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Residential parking permit plans in 7 cities worldwide: a survey

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As congestion pricing in Manhattan approaches implementation in 2021, Manhattan residents are understandably concerned about the effects on parking in their own neighborhoods—especially just north of the 61st Street congestion zone boundary. Many believe a residential permit parking system would eliminate congestion pricing's negative effects on dearly-held street parking.

This survey of congestion plans and practices in seven cities worldwide attempts to understand the brave new world Manhattan is about to enter. This study takes no position supporting or opposing zoned residential parking permits. The experiences of other cities are, however, useful in helping point the way forward.

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Introduction

From Seinfeld to Serpico, New York’s parking dilemma has garnered considerable infamy for the city, often welcoming comparisons to competitive sporting matches. Ever since overnight on-street parking was legalized in New York City in 1950, residents have been searching for ways to ensure local access to parking spaces. Thus, the discussion of Residential Permit Parking, or RPP, in New York City has been decades in the making.

The passage of legislation allowing congestion pricing in April, 2019—a toll on vehicles entering the Manhattan Central Business District, defined as south of 61 Street—that would both reduce Manhattan traffic congestion and generate revenue to the city’s beleaguered mass transit system. New York will be the first city in North America, and only one of a handful across the globe, to introduce the policy. It is set to be put into place no later than January 1, 2021.

Now, a little over a year away from congestion pricing’s roll-out, details remain scant. A six-person Traffic Mobility Review Panel that will decide most of the major details around the charge has yet to be named or meet. And while the state legislation sets a benchmark that congestion pricing generate \$1 billion a year for the Metropolitan Transportation Authority, and a report commissioned by the Governor’s Office in 2018 laid out possible charging schemes and other policies, New Yorkers are not any bit closer to finding out some of the most important details around this large-scale change.

Moreover, congestion pricing’s roll-out is occurring alongside New York City’s continued push to expand bus and bike lanes. Those changes, too, can greatly affect the daily routines of New Yorkers who own cars.

As space for vehicles continues to vanish and the cost of owning a vehicle in New York City continues to rise, the idea of instituting a Residential Permit Parking (RPP) program in New York—an idea that has existed ever since overnight, on-street parking was legalized in 1950—has once again returned to the forefront.

Interesting fault lines of support and opposition have formed for a RPP program. Perhaps the largest driving force is the subset of vehicle owners who view RPP as a silver bullet that will once-and-for-all guarantee them a parking spot in a city so famous for the daily hunt for parking. On the other hand, other vehicle owners have grown accustomed to, and even enjoy, the ‘hunt’ for this free parking and oppose any RPP program, especially if it comes with a fee.

New Yorkers without cars have a voice in this conversation as well. Here, some believe that a RPP could be a good incentive for New Yorkers—especially those who do not need their cars—to instead ditch them for our city’s mass transit system. On the other hand, some opponents believe a program—if not priced according to the ‘real’ or market-value of parking—could instead subsidize and incentivize further vehicle ownership and dependency.

A RPP program does indeed appear to have modest support in New York City with one study from 2013 finding that 53 percent of New Yorkers would be willing to pay for a residential permit, giving an average price they would be willing to pay of \$408 per year.¹ It is also possible

¹ Guo, Z. and McDonnell, S. “Curb parking pricing for local residents: An exploration in New York

that the passage of congestion pricing this year may have increased the popularity of the program, especially amongst residents who live adjacent to the proposed tolling zone.

But what exactly does a Residential Permit Parking program entail? Research into cities that have employed the policy—which will be expanded upon in the report below—shows that each city that has implemented RPP has done so in a variety of different ways to try to ensure success—from differing rates of permit pricing, to expanding the types of permits used, to tweaking the hours of enforcement, and more. Essentially, if New York City is to implement RPP, there exists no single permit program that the city could indiscriminately copy and paste here. The lesson to be learned from this comparative study is that when it comes to the success or failure of an RPP program, the devil is in the details: with no one right way to achieve the program's goals, success and failure are defined by the execution of several key aspects and how good a fit these present for those most directly impacted by the policy.

Therefore this report seeks to evaluate and compare the execution and results of permit parking programs in Boston, Chicago, Portland, San Francisco and Washington D.C. as well as London and Stockholm.

London, UK

Congestion Pricing and Parking Demand:

London introduced congestion pricing on February 17, 2003. The program called for a flat fee of £5 on vehicles traveling within the nearly 14 square mile zone—referred to as the central London congestion charging zone—with discounts available for residents living within the zone, disabled drivers, and lower emission vehicles. Fees were applicable between 7:00 AM and 6:30 PM Monday through Friday.

In the first year following congestion pricing's introduction, Transport for London (TfL) found that congestion within the zone as a whole had been reduced by 30 percent and that, notably, congestion on radial routes approaching the charging zone had been reduced by up to 20 percent.² The agency also found notable decreases in air and noise pollution and traffic collisions, as well as increases in public transit use.

In London, residents shared similar fears as current day New Yorkers do, of drivers avoiding the congestion charge by diverting to train stations just outside of the zone, parking, and continuing their trip by train (referred to as 'railheading' by TfL, or also commonly known as park-and-riding). For this reason, TfL studied changes in parking demand near train stations just outside of the congestion zone that did not have permit parking at the time.

Of the nine stations that TfL surveyed before and after congestion pricing's implementation, the agency found an overall net decrease of 1 percent in 'railheading.' The agency did find that some new passengers had begun railheading due to the new congestion charge; however, they found them to represent only .5 percent of total rail passengers. Transport for London attributed these

City based on willingness to pay." Transport Policy 30, (2013): 192-193.
<https://www.sciencedirect.com/science/article/abs/pii/S0967070X1300139X?via%3Dihub>

² Mayor of London. Congestion Charging Central London: Impacts Monitoring - Second Annual Report. London, UK: Transport for London, April 2004. <http://content.tfl.gov.uk/impacts-monitoring-report-2.pdf>

changes to ‘...the normal background ‘churn’³ in people’s daily travel patterns...’ and concluded that there was ‘... no evidence of systematic increases in ‘railhead’ parking...’ due to the congestion charge.

Residential Permit Parking System Structure:

Today, all of London’s 33 total boroughs operate some form of a residential permit parking program. Thanks to laws passed by the national government, each borough sets, maintains, and enforces its own permit program. For this reason, each borough’s program bears unique qualities that distinguish it from its peers.

Of the 33 total permit programs in London, 16 are priced based on a vehicle’s emissions, 13 have simple flat fees, and 4 are based on variable street-by-street parking demand. 20 programs have price escalators for additional vehicles owned and a majority offer discounts or free permits to those who have a disabled parking permit. Many of the systems also offer discounts or free permits for electric vehicles and motorcycles, and include price escalators for diesel vehicles. As will be seen further on in this report, London operates the only permit parking system that bases its pricing in part on a vehicle’s size and emissions. In this way, London’s program is structured to improve environmental sustainability and congestion outcomes through the incentivization of smaller, cleaner vehicles.

Results:

Tower Hamlets, a borough just east of downtown London, operates one of the more common residential permit parking systems in London. The borough currently operates an emissions and engine-size-specific system with discounts offered to motorcycles and electric vehicles and additional surcharges included for both diesel vehicles and additional permits requested. Permits are also available for short-term visitors, businesses, contractors, doctors, market traders, and public service employees. There is no cap on the number of permits issued, be it on a neighborhood or household level. Parking spaces are also set aside for disabled drivers.

Band/Vehicle Type	CO2 Emissions (g/km)	Engine Size (cc)	Yearly Charge (£)
Motorcycles	---	---	18.00
Electric	---	---	10.00
A	<100	n/a	10.00
B	101-120	<1100	50.00
C	121-150	1101-1300	63.00
D	151-165	1301-1600	88.00
E	166-185	1601-1800	112.00
F	186-225	1801-2000	136.00
G1	226-325	2001-3000	153.00
G2	>325	>3000	186.00

Prices for permits in Tower Hamlets are based on vehicle size and emissions.

³ In this instance, ‘churn’ refers to normal, non-policy transportation behavioral changes that occur in people’s everyday lives, such as using a different train line after moving residences.

While Tower Hamlets' stated goal of its permit parking system is to 'reduce congestion and emissions' and 'manage kerbside space',⁴ the borough has seen massive growth in the number of permits issued in the last several years, especially relative to the number of spaces available. From 2014 through 2018, the borough issued an additional 6,229 resident permits while only expanding the number of available permitted spaces by 65. Today, while the borough has issued 38,993 resident permits, there are only 12,768 resident-only parking spaces available,⁵ or a ratio of three permits for every one space available. The relationship between permits issued and parking spaces available is commonly referred to as the permit saturation rate.

Unfortunately, Tower Hamlets does not publicly report on the number of permits they issue broken down by vehicle type, so it is difficult to discern if their emissions-based system has had an effect on consumer choices. But Richmond-upon-Thames, another London borough, did track this when they first introduced their emissions-based fee in 2007, finding that in the three years since its introduction, the number of permits issued for the most emission-intensive vehicles had dropped from 16 to 13 percent and that the number of permits issued for the lowest emission vehicles had increased from 25 to 32 percent.⁶ Unfortunately, further information on a potential continuing reduction in emission-intensive vehicles in Richmond-upon-Thames is no longer available. In 2010, a new Conservative government took over the borough and abolished the emissions-based fee in place of a flat fee.

Overall, the London Councils, an umbrella business group that represents the interests of all 33 London boroughs, has endorsed emissions-based permit systems as an effective means to combat air quality concerns, and found residential permit systems as a whole to be an acceptable way to aim to provide parking for residents near their homes. However, the association has also found several flaws with residential permit systems.

First, the group found that in most cases, the demand for parking outweighs the supply and that residents who pay for permits are dismayed when they realize that their payments do not make the parking experience noticeably easier. Furthermore, they found that in areas with both high parking demand and excellent public transit access, there are concerns that the permit system—by not appropriately pricing parking according to the market value of land—has afforded too high a level of provision to residents. In addition, the association found that, under either a well-run or even mismanaged system, users often have negative views of the system on the whole given that they are always paying a fee, be it those for a permit or for a violation.⁷

Stockholm

⁴ Tower Hamlets. Parking and Mobility Services Annual Report 2016 – 2017. London, UK: Tower Hamlets, 2017. https://www.towerhamlets.gov.uk/Documents/Transport-and-infrastructure/Traffic-management/Parking/Parking_Annual_Report_2016_17.pdf

⁵ Tower Hamlets. Parking, Mobility and Transport Services Annual Account Report 2017-2018. London, UK: Tower Hamlets, 2018. https://www.towerhamlets.gov.uk/Documents/Transport-and-infrastructure/Traffic-management/Parking/TMA_Annual_Report_2017_2018_V4.pdf

⁶ Kodransky, M. and Hermann, G. Europe's Parking U-Turn: From Accommodation to Regulation. New York, New York: Institute for Transportation and Development Policy, 2011. https://itdpdotorg.wpengine.com/wp-content/uploads/2014/07/Europes_Parking_U-Turn_ITDP.pdf

⁷ Integrated Transport Planning Ltd. Benefits of Parking Management in London. London, UK: London Councils, August 2018.

Congestion Pricing and Parking Demand:

The city of Stockholm introduced a 7-month pilot program for congestion pricing on January 3, 2006 and permanently introduced congestion pricing—after a referendum on the issue—on August 1, 2007, electing to initially charge time-of-day based amounts, with the toll in effect on weekdays between 6:30 AM and 6:30 PM. The least a driver could be charged per zone crossing was 10 Swedish Krona (SEK) and the most they could be charged was 20 SEK. The system was capped at charging vehicles more than 60 SEK a day, or around \$7.73 in 2019 USD. The zone itself included 330,000 residents representing around 66 percent of total residents in the city of Stockholm.⁸

Originally alternative-fuel vehicles were exempt from the charge as a means to incentivize the purchase of more environmentally-friendly vehicles. From 2006 to 2009, the share of alternative-fuel vehicles in Stockholm rose from 3 to 15 percent.⁹ In 2009, the exemption was removed for alternative-fuel vehicles sold later than 2009, and in 2012 the exemption was removed altogether. Drivers with disabled parking permits were also exempted from the charge, as were a number of other drivers for varying reasons.

Following the trial period's implementation, the city of Stockholm reported a 22 percent decrease in traffic, with resulting reductions in traffic both just outside of the toll zone as well as in areas farther away from the toll zone.¹⁰ Particulate matter released by vehicles also dropped by 14 percent within the zone, public transit ridership increased by 4.5 percent, and the number of traffic crashes within the zone decreased by around 9 to 19 percent.¹¹ When congestion pricing was permanently implemented the next year, many of the same results were seen once again. Following the decrease, the reduction in traffic has stayed constant, except for an additional reduction in traffic when the exemption for alternate-fuel vehicles was lifted in 2012.

As a precautionary measure to prevent parking impacts just outside of the congestion zone, the city of Stockholm expanded its park-and-ride services near commuter train stations by 29 percent, resulting in an increase of 1824 vehicle spaces being utilized by park-and-riders.¹² However, the city did not find any large-scale parking effects either on streets or in the newly-created park-and-rides after congestion pricing was introduced. According to Jonas Eliasson, who was then appointed by the Mayor of Stockholm as the Chair of the city's congestion pricing Scientific Evaluation Committee and later served as the Director of the Stockholm Transportation Administration, "Before the charges were introduced, there were indeed fears that streets immediately outside or inside the charging cordon would be filled with parked cars, when drivers parked on one side of the cordon and then continued by transit, for example. There was no evidence of this, however; there was no noticeable change in street parking occupancy near

⁸ Eliasson, Jonas. Lessons from the Stockholm congestion charging trial. *Transport Policy* 15 (2008): 396.

⁹ Eliasson, Jonas. The Stockholm Congestion Charges: An Overview. Centre for Transport Studies Stockholm. 2014. <http://www.transportportal.se/swopec/cts2014-7.pdf>

¹⁰ Eliasson, J., Hultkrantz, L., Nerhage, L., and Smidfelt Rosqvist, L. "The Stockholm congestion – charging trial 2006: Overview of effects." *Transportation Research* 43, (2009): 242.

¹¹ Eliasson, J. and Hugosson, M. The Stockholm Congestion Charging System –An Overview of the Effects After Six Months. Association for European Transport and Contributors. 2006. http://web.mit.edu/11.951/oldstuff/albacete/Other_Documents/Europe%20Transport%20Conference/traffic_engineering_an/the_stockholm_cong1720.pdf

¹² Eliasson, J., Hultkrantz, L., Nerhage, L., and Smidfelt Rosqvist, L. "The Stockholm congestion – charging trial 2006: Overview of effects." *Transportation Research* 43, (2009): 242.

the cordon. And judging from the travel surveys made before and after the charges were introduced, park-and-ride was not a significant adaptation strategy either. Some drivers used it occasionally to adapt to the charges – which was fine, since this reduced traffic across the cordon just as intended – but nowhere near the volumes where it became a noticeable effect on aggregate parking occupancies.”¹³

Residential Permit Parking System Structure:

The City of Stockholm instituted their residential permit parking program in 1981 in order to provide priority parking for residents. Today, the program is broken down into five zones, with the pricing of permits being tailored to each zone (the zones also dictate the pricing of metered parking). Slight discounts are included for motorcycle and moped owners, which also change based on a zone’s parking demand and relative proximity to the city center. Residents with disabled parking permits do not receive a discount on residential permits, although they do receive free parking in metered locations. Permit holders are only allowed to own one permit at once, no matter what zone they reside in.

In the most recent year, the city of Stockholm issued 62,717 resident permits for an estimated 63,000 parking spaces, which are available to both permit holders and parking of other types (i.e. metered parking).¹⁴ Unlike its U.S. counterparts, the city of Stockholm does not reserve any parking spaces solely for residential permit users. Spaces that allow for permit parking are available to all users but permits do allow residents to ignore regulations relating to pricing and time.

Zone 1, located in the city center, does not allow permit parking of any type while Zone 5, located in the outer suburbs of Stockholm, charges the cheapest fee at 300 SEK a month (around \$31 a month or around \$374 a year). The most expensive permits are located in Zone 2, which is in downtown Stockholm and charges 1100 SEK a month (around \$114 a month or around \$1,372 a year) for permit holders to be granted parking access. New zones are created through legislation from the Stockholm City Council that then directs the Traffic Administration to look at the issue.

Results:

The permit parking program in Stockholm appears to be a relatively successful one with residents feeling that priority parking is allocated appropriately to them. One main reason for this, according to Anders Aronsson, an Analyst for the Traffic Administration, is that the relatively high pricing of permits mixed in with the cap on one-permit per person has led to an acceptable provision of parking for residents, which is matched up by the city’s data showing an almost equal amount of available parking compared to the number of permits issued.

Another main reason for this, according to Mr. Aronsson, is a culture in Stockholm that views the provision of private parking on public streets as a bonus provided to residents, not an obligation that the city must provide. Generally, the city of Stockholm and its residents believe

¹³ Interview with Jonas Eliasson, August 2019.

¹⁴ Information acquired from Anders Aronsson, City of Stockholm Traffic Administration; August 2019.

that the owners of private vehicles are responsible for finding private spaces for parking on their own, either in a private garage or lot. The public streets, operated and maintained by the city, instead are first used for the public movement of people and goods. Any additional parking made available on the streets is viewed as a bonus that residents are grateful for.¹⁵

Notably, of the five zones currently in operation, Zones 4 and 5 were created in 2016 thanks to requests from residents and local politicians. Since the creation of these new zones, the majority of feedback that the city has received has been positive. According to Mr. Aronsson, “After the Traffic Administration created Zones 4 and 5, we were instantly contacted by residents in those zones informing us that they appreciated the new program and now found it easier to find parking. Interestingly, now residents adjacent to Zones 4 and 5 are also asking for their neighborhoods to be included in the program.”¹⁶ Currently, the Traffic Administration and the City Council do not have any future proposals or amendments for the permit program.

San Francisco, CA

Structure:

San Francisco’s residential permit parking (RPP) program began in 1976 in response to increasing commuter traffic and parking in residential neighborhoods. Today, the program contains 31 RPP zones, encompassing over 155,000 households. There are 80,000 on-street parking spaces set aside for permit-holders and approximately 95,000 permits issued annually.¹⁷ The program is administered by the San Francisco Municipal Transportation Agency (SFMTA).

As can be seen in this chart, San Francisco employs more or less a flat fare structure with slight

Permit Pricing:	
Resident annual	\$127
Motorcycle annual.....	\$95
All other annual.....	\$127
1-day (1-5 per order).....	\$5
1-day (6-15 per order)...	\$7
2-week.....	\$44
4-week.....	\$64
6-week.....	\$83
8-week.....	\$108

variations in price between residents and other permit types, and small discounts given to motorcycle permit holders. In total, SFMTA administers six types of permits, given to: residents, businesses, medical caregivers, child caregivers, educational institutions, and short-term occupants. The agency does not set pricing based on variable neighborhood parking demand. It also does not limit the number of permits an applicant may receive, nor does it include escalators for additional permits owned, except for residents who own 5 permits or more. There are no incentives for low-emission vehicles. Residents with disabled placards are permitted to park in zones at no cost. Permit parking areas are created when more than 50% of residents or 250 resident households (whichever comes first) sign a petition in favor of the system and several other criteria are met, including having at least 80% of spaces occupied during the times of proposed

¹⁵ Interview with Anders Aronsson, August 2019.

¹⁶ Interview with Anders Aronsson, August 2019.

¹⁷ Presentation to the SFMTA Board of Directors, Residential Permit Parking Proposals for Reform. San Francisco, CA: June 5, 2018. https://www.sfmta.com/sites/default/files/reports-and-documents/2018/07/june_5_2018_-_presentation_to_the_sfmta_board_of_directors_0.pdf

enforcement.

Results:

SFMTA views their RPP as a modest success, with the agency continuing to expand the program as residents continue to feel that it generally prioritizes parking for them. According to Kathryn Studwell, the Program Manager for Residential Parking Policy in the Parking and Curb Management Division at SFMTA, “When two streets in the same neighborhood are compared to each other, one with RPP and the other without, it is clear that RPP has increased parking availability for residents and their visitors.”¹⁸

However, while the program was originally created in 1976 to prioritize parking access for nearby residents and continues today to prioritize that goal, SFMTA did find in a 2017 report that in some cases, notably in high density neighborhoods, the program no longer achieved one or several of its original goals. In its 2017 report, the agency found that in two of the highest demand zones — North Beach and Chinatown, where the permit saturation rates are 138 and 152 percent — 40 percent of residents who paid for a permit still spent over 16 minutes ‘circling’ for parking, with 22 percent of residents spending more than 30 minutes circling for parking. The agency also found, potentially largely due to increasing development in San Francisco, that today nearly half of all permit zones had saturation rates approaching or surpassing 100 percent.¹⁹

The agency eventually concluded that while, “... the permit program was designed to protect residential areas from the spillover effect of proximity to major traffic generators, such as hospitals, transit stations and universities, in more and more permit areas, the excess demand for on-street parking is generated by the residents themselves.”²⁰ Furthermore, on top of potentially re-inducing some of the same parking demand the program originally sought to preempt, the agency also found additional negative outcomes from the program.

According to Ms. Studwell, the agency believes that the RPP may be inducing further vehicle ownership, with a study evaluating this belief currently in the works. The agency also believes that the creation and amendment of zones over the last several decades has led to a mish-mosh of unevenly sized zones with differing regulations that make the legibility and success of the program more difficult for both the agency and users.

Moreover, Ms. Studwell acknowledged that the program has created a sense of entitlement amongst permit holders over parking spaces in some districts, making achieving Vision Zero and transit-ridership-boosting initiatives — which may require the re-allocation of parking — more difficult. For these reasons, SFMTA’s 2017 report — itself the culmination of a multi-year effort to reform the program — did make several recommendations aimed most notably at reducing demand for residential parking, in part through the use of permit capping and demand-based pricing. However, each of these came with their own complications.

Household permit capping was found by the agency to be potentially helpful but, on its own, not significant enough to improve parking occupancy rates given that the agency found that

¹⁸ Interview with Kathryn Studwell, July 2019.

¹⁹ SFMTA, San Francisco Residential Permit Parking Evaluation and Reform Project: Value Pricing Pilot Program Project. San Francisco, CA: Summer 2017. https://www.sfmta.com/sites/default/files/reports-and-documents/2017/12/sfmta_rpp_evaluation_reform_project_2017.pdf

²⁰ Ibid.

94 percent of households already only owned either one or two permits, with 71 percent of households only owning one.²¹ And while demand-based pricing was thought to be a viable option, SFMTA was unable to move forward on this measure given that California state law requires that fees levied by public agencies be limited to cost recovery. Furthermore, even if SFMTA had the leeway to institute demand-based pricing, the agency noted that through its community outreach process the most common comment it received related to pricing was that the current program was already too expensive.

In the end, while SFMTA sought to make several large-scale changes to its residential permit parking program, which it acknowledged had changed little since its inception in 1976 amidst a city that has seen increased population and vehicle registrations, the agency decided to scale back its originally large-scale recommendations. Instead SFMTA has decided to work one-by-one through each permit zone to make changes to improve upon the current system's flaws, adding years — if not more — to the reform process.

Portland, OR

Structure:

According to the Portland Bureau of Transportation (PBOT), Portland's Area Permit Parking Program (APPP) began in 1981 in response to citizen concerns about commuter parking in neighborhoods.²² As of 2015, during which time Portland's APPP and overall parking program were being reformed, there were 15 APPP zones with 23,740 parking permits issued.²³

Most neighborhoods in Portland that have a permit program employ a fixed fee system, with permits given to residents and businesses, and daily guest permits available for purchase. These zones, which today charge \$75 for a yearly resident or business permit, are generally farther outside of the downtown Portland area where parking demand is lower. Specific disabled parking spaces are included in permit zones, with different pricing details. A small number of additional permits are issued for commercial and delivery parking, non-profits, maintenance, and media parking as well.

In order to create a new zone, a request must go through a neighborhood association or business improvement district. Additionally, more than 50 percent of residents must sign a petition in support, PBOT must find that the area in question has spaces that are occupied more than 75 percent of the time during the proposed enforcement, and a city traffic engineer must find that the program would be beneficial.

Results:

While most of the residential permit zones are located in areas outside of the city center where parking demand is lower and residents feel the program works as is, there are a select few areas closer to downtown Portland that have parking demand that serves as a better comparison to NYC and have required more extensive parking studies and regulations by PBOT.

²¹ Ibid.

²² General Program Information, Portland Bureau of Transportation, <https://www.portlandoregon.gov/transportation/38744>

²³ PBOT, State of Parking. Portland, Oregon: 2015. <https://www.portlandoregon.gov/transportation/article/556011>

The Northwest District — also today referred to as Zone M — has undergone a litany of changes aimed at decreasing parking demand and prioritizing spaces for residents and short-term visitors since 2015, when PBOT created a permit parking system in the area. Beginning in 2003, city officials — through the Portland Bureau of Planning — began the process of reforming the Northwest District’s parking issues, which they stated had ‘...preoccupied and polarized NW resident and business organizations for over a decade.’²⁴ The agency recommended a number of policies aimed at reducing the parking crunch, including the creation of a permit parking system.

PBOT opted to model the permit system in the Northwest District like all others across the city. Permit prices were set at \$60 (now \$75), there was no limit on the number of residential permits owned, each additional permit requested was priced the same amount as the first, and businesses were eligible to purchase permits for 85 percent of their full-time employees, amongst a number of other policies.²⁵ PBOT also set a goal to bring down the parking occupancy rate during the peak period for on-street parking to 85 percent. Before the program’s implementation, the agency found the parking occupancy rates during the peak period on commercial and residential streets to be as high as 96 and 93 percent, respectively.²⁶

As was previously seen in London and San Francisco, the supply and demand of permits versus the relative number of parking spaces in the NW District became an immediate issue; in the program’s first year, PBOT issued 9,775 total permits²⁷ for an estimated 5,264 combined on-street parking spaces, prompting further regulations to handle the excess parking demand, especially given expected increases in future housing production in the area.

The agency responded with a slew of changes to the program that included increasing the cost of the permit from \$60 to \$180, eliminating the distribution of yearly guest permits, and instituting certain permit caps on businesses and residential buildings, with stricter caps for new residential buildings and buildings with off-street parking, amongst a number of other policies. The agency also offered residents and businesses that elected not to renew their permits a free ‘Transportation Wallet’ that included a one-year bike share pass, one-year streetcar pass, and one-month train pass, estimated to be a \$685 value by PBOT.

These changes led to a drop in permits issued the next year from 9,775 to 6,986, not far from the agency’s goal of 6,050 and more closely aligning with the number of available on-street parking spaces. According to Rick Michaelson, the Chair of the Northwest Parking District Stakeholder Advisory Committee, which worked hand-in-hand with PBOT to craft the updated program, “The combination of pricing and the placement of a limit on the number of permits issued had an impact on parking availability and congestion. Because of this, today residents are generally supportive of the updated permit and meter system, although there was some initial discomfort with the cost. However, this discomfort was eventually allayed with the establishment

²⁴ City of Portland, Oregon Bureau of Planning, Northwest District Plan. Portland, Oregon: September 24, 2003. <https://www.portlandoregon.gov/bps/article/76877>

²⁵ PBOT, NW District: Parking Management Plan. Portland, Oregon: 2012. <https://www.portlandoregon.gov/transportation/article/650333>

²⁶ PBOT, NW District: Parking Management Plan. Portland, Oregon: 2012. <https://www.portlandoregon.gov/transportation/article/650333>

²⁷ PBOT, NW Parking Project: Annual Report FY 2016-2017. Portland, Oregon: 2017. <https://www.portlandoregon.gov/transportation/article/659422>

of a discounted permit rate for lower income residents.”²⁸ Notably, even though NW District residents pay more than their U.S. counterparts — as will be seen further in this report — the reception to the program here is generally more positive than elsewhere as the pricing of permits more correctly balances supply and demand in order to ensure appropriate parking access.

Notably, in 2018 PBOT saw a slight uptick in the number of permits issued from 6,986 to 8,560,²⁹ upping the peak hour parking occupancy rate from 81.8 percent to 85.8 percent.³⁰ The agency has explained this uptick in permit issuance as the result of increasing housing development in the area and has planned another round of changes to the program. The agency plans to further increase the price of permits to \$195. And for residents and businesses who don’t already apply to new permit cap rules, the agency will increase the surcharge on additional permits owned, electing to charge \$390 for a second permit, and \$585 for third permits and more. More simply said, under the new rules, a family that owns three vehicles for instance would pay \$1,170 annually for the three street parking permits.

Chicago, IL

Structure:

The city of Chicago employs a two-tiered parking system. Residents who wish to park anywhere in the city must first purchase a Chicago City Vehicle Sticker and then additionally must purchase a specific permit for the residential zone they wish to park in. The residential permit system began in 1979 as a means to protect residents from the parking demands created by Northeastern Illinois University and has since expanded based on Aldermanic ordinances.

Chicago structures its larger city vehicle sticker pricing system based on type of vehicle, choosing to charge motorcycles \$46.49, passenger vehicles \$87.82, and larger passenger vehicles over a certain weight \$139.48 annually. Rates for small and large trucks are priced higher than passenger vehicles as well. All residential permits are then set to a flat rate of \$25 per year across all neighborhoods; permits are not based on permit-use-type, neighborhood parking demand, or environmental factors, as previously seen in other cities. Additionally, there are no caps set on the number of permits a resident can request. Both the City Vehicle Sticker and residential permit are offered to disabled residents for free, with additional discounts made available to tax-exempt organizations, seniors, government vehicles, and veterans.

The permit program is unique in that it is overseen and administered by the Chicago City Clerk, currently Anna M. Valencia, not the Chicago Department of Transportation (CDOT), although CDOT and the City Comptroller serve in an advisory role during the permit creation process. New residential zones are established per City Ordinances introduced by Chicago Aldermen, so residents who wish to establish a zone must lobby them. In order for a petition for a new zone to be approved residents must receive signatures from at least 65 percent of residents

²⁸ Interview with Kathryn-Doherty Chapman, Portland Bureau of Transportation, and Rick Michaelson, Parking District Stakeholder Advisory Committee; August 2019.

²⁹ PBOT, NW Parking Pilot: Executive Summary 2018. Portland, Oregon: 2018.
<https://www.portlandoregon.gov/transportation/article/704869>

³⁰ Rick Williams Consulting, NW Parking District: Parking Assessment and Permit Analysis Summary. Prepared for City of Portland Bureau of Transportation. Portland, Oregon: January 14, 2019.
<https://www.portlandoregon.gov/transportation/article/730545>

in the proposed zone and a parking study must find that 85 percent of parking is occupied during the proposed times, amongst other requirements.

There are over 2100 residential permit zones in Chicago; but this type of numbering is mostly bureaucratic and does not give a sense of the zone's geography. Over time, new zones of varying size have been added and others have been enlarged leading to a wide variance in the size of each zone. In Chicago's case, San Francisco's case, and other cases discussed in this report, this kind of haphazard application of zones has created a variety of problems.

Results:

Like many other cities, Chicago's permit parking program was started with the intention to provide guaranteed or priority parking to local residents. However, due to sizeable demand for parking by local residents, especially in high density environments, today the program often fails to do that and is viewed negatively by a large portion of the public and local elected officials.

In 2018, the Chicago City Clerk's Office issued 195,398 annual residential permits and 259,999 residential permit parking daily passes.³¹ Further compounding Chicago's problems with parking occupancy and availability related to permit saturation is the fact that neither the clerk's office nor CDOT keeps track of how many total spaces the zones cover. Neither the clerk's office nor CDOT publishes any statistics from their program nor does it publish any reports on the effectiveness of the program.

The previous City Clerk, Susana Mendoza, was critical of the permit program and cautioned aldermen against the creation of additional zones. In a 2016 City Council budget hearing, Mendoza stated "They [residents] pay the additional \$25 and think it guarantees them a spot in front of their home, but it doesn't. In congested neighborhoods, there are often more cars on a block than there are spots."³² Mendoza continued, "I think it creates more headaches, not just for the aldermen but for constituents," she said. "Now, there are some constituents who love it. They love that they have residential zone parking. But you're going to find just as many who live in residential zones who don't like it."

Chicago has left permit holders frustrated primarily due to an imbalance of supply versus demand. Given that the program is overseen by the City Clerk, not the city transportation agency, it does not appear that it will be reformed in order to better serve residents anytime soon.

Boston, MA

Structure:

Boston originally introduced its residential permit parking system within the downtown neighborhood of Beacon Hill in 1978, in order to protect residents from commuter traffic and parking. Later expansions of the program into the Back Bay, Fenway, Mission Hill, Dorchester,

³¹ Information acquired from Stacy Howlett, Chicago City Clerk's Office; August, 2019.

³² Byrne, John. "Time to rethink neighborhood permit parking zones, city clerk says." Chicago Tribune. October 21, 2016. <https://www.chicagotribune.com/politics/ct-city-council-budget-hearings-parking-permits-met-20161021-story.html>

and South Boston neighborhoods were implemented in order to protect parking for residents from other traffic generators such as hospitals, universities, and train stations.³³

Today, Boston employs the most simplistic permit parking system compared to any of the other cities covered in this report. In Boston, permits are given to residents for free; their pricing is not based on street parking demand, vehicle emissions, size of vehicle or its usage, or any other strategic policy. As in Chicago's case, there is no limit placed on the number of permits residents can request. There are no other applicable regulations, other than residency requirements involved in receiving a permit.

In order to create a new zone, residents must submit a petition to the Boston Office of Neighborhood Services with at least 51 percent of residents who live within the proposed zone signing in support of the program. From there, the Boston Transportation Department (BTD) studies the proposed area and may approve or disapprove of the petition; however, the BTD's study generally just examines what locations, and which regulations, might be best suited for the area. It is uncommon for the agency to disapprove of requests outright.

Results:

Today, Boston currently employs the program in 22 neighborhoods. However, there are many more than 22 permit zones, and the exact number of zones is not publicly reported and remains unclear. Like in Chicago's case, the BTD creates zones on a street-by-street basis, leading to similar legibility and user problems. On top of not publically reporting on the total number of zones, the BTD does not track the total number of applicable parking spaces in these zones, which makes measuring the permit saturation rate — and therefore measuring the program's success through its management of parking demand — very difficult. To date the BTD has issued 107,447 permits across the city,³⁴ which represents an over 41 percent growth from the number of permits issued in 2006, which was then 76,050.³⁵

Even with these complications, Greg Rooney, the Commissioner of the BTD says the agency is currently happy with the current program, mainly based off of demand for expansion from other neighborhoods. According to Mr. Rooney, "The success of the program is clear based on the continued demand for new programs, as well as, the expansion of existing programs."³⁶ However, others in Boston do not necessarily share this sentiment. Just this year, City Councilor Michelle Wu introduced legislation to amend the permit program for the first time in several decades, stating that the current "...system is not working. People are circling around, frustrated, trying to find parking... When we have a system that charges nothing, there's no incentive to have better parking management."³⁷ Under Councilor Wu's proposed legislation, the cost of a permit would increase to \$25 for the first permit and \$25 for each additional permit. Thus a family that owns three vehicles would pay \$150 a year—\$25 for the first permit, \$50 for the

³³ City of Boston. *Parking in Boston*. Boston: Boston Transportation Department, December 2001. <https://www.boston.gov/sites/default/files/document-file-09-2017/access-boston-full-report.pdf>

³⁴ Information acquired from Gregory Rooney, Boston Transportation Department; August 2019.

³⁵ *Future of Parking in Boston: Addressing the Need to Promote Economic Opportunity, Enhance Community Access, and Reduce Parking Demand*. Boston: A Better City, November 2016. https://www.abettercity.org/docs-new/Future_of_Parking_in_Boston.pdf

³⁶ Interview with Greg Rooney, Boston Transportation Department; September 2019.

³⁷ Sutherland, Brooks. "Michelle Wu proposes residential parking permit fees." *Boston Herald*, April 22, 2019.

second, and \$75 for the third. Certain residents would be exempt from the charges, including seniors and low-income residents, and a new fee for visitor permits would be included as well.

A Better City, a business group, has agreed with Councilor Wu's line of thinking. In 2016 the group published a highly critical report on parking in Boston, ironically with assistance from the BTM. The group noted in its analysis of Boston's program that "...continued free or cheap public on-street parking policies have streets flooded, forcing residents to make difficult decisions..."³⁸ The group also found that "Resident parking permits are intended to control spill-over parking from commercial districts, but in Boston they serve to discourage customers and act as barriers between neighborhoods."³⁹ Ultimately, the group made a number of recommendations that included creating a fee for permits with an additional surcharge, removing some RPP-designated parking in lieu of metered parking in order to ease travel to neighborhoods by visitors, and removing some RPP-designated parking spaces in lieu of car-share spaces.

And while today the Boston Transportation Department is content with the current program, the city did at one point attempt to begin a process to amend it. In 2001 the BTM, under Mayor Thomas Menino, stated in their 'Access Boston 2000-2010' report that "Although the types of regulations have evolved since the inception of the program, the RPP program is currently not structured to address the growing demand for parking among city residents."⁴⁰ To date though, the BTM has not attempted any larger-scale changes to the program other than to update the application process for new zones in order to remedy the problems seen in Boston and, as previously discussed, in San Francisco and Chicago related to zone formation and regulation legibility.

Washington, DC

Structure:

Washington DC's residential permit parking system was established by the City Council in 1974 as a means to regulate commuter use of the curb space in residential areas and enhance neighborhood stability, according to the District Department of Transportation (DDOT), which jointly administers the program with the Departments of Public Works and Motor Vehicles. The permit program is broken down on a block-by-block basis, with over 4,100 blocks in DC containing the permit system.⁴¹ As of 2014, DDOT issued 40,599 residential parking permits and an additional 110,000 visitor passes for around 100,000 parking spaces.⁴²

DDOT has opted for a flat fee across the entire city, charging residents \$35, seniors \$25, and part-time residents \$338, annually. Part-time residents also have the option of purchasing a permit for \$250 for six months, and visitor permits are available as well. Residents with disabilities can use their disability placard to park in residential spaces at no cost and residents

³⁸ *Future of Parking in Boston: Addressing the Need to Promote Economic Opportunity, Enhance Community Access, and Reduce Parking Demand*. Boston: A Better City, November 2016. https://www.abettercity.org/docs-new/Future_of_Parking_in_Boston.pdf

³⁹ Ibid.

⁴⁰ City of Boston. Parking in Boston. Boston: Boston Transportation Department, December 2001. <https://www.boston.gov/sites/default/files/document-file-09-2017/access-boston-full-report.pdf>

⁴¹ District Department of Transportation, Residential Permit Parking. <https://ddot.dc.gov/node/547972>

⁴² District Department of Transportation, Curbside Management Study. Washington, DC: August 2014. <https://comp.ddot.dc.gov/Documents/District%20Department%20of%20Transportation%20Curbside%20Management%20Study.pdf>

with severe and permanent disabilities can request a parking spot outside of their residence. DDOT does not set pricing based on neighborhood-by-neighborhood parking demand nor does it include any incentives for cleaner emission vehicles. There is no limit on the number of permits requested per household.

In order to receive a residential permit parking designation on a block, residents must obtain signatures from at least 51 percent of households on the block and DDOT must find that both parking occupancy exceeds 70 percent and parking occupancy by non-resident vehicles comprises over 10 percent of total parking during business hours, amongst a number of other policies. DDOT is not allowed to set the price of permits higher than the cost to administer the program, unless authorized by the DC City Council.

Results:

DDOT's August 2014 'Curbside Management Study' found that "In the vast majority of residential neighborhoods, residential permit parking (RPP) works exactly as it should; providing adequate space for residents while permitting other users — like daytime workers or visitors — adequate access to and use of the curbside space..."⁴³ However, the agency noted that the RPP fails to address spillover demand for curbside parking, generally in high density areas. Additionally, the agency noted that the block-by-block structure of the system "...created a spotty network and uneven regulation of implementation,"⁴⁴ much like in San Francisco, Boston, and Chicago. This was an issue that had been raised as far back as December 2003 in then-Mayor Anthony Williams' Parking Taskforce Report.⁴⁵

The agency, which acknowledged that many residents would like to see a more tailored neighborhood-by-neighborhood approach to the residential parking system, made several recommendations using international best practices and case studies to help the system cope with excess demand. First, the agency suggested that areas be broken down into four classes based on their typology, noting that "Different parts of the District have radically different land use and community contexts yet almost all current programs are managed the same across the District. This improves the "legibility" of the system for users, but limits the effectiveness of programs that are unable to respond to context."⁴⁶

The agency recommended that the four classes should be Downtown Core, Higher Intensity Districts, Neighborhood Centers, and Lower-Intensity Districts. Each district, it was noted, should include their own tailored recommendations; however, they generally all featured limits on the number of permits issued, more progressive pricing of permits, redefining boundaries of zones, and limiting permit issuances in new developments, amongst a number of other policies. However, to date, DDOT has not implemented many of these recommendations, save for a slight reconfiguration of the petition process for new zones.

⁴³ Ibid.

⁴⁴ Ibid.

⁴⁵ Government of the District of Columbia, Mayor's Parking Taskforce Report. District of Columbia, December 2003. <https://comp.ddot.dc.gov/Documents/Mayor%27s%20Parking%20Task%20Force%20Report.pdf>

⁴⁶ Ibid.

Conclusion

Permit parking programs have historically been implemented in cities across the world primarily as a means to protect parking for local neighborhood residents. In recent years, many cities have reoriented their programs in order to better align with updated city priorities. But the results have been a mixed bag, with some cities left wondering if creating a permit parking program was the right choice in the first place. It is important when evaluating RPP programs for New York to first ask what specific problems a program is intended to solve in order to evaluate not only whether a RPP should be implemented at all but also exactly what policies should be included and what potential pitfalls should receive special consideration.

I conducted a public hearing on congestion pricing on March 21, 2019. Many of those who testified fear a parking crunch along Manhattan's 61st Street border of the new congestion zone. While these fears are perhaps understandable, outcomes in London and Stockholm found similar fears to be unfounded. Neighborhoods near congestion zones experienced reductions in moving vehicle traffic. New York City experts predict similar results here.

As Jon Orcutt, DOT's former Director of Policy put it, "The idea of hordes of drivers looking for parking around 61st Street was viewed as very unlikely because of already very high parking demand and utilization in the border areas as well as both the time-cost and two-way transit fare cost of parking outside the zone to avoid the congestion charge." Charles Komanoff, a transportation economist whose research on congestion pricing assisted Governor Cuomo's staff in assembling the 'FixNYC Advisory Panel Report,' echoed Orcutt's analysis. According to Komanoff, "On a typical morning, only around a thousand car commuters into the zone—out of a total of 110,000—are likely to try to park outside to avoid the congestion toll. Considering that almost half of them will be coming from Long Island and will therefore look for parking in Brooklyn and Queens, and that many of the others will seek off-street parking in lots or garages, only a few hundred will be seeking free parking on the Upper East and West Sides. And furthermore, they will distribute more widely to express stations rather than concentrate around 61st Street."

For those who would like an RPP program to solve New York's historic parking crunch—congestion pricing or not—experts do agree that there is a path forward here. However, the cost to achieve this—found via a high pricing of permits and strict permit capping by either neighborhood or household level—could be too high a price to pay for some. Portland's Northwest District serves as a useful example; here, a neighborhood with a density that pales in comparison to some of New York's under-discussion neighborhoods has made some progress, yet also struggled to curb parking demand at the current price of \$195 for the first permit (and \$390 and \$585 for second and third permits). For New York to properly handle excess parking demand, the price of permits may need to be several, several multiples of Portland's Northwest District prices.

If some vehicle owners are indeed willing to pay these prices, this would put them in line with another subset of New Yorkers who in turn support a RPP program as a means to disincentivize car ownership for more sustainable modes by pricing the cost of parking to its 'market value.' London and Stockholm do chart a path forward in this regard as cities that have implemented programs that either disincentivize car ownership altogether or at least incentivize cleaner emission vehicles.

However, if a high enough price is not chosen, supporters run the risk of shooting themselves in the foot by incentivizing further vehicle ownership and inducing an even greater parking crunch. In the majority of examples evaluated under this report, cities made that exact mistake—especially in high density neighborhoods—and induced a greater demand for parking that was notably generated by the neighborhood’s own residents, not those from outside of the neighborhood.

It should be noted that in a city as litigious as New York, there may be legal challenges to any RPP system. Indeed, the DOT testified at a 2018 City Committee Council hearing on Transportation that without state authorization, the city may be “...prohibited from restricting highway use — including parking — based on residency.”⁴⁷ There is, however, another legal view that the New York State Vehicle and Traffic Law, Section 1642 grants New York City the necessary authority and that courts would support an RPP program as long as sufficient metered spots are still made available to visitors.

Overall, there is no singular right or wrong choice when it comes to a Residential Permit Parking program; instead the devil is in the details. For some the right choice may simply be not creating a program altogether, while others see the retaining status quo as the wrong choice. Clearly, though, a permit parking program is an intricate and nuanced transportation issue.

Below are the most critical details that New Yorkers must thoroughly vet and discuss in order to decide whether to implement a Residential Permit Parking program:

Pricing:

What price point are New Yorkers willing to pay—and have their neighbors pay—for a parking permit? The aforementioned case studies show that low, flat-fees do more harm than good by incentivizing further vehicle ownership, as most strongly evidenced in the Boston and Chicago cases.

If New Yorkers are willing to pay a high price point for a permit, would they like that to be based on the size and emissions of vehicles? While more research would need to be done by NYC DOT on exactly what the price points would be, Stockholm and London show positive ways forward towards programs that could disincentivize vehicle ownership, incentivize cleaner emission vehicles, and even potentially rebalance parking demand.

Which New Yorkers should be exempt from payment and/or permit capping? Many programs evidenced above featured discounts or exemptions for people with disabilities and people below certain income thresholds. The creation of discounts and exemptions could be viewed as equitable but it could also cut into the stated goals and successes reaped from the program.

Permits and Zones:

⁴⁷ New York City Council, Committee on Transportation. Testimony on Int 0848-2018, “Creation of a residential parking permit system in Northern Manhattan.” Testimony provided by Margaret Forgione, Chief Operations Officer, NYC DOT. June 12, 2018.

Should neighborhood permit caps be included? While most cities spoke to the need to institute neighborhood caps on permits in order to continue to manage demand, they also spoke to a difficulty in implementation. A permit cap in each neighborhood often leads to waiting lists and deciding who receives a higher place on the waiting list is a difficult process and something most cities would prefer to avoid.

Should household permit caps be included? Most cities additionally spoke to the need to institute household permit caps; but not all households are the same. Some households may need several vehicles while others may want to have several. A household cap could help manage demand on the whole but also create complications on the micro level for those who require more vehicles than the cap allows.

Should different buildings within a zone receive different allotments of permits? Some cities, including Portland, have instituted different permit cap rates based on how much private parking a building already provides and based on when the building was constructed.

How many zones should NYC's system have and how should the boundaries of each zone be decided? Should residents in every zone pay the same amount or differing amounts based on neighborhood parking demand? Some cities have zones based on a street-by-street basis while others have zones that reflect neighborhood boundaries. Many cities, including Chicago and Boston, have spoken to the difficulties in managing a street-by-street zone setup. Moreover, different zones — no matter how they are comprised — will have different parking demands; if residents pay the same rate across the city, then parking demand will not be managed as well, even if some may view it as more equitable.

What role should other types of permits and parking — such as visitor permits and metered parking — play in this conversation? It is important to ensure access to communities via vehicles for those who have no other choice. A lack of metered parking was cited as a restrictor of access and a primary reason for a loss in revenue for small businesses in Boston. On the other hand, some cities, including Portland, have done away with visitor permits after deciding that they made managing parking demand too difficult and even realizing that they had created a secondary market for permits.

Should permit zones have permeable boundaries where owners of two intersecting permit zones are allowed to park? This is especially important if a permit program is ultimately unable to adequately handle parking demand. At my congestion pricing hearing, a woman who had previously been enrolled in Berkeley's permit parking system spoke to the issues she had when she could not find parking in her own zone, would park in a different, nearby zone, and then receive a hefty fine.

Community Engagement and Environmental Sustainability:

What role should NYC DOT, Community Boards, and the public play in setting potential zones, pricing, regulations and so forth? On the one hand, an RPP program is a transportation issue and therefore, its policies and rules should be decided by transportation experts at NYC DOT. On the other hand, these rules will have effects on each neighborhood in different ways; in that regard, community experts should also play a large role in deciding certain policies. Portland's usage of a Stakeholder Advisory Committee points towards a potential path forward,

where transportation officials worked hand-in-hand with neighborhood experts to decide specific policies, priorities, and regulations.

Should NYC DOT offer a ‘buy-out’ option for residents who choose not to renew their permits? As in Portland’s case, this could include free or discounted access to Citi Bike memberships, NYC Ferry Passes, and MTA services.

Should NYC DOT strive to reduce the number of permits and parking spaces issued and allotted per year in the long-term? This would get to the question of one of the goals of the program. Is it simply to manage parking demand or is it to reduce vehicle dependency in NYC in the long-run and increase environmental sustainability?

What role should car-share and rental car agencies play in this conversation? Many cities, including Portland, have factored car-sharing services into their permit plans as a means to further disincentivize vehicle ownership, especially for those who may only need a vehicle a few times a month. New York City has begun a pilot car-share program in 14 neighborhoods, including 3 in Manhattan.

This report considered the variety of factors mentioned above that could make for a successful or unsuccessful permit parking program. The conclusions and findings above were made after careful research into each of these programs, discussions with local transportation officials in each city, and broader discussions with transportation academics and experts. These constitute no specific endorsement of policy, but are instead meant to help inform conversations around whether or not to develop a residential parking program here in New York. The largest areas for concern revealed by the case studies emerge around control of the supply and pricing of permits, as well as the methods by which zones are created.