Parking Puzzles

When news surfaced in Riverdale last February that 100 surface parking spots were on the verge of being eliminated to make way for a new high-rise residential building, neighborhood drivers were infuriated. Local politicians and community leaders, sensing both opportunity and danger, responded by organizing a parking forum with representatives from city agencies on hand to answer questions and placate concerns. Throughout the heated discussion, many of the residents in attendance expressed frustration that more households than ever were choosing to own vehicles, but that new residential developments were not doing enough to accommodate them.

As the city experiences its largest residential building boom in four decades, the tension between housing and parking is being intensified in neighborhoods across the city. New housing development, especially when it replaces existing parking lots and adds vehicles, heightens competition for curbside parking and increases traffic congestion. This combination of new housing and lost parking has created a potent cocktail of anti-growth sentiment. Increasingly, parking deficits have become the most visible way for growth-weary communities to quantify the loss of neighborhood character.

Broadening the focus from neighborhood to city, an entirely different set of policy tensions becomes apparent. Currently, about 46 percent of the 3.2 million households in the city own at least one vehicle. Parking availability, an integral component of transportation policy, greatly affects the travel decisions of individual households, giving formidable import to citywide parking strategies. Policies that mandate off-street parking may encourage automobile ownership and spread the cost of that ownership to those that do not own vehicles. Conversely, insufficient off-street parking indirectly increases the costs associated with car ownership and adds to the inconveniences of city life for those who do own cars.

Whether there should be more or less cars in New York City can be debated, but understanding how it affects the quality of life for owners and non-owners alike must be a central concern. Growing tensions over parking, especially in the outer boroughs, merit renewed consideration of citywide parking strategies. Those strategies should favor outcomes that do not deter density, raise housing costs, debase urban design, threaten economic vitality, collectivize ownership costs, or discourage public transportation use, while still reasonably accommodating parking demand.

Declining Registrations

In February 2005, the New York State Department of Motor Vehicles (DMV) published its latest annual vehicle registration data for the five boroughs and unwittingly added a perplexing piece to the parking puzzle. The data revealed what might seem counterintuitive to anyone who has had to cruise for parking recently— for the fourth consecutive year New York City experienced a decrease in registrations.

The recent decline has been so dramatic, in fact, that it has erased nearly all of the growth in registrations over the past two decades. In 2004, there were 1,669,948 passenger vehicles registered in the city, ten percent less than in 2001 and only three percent more than in 1985. Surprisingly, considering the parking furor in the outer boroughs, nearly all of the new growth in registrations since 1985 has been in Manhattan, which has seen a 25 percent surge in auto ownership. Since 2000, the citywide decline has occurred across the board, with registrations in Brooklyn dropping the most and in Manhattan the least.

A best-case explanation of the recent downward trend would be that public transportation has become more competitive compared to driving. Since 1997, several factors, including the introduction of free transfers between bus and subway, the introduction of unlimited-use fare cards, and increased levels of service have contributed to the growing attractiveness of public transportation in the city. From 2000 to 2004, New York City Transit reported an increase of 86.6

million annual riders. If even a small portion of that ridership has decided against owning a vehicle, that number could account for a significant portion of the decline in registrations.

A number of other explanations have been put forth to explain the decrease. According to Runzheimer International, the costs associated with owning a vehicle in New York City increased 20 percent over the last five years. Parking violations for serious offenses increased from $55 to $115, towing fees from $150 to $185, and insurance rates continue to be among the highest in the country. Rising expenses may have priced out some low-income or low-mileage drivers who are not dependent on their vehicle to get to work. Unemployment may be another contributing factor. When registrations began their descent in 2001, unemployment in the city was at a cyclical low. Some observers believe the decline to be illusory, speculating that more people are registering their cars out of the city in order to take advantage of lower insurance rates or registration fees. While this could be possible, there is no direct evidence, and data from contiguous counties show no unusual increases.

There may also be some long-term demographic factors at work. A CHPC analysis of 2000 census data show that factors such as education, family status, immigration status, and ethnicity have an even more prominent effect than household income. Adjusting for income and other relevant variables, African-Americans and Hispanics have significantly lower rates of car ownership than whites and non-citizens have lower rates of ownership than citizens. The findings imply that, if high rates of immigration continue, auto ownership may remain lower than purely economic circumstances suggest. With continued improvements to the city's transit system, sustaining low rates of growth in registrations may be easier than if auto ownership were solely a function of income.

Housing Cars

Parking in New York City has never been easy. By 1950, the parking problem and associated congestion became so acute that the City Planning Commission, following the lead of other large cities, mandated for the first time that new residential development contain off-street parking. One and two family units were required to provide one parking space per unit, while multi-family buildings had to provide spaces for 50 percent of the dwelling units. Requiring developers to construct parking irrespective of profitability assured that parking would be provided, but because the parking was often free or under-priced, sometimes had the unfortunate effect of shifting the cost of parking from owners to non-owners through increased housing prices.

By the late 1960s, many of the negative environmental impacts of the car became apparent. In 1970, Congress passed the Clean Air Act (CAA), which aimed at reducing emissions of carbon monoxide and other pollutants. In 1973, the city and state created a federally mandated Transportation Control Plan (TCP) to deal with harmful levels of air pollution. The TCP restricted the construction of off-street parking in Manhattan south of 60th Street and in Queens Community Districts 1 and 2, but said nothing about off-street requirements in other parts of the city. More recently, the most publicized parking battle has been fought over curbside parking. In October, despite objections from retailers and an Administration veto, the City Council eliminated Sunday metered parking on 36,600 spaces throughout the city.

Rather than dealing with parking as a separate issue by amending requirements within existing zoning designations, the Bloomberg Administration has encouraged communities to address parking in combination with other urban design issues that concern them. It has done so primarily through a series of downzonings in lower-density, auto-oriented neighborhoods throughout the outer boroughs. In some of these area-wide rezonings, there has been a renewed focus on regulating parking design in order to ensure that a greater amount of parking does not detract aesthetically from neighborhoods. The primary vehicle for doing this has been the creation of Lower Density Growth Management Areas (LDGMA).

The LDGMA designation was first applied in a borough-wide rezoning of Staten Island in 2003. The new regulations require two spaces for single-family homes and three for two-family homes; however, site guidelines stipulate that spaces in the front yard cannot be counted toward the requirement. Including the front driveway and a curb space, new single-family homes will actually have four spaces and two-family homes six spaces. While it is unlikely all of the potential spaces will be actively used, such large amounts of parking, besides increasing the amount of non-permeable ground cover, could have the

perverse effect of mitigating many of the desirable benefits of downzoning such as noise reduction, increased privacy and greenspace, aesthetic appeal, and decreased traffic congestion.

In many lower-density, outer borough neighborhoods such as those in Staten Island, parking requirements are intended to keep up with a growing number of households that own multiple vehicles. In Queens Community District 13, the number of households with two or more vehicles increased by 30 percent from 1980 to 2000. Another factor exacerbating parking conditions in lower-density neighborhoods is a proliferation of Accessory Dwelling Units (ADU). Though ADU residents may be less likely to own vehicles, because the units are sometimes illegal and do not conform to zoning regulations, any parking demand that they do generate is not accounted for in existing requirements.

The northeastern Bronx neighborhood of Throgs Neck has a significant number of ADUs and relatively poor access to mass transit. Consequently, residents there have one of the highest rates of car ownership in the city at nearly 1.8 vehicles per household. The R4 designations that have guided development in this neighborhood of one and two family homes, however, only require one space per dwelling unit. The result, residents say, was too many vehicles and not enough places to put them. Formerly green front yards were paved over and double parking became the norm.

In June 2004, DCP filed an application to amend the zoning map in Throgs Neck citing overdevelopment, parking, and inappropriate development as the three issues of major concern. With strong support at every stage of the ULURP process, the City Council voted unanimously to adopt the amendments. In addition, the entirety of the surrounding Bronx Community District 10 was designated an LDGMA, making it the first such designation outside of Staten Island. The R4-1, R4A, R3-2, R3-1, R3A, and C3A zones that replaced the former mostly R4 zones now mandate the inclusion of 1.5 on-site spaces per unit, rounded up, only slightly less than the parking regulations that now guide residential development in Staten Island.

Affordable Parking

The movement to greater off-street requirements may not be possible in medium-density districts. In R6 zones, the current 50 percent parking requirement can be difficult to meet even with a standard site configuration. Oftentimes, FAR can only be maximized in tandem with underground parking, which varies widely in cost and feasibility, depending on location, number of spaces, and site conditions. According to a recent analysis by the Newman Real Estate Institute of Baruch College, underground parking for a prototypical R6 Quality Housing building in the outer boroughs adds about

$7,000 per dwelling unit to hard construction costs under favorable conditions, which is about seven times more than surface parking per space.

For the construction of parking to result in a net revenue gain for development, the market must support rents of around $300 a month per space. In Manhattan below 125th Street and parts of Brooklyn, attaining those rents is possible. In most medium-density areas of the city, however, parking revenues do not cover costs, thus shifting costs to non-drivers. Many developers, in an effort to maximize revenue, lease out parking facilities to operators who then increase capacity with attended parking.

In medium-density districts, the issue of providing off-street parking is further complicated by the increasing amount of development taking place on irregularly shaped lots. For affordable housing, these sites have become extremely important, especially as the inventory of large city-owned lots has dwindled. Furthermore, as the city moves to expand the use of inclusionary housing bonuses, parking requirements emerge as a primary impediment. For example, a 20 percent density bonus would be difficult to utilize without underground parking, if the required number of spaces increases proportionately.

The cost of providing parking is an important issue, especially in the context of providing affordable housing. Many observers question the logic of current parking requirements for affordable developments where low-income tenants are less likely to own vehicles. Senior housing in R6 districts, for instance, must have 22.5 parking spots per hundred dwelling units, compared to the usual 50 spots. Developers argue that even such a lower amount is excessive. They note that limited housing subsidies would be better applied to the creation of more housing and less parking. Reducing parking requirements further, however, may heighten opposition to affordable housing, as new tenants who own cars would compete with existing residents for curbside spots. Others note that failing to provide off-street parking increases the cost of car ownership, thereby limiting employment access and transportation options. In addition, many affordable units may not remain affordable in perpetuity, leading to the possibility of future parking deficits.

Parking struggles in Bay Ridge typify those of other mid-density districts around the city. The Brooklyn neighborhood has twice the density of Throgs Neck and direct subway access, yet residents complain about the difficulty of finding parking. Since 1978, the Special Bay Ridge District (SBRD) has guided development in the southwest Brooklyn neighborhood. The regulations contained within the SBRD served as a template for similar rezonings throughout the 1980s, especially within R6 and R7 districts, but by 2002 many residents had renewed concern about overdevelopment.

Auto Ownership in New York City, 2000
(percent of households)

	Place of Work:		
Borough Residents	Man.	Boroughs	Not NYC
no cars	40.0	33.1	29.6
1 car	38.9	37.5	37.5
2 cars	16.7	21.9	23.9
3 or more	4.4	7.6	9.0
	Household Income:		
Borough Residents	<40K	40-100K	>100K
no cars	63.6	28.0	14.9
1 car	29.7	46.0	37.1
2 cars	5.5	21.6	34.7
3 or more	1.3	4.4	13.4
Manhattan Residents	<40K	40-100K	>100K
no cars	87.3	74.7	57.4
1 car	11.6	23.1	38.0
2 cars	0.7	1.7	3.7
3 or more	0.4	0.6	0.9

Source: Tabulated by CHPC from Census Microdata

Parking figured prominently in the discussion as residents were forced to utilize spots along Third Avenue, 86th Street, and other commercial corridors, leaving shoppers without spots and business owners without patrons.

To remedy the situation and in part to deal with the parking crunch, DCP proposed a significant downzoning of Bay Ridge. The proposal, which was passed by the City Council in March 2005, provided for a threefold increase in the number of blocks zoned exclusively for detached and semi-detached homes. In many cases, the dedensification of the district's zoning also meant a de facto increase in parking requirements. For instance, the midblocks to the east, northwest, and southwest of Third Avenue, previously zoned R6, were primarily replaced by a mix of R3 and R4 zones, thereby increasing parking requirements from 50 percent to 100 percent of units.

Terminal Capacity

Every transportation system is composed of three parts, the vehicle, the right-of-way, and the terminal. According to Donald Shoup, parking expert and professor of urban planning at UCLA, automobiles are unique among transportation systems in that they require massive terminal capacity—parking spots at home, work, and the businesses that drivers patronize. In New York City, where many residents do not need to use their vehicles on a daily basis, many cars remain parked upwards of 99 percent of the time, elevating questions of terminal capacity, or parking, to an even more important status.

Crafting parking policy thus requires a delicate balance. In many neighborhoods outside of Manhattan, automobiles are a practical necessity. Many residents rely on them for getting to and from work, shopping, school, and recreational activities. Moreover, car-owning households are important contributors to the city's fiscal and social health. Yet, accommodating those cars requires an enormous amount of space in an increasingly populous city that values every square foot. For every 100,000 vehicles that are added, approximately 500 acres of off-street parking is required. These enormous parking needs complicate urban design and interfere with the creation of inviting and functional public space.

In some cases, there are very few alternatives other than coping with demand through the creation of additional parking capacity. Some design professionals believe that the city's zoning regulations could do more to encourage innovative approaches to supply-side management. Liberalizing shared and remote parking requirements, for example, could effectively decrease the number of spaces needed per car and may also help developers avoid many of the extant FAR limitations that arise as a result of parking requirements. Others favor underground parking as the least intrusive way to satisfy demand and argue that the additional costs are justified.

From a local and global environmental perspective, however, limiting auto use should be a paramount objective and parking policy should not be bound by strategies that focus only on satisfying demand. By reducing the costs of driving, every new parking space generates trips that might otherwise be made by mass transit. Even in certain transit-rich areas, many workers choose to commute by car because parking is free or highly subsidized. A recent Transportation Alternatives report found that Manhattan census tract 2900, which includes the Municipal Building and 1 Police Plaza, receives nearly 12,000 workers by car on a normal weekday. Similarly, every driver who opts out of viable transit alternatives potentially contributes to the collective erosion of political support for mass transit.

Managing demand by rationalizing parking costs or by making alternatives more attractive may help to offset such scenarios. Charging for the use of curbside space in residential districts, depending on implementation technique, could be used to decrease the total number of vehicles on the road or to encourage smaller vehicles, while raising money for public transportation or other community improvements. Another option would be to create incentives for car sharing. Currently, Zipcar, a car sharing service in New York, has around 300 vehicles available. Studies have shown that each shared car takes up to ten private vehicles off the road. The city could also work to improve taxi service in the outer boroughs. Demand management techniques such as these and others could ease parking conditions without increasing terminal capacity, thereby contributing to a more sustainable and livable New York City. – Jeffrey Otto