



THE BORN-AGAIN GARAGE

BY DAVID KIDD



A repurposed parking garage in Wichita, Kan.

KNIGHTLEY'S PARKING GARAGE OPENED FOR BUSINESS IN WICHITA, KAN., ON MARCH 13, 1950,

a shining example of mid-century auto-centric architecture. An announcement in *The Wichita Eagle* hailed the newest addition to downtown as "The Midwest's Largest and Most Modern Parking Garage." Open 24 hours a day, 365 days a year, it charged 50 cents to park for the day, 75 cents for the evening and one dollar to leave a car overnight.

Navigating the five-level facility and finding a parking spot was not a problem. Motorists would leave their cars at the entrance and a Knightley's valet took care of everything. At the end of a shopping trip or workday, customers relaxed in an air-conditioned waiting room while an attendant fetched the family Ford or Chevy. Downtown stores sent purchases directly to the garage where they were stored in a safe until they were transferred to the car for the drive home.

Times changed. By the 1980s, people preferred to park themselves and carry their own packages. The last paying customer pulled out of the deteriorating garage in 2009, and what was once the Midwest's most modern parking facility continued its fall into a state of neglect and dilapidation.

America's old parking behemoths are falling into disrepair. But some of them have a future.

Now, times have changed some more. Recently rechristened “Broadway Autopark,” Knightley’s Garage today is home to 44 one-bedroom apartments, each about 700 square feet, with a covered terrace. The décor is mid-century modern. Colorful kitchen cabinets are made by a company that usually furnishes industrial sites. Exposed concrete ceilings, walls and floors plus a red four-story PARKING sign are a constant reminder of what this place used to be. Not that anyone is likely to forget.

Half of each of the Autopark’s top four floors still functions as a private garage, allowing residents and guests to park within a few feet of their apartment doors. A portion of the ground floor is used for office space. Instead of valet service and a waiting room, today’s onsite amenities include a “club house,” a 24-hour gym and a dog washing station. Historic preservation tax credits offered by the state and federal government made the project financially feasible, but also imposed limitations on what the developer could do to resurrect the property. The architects worked closely with the city of Wichita’s Metropolitan Area Building and Construction Department to solve the many issues related to repurposing a garage.

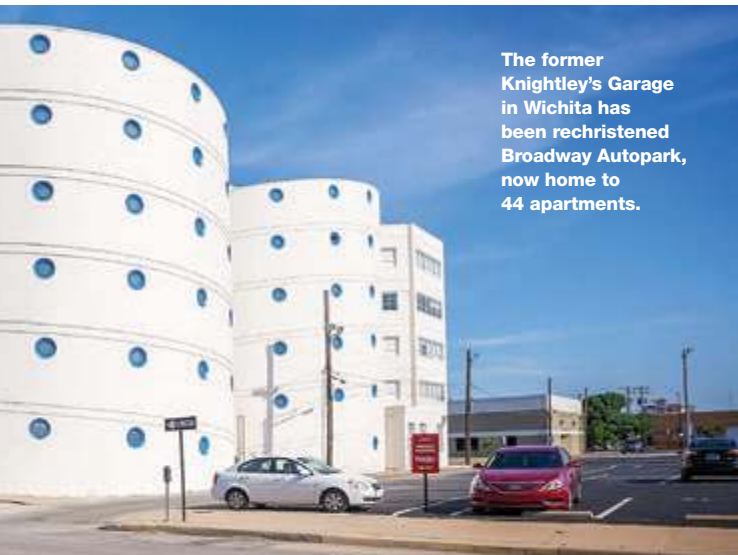
Knightley’s Garage opened when the car was king. By 1950, Americans owned one vehicle per household, doubling to two in the ensuing 25 years. Cities struggled to accommodate the proliferation of cars on grids designed for horses, streetcars and pedestrians. Surface parking lots and multilevel garages began to take up more and more of the urban landscape, changing the look and feel of cities. Today, mixed-use and pedestrian amenities are making a comeback in city centers, and residents can walk from home to work to entertainment. Many of them don’t need parking spaces at all.

With its 1950s aesthetic intact, Knightley’s Garage is more than a kitschy throwback to the past. Wichita’s repurposed parking facility may actually be an indication of things to come. As personal auto ownership declines in urban downtowns, car-related urban infrastructure is increasingly underused. Some garages, like Knightley’s, are ripe for adaptive reuse. Others are being constructed from scratch in ways that will allow them to be repurposed down the road.

As America’s dependence on personal automobiles started increasing in the 1950s, local governments began mandating the number of parking spaces required when developers erected new apartments, offices and shopping centers. In urban areas where land was more expensive, that often necessitated the construction of multilevel garages like Knightley’s. Using perhaps excessive formulas, more space was often allocated for parked cars than for people. Decades later, mandatory parking minimums have resulted in a glut of spaces in the center of large cities. This is an issue nationwide. Seattle has more than five parking spaces per household; Des Moines, Iowa, has nearly 20. Sprawling, car-centric Houston has 30 spaces—not per household, but for every single resident.

But many cities, including Houston, have begun to lower or eliminate mandatory parking minimums. San Francisco recently





The former Knightley's Garage in Wichita has been rechristened Broadway Autopark, now home to 44 apartments.

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did away with parking minimums citywide. Its planning department estimates that minimum parking requirements can add as much as \$50,000 to the cost of an apartment. The National Parking Association (NPA), a trade group of lot operators, supports the relaxation of parking requirements for developers, saying that strict minimums not only add to construction costs but also lead to slower development and excess capacity. “If you’re an operator and your parking structure is overbuilt and you can’t fill it, that does you no good,” says NPA Vice President Jason Gleit.

Lurking behind this evolving consensus is the eventual prospect of autonomous vehicles, and how they would shift the calculus around ride-hailing services. Right now, the per-mile cost of a trip with Uber or Lyft can be two to three times higher than the same trip in a personal car. But if and when ride-hailing fleets become fully autonomous, that will change. The tipping point, according to the Rocky Mountain Institute (RMI), a transportation think tank, will come when these services bring their cost per mile in line with the per-mile cost of owning and operating a personal vehicle, currently about \$1. A recent RMI study predicts that “peak car ownership in the United States will occur around 2020 and will drop quickly after that.”

Whether it happens in 15 years or 50, a shift to autonomous vehicles would leave metro areas with an even greater surplus of parking space. Fewer cars would be sitting idle most of the day, since a fleet will theoretically be on the move most of the time. Less room would be needed for parking, since five self-driving cars will fit into space now occupied by four. That day may be somewhere in the distant future, but it is a future that the people who build and own parking lots, and the cities that house them, cannot afford to ignore.

Converting an existing garage to other uses is not an easy thing to do. Mary Smith, a principal at Walker Consultants, a firm specializing in the design and restoration of parking facilities worldwide, points out that repurposing a multilevel garage to housing, office or retail space is more than a matter of adding walls and plumbing. Designing a structure to carry cars is not at all like designing for people and their possessions. Most parking structure footprints, Smith says, are “simply too big to convert to office. You won’t have enough windows in proportion to the space.”

A typical parking garage is designed more like a bridge than like a building. Support columns are spaced far apart, which allows the floors to flex. “Parking structures are really bouncy,” Smith says. “Most people wouldn’t want to live on a floor that bounces all the time.” The floors in a garage are typically sloped, and ceiling heights are shorter than in residential construction. Retrofitting an existing garage requires additional strengthening of the structure and adding stairs and elevators—and maybe hollowing out an atrium in the middle to bring in more light—all of which significantly increases the cost. Wichita’s Broadway Autopark apartments was feasible because Knightley’s Garage had high enough ceilings and flat floors. Some older garages have that, but most don’t.



Top: A Gensler Architects concept for future garage reuse. Bottom: In a nod to its previous life as a garage, parking stripes are still visible in a newly adapted space at Northwestern University.

For that reason, a growing number of developers, architects and engineers have started building new garages with the capacity to be switched to other uses, if and when the need arises. Major projects of this kind in Denver, Houston and Los Angeles are already under construction or on the drawing board. Peter Merwin is a principal at the worldwide firm Gensler Architects and specializes in “retail-centric, mixed-use environments and walkable urbanism.” Speaking of a designed-for-the-future garage project he worked on in Houston, Gensler says that “we convinced the client that adding 20 percent more steel into the structure would be a minimal cost and allow maximum flexibility over time.” Counterintuitively, the

loads for automobiles are actually less than the loads sustained when a floor is full of people and all of their possessions. “You’d think about a big heavy car,” he says. “But actually, you need to add more steel to your parking structure in order to retrofit it to other uses.”

Merwin’s firm is currently working on a new parking garage in the Los Angeles Arts District. With level floors and 13-foot ceilings, the structure is being designed such that it could one day accommodate office space, retail, a gym and a theater. The building’s exterior can be clad in glass windows when the time comes, and there will still be space for 1,000 cars underground. “If you keep



Three levels of above-ground parking at Cincinnati's 84.51° Centre were designed to become office space at a future date.

GENSLER/GARRETT ROWLAND

adding and tearing down you're doing a huge disservice to a planet of limited resources," says Merwin. "What's the most sustainable building? It's the one that already exists, right?"

Walker Consultants recently designed an office complex for a client that wanted to make the parking area completely convertible. They willingly paid a third more to have the structure designed from the start to be ready for a future conversion. Merwin thinks that designing garages that are adaptable will add value to a property, much the way LEED green building certification does today. "The asset will have a certain caché associated with it," he says.

Repurposing garages is not exactly a new idea. In Depression-era New York, two Kent Automatic Garages were erected, standing 24 stories tall and holding nearly 1,000 cars. An electronic parking device guided each car into an elevator and then to an empty slot far above the street. Similar elevated automatic garages were built in Cincinnati and Chicago. One of the New York buildings was later converted into a warehouse, then condos. The other was repurposed as office space in 1964. The Chicago garage, known locally as the Jeweler's Building, was once thought to be the tallest building in the world outside of New York. It's on the National Register of Historic Places, although not necessarily because of the 24-story parking garage that was removed from its core.

Some adaptive reuse conversions have moved in the opposite direction. Built in 1925, Detroit's Michigan Theatre was a French Renaissance movie palace before it became a nightclub and then a rock music venue. New owners wanted to tear it down, but that would have compromised the structural integrity of the adjoining office tower. In 1977 the seats were ripped out and a three-level parking deck erected within the theater's walls, leaving much of the ornate interior decaying but more or less intact. The movie palace-turned-garage sits on the spot where Henry Ford built his first automobile.

The conversion of the 68-year-old Knightley's Garage to the Broadway Autopark apartments was handled by Shelden Architecture in Wichita. The five-story, 500-space facility was designed and built in 1949 using the latest advances in concrete construction. The high ceilings and flat floors were important assets in the conversion to living space. "That's the first thing you need to check if you're going to change the occupancy type and not do a skateboard park," says architect Daniel Gensch, who took the lead in repurposing the abandoned Knightley garage. Things like fire separations between living space and the remaining garage area needed to be addressed. "We had to figure out ways of making it code compliant," Gensch says. ("The people who did the conversion in Wichita actually worked through all the issues," Mary Smith adds by way of compliment.)

Not everything reused in the Autopark project was strictly structural. Back in 1949, a young Wichita structural engineer named Dick Hartwell oversaw the advanced concrete construction method that made "The Midwest's Largest and Most Modern Parking Garage" possible. Sixty-five years later, Shelden Architects hired him to do the structural analysis for the repurposing project just before he retired.

Customers didn't have to park their own cars at the Knightley's Garage that Hartwell built. That was done for them. The same may be true one day if residents of the Broadway Autopark apartments have cars that park themselves. But rather than focusing on the conversion of other old garages, the Wichita firm is looking to the future, already designing two adaptable parking projects, intentionally built to be repurposed. "We are thinking about the long-term life of garages," says architect Gensch. "I would like to point out that the Pantheon in Rome is nearly 2,000 years old and is made out of concrete." **G**

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