



MEMORANDUM

TO

Distrikt Developments
Attention: Sasha Lauzon,
Vice-President of Development &
Planning

FROM

Timothy J. Arnott, BA Group
Kyle Cory Jong, BA Group
Adam Makarewicz, Paradigm
Greg Lue, Paradigm

PROJECT

Oakville TOC Development –
Midtown, Oakville – Distrikt
Developments

DATE

September 24, 2024

RE: OAKVILLE TOC DEVELOPMENT – SUMMARY TRANSPORTATION IMPACT STUDY - MIDTOWN OAKVILLE

1.0 INTRODUCTION

BA Consulting Group Ltd. (referred to as **BA Group** herein) and Paradigm Transportation Solutions Limited (referred to as **Paradigm** herein) have been retained by Distrikt Developments (referred to herein as **Distrikt** or the **Applicant**) to prepare a summary Transportation Impact Study (referred to as the **Summary TIS** herein) report for the Transit Oriented Communities (referred to as the **Oakville TOC Development** herein) development proposed by Distrikt Developments in the Midtown area within the Town of Oakville.

This Oakville TOC Development TIS is intended to serve as the initial transportation related technical document to fulfill, in part, the Transit Oriented Communities process as set out by Infrastructure Ontario (referred to as **IO** herein). Further, subsequent transportation related technical documents will be submitted responding to the ongoing process involving IO, the Town of Oakville, and Distrikt Developments.

This Summary TIS report will:

- Review and identify potential Transportation Demand Management (TDM) measures that can be implemented for the proposed Oakville TOC development;
- Review of the proposed strategies underlying the vehicular and bicycle parking provisions associated with the Oakville TOC development as well as the service vehicle loading supply strategies relative to the estimated demands;
- Review of the proposed Site Plan strategies with respect to vehicular Site access and circulation, vehicular and cycling parking configurations, and the service vehicle loading provisions of the Oakville TOC development;



- Forecast traffic from the proposed Oakville TOC development – noting that further refinement of the vehicular traffic generation estimates is ongoing and will be incorporated into subsequent transportation related technical reviews;
- Review of the vehicular traffic assignments associated with the projected volumes from the Oakville TOC development to the surrounding study area road network;
- Assess the total future vehicular traffic volumes within the study area at the 2038 future horizon. At this juncture, the cumulative effect of the Oakville TOC at the 2038 horizon is provided as a reference. A more fulsome assessment of incremental horizon years will be reviewed within the next full technical submission related to Oakville TOC development; and,
- Identify operational concerns and mitigation measures that may be required to improve operations resulting from the Oakville TOC development. A fulsome, comprehensive summary of mitigation measures will be provided in the next full technical submission related to Oakville TOC development, wherein, additional horizon years will be reviewed.

1.1 Oakville TOC Development Components

The Oakville TOC development is comprised of four (4) sites within the Midtown area of the Town of Oakville, all of which Distrikt controls.

The four sites are described in **Table 1** while their location and the general TIS study area is illustrated in **Figure 1** located in **Appendix A**.

Table 1 Oakville TOC Development Components

Site	Component Land Uses	Development Configuration
217-227 Cross Avenue & 571-587 Argus Road	Residential	<ul style="list-style-type: none"> • Tower A (46 storeys) & Tower B (52 storeys) & Tower C (59 storeys) on a 7 storey podium • Total of 1,977 residential units
	Retail	<ul style="list-style-type: none"> • 1,605 m² (17,276 ft²)
	Office	<ul style="list-style-type: none"> • 2,125 m² (22,873 ft²)
166 South Service Road	Residential	<ul style="list-style-type: none"> • Tower A (51 storeys) & Tower B (55 storeys) & Tower C (49 storeys) on a 7 storey podium • Total of 1,853 residential units
	Retail	<ul style="list-style-type: none"> • 1,231 m² (13,250 ft²)
	Commercial (Fitness Centre)	<ul style="list-style-type: none"> • 5,035 m² (54,196 ft²)

590 Argus Road	Residential	<ul style="list-style-type: none"> Towers A (47 storeys) & Tower B (50 storeys) & Tower C (55 storeys) on a 6 storey podium Total of 1,856 residential units
	Retail	<ul style="list-style-type: none"> 1,004 m² (10,807 ft²)
	Office	<ul style="list-style-type: none"> 997 m² (10,732 ft²)
	Day Care	<ul style="list-style-type: none"> 444 m² (4,779 ft²)
157 – 165 Cross Avenue	Residential	<ul style="list-style-type: none"> Tower A (58 storeys) & Tower B (50 storeys) on a 6 storey podium Total of 1,222 residential units
	Retail	<ul style="list-style-type: none"> 2,522 m² (27,147 ft²)
	Office	<ul style="list-style-type: none"> 1,254 m² (13,498 ft²)
Total Oakville TOC Development	Residential	<ul style="list-style-type: none"> Total of 6,908 residential units
	Retail	<ul style="list-style-type: none"> 6,362 m² (68,480 ft²)
	Office	<ul style="list-style-type: none"> 4,376 m² (47,103 ft²)
	Commercial (Fitness Centre)	<ul style="list-style-type: none"> 5,035 m² (54,196 ft²)
	Day Care	<ul style="list-style-type: none"> 444 m² (4,779 ft²)
	Total Non-Residential GFA	<ul style="list-style-type: none"> 16,217 m² (174,558 ft²)



2.0 EXISTING TRANSPORTATION NETWORK CONDITIONS

2.1 Existing Streets and Designations

The key public streets within the study area, consistent with prior analyses of the component Oakville TOC development sites, are illustrated in **Figure 1** and include:

- **Trafalgar Road** (Halton Region Road 3) is an urban major arterial road from Cornwall Road northwards and an urban minor arterial road southward from Cornwall Road. The roadway consists of a six-lane cross-section from Cornwall Road northwards and tapers down to a two-lane cross-section southward. The posted speed limit along Trafalgar Road is 50 km/h. Pedestrian facilities are provided along both sides of the road in the study area.
- **Cross Avenue** is an urban minor arterial road from Trafalgar Road to Cornwall Road. It provides access to the Oakville GO Station and the station's commercial businesses. East of Trafalgar Road, Cross Avenue continues as South Service Road, eastwards towards Royal Windsor Drive. The assumed speed limit of Cross Avenue is 50 km/h. Pedestrian facilities are provided along both sides of the road in the study area.
- **Lyons Lane** is a two-lane local road north of Cross Avenue. Lyons Lane terminates as a cul-de-sac west of its intersection with South Service Road. There is a sidewalk on the east side of Lyons Lane. The assumed speed limit of Lyons Lane is 50 km/h.
- **South Service Road East** is a two-lane local road that fronts the QEW and provides additional access to the existing built lands. From its west end of Lyons Lane, it runs east parallel to the QEW, turning south to intersect with Argus Road. The assumed speed limit of South Service Road is 50 km/h. There are no pedestrian facilities along South Service Road.
- **Argus Road** is a two-lane local road that connects Trafalgar Road to Cross Avenue. The assumed speed limit of Argus Road is 50 km/h. There is a sidewalk on the south and east side of the roadway.
- **Leighland Avenue / Iroquois Shore Road** is an east-west minor arterial road with a four-lane cross-section west of Trafalgar Road. East of Trafalgar is a multi-purpose arterial road with a two-lane cross-section. There is a sidewalk on both sides of the roadway. The posted speed limit is 50 km/h.
- A broader study area, reviewing the linkages to Midtown Oakville east of Trafalgar Road, will be reviewed in the next full technical submission related to Oakville TOC development. This expanded study area will require a review and understanding of the inputs and results of higher level modelling work being undertaken by the Town of Oakville's consulting team (the Consortium) which reflects sub-area analyses that is based upon a regional multi-modal transportation model.

2.2 Existing Public Transit Services

The existing public transit service operations and routes are illustrated in **Figure 2** (Oakville Transit) and **Figure 3** (GO Inter-Regional Transit) and include:

Oakville Transit

Oakville Transit owns and operates the public transit system in Oakville. The Oakville TOC Development is located within the Midtown Oakville Urban Growth Area, the most transit-accessible location within the Town. The Oakville TOC Development is approximately 150 to 450 metres (2 to 5-minute walk) from the Oakville GO Station, currently serviced by 16 out of 22 Oakville Transit Routes. Most of the transit routes which provide access to all of the Town of Oakville operate seven days a week from early morning to late evening, with headways generally between 10 and 30 minutes depending on the day of week and time of day.

GO Inter-Regional Transit

The proposed development is approximately 150 to 450 metres (2 to 5-minute walk) from the Oakville GO Station. This station is located along the Lakeshore West Line, which currently operates a two-way all-day train service seven days a week and GO Bus connections to Hamilton and Sheridan College and York University via Highway 407.

2.3 Existing Active Transportation Networks

Figure 4 illustrates the context around the existing and proposed active (pedestrian and cycling) networks within the general area surrounding the Oakville TOC Development.

Pedestrian Network

The site is within walking distance of several retail opportunities providing a range of destinations for prospective residents of the proposed Development that can be readily accessed without using a vehicle.

Pedestrian sidewalks are provided on at least one side of streets through most study areas. Crosswalks, pedestrian pushbuttons, and indicators are provided for all approaches at the signalized intersections within the study area.

The site's proximity to such a range of amenities and destinations within walking distance reduces the need for residents to travel regularly using a car and own a vehicle.

As noted elsewhere in this memorandum, significant improvements to the pedestrian network as a part of the planned Midtown Oakville street network improvements are planned to occur coincident with intensification within the Midtown area.

Cycling Network

On-road cycling lanes are not currently provided on the streets in the study area. However, the Town of Oakville's Active Transportation Master Plan identifies that Trafalgar Road and Cross Avenue are proposed to be reconstructed with on-street cycle lanes.

In addition, as cyclists are permitted to ride on most roads except controlled-access highways, the lack of separate bicycle lanes on all other local and collector roadways will not prohibit this type of travel.

As noted elsewhere in this memorandum, significant improvements to the cycling network as a part of the planned Midtown Oakville street network improvements are planned to occur coincident with intensification within the Midtown area.

2.4 Existing Vehicular Traffic Volumes

The current existing traffic volume base reflects conditions ranging from 2019 to 2022. Historic TMC data has been used and adjusted to provide reasonable traffic volumes for the baseline horizon (2023), using a growth rate of 2% per annum as outlined by the Region. Existing historical traffic counts were obtained from the Region of Halton, MTO, Spectrum and collected by Paradigm.

Volume balancing along Trafalgar Road has also been applied to ensure that the corridor maintains reasonable upstream and downstream flow. No balancing occurred on Cross Avenue west of Argus Road to account for the GO Station and commercial driveways.

Note that in future analyses of the Midtown area, a revised set of multi-modal volume counts will be undertaken to reflect a 2024 volume base. The use of this updated traffic volume base, along side a review and understanding of the inputs and results of higher level modelling work being undertaken by the Town's Consortium, which reflects sub-area analyses that

is based upon a regional multi-modal transportation model, will be documented in subsequent technical reports for the Oakville TOC Development.

Figure 5 and **Figure 6** illustrate the adjusted base year traffic volumes during the weekday AM and PM peak hours, respectively.



3.0 FUTURE AREA STREET NETWORK

3.1 Trafalgar Road Environmental Assessment

The Trafalgar Road (Regional Road 3) Improvements Class Environmental Assessment Study from Cornwall Road to Highway 407 was completed in May 2015. It was recommended that Trafalgar Road be widened from four (4) to six (6) lanes and convert the curb lanes to high occupancy vehicle (HOV) or bus rapid transit (BRT) lanes after completion of the road widening by 2032. The Midtown EA routes the BRT lanes across the QEW corridor via a new public arterial street over the QEW, east of Trafalgar Road. The BRT lanes leave the Trafalgar Road corridor north of the QEW ramp terminals, crossing the QEW east of Trafalgar Road and travel through Midtown Oakville via a new Midtown street network, which connects to the Oakville GO Station hub via connections both east and west of Trafalgar Road via a realigned Cross Avenue. Clarification of the relationship between the BRT lanes along the Trafalgar Road corridor any use of the curb lanes along Trafalgar Road through the QEW interchange, south to the realigned Cross Avenue intersection with Trafalgar Road, will be further reviewed within the next full technical submission related to Oakville TOC development.

Trafalgar Road is currently a six-lane cross-section plus exclusive left-turn lanes within the study area. The only modification to the road network for future analyses is removing the eastbound channelized right-turn at Trafalgar Road and Cornwall Road to be consistent with the preferred design.

3.2 Midtown Oakville Environmental Assessment

The Town of Oakville completed a Class Environmental Assessment (EA) for Midtown Oakville (MOEA) to guide the development of the transportation and municipal stormwater network needed to accommodate the planned growth in Midtown Oakville. The MOEA identified critical changes to the existing and planned road network that would be required to support intentional growth.

In addition, other master plans have been updated and technical studies completed, including the Halton Region Transportation Master Plan, the Town of Oakville Transportation Master Plan – Switching Gears, the Midtown Parking Strategy, and Designing Midtown Oakville. As part of this ongoing process, the Town has proposed several Draft Official Plan Amendments (OPA) that reflect the evolving nature of the Midtown area and would eventually incorporate the results of these studies as well as ongoing studies (see discussion on “Consortium” below) into the Town’s Official Plan and bring the policies and Schedules into alignment with the most current source documents.

3.3 Midtown Oakville Draft (2024) Official Plan Amendment

The latest draft of the transportation network for the Midtown Oakville OPA is dated April 2024 (with the relevant Schedules dated March 2024). The changes to the Midtown-related transportation network include modifications to the broader area network (consistent with Midtown EA) and changes to the local road network within Midtown Oakville. To accommodate traffic to and from Midtown Oakville and to provide an alternative to Trafalgar Road, several improvements are provided, including new ramps to/from the QEW at Royal Windsor Drive and to streets within the Midtown area that better link the east and west sides of Trafalgar Road, including:

- A direct between the west and east “sides” of Midtown is proposed beneath Trafalgar Road by extending Argus Road under the Trafalgar Road corridor and connect it to Davis Road at South Service Road, forming a four-way intersection. This reduces the impacts of future traffic demand on the existing constrained intersections along Trafalgar Road at Cross Avenue as well as at the Trafalgar Road / Interchange ramps by allowing traffic to access the Royal Windsor interchange without having to physically cross Trafalgar Road. The underpass of Trafalgar Road also provides the opportunity for improved active transportation connections within Midtown Oakville.
- A direct route from eastbound QEW to Midtown Oakville is provided via a new off-ramp to Cross Avenue at the Royal Windsor Drive interchange. A direct route from Midtown Oakville to eastbound QEW is provided via a new



on-ramp at Royal Windsor Drive opposite Cross Avenue. A new westbound QEW off-ramp at Royal Windsor Drive will offer an alternative route to Midtown Oakville and surrounding areas.

- Cross Avenue is extended from Trafalgar Road to Royal Windsor Drive, connecting with the enhanced QEW interchange. Cross Avenue will provide accessible facilities for pedestrians and cyclists to travel safely, on-street parking where appropriate and four vehicular travel lanes.
- For access and circulation within Midtown Oakville, a revised local road network for Midtown Oakville is designed to support and align with the broader transportation network determined through the MOEA. As part of the modified road network, Lyons Lane at Cross Avenue is proposed to be realigned to form a four-way signalized intersection. Other local road network changes include a north-south local road connecting South Service Road East and Cross Avenue and a new east-west road connecting Argus Road. For this study, the east-west local road is only assumed to extend between Argus Road and the new north-south local road. It is also assumed the realignment of Argus Road does not occur.
- Several additional active transportation connections within and beyond Midtown are proposed as part of the MOEA and the Midtown Draft 20204 OPA. These will assist in improving connectivity within and beyond Midtown and have the added benefit of improving active transportation linkages to the Oakville GO Transit hub and all of its transit opportunities.

The new ramps at Royal Windsor Drive and Trafalgar Road will accommodate the additional travel demand from Midtown Oakville's planned intensification, relieving the existing Trafalgar Road interchange.

Ramp network improvements are not assumed to be in place given the timeline of this study. However, the new local roads are assumed only in the 2038 horizon to assess the long-term impacts for the area. **Figure 7** and **Figure 8** and **Figure 9** illustrate the proposed transportation network for Midtown Oakville.

The MOEA recognized that the roadway improvements identified herein would provide some relief to operational issues; however, capacity constraints will persist for the overall vehicle transportation network.

3.4 Consortium

The consortium is a team of consultants that act as an extension of Town staff to deliver plans and studies needed to make Midtown Oakville ready for development. Their current scope of work for the Midtown Oakville area includes:

- Urban Planning and Design
 - Creating a Public Realm Master Plan for Midtown Oakville
 - Setting the Zoning By-law requirements for the Midtown Oakville area
 - Economic Development Strategies
 - Recommend an urban design direction
- Infrastructure Planning and Design
 - Creating a Transportation Master Plan for Midtown Oakville including street Right-of-Ways (ROW)
 - Integrating a network that prioritizes pedestrians, cyclists, and transit
 - Phasing and implementation strategy
 - Functional road plans



- Capital Plan and Financing Strategy
- Public Engagement, Communications, and Stakeholder Liaison

To date, the consortium has provided concept options for Midtown in November 2023 and January 2024 which illustrated street network considerations and masterplan land use block concepts and formed the basis for the Draft Midtown (2024) OPA street and active transportation network elements. Highlights included alternative street network options, land use concepts, parks and open space, community amenities, retail streets/districts, active transportation networks, and height and density ranges.

3.5 Midtown Oakville Street Network Modifications

Through the Midtown Oakville Environmental Assessment Study (Midtown EA), and further through the Draft Midtown (2024) Oakville process, the Town of Oakville has established a proposed street system to support intensification within the Midtown area of the Town. Central to this proposed street system, west of Trafalgar Road, are the following key components of the future Midtown street network illustrated in **Figure 10** (consistent with the Draft Proposed Midtown OPA Schedule L4):

- The realigned Cross Avenue as it crosses Trafalgar Road;
- The realigned South Service Road - facilitating the introduction of a new active transportation crossing of the QEW corridor and the extension of Argus Road beneath the Trafalgar Road corridor, while retaining the limited movements connection between Trafalgar Road and Argus Road;
- The extension of Argus Road beneath the Trafalgar Road corridor and connect it to Davis Road at South Service Road, forming a four-way intersection.
- New Local and Collector streets that would provide internal Midtown linkages between Cross Avenue, South Service Road, and Argus Road.

Providing these Midtown streets is essential to support transportation needs within the Midtown Oakville Urban Growth Centre. This area would accommodate the densest development planned within the Town of Oakville by creating:

- A structure of development blocks;
- Opportunities for direct vehicular access;
- Opportunities to substantially improve the multi-modal network afforded the planned intensification within Midtown; and,

The necessary routing options for all modes to appropriately navigate between future development blocks, external point of access and egress associated with Midtown Oakville, and the key element within the Protected Major Transit Station Area (PMTSA), namely the Oakville GO Station Hub – housing Metrolinx’s GO Rail and GO Bus stations and the Oakville Transit Terminal.

3.5.1 Lane Configurations / ROW Widths / ROW Elements

As part of the review of the Midtown Oakville Street network outlined in the Draft (2024) Proposed Midtown OPA, the functional design requirements associated with each of the aforementioned streets was undertaken in order to determine an appropriate set of ROW dimensions that were driven by the functional needs of ROW components. These are consistent with the ROW widths set out Schedule L4 see **Figure 7** in Appendix A).

An important component of each Midtown street, regardless of its “classification” within the typical street hierarchy, was provision of appropriate space to accommodate a multi-modal public street network that exhibited a suitable “urban

design” with well conceived space for pedestrians, including landscaping elements, cyclists, transit services (should they be routed along certain segments), general vehicular traffic, service vehicle traffic and emergency vehicle access and routing options.

The lane configurations contemplated along these Midtown streets reflect those generally identified in the Midtown EA. Key intersection design parameters have also generally been taken into consideration in the ultimate configuration of streets such as Cross Avenue, where vehicular capacity relative to the ultimate level of intensification of the broader Midtown area would be better defined on an area-wide assessment – something the Town of Oakville is engaging with their Midtown Consortium initiative that is underway.

At this juncture, the Draft (2024) Midtown OPA ROW’s have been accommodated along segments of Future Midtown public streets that abut the Oakville TOC Development and have made allowance for vehicular lane configurations consistent with anticipated vehicular volumes associated with the general level of intensification within the Midtown area. The scale of the Future Midtown public streets illustrated in **Figure 10** also balances the non-vehicular space required to appropriately accommodate and encourage active transportation modes to serve the local day-to-day needs of residents, visitors, employees, and commuters.

Most Future Midtown streets are expected to devote approximately 50%, and up to 60%, of their ROW dimension to non-vehicular activities or uses. The exception being Cross Avenue, where the requisite number of vehicular lanes given its role in providing significant vehicular capacity in and out of the Midtown area (west of Trafalgar Road) is dictating a larger proportion of the overall ROW dimension. Where consideration of the potential Cross Avenue Promenade is included, the non-vehicular component of the ROW is again in the 50% to 67% range of overall ROW.

In some instances, and in particular, along the developments frontage, the public sidewalk dimension of 2.0 metres (minimum, inclusive of the offset to the property line) will be augmented by private setbacks that will serve as additional amenity space, increasing the overall (seamless) publicly available space along the development edges. A review of individual Midtown Street segments follows.

3.5.2 Daylighting Triangles

Representing a conflict area for pedestrians, cyclists, and vehicles, public road intersections are a critical element in safe road design. Daylighting triangles are located at the four (4) corners of an intersection and are typically kept free of visual obstacles that restrict a driver’s sight distance. The purpose of a daylighting triangle is to:

1. Minimize conflicts between pedestrian, cyclists, and vehicles;
2. Introduce utilities, streetscape and street furniture; and,
3. Widen sidewalks within the area.

The size of a daylight triangle is dependent on the road classification of the intersecting public roads. The minimum daylighting triangle sizes are provided in the Town of Oakville standard STD 8-4 and was last revised in July 1995. **Table 2** outlines these requirements.



Table 2 TOWN OF OAKVILLE DAYLIGHT TRIANGLE REQUIREMENTS

Road Classification	Minor Local Road	Local Road	Collector Road	Arterial Road
Minor Local / Local Road	N/A	N/A	7.5m Day Lighting Triangle	15.0m Day Lighting Triangle
Collector Road	7.5m Day Lighting Triangle	7.5m Day Lighting Triangle	7.5m Day Lighting Triangle	15.0m Day Lighting Triangle
Arterial Road	15.0m Day Lighting Triangle	15.0m Day Lighting Triangle	15.0m Day Lighting Triangle	15.0m Day Lighting Triangle

It should be noted that the Oakville OP policy: 8.12.3 states: ...“Where appropriate and public safety is not affected, the Town will minimize the amount of land utilized for daylighting triangles to contribute to a more urban environment and maximize the efficient use of land.”

Consistent with policy 8.12.3, and to ensure a more urban context is created at the junction of the local, collector, and arterial streets within Midtown, reduced daylighting triangles and corner roundings and are proposed at the junction of the local, collector, and arterial streets.

The proposed daylighting dimensions provided in **Table 3** are a combination of corner roundings and daylighting triangles for the public street junctions. Similar to the urban conditions of the City of Toronto, these areas are proposed to be surface easements in order to construct a compact and efficient underground parking garage.

Table 3 PROPOSED MIDTOWN OAKVILLE DAYLIGHT TRIANGLE AND CORNER ROUNDING SURFACE EASEMENTS

Road Classification	Minor Local Road	Local Road	Collector Road	Arterial Road
Minor Local / Local Road	5m Corner Rounding	5m Corner Rounding	7.5m Corner Rounding	7.5m Day Lighting Triangle
Collector Road	7.5m Corner Rounding	7.5m Corner Rounding	7.5m Corner Rounding	7.5m Day Lighting Triangle
Arterial Road	7.5m Day Lighting Triangle	7.5m Day Lighting Triangle	7.5m Day Lighting Triangle	7.5m Day Lighting Triangle

For context, the City of Toronto adopts corner roundings at junctions based upon the road ROW widths as seen in **Table 4**. The City of Toronto corner rounding requirements have been referenced to create a comparable guideline for the envisioned urban community in the Midtown Oakville area.

It should be noted that the City of Toronto, by way of context, allows development sites to use these corner roundings to function as a surface easement and permits underground structure to be built beneath the area. By keeping the at-grade area clear of visual obstructions, the corner rounding achieves what it is intended to do. Areas below grade will not influence the sight lines or cause additional conflict between pedestrians and vehicles.

Table 4 CITY OF TORONTO CORNER ROUNDING REQUIREMENTS

Intersection Approaches, ROW			ROW Rounding (m)
ROW Width (m)	X	ROW Width (m)	
<23	x	<23	5
23-36	x	23-36	6
<36	x	<36	8

3.6 Review of Selected Midtown Area Street Segments

3.6.1 South Service Road

The Midtown EA Street network configuration contemplates the realignment of the South Service Road from a point along the frontage of 590 Argus Road to where the Draft Midtown (2024) OPA envisions South Service Road intersecting with Street D, along Argus Road, west of its current position.

In realigning South Service Road, the 590 Argus property and properties to the east of 590 Argus Road, will have to continue to respect the MTO’s 14 setback requirements along the south side of the South Service Road alignment.

The north-south realigned segment of the South Service Road that will intersect with Argus Road, will be paralleled (to its immediate east) by the Future Active Transportation bridge structure that will cross the QEW corridor. It is contemplated that this will involve a combination of retaining wall and earth structure.

The resulting intersection of the realigned South Service Road and Argus Road will align opposite Street D, as illustrated in **Figure 10**. It is contemplated that in the fullness of time, this intersection would be reviewed for potential signalization, depending on the ultimate configuration of other intersections along the Argus Road corridor. This would also be reviewed from the perspective of a controlled crossing for pedestrians, given the Future Active Transportation bridge crossing of the QEW corridor.

The cross-section of the realigned South Service Road is envisioned to be consistent with the Draft (2024) Midtown OPA Schedule L4.

3.6.2 Argus Road “Swelbow” Alignment

Figure 10 herein illustrates a version of the Argus Road alignment as it transitions into the newly proposed east-west Collector Street, Street 1. The ROW conditions would be consistent with the Draft (2024) Midtown OPA right-of-way dimensions. Coined the “swelbow”, a combined reference to its existing “elbow” design and a “swoosh” referred to in the past, this segment of Argus Road would accommodate an intersection where the existing north-south segment of Argus Road would “T” into the newly aligned segment.

The applicant’s Cross-Argus site (217-227 Cross Avenue and 571-587 Argus Road lands) has been configured in such a manner so as to provide the necessary lands for the future implementation of the “swelbow” alignment. Prior the “swelbow” alignment implementation, the frontage along the Cross-Argus site would reflect an urban design conditions that related to the current “elbow” alignment.

3.6.3 East-West Collector Street (Street 1) – Alignment and ROW

The East-West mid-block collector street, north of Cross Avenue in the Midtown area, referred to as Street 1 in **Figure 10**, has been assumed to reflect a three-lane cross-section with a 26-metre ROW dimension.

Street 1 is envisioned in the Town’s Midtown OPA Schedule L4 (both current and proposed versions) to intersect with several north-south local streets, thereby providing options for both Active and vehicular modes to access the future development blocks within Midtown.

The proposed three-lane cross section, within a 26 metre ROW provides flexibility to accommodate both through and turning movements at any of the intersecting local streets, while accommodating both appropriate pedestrian sidewalk conditions AND cycle tracks along with landscaping provisions. The ROW and cross-section configuration also permits the provision of on-street parking within lay-bys, where landscaping could be ‘interrupted’ in strategic locations, depending on the nature of the fronting development conditions.

3.6.4 Cross Avenue

Cross Avenue is the major traffic thoroughfare within the Midtown area, both east and west of Trafalgar Road.

The Midtown EA street network contemplates a 7-lane travelled way on the realigned Cross Avenue at Trafalgar Road, retaining the existing eastbound dual left turn lane arrangements and median island conditions at the intersection. When accounting for an appropriately dimensions active transportation component, plus landscaping provisions, an approximate 41 metre ROW allowance is anticipated at Trafalgar Road.

This condition transitions to a 5-lane cross-section (where left turn lanes are required) and a 4-lane cross-section (where left turn lanes are not necessary) further west at approximately Argus Road at a signalized intersection.

At this point, a 36-metre ROW is anticipated, providing 5 lanes (where necessary) plus a median island at intersections. Retaining appropriate active transportation components (sidewalks and cycle tracks) and landscaping elements within the boulevards results in slight variations in the boulevard dimensions, given the presence or absence of left turn lanes on Cross Avenue.

The realignment of Cross Avenue is central to the future structure of the Midtown area. The Cross Avenue realignment permits the delivery of key elements of expanded transit infrastructure east and west of Trafalgar Road. As such, the Cross Avenue realignment is anticipated to be an early component of the revised transportation network within Midtown.

Cross Avenue was also contemplated to have an urban designed “promenade” along the north side of its corridor, west of Trafalgar Road as part of the draft 2023 Midtown OPA. The applicant has been engaged relative to its land holdings in Midtown and has assessed the context of the “promenade” and how it could potentially be alternatively delivered to create an effective urban “place” at the junction of the Street C and Cross Avenue intersection, while being better integrated into the planned intensification along Cross Avenue.

The result of that consideration is instead of deploying the “promenade” as a continuous 10-metre strip of land along the length of the north side of Cross Avenue, the proposed development creates a POPS strategically located on the north-west corner of the Street C and Cross Avenue intersection to better animate the street edge and tie into future development to create more active spaces and relationships with ‘development edges (buildings frontages).

As noted above, the land use concepts that are illustrated in the Consortium’s latest presentation to town council do not appear to retain the 10m promenade across the site frontage. Therefore, reference to the promenade in the current application is no longer retained. However, the planned POPS as part of the 157-165 Cross Avenue Site is consistent with animating a portion of the Cross Avenue corridor and is strategically integrated in the proposed development application.

A property widening conveyance is proposed along the frontage of Cross Avenue to accommodate half of the widening of Cross Avenue to a 36m ROW.

With respect to Cross Avenue's role in the street network relative to traffic movement, the Cross Avenue corridor would offer a balance of the traffic volume carrying capacity and the urban placemaking roles the corridor would serve.

3.6.5 North – South Local Streets

There are several local roads envisioned in the Draft (2024) Midtown OPA Schedule L4 (Street C, Street D in **Figure 10**) to intersect with the E-W collector road and Cross Avenue which provide options for both active and vehicular modes to access the future development blocks within Midtown. These roads are proposed to be provided within a 20 metre ROW.

At this point, a minimum 20-metre ROW is anticipated for the local roads accommodating appropriate pedestrian sidewalk conditions and landscaping provisions. The ROW and cross-section configuration also permits the provision of on-street parking within lay-bys, where landscaping could be 'interrupted' in strategic locations, depending on the nature of the fronting development conditions.

3.6.6 Cross Avenue / Street C Interim Intersection Design

The location where local street "Street C" intersects with Cross Avenue is offset approximately 20m from the centreline of the existing intersection of Cross Avenue and the Oakville GO station driveway. Due to the close proximity of the two roads, it is proposed to introduce an interim signalized intersection to accommodate this offset condition.

The following components are key elements taken into account for the redesign of the existing signalized intersection for "interim design conditions" – prior to the reconfiguration of Cross Avenue and the access to the Metrolinx GO Station parking lot:

- A multi-phased traffic control system will be required to ensure all vehicle movements can be conducted safely.
- There are a large amount of vehicles that make the westbound left turn movement into the Oakville GO station driveway coming from Trafalgar Road. To mitigate queues and delays at the proposed intersection, it is proposed to introduce a dedicated left turn lane at both the proposed signalized intersection and to the existing unsignalized Metrolinx driveway further to the west.
- The western Metrolinx driveway is proposed to operate as a contra-flow intersection where only entry is permitted in the morning and only exit is permitted in the afternoon.
- It should be noted that the existing western Metrolinx driveway currently operates as outbound only. Therefore, additional discussions with Metrolinx will be required to coordinate the operations of this driveway.
- The introduction of the westbound left turn lane at the signalized intersection would remove a through lane in the eastbound direction.

A functional road plan for one manner of configuring the "interim intersection layout" has been prepared and is illustrated in **Figure 11**.

4.0 OAKVILLE TOC DEVELOPMENT – COMPONENT DESCRIPTION

4.1 Component Elements of the Oakville TOC Development.

As noted in **Table 1**, there are four component sites within the Oakville TOC Development. In total, the following land uses and quantities comprise the Oakville TOC Development:

- 6,908 residential units;
- 6,362 square metres of retail gross floor area (GFA)
- 4,376 square metres of office GFA;
- 5,035 square metres of commercial fitness centre GFA; and,
- 444 square metres of day care GFA.

The total non-residential GFA area within the Oakville TOC Development is 16, 217 square metres or 174,558 square feet of GFA.

4.2 Principles of the Oakville TOC Development

4.2.1 Location

The overarching principle associated with the Oakville TOC Development is its location.

The TOD Development is situated between 150 m and 450 m from the Oakville GO Transit Hub – the second busiest GO Transit station on the rail network and the epicentre of the public transit system within the Town of Oakville. As is set out further in Section 7 of this memorandum, the Oakville TOC Development benefits from its adjacency to the Protected Major Transit Station Area (PMTSA) in many ways and it supports higher population densities as a result.

The Oakville TOC Development will benefit from the combined effects of the Provincial, Regional, and Municipal policies that support mixed-use intensification. These policies encourage the characteristics that will enhance the transportation characteristics of the Oakville TOC Development through reduced parking ratios, enhanced transit access and investment, enhanced active transportation facilities and connectedness, encouraging mixed-use developments and the resulting internalization of person trips and reduction of vehicular trip making

The proximity to a GO Rail network will, in time, offer a service that is akin to “subway” service in places such as the Vaughan Metropolitan Centre (VMC). The travel time along the GO Rail Lakeshore West line from Oakville GO Station to Union Station is similar to, and in many respects less than, the travel time along the subway line between the VMC and Union Station. The GO Rail line offers a fixed route, frequent service that connects to many other GO network and other regional surface routes which in turn connect to other PMTSA’s through the Greater Toronto and Hamilton Area (GTHA).

This locational feature, combined with the existing and planned transit systems, offers Midtown Oakville a unique opportunity to service as central growth centre for the Town of Oakville as identified in the Growth Plan.

The relative location of the Oakville TOC Development also permits the future expansion of the Oakville GO Station without precluding any design modifications to the existing or potential future intermodal elements of the GO Station.

4.2.2 Design Features

The Midtown Oakville area and the Oakville TOC Development will combine to provide key transit oriented development characteristics that multi-modal travel will rely upon.

At the pedestrian level, the proposed Midtown street network in the Draft (2024) Midtown OPA will provide an integrated system of pedestrian amenities that individual Oakville TOC Development components will build upon to ensure that active transportation is an efficient and safe mode of travel not only within Midtown, but also to points beyond Midtown Oakville. Additional dedicated and shared active transportation infrastructure is planned within Midtown to ensure it is connected to communities to the north, to the south, to the west, and to the east. Two additional dedicated active transportation crossings of the QEW corridor are planned – one on each side of the Trafalgar Road corridor. This is in addition to the planned multi-modal bridge crossing of the QEW corridor on the east side of Trafalgar Road. Dedicated active transportation bridges are also planned across the rail corridor on the south side of Midtown. Additionally, extensions of the active transportation components of existing and planned public streets are proposed on the western and eastern perimeters of Midtown. These are set out in Schedule L5 of the Draft (2024) Midtown OPA.

All planned public streets within midtown are intended to have wide pedestrian sidewalks that will be directly connected to the Oakville TOC Development and to other planned developments within Midtown. Frequent and convenient public street intersections will enable a well connected neighbourhood which will facilitate internal-Midtown person trip making and likely favour person trips over private automobile trip making.

At the cycling network level, all public streets will either have dedicated cycling facilities (envisioned as cycle tracks within the public boulevard along arterial, collector and selected local streets) or short sections of shared pavement conditions leading to dedicated cycling facilities.

The aforementioned active transportation connections beyond Midtown will also benefit cyclists and trip making to nearby existing and planned development, recreational facilities and adjacent neighbourhoods. When combined with the benefits of the emerging E-bike and E-scooter modes, the travel options open to resident, visitors, customers, and employees within Midtown will be significant. These offer efficient and safe “last-mile” connections which further enable non-auto travel for work, school, recreational, entertainment, etc. types of trip making through the weekday and weekend periods.

Although single occupant vehicular trip making is discouraged within intensification areas, it remains an essential element of travel choices for many persons and trip types. The planned Midtown street network will offer strategic connections and essential access to vehicular trips originating from and destined to the Oakville TOC Development and other development sites within Midtown.

All Oakville TOC Development component sites have multiple points of vehicular access to accommodate both the capacity and functionality needs of the Oakville TOC development sites.

In principle, all Oakville TOC Development sites will have below-grade parking with some pick-up and drop-off opportunities either on-site or along the frontages of the Oakville TOC Development sites. Internal vehicular access ramps to the below-grade parking will be designed to accommodate the appropriate design vehicles. All Oakville TOC Developments will be equipped internal service vehicle loading areas which will accommodate forward-in / forward-out vehicular movements. This will contain the service vehicle manoeuvring to areas where pedestrians and cyclists are least likely to encounter large vehicle manoeuvring. This, combined with individual loading area protocols, will optimize the efficiency, safety, and functionality of the ‘back-of-house’ areas on each of the Oakville TOC Development sites as well as the collective efficiency, safety, and functionality of the Midtown public street system.

5.0 TRANSPORTATION DEMAND MANAGEMENT PLAN

Transportation Demand Management (TDM) measures will be incorporated within the planned development to minimize the need for automobile travel to and from the site and to encourage and facilitate the use of non-automobile travel modes on a daily basis. The following outlines the proposed physical and operational strategies that complement the Site design with the goal of encouraging a shift in the travel pattern of future residents to sustainable modes of transportation.

The TDM Plan strives to reduce automobile use as a part of the design and construction of the development, as well as after construction as an on-going strategy by supporting and promoting the use of non-auto travel modes. The key objective of the TDM Plan is to reduce peak hour single occupant automobile traffic, to a certain degree, by focusing on four specific policy areas:

1. Encourage the use of alternative travel modes (transit, cycling, and walking);
2. Increase vehicle occupancy;
3. Shift travel to off-peak periods; and
4. Reduce vehicle kilometres travelled.

Further details are discussed below in Section 5.1.

5.1 TDM Plan Strategies

The existing and future area context provides for excellent public transit services as well as travel by active transportation which will reduce the need of future residents of the site to travel using an automobile. Additional TDM strategies, which have been recommended as part of the proposed development are summarized in **Table 5**.

Based upon the site context and proposed land use, the recommended TDM strategies have been selected to further support non-automobile modes of travel. The measures fall into two general categories: a 'hard' or 'soft' measure. A 'hard' TDM measure is a physical infrastructure component, where the applicant or land developer is responsible for implementations. A 'soft' TDM measure is where the applicant or land developer is responsible for notifying a third party for implementations (i.e. Town Staff or Transit Agency). The following sections provide additional details regarding each recommended TDM strategy.

Table 5 Summary of Site TDM Measures

Measure	Description	TDM Plan Objective	Hard or Soft Measure
Reduce Car Ownership			
Reduced Vehicular Parking Supply	<p>The following parking supply is proposed for the Oakville TOC Development components:</p> <ul style="list-style-type: none"> • resident parking ratio = 0.50 space per unit; • visitor parking ratio = 0.15 spaces per unit; and, • non-residential parking ratio = 1.08 spaces per 100m² GFA <p>This is a reduced provision in comparison with the minimum resident parking requirements.</p>	<ul style="list-style-type: none"> • Reduce auto-oriented dependence and the need for everyday travel. • Promote non-auto modes of travel during peak travel periods. 	Hard Measure

Measure	Description	TDM Plan Objective	Hard or Soft Measure
	<p>The future area context around the site's location will be rich in transit, cycling and close to key area destinations, which reduces the need to drive. Providing less parking is a key component in reducing single occupant vehicle trips.</p> <p>Potential to gradually reduce parking ratios over time.</p>		
Unbundling of Residential Unit / Vehicle parking space sales	<p>Unbundling of unit leases and parking leases will benefit potential tenants who do not need or want parking space.</p> <p>Bachelor units will not be provided an option to purchase a parking space.</p>	<ul style="list-style-type: none"> Reduce auto-oriented dependence and the need for everyday travel 	Soft Measure
Car Share Parking Spaces	<p>Consideration to provide 5-10 car share spaces on site through a car share provider.</p>	<ul style="list-style-type: none"> Promote alternative transportation service options besides car ownership 	Hard Measure
Annual Car Share Memberships	<p>Consideration to provide an optional annual car share membership per unit for the first year of occupancy.</p>	<ul style="list-style-type: none"> Promote alternative transportation service options besides car ownership 	Hard Measure
Bicycle Use			
Bicycle Parking	<p>Provide bicycle parking in accordance with the Town standards. 1 space per/ unit split 75% occupant / 25% visitor. Provide bike parking for non-residential uses at a rate of 1/1000 m² GFA.</p>	<ul style="list-style-type: none"> Make cycling an attractive option for travel during the peak travel periods. 	Hard Measure
Bike Share	<p>Consider providing private bike share stations – quantity to be determined – supporting 25 bicycles (both regular and E-bike support) for residents.</p>	<ul style="list-style-type: none"> Promote alternative transportation service options besides car ownership 	Hard Measure
Bike Repair Station	<p>Provide bicycle repair stations (one for each tower) within the residential bicycle parking storage area on site.</p>	<ul style="list-style-type: none"> Make cycling an attractive option for travel during the peak travel periods. 	Hard Measure



Measure	Description	TDM Plan Objective	Hard or Soft Measure
Micromobility Use			
Private / Shared Micromobility Devices	Explore the provision of micromobility devices (manual bikes, e-bikes, e-scooters, etc.) in concert with Town of Oakville policy review of micromobility to facilitate “last kilometer” trip making in the Midtown Oakville context	<ul style="list-style-type: none"> Promote alternative transportation service options besides car ownership 	Hard Measure
Transit Use			
Transit Information Centre	Explore the provision of a television displaying real-time transit information in the resident lobby to assist residents in taking local transit services (e.g., bus and streetcar routes) and subway system.	<ul style="list-style-type: none"> Reduce car dependence and the need for everyday travel. Promote transit travel during peak travel periods 	Hard Measure
Travel Mode Information Package	Implement marketing programs to ensure that new residents are aware of available modal choices in the area.	<ul style="list-style-type: none"> Reduce auto-oriented dependence. Promote non-auto modes of travel during peak periods. 	Soft Measure
Pedestrian Access and Walkability			
Pedestrian & Cycling Connections	Provide a direct connection to Cross Avenue, which connects pedestrians and cyclists to the surrounding area’s bike lanes, Oakville Transit bus stops, and the Oakville GO Station.	<ul style="list-style-type: none"> Make walking and cycling an attractive option for travel during peak travel periods 	Hard Measure

6.0 VEHICULAR PARKING CONSIDERATIONS

6.1 Zoning Bylaw Vehicle Parking Requirements

The Oakville TOC Development area is currently subject to the “Mixed Use Zones” parking standards under the Town of Oakville Zoning By-law 2014-014.

Application of the supply requirements of Zoning-By-law 2014-014 to the proposed development would require the provision of a parking at the rate of 0.80 parking spaces per unit for resident parking for one and two bedroom units and 1.05 parking spaces per unit for three bedroom units. A further 0.20 parking spaces per unit for visitors to the residential units. Non-residential land uses would require parking supplied at a rate of 1 space per 18 square metres of retail and Fitness centre GFA, 1 / 35 square metres of office GFA, and 1 / 40 square metres of day care GFA.

Notwithstanding the applicability of Zoning Bylaw 2014-014 to the Oakville TOC Development sites, the Province of Ontario recent passed (June 6, 2024) Bill 185. Bill 185, among other things, amends the Planning Act of Ontario.

Provisions in Bill 185, in amending the Planning Act, limits the ability of official plans and zoning bylaws to contain policies requiring an owner to provide or maintain parking facilities within protected major transit station areas, certain other areas surrounding and including an existing or planned higher order station or stop and other prescribed areas.

Bill 185 says (paraphrased) that no official plan may contain any policy that has the effect of requiring, and that a zoning by-law may not require, an owner or occupant of a building or structure to provide and maintain parking facilities, other than parking facilities for bicycles, on land that is not part of a highway and that is located within:

- a protected major transit station area;
- an area delineated in the official plan of the municipality surrounding and including an existing or planned higher order transit station or stop, within which area the official plan policies identify the minimum number of residents and jobs, collectively, per hectare that are planned to be accommodated; or
- any other area prescribed for the purposes of this clause.

The Oakville TOC Development is located within the Protected Major Transit Station Area which is defined as Midtown Oakville.

The impact of Bill 185 renders any requirement for vehicular parking, for lands within a PMTSA, within the Town of Oakville’s Midtown area Secondary Plan and Comprehensive Zoning Bylaw as having ‘no effect’ (i.e., the requirement for vehicular parking is zero if a Site is within a PMTSA).

Application of Bill 185 and the provisions which amend the Planning Act result in vehicular parking requirements of zero parking spaces per unit (i.e., 0 parking spaces / unit) for both the resident parking and visitor parking components as well as the non-residential land use components of the Oakville TOC Development proposal.

6.2 Proposed Parking Supply

Notwithstanding the discussion around the Zoning Bylaw parking requirements and the effects of Bill 185 on the parking requirements for the Oakville TOC Development proposal, there does exist a practical parking demand that will need to be accommodated for the Oakville TOC Development to be marketable and to function appropriately within Midtown Oakville.

It is our opinion that the above noted parking standards summarized in Section 6.1 overstate the site's parking demands by some margin, given the excellent existing and future transit and pedestrian/cycling nature of the proposed development and future Mid-Town Oakville environs.

It is proposed to provide an effective resident parking supply ratio of 0.50 parking spaces per unit, and effective visitor parking supply ratio of 0.15 parking spaces per unit), and an effective non-residential parking supply ratio of 1.08 parking spaces per 100 m² of GFA.

It is also important to note that the total supply of non-resident parking – residential visitor and retail / office / commercial fitness facility / day care land uses (depending on what combinations of non-residential land uses are contained within the component Sites of the Oakville TOC Development proposal) – could potentially be shared during certain times of the day given the favourable (compatible) temporal patterns exhibited by office/residential visitor parking demands.

The residential visitor parking will not be fully utilized during the daytime hours throughout the week (likely between 20% and 50% utilization). The balance of these parking spaces can be effectively shared between the non-residential land uses during the daytime house and early evening hours to reduce the overall parking demands further.

There would be an opportunity, assuming an agreement between the residential condominiums and the non-residential GFA space purchasers, to share, on a paid parking basis, the residential visitor parking supply during daytime hours when non-residential parking demands are highest. This would create an efficient urban parking condition. This approach would be pursued further through the detailed Site Plan stages of development and through the leasing and sales process of the overall Oakville TOC Development proposal.

6.3 Appropriateness of Proposal Minimum Parking Standards

The in-force parking requirements, as per Zoning By-law 2014-014, overstate the parking needs of contemporary developments in transit-accessible areas of Oakville, such as the site. **The following parking standards are proposed:**

- **Resident:** 0.50 spaces per unit
- **Residential Visitor:** 0.15 spaces per unit
- **Commercial / Retail:** 1.08 spaces per 100 m² GFA

As such, the following sections discuss the appropriateness of the proposed (reduced) parking requirements, per use.

6.3.1 Resident Parking Assessment

Adoption of a reduced residential parking minimum standard is considered appropriate based upon the following considerations:

- Provincial and local policy / plan that direct municipalities to reduce or eliminate minimum parking requirements;
- Existing and planned transit and active transportation facilities in the area;
- The existing and future transit reach;
- Review of other residential parking By-law standards across Ontario;
- Observed precedence for residential parking approvals; and
- The TDM measures for the Site will influence parking demand on-Site and in the wider area.

The following provides an overview of the contextual factors influencing parking demand at residential developments in the Mid-Town Oakville area and the appropriateness of the proposed reduced parking supply in this instance.

6.3.1.1 PROVINCIAL, REGIONAL, AND LOCAL POLICY

There are many provincial plans and local policies that provide a framework to guide development in Ontario municipalities. These plans and policies often contain direction with regards to development along transit corridors, commenting on parking standards and the future regulations of parking minimums. A brief overview of the provincial and local plans and policies that support a reduced parking minimum and multi-modal lifestyle is outlined below.

Ontario's Five Year Climate Change Action Plan

Ontario's Five Year Climate Change Action Plan was announced in June 2016 (herein referred to as "the Plan"). The Plan emphasizes the importance of addressing climate change at the municipal level. Some of the key transportation and land-use planning actions outlined in the Plan are as follows:

- **Support cycling and walking:** *Commuter cycling networks will be established across Ontario, targeting routes with high-commuting volume such as between residential communities, major transit stations and employment areas. There will be more cycling facilities in urban areas, including grade-separated routes and cycling signals. There will be more bicycle parking at transit stations and provincially owned, publicly accessible facilities. Ontario will revise provincial road and highway standards to require commuter cycling infrastructure be considered for all road and highway construction projects where it is safe and feasible. Ontario will do the same for major transit corridors.*
- **Reduce single-passenger vehicle trips:** *Ontario will provide grants to municipalities and large private employers to implement Transportation Demand Management (TDM) Plans. The plans will be designed to help increase walking, cycling, carpooling, telecommuting and flex-work schedules, thereby reducing overall fossil fuel consumption, traffic congestion and transportation emissions.*
- **Eliminate minimum parking requirements:** *Minimum parking requirements will be eliminated over the next five years for municipal zoning by-laws, especially in transit corridors and other high-density, highly walkable communities. Minimum parking requirements are a barrier to creating complete, compact and mixed-use communities. Instead, by-laws will encourage bike lanes, larger sidewalks, and enhanced tree canopies.*

The idea to eliminate minimum parking requirements in transit accessible areas is not new in North America. Residential developments with lower parking requirements are being promoted, approved, and developed in Vaughan, Toronto, Calgary, Vancouver and other cities. This shift away from providing excess residential parking highlights a changing perspective. On this basis, a reduced minimum parking supply requirement for the subject site would be in conformance with Ontario's current vision for transit corridors.

Planning Act

The Planning Act directs municipalities to have regard to matters of provincial interest set out in Section 2 of the Planning Act, including:

(q) the promotion of development that is designed to be sustainable, to support public transit and to be oriented to pedestrians;

(s) the mitigation of greenhouse gas emissions and adaptation to a changing climate.

The proposed reduced parking standards has regard to the matters of Provincial interest and will promote sustainable, transit-supportive development, and the mitigation of greenhouse gas emissions. It will also support and encourage the



use of existing higher order public transit by discouraging automobile ownership and demand for single-occupant vehicle trips.

Provincial Policy Statement (2020)

The Provincial Policy Statement (2020) (the “PPS”) contains a number of policies which promote efficient development and the optimization of land and infrastructure.

Specifically, policy 1.1.1 e) states that healthy, liveable and safe communities are sustained by:

“e) promoting the integration of land use planning, growth management, transit-supportive development, intensification and infrastructure planning to achieve cost-effective development patterns, optimization of transit investments, and standards to minimize land consumption and servicing costs;”

Policy 1.1.3.2 states that “Land use patterns within settlement areas shall be based on densities and a mix of land uses which:

- a) efficiently use land and resources;
- b) are appropriate for, and efficiently use, the infrastructure and public service facilities which are planned or available, and avoid the need for their unjustified and/or uneconomical expansion;
- c) minimize negative impacts to air quality and climate change, and promote energy efficiency;
- d) prepare for the impacts of a changing climate;
- e) support active transportation;
- f) are transit-supportive, where transit is planned, exists or may be developed;

Policy 1.1.3.4. states that *“Appropriate development standards should be promoted which facilitate intensification, redevelopment and compact form, while avoiding or mitigating risks to public health and safety.”*

Policy 1.6.7.2. states that *“Efficient use should be made of existing and planned infrastructure, including through the use of transportation demand management strategies (TDM), where feasible.”*

Policy 1.6.7.4 states that *“Appropriate land use patterns, density, and a mix of uses should be promoted to minimize the length and number of vehicle trips taken and to support current and future use of transit and active transportation.”*

In summary, the PPS is supportive of the use of TDM, such as reduced parking rates, to support and increase the efficiency of more sustainable transportation options, including the various planned transportation improvements within the site vicinity, discussed further in **Section 5.0**. The proposed reduction in resident parking rates associated with the development is consistent with the PPS and is an appropriate development standard to facilitate intensification and transit-supportive development as planned for the area.

Ontario’s Growth Plan

Ontario’s most recent *A Place to Grow – Growth Plan for the Greater Golden Horseshoe* (the ‘Growth Plan’) was published in May 2019, which outlines requirements for accommodating growth to 2041. The plan covers a wide range of areas and topics, many of which are applicable to this development.

- **Transportation and Moving People** – Public transit will be the first priority for major transportation investment. Transit growth will focus on increasing the capacity of existing transit systems while also expanding transit service to connect nearby neighbourhoods with urban growth centres and major transit station areas. These goals should increase the modal share of transit and reduce greenhouse gas emission.
- **Active Transportation** – In order to reduce single occupant vehicle trips and address climate change, municipalities should encourage and include in their own growth plan guidelines for active transportations networks. These networks provide sidewalks, bicycle lanes, and easy access to surrounding major transit station areas.
- **Reduce single-passenger vehicle trips** – The Growth Plan calls for municipalities to develop and implement local TDM policies and active transportations strategies to reduce single-occupant automobile trips. This will aid in shifting trip demand from the automobile to the strengthened multi-modal networks also proposed in the plan with the hopes of reducing the need for individual automobile ownership.

Furthermore, the Growth Plan explicitly shows support for reduced parking standards within major transit station areas (MTSAs) which are areas that are within an approximate 10-minute walk of an existing or planned higher order transit station. Per the *Halton Region 2022 Official Plan*, the site is located within the Oakville GO Station MTSA, as discussed in greater detail, below.

The Growth Plan encourages development in MTSAs to support transit and active transportation, as noted in Section 2.2.4.8:

All major transit station areas will be planned and designed to be transit-supportive and to achieve multimodal access to stations and connections to nearby major trip generators by providing, where appropriate:

- connections to local and regional transit services to support transit service integration;*
- infrastructure to support active transportation, including sidewalks, bicycle lanes, and secure bicycle parking; and*
- commuter pick-up/drop-off areas.*

Additionally, the Growth Plan explicitly states that development in MTSAs should provide alternative development standards such as reduced parking standards in Section 2.2.4.9:

Within all major transit station areas, development will be supported, where appropriate, by:

- planning for a diverse mix of uses, including additional residential units and affordable housing, to support existing and planned transit service levels;*
- fostering collaboration between public and private sectors, such as joint development projects;*
- providing alternative development standards, such as reduced parking standards; and*
- prohibiting land uses and built form that would adversely affect the achievement of transit-supportive densities.*

In summary, the Growth Plan shows support for TDM measures which may reduce private automobile trips and, instead, increase the modal share of transit and active transportation within PMTSA areas. As such, the proposed resident parking reduction (which is within the Oakville GO station PMTSA) aligns with policies within the Growth Plan and is considered appropriate.

2041 METROLINX Regional Transportation Plan

The **Metrolinx 2041 Regional Transportation Plan (2041 RTP)** – adopted in 2018 as an update to The Big Move (2008) – provides a framework to create an integrated, multi-modal, and regional transportation system to support the growth of healthy, complete, and sustainable communities.

The 2041 RTP contains strategies that integrate land use and transportation planning to identify areas for investment and build new connections. Strategy 4.8 specifically addresses parking management, encouraging the Province to adopt a region-wide policy that “provides guidelines and encourages best practice in parking management.” The strategy states that “zoning standards should be reviewed, with the expectation that minimum parking requirements will be reduced, particularly in transit-supportive neighbourhoods”, such as the site area. The 2041 RTP also speaks to embedding TDM strategies in land use planning and development to prioritize cycling, walking and transit use.

Additionally, the 2041 RTP identifies Midtown Oakville as a Mobility Hub, for which an additional framework was developed to help guide development in these areas

Metrolinx Mobility Hub Guidelines

Per the 2041 RTP, Mobility Hubs are MTSAs at key intersection points on the Frequent Rapid Transit Network, which are intended to create strong transit connections and integrate multiple modes of transportation. The *2011 Metrolinx Mobility Hub Guidelines*, currently under review to reflect updated Provincial policy and the 2041 RTP, build upon the strategies presented by Metrolinx to provide a framework that helps plan development at Mobility Hubs across the GTHA.

This framework is intended to ensure these areas surrounding key transit stations support more intense development and accommodate strong pedestrian, cycling, and transit facilities and connections. In conjunction with improving non-vehicular transportation infrastructure, the Guidelines recommend minimizing auto-use through the implementation of parking maximums to limit excess parking supply and suggests reviewing and possibly removing minimum parking standards in areas that have high accessibility to rapid transit stations. The proposed parking reduction for the Oakville TOC Development is consistent with Metrolinx’s policies for Sites located within a Mobility Hub and in close proximity to higher-order transit.

Ontario Ministry of Transportation Transit-Supportive Guidelines

The Ontario Ministry of Transportation Transit-Supportive Guidelines aim to create an environment that is supportive of transit, and to develop services and programs intended to increase transit ridership. The guidelines also support the use of TDM strategies, particularly near transit routes. This may include the sharing of parking between site uses, the use of on-street parking during off-peak hours, and the reduction of minimum and maximum parking requirements as TDM measures are adopted. In this way, the proposed parking reduction proposed by the site is consistent with these provincial guidelines.

GO Rail Station Access Plan (2023)

The Metrolinx GO Rail Station Access Plan provides a high-level vision and policy guidance for the future planning, design, and access of GO Rail facilities. The station will be improved to provide greater transit access, opportunities, and safety for existing and future riders within the site area, overall supporting regional transit as a viable and reliable travel option. Overall, the Oakville TOC Development’s reduced resident parking supply aligns with the GO Rail Station Access Plan as it encourages transit use, particularly for inter-regional travel, and positions transit as a viable travel option for residents.

Halton Regional Official Plan

The 2022 Halton Region Official Plan sets the framework for growth and development in the region that includes the Town of Oakville. As the region grows, the plan emphasises the need for sustainable communities and proper intensification in growth areas. The plan includes policies and objectives, which are outlined below, that encourage safe, convenient, accessible, affordable and efficient transportation systems and to support TDM and parking management as a way to achieve these goals.

Policy 172. (2) states the OP Objective...“To develop a balanced transportation system that:

- a) reduces dependency on automobile use;
- b) includes a safe, convenient, accessible, affordable and efficient public transit system that is competitive with the private automobile; and
- c) promotes *active transportation*.

Policy 172. (4) states the OP objective...“ To improve transportation network efficiency through both *travel demand management* and *transportation supply management* strategies.”

Policy 172. (10) states the OP objective...“ To promote land use patterns and densities that foster strong live-work relationships and can be easily and effectively served by public transit and *active transportation*.”

The proposed (reduced) parking supply is encouraged by the Official Plan, as it is a TDM measure aimed at reducing single occupancy automobile use and the reduced supply acknowledges the walking distance to transit (in this case the proximity to the Oakville GO Rail Hub within the PMTSA) and complementary uses.

Livable Oakville – Growth Areas – Midtown Oakville

The Mid-Town Oakville District is envisioned as a higher density, transit-supportive, mixed use area and as a strategic location to accommodate both population and employment growth. This district will include gateway features, urban park with pedestrian midblock connections and establish a mix of commercial and residential uses.

Livable Oakville describes the Mid-Town and its attributes as follows...“*The Oakville GO/VIA Station is the Town’s primary hub for current and planned transit and is a major transit station. Rail and bus connections currently service the area and major improvements to the local and inter-regional transit network are planned. In addition to improvements to the local bus network, there will be express commuter rail service and bus rapid transit corridors along Trafalgar Road and Highway 403. The bus rapid transit systems will originate in Midtown Oakville and connect with the broader Greater Toronto and Hamilton Area transportation network.*”

Within Livable Oakville, Part E – Growth Areas, Mid-Town Oakville, there are a number of relevant policies that support the intensification of the Mid-Town area and that speak directly to the mobility needs and requirements, supporting land use policies (internalization of trip making), and phasing necessary to fulfill those goals and objectives. These characteristics are consistent with the objective of reducing the reliance on the private automobile to support that intensification.

Policy 20.1 states that:

Goal

Midtown Oakville will be a vibrant, transit-supportive, mixed use urban community and employment area.

Policy 20.2.1 state that:

Objectives

To create transit-supportive development by:

- a) *ensuring the entire area is developed as a pedestrian-oriented environment focused on access to, and from, transit;*



- b) *improving internal road circulation and connections to, and through, Midtown Oakville for public transit, pedestrians, cyclists and vehicles; and,*
- c) *promoting a compact urban form with higher density and higher intensity land uses.*

Policy 20.4.1 states that:

Transportation

- e) *Development shall promote safe, convenient and attractive pedestrian access to transit stops or stations. Barriers, such as boundary fences, shall be discouraged.*

Town of Oakville Zoning Bylaws

It is worth noting that the Town of Oakville’s Zoning Bylaws that govern the provision of vehicular parking recognize in some instances a variety of requirements to describe how parking must be provided for land use similar to those proposed within the Proposed Development.

Residential “Apartment – More than 4 storeys” as set out in the North Oakville Zoning Bylaw 2009-189 Section 5 has a “maximum” parking rate expressed but **no minimum parking rate**. Similarly, in Zoning Bylaw 2014—014, within Section 5.2.2 Minimum Number of Parking Spaces in Mixed-Use Zones, non-residential uses within the Downtown Oakville area have **no minimum requirement**.

These Zoning standards recognize that there are contextual differences across the Town that should be incorporated into the development and intensification of lands.

The Mid-Town Oakville area is an excellent example of where parking requirements should support the area’s goals and objectives as set out in the Livable Oakville document, while being consistent with Provincial and Regional policy. Reduced parking standards, as noted in the TDM sub-section to follow, is one of the most effective ways to reduce the reliance upon the private automobile and encourage alternative forms of mobility.

6.3.1.2 REVIEW OF EVOLVING TRANSPORTATION CONTEXT

The existing and future transportation context of the site area is supportive of alternative transportation modes, including transit and active transportation. Currently, the Oakville TOC Development area is located within a reasonable walking distance of the Oakville GO Station and various Oakville Transit bus routes, which provide connections to regional and local transit services, respectively. There are also emerging improvements to both the area transit context and active transportation context, including the Dundas and Trafalgar Bus Rapid Transit systems and new cycling and pedestrian infrastructure which connect local destinations.

Existing Transit Context

The Oakville TOC Development area is located approximately 150 to 450 m from the Oakville GO Station and adjacent to Oakville Transit bus stops providing convenient access to the various higher-order local and regional public transit services.

The Oakville GO Station is serviced by the Lakeshore West line which connects to Toronto’s Union Station at the east end and Niagara Falls Station at the west end. Additionally, GO Train buses run between Oakville GO Station to numerous locations such as Union GO Station, Square One, Highway 407 Bus Terminal, etc.

Oakville Transit is the local transit service which provide local connections across the Town of Oakville. There are number bus stops along Cross Avenue located directly south of the site.

Overall, the Oakville TOC Development area is well served by transit under existing conditions.

Emerging Area Transit Improvements

There are numerous planned transit improvements in the vicinity of the Oakville TOC Development area, including both Halton Region and GO Transit projects. These transit improvements / projects are summarized below.

Trafalgar Bus Rapid Transit was identified in Metrolinx's 2041 Regional Transportation Plan, and is planned to include dedicated bus lanes, frequent and reliable bus service and smart signals along Trafalgar Road, as well as include better connections to other transit modes. In 2021 the Town of Oakville council endorsed a proposed bus rapid transit (BRT) service along Trafalgar Road. Trafalgar Road is a north-south running regional road and is currently the only connection from north Oakville to the GO station. This proposed project would significantly improve the transit connectivity of the region and would advance the achievement of the Region's 20% targeted modal split as described in the Region's Transportation Master Plans, *The Road to Change*.

Complimentary to the proposed Trafalgar BRT installation, the *Dundas BRT* is a Metrolinx rapid transit project that is proposed to run along Dundas from Kipling Mobility Hub to Hamilton. This service would run east-west through north Oakville. This service would not provide direct access to Midtown Oakville, however, its alignment with the proposed Trafalgar BRT would provide a direct transit connection. The combination of these proposed projects would increase the function catchment area of origin and destination trips made to midtown Oakville.

The *Metrolinx Regional Express Rail (RER)* program is working to increase GO Transit service across the Greater Golden Horseshoe. As part of RER, GO Transit will offer more services with faster trains and more stations. New train technology with faster trains on the Lakeshore West GO Transit line will provide all-day, two-way services with 15 minutes or better transit service. The Town of Oakville, Metrolinx and TTC are collaborating to advance the SmartTrack and GO expansion in the area. New stations (Confederation and Beamsville) are proposed on the Lakeshore West line, which will provide the site with an increased transit reach via the Oakville GO Station.

Relevant Literature Review – Commuter Rail Station / Network

Density

Historically, North American commuter networks have experienced low population density within the station catchment areas. Given that heavy rail often has large catchment areas, it should be acknowledged that the feasibility of access via active transportation may be limited for riders on the periphery. The intensification of the station area with increased density mitigates this problem by increasing the share of riders who live within a distance reachable by active transportation.

Access Trips to Higher Order Transit Stations

From a transportation perspective, trips made via higher-order transit typically consist of three distinct trip legs,

- 1). The initial trip from origin to station;
- 2). The station to station trip; and
- 3). The station to destination trip.

Throughout the GO network, this typically involves an initial private automobile trip to a GO station, a GO Train trip to the CBD, and a final trip from the CBD station to the destination typically made via active or feeder transportation. Unlike the final CBD station to destination trip, which is well served by feeder connections, the initial origin to home station generally has fewer feeder transit options and active transport can be limited by access distance.

For the above reasons, there is a heavy reliance on private auto as the access mode to GO stations. However, as stated above, the expansion of parking facilities on the GO network is financially unsustainable and many station areas are land

constrained. This operational problem has been well documented and has been studied by academics, transit authorities, and NGOs. Notable studies include [Chan & Farber], [Graystone & Mitra], [Shantz & Casello], and [Skidmore]. These studies have highlighted a variety of different aspects to mitigate auto dependency on the first mile. Frequently discussed factors include:

- Enhancing active transportation facilities
- Enhancing feeder transportation connectivity
- Reducing free parking and expanding paid parking (Metrolinx’s long-term vision is to reduce overall parking and increase the paid / carpool parking component of the future parking supply)
- Promoting density around the station area

The above strategies aim to enhance the urban environment such that sustainable modes of travel become more attractive, and the dependency on auto ownership is reduced. The lands adjacent to the GO station are positioned to benefit from the implementation of these strategies.

Existing and Emerging Pedestrian and Cycling Context

Sidewalks are present throughout all the public streets in Midtown Oakville however, there is no cycling infrastructure in proximity to the site area. However, substantially improved multi-modal connectivity within and beyond Midtown Oakville is planned as part of the Midtown Oakville Environmental Assessment (EA) and the Draft (2024) Midtown Oakville OPA. The detailed improvements are not definitive and will be as part of an ongoing process.

It should be noted that the Town of Oakville’s *Active Transportation Master Plan (2017)* has identified future pedestrian and cycling network improvements to the Midtown Oakville lands. However, the only multi-modal improvement within the Oakville TOC Development’s area is a multi-use path along Argus Road.

6.3.1.3 TRANSIT REACH ASSESSMENT

Existing Transit Travel Reach

In order to understand the changing transportation context, transit service area analyses for the existing and future transit network was conducted using Geographic Information Systems (GIS). These analyses look at the service area of a transit network that a visitor of the Oakville TOC Development area has access to in a given time range. This type of analysis is useful in understanding the transit accessibility and can also be used to quantify the impact of transit service changes.

A 15, 30, and 45 minute transit reach from the Oakville TOC Development area during the weekday morning travel period was analysed for existing conditions as is illustrated in **Figure 12** and **Figure 13**. Transit travel times include walking time to and from transit stops, as well as the transit schedules during peak hour (i.e. service frequency and wait times), all of which are based upon existing transit service.

Future Transit Travel Reach

A review of projected transit travel times assumed the various public transit network improvements included in Section 6.3.1.2 and are illustrated in **Figure 14** and **Figure 15**. A comparison of areas that are reachable is provided in **Table 6** below.

Table 6 Existing and Future Transit Service Area Analysis Comparisons

Transit Scenario	15 minute reach	30 minute reach	45 minute reach
<p>Existing Conditions (Travel Away From Site)</p>	<ul style="list-style-type: none"> • North along Trafalgar Rd to before Upper Middle Rd; • South along Trafalgar Rd, and Kerr St to before Rebecca St / Randall St (north of Lakeshore Rd W); • East along Cornwall Rd to before Eighth Line / Chartwell Rd; and • West along Cornwall Rd / Speers Rd to just past Dorval Dr. 	<ul style="list-style-type: none"> • North along Trafalgar Rd just past Dundas St E up to Threshing Mill Blvd, and north past Upper Middle Rd between Third Line and Joshua Creek Dr; • South along Trafalgar Rd, Reynolds St, and Kerr St to the waterfront; • East along Upper Middle Rd to before Ninth Line / Ford Dr, and east along Lakeshore West GO Line to Port Credit GO Station; and • West along Upper Middle Rd W to past Third Line, and west along Speers Rd and Wyecroft Rd to Bronte Rd. 	<ul style="list-style-type: none"> • North along Trafalgar Rd to beyond Hwy 407 before Lower Baseline E; • South along Trafalgar Rd, Third Line, Reynolds St, and Kerr St to the waterfront; • East along Dundas St E to Winston Churchill Blvd, and east along Lakeshore West GO Line to Mimico GO Station; and • West along Dundas St W to Bronte Rd, west along Lakeshore Rd to Burloak Dr, and west along Lakeshore West GO Line to Burlington GO Station.
<p>Existing Conditions (Travel Towards Site)</p>	<ul style="list-style-type: none"> • North along Trafalgar Rd to before Upper Middle Rd; • South along Trafalgar Rd, and Kerr St to before Rebecca St / Randall St (north of Lakeshore Rd W); • East along Cornwall Rd to before Eighth Line / Chartwell Rd; and • West along Cornwall Rd / Speers Rd to past Morden Rd (west of Dorval Dr). 	<ul style="list-style-type: none"> • North along Trafalgar Rd just past Dundas St E up to Threshing Mill Blvd; • South along Trafalgar Rd, Reynolds St, and Kerr St to the waterfront; • East along Upper Middle Rd E to Hwy 403, and east along Lakeshore West GO Line to Clarkson GO Station; and • West along Upper Middle Rd W to past Third Line, and along Lakeshore West GO Line to Walkers Line (halfway to Burlington GO Station). 	<ul style="list-style-type: none"> • North along Trafalgar Rd to beyond Hwy 407 before Lower Base Line E; • South along Trafalgar, Third Line, Reynolds St, and Kerr St to the waterfront; • East along Dundas St E to Winston Churchill Blvd, and east along Lakeshore West GO Line to Long Branch GO Station; and • West along Dundas St W to Bronte Rd, and west along Lakeshore West GO Line to Aldershot GO Station
<p>Future Conditions (Travel Away From Site) <i>with the addition of GO Expansion /RER, Trafalgar BRT, Dundas BRT, etc.</i></p>	<ul style="list-style-type: none"> • North along Trafalgar Rd to before Oak Park Blvd / Postridge Dr (south of Dundas St E) via future Trafalgar BRT; • South along Trafalgar Rd, and Kerr St to before Rebecca St / 	<ul style="list-style-type: none"> • North along Trafalgar Rd to Hwy 407 (via future Trafalgar BRT), and north along Erin Mills Pkwy to past Dundas St W; • South along Trafalgar Rd, Reynolds St, Kerr St, and Appleby Line to the waterfront, and south along Southdown Rd to Lakeshore Rd W; • East along Dundas St W Pkwy (via future Dundas BRT) to beyond Erin Mills, and east along 	<ul style="list-style-type: none"> • North along Trafalgar Rd to Lower Baseline E (via future Trafalgar BRT), north along Erin Mills Pkwy and Mississauga Rd to past Eglinton Ave W, and north along Hurontario St (via future Hazel McCallion LRT) to Hwy 403; • South along Trafalgar Rd, Reynolds St, Kerr St, and Appleby Line to the waterfront; • East along Dundas St E to past Dixie Rd (via future Dundas BRT), and east

	<p>Randall St (north of Lakeshore Rd W);</p> <ul style="list-style-type: none"> • East along Lakeshore West GO Line to Clarkson GO Station; and <p>West along Lakeshore West GO Line to Bronte GO Station.</p>	<p>Lakeshore West GO Line to Mimico Go Station; and West along Upper Middle Rd W to past Third Line, and along Lakeshore West Go Line to Burlington GO Station.</p>	<p>along Lakeshore West GO Line (and via Waterfront Reset LRT from Long Branch GO) to Union Station; and West along Dundas St to Walkers Line (via future Dundas BRT), and along Lakeshore West Go Line to past Aldershot GO Station.</p>
<p>Future Conditions (Travel Towards Site) <i>with the addition of GO Expansion /RER, Trafalgar BRT, Dundas BRT, etc.</i></p>	<ul style="list-style-type: none"> • North along Trafalgar Rd to before Oak Park Blvd / Postridge Dr (south of Dundas St E) via future Trafalgar BRT; • South along Trafalgar Rd, and Kerr St to before Rebecca St / Randall St (north of Lakeshore Rd W); • East along Lakeshore West GO Line to Clarkson GO Station; and <p>West along Lakeshore West GO Line to Bronte GO Station.</p>	<ul style="list-style-type: none"> • North along Trafalgar Rd to beyond Hwy 407 (via future Trafalgar BRT), and north along Erin Mills Pkwy to past Dundas St W; • South along Trafalgar Rd, Reynolds St, and Kerr St to the waterfront; • East along Dundas St W Pkwy (via future Dundas BRT) to beyond Erin Mills, and east along Lakeshore West GO Line to Mimico GO Station; and <p>West along Upper Middle Rd W to Bronte Rd, and along Lakeshore West GO Line to Burlington GO Station.</p>	<ul style="list-style-type: none"> • North along Trafalgar Rd to Lower Baseline E (via future Trafalgar BRT), north along Winston Churchill Blvd and Erin Mills Pkwy to just before Eglinton Ave W, and north along Hurontario St (via future Hazel McCallion LRT) to Hwy 403; • South along Trafalgar Rd, Reynolds St, Kerr St, and Appleby Line to the waterfront; • East along Dundas St E to Hurontario St (via future Dundas BRT), and east along Lakeshore West GO Line (and via Waterfront Reset LRT from Long Branch GO) to Union Station; and <p>West along Dundas St to Cedar Springs Rd / Brant St (via future Dundas BRT), and along Lakeshore West Go Line to Hwy 6 (past Aldershot GO Station).</p>

Notable findings include:

- Within 15 minutes, under existing conditions, a small area is accessible for travel towards and away midtown Oakville, primarily along Trafalgar Rd and Kerr St (for southbound travel). Under future conditions, namely the implementation of the Trafalgar BRT, travel northwards along Trafalgar Rd extends to just short of Dundas St E. Future GO improvements also greatly increase access east-west from midtown Oakville along the Lakeshore West GO Line.
- Within 30 minutes, north-south travel away and towards midtown Oakville reaches northwards just past Dundas St E and southwards to the waterfront via Trafalgar Rd. East-west travel is centralized along Upper Middle Rd. Travel away from the site eastward along the Lakeshore West GO Line reaches Port Credit GO Station, whereas travel towards the site westward extends from Appleby GO Station. Under future conditions, with the implementation of the Trafalgar BRT, access northbound along Trafalgar Rd reaches to past Highway 407 for both travel directions. In addition, the Trafalgar BRT provides improved access to other transit services. In combination with the future Dundas BRT, improved access along Dundas further increases north-south reach along Winston Churchill Blvd and Erin Mills Pkwy. Future GO infrastructure and electrification projects improve east travel to Mimico GO Station (travel away) and west travel to Burlington GO Station (both directions).
- Within 45 minutes, northbound travel reaches Lower Baseline E along Trafalgar Rd. Southbound travel extends to the waterfront across Oakville via existing local bus routes. Eastward travel away from midtown Oakville



reaches Mimico GO Station, and westward travel towards midtown Oakville extends from Aldershot GO Station. Under future conditions, 45 minute reach spreads deep into surrounding municipalities of Burlington, Mississauga, and Toronto. The future Dundas BRT greatly increases east-west reach along Dundas; now reaching past Winston Churchill Blvd to Dixie Rd and past Bronte Rd to Walkers Line, respectively. Improved access to other transit operations along Dundas also increases north reach along Winston Churchill Blvd and Erin Mills Pkwy just shy of Eglinton Ave W. The implementation of Hurontario LRT also improves northwards reach up to Highway 403 along Hurontario St. Implementation of GO expansion extends travel along the Lakeshore West GO Line, spanning between Union Station and Aldershot GO Station.

In summary, under present conditions the site of midtown Oakville is bound by the QEW corridor, limiting northwards travel to Trafalgar Rd. The nearby Oakville GO Station serves as the primary east-west route. In the future, the inclusion of Trafalgar BRT, Dundas BRT and GO Expansion greatly improves overall reach, opening greater opportunities for travel in all directions. The effect of future implementations is especially noticeable in longer travel reaches, as future 45 minute travel provides access to central Burlington, Mississauga City Center, and downtown Toronto.

The evolving transportation context visualized in this analysis indicates that, at either local or intercity scales, there are suitable alternatives to driving or requiring a parking space for daily travel. The Oakville TOC Development area is in a prime location that enables future site users to shift away from auto use and utilize the major transit investments being afforded within the area.

6.3.1.4 ZONING BYLAW REVIEW – RESIDENT PARKING STANDARDS

A comprehensive Zoning By-law review has been undertaken which compares parking standards adopted across numerous municipalities across the GTHA and eastern Ontario with comparable transit access to the site. The selection of municipalities was primarily based on certain urban characteristics, including density and intensification patterns, conventionally auto-centric network, and a diversity of transit services available in the area. These minimum parking requirements reflect evolving transit contexts, mixed-use environments, and the emergence of alternative modes of travel.

A summary of resident Zoning By-law rates for comparable Ontario municipalities is provided in **Table 7**.

Table 7 Residential Parking Supply Ratio Requirements – Comparable Ontario Municipalities

Municipality	Zoning By-law	City Area	Land Use Category	Nearby Transit Service	Minimum Resident Parking Requirement
Oakville TOC Development Area (Proposed)	--	Midtown	Mixed-Use Building	<ul style="list-style-type: none"> Oakville Local Bus Routes GO Train (Lakeshore West Line) Future Dundas and Trafalgar BRT 	0.50 spaces / unit
Mississauga	By-law 0225-2007	Precinct 1	Condo / Rental Apartment	<ul style="list-style-type: none"> MiWay Bus Mississauga Transitway MiWay Express Bus <ul style="list-style-type: none"> GO Bus Future Hazel McCallion LRT 	0.80 spaces / unit
	Undergoing City staff investigation	Along future Hazel McCallion LRT	--		In 2024, City of Mississauga's Council approved reducing minimum residential parking requirements along the future Hazel

Municipality	Zoning By-law	City Area	Land Use Category	Nearby Transit Service	Minimum Resident Parking Requirement
					McCallion Light Rail Transit line.
Vaughan	By-law 001-2021 (Passed)	VMC	Apartment Dwelling	<ul style="list-style-type: none"> TTC Bus / Subway GO Bus / Train <ul style="list-style-type: none"> YRT Bus YRT Viva BRT 	0.40 spaces / unit
Toronto	By-law 569-2013	Parking Zone B	Mixed-Use Building	<ul style="list-style-type: none"> TTC Bus / Subway / Streetcar GO Bus / Train <ul style="list-style-type: none"> Miway Bus Future TTC Subway Future TTC Streetcar Future TTC BRT 	No Minimum
Brampton	By-law 270-2004	Central Area / Downtown	Apartment Dwelling	<ul style="list-style-type: none"> GO Bus / Train Brampton Bus Brampton ZUM BRT Future Hazel McCallion LRT 	No minimum
Ottawa ²	By-law 2008-250	Area "X"	Mixed-Use Building (within 300 metres of a rapid transit station)	<ul style="list-style-type: none"> O-Train LRT OC Transpo Rapid Bus OC Transpo Frequent Bus 	0.0 to 0.5 spaces / unit
Kingston	By-law 2022-62	Parking Area 1 (Downtown)	Mixed-Use Building	<ul style="list-style-type: none"> Kingston Transit Express Bus Kingston Transit Bus 	0.40 spaces / unit
Kitchener	By-law 2019-051	Urban Growth Centre	Multiple Residential Buildings	<ul style="list-style-type: none"> GO Bus / Train GRT bus GRT Ixpress Bus GRT ION LRT 	No Minimum
Bill 185 (received Royal Assent June 6, 2024)					Zero Parking Requirement in PMTSA's

Notes:

1. Along select streets within Central Ottawa and where the nearest active entrance of a mixed-use building is within 400 metres or less of a rapid transit station, the City of Ottawa Zoning By-law 2008-250 has no minimum resident parking standards for mixed-use buildings. Otherwise, a minimum standard of 0.5 spaces per unit applies.

A number of municipalities (Brampton, Kitchener, Toronto, Ottawa) have adopted substantial reductions in their residential parking rates within their downtown areas to align with goals of reducing non-auto modes of travel and promote existing and planned investments to transit, cycling, and pedestrian infrastructure. For example, the City of Brampton removed minimum resident parking requirements in the City's Central Area / Downtown with the passing of their most recent zoning by-law, and in June 2023 the City of Mississauga's Council directed City staff to investigate the feasibility of eliminating minimum parking requirements along the future Hazel McCallion LRT line.

Given that the level of existing and planned future transit service levels across the municipalities highlighted in **Table 7** are comparable to that of Midtown Oakville, it is evident that the minimum parking requirements stipulated in the prevailing

Zoning By-law 2014-014 exceed what is otherwise considered appropriate in comparable municipalities with a similar transit context.

Collectively, the above indicates a general trend within municipalities across the GTHA and eastern Ontario to present a progressive outlook towards the provision of residential parking supply, particularly where transit and transportation context is, or is planned to be, conducive to non-automobile travel.

6.3.1.5 OBSERVED RESIDENT PARKING REDUCTION APPROVALS

Consistent with the trend of reduced parking standards, there is a demonstrated trend towards parking supply reductions across the broader Greater Toronto and Hamilton Area (GTHA) beyond their respective Zoning By-law standards. BA Group has reviewed approvals for developments near GO Stations (with comparable transportation contexts as the site) for which reduced resident standards have been provided by City Council as part of the Zoning By-law Amendment process, by the Committee of Adjustment as part of Minor Variance applications, or at the Ontario Land Tribunal (OLT), formerly known as the Ontario Municipal Board (OMB) and the Local Planning Appeal Tribunal (LPAT).

A summary of these GTHA-wide resident parking reduction approvals for proxy sites with similar or less transit-supportive contexts as the proposed development are provided in **Table 8**.

Table 8 Approved GTHA Wide Resident Parking Supply Reductions

Address	Nearest Major Transit Station	Approved Minimum Resident Parking Rate	Permission Through	Year of Approval
Proposed Development				
Oakville TOC Development area	Oakville GO Station (~150 to 450 m from Oakville TOC Development)	0.50 spaces / unit (proposed)	--	--
City of Mississauga				
151 City Centre Drive	City Centre Transit Terminal (~750m from site)	1-Bed – 0.62 spaces / unit 2-Bed – 0.72 spaces / unit	CoA File A355.21 (September 23, 2021)	2021
151 City Centre Drive	City Centre Transit Terminal (~750m from site)	0.62 spaces / unit	CoA File A308.23 (September 7, 2023)	2023
Block 8 Mississauga City Centre	City Centre Transit Terminal (~300m from site)	0.67 spaces / unit	CoA File A323.23 (December 2023)	2023
City of Hamilton				
90 Charlton Avenue West, 85 Robinson Street, and 220 Park Street South	Hamilton GO Centre Station (~700 m from site)	0.58 spaces / unit (effective)	Site-Specific By-law 14-118	2014
98 James Street South	Hamilton GO Centre Station (~150 m from site) West Harbour GO Station (~1.5km from site)	0.47 spaces / unit	Site-Specific By-law 15-024	2015

Address	Nearest Major Transit Station	Approved Minimum Resident Parking Rate	Permission Through	Year of Approval
108 James Street North and 111 and 15 Hughson Street North	West Harbour GO Station (~850m from site)	0.50 spaces / unit	Site-Specific By-law 15-188	2015
71 Rebecca Street	Hamilton GO Centre Station (~750 m from site) West Harbour GO Station (~1.4km from site)	0.65 spaces / unit	Site-Specific By-law 18-293	2018
175 Catharine Street South and 117 Forest Avenue	Hamilton GO Centre Station (~350m from site)	0.65 spaces / unit	Site-Specific By-law 20-216	2020
600 James Street North	West Harbour GO Station (~900m from site)	0.58 spaces / unit	LPAT Case No. PL190517 Site-Specific By-law 21-053-LPAT	2021
City of Pickering				
Universal City 2 & 3 (Bayly Street & Liverpool Road)	Pickering GO Station (~550 m from site)	0.74 spaces / unit	CoA File P/CA 60/19	2019
Universal City 6 (Bayly Street & Liverpool Road)	Pickering GO Station (~550 m from site)	0.71 spaces / unit	Site-Specific By-law 7810/21	2021
Universal City 4 & 5 (Bayly Street & Liverpool Road)	Pickering GO Station (~550 m from site)	0.65 spaces / unit	Site-Specific By-law 7936/22	2022
Universal City 7 (Bayly Street & Liverpool Road)	Pickering GO Station (~550 m from site)	0.65 spaces / unit	Site-Specific By-law 7924/22	2022
PTC Phase 1	Pickering GO Station (~750 m from site)	0.65 spaces / unit	Site-Specific By-law 7981/23	2023
1786-1790 Liverpool Road	Pickering GO Station (~700 m from site)	0.55 spaces / unit	Site-Specific By-law 8023/23	2023
City of Vaughan				
Transit City 3 ¹ (Millway Avenue & Portage Parkway)	Vaughan Metropolitan Centre Subway Station (~450 m from site)	0.33 spaces / unit	Site-Specific By-law 096-2018	2018
Transit City 4-6 ¹ (Jane Street & Portage Parkway)	Vaughan Metropolitan Centre Subway Station (~400 m from site)	0.41 spaces / unit	Site-Specific By-law 071-2019	2019

Address	Nearest Major Transit Station	Approved Minimum Resident Parking Rate	Permission Through	Year of Approval
101 Edgeley Boulevard ¹ (Block A5)	Vaughan Metropolitan Centre Subway Station (~550 m from site)	0.18 spaces / unit	Site-Specific By-law 124-2021	2021
VMC Block 3 South (Interchange Way and Commerce Street)	Vaughan Metropolitan Centre Subway Station (~700 m from site)	0.30 spaces / unit	Site-Specific By-law 147-2022	2022
North-East Corner of Highway 7 and Commerce Street (Block E2)	Vaughan Metropolitan Centre Subway Station (~550 m from site)	0.18 spaces / unit	Site-Specific By-law 151-2022	2022
7800 Jane Street	Vaughan Metropolitan Centre Subway Station (~250 m from site)	0.37 spaces / unit	Site-Specific By-law 153-2022	2022
216 & 220 Doughton Rd	Vaughan Metropolitan Centre Subway Station (~700 m from site)	0.35 spaces / unit	Site-Specific By-law 155-2022	2022

Cities such as Hamilton, Pickering, and Vaughan have shown flexibility and pragmatism in adapting to the evolving transportation landscape as options become available to residents that were not available at the time when the Zoning By-law was enacted. For example, within the City of Pickering near the Pickering GO Station / Pickering Town Centre, decreasing parking supplies have been observed relative to the by-law requirement as the population continues to grow and as transit services levels continue to improve within its urban area. A review of these approvals, shown in **Table 8** illustrates a significant decline in resident parking rates over the last four years as there has been a reduction of 0.19 spaces per unit from 2019 to 2023.

Furthermore, this review of reduced parking approvals illustrates how numerous municipalities across the GTHA continue to approve resident parking standard reductions from their Zoning By-law standards, even for standards updated recently. For example, in 2023, the City of Mississauga approved a parking reduction of 0.62 spaces per unit (from 0.80 spaces per unit) for 151 City Centre Drive, a site located approximately 750 metres from the City Centre Bus Terminal. This approval represents a reduction of approximately 23% from the by-law standard. Furthermore, the applicable by-law standard of 0.80 spaces per unit was already the updated and reduced standard which the City of Mississauga passed in 2021. Therefore, it is not uncommon for municipalities to approve reduced resident parking rates from their Zoning By-law, even for standards updated recently.

In addition, the City of Pickering approved a resident parking reduction of 0.55 spaces per unit (from 0.80 spaces per unit) at 1786-1790 Liverpool Road, representing a reduction of approximately 38% from the by-law standard. The proposed resident parking rate for the site, 0.396 spaces per unit (from 0.6 spaces per unit), represents a reduction of approximately 33%. Therefore, the proposed reduction from the by-law standard is within the range of those seen in Mississauga and Pickering and is considered appropriate.

Further in the City of Vaughan, VMC Block 3 South and 216 and 220 Doughton Road are approximately 700 metres from the Vaughan Metropolitan Centre (VMC) subway station and were approved with a minimum resident parking requirement of 0.30 and 0.35 spaces per unit, respectively. By way of comparison, the proposed Oakville TOC Development is within 150 to 450 m of the existing Oakville GO Station. As such, the proposed development may be considered comparable to some degree to these VMC sites, further considering its future evolving area and mobility context, recognizing new cycling and pedestrian infrastructure and intensification policies on local and regional levels. Moreover, it is appropriate to

compare the VMC sites and the proposed Oakville TOC Development as they share comparable distances to higher-order transit facilities and similar access to comparable transit reach envelopes. As such, the proposed resident parking rate is viewed as proportionate to the parking approvals observed at other progressive centre areas, such as the VMC.

Overall, approved resident parking rates for comparable transit-oriented approvals within the GTHA range from 0.18 spaces per unit to 0.74 spaces per unit. The proposed minimum resident rate (0.50 spaces per unit) is within this range and is, therefore, considered appropriate for the Oakville TOC Development's existing and, most notably, future transportation context.

6.3.1.6 PROPOSED RESIDENT BASED TRANSPORTATION DEMAND MANAGEMENT STRATEGIES

As discussed in detail in **Section 5.0**, a TDM Plan for the Oakville TOC Development area is proposed to guide the provision of viable, alternative personal transportation options beyond the single-occupant, private automobile. The objective is to encourage the use of active and sustainable transportation modes, respond to the mobility needs of site residents and reduce dependence on automobiles.

The future Oakville TOC Development area context provides frequent, public transit services and improved pedestrian and cycling connectivity. The TDM Plan supplements and further leverages the physical infrastructure and attributes of the Oakville TOC Development area with a goal of reducing or minimizing auto-mode share. The proposed residential-based TDM strategies include, but are not limited to the following:

- Provision of a reduced resident parking supply;
- Unbundled parking from unit cost;
- Consideration to provide 5-10 car share spaces on site;
- Consideration to provide an annual car share membership for each residential unit;
- Provision of the required long-term bicycle parking supply, meeting the Zoning By-law standards;
- Consideration to provide a private bike share station on site;
- Provision of bicycle repair stations;
- Consideration to provide private or shared micromobility devices and;
- Provision of direct pedestrian and cycling connections to building entrances, bicycle parking facilities, nearby transit stops, and the external / public network.

Overall, the proposed TDM strategies complement the Oakville TOC Development's resident parking reduction. It is noted that the reduced parking supply is, in and of itself, considered an effective TDM strategy. In addition, the overall TDM strategies are supportive of and conform to the current and evolving policies discussed in **Section 5.0**. As such, the proposed resident parking reduction can be appropriately accommodated through the proposed resident-based TDM strategies.

6.3.1.7 RESIDENT PARKING SUMMARY

In summary, it is proposed to adopt a reduced residential parking supply standard in comparison to the minimum requirements of Town of Oakville Zoning By-law 2014-014. The appropriateness of the proposed (reduced) residential parking requirements has been summarized by theme and is provided below in **Table 9**.

Table 9 Summary of Resident Parking Rationale

Theme/Initiative	Brief Description
Proposed Resident Parking Rate: 0.50 spaces per unit	
Progressive Inter-Governmental Policy Context	Numerous existing and evolving provincial, regional, and local policies prioritize more sustainable travel choices over automobiles, including providing support for parking management strategies (TDM) and reduced minimum parking requirements.
Availability of Non-Automobile Travel Options	The Oakville TOC Development is near existing and planned transit services, bicycle route facilities, and various transportation improvements that provide non-automobile dependent travel connections across the City and Region. These services include the existing Oakville GO Station, the planned BRT systems along Trafalgar and Dundas, and planned multi-modal improvements to Midtown Oakville.
Transit Reach	Figures 12 through 15 illustrating existing and future transit reaches are provided during 15, 30, and 45 minute intervals. With the future improvements to public transit infrastructure, longer travel reaches can be achieved. Central Burlington, Mississauga City Center, and downtown Toronto can be reached within 45 minutes.
Comparison of Zoning By-laws across Ontario	The reduced resident parking standards proposed for the Oakville TOC Development is within the range of contemporary zoning standards across the Province of Ontario. Half of the municipalities reviewed have parking standards lower than the Town of Oakville's Zoning By-law 2014-014. Resident Zoning By-law Range Observed: 0.00 - 0.80 spaces per unit
Parking Requirement Reduction Approvals across the GTHA	Several resident parking reduction approvals have been granted for developments in comparable or slightly less transit supportive contexts. The proposed resident rate is within the midpoint of this range. Resident Reduction Approval Range Observed: 0.18 - 0.74 spaces per unit
Resident-Based TDM Strategies	The proposed residential-based TDM strategies are supportive of the reduced supply, encourage the use of active and sustainable transportation modes, and aim to reduce reliance on private automobile ownership and usage. The proposed parking reduction can be well accommodated in combination with these measures.

6.3.2 Non-Residential Parking Assessment

The proposed non-resident parking standards have been assessed based on the following considerations:

- Emergence of non-auto supportive regional and local plans and policy directives;
- Existing and planned transit and active transportation facilities afforded to the area;
- The existing and future transit reach;
- Review of other residential visitor and non-residential parking By-law standards; and
- Support from the site's TDM strategy for visitors.

6.3.2.1 PROVINCIAL, REGIONAL, AND MUNICIPAL POLICY

Similar to the resident parking assessment, the applicable provincial, regional, and local policies demonstrate increasing efforts to reduce auto-related trips for non-resident travel. Overall, increasing efforts and investments are being made to change the travel behaviour of future site visitors.

As discussed in Section 6.3.1.1, Provincial policy documents such as the Provincial Policy Statement (PPS), the Growth Plan for the Greater Golden Horseshoe, Provincial Planning Statement, and the Ontario Ministry of Transportation Transit-Supportive Guidelines, support the use of appropriate development standards and TDM measures, such as reduced parking standards, to facilitate intensification and support transit-supportive development within site areas. In addition, Metrolinx policy documents, including the 2041 Regional Transportation Plan, Mobility Hub Guidelines, and the GO Rail Station Access Plan, prioritize the intensification of development near transit and the creation of a multi-modal regional transportation system. As such these documents directly state the potential to reduce and potentially remove minimum parking requirements in transit-supportive areas while also providing direction to improve the accessibility of regional transit, including the Oakville GO Station near the Oakville TOC Development area. As such, these documents support the reduced non-residential parking standards.

Overall, a common theme across provincial and regional policy documents is to encourage the reduction of auto-related trips and increase the modal share of more active forms of transportation. The provision of a 0.15 residential visitor parking standard and a 1.08 per 100m² non-residential parking standard encourages visitors to utilize more active forms of transportation to travel to and from the site, thereby facilitating intensification and supporting active transportation within the site area.

6.3.2.2 REVIEW OF EVOLVING TRANSPORTATION CONTEXT

As described in Section 6.3.1.2, the Oakville TOC Development area is within 150 to 450 m of the Oakville GO Station and Oakville Transit bus stops. It will also benefit from various planned improvements to the local area road, transit, cycling, and pedestrian network as part of the Midtown Oakville OPA and Metrolinx BRT projects. These improvements showcase the Town's direction towards prioritizing non-auto modes of travel and increasing the mode share of transit and active transportation, of which the reduced non-resident parking spaces would align with.

6.3.2.3 TRANSIT REACH ASSESSMENT

As described in Section 6.3.1.3, 15, 30, and 45 minute transit reach to and from the Site during the weekday morning and afternoon travel periods were analyzed for existing and future conditions. Illustrative figures (**Figures 12 through 15**) were created using Geographic Information Systems (GIS) and observed the service area of a transit network that a visitor of the Site has access to in a given time range.

6.3.2.4 REVIEW OF RESIDENTIAL VISITOR ZONING BYLAW STANDARDS

In addition to the resident parking standards reviewed in Section 6.3.1.4, a comprehensive Zoning By-law review was also undertaken to compare residential visitor parking standards adopted across numerous municipalities in Ontario with comparable transit access to the proposed site, summarized in **Table 10**. The selection of municipalities was primarily based on certain urban characteristics, including density and intensification patterns, conventionally auto-centric network, and a diversity of transit services available in the area.

Several municipalities across Ontario have approved relatively low parking standards for residential visitor parking within their respective Zoning By-laws. These reduced minimum parking requirements reflect evolving transit contexts, mixed-use environments, and the emergence of alternative modes of travel.

Overall, the range of minimum resident visitor parking standards was observed to be between 0 to 0.20 spaces per unit. such, the ratio of 0.15 spaces per unit proposed for the Oakville TOC Development area is within the range observed for contemporary zoning standards across the GTHA and southern Ontario.

The above indicates a general trend within municipalities across the GTA towards a progressive outlook towards the provision of residential visitor parking supply, particularly where transit and transportation context is existing or planned, conducive to non-automobile travel. Within many of these observed municipalities, the existing and planned transit context is comparable or less than those available near the Oakville TOC Development area.

Table 10 Residential Visitor Parking Supply Ratio Requirements – Comparable Ontario Municipalities

Municipality	Zoning By-law	Centre Area	Land Use Category	Nearby Transit Service	Minimum Visitor Parking Requirements (spaces per unit)
Oakville TOC Development Area	-	Midtown Oakville	Mixed-Use Building	<ul style="list-style-type: none"> GO Train Oakville Transit 	0.15
Barrie	Draft Zoning By-law (June 2023)	District 1 District 2	Any Dwelling Unit	<ul style="list-style-type: none"> GO Train Barrie Transit Bus 	0.10
Mississauga	By-law 0225-2007	Precinct 1	Condo / Rental Apartment	<ul style="list-style-type: none"> MiWay Bus MiWay Express Bus Mississauga Transitway GO Bus / Train Future Hurontario LRT Future Lakeshore BRT 	0.20
Mississauga	By-law 0225-2007	City Centre	Apartment Dwelling	<ul style="list-style-type: none"> MiWay Bus MiWay Express Bus Mississauga Transitway GO Bus / Train Future Hurontario LRT Future Lakeshore BRT 	0.15

Municipality	Zoning By-law	Centre Area	Land Use Category	Nearby Transit Service	Minimum Visitor Parking Requirements (spaces per unit)
Pickering	By-law 7553-17	City Centre	Apartment Dwelling	<ul style="list-style-type: none"> Durham Region Transit Bus GO Train Future Durham-Scarborough BRT 	0.15
Waterloo	By-law 2018-050	Residential Mixed-Use Zones (Parking Area A)	Residential	<ul style="list-style-type: none"> Grand River Bus Grand River ION LRT GO Bus / Train 	0.10 ¹
Vaughan	By-law 001-2021	VMC	Apartment Dwelling	<ul style="list-style-type: none"> YRT Bus YRT Viva BRT GO Bus / Train TTC Bus / Subway 	0.15
Vaughan	Yonge-Steeles Secondary Plan (OLT)	Yonge-Steeles	Apartment Dwelling	<ul style="list-style-type: none"> YRT Bus YRT Viva BRT GO Bus TTC Bus / Subway Future Yonge North Subway Extension 	0.15
Toronto	By-law 569-2013	Parking Zone B	All non-residential uses	<ul style="list-style-type: none"> TTC Bus / Subway / Streetcar GO Bus / Train Miway Bus Future TTC Subway Future TTC Streetcar Future TTC BRT 	2 spaces + 0.05
Kingston	By-law 2022-62	Parking Area 1 (Downtown) & Parking Area 2 (Main Street Corridor)	Mixed-Use Building	<ul style="list-style-type: none"> Kingston Transit Bus Kingston Transit Express Bus 	0.10
Hamilton	By-law 05-200	Downtown Zone	Multiple Dwelling	<ul style="list-style-type: none"> HSR Bus Future B-Line LRT Future A-Line BRT GO Bus / Train 	Inclusive of minimum resident rate
Kitchener	By-law 2019-051	Urban Growth Centre / Downtown	Multiple Residential Buildings	<ul style="list-style-type: none"> Grand River Bus Grand River ION LRT GO Bus / Train 	No minimum
Brampton	By-law 270-2004	Central Area / Downtown	Apartment Dwelling	<ul style="list-style-type: none"> Brampton Bus Brampton ZUM BRT GO Bus / Train Future Hurontario LRT 	0.20

Notes:

- The City of Waterloo Zoning By-law 2018-050 provides parking standards for each Residential Mixed-Use (RMU) Zone. As such, the range of parking standards across the various RMUs is reported in this table.

6.3.2.5 OBSERVED RESIDENTIAL VISITOR PARKING REDUCTION APPROVALS

Consistent with the trend of reduced residential visitor parking standards, there is a demonstrated trend towards parking supply reductions across the broader Greater Toronto and Hamilton Area (GTHA) beyond their respective Zoning By-law standards. BA Group has reviewed approvals for developments near GO Stations (with comparable transportation contexts as the site) for which reduced residential visitor standards have been provided by City Council as part of the Zoning By-law Amendment process, by the Committee of Adjustment as part of Minor Variance applications, or at the Ontario Land Tribunal (OLT), formerly known as the Ontario Municipal Board (OMB) and the Local Planning Appeal Tribunal (LPAT). The residential visitor parking approvals that are under review are for sites specifically within the Cities of Mississauga and Brampton where they have a minimum residential visitor parking rate of 0.20 spaces per unit and a further reduced rate of 0.15 spaces per unit was approved. These sites provide the best comparison given that the proposed site is proposing a 0.15 spaces per unit ratio within Oakville which has a minimum residential parking requirement of 0.20 spaces per unit.

A summary of these residential visitor parking reduction approvals for proxy sites with similar or less transit-supportive contexts as the proposed development are provided in **Table 11**.

Table 11 Approved GTHA Wide Residential Visitor Parking Supply Reductions

Address	Nearest Major Transit Station	Approved Minimum Residential Visitor Parking Rate	Permission Through	Year of Approval
Proposed Oakville TOC Development				
Oakville TOC Development Area	Oakville GO Station (~300 m from site)	0.15 spaces / unit (proposed)	--	--
City of Mississauga				
78 Park Street East and 22 – 28 Ann Street	Port Credit GO Station (~80 m from site)	0.10 spaces / unit	CoA File: A413.20 Site-Specific Zoning By-law 0054-2020	2020
86 Dundas Street East	Cooksville GO Station (~1 km from site)	0.15 spaces / unit	CoA File: A51/21	2021
70 Mississauga Road South & 181 Lakeshore Road West	Port Credit GO Station (~1.3 km from site)	0.15 spaces / unit	CoA File: A226/21	2021
180 Rutledge Road	Streetsville GO Station (~1 km from site)	0.10 spaces / unit	CoA File: A185/23	2023
City of Brampton				
245 Steeles Avenue West (Phase 1)	Brampton Innovation GO Station (~3.3km from site)	0.15 spaces / unit	CoA Application No. A-2022-0023	2022
Block 7 (Mount Pleasant Area)	Mount Pleasant GO Station (~200 m from site)	0.15 spaces / unit	OMB Cases: PL160478 & PL160479	2017
2 & 4 Hanover Road	Bramalea GO Station (~3.4km from site)	0.14 spaces / unit	Site-Specific Zoning By-law 48-2020	2020
80 Scott Street	Brampton Innovation GO Station (~650 m from site)	0.15 spaces / unit	Site-Specific Zoning By-law 140-2020	2020

Address	Nearest Major Transit Station	Approved Minimum Residential Visitor Parking Rate	Permission Through	Year of Approval
499 Main Street South (Shoppers World Brampton)	Brampton Innovation GO Station (~3.3km from site)	0.15 spaces / unit	Site-Specific Zoning By-law 228-2020	2020

6.3.2.6 REVIEW OF PICK-UP AND DROP-OFF CONDITIONS IN URBAN INTENSIFICATION AREAS

BA Group has reviewed vehicular pick-up and drop-off conditions at residential developments in intensification areas to understand a general order of magnitude of the scale of accumulated pick-up and drop-off vehicular conditions at peak times. Pick-up / Drop-off activity generally includes passenger or parcel / food pick-up and drop-off trips near building entrances (given the desire to get close to the subject building).

In general, the rate of pick-up and drop-off activity at residential buildings amounts to an approximate vehicular accumulation of between 0.005 and 0.008 vehicles per unit. The Oakville TOC Development and its component sites are planned to include pick-up and drop-off facilities either on-site or along the frontages of the development sites. This is intended to accommodate all or the majority of pick-up and drop-off activity associated with the Oakville TOC Developments. This would tend to mitigate impacts generally within the extended Midtown Oakville area and within the Oakville GO Station vicinity.

Further discussion on this issue will be provided in subsequent technical submissions for the Oakville TOC Development.

6.3.2.7 REVIEW OF NON-RESIDENTIAL ZONING BYLAW STANDARDS

A comprehensive Zoning By-law comparison review for non-residential parking standards was also undertaken and is summarized in **Table 12**.

Similar to Section 6.4.1.4, several municipalities across Ontario have approved relatively low parking standards for non-residential parking within their respective Zoning By-laws.

Overall, the range of minimum non-residential parking standards was observed to be between 0.00 to 4.50 spaces per 100m² of non-residential GFA. As such, the proposed rate of 1.08 spaces per 100m² of non-residential GFA proposed for the site is within the range observed across the GTHA and southern Ontario.

The above indicates a general trend within municipalities across the GTA towards a progressive outlook towards the provision of non-residential parking supply, particularly where transit and transportation context is existing or planned, conducive to non-automobile travel. Within many of these observed municipalities, the existing and planned transit context is comparable or less than those available near the Oakville TOC Development area.

Table 12 Comparable Non-Residential Parking Supply Ratio Requirements

Municipality	Zoning By-law	Centre Area	Land Use	Nearby Transit Service	Minimum Parking Requirements (spaces per 100m ²)
Oakville TOC Development Area	-	Midtown Oakville	Retail & Office	<ul style="list-style-type: none"> GO Bus / Train Oakville Transit 	1.08 (for all non-residential uses)
Barrie	Draft Zoning By-law (June 2023)	District 1 District 2	All non-residential uses	<ul style="list-style-type: none"> GO Train Barrie Transit Bus 	No minimum
Mississauga	By-law 0225-2007	Precinct 1 ¹	Retail	<ul style="list-style-type: none"> MiWay Bus MiWay Express Bus Mississauga Transitway GO Bus / Train Future Hurontario LRT Future Lakeshore BRT 	3.00
			Recreational Establishment		4.50
Pickering	By-law 7553-17	City Centre	Retail	<ul style="list-style-type: none"> Durham Region Transit Bus GO Train Future Durham-Scarborough BRT 	3.50
			Commercial Fitness		4.50
Vaughan	By-law 001-2021	VMC	Retail ²	<ul style="list-style-type: none"> YRT Bus YRT Viva BRT GO Bus / Train TTC Bus / Subway 	0.70
			Health and Fitness Centre		0.90
Toronto	By-law 569-2013	Parking Zone B	All non-residential uses	<ul style="list-style-type: none"> TTC Bus / Subway / Streetcar GO Bus / Train Miway Bus Future TTC Subway Future TTC Streetcar Future TTC BRT 	No minimum
Kingston	By-law 2022-62	Parking Area 1 (Downtown) & Parking Area 2 (Main Street Corridor)	Retail & Commercial	<ul style="list-style-type: none"> Kingston Transit Bus Kingston Transit Express Bus 	No minimum
Hamilton	By-law 05-200	Downtown Zone	Retail & Commercial	<ul style="list-style-type: none"> HSR Bus Future B-Line LRT Future A-Line BRT 	No minimum

Municipality	Zoning By-law	Centre Area	Land Use	Nearby Transit Service	Minimum Parking Requirements (spaces per 100m ²)
				<ul style="list-style-type: none"> GO Bus / Train 	
Kitchener	By-law 2019-051	Urban Growth Centre / Downtown	Retail	<ul style="list-style-type: none"> Grand River Bus Grand River ION LRT GO Bus / Train 	No minimum
			Fitness Centre	<ul style="list-style-type: none"> GO Bus / Train 	No minimum
Brampton	By-law 270-2004	Central Area / Downtown	Retail	<ul style="list-style-type: none"> Brampton Bus Brampton ZUM BRT GO Bus / Train Future Hurontario LRT 	4.50
			Fitness Centre	<ul style="list-style-type: none"> GO Bus / Train Future Hurontario LRT 	4.50

Notes:

- Shared parking calculations allow for visitor parking to accommodate non-residential uses as an option for providing non-residential parking
- Retail parking rate applies to establishments less than 5,000m² GFA

6.3.2.8 PROPOSED NON-RESIDENTIAL BASED TDM STRATEGIES

As discussed in detail in Section 5.0, a TDM Plan for the Oakville TOC Development area is proposed to guide the provision of viable, alternative personal transportation options beyond the single-occupant, private automobile. The objective is to encourage the use of active and sustainable transportation modes, respond to the mobility needs of site residents and reduce dependence on automobiles. The future site context provides frequent, public transit services and improved pedestrian and cycling connectivity. The TDM Plan further leverages the physical infrastructure and attributes of the site area with a goal of reducing or minimizing auto-mode share. The proposed non-residential-based TDM strategies include, but are not limited to, the following:

- Provision of a reduced non-residential parking supply; and
- Provision of the required short-term bicycle parking supply, meeting the Zoning By-law standards.

6.3.2.9 NON-RESIDENTIAL PARKING SUMMARY

In summary, it is proposed to adopt reduced non-resident parking supply standards in comparison to the minimum requirements of the Town of Oakville Zoning By-law 2014-014. The assessment of the proposed (reduced) non-resident parking requirements has been summarized by theme and is provided below in **Table 13**.

Table 13 Summary of Reduced Non-Resident Parking Rationale

Theme/Initiative	Brief Description
Proposed Residential Visitor and Retail Parking Rate: No Minimum Requirement	
Progressive Inter-Governmental Policy Context	Numerous existing and evolving provincial, regional, and local policies prioritize more sustainable travel choices over automobiles, including support for parking management strategies and reduced minimum parking requirements.
Availability of Non-Automobile Travel Options	The Oakville TOC Development area is near existing and planned transit services, bicycle route facilities, and various transportation improvements that provide non-automobile dependent travel connections across the City and Region. These services include the existing Oakville GO Station, the planned BRT systems along Trafalgar and Dundas, and planned multi-modal improvements to Midtown Oakville.
Transit Reach	Figures 12 through 15 illustrating existing and future transit reaches are provided during 15, 30, and 45 minute intervals. With the future improvements to public transit infrastructure, longer travel reaches can be achieved. Central Burlington, Mississauga City Center, and downtown Toronto can be reached within 45 minutes.
Comparison of Zoning By-laws across Ontario	The reduced non-resident parking standards proposed for the site is within the low-end of the range of Zoning By-law standards observed across the GTHA and southern Ontario. Residential Visitor Zoning By-law Range Observed: 0.00 - 0.20 spaces per unit Non-Residential Zoning By-law Range Observed: 0.00 - 4.50 spaces per 100 m² GFA
Parking Requirement Reduction Approvals across the GTHA	Several residential visitor parking reduction approvals have been granted for developments in comparable or slightly less transit supportive contexts. The proposed resident rate is within the midpoint of this range. Resident Reduction Approval Range Observed: 0.10 - 0.15 spaces per unit
On-site or Development frontage PU/DO facilities	Oakville TOC Developments will be providing either on-site pick-up and drop-off facilities or pick-up and drop off facilities along the frontages of the individual component sites. This will accommodate all or the majority of pick-up and drop-off activities, mitigating impact on the broader Midtown Oakville area and the Oakville GO Station operations.
Residential Visitor-Based TDM Strategies	The proposed visitor-based TDM strategies, including the provision of short-term bicycle parking supply and meeting the Zoning By-law standards to encourage the use of active and sustainable transportation modes, reducing reliance on private automobile ownership and usage.

6.4 Parking Summary

It is proposed to provide a reduced vehicular parking supply to the requirements stipulated in Town of Oakville's Zoning By-law 2014-014. The appropriateness of the proposed parking standards, for all uses, are summarized in **Table 14**.

Table 14 Summary Parking Rationale

Theme/Initiative	Brief Description	
	Resident	Non-Resident
	Proposed Resident Rate: 0.50 spaces per unit	Proposed Residential Visitor Rate: 0.15 spaces per unit Proposed Non-Residential Rate: 1.08 spaces per 100 m ²
Progressive Inter-Governmental Policy Context	Existing and evolving provincial, regional, and local policies prioritize sustainable travel choices over automobiles, supporting the use of parking management strategies and reduced minimum parking requirements.	
Availability of Non-Automobile Travel Options	The Oakville TOC Development area is in close proximity to existing and planned transit services, bicycle route facilities, and various transportation improvements that encourage non-automobile dependent travel across the City.	
Transit Reach	Figures 12 through 15 illustrating existing and future transit reaches are provided during 15, 30, and 45 minute intervals. With the future improvements to public transit infrastructure, longer travel reaches can be achieved. Central Burlington, Mississauga City Center, and downtown Toronto can be reached within 45 minutes.	
Comparison of Zoning By-laws across Ontario	Resident Zoning By-law Range: 0.00 - 0.80 spaces / unit	Residential Visitor Zoning By-law Range: 0.00 - 0.20 spaces / unit Non-Residential Zoning By-law Range: 0.00 – 4.50 spaces / 100 m² GFA
Parking Requirement Reduction Approvals across the GTHA	Resident Approval Range: 0.18 to 0.74 spaces / unit	Residential Visitor Approval Range: 0.10 to 0.15 spaces / unit
On-site or Development frontage PU/DO facilities	Oakville TOC Developments will be providing either on-site pick-up and drop-off facilities or pick-up and drop off facilities along the frontages of the individual component sites. This will accommodate all or the majority of pick-up and drop-off activities, mitigating impact on the broader Midtown Oakville area and the Oakville GO Station operations.	
TDM Strategies	The proposed TDM strategies encourage the use of sustainable transportation modes, reducing reliance on private automobile ownership and usage for both residents and visitors.	

7.0 SERVICE VEHICLE LOADING CONSIDERATIONS

7.1 Zoning Bylaw Loading Considerations

Application of the prevailing Zoning By-law-2014-014 loading standard to the proposed Oakville TOC Development does not require any loading spaces.

7.2 Proposed Loading Strategy

Service vehicle loading is, notwithstanding the absence of a Zoning Bylaw requirement, a practical requirement for developments that reflect the kind of intensification that the Oakville TOC Development proposal reflects.

As such, loading has been evaluated within the context of the following principles:

- Refuse collection needs – driven by the Region of Halton requirements for dimensional standards;
- Resident move-in / move-out needs – driven in part by the scale of the scale development and the mix of non-residential uses;
- Delivery vehicle needs associated with the residential units; and,
- The needs of the non-residential land uses and their associated intensities.

Each residential tower generally would be assigned one (1) refuse collection loading space – commonly referred to as a Type G loading space. This is typically 13 m in length and an allowance of 6 m in width is made to accommodate not only the refuse collection vehicle itself, but also the spaces required around the vehicle for operations related to the collection of refuse in “bins” (bins that are typically collected by an overhead refuse collection vehicle). Additional ‘bin-staging area’ is provided and is directly related to the scale (number of units) of the residential development and that which is served by the Type G loading area. In some conditions, in order to be space efficient, Type G loading spaces can serve more than one building. This requires coordination in terms of the ‘bin staging area’ size and the schedule for refuse collection. This is something that is being considered within the Oakville TOC Development proposal in order to ensure that the ground floor area within the component developments be best assigned between the “front of house” and “back-of house” uses that need to be on the ground level of the developments.

Generally speaking, buildings with more than 400 units within them will also be assigned a second loading space that is generally used for the resident move-in / move-out needs. This activity is generally monitored by the building maintenance staff so that a schedule is established and an orderly use of this loading space is maintained.

Given the “schedule” that is associated with the Type G loading space, and that it is generally the largest loading space assigned to a residential building, it will be “shared” by deliveries that are made to the residential building by trucks that are larger than a typical moving truck used by private residents. This sharing is subservient to the scheduled needs of the refuse collection by the Region of Halton; i.e., the refuse collection activities generally take precedent over any other use of the Type G space. Available “delivery” times can be made known to the residents of the development and tenants of the non-residential floor space.

If the non-residential floor space is of sufficient scale, additional formal single unit truck (SU design vehicles) loading spaces would be added in the form of a Type B loading space (typically 11 m in length and 3.5 to 4.0 m in width - depending on the loading area and manoeuvring needs).

The resulting loading facilities are tested with representative design vehicles that meet the Region of Halton refuse collection vehicle dimensions and manoeuvring characteristics along with SU design vehicles and typically “cube van” design vehicles to ensure that all loading spaces are practical and functional.

In addition, the loading areas that are designed are design so that all vehicles can enter and leave the loading facility in a forward motion. This ensures that the most efficient, functional and safe circumstance can be built into the Oakville TOC Development plans.

7.3 Height Clearances

The Region of Halton has specific vertical clearances for their refuse collection vehicles. A 7.5 m vertical height is provided where the refuse collection vehicle will be engaged in collecting and returning the “bins” to their staging area. Beyond this active loading space, a 4.5 m vertical clearance is provided to ensure that all service vehicle design vehicles are able to enter and exit the loading area without risk of coming into conflict with overhead features of the building (i.e., structural beams, electrical conduits, plumbing pipes, overhead doors, etc..

7.4 Loading Summary

In summary, each Oakville TOC Development building or group of buildings, is evaluated against the practical, functional, and policy requirements associated with the various types of loading operations that would be experienced on a daily basis.

The functional design of loading areas are tested with appropriate design vehicles and manoeuvring requirements to ensure that the resulting loading space is capable of accommodating the needs – based upon land uses, scale of development, and physical opportunities / constraints – of each individual Oakville TOC Development building. This ensures an efficient and compact development and safe development plan.



8.0 BICYCLE PARKING CONSIDERATIONS

8.1 Zoning Bylaw Bicycle Parking Requirements

The Town of Oakville has bicycle parking requirements embedded in their general zoning bylaw.

These include requirements for residential “long-term” (i.e., resident) and “short-term” (i.e., visitor) bike parking needs. Further, they also have requirements for non-resident “long-term” (employee) and “short-term” (i.e., customer) bike parking needs. A detailed summary of these requirements is provided in **Table 15**.

Table 15 Zoning By-law 2014-014 Bicycle Parking Requirements

Land Use		Minimum Parking Rate ^[2]
Residential	Long-term	0.75 spaces / unit
	Short-term	0.25 spaces / unit
Non-Residential	Retail Long-term	Greater of 2 or 1 space / 1000 m ² GFA
	Office Long-term	Greater of 2 or 1 space / 1000 m ² GFA

Each Oakville TOC Development site would calculate and supply at least the minimum amount of bicycle parking per each type of bike parking.

8.2 Proposed Bicycle Parking Strategy

Long-term bicycle parking is supply in secure, weather protected internal rooms within each Oakville TOC Development building. Access to the bike parking rooms would be via pass-card or key and be fitted with security features to ensure users are able to notify security should there be a need to. Separate rooms would be provided for the Resident and the Non-Resident long-term bike parking facilities.

Long-term bike parking can be located on the ground floor or below-grade or above-grade levels of the Oakville TOC Development buildings. Access is generally afforded via dedicated elevators so as not to conflict with mainly pedestrian elevators. Alternative means of access via parking ramps can be provided, however, ramp grades pose a challenge for the “up-ramp” direction and need to be designed accordingly, providing cyclists with added room on ramps to facilitate the slower and more challenging exiting experience. Generally speaking the Oakville TOC Development buildings will be design with dedicated bike elevators to facilitate below-grade or above-grade long-term bike parking areas.

Generally, and in keeping with the TDM plan strategies, a Bike Repair Station is also contained within the Bike storage rooms. This enable minor repairs and tire inflation to occur conveniently where bikes are storage.

Short-term bike parking is generally contained outside, preferably under some sort of overhang or canopy (but not always) and near visitor / customer entrances so as to be convenient and encouraging of their use. Sometimes, smaller bike repair stations are outfitted near larger short-term bike parking areas, depending on the location and nature of the bike parking users.

9.0 OAKVILLE TOC DEVELOPMENT TRAVEL PROJECTIONS AND ASSESSMENT OF VEHICULAR IMPACTS

9.1 Oakville TOC Development - Vehicular Traffic Volume Projections

Traffic projections from the four Oakville TOC sites have been estimated using land use codes from the Institute of Transportation Engineers (ITE) Trip Generation 11th Edition¹.

Data for the peak hours of adjacent street traffic were used to estimate trip generation. The resulting summation is the "raw" trip generation – unadjusted for modal split credits. The trip generation rates for the Multifamily Housing trips are for urban, multi-use developments near rail transit. The trip generation rates consider lower auto mode shares typically seen in these high-density, multi-modal areas. Additionally, through previous development applications within the study area, the MTO has previously advised that mode share should not be considered when providing a conservative estimate. As such, no mode share reductions were applied to the trip generation.

The ITE Trip Generation Handbook describes a multi-use development as a single project consisting of two or more ITE land use classifications in which trips can be made between land uses without using the off-site roadway system. Sharing trips between compatible land uses without travelling off-site is an internal capture.

Based on this information, the proposed Oakville TOC sites are considered multi-use developments with compatible commercial land uses that are likely to share – or capture – trips that do not require vehicular travel outside the site. The ITE Trip Generation Handbook has been utilized to account for the development's internal trips.

In future technical submissions for the Oakville TOC Development, a review of potential mode split characteristics and the influence of transit improvements (in terms of service frequencies and routing characteristics) will be taken into account.

Table 16 summarizes the projected trip generation associated with the build-out of the Oakville TOC sites. As noted earlier, these estimates were based on the standardized ITE rates with internal credits. The estimated trip generation for the Oakville TOC sites indicates that 1,759 new trips are forecasted to be generated during the AM peak hour and 1,734 new trips during the PM peak hour.

The area lends itself to commuter travel patterns, given the presence of a GO Station on the south side of Cross Avenue, similar to what the development would exhibit. The site-generated trips were assigned to the road network based on the existing traffic distribution at the study area intersections. The distribution is summarized in **Table 17**. A further review of the trip distribution patterns of Oakville TOC Development related vehicular traffic volumes will be undertaken in the next technical submission for the Oakville TOC Development. **Figure 16** and **Figure 17** display the Oakville TOC Development related a.m. and p.m. peak hour site trip assignment, respectively, under full build-out.

¹ Trip Generation Manual 11th Edition + Supplement, Institute of Transportation Engineers, Washington DC 2020



Table 17 Oakville TOC Development Vehicular Trip Distribution Estimates

Direction	Route	AM Peak Hour	PM Peak Hour
North	Trafalgar Road	39%	39%
South	Trafalgar Road	7%	7%
East	QEW	6%	6%
	South Service Road	5%	5%
	Cross Avenue	19%	19%
West	QEW	20%	20%
	Cross Avenue/Speers Road	4%	4%
Total		100%	100%

9.2 Future Vehicular Traffic Volume Projections

Traffic growth on area roadways is a function of the expected land development, economic activity, and demographic changes. A frequently used procedure estimates an annual percentage increase and applies that increase to the study area traffic volumes. An alternative approach is to identify estimated traffic generated by specific planned significant developments that would be expected to affect the project study area roadways. Both methods were utilized for this assessment. They included a growth rate of 2% per annum applied to the area roadways and turning movements at study area intersections to account for population and employment growth as well as other proposed developments.

The following background developments are planned within the study horizon and are included in the background traffic:

- 271 Cornwall Road — Located east of Trafalgar Road at Cornwall Road, the proposed development consists of two mixed-use towers for residential, office, and commercial use.
- 599 Lyons Lane – The proposed development is a residential high-rise located north of Lyons Lane at Cross Avenue.
- 627 Lyons Lane – The proposed development is a residential high-rise located east of South Service Road East at Lyons Lane.
- 320 Davis Road – Located south of David Road and east of South Service Road, the proposed development is a pumping station expansion.

Additional assumptions have also been made concerning the new local road network for Midtown Oakville, which will see several new local and collector roadways constructed. With a new local roadway network provided, this will cause a portion of the Argus Road traffic to divert to the new east-west local road to access the GO Station. Based on existing volumes along Cross Avenue, it is assumed that approximately 70% of westbound vehicles in the AM peak hour (30% in the PM peak hour) are going to the GO Station. It is assumed that an equal portion of the vehicles along Argus Road will go to the GO station and take the new local road network. Future heavy vehicle assumptions and pedestrian volume conditions were held consistent with existing heavy vehicle percentage and pedestrian volume assumptions. Minimum pedestrian clearance intervals were assumed to accommodate increases in pedestrian volumes, given the relative low incidence of existing pedestrian crossing volumes on study area streets (i.e., there is significant capacity to increase pedestrian volumes within

existing pedestrian crossing times. This aspect of the operational analyses will be reviewed in subsequent technical submissions for the Oakville TOC Development.

Figure 18 and **Figure 19** illustrates the projected total traffic volumes for the study area for a.m. peak hour and p.m. peak hours, respectively, with the build-out of the Oakville TOC developments. More detailed information detailing the future total traffic volumes, including diversion assumptions and resulting intersection volume assignments, will be provided in the next technical submission for the Oakville TOC Development.

9.3 Vehicular Network Operational Assessment

Intersection capacity analyses were conducted at all intersections in the study area. Analyses were conducted for the Base Conditions and the (2038) Total Conditions. For the purposes of the initial technical submission for the Oakville TOC Development, only the Future Total 2038 conditions have been reported. A more fulsome summary of Existing and additional incremental future operational horizon years (to be confirmed through discussions with Town of Oakville Transportation staff), including “background” scenarios to identify impacts of the Oakville TOC Development related traffic volumes, will be reviewed in the next technical submission for the Oakville TOC Development.

This will include updated base traffic volumes, calibration of existing operational assessments, and a review and understanding of the inputs and results of higher level modelling work being undertaken by the Town’s Consortium, which reflects sub-area analyses that is based upon a regional multi-modal transportation model. **Table 18** and **Table 19** illustrate the initial 2038 Future Total a.m. peak hour operational results while **Table 20** and **Table 21** illustrate the 2038 Future Total p.m. peak hour operational results. The following is noted:

- At the intersection of Trafalgar Road at Leighland Avenue / Iroquois Shore Road, the overall intersection operations are at LOS D during the existing weekday peak hours. However, A critical movement is noted for the westbound left-turn movement, which operates at LOS F and has a v/c ratio exceeding 1.00. The northbound left turn operates at LOS E with a v/c ratio of 0.98. Under the 2038 Total conditions, operations are expected to degrade for the southbound and northbound through movements.
- At the intersection of Trafalgar Road and QEW Westbound Ramp, the northbound through movement along Trafalgar Road presently operates at LOS E with a v/c ratio of 0.86. Under the 2038 Total conditions, northbound and southbound delays are forecast to increase. The westbound left and through movements are also projected to degrade to LOS F.
- At the intersection of Trafalgar Road at QEW Eastbound Ramp, the eastbound left and right turn movement operates at LOS D with a v/c ratio of 0.88 and 0.80 during the weekday AM peak hour. Under the 2038 Total conditions, the eastbound right is projected to operate at LOS F, while the eastbound left will operate at LOS E. The northbound and southbound movements will operate with a v/c ratio exceeding 1.00.
- The intersection of Trafalgar Road and Cross Avenue/South Service Road presently operates at a LOS D overall. Several movements operate at LOS E during the weekday AM peak hour and LOS E with a v/c ratio no greater than 0.79. Under 2038 Total conditions, the southbound and northbound shared through/right turn movement is projected to operate with increased delay. The eastbound and northbound left turn movement are also projected to operate poorly. Concerning the southbound approach, this leg of the intersection is extremely sensitive to adding traffic due to the current high volumes projected at the intersection.
- Trafalgar Road and Cornwall Road intersection presently operates at a LOS F overall during the weekday peak hours. Several movements (eastbound left, northbound left and northbound through) operate at LOS E and F during the weekday peak hours with a v/c ratio exceeding 1.00. Under 2038 Total conditions, the westbound through movement is projected to operate at LOS F with a v/c ratio exceeding 1.00. The eastbound through/right will also operate with increased delays.



- Individual movements at the unsignalized intersection of Argus Road and South Service Road East presently operate at LOS C or better during the weekday peak hours. Under the 2038 Total conditions, extensive delay is projected for the southbound approach due to high volumes of east-west traffic along Argus Road, leaving few gaps for southbound stop-controlled movements.
- Signal warrant calculations were not undertaken at this time. Operational assessments have been used in this initial technical assessment to determine whether modifications to intersection control should be revised. Future assessments in the next technical submission will accompany the operational assessments where necessary.
- The majority of movements at Cross Avenue and Argus Road/GO Station Driveway's signalized intersection presently operate at LOS C or better during the weekday peak hours. Under the 2038 Total conditions, implementing the local road network allows alternative routing in the study area. However, the southbound left turn is projected to operate at LOS F with a v/c ratio exceeding 1.00. In addition, the eastbound shared through/right turn movement is projected to operate at LOS D with a v/c ratio of 0.99.
- Individual movements at the signalized intersection of Cross Avenue and Lyons Lane presently operate at LOS C or better during the weekday peak hours. Northbound left-turn operations are forecast to degrade from LOS C to LOS D with a v/c ratio of 0.89 under the 2038 Total conditions.
- Individual movements at the signalized intersection of Cross Avenue and Cornwall Road/Speers Road presently operate at LOS C or better during the weekday peak hours. Similar operations are expected under the 2038 Total conditions.
- Individual movements at the signalized intersection of Cross Avenue and GO Station West Access presently operate at LOS B. Exception to this is the westbound approach that operates at LOS F with a v/c ratio exceeding 1.00 during the weekday AM peak hour due to the high volume of left-turning traffic travelling into the GO Station. Under the 2038 Total horizon, it is assumed that the north leg of the intersection will be operational, and the westbound approach is projected to operate at LOS F with a v/c ratio exceeding 1.00. The southbound left turn movement is also projected to operate at LOS F with a v/c ratio exceeding 1.00.
- At the proposed intersection of Argus Road and the Jug Handle, the westbound approach is forecast to operate with high levels of delay under stop control for the 2038 Total conditions. This delay is due to the amount of northbound through traffic occurring at the intersection, given that this movement has been assumed to operate under free-flow conditions to reduce the potential for queue spillback onto Trafalgar Road. The northbound left turn movement is also projected to operate with high levels of delay for the weekday PM peak hour.



Table 18 2038 Future Total AM Peak Hour Operational Summary (1/2)

Peak Hour	Intersection	Horizon	Control Type	MOE	Direction / Movement / Approach																Overall
					Eastbound				Westbound				Northbound				Southbound				
					Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	1: Trafalgar Rd & Leighland Ave/Iroquois Shore Rd	2023 Existing	TCS	LOS Delay V/C Q	D 39 0.12 12	D 42 0.31 35	D 47 0.58 57	D 45	E 70 0.97 73	D 35 0.17 25	C 35 0.12 16	E 60	C 21 0.59 38	C 21 0.42 77	C 24 0.50 33	C 22	B 16 0.48 33	C 26 0.65 132	B 18 0.03 0	C 25	C 32 0.76
		2038 Total	TCS	LOS Delay V/C Q	D 42 0.20 16	D 47 0.49 50	A 1 0.27 0	B 15	E 231 1.40 169	D 36 0.23 33	C 36 0.17 19	E 175	E 57 0.86 110	C 33 0.76 131	A 4 0.73 0	C 24	C 34 0.69 73	E 60 1.01 209	B 21 0.04 0	E 56	E 60 1.12
	2: Trafalgar Rd & North Service Rd/QEW WB Off-Ramp	2023 Existing	TCS	LOS Delay V/C Q	E 63 0.09 2	D 38 0.30 42	D 39	E 60 0.73 88	E 60 0.74 65	A 0 0.21 0	D 37	B 10 0.53 94	C 9	B 16 0.64 151	B 16 0.64 151	B 16	B 17 0.64 151	B 18 0.64 151	B 16	B 17 0.64	
		2038 Total	TCS	LOS Delay V/C Q	E 63 0.03 4	C 29 0.32 54	C 29	E 55 0.82 163	D 55 0.82 164	A 0 0.22 0	D 40	D 43 1.00 165	C 35	E 63 1.05 313	E 63 1.05 313	E 63	E 47 1.05 313	D 47 1.05 313	D 47	D 47 0.94	
	3: Trafalgar Rd & QEW EB-Off Ramp	2023 Existing	TCS	LOS Delay V/C Q	C 24 0.52 88	D 43 0.88 211	C 32	C 24 0.52 88	D 43 0.88 211	C 32	C 30 0.56 72	C 30	C 30	C 28 0.75 155	A 22	C 27 0.84 0	C 27	C 27	C 27	C 27	C 27
		2038 Total	TCS	LOS Delay V/C Q	C 26 0.66 133	F 136 1.20 398	E 77	C 26 0.66 133	F 136 1.20 398	E 77	E 77	E 77	E 77	F 119 1.19 276	E 96	F 85 1.22	F 85	F 85	F 85	F 85	F 85
	4: Trafalgar Rd & Argus Rd	2023 Existing	TWSC	LOS Delay V/C Q	A 10 0.06 1	A 10	A 10	A 10	A 10	A 10	A 10	A 10	A 0 0.33 0	A 0	A 0	A 0	A 0	A 0	A 0	A 0	A 0
		2038 Total	TWSC	LOS Delay V/C Q	B 13 0.29 10	B 13	B 13	B 13	B 13	B 13	B 13	B 13	A 0 0.70 0	A 0	A 0	A 0	A 0	A 0	A 0	A 0	A 0
	5: Trafalgar Rd & Cross Ave/South Service Rd	2023 Existing	TCS	LOS Delay V/C Q	E 58 0.64 53	D 50 0.23 19	D 50 0.23 19	E 55	D 51 0.21 16	E 59 0.25 19	E 58 0.08 0	E 57	C 27 0.57 27	C 30 0.49 106	C 30 0.49 106	C 30	B 18 0.58 25	C 26 0.70 125	C 26 0.70 125	C 26	C 26
		2038 Total	TCS	LOS Delay V/C Q	F 558 2.12 436	D 41 0.43 64	D 41 0.43 64	F 497	D 51 0.23 17	E 60 0.31 25	E 57 0.09 4	E 56	D 46 0.71 39	E 68 0.97 137	E 68 0.97 137	E 66	D 48 0.81 49	F 179 1.28 225	F 179 1.28 225	F 167	F 236
	6: Trafalgar Rd & Cornwall Rd	2023 Existing	TCS	LOS Delay V/C Q	F 81 0.83 66	D 38 0.50 82	D 38 0.50 82	D 52	F 121 0.81 37	D 45 0.57 83	D 45 0.42 48	D 50	F 330 1.48 60	D 52 0.73 109	D 52 0.73 109	F 111	F 114 1.05 124	F 157 1.26 384	B 12 0.29 18	F 116	F 86
		2038 Total	TCS	LOS Delay V/C Q	F 297 1.47 111	E 76 0.96 154	E 76 0.96 154	F 150	F 101 0.74 51	E 68 0.90 135	A 1 0.43 0	D 40	F 246 1.27 90	E 68 0.92 166	E 68 0.92 166	F 95	F 95 1.00 109	F 223 1.42 321	C 20 0.32 12	F 142	F 111
	7: South Service Road/Canadian Road & QEW EB Off-Ramp/Royal Windsor Drive	2023 Existing	TCS	LOS Delay V/C Q	A 4 0.03 2	A 6 0.24 31	A 6 0.24 31	A 6	A 3 0.13 6	A 5 0.23 29	A 4 0.01 0	A 5	D 0.01 0.05 2	D 0.03 0.03 6	D 0.03 0.03 6	D 38	D 0.02 0.10 3	D 0.10 0.02 10	D 0.02 0.02 0	D 38	D 8
		2038 Total	TCS	LOS Delay V/C Q	A 4 0.05 2	A 8 0.33 42	A 8 0.33 42	A 8	A 4 0.19 8	A 7 0.31 39	A 5 0.01 0	A 7	D 0.02 0.05 3	D 0.05 0.04 7	D 0.05 0.04 7	D 38	D 0.02 0.11 4	D 0.11 0.02 12	D 0.02 0.02 0	D 38	D 10
	8: QEW WB Off-Ramp & Kerr Street	2023 Existing	TCS	LOS Delay V/C Q	A 10 0.31 20	A 10	A 10	A 10	A 9 0.19 13	A 9	A 9	A 9	B 11 0.33 25	A 9	A 10	A 10	A 10	A 10	A 10	A 10	A 10
		2038 Total	TCS	LOS Delay V/C Q	B 11 0.41 27	B 11	B 11	B 11	A 9 0.25 17	A 9	A 9	A 9	B 12 0.43 33	B 12	B 12	B 12	B 12	B 12	B 12	B 12	B 12

MOE - Measure of Effectiveness
 LOS - Level of Service
 Delay - Average Delay per Vehicle in Seconds
 Q - 95th Percentile Queue Length
 Ex - Existing Available Storage
 Avail - Available Storage
 TCS - Traffic Control Signal
 TWSC - Two-Way Stop Control
 AWSC - All-Way Stop Control
 RBT - Roundabout



Table 19 2038 Future Total AM Peak Hour Operational Summary (2/2)

Peak Hour	Intersection	Horizon	Control Type	MOE	Direction / Movement / Approach												Overall				
					Eastbound				Westbound				Northbound					Southbound			
					Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach		Left	Through	Right	Approach
AM Peak Hour	9: Dorval Drive & QEW WB Off-Ramp	2023 Existing	TCS	LOS Delay V/C Q					D 39 0.76 118	C 29 0.24 23	D 36	B 11 0.22 37	B 11	B 16 0.61 128	B 16	C 23 0.66					
		2038 Total	TCS	LOS Delay V/C Q					D 54 0.95 184	C 33 0.54 83	D 48	B 13 0.30 49	B 13	C 24 0.83 206	C 24	C 32 0.87					
	10: Dorval Drive & QEW EB Off-Ramp	2023 Existing	TCS	LOS Delay V/C Q	C 35 0.45 43	D 40 0.64 69	D 37						A 6 0.27 43	A 6	A 9 0.57 119	A 9	B 14 0.59				
		2038 Total	TCS	LOS Delay V/C Q	C 34 0.51 60	D 43 0.75 104	D 38						A 10 0.38 73	A 10	B 18 0.82 241	B 18	C 20 0.79				
	11: Argus Rd & South Service Rd	2023 Existing	TWSC	LOS Delay V/C Q	A 3 0.01 0	A 3 0.01 0	A 3			A 0 0.50 0	A 0 0.50 0	A 0			C 15 0.07 2	C 15 0.07 2	C 15				
		2038 Total	TWSC	LOS Delay V/C Q	A 0 0.00 0	A 0 0.00 0	A 0			A 0 0.74 0	A 0 0.74 0	A 0			F 129 1.09 91	F 129 1.09 91	F 129				
	13: GO Bus Terminal/Argus Rd & Cross Ave	2023 Existing	TCS	LOS Delay V/C Q	B 19 0.28 8	B 19 0.45 38	B 19	B 19 0.24 16	B 12 0.44 63	B 12 0.44 63	B 12	E 67 0.75 11	B 15 0.09 0	B 15 0.09 0	C 34 0.16 14	C 30 0.81 37	C 30 0.81 37	C 28 0.64			
		2038 Total	TCS	LOS Delay V/C Q	B 15 0.20 13	C 26 0.83 124	C 25	B 17 0.50 16	B 11 0.51 63	B 11 0.51 63	B 11	C 24 0.27 12	C 22 0.10 0	C 22 0.10 0	F 246 1.69 233	F 246 1.69 233	F 246	E 62 1.07			
	14: Lyons Lane/Street A & Cross Ave	2023 Existing	TCS	LOS Delay V/C Q	A 10 0.14 11	A 10 0.24 14	A 10	A 6 0.56 8	A 3 0.08 4	A 3 0.08 4	A 5	C 26 0.11 8	C 25 0.03 5	C 25 0.03 5	C 25 0.13 7	C 26 0.13 15	C 26 0.13 15	C 26 0.48			
		2038 Total	TCS	LOS Delay V/C Q	B 12 0.28 28	B 12 0.29 27	B 12	A 7 0.57 32	A 4 0.18 15	A 4 0.18 15	A 5	C 25 0.14 10	C 24 0.03 6	C 24 0.03 6	C 25 0.40 27	C 26 0.21 21	C 27 0.21 21	F 83 1.12			
	16: Speers Road/Cornwall Road & Cross Avenue	2023 Existing	TCS	LOS Delay V/C Q	A 4 0.34 14	A 3 0.25 20	A 3		A 9 0.32 39	A 9 0.32 39	A 9				C 31 0.03 4	C 31 0.09 11	C 31 0.09 11	A 10 0.34			
		2038 Total	TCS	LOS Delay V/C Q	A 7 0.58 24	A 4 0.33 32	A 5	B 14 0.48 73	B 14 0.48 73	B 14					C 32 0.39 24	C 31 0.18 14	C 31 0.18 14	B 14 0.58			
	23: GO Station West Access/Street C & Cross Ave	2023 Existing	TCS	LOS Delay V/C Q		B 11 0.21 14	B 11	F 179 2.02 114	F 179 2.02 114		F 179	B 10 0.08 7	B 11 0.14 0	B 11					F 123 0.74		
		2038 Total	TCS	LOS Delay V/C Q	B 12 0.47 27	B 12 0.47 27	B 12	F 206 1.83dl 119	F 206 1.83dl 119	F 206 1.83dl 119	F 206	C 15 0.31 11	B 11 0.19 11	B 11 0.19 11	B 12 0.19 11	F 186 1.66 150	C 23 0.80 93	C 23 0.80 93	F 147 1.53		
	24: Argus Road at Jug Handle	2038 Total	TWSC	LOS Delay V/C Q	A 0 0.00 0	A 9 0.13 4	A 9	F 16.37 Err	F 16.37 Err		F Err	B 15 0.78 71	A 0 0.35 0	A 10					F 367		

MOE - Measure of Effectiveness

LOS - Level of Service

Delay - Average Delay per Vehicle in Seconds

Q - 95th Percentile Queue Length

Ex - Existing Available Storage

Avail. - Available Storage

TCS - Traffic Control Signal

TWSC - Two-Way Stop Control

AWSC - All-Way Stop Control

RBT - Roundabout



Table 20 2038 Future Total PM Peak Hour Operational Summary (1/2)

Peak Hour	Intersection	Horizon	Control Type	MOE	Direction / Movement / Approach																Overall	
					Eastbound				Westbound				Northbound				Southbound					
					Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach		
PM Peak Hour	1: Trafalgar Rd & Leighland Ave/Iroquois Shore Rd	2023 Existing	TCS	LOS Delay V/C Q	D 47 0.57 35	D 49 0.43 41	A 0 0.21 0	C 21	F 96 1.09 138	D 38 0.44 63	C 34 0.17 20	E 77	E 72 0.98 156	C 33 0.83 159	A 1 0.45 0	C 31	C 34 0.66 50	D 37 0.69 98	C 28 0.08 0	D 36	D 41 1.02	
		2038 Total	TCS	LOS Delay V/C Q	E 56 0.74 44	D 49 0.51 52	A 1 0.30 0	C 23	F 278 1.53 215	D 37 0.54 81	C 34 0.30 35	F 207	F 281 1.51 253	F 119 1.18 283	A 2 0.63 0	F 115	E 78 0.93 82	E 78 1.05 183	C 29 0.10 6	D 20 0.29 6	E 74	F 116 1.52
	2: Trafalgar Rd & North Service Rd/QEW WB Off-Ramp	2023 Existing	TCS	LOS Delay V/C Q	E 63 0.23 16	D 38 0.51 76	A 0 0.24 0	D 40	E 59 0.77 108	E 57 0.75 110	C 0 0.24 0	D 37		C 20 0.86 252	B 17			C 22 0.76 171	C 22 0.76 171	C 22	C 23 0.82	
		2038 Total	TCS	LOS Delay V/C Q	E 64 0.28 19	C 34 0.60 113	D 0 0.26 8	D 36	F 279 1.49 375	F 264 1.45 380	A 1 0.31 0	F 206		F 188 1.34 412	F 156			F 153 1.26 363	F 153 1.26 363	F 153	F 159 1.34	
	3: Trafalgar Rd & QEW EB-Off Ramp	2023 Existing	TCS	LOS Delay V/C Q	D 43 0.80 137	D 37 0.61 100	A 0 0.21 0	D 41						B 18 0.74 112	B 18			B 14 0.62 91	A 0 0.21 0	B 12	C 21 0.78 0	
		2038 Total	TCS	LOS Delay V/C Q	E 75 1.02 239	F 102 1.07 266	F 84	F 84						E 71 1.09 220	E 71			F 119 1.22 205	F 105 0.28 0	F 105	F 88 1.18	
	4: Trafalgar Rd & Argus Rd	2023 Existing	TWSC	LOS Delay V/C Q		A 10 0.06 2	A 10							A 0 0.50 0	A 0			A 0 0.38 0	A 0 0.37 0	A 0		
		2038 Total	TWSC	LOS Delay V/C Q		C 15 0.25 8	C 15							A 0 0.77 0	A 0			A 0 0.54 0	A 0 1.07 0	A 0		
	5: Trafalgar Rd & Cross Ave/South Service Rd	2023 Existing	TCS	LOS Delay V/C Q	E 55 0.79 102	C 26 0.15 18	C 26 0.15 18	D 49	E 68 0.60 36	E 55 0.26 29	E 55 0.25 30	E 58	D 46 0.60 26	D 52 0.73 124	D 53 0.72 124	D 51	D 41 0.48 30	D 40 0.77 194	D 40 0.77 194	D 40	D 47 0.72	
		2038 Total	TCS	LOS Delay V/C Q	F 395 1.75 340	C 26 0.24 32	C 26 0.24 32	F 343	F 94 0.81 56	F 57 0.41 43	E 60 0.54 56	E 67	F 94 1.06 64	F 55 0.98 145	F 55 0.98 145	E 59	D 46 0.76 17	F 189 1.30 214	F 189 1.30 214	F 183	F 172 1.3	
	6: Trafalgar Rd & Cornwall Rd	2023 Existing	TCS	LOS Delay V/C Q	F 97 0.99 107	D 44 0.55 84	D 44 0.55 84	E 69	E 73 0.55 43	E 73 0.93 146	A 1 0.27 0	D 49	F 121 0.85 42	E 62 0.92 183	E 62 0.92 183	E 67	F 93 0.90 106	F 46 0.98 306	A 7 0.31 10	D 53	E 58 0.97	
		2038 Total	TCS	LOS Delay V/C Q	F 338 1.59 170	E 55 0.81 125	E 55 0.81 125	F 187	F 89 0.75 66	F 168 1.23 232	A 1 0.40 0	F 106	F 131 0.91 58	F 141 1.19 293	F 141 1.19 293	F 141	F 291 1.46 110	F 178 1.33 267	B 15 0.49 13	F 181	F 154 1.37	
	7: South Service Road/Canadian Road & QEW EB Off-Ramp/Royal Windsor Drive	2023 Existing	TCS	LOS Delay V/C Q	A 5 0.25 14	A 10 0.26 44	A 10 0.26 44	A 8	A 6 0.27 19	B 11 0.30 53	A 8 0.02 0	A 10	D 36 0.07 8	D 37 0.15 19	D 36 0.06 3	D 36	D 36 0.06 8	D 39 0.37 39	D 38 0.26 27	D 38	B 17 0.31	
		2038 Total	TCS	LOS Delay V/C Q	A 8 0.40 23	B 14 0.37 75	B 12 0.37 75	B 12	A 9 0.44 30	B 16 0.43 87	B 12 0.02 0	B 14	D 36 0.08 10	D 36 0.15 23	D 36 0.08 10	D 36	D 35 0.06 10	D 48 0.38 51	D 48 0.71 87	D 46	C 22 0.49	
	8: QEW WB Off-Ramp & Kerr Street	2023 Existing	TCS	LOS Delay V/C Q	A 10 0.28 19	A 10 0.28 19	A 10 0.28 19	A 10	B 11 0.47 31	B 11 0.47 31	B 11 0.47 31	B 11	A 9 0.16 13	A 9 0.16 10	A 9							B 10 0.31
		2038 Total	TCS	LOS Delay V/C Q	B 10 0.38 25	B 10 0.38 25	B 10 0.38 25	B 10	B 13 0.62 44	B 13 0.62 44	B 13 0.62 44	B 13	A 10 0.20 16	A 10 0.20 16	A 10							B 12 0.48

MOE - Measure of Effectiveness

LOS - Level of Service

Delay - Average Delay per Vehicle in Seconds

Q - 95th Percentile Queue Length

Ex - Existing Available Storage

Avail. - Available Storage

TCS - Traffic Control Signal

TWSC - Two-Way Stop Control

AWSC - All-Way Stop Control

RBT - Roundabout



Table 21 2038 Future Total PM Peak Hour Operational Summary (2/2)

Peak Hour	Intersection	Horizon	Control Type	MOE	Direction / Movement / Approach												Overall				
					Eastbound				Westbound				Northbound					Southbound			
					Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach		Left	Through	Right	Approach
PM Peak Hour	9: Dorval Drive & QEW WB Off-Ramp	2023 Existing	TCS	LOS Delay V/C Q					C 35	C 35	C 35		B 15	B 15	B 15	B 15	C 23				
		2038 Total	TCS	LOS Delay V/C Q					D 43	D 53	D 46		C 21	C 21	C 22	C 22	C 31				
	10: Dorval Drive & QEW EB Off-Ramp	2023 Existing	TCS	LOS Delay V/C Q	D 37	D 36	D 36						A 6	A 6	A 6	A 6	B 12				
		2038 Total	TCS	LOS Delay V/C Q	D 37	D 38	D 37						B 11	B 11	B 10	B 10	B 16				
	11: Argus Rd & South Service Rd	2023 Existing	TWSC	LOS Delay V/C Q	A 4	A 4	A 4		A 0	A 0	A 0				B 11	B 11	B 11				
		2038 Total	TWSC	LOS Delay V/C Q	A 5	A 5	A 5		A 0	A 0	A 0				E 43	E 43	E 43				
	13: GO Bus Terminal/Argus Rd & Cross Ave	2023 Existing	TCS	LOS Delay V/C Q	B 11	B 16	B 16	B 16	A 8	A 6	A 6	A 6	C 21	C 21	C 21	C 21	C 23	B 15			
		2038 Total	TCS	LOS Delay V/C Q	B 13	D 48	D 48	D 47	A 19	A 9	A 9	A 10	C 23	C 23	C 23	C 23	F 148	D 52			
	14: Lyons Lane/Street A & Cross Ave	2023 Existing	TCS	LOS Delay V/C Q	B 13	B 13	B 13	B 13	A 8	A 8	A 8	A 8	C 32	C 21	C 21	C 28	C 20	B 18			
		2038 Total	TCS	LOS Delay V/C Q	B 17	B 17	B 17	B 17	A 10	B 11	B 11	B 11	D 49	B 20	B 20	D 37	B 20	E 56			
	15: Cross Ave & Lyons Lane	2023 Existing	TWSC	LOS Delay V/C Q	A 9	A 0	A 0	A 0	A 0	A 0	A 0	A 0			B 12	B 12	B 12				
		2038 Total	TWSC	LOS Delay V/C Q	B 10	A 0	A 0	A 2	A 0	A 0	A 0	A 0			C 18	C 18	C 18				
	16: Speers Road/Cornwall Road & Cross Avenue	2023 Existing	TCS	LOS Delay V/C Q	A 5	A 3	A 3	A 4	B 11	B 11	B 11	B 11	C 31	C 32	C 32	A 0	B 12				
		2038 Total	TCS	LOS Delay V/C Q	C 21	A 2	A 2	A 8	B 15	B 15	B 15	B 15	D 37	C 34	C 34	A 0	B 11				
	23: GO Station West Access/Street C & Cross Ave	2023 Existing	TCS	LOS Delay V/C Q		B 13	B 13	B 13	C 18	C 18	C 18	C 18	A 9	B 12	B 11		B 14				
		2038 Total	TCS	LOS Delay V/C Q	C 24	C 24	C 24	C 24	D 32	D 32	D 32	D 32	B 11	C 23	C 23	C 21	F 115	E 41			
24: Argus Road at Jug Handle	2038 Total	TWSC	LOS Delay V/C Q	A 9	A 9	A 9	A 9	F Err	F Err	F Err	F Err	F 127	A 0	C 18		F 603					

MOE - Measure of Effectiveness
 LOS - Level of Service
 Delay - Average Delay per Vehicle in Seconds

Q - 95th Percentile Queue Length
 Ex - Existing Available Storage
 Avail. - Available Storage

TCS - Traffic Control Signal
 TWSC - Two-Way Stop Control
 AWSC - All-Way Stop Control

RBT - Roundabout



9.4 Argus Road at “Jug Handle”

The midtown Oakville revised street network proposes a significant modification to the current Argus Road alignments west of Trafalgar Road. Argus Road is proposed to travel beneath Trafalgar Road and connect with Davis Road at South Service Road east of Trafalgar Road. As a result, the connection between Trafalgar Road and Argus Road, rather than connecting directly to each other at a right-in/right intersection, a “jug handle” design has been incorporated – whereby a connecting segment of public street links Trafalgar Road with Argus Road. As Argus Road is expected to handle a significant amount of southbound traffic entering Midtown, an updated traffic operational assessment has been completed, taking into account refinements to the traffic assignment based on the proposed roadway network as envisioned in the Draft (2024) Midtown Oakville Schedule L4 of the Midtown Oakville proposed transportation network.

Based on a preliminary analysis completed as noted above, Argus Road and the “Jug Handle” are expected to operate with significant delay if the intersection is to remain under stop sign control for the east-west approaches. Concerning upgrading the traffic control to traffic control signals, given the limited spacing from the Trafalgar Road corridor, this would not be recommended as there is a high probability that the queue created along the south leg of the Argus Road and “Jug Handle” intersection would back up onto Trafalgar Road, creating operational issues at the upstream off-ramps.

Instead, given that the intersection will mark the entrance to Midtown Oakville, a roundabout could be considered to provide the increased capacity while also serving as a “Gateway” feature. Gateway features are typically constructed as landmarks highlighting the arrival into an urban area or community core to provide a transition to reinforce the theme of the community core. They may also function to slow traffic and increase the driver's level of awareness that they are entering an area that has a higher level of pedestrian and cycling activity. Based on the projected traffic estimates for this intersection, two entry lanes would likely be required for the south leg, while a single-entry lane would be sufficient for the east and west legs. However, further detailed modelling will need to be confirmed to determine the specifics of the roundabout design.

9.5 Cross Avenue Operations

With the emphasis on developing Mid-Town Oakville as a Transit-Oriented Community (TOC), a greater focus will be placed on reducing traffic congestion and emissions and building integrated, accessible communities that will benefit future and current residents.

Midtown Oakville presently has limited access points to/from Trafalgar Road due to the barriers imposed by the railway corridors to the south, the Queen Elizabeth Way to the North, and environmentally sensitive areas to the west. As a result, Cross Avenue at Trafalgar Road facilitates the majority of inbound and outbound traffic to Midtown Oakville, including general traffic to/from the Oakville GO Station and several commercial developments.

Based on the previous transportation impact studies completed, mitigation measures to alleviate and improve traffic operations along the Cross Avenue corridor were limited due to right-of-way constraints coupled with the limited access options to Trafalgar Road.

Further review of the traffic volumes associated with Cross Avenue indicates that the east section (between Trafalgar Road and the GO Station’s signalized vehicle entrance) is approaching capacity limitations for a four-lane roadway based on a general threshold of 900 vehicles per hour per lane. However, the western section of Cross Avenue (between the GO Station’s signalized vehicle entrance and Spears Road) is noted to be serviced with sufficient available capacity.

Midtown Oakville intends to emphasize local residents utilizing sustainable transportation options (i.e., transit, walking, cycling) thus reducing the level of vehicular traffic being generated within Midtown Oakville. Limiting capacity within Midtown will assist in shifting mode split from private auto to high occupancy auto trips or transit, cycling and walking trips, especially if destined to the Oakville GO Station from areas of Oakville where transit cycling and high occupancy auto trips is a logical alternative mode of travel.

Coincidentally, there needs to be an acknowledgment that the amount of commuter traffic arriving at or departing from the Oakville GO Station by private auto is significant and needs to have a reasonable set of approach and departure routing options.

In conjunction with an effort to identify who amongst the commuting motorists would be good candidates to switch modes from auto to transit, carpooling, cycling or walking, a congestion circulation plan should be identified illustrating alternative routing options that take better advantage of inbound and outbound routing patterns which experience less congestion. This could be done through real-time area traffic monitoring and variable message signage in the general vicinity of the Oakville GO Station. The goal would be to actively shift traffic patterns to better distribute arriving and departing traffic associated with the Oakville GO Station schedules.

As a result, the future roadway network proposed for Midtown Oakville will need to encourage commuting motorists to travel westbound on Cross Avenue when departing the Oakville GO Station environs (or westbound on Argus Road under Trafalgar Road) to use alternative routes to cross the QEW corridor – such as Dorval Drive in the West or Winston Churchill Boulevard in the east or the new arterial road planned to cross the QEW, east of Trafalgar Road.

Exceptions, however, can be made for buses. By providing real time benefits to alternative routing options when approach or departing the Oakville GO Station area, the Oakville GO Station could remain accessible and priority given to transit vehicle routings along Cross Avenue. It is important to note that access out of Midtown Oakville remains possible but with constraints. The proposed lane configuration along Cross Avenue is illustrated in **Figure 20**.

A preliminary operational assessment has been completed to assess potential diversions of motorists to alternative routing options when arriving at or departing from the Oakville GO Station area using the Midtown Oakville street network. The process by which “diversions” of Midtown Oakville traffic would adopt alternative routing options given the proposed Midtown Oakville street network and its ability to permit vehicular trips to “cross” Trafalgar Road in a “grade separated” conditions, have been only generally summarized herein. This “initial” analyses will undergo additional review and will be summarized in a more fulsome way in the next technical submission for the Oakville TOC Development. This initial assessment is outlined using the resulting 2038 operational indices in **Table 22**. Based on the initial analysis, all intersections along the Cross Avenue corridor are expected to operate satisfactorily. It is crucial that the GO Transit Driveway, which facilitates busses to/from the GO Oakville Station, avoid any vehicle blockages from the upstream intersection at Trafalgar Road and Cross Avenue. It is also noted that once a detailed model has been developed, further refinements to the projections and an updated operational assessment will need to be undertaken.



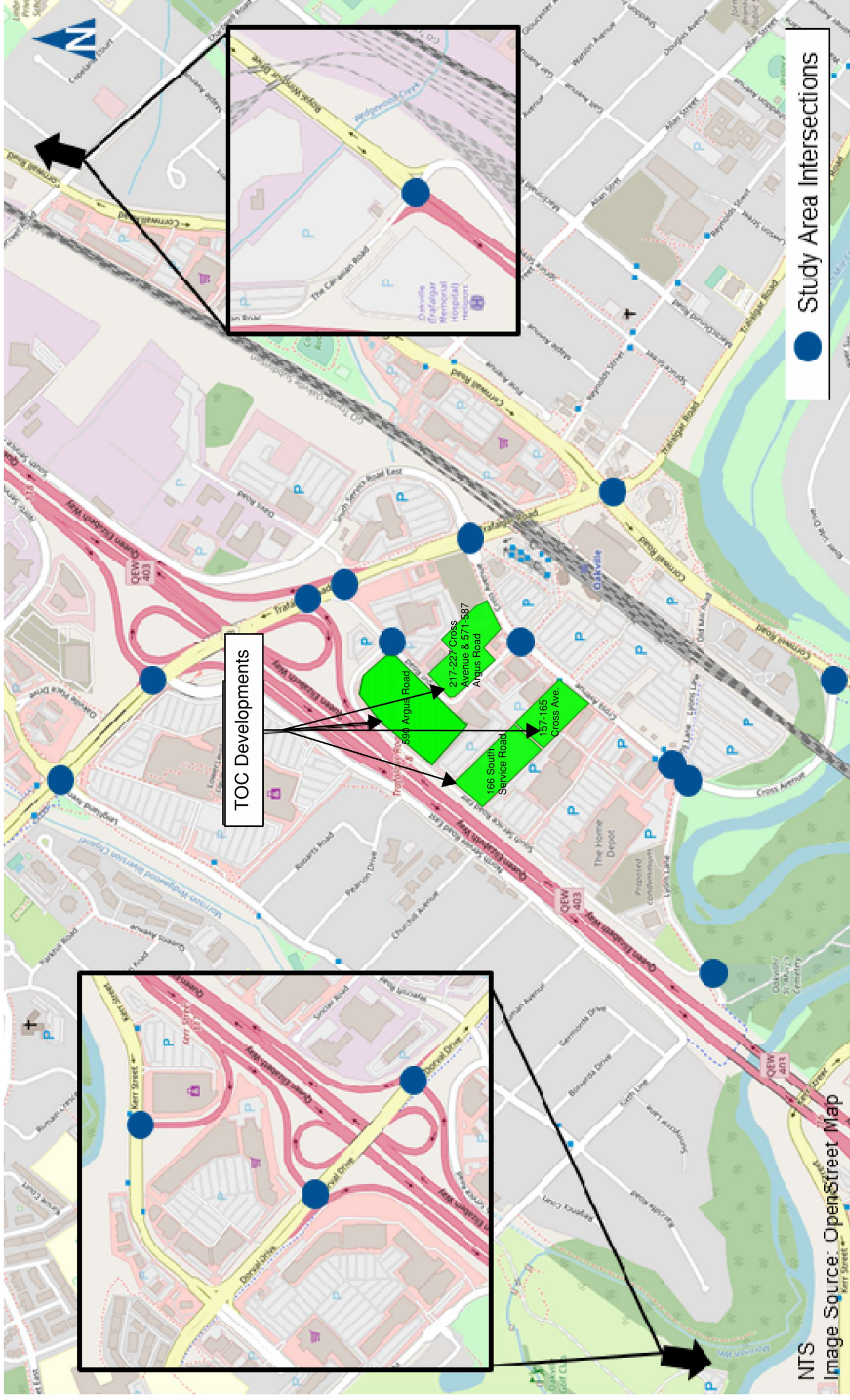
Table 22 2038 Operational Assessment – Area Circulation Diversions – Sensitivity

Analysis Period	Intersection	Control Type	MOE	Direction / Movement / Approach																Overall	
				Eastbound				Westbound				Northbound				Southbound					
				Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach		
AM Peak Hour	5 - Trafalgar Road at Cross Avenue/South Service Road	TCS	LOS Delay V/C Q	E 71 0.93 63	F 109 0.89 109	F 109 0.89 109	E 66	A 6 0.06 24	D 41 0.39 34	A 0 0.03 30	C 32	D 46 0.82 47	F 125 0.86 32	F 125 0.86 32	C 33	B 14 0.40 20	F 166 0.99 47	F 166 0.99 47	D 46	D 43	
	13 - Arugs Road at Cross Avenue	TCS	LOS Delay V/C Q	C 23 0.54 59	C 23 0.54 59	C 23 0.54 59	C 23	B 15 0.35 12	B 18 0.68 96	B 18 0.68 96	B 18	B 18	E 70 0.66 19	B 16 0.10 0	B 16 0.10 0	C 32		D 43 0.86 146	D 38 0.81 140	D 40	C 27
	14 - Lyons Lane/Street A at Cross Avenue	TCS	LOS Delay V/C Q	C 21 0.65 39	B 11 0.27 28	B 11 0.27 28	B 13	A 7 0.55 35	C 32 0.97 250	C 32 0.97 250	C 32	C 28	D 38 0.29 13	C 33 0.03 7	C 33 0.03 7	D 36		D 42 0.60 54	D 42 0.60 54	D 42	C 26
	16 - Speers Road/Cornwall Road at Cross Avenue	TCS	LOS Delay V/C Q	D 53 0.89 102	C 21 0.50 86		C 29		D 50 0.88 130	D 50 0.88 130	D 50	D 50						C 24 0.42 72	D 36 0.97 267	D 34	D 36
	23 - GO Station West Access/Street C at Cross Avenue	TCS	LOS Delay V/C Q	C 32 0.10 12	C 25 0.50 74	C 21 0.08 10	C 24	D 38 0.78 69	D 43 0.96 180	D 43 0.96 180	D 41	E 66 0.67 30	C 27 0.19 0	C 27 0.19 0	C 33		E 60 0.93 138	E 60 1.00 173	E 60	D 44	
PM Peak Hour	5 - Trafalgar Road at Cross Avenue/South Service Road	TCS	LOS Delay V/C Q	F 97 1.02 118	F 82 0.63 82	F 82 0.63 82	E 75	B 18 0.29 57	F 108 0.99 113	D 46 0.52 58	F 84	D 44 1.02 62	F 127 0.89 44	F 127 0.89 44	D 46	A 6 0.25 36	F 162 1.03 73	F 162 1.03 73	E 72	E 63	
	13 - Arugs Road at Cross Avenue	TCS	LOS Delay V/C Q	C 20 0.77 168	C 20 0.77 168	C 20 0.77 168	C 20	B 13 0.41 13	A 7 0.35 56	A 7 0.35 56	A 7	E 65 0.59 15	C 27 0.11 12	C 27 0.11 12	D 36		C 34 0.33 36	C 33 0.20 25	C 34	B 19	
	14 - Lyons Lane/Street A at Cross Avenue	TCS	LOS Delay V/C Q	C 29 0.64 33	A 9 0.22 25	A 9 0.22 25	B 13	A 9 0.05 6	B 17 0.78 129	B 17 0.78 129	B 17	D 53 0.93 91	B 18 0.17 15	B 18 0.17 15	D 38		C 30 0.47 38	C 30 0.47 38	C 30	C 22	
	16 - Speers Road/Cornwall Road at Cross Avenue	TCS	LOS Delay V/C Q	D 48 0.90 118	A 10 0.44 60		C 21		D 47 0.95 161	D 47 0.95 161	D 47	D 47						C 30 0.31 38	C 27 0.88 157	C 27	C 31
	23 - GO Station West Access/Street C at Cross Avenue	TCS	LOS Delay V/C Q	E 76 0.82 48	B 17 0.66 122	A 10 0.04 4	C 23	F 80 0.93 44	D 47 0.99 269	D 47 0.99 269	D 53	D 37 0.42 34	E 60 0.86 107	E 60 0.86 107	E 56		C 33 0.32 36	D 36 0.43 43	D 35	D 43	

MOE - Measure of Effectiveness
 LOS - Level of Service
 Delay - Average Delay per Vehicle in Seconds
 Q - 95th Percentile Queue Length
 Ex. - Existing Available Storage
 Avail. - Available Storage
 TCS - Traffic Control Signal
 TWSC - Two-Way Stop Control
 AWSC - All-Way Stop Control
 RBT - Roundabout

Appendix A: Memo Figures





Location of Subject Site

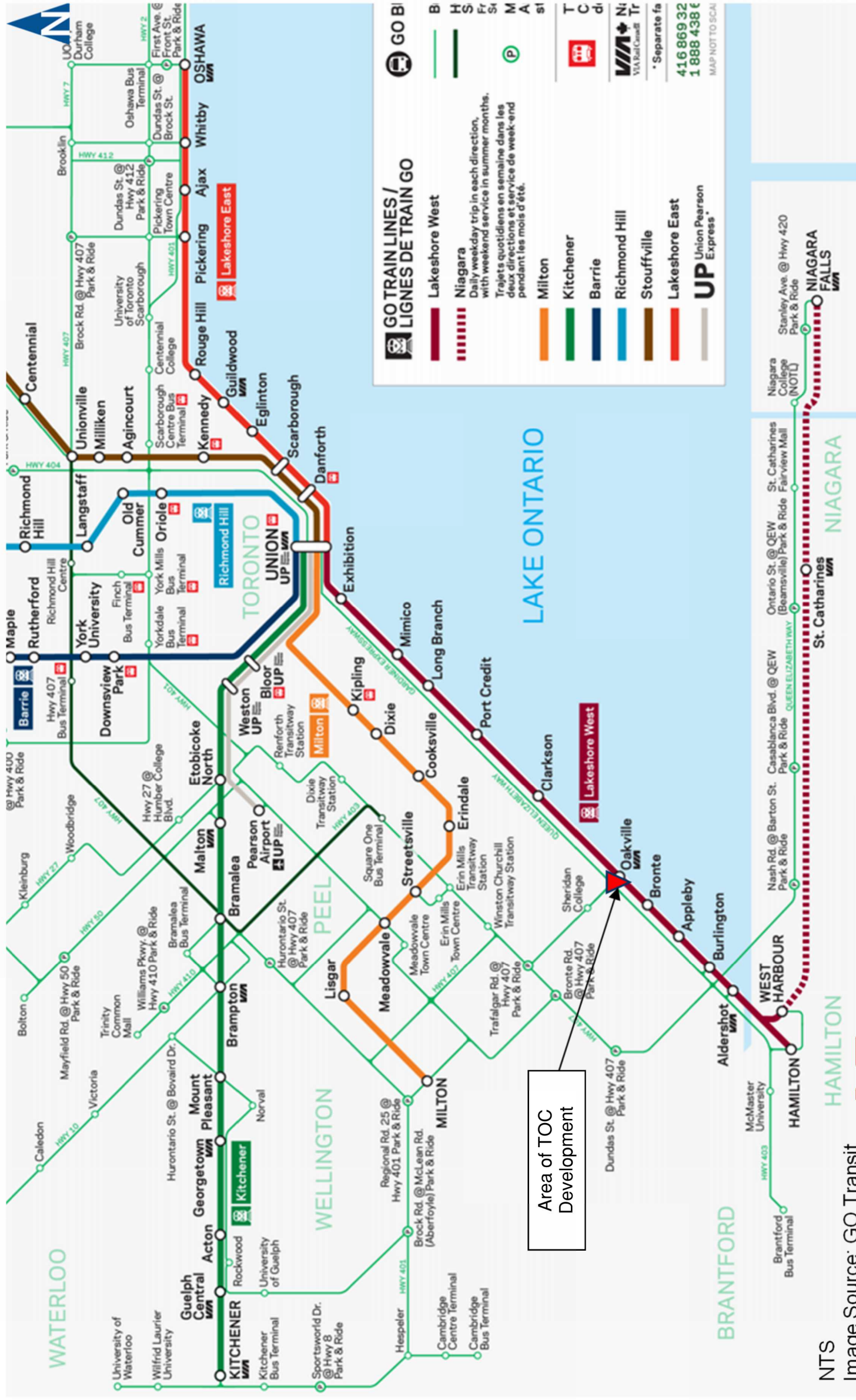
Figure 1



Existing Oakville Transit Network

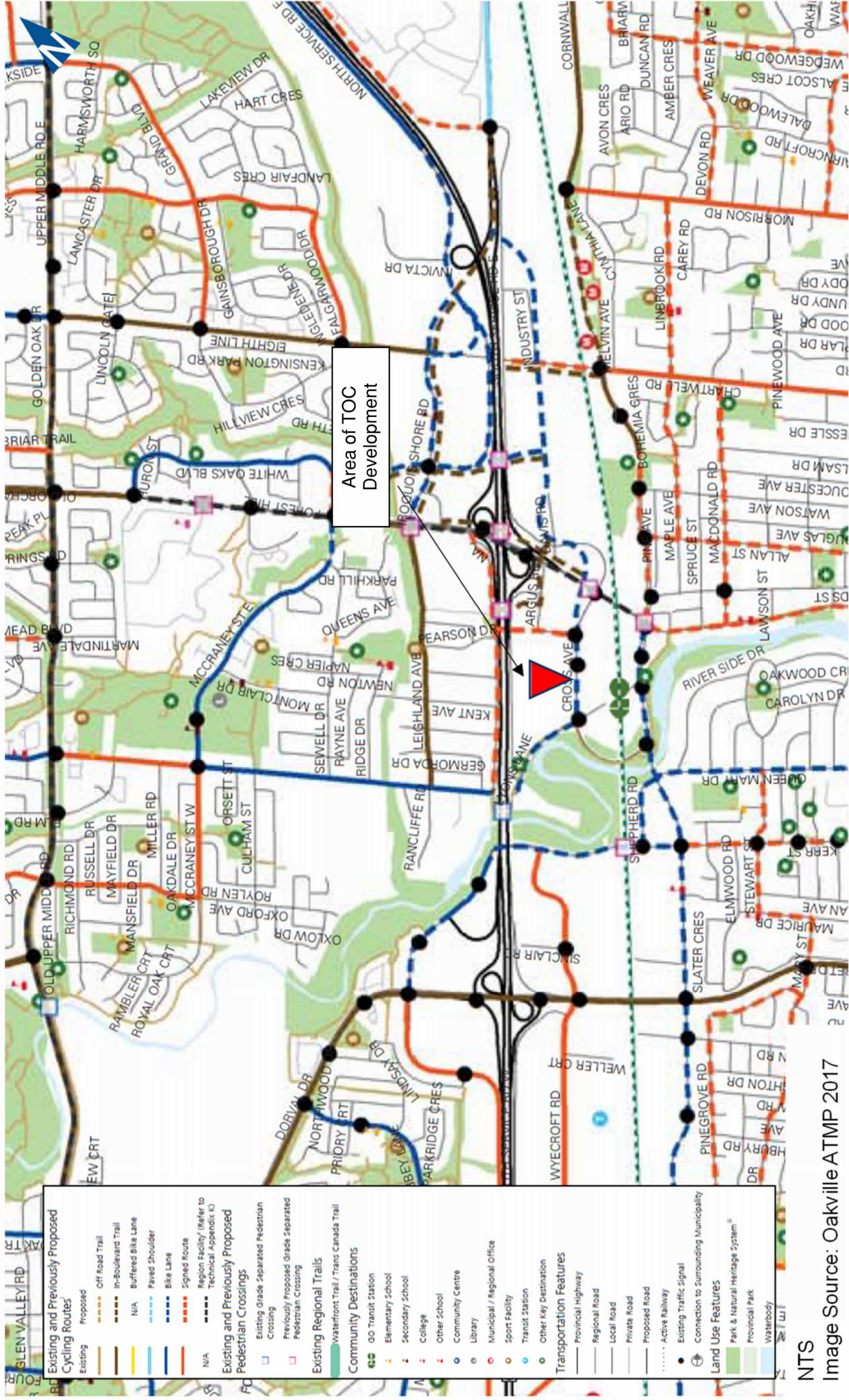
TOC Development - Midtown, Oakville

Figure 2



Existing GO Transit Network

Figure 3



NTS

Image Source: Oakville ATMP 2017

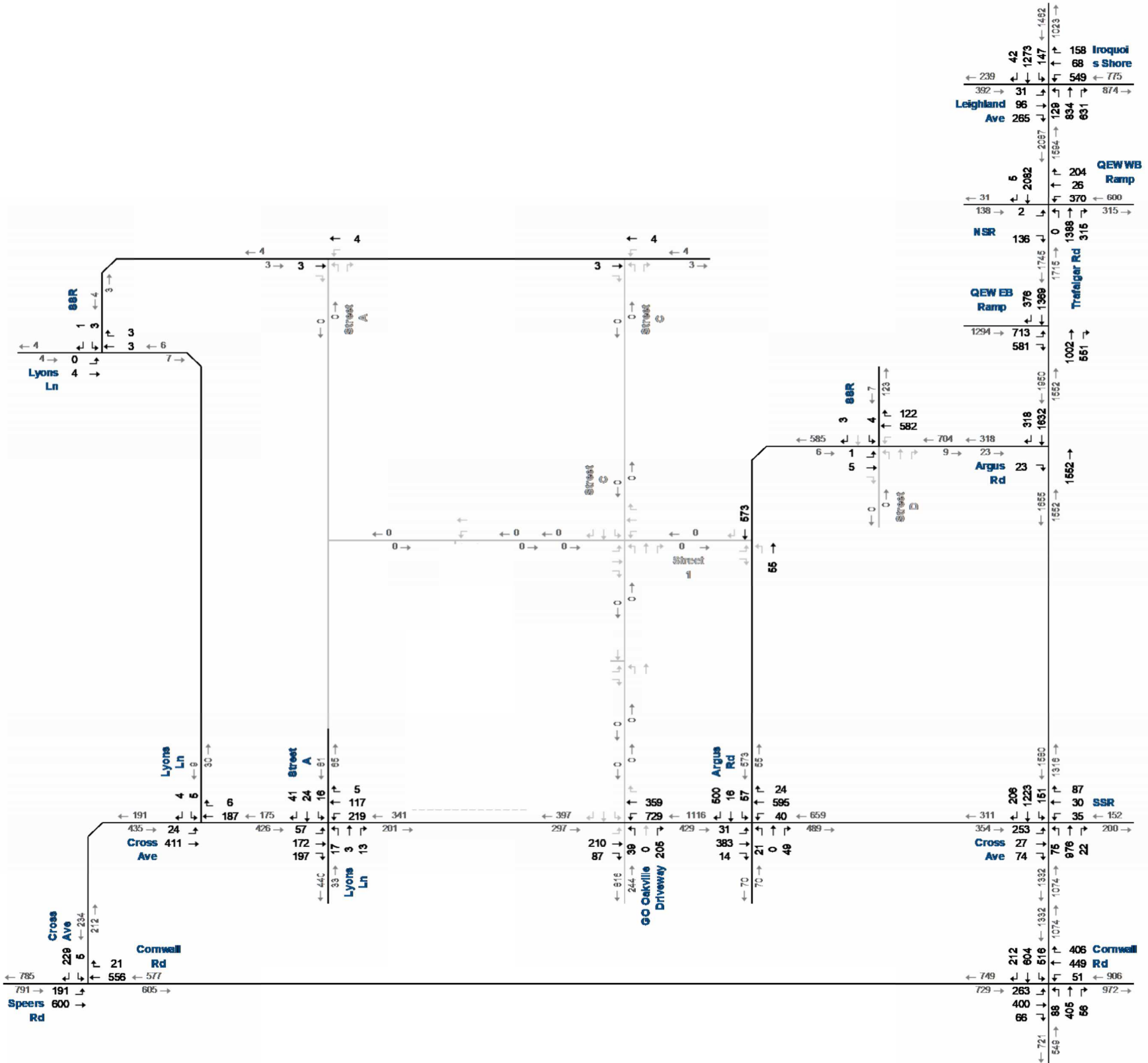


BA Group

Proposed Cycle & Trail Network

TOC Development - Midtown, Oakville

Figure 4



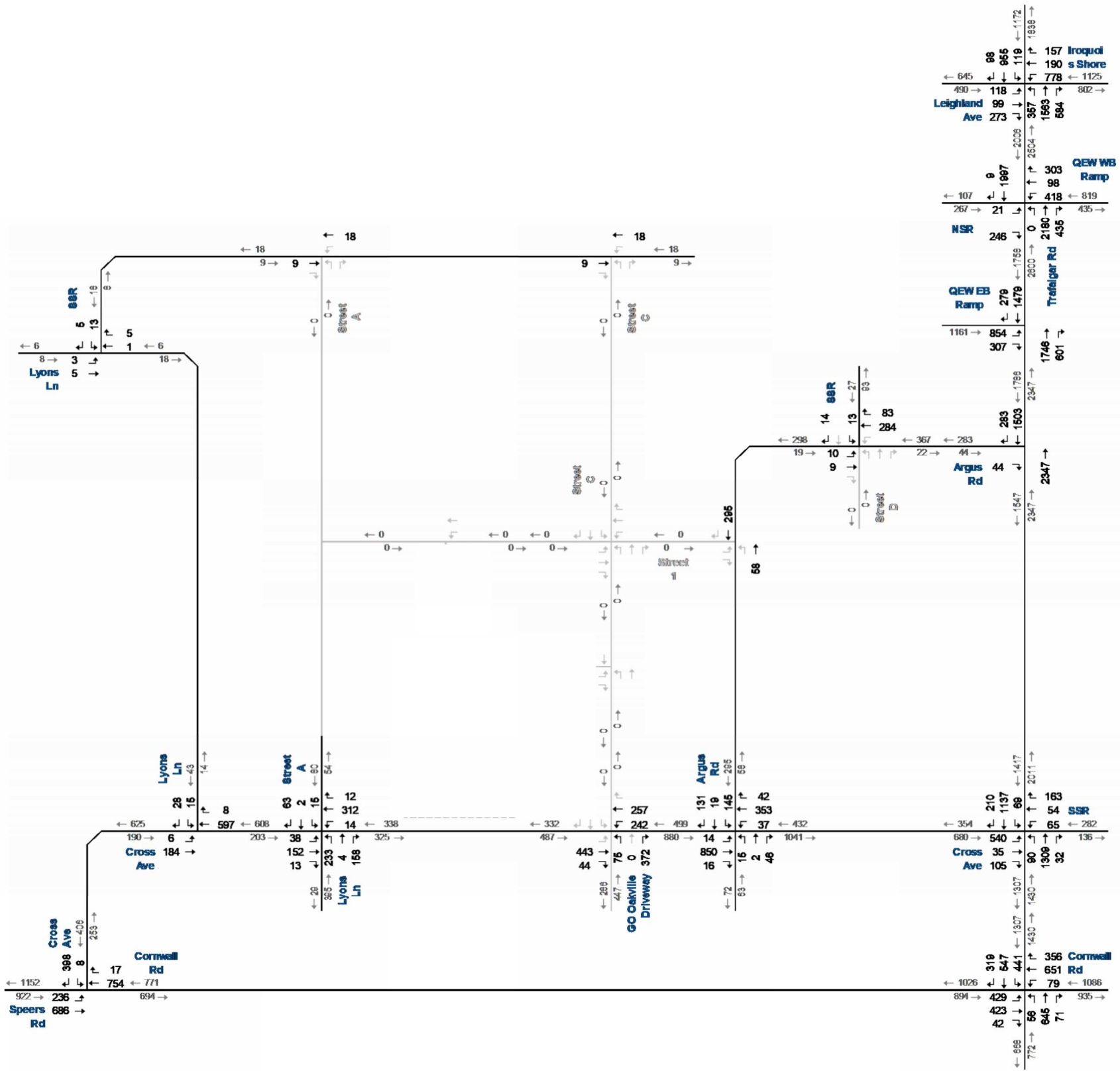
BA Group



Base Year Traffic Volumes AM Peak Hour

TOC Development - Midtown, Oakville

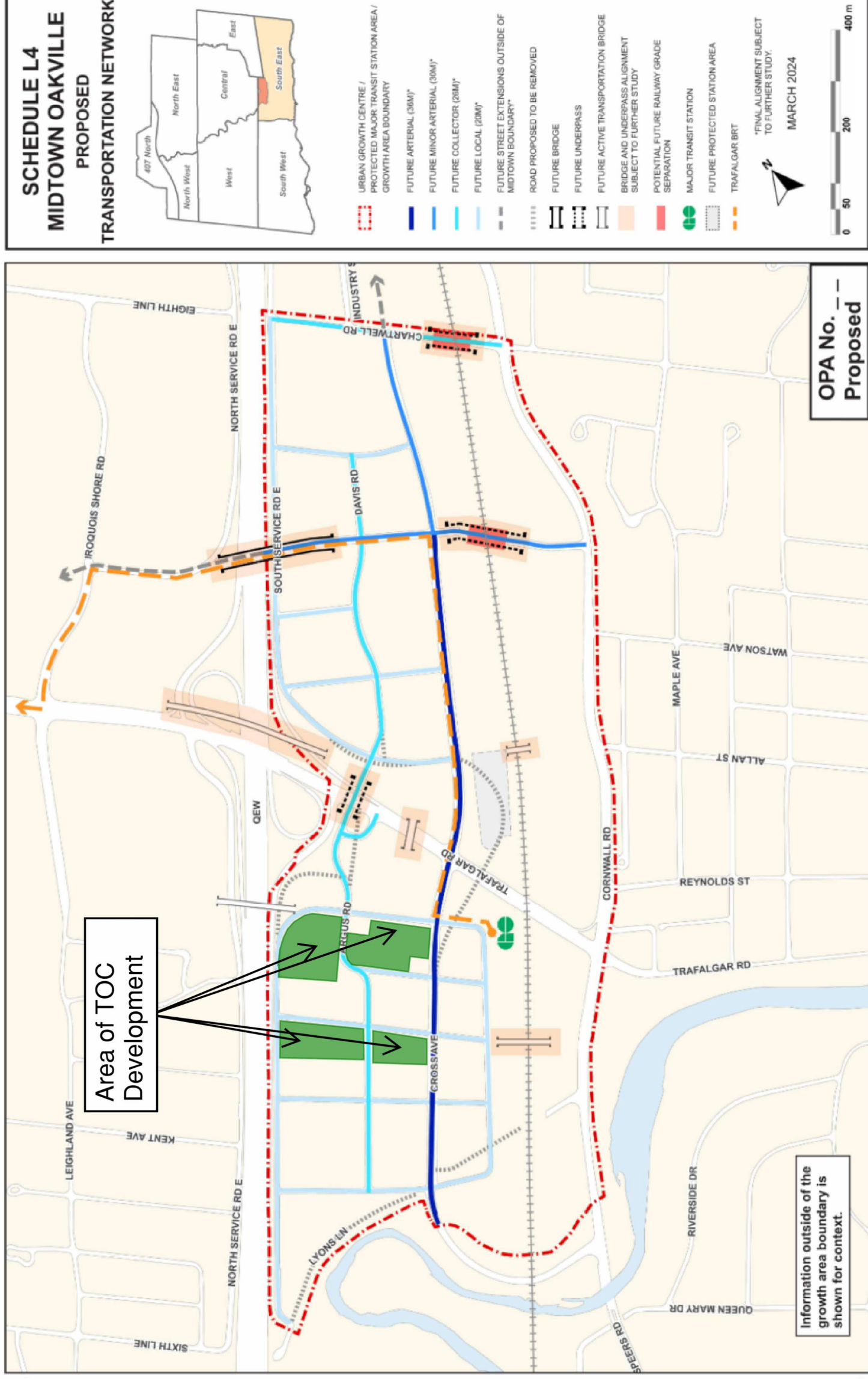
Figure 5

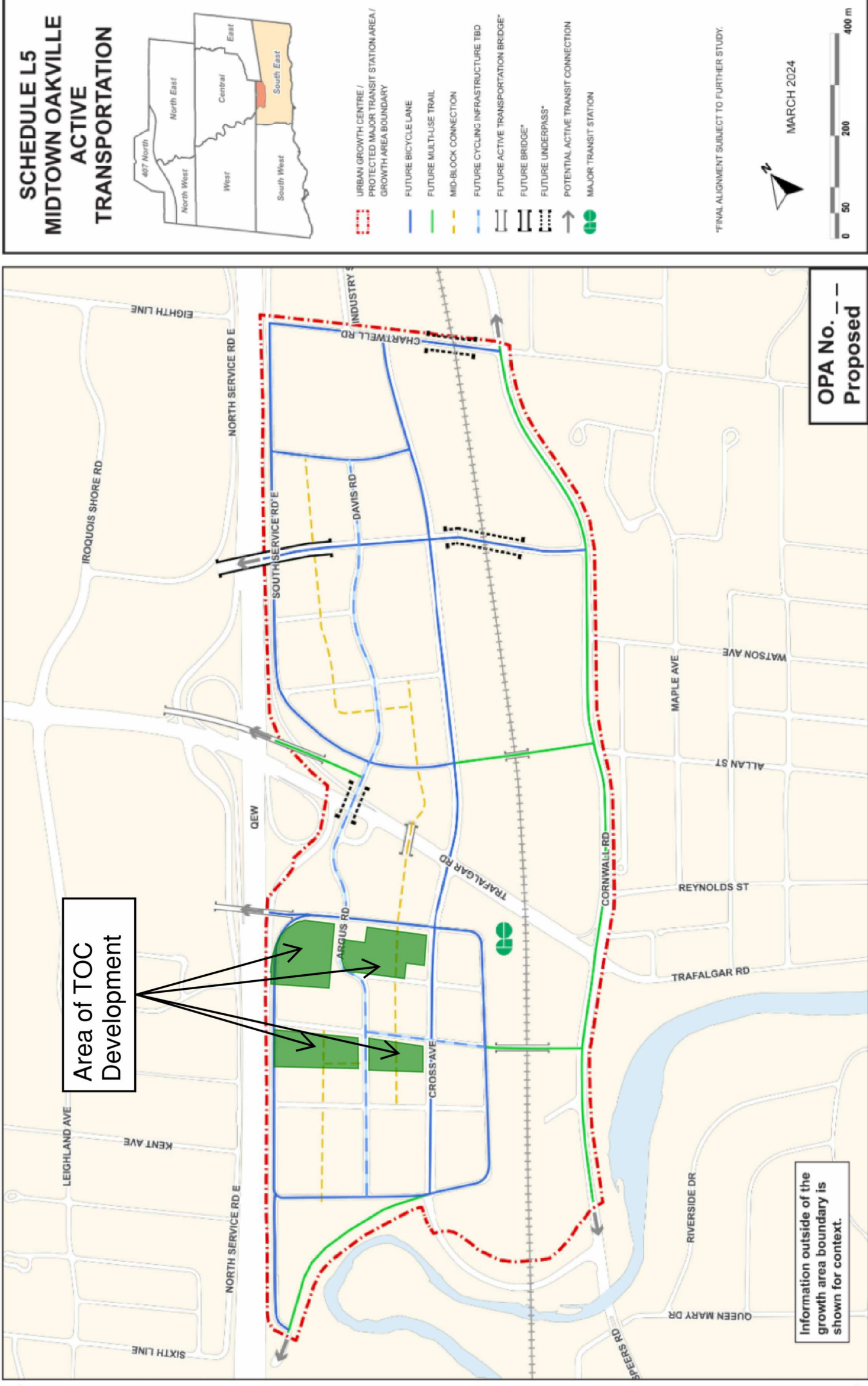


Base Year Traffic Volumes PM Peak Hour

TOC Development - Midtown, Oakville

Figure 6

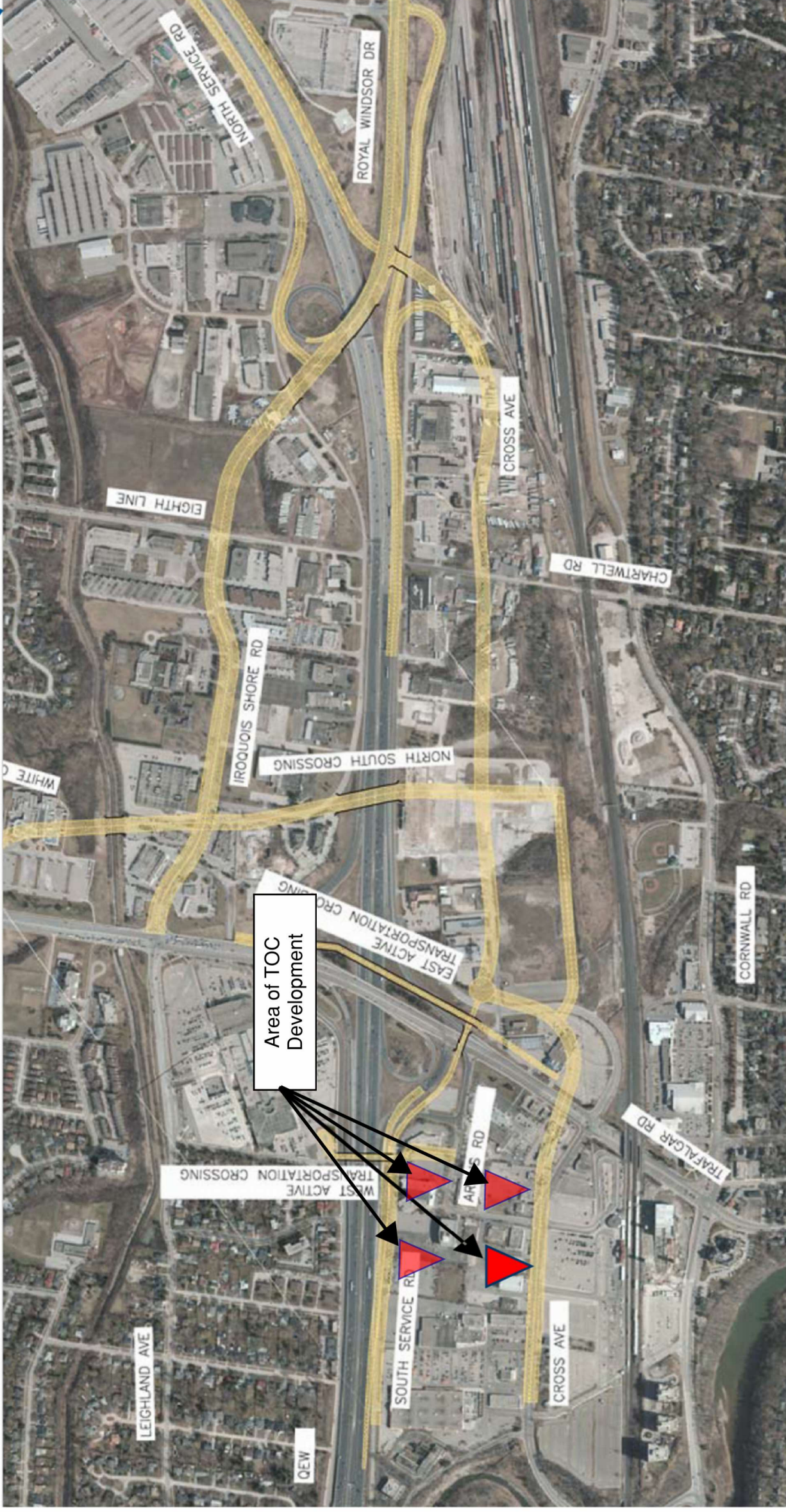




Draft Midtown (2024) OPA Proposed Active Transportation Network

TOC Development - Midtown, Oakville

Figure 8



NTS

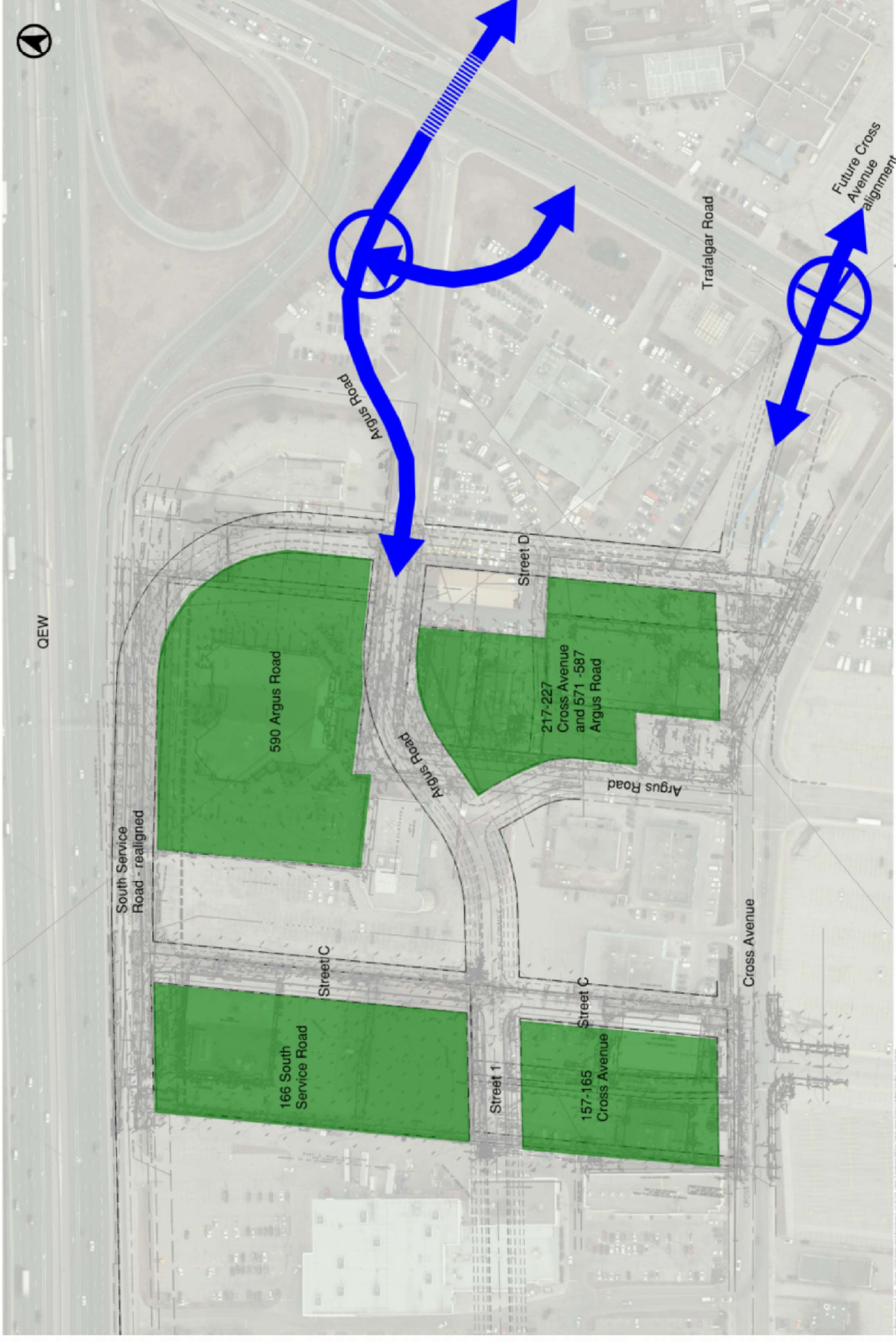
Image Source: Midtown Oakville Class EA



Midtown EA Broader Area Improvements

TOC Development - Midtown, Oakville

Figure 9



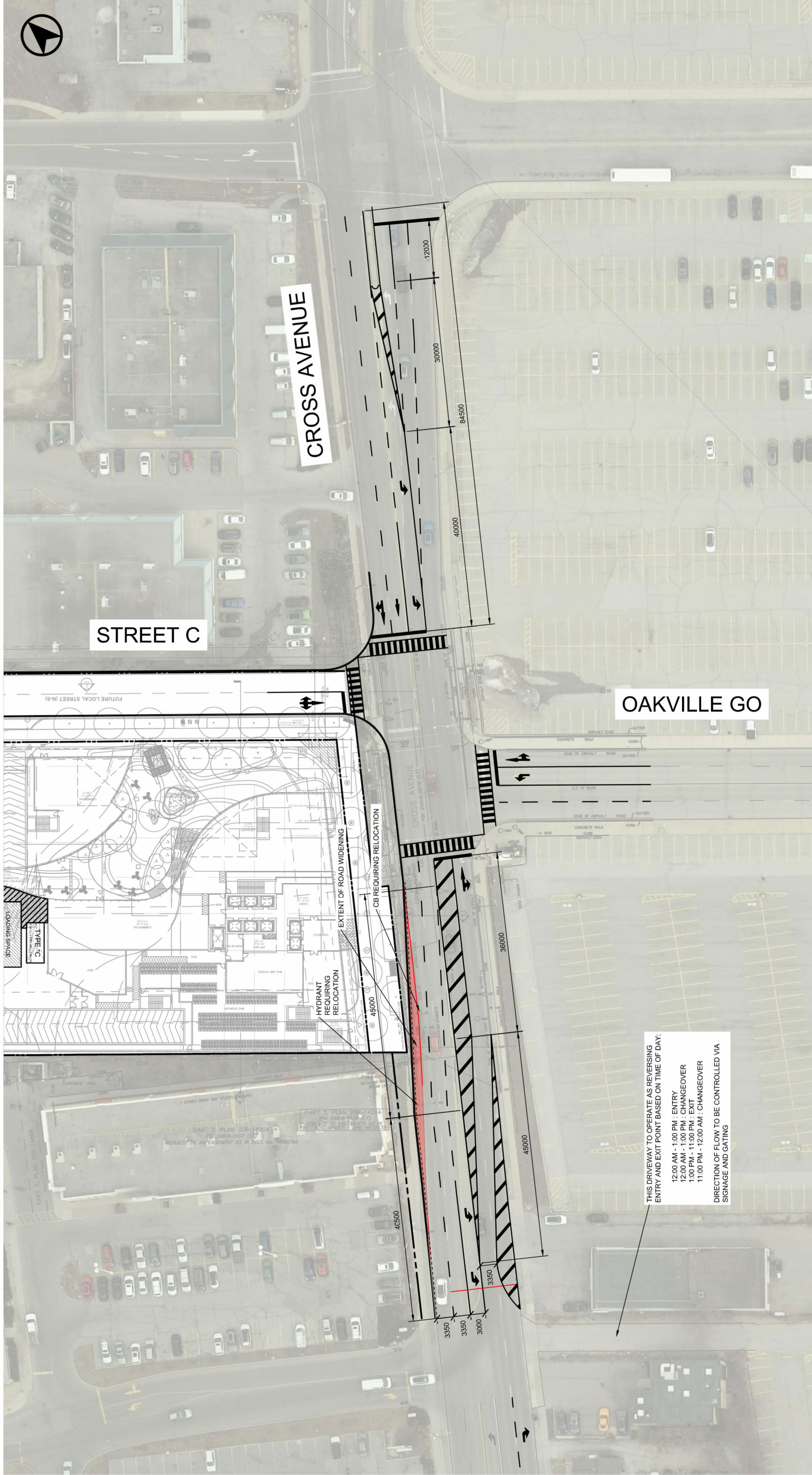
NTS



Key Future Midtown Street Segments – West of Trafalgar Road

TOC Development - Midtown, Oakville

Figure 10



THIS DRIVEWAY TO OPERATE AS REVERSING ENTRY AND EXIT POINT BASED ON TIME OF DAY:
 12:00 AM - 1:00 PM : ENTRY
 12:00 AM - 1:00 PM : CHANGEOVER
 1:00 PM - 11:00 PM : EXIT
 11:00 PM - 12:00 AM : CHANGEOVER
 DIRECTION OF FLOW TO BE CONTROLLED VIA SIGNAGE AND GATING

	157 CROSS AVENUE Functional Road Plan for Interim Offset Intersection		Scale 1:500 
	Project: 157 CROSS Project No. 8078-06 Date: October 02, 2023 Revised: February 20, 2024	Drawing No. FD-01	

Figure 11

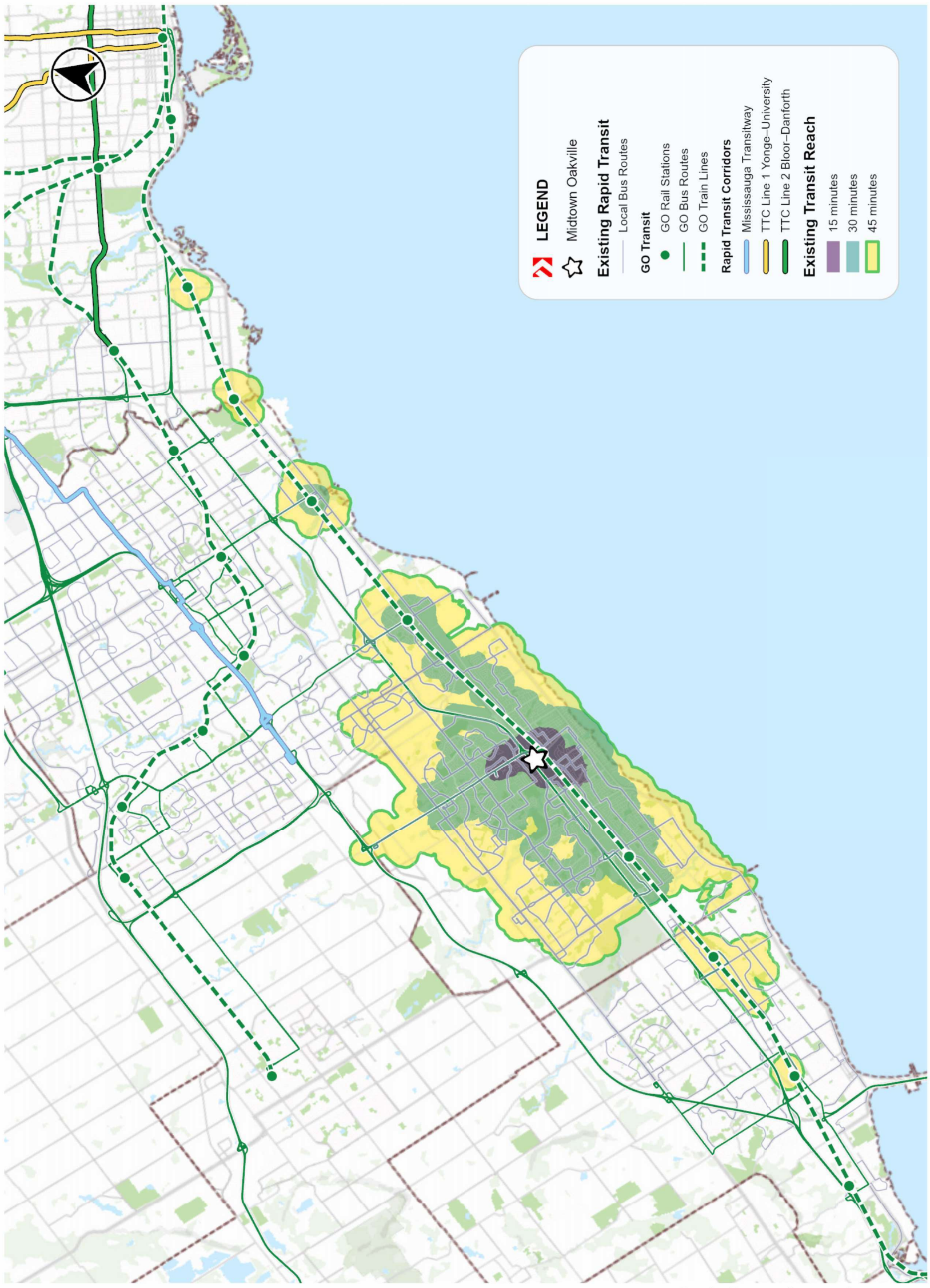
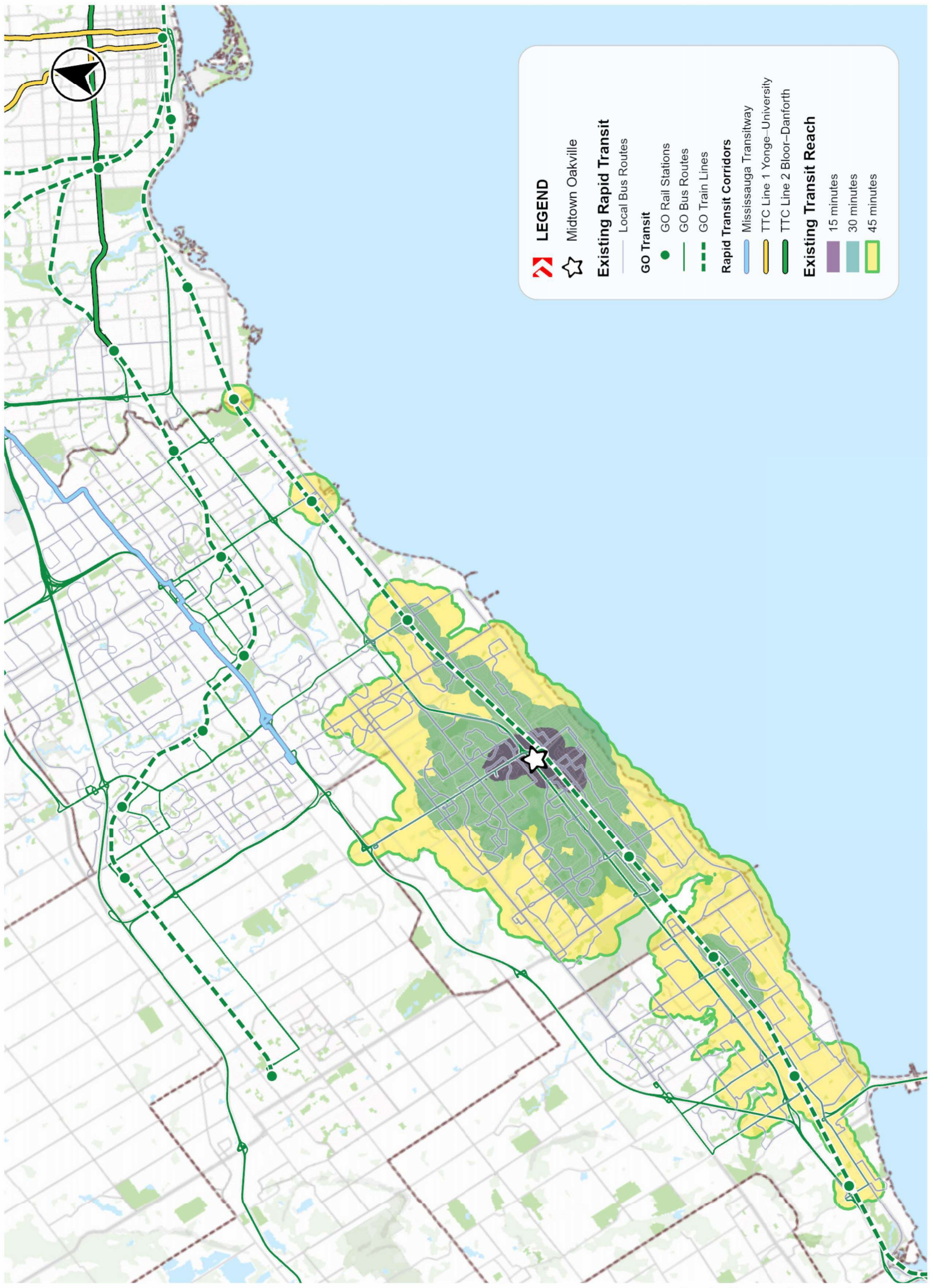


Figure 12 EXISTING TRANSIT REACH (TRAVEL AWAY)

TOC Development - Midtown Oakville

BA Group



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Figure 13 EXISTING TRANSIT REACH (TRAVEL TOWARDS)

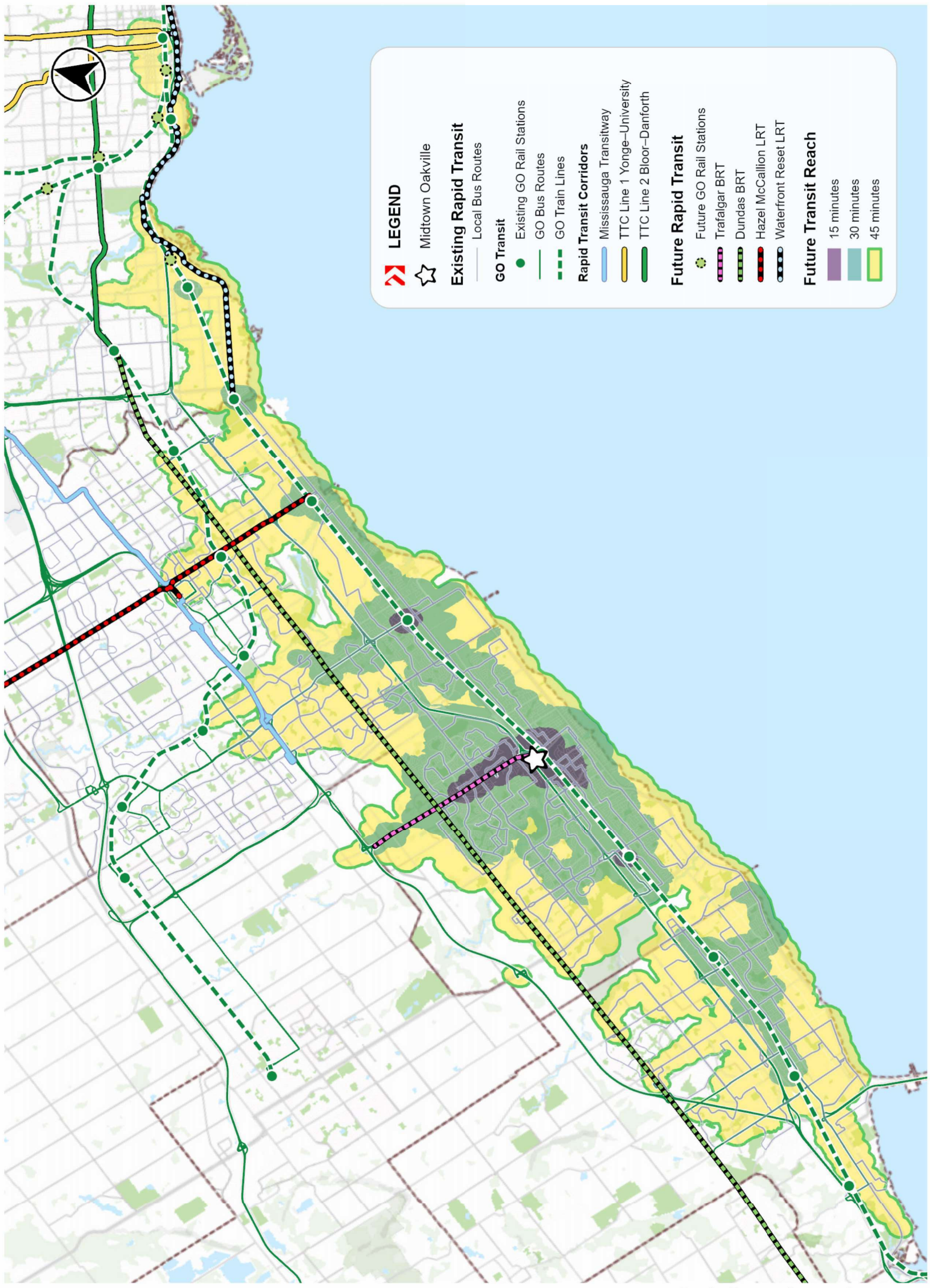


Figure 14 FUTURE TRANSIT REACH (TRAVEL AWAY)

TOC Development - Midtown Oakville

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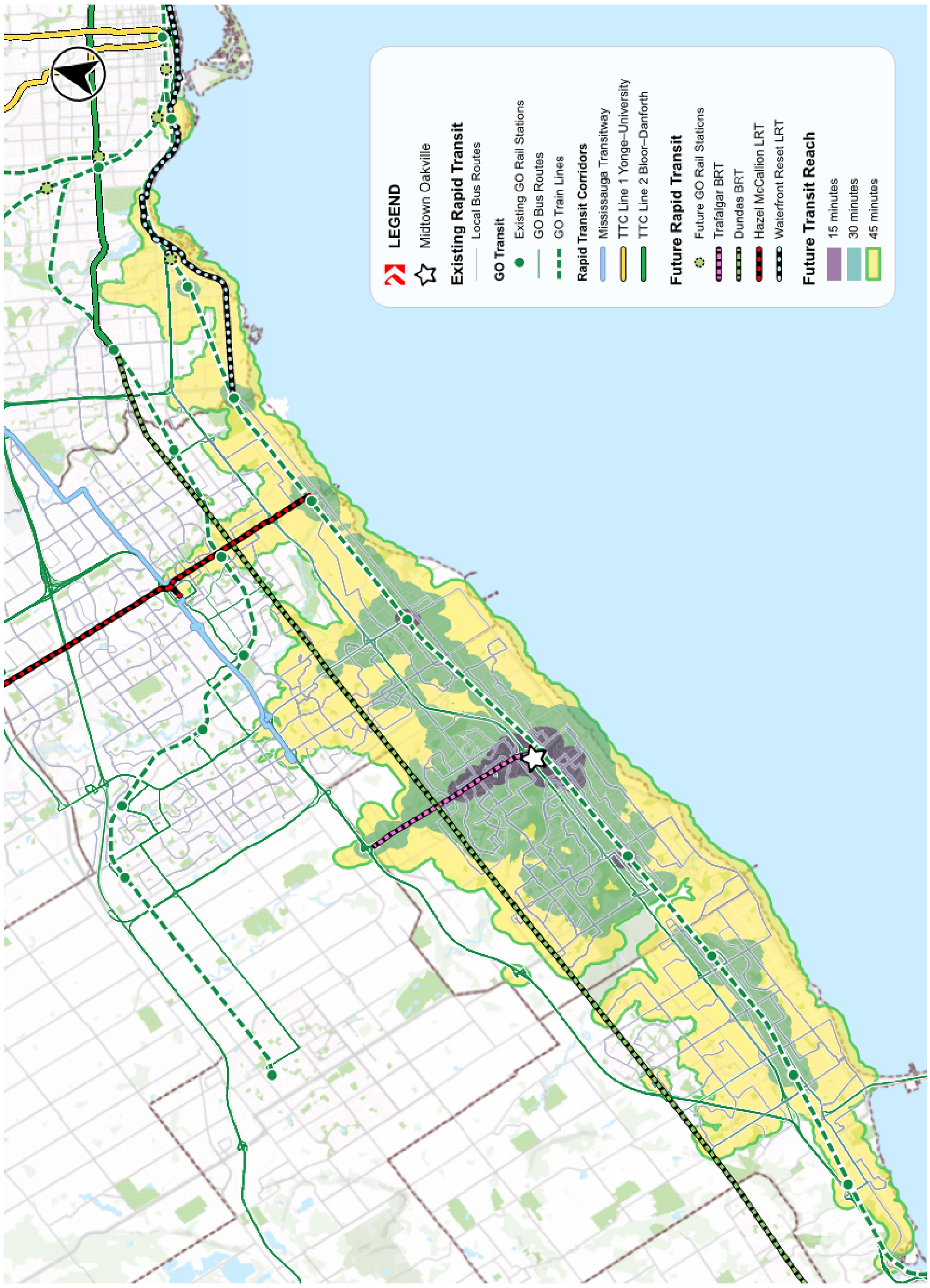
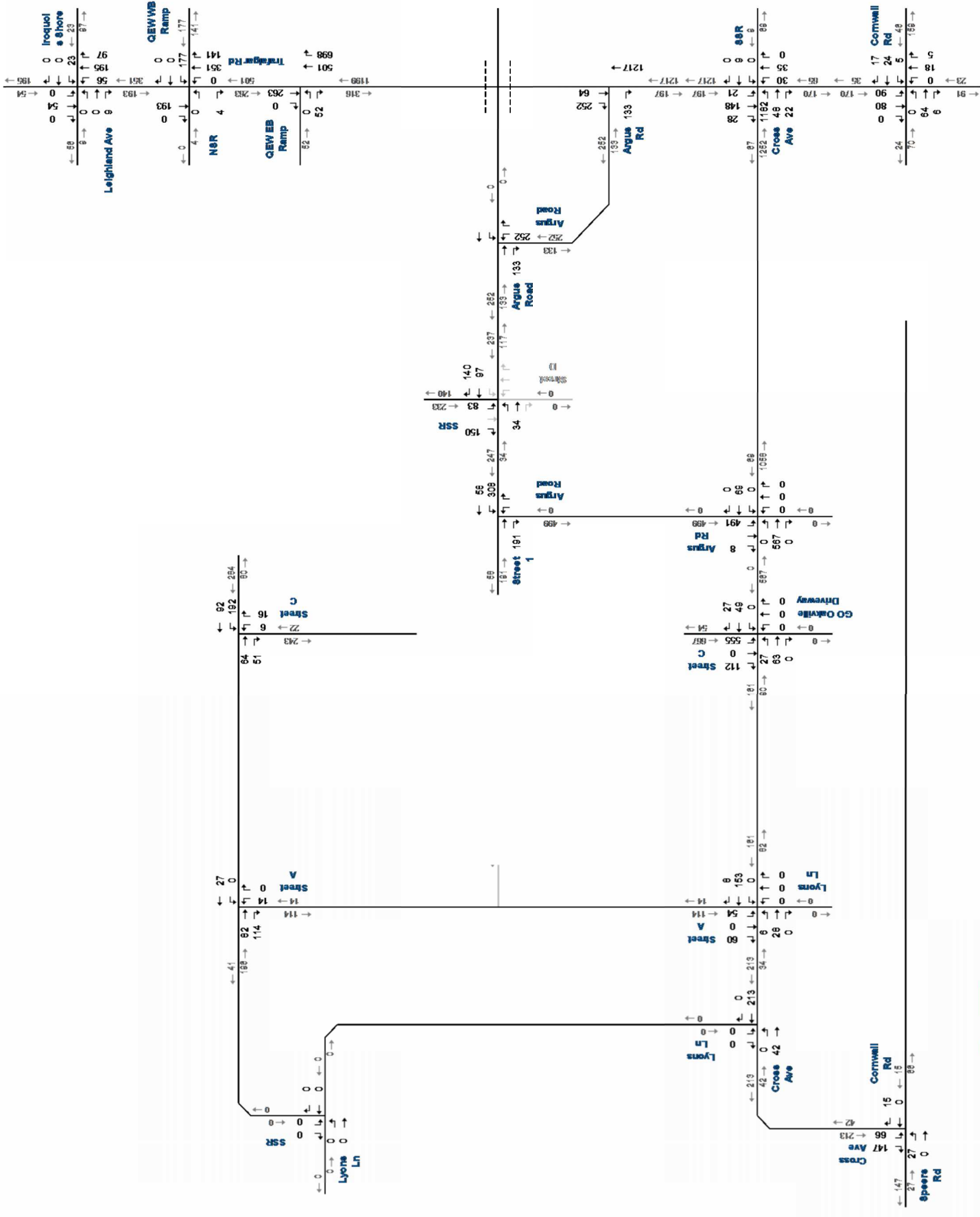


Figure 15 FUTURE TRANSIT REACH (TRAVEL TOWARDS)

TOC Development - Midtown Oakville

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paradigm
TRANSPORTATION SOLUTIONS LIMITED

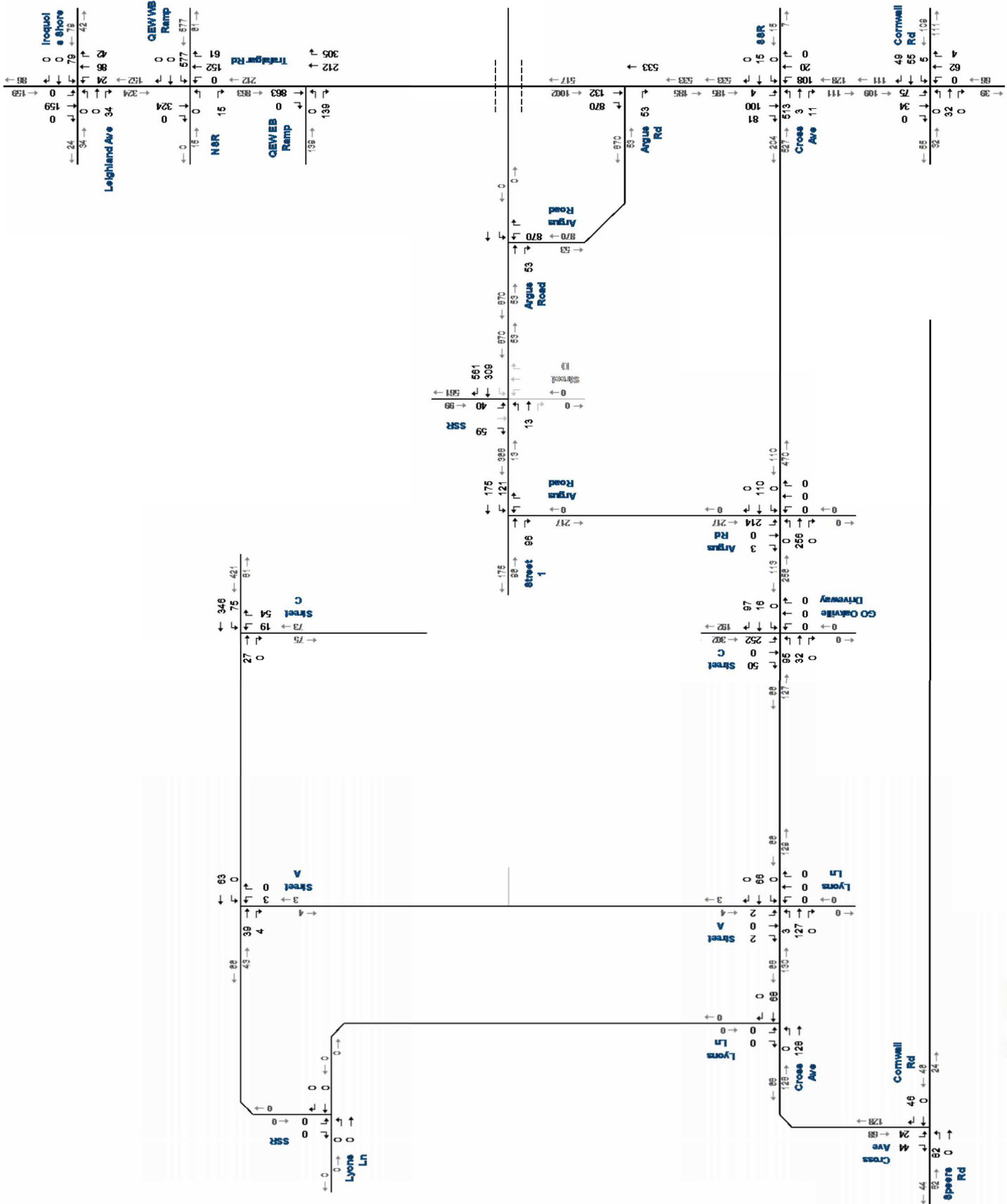


BA Group

TOC Development Generated Traffic Weekday AM Peak Hour

TOC Development - Midtown, Oakville

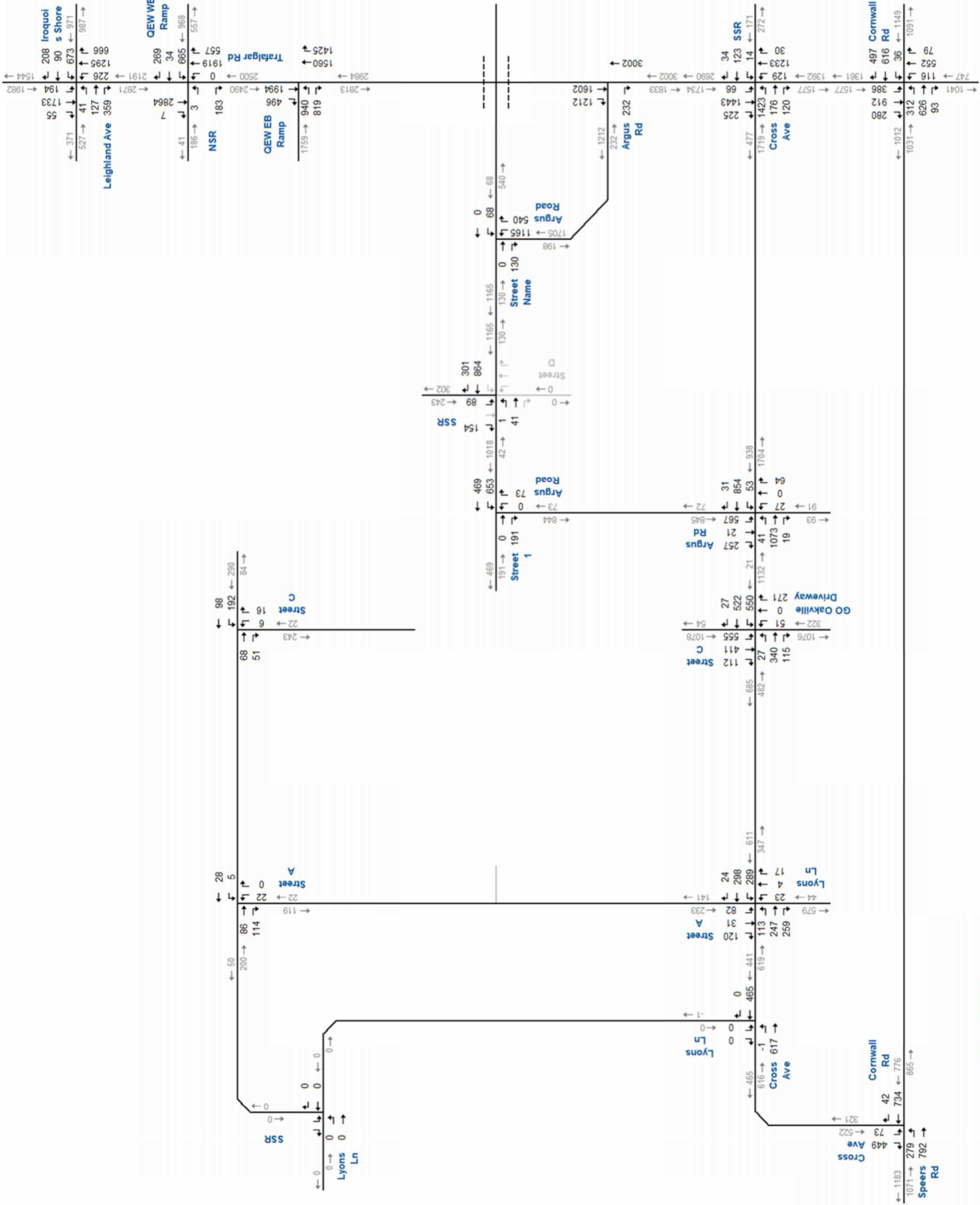
Figure 16



TOC Development Generated Traffic Weekday PM Peak Hour

TOC Development - Midtown, Oakville

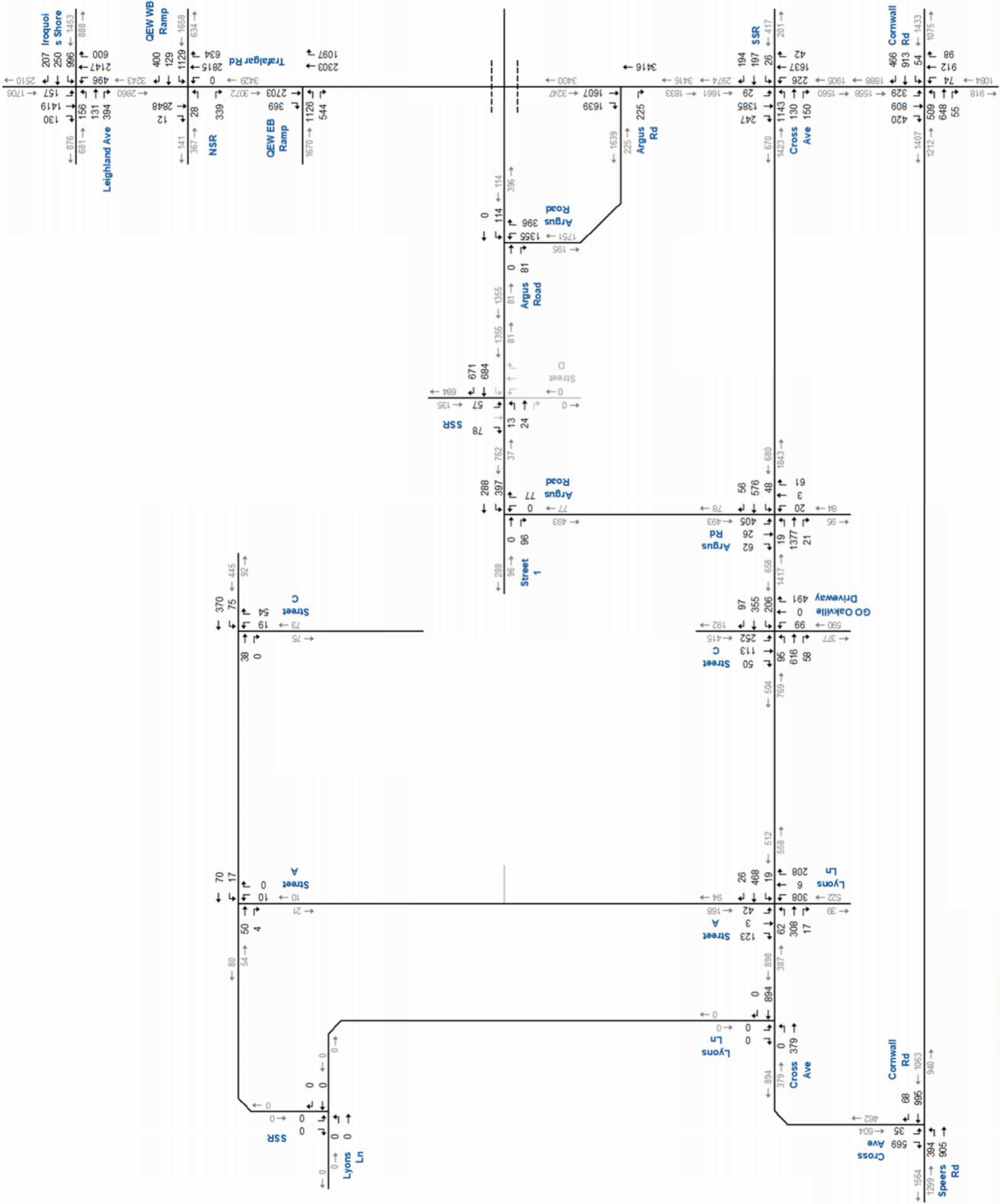
Figure 17



2038 Total Traffic Weekday AM Peak Hour

TOC Development - Midtown, Oakville

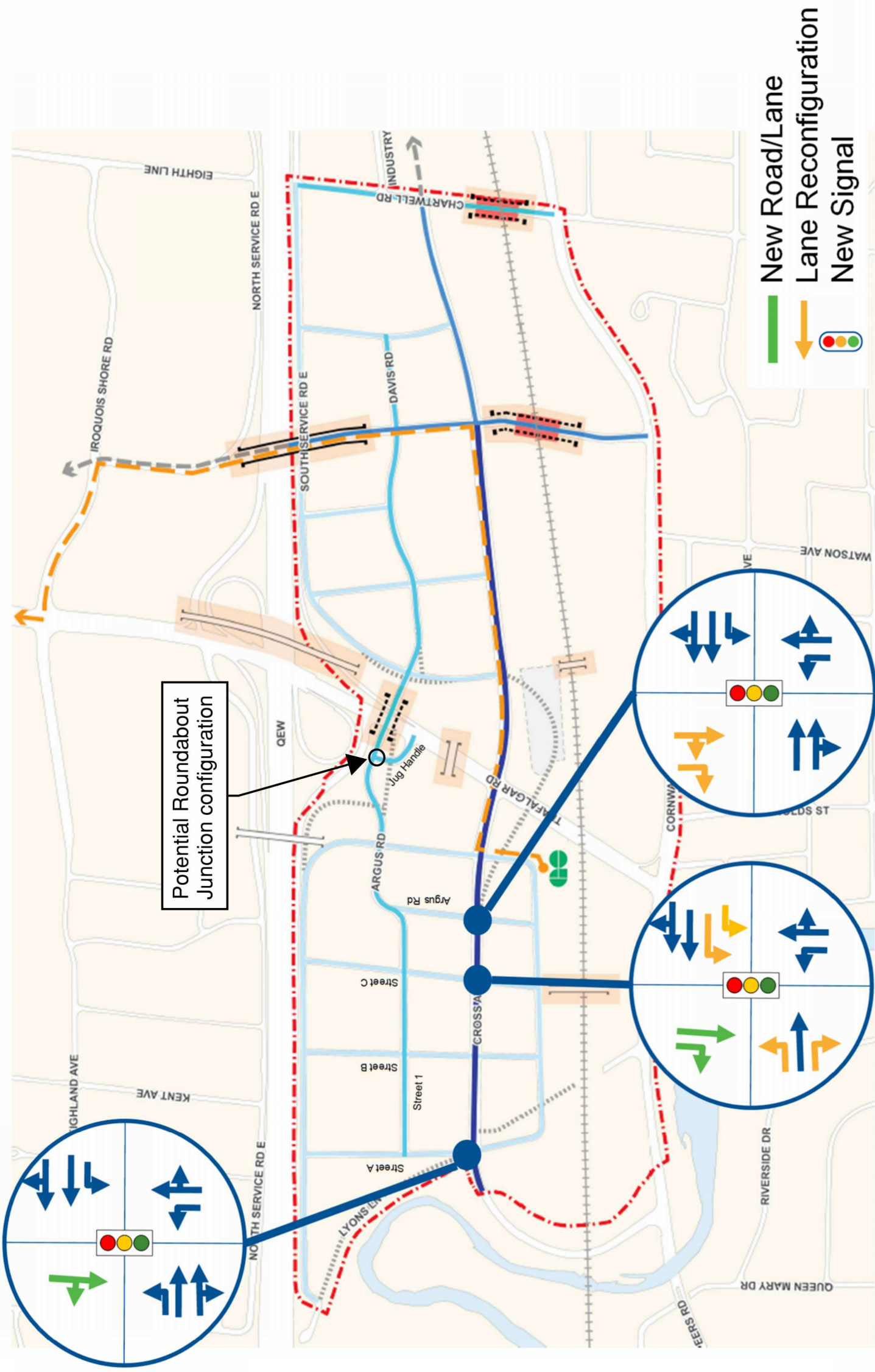
Figure 18



2038 Total Traffic Weekday PM Peak Hour

TOC Development - Midtown, Oakville

Figure 19



Recommended Future Configuration

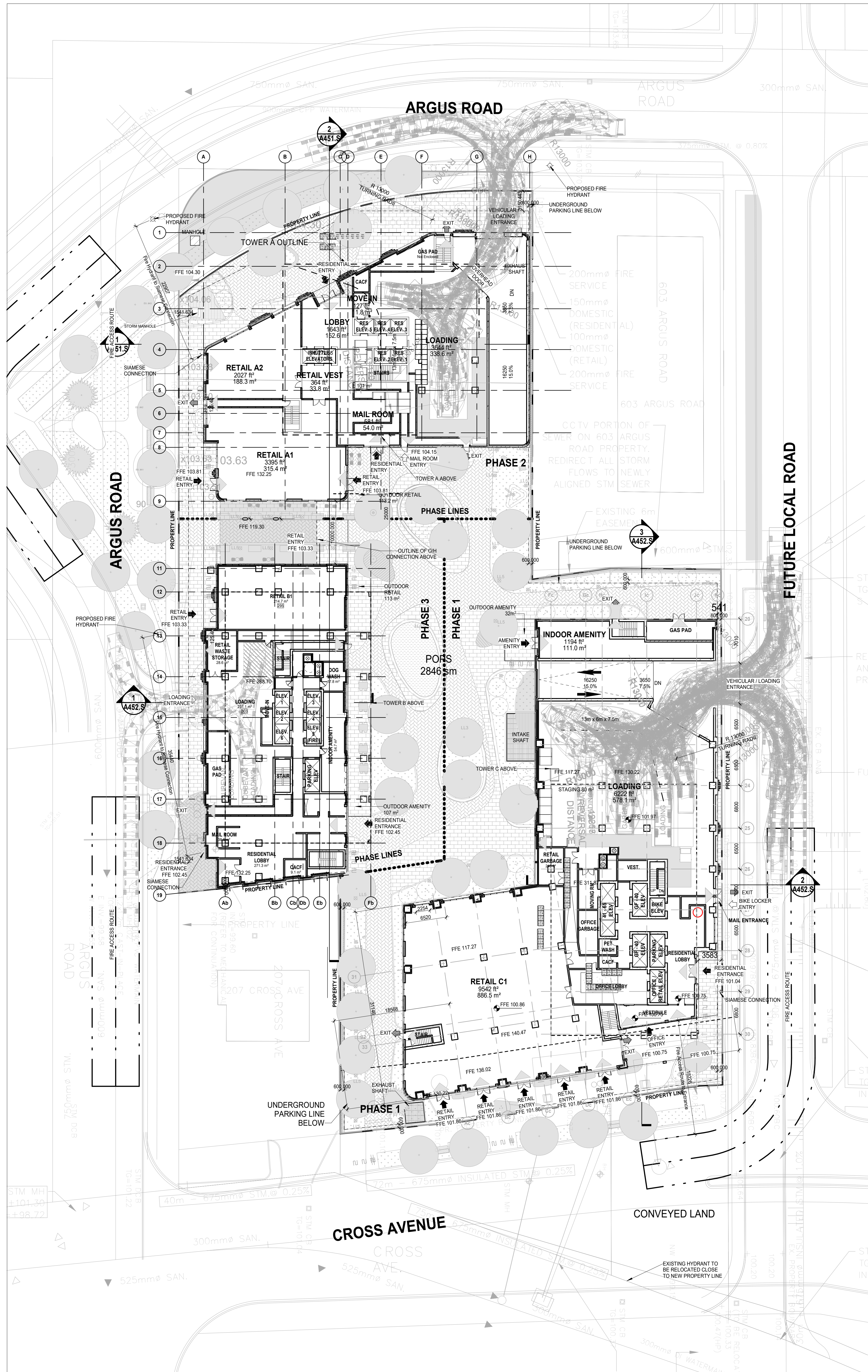
Figure 20

Appendix B:

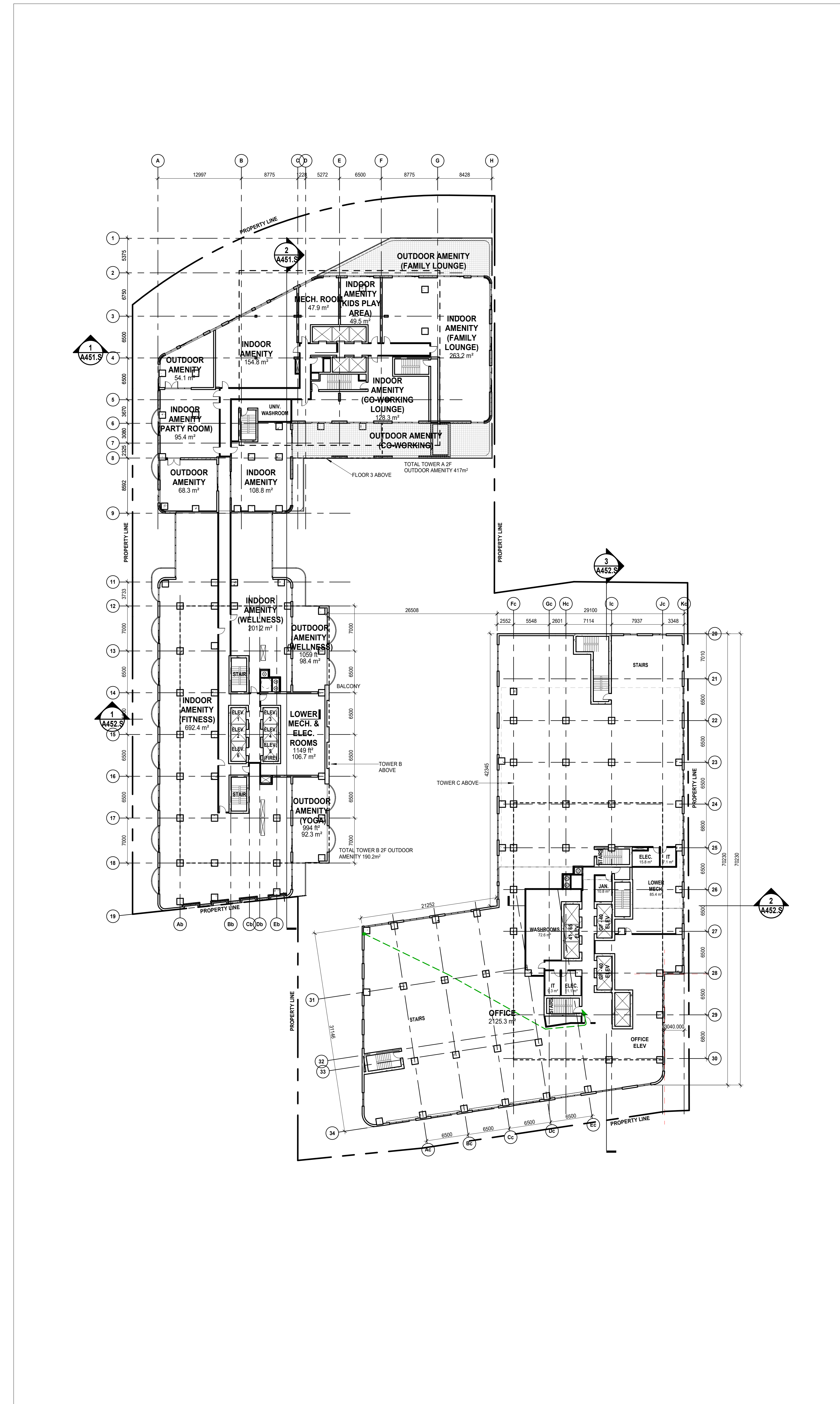
Ground Floor Plans of Oakville TOC Development Sites – Midtown Oakville - Distrikt Developments

- 217 – 227 Cross Avenue and 571 – 587 Argus Road
- 166 South Service Road
- 590 Argus Road
- 157 – 165 Cross Avenue





1 GROUND FLOOR PLAN
SCALE: 1:300



2 SECOND FLOOR PLAN

Date No. Description

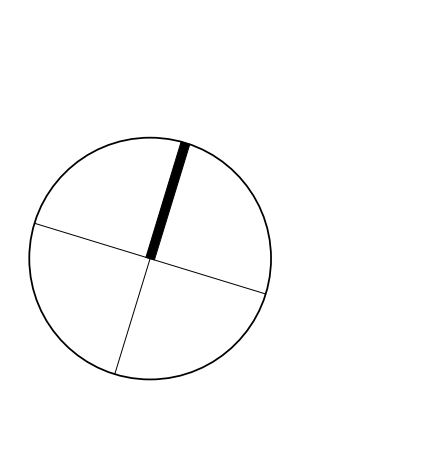
REVISION RECORD

Date	No.	Description
2024-09-20		Issued for TOC Submission
2024-03-28		Issued for ZBA, OPA rev 1 & SPA
2022-04-19		Issued for Rezoning

ISSUE RECORD

Date	No.	Description
2024-09-20		Issued for TOC Submission
2024-03-28		Issued for ZBA, OPA rev 1 & SPA
2022-04-19		Issued for Rezoning

ISSUE RECORD



BDP.
Quadrangle

Quadrangle Architects Limited
The Wood, 8 Spadina Avenue, Suite 2100, Toronto, ON M5V 6S8
+1 416 598 1242 www.bdpquadrangle.com

217-227 Cross Avenue and
571-587 Argus Road

for
Distrikt Developments

19072 1:300 EG KVE
PROJECT SCALE DRAWN REVIEWED

Ground and Second Floor Plans

A201.S

Note: This drawing is the property of the Architect and may not be reproduced or used without the expressed consent of the Architect. The Contractor is responsible for checking and verifying all sizes and dimensions and shall report all discrepancies to the Architect and obtain authorization prior to commencing work.

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DRAWING NOT TO BE SCALED

Contractor must check and verify all dimensions on the job and report any discrepancies to the architect before proceeding with the work.

This drawing shall not be used for construction purposes until signed by the consultant responsible. This drawing, as an instrument of service, is provided by and is the property of Sweeny & Co. Architects.

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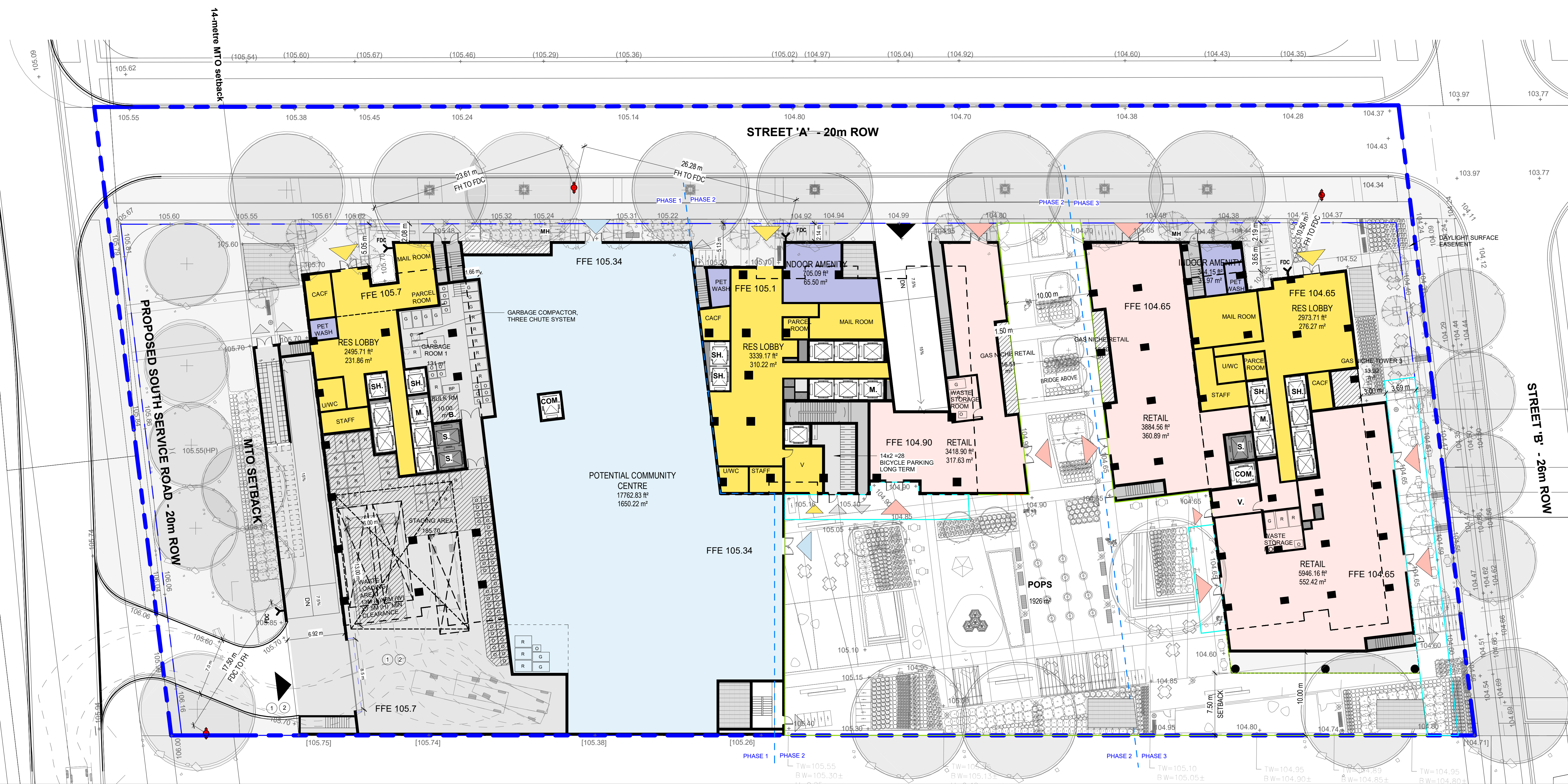
2024-03-26 ISSUED FOR ZBA

2024-09-20 ISSUED FOR TOC

GR PLAN NOTES

Note Number	Note Text
1	WEIGHT CAPACITY OF LOADING AREA (35,000 KG)
2	LOADING AREA HAS +/- 2% GRADE

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SITE SYMBOL LEGEND:

- RESIDENTIAL ENTRANCE (TOWER)
- EXISTING OFFICE ENTRANCES
- SERVICE ENTRANCE
- AMENITY ENTRANCE
- PRIVATE TERRACE
- OUTDOOR AMENITY
- GREEN ROOF
- CANOPY
- +123.48 EX EXISTING GRADES
- +123.45 PROPOSED GRADES
- PROPOSED FIRE HYDRANT
- FIRE DEPARTMENT CONNECTION
- PROPERTY LINE
- E-BIKES
- GARBAGE BIN
- RECYCLING BIN
- ORGANIC BIN
- BULKY WASTE STORAGE (MIN. 10HP)
- JANITOR CLOSET
- COM. COMMERCIAL ELEVATOR
- M. MOVING ELEVATOR / MOVING ROOM
- S. SERVICE ELEVATOR
- SH. SHUTTLE ELEVATOR
- V. VESTIBULE

Sweeny&Co Architects

134 PETER STREET | SUITE 1601
TORONTO, ONTARIO | M5V 2H2 | CANADA
P: 416-971-6252 | F: 416-971-5420
E: info@sweenyandco.com | www.sweenyandco.com

PROJ. NAME
166 South Service Road
South Service Road & Trafalgar

OWNER
TOC Development

DWG TITLE
Level 1 - Ground Floor Plan

DATE: 2024-09-20
SCALE: 1:250
DRAWN: LB
CHECKED: AG
PROJ. No.: 2128

DWG No.
AZ108

ESTABLISHED GRADE INDICATED IS CALCULATED BASED ON DEFINITION FOR "GRADE ESTABLISHED PROVIDED IN TOWN OF OAKVILLE ZONING BY-LAW 2014-04".
 GRADE ESTABLISHED (2021-04) MEANS THE GRADE ELEVATION MEASURED AT:
 A) THE CENTRE POINT OF THE FRONT LOT LINE FOR INTERIOR LOTS AND
 B) THE AVERAGE OF THE CENTRE POINTS OF EACH LOT LINE ADJACENT TO A ROAD FOR CORNER LOTS, THROUGH LOTS, THROUGH CORNER LOTS AND INTERIOR LOTS HAVING MORE THAN ONE SEPARATE FRONT LOT LINE.

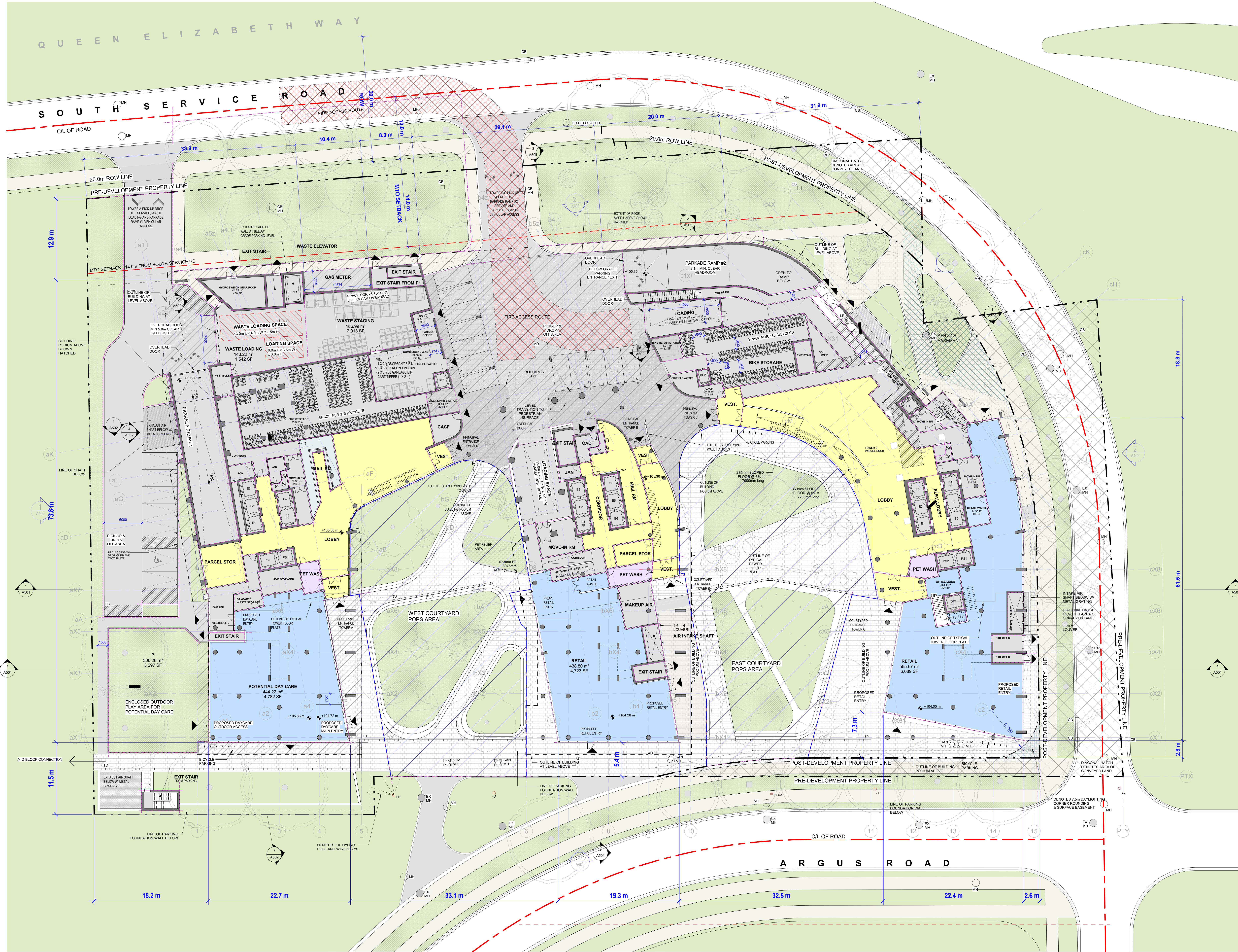
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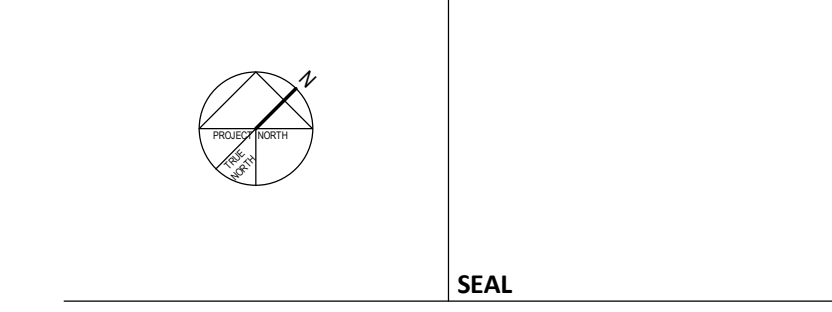
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NO.	DATE	ISSUED FOR:
1	2023-03-20	ISSUED FOR OPAZ/BA
2	2023-08-28	ISSUED FOR COORDINATION PRICING
3	2024-03-20	ISSUED FOR OPAZ/BA - 2nd SUBMISSION
4	2024-09-20	ISSUED FOR TOC DEVELOPMENT



- ARCHITECT
Teepie Architects Inc.
 5 Camden Street, Toronto, ON, Canada, M5V 1V2
 T: 416.598.0554
- STRUCTURAL
 -
- MECHANICAL
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- LANDSCAPE
Public City Architecture Inc.
 11-650 Clifton Street, Winnipeg, MN, R5G 2X6
 T: 204.476.9523
- TRAFFIC
Trafalgar Engineering Limited
 300-45 St. Clair Avenue West, Oakville, ON, L6K 2W6
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 T: 1.800.285.9652
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 1-50 Wingfield Avenue, Toronto, ON, Canada M8B 1P5
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- DISTRIKT OAKVILLE**
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LEVEL 1 PLAN

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22-106 1:200 ARCH E 2024-03-20
 PROJ NO SCALE FORMAT PLOT DATE

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