



Residential Parking
Management
Best Practices & Policies

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Background & Purpose

The City of Vancouver has developed two key plans – the Greenest City 2020 Action Plan¹ and the Transportation 2040 Plan² – over the last few years to support its efforts to create a more sustainable city. Collectively, these two plans have set ambitious future targets to achieve a higher share of trips made by green transportation modes. The City envisions that at least half of all trips will be carried out on foot, bike or transit by 2020, and two-thirds by 2040.

Parking impacts the City's long-term green transportation mode share targets, as well as other aspects related to sustainability in many different ways. Underpriced parking encourages automobile usage and induces traffic congestion as people are inclined to drive around for cheap parking, resulting in reduced neighbourhood livability. When parking is provided in the form of surface lots, they are often a visual blight on the urban landscape, impose a greater burden on stormwater drainage systems, contribute to the urban heat island effect and result in a less pleasant experience for walking and cycling. Even when parking facilities are provided underground or in the form of parking structures, they require driveways which disrupt the continuity of sidewalks, posing safety issues for pedestrians and cyclists. As well, parking affects housing affordability since the cost of a parking space is often embedded in the cost of housing. For households who choose not to own a car, they end up paying for an unwanted parking space and in some instances, may even be priced out of the housing market because of the parking costs.

To achieve the future mode share targets, numerous parking policy directions have been identified in the Transportation 2040 Plan. One of these policy directions is to manage parking in residential neighbourhoods more effectively, which is the focus of this report.

At present, existing off-street parking spaces in residential buildings are often under-used and higher utilization rates can be encouraged with more effective on-street parking policies. By shifting the temporary storage of residents' vehicles from the street to off-street parking facilities, precious street space in areas of high parking demand can be freed up for visitors and service providers who can then spend less time cruising for an available parking space. As well, more room on the street can be freed up for other sustainable transportation modes, such as wider sidewalks for pedestrians and protected bike lanes for cyclists.

A more prudent and well-thought approach towards managing on-street parking also plays a critical role in supporting other parking policy directions in the Transportation 2040 Plan. In particular, reducing or eliminating minimum off-street parking requirements and unbundling parking costs from housing costs for new residential developments have been proposed to increase housing affordability and support reduced car ownership. However, existing residents often express resistance to these concepts as they fear that new residents will simply choose to park on the street, a phenomenon known as parking spillover. Thus, in light of Vancouver's intensifying growth and limited potential to expand on-street parking capacity, there is the need for on-street parking in residential neighbourhoods to be effectively managed so as to mitigate such fears.

¹ The Greenest City 2020 Action Plan can be accessed at: <http://vancouver.ca/files/cov/Greenest-city-action-plan.pdf>.

² The Transportation 2040 Plan can be accessed at: http://vancouver.ca/files/cov/Transportation_2040_Plan_as_adopted_by_Council.pdf.

To this end, this report serves as a reference document on best practices and policies adopted by other cities to manage on-street parking in residential neighbourhoods. Although a high degree of emphasis has been placed on residential parking permit schemes (since they are commonly used to manage residential on-street parking), other interesting approaches that facilitate more effective on-street residential parking management are also explored in detail. The report concludes by recommending some strategies that may be considered to improve the management of on-street parking in Vancouver's residential neighbourhoods.

Before presenting the best practices and policies garnered from other cities, an overview of residential parking management in Vancouver, including a brief description of its historical evolution, is first presented in the following section.

Residential Parking Management in Vancouver

Residents living in the City of Vancouver are often faced with parking pressures from non-residents living elsewhere in the region or city who make trips to their neighbourhood for work, leisure or shopping. To alleviate such parking concerns, the City has adopted a few measures that accord residents priority for parking within their neighbourhood streets.

One such means is the “**three-hour non-resident parking**” provision in the City’s Street and Traffic By-law No. 2849 that prohibits non-resident parking in front of any property for more than 3 hours between 8 a.m. and 6 p.m.³ This provision is informally referred to as the “three-hour by-law” and was introduced back in 1958⁴ with the intention of deterring commuters from parking long hours on residential streets. It was acknowledged at the time of its inception that enforcement would likely be difficult, but nonetheless the consensus was that having such a regulation would make it possible for enforcement to be undertaken on a complaint basis.⁵

However, the “three-hour by-law” sometimes fails to adequately address parking issues within residential neighbourhoods, such as when there is short-term heavy transient parking or transient evening parking. In such cases, **residential parking zones** are used to help provide relief from outside parking pressures. The City currently operates three types of residential parking:

- Resident Parking Only (RPO) zones;
- Resident Permit Parking (RPP) zones; and
- Vancouver Resident Permit Parking (VRPP) zones

Resident Parking Only (RPO) zones

RPO zones were traditionally installed to mitigate parking pressures on single or two-family dwelling residential blocks. The RPO zones allow residents to park on their block without a permit and enforcement is carried out only in response to complaints. Typically, blocks with RPO zones contain both RPO regulations as well as time-limited and/or unregulated areas.

The first RPO zone began in 1966 as a small trial area adjacent to the P.N.E. to address resident concerns about heavy on-street parking that was generated by frequent evening events. The trial was deemed back then to have been reasonably successful and just three years later in 1969, there were as many as 130 blocks across the City with RPO regulations implemented.³

As of today, however, new RPO zones are no longer implemented by the City following the 2010 Operating Budget Process⁶ that eliminated the RPO program to reduce costs. The RPO zones existing at the time of the program’s elimination have since been grandfathered into the residential parking system.

³ Currently, four other municipalities within the Metro Vancouver region have adopted this “three-hour by-law”: Burnaby, Richmond, Port Moody and White Rock (only within the Town Centre area). In the case of Port Moody, the “three-hour by-law” is in effect for 24 hours a day instead of between 8.00 a.m. and 6.00 p.m.

⁴ See <http://former.vancouver.ca/blStorage/3720.PDF>.

⁵ From City of Vancouver’s Official Traffic Commission meeting minutes dated April 28, 1969.

⁶ See <http://former.vancouver.ca/ctyclerk/cclerk/20091201/documents/rr1.pdf>.

These grandfathered RPO zones remain enforceable, albeit with a lot of challenges as it can be difficult to determine the registered addresses of vehicles.⁷ Residents who complain about RPO zone infractions are often advised to first check with their neighbours that the subject vehicle is indeed not owned by any of them and then told to call the City again if the subject vehicle is in the same spot after three days.

Residential Permit Parking (RPP) zones

RPP zones span multiple blocks within a neighbourhood and are generally established to limit commuter parking. In contrast with RPO zones, RPP zones are enforced not only by requests from residents, but also by staff doing regular patrols.

The first RPP zone was incorporated in June 1980 within the P.N.E.'s vicinity to address recurrent parking spillover into residential neighbourhoods on event days.⁸ Since then, the RPP program has expanded to 23 zones across the city and details pertaining to their Council approval year and corresponding parking generators are listed in Table 1.⁹

Modification of RPP zones. Each of the existing 23 RPP zones were established either through a resident-initiated petition process or by the City in anticipation of future parking pressures (e.g. completion of Expo Line and Canada Line). During the researching and writing of this report, the City modified its process to add new blocks into existing permit zones.

Prior to the summer of 2014, the City would design RPP regulations on a block in consultation with the resident requesting for the installation of the RPP regulations. After the design was complete, the resident requesting the regulations would be responsible for obtaining signatures of 67% of households on the block in a petition process. If these signatures are successfully obtained, the City would then install the appropriate signage on the block.

During the summer of 2014, the City initiated a new trial of introducing RPP regulations on a block. Under this new system, upon receiving a request from a resident to add a block to an RPP zone, the City first conducts a preliminary survey for residents of that block to gauge their general interest in becoming part of a RPP zone. If at least 67% of residents express interest, a plan proposing permit parking regulations along the residents' block is created by City staff, taking into account the block's parking needs. A final survey is subsequently conducted for residents' approval of the proposed plan and at least 67% support is again required.

Who can park on-street within the RPP zones? Unlike RPO zones, RPP zones require residents to purchase and display a parking permit in order to enjoy parking privileges within the permit zone specific to their residence. These parking privileges allow RPP holders to park their vehicles for longer periods beyond posted time restrictions and also in areas that are exclusively reserved for permit holders. The City similarly extends such parking privileges, albeit on a short-term basis, to the following groups of non-residents: out-of-town visitors, housesitters, home medical care providers, and contractors.¹⁰

⁷ The "three-hour by-law" similarly faces enforcement difficulties because of this.

⁸ Although the program was initially in effect only on event days, residential parking restrictions in the P.N.E. RPP zone now apply year-round.

⁹ Most of the information in this table is obtained from a previous version of the City of Vancouver's Resident Permit Parking webpage. A version of this webpage archived as of October 16, 2011, is accessible at: https://web.archive.org/web/20111016160451/http://vancouver.ca/engsvcs/parking/admin/rpp_maps.htm.

¹⁰ More details regarding these provisions are provided on page 7.

RPP Zone	Approved by Council in...	Parking Generator(s)
Boundary	October 1985	<ul style="list-style-type: none"> Telus Corporation's headquarters building & Erwin Swangard stadium on the east side of Boundary at Kingsway (in Burnaby) Commercial businesses along Kingsway
Broadway Station	November 1985	<ul style="list-style-type: none"> Broadway SkyTrain station (RPP zone was installed at the opening of the SkyTrain system)
Cambie Village (King Edward Station)	June 2009	<ul style="list-style-type: none"> King Edward Canada Line station (RPP zone was an expansion of the existing Cambie Village zone at the time when the Canada Line opened. This Cambie Village zone was initially intended to be a temporary conversion from RPO regulations to RPP in 2006 to mitigate the parking pressures arising from the removal of parking along Cambie Street due to the Canada Line construction. The RPP system was retained in 2008 following a resident poll in favour of the conversion)
Commercial Drive	March 1993	<ul style="list-style-type: none"> Businesses along Commercial Drive
Fairview Slopes	March 1986	<ul style="list-style-type: none"> Commercial businesses along the Broadway corridor Vancouver General Hospital
Guelph	March 1986 as Mount Pleasant RPP zone. In 2011, this zone was split into three: Guelph, Industrial and Mount Pleasant.	<ul style="list-style-type: none"> Commercial businesses along the Broadway & Main Street corridors
Industrial	See Guelph (above)	<ul style="list-style-type: none"> Commercial businesses and industrial buildings within the vicinity of the residential buildings in the north side of Mount Pleasant
Joyce Station	November 1985	<ul style="list-style-type: none"> Joyce SkyTrain station (RPP zone was installed at the opening of the SkyTrain system)
King Edward Campus	May 1984	<ul style="list-style-type: none"> Vancouver Community College's Broadway Campus which opened in 1983 (At the time of RPP introduction, it was known as the King Edward Campus and the RPP zone is named as such)
Kitsilano North	January 1998 as Kitsilano RPP zone. In 2010, this zone was split into two: Kitsilano North and Kitsilano South.	<ul style="list-style-type: none"> Commercial businesses along the Kits Beach, 4th Avenue, Burrard, and Yew Street corridors Park-and-ride commuters along Cornwall Avenue
Kitsilano South	See Kitsilano North (above)	<ul style="list-style-type: none"> Commercial businesses along the 4th Avenue, Broadway, and Burrard Street corridors
Kitsilano Point	March 1986	<ul style="list-style-type: none"> Beaches around the area Pacific Space Centre Maritime Museum
Macdonald	May 1987	<ul style="list-style-type: none"> Safeway store and commercial businesses along West Broadway

Table 1: List of the 23 RPP zones in Vancouver with Council approval year and corresponding parking generators

RPP Zone	Approved by Council in...	Parking Generator(s)
Marine Drive	June 2009	<ul style="list-style-type: none"> Marine Drive Canada Line station (RPP zone was installed at the opening of the Canada Line)
Mount Pleasant	March 1986. It used to include the Guelph and Industrial RPP zones within its boundary until 2011.	<ul style="list-style-type: none"> City Hall and neighbouring employment areas Originally installed due to Expo 1986
Oak West	January 1992	<ul style="list-style-type: none"> Vancouver General Hospital Commercial businesses along the Broadway and South Granville corridors Area largely comprises older apartment buildings, many with limited or no off-street parking
Oakridge (41st & 49th Avenue Stations)	June 2009	<ul style="list-style-type: none"> Oakridge-41st and Langara-49th Canada Line stations (RPP zone was installed at the opening of the Canada Line)
P.N.E.	June 1980	<ul style="list-style-type: none"> Hastings Racecourse Annual Pacific National Exhibition
Robson North	November 1993	<ul style="list-style-type: none"> Commuters working in the downtown area Visitors shopping or using the services in the downtown area
South Granville	May 1993	<ul style="list-style-type: none"> Commercial businesses along the South Granville and Broadway corridors Park-and-ride commuters Area largely comprises older apartment buildings, many with limited or no off-street parking
Strathcona	March 1986	<ul style="list-style-type: none"> Chinatown shopping and retail district west of Gore Avenue. Originally installed due to Expo 1986
VGH	April 1984	<ul style="list-style-type: none"> Vancouver General Hospital Commercial businesses along the Broadway and Cambie corridors
West End	April 1993	<ul style="list-style-type: none"> Commuters working in the downtown area Commercial businesses along the Robson, Denman, Davie, and Burrard Streets corridors St. Paul's Hospital

Table 1 (continued): List of the 23 RPP zones in Vancouver with Council approval year and corresponding parking generators

Parking permit limits. While households living in most RPP zones do not face any limits on the number of residential parking permits that they can apply for, there are caps imposed in 10 RPP zones.¹¹ In these RPP zones, each household is limited to a maximum of two residential parking permits. As for the overall number of parking permits that may be issued in an entire block or zone, there is currently no cap imposed in any of the RPP zones. As a result, the number of parking permits issued in some RPP zones like the West End has often exceeded the number of available on-street spaces.

Parking permit fees. Permit fees are charged on an annual basis using a three-tiered fee structure that varies by geography. The current three-tiered fee structure was introduced in 1997¹² and assesses the highest permit fee in the Downtown peninsula zones, followed by the Central Broadway zones and finally in the Outer zones. The fee differences are intended to reflect the amount of street space to be regulated, the level of parking enforcement required, and the price of off-street parking in the area. A comparative summary of the fees charged back in 1997 and at present is provided in Table 2. Fees are traditionally adjusted on an annual basis to reflect cost increases.¹³ Motorcycles and scooters are not exempted from the RPP system and they are charged the same rate as cars.

Zones	1997 fee	2014 fee
<i>Downtown peninsula zones</i> – Robson North, West End	\$48	\$73.40
<i>Central Broadway zones</i> – Fairview Slopes, Oak West, VGH	\$36	\$54.18
<i>Outer zones</i> – Boundary, Broadway Station, Cambie Village, Commercial Drive, Guelph, Industrial, Joyce Station, King Edward Campus, Kitsilano North, Kitsilano South, Kitsilano Point, Macdonald, Marine Drive, Mount Pleasant, Oakridge, PNE, South Granville, Strathcona	\$24	\$36.70

Table 2: Three-tiered RPP fee structure in 1997 and in 2004

Permit expiry dates are specific to the RPP zone and residents purchasing permits in the middle of a permit cycle will have their fees pro-rated according to the number of remaining days in the cycle. In the event that residents no longer require on-street parking in their neighbourhood, they can apply for a refund of the permit fee, which is also pro-rated on a daily basis but incurs an administration fee equal to one month of permit costs. However, due to the generally low permit fees, the amount of refund to be processed can be small and some residents may not bother pursuing a refund. Furthermore, for people who have moved out of their neighbourhood, they may choose to retain the permit for future visits to the neighbourhood during the remainder of the permit year since the cost of the on-street residential parking permit is relatively low compared to the cost for off-street parking facilities within the vicinity.

Residents who are borrowing or renting a car, or using a courtesy vehicle may sometimes need to park on the street. In such cases, temporary permits can be purchased at \$10.50 per week.

Accommodation of visitors in RPP zones. In certain circumstances, temporary permits can be issued to non-residents for a period of up to three months (except for home medical care services). Visitors from outside the Metro Vancouver region and housesitters are eligible for temporary permits at a fee of \$10.50 per week. Contractors working on a home can pay for a temporary permit that costs \$5.25 per day and is valid between 7 a.m. and 8 p.m. In the case

¹¹ These ten RPP zones with household permit limits are: Boundary, Broadway Station, Commercial Drive, Fairview Slopes, Guelph, Industrial, Joyce Station, Kitsilano Point, Mount Pleasant & Strathcona.

¹² See <http://former.vancouver.ca/ctyclerk/cclerk/970422/tt1.htm>.

¹³ For 2014, the proposed increase was 1% and this was based on recorded and projected Consumer Price Index Trends. See <http://former.vancouver.ca/ctyclerk/cclerk/20131210/documents/cfsc1b.pdf>.

of home medical care, residents who need such services can apply for a temporary permit that is issued for a year and transferrable between the vehicles of the resident's home medical care providers. The charge for this temporary permit for home medical care providers is equivalent to the RPP annual fee corresponding to the resident's zone.

Vancouver Resident Permit Parking (VRPP) zones

The VRPP program was introduced in 2010 as a replacement for the RPO program that was phased out the same year. VRPP zones are similar to RPP zones in terms of their administration, operation and enforcement, with the notable difference being that VRPP zones cover only a single block instead of multiple blocks. As of 2014, residents have to pay an annual fee of \$36.70 for a VRPP permit and households are not subject to any permit issuance limits. New VRPP zones are introduced in a similar manner as adding additional blocks to existing RPP zones.

Timeline Summary

To summarize the information described in this section, a timeline outlining the key historical events surrounding the evolution of residential parking management in Vancouver has been provided below.

1958	<ul style="list-style-type: none"> • "Three-hour non-resident parking" provision introduced in the City's Street and Traffic By-law No. 2849, prohibiting non-resident parking in front of any property for more than 3 hours between 8:00 a.m. and 6:00 p.m.
1966	<ul style="list-style-type: none"> • First Resident Parking Only (RPO) zone created as a small trial area adjacent to the P.N.E. to address resident concerns about heavy on-street parking caused by frequent evening events.
1980	<ul style="list-style-type: none"> • First Residential Permit Parking (RPP) zone initiated in the P.N.E.'s vicinity to address recurrent parking spillover into residential neighbourhoods on event days. RPP program initially in effect only for event days, but the P.N.E. RPP zone now operates year-round.
1997	<ul style="list-style-type: none"> • Three-tiered fee structure for RPP permit fees introduced, with fees highest in the Downtown peninsula zones, followed by the Central Broadway zones and finally in the Outer zones.
2010	<ul style="list-style-type: none"> • RPO zones phased out as part of the 2010 Operating Budget Process to reduce costs, with existent RPO zones grandfathered into the residential parking system. • Vancouver Resident Permit Parking (VRPP) zones introduced as a replacement for the RPO zones.
2011	<ul style="list-style-type: none"> • The City's two newest RPP zones, Guelph and Industrial, were created by splitting them from the Mount Pleasant RPP zone. This brings the total number of RPP zones to 23.

It is worthwhile to note that the spread of RPP programs across the United States largely began after a 1977 Supreme Court decision that upheld the constitutionality of preferential parking permit districts.¹⁴ While Vancouver's first residential permit parking district was incorporated in 1980, its introduction cannot be definitively linked to the aforementioned trend since discussions recommending the introduction of an annual Resident Parking Only decal took place as early as February 1974,¹⁵ and resident-only parking areas were established as early as 1966.

¹⁴ The origins behind the prevalence of residential parking permit programs across the United States today can be traced back to a Supreme Court decision made in 1977. This decision related to a parking permit program introduced in 1974 in Arlington County, Virginia, which was one of the earliest in the country. The enacted zoning ordinance specified that in residential areas where 75% of street parking capacity was filled and more than 25% of capacity was being occupied by non-residents (i.e. the "75%/25% rule"), parking privileges would be restricted to service or delivery vehicles and vehicles displaying parking permits (issued free to residents). Commuters working near to a newly designated residential parking permit district and who had regularly parked there subsequently filed a lawsuit alleging that the ordinance violated the Equal Protection Clause of the Fourteenth Amendment. Following two years of legal battles, the U.S. Supreme Court upheld the constitutionality of preferential parking districts in 1977, and they began spreading rapidly across the United States shortly thereafter, typically based on the "75%/25% rule" but potentially with some variations. For instance, preferential parking ordinances were passed in Beverly Hills (1978), Los Angeles (1979), Seattle (1979), Baltimore (1979), Santa Monica (1980) and Portland (1981). More details about the 1977 Supreme Court decision can be found at: <http://caselaw.lp.findlaw.com/scripts/getcase.pl?court=us&vol=434&invol=5>.

¹⁵ See https://archive.org/stream/19740312/1974-03-12_djvu.txt.

Residential Permit Parking Schemes in Other Cities

This section summarizes the findings relating to best practices and policies in residential permit parking programs, which are often used as a tool in many major cities to provide residents with preferential (or sometimes even guaranteed) access to on-street parking within their neighbourhoods, especially when there is high demand for these spaces from non-residents.¹⁶

Residential parking permit programs operated by the following eight cities have been examined in detail for this study: Calgary, Ottawa, Portland, San Francisco, Seattle, Sydney (Australia), Toronto and Washington DC. The findings are summarized and organized according to the following key elements of RPP schemes:

- Who can obtain parking privileges within the permit parking areas?
- Are there limits imposed on the number of permits issued?
- How much do residents have to pay for the parking permits?
- How are visitors and service providers accommodated within the permit parking areas?

A detailed city-by-city summary of the eight cities' residential permit programs is provided in the *Appendix*. Notwithstanding the focus on these eight municipalities, residential parking permit programs in numerous other cities across the world and parking permit schemes operated by educational institutions have also been examined, albeit in lesser detail, and are highlighted where relevant.

As noted in the previous section, Vancouver currently issues parking permits for zones covering either a single block or multiple blocks. Of the eight cities investigated, only Toronto issues parking permits for zones of similar sizes. Permit parking in Toronto is either implemented on a street name basis (i.e. privileges apply to a specific street) or an area basis (i.e. privileges apply to an area comprising several streets).

In the cases of Washington DC and Calgary, their programs use a hybrid approach that incorporates both zones and blocks. Washington DC's eight RPP zones have boundaries coinciding with its political wards, and within each zone, permit parking restrictions are implemented by petition on a block by block basis. Permit holders can then park anywhere within their respective zones. Calgary adopts a similar approach in implementing new permit parking restrictions within its RPP zones. However, unlike Washington DC, Calgary's RPP zones have to be first individually created based on an established set of qualifying criteria before permit parking restrictions for a block or a few blocks within the created zone may be implemented through a petition.

¹⁶ The concept of a resident permit parking scheme does however have its detractors. Some of the criticisms levelled at RPP programs are that they (i) are not equitable since not everyone has the same opportunity to access a public resource when it is prioritized based on where people live; (ii) can create parking inconveniences for residents when visiting other permit areas; (iii) promote under-utilization of off-street parking and less efficient use of on-street parking, especially when on-street parking permits are set at artificially low prices; (iv) can be administratively complex; and (v) often fail to tackle the underlying issue of excess parking demand. For a more detailed discussion of these drawbacks, see <http://transportblog.co.nz/2014/06/09/four-things-to-not-like-about-residential-parking-permits/>.

The other five cities operate using only the area-based approach, although in the case of Seattle, permit holders have a further restriction in that they may only park within six blocks of their residence.

Given the heavy emphasis on the area-based approach in other cities' permit parking programs, brief comparisons with Vancouver's Resident Permit Parking scheme (which covers multiple blocks) are also provided when presenting the findings relating to the key elements identified above.

Who can obtain parking privileges within the residential permit parking areas?

Residential permit parking areas are clearly intended to provide parking privileges to residents living within these areas. However, in some cities, not every resident living within a permit parking area qualifies for a permit. Eligibility restrictions may be imposed to avoid over-supplying permits for a limited number of on-street parking spaces, or to ensure that permits are allocated to residents who possess a greater need for on-street parking (e.g. residents with no on-site parking). In addition, many cities extend parking privileges to guests, as well as other groups of people who have business at a resident's home, such as contractors and home medical care providers.

Vancouver's approach. In **Vancouver**, all residents living within RPP zones can apply for a parking permit and there are no restrictions forbidding certain residents from obtaining one. Visitors can apply for temporary permits to park in RPP zones, but they must live outside the Metro Vancouver region. The RPP scheme does not have any provision for guests living within Metro Vancouver but outside of the City of Vancouver. Aside from residents and out-of-town visitors, housesitters, home medical care providers and contractors can also park within the RPP zones.

Comparison with other permit parking programs. Of the eight cities studied, five cities — Washington DC, Calgary, Ottawa, Sydney and Toronto — have some form of qualification criteria that residents must meet in order to obtain parking permits.

For **Washington DC** and **Calgary**, it was noted earlier that permit parking regulations are implemented on a block-by-block basis. Residents must be living on blocks containing permit parking restrictions in order to be eligible for parking permits.

Residents in **Ottawa** must demonstrate that they have no access to off-street parking in order to qualify for the permits. Elsewhere in Canada, the **City of St John's** likewise only issues parking permits to residents living in the downtown who do not have access to off-street parking.¹⁷

Toronto adopts a priority ranking system that classifies applications for residential parking permits into one of three levels, depending on each resident's degree of actual need for an on-street parking space. This system is used to allocate a limited number of parking permits (as determined by the on-street parking capacity), where higher priority is given to residents who are not holding any other parking permits and who have no access to on-site parking:^{18,19}

- *Priority 1:* Resident has no access to on-site parking for the subject vehicle and does not hold any parking permit
- *Priority 2:* Resident has no access to on-site parking for the subject vehicle and already has a Priority 1 permit for another vehicle
- *Priority 3:* Resident has access to on-site parking for the subject vehicle and wants the permit for convenience

¹⁷ See <http://www.stjohns.ca/living-st-johns/streets-traffic-and-parking/parking-permits/residential-parking-permits>.

¹⁸ Toronto's permit parking program is linked to its Street Allowance Rental Application (SARA) system to verify whether a resident indeed has no access to an on-site parking space. This SARA system is based on analytic surveys of all properties in the City of Toronto and residents can choose to contest the findings, in which case a bylaw officer will visit their property to investigate.

¹⁹ In 2013, out of the 71,000 residential permits issued, 80% are for Priority 1, 15% for Priority 2 and 5% for Priority 3.

In any permit zone, the residents holding the parking permits would be the ones with the highest priority. When a street is already at capacity and new residential parking permit applications are made, a waitlist is created and reviewed at least once a year. During this review, a lower priority permit in circulation can be rescinded with the introduction of a higher priority permit.²⁰ In this sense, residents with access to on-street parking are free to participate in the parking permit program, but can only obtain a parking permit if there is sufficient on-street parking capacity. Even so, these residents are not permanently guaranteed a parking permit since they may be moved into the waiting list at any time in the future.

As Toronto's residential parking permit system accords a higher priority to residents without access to on-site parking, there is the potential for increased community opposition to proposed developments that provide no or fewer parking spaces than usual. Based on discussions with Toronto City staff, there has indeed been a recent trend of community groups petitioning their ward's Councillor to pressure developments into providing higher parking ratios on new properties (so as to minimize any increase in demand for on-street parking). Councillors have in turn requested for certain new developments to be prohibited from obtaining parking permits. This is initiated in the Zoning/Planning Report, and buyers of units are notified in their purchase agreement that they will not be eligible to apply for on-street parking permits.

In **Sydney**, depending on the area, only residents without on-site parking or at most one on-site parking space may apply for parking permits. Residents with one on-site parking space are allowed to apply for parking permits only if they have a second vehicle registered to the residence (i.e. they cannot apply if they have only one vehicle). The number of on-site parking spaces is determined by: how many medium-sized passenger vehicles the property can accommodate; and how much space on the property can be reasonably converted to additional parking. For residents who own vehicles that are too large to fit into their on-site parking spaces, the City has clearly stated that such residents would still be deemed to have on-site parking.

Another criteria to be met is that residents must not be living in multi-unit flat buildings (i.e. buildings containing 3 or more dwellings) that have been newly built, converted or have undergone major refurbishment since a certain date. The dates vary according to the residence's location, and are 8 May 1996, 1 May 2000 or 12 May 2014. Finally, some residents who meet the aforementioned criteria may also be living in residential dwellings that have been approved on the condition that no parking permits will be issued to residents. For any property that is ineligible for the permit parking scheme, the development consent issued to the property owner will have included stipulations that prohibit the owner from obtaining parking permits, as well as require the owner to inform prospective buyers or tenants about this restriction.²¹

Sydney's strict residential permit parking eligibility criteria serves to protect existing on-street parking and prevent parking demand spillover associated with new higher density residential development. This is especially critical since the city does not require new apartments to

²⁰ Where there are two lower priority types (i.e. Priority 1 application on waiting list and both Priority 2 and 3 permits have been issued), then the lowest priority permit (i.e. Priority 3) will be cancelled. In determining whose permit is to be cancelled within a specific priority level, the most recently issued permit will be rescinded first.

²¹ In areas not covered under the 1996 or 2000 restrictions, this practice has been carried out for all new multi-unit flat development applications made after 2004. The ongoing application of the "no parking permit" restriction in these areas has since been formalized in the Neighbourhood Parking Policy approved by Council on 12 May 2014.

provide parking spaces due to its goals of keeping new housing affordable and offering more options for car-free households.²²

Other jurisdictions have also imposed similar eligibility restrictions for residential parking permits. The **City of North Vancouver** does not issue parking permits to residents living in buildings containing at least three units and sufficient off-street parking.²³ Residents are deemed to have sufficient off-street parking if their building provides the minimum parking requirement in the Zoning Bylaw or has obtained parking variances from the City. As for **Camden borough in London, England**, it restricts residents living in car-free housing developments from obtaining on-street parking permits (except for disabled drivers).²⁴ As such developments generally do not have any on-site parking provisions, this restriction is essential to prevent any additional burden on on-street parking.

Equity issues may arise if certain development types are prohibited from obtaining permit parking privileges. **Portland**, which is one of the three cities that do not impose any eligibility conditions for residential parking permits (the others are San Francisco and Seattle), has previously resisted suggestions to exclude apartment buildings without off-street parking from their permit parking program.²⁵ In particular, Portland strongly disapproves of any foreseeable discrimination and has expressed concerns that distinguishing permit eligibility based on housing type can be unfair as not every resident will end up having equitable access to city resources. Thus, in this light, any resident parking permit eligibility restrictions have to be thoughtfully considered with the benefit of preventing parking demand spillover carefully weighed against the notion of equity.

As noted earlier, parking exemptions can also be accorded to non-residents. Table 3 provides an overview of the different non-resident groups who are explicitly allowed to apply for permit parking privileges in Vancouver and the eight cities explored in detail.

City	Guests	Home medical care providers	Contractors	Businesses	Others
Vancouver	✓ ^a	✓	✓		Housesitters
Calgary	✓	✓	✓		Absentee landlords, community associations, religious institutions
Ottawa	✓ ^{a,b}	✓			
Portland	✓			✓	
San Francisco	✓	✓	✓	✓	Child caregivers
Seattle	✓		✓	✓	Building owners/managers
Sydney	✓	✓		✓	
Toronto	✓ ^b		✓ ^b		
Washington DC	✓	✓	✓		

^a Only if they are from out-of-town.

^b Only if there is on-street parking vacancy.

Table 3: Non-resident groups who may be given parking privileges in residential permit areas

Across all of the cities, guests are commonly catered for in permit parking programs. Specific permit parking privileges are also usually extended to homecare providers and contractors. Other groups of non-residents who provide services to residents but are more rarely given specific parking privileges in residential permit zones include child caregivers (San Francisco),

²² Sydney's restriction of access to street parking for new apartments is further combined with maximum caps for on-site parking supply that collectively help to mitigate the traffic congestion impact of new developments and also support the viability of public transit.

²³ See <http://www.cnv.org/~media/539B9103066C4BCBDD146CD5E527B18.pdf>.

²⁴ See <http://www.camden.gov.uk/ccm/content/transport-and-streets/transport-strategies/car-free-housing.en>.

²⁵ See <http://www.portlandoregon.gov/bps/article/445151>.

housesitters (Vancouver), absentee landlords (Calgary) and building owners/managers (Seattle). A more in-depth comparison of how the different cities accommodate visitors and non-residents providing services to residents is provided on page 28.

In some cities, parking permits may be issued to non-residents who are not related to residents in any capacity. Such groups include businesses (San Francisco, Sydney, Seattle and Portland), community associations (Calgary) and religious institutions (Calgary).

San Francisco allows commercial business owners located within RPP zones to obtain one residential parking permit for a personal vehicle and three such permits for delivery vehicles per address. The RPP fees charged to the business owners are the same as those paid by residents.

Sydney currently offers business parking permits in three of its parking precincts. Two of these parking precincts allow businesses to apply for one permit provided that they have no on-site parking, while in the third precinct (Glebe), businesses can obtain up to two permits if they have at most one on-site parking space and no access to parking for the subject vehicle. As part of their recent Neighbourhood Parking Policy, Sydney is working to expand the availability of business parking permits to the rest of the City (excluding Central Sydney), while imposing a more stringent eligibility criteria. For all newly processed applications (including in Glebe precinct), one parking permit can be obtained by businesses without on-site parking for use in their parking precinct provided that the subject vehicle of application is constructed for the purpose of carrying goods. The fee structure adopted for business parking permits is identical to that for non-discounted residential parking permits.

Since 2013, **Seattle** has been considering requests for parking permits made by businesses within residential parking zones (RPZs) on behalf of their employees. The Seattle Department of Transportation (SDOT) Director has the discretion to decide whether RPZ permits are issued to the businesses. The criteria to be considered are availability of on-street parking, off-street parking and alternate transportation modes within walking distance of the employer, availability of on-street parking in the RPZ (under 50% occupancy), employee working time, number of permits requested by the employer and existence of other employers within the RPZ (zone occupancy must not exceed 85% upon permit issuance). RPZ permits issued to business employees would be vehicle-specific and cost \$65 for the permit term (which is typically 2 years except in two zones which renew annually).

Like Seattle, **Portland** allows permits to be issued to business employees working in its area permit parking program zones. Businesses pay the same rate as residents for the permits. However, most zones limit the number of area parking permits that may be issued to a business, which is dependent on the number of full-time equivalent employees. This limit is either 0.5 or 0.75 permits per full-time equivalent employee, and in one zone there is a further cap of 40 total permits that may be issued. Another interesting aspect of Portland's permit parking program is that businesses can also apply for guest permits or guest passes and they are subject to the same quotas and fees as residents.

Calgary is unique in offering permit privileges to community associations and religious institutions. A community association can be issued up to five parking permits, while religious institutions can obtain up to three parking permits if their street frontage is 15 metres and an extra permit for every additional 6.1 metres of street frontage. These parking permits have identical privileges as residential parking permits and can be used by their employees or visitors since there are no specific license plate restrictions.

Are there limits imposed on the number of permits issued?

Limits can be imposed on the number of residential parking permits that may be issued to an eligible household or address to more equitably allocate finite on-street parking spaces between different users (i.e. residents, visitors and other non-residents), as well as to avoid placing an excessive burden on the on-street parking system through an over-issuance of parking permits. Caps on the overall number of permits issued for a block or permit zone can also be set to maintain a tighter control over the supply of residential parking permits and thus better ensure that street parking capacities can adequately accommodate permit holders. When the permit quota for a block or zone has been reached, a waitlist is usually established to manage the excess applications.

Vancouver's approach. 10 out of Vancouver's 23 RPP zones impose a limit of two residential parking permits per household. Households in the other 13 RPP zones can apply for an unlimited number of permits. In all of the RPP zones, there is no cap imposed on the total number of residential parking permits that can be issued for a particular block or the entire zone.

Comparison with other permit parking programs. Table 4 provides a comparative summary of the RPP limits for eligible household/addresses and whether area-wide caps are in place for Vancouver and the eight studied cities.

City	RPP limits for eligible households/addresses	RPP caps for blocks/zones
Vancouver	2 per household (in 10 RPP zones); No limits in all other permit areas	No
Calgary	1 per residence (in 2 permit areas); No limits in all other permit areas	No
Ottawa	No	Yes
Portland	No absolute limit in all zones; A soft limit exists in 1 zone that reduces the number of permits allowed by the number of available off-street parking spaces in that address.	No
San Francisco	4 per address	No
Seattle	4 per address	No
Sydney	1 or 2 per property (depends on location, number of on-site parking spaces and whether subject vehicle needs parking)	No
Toronto	No	Yes
Washington DC	No	No

Table 4: Permit limits for eligible households/addresses and for entire blocks/zones

In terms of the number of permits that may be issued to a particular household or address, **Ottawa, Toronto²⁶** and **Washington DC** do not impose absolute maximums in any of their permit areas, although in the cases of Ottawa and Toronto, additional permits for a resident or household are typically only issued if there is sufficient on-street parking capacity. As for Calgary and Portland, restriction of the number of permits issued to a household or address takes place in only one or two of their zones. In **Calgary**, the permit rationing occurs in two special permit areas where a vast majority of residential dwellings are multi-family buildings. In these two areas, a strict limit of one parking permit per residence is imposed with no replacements for permits that are lost or stolen during the permit year. In the case of

²⁶In the case of Toronto, permits are issued to individuals rather than households. There is no limit on the number of permits that an individual can hold, although the likelihood of an individual holding many permits is low since those already with existing permits are given a lower priority in the system.

Portland, there are no absolute limits imposed on the number of permits allowed for each residence across all zones, but in one of its permit areas, a soft limit exists that proportionately reduces the number of permits obtainable per residence by the number of available off-street parking spaces in that address.

San Francisco, Seattle and Sydney have parking permit limits applied to residential properties throughout all permit zones. **San Francisco** and **Seattle** both allow up to four residential parking permits per address. **Sydney** however only allows one or two parking permits for eligible residences, with the figure dependent on location, number of on-site parking spaces and whether they are sufficient to accommodate the vehicles registered at the residence. In most zones, households with no on-site parking spaces are allowed to apply for two permits, while households with one on-site parking space and two registered cars can apply for one permit. In the few zones where parking spaces are at a premium, only residents without on-site parking can apply for permits and each eligible household is limited to one permit.

Like Vancouver, almost all of the eight cities do not have area-based permit issuance caps, meaning that the number of permits issued can easily exceed the number of on-street parking spaces. However, some cities have made it explicit that their permit program is not intended to guarantee residents an on-street parking space. For example, San Francisco makes it clear that their program is not intended to ensure that residents will have sufficient parking spaces, Sydney indicates that their parking permits do not assure residents of a parking spot, while Portland describes their permits as akin to "hunting licenses" where residents are given preferential treatment in looking for on-street parking near their home, but are not necessarily guaranteed in finding a space.

Only Ottawa and Toronto have a quota on the number of permits that can be issued in a permit zone. **Toronto** limits the overall number of parking permit issued for any street, which generally does not exceed the number of on-street parking spaces (calculated using an average vehicle length of 5.5 metres). An exception is provided in the Permit Parking Bylaw that allows Toronto City staff to issue up to 10% more parking permits in excess of available on-street spaces if requested by the Ward Councillor. Residents living on streets that have reached their permit caps can apply to be placed on a wait list. This wait list is periodically reviewed to ensure that the parking permits in circulation are allocated based on the degree of need for a parking space, taking into account whether there is access to an off-street parking space and whether permits have already been issued to the household (see page 13).

In **Ottawa**, each permit zone has a quota that is based on its on-street parking capacity. In the case of households applying for a second or subsequent permit, they would be placed on a waiting list if their zones have reached their quota. The waiting time for a permit can be as long as two years in some zones.

Aside from Toronto and Ottawa, there are a couple of European municipalities that adopt both area-based caps and a waiting list system for their permit parking programs. **Amsterdam** limits the number of permits issued in each district and creates a waitlist when a district's cap is reached. Currently, almost all of its permit districts have waitlists activated and residents may need to wait as long as 4 years to obtain a parking permit in their district.²⁷ In the interim, these residents may apply for overflow parking permits that would be valid in another district, although these applications would again be subject to a waitlist system. Similarly, but on a smaller scale, **Brighton & Hove** (in the U.K.) sets limits on the total number of permits that can

²⁷ See https://www.cition.nl/main.php?obj_id=442832490 (in Dutch).

be issued in some of its zones. Presently in these zones, the approximate waiting time is 3 to 4 months.²⁸

A key point to highlight is that unlike Toronto, the waiting list systems adopted by Amsterdam and Brighton & Hove do not take into account the degree of residents' need for on-street parking. Since permit allocation is rationed based on a first-mover advantage, new residents who have legitimate on-street parking needs in the short term would be penalized in favour of existing permit holders, some of whom are just using on-street parking for convenience's sake.

The queue-based approaches brought up so far allocate a limited number of parking permits either according to the degree of need for an on-street parking space or on a first-come-first-served basis. A more radical approach however is to allocate parking permits based on residents' willingness to pay for one (in monetary terms). At present, the prevalent approach to permit parking means that whenever the parking permits in circulation exceed the on-street parking spaces available, residents have trade away the time spent cruising around for a vacant parking spot near their home. For people who place a high value on their time and who may be willing to spend more money in exchange for expending less time in looking for a parking space (i.e. paying in terms of money rather than time), an auction-based system offers a means of accommodating them. Under such a system, a limited number of parking permits will be auctioned off to residents and those who value their time more can bid higher to ensure they have a higher chance of getting a parking permit.

While economically rational in theory, auctioning off parking permits is however likely to be politically difficult to implement in practice since it can be argued that such a system favours the rich at the expense of the poor. To address further concerns that the municipality might be profiting at the expense of residents, any potential net proceeds from an auction-based system must also be re-invested back into the neighbourhoods.

Indeed, no municipality to date has adopted an auction-based approach to allocate on-street parking permits, although interestingly, **Chapman University**, a private university in California, currently uses a Dutch style auction to auction off permits for some of its parking spaces.²⁹ Under the Dutch style auction system, successful bidders would pay the lowest possible price that sells all the available permits. Bidding for the parking spaces at Chapman University begins with a high ceiling price (i.e. maximum amount the university can expect to receive) that decreases at regular intervals until the number of people willing to pay the posted price is more than or equal to the number of permits available. In the case of a tie, the bid that was placed first wins the permit.

A final approach that may be used to allocate a scarce resource is through a lottery system. Under such a system, a fixed number of parking permits would be sold at a certain fee and if demand exceeds supply, a lottery draw randomly determines who would be issued the parking permits. The lottery system is currently used by numerous educational institutions to select students who would be granted permits for parking on campus, with unsuccessful applicants placed on a waiting list. Depending on the educational institution, these students can be living on campus or commuting to school regularly. In the case of municipalities, the

²⁸ See <http://www.brighton-hove.gov.uk/content/parking-and-travel/parking/waiting-list-information>.

²⁹ Every fall, annual permits for 67 reserved spaces (24/7) in three parking lots and 105 unreserved spaces in one parking lot are auctioned online. For the reserved spaces, the winning permit fee is in addition to an \$330 annual parking fee that is charged for parking in any campus lot (except for the one parking lot where unreserved spaces are being auctioned). The parking spaces being auctioned are centrally located and convenient and prior to the inception of the auction system, these spaces were taken on a first-come-first-served basis, meaning that commuter students who arrived later in the day would have no chance of landing a central space.

City of St John's operates a lottery draw system to lease some stalls in one of its off-street parking facilities.³⁰ The public is welcome to attend the draw and successful applicants would have their names posted on the City's website, after which they have two weeks to sign a formal one-year contract.

In terms of applying a lottery system to an on-street permit parking system, no precedence appears to exist. While lotteries may seem fair in the sense that everyone has an equal chance of obtaining an on-street parking permit, the fact that permits are essentially allocated based on luck means that residents with more pressing needs for on-street parking may not be able to obtain one near their home. Residents, especially those who plan to live in their neighbourhood for a long time, would also likely prefer greater certainty in knowing whether they can have access to a parking permit for a longer time, rather than being subject to the uncertainty of whether or not they will be fortunate enough to obtain a parking permit for the next year.

³⁰ See <http://www.stjohns.ca/living-st-johns/streets-traffic-and-parking/parking-lottery>.

How much do residents have to pay for the parking permits?

A residential permit parking program incurs costs related to permit issuance, administration, operations and enforcement of permit parking regulations. To recoup at least some, if not all of these costs,³¹ fees are commonly charged by many cities.

Permit fees are typically charged on an annual basis and residents have to renew the permit upon its expiry. Longer permit terms can help to reduce the administrative efforts required on the parts of both city staff and residents, but may increase the potential for fraud especially in areas with a high turnover of residents and a substantial price differential between permit fees and off-street parking charges.

Refunds can also be issued to residents for returning unneeded permits before their expiry. Furthermore, by issuing refunds, ex-residents who have moved out of the permit zone may have an incentive to return their permits, provided that the refund amount involved is not trivial and permit fees are not significantly under-priced relative to off-street parking charges (otherwise they may simply keep the permit in case they visit the permit area again sometime during the rest of the permit term). Processing of refunds however takes up staff resources, so some cities may choose to charge an administrative fee to recover part or all of these costs.

Permit fees may be set at a standard rate for all applicants or they can be made to vary in order to achieve certain objectives. Contrasting fees can be charged to take into account the differing locational characteristics across permit zones. To manage parking permit demand and encourage a more equitable allocation of the parking permits issued in a program, higher permit fees can be charged to households with sufficient on-site parking or who are already holding a certain number of permits. Since vehicles parked on the street essentially occupy space at the expense of other users, parking permit applications for shorter car lengths or motorcycles/scooters can be charged lower rates. A parking permit program can also promote broader environmental goals, such as by charging lower permit fees for electric or lower emission vehicles.

Parking problems in residential neighbourhoods commonly arise because of parking generators; in such cases, the amount that residents have to pay for their parking permits can be partially or fully subsidized by the parking generators themselves.

Vancouver's approach. In **Vancouver**, the permit fees collected help to recoup the administrative costs of the program. Permit terms last for a year and each RPP zone has its own starting and expiry dates for its permit cycle. Residents purchasing parking permits in the midst of a permit cycle will have their fees pro-rated based on the number of remaining days in the cycle. Residents can also obtain a refund for returning their permit before its expiry. This refund is similarly pro-rated on a daily basis, but incurs a processing charge equivalent to 30 days' worth of the permit fee. The annual fee for a permit is \$36.70, \$54.18 or \$73.40 and the fee differences are solely based on the location of the RPP zone. In other words, factors such as sufficiency of on-site parking, number of permits already issued to the household, vehicle emissions, and vehicle length have no impact on the permit fee. Motorcycles and scooters are also charged the same rate as cars and residents are not subsidized by parking generators when they pay for their parking permits.

³¹ Cities may have different interpretations regarding the costs pertaining to a permit parking scheme. For example, some cities do not include the costs of enforcing permit parking regulations within their overall program expenses, and instead budget for these costs under a general parking enforcement category.

Comparison with other permit parking programs. Most of the eight surveyed cities charge fees on the basis of recouping the costs associated with the program. The cities that have explicitly stated such a rationale include **Ottawa, Portland, San Francisco, Seattle, Sydney** and **Toronto**. For **Ottawa**, the permit fees charged are also intended to cover the substantial expenses needed to provide additional winter maintenance efforts that support all-day parking activities for permit holders, who would be exempted from the citywide overnight winter parking ban in effect from 15 November to 1 April (this ban is to facilitate snow ploughing; permit holders are still not exempted from snow route parking bans).

In the cases of Calgary and Washington DC, permit fee rates are not specifically tied to cost recovery for their RPP programs. Funding for **Calgary's** RPP program is not from the City's Transportation Department budget; instead, it comes from the general revenue of the Calgary Parking Authority, which is an "arm's length" agency of the City. As for **Washington DC**, permit fee revenues are instead deposited into a general fund which is used to fund a wide array of programs, of which the permit parking scheme is one of them.

Table 5 compares the permit cycle length and whether issued permits have standardized expiry dates in Vancouver and the eight other municipalities.

City	Length of permit cycle	Standardized expiry dates for issued permits?
Vancouver	1 year	Yes, standardized by permit zones
Calgary	1 year	Yes, standardized by permit zones
Ottawa	1 year or month-to-month	No
Portland	6 months* or 1 year	Yes, standardized by permit zones
San Francisco	6 months* or 1 year	Yes, standardized by permit zones
Seattle	2 years (except in 2 zones which is 1 year)	Yes, standardized by permit zones
Sydney	1 year	No
Toronto	6 months or 1 year	Yes, permit terms in all zones expire on May 31 or Nov 30
Washington DC	1 year or 2 years	No, permit expiry coincides with vehicle registration expiry

* The six-month permit cycle length for Portland and San Francisco technically refers to a one-year permit that expires within six months at the time of the purchase.

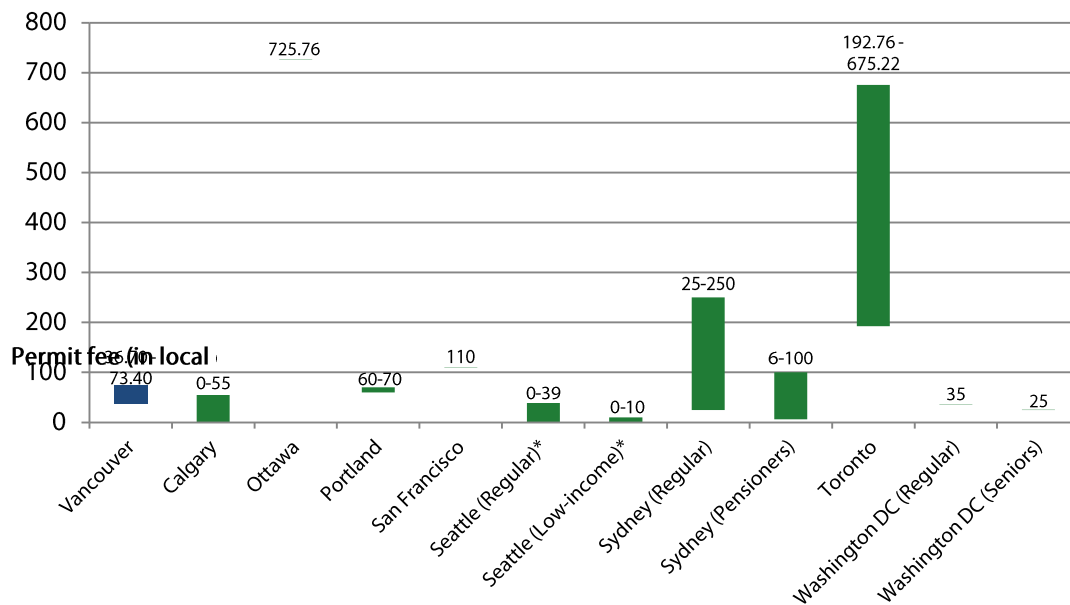
Table 5: Length of permit cycle and whether a program has standardized expiry dates for its issued permits

With the exception of Seattle, every other municipality adopts a default one-year duration for its permit cycle. In **Seattle**, most zones have a two-year length for their permit term, with residents in only two zones renewing their permits on an annual basis. In addition to the standard one-year permit term, the following municipalities offer residents the flexibility of choosing a different permit term duration at the time of purchase: **Ottawa** (1 month), **Toronto** (6 months) and **Washington DC** (2 years). In the cases of **Portland** and **San Francisco** that have fixed dates for their permit cycles, a "six-month" term is available in the sense that annual permits are charged at half-price if they expire within six months at the time of purchase.

Like Vancouver, the residential parking permits in **Calgary, Portland, San Francisco** and **Seattle** have standardized expiry dates that are specific to each permit zone. **Toronto** takes a step further by having fixed permit expiry dates regardless of the permit zone, whereby permits expire on either May 31 or November 30 of each year. The other three cities (Ottawa, Sydney and Washington DC) have varying expiry dates for issued permits. Parking permits in **Ottawa** and **Sydney** are valid for an entire permit term's duration (i.e. 1 year or in the case of Ottawa, an additional option of 1 month) from the date of issuance, while in **Washington DC**, the expiry date of a residential parking permit coincides with that of the vehicle registration, both of which are processed by the District's Department of Motor Vehicles.

In terms of permit fee refund policy, **Portland**, **San Francisco**, **Seattle** and **Washington DC** do not offer any pro-rated refunds, meaning that there may be little incentive for residents who have moved out of their permit zones to return their parking permits to the city. The other cities offer refunds on purchased permits, albeit in very different ways. **Calgary** only offers a full refund within the first 10 business days of purchasing a permit, while **Sydney** refunds half of the permit's cost if it is returned with at least three months' validity. In **Toronto**, returned permits are pro-rated on a monthly basis and no administrative fee is charged. **Ottawa's** refund policy is quite similar to Vancouver's as refunds are pro-rated on a daily basis if the returned permit has at least 30 days' validity, and an administrative fee is charged. However, unlike Vancouver which charges an administrative fee equal to 30 days' worth of the annual permit fee, Ottawa retains a processing fee equivalent to half of the monthly permit parking rate.

The range of permit fees charged on a per year basis by Vancouver and the eight cities are presented in Figure 1. The permit fee amounts shown are in local dollars (i.e. Australian dollars for Sydney and U.S. dollars for Portland, San Francisco, Seattle and Washington DC). Given that all three currencies are reasonably close to parity with one another, a direct fee comparison can be made across all of the cities.



* In most of Seattle's residential permit parking zones, rates are published for a two-year term. In such cases, the published fees were divided by two to obtain the per-year charges.

Figure 1: Range of permit fees on a per year basis

As deduced from Figure 1, the highest fee in Vancouver at \$73.40 does not come close to any of the amounts being charged in **Ottawa** (\$725.76),³² **Toronto** (\$192.76 to \$675.22) and **San Francisco** (\$110, which is one of the highest fees charged across all U.S. cities). For **Ottawa** and **Toronto**, the high fees likely reflect the stronger guarantee offered by their permits in finding an on-street parking spot since there are permit quotas and waiting lists established for their permit zones.

³² Ottawa's annual rate of \$725.76 is the highest for residential parking permits in North America, although the City of Eugene in Oregon comes close in one of its permit zones that has high density residential development. In this zone, the number of parking permits is capped at 75% of the available on-street parking spaces and they are sold for \$60 per month or \$720 per year. For more information, see <https://www.eugene-or.gov/index.aspx?NID=1633>.

The maximum fee in Vancouver is also lower than the highest amount being charged to regular permit holders in **Sydney** (\$250). In **Portland**, the highest fee (\$70) is comparable to Vancouver's maximum fee, but the range of fees being charged (\$60 to \$70) is within a considerably narrower band and towards the higher end of what Vancouver charges. The other cities of **Calgary**, **Seattle** and **Washington DC** generally charge lower fees than Vancouver to their regular permit holders.

Thus, on the whole, with the exception of Ottawa and possibly Toronto, on-street residential parking permits in most cities are significantly under-priced compared to their true market prices (which would be closer to off-street parking fees charged in the residents' neighbourhoods).³³ When fees are set artificially low, residents have little incentive to use their on-site parking spaces and often choose to park their car on the street instead. A substantial price differential between on-street parking permit fees and off-street parking charges may also encourage fraud since residents stand to profit from selling the cheap permits to a third party (e.g. a commuter).

Three cities, Seattle, Sydney and Washington DC, also offer discounted parking permits to certain groups. **Seattle** sells low-income parking permits at \$10 per term (1 year or 2 years) in zones where residents are charged a fee for obtaining a permit. In **Sydney**, pensioners are charged between \$6 and \$100 when purchasing a parking permit. **Washington DC** offers parking permits to seniors aged 65 and above at a cheaper rate of \$25. For the remainder of this section, the permit fees being discussed refer to the charges that apply to regular permit holders.

Table 6 provides a summary of major factors that influence fee variations for permit holders in Vancouver and the eight surveyed municipalities.

City	Do permit fees vary with ... ?					
	Permit zone location	Number of permits issued	Sufficiency of on-site parking	Environmental rating of vehicle	Car length	Use of motorcycles/scooters
Vancouver	✓					
Calgary	✓	✓				
Ottawa						
Portland	✓					
San Francisco						
Seattle	✓	✓				✓
Sydney	✓	✓		✓		✓
Toronto		✓	✓			✓
Washington DC						

Table 6: Major factors influencing permit fee variations

The cities of **Ottawa**, **San Francisco** and **Washington DC** charge a single rate for all of their parking permits, meaning that permit fees do not vary by location, number of permits issued, sufficiency of on-site parking, a vehicle's environmental rating or vehicle length.

Like Vancouver, **Portland** has permit parking fees that vary by zone location. With the exception of one zone where parking permits sell for \$70 a year, all other permit zones in Portland charge \$60 annually for a permit.

³³ True market prices can be achieved by auctioning off parking permits, but as discussed on page 18, there are significant political hurdles for implementing such an approach.

The other four municipalities charge permit fees that vary with at least two different factors. For most permit parking zones in **Calgary**, the first two permits are issued at no cost to a residence, while the third and subsequent permits have an annual charge of \$50 plus GST (i.e. \$55). Two special permit zones that largely comprise multi-family buildings exist and in both areas, households can obtain only one permit at a yearly cost of \$25 plus GST (i.e. \$27.50).

Seattle adopts seven different fee schedules for its 33 residential permit zones, which are shown in Table 7. The charges shown in the table apply to the entire permit cycle duration, which is two years for most zones. Only two residential permit zones are assessed on an annual basis and one of them has different rates for its 2 sub-areas. The various fee schedules arise because in certain areas, the amounts that residents have to pay for their parking permits are subsidized partially or fully by an institution or some other source of parking spillover. Some permit zones end up with progressive permit rates for residents as a result of these subsidies. Without any subsidy, every resident would be paying \$65 for a parking permit. For residents who ride motorcycles or scooters, they are not required to obtain a permit to park in a residential permit zone.

Permit validity period	1st permit	2nd permit	3rd & 4th permits	Level of subsidy
2 years	\$0	\$0	\$0	Full
2 years	\$0	\$32	\$65	Partial
2 years	\$16	\$65	\$65	Partial
1 year	\$29	\$29	\$29	Partial
1 year	\$32	\$48	\$65	Partial
1 year	\$39	\$39	\$39	Partial
2 years	\$65	\$65	\$65	None

Table 7: Fee schedules used to charge for residential parking permits in Seattle

In the case of **Toronto**, permit fees are higher for residents who have a less pressing need for on-street parking. As previously described on page 12, Toronto manages their permit parking program by ranking applications into three priority levels, taking into account whether the resident has access to on-site parking and also if the resident is already holding a Priority 1 permit. The permit fees charged for the different priority levels are shown in Table 8.

Different monthly rates apply for the Dec 1 to May 31 and June 1 to November 30 periods due to a twice-yearly review of the permit charges. On an annual basis, the fees for Priority 1, Priority 2 and Priority 3 permits translate to \$170.58, \$426.84 or \$597.54 before HST (i.e. \$192.76, \$482.33 or \$675.22). Residents riding motorcycles and scooters need to obtain residential parking permits, but no fee is charged.

City	Fee (before HST)	
	Dec 1 to May 31	Jun 1 to Nov 30
<i>Priority 1: Resident has no access to on-site parking for the subject vehicle and does not hold any parking permit</i>	\$14.04 per month	\$14.39 per month
<i>Priority 2: Resident has no access to on-site parking for the subject vehicle and already has a Priority 1 permit for another vehicle</i>	\$35.13 per month	\$36.01 per month
<i>Priority 3: Resident has access to on-site parking for the subject vehicle and wants the permit for convenience</i>	\$49.18 per month	\$50.41 per month

Table 8: Fee schedule for residential parking permits of different priority levels in Toronto

Sydney's parking permit fees are affected by a wide range of factors, namely zone location, number of permits issued to the household, environmental rating of a vehicle and whether the vehicle in question is a motorcycle or scooter. As compared to other areas of the city, restricted multi-unit residential developments in the areas of Ultimo and Pymont are charged

a higher fee for the single permit that they are allowed. Also, if a household is eligible for a second permit, then this permit will be charged at a higher rate than the first one. As for pegging permit fees to the environmental rating of a vehicle, it was introduced in July 2008 and assessment of the rating is based on the Federal Government's Green Vehicle Guide. Vehicles rated at 4 or more stars (i.e. the least polluting vehicles), as well as motorcycles or scooters, are charged the lowest fees, holding all other variables constant. In instances where a car's model cannot be found in the guide (which may be common for cars manufactured before 2004), a standard fee equivalent to the fee for a vehicle rated at 2 to 2.5 stars is applied. Table 9 shows the fee schedule for residential parking permits in Sydney.

	Vehicle Rating			
	4 or more stars & motorcycles/scooters	3-3.5 stars	2-2.5 stars or not in Green Vehicle Guide	1.5 stars or less
1st RPP	\$25	\$37	\$50	\$100
2nd RPP*	\$50	\$75	\$100	\$200
Restricted RPP in Ultimo/Pyrmont (only one per residence)	\$62	\$93	\$125	\$250

* A 2nd RPP is not issued in zones where parking permits in circulation significantly exceed the number of on-street parking spaces

Table 9: Fee schedule for residential parking permits in Sydney

Numerous other jurisdictions have similarly incorporated variations in the parking permit fees charged to residents and a few interesting examples are cited as follows.

Close to the City of Vancouver, the **University Neighbourhoods Association**, which oversees five neighbourhoods on the University Endowment Lands, requires residents in its Hawthorn Place and Wesbrook Place neighbourhoods to purchase residential parking decals to park on the street. An escalating fee structure is adopted for the annual parking decals – 1st permit: \$60, 2nd permit: \$120, 3rd and subsequent permits: \$240 each.³⁴

Sevenoaks District (in Kent, U.K.) charges a higher parking permit fee for residents with more off-street parking spaces and existing on-street parking permits,³⁵ as shown in Table 10.

Total number of off-street parking spaces and existing on-street parking permits	1st permit	2nd permit	3rd permit	4th permit
0	£35	£70	£125	£250
1	£70	£125	£250	£250
2	£125	£250	£250	£250
3	£250	£250	£250	£250

Table 10: Fee schedule for residential parking permits in Sevenoaks, U.K.

The **Rosemont La Petite-Patrie borough in the city of Montréal** has recently introduced a new permit fee schedule in July 2014 that charges lower amounts for electric and hybrid vehicles and higher amounts for additional permits. The first permit costs \$115, \$87 and \$58 for regular, hybrid and electric vehicles respectively, while the corresponding charges for an additional permit are \$173, \$133 and \$87 for regular, hybrid and electric vehicles. The borough's officials have also indicated their intention to have permit fees that vary with the car engine size in the future.³⁶

³⁴ See <http://www.myuna.ca/services/parkinginterim/2014-parking-fees/>.

³⁵ See <https://www.sevenoaks.gov.uk/services/business/parking/street-parking-permits>.

³⁶ See http://ville.montreal.qc.ca/portal/page?_pageid=7357,93209624&_dad=portal&_schema=PORTAL and <http://www.cbc.ca/news/canada/montreal/type-of-car-will-affect-cost-of-rosemont-parking-permits-1.2662696>.

A few boroughs in London, England have also linked their permit fees to vehicle environmental impacts. In **Islington**, the cost of an on-street parking permit depends on the vehicle's carbon emissions rating (if manufactured after April 2001) or engine size (if manufactured in or before April 2001), which is matched to one of 13 fee bands. Electric or low emission vehicles (which emit between 0 to 100 g/km of CO₂) can have permits issued for free, while the top price applying to the most polluting vehicles is £434 per year. Up to three vehicles can also be registered to a single permit, but a vehicle must display a permit in order to park on-street and the permit fee charged will be based on the vehicle with the highest carbon dioxide emissions or largest engine size.³⁷

Similarly, in the **Camden** borough, four basic parking permit tariff bands apply to non-electric vehicles based on their carbon emissions rating (if registered in or after March 2001) or engine size (if manufactured before March 2001). The range of annual tariff amounts within these bands is £90.13 to £265.74 per year. Electric vehicles are charged £28.07 per year. Although up to three vehicles can be registered to a permit, the permit can only be used in one vehicle at a time and there are second and third vehicle charges of £53.05 and £79.31 respectively. The basic charge depends on the vehicle with the highest carbon dioxide emissions or largest engine size and a further surcharge of £10.30 applies for every diesel powered vehicle registered to the permit. Thus, an applicant registering three diesel-powered vehicles for his annual permit will be paying £429 if one of the vehicles is in the most polluting band, although an additional £10 discount applies if payment is made online.³⁸

The boroughs of **Islington** and **Camden** also have separate rates for motorcycles or scooters. A twelve-month permit costs £49.50 in Islington and £55.11 in Camden.

Interestingly, while none of the eight cities studied in detail vary permit charges according to car length, there is one city in England that does so. **Norwich** classifies vehicle lengths into short (under 3.92 metres), medium (between 3.92 and 4.45 metres) and long (over 4.45 metres), charging on-street parking permit applicants an annual fee of £19, £31 and £46 respectively. Motorcycles and scooters do not require permits to be parked on the street. Essentially, Norwich's goal of adopting such a fee scheme is to encourage the ownership of shorter vehicles and to increase the number of vehicles that can be parked on the street.³⁹

Lastly, it was noted earlier that some residents in Seattle enjoy lower permit parking fees which are partially or fully paid for by parking generators. The city of **Eugene** in Oregon has adopted a similar approach for an event parking district that was jointly established by the city, the local neighbours association and the University of Oregon in 2010. This event parking district was created to address residents' concerns about parking spillover from the university's new basketball arena during game days, as well as to overcome the residents' reluctance to pay for parking permits to solve a problem arising from the university (which logically did not want to build an expensive parking facility to meet the infrequent spikes in demand).

The finalized arrangement for this event parking district allowed each residence to be eligible for two free parking permits which would exempt vehicles from the two-hour parking restrictions in effect daily from 7 a.m. to 11 p.m. throughout the district (additional parking permits, if available, could also be purchased at the prevailing market price by these

³⁷ See http://www.islington.gov.uk/services/parking-roads/parking/parking_permits/Pages/resident_permit.aspx.

³⁸ See http://www.camden.gov.uk/ccm/cms-service/download/asset?asset_id=3211812.

³⁹ See <http://www.norwich.gov.uk/TransportAndStreets/Parking/ParkingPermits/Pages/ParkingPermit-checkyourcarlengthandpermitcharges.aspx>.

households). Unlike the other permit parking zones in Eugene where residents are charged for each parking permit, the funds required to manage this event parking district would be collected through the university's sale of up to 500 event parking permits that could be used on men's basketball game days. These permits are sold at \$150 for a basketball season (up to 22 games) or \$10 per game if there are unsold season permits. In the event that insufficient revenue is generated from the sale of the event parking permits, the university has to make up the shortfall, thus ensuring that the city receives the required funds to manage the district.⁴⁰

Likewise, in areas with sufficient vacant on-street spaces during the day, parking permit fees for residents can be subsidized through the sale of permits at higher rates to non-residents. This approach also yields other benefits as more efficient usage of curb parking spaces is promoted, neighbouring businesses can have additional parking spaces if needed, and any excess revenue generated by the non-resident parking permits may potentially be dedicated to pay for improvements in residents' neighbourhoods (e.g. street repair, and wider sidewalks). Some cities in the United States have adopted such an approach, often by issuing parking permits to residents at a low cost and selling excess on-street parking capacity in the form of day permits to local employees at moderate cost, and/or commuters at market rate.

The city of **Tucson** in Arizona offers parking permits to residents living in properties with fewer than five units at an annual charge of \$48, \$60 or \$72 (depending on location). As for non-residents, they can purchase parking permits for \$100 to \$450 per year in the five zones within the University of Arizona area and \$250 to \$300 a year in the three zones within the Downtown/4th Avenue area. These rates for the non-resident parking permits vary by zone location. A hanging permit tag option also exists for an additional \$100 per year that allows the non-resident parking permit to be transferred between vehicles.⁴¹

The Californian city of **West Hollywood** sells yearly parking permits to residents using an incremental fee structure, where the first, second, third and fourth permits cost \$22, \$30, \$52 and \$75 respectively. A fixed number of commercial parking permits are available for businesses located within some permit zones at a cost of \$180 per quarter (or \$720 per year).⁴²

As for **Boulder** in Colorado, residential parking permits can be obtained for an annual fee of \$17 (which is a rate maintained since 2006) and they come with two free visitor permits. Businesses located within permit parking zones can also purchase up to three parking permits (exceptions may be made for large businesses) at \$75 per permit per year for their employees' use. As for those who do not live or work in the permit zones, a limited number of commuter parking permits can be purchased by them and the revenues collected help to cross-subsidize the residential parking permit fees. These commuter parking permits would however only be valid for a specific block within a zone, and they cost \$82 quarterly (or \$328 annually).⁴³

⁴⁰ See <http://www.cato-unbound.org/2011/04/13/donald-shoup/who-should-pay-parking>, <https://www.eugene-or.gov/index.aspx?NID=1633> & <http://matthewknightarena.com/mensbasketballparking.php>.

⁴¹ See <http://www.tucsonaz.gov/parkwise/residential-parking> and <http://www.tucsonaz.gov/parkwise/non-resident-parking-permit-program>.

⁴² See <http://www.weho.org/city-hall/city-departments/public-works/parking-services/parking-permits/residential-permits-and-fees> and <http://www.weho.org/city-hall/city-departments/public-works/parking-services/parking-permits/commercial-permits-and-fees>.

⁴³ Overall, Boulder's program is designed to be revenue neutral with the sale of commuter and residential parking permits expected to cover its costs. In terms of parking permits sold in 2013, commuter permits generated \$86,128 (68% of total revenue), while 2,292 residential permits generated \$38,964 (31% of total revenue) and 31 business permits generated \$2,325 (2% of total revenue). For more information about Boulder's permit parking program, see <https://bouldercolorado.gov/parking-services/neighborhood-parking-program> and https://www-static.bouldercolorado.gov/docs/IP_06032014_website-1-201405290912.pdf.

How are visitors and service providers accommodated within the permit parking areas?

Although the primary intention of residential permit parking programs is to provide parking privileges to residents, it is also essential for these programs to accommodate the parking needs of visitors and other people who provide services to residents. Without proper parking management for visitors and service providers, unnecessary cruising for parking spaces could result and residents may also experience significant difficulties in hosting their relatives or friends.

Given the importance of accommodating guests, many cities offer visitor parking permits that exempt users from posted parking restrictions within the permit areas. Some cities may however more narrowly define eligible visitors to be from out-of-town, meaning that there can be a gap in meeting the parking needs of short-term guests who are visiting from nearby. The formats in which visitor parking permits are issued can also differ as cities can offer them as transferrable annual permits, temporary permits lasting up to a few weeks or months, or single-day passes.

As indicated on page 14, cities can also extend permit parking privileges to groups of people who provide services to residents. Such groups could include contractors, homecare providers, housesitters and absentee landlords or building owners/managers.

Vancouver's approach. Visitors must be from out of town (i.e. outside the Metro Vancouver region) in order to apply for temporary permits to park in Vancouver's RPP zones. These temporary visitor permits are issued for up to three months at a fee of \$10.50 per week and they are not transferrable between vehicles. Housesitters can similarly obtain temporary permits of up to three months at the same rate. Residences with contractors working on their properties can purchase temporary permits of up to three months at a fee of \$5.25 per day. These permits can be transferred between different contractors and they are only valid between 7 a.m. and 8 p.m. Residents who require homecare services can apply for a temporary permit that is issued for a year and is transferrable between the vehicles of the resident's homecare providers. This temporary permit for homecare providers is sold at an amount equivalent to the annual residential parking permit fee corresponding to the resident's zone.

Comparison with other permit parking programs. Table 11 on the next two pages provides a comparative summary of the treatment of visitors in the permit parking programs of Vancouver and the other eight municipalities.

Ottawa is similar to Vancouver in requiring applicants for their temporary visitor parking permits to be from out-of-town. These temporary permits are sold at \$14.75 plus HST (i.e. \$16.67) per week and issued for only up to two weeks, provided that the zone has no waiting list for residential parking permits. Consecutive issuances of these permits are not allowed and out-of-town visitors who wish to park for more than two weeks will have to purchase the regular residential parking permit.

City	Means of accommodating visitors	Special Eligibility/Restrictions	Permit Duration	Permit Fee	Permit limits per household	Transferability across vehicles
Vancouver	Temporary permit	Only for out-of-town visitors from outside Metro Vancouver)	Up to 3 months	\$10.50 per week	No limits	No
Calgary	Long-term permit	<ul style="list-style-type: none"> • Available in all but 2 zones • Only for residential properties with less than 5 units • Permit users have to park within one block from residence. 	1 year	Free	2 per year	Yes
	Temporary permit	<ul style="list-style-type: none"> • Available in all but 2 zones • Only for residential properties with at least 5 units • Only for out-of-town visitors 	Up to 2 weeks	Free	No limits	No
	Transferrable residential parking permit	<ul style="list-style-type: none"> • Only in the 2 zones where visitor parking permits are not issued. • RPPs intended to double up as visitor parking permits. 	1 year	\$55	1 per year	Yes
Ottawa	Temporary permit	<ul style="list-style-type: none"> • Only for out-of-town visitors • No residents must be on the waiting list 	Up to 2 weeks	\$16.67 per week	No limits but back-to-back permits will not be issued	No
	Guest parking permit	Only in established Guest Parking Permit zones	1 year	\$27.69	5 per year	Yes
Portland	Long-term permit	<ul style="list-style-type: none"> • Available in all but one zone • In 1 zone where these permits are available, the permit can only be used up to 5 times per vehicle per month 	1 year	\$60 in 10 zones; \$70 in 1 zone	1 per year	Yes
	Scratch-off pass	Available in 4 zones	1 day	\$10 for a booklet of 10	12 booklets (or 120 permits) per year in 1 zone; No limits in other 3 zones	Yes
	Temporary permit	Only for holders of area parking permits	No fixed duration	Free	Total hours used by area parking permit holder (not household) must not exceed 99 hours in a year	Yes
San Francisco	Two-week increment permit	-	2 weeks 4 weeks 6 weeks 8 weeks	2 weeks - \$37 4 weeks - \$55 6 weeks - \$73 8 weeks - \$94	No limits	Yes
	Scratch-off pass	-	1 day	Depends on order size: < 5 permits - \$12 each 6-15 permits - \$10 each 16-20 permits - \$8 each	20 per year	Yes

Table 11: Accommodation of visitors in permit parking programs

City	Means of accommodating visitors	Special Eligibility/Restrictions	Permit Duration	Permit Fee	Permit limits per household	Transferability across vehicles
Seattle	Long-term permit	-	1 year / 2 years (coincides with permit cycle)	Residents with RPPs \$30 in most zones, free in a few zones Residents without RPPs Free, \$16, \$29, \$32, \$39 or \$65 (same amount as a first residential permit)	1 per permit period	Yes
	Single-day pass	-	1 day	\$1	5 per day & 50 per year	Yes
Sydney	Long-term permit	<ul style="list-style-type: none"> Currently in circulation for 4 precincts, but will be phased out by May 2016 Only issued to households who are not living in multi-unit flat buildings newly built/converted since as early as 1996 or buildings that are subject to the "no parking permit" restriction 	1 year	Non-pensioners - \$50 Pensioners - \$13	1 per year	Yes
	Scratch-off pass	<ul style="list-style-type: none"> Currently available in 1 precinct, but will be extended to all precincts (except Central Sydney) by mid-2015 Only issued to households who are not living in multi-unit flat buildings newly built/converted since as early as 1996 or buildings that are subject to the "no parking permit" restriction 	1 day	\$50 for a pack (number of permits contained within varies by household)	<u>Areas where permits issued exceed on-street parking spaces</u> 30, 20 and 10 per year for households with 0, 1 and 2 RPPs respectively. <u>All other areas</u> 45, 30 and 15 per year for households with 0, 1 and 2 RPPs respectively.	Yes
Toronto	Temporary permit	<ul style="list-style-type: none"> No residents must be on the waiting list At least 10% of permits are available to residents at the time of application 	24 hours 48 hours 1 week (maximum of 8 consecutive weeks)	24 hours - \$8.60 48 hours - \$12.90 1 week - \$20.15	No limits	No
Washington DC	Long-term permit	<ul style="list-style-type: none"> Only available in some permit zones and valid within a smaller area of these zones Residence being visited must be on RPP-restricted block. 	1 year (expires on Sep 30 of each year)	Free (mailed to residents on request)	1 per year	Yes
	Temporary permit	Residence being visited must be on RPP-restricted block.	Up to 15 days	Free	No limits	No

Table 11 (continued): Accommodation of visitors in permit parking programs

However, a limited number of residential areas in Ottawa contain dedicated guest permit parking zones that serve to facilitate short-term visits of up to 3 hours in high traffic areas. Residents living in these zones can apply for annual guest parking permits that can be used by their visitors, who need not be from out-of-town. These guest parking permits cost \$24.50 plus HST (i.e. \$27.69) per annum and each eligible residence can apply for up to five permits in a year.

In **Calgary**, the out-of-town visitor requirement exists for one of its three means of accommodating guests. The temporary visitor permit, which is issued for free for a period of up to two weeks, is available in all but two of Calgary's permit parking zones. In the qualifying zones, this permit is only issued to residential properties with at least 5 units if they have visitors from out-of-town and there is no issuance limit for each household. For residential properties with fewer than 5 units that are not allowed to apply for temporary visitor parking permits in these zones, they cannot instead apply for up to two free annual visitor permits that are valid within a block's radius from the residence. The two special zones where residents are prohibited from obtaining temporary or annual visitor permits largely consist of multi-family buildings. In both zones, the single residential parking permit that each household may purchase for \$50 plus GST (i.e. \$55) is transferrable and doubles up as a visitor parking permit.

As for **Toronto**, although guests are eligible for visitor permits regardless of their geographic origin, their applications would only be accepted if not more than 90% of the permit zone's capacity is occupied and residents are not on the waiting list for an on-street parking permit. Should these criteria be satisfied, then temporary permits for 24 hours, 48 hours or 1 week permits can be issued for \$8.60, \$12.90 and \$20.15 respectively. Permits can however be issued for up to 8 consecutive weeks if the application is made at the permit parking office; otherwise they are only valid for up to 1 week if applied online).

The other permit parking programs managed by Portland, San Francisco, Seattle, Sydney and Washington DC accommodate a wider range of visitors than Vancouver, Ottawa, Calgary (to some extent) and Toronto as they do not have any stipulations that visitors must be from out-of-town or incorporate an "if available" condition in order to accept visitor parking permit applications.

Portland allows residents and businesses located within all but one of its permit zones to apply for up to one annual guest permit. The guest permit costs the same amount as a residential parking permit, meaning that the permit fee is \$70 in one zone and \$60 in every other zone. Among the zones that charge \$60 for a permit, one of them has an additional usage restriction of up to 5 times per vehicle per month to address recurrent abuse of the guest permit.

The option of scratch-off guest passes is offered in four of Portland's permit parking zones, including the sole area where the annual guest permit is not issued. The scratch-off passes come in the form of a hang tag and visitors scratch off the corresponding date to use them. These passes are sold in booklets of 10 passes and each booklet costs \$10. While most zones do not restrict the number of booklets that can be bought in a year, one zone only allows a residence or business to purchase up to three booklets at a single time and up to 12 booklets per annum.

When residents or businesses purchase their area parking permits, they also automatically obtain up to 99 free hours of permit time per year that can be used to accommodate visitors during special occasions like parties and funerals. These free permit hours are usually used in

zones that do not offer the daily scratch-off permits and area parking permit holders need to apply in person at the parking office for these temporary permits.

In the case of **San Francisco**, temporary two-week increment permits (up to maximum duration of 8 weeks) and scratch-off passes help to cater to visitors' parking needs in permit zones. The fees for the 2-week, 4-week, 6-week and 8-week visitor permits are \$37, \$55, \$73 and \$94 respectively and there is no quota on the number of visitor permits for each household.

Residents in San Francisco can also obtain up to 20 scratch-off passes in a year whereby visitors would scratch off the date of use on the pass and then affix it to the rearview mirror. The cost of a scratch-off pass depends on the size of the order. Each pass costs \$12 for an order of up to 5 permits, \$10 for an order of 6 to 15 permits and \$8 for an order of 16 to 20 permits.

Seattle allows each residential property in all of its permit zones to be issued one guest permit for the permit cycle (2 years in most zones; 1 year for the rest). The charge for a guest permit depends on whether the household has purchased a residential parking decal. If households already own a decal, the guest permit would either cost \$30 (in most zones) or be issued free (in the remaining zones where permit fees are fully subsidized by the parking generators). Otherwise, households would be charged a fee equivalent to a first residential parking decal for their guest permit, which could be free, \$16, \$29, \$32, \$39 or \$65.

Except in two permit zones, residents can also purchase single-day guest passes at \$1 each in all but two zones. These passes are paper permits that may be printed at home and each residence is limited to five per day and 50 per year.

Visitors in **Sydney** are currently accommodated in some permit precincts and will eventually be catered for in all permit precincts (except Central Sydney) by mid-2015. To qualify for the visitor parking permits, residents must not be living in multi-unit flat buildings that are newly built, converted or majorly refurbished since 8 May 1996, 1 May 2000 or 12 May 2014 (depending on location within the city), or approved on the condition that no parking permits will be issued. These conditions are essentially the same as those for residential parking permits (see page 13), except that visitor parking permits may be issued to households even if they have two or more on-site parking spaces.

The visitor permits in Sydney are presently issued in two forms - annual permits and scratch-off passes. The annual permits, which are presently in circulation for four precincts, cost \$50 (or \$13 for pensioners) each and are limited to one per household. However, due to their vulnerability to fraud and misuse (e.g. usage as a third parking permit by households, resale to non-residents, and theft from vehicles), new annual permits are no longer being issued in these four precincts and they will be completely phased out by May 2016.

Instead, the visitor permit system will eventually transition to incorporate scratch-off passes in every precinct (outside of Central Sydney) by mid-2015. Under this new system, guests will scratch off their date of visit on a parking pass that is in the form of a card. The new visitor parking passes are sold in packs that cost \$50 (or \$13 for pensioners). The number of scratch-off passes contained within a pack depends on the household's annual allotment, which in turn varies with the location of the permit zone and the number of residential parking permits issued to the household. In the few permit zones where permits issued significantly exceed the number of on-street parking spaces available, households with no residential parking permits are entitled to 30 visitor passes, whereas those with 1 or 2 residential parking permits

get 20 or 10 visitor passes respectively. Households in all other zones are likewise subject to these caps, but their entitlements are 50% higher (i.e. 45 visitor passes for no residential parking permits, 30 visitor passes for 1 residential parking permit and 15 visitor passes for 2 residential parking permits). The rationale for allocating more visitor passes to households with fewer residential parking permits is to share limited street parking space more equitably.

In **Washington DC**, residents must live on blocks with permit parking restrictions to be issued visitor parking permits to accommodate guests in permit zones. For guests of ineligible residences that are located on non-permit restricted blocks, they can only park on unrestricted blocks or for a cumulative maximum of two hours per day on all of the restricted blocks within a particular zone.

Eligible residents with visiting guests can visit the local police stations to apply for free temporary permits that can be used on any permit-restricted block within the resident's permit zone. These temporary permits can be issued for up to 15 days and there are no issuance limits for households.

In selected permit zones of Washington DC, there are also annual visitor permits that let guests park on permit-restricted blocks within the resident's sub-ward area. To remove the hassle of needing to obtain a temporary permit for every new guest, one free annual permit is mailed to eligible households that register for it, regardless of whether they own a residential parking permit. These annual permits also have unique identification codes and expire at the end of September every year.

Aside from visiting guests, permit parking schemes also cater to the parking needs of other non-residents who provide services to residents. Home medical care providers in Ottawa, Washington DC, Calgary, San Francisco and Sydney are accorded specific parking privileges, just as in Vancouver. **Ottawa** grants residents requiring regular in-home health care one permit of up to a year in duration and no fee is charged due to compassionate reasons. **Washington DC** likewise offers free temporary parking permits of up to 60 days to health care providers serving residents living on permit-restricted blocks. **Calgary** allows homecare health service providers to apply for an annual permit that costs \$25 per month and is valid in multiple zones. In **San Francisco**, residents who require home medical care on a regular basis can obtain up to 3 non-transferrable medical caregiver permits for use by their home medical care provider. These permits cost \$110, which is the same amount as a residential parking permit. Unlike Vancouver and the previous three cities, **Sydney** issues care worker parking permits that are tagged to care provider organizations instead of household addresses so as to avoid placing the burden of application on residents requiring in-home care. The care provider organizations, which must routinely provide in-home care services to clients in Sydney and conduct more than 60 home visits per annum, are in essence applying for the permits on behalf of their care workers. The permit fee costs \$50 and is valid for a year. While there is no limit on the number of permits that may be issued to a care provider organization, only one permit will be issued for each vehicle.

Contractors are another group of non-residents who are often given specific parking privileges in permit areas. In **Washington DC**, contractors working on residences located on permit-restricted blocks can apply for free contractual employee temporary parking permits of up to 15 days. **Seattle** offers contractors temporary permits that cost \$25 each and are valid for up to 60 days. Contractors in **Calgary** are eligible for a short-term parking permit with specific restrictions at a cost of \$50 per month. **Toronto** allows tradespersons to apply for temporary parking permits and the issuance conditions, permit durations and fees are the same as those for visitors. In other words, temporary parking permits are issued to contractors on an "if

available" basis and permits for 24 hours, 48 hours or 1 week cost \$8.60, \$12.90 and \$20.15 respectively. As for **San Francisco**, contractors in the construction or pest control trades can be issued up to 8 non-transferrable parking permits that are tied to their business address (rather than a household). These contractor parking permits are valid for use in all permit parking areas and can also be used at parking meters (except meters within 1,500 feet or three blocks from their offices). The contractor parking permit costs \$929 per annum and expires on May 31st of each year, although a six-month option is available at half-price starting every December 1st.

In some cities, absentee landlords, building owners or building managers can apply for parking permits that are especially helpful when they are physically present at their property to render assistance or undertake repair work. In **Calgary**, absentee landlords can obtain an additional free visitor parking permit that does not count towards the property's permit limit. As for **Seattle**, building owners or managers are allowed to purchase a RPZ decal at \$65 to park near their properties.

Dedicated parking permits can also be issued for the use of home childcare providers, albeit much less frequently. Only **San Francisco** offers households with children under 12 years of age the option of obtaining a transferrable annual child caregiver permit in some of its permit zones. This permit costs \$110, which is the same amount as a residential parking permit. Eligible households are limited to one child caregiver permit which will count towards the household limit of 4 residential parking permits. Residents living on blocks where child caregiver permits are not being issued can petition for their blocks to be made eligible. In order for the petition to be successful, it must be signed by at least 9 separate households (or in the case of blocks with fewer than 20 residential units, half of all households on the block).

None of the eight cities surveyed offer specific parking privileges to housesitters like Vancouver does.

Other Approaches of Managing Residential Parking

So far, this report has illustrated how different elements of residential permit parking schemes can influence on-street residential parking. In this section, other interesting practices adopted by other jurisdictions to facilitate more effective on-street residential parking management are described.

Facilitating leasing of private parking spaces to residents

The City of Long Beach in California administers an Urban Parking Program that enables businesses and churches with underutilized parking lots to lease parking spaces to local residents. Parking lot owners set the rules and fees for parking while a vendor selected by the City handles parking payment collection and issues parking permits to ensure proper control of the lot. Administration and enforcement are handled by the private parking lot owners. By facilitating the leasing of private parking lots to residents living in neighbourhoods with tight on-street parking supply, more efficient utilization of off-street parking spaces is achieved and cruising for street parking spaces can be reduced.⁴⁴

Such local government involvement in matching private parking lot owners with residents who need parking is rare in practice. Yet, the market for peer-to-peer private parking space rental already exists, as evidenced by numerous websites that facilitate these transactions in mainly the United States (e.g. JustPark, Park Circa, ParkingPanda, ParkingSpots and ParkingSpotter).⁴⁵ As a potential means of relieving on-street parking pressures and promoting a more efficient utilization of off-street parking spaces, local governments can consider developing partnerships with these websites, which may be as simple as providing links on the city's webpage.

Promotion of "car-free" developments that discourage vehicle ownership

"Car-free" developments that discourage vehicle ownership and thus minimize parking demand are common in Europe, particularly in Austria, Germany and the United Kingdom.⁴⁶ These developments usually require the residents to make commitments to live a car-free lifestyle as part of their lease or purchase agreements, and may also be excluded from access to on-street permit parking schemes. To ensure greater compliance of residents' commitment towards a car-free lifestyle, some "car-free" development projects incorporate stringent and legally binding clauses in the agreements. Two European "car-free" developments are highlighted as follows.⁴⁷

⁴⁴ See <http://www.communityparking.com/images/FAQ.pdf>.

⁴⁵ Links to these websites are provided in the Resources section on page 41 of this report.

⁴⁶ For a list of existing car-free housing projects, see page 47 of the Car-Free Development module in the *Sustainable Transport: A Sourcebook for Policy-Makers in Developing Cities* report (accessible at http://www.carfree.com/papers/carfree_dev.pdf).

⁴⁷ For more information about these two examples, see pages 16-17 of the *Supporting car share clubs: A worldwide review* report (accessible at <http://www.communauto.com/images/ways%20to%20supportfinal%20report.pdf>), pages 40-81 of this Masters Thesis on *The Social Benefits of Carfree Living* (accessible at http://othes.univie.ac.at/16549/1/2011-09-01_0900267.pdf) and an archived version of the *Car-Free Housing in European Cities: A Survey of Sustainable Residential Development Projects* webpage (accessible at <https://web.archive.org/web/20060516021944/http://www.wistp.murdoch.edu.au/publications/projects/carfree/carfree.html>).

The **Autofreie Mustersiedlung Florisdorf development in Vienna, Austria** uses stringent legal agreements that forbid car ownership as a prerequisite for obtaining tenancy. For tenants who insist on owning a car, they will not be forcibly evicted from their apartment (not permitted by Austrian law), but there exist instruments to force an apartment swap or to withdraw housing subsidies (which results in a significant increase of the current rent). Exceptions can be granted when tenants are forced to buy a car as a result of changes to personal or professional circumstances, but they will bear the full cost of the parking space.

Another example is the **Vauban development in Freiburg, Germany**, which is a car-reduced and parking-free project whereby residents sign an annual declaration of car-free living. Residents are however not strictly restricted from owning cars but if they do choose to own one, they are obliged to bear the full expenses of parking their car (around €20,000) which will be stored in one of the multi-storey garages located at the periphery of the neighbourhood (about 5 minutes' walk from their home).

Requiring rental building managers to ensure that parking demand generated by building occupants does not exceed its parking supply

The city of **Kirkland** in Washington state requires rental building managers of residential suites projects (i.e. those with single-room occupancy units) to monitor and ensure that the total demand for parking generated by their building occupants does not exceed the building's parking capacity. In the event of excessive parking demand, the building managers have to either restrict the occupancy of units or limit leasing only to tenants who do not own cars, thus mitigating parking spillover concerns from buildings that produce little parking supply.⁴⁸

Proof-of-parking requirement for vehicle registrations

Since the 1950s, local governments in **Japan** have been administering a proof-of-parking policy whereby motorists registering their cars to obtain a license plate must demonstrate that they have access to a parking space within 2 kilometres of their residences. This parking space can be leased (i.e. need not be owned) and the blanket overnight on-street parking ban in place means that it will be impractical for residents to cancel a lease without finding a replacement spot. Although such an approach may not be transferrable to many cities, it does serve to highlight that by simply placing the onus of responsibility for finding an overnight parking spot on car owners (instead of developers or the local government), the need for local governments to adopt minimum off-street parking requirements or residential permit parking schemes can be avoided without negative consequences.⁴⁹

⁴⁸ See page 36 of *Right Size Parking Model Code* report at <http://metro.kingcounty.gov/up/projects/right-size-parking/pdf/140110-rsp-model-code.pdf>.

⁴⁹ For more information about Japan's proof-of-parking policy, see page 49 of Asian Development Bank's *Parking Policy in Asian Cities* report at <http://www.adb.org/sites/default/files/parking-policy-asia.pdf> and these two *Reinventing Parking* blog posts at <http://www.reinventingparking.org/2010/08/japan-style-proof-of-parking.html> and <http://www.reinventingparking.org/2014/06/japans-proof-of-parking-rule-has.html>.

Recommendations

This report concludes with five key recommendations to improve the management of residential on-street parking in Vancouver. All of the recommendations, except for the last one, apply to the residential permit parking scheme.

Recommendation 1: Reduce the gap between residential parking permit fees and off-street parking rates

At present, the highest permit fee in Vancouver is \$73.40 per year, or around \$6.12 per month, which is significantly under-priced compared to the rates charged by off-street parking facilities (e.g. in the West End which is one of the neighbourhoods with the highest permit fee, parking in an EasyPark facility would cost almost \$89 every month). Even when compared with other peer cities like Ottawa, San Francisco, Toronto and to some extent, Sydney, the permit fees charged in Vancouver are substantially lower.

The significantly low permit fees do little to control the number of vehicles that are parked on the street, since on-street parking is often perceived to be more convenient than off-street parking. By reducing the gap between residential parking permit fees and off-street parking rates, more residents will be encouraged to utilize any off-street parking facilities they currently own before resorting to parking on the street. This will in turn free up precious street space for more productive uses, whether in terms of accommodating more visitors and service providers or re-allocating street space to promote more environmentally friendly travel modes. In the latter case, some uses of re-allocated street space could include wider sidewalks, safer cycling routes for people of all ages and abilities, and parklets.

It is important to note however that this recommendation does not imply an advocacy for a complete equalization of residential parking permit fees with prevailing off-street parking rates. Unlike off-street parking facilities or permit parking schemes in Toronto and Ottawa that have zone quotas linked to the on-street parking capacity, residential parking permits in Vancouver currently do not offer a strong guarantee of successfully finding a spot. Unless Vancouver chooses to follow in the footsteps of Toronto and Ottawa in capping the number of permits (in which case permits have more value since they offer a greater guarantee of a parking space), it is ultimately still reasonable for residential parking permits to be priced lower than off-street parking facilities, so long as they are not severely discounted.

Recommendation 2: Adopt a more varied fee structure that takes into account number of permits owned by a household, vehicle space occupied and vehicle emissions

Currently, permit fees in Vancouver only vary by the zone location. For households who store more cars on the street and thus contribute to greater parking burden within their neighbourhood, they end up paying the same fee on a per permit basis as other households who have obtained only one parking permit. To more equitably reflect the parking burdens imposed by households holding different number of permits, a higher fee should be charged for each additional permit obtained in a particular household. A precedence already exists in the Metro Vancouver region, where households under the University Neighbourhoods Association pay \$120 for a second permit (double the fee of the first permit) and \$240 for a third or subsequent permit (quadruple the fee of the first permit).

With an escalating permit fee structure, households who choose to own many cars can thus become more aware of the true costs of parking and realize that it is a scarce resource. They would ideally be nudged into storing their occasionally used vehicles in off-street parking facilities instead of relying on limited street parking supply that is meant to be shared equitably by all of the neighbourhood's households (and their visitors).

Another rational approach of setting permit fees is to vary them by vehicle length. For parallel on-street parking, a vehicle's length essentially influences the amount of parking space being occupied on the street. Thus, higher permit fees should be charged for longer vehicles since they take up more on-street parking space and have a stronger influence in reducing the amount of on-street parking available to other motorists. Such a vehicle length-based fee structure has already been implemented in Norwich, England.

In light of the goal to promote the uptake of low-carbon and electric vehicles in both the City's Greenest City 2020 Plan and Transportation 2040 Plan, permit parking fees can also incorporate variations based on vehicle emission ratings. Cleaner vehicles would be charged lower permit fees than more environmentally polluting vehicles and a few other jurisdictions (Sydney, Rosemont La Petite-Patrie borough in Montréal and some boroughs in London, England) have already implemented such a permit fee structure.

Recommendation 3: Consider a permit allocation or permit fee system that takes into account the sufficiency of on-site parking

In the long term, the City should consider working towards a permit allocation system that takes into account the sufficiency of on-site parking. At present, the City does not maintain a record of on-site parking spaces at each residential property, which makes it difficult to implement such a system.

Nonetheless, by gradually building up an inventory of on-site parking spaces for residential properties, households with sufficient on-site parking can eventually be charged a higher rate for obtaining a parking permit that they merely need for convenience. In areas with very limited on-street parking supply, households with sufficient on-site parking can further be prohibited from obtaining parking permits. If the City were to consider permit issuance caps for permit parking blocks or zones, having such an inventory can also help to facilitate a more equitable rationing of the limited supply of permits. For instance, as implemented in Toronto, households with sufficient on-site parking can be allowed to have a parking permit if there is adequate on-street parking permit supply, but will be forced to give it up if another household with insufficient on-site parking is placed onto a waitlist.

However, a permit rationing approach that accords priority to residents with insufficient on-site parking may have an unintended consequence of fostering community opposition to new residential developments with reduced or no parking provisions. Existing permit holders may fear that future residents of these new developments will simply choose to park on the street and cause them greater difficulty in obtaining or renewing a parking permit. Thus, it may be necessary for such a permit allocation system to be supported by exclusions from the permit parking scheme for new "car-free" or "car-reduced" developments, like in Toronto (see page 13) and London's Camden borough (see page 14).

Recommendation 4: Ensure better accommodation of short-term visitors from within the Metro Vancouver region

By and large, Vancouver's permit parking scheme caters to a narrower range of visitors than most of the other cities studied in this report since only visitors from outside the Metro Vancouver region can apply for temporary permits. When visitors from the Metro Vancouver region (who may be living in more car-oriented parts of the region) need to drive to Vancouver's RPP zones, they are often subject to parking duration restrictions in the permit zones. However, in the event that they need to park beyond the posted time restrictions, they have to "block-hop" to avoid parking tickets, resulting in unnecessary short-distance driving and cruising for parking spaces.

To better meet the parking needs of short-term guests from within the Metro Vancouver region, a daily scratch off permit system similar to those in Portland, San Francisco and Sydney could be implemented in permit zones where there are less intense parking pressures. Under such a system, a quota would be imposed on the number of daily permits that can be issued to a household. The fee for a daily scratch-off permit should also be set high enough to provide a disincentive for driving relative to other travel modes (i.e. it should not be set too low such that it serves to encourage driving at the expense of other modes, especially for short-distance travel). As an example, this amount could be pegged to the cost of a return three-zone transit fare, which is currently \$11.

In permit zones where on-street parking is often close to capacity, the implementation of a daily scratch-off permit system may aggravate further parking problems since it can induce greater parking demand from new visitors, resulting in longer cruising times for parking spaces. As well, the parking needs of visitors in these zones are unlikely to be satisfactorily accommodated since they would likely still face significant difficulty in finding an on-street parking spot. To mitigate this problem, a consideration can be made to cap the number of residential parking permits and set aside adequate street space for use by visitors with daily permits. Alternatively, some on-street parking spots can also be converted into metered spaces that are priced just high enough to ensure availability for visitors.

Recommendation 5: Facilitate peer-to-peer private parking space rental

The City can adopt measures to facilitate peer-to-peer private parking space rental since it can help to achieve a more efficient utilization of off-street parking spaces. In Vancouver, a nascent market for peer-to-peer parking stall rental already exists and a quick look at JustPark (formerly Parkatmyhouse) yields 12 listings for the Vancouver and University Endowments Land areas (see Figure 1 on the next page). Just as the City provides links to car-sharing co-operatives or businesses on its website, the same could be done for peer-to-peer parking rental websites.

Although some residents may wish to rent out their private parking stalls, they are legally unable to do so for security reasons since the spaces are not located in publicly accessible areas. This impediment arises from the Parking Bylaw requirement for parking garages with at least 20 residential parking spaces to have lockable security doors that are only accessible by authorized users. To facilitate peer-to-peer private parking space rental, this requirement should be reviewed and relaxed or removed if possible.

How it works Popular locations Log In Sign up Help **List your space**

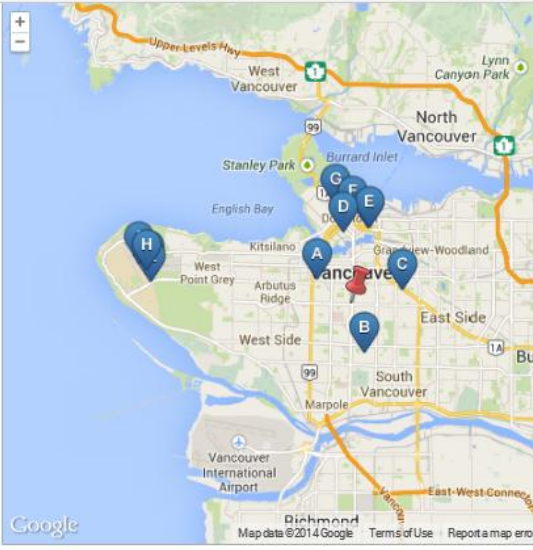
JustPark

Parking in Vancouver

Where: vancouver From: [] Time: [v] Until: [] Time: [v] **Q Search** Filters

1-12 of 12 parking locations Sort by...

- A** Driveway on (behind The Building), V6H **from CA \$31.50**
Not yet reviewed **BOOK INSTANTLY**
Private driveway - (1 space), 1.05 miles from here
- B** Garage on West 43rd Ave, V5Y **CA \$12.50 per day**
Not yet reviewed **BOOK INSTANTLY**
Private garage - (2 spaces) 24/7 access, Security key,...
- C** Driveway on East 17th Ave, V5V **CA \$6.50 per day**
Not yet reviewed **BOOK INSTANTLY**
Private driveway - (1 space), 1.46 miles from here
- D** Yaletown 1088 Richards Vancouver, P1 ... **from CA \$159.50**
Not yet reviewed **LONG TERM ONLY**
Private garage - (7 spaces) 24/7 access, Sheltered parking,...
- E** Car Park on Keefer Place, V6B **CA \$12.50 per day**
★★★★★ based on 1 review **BOOK INSTANTLY**
Private parking lot - (1 space) 24/7 access, Security key,...
- F** Private parking lot - (1 space) 24/7 access, Security key,...



Friends using JustPark

Figure 1: Screenshot of Vancouver private parking space listings on JustPark website

Resources

RESIDENTIAL PERMIT PARKING SCHEMES

Calgary

- Overview

<http://www.calgary.ca/Transportation/Roads/Pages/Traffic/Parking-management/Residential-parking-permit-program.aspx>

<http://www.calgary.ca/Transportation/Roads/Documents/Traffic/Parking-management/residential-parking-permits-brochure.pdf>

<http://www.calgaryparking.com/web/guest/residentialparking/faq>

- Residential Parking Zones section in Traffic Bylaw

<https://www.calgary.ca/CA/city-clerks/Documents/Legislative-services/Bylaws/26m96-Traffic.pdf?noredirect=1> (pages 17 to 22)

- Residential parking permits

<http://www.calgaryparking.com/web/guest/residentialparking>

- Visitor parking permits

<http://www.calgaryparking.com/web/guest/residentialparking/visitorpermits>

Ottawa

- On-street Parking Permit Policy

<http://ottawa.ca/calendar/ottawa/citycouncil/occ/2007/05-23/trc/ACS2007-PWS-TRF-0002.htm>

- On-street residential monthly parking permits

<http://ottawa.ca/en/residents/transportation-and-parking/parking-permits/street-residential-monthly-parking-permits>

- Visitor's parking permit

<http://ottawa.ca/en/residents/transportation-and-parking/parking-permits/visitors-parking-permit>

- Parking Operations, Maintenance & Development - 2014 Business Plan

http://ottwatch.ca/meetings/file/88878/File_Doc_1_REVISED_POMD_2014_Business_Plan_pdf_Item_PARKING_OPERATIONS_MAINTENANCE_AND_DEVELOPMENT_BRANCH_2014_BUSINESS_PLAN_Meeting_Transportation_Committee_Date_2013_11_06_09_30_00

Portland

- Overview of Area Parking Permit Program

<https://www.portlandoregon.gov/transportation/38744>

- Area Parking Permit Program section in Vehicles and Traffic Code

<http://www.portlandonline.com/Auditor/Index.cfm?c=28180> (sub-sections 16.20.800 to 16.20.860)

- Area/Residential Parking Program section in Parking Operations Policy

<http://www.portlandonline.com/auditor/index.cfm?c=38634>

San Francisco

- Overview of Residential Area Permits (including visitor permits, medical caregiver permits, child caregiver permits, business permits)

<http://www.sfmta.com/services/permits-citations/parking-permits/residential-area-permits>

<https://www.sfmta.com/sites/default/files/projects/20120828SFMTAPoliciesforOn-StreetParkingManagement.pdf> (pages 12 to 14)

- Contractor parking permits

<https://www.sfmta.com/sites/default/files/pdfs/pdfSFMTATransportationCodeSec.906120619.pdf>

<https://www.sfmta.com/sites/default/files/agendaitems/6-19-12item12rppvisitorandcontractorpermits.pdf> (page 3)

Seattle

- Overview of Restricted Parking Zone Program

<http://www.seattle.gov/transportation/parking/docs/RPZFinal/RPZDraftFinaReport30Jul08.pdf> (Chapter 1)

<http://www.seattle.gov/transportation/parking/parkingrpz.htm>

<http://www.seattle.gov/transportation/parking/docs/RPZFactSheet6.2014.pdf>

http://www.seattle.gov/transportation/parking/rpz_more.htm

http://www.seattle.gov/transportation/parking/rpz_faq.htm

- Temporary permits

http://www.seattle.gov/transportation/parking/rpz_temp.htm

- Permit fees

http://www.seattle.gov/transportation/parking/rpz_cost.htm

- RPZ permit applications by businesses

<http://www.seattle.gov/transportation/parking/docs/Biz%20permit%20application%20development%20process%20FINAL.pdf>

Sydney

- Overview of parking permits

<http://www.cityofsydney.nsw.gov.au/live/residents/parking-permits>

- Neighbourhood Parking Policy enacted on 12 May 2014

http://www.cityofsydney.nsw.gov.au/_data/assets/pdf_file/0016/203353/neighbourhood_parking_policy.pdf

<http://www.cityofsydney.nsw.gov.au/live/residents/parking-permits/new-parking-policy>

http://www.cityofsydney.nsw.gov.au/_data/assets/pdf_file/0004/210739/2014-342596-New-Parking-Policy-FAQs-for-Website-CoS-format.pdf

- Residential parking permits

<http://www.cityofsydney.nsw.gov.au/live/residents/parking-permits/residential-parking-permits>

- Business parking permits

<http://www.cityofsydney.nsw.gov.au/live/residents/parking-permits/business-parking-permits>

- Visitor parking permits

<http://www.cityofsydney.nsw.gov.au/live/residents/parking-permits/visitor-parking-permits>

- Care worker parking permits

<http://www.cityofsydney.nsw.gov.au/live/residents/parking-permits/care-worker-parking-permits>

- New South Wales Permit Parking Guidelines

<http://www.rms.nsw.gov.au/doingbusinesswithus/downloads/technicalmanuals/permitpkgv32.pdf>

Toronto

- Overview of Permit Parking

<http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=cd4c4074781e1410VgnVCM10000071d60f89RCRD>

- Chapter 925 (Permit Parking) of Toronto Municipal Code

http://www.toronto.ca/legdocs/municode/1184_925.pdf

Washington DC

- Overview of program

http://ddot.dc.gov/sites/default/files/dc/sites/ddot/publication/attachments/rpp_brochure_0.pdf

- Residential Permit Parking section in Vehicles and Traffic Code

<http://www.dcregs.org/Gateway/ChapterHome.aspx?ChapterNumber=18-24> (sub-sections 18-2411 to 18-2416)

- Residential permit parking

<http://ddot.dc.gov/service/residential-permit-parking>

<http://dmv.dc.gov/service/obtain-residential-parking-permit-rpp>

- Visitor parking passes

<http://ddot.dc.gov/page/visitor-parking-passes>

<http://dmv.dc.gov/service/obtain-visitors-parking-permits-guests-permanent-residents>

<https://go.mpdconline.com/GO/SO-07-08.pdf>

<http://www.washingtonpost.com/blogs/dr-gridlock/wp/2013/10/16/d-c-sending-out-new-visitor-parking-permits/>

- Health care provider temporary parking permits

<http://dmv.dc.gov/service/obtain-health-care-provider-temporary-parking-permit>

- Contractual employee temporary parking permits

<http://dmv.dc.gov/service/obtain-contractual-employee-temporary-parking-permit>

Other useful resources

- Seattle's Residential Parking Zone Policy Review - Appendix B: Best Practices [July 31, 2008]

<http://www.seattle.gov/transportation/parking/docs/RPZFinal/RPZBESTPRACTICESAPPENDXB.pdf>

(Although somewhat dated, this report provides a comparison of Seattle's residential parking permit scheme with those in Arlington County, Austin, Berkeley, Boulder, Chicago, Denver, Melbourne, Portland, San Francisco, Sydney, Toronto, Vancouver and Washington)

- City of Glendale's Preferential Parking District Program Peer Review

<http://www.glendaleca.gov/home/showdocument?id=4299>

(This report profiles residential parking permit schemes in mostly Californian communities, Tucson in Arizona and Toronto)

PEER-TO-PEER PARKING WEBSITES

- JustPark

<https://www.justpark.com/>

- Park Circa

<http://www.parkcirca.com/>

- ParkingPanda

<https://www.parkingpanda.com/>

- ParkingSpots

<http://www.parkingspots.com/>

- ParkingSpotter

<http://www.parkingspotter.com/>

Appendix: City-by-city Summary of Residential Parking Permit Parking Schemes

CALGARY- RESIDENTIAL PARKING PERMIT PROGRAM

Calgary's Residential Parking Permit (RPP) Program helps to protect residential communities from excessive parking in their neighbourhood. In areas under the RPP program, residents can apply for permits to exempt their vehicles from posted "No Parking" or parking time restrictions on their block. Residents (and visitors) with permits however have to comply with snow route parking bans and their permits are not valid in ParkPlus pay parking zones.

There are currently 69 normal permit zones, as well as two special permit zones which largely comprise multi-family buildings. A map showing most of the zones is shown below.

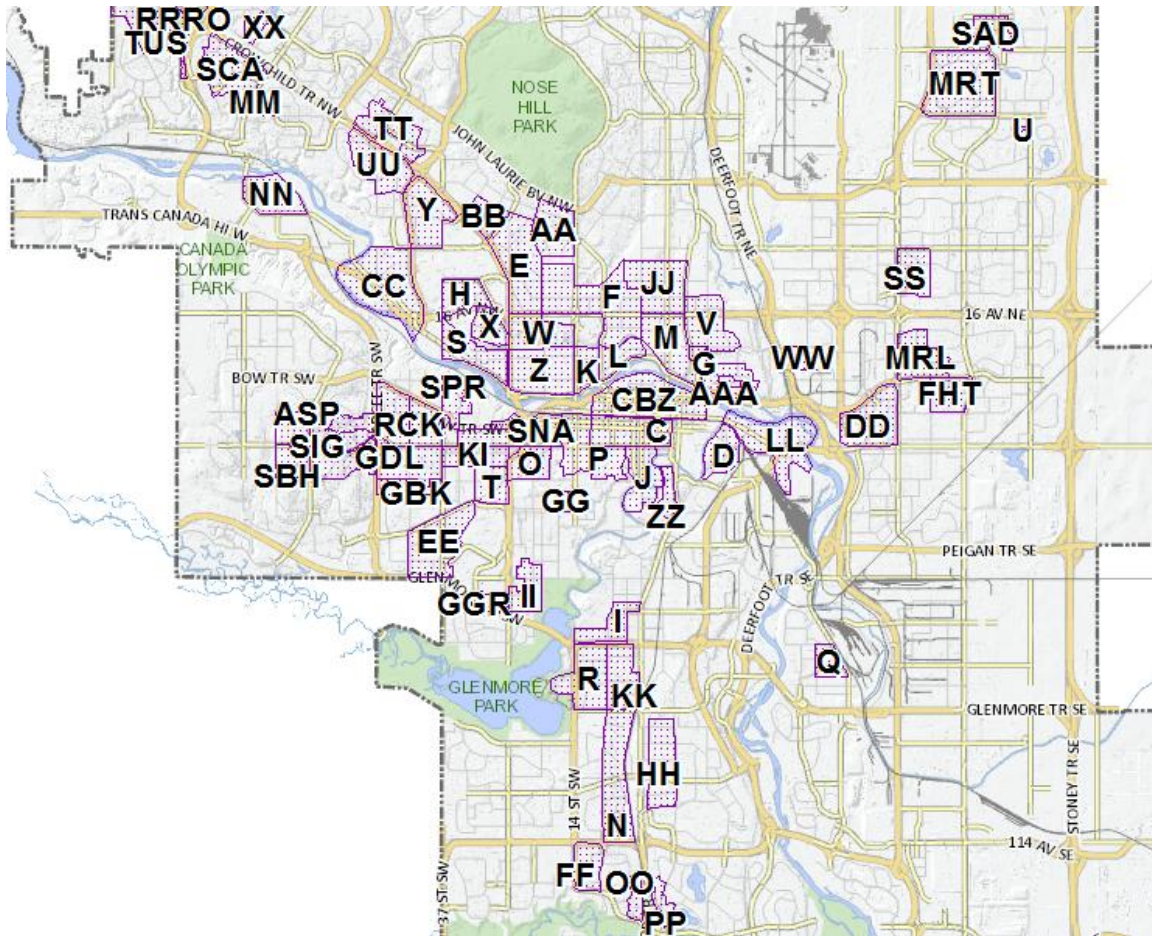


Image credit: City of Calgary's Online Map System

Program highlights

- The establishment of a new RPP zone does not imply that every resident within the zone automatically qualifies for a permit. A newly established RPP zone does not have any on-street parking restrictions installed on any block and residents have to separately petition for parking

restrictions to be installed on their block. Only residents living on blocks with permit parking restrictions can apply for a RPP.

- RPPs are valid within the entire designated zone, but visitor parking permits can only be used within a one block radius from the block containing the dwelling for which the permit is issued.
- Residents living in apartments are restricted from obtaining annual visitor parking permits. Instead, they can apply for short-term visitor permits (up to 2 weeks) if their guests are from out-of-town.
- Within the two special permit zones, there are no specific visitor permits (neither annual nor temporary) available to residents. To accommodate visitors, RPPs in these two zones are available to residents who do not own cars and double up as visitor parking permits that can be transferred for use in guests' vehicles.
- Absentee landlords can apply for a permit that can be used when they are physically present at the address providing repairs or assistance to the property.
- Community associations and religious institutions can apply for parking permits that offer identical privileges as RPPs.

Who can obtain parking privileges within the permit parking areas?

Residents located within the normal RPP zones must live on a block with permit parking restrictions in order to be eligible for the parking permits (which come in the form of a non-transferrable sticker). Those living on blocks without permit parking restrictions are excluded from obtaining permits, but can petition for restrictions on their blocks so that they are eligible for the permits.

Guests displaying annual visitor or temporary visitor permits can also park within the normal RPP zones. Building owners not residing at the residence may apply for an absentee landlord permit.

In the two special permit zones where specific visitor parking permits are not issued, guests have to use the transferrable RPP permits issued to residents (who need not own a car in these two zones) since the RPP permits are intended to double up as visitor parking permits.

Parking permits can also be issued to homecare providers, contractors, community associations and religious institutions within RPP zones.

Residential parking permit limits

There are no limits imposed on the number of RPPs that can be issued to a household, except in the two special permit areas which have a strict limit of one RPP per residence per permit year (no replacement of lost or stolen permits). This strict limit is imposed as most, if not all of the residential dwellings in these two special permit areas are multi-family buildings.

Residential parking permit fees

In the normal permit areas, the first two RPPs are issued at no cost to a residential address, while an annual fee of \$50 plus GST is charged for the third and subsequent permit. As for the two special permit areas, the single RPP that a household may purchase is charged at \$25 plus GST for a year.

RPPs are issued on an annual basis and each permit area has a specific starting month for its permit cycle. In the event that a fee has been charged for a RPP, a full refund is only issued within the first ten business days of the permit purchase date. No pro-rated refund is given otherwise for the early return of permits.

Since permits are issued for free (in normal permit areas) and refunds are not given after the first 10 business days of the permit (for paid permits), the City may in some instances have difficulty obtaining the permits back from households who have moved out (since they gain no advantages from returning their RPPs). In such cases, the City would have to assume that these RPPs are still active for the rest of the permit year and new residents moving into the RPP zone either pay \$50 plus GST for their first permit in normal permit zones (if two permits had already been issued to the former resident) or are simply restricted from obtaining a RPP in the two special permit zones.

Accommodation of visitors or other non-residents providing services to residents in residential parking permit areas

In the normal RPP zones, residents may purchase annual visitor permits or temporary visitor permits that can be used by their guests. These visitor permits come in the form of a hang-tag that is to be attached to the rear view mirror. However, unlike RPPs which are valid within the entire designated zone, visitor parking permits can only be used within a one block radius from the block containing the dwelling for which the permit is issued.

In the case of annual visitor permits, up to 2 of them may be issued in any permit year to residents of a single detached dwelling unit, a duplex, triplex, fourplex or rowhouse. These visitor permits are issued at no cost to the resident and will not be replaced if misplaced or stolen before their expiry date.

Annual visitor permits are however not issued to residents living in apartment buildings (containing at least 5 suites) since the limited on-street spaces cannot sufficiently accommodate the total parking demand generated by all of the individual apartments. The residents living in apartment dwellings can instead apply for short term temporary permits provided that their guests are from out-of-town. These temporary permits are only issued close to their required date and for a period of up to two weeks.

Absentee landlords (i.e. owners of buildings with one or more dwelling units and who are not residing at the address) can obtain a visitor parking permit that does not count towards the permit limit. This absentee landlord permit is strictly for the landlord's use when physically present at the address providing repairs or assistance to the property, and is not to be used on a daily or long-term basis.

Within the two special permit zones, there are no specific visitor permits (neither annual nor temporary) available to residents. To accommodate visitors, RPPs in these two zones are available to residents who do not own cars and double up as visitor parking permits that can be transferred for use in guests' vehicles.

Homecare health service providers can pay \$25 per month for an annual permit that is valid in multiple RPP zones. Contractors can apply for permits that are valid for much shorter durations. The contractor permits tend to be for specific areas with special restrictions and cost \$50 per month.

Community associations and religious institutions can apply for parking permits that offer identical privileges as RPPs. Since these permits have no specific license plate restrictions, they can be used by employees or visitors of the community associations or religious institutions. A community association can be issued up to five parking permits, while religious institutions can obtain up to three parking permits if their street frontage is 15 metres and an extra permit for every additional 6.1 metres of street frontage.

Establishment of new residential parking permit areas

New RPP zones in Calgary can be established through requests initiated by residents, councillors or city staff. The steps for residents to request for a new RPP zone are as follows:

1. Residents contact their community association or City Alderman with their request to establish a RPP zone, who would in turn make a formal written request to the City's Traffic Engineering Division.
2. The City conducts a parking survey to check whether the proposed area meets either of the following criteria:
 - i. Area is adjacent to a generator of at least 5,000 vehicle trips per day
 - ii. Area covers at least 10 blocks and a minimum of 70% of vehicles are non-resident.
3. If either criteria is met, both the City's Transportation and Transit Committee and City Council have to approve an amendment to the Traffic Bylaw to designate the proposed area as a Residential Parking Permit Zone. At the point of time when a new RPP zone is established, no actual on-street parking restrictions are installed yet.
4. Residents within a designated RPP zone can then request for signs controlling parking for non-permit holders on individual blocks within the zone (e.g. 2-hour parking or "No Parking Except By Permit"). A petition with at least 80% agreement from residents of the block face is required. If approved, signage for permit parking restrictions would be installed, and permits issued only to those residents on blocks with these restrictions.

OTTAWA – ON-STREET RESIDENTIAL MONTHLY PARKING PROGRAM

Ottawa's On-Street Residential Monthly Parking Program aims to provide eligible residents and their out-of-town visitors in defined areas with "special on-street parking privileges as a remedial measure for a limited number of residential areas that undeniably have a deficiency in off-street parking with no other parking alternatives for longer-period parking". These privileges generally include exemption from stipulated parking duration restrictions (but not more than 48 hours in the same spot), and the overnight winter parking ban from 15 November to 1 April (i.e. they can leave their vehicles on the streets while they are being ploughed for snow, but not during snow route parking bans).

The program began in August 1980 as a pilot project for inner-city residents, before it was made permanent in the mid-1980s and further expanded to other densely populated areas. Currently, there are 38 RPP zones, of which the majority cover just one or two blocks (around 10 or so remaining zones cover larger areas).

Program highlights

- Only residents who do not have access to on-street parking are eligible for residential parking permits.
- Ottawa has the highest residential parking permit fees in North America, with a monthly fee of \$59 plus HST or an annual fee of \$648 plus HST for each vehicle.
- The city imposes a zone permit quota and establishes waiting list in areas that reach this quota for households applying for a second or subsequent permit. Visitors are issued parking permits provided that they are from out-of-town and there is no waiting list.
- The City has established Guest Parking Permit zones in some areas close to high on-street parking generators (e.g. hospitals, sports venues), which serve to provide guest parking of up to 3 hours.

Who can obtain parking privileges within the permit parking areas?

Residents in the designated areas who demonstrate that they have no access to off-street parking and have a need for on-street parking are eligible for the RPPs, which come in the form of a non-transferrable paper permit. Visitors with guest permits can also park within the RPP zones. Health care providers who provide frequent and long duration in-home health care services to residents can apply for health care parking permits, which have similar privileges as RPPs.

Residential parking permit limits

There are no residential parking permit limits for each address. However, as each permit zone has a quota that is based on its on-street parking capacity, households applying for a second or subsequent permit would be placed on a waiting list if their zones have reached their quota. The waiting time for a permit can be as long as two years in some zones.

Residential parking permit fees

Ottawa's residential parking permit program is operated on the principle that permit fee revenues should be on a pay-as-you-go basis and sufficiently recover the direct and indirect costs incurred during its operation. These costs include the substantial expenses needed to

provide additional winter maintenance efforts that support all-day parking activities for permit holders, who would be exempted from the citywide overnight winter parking ban in effect from 15 November to 1 April.

The cost of a RPP per vehicle per month is \$59 plus HST. An annual permit is also available for \$648.00 plus HST, which provides the applicant with a \$60 savings. Applicants can begin the permit on any day of the month.

RPP holders who no longer need their permits can claim refunds. Refunds incur a \$29.50 processing charge and are calculated on a pro-rated daily basis.

Accommodation of visitors or other non-residents providing services to residents in residential parking permit areas

Visitor parking permits that are valid in RPP zones can be issued to out-of-town non-residents for a period of up to two weeks, provided that the zone has no waiting list. These non-transferrable permits are printed on paper and to be displayed on the dashboard. The fee is \$14.75 plus HST per week and applicants' addresses are verified using their driving licenses or vehicle registrations. While there are no imposed limits on the number of visitor parking permits per household, back-to-back issuances of visitor permit will not be given. Instead, visitors who wish to park for more than 2 weeks need to purchase the regular RPP instead.

The City also has established Guest Parking Permit zones in some areas close to high on-street parking generators (e.g. hospitals, sports venues), which serve to provide guest parking of up to 3 hours. The process to establish a Guest Parking Permit zone is similar to that for a RPP zone. Guest parking permits are issued on an annual basis and cost \$24.50 plus HST. A maximum of 5 guest parking permits is issued per residence per year.

For health care parking permits, they are issued for up to one year and each residence can only be issued one at any time. The fees are waived on compassionate grounds.

Establishment of new residential parking permit areas

The establishment of new residential parking permit (RPP) zones is request-initiated and consists of the following steps:

1. Pre-consultation takes place between the proponent and the City staff to discuss parking issues and permit parking proposal. Proponents are advised that only non-arterial streets that serve predominantly residential uses within Urban Area/Village areas in the Official Plan will be considered for permit parking.
2. Proponent submits a written petition to the City requesting for the establishment of a RPP zone. The petition needs to show that there is insufficient off-street parking within the area and there are no reasonable alternatives to provide off-street parking to meet residential parking needs. A survey with at least 80% level of support for parking regulation changes is also required.
3. City staff conducts a preliminary screening and review of the request, ensuring that the new RPP zone would satisfy numerous street or neighbourhood conditions (e.g. location/age of neighbourhood, proximity to existing RPP zones, land use, lot sizes, off-street parking, enforcement and complaints)

4. City staff undertakes a more detailed investigation for the new RPP zone, considering the following factors: area limits, road classifications, on-street and off-street parking supplies, violations and complaints, surface operations and parking utilization. Two compulsory criteria to be fulfilled are that: (i) streets in the new RPP zone have the capacity to accommodate on-street parking for long periods; and (ii) there is less than 1 off-street parking space per dwelling in the area
5. Following the detailed investigation, a staff assessment report is sent to the Ward Councillor for final approval.

PORTLAND – AREA PARKING PERMIT PROGRAM

Portland's Area Parking Permit Program is designed to help citizens who live or work in non-metered areas by controlling commuter parking in their area.

The program began in 1981 following resident concerns about commuter parking in their neighbourhoods. Currently, there are 11 Area Parking Permit Program zones, as shown in the map below.

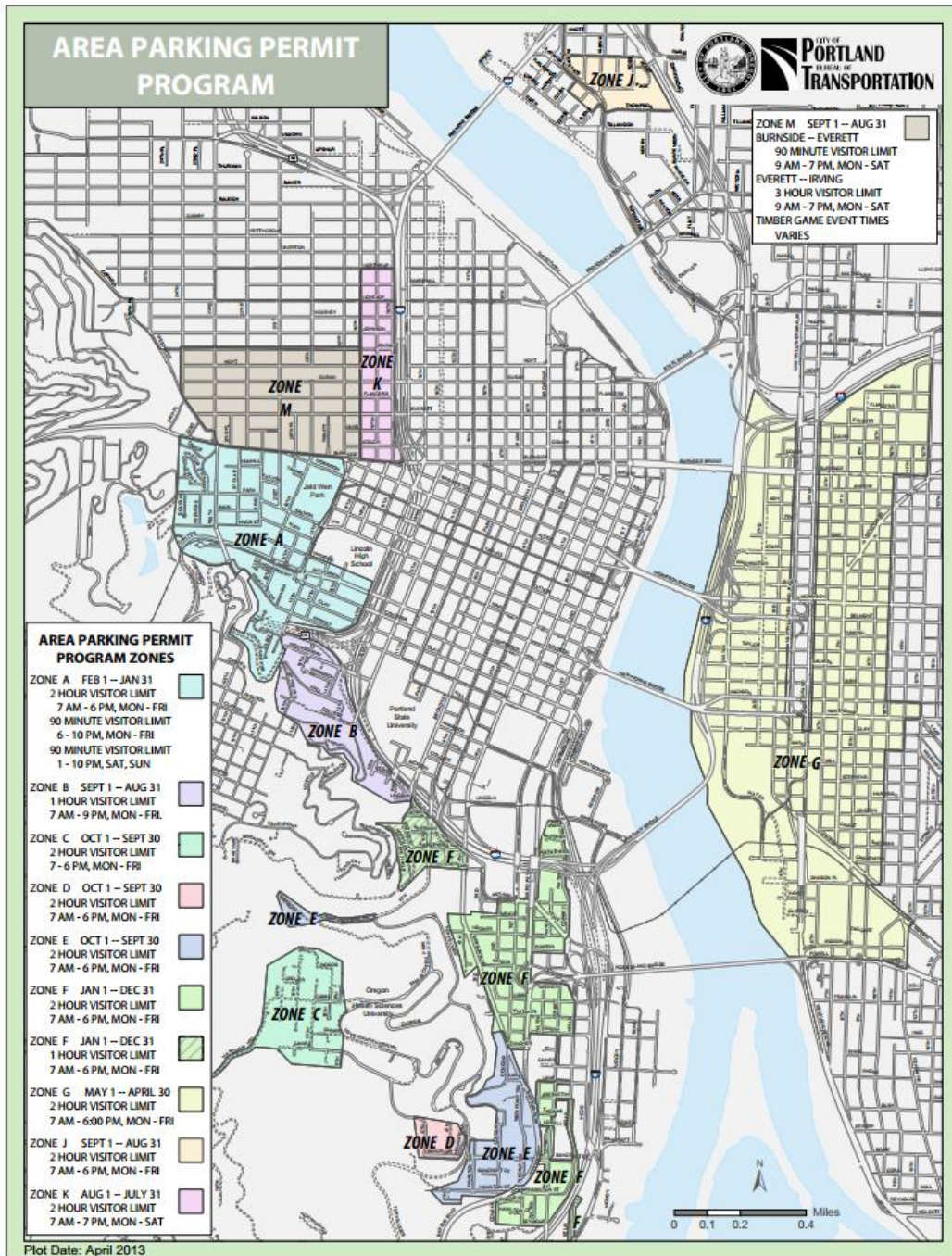


Image credit: City of Portland's Area Parking Permit Program website

Program highlights

- Employees of businesses located within the zone can apply for both area parking permits and guest permits.
- Permit holders can obtain up to 99 free hours (up to 9 program days) of permit time per year that can be used for special occasions (e.g. parties, funerals).
- Booklets" of 10 single-day scratch off guest passes are purchasable by residents and businesses in 4 zones (including the zone where guest permits are not offered). These guest passes were offered to satisfy residents' desire to have multiple permits for parties.

Who can obtain parking privileges within the permit parking areas?

Residents and employees of businesses located within the zones are eligible for the area parking permits, which come in the form of a non-transferrable physical decal. Visitors with guest permits or passes can also park within the zones.

Area parking permit limits

There are no absolute limits on the number of area parking permits that can be applied for each residence. However, in one of the zones (Zone F) where the number of area parking permits available per residence will be reduced proportionately by the number of available off-street parking spaces in that address.

There are also no limits on the total number of residential permits that can be issued within each zone. The City's website explicitly states that permits are to be considered as "hunting licenses" that give holders the privilege of parking within an area, but are not intended to guarantee a space.

For businesses, limits are imposed on the number of issued permits based on a proportion of employees and these limits vary across the zones. Three zones have no limits on permits issued per business, one zone has a limit of 0.75 permits for every 1 full-time equivalent employee, and seven zones have a limit of 0.5 permits for every 1 full-time equivalent employee. Among the latter seven zones, one also has an absolute cap of 40 permits per business. The proportional reduction in number of area parking permits available by the number of off-street parking spaces also applies for businesses in Zone F.

Area parking permit fees

The annual permit fees are based on a cost for service fee structure (i.e. cost neutral objective), where the cost of any permit covers the cost of issuance, administration, operations, and enforcement of the regulations tied to the permit. The current fee for a resident parking permit is \$60 per year (except in one zone which charges \$70 per year). Business parking permits have the same price as resident parking permits.

Each area parking permit zone has a specific starting month for its permit cycle. Mid-year applicants can purchase a 6-month permit for half-price. No refunds are issued for early return of permits.

Accommodation of visitors or other non-residents providing services to residents in residential parking permit areas

With the exception of one zone, residents and businesses can purchase up to one guest permit per address. These guest permits are in the form of a transferrable physical decal and cost the same amount as the area parking permits within the corresponding zone (i.e. \$60 per year in ten zones, \$70 per year in one zone). In one of the zones where guest permits are offered for \$60, the annual permit can only be used up to five times per vehicle per month due to recurrent abuse of guest permits.

In four of the busier zones (including the zone where guest permits are not offered), residences and businesses can purchase booklets of ten single-day guest passes for \$10. Only one of these four zones imposes a limit on the number of purchasable booklets, with each address allowed a purchase of up to 3 booklets at a single time and a maximum of 12 booklets per year. These guest passes are in the form of a scratch-off hang tag where the user scratches off the month and day of use, and were offered to satisfy residents' desire to have multiple permits for parties. Overall, based on correspondence with Portland's city staff, the scratch-off guest pass system appears to be working well in these zones.

As well, permit holders can obtain up to 99 free hours (up to 9 program days) of permit time per year that can be used for special occasions, such as parties and funerals. These free permit hours are especially useful in zones without the daily scratch-off permits. Permit holders have to apply to the parking office for temporary permits that will indicate the valid dates and times, as well as the permit holder's address.

Establishment of new residential parking permit areas

Establishment of new RPP areas in Portland is request-initiated and consists of the following steps:

1. A local neighborhood group, representing a minimum area for 40 block-faces or 8,000 linear feet of curb, needs to submit a petition with signatures representing 50% of the affected addresses (1 signature per address).
2. After verifying that (i) peak parking occupancy exceeds 75% for at least 4 days per week, 9 months of the year; and (ii) at least 25% of the parked vehicles are from outside of the proposed zone area, City staff will propose a program, identifying the boundaries and parking controls.
3. A formal public meeting takes place and within 30 days, ballots are mailed out for a resident vote. At least 50% of the ballots must be received with a minimum of 60% support for program approval.
4. If successful, Council approval is needed to officially approve the zone

SAN FRANCISCO – RESIDENTIAL AREA PERMIT PROGRAM

San Francisco's Residential Area Permit Program aims to increase the availability of on-street parking spaces for residents by discouraging long-term parking from commuters living elsewhere. The program however does not and is not intended to ensure that residents have sufficient parking spaces.

The program began in 1976 prior to the Supreme Court decision and as shown in the map below, there are currently 28 residential parking permit (RPP) areas within the City, all of which cover at least a few blocks.

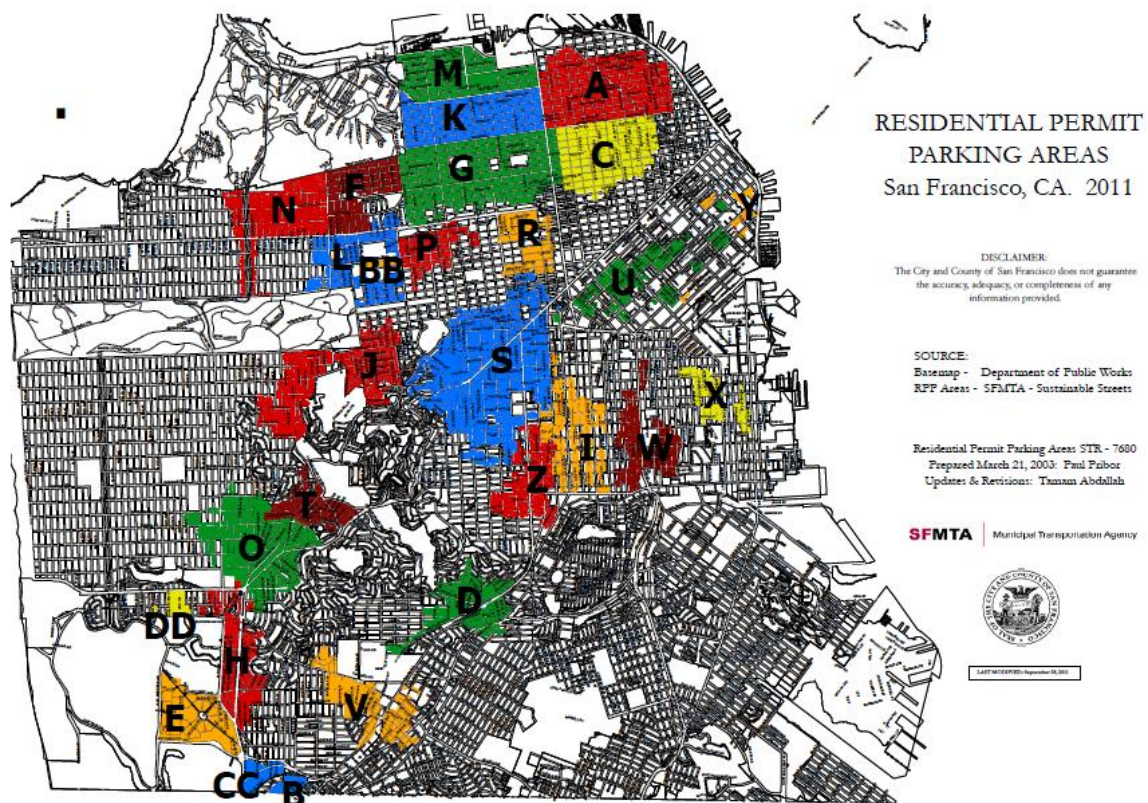


Image credit: City of San Francisco's Residential Area Permit Program website

Program highlights

- At \$110 a year, San Francisco has one of the highest RPP fees in the United States.
- Commercial business owners located within RPP zones can obtain one RPP per business address, and up to three more for delivery vehicles that are registered to their business name and address within the RPP zone.
- Pre-paid single day scratch-off hanging permits can be purchased by residents for short-term visitors. A limit of 20 one-day permits is imposed annually per resident to limit the potential for fraud or resale. The price of the one-day permit depends on the size of the order, with a larger order size incurring a lower per unit price. There are also 2-week, 4-week, 6-week and 8-week permits available for long term guests.

- Residents can apply for a transferrable child caregiver permit in some zones. This permit counts towards the limit of four RPPs per address. In areas where child caregiver permits are not issued, residents can petition for their block to be made eligible.
- Contractors who are in the construction or pest control trades can apply directly for contractor parking permits that cost \$929 per year and are valid for use in any RPP zone (as well as at parking meters).

Who can obtain parking privileges within the permit parking areas?

Residents and commercial business owners located within the permit areas are eligible for parking permits, which come in the form of a non-transferrable sticker to be placed on the vehicle's bumper.

Temporary permit holders, who can be residents (who may apply for them for short term rental vehicles) or visitors, can also park within the permit areas. Medical care providers who provide home health care service to a resident on a regular basis can apply for medical caregiver permits, which have similar privileges as RPPs. In certain neighbourhoods, residents can apply for a transferrable child caregiver permit that can be used by people providing childcare to a minor aged 12 years or under.

Contractor parking permit holders can park in any RPP zone within the city.



Credits for both images: City of San Francisco's Residential Area Permit Program website

Residential parking permit limits

A maximum of four RPPs is issued per residential address, although this limit can be waived under special circumstances. This limit was introduced in 2002 to address the issue of some residents abusing the program through having an excessive number of residential parking permits (two residents had as many as 26 and 22 permits respectively). There is no area-based quota on the number of permits that may be issued in the RPP zone.

For commercial business owners located within RPP zones, they can obtain one RPP per business address, and up to three more for delivery vehicles that are registered to their business name and address within the RPP zone. Each RPP costs \$110 for businesses.

Residential parking permit fees

The RPP program operates on a cost recovery basis and fees are periodically adjusted to account for inflation. The current fee for a RPP is \$110 for a year, which is the highest in the United States. Residents and business owners are both charged the same rate.

Each RPP area has a specific starting month for its permit cycle. When there are less than 6 months remaining in a RPP area's permit cycle, residents can purchase a permit for half-price (i.e. \$55). However, pro-rated refunds are not given for permits that are returned early to the City.

Accommodation of visitors or other non-residents providing services to residents in residential parking permit areas

Temporary permits can be purchased by residents for use by visitors. Temporary permits are available in five different validity periods: 1-day, 2-weeks, 4-weeks, 6-weeks and 8-weeks. One-day permits are pre-paid and users have to scratch off the corresponding date for them to be valid. The scratched permits are then to be hung from the rear view mirror of the visitor's vehicle for enforcement. There is a purchase limit of 20 one-day permits per address in a year to reduce the potential for fraud or resale, and the permit cost is dependent on the size of the order:

Order Size	Cost of a one-day permit
1 to 5 permits	\$12
6 to 15 permits	\$10
16 to 20 permits	\$8

Unlike one-day permits, the initial date of use needs to be provided at the time of purchase for the two-week increment permits. There are no purchase limits imposed for the 2-weeks, 4-weeks, 6-weeks and 8-weeks permits and their fees are \$37, \$55, \$73 and \$94 respectively.

For medical caregivers providing home health care service to a resident, up to 3 RPPs may be issued per address and they do not count towards the limit of four RPPs per address. RPPs issued to medical caregivers cost \$110 each.

In some RPP zones, households with children under 12 years old can also pay \$110 for a transferrable annual permit that can be used by child caregivers. However, they are only limited to one such permit which will count towards the maximum of four RPPs per address. Residents living on blocks where child caregiver permits are not issued can petition for their block to be made eligible. A minimum of 9 different household signatures is required from blocks with 20 or more residential units, or at least half of the households on the block must sign the petition for blocks with less than 20 residential units.

Contractors who are in the construction or pest control trades can apply directly for up to 8 non-transferrable contractor parking permits that are valid for use in all RPP areas. These contractor parking permits can also be used at parking meters that are more than 1,500 feet or three blocks from the contractor's registered business address or satellite office(s). The contractor parking permit costs \$929 annually and expires on May 31 of each year. A half-year permit is available for \$465 from December 1 of each year. As of 2012, 2,750 contractor parking permits were issued to 675 businesses.

Establishment of new residential parking permit areas

Residents can request for new RPP zones to be established through a petition. The steps are as follows:

1. A petition signed by 250 different residential households living in the area proposed for designation is to be submitted to the City (i.e. San Francisco Municipal Transportation Agency, or SFMTA in short). The area must meet contain blocks that are contiguous to each other and a minimum of one mile of street frontage.
2. City staff reviews the petition, carrying out field surveys or studies if necessary, and ensures that the following criteria are also met in order for the proposed area to be suitable as a RPP zone:
 - a. The blocks in the proposed area must be of a low- or medium-density residential character.
 - b. A minimum of 50% of vehicles parked on-street in the proposed area are not registered to the area's residents.
 - c. A minimum of 80% of legal on-street parking spaces in the proposed area are occupied during the day.
3. Public engagement efforts, which include a public hearing, take place to gauge the extent of the desire and need of the residents for RPPs, as well as their willingness to bear the resulting administrative costs.
4. The City's Traffic Engineer makes recommendations to the SFMTA Board of Directors on the proposed establishment of the new RPP zone, including parking time restrictions and periods (days or times) when these restrictions would be enforced.
5. Upon approval of the new RPP zone by the SFMTA Board of Directors, City staff will start to install signs and issue permits. The entire process from valid petition submission to legislation and sign installation is expected to take about six months.

There is also a similar process to request for the expansion of an existing permit area. To do so, a petition has to be signed by more than 50% of households on each block within the proposed expansion area. These blocks must be of a low- or medium-density residential character and at least 80% of legal on-street parking spaces in the proposed area have to be occupied during the day. The entire process from valid petition submission to legislation and sign installation for RPP area extension is expected to take three months.

New RPP zones can also be initiated by the City through a public process to support broader parking and transportation goals, as well as to proactively enhance parking management in anticipation of future developments.

The City has further developed a matrix (shown on next page) to assist in deciding the most appropriate tool for parking management across areas with varying zoning types/land uses and peak occupancy rates. Scenarios where meters are deemed as a more effective tool than RPP in managing spillover parking include residential blocks between adjacent commercial corridors with consistently high parking occupancy, as well as mixed use blocks with ground floor commercial uses and residents living above.

Parking Management Decision Chart	Peak Occupancy		
	> 80%	60%–80%	< 60%
Residential – Low Density	RPP ¹	Unregulated	Unregulated
Residential – Med. Density	Further analysis ²	Further analysis ²	Unregulated
Residential – High Density	Meter	Further analysis ³	Unregulated
Mixed Use	Meter	Further analysis ³	Unregulated or time limit
Industrial/PDR	Meter	Further analysis ³	Unregulated or time limit
Neighborhood Commercial	Meter	Meter or time limit	Unregulated or time limit
Public	Meter	Meter or time limit	Unregulated or time limit

¹ For a block/area to qualify for RPP more than 50 percent of parked cars must be attributable to commuters. This is measured by a license plate survey from a sample of vehicles. This analysis is part of the routine review of RPP applications.

² The built environment within these zoning categories varies significantly in density and context. As a result, further SFMTA analysis as outlined in this document will help determine the correct tool for these blocks. For example, there are some blocks with many single family homes in these categories, which may be best managed using the RPP program, but there are also multi-level apartment buildings adjacent to commercial corridors which may be best managed by parking meters.

³ These cases may require additional SFMTA analysis.

Image credit: "How the SFMTA makes parking management decisions" report by San Francisco Municipal Transportation Agency

SEATTLE – RESIDENTIAL PARKING ZONE PROGRAM

Seattle's Residential Parking Zone (RPZ) program is designed to help alleviate parking congestion in residential neighborhoods, while balancing the needs of all people in terms of ability to use the public streets.

The first Residential Parking Zone in Seattle was established in 1977, although the program was not formally created until 1979. Currently, there are 33 Residential Parking Zones, as shown in the map below.



Image credit: City of Seattle's Residential Parking Zone Program website

Program highlights

- As Seattle’s residential parking zones exhibit high degrees of variations in their characteristics, a consultant in 2008 proposed a quantitative impact classification measure to categorize Seattle’s 25 zones existent at that time as low impact, medium impact or high impact areas:

- (a) Low impact areas – characterized mainly by single-family and small apartment residential development, with one traffic/parking generator
- (b) Medium impact areas – characterized mainly by medium to higher density residential development, with one or more traffic/parking generators and local businesses
- (c) High impact areas – characterized by high density residential development, large employers and lively business districts including many mixed-use buildings, as well as possibly a large institution. On-street parking on commercial streets may require payment.

The measure assigned impact scores to six factors: on-street spaces per permit, population density, vehicle density, vehicles per household, proportion of multifamily buildings and projected growth. An overall score was then tabulated for each zone and matched to the three classifications of impact level, with refinements made to the final categorizations where justified (see next two pages). While this proposed impact classification system was ultimately not adopted by the City, it nonetheless serves as an interesting case study since the motivation behind the system is to permit a more context-responsive approach towards setting permit qualification criteria and permit limits.

- Residents must park within 6 blocks of their home address in the residential parking zone.
- In some zones, the fees for residential and guest parking permits are partially or fully subsidized by the parking generators (e.g. an institution).
- Scooters and motorcycles are not required to have an RPZ permit.
- The Seattle Department of Transportation (SDOT)’s Traffic Management Division Director has the discretion to consider requests for RPZ permits for employees working within a residential parking zone.
- In most zones, residents can apply for single-day use guest passes that are valid from midnight to the following midnight.

CHART 3.1: COMPARATIVE DATA FOR EXISTING ZONES

Source of data: SDOT

Data Year	2008	2000	2000	2000	2000	2008-2030	
Zone	On-street spaces per permit	Population Density (Pop/Acre)	Vehicle Density (Veh/Acre)	Vehicles/HH (inverse)	Multifamily	Projected Growth	"Score"
1*	●	○	○	○	○	○	4
2	●	●	●	●	●	●	18
3	○	○	○	○	○	○	2
4	●	●	●	●	●	○	16
5	○	○	○	○	○	●	8
6	●	●	○	○	○	●	16
7	●	●	○	●	●	●	20
8	○	●	○	○	●	○	12
9	○	○	○	○	○	○	4
10	●	●	○	○	●	●	18
11	○	●	○	○	○	○	8
12	○	○	○	○	○	○	6
13	○	●	○	●	●	●	20
14	○	○	●	○	○	○	10
15	○	●	●	○	●	○	16
16	○	○	●	○	○	●	10
17	○	○	○	○	●	○	12
18	●	○	●	○	○	○	12
19	○	○	○	○	○	○	4
20	○	○	●	○	○	○	12
21	●	●	●	●	●	○	22
22	○	○	●	○	○	○	12
23	○	○	○	○	○	○	4
24	●	●	○	●	●	●	20
25	○	○	○	○	●	○	10

*Zone numbers in bold are zones where institutions pay all or part of permit fees.

Measures

	High	Medium	Low
Spaces per Permit	< 0.5	0.6 – 1.8	> 1.8
Population Density	> 19	9 - 19	< 10
Vehicle Density	> 39	20-39	< 20
Vehicles/HH*	< 1.0	1.0 – 1.9	> 2+
Multifamily	> 70%	40% - 69%	< 40%
Projected Growth	> 30%	20% - 30%	< 20%

* Note that the Vehicles/Household the measure is counterintuitive; more vehicles per household correlates with less congested neighborhoods.

Scores

High = 4

Medium = 2

Low = 0

Reprinted from page 3.7 of Residential Parking Zone Policy Review Project Draft Final Report prepared by The Underhill Company, LLC for SDOT (July 31, 2008).

CHART 3.2 RECOMMENDATIONS FOR CLASSIFYING EXISTING ZONES

Zone	Name	Score H / M / L	Rationale
1*	Montlake	4 – L	Consistent with its score.
2	Providence	18 – M	Consistent with its score.
3	Fauntleroy	2 – L	Consistent with its score.
4	Capitol Hill	16 – H	The largest zone in the city. The northern portion would probably work well with two permits/HH but parking in the southern portion is extremely tight. If, in the future, the zone is split into two zones, the classifications could be different.
5	Wallingford	8 – M	This zone is experiencing extensive new housing construction, not reflected in the data, with a number of new apartment and townhome developments. These added households and their parking needs push the zone to a Medium.
6	University East	16 – M	Consistent with its score.
7	First Hill	20 – H	Consistent with its score.
8	Eastlake	12 – M	Consistent with its score.
9	Magnolia	4 – L	Consistent with its score.
10	University West	18 – M	Consistent with its score.
11	N. Queen Anne/SPU	8 – L	Consistent with its score.
12	N. Capitol Hill	6 – L	Consistent with its score.
13	Lower Queen Anne	20 – H	Consistent with its score.
14	Garfield High School	10 – L	Consistent with its score.
15	Belmont/Harvard	16 – M	Consistent with its score.
16	Mount Baker	10 – L	Consistent with its score.
17	North Beacon Hill	12 – M	Consistent with its score.
18	Licton Springs	12 – L	This zone scores Medium, but permits are subsidized and it is likely this has skewed the spaces/permitted vehicle ratio. There are no other parking pressures on this area, which should operate well with four permits/HH.
19	Roosevelt/Cowan Park	4 - L	Consistent with its score.
20	Ravenna/Bryant	12 – M	Consistent with its score.
21	Pike/Pine	22 – H	Consistent with its score.
22	Lincoln High School	12 – M	Consistent with its score.
23	Madison Valley	4 – L	Consistent with its score.
24	Cascade	20 – H	Consistent with its score.
25	Westlake Roadway	10 – L	Consistent with its score.

**Zone numbers in bold are zones where institutions pay all or part of permit fees.*

Default total scores

High = 20 and above

Medium = 12-18

Low = 10 and under

Reprinted from page 3.8 of Residential Parking Zone Policy Review Project Draft Final Report prepared by The Underhill Company, LLC for SDOT (July 31, 2008).

Who can obtain parking privileges within the permit parking areas?

Residents located within the zone who have purchased RPZ permits as well as visitors with guest permits can park within 6 blocks of the home address in their respective residential parking zone.

Since 2013, the SDOT Director has the discretion to consider requests for RPZ permits for employees within an residential parking zone. Criteria to be considered are availability of on-street parking, off-street parking and alternate transportation modes within walking distance of the employer, availability of on-street parking in the RPZ (under 50% occupancy), employee working time, number of permits requested by the employer and existence of other employers within the RPZ (occupancy must not exceed 85% upon permit issuance).

Contractors can apply for temporary permits and building owners/managers can obtain a vehicle decal to park in RPZ areas. In the case of homecare providers and housesitters, they would generally use the guest passes.

Residential parking permit limits

A maximum of 4 RPZ physical decals is issued per address. There is currently no cap on the overall number of permits issued in a RPZ or block.

Residential parking permit fees

Across all of Seattle's 33 RPZs, there are 7 different fee schedules for residents and they are mostly assessed on a 2-year cycle (except for 2 zones that are assessed on an annual basis, one of which has different rates for its 2 sub-areas). The various fee schedules result from the partial or full subsidy of residents' parking permit fees by an institution or some other parking generator in certain areas. Without any subsidy, all residents pay \$65 for every RPZ decal and \$30 for a guest permit (if they had also purchased a resident decal). These amounts are set on the basis of covering the administrative cost of the permits. Low income households can however obtain a discounted RPZ permit for \$10 with valid documentation.

Permit duration	1 st RPZ decal	2 nd RPZ decal	3 rd & 4 th RPZ decals	Guest Permit without RPZ decal	Guest Permit with RPZ decal	
2 years	\$0	\$0	\$0	\$0	\$0	<i>Full subsidy</i>
2 years	\$0	\$32	\$65	\$0	\$30	<i>Partial subsidy</i>
2 years	\$16	\$65	\$65	\$16	\$30	<i>Partial subsidy</i>
1 year	\$29	\$29	\$29	\$29	\$30	<i>Partial subsidy</i>
1 year	\$32	\$48	\$65	\$32	\$30	<i>Partial subsidy</i>
1 year	\$39	\$39	\$39	\$39	\$30	<i>Partial subsidy</i>
2 years	\$65	\$65	\$65	\$65	\$30	<i>No subsidy</i>

Each RPZ has a specific starting month for its permit cycle. There is no fee prorating or refunds since the fees are intended to cover administrative costs.

Accommodation of visitors or other non-residents providing services to residents in residential parking permit areas

Residents in all zones can purchase one guest permit per address. This guest permit is in the form of a hang tag that is transferrable from one vehicle to another. For residents who have purchased RPZ decals, guest permits cost \$30 in most zones and are free in a few zones (where the fees are fully subsidized by parking generators). As for residents who have not purchased any RPZ decals, guest permits cost the same as the first vehicle decal (i.e. free, \$16, \$29, \$32, \$39 or \$65).

Single-day use guest passes that are valid from midnight to the following midnight are also available for application by residents living in all but two zones. These guest passes cost \$1 each, and residents are limited to 5 per day and up to 50 per year per address. These guest passes are in the form of a paper permit that may be printed at home.

Contractors can apply for temporary permits that cost \$25 each and are valid for up to 60 days. Building owners/managers can also obtain a RPZ decal at \$65 to park near their properties. In the case of homecare providers and housesitters, they would generally use the guest passes.

Establishment of new residential parking permit areas

Seattle's RPZ programs are typically established through requests initiated by residents or community organizations. The steps to request for a new RPZ program are as follows:

1. A letter from neighbourhood association, community council or residents across an area of at least 10 contiguous blocks (or 20 blockfaces) is required with details about the parking problem (including streets and blocks most affected, days and times of problem and probable parking demand generators).
2. Initial assessment is conducted by staff to determine if RPZ is an appropriate solution to the area. Factors to be considered are that the parking problem must exist on at least 10 contiguous blocks, it appears that at least 75% of parking spaces are being used and there is an identifiable parking generator.
3. If RPZ is deemed appropriate, a formal parking study is conducted to ensure that at least 75% of on-street spaces are occupied with 35% or more of these spaces used by non-local vehicles for 10 contiguous blocks.
4. If RPZ is warranted, staff will engage affected community stakeholders and work together to develop a draft RPZ design for community review and input.
5. The SDOT's Traffic Management Division Director makes the final decision on whether to establish a new RPZ.

RPZ programs can also be initiated as part of a comprehensive neighbourhood parking plan undertaken by the City.

SYDNEY – RESIDENTIAL PARKING PERMIT PROGRAM

Sydney offers residential parking permits (RPPs) that assist residents without on-site parking access for their vehicle and who may be disadvantaged by non-residents occupying limited street parking spaces near their place of residence. Residents are typically accorded parking priority in the form of exemptions from time controls and parking meters in their parking permit areas (also known as parking precincts).

The administration of parking permits in Sydney follows the Permit Parking guidelines issued by the state government agency New South Wales Roads and Maritime Services (NSW RMS). These guidelines establish the types of permit parking schemes that may be implemented, minimum eligibility criteria, and some mandatory features of such schemes.

A Neighbourhood Parking Policy applying to all areas of the City except for Central Sydney was also recently adopted by the City Council in May 2014. This new parking policy is intended to minimize inconsistencies across the City's parking precincts and it will be rolled out progressively across the City over 12 months, starting in August 2014. For Central Sydney, the permit parking policy will be addressed in a broader transportation review due to ongoing consultations surrounding the Sydney City Centre Access Strategy to accommodate a new surface light rail project.

There are currently 32 parking precincts within the City whose boundaries are coloured in the map below, which will eventually be reduced to 16 following a series of zone amalgamations and zone boundary arising from changes proposed as part of the Neighbourhood Parking Policy. Approximately 15,000 permits are issued annually.

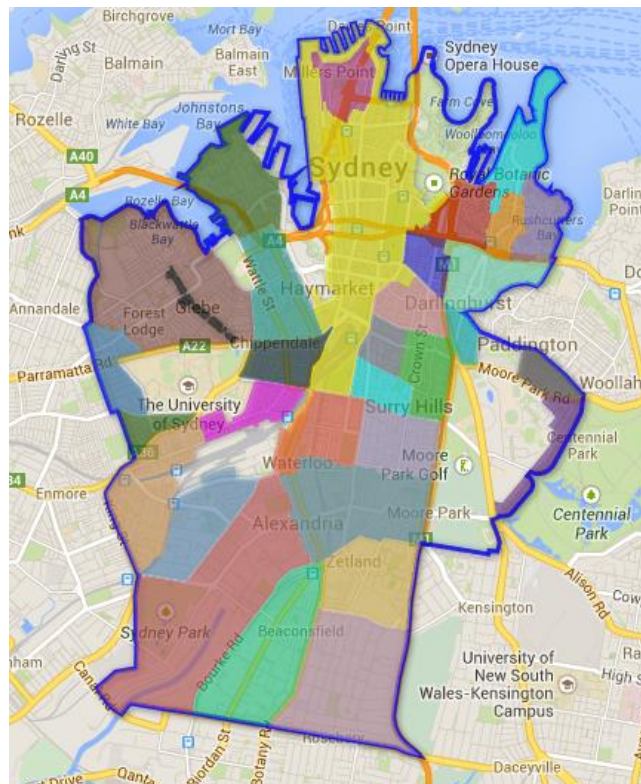


Image credit: City of Sydney's Residential Parking Permit Program website

Program highlights

- The number of issued permits exceeds the available on-street parking spaces only in one of the 16 newly re-organized parking precincts (Kings Cross with a ratio of 1.5). The next highest precinct has a ratio of 0.8.
- Residents living in new, converted or majorly refurbished multi-unit flat buildings are restricted from applying for RPPs. In some areas of the City, these restrictions date back to as early as 1996. These RPP restrictions are critical in protecting existing on-street parking and preventing parking demand spillover associated with such new development, especially since the City of Sydney does not require new apartments to supply parking spaces due to its goals of keeping new housing affordable and providing more options for car-free households. The restricted access to street parking for new apartments is further combined with maximum limits for on-site parking supply that collectively help to mitigate the traffic congestion impact of new developments and support the viability of public transit.
- For any property that is ineligible for parking permits, the development consent issued to the property owner will have included conditions that restrict the owner from participating in the permit parking scheme, as well as require the owner (or real estate agent) to inform prospective buyers or tenants of this restriction.
- The RPP limit imposed on a household varies depending on the location, number of on-site parking spaces and whether on-street parking is available for the subject vehicle.
- RPP and business parking permit fees increase with the number of permits issued to a household/business and vary according to the environmental impact of the vehicle. The environmental rating of the vehicle is based on the Federal Government's Green Vehicle Guide.
- Visitor parking permits (annual and daily) and business parking permits are currently available to certain eligible properties in a few parking precincts. They will be progressively introduced in all other parking precincts of the City (except Central Sydney) over the next year as part of the Neighbourhood Parking Strategy, although the annual visitor parking permits will eventually be phased out in favour of daily scratch off visitor passes.
- As indicated in the Neighbourhood Parking Strategy, the annual allocations of daily visitor parking permits depend on the location and the number of RPPs issued to that household. More visitor permits are issued to households with fewer RPPs so as to equitably share limited street parking space. A standard administrative fee applies regardless of the number of visitor parking permits issued to the household.
- Care worker parking permits are issued to care provider organizations rather than residents requiring in-home care to avoid placing the burden of application on these residents.

Who can obtain parking privileges within the permit parking precincts?

Residents with parking permit decals are exempted from time-limited areas and metered parking areas in the parking precincts where "permit holders excepted" signs are installed. However, not every resident is eligible to apply for a RPP since the scheme is intended to cater for residents with no on-site parking access for their vehicle. Residents with two or more on-site parking spaces cannot apply for RPPs, and in certain areas, households with one on-site parking space are also ineligible for RPPs (more details in the next section on RPP limits). Furthermore, residents living in multi-unit flat buildings (i.e. buildings containing 3 or more dwellings) that have been newly built, converted or have undergone major refurbishment (i.e. major alteration that renders an inability to occupy the flat for at least 6 months) are excluded from the RPP scheme, depending on their approval date and location within the City:

Location within the City of Sydney (current boundaries in effect since 2004)	RPPs not available to residents living in new, converted or majorly refurbished residential flat buildings approved since...
Area covered by the former South Sydney Council (city east & city south)	8 May 1996
Area covered by the former Sydney City Council (city centre)	1 May 2000
All other areas of the City that are not part of the former South Sydney Council (as of 8 May 1996) or the former Sydney City Council (as of 1 May 2000)	12 May 2014 <i>(this is the date of the Neighbourhood Parking Policy which essentially formalized an ongoing practice since 2004 to include the parking permit scheme restriction in the planning consent for new multi-unit flat development applications in these areas)</i>

Other residential dwellings may also have been approved with the condition that no parking permits are to be issued to them. For any property that is ineligible for parking permits, the development consent issued to the property owner will have included conditions that restrict the owner from participating in the permit parking scheme, as well as require the owner to inform prospective buyers or tenants of this restriction.

These RPP restrictions are critical in protecting existing on-street parking and preventing parking demand spillover associated with such new development, especially since the City of Sydney does not require new apartments to supply parking spaces due to its goals of keeping new housing affordable and providing more options for car-free households. The restricted access to street parking for new apartments is further combined with maximum caps for on-site parking supply that collectively help to mitigate the traffic congestion impact of new developments and support the viability of public transit.

Visitor parking permits and business parking permits are currently available to certain eligible properties in a few parking precincts, although they will be progressively introduced in all other parking precincts of the City (except Central Sydney) over the next year as part of the Neighbourhood Parking Strategy. Care worker permit holders can also park in the parking permit areas.

Residential parking permit limits

The Neighbourhood Parking Policy adopted in May 2014 newly classifies parking precincts in Sydney (except Central Sydney) as Zone A or Zone B, whereby Zone A parking precincts have significantly more RPPs in circulation than the number of street parking spaces and thus have greater parking pressures. At the inception of the new parking policy, only one out of the 16 newly re-organized parking precincts (or equivalently, 3 out of the 32 old parking precincts) is

classified as Zone A and it has approximately 1.5 permits issued per available on-street parking space (the next highest ratio is 0.8, so all other precincts are in Zone B).

The RPP limit per household depends on the zone classification, number of on-site parking spaces and whether they are sufficient to accommodate the vehicles registered at the residence:

Scenario	Zone A	Zone B
No on-site parking spaces	Up to 1 RPP	Up to 2 RPPs
1 on-site parking space, 2 cars registered at residence	Ineligible for RPP	Up to 1 RPP
1 on-site parking space, 1 car registered at residence	Ineligible for RPP	Ineligible for RPP
2 or more on-site spaces	Ineligible for RPP	Ineligible for RPP

The RPP limits currently established for Zone B are equivalent to those imposed throughout the City prior to the adoption of the Neighbourhood Parking Policy (except for Ultimo and Pyrmont, whose limits are equivalent to the current Zone A restrictions). This in turn means that the Central Sydney precinct is essentially considered as a Zone B classification pending its permit parking policy review. In the case of existing households in Zone A areas holding more RPPs than the new limits otherwise allow, they can continue to renew the extra RPP or transfer to a replacement vehicle at the same address until they move out of their property.

When applying for the RPPs, residents have to disclose the number of on-site parking spaces on their property and the City maintains a record of the on-site parking supply at each eligible residence. The determination of the number of on-site parking spaces is based on the ability to accommodate a medium-sized passenger vehicle and takes into account whether the property has space that can be reasonably converted to parking. For residents who own vehicles that are too large to fit into their off-street parking spaces, the City has explicitly stated that the residents would still be deemed to have on-site parking.

These limits are consistent with the NSW RMS guidelines which state that residents (i) must have no or limited on-site parking, and (ii) cannot reasonably modify their place of residence to supply on-site parking spaces in order to be eligible for a RPP program. The guidelines also suggest that when permit demand exceeds on-street parking availability, residents with no on-site parking space should be accorded the highest priority, followed by those with one on-site parking space and finally those with two or more on-site parking spaces. Furthermore, the maximum number of RPPs that may be issued to an eligible resident with limited on-site parking spaces should be determined by deducting the number of on-site parking spaces from the maximum number of permits issued to a household without on-site parking.

Residential parking permit fees

RPP fees in Sydney are reviewed annually and in line with the NSW RMS guidelines, set at a rate to recoup administration costs of the scheme. The fees would also reflect that parking permits are not intended to guarantee access to a parking space.

RPP fees vary according to the number of permits issued to a household and also, the environmental impact of the vehicle since 1 July 2008. The environmental rating of the vehicle is based on the Federal Government's Green Vehicle Guide and in instances where car models are not found in this guide (particularly for cars manufactured before 2004), a standard fee (equivalent to the fee for a vehicle rated at 2-2.5 stars) is applied.

The RPP annual fee schedule is shown below with discounted rates for pensioners indicated in parentheses. For restricted multi-unit residential developments in the areas of Ultimo and Pyrmont, a higher fee applies and there is no discounted rate for pensioners.

	Vehicle Rating			
	4+ stars (also includes motorcycles/scooters)	3-3.5 stars	2-2.5 stars or not in Green Vehicle Guide	1.5 stars or less
1 st RPP	\$25 (\$6)	\$37 (\$10)	\$50 (\$13)	\$100 (\$25)
2 nd RPP (only in Zone B)	\$50 (\$25)	\$75 (\$37)	\$100 (\$50)	\$200 (\$100)
Restricted RPP (Ultimo/Pyrmont)	\$62	\$93	\$125	\$250

(Note: pensioner rates indicated in parentheses)

The annual permit term can begin anytime in the year and for parking permits returned to the City more than three months before the expiry date, half of the cost will be refunded by the City.

Permit fee revenues are used to compensate the Customer Service Division for the staff time and costs incurred in processing the applications, with excess amounts going into a consolidated revenue fund.

Business parking permits

Business parking permits may currently be purchased by permanent businesses in three parking precincts for cars, small vans or motorcycles registered to the business name and address. In two of the parking precincts, businesses can apply for 1 permit only if they have no on-site parking and are unable to reasonably modify their premises to provide on-site parking. In the third precinct, businesses can apply for up to 2 permits if they have no on-site parking and 1 permit if they already have one on-site parking space but need another parking space for a second vehicle. The fee structure is similar to that for RPPs, with additional permits costing more and rates dependent on the vehicle's environmental rating. The main exceptions are that businesses have no discounted rates and cannot obtain refunds for business parking permits.

	Vehicle Rating			
	4+ stars (also includes motorcycles/scooters)	3-3.5 stars	2-2.5 stars or not in Green Vehicle Guide	1.5 stars or less
1 st RPP	\$25	\$37	\$50	\$100
2 nd RPP (only in Glebe)	\$50	\$75	\$100	\$200

With the adoption of the Neighbourhood Parking Strategy, the City will eventually extend the availability of business parking permits to the rest of the City (excluding Central Sydney), while imposing a tighter eligibility criteria. Businesses in both Zones A and B would be eligible for one parking permit only if they have no on-site parking and are unable to reasonably modify their premises to provide on-site parking. Also, business parking permits would only be issued to vehicles constructed for the purposes of carrying goods on a regular basis (i.e. small goods or trade vehicles like vans or station wagons), when previously there was no such requirement. The change was introduced to avoid business parking permits being used for commuting to workplaces as they can cause adverse parking impacts for residents, visitors and business customers. Existing business permits issued in the three zones can be renewed up to 12 May 2016 before switching to the new policy.

Accommodation of visitors or other non-residents providing services to residents in residential parking permit areas

Visitor parking permits can only be issued to residents and not businesses based on existing state regulations. As of July 2014, visitor parking permits are available in five parking precincts, with four of them offering annual permits for \$50 (or a concessionary \$13 fee) and the fifth using a daily permit system that initially began as a trial.

With the adoption of the Neighbourhood Parking Strategy, the City will eventually extend the availability of daily visitor parking permits to all other precincts (excluding Central Sydney). In the four areas where annual visitor permits are currently issued, the daily permit system will also be adopted although existing annual visitor permits may be renewed for up to 12 May 2016. The decision to phase out an annual permit system and adopt a scheme of multiple single-day visitor permits was made because the annual permits are vulnerable to fraud and misuse (e.g. used as a third household permit, resale to commuters, theft from cars).

Under this new system, eligible residents can obtain a pack of daily scratch-off visitor permits that have a minimum of 12 months' validity. These permits are essentially scratch-off cards and visitors will display one of them on their vehicle's dashboard with the corresponding date scratched off in order to be exempted from time limits and parking fees in the parking precincts.

Just like RPPs, the new visitor parking permits are only issued to certain eligible households. Properties ineligible for the visitor parking permits include (i) multi-unit flat buildings approved since 8 May 1996 (former South Sydney), 1 May 2000 (former Sydney City Council) or 12 May 2014 (remaining areas of the City), and (ii) residential dwellings approved on the condition that no parking permits are to be issued. Residential dwellings with on-site visitor parking spaces (including shared visitor parking spaces in multi-unit dwellings) are also typically excluded from obtaining visitor permits, but may be given exceptions on a case-by-case basis.

The number of parking permits contained in one pack varies according to the households' annual entitlement of daily visitor parking permits, which is affected by the zone classification and the number of residential parking permits issued to that household for the year:

Number of RPPs issued to the household	Zone A	Zone B
Households with no RPPs	Up to 30 visitor permits	Up to 45 visitor permits
Households with 1 RPP	Up to 20 visitor permits	Up to 30 visitor permits
Households with 2 RPPs	Up to 10 visitor permits	Up to 15 visitor permits

Due to the greater parking pressures in Zone A, eligible households are issued fewer visitor permits than in Zone B. The rationale for allocating more visitor permits to households with fewer RPPs is to equitably share limited street parking space. For households without RPPs, the visitor permits also serve to accommodate their occasional use of borrowed or rented vehicles.

The fees for the daily visitor parking permits are charged on a per pack basis, regardless of the number of permits within that pack. A pack of visitor permits currently costs \$50 and this amount is set annually at a level that covers administrative costs and to discourage a trade in permits.

Care provider organizations that routinely provide in-home care services and conduct more than 60 home visits to clients in the City of Sydney can apply for care worker parking permits to be used on nominated vehicles of care workers. These care worker parking permits are issued to care provider organizations rather than residents requiring in-home care to avoid placing the burden of application on these residents. Care worker parking permits cost \$50, are valid for a year and provide exemptions from time limits and parking charges when care workers conduct home visits in the parking precincts. There is no limit on the number of care worker parking permits that can be issued to a care provider organization, except that only one permit is issued per vehicle used to provide in-home care.

Establishment of new residential parking permit areas

Every residential area in the City is already part of a permit parking precinct.

TORONTO – PERMIT PARKING PROGRAM

Toronto's permit parking program entitles residents with parking permits to exclusively park their automobiles on the street within a defined area during its permit parking hours. The program is believed to have started in some form during the 1960s, originating in the downtown core where the makeup of properties (fee garages, lack of driveways and narrow houses) meant residents were forced to park on the street. Currently, it generally services areas that are predominantly residential in character and where there is a deficiency in off-street parking spaces (i.e. areas where driveways or garages are uncommon).

Delivery of the permit parking program is governed by Chapter 925 of the Toronto Municipal Code, which is the Permit Parking Bylaw passed in November 2001 to harmonize the former permit parking programs that previously existed in the pre-amalgamation municipalities.

Toronto's approach towards the size of implementation areas for permit parking is similar to that of Vancouver's. In Toronto, implementation of permit parking is either street name-based (parking is restricted to a specific street) or area-based (parking is restricted to an area which consists of a number of streets). Area-based permit parking helps to maximize the available on-street parking spaces and also provides permit holders with greater flexibility as they can park on any licensed street within the area. In addition, the permit parking operational hours can also vary within a permit parking area (e.g. in effect during certain portions of the year, days of the week or times of the day). The City of Toronto currently operates a total of 95 permit parking areas and in 2013, a total of 71,000 residential parking permits and 265,000 temporary parking permits were issued.

Program highlights

- Toronto limits the number of parking permits issued according to the number of motor vehicle spaces available, although there is a provision for City staff to issue up to 10% more parking permits at the request of the Ward Councillor. In cases where there are no available parking permits, residents have to apply to be on a waitlist, which ranks priority first based on the degree of the resident's need for an on-street parking space and then the application approval date. At least once a year, the waitlist is to be reviewed and permits held by people with lower on-street parking needs are cancelled to accommodate applications by residents with a greater need.
- Fees for residential parking permits vary according to the resident's need for an on-street parking space. Residents with more pressing needs for on-street parking (i.e. no access to an available off-street parking space) pay a lower fee for a permit. The permit parking program is linked to the Street Allowance Rental Application (SARA) system to verify whether a resident indeed has no access to an on-site parking space.
- Temporary parking permits are issued to visitors or tradespersons only when (i) there is no resident on the waiting list, and (ii) there remains at least 10% of permits available to residents at the time of application.
- Scooters and motorcycles require parking permits, but no fee is charged.
- Refunds are pro-rated based on the unused number of full months remaining in the permit cycle, and no additional administrative fee is charged to process refunds.

Who can obtain parking privileges within the permit parking streets/areas?

Unless ineligibility for the on-street permit parking program is explicitly stated in the purchase agreement, all residents within the zones can apply for the residential parking permits, which come in the form of a non-transferrable decal sticker. Applications for the residential parking permits are however designated into one of three categories based on their degree of need for an on-street parking space, which affects their priority and permit fees (more details below):

Priority Level	Scenario
Priority 1	Resident has no access to on-site parking for the subject vehicle and does not hold any parking permit
Priority 2	Resident has no access to on-site parking for the subject vehicle and already has a Priority 1 permit for another vehicle
Priority 3	Resident has access to on-site parking for the subject vehicle and wants the permit for convenience

The permit parking program is linked to the Street Allowance Rental Application (SARA) system to verify whether a resident indeed has no access to an on-site parking space. The SARA system is based on analytic surveys of all properties in the City of Toronto and residents can choose to contest the findings, following which a bylaw officer will visit their property to investigate.

Temporary permit holders, who can be residents (who may apply for them for temporary replacement vehicles), visitors or tradespersons, are also allowed to park within the limits of a residential permit parking street or area.

Residential parking permit limits

There are no limits on the permits that can be issued to a particular resident, although as discussed below, residents who already hold an existing permit are accorded a lower priority and assessed a higher fee than those who currently hold no permits.

The number of parking permits issued for any street generally does not exceed the number of motor vehicle spaces available, which is calculated based on the average vehicle length figure of 5.5 metres. The Permit Parking Bylaw however contains a provision for City staff to issue up to 10% more parking permits if the Ward Councillor so requests.

When there are no available parking spaces in certain streets or areas, residents can apply to be on a wait list and will be given 21 days to claim a parking space once it becomes available. Priority 1 applications are ranked the highest on the waitlist, followed by Priority 2 and finally Priority 3 applications. Within each of the Priority 1, Priority 2 and Priority 3 categories, the applications are further ranked by their approval date.

The wait list is reviewed at least once a year (supposedly every 6 months, but insufficient staffing has resulted in reviews taking place once a year unless a complaint is received) to determine whether the applications on the wait list need to be accommodated:

- i. When there are Priority 1 applications on the waitlist with Priority 2 or Priority 3 permits currently issued, a sufficient number of these Priority 2 and/or Priority 3 permits will be cancelled (with fees refunded if necessary) to accommodate the Priority 1 applications. Priority 3 permits issued most recently are cancelled first and if

there are no more Priority 3 permits in circulation, Priority 2 permit holders will then have to give up their spaces, again with the most recent issuances going first.

- ii. When there are Priority 2 applications on the waitlist with Priority 3 permits currently issued and no Priority 1 applications on the waitlist, a similar process ensues to accommodate the Priority 2 applications.

Hence, the system always ensures that residents with no on-site parking options are accorded a higher priority than those with on-site parking options who can only obtain permits if there is availability of on-street parking. In 2013, out of the 71,000 residential permits issued, 80% are for Priority 1, 15% for priority 2 and 5% for priority 3.

However, this priority system adopted for the issuance of residential parking permits has the potential to increase community opposition to proposed developments that provide no or fewer parking spaces than usual. Indeed, there has been a recent trend of community groups petitioning their ward's Councillor to pressure developments into providing better parking ratios on new properties so as to minimize any increase in demand for on-street parking. In response, Councillors have requested for certain developments to be blocked from the permit parking inventory. This is initiated through the Zoning/Planning Report, and buyers of units will be notified in their purchase agreement that they will not be eligible to apply for on-street parking permits.

Residential parking permit fees

Permit fees are assessed on a 6-month or 12-month term, starting either in June or December of each year. These fees are reviewed twice a year to account for inflation and determine if a fee hike is required.

Permit fees are assessed on the basis of on-street parking needs and become progressively higher for people with a lower need for on-street parking:

Priority Level	Fee (before HST)	
	Dec 1 to May 31	Jun 1 to Nov 30
Priority 1 - No access to on-site parking for resident's first permit	\$14.04 per month	\$14.39 per month
Priority 2 - No access to on-site parking for resident's second or subsequent permits	\$35.13 per month	\$36.01 per month
Priority 3 - Resident has access to on-site parking (i.e. permit is for convenience)	\$49.18 per month	\$50.41 per month

On an annual basis, the fees translate to \$170.58, \$426.84 or \$597.54 before HST for the three respective priority levels, which are significantly higher than the fees charged in Vancouver but still lower than those in Ottawa.

Residents must prove that they have no access to on-site parking for the subject vehicle of their permit application in order to qualify for the lower fees. For example, they can show proof that other vehicles registered at the address are occupying all of the existing off-street spaces or have a letter from the property owner (or property manager in the case of condominiums, apartments or townhouse complexes) stating that there is no access to parking on the premises.

In the case of permits issued for motorcycles and scooters, no fee is charged.

Permit holders who no longer need their permits can claim refunds. Refunds are pro-rated based on the unused number of full months remaining in the permit cycle. There is no additional administrative fee charged to process refunds.

Toronto's permit parking program operates on a full cost recovery basis and parking revenue goes into the Transportation Services Division's main account to fund projects for the year. A specific portion of the permit parking revenue is also allocated to Road Operations for cleaning of streets that are part of the permit parking program and road maintenance.

Accommodation of visitors or other non-residents providing services to residents in residential parking permit areas

Temporary parking permits can be issued to visitors or tradespersons only when (i) there is no resident on the waiting list, and (ii) there remains at least 10% of permits available to residents at the time of application. They cost \$20.15 per week, \$12.90 per 48 hours or \$8.60 per 24 hours before HST. Temporary permits are non-refundable and can be purchased for up to a maximum of 8 consecutive weeks from the Permit Parking office or up to 1 week online.

Temporary permits issued through the permit office are in the form of a decal sticker, similar to regular permits except that they are of a different colour. For permits issued online, they have a bar code and are to be taped to the windshield.

Establishment of new residential parking permit streets/areas

New permit parking streets/areas can be established in Toronto through requests initiated by residents, provided that the streets involved are not major arterial roads or expressways and are predominantly residential in character with inadequate off-street parking. The steps to establish a new permit parking street or area are as follows:

1. A petition requesting permit parking is required from residents representing at least 25% of the total number of residential properties facing or flanking the street(s) in question.
2. If the petition is valid, a 30-day mailing poll is conducted to determine whether permit parking will be initiated in the street or area. At least 25% of the ballots must be received with more than 50% support for the poll to be successful.
3. If the poll is successful, the community council (which has delegated authority to pass any necessary by-laws) can go ahead to implement permit parking on the street or area.

WASHINGTON, D.C. – RESIDENTIAL PERMIT PARKING PROGRAM

Washington, D.C.'s Residential Permit Parking Program aims to protect residential neighbourhoods from commuter parking and assist residents in finding parking on their blocks. The parking permits are issued through the District's Department of Motor Vehicles which holds all of its vehicle owners' registration details and addresses.

There are 8 residential parking permit (RPP) zones in the District and the zone boundaries coincide with the existing ward boundaries (shown in the map below). Within these 8 zones, more than 4,100 blocks have residential parking restrictions.

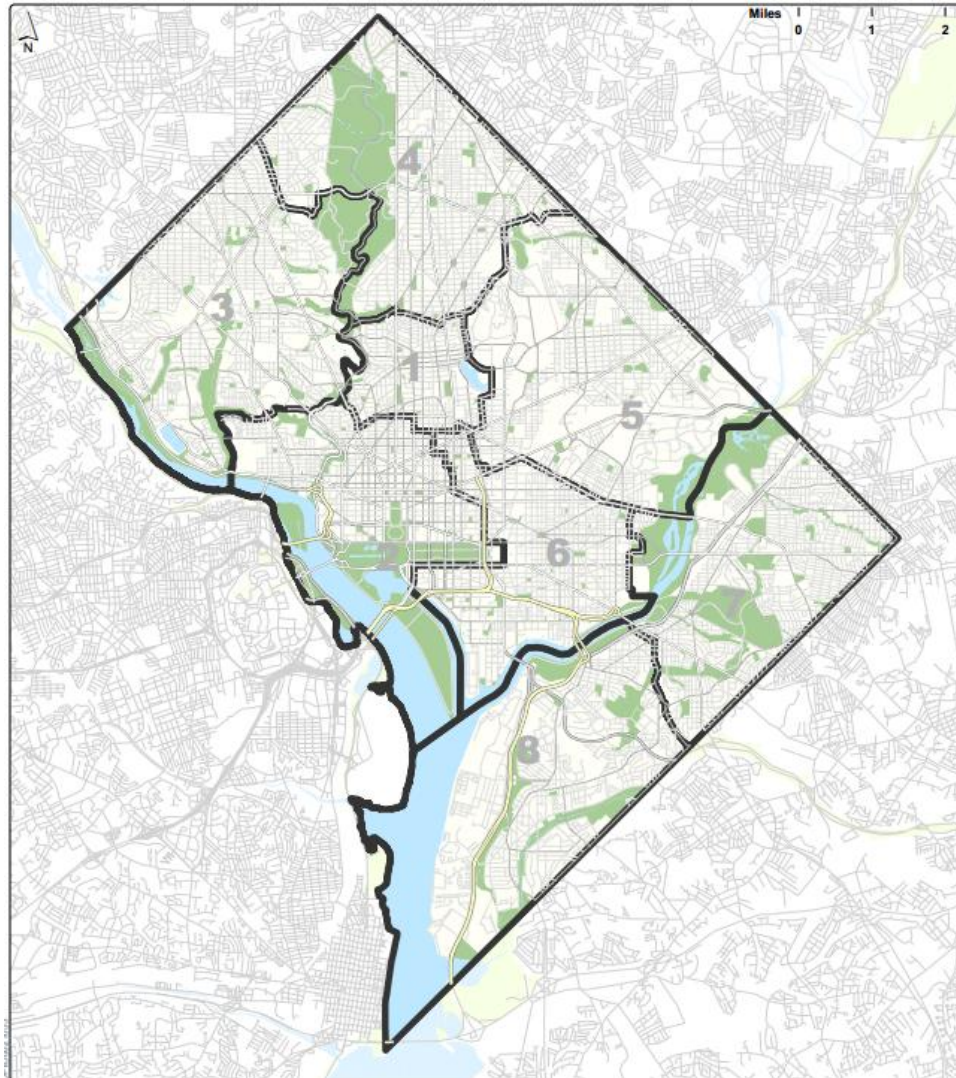


Image credit: District of Columbia Office of Planning's website

Program highlights

- Residents' eligibility for the RPP program is dependent on whether their block has RPP restrictions (typically a two-hour limit between 7 a.m. and 8.30 p.m. for non-permit holders), and not by the zone of residence. A resident is considered to be eligible if the block of residence

contains RPP restrictions. A RPP permit holder can then park beyond the posted time restrictions on any block within their zone.

- Non-RPP holders can only park up to two hours a day on all of the RPP-restricted blocks within a particular zone. They are not permitted to move their vehicle after two hours to another restricted space within the same zone.
- Residents living on RPP blocks can apply for free temporary visitor permits of up to 15 days at local police stations.

Who can obtain parking privileges within the permit parking areas?

Unless there are other conflicting parking regulations, the default RPP restriction assigned to any location in the RPP program is a time limit of two hours in effect from 7 a.m. to 8.30 p.m. (or 9 p.m.) on non-holiday weekdays. An exception occurs in one of the RPP zones where resident-only parking is designated on one side of the street and the usual two-hour restrictions on the other, both with the same enforcement hours. Residents holding RPPs are exempted from the posted restrictions on any RPP block within their zone and their status is identified through a zone number designation on their non-transferrable vehicle registration sticker (see image below).



Image credit: <http://www.dcplaces.net>

Non-RPP holders, on the other hand, can only park for up to a daily collective total of two hours on all of the RPP blocks within a particular zone (i.e. the two-hour restriction applies to the entire zone and not to a specific block). However, on the blocks without RPP restrictions, non-RPP holders can park for an unlimited time. For residents living on blocks without RPP restrictions and who are hence ineligible for the RPP program, their status is identified by the label "NO RPP" on their non-transferrable vehicle registration sticker.

Guests can park in RPP zones if they display visitor permits (available in all zones) or visitor passes (available in some zones).

Health care providers and contractors can also park in RPP zones if they have temporary parking permits.

Residential parking permit limits

Residents can obtain a RPP for each owned vehicle and there is no limit imposed on the number of RPPs that can be issued to a household or throughout a permit zone.

Residential parking permit fees

The fee for each RPP is \$35 per year and residents have the option of purchasing them on either a one-year or two-year term. For seniors at least 65 years of age, there is a discounted rate of \$25 per year. The expiry date for a RPP coincides with the vehicle registration expiry date. No pro-rated refunds are provided for RPPs that are returned before their expiry date.

Accommodation of visitors or other non-residents providing services to residents in residential parking permit areas

Residents living on RPP blocks can be issued temporary visitor parking permits or annual visitor parking passes for use by their guests.

Requests for temporary visitor parking permits are to be made on an as-needed basis at the local police stations, which would then issue the permits at no cost for a period of up to 15 days. There are no limits on the number of such permits that may be issued to an eligible household or for a RPP block. These temporary permits are valid on any RPP block within the zone of the residence being visited.

In the case of annual visitor parking passes, they are only available in selected RPP zones and allow visitors to park on RPP blocks within the sub-ward area of the resident (each ward or RPP zone comprises several sub-wards known as Advisory Neighbourhood Commissions). These passes expire on September 30 of each year and one pass is mailed to households living on RPP blocks if they register for it (these households need not have a RPP).

While an annual permit system eliminates the hassle of having to obtaining a temporary permit for each new guest, there is a high potential for abuse since residents may sell these permits to someone living outside the zone. In an attempt to limit such abuse, the District started printing unique identification codes on parking passes issued from late 2013 (see example of the new visitor pass below). District transportation officials had also proposed to have residents register online for the annual visitor passes so as to better keep track of issued permits; however, Council rejected the proposal due to concerns about the inconvenience imposed on residents.



Image credit: D.C. Department of Transportation

Contractors working on residences located on RPP blocks can apply for contractual employee temporary parking permits of up to 15 days for free at the D.C. Department of Motor Vehicles Service Centre. Likewise, health care workers providing long-term homecare for residents living on RPP blocks can apply for visitor parking permits at the same location, except that their permits can be issued for up to 60 days.

Establishment of new residential parking permit areas

Washington, DC has eight RPP zones whose boundaries correspond to those of the wards. However, only residents living on blocks with residential parking restrictions are eligible for the Program and they can park beyond the posted time restrictions on any block within their zone (i.e. not necessarily on their own block).

For residents living on blocks that are not in the Program, they can petition for the inclusion of their block. A majority (51% or more) of the households on the block must sign the petition in order for it to be considered. Once the petition is submitted, staff will then consider whether the block should be eligible for designation as a RPP block, taking into account whether the block has at least 70% overall parking occupancy and at least 10% occupancy by vehicles registered outside the RPP zone during weekdays between 7 a.m. and 6.30 p.m. If the petition is successful, the block will typically be assigned a two-hour parking restriction between 7 a.m. and 8.30 p.m. (or 9 p.m.) on non-holiday weekdays.

The District also has the discretion to include a block in the RPP program without a petition in certain instances, such as if it is within 5 blocks of a commercial district or some major traffic generator, or if there is less than 20% of free curb space available for resident parking.