for the Near Future
By Kati Rubinyi
Civic Projects Foundation, $34.95

THE CAR IN 2035 is a good title and I was anxious to learn about a future in which the car’s role as a shaping force in American life is diminished. But this book, edited by Kati Rubinyi and published by the Civic Projects Foundation, Los Angeles, is not going to take the reader down the road to a post-carbon world. Rather it is a practical and multifaceted view of the future of mobility, grounded in the precepts of Southern California.

During the mid-Twentieth Century this vast geographic area was developed alongside the freeway system and a culture of car ownership that gave us “Little Deuce Coupe” and the “Little Old Lady from Pasadena.” In fact, the Pasadena Freeway connecting Pasadena with downtown Los Angeles was the first freeway in California and the western United States. The Art Center College of Design, based in Pasadena, plays a prominent role in this book; seven of the 27 contributors have an affiliation with Art Center, and 20 of the 27 live in Southern California, which gives this book a regional slant.

Many of the essays are from an administrative point of view, which may be useful to architects and planners. Marco Anderson, a senior regional planner points out that the 2035 date was chosen because it “corresponds to the target year for the vision for future transportation infrastructure that informs the Southern California Association of Governments (SCAG) 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy.”

Writing in the foreword, Michael Webb notes, “the future some of (the contributors) depict is an idealized present, a future constructed out of images of the present.” But in a counterpoint, the Car Future Group’s report, continued on page 16

ACT NATURALLY
Architecture Follows Nature: Biomimetic Principles for Innovative Design
By Ilaria Mazzoleni in collaboration with Shauna Price
CRC Press, $79.96

Biomimicry is increasingly becoming one of those loaded words, like sustainability or innovation, rendered meaningless by overuse and over-application to concepts and objects further and further removed from their original intention. In its simplest definition, biomimicry is design inspired by natural systems and materials. Poorly translated, this could mean anything from a building shaped like a bird to a coat rack in the form of a tree’s branches.

In other words, biomimicry can easily become a slick appropriation of natural forms and imagery to no end in particular, as opposed to the application of scientific principles of nature and its systemic processes to a design problem. Why shape a building like a bird—and surely this calls one particular architect to mind—unless you need the building to perform similarly to a bird?

In her work and writing, the Los Angeles architect and educator Ilaria Mazzoleni has sought to expand biomimicry’s limited understanding in architecture to include performative aspects she sees as central to a more balanced, holistic view of the world. For the last several years, Mazzoleni has taught a design investigation course focused on biomimetics at SCI-Arc (full disclosure: I have taught a separate class with Mazzolini at SCI-Arc). She has now written a book, Architecture Follows Nature: Biomimetic Principles for Innovative Design, which builds on material produced in the course.

The book is divided into two parts. The first sets a theoretical framework for the concept, beginning with a light touch on historical precedents for expressions of nature in architecture and how the modern era has driven nature to extremes through over-consumption of natural resources with designs working against, rather than with natural processes. She then follows this with a similar discussion on biology and architecture. To underline her main point—that our era defines a shift from “bio-inspiration to biomimicry”—Mazzoleni relies on systems theory, which posits that nothing, not even a building, exists in isolation, but is dependent on a shifting network of other things. She suggests that parametric design, emerging materials science, and responsive, dynamic technologies increasingly make it easier for architects to ground their work within this systems approach.

In the second half of the book, Mazzoleni and her students follow through on this proposition with a series of case study projects that respond to the performative aspects of animal skins to develop a responsive architecture focused around the building envelope. Conceptually, she positions the envelope as fulfilling four main roles in architecture—communication, thermal continued on page 16
Car trouble? continued from page 15
“Possible Futures: Southern California in 2035,” states: “This book does not deal directly with many radically alternative scenarios, including severe global depression, permanent drought in the Southwest, The Big One (massive earthquake), Peak Oil, and rapidly rising sea levels due to climate change. However these possibilities shouldn’t be ignored.”

So while the book seems relentlessly stuck in a form of short-term thinking, there are notable exceptions. Featured on the wrap-around cover design, the Origami Model T was designed by Sang-eun Lee in a project sponsored by Ford at Art Center College of Design. Intended as a car to sell for under $7,000 by utilizing an innovative manufacturing process, Lee’s method was to apply origami methods to simplify shaping the body of a light, urban vehicle. Another notable exception, “Is an Environmentally Neutral Car Possible?”, is by John Thackara, the author of In the Bubble: Designing in a Complex World (MIT Press) and a blog at designobserver.com. He writes about a start-up car company in the UK, Riversimple, whose purpose is “to build and operate cars for independent use while systematically pursuing elimination of the environmental damage caused by personal transport.” The company currently has “a technology demonstrator vehicle” powered by electric motors and hydrogen fuel cells and with a body made from composite materials.

Of course, for many readers the essential question is what will those new cars look like in 2035? Geoffrey Wardle, Art Center’s Executive Director of Graduate Transportation Design, in “The 2035 Look,” takes the reader through a succinct and well illustrated history of car styling in the 20th century and beyond to 2035: “Writing in 2012, one thing is quite clear: the rate of change of the automobile industry is going to be faster and more significant between now and 2035 than perhaps the entire history of the car. Of course quite major, even catastrophic events, which are hard to predict, could completely change the direction of development.”

Chip Lord is a professor emeritus at the University of California, Santa Cruz and a founder of Ant Farm.

Modernism Week
February 13-23, 2014
Double Decker Bus Architecture Tours
Brightening Lectures
Historical Walking and Bike Tours
Home and Garden Tours
Modern Living Expo
Pecha Kucha
Modernism Show & Sale
Sewnly Cocktail Parties
Over 100 Events

FOR TICKETS AND INFORMATION VISIT modernismweek.com
THE WORLD'S SLIMMEST SIGHTLINES.

The 3/4” profile Vitrocsa sliding glass wall system. Absolutely nothing else compares. Proven and tested since 1993, with over 25,000 Vitrocsa units installed in over 20 countries.

GOLDBRECHT USA INC.
5701 BUCKINGHAM PARKWAY UNIT C
CULVER CITY, CA 90230
PHONE: 310 988 4655
WWW.VITROCSAUSA.COM

VITROCSA

Save up to 70% of your installation budget!

Manfred Frank Hinges (MFH) are a truly new class of concealed hinging solutions. A single pair of MFH Hinges can support panels of up to 880 pounds! Combined with instant 3D adjustment under full load by a single person, MFH Hinges ensure not only quick installation, but offer a freedom of architectural design that is unrivaled across the globe.

Please visit www.manfredfrank.com to find the right hinging solution for your next project.

www.manfredfrank.com

SUBSCRIBE

THE ARCHITECT'S NEWSPAPER, THE WEST COAST'S ONLY ARCHITECTURE AND DESIGN TABLOID. FREE FOR REGISTERED ARCHITECTS IN THE WEST COAST AREA WITH VALID STATE R.A. NUMBERS

SUBSCRIBE AT WWW.ARCHPAPER.COM/SUBSCRIBE

Steve Stankiewicz  Industrial Williamsburg #10 etching  18½ x 33¼ inches
Experimental Histories at CCA

History as a discipline has a reputation for being conservative, and therefore at loggerheads with the avant-garde thrust of many future-leaning architecture practices and schools. In how many architecture departments is it all too easy to discern the historians in ill-fitted tweed from the designers in bespoke black? And yet a number of architects, artists, theorists, and historians have been pushing the lines between disciplinary categories by working in a vein that might be called “experimental history.” While there are many ways to define “experimental history,” we might provisionally describe it as analyses of the past that lie outside the dominant modes of history writing—the monograph and text—including reconstructions, counterfactual histories, new media, critical conservation, and even destruction.

Such alternative historical practices were the subject of a recent pair of events held at the California College of the Arts (CCA) in San Francisco, both sponsored by the school’s Masters program in Design Theory and Critical Practices. The first was an exhibition entitled “An Olfactory Archive: 1100-1951,” curated by David Gissen and designed by Brian Price and Matt Hutchinson, that explored scent as a medium of historical reconstruction. Suspended in a lightweight steel frame occupying the school’s cavernous Nave were eighteen glass cloches, each encasing a waft of the past: manure in a Nave of the newly built house in 1949 is a blend of “river water, patchouli, Acqua Velva. The final fragrance portrays the house in the late 60s, after its surfaces had been infused with the air of thousands of cigarettes and cigars. Otero-Pailos’ project challenges several longstanding biases in historic preservation, such as the tendency to give greater weight to a building’s original state (and its designer’s intention) over the work’s subsequent life, as well as an emphasis on the visual aspects of architecture over its other sensory qualities. The scents of the Glass House, like the architecture as a whole, invite speculation about what it means to reconstruct and to understand the past.

Test Sites

Historians of a more disciplinary bent might describe the above projects as works of conceptual art rather than “history.” Greg Castillo, a professor at the University of California at Berkeley and a respondent for one of the symposium’s panels, voiced the concern that a work of history must advance the dominant modes of history writing—the monograph and text—including reconstructions, counterfactual histories, new media, critical conservation, and even destruction.

Odor is such an obviously powerful aspect of the experience of the city that one wonders why more urban and landscape historians have not addressed it. I asked my students to describe the characteristic smells of San Francisco, and they quickly identified the tang of the Civic Center, the putrescence of the number 22 MUNI bus, omnipresent odors of coffee, weed, and the scent of seafood at Fisherman’s Wharf. Odor is immediate, visceral, and sometimes overwhelming. Yet scent, as the cultural historian Alan Corbin has observed, is a traditionally discredited source of knowledge—“at the bottom of the hierarchy of senses,” especially as compared with sight. Epheumatic, invisible, and sometimes to describe precisely, odors are excluded from the purview of most architectural and urban histories.

One of the works in the show that explicitly responds to the absence of smell from the standard historical accounts is Jorge Otero-Pailos’ Olfactory Reconstruction of Philip Johnson’s Glass House (2009). The project actually comprises three scents, each incarnating Johnson’s iconic residence at a different historical moment: The odor of the newly built house in 1949 is a blend of freshly laquered wood, painted steel, and the leather of the house’s Barcelona chairs and bathroom ceiling. The scent from 1959 recalls the “aesthetic of olfaction preferred by sophisticated American men of the mid-to-late 1950s”—a Mad Men–worthy confection of Old Spice, English Lavender, and Acqua Velva. The final fragrance portrays the house in the late 60s, after its surfaces had been infused with the air of thousands of cigarettes and cigars. Otero-Pailos’ project challenges several longstanding biases in historic preservation, such as the tendency to give greater weight to a building’s original state (and its designer’s intention) over the work’s subsequent life, as well as an emphasis on the visual aspects of architecture over its other sensory qualities. The scents of the Glass House, like the architecture as a whole, invite speculation about what it means to reconstruct and to understand the past.

Test Sites

Historians of a more disciplinary bent might ask, is reconstructing a smell “legitimate” history? After all, without actual historic air samples, the reconstruction of what a house smelled like seventy years ago is necessarily a work of imaginative recreation. This was one of the questions probed at “Test Sites: Experiments in the History of Space,” a symposium organized by David Gissen and myself at CCA on October 12. The event gathered a number of architectural historians, theorists, artists, architects, and people whose identities are mash-ups of the above. Each presented a project, or series of works, that could be considered “test sites” for practices in experimental history. As part of a panel on “Archives,” for example, the San Francisco-based artist Amy Balkin presented an ongoing project called A People’s Archive of Sinking and Melting (2012), in which she asks people living in places at risk of disappearing to contribute items to a collective archive. The notion of a “people’s archive” responds to the problematic issues around authority, control, and access attending most institutional archives. Such collections—places like MoMA, Avery Library, or the Fondation Le Corbusier—comprise the typical starting points for architectural historians. Yet nagging problems plague historians’ relationships to these official collections. Who determines what is valuable enough to be saved, and according to what criteria? How is history distorted when the guardians of an architect’s papers want to “edit” his or her legacy? Balkin’s project draws attention to exactly these questions of framing, editing, and curatorial authority. Her People’s Archive is strikingly varied: it includes items best described as debris—a crumpled Ramen package retrieved from New Orleans’ Upper Ninth Ward, a Kodachrome film box salvaged from a flooded Brooklyn basement after Hurricane Sandy, an empty tuna fish tin from Cape Verde—alongside more obviously “valuable” artistic items such as a carved whalebone from Alaska. Whereas most historians use the archive as a starting point, a source for the materials that are then interpreted, Balkin’s project ends with the archive—one that is “open source” and that the artist describes as a kind of “proxy” for political consciousness among a dispersed public.

Several of the projects presented at the symposium shared a preoccupation with issues of pollution, climate change, and the degraded atmospheres of modern cities. Otero-Pailos, for example, spoke about a series of works entitled The Ethics of Dust (borrowing a phrase from John Ruskin), in which he uses a latex treatment to remove pollution and dirt from historical sites such as the Doge’s Palace in Venice (2005) and an Alumix factory in Bolzano, Italy (2008). The result renders dust itself into an object of historical and aesthetic contemplation. Mark Wasuta and Marcos Sánchez, architects who teach at Columbia and the University of Southern California respectively, presented a project that likewise “reconstructs” pollution, entitled Instructions for the Reconstitution of Historical Smog (2011). The project takes the form of an elaborate diagram of a machine theoretically capable of recreating the smog conditions of a specific site and time—for example, Los Angeles on September 14, 1965, using the archival records compiled by air quality agencies beginning in the 1940s. Like Otero-Pailos’ project, Instructions makes palpable something normally devalued by historians and preservationists, calling attention to smog—a condition that profoundly shapes the environment and perception of Los Angeles but rarely is addressed by historians. By drawing on actual scientific archives, Wasuta and Sánchez’s project also cleverly plays on the idea of historical “reversibility”—the idea that historic data-banks not only record the past but also offer instructions for future reconstructions.

No doubt many professional historians would describe the above projects as works of conceptual art rather than “history.” Greg Castillo, a professor at the University of California at Berkeley and a respondent for one of the symposium’s panels, voiced the concern that a work of history must advance the dominant modes of history writing—the monograph and text—including reconstructions, counterfactual histories, new media, critical conservation, and even destruction.
Pilkington Solar-E™ Plus Graphite Blue

The new Pilkington Solar-E™ Plus Graphite Blue glass provides a truly dynamic appearance for any new commercial project or renovation, while offering excellent solar and thermal control. Pilkington Graphite Blue™ is available as an uncoated tint that provides an original design and aesthetics.

- Reduced solar heat gain
- Low reflectivity and glare control
- Durable pyrolytic coating
- Virtually unlimited shelf-life

For more information, please call 800.221.0444, e-mail us at buildingproducts.pna@nsg.com, or visit www.pilkington.com/na
How Guardian SunGuard made a 60-year-old feel young again.

With light.

Adding windows that let in light is one way to bring new life to an old building. That’s why Proteus Group specified SunGuard SuperNeutral 68 on clear when they renovated a 60-year-old building for Hillshire Brands’ new corporate headquarters in Chicago. With exceptional daylighting, SN 68 enhances the wide-open, collaborative environment that Hillshire management desired, while its low 0.38 solar heat gain coefficient keeps energy costs in check. What’s more, SN 68 is bendable, allowing the building’s corners to be made from glass as well. For performance data, project photos and other ways to Build With Light, visit SunGuardGlass.com. Or call 1-866-GuardSG (482-7374).