

Test-Driving a 178-Square-Foot Micro-Unit, for Science

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Katherine Qiu lived in a 178-square-foot prototype built inside a Berkeley storage facility, complete with a faux view of the Bay Bridge. Photo courtesy Patrick Kennedy.

Every morning, the first thing Katherine Qiu had to do was turn her bed back into a couch. It was May of 2009, and Qiu, then a 25-year-old graduate student in MIT's real estate development program, was living in a prototype micro-unit designed by the Berkeley-based developer Patrick Kennedy. The bed had to be stripped and flipped back up into its couch position, the cushions returned to the backrest. "One of the tougher things about living in a small space is **everything is multipurpose**," recalls Qiu. "Removing the sheets every morning is a drag."

At just **178 square feet**, the unit was nearly 100 square feet smaller than the typical studio at the Panoramic, the 11-story micro-unit building that Kennedy's firm, [Panoramic Interests](#), is [building at Mission and Ninth streets](#). At the time, Kennedy was still honing the design that would inform the Panoramic and CitySpaces 38 Harriet, the prefab micro-unit building that opened in 2013. He brought in Qiu to test out the prototype for a five-night stay, and she kept a journal about the experience as part of her master's thesis. Kennedy wanted to see how small a micro-unit could get and still be livable. "We'd built units at 350 square feet, which we thought were too big," he says.



At left, the TableBench beneath Qiu's faux view. Right, the hybrid couch bed. Left photo courtesy Patrick Kennedy/right photo courtesy Katherine Qiu.

For Qiu's experiment in micro-living, Kennedy designed a real, fully functioning unit, with a kitchen, the aforementioned hybrid bed-couch, two workstations, and a bathroom large enough to qualify as handicap accessible. But, without building a full micro-unit building, Kennedy had to put the prototype somewhere. So he constructed the unit **inside a warehouse bay at UC Storage**, a storage facility on Shattuck Avenue in Berkeley that Panoramic owned at the time (it's now known as Central Storage).

Despite its size—and the self-storage metaphor irrepressibly at work here—**the prototype felt more like a nice hotel** than a dorm or storage locker, says Qiu. The ceilings, for one, were nine feet six inches high. The finishes were well chosen, and far better than anything Qiu had lived in as a student: There were cork floors, recessed lights on dimmers, a wall-mounted flat-screen TV, and a kitchen whose appliances could be disappeared behind a sliding door. "The bathroom even had a towel heater," she says.



The prototype sink was too small for a pasta pot; it got redesigned in subsequent units. Photo courtesy Patrick Kennedy.

The unit's window, however, looked onto the backside of a roll-up garage door, owing to the prototype's location inside the storage bay. For a bit of verisimilitude, Kennedy hung up a picture of the Bay Bridge—the same bridge view, incidentally, that tantalized buyers of luxury condos at the Infinity showroom. "I got a copy of the same image and had a transparency made the size of the windows in our micro-apartment," recalls Kennedy.

Qiu was the ideal micro-unit guinea pig. As a student, she had moved around a lot, and found herself frustrated by the need to find and furnish a string of apartments that she didn't spend much time in. "**A lot of times what I find is I have a huge space I don't need**, and I'm paying an arm and a leg for it," she says. "The other pain spot was getting furniture and having to sell it later on Craigslist. You always lose money."



The prototype stove was an induction burner mounted in a slide-out drawer. Photo courtesy Patrick Kennedy.

While Qiu lived in the unit, she managed to pack about a dozen people inside—a delegation who gamely took a detour from a birthday party thrown by a friend of Qiu's. As part of her research, she gave them a tour and had them fill out a survey about the unit's design. Asked how long they would be willing to live in a unit like the prototype, some respondents could only imagine doing it for one month. More than one chose "indefinitely."

Some of Panoramic's clever convertible pieces were already present, like the TableBench window seat, which converts from a bench to a small café table with two seats. The stove, however, was just **one induction burner in a slide-out drawer**. "That didn't fly too well," remembers Qiu. (Kennedy's built units now include a two-burner stove on a cooktop surface.)



Photo courtesy Katherine Qiu

Qiu's main complaint, though, was with the bathroom, which was basically one big shower, with a shower head in the middle of the room and a curtain you'd draw around to keep the water in. Here's part of her journal entry from her second day in the unit:

I had my first shower experience today—didn't like it so much. There is no curtain here right now and **water got all over the place**, even in the groove of the sliding door of the bathroom. Even if there is a curtain, the center of the bathroom will still get wet—I would much rather prefer to have the shower on the side of the bathroom instead of the center and have something that makes sure the water does not get outside of the shower area. What was very nice about showering is that when you close the sliding door, the whole bathroom is your shower. That's about 400% more space than the shower I used in Paris where it was surrounded by glass doors and I kept bumping into them!

After Qiu's experience, Kennedy designed his units to include a conventional bathroom. He's also devised a Murphy bed format called the TableBed—the bed flips up to reveal a dining room table that seats four or five comfortably—so that residents don't have to make and unmake their beds every day.



Photo courtesy Patrick Kennedy.

Qiu, who now lives in Rhode Island and works as a development associate at Gilbane Development, liked the experience enough to consider herself a convert. Now, as a married 31-year-old, she no longer counts herself among the micro-living target demographic. Asked whether she'd live in a micro-unit again, though, she didn't hesitate. "I'd do it again in a heartbeat," Qiu says. "I don't like paying for more space than I need."



Photo courtesy Patrick Kennedy.

None of Kennedy's current developments contain units as small as the 178-square-foot prototype. But that's not because it wasn't livable, Kennedy is careful to note. "We wanted to build a size that would have a broader appeal to a range of households, and 178 square feet was a tad small for a two-person household," he says. "We'd build those again for a project where we wanted to have single people."