

SEPTEMBER 20, 2019

PROJECT NO: 110-4331

SENT VIA: EMAIL
BRUCEMR@GSAI.CA

Glen Schnarr & Associates Inc.
700 – 10 Kingsbridge Garden Circle
Mississauga, ON L5R 3K6

**Attention: Bruce McCall-Richmond, MCIP, RPP
Planner**

**RE: PARKING JUSTIFICATION LETTER
16114 AIRPORT ROAD
TOWN OF CALEDON, REGION OF PEEL**

Dear Bruce,

Pursuant to your request for a parking analysis for the proposed mixed-use development at 16114 Airport Road (the "site"), this Parking Justification Letter has been prepared.

The Development Concept Plan consists of 32 condo townhouse units and two commercial buildings with a total gross floor area (GFA) of 1,235 square metres (13,293 square feet). Access to the development will be provided by two accesses on Airport Road and an access on Walker Road.

The north Airport Road access will permit full moves and provide direct access to the residential dwellings. The south Airport Road access will be restricted to right-in/right-out movements only and provide direct access to the commercial buildings. The Walker Road access will permit full moves and provide access to the commercial buildings. An internal connection between the residential and commercial portion of the site has now been proposed to facilitate improved site circulation.

The development proposes to supply 59 parking spaces to service the commercial uses, and 9 residential visitor parking spaces. Parking for the individual residential units will be provided through a garage and driveway, equating to two spaces per unit.

Refer to **Attachment A** for the most recent Development Concept dated August 28, 2019.

This study reviews the following main aspects of the proposed mixed-use development from a transportation engineering perspective:

- Minimum Zoning By-law requirements of the proposed land uses; and,
- Forecasted demand based on ITE Parking Generation rates.

The purpose of this letter is to confirm if the proposed parking supply can accommodate the forecasted demand of the proposed uses at the site.

Existing Conditions

The site is approximately 4.09 hectares (10.11 acres) in size and is bounded by Airport Road to the east, Walker Road to the south, an existing residential condominium townhouse development to the north, and a treed area to the west. The site itself currently contains a residential property with one existing access to Airport Road. The site is currently zoned as Rural "A2" per the Town of Caledon Zoning By-law 2006-50, of which "Dwelling, Detached" is a permitted use.

The location of the site is reflected on the development Site Location Plan included as **Attachment B**.

Town of Caledon Parking Requirements

To establish the minimum parking requirement for the proposed residential and commercial uses, Section 5.2.2 "Residential Parking Requirements" and Section 5.2.3 "Non-Residential Parking Requirements" of the Zoning By-law was referenced. The minimum parking requirements for the site are summarized in **Table 1**.

Table 1: Town of Caledon Minimum Parking Requirements

Land Use	Units/GFA	Parking Rate	Parking Requirements	Proposed Supply	Surplus/Deficiency
Residential (Condo Townhouse)	32 units	2 spaces per unit	64	64	0
Residential (Condo Townhouse)	32 units	0.25 visitor spaces/unit	8	9	+1
Retail Commercial	1,235 m ²	1 space/20 m ²	62	59	-3

As summarized above, the proposed visitor parking supply for the residential units exceeds the minimum requirement by one parking space, while the retail commercial parking supply results in a deficiency of 3 spaces, when compared with the minimum Zoning By-law parking requirements. Parking for the residential units, excluding visitor spaces, is provided at the rate required in the Zoning By-law.

Relevant excerpts from the Town of Caledon Zoning By-law have been included as **Attachment C**.

ITE Parking Generation

A parking deficiency as compared to Zoning By-law requirements does not always indicate operational issues on the site. The Institute of Transportation Engineers (ITE) Parking Generation Manual, 5th Edition, was consulted to forecast the peak parking demand of the retail commercial use. It was determined that Land Use Category 820 "Shopping Center" would best represent the proposed uses at the site.

Table 2 summarizes the forecasted parking generation of the proposed uses. Relevant excerpts from the ITE Parking Generation Manual, 5th Edition have been included as **Attachment D**.

Table 2: Forecasted ITE Parking Generation

Use	Day	Typical Peak Period	Average Rate	Forecasted Parking Generation	Proposed Parking Supply	Surplus/Deficiency
LUC 820 "Shopping Centre" (13,293 ft ²)	Weekday	12:00 p.m. to 6:00 p.m.	1.95 veh per 1,000 ft ²	26	59	+33
	Saturday	11:00 a.m. to 5:00 p.m.	2.91 veh per 1,000 ft ²	39	59	+20

The proposed parking supply for the commercial uses can accommodate the forecasted parking demand of the proposed retail commercial buildings. The parking generation forecasted for the weekday is 26 parked vehicles, and for the Saturday is 39 parked vehicles. This equates to a surplus of 33 and 20 parking spaces during the weekday and Saturday peak periods, respectively.

In addition to the forecasted parking demand described above, it is also anticipated that there will be synergies between the residential and commercial components of the development. Shoppers living on site would not add a parked vehicle or vehicle trip as they can park in their own driveway.

Given the above rationale, the proposed residential and retail commercial uses can be accommodated by the proposed parking supply on-site. The development applications can be supported from a parking perspective.

Should you have any questions or require any further information, please do not hesitate to contact the undersigned.

Sincerely,

C.F. CROZIER & ASSOCIATES INC.



Alexander J. W. Fleming, MBA, P.Eng.
Associate
/mf

C.F. CROZIER & ASSOCIATES INC.



Madeleine Ferguson, EIT
Engineering Intern, Transportation

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Enc.

Attachment A – Development Concept Plan

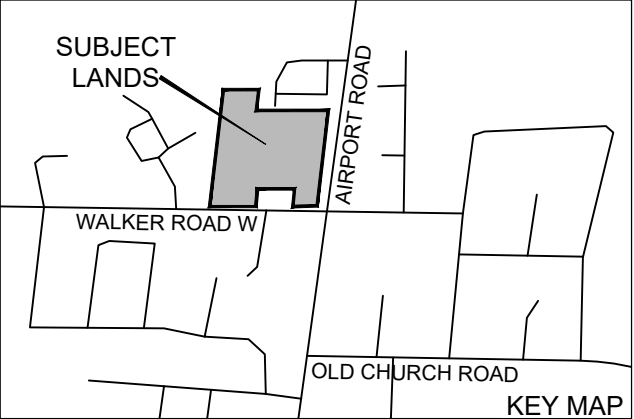
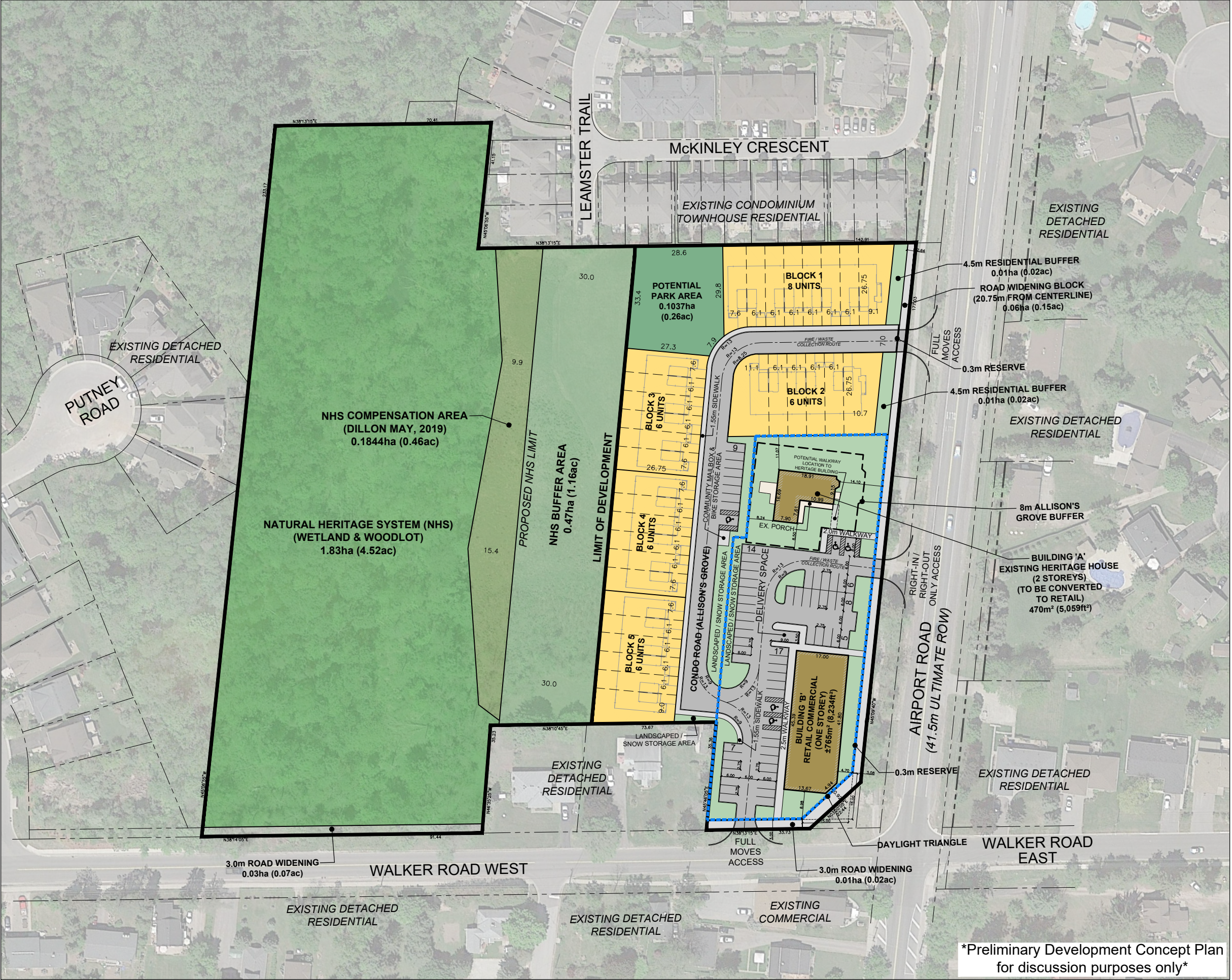
Attachment B – Site Location Plan

Attachment C – Zoning By-law Excerpts

Attachment D – ITE Parking Generation Manual, 5th Edition - Excerpts

ATTACHMENT A

Development Concept Plan



DEVELOPMENT CONCEPT PLAN
SHACCA CALEDON HOLDINGS INC.

16114 AIRPORT ROAD
PART 1, PLAN OF PART OF LOT 4, CONCESSION 6, E.H.S.
TOWN OF CALEDON, REGION OF PEEL

Development Statistics - Total Site	
Wetland / Woodlot	1.86(4.60ac)
Compensation Area:	0.184ha (0.46ac)
Compensation Area Buffer:	0.47ha (1.16ac)
Potential Park:	0.104ha (0.26ac)
Net Residential Area^:	0.84ha (2.08ac)
Commercial Area:	0.56ha (1.38ac)
Road Widening & Daylight Triangle:	0.07ha (0.17ac)
Gross Site Area:	4.09ha (10.11ac)
Net Site Area*:	1.51ha (3.73ac)

Development Statistics - 6.1m Condo Townhouse Residential	
Total Units:	32 Units
Net Residential Density:	32 Units / 0.84ha = 38.1UPH
Total Visitor Parking:	9 Spaces (0.28 per unit)
Total Landscaped / Snow Storage:	361m ²
Total Hard Surface (HS) Area:	1,830m ²
Total Snow Storage % of HS Area:	19.7%
Total Parkland Dedication required:	0.042ha (5%)
Total Parkland Dedication provided:	0.104ha (12%)

Development Statistics - Retail Commercial (Buildings A & B)	
Total GFA:	1,235m ² (13,293ft ²)
Building Coverage:	18.0%
Total Landscaped / Snow Storage:	619m ²
Total Hard Surface (HS) Area:	2,503m ²
Total Snow Storage % of HS Area:	24.7%
Total Parking Required:	62 Spaces (1 space per 20m ²)
Total Parking Provided:	59 Spaces
Total Barrier Free Parking Required:	3 (2 Type 'A'; 1 Type 'B')
Total Barrier Free Parking Provided:	4 (2 Type 'A'; 2 Type 'B')
Delivery Spaces Required:	1
Delivery Spaces Provided:	1

- Notes:**
- * Net Site Area only includes: Net Residential Area, Commercial & Potential Park
 - ^ Net Residential Area includes 4.5m Residential Buffers
 - Typical Parking Space: 2.75m x 6.0m
 - Typical Type 'A' Barrier Free Space: 3.4m x 6.0m
 - Typical Type 'B' Barrier Free Space: 2.75m x 6.0m
 - Typical Barrier Free Aisle: 1.5m x 6.0m
 - Typical Delivery Space: 3.5m x 9.0m
 - Wetland / Woodlot constraint information provided by Dillon Consulting



Scale 1:1250
August 28, 2019





*Preliminary Development Concept Plan
for discussion purposes only*

ATTACHMENT B

Site Location Plan



Legend  = SUBJECT LANDS	Project 16114 AIRPORT ROAD TOWN OF CALEDON EAST	<div>  </div> <div> CROZIER & ASSOCIATES Consulting Engineers </div> <div> <small>THE HARBOUREDGE BUILDING, 40 HURON STREET, SUITE 301, COLLINGWOOD, ON L9Y 4R3</small> </div> <div> <small>705-446-3510 T 705-446-3520 F WWW.CFCROZIER.CA INFO@CFCROZIER.CA</small> </div>																				
	Drawing SITE LOCATION PLAN	<table border="1"> <tr> <td>Drawn By</td><td>K.J.L.</td> <td>Design By</td><td>S.W.</td> <td>Project</td><td>110-4331</td> </tr> <tr> <td>Scale</td><td>N.T.S.</td> <td>Date</td><td>OCT. 11, 2016</td> <td>Check By</td><td>M.L.</td> </tr> <tr> <td colspan="5"></td><td>Drawing Attach. B</td> </tr> </table>				Drawn By	K.J.L.	Design By	S.W.	Project	110-4331	Scale	N.T.S.	Date	OCT. 11, 2016	Check By	M.L.					
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					Drawing Attach. B																	

ATTACHMENT C

Town of Caledon Zoning By-law Requirements

SECTION 5

PARKING, LOADING AND DELIVERY STANDARDS

5.1 APPLICABILITY OF THIS SECTION

- a) The *parking, loading and delivery space* requirements of this section of the By-law shall not apply to any *building* in existence at the date of passing of this By-law so long as the *floor area*, as it existed at such date, is not increased or if the *building or structure* is used for a purpose that requires more *parking spaces*.
- b) If an addition is made to the *building* that increases the *floor area*, additional *parking, loading and delivery spaces* shall be provided for the additional *floor area* only, as required by the regulations of this By-law.

5.2 PARKING

5.2.1 Restriction On Use Of Land, *Buildings And Structures*

No *person* shall use any land, *building or structure* in any *Zone* for any purpose permitted by this By-law, unless *parking spaces* are provided in accordance with the provisions of this Section of the By-law.

5.2.2 Residential *Parking Requirements*

The number of *parking spaces* required for residential *uses* shall be calculated in accordance with the standards set out in **Table 5.1**:

TABLE 5.1

Type or Nature of Use	Minimum Off-Street <i>Parking Requirements</i>
- <i>Dwelling, Detached</i> - <i>Dwelling, Semi-Detached</i> - <i>Dwelling, Duplex</i> - <i>Dwelling, Linked</i>	2 <i>parking spaces</i> per <i>dwelling unit</i> .
- <i>Dwelling, Back-to-Back Townhouse</i>	2 <i>parking spaces</i> per <i>dwelling unit</i> plus 0.25 visitor <i>parking spaces</i> for each <i>dwelling unit</i> . Such visitor <i>parking spaces</i> shall not be located on exclusive use lands.
- <i>Dwelling, Townhouse</i>	2 <i>parking spaces</i> per <i>dwelling unit</i> + 0.25 <i>parking spaces</i> per unit for visitors on a <i>lot</i> with four or more <i>dwelling units</i>
- <i>Building, Apartment</i> - <i>Seniors Retirement Facility</i>	1.5 <i>parking spaces</i> per <i>dwelling unit</i> + 0.25 <i>parking spaces</i> per unit for visitor parking in a designated visitor <i>parking area</i> .
- <i>Apartment, Accessory</i> - <i>Dwelling Unit, Accessory</i>	1 <i>parking space</i> per each 70m ² or portion thereof to a maximum of 2 <i>parking spaces</i>
- <i>Home Occupation</i> - <i>Home Industry</i>	<i>Parking spaces</i> in addition to the required parking for the residential use shall be provided in accordance with the following: <ul style="list-style-type: none"> ➤ 0-10m² - no additional <i>parking spaces</i> ➤ >10m² - 1 <i>parking space</i>

Type or Nature of Use	Minimum Off-Street <i>Parking Requirements</i>
-Day Care, Private Home	No requirement
-Bed & Breakfast Establishment	1 <i>parking space</i> per guest room

5.2.3 Non-Residential *Parking Requirements*

The number of *parking spaces* required for non-residential uses shall be calculated in accordance with the standards set out in **Table 5.2**:

TABLE 5.2

Type or Nature of Use	Minimum Off-Street <i>Parking Requirements</i>
-Adult Day Centre - Day Nursery	1 <i>parking space</i> per staff member + 1 <i>parking space</i> per 30 m ² of <i>net floor area</i> or portion thereof
-Art Gallery - Artisan Operation -Artist Studio & Gallery -Museum	1 <i>parking space</i> per 100 m ² of <i>net floor area</i> or portion thereof where no retail; 1 per 60 m ² or portion thereof where retail component.
-Business Office -Research Establishment - Library	1 <i>parking space</i> per 30 m ² of <i>net floor area</i> or portion thereof
-Community Centre - Sports Arena - Wellness Centre - Fitness Centre -Club	1 <i>parking space</i> per 15m ² of <i>net floor area</i> or portion thereof
-Financial Institution	1 <i>parking space</i> per 25m ² of <i>net floor area</i> or portion thereof
-Funeral Home	1 <i>parking space</i> per 20m ² of <i>net floor area</i> or portion thereof
-Golf Course	12 <i>parking spaces</i> per hole
-Hospital	1.5 <i>parking spaces</i> per bed
-Hotel - Motel	1 <i>parking space</i> per guest room, plus 1 <i>parking space</i> per 10 m ² or portion thereof of <i>net floor area</i> devoted to meeting, dining and banquet facilities.
- Industrial Use - Medical Marihuana Production Facility	<p>a) If accessory office and retail <i>net floor areas</i> are 15% or less of the total <i>net floor area</i>:</p> <p>Up to 5,000 m² – 1 <i>parking space</i> per 60 m² <i>net floor area</i> or portion thereof</p> <p>5,000 to 10,000 m² – 83 <i>parking spaces</i>, plus 1 <i>parking space</i> per 90 m² of <i>net floor area</i> or portion thereof over 5,000 m²</p> <p>Over 10,000 m² – 139 <i>parking spaces</i>, plus 1 <i>parking space</i> per 170 m² or portion thereof of <i>net floor area</i> or portion thereof over 10,000 m²</p> <p>b) If associated office and retail <i>net floor areas</i> are more than 15% of the total <i>net floor area</i>:</p>

Type or Nature of Use	Minimum Off-Street <i>Parking</i> Requirements
	In addition to the standards contained above in (a), the applicable <i>net floor areas</i> exceeding 15% shall be subject to the applicable office or retail parking requirements.
-Dry Cleaning or Laundry Plant - Dry Cleaning or Laundry Outlet - Laundromat	1 <i>parking space</i> per 20 m ² of <i>net floor area</i> or portion thereof
-Long Term Care Facility	0.5 <i>parking spaces</i> per bed
-Clinic - Veterinary Hospital - Animal Hospital - Medical Laboratory -Medical Centre	1 <i>parking space</i> per 16.5 m ² of <i>net floor area</i> or portion thereof
-Motor Vehicle Body Shop -Motor Vehicle Repair Facility -Motor Vehicle Service Centre	3 <i>parking spaces</i> per service bay plus 1 <i>parking space</i> per 20 m ² or portion thereof of <i>net floor area</i> for the office and any retail use.
-Motor Vehicle Gas Bar	1 <i>parking space</i> per 20 m ² or portion thereof of <i>net floor area</i> exclusive of fuel dispensing spaces
-Motor Vehicle uses not otherwise listed	1 <i>parking space</i> per 20 m ² or portion thereof of <i>net floor area</i> exclusive of display and storage parking
-Park	5 <i>parking spaces</i> per hectare or portion thereof
-Place of Entertainment	the greater of 1 <i>parking space</i> per 6 seats capacity or 1 <i>parking space</i> per 10m ² of <i>net floor area</i> or portion thereof
-Place of Worship	the greater of 1 <i>parking space</i> per 6 persons design capacity of the worship area or 1 <i>parking space</i> for 10 m ² of <i>net floor area</i> or portion thereof of the worship areas and any <i>accessory use</i> areas, excluding residential uses.
-Recreational Use	30 <i>parking spaces</i> per ball field 30 <i>parking spaces</i> per soccer field 4 <i>parking spaces</i> per tennis court
-Restaurant -Place of Assembly	1 <i>parking space</i> per 15 m ² of <i>net floor area</i> or portion thereof
-Retail Store - Sales Service and Repair Shop - Personal Service Shop -Factory Outlet - Merchandise Service Shop -Light Equipment Rental Establishment - Bakery - Printing & Processing Service Shop	1 <i>parking space</i> per 20 m ² of <i>net floor area</i> or portion thereof
-School	Elementary – 1 <i>parking space</i> per 100 m ² of <i>gross floor area</i> or portion thereof and 1 <i>parking space</i> per portable Secondary – 1.5 <i>parking spaces</i> per 100 m ² of <i>gross floor area</i> or portion thereof and 1 <i>parking space</i> per portable

Type or Nature of Use	Minimum Off-Street <i>Parking</i> Requirements
	classroom
-Training Facility	1 <i>parking space</i> per 30 m ² of <i>net floor area</i> or portion thereof
-Warehouse -Transportation Depot	<p>a) If associated office or retail <i>net floor areas</i> are 15% or less of the total <i>net floor area</i>:</p> <p>Up to 7,000 m² – 1 <i>parking space</i> per 90 m² <i>net floor area</i> or portion thereof</p> <p>7,000 to 20,000 m² – 78 <i>parking spaces</i>, plus 1 <i>parking space</i> per 145 m² of <i>net floor area</i> or portion thereof over 7000 m²</p> <p>Over 20,000 m² – 168 <i>parking spaces</i>, plus 1 <i>parking space</i> per 170 m² of <i>net floor area</i> or portion thereof over 20,000 m²</p> <p>b) If associated office or retail <i>net floor areas</i> are more than 15% of the total <i>net floor area</i>:</p> <p>In addition to the standards contained above in (a), the applicable <i>net floor areas</i> exceeding 15% shall be subject to the applicable office or retail parking requirements.</p>
-Warehouse, Public Self-Storage	1 <i>parking space</i> per 30 m ² of <i>net floor area</i> or portion thereof within the office; plus 1 <i>parking space</i> per 100 m ² of <i>net floor area</i> or portion thereof of the <i>building</i> .
-Warehouse, Retail	1 <i>parking space</i> per 30 m ² of <i>net floor area</i> or portion thereof
-Warehouse, Wholesale	1 space per 80 m ² of <i>net floor area</i> or portion thereof
Uses permitted by this By-law other than those listed in this Table	1 <i>parking space</i> per 45 m ² of total <i>floor area</i> or portion thereof

Where the minimum parking requirement in an Exception Zone is different from the above requirements, the applicable minimum *parking* provisions of the Exception Zone shall apply.

5.2.4 Calculation Of *Parking, Loading and Delivery* Requirements

Where the minimum number of *parking, loading or delivery spaces* is calculated on the basis of a rate or ratio, the required number of *parking, loading or delivery spaces* shall be rounded to the next higher whole number.

5.2.5 More Than One Use On A Lot

The parking requirements for more than one *use* on a single *lot* or for a *building* containing more than one *use*, shall be the sum total of the parking requirements for each of the component *uses*, unless otherwise noted.

5.2.6 Barrier-Free *Parking*

Barrier-free *parking spaces* shall be provided in accordance with the provisions of the barrier-free access requirements in Town of Caledon By-law 2006-138, as may be amended from time to time.

5.2.7 Exclusive Use Of A *Parking, Loading or Delivery Space*

Any required *parking, loading or delivery space* shall be unobstructed and available for parking, delivery or loading purposes and used exclusively for that purpose at all times, unless otherwise specified in this By-law.

5.2.8 Location Of Required *Parking, Loading and Delivery Spaces*

Required *parking, loading and delivery spaces* shall be located on the same *lot* as the *use* that requires the *parking, loading or delivery space*. Notwithstanding the above, required *parking, loading and delivery spaces* for any commercial *use* permitted within the **CC** and **CV Zones** may be located on another *lot* within 150 metres of the *lot* on which *parking, loading or delivery spaces* would be required for a *use*, provided the off-site *parking, loading or delivery spaces* are located on a *lot* in a Commercial zone and subject to the applicant/proponent executing an Off-Site Parking, Loading and/or Delivery Agreement with the Town.

5.2.9 Cash-In Lieu Of *Parking*

Parking spaces required by Subsections 5.2.2 and 5.2.3 of this By-law shall not be required within the Bolton Core Area subject to the owner obtaining Minor Variance approval for the *parking space* deficiency and executing an Agreement with the Town respecting the payment of cash-in-lieu of some or all of the parking required in accordance with the applicable Town of Caledon By-law.

5.2.10 *Parking* Required For *Outdoor Patios*

Parking spaces are not required for any *outdoor patio* that is less than 40% of the *net floor area* of the *restaurant* it serves. The standard *restaurant* ratio shall apply to any area over 40%.

5.2.11 Location Of *Parking* On A *Lot* Used For Residential Purposes

The parking of *motor vehicles* associated with a residential *use* is permitted only within a *parking garage, surface parking area, private garage, carport* or on a *driveway* accessing an individual *dwelling unit, a private garage or a carport*.

5.2.12 Size Of *Parking Spaces*

- a) Where *parking spaces* are provided in a *surface parking area*, each *parking space* shall have width of not less than 2.75 metres and length of not less than 6.0 metres, with the exception of a barrier-free *parking space* which shall have a width and a length which complies with the Town's barrier-free parking requirements
- b) Where *parking spaces* are provided in an enclosed or underground *parking garage*, such *parking spaces* shall have width of not less than 2.6 metres and length of not less than 5.8 metres.
- c) The width and length of a parking space shall be measured exclusive of the width or length of any painted lines marking such parking space.

5.2.13 Width Of Aisles

The minimum width of an *aisle* providing access to a *parking space* within a *parking area* shall be 6.0 metres, except in the case of angled off-street parking accessed by a one-way *aisle*, which shall be a minimum width of 4.5 metres.

5.2.14 Width Of Access Ramps And Driveways

Access ramps and *driveways* accessing a *parking area* or *parking lot* shall be a minimum of 4.5 metres in width for one-way traffic and a minimum of 6.0 metres in width for two-way traffic. For a *Commercial* or *Municipal Parking Lot*, a minimum of 9.0 metres in width shall be required.

5.2.15 Width Of Driveways Accessing Individual Residential Dwellings

- i) In no case shall the width of an individual *driveway* accessing a single *detached*, *semi-detached*, *linked* or *townhouse dwelling* exceed the following at its widest point :
 - for *semi-detached*, *link* and *townhouse dwellings*, a maximum width of 5.2 metres.
 - for *detached dwellings*, a maximum of 6.0 metres for *lots* having a *lot frontage* of 12.0 metres or less and for *lots* with over 12.0 metres of *frontage*, up to 50% of the *lot frontage* to a maximum of 8.5 metres, whichever is less.

5.2.16 Surface Treatment

All required *parking spaces* and *parking areas* and all *driveways* to any *parking area* or *parking lot* shall be maintained with a stable surface which may include asphalt, concrete, concrete pavers, gravel or similar material which is treated so as to prevent the raising of dust or loose particles.

5.2.17 Parking Garages

Parking garages shall comply with the *Zone* provisions for the *main building* for the *Zone* in which it is located in accordance with this By-law. No *setbacks* or *yards* shall be required for any portion of a *parking garage* constructed completely below the established grade. This exemption shall also apply to ventilation shafts and housings, stairways and other similar facilities associated with below grade parking garages that extend from below established grade.

5.2.18 Parking Area Location On A Non-Residential Lot

Notwithstanding any other provisions of this By-law, *parking areas* shall be set back a minimum of 2.0 metres from any *building* or *structure*.

5.2.19 Illumination

Where *parking areas* are illuminated, the lighting fixtures shall be provided in accordance with the following provisions:

- i) No part of the lighting fixture shall be more than 9 metres above grade and no closer than 4.5m to any *lot line*; and,
- ii) Lighting fixtures shall be installed in such a manner that all light emitted by the fixture, either directly from the lamp or a diffusing element, or indirectly by reflection or refraction from any part of the fixture is projected below the lamp and onto the *lot* the lighting is intended to serve.

ATTACHMENT D

ITE Parking Generation Manual, 5th Edition

Excerpts



Parking Generation Manual

5th Edition

JANUARY 2019

Land Use: 820 Shopping Center

Description

A shopping center is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. A shopping center's composition is related to its market area in terms of size, location, and type of store. A shopping center also provides on-site parking facilities sufficient to serve its own parking demands.

Time of Day Distribution for Parking Demand

The following table presents a time-of-day distribution of parking demand **during the month of December** on a weekday (seven study sites), a Friday (eight study sites), and a Saturday (19 study sites).

Hour Beginning	Percent of Peak Parking Demand during December		
	Weekday	Friday	Saturday
12:00–4:00 a.m.	—	—	—
5:00 a.m.	—	—	—
6:00 a.m.	—	—	—
7:00 a.m.	—	—	—
8:00 a.m.	—	—	—
9:00 a.m.	—	—	—
10:00 a.m.	—	74	—
11:00 a.m.	—	87	85
12:00 p.m.	77	97	97
1:00 p.m.	100	100	98
2:00 p.m.	98	92	100
3:00 p.m.	90	85	97
4:00 p.m.	76	84	88
5:00 p.m.	82	78	77
6:00 p.m.	89	75	64
7:00 p.m.	90	63	—
8:00 p.m.	84	—	—
9:00 p.m.	—	—	—
10:00 p.m.	—	—	—
11:00 p.m.	—	—	—

The following table presents a time-of-day distribution of parking demand **during a non-December month** on a weekday (18 study sites), a Friday (seven study sites), and a Saturday (13 study sites).

Hour Beginning	Percent of Non–December Peak Parking Demand		
	Weekday	Friday	Saturday
12:00–4:00 a.m.	–	–	–
5:00 a.m.	–	–	–
6:00 a.m.	–	–	–
7:00 a.m.	–	–	–
8:00 a.m.	15	32	27
9:00 a.m.	32	50	46
10:00 a.m.	54	67	67
11:00 a.m.	71	80	85
12:00 p.m.	99	100	95
1:00 p.m.	100	98	100
2:00 p.m.	90	90	98
3:00 p.m.	83	78	92
4:00 p.m.	81	81	86
5:00 p.m.	84	86	79
6:00 p.m.	86	84	71
7:00 p.m.	80	79	69
8:00 p.m.	63	70	60
9:00 p.m.	42	–	51
10:00 p.m.	15	–	38
11:00 p.m.	–	–	–

Additional Data

The parking demand database includes data from strip, neighborhood, community, town center, and regional shopping centers. Some of the centers contain non-merchandising facilities, such as office buildings, movie theaters, restaurants, post offices, banks, health clubs, and recreational facilities.

Many shopping centers, in addition to the integrated unit of shops in one building or enclosed around a mall, include outparcels (peripheral buildings or pads located on the perimeter of the center adjacent to the streets and major access points). These buildings are typically drive-in banks, retail stores, restaurants, or small offices. Although the data herein do not indicate which of the centers studied included peripheral buildings, it can be assumed that some of the data show their effect.

The parking demand data plots and analysis are based on the total gross leasable area (GLA) of the center. In cases of smaller centers without an enclosed mall or peripheral buildings, the GLA could be the same as the gross floor area (GFA) of the center.

The average parking supply ratios for the study sites with parking supply information are the following:

- 5.1 spaces per 1,000 square feet GFA (137 sites) in a general urban/suburban setting
- 4.7 spaces per 1,000 square feet GFA (five sites) in a dense multi-use urban setting

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alabama, Alberta (CAN), Arizona, California, Colorado, Delaware, District of Columbia, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, North Carolina, New Jersey, New York, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Virginia, and Washington.

Future data submissions should attempt to provide information on the composition of each study site (types and number of stores, restaurants, or other tenants within the shopping center).

Source Numbers

3, 18, 21, 32, 39, 47, 87, 88, 89, 103, 142, 145, 152, 153, 154, 174, 175, 176, 179, 202, 203, 204, 205, 209, 215, 219, 224, 241, 265, 274, 313, 314, 315, 431, 432, 433, 436, 438, 441, 511, 525, 527, 531, 533, 542, 556, 558, 565

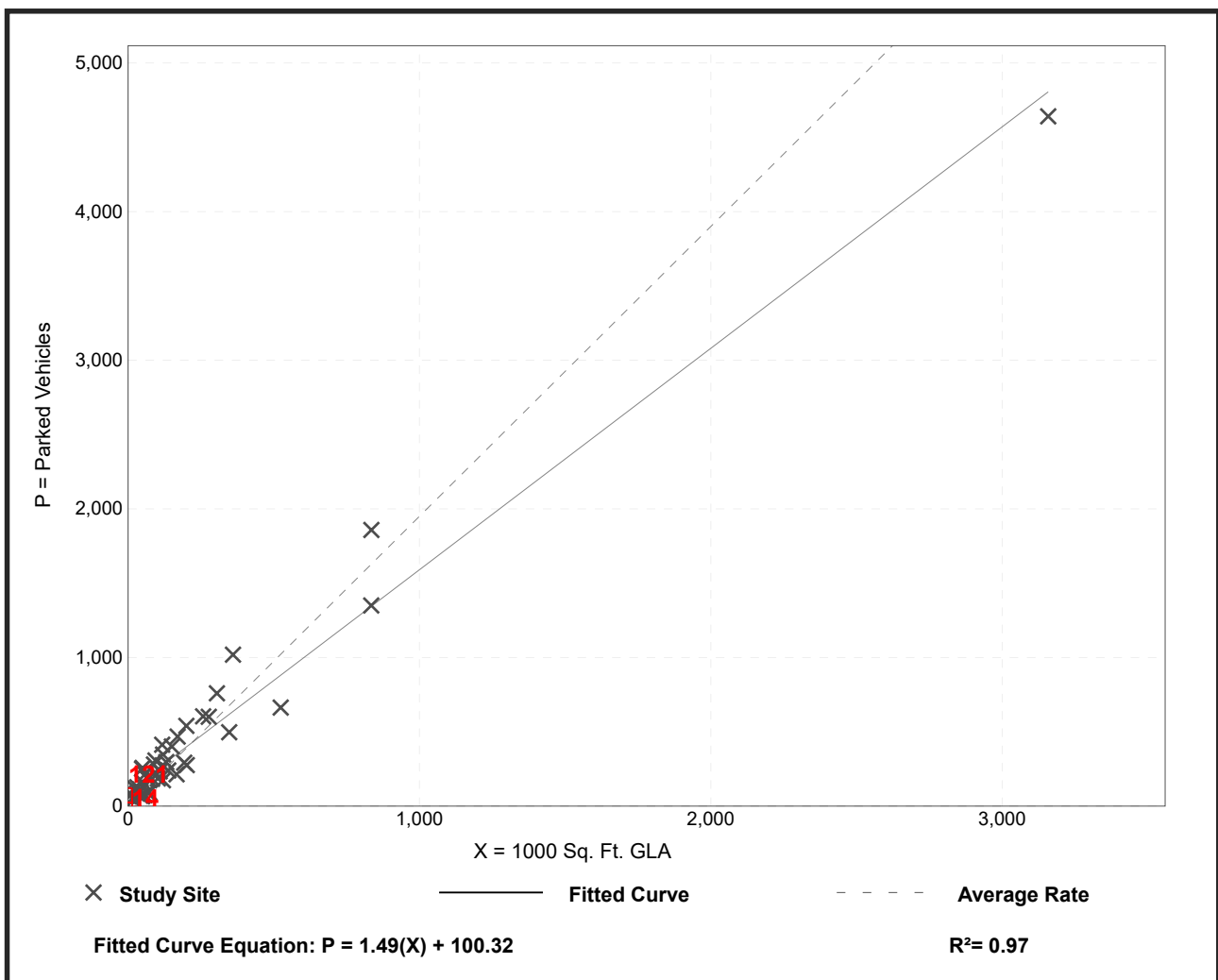
Shopping Center - Non-December (820)

Peak Period Parking Demand vs: 1000 Sq. Ft. GLA
 On a: Weekday (Monday - Thursday)
 Setting/Location: General Urban/Suburban
 Peak Period of Parking Demand: 12:00 - 6:00 p.m.
 Number of Studies: 46
 Avg. 1000 Sq. Ft. GLA: 218

Peak Period Parking Demand per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
1.95	1.27 - 7.98	1.99 / 3.68	1.73 - 2.17	0.75 (38%)

Data Plot and Equation



Shopping Center - Non-December (820)

Peak Period Parking Demand vs: 1000 Sq. Ft. GLA
 On a: Saturday
 Setting/Location: General Urban/Suburban
 Peak Period of Parking Demand: 11:00 a.m. - 5:00 p.m.
 Number of Studies: 58
 Avg. 1000 Sq. Ft. GLA: 313

Peak Period Parking Demand per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
2.91	1.15 - 4.72	2.27 / 3.74	2.72 - 3.10	0.74 (25%)

Data Plot and Equation

