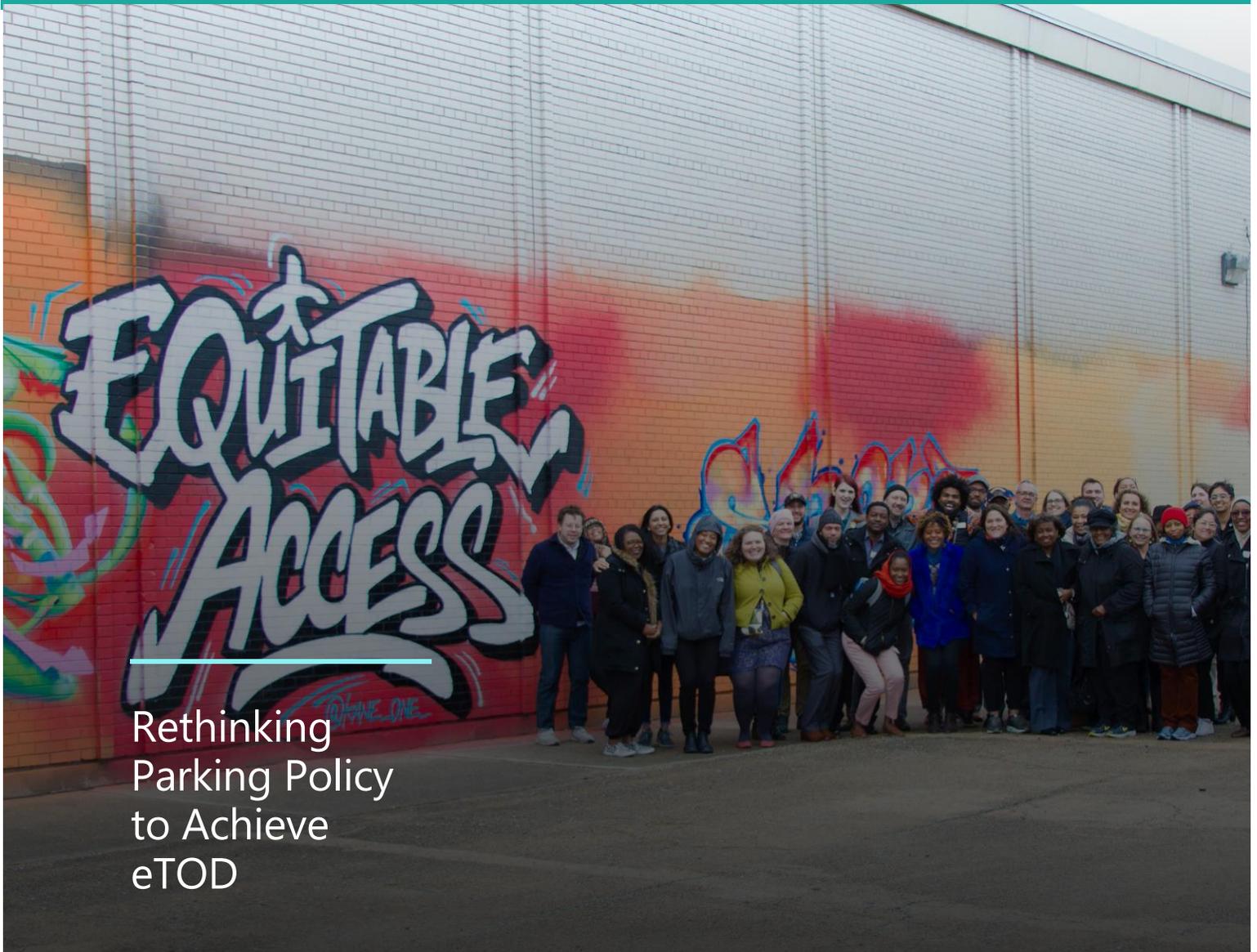


FEBRUARY 2020



Parking: A Major Barrier to Equitably Oriented Transit



Rethinking
Parking Policy
to Achieve
eTOD

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BACKGROUND AND KEY FINDINGS

Introduction

“If not dealt with, parking can form a huge obstacle to TOD (Transit-Oriented Development).”

[-Cervero et al, 2004](#)

Partners in the [Strong, Prosperous, And Resilient Communities Challenge](#) (SPARCC) are working to advance equitable transit-oriented development (eTOD) policies and projects. This includes broadening the definition of transit-oriented development (TOD) to include issues of racial equity, community health, access to economic opportunity, and environmental goals. Infrastructure investment that includes a design for TOD without specific attention to those most vulnerable in a community and those most reliant on transit can perpetuate and exacerbate racial and economic inequities.

An equity- and justice-centered approach must be at the core of eTOD planning and investments to ensure that past inequities are acknowledged, and that new plans, projects and policies do not cause harm to the people they are designed to serve. That includes low-income residents and workers, and people with disabilities, to list a few.

Successful eTOD requires planning not just for transit but for the ways such a catalytic investment will advance larger community needs, including affordable housing, workforce and small business development, community health, and the environment.¹

In 2019, SPARCC partners in Chicago came together to support the new Lightfoot mayoral administration to advance eTOD and implement the City's TOD ordinance, which was originally adopted in 2013 and amended in 2018. Members of [Elevated Chicago](#), representing local TOD communities, regional planning agencies, non-profits, philanthropic organizations and public agencies, helped shape the 2018 TOD ordinance to include neighborhoods served by high-frequency, heavily utilized bus routes. They were also part of the City's eTOD working group convened to support its implementation. This includes meeting Section 4 of the TOD Ordinance that requires the City to publish an eTOD Policy Plan by August 2020.

The eTOD Policy Plan shall include measures to evaluate the performance of policy changes, and their equity impacts. It also creates the platform to recommend additional policies to further support transit, affordable housing and equitable development including modifications to the City's parking approaches and discouraging the use of single-occupancy vehicles through travel demand management strategies.

SPARCC technical assistance is supporting Chicago's eTOD working group, including researching best practices for TOD-supportive parking policies and examining the equity considerations for approaching parking reforms in Chicago's TOD neighborhoods. This white paper, developed by MZ Strategies, LLC for SPARCC's Elevated Chicago partners, compiles these research findings. While developed to support efforts underway in Chicago, it can be useful for other communities working to advance eTOD strategies.

Parking and Racial Equity -- Key Findings

It's estimated that there are as many as two billion parking spots in the United States, while there are 200 million cars on the road. It's been calculated that cars cruising for on-street parking in U.S. cities contribute significantly to congestion and pollution, and parking covers huge amounts of urban land area, including, for example, 14 percent in LA County alone. "Free" parking increases housing and consumer costs because parking

¹ SPARCC has produced two white papers on equitable TOD that are available on our website: "[Lighting a SPARCC Under Equitable Transit-Oriented Development](#)" and "[Implementing Equitable TOD](#)"

is subsidized through expenditures passed on to consumers. It also contributes to more driving, which means more polluting cars on the road.

Parking policies are an integral part of implementing eTOD. Many transit and climate advocates and those wanting to see more walkable communities support strategies to eliminate the hidden subsidies that encourage driving. This can include so-called free parking as well as zoning and land use regulations that require an overabundance of parking in relation to homes and businesses. Such policies are especially detrimental in lower-income communities, which typically have fewer car owners, especially if residents have access to high quality transit. At the same time, low-income residents who live or work in areas not served by transit are forced to own and maintain cars, putting further strain on their ability to pay for housing, education, healthcare, food and other goods and services, and adding to carbon pollution.

Transit-oriented development, by its very nature, is designed to reduce dependence on the personal automobile and encourage greater use of transit, walking and other mobility options. As a result, traditional parking approaches subsidized by residents in the form of higher consumer and housing costs are unnecessary. Aligning parking policies to support TOD goals is an important strategy to discourage the use of single-occupancy vehicles. However, it is also important to consider how policy approaches such as increased parking fees could have potentially negative consequences for those who may be economically burdened.

Parking strategies explored in this white paper that advance eTOD goals include:

- » Utilizing an equity screen to examine equity impacts, and identify mitigation strategies
- » Designing inclusive community engagement strategies including determining how parking revenues are used to ensure community benefit
- » Targeting parking revenues to support increased mobility options and ensure that low-income households are not unduly burdened
- » Unbundling parking costs from housing, including in affordable housing and multi-family housing projects
- » Right-sizing parking requirements through reducing or eliminating minimums in TOD neighborhoods, or setting parking maximums that foster shared-parking opportunities
- » Investing in more frequent, accessible transit to increase regional coverage and availability.
- » Committing to fair and frequent parking enforcement, including of vehicles illegally parked in transit corridors.

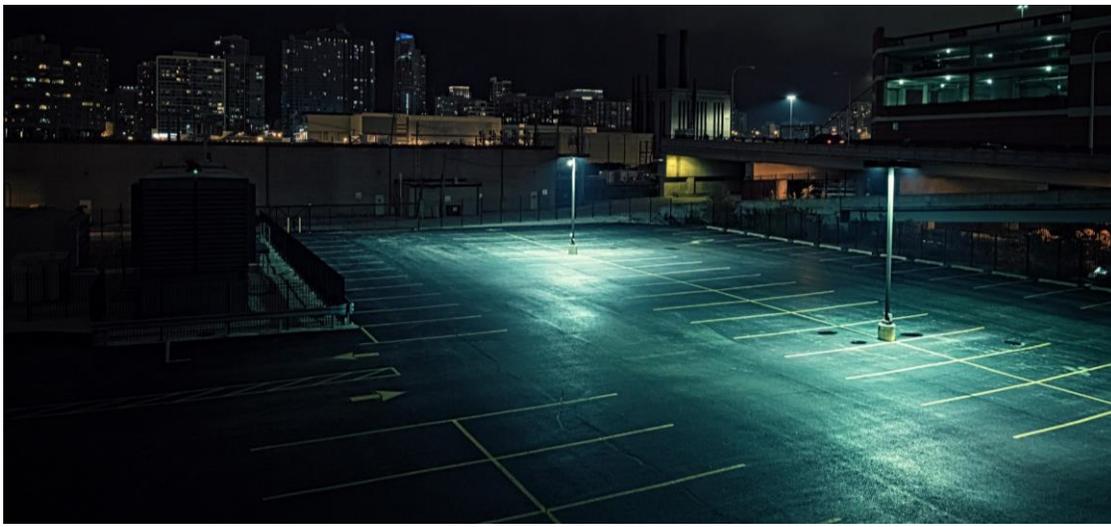


Photo: Shutterstock

WASTEFUL PARKING HURTS COMMUNITIES

Right-sizing parking policies encourages greater transit ridership and may reduce the burden of paying for parking faced by low-income residents. Parking fares and regulations should fit the context of the local community. Traditional parking requirements often take a suburban model and apply it to denser urban environments. The result can be an excess of parking or lost revenues that could be tapped to fund other needs important to the community, including transportation demand strategies or even subsidizing transportation costs for low-income residents.

Parking is also fundamental to achieving equitable TOD, and getting it right requires working with local communities and residents to tailor solutions so that they reflect the authentic needs, impacts and benefits for communities. Transportation is the second highest household cost, on average, for lower-income households ([Center for Neighborhood Technology \(CNT\)](#)). Building and maintaining excess parking can add significant unnecessary costs to affordable housing projects, with a single underground space costing almost \$40,000 to build ([Enterprise Community Partners](#)). For housing built near transit, this may be a wasted expense. According to the [National Household Transportation Survey](#), households with annual incomes below \$25,000 were 10 times more likely, on average, to be zero-vehicle households than households with annual incomes above \$75,000.

The evidence in Chicago suggests that indeed, too much parking may already exist in higher density neighborhoods near high quality transit. A [2016 analysis by CNT](#) found that a third of mandated parking garages and surface lots at apartment buildings across the city were empty. On average, the analysis found that buildings studied provided 0.61 parking spaces for every apartment unit but used only 0.34 spaces per unit.

The last decade witnessed a wealth of new research and reports quantifying the impacts of TOD and transportation management strategies on reducing parking requirements and driving. Several studies have also documented the cost to developers of providing too much parking, thereby driving up the overall cost of housing. Among the notable publications produced are Todd Litman’s *Parking Management Best Practices* (2006); *Parking Reform Made Easy*, by Richard Willson (2013); *Parking Management for Smart Growth*, by Richard Willson (2015); *The High Cost of Free Parking* by Donald Shoup (2004); and *Parking and the City*, Edited by Donald Shoup (2018). This body of work finds that adjusting traditional parking approaches to leverage and support TOD can have a profound impact, as shown in Figure 1.

REDESIGNING PARKING WITH EQUITY IN MIND

Factor	Typical Adjustments
Residential Density	Reduce requirements 1% for each resident per acre; e.g., 15% where for 15 residents per acre, and 30% for 30 residents per acre.
Employment Density	Reduce requirements 10-15% in areas with 50+ employees per gross acre.
Land Use Mix	Reduce requirements 5-10% in mixed-use areas, and more if parking can be shared.
Transit Accessibility	Reduce requirements 10% for housing and employment within ¼ mile of frequent bus service, and 20% within ¼ mile of a rail transit station.
Carsharing	Reduce residential requirements 5-10% if a carsharing service is located nearby, or 4-8 spaces for each carshare vehicle in a residential building.
Walkability	Reduce requirements 5-15% in walkable communities, and more if walkability allow more shared and off-site parking.
Income	Reduce requirements 10-20% for the 20% lowest income households, and 20-30% for the lowest 10%.
Pricing	Reduce requirements 10-30% for cost-recovery pricing (i.e. parking priced to pay the full cost of parking facilities).
Parking & Mobility Management	Reduce requirements 10-40% at worksites with effective parking and mobility management programs.
Design Hour	Reduce requirements 10-20% if a 10 th annual design hour is replaced by a 30 th annual peak hour. Requires overflow plan.
Contingency-Based Planning	Reduce requirements 10-30%, and more if a comprehensive parking management program is implemented.

Figure 1. Strategies to Reduce Parking Demand (Source: Todd Litman, *Parking Management Best Practices*, 2006)

What if cities and communities rethought parking policy and designed it not only to serve transportation goals but also equity goals? Leading with equity creates better transportation options for all. It also opens up new ways of looking at traditional problems and solutions. This includes the common approach to TOD parking policies that encourage eliminating parking and increasing the cost. Both are strategies that

create disincentives to driving but should be considered in terms of their equity impacts and mitigation strategies.



Photo: Shutterstock

Many low-income people and people of color are forced to drive given inadequate transit options and poor transit coverage or service hours. Increased costs of parking or greater enforcement of parking violations can create greater financial hardships for those living on modest incomes. Greater enforcement leads also to more opportunities for racial profiling and inequitable ticketing. In some areas of the country, parking violations and unpaid fines are reasons used by courts to take away residents' driver's licenses or create other legal barriers, adding to the burden of low-income families.

Some strongly support market prices—except for parking. Some strongly oppose subsidies—except for parking. Some abhor planning regulations—except for parking. Some insist on rigorous data collection and statistical tests—except for parking. This exceptionalism has impoverished thinking about parking policies. If drivers paid the full cost of their parking, it would seem too expensive, so we expect someone else to pay for it. But a city where everyone happily pays for everyone else's free parking is a fool's paradise. – Donald Shoup, [City Lab](#), [September 20, 2019](#)

In updating parking policies and requirements, planners and engineers must work with the diverse set of partners involved in TODs, including those who live, work and own businesses in transit-served communities. Equity impacts must be considered to ensure that parking approaches are right sized to reduce traffic congestion and environmental impacts, lower construction costs so that housing is more affordable, and support a comprehensive set of affordable mobility options for people of all income levels and physical abilities.

Across the country, hundreds of communities are in the process, or have recently updated, their parking policies to create more walkable, TOD-supportive neighborhoods. Among the approaches being advocated for by parking experts like Donald Shoup are to remove off-street parking requirements, charge the right price for on-street parking, and spend the parking revenue to improve public services on metered streets. These are all strategies that can advance TOD-supportive parking goals. The third approach becomes especially critical from an equity perspective and is one whereby more cities can broaden the ways that parking revenues can be used to support low-income residents in corridors or neighborhoods where parking is priced.

The following sections provide a primer on traditional parking approaches and spotlight strategies being used in a growing number of communities to “tame parking” in support

of reduced single-occupant automobile use to achieve broader TOD, climate, walkability and affordability goals. Current parking trends and existing policies utilized in the City of Chicago are described to provide SPARCC partners a better understanding of current conditions, and where new approaches may be warranted. This white paper concludes with examples of innovative parking reform strategies emerging from several communities across the country. In places like Seattle, Minneapolis and Portland, greater involvement of local residents and businesses is being used to create new parking approaches. Eliminating parking requirements and targeting parking revenues to improve mobility options are among the list of emerging best practices. Yet it is clear in bringing a specific equity focus to the topic of parking reform and looking for examples that more work is needed.

APPROACHES

A Quick Look at Traditional Parking Requirements

Minimum parking requirements were developed to address congestion caused by people circling streets in search of parking. Adequate parking is important for retail and commercial developments. Over time, minimum parking requirements originally developed for suburban contexts have been applied to urban settings, leading to increased development costs and high parking vacancy rates. Even in suburban developments, excess parking capacity is common.

Excess parking takes up space that could be put to better use for more housing, other community uses or open green space and parks. For example, in 2016 in Atlanta, the regional transit agency, MARTA, began [repurposing land near transit stations to serve as youth soccer fields](#). A third location is under development along MARTA's rail network. Another example from Chicago is the [Emmet Street affordable housing development](#) in Logan Square that is being built on a underutilized parking lot owned by the City of Chicago. When completed, the project will provide 100 units of affordable housing adjacent to frequent transit service.

Parking provided immediately adjacent to transit stations creates a physical barrier to the surrounding community and can create empty and potentially poorly lit space that feels unsafe. Surface parking lots covered in impervious surfaces generate increased storm flows, degraded water systems and heat islands. These environmental hazards contribute to additional health and cost burdens on low-income families and reduce their quality of life. Parking structures themselves require substantial energy and natural resources to construct and maintain, further contributing to greenhouse gas emissions. Additionally, excess parking likely to encourage car use can have negative impacts on air

quality. In Chicago, SPARCC is supporting the [Center for Neighborhood Technology's Culture and Climate Resilience](#) project at the former Overton Elementary School to transform a large underutilized parking lot into a rain garden to address frequent urban flooding.

Excessive parking also drives up housing costs. [Researchers have estimated the national hidden costs of parking](#) and find that, on average, the per space construction costs are \$24,000 for surface lots and \$34,000 for underground structures. In high cost housing markets like San Francisco, the cost to build one structured parking space exceeds \$60,000. These costs are typically not recaptured because few developments charge the full cost of parking. [Gabbe and Pierce \(2017\)](#) estimate a deadweight loss of \$440 million nationwide due to carless renters paying for garage space bundled into their housing costs.

[Research in King County, Washington, found](#) evidence of excess supply (average parking vacancy rates over 40%) at multi-family developments, as well as high parking construction costs (\$20,000-\$40,000 per stall). This means that scarce affordable housing dollars may be subsidizing unused parking spots.

The “over-parking” of projects near transit probably plays a large part in explaining why some TODs in the U.S. have failed to meet expectations for transit ridership gains and congestion reductions. One-to-one replacement parking requirements have clearly hampered TODs, and excessive parking requirements have probably induced car ownership and usage in a “[vicious cycle of supply and demand feeding off each other.](#)” A [national survey in 2010 found](#) an estimated average minimum parking requirement for multi-family housing near rail transit of 1.48 spaces per unit, above even the Institute of Transportation Engineers suburban standard of 1.2 spaces per unit.

Getting Parking Right

The movement to **right size parking** is about encouraging a level of parking that matches the goals of the community. For TOD [right-size parking entails multiple strategies](#), including:

1. A limited parking supply achieved through eliminating parking minimums
2. Programs and services for alternative transportation and shared parking
3. Thoughtful and safe designs for pedestrians
4. Priced parking, including dynamic pricing, to help manage available supply.

“ ”

Parking reforms may be the easiest way to achieve a more just society... Thoughtless planning for parking can be as harmful as a perverse and deliberate scheme.

DONALD SHOUP

Programs and services to reduce the demand for parking decrease the need to expand current or future parking supplies and include bikesharing, carsharing, and discounts for public transportation. Thoughtful designing for pedestrian safety and appeal entails efforts such as reducing the number and size of curb cuts, placing parking behind buildings, and offering amenity-rich walkways and plazas. Priced parking supports adequate availability and turnover of spaces. Unbundling the cost of parking from rent for housing supports equity because car-free households no longer pay for parking spaces they don't use. Returning parking meter revenue to metered neighborhoods can catalyze public improvements such as sidewalk cleaning and street trees (see analysis by [Shoup, 1994](#); and [Kolozsvari and Shoup, 2003](#)).

Reductions in minimum parking requirements are often applied in transit-supportive districts in order to reflect the potential for reduced automobile ownership and usage among residents and commuters, given the close proximity of high-quality transit services. Typically, these reduced parking minimums are applied to land use types that are better correlated with transit usage, such as multi-family residential, commercial office, and small-scale retail. Common approaches to applying reductions to minimum parking requirements include applying an overall percentage reduction to citywide parking requirements or establishing new minimum parking ratios that apply with the boundaries of the plan or transit station area. As an alternative to reducing minimum parking requirements, some cities have implemented parking maximums. Under the parking maximum approach, cities establish a maximum ratio for parking spaces for various development types. Developers then have the option to provide less parking than the maximum amount allowed. Parking maximums can be used in tandem with reduced parking minimums to ensure that the minimum parking needs of a transit-oriented community are met while still encouraging walking and transit use.

When allowed to determine how much parking to provide, most developers respond to market dynamics. Deregulating parking requirements by eliminating minimums allows markets to determine parking supplies and shifts the approach to supplying parking only to the extent that it is economically justified ([Willson, 2013](#)).

Understanding the unique needs of Chicago TOD residents is important and should be informed with updated parking and driver information, and through discussions with community members to co-design solutions and right-size parking strategies. This may include not only regulatory approaches, but also new methods for pricing parking and community-ownership and control of revenues raised from such strategies.

Fair and frequent enforcement of parking policies also needs to be part of the equitable TOD parking approach. This includes making it a City priority to ensure that vehicles are not double-parked and blocking transit routes or bike lanes, parking is regularly enforced, particularly along high-frequency transit routes, and specifically allocating parking revenues to better serve equity goals. Revenues can be used to increase transit options, subsidize transit passes for low-income households, or fund small-scale infrastructure improvements in the communities where these revenues are

raised to improve safety and vitality of the pedestrian environment. Before introducing new or higher parking fees for public destinations poorly served by transit, the responsible agencies could discourage car use by adding “last mile” transportation connections from major transit corridors to destinations.

In establishing approaches to pricing parking, it’s critical to engage residents, developers and business owners in the process. No matter the income level, it seems parking is a hot button issue. Yet, it is critical to fully consider the unequal and disproportionate impacts that pricing parking may have on different individuals and businesses, and then identify appropriate policy responses.

Melody Ma, in writing about [equitable parking approaches in Vancouver, British Columbia](#), suggests creating new formulas for pricing parking, keeping equity in mind rather than merely revenue generation. She notes that overly high parking rates that don’t reflect the clientele or cost of an average shopping trip in an area can hurt already struggling businesses serving lower-income residents. Instead, parking rates could be priced to reflect the average price of a shopping trip in an area or priced to reflect the value that the destination provides to low-income households.

Chicago’s Parking Story

The City of Chicago is already on the path to rethinking its parking policies. The [Chicago Transit Oriented Development Ordinance](#) aims to encourage more development in transit zones and includes provisions to reduce parking. In 2015, the ordinance was amended to provide various bulk, density and parking premiums for proposals in business, commercial, downtown or manufacturing zoning districts if those properties are located within 1,320 feet (a quarter mile) of a Chicago Transit Authority or Metra rail station (extended to 2,640 feet, a half mile, if the property is on a pedestrian street). These development incentives related to height, density or building bulk increases are only applicable in zoning districts that also have a three-floor area designation. Developers can apply for parking reductions regardless of the project’s floor area. This approach reflects similar strategies being advanced in other TOD regions where reduced parking requirements are codified for TOD projects. Given the voluntary nature of Chicago’s TOD ordinance, there is more the City can do to reduce single-vehicle use, encourage right-size parking, and ensure that the impacts and benefits to low-income TOD residents are considered in parking policies and mobility options.

One challenge, however, is the decision made in [2008 by Mayor Daley to privatize the City’s parking meters](#). In exchange for ceding 75 years’ worth of parking meter revenue, the City was paid \$1.15 billion by the private firm, Chicago Parking Meters, LLC. The deal means the city receives part of the profit when the company makes money but it puts the City on the financial hook to pay the firm lost revenues when parking profits are

down. In recent years, the City has been losing money, taking resources that could fund other important City priorities to pay for low-cost parking. This is all about to change.

In November 2019, Chicago aldermen approved a 50-cent increase in the city’s most high-demand parking areas as part of the city’s 2020 budget. New parking meters will be installed in the West Loop, where hourly rates will increase by \$2.50. Other parking hikes are planned, in 25-cent increments, for downtown rates and in some neighborhoods. On its face, this decision is a win for equity advocates if new revenues are directed in ways that benefit low-income people and people of color. City resources can be redirected to help pay for other budget items that benefit neighborhoods and city residents. Those most likely to pay the higher rates are from suburban communities, according to data collected by the City. The areas seeing price increases are well served by transit. Increasing parking fees therefore accurately moves the cost of paying for parking to those who actually use it.

Figure 2 provides analysis of the most recent household travel survey for Chicago. It finds a strong correlation between income and vehicle ownership, with roughly 40% of those households whose annual income is below \$20,000 owning no cars and an extremely low rate of those households owning three or more cars. This data underscores that TODs providing affordable housing units still need some parking but significantly less than traditionally required.

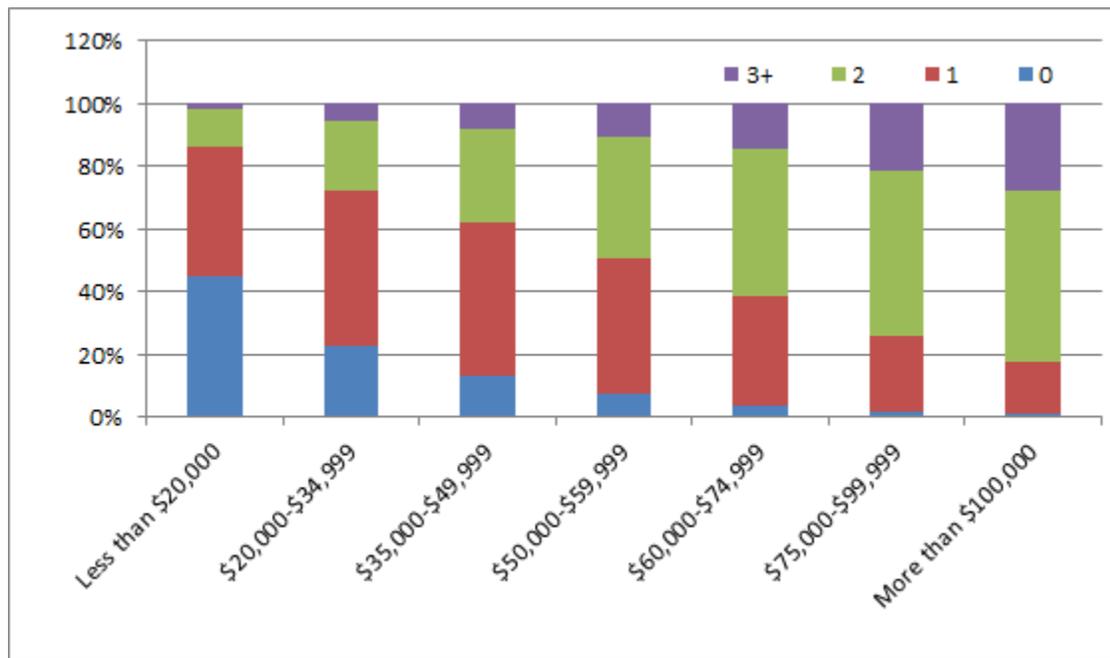


Figure 2. Lower-income households in Chicago own fewer automobiles than higher-income households (Source: 2008 Chicago Travel Tracker Survey; calculated by MZ Strategies using household weights.)

Yet, it may also be that some low-income residents are unduly burdened by these cost increases, especially if they live in neighborhoods not well served by transit or have mobility impairments that necessitate use of a personal vehicle. As parking rates increase in neighborhood commercial areas, this burden may become more pronounced. The response should be to craft a policy with equity as a core consideration. Revenues could be targeted to help fund transportation options and improved transit service; a program could be funded to subsidize lower rates for qualifying residents; or other innovative and equitable strategies could be realized.

Parking Reform Examples from the Field

San Diego, California, recently took a significant step toward deregulating parking with a [vote earlier this year](#) to eliminate minimum parking requirements for new housing developments in “transit priority areas” – those within a half-mile of current or planned transit. Accompanying this shift are planned requirements for developers to include access to bike storage, **and discounts for regional transit passes.**

In recent years, the [Right Size Parking](#) project in King County, Washington, produced a [Technical Policy Memo](#), a [Right Size Parking Model Code](#), and the web-based [King County Multi-Family Residential Parking Calculator](#), in support of more efficient parking resource allocation and reduced parking in multi-family developments. Additionally, a performance-based parking management approach can help to establish policy goals and targets for implementing parking that meets a community or development need. The King County model includes a set of adjustments to parking minimums that help address different housing unit types, demographic constraints, and encourage transportation alternatives. These are shown in Figure 3. The recommended adjustments for low-income, senior and student households reflects the lower automobile ownership rates of these populations and is intended to help reduce the cost for developing affordable housing options.

King County is a national leader in its approach to institutionalizing racial equity in its policies and programs across county departments. The County’s [Equity Impact Review \(EIR\) process](#) has been used for several years and offers an approach for other communities to consider in evaluating equity impacts from parking strategies. The EIR process includes quantitative metrics and community engagement findings, involving both technical subject matter experts and those from the community who may be most

affected.² The County has created EIR tools, workshops and training to supports its use in considering equity in each stage of the process.

These include:

- » Distributional equity—Fair and just distribution of benefits and burdens to all affected parties and communities across the community and organizational landscape.
- » Process equity—Inclusive, open and fair access by all stakeholders to decision processes that impact community and operational outcomes. Process equity relies on all affected parties having access to and meaningful experience with civic and employee engagement, public participation, and jurisdictional listening.
- » Cross-generational equity—Effects of current actions on the fair and just distribution of benefits and burdens to future generations of communities and employees. Examples include income and wealth, health outcomes, white privilege, resource depletion, climate change and pollution, real estate redlining practices, and species extinction. – *King County Equity Review Checklist*

² [https://kingcounty.gov/~media/elected/executive/equity-socialjustice/2016/The Equity Impact Review checklist Mar2016.ashx?la=en](https://kingcounty.gov/~media/elected/executive/equity-socialjustice/2016/The_Equity_Impact_Review_checklist_Mar2016.ashx?la=en)



TABLE 2: CONTEXT-BASED ADJUSTMENTS AND REDUCTIONS

ADJUSTMENTS FOR HOUSING UNIT TYPE

Studio*	1-Bedroom*	2-Bedroom*	3-Bedroom+*	Residential Suite
0.85x	1.0x	1.6x	1.8x	0.5x

ADJUSTMENTS FOR RESIDENT CHARACTERISTICS

Very Low-Income	Low-Income*	Workforce	Senior*	Assisted Living	Dormitory
0.5x	0.65x	0.75x	0.5x	0.33x	0.33x

REDUCTIONS FOR TRANSPORTATION ALTERNATIVES

Frequent Transit	Fixed-guideway Transit	Bike Share Facility	Resident TMP	Active Transportation/ Transit-supportive Design
25%/50%	50%/100%	up to 25%	up to 20%	up to 10%

ADJUSTMENTS FOR OFF-STREET PARKING MANAGEMENT

Unbundling*	Shared Parking	Remote Parking	In-lieu Fee	Deferred Parking	Lease/Deed-restricted parking
20%	up to 50%	up to 100%	up to 100%	up to 50%	up to 100%

PARKING STALL SUBSTITUTIONS

Car Share Stalls	Bike Parking Stalls	Motorcycle Parking	Adjacent On-street Parking
4:1 (up to 40%)	1:4 (up to 25%)	1:2 (up to 5%)	1:1

*Factors derived from the RSP multifamily parking utilization survey

Figure 3. King County Metro model parking ordinance adjustments to base-minimums (Right Size Parking Model Code, December 2013; page 21)

The Seattle City Council revised [city regulations to provide developers more flexibility](#) in deciding how much parking to include in developments in areas with frequent transit and to enable building owners to rent their unused parking spots.

This legislation enables the city to:

- Allow for greater sharing of off-street parking in certain zones
- Reduce the parking requirements for rental and income-restricted housing
- Enable landlords to rent out excess parking to individuals who do not live or work in their buildings
- Require owners of apartment buildings with 10 or more units to charge separately for parking spaces, giving tenants the option to forgo parking and pay less for housing.

In 2016, the [District of Columbia](#) also undertook efforts to reduce parking minimums in some areas, especially those close to Metro stations, along high-capacity bus lines and throughout downtown. It also cut parking minimums by half for mixed-use developments that are within a half-mile of a Metro station or a quarter-mile of a streetcar line or priority bus corridor.

In [Arlington, Virginia, the County](#) has enacted a comprehensive set of TOD parking policies. This includes reduced parking requirements for office, hotel and commercial spaces within transit-served areas. Parking requirements are further reduced if shared parking programs are implemented, and parking can also be provided up to a quarter-mile away. Rigorous transportation demand strategies are in place, including offering transit benefits to residents and tenants. It is not surprising that the County also boasts strong economic and population growth without a parallel significant increase in traffic. In fact, the vehicle trip rate in Arlington County's Rosslyn-Ballston corridor, a renowned TOD corridor, was estimated to be 0.17, compared to the ITE average for similar housing of 0.54 ([Cervero et al, 2004](#)).

In Berkeley, California, the City passed the [Tax Relief Action to Cut Commuter Carbon](#) and provide commuter benefit services for employers. The City requires that employers with ten or more employees provide a commute program to encourage use of public transit, bicycles, and vanpools. Parking can be provided up to 300 feet away from a development. A Transit Service Fee is collected to provide paratransit passes to people with disabilities, and subsidies are available for approved transportation demand management programs to further support low-income commuters. New York City and Washington, D.C., have also passed transit benefit ordinances.

In 2018, the City of Minneapolis in Minnesota got [rid of all its off-street parking minimums](#), becoming the third major U.S. municipality to do so (San Francisco and Seattle being the other two). This policy decision was driven in part by the large percentage of renters (29% of households) who do not own cars, and by the City's

commitment to reduce local miles driven by 40% to reduce greenhouse gas emissions. A number of cities have passed policies to eliminate parking in certain areas. The non-profit organization, Strong Towns, is [tracking progress across the country by cities to eliminate parking minimums](#) and has sample ordinances used by cities to eliminate or reduce parking minimums.

In Portland, Oregon, the City manages each meter district, including implementation of other parking management plans. [Policies were updated in 2015](#) to coordinate policies so they aligned with the City's vehicle reduction goals and elevated the voice of residents and business owners. Adjustments to rates and to the [City's Area Parking Permit Program](#) are both guided by a committee of local businesses, residents and property owners based on a periodic review of parking occupancy, availability of travel options and other factors. City policies also require that the Area Parking Permit Program be informed and guided by a committee of local residents, businesses and property owners. City policy (BCP-TRN-2.102) dictates that revenues must first be spent to payback of bonds for city-owned parking facilities; second to pay for capital and operating costs of the meter system; and third to pay for mitigation of spillover parking impacts to adjacent neighborhoods. Remaining funds can be spent on transportation and parking services (with a majority of net revenue to be used within the district in which it was raised), including transportation demand management and economic development programs; maintaining and improving right-of-way to support those walking and biking; and building short-term off street parking.

CONCLUSION

Approaches to parking have been revolutionized in many cities over the last decade to align with TOD goals that encourage reduced driving and greater use of transit. This same type of revolutionary thinking is needed now to ensure that equity is fully considered going forward. Residents of low-income households, on average, own fewer cars, so improving transit alternatives and shifting the cost of parking from those who don't use it to those who do is a win for equity. But that's not the only approach. Residents need to be included in the process to help set parking policies and rates to ensure programs are designed with equity impacts in mind. Special effort should be made to include those who are low-income, who have mobility impairments, and who live in multi-family units. Parking policies should also be informed by business owners, especially those serving lower-income and neighborhood customers.

We can and must rethink parking policy to serve transportation and equity goals. Leading with equity creates better transportation options for all. It is also critical to achieving truly equitable TOD.

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More Acknowledgements

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Appendix

- » [Todd Litman's *Parking Management Best Practices* \(2006\)](#)
- » [Parking Reform Made Easy, by Richard Willson \(2013\)](#)
- » [Parking Management for Smart Growth, by Richard Willson \(2015\)](#)
- » [The High Cost of Free Parking by Donald Shoup \(2004\)](#)
- » [Parking and the City, Edited by Donald Shoup \(2018\)](#)

