



# **293 Upper Wentworth Street Hamilton Parking Study**

Paradigm Transportation Solutions Limited

November 2020  
200158



# Project Summary



**Project Number**  
200158

**November 2020**

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## 293 Upper Wentworth Street, Hamilton Parking Study

A handwritten signature in dark ink, appearing to be "S. Elkins", written over a light blue grid background.

Signing Engineer, P.Eng.

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# Executive Summary

## Content

Paradigm Transportation Solutions Limited (Paradigm) has been retained to conduct this Parking Study for the existing 5-storey mid-rise multi-family building located at 293 Upper Wentworth Street in the City of Hamilton.

The property owner is undertaking the steps required to legalize one (1) of the 43 existing rental apartment units from a zoning perspective. The site's existing parking supply does not meet the City of Hamilton's Zoning By-law parking requirements as currently planned.

## Site Concept

The subject site is located at 293 Upper Wentworth Street in the City of Hamilton. The existing 5-storey mid-rise multi-family building was constructed in the 1960's and contains 43 rental apartment units. The City of Hamilton recognizes 42 of the existing units. One (1) of the existing units is considered illegal.

On-site parking spaces are unbundled from the residential units and are offered to occupants as a separate lease. This provides residents with the opportunity to realize additional cost savings associated with car-free living and provides incentives for those considering this as an option.

The site's parking supply is estimated to be approximately 40 spaces (0.93 spaces per unit). All on-site parking is located at grade consisting of perpendicular spaces.

Vehicle access is provided by three private driveways to Upper Wentworth Street located approximately 75, 90, and 135 metres north of Concession Street.

## Conclusions

The site's existing parking supply is supportable for the following reasons:

- ▶ The subject site is located within a dense urban area with good access to public transit service (3 bus routes);
- ▶ The subject site's location is considered "Very Walkable", which means that most errands can be accomplished on foot allowing for reduced dependency on the automobile;



- ▶ The City of Hamilton offers a comprehensive cycling network with designated routes connecting the subject site to the larger network;
- ▶ The required minimum parking supply for the subject site, based on the City of Hamilton's Zoning By-law 05-200, is 13 parking spaces;
- ▶ Transportation Tomorrow Survey data suggests that approximately 37% of residents living in apartments do not own a vehicle. The survey data suggests that the site's parking demand is in the order of 34 spaces; and
- ▶ Published data by Institute of Transportation Engineers estimates the site's parking demand to be approximately 25 spaces.
- ▶ The site's parking demand is estimated to be fully contained on site. The site's parking demand is forecast to range from 13 spaces to 34 spaces, depending upon the methodology used to forecast the demand.

To further manage the site's transportation and parking impacts, the site operator could consider implementing a Transportation Demand Management (TDM) program. TDM measures that could be consider include:

- ▶ Subsidized transit passes;
- ▶ Short-term bicycle parking within 15 metres of the building's principle entrance;
- ▶ Long-term bicycle parking in a secure indoor location that is only accessible to residents;
- ▶ Continuing to unbundle the cost of the parking spaces from the units;
- ▶ Enroll in a carshare program; and
- ▶ Provide wayfinding and travel planning resources on-site.

The above TDM measures can further assist in mitigating the site's transportation and parking impacts on the adjacent road network, promote a strong and vibrant economy, and create a livable community that has a balanced transportation network.

## Recommendations

Based on the findings of this study, it is recommended that the site operator consider developing and implementing a TDM program to assist in managing the site's transportation and parking impacts.



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# 1 Introduction

## 1.1 Overview

Paradigm Transportation Solutions Limited (Paradigm) has been retained to conduct this Parking Study for the existing 5-storey mid-rise multi-family building located at 293 Upper Wentworth Street in the City of Hamilton.

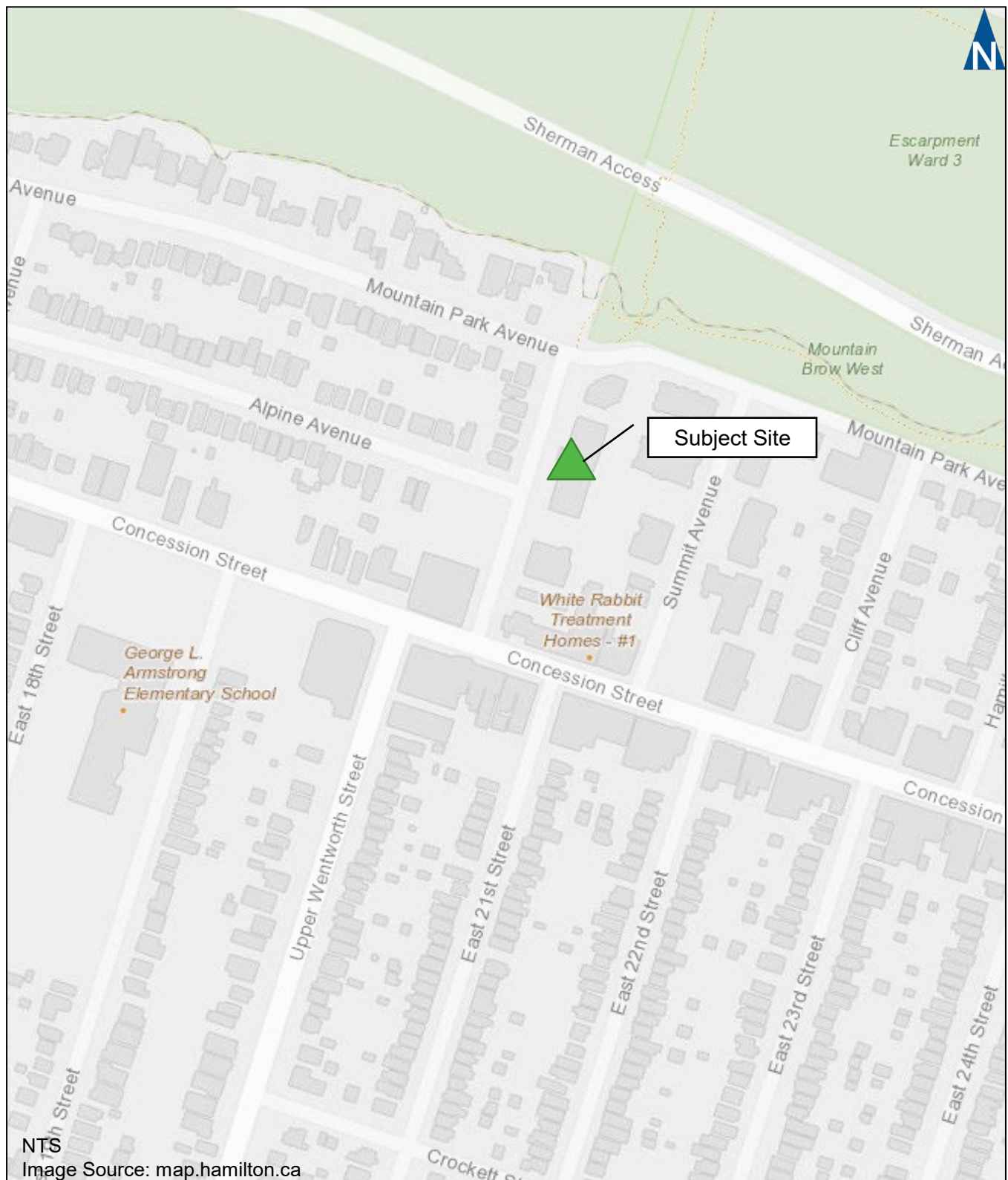
**Figure 1.1** illustrates the location of the subject site.

## 1.2 Purpose and Scope

The property owner is undertaking the steps required to legalize one (1) of the 43 existing rental apartment units from a zoning perspective. The site's existing parking supply does not meet the City of Hamilton's Zoning By-law parking requirements as currently planned.

The purpose of the study is to justify the current parking supply based on existing conditions recognizing local constraints and conditions.





## 2 Site Description

The subject site is located at 293 Upper Wentworth Street in the City of Hamilton. The existing 5-storey mid-rise multi-family building was constructed in the 1960's and contains 43 rental apartment units. The City of Hamilton recognizes 42 of the existing units. One (1) of the existing units is considered illegal.

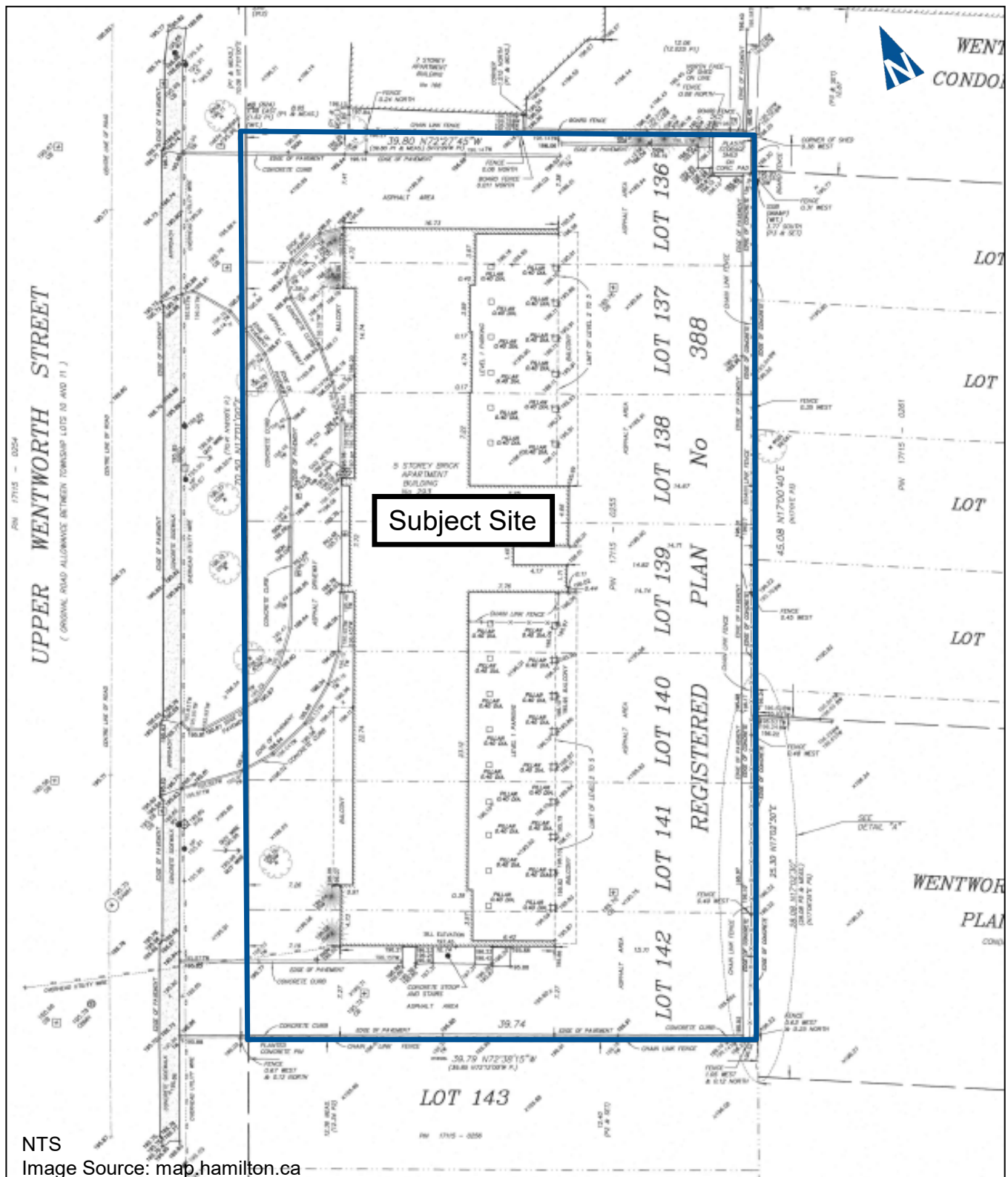
On-site parking spaces are unbundled from the residential units and are offered to occupants as a separate lease. This provides residents with the opportunity to realize additional cost savings associated with car-free living and provides incentives for those considering this as an option.

The site's parking supply is estimated to be approximately 40 spaces (0.93 spaces per unit). All on-site parking is located at grade consisting of perpendicular spaces.

Vehicle access is provided by three private driveways to Upper Wentworth Street located approximately 75, 90, and 135 metres north of Concession Street.

**Figure 2.1** illustrates the site plan.





### 3 Area Description

The subject site is located mid-block on Upper Wentworth Street between Mountain Park Avenue and Concession Street. The site is located within walking distance of numerous and significant employment, retail, cultural and recreational opportunities adjacent to the City's Concession Street Business Improvement Area (BIA).

The proximity of the site to such a range of amenities and destinations reduces the need for occupants and visitors to the site to travel on a regular basis by car alone. Trip decision making can allow for reduced automobile trips, combined and/or shorten vehicle trips.

#### 3.1 Local Parking Provisions

The area within 200 metres of the subject site is considered when assessing the potential parking impact. This represents a typical walking time of approximately 2-3 minutes. Beyond this distance, casual parking (i.e. visitors) is generally not expected.

Unrestricted on-street parking in the City of Hamilton is subject to all city-wide by-laws which are not typically posted (e.g. over night parking on through streets, 12-hour parking, etc.).

**Figure 3.1** outlines the general on-street parking provisions within 200 metres of the subject site. The following parking regulations are noted:

- ▶ Upper Wentworth Street
  - On-street parking is permitted (where signed).
- ▶ Mountain Park Avenue
  - Seasonal parking restrictions with alternating north and south side parking (where signed) west of Upper Wentworth Street intersection. Parking is not permitted east of the Upper Wentworth Street intersection.
- ▶ Alpine Avenue
  - Seasonal parking restrictions with alternating north and south side parking (where signed).
- ▶ Concession Street
  - On-street metered parking is permitted in delineated spaces.
- ▶ Off-Street Parking

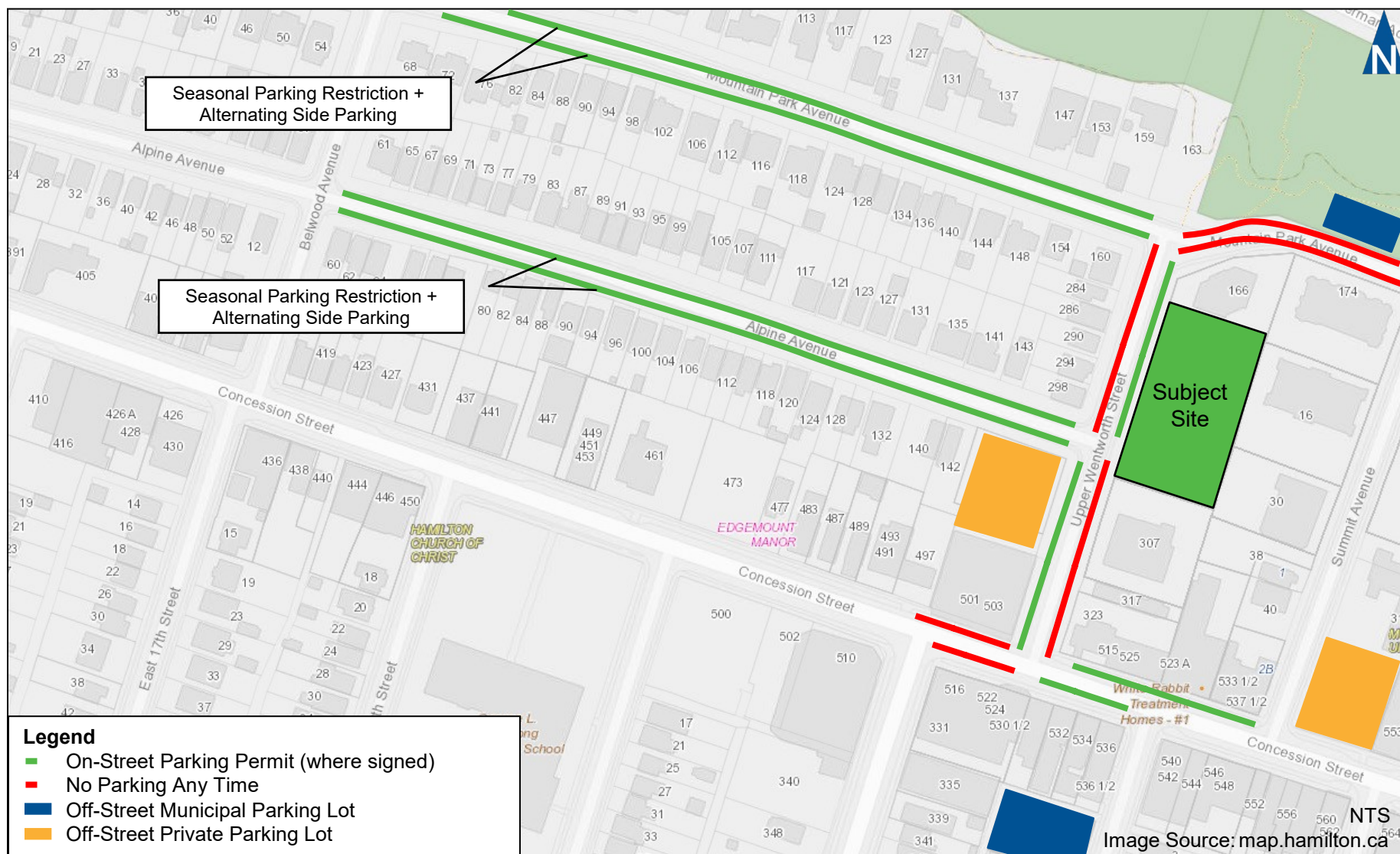


- A municipal lot at the north end of Summit Avenue has approximately 28 spaces that are not delineated.
- A municipal parking lots on the west side of East 21<sup>st</sup> Street south of Concession Street has 24 delineated spaces.
- A private parking lot at the southwest corner of Upper Wentworth Street and Alpine Avenue has approximately 42 spaces.
- A private parking lot at the northeast corner of Concession Street and Summit Avenue has approximately 29 spaces.

Within 200 metres of the subject site, the on-street parking supply is estimated to be approximately 45 spaces. The parking supply for areas where parking spaces are not defined, such as on Upper Wentworth Street, is dependent upon how efficiently drivers are able to park. Additionally, there are approximately 52 spaces in nearby municipal parking lots and 71 spaces in nearby privately owned parking lots.







### 3.2 Walking

Sidewalks are provided along both sides of all streets within the study area. Sidewalks along the north side of Mountain Park Avenue are discontinuous as a multi-use trail is provided along the Mountain Brow. The Mountain Brow multi-use trail runs from Upper Wentworth Street to Upper Ottawa Street.

At signalized intersections crosswalks and pedestrian signal heads are provided on all approaches. A mid-block pedestrian signal is located on the west leg of Concession Street at the East 22<sup>nd</sup> Street intersection.

The Wentworth Street Stairs provide a pedestrian connection between the lower and upper city. The stairs are located near the intersection of Upper Wentworth Street and Mountain Park Avenue. At the bottom, the stairs provide a connection to the Escarpment Rail Trail.

Walk Score<sup>1</sup> is an online tool that assigns a numerical walkability score between 0 and 100. Walk Score ranks communities nationwide based on the number of businesses, parks, theatres, schools, and other common destinations within walking distance of any given address.

293 Upper Wentworth Street is noted to have a walk score of 75 and is considered “Very Walkable”, which means that most errands can be accomplished on foot.

### 3.3 Cycling

Signed bike routes are present along Mountain Park Avenue and Concession Street, and East 24<sup>th</sup> Street. The signed bike routes are shared environments without delineated bicycle lanes or sharrow pavement markings. Guidance signage is provided at key locations where the designated routes change direction.

A cautionary unsigned bicycle route is present on Upper Wentworth Street.

**Figure 3.2** illustrates the existing cycling facilities near the subject site.

<sup>1</sup> <https://www.walkscore.com/score/293-upper-wentworth-st-hamilton-on-canada>







### 3.4 Transit

In addition to being a walkable area, the subject site is noted to have a Transit Score of 59<sup>1</sup>. This is considered to have “Good Transit”, which is defined as having many nearby public transportation options.

Hamilton Street Railway (HSR) operates the public transit system in the City of Hamilton. The area near the subject site is currently serviced by the following bus routes:

- ▶ **23 Upper Gage:** This bus route operates between the MacNab Transit Terminal and Upper Gage Avenue at Rymal Road East in a north-south direction. Service runs 7 days a week from early morning until after midnight. Weekday and weekend headways are in the order of 20 to 30 minutes.
- ▶ **24 Upper Sherman:** This bus route operates between the MacNab Transit Terminal and Upper Gage Avenue at Rymal Road East in a north-south direction. Service runs 7 days a week from early morning until around midnight. Weekday and weekend headways are in the order of 20 to 30 minutes.
- ▶ **25 Upper Wentworth:** This bus route operates between the MacNab Transit Terminal and Lime Ridge Mall in a north-south direction. Service runs 7 days a week from early morning until around midnight. Weekday and weekend headways are in the order of 20 to 30 minutes.

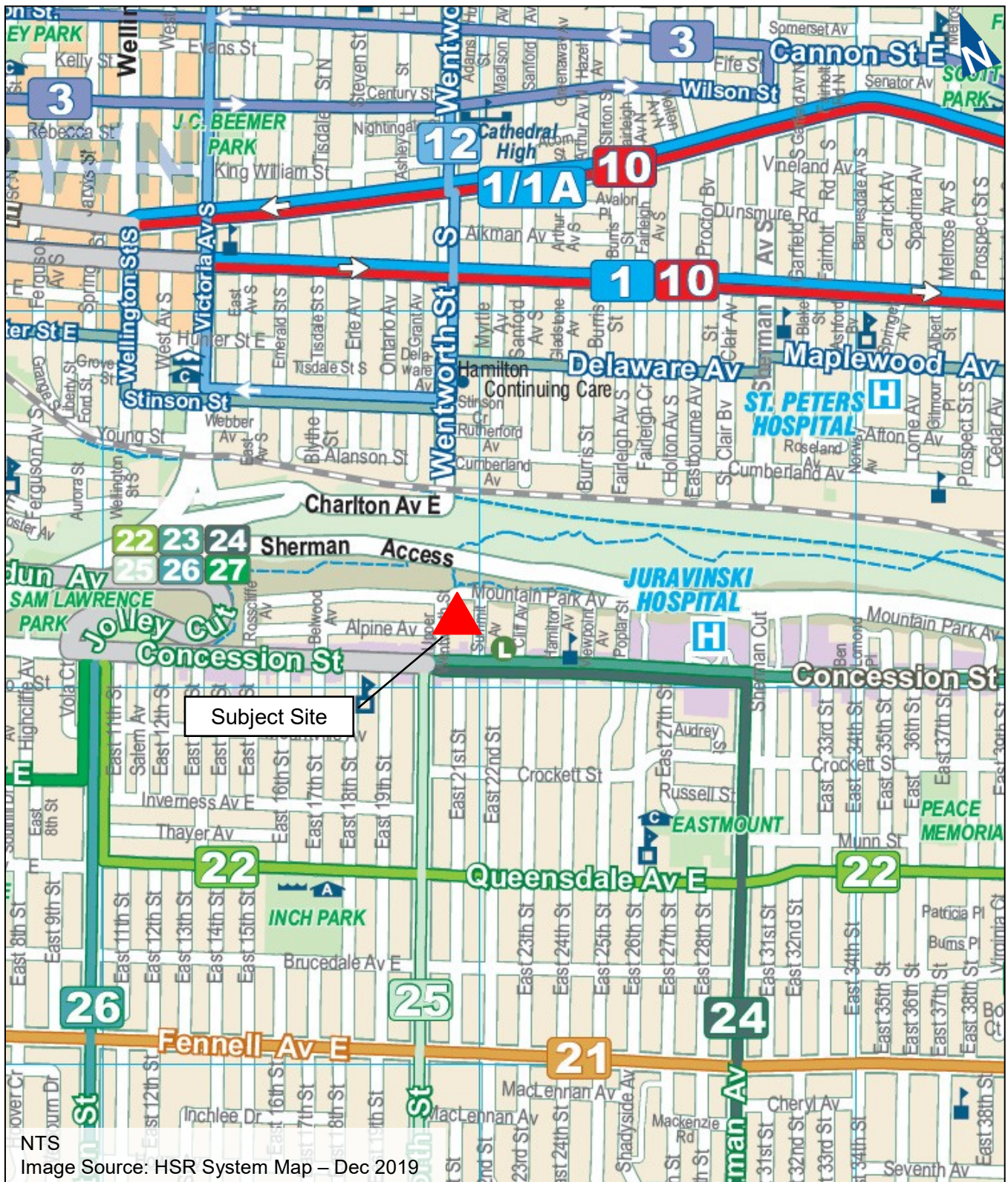
**Figure 3.3** illustrates the existing transit network.

The closest transit stop to the subject site is located at the intersection of Concession Street and Upper Wentworth Street. The walking distance to the transit stop is approximately 125 metres (2-minute walk).

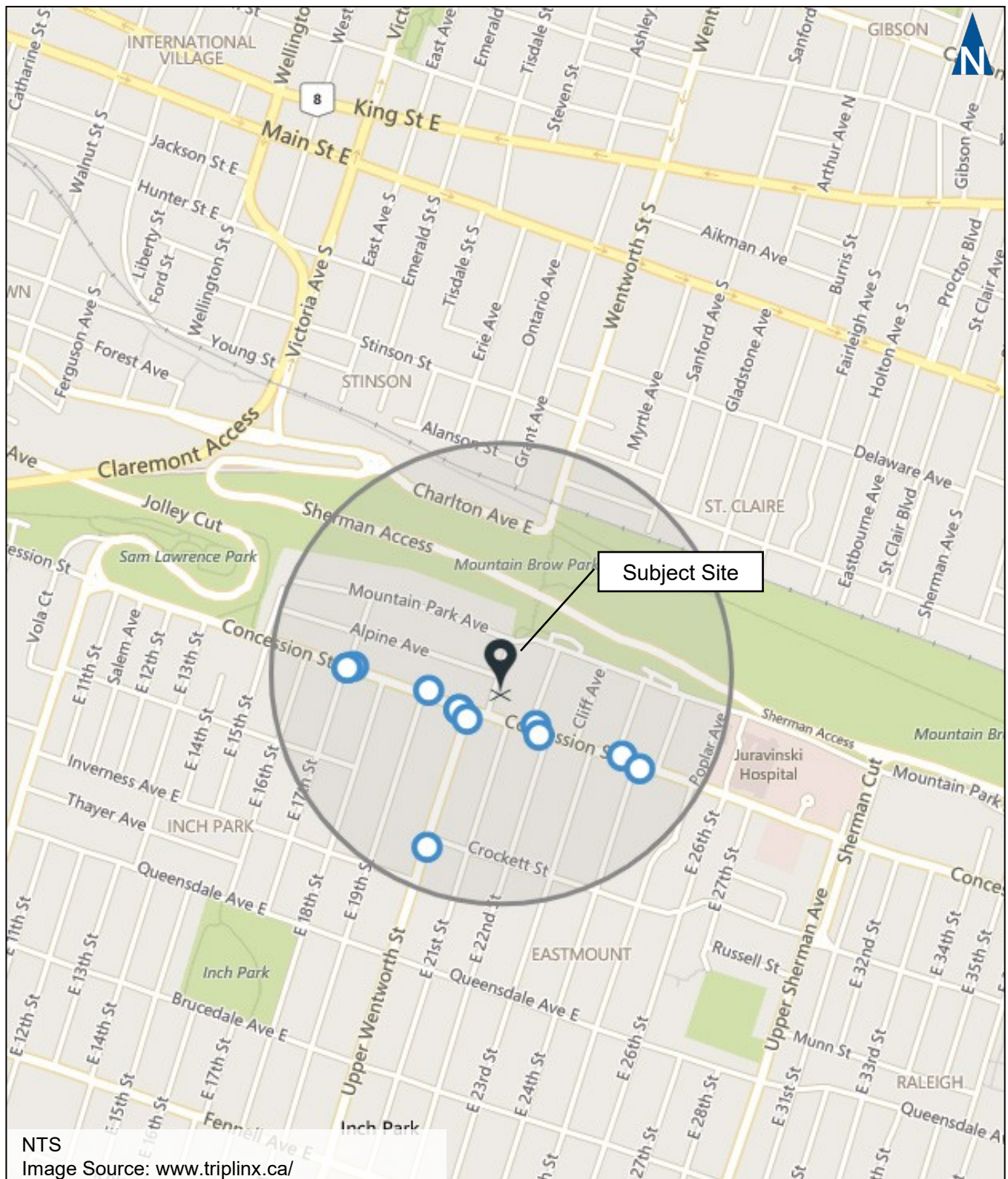
**Figure 3.4** illustrates the existing transit stops within 500 metres of the subject site.











### 3.5 Travel Trends

The Transportation Tomorrow Survey (TTS) <sup>2</sup> is a comprehensive travel survey conducted in the Greater Golden Horseshoe Area once every five years.

**Table 3.1** summarizes the TTS mode share estimates for the City of Hamilton. Travel by automobile in the City accounts for approximately 68% of daily trips. Active Transportation (AT) and transit-oriented trips account for approximately 32% of daily trips.

Between Year 2006 and Year 2016, the percentage of city-wide AT and transit-oriented trips have been increasing while the percentage of auto-oriented trips has been decreasing. **Appendix A** contains the TTS data.

**TABLE 3.1: TTS MODE SHARE – CITY OF HAMILTON**

Travel Mode	Year 2006	Year 2011	Year 2016
<b>Active Transportation</b>	<b>9%</b>	<b>9%</b>	<b>12%</b>
Cycle	1%	1%	2%
Walk	8%	8%	11%
<b>Auto Oriented</b>	<b>71%</b>	<b>72%</b>	<b>68%</b>
Auto driver	53%	52%	55%
Auto passenger	17%	18%	11%
Motorcycle	0%	0%	0%
Other	0%	0%	0%
Paid rideshare	0%	0%	0%
Taxi passenger	1%	1%	1%
<b>Transit</b>	<b>19%</b>	<b>19%</b>	<b>20%</b>
GO rail only	0%	0%	0%
Joint GO rail and local transit	0%	0%	0%
School bus	1%	1%	1%
Transit excluding GO rail	18%	17%	18%
<b>Grand Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

\* Percentages may not add to 100% due to rounding.

<sup>2</sup> Transportation Tomorrow Survey, Data Management Group – University of Toronto.



## 4 Parking Methodology

It is noted that emergency government measures used to contain a pandemic were in place at the time of this study which altered travel patterns for an extended period of time. Therefore, parking utilization surveys of nearby, similar sites were not conducted.

### 4.1 Existing Parking Supply

On-site parking spaces are unbundled from the residential units and are offered to occupants as a separate lease. This provides residents with the opportunity to realize additional cost savings associated with car-free living and provides incentives for those considering this as an option.

Currently, all 40 spaces are leased to residents. The market demand for parking at the subject site is calculated to be approximately 0.93 spaces per unit.

### 4.2 Zoning By-law Requirements

The zoning for institutional, industrial, parks and opens spaces, as well as the Downtown Hamilton area is regulated by Zoning By-law 05-200. The remaining land uses, including residential, is currently regulated through the former zoning by-laws for the respective municipalities.

#### 4.2.1 City of Hamilton Former Zoning By-law 6593

The City of Hamilton's Former Zoning By-law 6593 requires the following minimum parking requirements for multiple dwellings:

- ▶ 1.25 spaces per unit; and
- ▶ 0.25 visitor spaces per unit.

The required minimum parking supply for the subject site, based on the City of Hamilton's former zoning By-law, is 65 parking spaces.

#### 4.2.2 City of Hamilton New Zoning By-law 05-200

The new Zoning By-law 05-200<sup>3</sup> will eventually be implemented for the entire City of Hamilton; however, it is currently only for residential uses located within Downtown Hamilton.

<sup>3</sup> *Zoning By-Law 05-200*, City of Hamilton, August 2019.



Zoning By-law 05-200<sup>4</sup> identifies the following parking requirements for multiple dwelling units:

- ▶ Minimum: 0.30 spaces per unit; and
- ▶ Maximum: 1.25 spaces per unit.

The minimum required parking supply for the subject site, based on Zoning By-law 05-200, is 13 parking spaces.

By limiting the amount of vehicle parking, the City of Hamilton is demonstrating a strong commitment to alternative modes of transportation (transit/walking/cycling).

### 4.3 Vehicle Ownership

Vehicle ownership data from the Transportation Tomorrow Survey<sup>5</sup> (TTS) for the City of Hamilton suggests that approximately 37% of residents living in apartments do not own a vehicle.

**Table 4.1** summarizes the vehicle ownership characteristics for apartment units.

The survey data suggests that vehicle ownership for apartment units is approximately 0.77 vehicles per unit. The parking demand for occupants of the subject site is calculated to be 34 spaces. With 40 on-site spaces provided, the site's current parking supply exceeds the existing vehicle ownership trends for apartment units. **Appendix A** contains the TTS data.

**TABLE 4.1: TTS VEHICLE OWNERSHIP RATES**

Vehicles per Household (Apartment Units)	Number of Households	Number of Vehicles
0	21,360	0
1	30,271	30,271
2	6,010	12,020
3	607	1,821
5	131	655
<b>Total</b>	<b>58,379</b>	<b>44,767</b>
<b>Average # of Vehicles / Household</b>		<b>0.77</b>

<sup>4</sup> Zoning By-Law 05-200 – Section 5.6.c.i

<sup>5</sup> Transportation Tomorrow Survey, Data Management Group – University of Toronto.



## 4.4 ITE Parking Demand Estimate

There are numerous industry associations that are dedicated to the survey and review of parking requirements related to various land uses. These associations, such as the Institute of Transportation Engineers (ITE), collect, review, and publish information related to parking demand, supply, and appropriate design standards.

An accepted industry standard for the determination of potential parking demand is ITE's Parking Generation Manual<sup>6</sup>. ITE provides data on surveys across the USA and Canada of peak parking demand for different land uses. ITE Parking Generation is generally regarded as the best source for measured parking demands other than local data collected at similar land uses.

Land use code 221 (Multifamily Housing - Mid Rise) Dense Multi-Use Urban (no nearby rail transit) is used to estimate the site's peak parking generation.

*A dense multi-use urban area is described as "a fully developed area (or nearly so), with diverse and interacting complementary land uses, good pedestrian connectivity, and convenient and frequent transit. This area type can be a well-developed urban area outside a major metropolitan downtown or a moderate size urban area downtown... The residential uses are typically multifamily or single-family on lots no larger than one-fourth acre. The commercial uses often have little or no setback from the sidewalk... The complementary land uses provide the opportunity for short trips within the Dense Multi-Use Urban area, made convenient by walking, biking, or transit."*<sup>7</sup>

**Table 4.2** summarizes the estimated parking generation for the subject site. The subject site's parking demand is estimated to be approximately 25 spaces.

<sup>6</sup> *Parking Generation – Fifth Edition*, Institute of Transportation Engineers, Washington D.C.

<sup>7</sup> *Section 3 – Trip Generation Manual 10<sup>th</sup> Edition – Volume 1: Desk Reference*. Institute of Transportation Engineers, Washington D.C.





**TABLE 4.2: ITE PARKING GENERATION ESTIMATES**

<b>Multifamily Housing (Mid-Rise) (221) Occupied Dwelling Units</b>	<b>Equation</b>	<b>Fitted Curve Equation</b>
Fitted Curve Equation	$P = 0.96(X) - 16.70$	25
<b>Parking Demand</b>		<b>25</b>

#### 4.5 Summary of Parking Demands

To forecast the site's parking demand, five methods have been used. **Table 4.3** summarizes the parking demand estimates. The existing 43-unit rental apartment site is estimated to have a parking demand in the order of 12 spaces to 62 spaces, depending upon the methodology used to forecast the demand.

Four of the five methods used to estimate the site's parking demand suggest that the existing supply exceeds demand.

**TABLE 4.3: PARKING DEMAND SUMMARY**

<b>Parking Methodology</b>	<b>Parking Demand / Requirements</b>
Existing Market Demand	40
Zoning By-law 6593	65
Zoning By-law 05-200	13
Average Hamilton Vehicle Ownership	34
ITE Parking Demand	25



## 5 Parking Demand Management

### 5.1 On-Street Parking Permit

A residential parking permit ensures that residents have priority parking on the streets within their neighborhood. These programs are created in areas with a high parking demand and can include areas with schools, hospitals, or busy commercial areas. Permit parking prohibits anyone without a permit from parking on specific streets. Residents can buy permits to park exclusively within these signed areas.

Streets with residential parking can combine restricted resident parking with time-limited and unregulated space for visitors. Summit Avenue consists of unrestricted and time-limited parking.

It is noted that these spaces are not guaranteed for exclusive use by the development, however it ensures that these spaces are not occupied by non-residents.

### 5.2 Transportation Demand Management

#### 5.2.1 Transit Passes

To encourage the use of transit and reduce the need for automobile parking, residents could be provided with subsidized transit passes. Transit passes provide residents an opportunity to recognize additional cost savings associated with car-free living.

#### 5.2.2 Bike Parking

By providing residents and visitors with a location to park their bicycle, residents are encouraged to use alternative modes of travel over use of an automobile.

Long-term bicycle parking should ideally be provided in a secure indoor location that is accessible to only residents. Long-term bicycle parking is typically provided at a rate of 0.50 to 1.25 spaces per unit.

Short-term bicycle parking could also be provided for visitors to the subject site. Short-term bicycle parking spaces should be in a convenient, secure, and readily accessible space within 15 metres of the building's principal entrance. All bicycle parking locations should avoid conflicts with pedestrians and vehicles. Short-term bicycle parking is typically provided at a rate of 0.05 to 0.20 spaces per unit.



### **5.2.3 Parking**

Parking for occupants should remain unbundled from the cost of the units. The parking supply should be managed to limit the sale of multiple spaces to a single buyer. The cost of parking should reflect the full cost of operating the parking (winter maintenance, pavement repair, etc.).

### **5.2.3 Car Sharing**

Car sharing encourages more sustainable travel by providing an alternative to vehicle ownership. By having a car share vehicle on-site, residents will be able to use more sustainable methods of travel while having the option of using a vehicle for short-term use.

A carshare vehicle can also provide benefits to other nearby residents and businesses.

### **5.2.3 Wayfinding and Travel Planning**

Wayfinding and Travel Planning resources (transit and active transportation maps) can be provided in an information kiosk in the main lobby. Wayfinding signage directing residents and visitors to active transportation facilities (pedestrian pathways, bike network, trails) could also be integrated into the site's landscaping plans.



## 6 Conclusions and Recommendations

### 6.1 Conclusions

The existing 5-storey mid-rise multi-family building contains 43 rental apartment units. The City of Hamilton recognizes 42 of the existing units. One (1) of the existing units are considered illegal.

The property is undertaking the steps required to legalize the one (1) rental apartment unit from a zoning perspective. The site's existing parking supply, 40 spaces (0.93 spaces per unit), does not meet the City of Hamilton's Zoning By-law parking requirements.

On-site parking spaces are unbundled from the residential units and are offered to occupants as a separate lease. This provides residents with the opportunity to realize additional cost savings associated with car-free living and provides incentives for those considering this as an option.

Currently, all 40 spaces are leased to residents. The market demand for parking at the subject site is calculated to be approximately 0.93 spaces per unit.

The site's existing parking supply is supportable for the following reasons:

- ▶ The subject site is located within a dense urban area with good access to public transit service (3 bus routes);
- ▶ The subject site's location is considered "Very Walkable", which means that most errands can be accomplished on foot allowing for reduced dependency on the automobile;
- ▶ The City of Hamilton offers a comprehensive cycling network with designated routes connecting the subject site to the larger network;
- ▶ The required minimum parking supply for the subject site, based on the City of Hamilton's Zoning By-law 05-200, is 13 parking spaces;
- ▶ Transportation Tomorrow Survey data suggests that approximately 37% of residents living in apartments do not own a vehicle. The survey data suggests that the site's parking demand is in the order of 34 spaces; and
- ▶ Published data by Institute of Transportation Engineers estimates the site's parking demand to be approximately 25 spaces.



- ▶ The site's parking demand is estimated to be fully contained on site. The site's parking demand is forecast to range from 13 spaces to 34 spaces, depending upon the methodology used to forecast the demand.

To manage the site's parking generation the site operator could consider implementing a Transportation Demand Management (TDM) program. TDM measures that could be provided include:

- ▶ Subsidized transit passes;
- ▶ Short-term bicycle parking within 15 metres of the building's principle entrance;
- ▶ Long-term bicycle parking in a secure indoor location that is only accessible to residents;
- ▶ Continuing to unbundle the cost of the parking spaces from the units;
- ▶ Enroll in a carshare program; and
- ▶ Provide wayfinding and travel planning resources on-site.

To further manage the site's transportation and parking impacts, the site operator could consider implementing a Transportation Demand Management (TDM) program. TDM measures that could be consider include:

- ▶ Subsidized transit passes;
- ▶ Short-term bicycle parking within 15 metres of the building's principle entrance;
- ▶ Long-term bicycle parking in a secure indoor location that is only accessible to residents;
- ▶ Continuing to unbundle the cost of the parking spaces from the units;
- ▶ Enroll in a carshare program; and
- ▶ Provide wayfinding and travel planning resources on-site.

The above TDM measures can further assist in mitigating the site's transportation and parking impacts on the adjacent road network, promote a strong and vibrant economy, and create a livable community that has a balanced transportation network.



## 6.2 Recommendations

Based on the findings of this study, it is recommended that the site operator consider developing and implementing a TDM program to assist in managing the site's transportation and parking impacts.



# Appendix A

## Transportation Tomorrow Survey Data







Wed Sep 23 2020 09:56:21 GMT-0400 (Eastern Daylight Time)

Frequency Distribution Query Form - Trip - 2006      2011 2016 v1.1

Field: Primary travel mode of trip - mode\_prime

Filters:

Regional municipality of household - region\_hhld In 6  
and

Type of dwelling unit - dwell\_type In 2

Table: Trip 2006

Row:	Count:	Expanded:
Transit excluding GO rail	1271	26870
Cycle	56	1095
Auto driver	3928	80083
GO rail only	17	331
Joint GO rail and local transit	23	496
Motorcycle	2	42
Other	24	509
Auto passenger	1221	24995
School bus	82	1655
Taxi passenger	91	1928
Walk	599	12615
Total:	7314	150617

Table: Trip 2011

Row:	Count:	Expanded:
Transit excluding GO rail	1264	26770
Cycle	75	1646
Auto driver	4228	80076
GO rail only	9	243
Joint GO rail and local transit	16	410
Motorcycle	7	127
Other	30	528
Auto passenger	1403	28118
School bus	57	1288
Taxi passenger	84	1576
Walk	577	12946
Total:	7750	153726

Table: Trip 2016

Row:	Count:	Expanded:
Transit excluding GO rail	781	32508
Cycle	66	3124
Auto driver	2672	97450
GO rail only	21	548
Joint GO rail and local transit	19	573
Motorcycle	14	240
Other	17	707
Auto passenger	606	20292
School bus	32	2055
Taxi passenger	45	1330
Paid rideshare	8	411
Walk	427	18940
Total:	4708	178178