SCALE FACTOR
HUMANIZING A UNIVERSITY CAMPUS IN SPRAWLING MONTERREY.
BY JONATHAN LERNER
IEGIO GONZALEZ was driving through San Pedro Garza García, the poshest municipality in metropolitan Monterrey, one of the richest cities in Mexico. “When I was a kid, in the 1970s,” he said, gesturing broadly through the windshield, “all of this was agricultural. I came here hunting rabbits.”

San Pedro is built out now. Its dominant typology is the single-family house, and its circulation patterns exist to serve cars, so it’s not unlike any late 20th-century North American suburb, except that it has an orthogonal grid instead of a dendritic street plan. Also, almost every property is enclosed within a high security wall.

Gonzalez’s destination was the campus of the University of Monterrey (UDEM).

UDEM demarks San Pedro’s narrow western border, at a point where lateral ridges off the soaring Sierra Madre mountains pinch close to the Santa Catarina River. West of the campus, where the valley opens out a bit, a new suburb is being developed; land prices there have quadrupled in the past decade. When the university campus was first established in 1981, “it was in the country,” noted Gonzalez’s passenger, René Bihan, FASLA. “Now they are landlocked. They have no choice but to be smart about how they infill.” One of UDEM’s smart choices was to hire the firm of which San Francisco-based Bihan is a principal, SWA, to create a landscape master plan for the campus. Gonzalez, whose Monterrey firm is Prohabitat, is his local collaborator.

The campus’s problems reiterate Monterrey’s sprawling urban form and reliance on cars. Nearly half of its 94 acres is surface parking. That consumes centrally located potential building sites and logical axes of circulation. SWA’s landscape plan elaborates upon an earlier master plan by the architecture and engineering firm Page (formerly Page Southwest Partners). Most of the parking will be relocated to the perimeter; much of it will go underground. That will free up space for infill construction and connective landscape interventions. SWA’s goal, Bihan said, is place-making that establishes “scale and engagement” and uses “regional expression.” Those qualities should well distinguish the experience of UDEM from that of the rest of the city.

The plan will rely on native species, in relaxed sweeps of grasses and groves of trees, for example, to replace what’s there—“lawns, and gardening with little shrubs and flowers,” as Gonzalez characterized it. (Bihan said drily, “It’s interesting, for a city like this, that they identify with the ‘Home Depot landscape,’ which is kind of this curator of the British landscape across the entire globe—boxwood, roses, privet.”) And the SWA plan will acknowledge the magnificent setting. The valley floor is cantilevered. The campus slopes an average of 10 percent from top to bottom; no matter where you stand, there’s a view. Just a mile and a half to the south, the escarpment of the Sierra Madre shoots up 1,000 meters over the bottom of the valley. Two and a half miles north, across the river, rises the even higher wall of the Cerro de las Mitras. Formed by tectonic uplift, not volcanism, these vertiginously steep exposed limestone fins have an almost kinetic quality, as if they are just breaking through the earth’s crust right now.

The first expression of the SWA plan has been put in place. It’s the landscape surrounding the Centro Roberto Garza Sada (CRGCS),
a monumental 2013 building designed by Tadao Ando that houses the university’s design faculties. The building is a long concrete slab, slit with narrow ribbon windows and cut out underneath to form a low arch whose undersides are tightly pleated and oppositionally angled. It has a massoive, sharp-edged quality similar to that of the mountains. (The CRGS is also called the “Gate of Creation,” which sounds grandiose, but once you observe the studios upstairs where young people are busy learning things like graphic, interior, textile, and industrial design, it seems less so.) Surrounding the building and flowing beneath the arch are soft swaths of vegetation and a rather intimate plaza where students display their architecture projects and sculptures. The arch frames dramatic vistas, but it also delimits them. It shades you from Monterrey’s intense sunlight. And the softness and seeming randomness of the planting, a foretaste of what is envisioned as a predominant treatment for the campus, is a humanizing response to both the building and the surrounding topography, which together verge on the overwhelming.

The next effort toward implementing the campus landscape master plan is immediately adjacent: a plaza between the CRGS and a new student center currently under construction. This project embodies many of the complexities inherent in transforming the UDEM campus. Located where a boulevard forms the campus boundary, it incorporates a drop-off zone and the principal pedestrian entry. (The student center is being built over a parking deck sunk into the slope; vehicles will enter it on the other, downhill side.) At the plaza level, the new building—actually, a cluster of pavilions looking more like a bit of a village than a single building—will include retail spaces such as restaurants, a bookstore, and a barber shop. These will be accessible to both the general public and the university community. And that’s a challenge, because access to the campus, as to many places in Monterrey, is controlled. (Security is an issue in the region because of drug trafficking, but also, and especially in this affluent part of the city, because of opportunistic kidnappings for the purpose of extorting ransom.)

“The tricky thing is where you draw the security line,” Bihan said. Plus, of course, the aesthetics of that barrier. SWA came up with a visually porous fence design, the elements of which actually but subtly form the letters of the acronym UDEM. Finished in a shiny goldenrod hue, it’s distinctive,
and has the virtue of not pretending it isn’t there. “In the United States when you design something like that, specialty construction, a contractor does shop drawings, you review those drawings, there are several levels of refinement. Here they just build it. The first version of that fencing was a disaster, too heavy, and not sized properly for the gates,” he said. But on this site visit, he noted with satisfaction that a version had been recently installed at one of the existing campus entries. “It looks like they haven’t given up.”

The sloping terrain is another challenge for the plaza, as for the entire campus. In this spot, “the topography is moving in two directions.” The plaza’s signal gesture is an oval berm, 84 by 57 meters in plan, rising to six meters at its peak. “The idea is you’re mitigating the topography,” Bihan explained. “It’s also to give a big landscape presence.” It’s complemented by a fountain 18 meters in diameter, flush with the ground plane, with a thin water skin. The plaza “is bookended by two beautiful buildings, and then there’s this landscape move that works as an amphitheater if they want to stage the plaza, with the mountains as a backdrop.” Depending on an event’s

**Above** Early concept drawings of circulation (left) and the campus master plan (right).

**Legend**
- Security checkpoint
- Vehicular access
- Primary pedestrian
- Drop-off zone
- VIP routing

**1. Centro Roberto Garza Sada**
- Project area
- Gate of Creation

**2. Entry Plaza**
- Integration zone
- Future event lawn
- Future sports fields

**3. Student Housing**
- High school

**Plan**

**Circulation Diagram**

**Master Plan Sketch**
configuration, with the fountain drained, the plaza could accommod-ate 5,000. “And it also works on a more garden scale, as it faces into the university.” With fence, gates, foun-tain, planted plots, and the cluster of pavilions, “it’s composed,” he said. “But it’s very large-scaled.”

UDEM is a private institution that receives major support from sev-eral prominent Monterrey families, whose members occupy powerful roles on university boards. In its current effort to re-create the cam-pus, the university is leaning toward showcase buildings by famous archi-tects. This creates another particular set of conditions. Tadao Ando, the architect of the CRGS, had designed the home of one such donor. Tatiana Bilbao, the architect of the new stu-dent center, had done the home of another. “That creates a personal bond, over the years,” Bihan said. “The donor picks the architect. And sometimes the architects rule.”

Bilbao’s design replaced an earlier concept. “The old plan was more conventional, a building on top of a podium. Tatiana’s improvement was wrapping its edge” with the more dispersed ensemble of the pavilions. “What it does is much better,” Bihan said. But SWA had designed the plaza earlier, concurrently with the Ando building’s planning; construction documents were complete. Modifica-tions to long-term projects must be taken in stride, of course. And Bilbao’s concern—or, perhaps, sensibility—was not primarily focused on the landscape architecture. “She’s a good architect. There’s a storyline there. But it doesn’t translate into public space,” Bihan said. Bilbao’s design didn’t ad-dress the grading issues. At one point, she proposed a recessed exit corridor from the underground garage, open to the sky, slicing in several directions through the oval berm—treating the berm as a simple landform more than a functional element with program-matic purposes.

This reliance on deep-pocket do-nors funding high-visibility build-ings has another, surely unintend-ed, consequence: Other elements of the plan can become deprioritized. For example, at the southern, uphill point of the campus is UDEM’s...
preparatory high school. It used to be separated from the rest of the campus by a road. The Page plan proposed depressing the roadway and creating a broad land bridge on top. SWA’s concept for this “integration zone” is a walkway on an axis from the high school’s main entrance, down the slope, right under the arch of the CRGS and into the entry plaza. Another walkway will lead down from the high school into the campus’s center on a line to the atrium of the Rectoría, UDEM’s prominent administration building. In the integration zone, a sequence of smaller paths will zigzag between these two axes, addressing the grade change to provide universal access and creating a chain of graduated triangular lawns.  

The tunnel was completed in 2008. The landscape plan was completed in 2011. But the integration zone, though identified as part of the plan’s first phase, remains a blank. Implementation there is to be directed by Gonzalez. “They asked me a while ago, can’t you put a little something there?” he mentioned to Bihan, “so I said, uh, what about following the master plan?” Bihan replied, “I thought this would be the first project to go because when we started, they were building the tunnel, sinking the road. But then for whatever reason they never completed this part. I thought it would be the first project to go because when we started, they were building the tunnel, sinking the road. But then for whatever reason they never completed this part. I thought it probably has to do with funding. If there’s not a building to amortize the cost of the site work, it’s very hard to fund-raise for a landscape.”

In Mexico, people are not interested in investing in landscape. They just build a building and don’t have landscape around it,” Gonzalez said. Only one university in the country offers a landscape architecture degree, “so you don’t have landscape architects being trained.” In that context, UDEM’s engagement with landscape architecture in its long-range planning may be not only laudable but exemplary.

The ambitious reconfiguring of an entire campus can’t be accomplished in a single stroke. It is hoped the new plaza’s programming and design elements will introduce the animation and sense of place that is currently lacking, and perhaps it will spur the overall project onward. Given the terrain, though, delay implies a particular risk. “The planting makes it humane, but the grading makes it functional, and it’s also very expensive and difficult to do here. When they’re doing it piecemeal, it’s not like doing an entire district,” Bihan said. “The thing I’m concerned most about is that they’re going to give up on the grading plan.” He added, “If they don’t

above SWA’s goals are “scale and engagement,” “regional expression,” and pedestrian culture.

opposite The architectural monumentality of the CRGS is balanced by the naturalism of its plantings.

plant list

Cordia boissieri (Anacahuita)
Pennisetum alopecuroides (Chinese fountain grass)
Prosopis velutina (Velvet mesquite)
Quercus polymorpha (Netleaf white oak)
Ruellia (Wild petunia)
Salvia leucantha (Mexican bush sage)
get this right, then the master plan will never work. You’d always have these jarring interruptions.”

Even if the plan is fully and perfectly realized, there will be the irony of it having created a pedestrianized, human-scale island in a metropolis where walking is discouraged by urban form, perhaps by culture—and by danger. People in Monterrey say that the security situation is less dire than it was a few years ago, though it must mean something that U.S. government personnel are still required to stay within the upscale and safer enclaves of San Pedro and the new suburb west of UDEM between 1:00 a.m. and 6:00 a.m. “The city is extending toward this direction, growing very fast,” says the UDEM architecture professor Roberto Pasini. He brings the master plan and campus design issues into his studio curricula so that students can “envision its projection toward the outside, that it becomes a relevant component of the city. You need some kind of physical interface, which should not be just a fence. Probably the fact of having certain urban context all around will facilitate the reduction of security measures.”

At the least, that’s a reasonable pedagogical challenge, and students’ imaginations should be encouraged. What would it look like to open up the campus, even incrementally? “When we were first doing the master plan it was, ‘It has to be bombproof.’ If someone can drive a car through it, that’s not good enough,” Bihan said. “It also shows why master plans need to be flexible—and it’s a barometer of improved conditions, the fact that we’re even talking about it.”

Above Native species such as velvet mesquite reunify the campus with its setting.

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Jonathan Lerner is the author of the 1960s memoir Swords in the Hands of Children: Reflections of an American Revolutionary.

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ABOVE Native species such as velvet mesquite reunify the campus with its setting.

OPPOSITE Intimate spaces balance the terrain’s magnitude.