COURTESY BIONIC, ALL

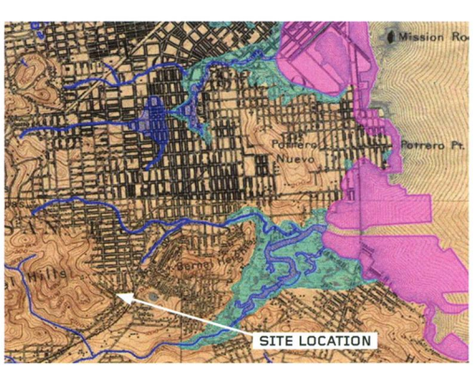
WITH THE FLOW

A NEIGHBORHOOD STREAM TURNED UP AS A SPRING IN A SAN FRANCISCO BACKYARD. THE HOMEOWNERS LET NATURE TAKE ITS COURSE.

BY JOANNE FURIO

ABOVE
Giant chainferns surround a stair.

LEFT AND BELOW
The homeowner's lot in San Francisco and the route of the watershed that empties into the Islais Creek.



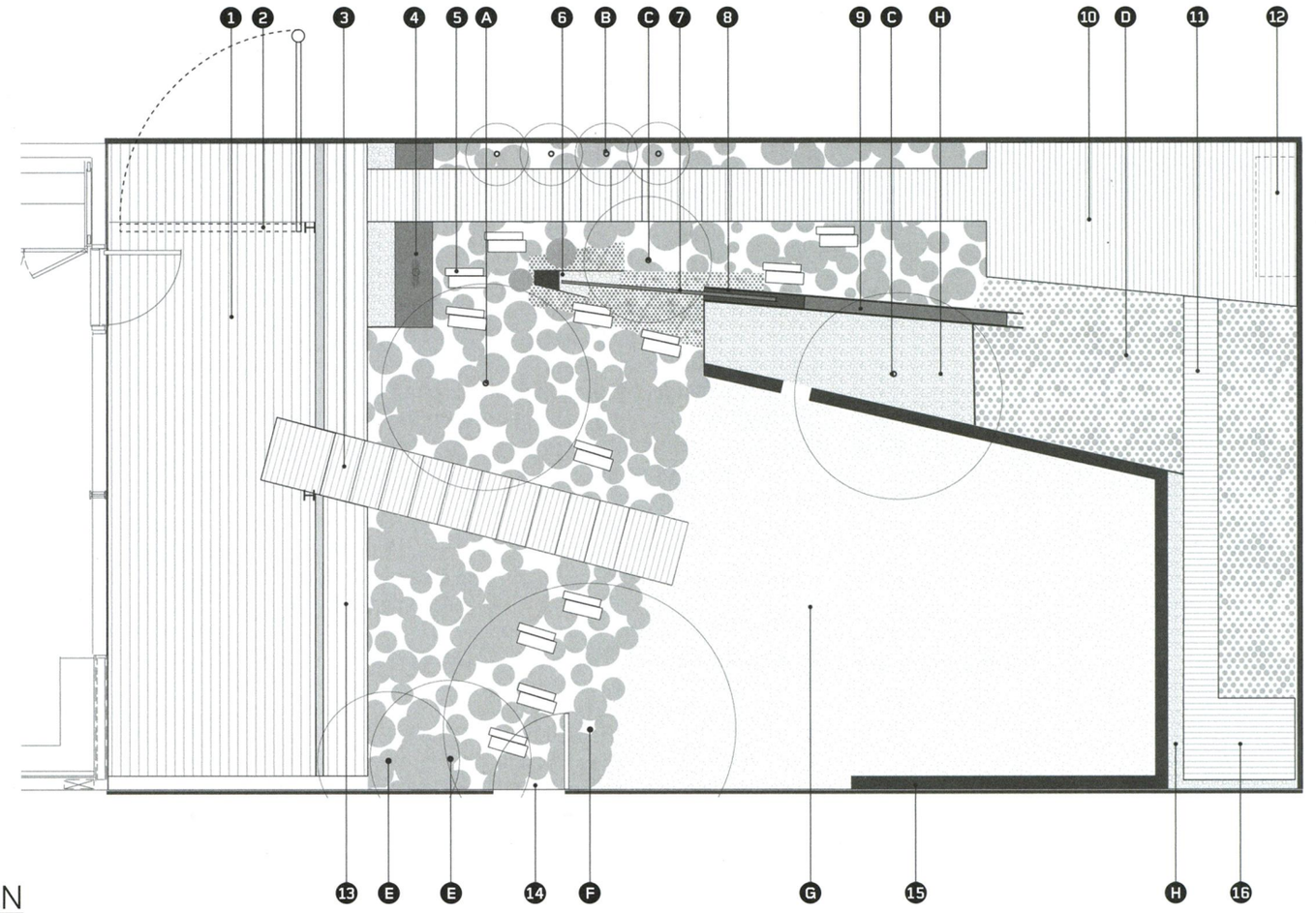
In 2002, two landscape architects—spouses, as it happened—were looking for a fixer-upper in pricey San Francisco during the height of the real estate boom. They found their fixer, in the hilly neighborhood of Glen Park, and with it what they call "the big no-no," an anomaly in the urban environment and a testament to the tenacity of nature: a backyard spring.

"Most people would see that and run the other way," says Marcel Wilson, ASLA, as he sits in the 1929 Spanish Revival house that he shares with his wife, Jennifer Carroll Wilson, and two daughters, ages two and six. Trickling water from the spring in the yard can be heard. "For us, the spring was one of the selling points."

According to neighborhood lore, the spring was one of three streams that once ran down the hillside, part of the upper watershed of Islais Creek, which empties into the San Francisco Bay about two miles away. Two of the streams have been contained and whisked away by underground pipes. It is believed that the remaining stream surfaces as a spring at the base of the Wilson house.

As fate would have it, Wilson, a principal with the five-year-old San Francisco firm Bionic, was studying how to create public access points at the spots where Islais Creek interfaces with the bay as part of an Environmental Protection Agency-funded project for the San Francisco Parks Alliance. At

BELOW
The lower runnel drops into a wetland of irises.



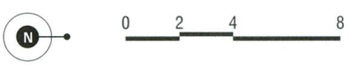
PLAN

CONSTRUCTED ELEMENTS

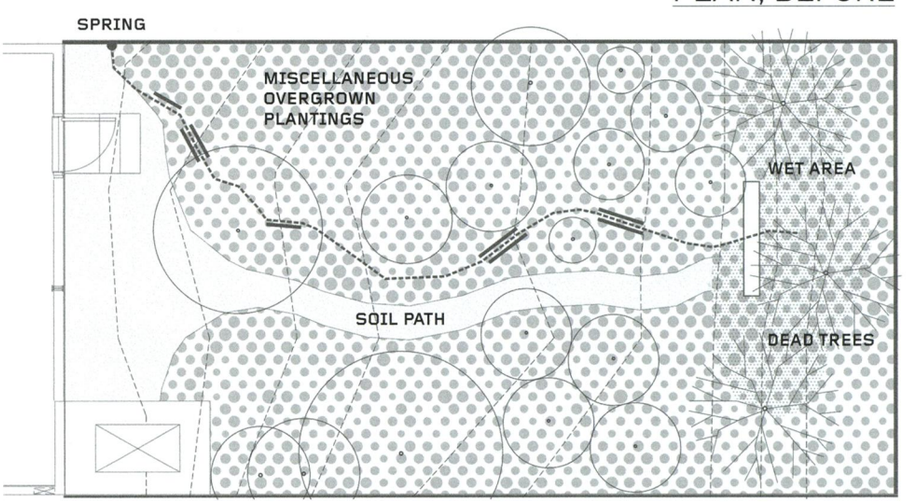
1 UPPER DECK
2 CRANE (ABOVE)
3 STAIRS
4 SPRING BASIN
5 MINI DECK, TYP.
6 HEADWALL
7 UPPER RUNNEL
8 LOWER RUNNEL
9 WATER BOX
10 LOWER DECK
11 BOARDWALK
12 WINDOW
13 BENCH
14 NEIGHBOR GATE
15 CONCRETE RETAINING WALL
16 WETLAND DECK

PLANTING AND GROUND COVER

A SANGO-KAKU JAPANESE MAPLE
B BLUE BAMBOO
C VINE MAPLE
D IRIS WETLAND PLANTING
E BAY LAUREL
F TEA TREE
G TURF
H BLACK MEXICAN PEBBLE, TYP.



PLAN, BEFORE



ABOVE
The backyard is a modest 25 by 50 feet yet contains various zones, walkways, and plantings.

the time, though, he had no inkling that the spring in his yard would be a small tributary to his professional work a decade later.

Though they were intrigued by the stream, the couple worried that it could have damaged the house. Yet, "there was no mildew or mold damage we could find as a result of the spring," Carroll Wilson explains. A structural engineer's inspection came to the same conclusion.

Still, the couple braced for the work ahead. They knew that working the spring into the design—and creating the garden itself—was going to occur in phases and over time. They have been making the garden for eight years and still consider it a work in progress.

By allowing the spring to rise up into the urban landscape, the Wilsons are, in essence, reversing hundreds of years of urban planning. In typical parts of San Francisco, houses that were built into the clay-heavy hills above the street diverted the runoff through pipes that ultimately ended up in the stormwater system at street level. Houses like the Wilsons' on the lower side of the street had to pump water uphill to the storm drains.

Professionally, Wilson recognized the benefit in taking the spring out of an engineered system. Plus, he and Carroll Wilson were interested in all the possibilities that could result from the constant flow of water. "It was a controlled experiment in a way," he adds.

Because the yard would also provide a play area for the couple's daughters, there were more personal objectives. "It is meant to be a wild place for our kids, to let them lose themselves," Carroll Wilson says. "We wanted it to be a little bit dangerous," Wilson adds, "a place that would keep their attention and hopefully inspire them."

ABOVE
Cutouts in red cedar fencing allow room for the neighbor's Japanese maple.

OPPOSITE TOP
Anemones, hellebores, redwood-sorrel, and Venus maidenhair fern are among the plantings.

OPPOSITE BOTTOM
Springwater collects in the copper basin.

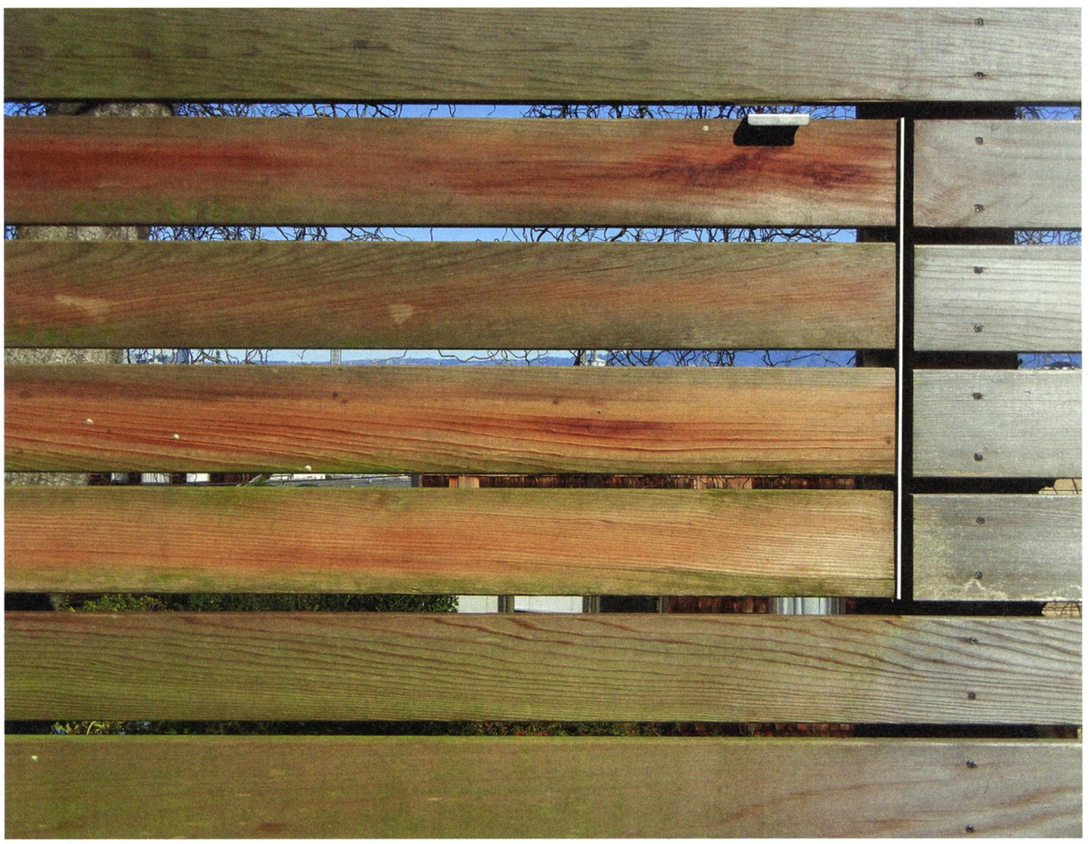
To undertake any kind of work in the backyard, though, there was a problem with access. The modest, 25-by-50-foot backyard has none on either side. So anything destined for the yard would have to be transported through the front door, the kitchen and dining room, and down a hairpin stairway before heading out the back door of the house and into the yard. Again, that's San Francisco for you.

But the couple, relying on the kind of ingenuity that results when budgets are not boundless, found ways to make the house renovation benefit the backyard renovation.

Creating a lower level for the house required the excavation of six feet of soil. Instead of paying to have the soil hand carried through the house and up to the street level in five-gallon buckets and hauled away, the soil was conveyed more efficiently via wheelbarrow into the yard, where it was used to flatten out sloping areas that became a lawn and a deck. The yard has a 10-foot grade change from the back of the house to the back property line.

In the process of doing a full seismic upgrade on the house, 25-foot-long steel C-shaped beams were removed and repurposed to create long spans of stairs and boardwalks that traverse the yard's slopes and wet areas. To deal with the inaccessibility, a crane was built into the steel frame for the new decking they added so that trees, concrete, wood, steel, plants, and furniture that had come in through the front door could be lowered into the yard.

Since the spring was such a perplexing part of the garden, Wilson devoted the bulk of his efforts to its place in the design. The base flow of the spring rises from a vein of clay in the heavy soils just beneath the surface, equal to the diameter of a pencil, yet it produces an impressive



100 gallons of water a day. Wilson conducted many tests and pilot projects to measure the flow and quality of the water and the ability of the soils to accept it. The spring had been in so many configurations, Wilson nicknamed it "my Mississippi." "We didn't want to design a garden around a water source that maybe would go away or wouldn't be configured in the right way," he says.

In the end, the two allowed the spring to surface at its original location but into a copper basin Wilson made in his basement workshop. A riser helps convey any overflow to an upper runnel, a one-and-a-half-inch copper channel, which then drops into a water box a foot deep. It makes a trickling sound. There is a runnel farther down the hill. The water winds up at the base of the garden, in a wetland planted with perennial and evergreen irises.

The choosing of plants, which Carroll Wilson did, was almost as research intensive as the spring. A magnificent New Zealand tea tree *(Leptospermum scoparium)* and some giant chainfern *(Woodwardia fimbriata)* were already in the yard. Yet few species would survive the tough placement: north facing, shaded by buildings, windy, cold, and with "bowling-ball-sized hunks of clay you can pull out of the ground and make a primitive pot or ash tray with," Wilson quips. Carroll Wilson wrangled with plant selection by the square foot.

"Some things would just disappear—as if they had gotten eaten up by the soil," she explains. Her choices were extremely limited. It was hard to find trees, for example, that could fit her criteria: riparian, multistemmed, didn't grow above 15 feet high, and would survive in the shade. Of the five trees ultimately selected, two dogwoods did not survive, but two vine maples *(Acer circinatum)* did, along with a Sango-kaku Japanese

LEFT AND OPPOSITE
A window in the western cedar fence provides views of the neighbor's corkscrew willows.

maple *(Acer palmatum* 'Sango-kaku'). A thin grove of Himalayan blue bamboo *(Bambusa chungii)* runs up against the stair.

The chainferns that were there had done so well, Carroll Wilson added more of them on the hill, which also has shade-loving anemones *(Anemone* x *hybrida),* hellebores *(Helleborus orientalis),* redwood-sorrel *(Oxalis oregana),* and Venus maidenhair fern *(Adiantum capillus-veneris).* Lilyturf *(Liriope muscari* and *Liriope muscari* 'Variegata') pokes out from under the stairs. The garden has blooms almost year-round, even though it is a very shady plot.

Water-loving low ground covers like mosses, baby's tears, and blue star creeper cover the damp soils around the spring and runnels. Because the conditions are so limiting, Carroll Wilson decided to tolerate some of the weeds—like liverwort and watercress; watercress also happens to be a sign of cool, clean water. ●

JOANNE FURIO IS A BAY AREA WRITER WHO SPECIALIZES IN DESIGN, GARDENING, AND ARCHITECTURE. HER WORK HAS APPEARED IN THE *NEW YORK TIMES, DWELL,* AND *SAN FRANCISCO* MAGAZINE, WHERE SHE'S A CONTRIBUTING WRITER.

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