8 Schofield Street, Cambridge, ON

Parking Study

Paradigm Transportation Solutions Limited

2024-09
240411

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Project Summary

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TRANSPORTATION SOLUTIONS LIMITED

Project Number:

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Client:

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Consultant Project Team

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8 Schofield Street, Cambridge, ON Parking Study

Erica Bayley, P.Eng.

Disclaimer

Executive Summary

Content

Paradigm Transportation Solutions Limited (Paradigm) was retained to prepare this Parking Study (PS) for a residential development located at 8 Schofield Street, in the City of Cambridge, Ontario.

This study includes a review of existing conditions, a description of the proposed development, review of Zoning By-Law requirements, estimates of the on-site parking demand, Transportation Demand Management measures, and evaluation of on-site vehicle circulation.

Development Concept

The subject site is located at 8 Schofield Street in the City of Cambridge. The subject site is proposed to be redeveloped into a five-storey building with approximately 86 units. Vehicle access is proposed via an all-moves connection to Schofield Street. A total parking supply of 97 spaces is proposed, including 14 tandem spaces. 14 units are proposed to have 2 spaces per unit (28 spaces) and 72 units are proposed to have 0.88 spaces per unit (64 spaces) for an average of 1.127 spaces per unit. Five spaces separate will be marked for visitor parking.

Conclusions

Based on the investigations carried out, it is concluded that:

- **Zoning By-Law Requirements:** The proposed development requires a total of 108 parking spaces to comply with the City's Zoning By-laws. With a proposed supply of 97 parking spaces, the site has a potential shortfall of 11 spaces.
- A review of Zoning By-Laws in other municipalities indicates that reductions of on-site parking for developments outside of downtown areas is becoming an increasingly common practice.
- **Forecast Parking Demand**
  - Transportation Tomorrow Survey (TTS) 2016 vehicle ownership data for the area surrounding the subject site indicates an average rate of 1.05 vehicles per household for apartment units (91 spaces for the proposed development). This rate does not account recent Grand River Transit changes and reflects developments with minimal TDM initiatives.

  - The *ITE Parking Generation Manual* indicates a forecast parking demand rate of 0.90 spaces per residential unit (77 spaces).
  - Proxy site data at a residential development in the City of Cambridge indicates a peak parking demand of 0.92 spaces per unit (79 spaces), and in the City of Brantford with a peak parking demand of 0.86 spaces per unit (74 spaces).

- **Estimated Parking Demand:** Based on the combination of auto ownership, ITE rates, proxy site data, and requirements in other municipalities the estimated maximum residential parking demand is between 0.50 and 1.10 spaces per unit (43 and 95 spaces). These rates are supportive of the two proposed rates on site: 14 units with 2 parking spaces per unit and 72 units with 0.88 spaces per unit.
- To further support the use of alternative modes of transportation and reduce the parking demand on site, the following actions should be considered:

  - Bicycle parking be provided to meet the minimum bicycle parking requirements as set out in the City's Cycling Master Plan;
  - Long-term bicycle parking spaces be in a secure location (i.e. within the parking structure or buildings) and short-term bicycle parking spaces should be in an accessible location near the buildings main entrance;
  - Unbundling all parking spaces or re-evaluating the proposed parking strategy as the site becomes occupied to support tenants who choose not to own a vehicle and are not required to purchase a parking spot;
  - Consideration given to offering a car share space in a premium location on site to support those who choose not to own a car; and
  - Delegating a TDM coordinator, either an interested individual or property manager, to support all on-site TDM programs; and
  - Consideration given to offering transit, car share, and active transportation information in a welcome package to new tenants and posting the information in a central location to further support all alternative modes.

Recommendations

Based on the findings of this study, it is recommended that the developer commits to the TDM measures listed herein to support a parking supply of 14 units with 2 parking spaces per unit (28 spaces) and 72 units with 0.88 spaces per unit (64 spaces) for an average of 1.127 spaces per unit (97 parking spaces) including five spaces marked for visitor parking.

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1 Introduction

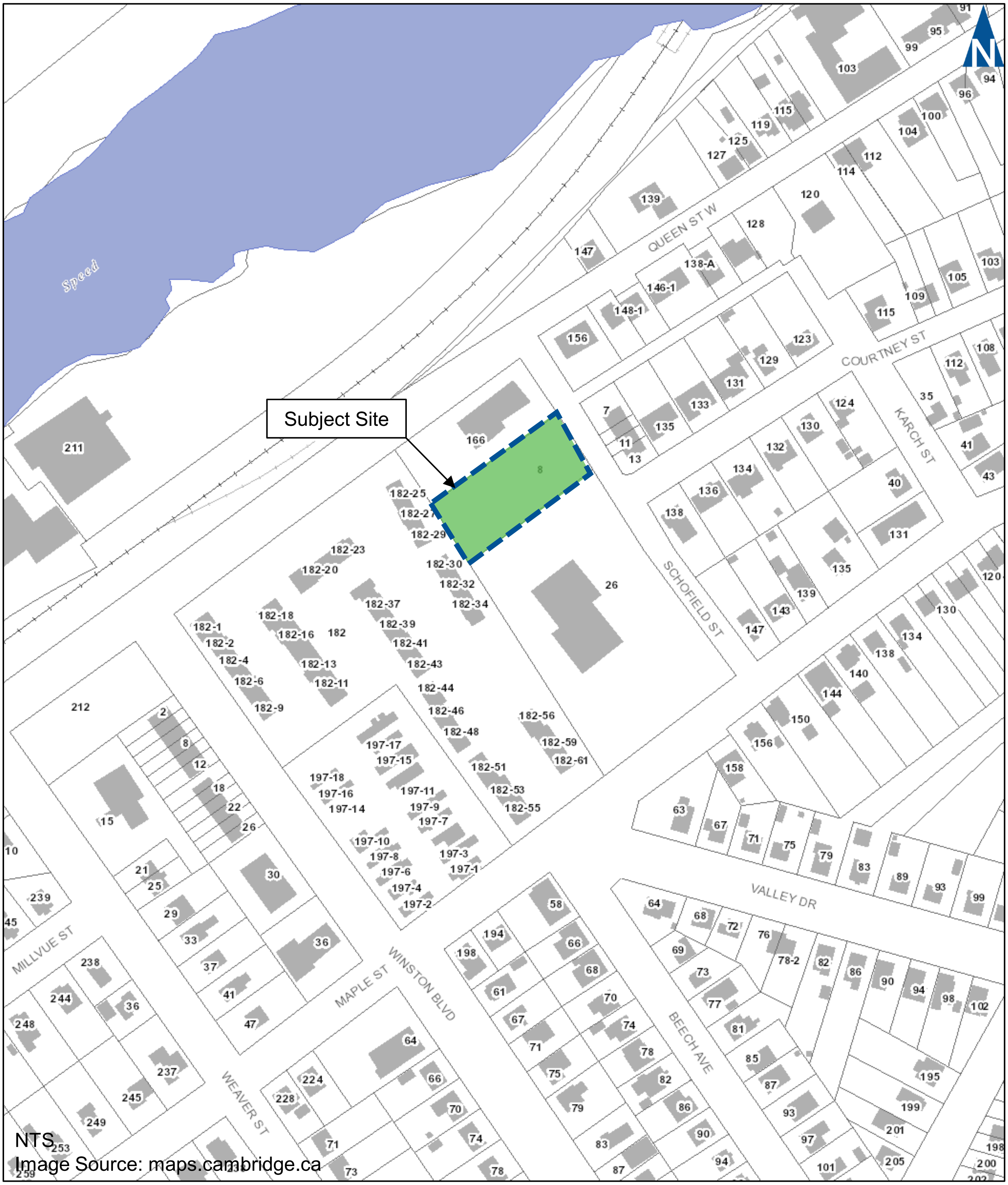
1.1 Overview

Paradigm Transportation Solutions Limited (Paradigm) was retained to conduct this Parking Study for a proposed residential development located at 8 Schofield Street in the City of Cambridge, Ontario. **Figure 1.1** shows the subject development location.

1.2 Purpose and Scope

The purpose of this study is to review the adequacy of the proposed parking supply and to identify Transportation Demand Management (TDM) measures to support the proposed parking supply and further promote the use of alternative modes of travel to and from the site. The scope of the study includes:

- Assessment of the current parking and alternative mode resources within the study area
- Review of Zoning By-law parking requirements
- Estimates of parking demand based on data collected at similar proxy sites and other affordable housing sites
- Availability of nearby off-site parking
- Evaluation of proposed TDM measures; and
- Recommendations on preferred measures to support the reduction in parking supply.



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Location of Subject Site

8 Schofield Street, Cambridge
240411

Figure 1.1

2 Existing Conditions

2.1 Roadways

The main roadways under the jurisdiction of the City of Cambridge[1] near the subject site include:

Queen Street is an east-west collector road with a two-lane cross-section and a posted speed limit of 50 km/h. Sidewalks are provided on both sides of the roadway. On-street parking is allowed on the south side of the roadway east of Schofield Street.

- **Schofield Street** is a north-south local street with a two-lane urban cross-section. T

2.2 Active Transportation

2.2.1 Pedestrian

Sidewalks are provided on both sides of Queen Street. There are no sidewalks on Schofield Street.

The subject site is noted to score a Walk Score[2] of 33 and is considered "Car-Dependent" which means that almost all errands require a car. Walk Score is an online tool that assigns a numerical walkability score between 0 and 100. Walk Score ranks communities nationwide based on how many businesses, parks, theatres, schools, and other common destinations are within walking distance.

2.2.2 Cycling

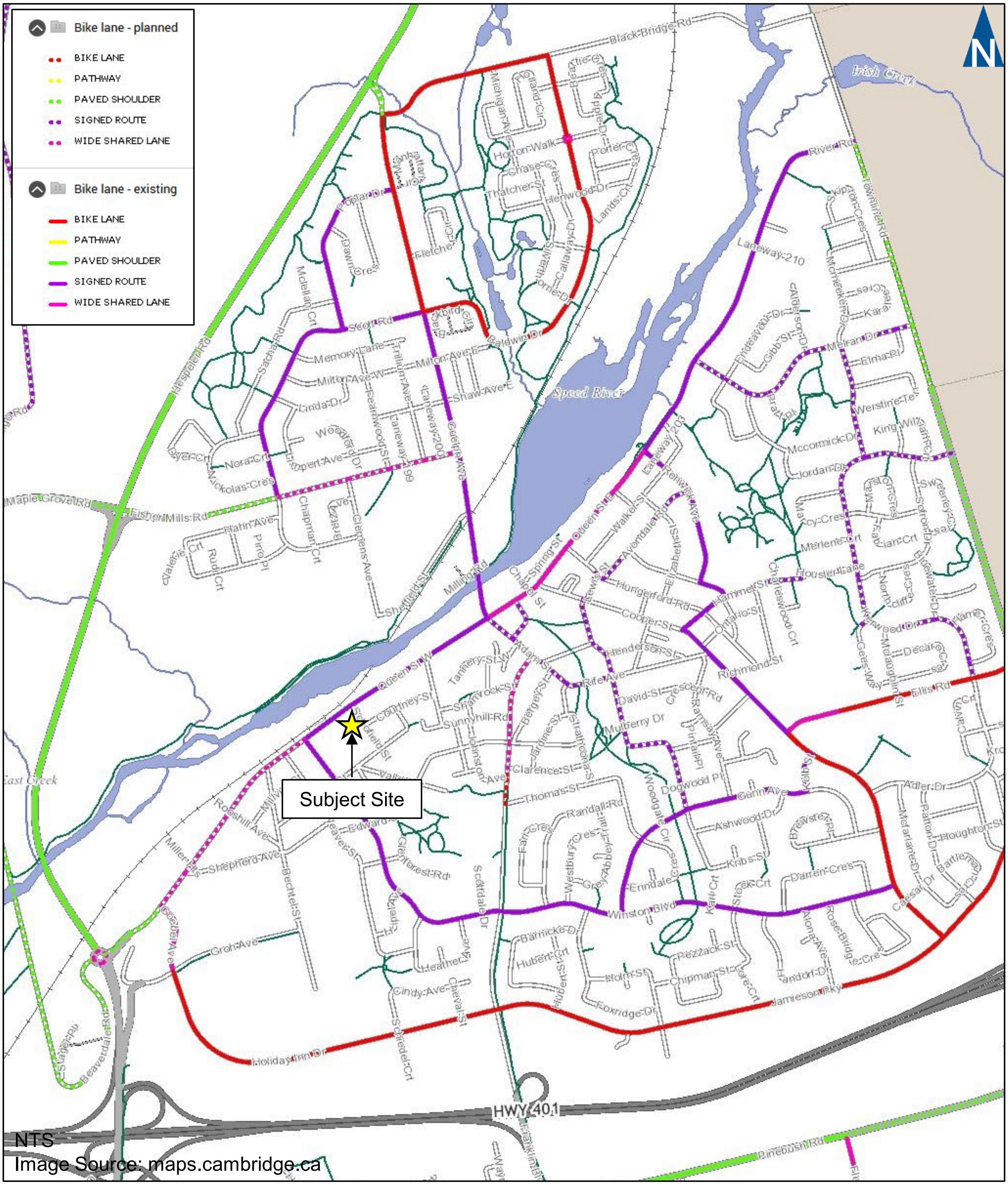
Sharrows are provided along Queen Street between Winston Boulevard and Guelph Avenue.

The subject site is noted to score a cycle score of 48. This is considered "Somewhat Bikeable," meaning that minimal bicycle infrastructure is available.

Figure 2.1 illustrates the current and planned cycling network.

[1] City of Cambridge, *City of Kitchener Official Plan,* (Cambridge, September 2018), Map 7A: Major Transportation Facilities and Hydro Corridors.

[2] www.walkscore.com/score/8-schofield-st-cambridge-on-ca



Cycling Network

Figure 2.1

2.3 Transit Network

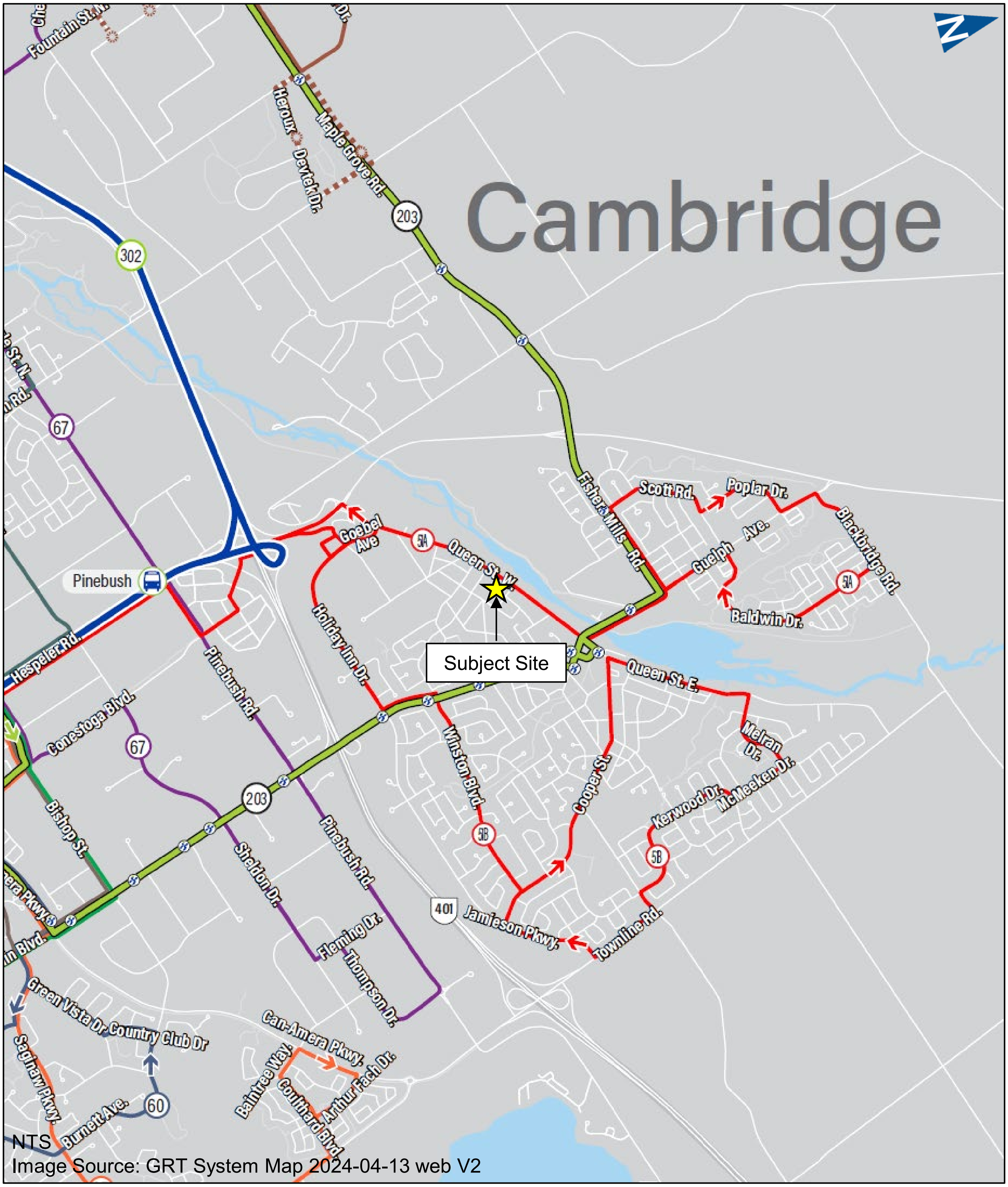
Figure 2.2 illustrates the existing Grand River Transit (GRT) routes near the development. GRT operates two routes near the subject site:

- **Route 51A Hespeler** operates along Queen Street with major stops at the Cambridge Centre Station and Ainslie Terminal. The route operates Monday to Friday (6:00 AM to 12:00 AM) with 30-minute headways, Saturday (6:00 AM to 12:00 AM) with 30-minute headways, and Sunday/Holiday (10:00 AM to 7:00 PM) with 60-minute headways.
- **Route 203 Maple Grove** operates along Maple Grove Road with major Stops at the Cambridge Centre Station and Conestoga College. The route operates Monday to Friday (6:00 AM to 12:00 AM) with 30-minute headways, Saturday (6:30 AM to 10:00 PM) with 60-minute headways, and Sunday/Holiday (9:00 AM to 10:00 PM) with 60-minute headways.

Figure 2.2 illustrates the existing transit stops within 500 metres of the subject site[3]. There are approximately five bus stops within 500 metres. The closest bus stop is approximately 230 metres (3-minute walk) from the subject site.

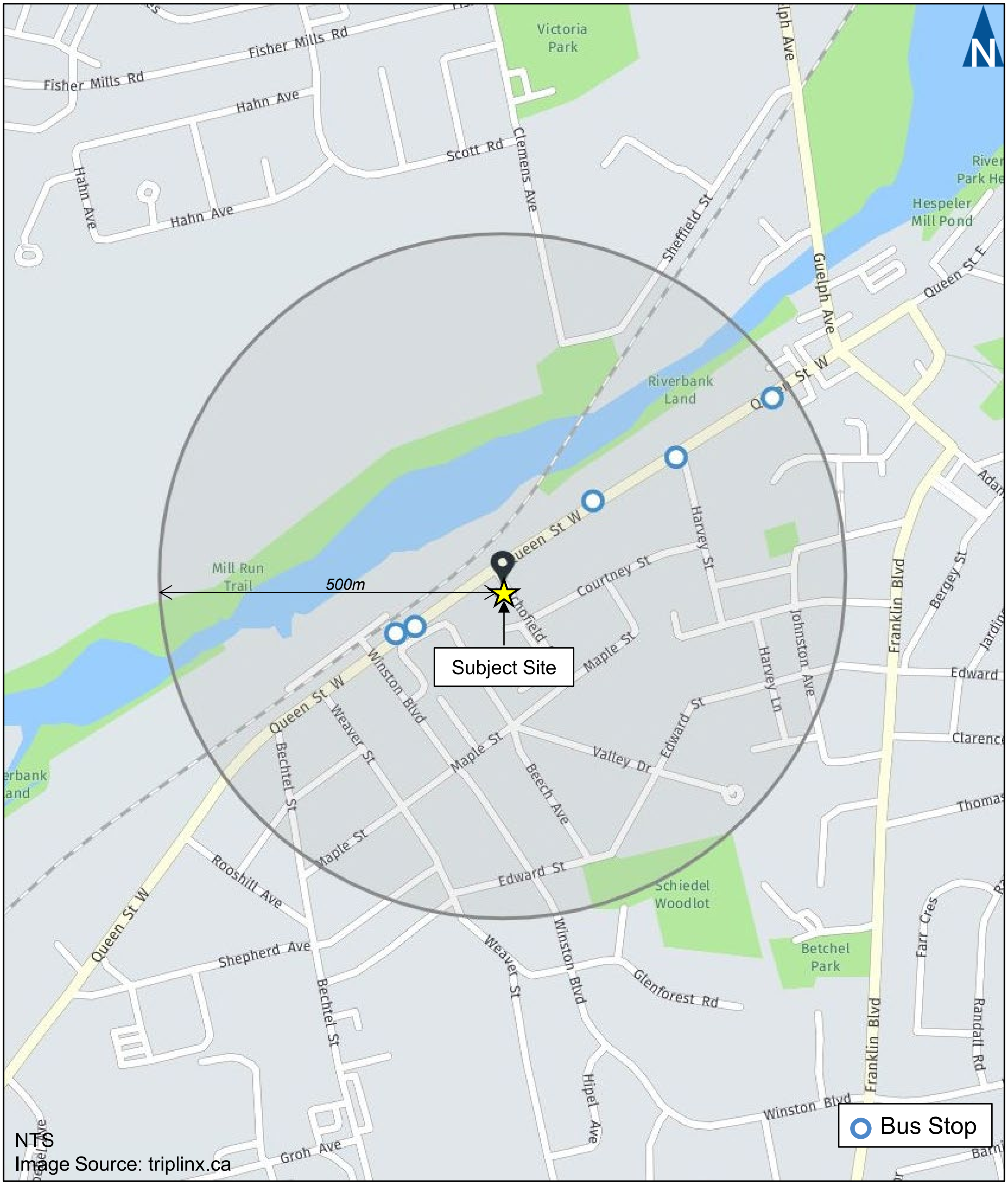
The subject site is noted to score a transit score of 35. This is considered “Some Transit,” which means many a few nearby public transportation options.

[3] www.triplinx.ca



Transit Network

Figure 2.2



Transit Stops

8 Schofield Street, Cambridge
240411

Figure 2.3

3 Development Concept

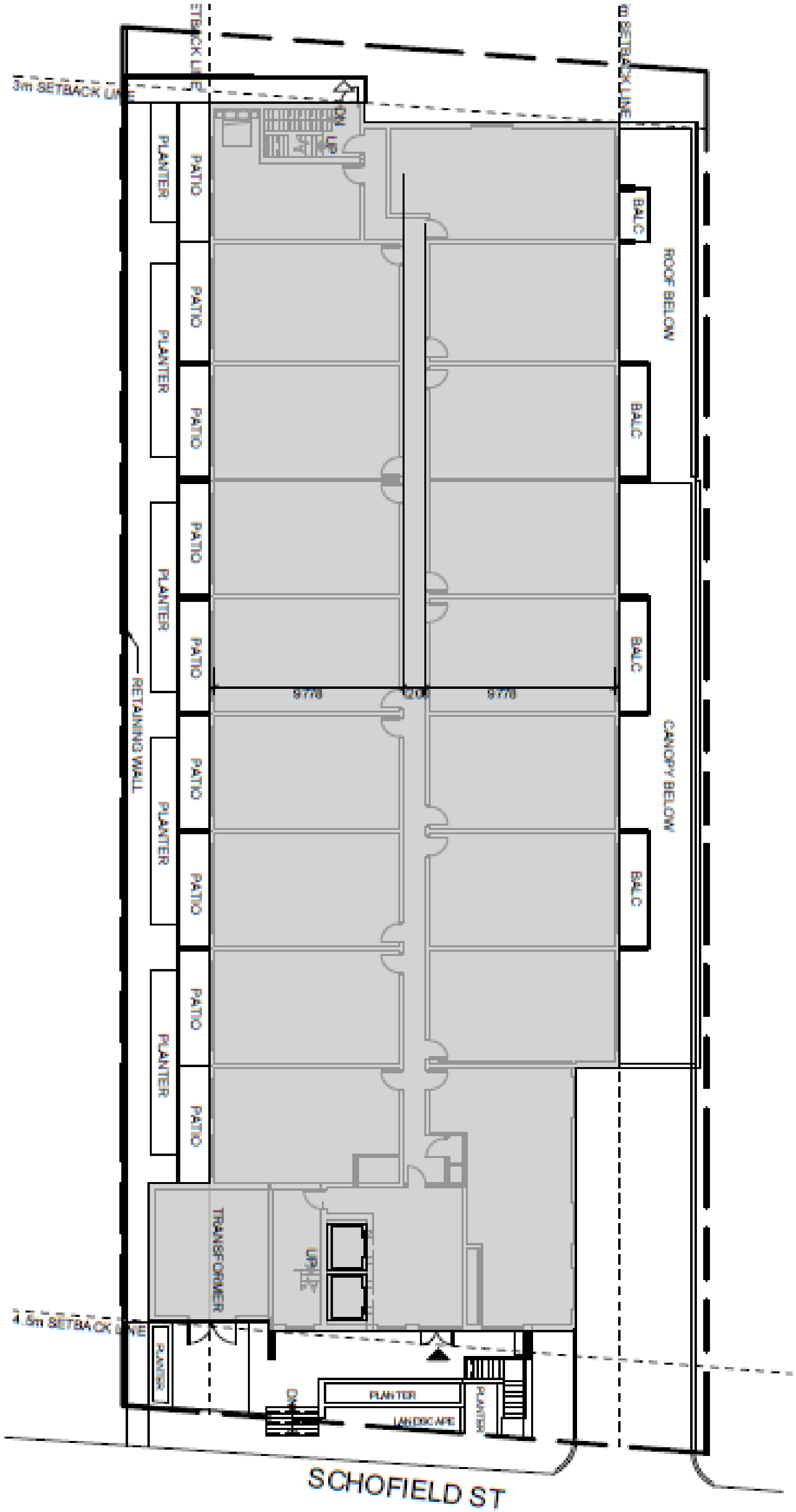
3.1 Description

The subject site is located at 8 Schofield Street in the City of Cambridge, Ontario. The property owner is proposing to develop the lands into a five-storey building with 86 residential units.

Vehicle access is proposed via one full-moves access to Schofield Street.

A total parking supply of 97 parking spaces is proposed, comprised of 83 regular spaces and 14 tandem spaces. The parking is proposed on two underground levels. This parking supply does not meet City of Cambridge Zoning requirements as currently planned.

Figure 3.1 shows the latest concept plan.



NTS

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Concept Plan

8 Schofield Street, Cambridge
240411

Figure 3.1

4 Parking Justification

As with any equilibrium system there are a minimum of two components that are required to be in balance. With parking systems, this requires the balance of parking supply and demand. Reaching an appropriate supply level is equally as important as demand. The ubiquitous oversupply of cheap and accessible free parking has long been identified as a major contributing factor in the growth and reliance on single-occupant vehicle travel.

4.1 Proposed Parking Supply

A total of 97 parking spaces are proposed for the 86 units (1.127 spaces per unit). There are 14 tandem parking spaces included in the total parking supply. Four barrier-free spaces are proposed. 14 of the units will have 2 parking spaces per unit and the remining 72 units will have 0.88 parking spaces per unit. This represents an average rate of 1.127 spaces per unit. Five spaces will be marked for visitors.

4.2 Zoning By-Law Requirements

The City of Cambridge *Zoning By-Law 150-85* is the current in-force Zoning By-Law.

Although not yet applicable to the subject development, the city recently completed a Zoning By-Law review and produced a draft Zoning By-Law in 2019. This latter document includes updated parking rates.

This section of the report outlines the parking requirements under both by-laws.

4.2.1 Zoning By-Law 150-85

The City of Cambridge Zoning By-law 150-85[4] indicates the following minimum parking requirements for “an apartment house, maisonette, mixed terrace or cluster attached duplexes”:

- 1 space per dwelling unit for residents (86 spaces); and
- 1 space for each 4 dwelling units for visitors (22 spaces).

[4] Corporation of the City of Cambridge, *City of Cambridge Zoning By-Law No. 150-85 Section 2.2 Off-Street Parking*, January 2012 Consolidation, Page 64.

Therefore, a total of 108 parking spaces is required under Zoning By-Law 150-85. With 97 parking spaces proposed, this results in a technical shortfall of 11 spaces.

4.2.2 2019 Draft Zoning By-Law

The 2019 Draft Zoning By-Law[5] provides similar parking rates for multiple dwelling units as By-Law 150-85. At 1 parking space per unit and 0.25 spaces per unit for visitors, this results in a requirement of 108 parking spaces.

4.2.3 Zoning By-Law Requirements in Other Municipalities

In recent years, some Canadian municipalities have reviewed and updated the vehicle parking requirements implemented under their respective zoning by-laws. These updates reflect the growth of sustainable transportation options and their impacts on parking rates. Some notable examples of these new zoning by-law requirements are discussed in this section.

These updates demonstrate that the relaxing and/or removal of minimum parking requirements for new developments in non-downtown and downtown areas is becoming an increasingly common practice for Canadian municipalities.

Table 4.1 summarizes parking requirements for similar land uses in the cities of London and Kitchener.

TABLE 4.1: PARKING REQUIREMENTS IN OTHER MUNICIPALITIES

Municipality	Lane Use	Rate
London[1]	Apartment	0.50 per unit
Kitchener2	Apartment	1.10 per unit

[1]City of London Zoning By-Law Z-1, Section 4.19.

[2] City of Kitchener By-Law 2019-051 "All Other Zones", Section 5.

4.3 Parking Demand Forecasts

A review of actual parking demands that are likely to be generated by the proposed development has been considered to assess the

[5] Meridian Planning, *City of Cambridge Zoning By-Law Draft Section 5 Parking and Loading Standards*, May 2010, Page 57.

proposed parking supply, independent and separate from a review of the Zoning By-law parking requirements.

4.3.1 Area Specific Vehicle Ownership

The need for parking is based in part on auto ownership rates and proximity to destinations within walking distance or access to transit. The most recent Transportation Tomorrow Survey (TTS)[6] (a household travel survey conducted within the Greater Golden Horseshoe by the Data Management Group at the University of Toronto) provides data with respect to the number of vehicles owned by private households within Waterloo Region in 2016.

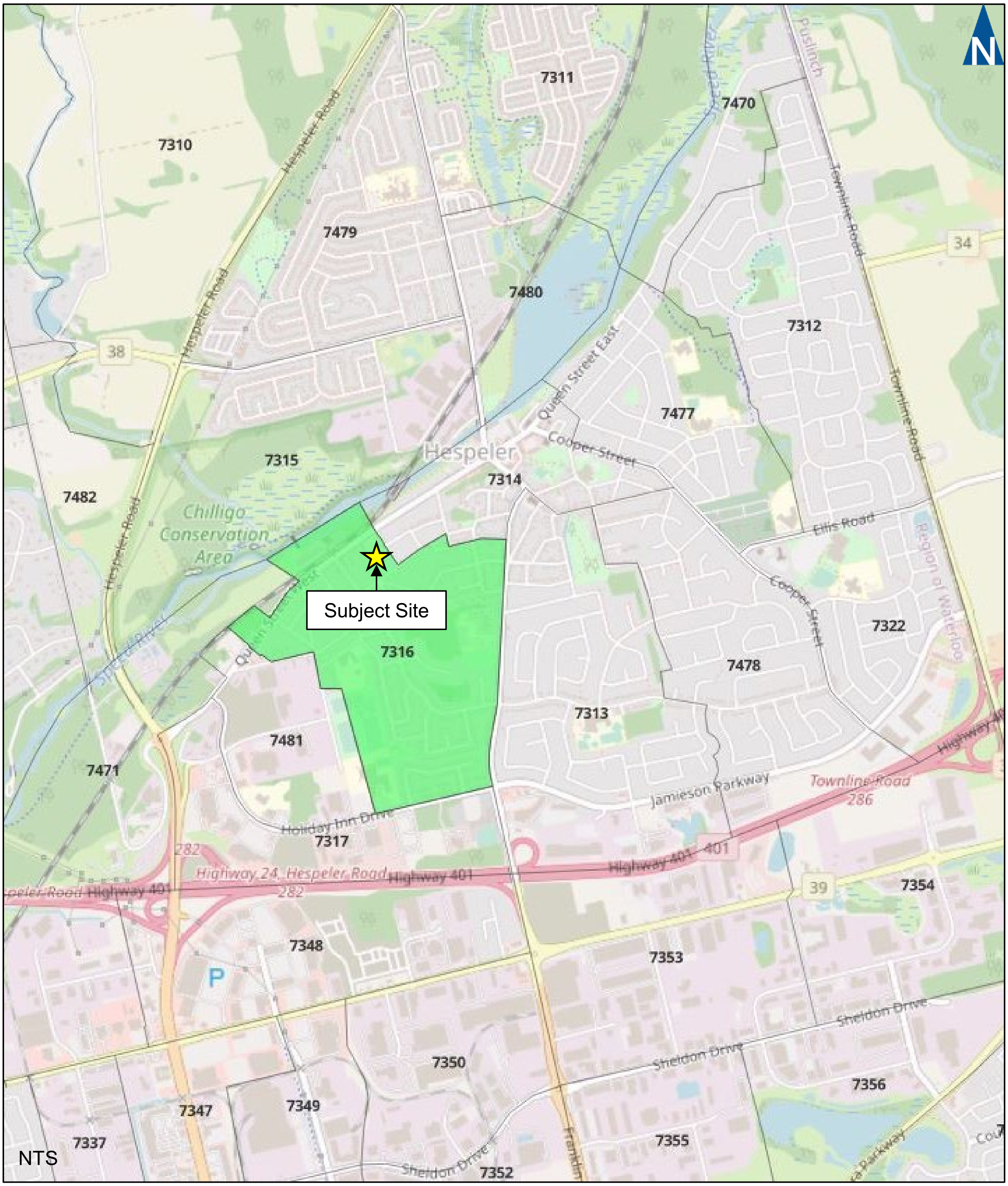
Figure 4.1 illustrates the Traffic Analysis Zones (TAZ) used in the analysis. A review of vehicle ownership among apartment units within TAZ of the subject site and surrounding area suggest that approximately 8% of households do not own a vehicle, and 13% own more than one vehicle. The survey results conclude that the actual vehicle ownership is 1.05 vehicles per household for apartment dwellers in the surrounding area.

It is noted that these vehicle ownership characteristics do not account for the any changes in the Grand River Transit routes and schedules. This service may have modified vehicle ownership characteristics since the 2016 Transportation Tomorrow Survey. The households included in the data set also reflect older developments that may not have comprehensive TDM plans.

Data in the 2016 TTS suggests approximately 5% of all trips use local transit, walking or cycling and the primary mode of travel (1% transit and 4% walking.

Appendix A contains the TTS data.

[6] Data Management Group, Transportation Tomorrow Survey 2016, University of Toronto, 2016, http://www.transportationtomorrow.on.ca/



TTS Traffic Analysis Zone

8 Schofield Street, Cambridge
240411

Figure 4.1

4.3.2 ITE Parking Generation

The ITE Parking Generation Manual (5th Edition)[7] provides data on surveys across the USA and Canada of peak parking demand of different land uses.

The forecast parking demand has been estimated using land use code (LUC) 221 Multifamily Housing, Mid-Rise. As the subject site is near an area with access to frequent transit, and good pedestrian connectivity, the location/setting of Dense Multi-Use Urban (not near rail transit) has been used. The average rate is 0.90 spaces per unit.

Based on ITE rate, a total of 77 parking spaces is forecast for the proposed development. Based on a proposed supply of 97 spaces, this results in a potential surplus of 20 spaces.

ITE data does not aggregate the parking generation data by occupant or visitor. The data is inclusive for both occupant and visitor parking demands.

4.3.3 Comparable Parking Demand

for the development, parking utilization surveys were reviewed at two different sites, one in Cambridge and one in Brantford, with similar land uses to the proposed development.

Appendix B contains the proxy site parking demand data.

150 & 180 Greenbrier Road

The existing development at 150 and 180 Greenbrier Road is located at the southwest corner of Myers Road and Greenbrier Road. The development includes two 6-storey apartment buildings containing 153 units. Parking is provided at a rate of 1.14 spaces per unit (175 spaces).

The development has access to two transit routes within 150 metres. Sidewalks are provided along both sides of Myers Road and Greenbrier Road allowing residents to easily access these routes.

Spot counts conducted in August 2023 indicates a peak parking demand of 141 vehicles (0.92 vehicles per unit).

Applying the peak parking demand at 150 and 180 Greenbrier Road to the proposed 86 units results in a parking demand of 79 spaces.

[7] Institute of Transportation Engineers. *Parking Generation Manual,* 5th ed., (Washington, DC: ITE, 2019).

291 Brant Avenue, Brantford

The existing development at 291 Brant Avenue is located at the northeast corner of Brant Avenue and St. Paul Avenue. The development comprises one 7-storey apartment building containing 70 units. Parking is provided at a rate of 1.21 spaces per unit (85 spaces).

The development has access to two transit routes within 150 metres. Sidewalks are provided along both fronting roads allowing residents to easily access this site.

A survey was conducted by Paradigm in May 2015 from 7:00 AM to 9:00 AM and 6:00 PM to 10:00 PM on a weekday. The parking survey indicated that the residential parking demand was 0.86 spaces per unit (60 spaces). Only 71% of the total supply of 85 spaces were utilized.

Applying the peak parking demand at 721 Franklin Boulevard to the proposed 86 units results in a parking demand of 74 spaces.

4.4 Parking Assessment Summary

The parking supply proposed for the subject development is lower than the parking requirements under the City of Cambridge's current Zoning By-Laws. ITE rates, auto ownership. and proxy sites show a range of parking rates from 0.86 and 1.05 spaces per unit. These rates are supportive of the two proposed rates on site: 14 units with 2 parking spaces per unit, 72 units with 0.88 spaces per unit and five spaces for visitors. The proposed parking supply can be justified as adequate for the subject development based on:

- Residential Zoning By-Law parking requirements in other municipalities; and
- Alternative parking demand assessments based on actual parking utilization in apartment developments, ITE rates, and non-auto usage levels for residential uses.

5 Transportation Demand Management

Transportation Demand Management (TDM) refers to ways of making the capacity of our roads more efficient by reducing vehicle demand. TDM approaches consider how people's choices of travel mode are affected by land use patterns, development design, parking availability, parking cost, and the relative cost, convenience, and availability of alternative modes of travel. Various TDM strategies are used to influence those factors so that the alternatives are more competitive with driving alone and potentially reduce reliance on motor vehicles.

TDM strategies at a development can be divided into two basic categories:

- **Pre-occupancy:** things that need to be done while a development is being designed and built; and
- **Post-occupancy:** things that can be done once people are using the development.

The pre-occupancy actions are critical as they are most likely to determine how attractive, convenient, and safe alternative travel will be once the site is occupied. Before a site is occupied, it can be designed to be convenient and safe for pedestrians and cyclists, and vehicle parking can be provided to meet but not exceed demand.

After the development is built, incentives can be offered, but those incentives will not work as well if the site and its surroundings are oriented to cars. The incentives generally include subsidies to use transit, access to rideshare programs, and information about where and how to use alternatives.

5.1 Pre-Occupancy Strategies

5.1.1 Parking Management

To further encourage residents of the building to use sustainable travel modes, the development should be leasing parking spaces separately from the cost to rent/purchase a unit. This practice of 'unbundling' parking from the unit is more equitable and efficient since occupants are not forced to pay for parking they do not need. In addition, it would encourage people to pay for parking who do own a vehicle to become tenants and contribute to reducing the demand for parking in the development.

5.1.2 Walking

The landscaping plan should consider additional amenities such as lighting and soft landscaping to enhance the pedestrian realm and to prioritize pedestrians.

All on-site sidewalks should be well-lit and should conform to the City of Cambridge's design standards as well as the Accessibility for Ontarians with Disabilities Act (AODA) design standards.

To further enhance the attractiveness of walking, proper lighting should be provided on site and near all building entrances and exits. It is also recommended that weather protection, barrier free access and seating be provided at main building entrances.

5.1.3 Cycling

The City of Cambridge *Cycling Master Plan*[8] indicates the following bicycle parking requirements:

- Multiple Dwelling:
  - Long-Term: 0.3 spaces per dwelling unit (26 spaces); and
  - Short-Term: 0.05 spaces per dwelling unit to a maximum of 12 or minimum of 2 (4 spaces).

Short-term bicycle parking includes bicycle racks located in public areas, generally located in convenient locations and as close to destinations as possible (less than 15 metres from the intended building entrance or no further than the nearest motor vehicle parking space, whichever is closer).

Long-term bicycle parking consists of lockers, bicycle rooms, bicycle cages, full-service stations, or secure areas. This type of parking is generally geared towards users that need to park a bicycle for a longer period.

The total requirement for the site is 30 bicycle parking spaces. It is recommended that the developer provide bicycle parking spaces to meet these requirements.

5.1.4 Transit

As noted in **Section 2.3**, there are 5 existing transit stops located within 500 metres of the subject site. Majority of all nearby transit stops

[8] City of Cambridge, *Bike Your City Cycling Master Plan*, March 2020.

only provide a concrete landing pad. Only one nearby stop provides seating and shelter.

Transit routes within the vicinity of the subject site provide access to the broader network and key destinations within the City and Region.

5.2 Post-Occupancy Strategies

5.2.1 Car Share Program

Car sharing refers to automobile rental services intended to substitute for private vehicle ownership. It makes occasional use of a vehicle affordable while providing an incentive to minimize driving and rely on alternative travel options as much as possible.

Where car sharing services are available, some households reduce their vehicle ownership, either shifting from two to one vehicle, or from one to zero vehicles.

By providing this type of mode share on site, lower automobile ownership rates and parking requirements can be further obtained. Residents of the building could choose to use walking, transit or cycling as their primary mode of travel and use the car share as a secondary mode of travel.

Communauto[9] is offered in the City of Cambridge. The closest vehicles/spaces are located Downtown Galt, approximately 8 kilometres from the subject site.

The availability of a car share space in a premium location on-site allows residents of the development and surrounding community who normally would not need a vehicle for their daily activities to be comfortable with the decision to not own a vehicle.

5.2.2 Travel Planning/Education/Promotion

Increasing awareness of sustainable transportation opportunities for residents and visitors of the subject site should be considered by the developer. Residents should be provided with a welcome package that outlines the available transit routes and active transportation options such as the development's proximity to the existing bicycle network. A travel plan will engage and educate residents on the available sustainable modes of travel and how to overcome obstacles that maybe perceived.

[9] "How It Works," Communauto Ontario, 2022, https://ontario.communauto.com/how-it-works/.

General education of all modes of transportation, including their benefits and how to make the best use of them, are a key component to TDM success. The strategies require cooperation and coordination with several partners, including transit providers, building owners, area municipalities as well as residents.

By educating about sustainable modes of travel as well as providing travel demand management tools and incentives, TDM can be further integrated within the development to promote all modes of transportation.

5.2.3 TDM Coordinator

The building owner should look to delegate an interested individual or require the property manager to act as a coordinator for the TDM measures. The TDM coordinator should provide information for the car share program and administer access to the secured bicycle parking facility. It is expected that a representative from the City of Cambridge or Region of Waterloo will be available to assist the TDM coordinator to help get the program started during the early stages of operations.

5.3 TDM Checklist

The City of Cambridge TDM checklist is used to assess whether developments are planned in such a manner to support the overall objectives of the city to increase transit use and to reduce single occupant vehicle (SOV) travel.

The development is considered TDM supportive based on the following TDM measures:

- Pedestrian walkways (1.5m min width) are provided through large parking areas to link the building with the public street sidewalk system (over and above requirement);
- The development is located within 400 metres of a bus service with headways of 15 to 30 minutes;
- The development provides no more than the minimum number of parking spaces, as required by applicable Zoning By-Law;
- 75% of parking or more is located underground or in a structure;
- The development includes mixed uses on-site or located within 400 metres.

Appendix C contains the TDM checklist.

6 Conclusions & Recommendations

6.1 Conclusions

Based on the investigations carried out, it is concluded that:

- **Zoning By-Law Requirements:** The proposed development requires a total of 108 parking spaces to comply with the City's Zoning By-laws. With a proposed supply of 97 parking spaces, the site has a potential shortfall of 11 spaces.
- A review of Zoning By-Laws in other municipalities indicates that reductions of on-site parking for developments outside of downtown areas is becoming an increasingly common practice.
- **Forecast Parking Demand**
  - Transportation Tomorrow Survey (TTS) 2016 vehicle ownership data for the area surrounding the subject site indicates an average rate of 1.05 vehicles per household for apartment units (91 spaces for the proposed development). This rate does not account recent Grand River Transit changes and reflects developments with minimal TDM initiatives.
  - The *ITE Parking Generation Manual* indicates a forecast parking demand rate of 0.90 spaces per residential unit (77 spaces).
  - Proxy site data at a residential development in the City of Cambridge indicates a peak parking demand of 0.92 spaces per unit (79 spaces), and in the City of Brantford with a peak parking demand of 0.86 spaces per unit (74 spaces).
- **Estimated Parking Demand:** Based on the combination of auto ownership, ITE rates, proxy site data, and requirements in other municipalities the estimated maximum residential parking demand is between 0.50 and 1.10 spaces per unit (43 and 95 spaces). These rates are supportive of the two proposed rates on site: 14 units with 2 parking spaces per unit and 72 units with 0.88 spaces per unit.
- To further support the use of alternative modes of transportation and reduce the parking demand on site, the following actions should be considered:
  - Bicycle parking be provided to meet the minimum bicycle parking requirements as set out in the City's Cycling Master Plan;

- Long-term bicycle parking spaces be in a secure location (i.e. within the parking structure or buildings) and short-term bicycle parking spaces should be in an accessible location near the buildings main entrance;
- Unbundling all parking spaces or re-evaluating the proposed parking strategy as the site becomes occupied to support tenants who choose not to own a vehicle and are not required to purchase a parking spot;
- Consideration given to offering a car share space in a premium location on site to support those who choose not to own a car; and
- Delegating a TDM coordinator, either an interested individual or property manager, to support all on-site TDM programs; and
- Consideration given to offering transit, car share, and active transportation information in a welcome package to new tenants and posting the information in a central location to further support all alternative modes.

5.2 Recommendations

Based on the findings of this study, it is recommended that the developer commits to the TDM measures listed herein to support a parking supply of 14 units with 2 parking spaces per unit and 72 units with 0.88 spaces per unit for an average of 1.127 spaces per unit (97 parking spaces) and five spaces to be marked as visitor parking.

Appendix A

TTS Data

Cross Tabulation Query Form - Household - 2016

Row: 2006 GTA zone of household - gta06_hhld
Column: Type of dwelling unit - dwell_type
Table: No. of vehicles in household - n_vehicle

Code	Description
1	House
2	Apartment
3	Townhouse (Starting From 1996)
9	Unknown

RowG:(7316)
ColG:
TblG:

Filters:
No Filters

	0	1	2	Total units
TTZ Zone	16	158	25	199
		158	50	208
				1.05
	8%		13%	

Household 2016
ROW : gta06_hhld
COLUMN : dwell_type

TABLE : n_vehicle (0)

gta06_hhld	dwell_type	total
1	1	12
1	2	16

TABLE : n_vehicle (1)

gta06_hhld	dwell_type	total
1	1	117
1	2	158
1	3	12

TABLE : n_vehicle (2)

gta06_hhld	dwell_type	total
1	1	244
1	2	25
1	3	41

TABLE : n_vehicle (3)

gta06_hhld	dwell_type	total
1	1	37

TABLE : n_vehicle (4)

gta06_hhld	dwell_type	total
1	1	9

Cross Tabulation Query Form - Trip - 2016

Row: 2006 GTA zone of household - gta06_hhld
Column: Primary travel mode of trip - mode_prime

RowG:(7316)
ColG:
TblG:

Filters:
No Filters

Trip 2016
ROW : gta06_hhld
COLUMN : mode_prime

gta06_hhld	mode_prime	total
1	B	45
1	D	2414
1	P	516
1	W	128

Code	Description		
B	Transit excluding GO rail	45	1%
C	Cycle		
D	Auto driver	2414	78%
E	E-scooter (2022)		
G	GO rail only		
J	Joint GO rail and local transit		
M	Motorcycle		
O	Other		
P	Auto passenger	516	17%
S	School bus		
T	Taxi passenger		
U	Paid rideshare (2016)		
W	Walk	128	4%
9	Unknown		
	Total	3103	100%

Appendix B

Proxy Parking Data

Address: **150 & 180 Greenbrier Road**
Surveyor: LC
Date: 2023-08-17
# of Units: 153
Available Spaces: Res: 169 Vis: 6

Time	Demand		
	Resident	Visitor	Total
6:10 AM	141	0	141
11:30 AM	91	4	95
8:30 PM	138	0	138

max parking demand	141
max parking rate	0.92

291 Brant St - Thurs

Start Time	**Cars in Lot**
# parked at start of shift	**60**
7:00	60
7:15	59
7:30	58
7:45	55
8:00	55
8:15	51
8:30	51
8:45	50
9:00	50

Date Thursday, May 21, 2015

Initials ES

Location 291 Brant St

Start Time	**Cars in Lot**
# parked at start of shift	**52**
18:00	52
18:15	51
18:30	51
18:45	52
19:00	55
19:15	58
19:30	58
19:45	58
20:00	59
20:15	58
20:30	59
20:45	59
21:00	58
21:15	59
21:30	60
21:45	60
22:00	60

Appendix C

City of Cambridge TDM Checklist

FORM 1: TDM CHECKLIST

Site Address: 8 Schofield Street **Site Context:** __________

Date: August 2024 **ZBL Parking Requirement:** 108 spaces (86 O 22 V)

Applicable Parking Reduction: __________

The Transportation Demand Management (TDM) Checklist and Parking Management Worksheet are not designed for residential properties, but can be used to inform mixed-use developments.

TABLE A		**Site Access**		
In creating an environment that supports pedestrian and cycling activity, the public realm must be accessible, safe, and comfortable to encourage movement on the street and in the surrounding area(s). These facilities and features should encourage walking and cycling.				
Points		**Features**	**Yes**	**N/A**
A1	**2**	Development incorporates functional building entrances that are oriented to public space or to locations where pedestrians and transit users arrive from such as a street, square, park or plaza.	**X**	
A2	**1**	External to site: Continuous sidewalks (1.5m min. width) are provided along both sides of all adjacent public streets (over and above requirement) Internal to site: Pedestrian walkways (1.5m min width) are provided through large parking areas to link the building with the public street sidewalk system (over and above requirement)	**X**	
A3	**3**	Non-residential: development provides secure bike storage for 4% of the building occupants.		
A4	**4**	Shower and change facilities for employees provided on-site consistent with LEED requirements.		
A5	**2**	Provision of active uses at-grade along street frontages.		
Category Max =	10	**Total Points Applicable =** 10	**Score =**	3

TABLE B		**Public Transportation Access**		
The availability and proximity of convenient public transit service with direct pedestrian linkages to the building will provide viable travel options for employees, visitors and residents.				
Points		**Features**	**Yes**	**N/A**
B1	**1**	Bus shelters with seating are provided at the transit stop immediately adjacent to the development in consultation with Grand Rapid Transit (GRT) or transportation provider		
B2	**1**	Information regarding public transit routes, schedules and fares are provided in an accessible and visible location on site and in adjacent bus stops		
B3a	**5**	Located within 800m of a Rapid Transit Station		
B3b	**3**	Located within 600 m of a bus service with headways of 15 min or less or is located in a designated mixed use corridor or node. **Note: Points are awarded for either B3a, B3b or B3c only. Please choose whichever represents the highest order of transit.**		
B3c	**1**	Located within 400 m of a bus service with headways of 15 min to 30 min. **Note: Points are awarded for either B3a, B3b or B3c only. Please choose whichever represents the highest order of transit.**	**X**	
Category Max =	5	**Total Points Applicable =** 5	**Score =**	1

TABLE C		**Parking**		
Vehicle parking facilities can affect the character, travel mode and cost of a development. Reducing parking supply to match expected demand can a have a positive influence on the selection of alternative travel modes.				
Points		**Features**	**Yes**	**N/A**
C1	**24**	Utilizes reduced parking supply consistent with the TDM Parking Management Worksheet or includes allowances for shared parking in mixed use zones. **Note: Points are awarded for either C1 or C2 only. Please choose whichever applies** after consulting with the Area Municipal planning authority**.**		
C2	**15**	Provides no more than the minimum number of parking spaces, as required by applicable Zoning By-Law. **Note: Points are awarded for either C1 or C2 only. Please choose whichever applies.**	**X**	
C3	**10**	Implements paid parking on part or all of the site (e.g. parking permits, paid parking zones near main entrances)		
C4	**3**	Provides priority parking for carpooling/vanpooling participants equivalent to 5% of employee spaces		
C5	**5**	Commercial Uses: Provide car-share spaces equivalent to 2% of building occupants		

C6	**3**	Parking is not located on major street frontage or between a road right of way and the building facade.		
C7	**5**	25% to 50% of parking is located underground or in a structure		
C8	**10**	50% to 75% of parking is located underground or in a structure		
C9	**15**	75% of parking or more is located underground or in a structure	**X**	
C10	**3**	Parking spaces provided off-site on a lot within 300 metres of the lot containing such use.		

Category Max =	25	**Total Points Applicable =**	25	**Score =**	25

TABLE D		**Trip Reduction Incentives**		
A formal TDM plan will identify specific initiatives that will be initiated in order to encourage reduced single occupant vehicle travel.				
Points		**Features**	**Yes**	**N/A**
D1	**2**	The building owner/occupant will provide a ride matching service for car/vanpooling		
D2	**2**	The building owner/occupant will provide emergency ride home options		
D3	**5**	The building owner/occupant will provide subsidized transit passes for all occupants for a period of two years		
D4	**5**	The building owner/occupant agrees to charge for parking as an unbundled cost to occupants	**X**	
D5	**2**	The building owner/occupant agrees to provide reduced cost for users of car/van pool, bicycle, moped/motorcycle spaces		
D6	**10**	The building owner/occupant has prepared a TDM plan that targets a 10% reduction in peak hour trips using forecast trip generation with status quo travel characteristics		
D7	**5**	The employer has provided flexible working hours, telework or shift work arrangements.		
D8	**14**	The development agrees to join Travelwise (TMA) that provides the same services outlined under items D1, D2, D6		
D9	**2**	The development includes mixed uses (i.e. retail, commercial or food services, daycares, or other complementary uses) on-site or located within 400 metres.		

Category Max =	25	**Total Points Applicable =**	25	**Score =**	5

TABLE E **Checklist Summary**

For each item, a "Yes" answer is equivalent to the points as indicated in the section. N/A sections should be explained in an attachment to this table. The score for each section is reflected as a percentage and calculated by dividing the points by the "Total Applicable".

Category	**Minimum Requirement**	**Total Applicable**	**Points Scored**	**Comments**
Pedestrian & Cyclist Orientation	24	10	3	
Public Transit Access		5	1	
Parking		25	25	
SUB-TOTAL		**40**	**29**	
Trip Reduction Incentives		25	5	
OVERALL TOTAL	***65***	***65***	**34**	

TABLE F **Scoring Summary**

FINAL SCORE	**RATING**		
50 - 65	****		**TDM SUPPORTIVE DEVELOPMENT**
40 -49	***		
30 - 39	**	**X**	
24 - 29	*		
0 - 23			Non-TDM Supportive Development