

### Front Yard Parking Regulations and Electric Vehicle Charging on Residential Streets

**Date:** September 22, 2020

**To:** Infrastructure and Environment Committee

**From:** General Manager, Transportation Services

**Wards:** All

#### SUMMARY

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The ability to apply for and obtain front-yard parking (FYP) pads for private residential homes on the City-owned boulevard and/or front yard in certain areas of Toronto was originally intended to provide parking for residents where there is no parking available on-site in the form of a garage, driveway or other reserved outdoor space. Over time, adjustments to Chapter 918 of the Municipal Code based on specific area characteristics as well as the recent ward boundary changes of December 1, 2018 have resulted in different permissions and regulations across the City and even within the boundaries of a single ward.

Concerns about the implementation of FYP from equity, environmental and urban design perspectives continue to be expressed by residents and elected officials. Furthermore, the emergence of electric vehicle (EV) technologies have increased public demand to accommodate the charging of electric vehicles on private property and within the city road allowance.

The purpose of this report is to respond to a request from Toronto and East York Community Council to provide comment on the potential impact of allowing front yard parking pad applications in currently prohibited zones if a resident purchases and maintains ownership of an electric vehicle. City Planning, Toronto Water, Environment and Energy, Urban Forestry and Toronto Hydro were consulted during the preparation of this report.

A city-wide residential parking strategy is underway and is expected to be completed in 2021. Decisions regarding new implementation features for either Front Yard Parking or On-Street Residential Permit Parking, including provisions for EVs, should be postponed until the strategy is complete and brought to City Council.

## **RECOMMENDATION**

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The General Manager, Transportation Services recommends that:

1. City Council request that the General Manager, Transportation Services as part of the Parking Strategy, review residential front yard and commercial boulevard parking with consideration of electric vehicle initiatives, and impacts on tree canopy, stormwater management, urban design, safety and enforcement and report back to Infrastructure and Environment Committee in the second quarter of 2021.

## **FINANCIAL IMPACT**

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There are no current or known future year financial impacts arising from the recommendation contained in this report.

The Chief Financial Officer and Treasurer has reviewed this report and agrees with the financial implications as identified in the Financial Impact section.

## **DECISION HISTORY**

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Toronto and East York Community Council, at its meeting of November 5, 2019, requested the General Manager, Transportation Services, in consultation with City Planning, Toronto Water, Office of Environment and Energy, and Urban Forestry, to report back to the February 5, 2020 Toronto and East York Community Council meeting on front yard parking pads with consideration given to factors such as right-of-way management, capacity of Toronto's electricity system, tree canopy, stormwater management, urban design, pedestrian safety, and a path for creating electric vehicle charging on residential streets including the staff resources required to monitor the use of parking pads to ensure that they are only used by an electric vehicle.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2019.TE10.49>

On January 29, 2020 City Council adopted Toronto's first Electric Vehicle Strategy ("EV Strategy") (Item IE.11.17) with amendments. The EV Strategy is a critical component of transitioning Toronto to a low-carbon city as articulated in the City's Climate Action Strategy, TransformTO, in particular the goal that 100% of transportation use zero carbon energy by 2050. The Strategy identifies a number of targeted actions to support the adoption of Electric Vehicles, including improving charging availability on public and private property.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2020.IE11.17>

## COMMENTS

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### **Right-of-Way Management**

The provision of Front Yard Parking (FYP) on a property, within the area now known as the amalgamated City of Toronto, dates back nearly 50 years. It was used primarily in the former City of Toronto to provide parking for residents where no parking was available on-site in the form of a garage or driveway. It was later expanded and introduced to a number of other areas in the former municipalities of York and East York as the municipalities grew and demand for parking continued to increase.

FYP is often a contentious and divisive issue. Over the years, specific amendments to the Municipal Code have been made to suit specific area characteristics. This has resulted in a process that, despite attempts to harmonize the bylaw, can be a challenge to understand and implement throughout various parts of the City.

In addition, there have been longstanding concerns with the existence and continued implementation of FYP including, but not limited to, such things as environmental impacts, particularly pertaining to stormwater runoff, urban design and streetscape aesthetics, protecting the tree canopy and the loss of on-street permit parking space. More recent challenges include the emergence of electric vehicle technologies which have led to an increase in public demand to accommodate the charging of electric vehicles within City road allowance and on private property.

It has become apparent to staff that moving forward, a strategic and balanced city-wide approach is required to address off and on-street parking. Transportation Services staff are currently in the first stages of developing a city-wide residential parking strategy, which will be brought before Council in 2021.

### ***Current Front Yard and Boulevard Parking Regulations***

Compared to previous municipal code requirements, the current Municipal Code (Chapter 918) adopted in 2007 generally made it more difficult for residents to be granted FYP. Some of the key restrictive requirements that were introduced include:

- Limiting the size of the parking space;
- Reducing the number of parking spaces to be licensed from two spaces to one;
- Introducing a minimum requirement for soft landscaping (an area supporting the growth of plants and vegetation);
- Introducing measures to protect existing trees, by increasing the minimum distances to paved areas;
- Introducing a requirement for permeable paving;
- Requiring the planting of one tree in the front yard or funding the planting of a tree elsewhere in the neighbourhood; and
- Excluding consideration where on-street permit parking is available on the street.

Many of these changes were adopted to support the City's 2003 Wet Weather Flow Master Plan which aims to reduce the volume of surface level and water runoff entering

the sewer system thereby improving water quality of the City's watercourses and reducing basement flooding.

As a result of these bylaw changes, a considerable number of properties that were able to apply for FYP in the past became ineligible to apply for or receive permission to build a front yard parking pad on any portion of the right-of-way.

The FYP zones are illustrated below:

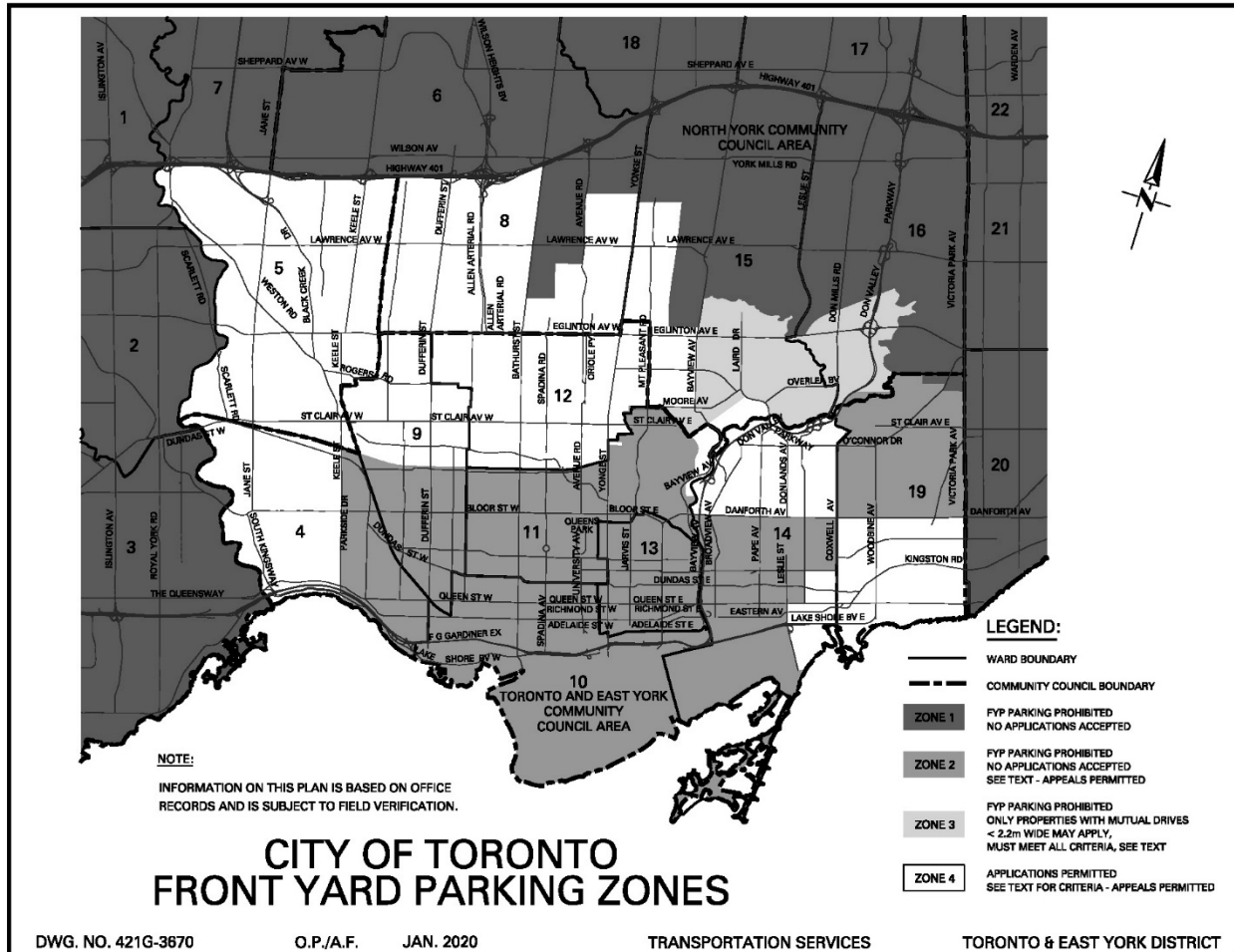
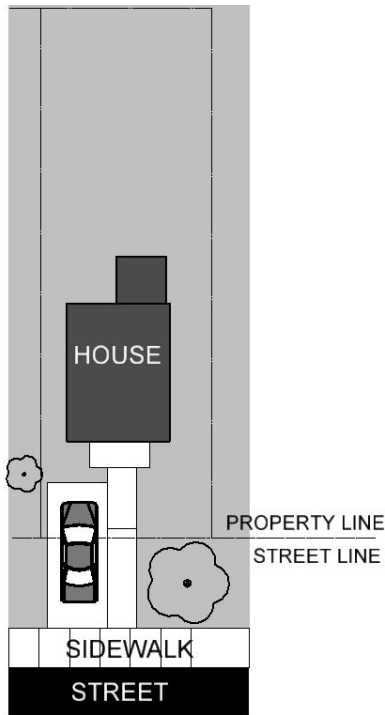


Figure 1. City of Toronto Front Yard Parking Zones

As changes to the FYP by-laws were made at a local level to suit the neighbourhood's needs, when Council transitioned from 44 to 25 wards, the changes in ward boundaries resulted in wards with differing parking conditions within the same ward. For instance, in some cases new wards have areas where FYP is prohibited entirely and within the same ward, includes areas where FYP applications are permitted.

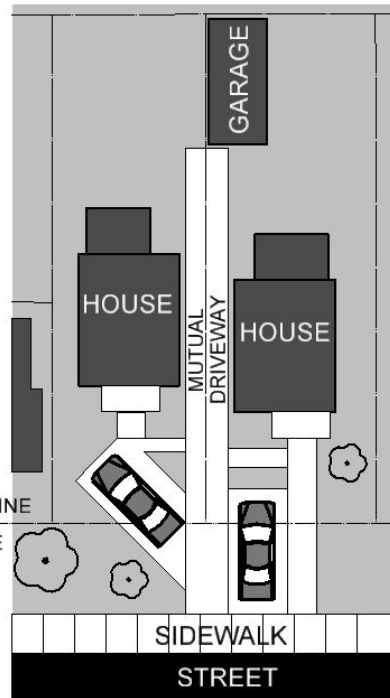
The following illustrations identify examples of the various types of parking configurations which require a licence under Chapter 918, Parking on Residential Front Yards and Boulevards:

## Properties without Access



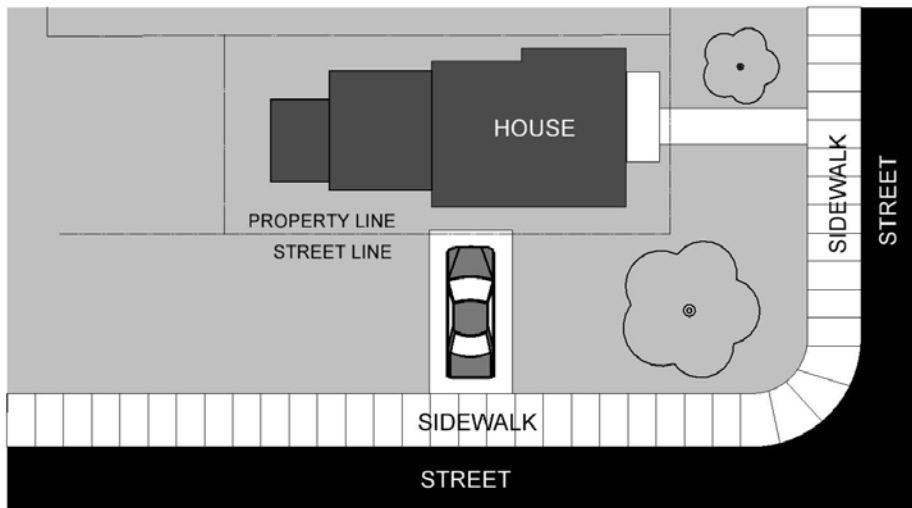
- Parking pad in front yard and boulevard
- Curb cut does not exist

## Mutual Driveway



- Existing mutual driveway is too narrow, less than 2.2 metres wide
- Parking pad adjacent to mutual driveway

## Corner Properties



- Parking pad at side of dwelling adjacent to flanking street
- Only at corner locations with no rear yard or parking space

The following discussion provides a response to the various elements identified by Toronto and East York Community Council representing certain considerations when constructing FYP pads.

## **A. Electric Vehicle (EV) Initiatives**

EV charging on the public right-of-way is an emergent pressure which is being addressed in a strategic manner from a city-wide perspective.

Preparing for the increase in demand for electric vehicle ownership is a key component of the Electric Vehicle Strategy adopted by City Council in January 2020. The strategy identifies key barriers limiting EV uptake including a lack of access to home charging infrastructure for residents who do not have a private overnight parking space. This includes residences without a designated private parking space on their property and those who live in Multi-Unit Residential Buildings ("MURBs"), who are experiencing difficulty in accessing or installing charging infrastructure.

To minimize these barriers, one of the actions identified in the EV Strategy is to expand the deployment of public charging infrastructure in neighbourhoods with higher concentrations of MURBs and residences without private parking.

In November 2017, City Council approved the installation of on-street electric vehicle (EV) charging stations at seven (7) locations to serve thirteen (13) charging spots, on a pilot basis, to enable Toronto Hydro to utilize electrical and street light poles. The charging stations will have been energized by the time this report reaches the Infrastructure and Environment Committee on September 22, 2020.

Staff recognize that there is a strong desire from some prospective electric vehicle owners in certain areas of the city without access to private charging opportunities to amend the current regulations for front yard parking access. However, the implementation of such changes need to be considered from a multi-faceted, city-wide perspective. As a result, further work is required for staff to formulate what requirements or considerations need to be addressed as it relates to EV's and FYP.

## **B. Capacity of Toronto's Electricity System**

Toronto Hydro staff, who are part of the City's Electric Vehicle Working Group ("EVWG") and contributed to the development of the EV Strategy, have indicated that they are confident that the distribution grid will continue to meet the electricity charging needs of EV growth. Toronto Hydro is integrating load growth from EVs and electric transit in their system planning and do not anticipate any system-level constraints to meet future EV needs. Toronto Hydro will make necessary local upgrades in specific areas of concentrated adoption through routine, day-to-day operations.

Toronto Hydro's standard planning processes track load growth from increased EV adoption to ensure sufficient capacity is available to meet it. Currently there is sufficient capacity available at the system, station and feeder level. An EV charger effectively doubles the normal power draw of a typical home when charging. The extra load will be handled by the available spare capacity of the local pole-mounted transformer. If no spare capacity exists, the transformer will be upgraded, which is a routine activity for Toronto Hydro.

In addition, as EV charging becomes more intensified, Toronto Hydro will monitor power quality impacts (like non-linear electrical loads) to maintain supply standards to its customers.

Toronto Hydro has confirmed that the actual location of the EV Charger is not an issue from their perspective, however,, individual customers may need to upgrade their own electrical service in order to accommodate new chargers they want to install on their property.

### **C. Tree Canopy**

The recently released 2018 Tree Canopy Study identified an increase of impermeable land cover over the last ten years, totalling 892 hectares or equivalent to 1,100 soccer fields. Land cover analysis found that the greatest amount of land converting from permeable to impermeable was found on low density residential lands. This is a concerning trend as low density residential lands have the greatest amount of potentially plantable space for tree canopy expansion in the city.

Chapter 918 does incorporate measures to minimize the impact to trees when considering the installation of a FYP pad. Property owners who are permitted to install a FYP are required to plant an additional tree on the boulevard fronting or in the front yard of their residential property. If this is not feasible based on an assessment from Urban Forestry, the successful FYP applicant must pay a tree planting service fee to plant a tree on City property in their general area.

If it has been determined that a property owner has not planted a tree on the property where a FYP license is being sought, as per the terms in Chapter 918, they are provided with a written notice providing 30 days to comply with the bylaw. If they do not comply within the allotted time frame, the City will plant a tree at the applicant's expense and the tree planting service fee will be added to their property tax bill.

Based on consultation with Forestry staff, there are a number of areas where Chapter 918 could be further revised to strengthen controls and minimize/mitigate impacts to the tree canopy. These revisions will be explored at a later date.

Although there are mechanisms in the bylaw to minimize any impacts to trees, low density residential lands represent the greatest potential to expand the plantable space for tree canopy expansion in the city. Adding FYP has the potential to negatively impact the preservation of plantable space at the site level and also affect the City's ability to meet climate mitigation objectives including achieving 40% tree canopy cover.

Further information relating to the 2018 Tree Canopy Study can be found here: <http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2020.IE11.1>

### **D. Stormwater Management**

Prior to the implementation of Municipal Code Chapter 918 in 2007, an extensive review was conducted by Toronto Water outlining the impacts of FYP on wet weather flow management.

The results of that review can be accessed in a 2005 staff report through the link at <http://www.toronto.ca/legdocs/2005/agendas/committees/plt/plt051130j/it003b.pdf>

The review found that hard surface parking pads decrease the ability for stormwater to be absorbed into the ground. However, the report found that the cumulative effects of paved parking pads had a minimal impact on the total volume of stormwater runoff on a city-wide basis. This is mainly because the total number of licensed parking pads (15,700 based on 2001 data) across the city was small relative to the total number of driveways (356,000). These parking pads contributed to about 0.7% of stormwater runoff from low to medium density areas across the city, while the driveways providing access to garages and other on-site parking areas represented about 17% of stormwater runoff. The report concluded that, on a city-wide basis, the residential licensed parking areas represented a small portion of stormwater runoff across the whole city.

Although the number of licensed parking pads has increased to over 17,000 since the time of the review, the magnitude of the impacts noted above remain minimal.

As noted previously in this report, there are a number of provisions in Chapter 918 which address stormwater runoff and environmental concerns, such as the requirement to install permeable materials and to increase soft landscaping area. Further, the Zoning Bylaw also requires a percentage of landscaping to be soft landscaping, in part to encourage stormwater infiltration on site. If designed and maintained correctly, front yard parking pads constructed with permeable materials can come close to exhibiting similar infiltration characteristics of the underlying native soils. However, there is a general understanding that permeable pavements, which are designed to replace impervious/impermeable areas, must be used as part of an overall on-site management system for stormwater. They do not solely replace other stormwater management techniques.

A number of reports and requests through the former Public Works and Infrastructure Committee requested staff to review environmental aspects related to FYP pads. Specifically, staff were asked for advice on the general impact of parking pads on the City including the impact on the City of Toronto's natural environment and stormwater operations. Staff were also asked to assess permeable paving materials and front yard parking regulations in other jurisdictions as part of the on-going review of Chapter 918 to determine if there are permeable paving materials available in the market which minimize surface water runoff such that front yard parking pads constructed with those materials could be considered landscaped open space and/or soft landscaping.

The results of the most recent review can be found here: <https://www.toronto.ca/legdocs/mmis/2017/pw/bgrd/backgroundfile-104233.pdf>

It should be noted that previous reports on the stormwater impact of FYP predate more recent City policies and initiatives (i.e. the Toronto Resilience Strategy, Green Streets) that bring greater attention to minimizing the impact of stormwater across the city.



More recently, Toronto and East York Community Council, at its meeting of November 5, 2019, requested that General Manager, Transportation Services in consultation with Toronto Water and Municipal Licensing and Standards report back on the feasibility of improving the permeability of new and existing parking pads and driveways within Toronto and East York Community Council boundaries with a goal of all stormwater being treated on site. The Committee also requested the report include consideration of the long-term impacts of soil compaction and dirt accumulation on the permeability of parking pads, a gradual phase in of mandatory upgrading to all non-permeable parking pads and driveways and the a review of the contamination resulting from runoff from traditional asphalt and permeable pavement options.

## **E. Urban Design**

Front yard parking erodes the quality of neighbourhood streetscapes, as portions of front yards and City boulevards are paved to accommodate parking pads for automobiles. By increasing paved area, FYP reduces the opportunity to provide a greater proportion of soft landscaping and tree planting.

The Official Plan includes a number of policies that discourage front yard parking in the City's residential neighbourhoods. In Chapter 3 (Building a Successful City), Policy 3.1.2.2(e) states that "New development will locate and organize vehicle parking, vehicular access, service areas and utilities to minimize their impact on the property and on surrounding properties and to improve the safety and attractiveness of adjacent streets, parks and open spaces by limiting surface parking between the front face of a building and the public street or sidewalk." In Chapter 4 (Land Use Designations), Policy 4.1.5(g) requires development in established Neighbourhoods will respect and reinforce the existing physical character of each geographic neighbourhood, including in particular, prevailing patterns of rear and side yard setbacks and landscaped open space.

Toronto's Zoning By-law 569-2013 reflects Official Plan policy and prohibits a parking space to be located in the front yard, unless the space is otherwise permitted under the City of Toronto Act, through a permit issued by Transportation Services. Zoning By-law 569-2013 also relieves properties in some residential zones from the requirement to provide a parking space on site, when the lot in questions is narrower than 7.6 metres and might therefore be challenged to provide parking beyond the main front wall of the house. This also creates stretches of street which cannot accommodate street parking.

## **F. Safety Considerations**

Front yard parking pads are predominantly located along local residential streets. From a statistical perspective, local residential streets provide a comparatively high level of safety when compared to higher order roadway typologies such as arterial and collector roads.

The highest level of risk for pedestrians tends to be encountered when pedestrians attempt to cross high volume roadways with higher operating speeds and without any form of control (i.e. pedestrian crossover or traffic control signal). Other factors influencing pedestrian safety include available sight line/sight visibility, crossing

distance, weather conditions and time of day. Logically, there is an increased level of risk associated with increased numbers of driveways on any street due to increased number of potential conflict points combined with potential sightline limitations. This risk is greater on commercial driveways, as opposed to front yard parking driveways on local streets, due to higher frequencies of vehicle entry/exits and higher levels of pedestrian activity.

Generally, the level of collision risk and exposure risk are both greater on higher order roadway typologies such as arterial and collector roadways given the higher traffic volumes, higher speeds and greater number of conflicting travel movements. As such, the majority of killed or serious injury collisions are concentrated on arterial and collector roadways. Transportation Services does not have empirical evidence that suggests that the increased risk of driveways on local roads is significant. Specifically, for collisions involving pedestrians or cyclists at driveways, the relative magnitude of this collision type on local roads, where parking pads tend to be located, is very small. A review of collisions for the last five years (from 2015 - 2019) found:

- 6 (2 fatal and 4 serious injury) out of 872 (less than 1%) of pedestrian killed or serious injury collisions in the past 5 years have been related to driveways on local roads.
- 3 (none fatal) out of 225 (just over 1%) of cyclist killed or serious injury collisions in the past 5 years are related to driveways on local roads.

## **G. Enforcement - Staff Resources**

While it is challenging to provide a meaningful estimate on how many residents will actually own or have use of an EV in the foreseeable future, the EV Strategy outlines the following target adoption rates for personal vehicle electrification:

- By 2025, 5% of registered personal vehicles are EVs;
- By 2030, 20% of registered personal vehicles are EVs;
- By 2040, 80% of registered personal vehicles are EVs; and,
- By 2050, 100% of registered personal vehicles are EVs.

These goals are estimated to proportionally align with Federal EV sales targets and assume an 11 year average vehicle turnover age.

In 2018, over 6,200 EVs were registered in Toronto compared to 1,600 EVs in 2016. Although Toronto accounts for approximately 20% of all EVs registered in Ontario, only approximately 0.6% of all vehicles registered in the city are EVs.

Should Council decide to amend Chapter 918 to allow for increased access to FYP for owners of EV's, there may be an increase in enforcement activities related to ensuring residents are not parking gas powered vehicles instead of EV's in spaces approved for EV's. However, as any new application would require proof of ownership of an EV, staff feel that the likelihood of abuse would be low since these types of applications would be accompanied by a visible onsite charging system thereby facilitating easier enforcement.

If existing complaint-based enforcement practices are assumed, enforcement staff resources will likely be adequate to respond to compliance issues, if proactive inspections are required.

## **Front Yard Parking Moving Forward**

Historically each Councillor, through the Community Council structure, has implemented the off-street parking system they feel best suits their constituent's residential parking needs. The current bylaw has been structured to accommodate this approach over the years.

Moving forward, a strategic and balanced approach is required to address off and on-street parking, including the accommodation of EV's city-wide. A city-wide residential parking strategy is underway and will be brought forward to Council in 2021. Decisions regarding new implementation features for either Front Yard Parking or On-Street Residential Permit Parking, including any provisions for EVs, or a gradual upgrade of all non-permeable existing parking pads and driveways should be postponed until the strategy is complete and brought to City Council.

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## **SIGNATURE**

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