PARKING JUSTIFICATION STUDY

LAKESIDE VILLAGE PLAZA
5353 LAKESHORE ROAD
CITY OF BURLINGTON
REGION OF HALTON

PREPARED FOR:
GLANELM PROPERTY MANAGEMENT

PREPARED BY:
C.F. CROZIER & ASSOCIATES INC.
2800 HIGH POINT DRIVE, SUITE 100
MILTON, ON L9T 6P4

APRIL 2018

CFCA FILE NO. 1281-4451

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CROZIER
CONSULTING ENGINEERS

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Revision Number	Date	Comments
Rev.0	April 2018	Issued for Coordination
Rev.1	April 2018	Issued for First Submission

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1.0 Introduction

C.F. Crozier & Associates Inc. (Crozier) was retained by Glanelm Property Management to undertake a Parking Justification Study for the proposed mixed-use development located at 5353 Lakeshore Road, in the City of Burlington. The purpose of the study is to assess the parking requirements associated with the proposed use, and to determine whether a lower parking supply than required by the Zoning By-Law for the site.

2.0 Existing Conditions

The subject lands currently contain a commercial plaza, and are zoned by the City of Burlington Zoning By-Law 2020 as a Neighbourhood Commercial Zone – CN1-63. Relevant zoning map excerpts have been included in the **Appendix B**.

The subject lands are bounded by Lakeshore Road to the south, Kenwood Avenue to the west, Hampton Heath Road to the east and Skyway Park to the north. Refer to **Figure 1** for the site location.

Lakeshore Road is an east-west roadway with a three-lane cross-section at the site frontage consisting of one lane in each direction and a two-way left-turn median lane. Lakeshore Road is under the jurisdiction of the City of Burlington and is defined as a Minor Arterial according to "Schedule J" of the City of Burlington Official Plan, with a posted speed limit of 50 km/h at the site frontage. Sidewalks are located on both sides of the roadway, separated from the roadway by a boulevard strip. Lakeshore is a bicycle route with on-street shared lane markings for either direction.

Kenwood Avenue is a north-south roadway with a two-lane cross-section, one lane in each direction. Kenwood Avenue is under the jurisdiction of the City of Burlington and is defined as a Collector Roadway according to "Schedule J" of the City of Burlington Official Plan, with a posted speed limit of 40 km/h. Sidewalks are located on both sides of the roadway, separated from the roadway by a boulevard strip.

Hampton Heath Road is a north-south roadway with a two-lane cross-section, on lane in each direction. Hampton Heath Road is under the jurisdiction of the City of Burlington and is defined as a Collector Roadway according to "Schedule J" of the City of Burlington Official Plan, with a posted speed limit of 50 km/h at the site frontage. Sidewalks are located on both sides of the roadway, separated from the roadway by a boulevard strip.

3.0 Development Proposal

The proposed redevelopment of the existing plaza includes mixed-use buildings comprising residential, retail, offices, restaurant and a grocery store. The proposed redevelopment will be implemented in five phases, and it is projected for full-buildout in the year 2025.

As illustrated on the concept plan, dated 21st March, 2018, and phasing plans prepared by Cynthia Zahoruk Architects, the mixed-use development will be completed as follows:

- **Phase One:** Demolish 2,400 m^2 of the existing retail area and redevelopment of demolished area to contain Block B. Block B is a 6-storey (6,000 m^2 GFA) residential building consisting of 5 townhouse units and 46 apartment units.
- **Phase Two:** Demolish an additional 1,500 m^2 of the existing retail area and redevelopment of demolished area to contain Blocks A, E and F. Block A is a 1-storey (560 m^2 GFA) restaurant. Blocks E (14-storey) and F (18-storey) share a common 6-storey podium. The entire E and F have 336 apartment units and 2520 m^2 of retail space.

- **Phase Three:** Demolish an additional 4,270 m^2 of the existing retail/grocery store area and redevelopment of demolished area to contain Block-I and a 1-storey new grocery store (3,175 m^2 GFA). Block-I is 4-storeys and consist of offices (2,700 m^2 GFA) and retail (900 m^2 GFA).

- **Phase Four:** Demolish an additional 2,180 m^2 of the existing retail area and redevelopment of demolished area to contain Blocks C and D. Blocks C and D are both 11-storeys and share a common 4-storey podium. The entire building has 224 apartment units and 2,320 m^2 GFA of retail space.

- **Phase Five:** Redevelop a portion of the existing parking area to contain Blocks G and H. Blocks G (18-storey) and H (10-storey) share a common 6-storey podium. The building has 284 apartment units and 2480 m^2 GFA of retail space.

The existing site accesses to Kenwood Avenue, Lakeshore Road and Hampton Heath Road will be maintained, with a proposed additional access to Kenwood Avenue. Surface parking, as well as underground parking, will be available on-site. A total of 1350 parking spaces (1150 underground and 200 surface parking) will be provided on-site. Refer to the Figures section of this report for the concept plan, dated 21st March, 2018, and phasing plans prepared by Cynthia Zahoruk Architects.

It is assumed that, the underground parking spaces will be used for the residential tenant and offices, while the surface parking will be shared by the visitor and commercial uses.

4.0 Parking Requirements

4.1 Zoning By-Law Parking Requirements

Section 2.25 of the City of Burlington Zoning By-Law 2020 was used to calculate the number of parking spaces required by the proposed mixed-use plaza development. The parking requirement rates for retail store, restaurant, office and grocery store from the By-law were used to calculate the required parking supply. Relevant Zoning By-Law excerpts are provided in **Appendix B**.

The Zoning By-Law parking rates are 1.25 and 1.50 for one and two-bedroom units respectively, while a rate of 0.35 is required for visitor parking. However, parking rates of 1.00 and 1.25 for one and two-bedroom units were agreed upon in meetings between Cynthia Zahoruk Architects and the City of Burlington. Additionally, 0.25 parking spaces per unit was considered acceptable for the visitor parking. A 20% reduction in Gross Floor Area (GFA) was applied to the non-residential uses to account for areas dedicated for amenities such as storage, mechanical rooms, washrooms, stairs, and elevators. These established rates have been used for analysis herein as illustrated in **Tables 1 and 2**.

In order to completely determine the capacity of the proposed parking supply to support parking demand at any time throughout the multi-phase development of the mixed-use property, the parking requirements per the City of Burlington Zoning By-Law 2020 at the end of each phase were analyzed and are presented in **Table 1**.

Additionally, analysis has been conducted to determine the capacity of parking provided for specific building blocks to support the parking demand generated within the buildings. This analysis is based on the City of Burlington Zoning By-Law 2020 parking requirements and established rates for the residential units. Interconnection between parking lots was taken into account and building blocks were aggregated accordingly. The underground parking is such that:

- Blocks A, E, F, G, and H are connected at the 3 levels of underground parking

- Blocks B, C, and D are connected at the 3 levels of underground parking
- Block I, and the grocery store are connected at the 3 levels of underground parking
- Block D and I are connected at one level of underground parking

A comparison of the parking requirements per the City of Burlington Zoning By-Law 2020 for the aggregated building blocks and the proposed parking supply are illustrated in **Table 2**.

Table 1 summarizes the City of Burlington Zoning By-Law 2020 parking requirements for the multi-phase mixed-use development based on the phase development plan.

Table 1: Zoning By-Law Parking Requirement analysis by Phase

Land Use	Parking Rates	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
Townhouse	2 / townhouse unit & 0.25 / visitor	5 units: 10 & 5 units: 1	-	-	-	-
Apartment	1.25 /two bed-units & 0.25 / visitor	18 units: 23 18 units: 5	120 units:150 120 units: 30	-	72 units: 90 72 units: 18	110 units:137.5 110 units: 27.5
	1.0 /one bed-unit & 0.25 / visitor	33 units: 33 & 33 units: 8	216 units:216 216 units: 54	-	152 units:152 152 units: 36	174 units:174 174 units:43.5
Retail (Net GFA of demolished/ built)	4(0.8)[y] /100 m^2 GFA (5% less)[x]	4775 m^2: 153	6355 m^2: 203	3080 m^2: 94	6300 m^2: 192	8220 m^2: 250
Restaurant	25(0.8)[y] /100 m^2 GFA (5% less)[x]	-	560 m^2: 106	*(106)*	*(106)*	*(106)*
Office	3.5(0.8)[y] /100 m^2 GFA (5% less)[x]	-	-	2700 m^2: 72	*(72)*	*(72)*
Grocery Store	10(0.8)[y] /100 m^2 GFA (5% less)[x]	*(241)*	*(241)*	3175 m^2: 241	*(241)*	*(241)*
Parking Required for the Phase	Residential– Tenant/ Office	66	366	72	242	311.5
	Visitor /Non-Resid.[z]	402	561	441	550	609
Total Parking Required at End of Phase	Residential– Tenant/ Office	66	432	504	746	1057
	Visitor /Non-Resid.[z]	402	561	441	550	609
Total Parking Supplied	Residential– Tenant/ Office	90	390	390	940	1150
	Visitor /Non-Resid.[z]	538	372	344	338	200
Parking Deficiency	Residential– Tenant/ Office	None	42	**114**	None	None
	Visitor /Non-Resid.[z]	None	189	97	212	**409**
	Total	None	231	211	212	**409**

Note x: City of Burlington By-Law 2020 Part 5 Section 4.6 (d); y: 20% reduction for areas dedicated to amenities
z: City of Burlington By-Law 2020 Part 5 Section 4.6 (c) and (d)

Table 2 summarizes the City of Burlington Zoning By-Law 2020 parking requirements for the multi-phase mixed-use development based on the shared parking aggregation of the building blocks.

Table 2: Zoning By-Law Parking Requirements for aggregated building blocks

Combined Blocks	Number of Dwellings/ GFA	Parking Rates	Parking Spaces Required	Total Parking Required	Total Parking Supplied	Parking Deficiency
Residential Blocks A, E, F, G & H	390 Units (Apartment)	1.0 /one bed-unit & (0.25 / visitor)	390 (98)	677 residential/ office	510 residential/ office	167 spaces
	230 units (Apartment)	1.25 /two bed-units & (0.25 / visitor)	287 (58)			
	560 m^2 (Restaurant)	25 (0.8)[y] /100 m^2 GFA (5% less)[x]	106	263 Non-residential/ Visitor[z]	200 Non-residential/ Visitor	Shared
	5000 m^2 (Retail)	4(0.8)[y] /100 m^2 GFA (5% less)[x]	152			
Residential Blocks B, C & D	185 Units (Apartment)	1.0 /one bed-unit & (0.25 / visitor)	185 (46)	308 residential/ office	640 residential/ office	None
	90 units (Apartment)	1.25 /two bed-units & (0.25 / visitor)	113 (23)			
	5 units (Townhouse)	2 / townhouse unit & (0.25 / visitor)	10 (1)	72 Non-residential/ Visitor[z]	200 Non-residential/ Visitor	Shared
	2320 m^2 (Retail)	4(0.8)[y] /100 m^2 GFA (5% less)[x]	71			
Block I, and Grocery Store	900 m^2 (Retail)	4(0.8)[y] /100 m^2 GFA (5% less)[x]	27	72 residential/ office	Shared with Blocks B, C & D	None
	2700 m^2 (Office)	3.5(0.8)[y] /100 m^2 GFA (5% less)[x]	72			
	3175 m^2 (Grocery store)	10(0.8)[y] /100 m^2 GFA (5% less)[x]	241	274 Non-residential/ Visitor[z]	200 Non-residential/ Visitor	Shared
Total for Entire Mixed-Use Development				1057 residential/ office	1150 residential/ office	None
				609 Non-residential/ Visitor[z]	200 Non-residential/ Visitor	409 spaces

Note x: City of Burlington By-Law 2020 Part 5 Section 4.6 (d); y: 20% reduction for areas dedicated to amenities
z: City of Burlington By-Law 2020 Part 5 Section 4.6 (c) and (d)

As outlined in **Table 1**, the proposed development is expected to satisfy the City of Burlington requirement for tenant and office parking after full buildout of the mixed-use development as indicated at the end of phase five. However, the critical phase with regards to tenant and office parking occurs at the end of phases two and three, where a deficiency of 42 and 114 parking spaces have been identified, respectively.

Parking supply for the visitor and non-residential uses is deficient from phase two until full buildout, with the critical deficiency identified after full buildout as presented in **Table 1**. According to the City of Burlington Zoning By-Law 2020, a total deficiency of 409 parking spaces is forecasted. It is noted that the excess residential tenant parking of 93 spaces will be assigned to commercial and visitor parking where necessary.

As presented in **Table 2**, the interconnected underground tenant parking for blocks A, E, F, G and H, are 167 spaces deficient of the zoning requirements for the blocks combined. The interconnected underground tenant parking at blocks B, C and D are in excess of zoning requirements by 332 spaces. Some of the excess underground tenant parking spaces at blocks B, C and D will be allocated to blocks A, E, F, G and H to cover the deficiency. Similar to **Table 1**, **Table 2** presents a total deficiency of 409 visitor/ commercial parking spaces for the entire mixed-use development.

4.2 Surrogate Site Parking Demand

In order to forecast the parking demand for the proposed mixed-use development, parking counts undertaken at sites with similar uses as the proposed redevelopment were examined. Based on the surrogate sites' data, peak parking demand rates were determined and utilized for a comparative analysis to determine peak parking demands for the proposed mixed-use redevelopment.

4.2.1 Residential Surrogate Sites

Two residential surrogate sites were utilized as a comparative measure to forecast future parking demand at the proposed development.

5340 Lakeshore Road, City of Burlington

The 5340 Lakeshore Road development was selected as a surrogate site as it is a high-rise apartment building with surface and underground parking, located across from the proposed development along Lakeshore Road. A total of 42 dwelling units are located within the surrogate site, with a total of 60 tenant parking spaces underground, three tenant parking spaces on the surface and 16 visitor parking spaces on the surface. A parking utilization survey was completed by the facility's own staff on Wednesday March 29th, 2017, from which a parking utilization rate was derived for tenant and visitor parking spaces. The data and calculation are provided in **Appendix C**.

6550 Glen Erin Drive, City of Mississauga

The 6550 Glen Erin Drive development was selected as a surrogate site as it is a high-rise apartment building with surface and underground parking. It is located in an area similar to that of the proposed development, composed of residential and commercial developments. The parking survey was undertaken by Ontario Traffic Inc. between Tuesday, September 6th 2016 and Friday, September 16th, 2016. The dates were selected to survey the peak parking demand at the subject site during peak parking hours for residential and visitor parking. Surveys of residential parking recorded the number of occupied spaces between the hours of 1 a.m. and 5 a.m. Surveys of visitor parking recorded the number of occupied spaces on Friday between 6:00 p.m. and 10:00 p.m., and on Saturday between 12:00 noon and 4:00 p.m. Using the number of cars parked and the number of dwelling units of the surrogate site, the maximum peak parking demand rates were calculated. The parking survey results and rate calculation are provided in **Appendix C**.

4.2.2 Commercial Surrogate Site

A survey of the existing commercial plaza (at 5353 Lakeshore Road, Burlington) was completed by Ontario Traffic Inc. on Saturday April 1st, 2017, and Wednesday April 5th, 2017, between 9 a.m. and 9 p.m. These hours were selected as they incorporate the peak hours of operations of the majority of the commercial plaza uses.

The floor area of the existing plaza, as listed in the site statistics, was used in association with the parking survey results in order to derive a parking utilization rate for the plaza. This rate will be applied to the commercial components of the proposed redevelopment to determine the required parking supply for the non-residential portion of the development. The parking survey results and rate calculation are provided in **Appendix B**. Given that, the commercial plaza had no residential components, it is noted that the rates obtained are likely an overestimation and the forecast parking requirement based on the calculated maximum rate is conservative. This is because the rate does not account for internal trips from the onsite residents who will not require parking.

4.2.3 Office Building Surrogate Site

A parking survey undertaken at an office building located at 5450 Explorer Drive, in the City of Mississauga was used to forecast parking required for the office. The parking surveys at 5450 Explorer Drive were undertaken on Thursday, March 23rd, 2017 and Tuesday, March 28th, 2017. The surveys at both locations were conducted between the hours of 8:00 a.m. to 12:00 p.m. and 1:00 p.m. to 6:00 p.m. The dates and hours were selected to capture the peak parking demand of the office building.

Using the number of cars parked and the Gross Floor Area (GFA) of the surrogate site, the maximum peak parking demand rate for the office was calculated. The parking survey results and rate calculation are provided in **Appendix C**.

Table 3 summarizes the peak parking rates calculated from the residential, commercial plaza and office surrogate sites.

Table 3: Peak Parking Rates from Surrogate Site Data

Use	Surrogate Site	Maximum Peak Parking Demand Rate
Apartment Building	5340 Lakeshore Road	1.07 tenant spaces /unit
		0.10 visitor spaces /unit
	6550 Glen Erin Drive	1.02 tenant spaces /unit
		0.07 visitor spaces /unit
Office Building	5450 Explorer Drive	2.34 spaces /100 m^2
Existing Commercial Plaza	Existing Commercial Plaza	1.67 spaces /100 m^2

Based on the peak rates for the surrogates presented in **Table 3**, the maximum peak parking rates for tenant parking is 1.07 spaces per unit, visitor parking is 0.10 spaces per unit, office is 2.34 per 100 m^2 and 1.67 spaces per 100 m^2 for the commercial uses.

Table 4 summarizes the parking requirements forecasted for the mixed-use development based on the proposed development plan by phase.

Table 4: Parking Requirements Forecast Based on Surrogate Site Data for Aggregate Blocks

Land Use	Parking Rates	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
Residential Tenant	1.07 / unit	56 units: 60	336 units: 359	-	224 units: 240	284 units: 304
Residential Visitor	0.10 / unit	56 units: 6	336 units: 34	-	224 units: 22	284 units: 28
Commercial (Net GFA of demolished/ built)	1.67(0.8)[y] / 100 m^2 GFA	7950 m^2: 106	10,090 m^2: 135	6255 m^2: 84	4160 m^2: 56	11955 m^2: 160
Office	2.34(0.8)[y] / 100 m^2 GFA	-	-	2700 m^2: 51	*(51)*	*(51)*
Parking Required for the Phase	Residential–Tenant and Offices	60	359	51	240	304
	Visitor /Non-Resid.[z]	108	138	86	57	163
Total Parking Required at End of Phase	Residential–Tenant and Offices	60	419	470	710	1014
	Visitor /Non-Resid.[z]	108	138	86	57	163
Total Parking Supplied	Residential–Tenant and Offices	90	390	390	940	1150
	Visitor /Non-Resid.[z]	538	372	344	338	200
Parking Deficiency	Residential–Tenant and Offices	None	**29**	**80**	None	None
	Visitor /Non-Resid.[z]	None	None	None	None	None
	Total	None	None	None	None	None

y: 20% reduction for areas dedicated to amenities z: City of Burlington By-Law 2020 Part 5 Section 4.6 (c) and (d)

As outlined in **Table 4**, the parking supply for the proposed mixed-use redevelopment is sufficient for both residential tenant plus offices and residential visitor plus non-residential uses at full buildout as indicated at the end of phase five. Additionally, parking supply at the end of each of the other phases is sufficient for the visitor and commercial (non-residential) uses. The only deficiency is the residential tenant and office parking at the end of phases two and three, with a maximum deficiency of 80 parking spaces. Given that the available surface parking supply for visitor and commercial at the end of those phases have more than 100 excess parking spaces, the tenant or office parking deficiency can be accommodated during those phases. Therefore, no parking deficiency issues are forecast based on analysis by phase.

Table 5 summarizes the parking requirements forecasted for the mixed-use development based on the shared parking aggregation of the building blocks.

Table 5: Parking Requirements Forecast Based on Surrogate Site Data for each Phase

Combined Blocks	Number of Dwellings/ GFA	Parking Rates	Parking Spaces Required	Total Parking Required	Total Parking Supplied	Parking Deficiency
Residential Blocks A, E, F, G & H	Residential 620 units	1.07 / unit	663	663 residential tenant/ offices	510 residential tenant/ offices	153 spaces
		0.10 / unit	62			
	Commercial 5560 m^2	1.67(0.8)[y] / 100 m^2 GFA	74	75 Non-residential/ Visitor[z]	200 Non-residential /Visitor	None
Residential Blocks B, C & D	Residential 280 units	1.07 / unit	300	300 residential tenant/ offices	640 residential tenant/ offices	None
		0.10 / unit	28			
	Commercial 2320 m^2	1.67(0.8)[y] / 100 m^2 GFA	31	32 Non-residential/ Visitor[z]	200 Non-residential /Visitor	None
Block I, and Grocery Store	Office 2700 m^2	2.34(0.8)[y] / 100 m^2 GFA	51	51 residential tenant/ offices	Shared with Blocks B, C & D	None
	Commercial 4075 m^2	1.67(0.8)[y] / 100 m^2 GFA	56	56 Non-residential/ Visitor[z]	200 Non-residential /Visitor	None
Total for Entire Mixed-Use Development				1014 residential tenant/ offices	1150 residential tenant/ offices	None
				163 Non-residential/ Visitor[z]	200 Non-residential /Visitor	None

y: 20% reduction for areas dedicated to amenities z: City of Burlington By-Law 2020 Part 5 Section 4.6 (c) and (d)

As presented in **Table 5**, the interconnected underground tenant parking for blocks A, E, F, G and H, are 153 spaces deficient of the parking forecast for the blocks combined based on the surrogate site peak parking demand rates. The interconnected underground tenant parking at blocks B, C and D are in excess of requirements by 340 spaces. Some of the excess underground tenant parking spaces at blocks B, C and D will be allocated to blocks A, E, F, G and H to cover the deficiency.

The retail at Block-I, plus the grocery store and all other commercial uses at the other blocks are forecasted to require a maximum of 163 parking spaces, resulting in a surplus of 37 spaces compared to the proposed supply for the site. It is noted that the rate for the commercial plaza is likely an overestimation as no residential units currently exist on the property, therefore, the forecasted parking requirement of 163 spaces is conservative.

The surrogate site peak rates forecast a total parking demand of 1177 spaces for the entire development, resulting in a surplus of 173 parking spaces compared the total parking supply of 1350 spaces proposed for the site.

4.3 Transportation Tomorrow Survey (TTS) Data

In order to further determine a parking rate and assess parking for the proposed development, Transportation Tomorrow Survey (TTS) data was used. TTS data was used to determine the vehicle ownership rate per household based on the type of household and the location of the household.

The proposed development is located in Zone 4075 of the TTS 2006 Traffic Zones. The TTS data and calculations of the vehicle ownership rate for Zone 4075 are included in **Appendix C**. the TTS data resulted in parking rate requirements of 0.83 spaces per apartment unit and 1.25 spaces per townhouse unit. TTS does not provide data for non-residential or visitor uses. **Table 6** summarizes the parking requirements for the residential portion of the development.

Table 6: TTS Parking Rate

Development	Number of Dwellings	Vehicle Ownership Rate	Parking Required
Apartment (Zone 4075)	895	0.83 vehicles per apartment unit	743 spaces
Townhouse (Zone 4075)	5	1.25 vehicles per apartment unit	6 spaces
Total Residential Parking Required			**749 spaces**

As aforementioned, TTS data does not include visitor parking, nor commercial uses, therefore, the forecasted 51 spaces for offices and 163 spaces for commercial/ visitor uses from the surrogate site calculations will be used. The total number of parking spaces required for the entire mixed-use multi-phase development is 963 parking spaces per the TTS/surrogate data calculations. Therefore, the TTS data shows that the site has a parking supply surplus of 387 parking spaces.

5.0 Travel Demand Management

There are some of low impact opportunities for the development to promote Travel Demand Management (TDM) measures in support of reduced automobile use.

5.1 Transit Proximity

Multiple Burlington Transit routes operate in the immediate surroundings of the proposed redevelopment. Route 20 – Burloak – Lakeshore and Route 40 – Pinedale – Hampton Heath both allow access from the proposed redevelopment to the Appleby Mall as well as the Appleby GO Station. Route 50 – Burlington South allows access from the proposed development to the west of the City of Burlington, with a stop at the Burlington GO Station, the downtown of Burlington, and other city attractions such as the Appleby Mall and the Mapleview Mall. Finally Route 301 – Pinedale allows access from the proposed redevelopment to the Appleby Mall and the Eastway Plaza. Therefore, the site is accessible via transit. Relevant maps are included in **Appendix D**.

5.2 Cycling Facilities

Lakeshore Road has bicycle lanes located on both sides of the roadway, as well as a multi-use path, per the Long-Term Cycling Master Plan Map. Additionally, Kenwood Avenue and Spruce Avenue are both considered bicycle priority streets per the Long-Term Cycling Master Plan Map. These cycling infrastructures are connected to the City of Burlington cycling network through the road network. Therefore, the site is accessible via cycling facilities. Relevant maps are included in **Appendix D**.

5.3 Proposed TDM Measures

The provision of trail and cycling route maps within the lobby of each floor of the high-rise apartment buildings will increase awareness of nearby pedestrian and cycling routes, and provide incentive for residents and visitors to utilize the existing non-auto network. Prior to occupancy, future residents can be informed of the active transportation and TDM opportunities of the proposed development.

Furthermore, upon occupancy, a TDM information package comprised of active transportation network maps, transit maps/schedules and a loadable PRESTO card can be provided to residents. Information on Smart Commute and Car share opportunities may also be beneficial to educate residents of alternative transportation modes for their existing and future areas of employment.

5.4 Summary

Given the conveniently close proximity of transit and cycling infrastructure, as well as the proposed TDM measures for this development, lower auto-trips are forecasted for the proposed development, which will result in a lower parking utilization.

6.0 Conclusions

The proposed mixed-use redevelopment at 5353 Lakeshore Road requires a total of 1666 parking spaces (1057 tenant/office parking and 609 visitor/commercial) according to the City of Burlington Zoning By-Law 2020. The parking requirements exceed the total parking supply of 1350 parking spaces (1150 tenant/office parking and 200 visitor/commercial) proposed for the site.

Based on the peak parking demand rate determined from the surrogate sites (at 5340 Lakeshore Road, 5450 Explorer Drive and 6550 Glen Erin Drive), a total peak period demand of 1177 parking spaces is forecasted to be sufficient for the entire development. This results in a surplus of 173 parking spaces. Additionally, parking supply is forecasted to be sufficient for every phase of the multi-phase development and for the aggregated building blocks based on parking lot connections (sharing between blocks where necessary).

The Transportation Tomorrow Survey (TTS) data calculates an even lower parking requirement of 749 spaces for the residential uses compared to the surrogate site data. Combining this lower residential forecast with the surrogate site forecast of 163 spaces for the commercial uses and 51 spaces for the offices, creates a total requirement of 963 parking spaces. Therefore, a surplus of 387 spaces is forecast per TTS data.

Accordingly, based on the surrogate site survey data, and the Transportation Tomorrow Survey (TTS) data, the proposed mixed-use development at 5353 Lakeshore Road can be supported from a parking justification perspective. The forecasted peak parking demands can be accommodated by the proposed supply of 1350 parking spaces (1150 tenant/office parking and 200 visitor/commercial).

Respectfully submitted by,

C.F. CROZIER & ASSOCIATES INC.

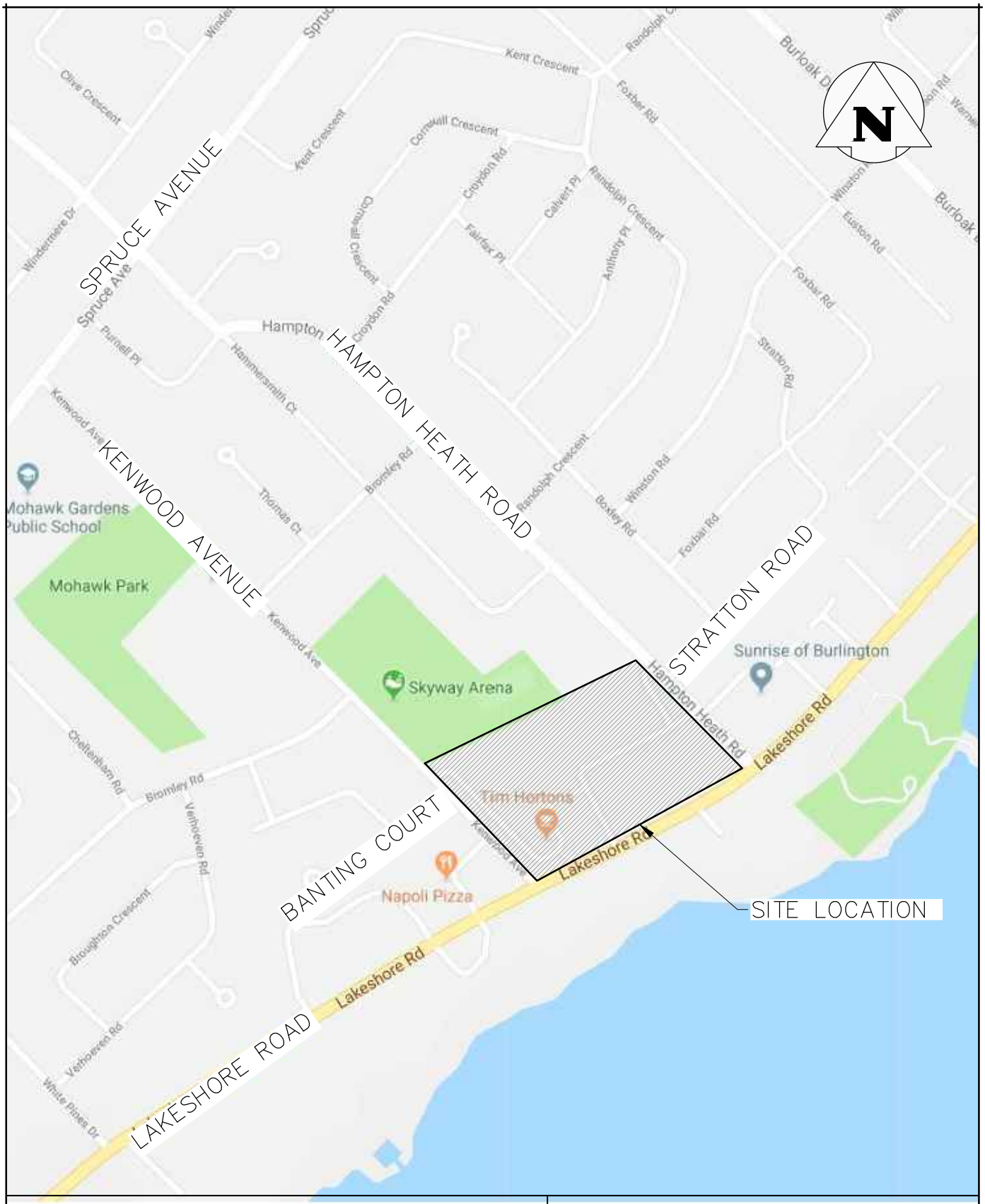
Peter Apasnore, MASc., E.I.T.
Transportation

C.F. CROZIER & ASSOCIATES INC.

R. Aaron Wignall
Project Manager, Transportation

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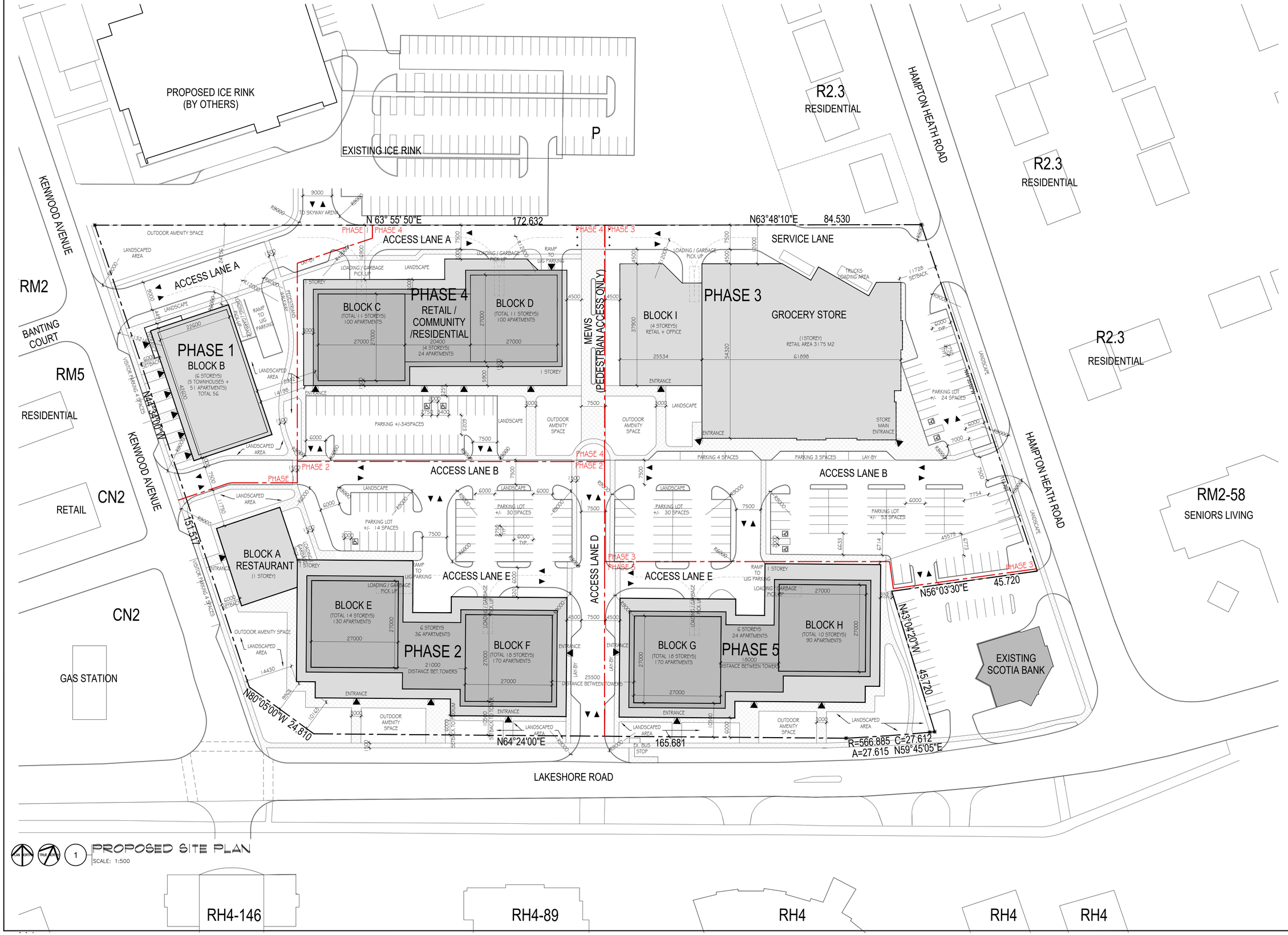


LAKESIDE VILLAGE PLAZA
CITY OF BURLINGTON

SITE LOCATION

CROZIER & ASSOCIATES Consulting Engineers
2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905 875-0026 T
905 875-4915 F
www.cfcrozier.ca

Drawn	Design	Project No.	
R.G.			1281–4451
Check	Check	Scale	Dwg.
P.A.	P.A.	N.T.S	FIG. 01



1 PROPOSED SITE PLAN
SCALE: 1:500

CYNTHIA ZAHORUK
ARCHITECTS
3077 NEW STREET,
BURLINGTON, ON L7N1M6
905.331.4480

ONTARIO ASSOCIATION OF ARCHITECTS
CYNTHIA ZAHORUK
LICENCE
4488

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DD/MM/YY	REVISION
21/3/2018	ISSUED FOR PLANNERS REVIEW

SCALE: 1 : 500
DRAWN BY: N.S.
PRINT DATE: 04/08/2017

LAKESIDE VILLAGE

MIXED USE DEVELOPMENT
5353 LAKESHORE ROAD, BURLINGTON, ON

PROPOSED SITE PLAN

A 1.0

	PHASE 1
	BLOCK B - RESIDENTIAL
EX. AREA TO BE DEMOLISHED	2,400 SQ.M.
EXISTING AREA TO REMAIN	7,950 SQ.M.
NEW FLOOR AREA	6,000 SQ.M.
EX. PARKING TO REMAIN	534 SPACES
NEW SURFACE PARKING	4 SPACES
NEW U/G PARKING	90 SPACES
TOTAL PROPOSED PARKING	628 SPACES

NOTES:

- PHASING STRATEGY HAS TAKEN INTO CONSIDERATION THE FOLLOWING PARAMETERS:
- MOST EFFICIENT SERVICING SEQUENCE
- TRAFFIC AND PARKING PERSPECTIVE
- EXISTING TENANTS RELOCATION

-THIS PHASING STRATEGY IS SUBJECT TO CHANGE AND UPDATES BASED ON DEVELOPERS AND MARKET NEEDS.

-LOCATION OF PHASE LINES IS SUBJECT TO CHANGE BASED ON STRUCTURAL REVIEW FOR THE EXISTING BUILDING AND DETERMINATION OF THE MOST SUITABLE LOCATION.



1 PHASE 1
SCALE: 1:500

CYNTHIA ZAHORUK
ARCHITECTS
3077 NEW STREET,
BURLINGTON, ON L7N1M6
905.331.4480

ONTARIO ASSOCIATION OF ARCHITECTS
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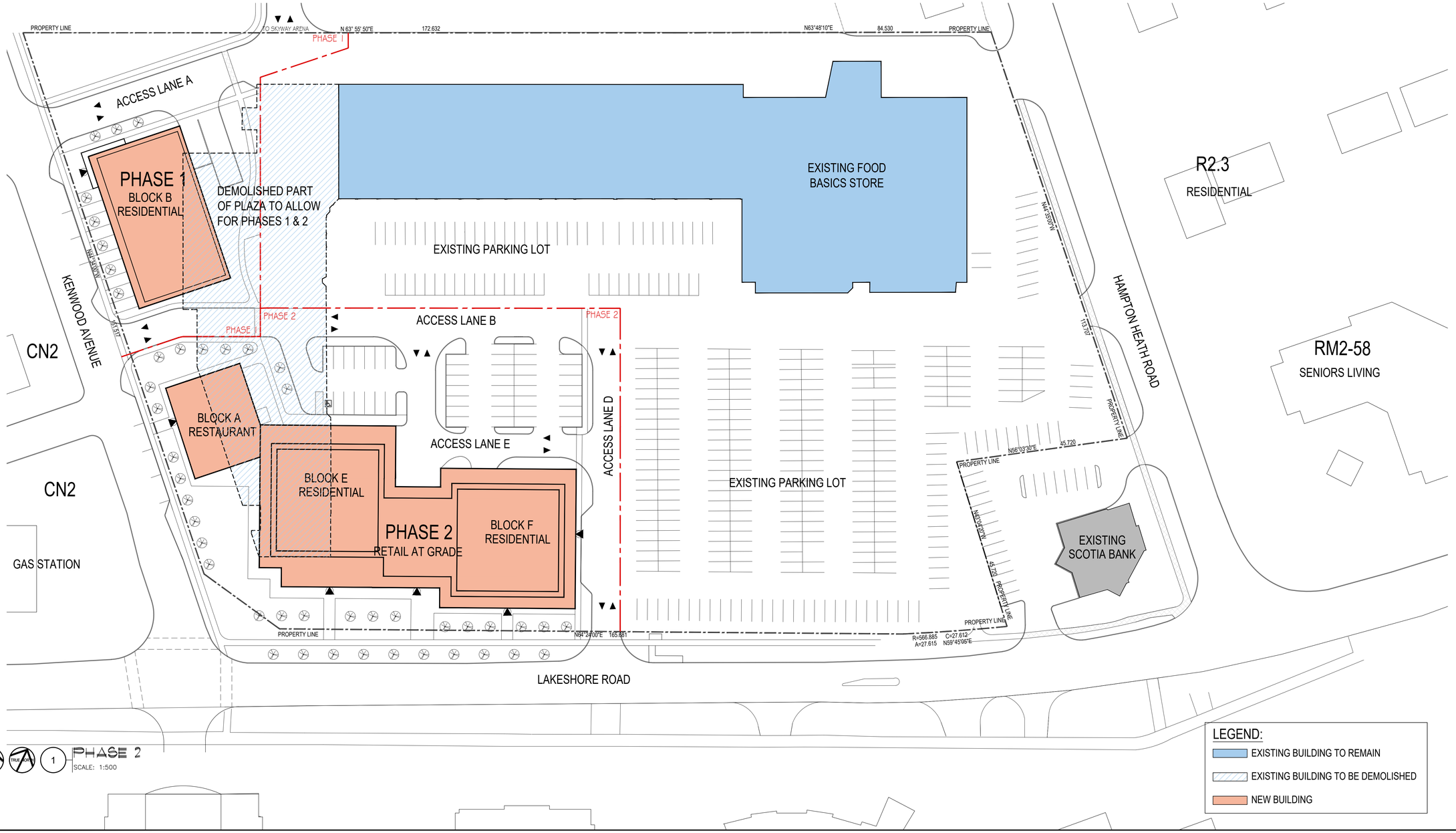
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LAKESIDE VILLAGE
MIXED USE DEVELOPMENT
5353 LAKESHORE ROAD, BURLINGTON, ON

PROPOSED PHASING PLAN - PHASE 1

PH 1.0

	PHASE 1	PHASE 2	OVERALL SITE
	BLOCK B - RESIDENTIAL	BLOCKS A - E - F - RETAIL AT GRADE - RESIDENTIAL	
EX. AREA TO BE DEMOLISHED	2,400 SQ.M.	3,900 SQ.M.	3,900 SQ.M.
EXISTING AREA TO REMAIN	7,950 SQ.M.	6,450 SQ.M.	6,450 SQ.M.
NEW FLOOR AREA	6,000 SQ.M.	30,100 SQ.M.	36,100 SQ.M.
EX. PARKING TO REMAIN	534 SPACES	320 SPACES	320 SPACES
NEW SURFACE PARKING	4 SPACES	48 SPACES	52 SPACES
NEW U/G PARKING	90 SPACES	300 SPACES	390 SPACES
TOTAL PROPOSED PARKING			762 SPACES



1 PHASE 2
SCALE: 1:500

CYNTHIA ZAHORUK
ARCHITECTS
3077 NEW STREET,
BURLINGTON, ON L7N1M6
905.331.4480

ONTARIO ASSOCIATION OF ARCHITECTS
CYNTHIA ZAHORUK
LICENCE
4488

ONTARIO ASSOCIATION OF ARCHITECTS

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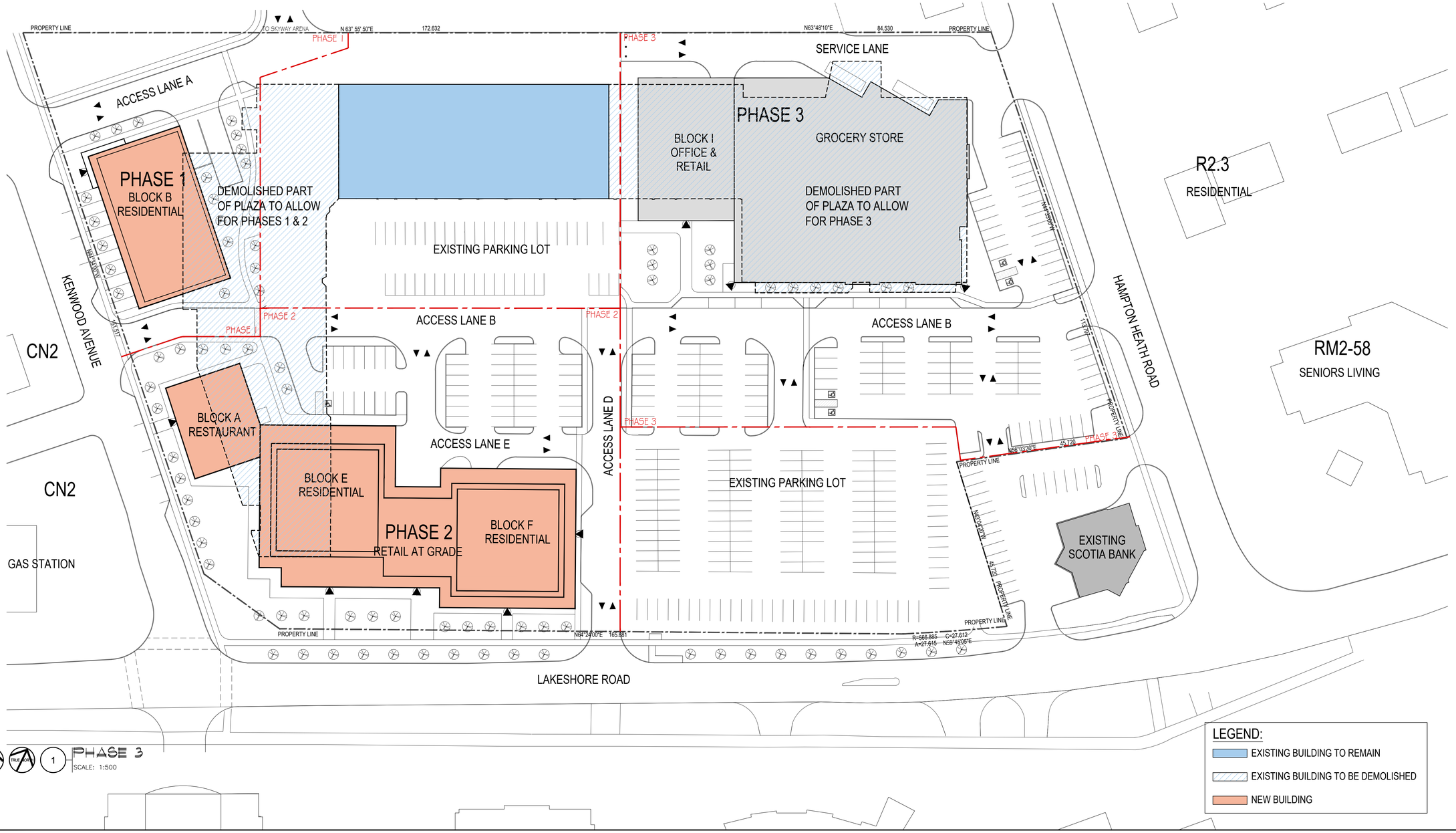
SCALE: 1 : 500
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PRINT DATE: 04/08/2017

LAKESIDE VILLAGE
MIXED USE DEVELOPMENT
5353 LAKESHORE ROAD, BURLINGTON, ON

PROPOSED PHASING PLAN - PHASE 2

PH 2.0

	PHASE 1	PHASE 2	PHASE 3	OVERALL SITE
	BLOCK B - RESIDENTIAL	BLOCKS A - E - F - RETAIL AT GRADE - RESIDENTIAL	BLOCKS I & GROCERY STORE - RETAIL & OFFICES	
EX. AREA TO BE DEMOLISHED	2,400 SQ.M.	3,900 SQ.M.	8,170 SQ.M.	8,170 SQ.M.
EXISTING AREA TO REMAIN	7,950 SQ.M.	6,450 SQ.M.	2,180 SQ.M.	2,180 SQ.M.
NEW FLOOR AREA	6,000 SQ.M.	30,100 SQ.M.	6,775 SQ.M.	42,870 SQ.M.
EX. PARKING TO REMAIN	534 SPACES	320 SPACES	178 SPACES	178 SPACES
NEW SURFACE PARKING	4 SPACES	48 SPACES	114 SPACES	166 SPACES
NEW U/G PARKING	90 SPACES	300 SPACES	--	390 SPACES
TOTAL PROPOSED PARKING				734 SPACES



1 PHASE 3
SCALE: 1:500

CYNTHIA ZAHORUK
ARCHITECTS
3077 NEW STREET,
BURLINGTON, ON L7N1M6
905.331.4480

ONTARIO ASSOCIATION OF ARCHITECTS
CYNTHIA ZAHORUK
LICENCE
4488

ONTARIO ASSOCIATION OF ARCHITECTS

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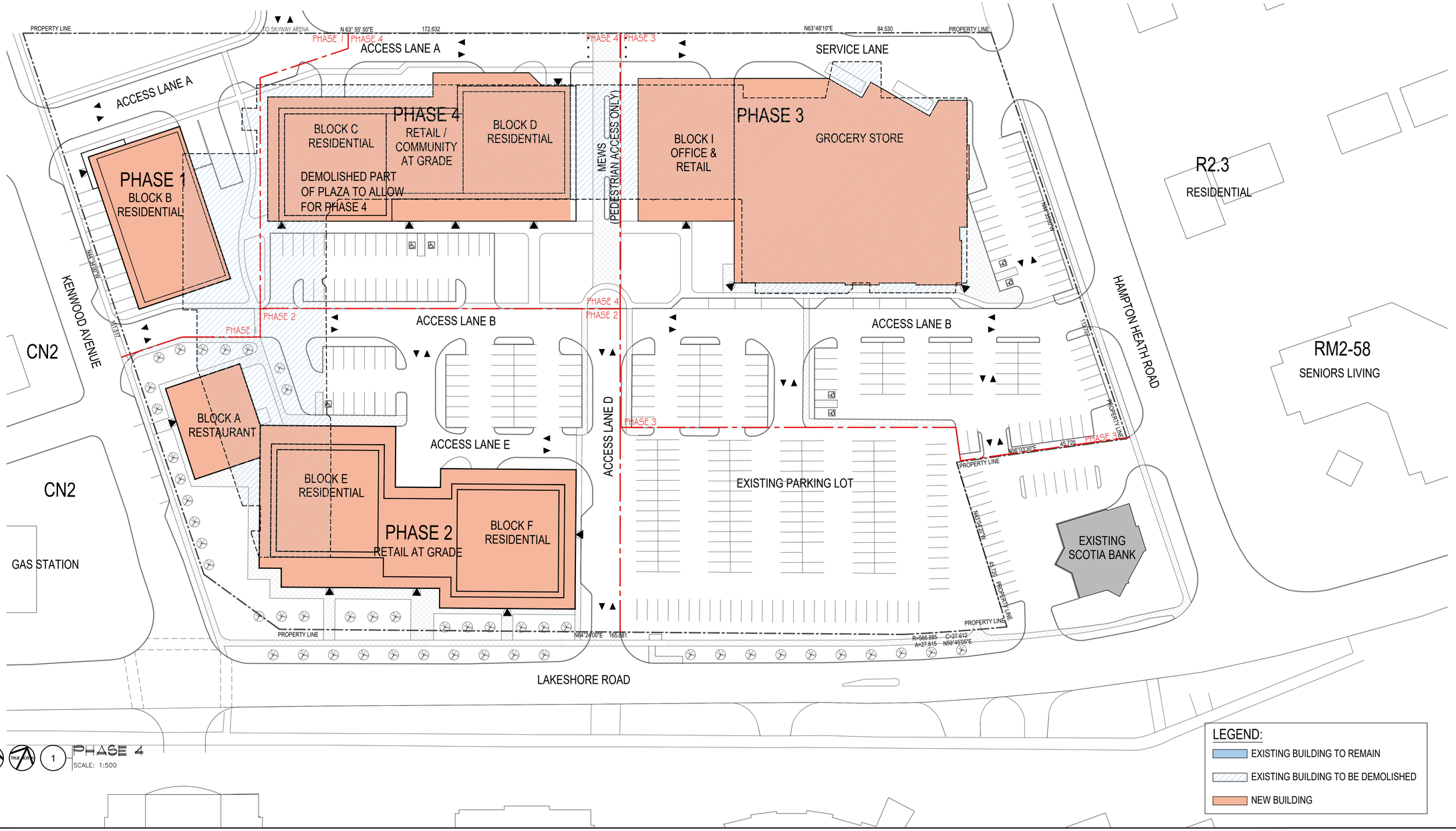
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PRINT DATE: 04/08/2017

LAKESIDE VILLAGE
MIXED USE DEVELOPMENT
5353 LAKESHORE ROAD, BURLINGTON, ON

PROPOSED PHASING PLAN - PHASE 3

PH 3.0

	PHASE 1	PHASE 2	PHASE 3	PHASE 4	OVERALL SITE
	BLOCK B - RESIDENTIAL	BLOCKS A - E - F - RETAIL AT GRADE - RESIDENTIAL	BLOCKS I & GROCERY STORE - RETAIL & OFFICES	BLOCKS C & D-RETAIL & OFFICES AT GRADE-RES.	
EX. AREA TO BE DEMOLISHED	2,400 SQ.M.	3,900 SQ.M.	8,170 SQ.M.	10,350 SQ.M.	10,350 SQ.M.
EXISTING AREA TO REMAIN	7,950 SQ.M.	6,450 SQ.M.	2,180 SQ.M.	--	--
NEW FLOOR AREA	6,000 SQ.M.	30,100 SQ.M.	6,775 SQ.M.	21,720 SQ.M.	64,590 SQ.M.
EX. PARKING TO REMAIN	534 SPACES	320 SPACES	178 SPACES	138 SPACES	138 SPACES
NEW SURFACE PARKING	4 SPACES	48 SPACES	114 SPACES	34 SPACES	200 SPACES
NEW U/G PARKING	90 SPACES	300 SPACES	--	550 SPACES	940 SPACES
TOTAL PROPOSED PARKING					1278 SPACES



PLAN NORTH TRUE NORTH 1 PHASE 4
SCALE: 1:500

CYNTHIA ZAHORUK
ARCHITECTS
3077 NEW STREET,
BURLINGTON, ON L7N1M6
905.331.4480

ONTARIO ASSOCIATION of ARCHITECTS
CYNTHIA ZAHORUK
LICENCE
4488
ONTARIO ASSOCIATION OF ARCHITECTS

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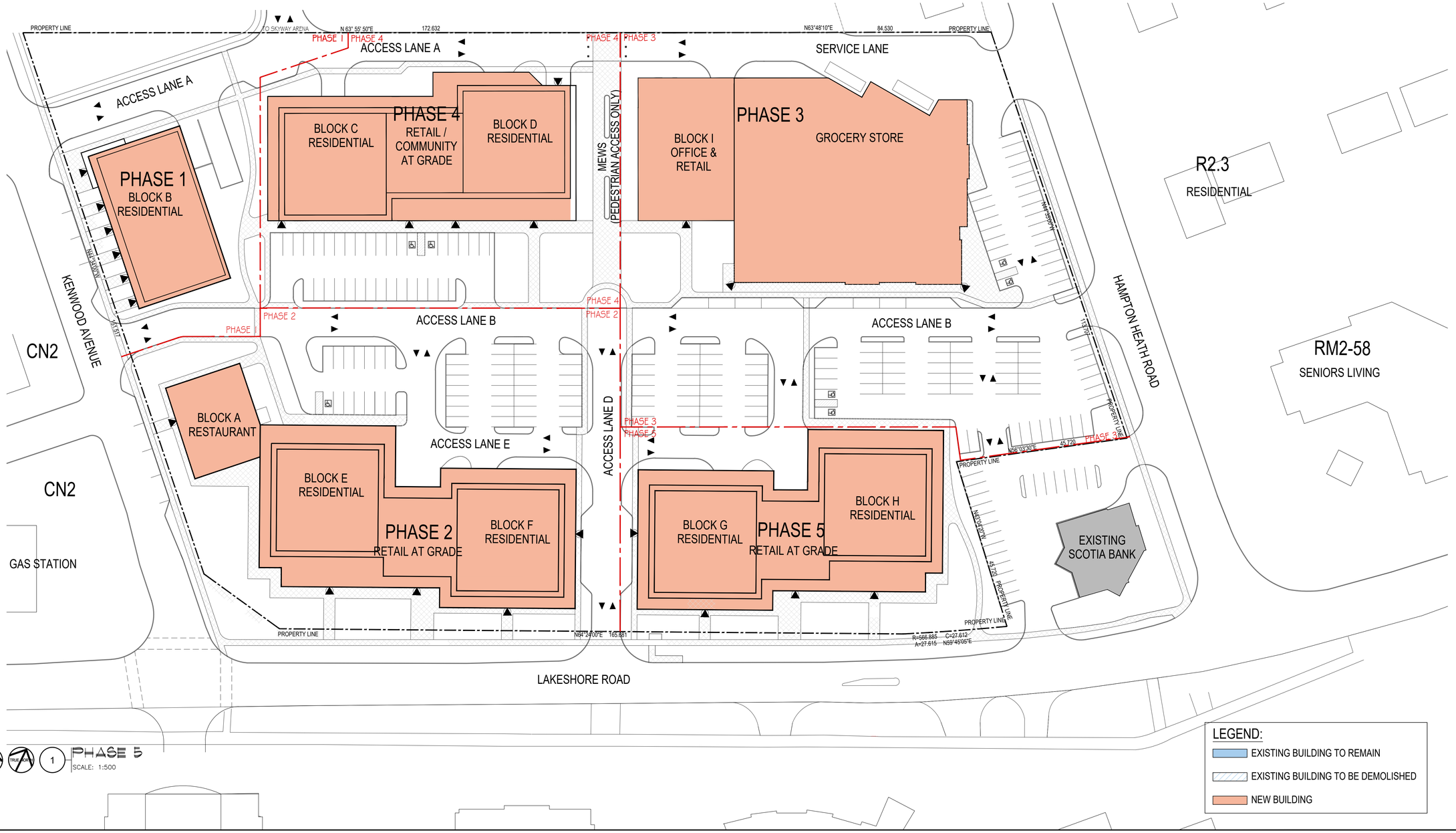
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PRINT DATE: 04/08/2017

LAKESIDE VILLAGE
MIXED USE DEVELOPMENT
5353 LAKESHORE ROAD, BURLINGTON, ON

PROPOSED PHASING PLAN - PHASE 4

PH 4.0

	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	OVERALL SITE
	BLOCK B - RESIDENTIAL	BLOCKS A - E - F - RETAIL AT GRADE - RESIDENTIAL	BLOCKS I & GROCERY STORE - RETAIL & OFFICES	BLOCKS C & D-RETAIL & OFFICES AT GRADE-RES.	BLOCKS G & H - RETAIL AT GRADE - RESIDENTIAL	
EX. AREA TO BE DEMOLISHED	2,400 SQ.M.	3,900 SQ.M.	8,170 SQ.M.	10,350 SQ.M.	--	--
EXISTING AREA TO REMAIN	7,950 SQ.M.	6,450 SQ.M.	2,180 SQ.M.	--	--	--
NEW FLOOR AREA	6,000 SQ.M.	30,100 SQ.M.	6,775 SQ.M.	21,720 SQ.M.	26,200 SQ.M.	90,790 SQ.M.
EX. PARKING TO REMAIN	534 SPACES	320 SPACES	178 SPACES	138 SPACES	--	--
NEW SURFACE PARKING	4 SPACES	48 SPACES	114 SPACES	34 SPACES	--	200 SPACES
NEW U/G PARKING	90 SPACES	300 SPACES	--	550 SPACES	210 SPACES	1150 SPACES
TOTAL PROPOSED PARKING						1350 SPACES



PLAN NORTH
TRUE NORTH
1 PHASE 5
SCALE: 1:500

CYNTHIA ZAHORUK
ARCHITECTS
3077 NEW STREET,
BURLINGTON, ON L7N1M6
905.331.4480

ONTARIO ASSOCIATION OF ARCHITECTS
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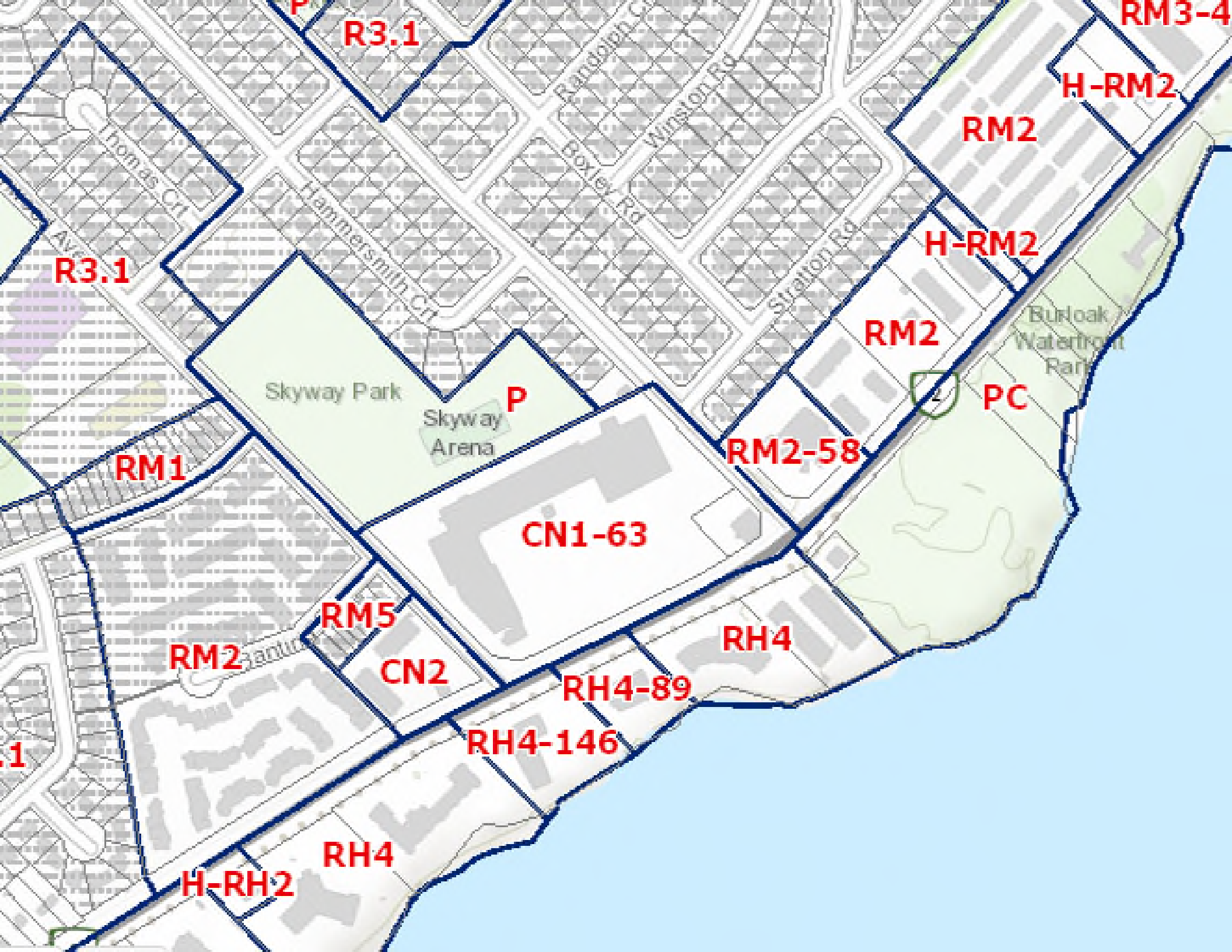
LAKESIDE VILLAGE
MIXED USE DEVELOPMENT
5353 LAKESHORE ROAD, BURLINGTON, ON

PROPOSED PHASING PLAN - PHASE 5

PH 5.0

APPENDIX A

Relevant Zoning By-Law Excerpts


R3.1
Randolph Cr
Winston Rd
Boxley Rd
Stratton Rd
Hammersmith Cr
Thomas Cr
Avenue
R3.1
RM3-4
H-RM2
RM2
H-RM2
RM2
Burloak Waterfront Park
PC
Skyway Park
P
Skyway Arena
RM2-58
RM1
CN1-63
RM5
RM2
CN2
RH4
RH4-89
RH4-146
RH4
H-RH2

(iii) The widest point not including the 2 m hammerhead extension shall not exceed a maximum of 7 m.
(iv) Shall have a maximum width of 3 m.
(v) Shall have a maximum length of 2 m extending perpendicularly from the driveway.
(vi) Shall be setback a minimum of 0.5 m from the interior and street side lot lines.

See Section 1.13, Illustration No. 5 - Hammerhead Driveway

(h) Properties located within the Shoreacres Character Area as identified in Part 2 - Residential Zones, Section 4.9 Character Area Maps, regardless of lot width, shall be subject to subsection (e) above. Circular and hammerhead driveways are subject to subsections (f) and (g) above.

2.25 Off Street Parking and Loading Requirements

2.25.1

Whenever new development occurs or whenever an existing development is enlarged, extended or increased in capacity, in accordance with this By-Law, off street vehicle parking spaces shall be provided and maintained on the property and within the zone designation for all uses, except, within the "Downtown Parking Exemption Area" shown on Diagram 1A, Subsection 2.25 shall only apply to residential uses.

2.25.2

Off-Street parking shall be in accordance with Part 1, Subsection 2.26, "General Parking Provisions"

2.25.3

At least one off-street loading space shall be provided in conjunction with every principal building, including mixed use buildings, but excluding residential buildings less than 4 storeys high.

2.25.4

The number of parking spaces required for permitted uses in all zones shall be in accordance with as follows, unless otherwise specified in the respective zones.

TABLE 1.2.6 OFF-STREET PARKING STANDARDS

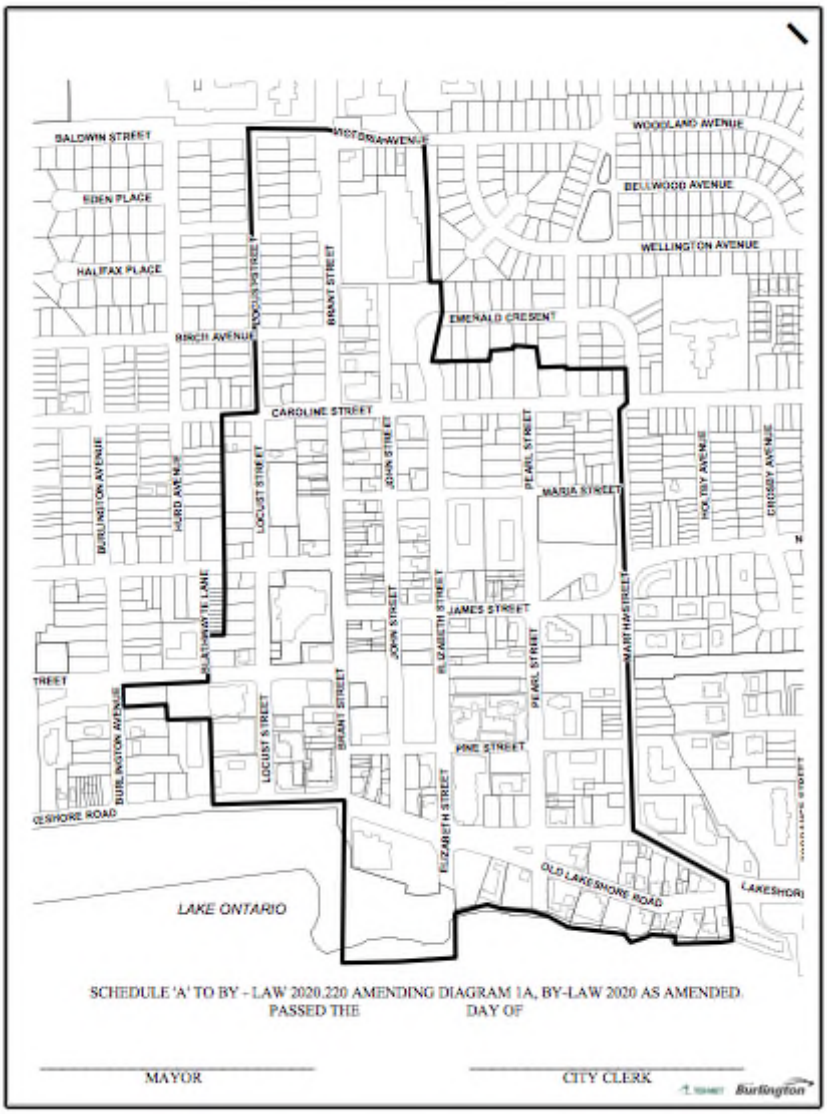
USE	PARKING STANDARD

USE	PARKING STANDARD
Detached Dwelling Semi-Detached Dwelling Duplex Dwelling Triplex Dwelling	2 spaces per unit; one of which may be provided in an attached or detached garage Detached, Semi-Detached, Duplex and Triplex Dwelling on a parcel of tied land fronting onto a common element condominium road : 1.5 spaces per unit where 1 space shall be located on the parcel of tied land and .5 space per unit for visitor parking shall be located within the common element condominium block which contains the condominium roadway
Street Townhouse Dwelling Street Triplex Dwelling Street Fourplex Dwelling	2 spaces per unit
Townhouse Dwelling Fourplex Dwelling Cluster Homes	2 occupant spaces per unit, 0.50 visitor spaces per unit
Stacked Townhouse Dwellings Back to Back Townhouse Dwellings	Without exclusive use garage: 1.25 occupant spaces per one bedroom unit 1.50 occupant spaces per two bedroom unit 1.75 occupant spaces per three or more bedroom 0.35 visitor spaces per unit With exclusive use garage: 2.0 occupant spaces per unit, 0.35 visitor spaces per unit
Apartment Building	1.25 occupant spaces per one bedroom unit 1.50 occupant spaces per two bedroom unit 1.75 occupant spaces per three or more bedroom 0.35 visitor spaces per unit
Dwelling Units on the 2nd or 3rd floor of a 2 or 3 storey commercial building	1.25 spaces per unit
Adult Entertainment Establishment	1 space per 2 persons capacity
Allotment Garden	1 space per garden plot

USE	PARKING STANDARD
Bank, Trust Company, Credit Union	6 spaces per 100 m^2 gross floor area
Bed & Breakfast Home Boarding House	1 space per guest room in addition to the parking requirement for a detached dwelling
Bowling Alley	4 spaces per alley
Cemetery	1 space per employee plus 1 per 4 seats chapel capacity
Community Institution	1 space per 4 persons capacity
Convent, Monastery	1 space per two beds
Convention/Conference/Banquet Centre	10 spaces per 100 m^2 gross floor area
Correctional Facility	0.85 spaces per employee 0.25 visitor spaces per resident
Correctional Group Home	4 parking spaces
Day Care Centre	4 spaces per 100 m^2 gross floor area
Emergency Shelter	0.85 spaces per employee 0.25 visitor spaces per resident
Entertainment Establishment	1 space per 6 persons
Funeral Home, Mortuary, Crematorium	4 spaces per 100 m^2 gross floor area, 15 spaces minimum
Group Home	2 parking spaces
Home Based Business	None Required
Home Day Care	None Required
Hospital, Health Care Facility	0.65 spaces per patient bed
Hotel	1 space per guest room or suite
Industrial Uses	1 space per 100 m2 gross floor area
Kennel	1 space per employee plus 1 per 100 m^2 gross floor area

USE	PARKING STANDARD
Library, Museum, Post Office	0.75 spaces per employee plus 1.5 spaces per 100 m^2 GFA
Lodge, Fraternity, Private Club	1 space per 4 persons capacity
Long Term Care Facility	0.85 spaces per employee, plus 0.25 spaces per bed
Movie Theater	1 space per 4 seats
Night Club, Dance Hall	1.1 spaces per 4 persons
Office: Medical Other	6 spaces per 100 m^2 gross floor area 3.5 spaces per 100 m^2 gross floor area
Place of Assembly, Place of Worship,	6 spaces per 100 m^2 gross floor area
Recreational Establishment	1 space per 6 persons capacity
Retail Store	4 spaces per 100 m^2 gross floor area
Retail Centre	5.25 spaces per 100 m^2 gross floor area
Residential Social Service	0.85 spaces per employee 0.25 visitor spaces per resident
Restaurant: Fast Food Restaurant Standard Restaurant Patio	1 space per 4 persons capacity or 25 spaces per 100 m^2 GFA, whichever is greater. 1 space per 4 persons capacity 1 space per 4 persons capacity
Retirement Home	0.85 spaces per employee, plus 0.50 occupant spaces per unit, plus 0.25 visitor spaces per unit
School: Elementary Secondary Post Secondary Business, Commercial, Trade	 1.5 spaces per classroom 4 spaces per classroom 1 space per 3 students, faculty and staff 1 space per 3 students, faculty and staff
Service Commercial Uses	4 spaces per 100 m^2 gross floor area
Supermarket	10 spaces per 100 m^2 gross floor area

Diagram 1A:Downtown Parking Exemption Area



2.26 General Parking Provisions

1. Parking Space Size & Accessibility

a) Each parking space shall have a minimum width of 2.75 m and a minimum area of 16.5 m^2 and be readily accessible without obstructions at all times for parking and removal of a motor vehicle without the necessity of moving any other vehicle or obstruction. The minimum area of a parking space may include walkways for residential uses only. The minimum area of a parking space may include walkways for residential uses only.

The minimum internal dimensions for a private garage are 6.0m depth x 3.0m width x 2.0m height. The minimum internal dimensions for unobstructed area in the private garage are 5.5m depth x 3.0m width x 2.0m height. One step is permitted in the unobstructed area.

b) Accessibility shall not apply to a parking space in a garage which is for the exclusive use of the dwelling unit, provided the driveway serving the garage has a minimum length of 5.5 metres.

Accessibility is not required for 20% of the required occupant parking in townhouse, back to back townhouse, stacked townhouse, maisonette, fourplex and apartment buildings.

2. Illumination

Where parking facilities are illuminated by lighting fixtures or standards, they shall be arranged so that light from the fixture is shielded and or directed away from residential dwellings.

3. Surface Treatment

Every parking lot, which includes parking spaces and driveways, shall be graded and drained and the surface treated so as to provide a permanent durable and dustless surface. This provision shall not apply to parking lots of residential developments having three or fewer dwelling units.

4. Access

Every such parking lot shall have adequate means of entrance and exit directly to an existing street or public lane, and every such entrance and/or exit shall be clearly marked by directional signs.

5. Parking Structures

(i) Any part of an enclosed parking structure that projects 1.6 m or more above grade shall be subject to the yard requirements of the zone designation.

(ii) Entrance and exit ramps to below grade and above grade parking structures or buildings shall be setback 7.5 m from a street line.

(iii) Below grade parking structures shall not extend into a required landscape buffer and shall be setback 3 m from all other property lines and street lines.

6. Multiple Zones

Where a property is covered by more than one zone designation, required parking and loading facilities shall be provided within that area of the property zoned for the permitted use and within which the permitted use is located. However, a driveway providing access from a street to service a property zoned for a permitted use may be located on land zoned for a different permitted use.

7. Group Home Parking

Required Parking for Group Homes may be blocked provided that at least two parking spaces are accessible at all times.

8. Correctional Group Home Parking

Required Parking for Correctional Group Homes may be blocked provided that at least two parking spaces are accessible at all times.

9. Designated Accessible Parking Spaces

Where parking facilities are required, designated accessible parking spaces for the exclusive use of persons with disabilities shall be identified with a Provincially regulated vertical sign displaying the international symbol for accessible parking spaces. Designated accessible parking spaces shall be included in the calculation of required parking and shall be provided in accordance with Table 1.2.7, 9(a) and 9(b):

Table 1.2.7

Required Parking	Designated Accessible Parking Spaces
5 to 50 spaces	1 designated accessible parking space
51 to 90 spaces	2 designated accessible parking spaces
Over 90 spaces	3% of required parking

a) Medical office and institutional uses shall provide a minimum of one designated accessible parking space. Where out-patient services are provided, a minimum of 10% of the required parking shall be designated accessible parking spaces.

b) Each designated accessible parking space shall meet the minimum width and area requirements of subsection (1)(a) above and shall be located adjacent to a delineated accessible parking walkway with a minimum width of 2.0 metres.

10. Bicycle Parking

Bicycle parking spaces shall be provided in conjunction with office, retail and service commercial, industrial and institutional developments, in accordance with Table 1.2.8 and (10)(a):

Table 1.2.8

Use	Required Bicycle Parking
Retail, Retail Centre, Service Commercial Office, Institutional	2 spaces plus 1 space / 1000 m^2 GFA
Industrial	2 spaces plus 0.25 spaces / 1000 m^2 GFA
Elementary & Secondary School	1 space / 10 students & 1 space / 35 employees
Post-Secondary School	1 space / 20 students

a) Each bicycle parking space shall be 60 cm x 1.8 m in size.

By-law 2020.205 (April 28, 2008), are deemed to conform to the building height regulations of this By-law for the life of the building or structure.

4.6 Parking

a) Parking shall be provided in accordance with Part 1, Subsection 2.25, "Off Street Parking and Loading Requirements" except as amended by the following:

b) The minimum number of parking spaces required for non-residential uses in MXG, MXC and MXT zones is deemed to be the number generated by the standards outlined in Part 1, Table 1.2.6, less a factor of 5%; and

c) For non-residential uses in MXG, MXC and MXT zones, the number of parking spaces provided shall not be greater than 102% of the minimum standard outlined in Part 1, Table 1.2.6;

d) Visitor Parking: Where a development is comprised of a mix of residential and non-residential uses, non-residential parking located on the same property as the residential use may be counted toward required visitor parking for the residential use, using the standards outlined in clause c) above;

e) Where the use is a mixed use development, the parking requirement may be calculated using percent of peak period use as given in the detailed table outlined below, using the standards outlined in clauses b) and c) above. For purposes of this subsection, €œmixed use development€ is defined as a development which contains any combination of office, retail/service commercial, restaurant and/or overnight accommodation uses which shares parking on the same lot.

The initial step in determining the parking for a mixed use development is to calculate the parking requirement for each use contained within the development as if these uses were free-standing buildings. The parking requirement for each use is then multiplied by the percent of the peak period for each time period (e.g. noon) contained in the charts below. Each column is totalled for weekday and weekend. The maximum figure obtained from all time periods shall become the parking requirement for the specific mixed use development.

PERCENT OF PEAK PERIOD OCCUPANCY (Weekday)				
Type of Use	**Morning**	**Noon**	**Afternoon**	**Evening**
Office/Financial Institution	100	90	95	10
Retail/Service Commercial	80	90	90	90
Restaurant	20	100	30	100

APPENDIX B

Parking Data

Parking Survey

Location: 5340 Lakeshore Road, Burlington

Survey Time: March 29th, 2017, 11:30 p.m.

Total Underground Residential Parking Supply:	60	spaces
Total Surface Residential Parking Supply:	3	spaces
Overall Residential Parking Supply:	63	spaces
Total number of Residential spaces occupied:	**45**	**spaces**
Total Visitor Parking Supply:	16	spaces
Total number of visitor spaces occupied:	**4**	**spaces**
Total number of dweling units occupied:	**42**	**units**
Residential Parking Rate:	1.07	residential spaces/dwelling unit
Visitor Parking Rate:	0.10	visitor spaces/dwelling unit

ONTARIO TRAFFIC INC - PARKING COUNTS

Location: 5353 Lakeshore Rd, Burlington

Total Available Spaces = 632

Time			Saturday April 1st, 2017 Parked Vehicles	Wednesday April 5th, 2017 Parked Vehicles
9:00	to	9:15	77	90
9:15	to	9:30	88	95
9:30	to	9:45	111	111
9:45	to	10:00	133	116
10:00	to	10:15	144	128
10:15	to	10:30	147	137
10:30	to	10:45	150	145
10:45	to	11:00	153	149
11:00	to	11:15	149	156
11:15	to	11:30	145	159
11:30	to	11:45	147	152
11:45	to	12:00	143	155
12:00	to	12:15	139	152
12:15	to	12:30	136	158
12:30	to	12:45	131	155
12:45	to	13:00	128	155
13:00	to	13:15	125	157
13:15	to	13:30	123	160
13:30	to	13:45	125	159
13:45	to	14:00	121	163
14:00	to	14:15	119	167
14:15	to	14:30	117	166
14:30	to	14:45	118	169
14:45	to	15:00	115	170
15:00	to	15:15	116	173
15:15	to	15:30	114	171
15:30	to	15:45	113	167
15:45	to	16:00	113	163
16:00	to	16:15	112	158
16:15	to	16:30	113	155
16:30	to	16:45	112	153
16:45	to	17:00	109	152
17:00	to	17:15	101	134
17:15	to	17:30	93	121
17:30	to	17:45	85	112
17:45	to	18:00	74	104
18:00	to	18:15	68	91
18:15	to	18:30	65	86
18:30	to	18:45	63	81
18:45	to	19:00	60	77
19:00	to	19:15	57	72
19:15	to	19:30	51	67
19:30	to	19:45	47	61
19:45	to	20:00	42	60
20:00	to	20:15	37	54
20:15	to	20:30	35	50
20:30	to	20:45	30	46
20:45	to	21:00	33	41
MAX:			153	173

Area of the existing development: 10340 square metres

Satuday parking rate: 1.48 parking spaces per 100 square metres

Weekday parking rate: 1.67 parking spaces per 100 square metres

ONTARIO TRAFFIC INC - PARKING STUDY

6550 Glen Erin Dr Residential Building (southwest corner of Glen Erin Dr & Battleford Rd)

Location: Residential Parking

Reading #1 at 1:00 a.m.
Reading #2 at 3:00 a.m.

	Parked Vehicles			
	Weekday 1	Weekday 2	Weekday 3	Sunday
Reading #	6-Sep-16	8-Sep-16	13-Sep-16	11-Sep-16
1	86	98	111	109
2	87	94	112	108

Maximum residential use:	112	spaces
Number of occupied residential units:	110	units
Residential parking rate:	1.02	residential spaces/dwelling unit

Location: Visitor Parking
Date: Saturday, September 10, 2016

Time			Parked Vehicles
12:00	to	12:30	6
12:30	to	13:00	7
13:00	to	13:30	7
13:30	to	14:00	6
14:00	to	14:30	8
14:30	to	15:00	6
15:00	to	15:30	7
15:30	to	16:00	6

Maximum visitor use:	8	spaces
Number of occupied residential units:	110	units
Visitor parking rate:	0.07	vistor spaces/dwelling unit

Location: Visitor Parking
Date: Friday, September 16, 2016

Time			Parked Vehicles
18:00	to	18:30	5
18:30	to	19:00	4
19:00	to	19:30	3
19:30	to	20:00	4
20:00	to	20:30	4
20:30	to	21:00	3
21:00	to	21:30	2
21:30	to	22:00	2

ONTARIO TRAFFIC INC - PARKING COUNTS

Location: 5450 Explorer Drive, Mississauga

Date: Tuesday, March 28, 2017

Time			Tuesday, March 28, 2017 Parked Vehicles Surface 297	Underground 216	Total
08:00	to	08:15	54	23	**77**
08:15	to	08:30	66	31	**97**
08:30	to	08:45	82	37	**119**
08:45	to	09:00	109	46	**155**
09:00	to	09:15	138	54	**192**
09:15	to	09:30	150	57	**207**
09:30	to	09:45	165	62	**227**
09:45	to	10:00	171	67	**238**
10:00	to	10:15	178	71	**249**
10:15	to	10:30	198	73	**271**
10:30	to	10:45	199	75	**274**
10:45	to	11:00	198	74	**272**
11:00	to	11:15	199	76	**275**
11:15	to	11:30	198	77	**275**
11:30	to	11:45	199	77	**276**
11:45	to	12:00	202	74	**276**
13:00	to	13:15	184	71	**255**
13:15	to	13:30	184	72	**256**
13:30	to	13:45	187	73	**260**
13:45	to	14:00	188	70	**258**
14:00	to	14:15	189	71	**260**
14:15	to	14:30	191	70	**261**
14:30	to	14:45	190	71	**261**
14:45	to	15:00	190	74	**264**
15:00	to	15:15	183	73	**256**
15:15	to	15:30	179	72	**251**
15:30	to	15:45	168	72	**240**
15:45	to	16:00	167	71	**238**
16:00	to	16:15	156	68	**224**
16:15	to	16:30	146	68	**214**
16:30	to	16:45	135	64	**199**
16:45	to	17:00	121	61	**182**
17:00	to	17:15	101	57	**158**
17:15	to	17:30	77	50	**127**
17:30	to	17:45	64	41	**105**
17:45	to	18:00	47	32	**79**

Available Parking Spaces = 513

ONTARIO TRAFFIC INC - PARKING COUNTS

Location: 5450 Explorer Drive, Mississauga

Date: Tuesday, March 28, 2017

Residual Supply		% Utilization		Residual Supply	% Utilization
Surface	Underground	Surface	Underground	Total	Total
243	193	18%	11%	436	15%
231	185	22%	14%	416	19%
215	179	28%	17%	394	23%
188	170	37%	21%	358	30%
159	162	46%	25%	321	37%
147	159	51%	26%	306	40%
132	154	56%	29%	286	44%
126	149	58%	31%	275	46%
119	145	60%	33%	264	49%
99	143	67%	34%	242	53%
98	141	67%	35%	239	53%
99	142	67%	34%	241	53%
98	140	67%	35%	238	54%
99	139	67%	36%	238	54%
98	139	67%	36%	237	54%
95	142	68%	34%	237	54%
113	145	62%	33%	258	50%
113	144	62%	33%	257	50%
110	143	63%	34%	253	51%
109	146	63%	32%	255	50%
108	145	64%	33%	253	51%
106	146	64%	32%	252	51%
107	145	64%	33%	252	51%
107	142	64%	34%	249	51%
114	143	62%	34%	257	50%
118	144	60%	33%	262	49%
129	144	57%	33%	273	47%
130	145	56%	33%	275	46%
141	148	53%	31%	289	44%
151	148	49%	31%	299	42%
162	152	45%	30%	314	39%
176	155	41%	28%	331	35%
196	159	34%	26%	355	31%
220	166	26%	23%	386	25%
233	175	22%	19%	408	20%
250	184	16%	15%	434	15%

Available Parking Spaces = 513

ONTARIO TRAFFIC INC - PARKING COUNTS

Location: 5450 Explorer Drive, Mississauga
Date: Thursday, March 23, 2017

Time			Parked Vehicles		
			Surface	Underground	
			297	216	Total
08:00	to	08:15	56	21	**77**
08:15	to	08:30	67	28	**95**
08:30	to	08:45	83	31	**114**
08:45	to	09:00	112	36	**148**
09:00	to	09:15	128	49	**177**
09:15	to	09:30	153	56	**209**
09:30	to	09:45	158	66	**224**
09:45	to	10:00	164	70	**234**
10:00	to	10:15	178	71	**249**
10:15	to	10:30	181	71	**252**
10:30	to	10:45	184	73	**257**
10:45	to	11:00	186	73	**259**
11:00	to	11:15	190	74	**264**
11:15	to	11:30	192	75	**267**
11:30	to	11:45	194	75	**269**
11:45	to	12:00	198	73	**271**
13:00	to	13:15	180	65	**245**
13:15	to	13:30	178	63	**241**
13:30	to	13:45	180	64	**244**
13:45	to	14:00	182	62	**244**
14:00	to	14:15	183	64	**247**
14:15	to	14:30	183	67	**250**
14:30	to	14:45	182	67	**249**
14:45	to	15:00	178	67	**245**
15:00	to	15:15	173	65	**238**
15:15	to	15:30	169	64	**233**
15:30	to	15:45	166	63	**229**
15:45	to	16:00	160	62	**222**
16:00	to	16:15	155	58	**213**
16:15	to	16:30	153	53	**206**
16:30	to	16:45	142	52	**194**
16:45	to	17:00	125	52	**177**
17:00	to	17:15	107	50	**157**
17:15	to	17:30	76	37	**113**
17:30	to	17:45	60	34	**94**
17:45	to	18:00	48	25	**73**

Available Parking Spaces = 513

ONTARIO TRAFFIC INC - PARKING COUNTS

Location: 5450 Explorer Drive, Mississauga
Date: Thursday, March 23, 2017

Residual Supply		% Utilization		Residual Supply	% Utilization
Surface	Underground	Surface	Underground	Total	Total
241	195	19%	10%	436	15%
230	188	23%	13%	418	19%
214	185	28%	14%	399	22%
185	180	38%	17%	365	29%
169	167	43%	23%	336	35%
144	160	52%	26%	304	41%
139	150	53%	31%	289	44%
133	146	55%	32%	279	46%
119	145	60%	33%	264	49%
116	145	61%	33%	261	49%
113	143	62%	34%	256	50%
111	143	63%	34%	254	50%
107	142	64%	34%	249	51%
105	141	65%	35%	246	52%
103	141	65%	35%	244	52%
99	143	67%	34%	242	53%
117	151	61%	30%	268	48%
119	153	60%	29%	272	47%
117	152	61%	30%	269	48%
115	154	61%	29%	269	48%
114	152	62%	30%	266	48%
114	149	62%	31%	263	49%
115	149	61%	31%	264	49%
119	149	60%	31%	268	48%
124	151	58%	30%	275	46%
128	152	57%	30%	280	45%
131	153	56%	29%	284	45%
137	154	54%	29%	291	43%
142	158	52%	27%	300	42%
144	163	52%	25%	307	40%
155	164	48%	24%	319	38%
172	164	42%	24%	336	35%
190	166	36%	23%	356	31%
221	179	26%	17%	400	22%
237	182	20%	16%	419	18%
249	191	16%	12%	440	14%

Available Parking Spaces = 513

APPENDIX C

TTS Data

USER : Alexander Fleming - CF Crozier and Associates
DATE : Apr 11 2017 (15:02:28)
DATA : 2011 TTS V1.0 Households
TABLE : gta06_hhld (4075)
FILTER 1 : gta06_hhld => 4075
ROW : dwell_type
COLUMN : n_vehicle

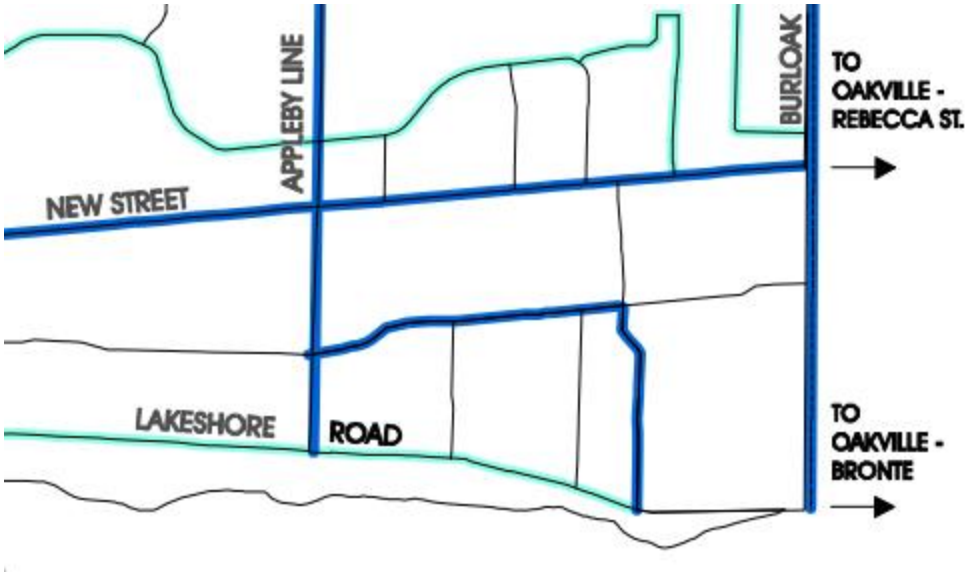
Number of vehicles per dwelling type:	0	1	2	3	4	6
House	35	308	779	73	54	31
Apartment	202	276	104	0	0	0
Townhouse	99	99	101	0	26	0

Total number of apartments:	582	
Total number of Townhouses:	325	
Total number of vehicles for apartment units:	484	
Total number of vehicles for Townhouse units:	405	
Vehicle ownership rate for apartment dwellings:	0.83	vehicles/apartment dwelling unit
Vehicle ownership rate for Townhouse dwellings:	1.25	vehicles/apartment dwelling unit

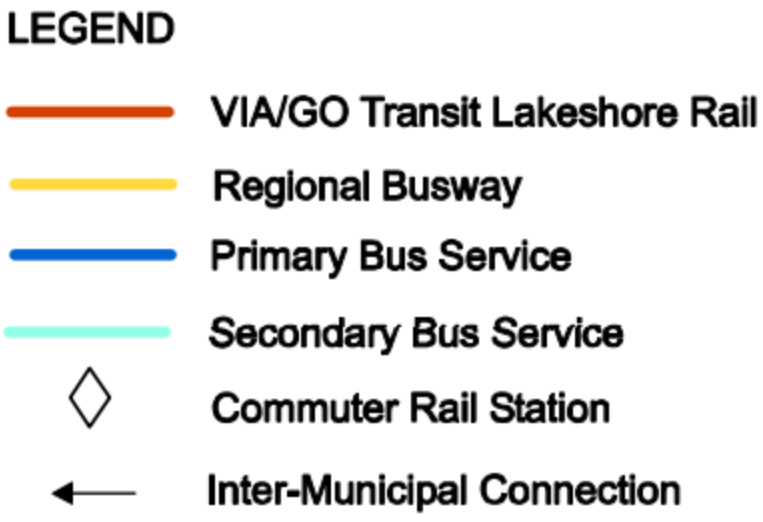
APPENDIX D

Transit and Cycling Maps

Long-Term Transit Service Network Map



Legend



Burlington Transit Maps

- Routes 20 and 40



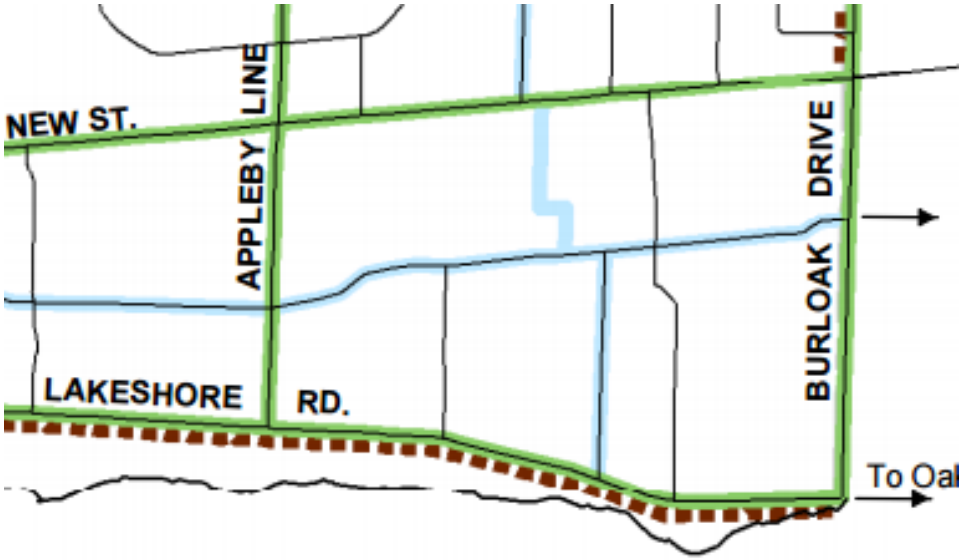
- Route 50


Thomas Alton Bl
Tim Dobbie Dr
Dundas-Walmart Plaza
Haber
Dundas St
Cavendish Dr
Coventry Way
Headon Forest Dr
Headon Rd
Headon Forest
Appleby-Dundas Plaza
51
Sutton Dr
Brant Hills
Upper Brant Plaza
Brant St
Angela Coughlan
Burlington Supercentre
Walker Place
Upper Middle Rd
Tansley Woods
52
Burlington Heights Centre
Power Centre
Guelph Line
Mainway Business Centre
Mainway
Walkers Line
Appleby Line
Burloak Dr
Davidson Plaza
Ontario Court of Justice
Queensway Dr
Westgate Plaza
Plains Rd E
Burlington
51
Harvester Rd
Brant Plaza
Burlington Mall
Woodview Place
Maple Mews
Mapleview Mall
Prospect St
Fairview St
Velocity - A Place for Youth
50
Burlington Square
52
Rotary Youth
Maple Av
Brant Plaza
Central YMCA
Music Centre
Eastway Plaza
Nelson
Appleby Mall
Centennial
City Hall
Roseland Plaza
New St
50
James St
North Shore Bl E
John St
Burlington Seniors'
Central
Joseph Brant Memorial
Downtown
Lakeshore Rd
Skyway Arena
Lakeside Plaza

- Route 301


Lasalle Park Rd
Townsend Av
Shadeland Av
Plains Rd W
Aldershot
King Rd
Burlington Bay
300
Mapleview Mall
Maple Ave
Maple Mews
Joseph Brant Memorial
Ontario St
City Hall
John St
James St
Pine St
Elizabeth St
Lake Ontario
Brant St
Burlington Seniors' Central
Central
Rotary Youth
New St
302
Guelph Line
Burlington Mall
301
Eastway Plaza
Longmoor Dr
Walkers Line
Burlington Supercentre
Burlington Heights Centre
Walker Place
Tansley Woods
Itabashi Way
Upper Middle Rd
Lakeshore Rd
Appleby Mall
Appleby Line
Pinedale Av
Lakeside Plaza
Centennial
Hampton Heath Rd
New St

Except from the Long-Term Cycling Masterplan



Legend

