

Welcome to the SXSW of Concrete

A week inside the industry that's building Trump's America brick by brick
Georgina Voss Mar 3, 2017

It's a cold January afternoon outside the Las Vegas Convention Center. I'm leaning over the barriers of what appears to be a glossy black ice rink. Gliding across its shiny surface are the offspring of a La-Z-Boy recliner and a hovercraft. In the driving seats, men clad in heavy jeans and khaki sweaters effortlessly steer the humming machines around in smooth, swinging circles. Judging by the couple next to me who have been staring quietly at the display for several minutes, I'm not the only person who finds it hypnotic, even soothing.

I'm at World of Concrete, the concrete and masonry industry's South by Southwest—a five-day show that has summoned more than 60,000 attendees. Concrete takes many forms here—thick liquid, solid blocks, even slender decorative ribbons. The rink in front of me is poured concrete, and the machines are riding trowels whose whirring blades smooth down concrete floors into a mirrored sheen. They look like a lot of fun to pilot, and I wonder how far I could get if I commandeered one out of the lot and onto Paradise Road, heroically riding it into the Mojave Desert.

This is also the week of the presidential inauguration. World of Concrete begins on Monday; on Friday, on the other side of the country, Donald John Trump will be sworn into office. In the distance beyond the lot, Trump's concrete literally looms over the show, bound up in the golden tower of the Trump International Hotel Las Vegas, a slim brick shimmering in the winter sun.

Trump paved his pathway to the White House with pledges to build roads, hospitals, and, of course, a "great great wall." So now I'm staring at riding trowels in an effort to answer what I soon realize is not an easy question. How do Trump's high-octane and often contentious campaign promises sit with the people who will actually be doing the building?

I arrive in the city over the weekend, touching down late at night. The Las Vegas Strip is visible from the air as glittering neon cubes and boxes on the glowing circuit-board of the city grid. In my ride from the airport, the boxes transform into enormous replicas of the New York skyline, Egyptian pyramids (complete with a full-schnoz Sphinx), and parts of the Roman Pantheon, variously flanked by hyperactive fountain displays.

Concrete isn't the only show in town this week. The Shooting, Hunting, and Outdoor Trade Show, a.k.a. SHOT, is at the Sand Expo Center. Members of the pornography and sex-toy industries gather for the Adult Entertainment Expo over in the Hard Rock Hotel. Last week, all eyes in Vegas were on the Consumer Electronics Show, or CES, America's largest tech event, filled with smart cars, fingerprint-enabled padlocks, and consumer drones. Even smart cars need roads to drive on, so I'd initially planned my visit to explore how the technologies and philosophies of concrete differ from CES' disruptive widget-escape. Then Trump got elected.

Las Vegas feels like a natural home for World of Concrete. The casinos huddled together on the Strip's curving four miles may be a grab-bag of international translation and appropriation, but underneath each façade lies structurally reinforced concrete. At the back of the Circus Circus casino, prefabricated concrete houses power facilities in delicate white curlicues.

Concrete is old, dating back to the actual Pantheon and Colosseum of the Roman Empire. Concrete at the industrial scale is newer. Reinforced concrete, strung through with steel and iron to make it stronger, emerged in Europe in the middle of the 19th century. Concrete pumps, machines that transfer liquid concrete by pumping, were patented in 1932. The pumps allowed builders to rapidly carry and lift large volumes of concrete from point to point, and concrete structures saturated the American landscape shortly afterward.

On this timeline, World of Concrete is a scrappy newcomer. It was founded in Houston, Texas, in 1975, and bounced around the country before settling down in Las Vegas. The Las Vegas Convention Center is a 10 minute walk from the main Strip, and with two million square feet of exhibition space, it's one of the few places large enough to contain the show. A week ago, these beige hallways were CES's "Tech East" section. Now the sightlines on the show floor are blocked by dinosaur-sized yellow and orange vehicles that could crush any leftover consumer gadget without leaving a smudge. Machines here actually do move fast and break things. The air smells of dust and plastics.

On Tuesday, I head to the convention center's courtyards, where forklifts carry weights around their necks on yellow straps to show off how much each can carry—40,000 pounds for the strongest. Inside the show, men in polo shirts spritz and buff freestanding tires with treads that are deep enough to stick an arm into. The vehicles on display are glossy, candy-colored, and catwalk-pretty; one concrete mixer is decorated with massive gold and blue glittery decals that twinkle as its drum rotates.

At the merchandise area, I rifle through instructional books on sustainable bridge structures and pavement performance. Racks of XXL t-shirts are on display, covered with phrases like "Concrete Is My Addiction." Attendees can take in seminars ("When Bad Things Happen To Good Concrete") or drive a Western Star severe duty truck around an obstacle course, backing it up over a ramp made of crushed gravel. You can talk pipes or paving at the thousands of vendors' stalls, or have your photo taken alongside their machines.



In the convention center's Central Hall, the 200-foot robotic arms of a gang of sugar-pink and lime-green concrete pumps are entwined in the rafters, like diplodocuses snuggling together. Squeezing them all into a photograph proves impossible, so I head to the booth for [EarthCam](#), a company that specializes in image capture at a construction scale. EarthCam shoots time-lapse footage of building sites, filleting years of slow work into short balletic films where cranes and scaffolding delicately swoop around each other. Their videos of a clinic in Abu Dhabi took so long that they inadvertently captured the construction of the rest of the city behind it.

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These are interesting times for the concrete industry. After the misery of the 2008 financial crisis, construction in America is back in rude health, albeit patchily. Texas, California, and Colorado are all "very hot," attendees say, as places where new hotels and homes and offices are being built. Demand is so high in these states that concrete-pump manufacturers are apparently having trouble filling orders. Employees worry that with baby boomers retiring, there isn't the skilled labor force in place to do the work.

But America's public infrastructure is still a mess—rusting rebars and cracked freeways stand as miserable testaments to a lack of net investment. It's a complex and cross-party problem, as James Surowiecki has described in *The New Yorker*. Republicans have shied away from big-government investment, and the increasing need to get the nod from different government bodies makes it hard to pass policy. For politicians keen on publicity, grand plans for big new things are exciting. But the subsequent decades of maintenance are thankless and dull.

Concrete and construction formed a core part of the 2016 election manifestos, including a promise by Trump of a \$1 trillion investment in infrastructure from private investors. But Trump's loose wording on the campaign trail made it hard to define exactly what he was envisioning. His use of "infrastructure" covers the classic civic infrastructure of highways and bridges, but also the real estate of schools and hospitals. (Senate Democrats have since introduced their own \$1 trillion infrastructure plan for repair and maintenance, but through federal spending.)

Then there's the wall. The megastructure promised by Trump to run the length of the U.S.-Mexico border was given its own #FuckingWall hashtag on Twitter in January from the former Mexican president Vicente Fox Quesada. "Nobody builds better walls than me, believe me," Trump declared when he launch his presidential campaign in June 2015. And shares of concrete suppliers leapt when he was elected, following expectations that the new administration would funnel resources toward the industry. But enthusiasm appears to have become muted since. With few details on the materials needed or other components of the project, the industry has been kept in the dark about what its involvement might be.

This political focus on infrastructure feels like it's been a long time coming, but slowness is built into the concrete industry. The big machines on the showroom floor are long-term investments; I get the impression that, like a Philippe Patek watch, one never truly owns a concrete pump, but merely looks after it for the next generation. And the industry takes its time in adopting new technologies. "It's an uphill struggle," says Kristy Wolfe, a professor in the Civil Engineering and Construction School at Bradley University. "No one wants to take the risk. They know what they're getting if it's the way they've always done it".

There are at least some digital tchotchkes at the show—foremen's smartphones and iPads, the proprietary software threaded into the vehicle controls. At the launch of their new delivery-tracking app *WheresMyConcrete*, I feel that Mack Trucks have missed a marketing opportunity by not adding "Dude." Indeed, like the hunger for new technologies, lightheartedness is in short supply. I take a break to visit the Adult Entertainment Expo, which delights in double meaning and metaphors in a way that concrete does not. My friends create the game "Porn or Concrete?" from the photos I send from both events: billboards promising "Vibratory Screeds," "Schwing Parts," "Whatever It Takes"; tools, lubricants, harnesses, and "general purpose hard material."

When I return to the convention center's floor, I poll attendees on their feelings about Trump's grand claims of infrastructure spending. "Dealers are saying they're excited," explain staff from Chicago Pneumatic. "They're buying equipment in anticipation for what's to come." Meanwhile, some industry members respond with considerable side-eye. "I think the trillion dollars is ridiculous and it won't happen," says Bill Palmer, editor of the Concrete Construction industry website. Others look to the legislative groups to keep the checks and balances on big

claims about highways and infrastructure. “I’m not holding it all onto Mr. Trump as the guy to do that,” says Jilka, of Topcon.

Hiring shortages are an example of the complexities around infrastructure. This industry tends to be multigenerational, but that’s changing, as Wolfe, the Bradley University professor, explains. “In the past, we saw a lot of ‘If my dad was an electrician and my grandad was an electrician then I’ll be an electrician.’ We don’t see so much of that any more.” She hopes that a renewed focus by the government on vocational work will draw students to careers in construction.

Yet hiring is contentious. Five days after the election, Concrete Construction published a gentle column in which their editor acknowledged that, although he was not a fan of Trump, the new administration might support construction by easing regulations and adopting skilled labor programs. But if the industry really wanted to have the workers to build all of the new civic infrastructure that had been promised? “Better build a big door in that wall.”

Palmer received several angry emails from readers cancelling their subscriptions. In December, the magazine published a counter-response from the president of a California concrete cutting company, who was furious at the implication that the infrastructure plan would come at the expense of American workers. “I do understand this trade-off” Palmer says. “They want foreign labor but they don’t. They don’t like illegal immigration, but on the other hand it keeps labor prices down. ‘If this guy uses illegal immigrants so he can do the job cheaper than I can, well, that’s just not fair.’”

Down in the merch stand are t-shirts that say Skilled Labor Isn’t Cheap; Cheap Labor Isn’t Skilled. It’s the only political slogan I see at the show.

On Wednesday, the SPEC MIX Bricklayer 500 World Championships are held in the convention center’s back lot. “WHO IS THE WORLD’S BEST BRICKLAYER?” demands a banner above a red Ford F-250 truck, which the world’s best bricklayer will take home. Lines of bricks and mortar are laid out for 25 competitors, and for an hour, these competitors each build a wall as their families look on from the stands, decked out in matching team t-shirts. The walls must be constructed 26 feet and 8 inches long, 8 inches wide, and as tall as possible. At the end, most only come up to the midribs of the red-jacketed judges who evaluate each creation for sleek and structural perfection. Marks are docked for chipped or misaligned bricks.

These considerations are not simple aesthetics. At grander scales, small mistakes with concrete can have enormous and terrible effects. Back in 1993, when Steve Bannon, Trump’s chief strategist, was still an investment banker, he was hired to jump-start the failing Biosphere 2 eco-project, a sealed manned greenhouse designed to play-test future space colonization. Oxygen levels had plummeted unexpectedly in the facility, threatening the health of the crew. It transpired that one of the culprits was the dome’s exposed concrete struts, which sucked up carbon dioxide before the plants had a chance to grab it for photosynthesis. Bannon was brought in to stop the project hemorrhaging further money, though his appointment was highly controversial.

Trump is not at the bricklaying competition to defend his wall-building prowess. Moreover, talk about the border wall—which, should it happen, is supposed to be 1,000 miles long and up to 55 feet high—is conspicuously absent at World of Concrete. Scattered around the show, copies of Masonry magazine carry an open letter to Trump from the Mason Contractors Association of America, whose stand sits in front of the wall-building challenge. The letter offers support for rebuilding existing infrastructure, but doesn’t say anything about the wall.

On Friday, the morning of inauguration, heavy clouds roll in over the mountains and a gray drizzle falls on the streets. I arrive at the Trump Hotel 30 minutes after the new president has been bestowed, curious to see what the mood is like. In the gift shop, customers are picking through Ivanka leather jackets and wine (Sauvignon Blanc is the only choice). News comes in that the Make America Great Again caps are discontinued and reduced; one couple quickly starts stacking hats into a pile, 10 high.

A young man by the tills effusively thanks everyone around him. “My voice is hoarse from cheering! It was such an honor celebrating with you all,” he tells the people in line, who nod politely. “This was such a great event. You guys make America great again!” In the twinkling lobby, families pose for photos in front of the floor-to-ceiling chandeliers.

The Trump hotel is a loner on the Strip. It’s one of only two buildings on its block, awkwardly nudged against a much shorter corporate office and standing watch over an empty construction site. Skeleton structures in the netherworld of either being built up or torn down surround it—a distinctive view that has been noted by hotel guests on TripAdvisor. As massive golden buildings go, it’s pretty eye-catching; the tint of its exterior gives it an edge over the slightly duller bronze Wynn and Encore Casino the next block over. But in a family of idiosyncratic, even downright weird Las Vegas casinos, I find it unimaginative and unambitious. Down the road, the cobalt MGM Grand needed 60 different concrete mixes when it was built to support all its various weights and structures. At the time, it was the largest hotel complex in the world.

I recall a demonstration I’d seen earlier in the week in the outside arena, across from the riding trowels on their concrete ice rink. An exhibitor in hard hat and heavy gloves had carefully and gracefully transformed several inches of bulky wet gray mass into a smooth surface. There’s a lesson here, I think. It’s easy to promise magnificent, gleaming, trillion-dollar things made of concrete if you believe the substance is malleable to your will. But a career dedicated to taming concrete—trying to tame it—forces you to be patient. It demands locking in for long-term consequences, and understanding that materials matter more than metaphor.

“Anyone can mix up concrete,” says Palmer, of Concrete Construction. “But that doesn’t mean it’s going to last. It’s enormously complex and very easy to do wrong. You can put something up now and think it’s okay, but the problems won’t show up for several years. I can do a floor and think it’s great and it might be perfect the day I leave, but what’s it going to look like two years from now?”