3085 HURONTARIO STREET
CITY OF MISSISSAUGA

Mixed Use Development
Urban Transportation Considerations

Prepared For: Equity Three Holdings Inc.

September 2023

BA Group

45 St. Clair Avenue West, Suite 300
Toronto, ON M4V 1K9
www.bagroup.com

AUTHORSHIP

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01/09/2023	Version 1	Zoning By-law Amendment – Final Report

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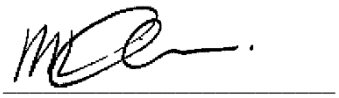

Lead Author

Monica Miranda
Lead Transportation Analyst

REVIEWED BY

Co-Project Manager

Steven Kwan, P.Eng.
Senior Associate

Co-Project Manager

Lauren O'Grady, P.Eng.
Senior Transportation Engineer

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1.0 INTRODUCTION

BA Group is retained by Equity Three Holdings Inc. (the "Owner") to provide transportation advisory services in support of their proposed mixed-use development known as 3085 Hurontario Street (the "site" or "proposed development"). The site is located on the southeast quadrant of the Hurontario Street / Kirwin Avenue intersection in the downtown area of the City of Mississauga. The site is bound by Hurontario Street to the west, Kirwin Avenue to the north, existing residential to the east, and existing commercial to the south. It is noted that the Community Youth development located at 3115 Hurontario Street is not included as part of the proposed development application. The site location is illustrated in **Figure 1**.

1.1 Background

A Official Plan Amendment (OPA) and Zoning By-law Amendment (ZBA) application was initially submitted in July 2021 and the first Transportation Impact Study (TIS) was prepared by CGH Transportation Inc. Since that time, Mattamy Homes has joined the applicant team and BA Group has been retained to prepare a new transportation report as part of the resubmission for the 3085 Hurontario Street ZBA application.

As part of the July 2021 TIS submission, comments have been provided from the City of Mississauga's Transportation (Parking) department dated October 19, 2021, and Transportation and Works (Traffic and Transit) department, dated November 16, 2021. Substantial changes have been made to the proposed development and site plan which are discussed in **Section 3.0** with responses to the comments received provided in **Section 2.0**.

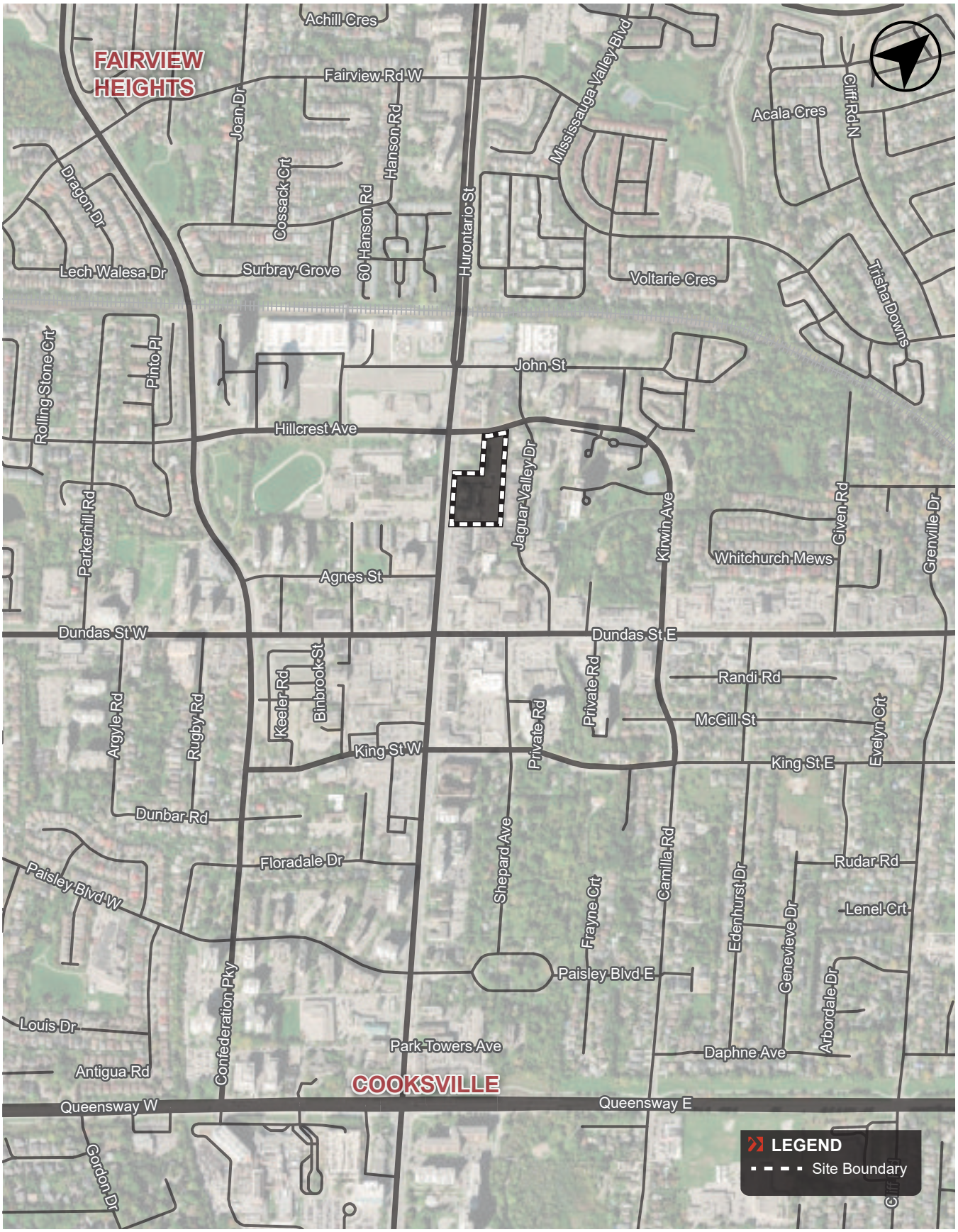
1.2 Existing Site and Surrounding Uses

The site area is located within the Downtown Cooksville Character Area of the City and is in proximity (approximate 350-metre walking distance) to the existing Cooksville GO Station. The existing uses of the site comprise a surface parking lot and commercial and food establishment uses. These uses will be demolished as part of the proposed development. In addition, the surrounding area along the Hurontario Street and Hillcrest Avenue / Kirwin Avenue corridors are predominantly residential and mixed-use, including retail / commercial, educational, recreational, and institutional uses.

1.3 This Study

BA Group has prepared the following report based upon the following study scope:

- Review of the proposed development program and site plan;
- Documentation of existing transportation infrastructure and future improvements;
- Review of applicable transportation policy directives;
- Review of applicable bicycle parking and loading requirements;
- Outline of the proposed Transportation Demand Management (TDM) Plan;
- Multimodal travel demand forecasts for the site's proposed development programme;
- An analysis of traffic operations for the weekday morning and afternoon peak hour existing conditions, future background (without the proposed development), and future total (with the proposed development) scenarios within the proximate study area road network;
- Outline of specific road improvements, if necessary, to mitigate site traffic impacts; and
- A review of the site-generated transit trips and their relative impact on transit capacity.



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Aerial maps provided courtesy of: Esri, DigitalGlobe, GeoEye, Earthstar Geographies, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, the GIS User Community and/or Google Earth/Maps.

FIGURE 1 SITE LOCATION

2.0 RESPONSE TO COMMENTS

Comments were provided from the City's Transportation (Parking) department dated October 19, 2021, and Transportation and Works (Traffic and Transit) department, dated November 16, 2021. In summary, the comments received were in relation to the following key aspects:

- Vehicle parking rates and supply;
- Existing vehicle traffic data;
- Future vehicle access restrictions;
- Bicycle parking rates;
- New roadway / site access design and design vehicle manoeuvring;
- Response to community impacts and feedback; and
- Future transit impacts.

2.1 Transportation – Parking

Comment 80

It appears that the submitted draft Zoning By-law Amendment states rates lower than those in the TIS. Staff recommend that the applicant address parking discrepancies between the site plan statistics, dated June 30, 2021, the TIS and the submitted draft Zoning By-law Amendment to accurately state the proposed parking rates for all uses.

Response:

All parking-related matters are to be discussed under a separate cover prepared by another transportation consultant.

Comment 81

Staff is seeking clarification on the non-residential mixed use component to identity all the proposed non-residential uses and determine applicable parking regulations (e.g. retail, office, medical office, financial institution, etc)

Response:

All parking-related matters are to be discussed under a separate cover prepared by another transportation consultant.

Comment 82

Staff agrees that parking reductions are appropriate for the proposed development given its location along the Hurontario LRT in Downtown Cooksville. However, relying solely on the City's proposed draft Parking Regulations from May 14, 2021, is inappropriate and premature because the parking rates are not approved and subject to further changes. Applications are evaluated against the current Zoning By-law. Furthermore, 78 Park Street is not an appropriate comparison. Staff reviewed other development applications in Downtown Cooksville and note that staff supported the interim Hurontario LRT rates for residential and visitor parking. Overall, the submitted information is not satisfactory to justify the requested parking reductions, however, the following is recommended:

a) Based on previously supported applications with similar context and connectivity, staff can support the interim LRT parking rates as follows: Minimum number of resident parking spaces per studio condominium apartment dwelling unit: 0.8; Minimum number of resident parking spaces per one-bedroom condominium apartment dwelling unit: 0.9; Minimum number of resident parking spaces per two-bedroom condominium apartment dwelling unit: 1.0; Minimum number of visitor parking spaces per condominium apartment dwelling unit: 0.15; For the visitor component, staff can support a shared parking arrangement based on the calculation of the required visitor and non-residential parking spaces as per Table 3.1.2.1 of the Zoning By-law OR,

b) In absence of satisfactory justification, the applicant can undertake a satisfactory Parking Utilization Study in accordance with the City's parking Terms of Reference and consult with staff on appropriate survey methodology prior to conducting the surveys.

Response:

All parking-related matters are to be discussed under a separate cover prepared by another transportation consultant.

2.2 Transportation and Works – Traffic and Transit

Comment 168

A Transportation Impact Study prepared by CGH Transportation dated July 2021 was submitted in support of the proposed development. Based on the information provided to date, staff provide the following comments:

A. EXISTING CONDITIONS

i. Road Network. Some of the designated ROW widths indicated in Section 2.1 are incorrect. Please review the latest version of the Official Plan and revise accordingly.

Response:

Please see **Section 5.1** for the existing conditions of the area road network.

ii. Traffic Data – The existing traffic volumes must be grown to existing 2021 levels. Please obtain additional historical traffic data counts for the study area intersections and utilize regression analysis to determine the appropriate growth rates. The report must thoroughly justify all proposed growth rates and the methodology utilized to calculate them. Furthermore, all background work to calculate the growth rates must be appended to the report in a format that is easily verifiable to the reviewer. Volumes should continue to be balanced to the higher values. Please also justify the methodology used for determining the estimated John Street extension traffic volumes within the report.

Response:

Please see **Section 13.1** for the methodologies implemented to forecast baseline existing traffic volumes.

B. FUTURE BACKGROUND CONDITIONS

i. Corridor Growth Rates – Provide an appended traffic volume diagrams with growth rates applied only for verification purposes.

Response:

Corridor growth rates applied within the study are summarized within **Table 16**. Corridor growth volumes are illustrated in Error! Reference source not found..

ii. Capacity Analysis Signal timings should be optimized for future background conditions.

Response:

Capacity analysis signal timings have been optimized for future background conditions matching future total timing splits.

iii. Background Developments – 45 Agnes Street (OZ 13-17) and 3016, 3020, 3026 & 3032 Kirwin Avenue & 3031 Little John Lane (OZ/OPA 21-5) must be considered as background developments.

Response:

The listed developments have been considered within the traffic analysis. **Section 13.2.1** outlines all background developments that have been considered in this new transportation report.

C. SITE TRAFFIC

i. Modal Split – As a conservative approach please assume that the modal split for the horizon year is consistent with 2016 TTS data. Please also append all raw TTS modal split data.

Response:

Modal splits have been adjusted to reflect the shift in travel modes anticipated by the future development of the Hurontario LRT under construction. Please see **Section 12.1.2** and **Section 12.2.2** for further details.

ii. Trip Distribution and Assignment – The trip distribution/assignment should be further broken down by AM and PM Peak hours and Inbound and Outbound. Were existing travel patterns taken into consideration when determining the trip distribution and assignment. If not, why? Please append all raw TTS trip distribution data.

Response:

2016 Transportation Tomorrow Survey (TTS) was used to distribute and assign residential and retail traffic on the network. Please see **Section 13.3.4** for further details.

D. DEVELOPMENT DESIGN

i. Development Access – According to the TAC manual, clear throat length requirement are also based on road classifications. Further to that, generally no parking spaces or intersecting drive aisles are permitted with clear throat lengths. Furthermore, as per the ToR, a complete site access review is required. Review corner clearances, sightline distances, proximity to utilities and other driveways/roads, and alignment with opposing accesses in accordance to TAC standards. Revise the report accordingly.

Response:

As part of this new transportation report, a site access review has been completed based on the revised proposal. Please see **Section 11.0** for further details.

ii. Transportation Demand Management – All proposed TDM measures must be confirmed through the OZ/OPA application process rather than deferred to SPA. Please confirm all TDM measures that the Owner is proposing for this site.

Response:

Upon revising the proposal, specific TDM measures (e.g., reduced parking unbundled parking, bike repair stations, pick-up / drop-off facility, and pre-loaded PRESTO passes for new unit owners) have been contemplated in discussion with the applicant. The TDM measures proposed as part of the revised proposal is outlined in **Section 6.0** of this new transportation report.

E. FUTURE TOTAL CONDITIONS

i. Capacity Analysis – Signal timings should be optimized for future total conditions.

Response:

Signal timings were optimized for future total conditions.

ii. Please provide further technical justification as to why it would or wouldn't be appropriate for the proposed development to proceed.

Response:

Site traffic is expected to be readily accommodated on the area street network given the transportation design of the proposed development and signal timing optimization. Please see **Section 14.0** for further details.

iii. The future total conditions should assess the cumulative overall impact on the site based on the difference between the currently permitted zoning/densities vs. proposed zoning/densities.

Response:

A comparison of the as-of-right permitted and proposed zoning / densities indicate that proposed development would generate 145 and 110 less trips less in the weekday morning and afternoon peak hours, respectively, than the maximum as-of-right zoning permission. Please see **Section 16.0** for further details.

F. CONCLUSION/RECOMMENDATIONS
i. A Recommendations Section is required to be included complete with recommendations on on-site/off-site roadway improvements, site access, site circulation, and TDM measures are to be made. Refer to Traffic Comment #204 for further TIS comments.

Response:

Please see **Section 18.0** for the comprehensive set of conclusions and recommendations of the various analyses / assessments based upon the revised proposal.

Comment 194

[FUTURE ACCESS RESTRICTIONS] The Owner is advised that the access to Hurontario Street will be restricted to right-in/right-out movements only, due to the future LRT.

Response: The future east-west municipal road intersection with Hurontario Street is proposed as being restricted to right-turns only.

Comment 195

[CYCLING FACILITIES] The Owner will be required to provide accessible and secure short term (outdoor) and long term (indoor) bicycle storage facilities on site. The Site Plan shall be revised to identify the cycling facility locations and to specify the facility detail(s), including quantity of spaces proposed for each.

The following rates are to be used:

(a) Apartment City Centre. A minimum of 0.80 long term spaces and 1.10 (6 spaces min.) short term spaces per residential unit.

(b) Retail (Per 100 sq.m. GFA of retail area) Mississauga. A minimum of 0.10 long term spaces and 0.20 short term spaces.

Response: In accordance with the City's recently adopted Parking Regulations Study (now consolidated in Comprehensive Zoning By-law 0225-2007), the revised proposal has been planned and designed to adopt appropriate bicycle parking standards meeting the City's updated supply requirements. Alternative bicycle parking size / dimensions have been provided while maintaining the required supply for all uses. Please see **Section 7.0** for further details.

Comment 204

G. ADDITIONAL COMMENTS
i. The turning template drawings indicate the TAC-LSU design vehicle striking columns and walls as it maneuvers through the parking area. Please revise the site design accordingly. As revisions to the site design/layout is required, please update the turning movement diagrams in the TIS accordingly. Also, please provide swept-path analyses for a fire truck.

Response: As part of the revised proposal, the new transportation study prepares vehicle manoeuvring diagrams based on the types of loading activity vehicles expected to be utilized at the site. Please see **Appendix D** for further details.

ii. Community Impacts – The TIS shall include a section in the report to address Community Impacts. The section shall include summary statements outlining the resulting traffic increases to the critical streets, movements, and intersections. Comments or concerns from the community through future public meetings and engagements that are related to traffic shall also be addressed in this section.

Response: The new transportation report concludes that the development-generated traffic can be accommodated on the road network with the proposed transportation improvements. Responses are provided to the comments received at the public meeting. Please see **Section 14.4** for further details.

Comment 205

[SITE ACCESS]

(a) The proposed Kirwin Avenue access shall be relocated to align with the opposing access.

Response: As part of the revised proposal, the proposed access alignment, although not aligned with the opposing access on Kirwin Avenue, is appropriate and implements the evolving policy objectives for the Downtown Cooksville community. Please see **Section 10.0** for further details.

(b) The Owner shall ensure the proposed access provides sufficient sight lines such that views are not obstructed at the intersections (street trees, etc.).

Response: As part of the revised proposal, the proposed access sightlines are appropriate. Please see **Section 11.0** for further details.

3.0 PROPOSED REDEVELOPMENT

3.1 Development Uses

The proposed development includes four (4) mixed-use buildings comprising the following uses:

- **Building 1:** 430 residential units and 686 square metres of retail GFA
- **Building 2:** 501 residential units and 474 square metres of retail GFA
- **Building 3:** 355 residential units
- **Building 4**: 372 residential units

Overall, the updated development plan includes 1,658 residential units (all market condominium) and 1,160 square metres of retail GFA. In comparison to the initial July 2021 submission, the number of residential units has increased substantially with a modest increase in retail GFA. The updated development proposal is outlined in **Table 1** and illustrated in **Figure 2**. Reduced scale architectural plans are provided in **Appendix B**.

Table 1 Development Proposal

		Initial ZBA Submission (July 2021)[1]	ZBA Resubmission #1 (August 2023)[2]	Difference
Land Uses	Residential	0 Studio Units 21 1-Bedroom Units 497 2-Bedroom Units 563 3-Bedroom Unit 1,081 Total Units	46 Studio Units 1,054 1-Bedroom Units 503 2-Bedroom Units 55 3-Bedroom Unit 1,658 Total Units	*+46 Studio Units* *+1,033 1-Bedroom Units* *+6 2-Bedroom Units* *-508 3-Bedroom Unit* *+577 Total Units*
	Retail	1,026 square metres GFA	1,160 square metres GFA	*+134 square metres GFA*
Transportation Elements	Vehicle Parking Supply	1,038 spaces (865 residential and 162 shared residential visitor / non-residential vehicle spaces)	*All parking supply matters are to be discussed under separate cover and prepared by another transportation consultant.*	
	Bicycle Parking Supply	797 spaces (714 long-term and 83 short-term bicycle spaces)	1,303 spaces (1,217 long-term and 86 short-term bicycle spaces)	*+506 spaces* *(+503 long-term and +3 short-term bicycle spaces)*
	Loading Supply	4 loading spaces	7 loading spaces	*+3 loading spaces*
	Site Access	Via driveways off Hurontario Street and Kirwin Avenue	Via driveways off new east-west municipal road and Kirwin Avenue	*New east-west municipal road provides connections to underground parking and north-south private road*
	Vehicle Parking Access	Via ramp off new Private Road at Building 2	Via one ramp off future Public Road at Building 3 and one off new east-west municipal road at Building 1	*+1 access off new east-west municipal road and +1 access off new north-south private road*
	Bicycle Parking Access	Via elevator in P1-P4 levels (long-term) and at-grade and P1 level (short-term)	Via elevator at lobby (long-term and short term) and at-grade (short-term)	*All short-term parking provided at-grade*
	Loading Access	Via driveway off new north-south private road at Buildings 2 and 3	Via driveway off new north-south private road at Building 1 and via ramp off new municipal road at Building 3	*+1 access off new east-west municipal road and +1 access off new north-south private road*

Notes:
1. Site statistics provided by Diamond Schmitt Architects received on July 19, 2021.
2. Site statistics provided by Diamond Schmitt Architects received on July 17, 2023.

3.2 Transportation Improvements

3.2.1 New East-West Municipal Road

As per the City's Official Plan and in discussions with the City, City staff identified the desire to see a new east-west municipal road (the "Municipal Road") as part of the proposed development which would connect to Hurontario Street and Jaguar Valley Drive. To satisfy this request, the site plan now identifies a 14.2-metre right-of-way (ROW) along the south edge of the property. This ROW will allow for a 6.6-metre pavement width, 5.6-metre boulevard on the north side (including a 2.2-metre sidewalk) and 1.5-metre boulevard on the south side for grading purposes. When the commercial property to the south develops, it is expected that they would make up the remaining boulevard including sidewalk on the south side of the Municipal Road.

The site does not have frontage on Jaguar Valley Drive. Consequently, in the interim, the Municipal Road will terminate as a dead-end at the east edge of the property. To facilitate a turnaround for City vehicles including snowplows, a custom-designed turnaround facility (mini-hammerhead) has been provided. This turnaround facility allows for the development of an efficient and urban built form that is compatible with both the interim and ultimate road condition. It is expected that when the properties immediately east of the site fronting onto Jaguar Valley Drive redevelop, the Municipal Road will be extended to Jaguar Valley Drive.

It should be noted that the commercial property to the south has a driveway at its northerly edge adjacent to the proposed development site. To satisfy the City's request to provide the new Municipal Road at the location shown, this will require the closure of the south commercial property northerly driveway to avoid a side-by-each driveway condition. The commercial property to the south will continue to have a driveway to Hurontario Street and means of providing alternative access such as a potential connection to the Municipal Road will be explored.

Further details on the design of the new Municipal Road are provided in **Section 10.0**.

3.2.2 New North-South Private Road

As part of the initial July 2021 submission, a "L" shaped private road was proposed, connecting Hurontario Street in the west to Kirwin Avenue in the north. The new connection also provided access to the parking and loading facilities between Buildings 2 and 3 of the previous site plan.

As part of the revised proposal, a new north-south private road (the "Private Road") is proposed, extending between the Municipal Road in the south and Kirwin Avenue in the north. The Private Road provides two travel lanes (one in each direction), layby parking on both sides, and landscaping with alternating flush and mountable curbs along the entire extent of the roadway. The roadway design also resembles a winding pathway, which generally acts as a natural traffic calming measure to enhance safety for pedestrians and cyclists. Lastly, the Private Road provides access to one of the underground parking ramps and the at-grade loading area located at Building 1.

Further details on the design of the new Private Road are provided in **Section 10.0**.

3.2.3 Public Realm (Active Transportation Facilities)

As part of the initial July 2021 submission, the pedestrian and cycling amenities and facilities included sidewalks, open areas (public plaza), and landscaping between the various buildings. In addition, bicycle parking was proposed on-site.

As part of the revised proposal, the site is expected to further expand and improve the quality of the public realm with redesigned Private Road and Municipal Road connections on-site. The overall pedestrian facilities and amenities at-grade include widened sidewalks along the internal roads, landscaping, mountable and flushed curbs, bicycle parking and repair stations, and open spaces (village plaza and park) between all buildings to improve the permeability and movement of people and cyclists on-site.

Further details on the pedestrian realm of the site and the bicycle parking strategy are provided in **Section 5.3.1** and **Section 7.0**, respectively.

3.2.4 Pick-up / Drop-off Facilities

As part of the initial July 2021 submission, pick-up / drop-off (PUDO) facilities, in the form of a loop and layby parking, were proposed in the centre of the site and along the north-south portion of the private road to serve the new Buildings.

As part of the revised proposal, PUDO areas will be provided as on-street layby facilities along both sides of the new north-south Private Road. The laybys are in appropriate areas that are easily accessible to all buildings. Two PUDO spaces will also be provided at-grade adjacent to the loading area of Building 1. These PUDO areas can accommodate a total of approximately 12 vehicles.

Further details on the PUDO strategy are provided in **Section 9.0**.

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Aerial maps provided courtesy of: Esri, DigitalGlobe, GeoEye, Earthstar Geographies, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, the GIS User Community and/or Google Earth/Maps.

FIGURE 2 SITE PLAN

4.0 POLICY AND PLANNING CONTEXT

The transportation-related policies and plans that directly or indirectly apply to the site are described below.

4.1 Provincial and Regional Policies

4.1.1 Provincial Policy Statement

On a general basis, the *Provincial Policy Statement (2020)* encourages the provision of transportation demand management (TDM) strategies within new developments to increase the efficiency of existing and planned transportation infrastructure. It also encourages transit-oriented development and higher density that adopts a mix of uses to promote non-auto travel. This suggests limiting the number of vehicular site trips, partially through reduced parking as proposed, which will support local transit investments within the site area.

4.1.2 Bill 112: Hazel McCallion Act (Region of Peel Dissolution)

Announced in May 2023, the province established *Bill 112* (also known as the *Hazel McCallion Act / Peel Dissolution*), stating that the Region of Peel be dissolved and that the City of Mississauga, City of Brampton, and Town of Caledon continue as single-tier municipalities. Bill 112 was enacted / passed in June 2023 and is expected to come into effect starting January 1, 2025. Through the Hazel McCallion Act, municipalities are provided with the authority and resources necessary to address population growth and establish housing options. The Transition Board will oversee the orderly conclusion of the financial operations of Peel Region and supervise and monitor the actions, duties, and decisions delegated to the Committees and staff of the Region, City of Mississauga, City of Brampton, and Town of Caledon.

The transition phase leading up to January 2025 aims to provide a seamless delivery of essential services and facilitate a smooth transfer of assets and responsibilities. Specifically, Mississauga Staff and Council will collaborate with the Transition Board to facilitate this process, delivering support and resources to ensure a seamless transition to the newly established single-tier municipality. The transition phase will also evaluate the long-term economic sustainability of each municipality, which is expected to bring several positive implications for the future growth of City of Mississauga.

4.1.3 Places to Grow: Growth Plan for the Greater Golden Horseshoe

Places to Grow: Growth Plan for the Greater Golden Horseshoe (Growth Plan for the GGH) outlines the importance of reducing reliance upon the automobile and promoting transit and active transportation. Planning along priority transit corridors and major transit stations, such as the Cooksville GO Station, shall be prioritized and planned for minimum density targets and a mix of uses in order to maximize the number of potential transit users within walking distance of the Station.

In early 2022, the Ministry of Transportation and its partners developed a *Transportation Plan for the GGH* as a 30-year plan for improved mobility across the Province of Ontario. As the Greater Golden Horseshoe (GGH) continues to expand, the Region will require improvements to its transportation systems to accommodate increased demand. The Plan aims to address the impact of predicted growth through a well-connected transportation system that provides safe, efficient, and convenient options for users. The 2051 vision of the Plan includes focuses on fighting gridlock and improving road performance by getting people moving on a connected transit system, supporting a more sustainable and resilient region, and efficiently moving goods.

Within the Plan, an improved transit network is a key focus. To achieve a more sustainable and resilient region, it is necessary to motivate people to use the transit system by improving transit connectivity. Expanding service across the region would allow for greater inter-regional travel and connections to destinations that might have previously been difficult to reach by transit alone. As such, the Plan aims to expand routes and provide more frequent services and connections to enhance the network. In addition to expanding bus service, higher-order transit services, such as the Hurontario LRT, are being planned or underway.

4.1.4 Metrolinx: The Big Move, Mobility Hub Guidelines, and Regional Transportation Master Plan

Building upon the successes of *The Big Move (2008)*, the *Metrolinx 2041 Regional Transportation Master Plan (RTP)* supports intensification in accordance with sustainable transportation objectives. Additional rapid transit options, greater pedestrian connections, and mixed-use density should be considered for the City of Mississauga and the surrounding region. Emerging mobility hubs, such as the area surrounding the Cooksville GO Station, should adopt such elements and minimize parking in areas that may be more efficiently utilized by more sustainable infrastructure.

The Cooksville GO Station area is recognized as a "mobility hub" as per Metrolinx's *Mobility Hub Guidelines* and RTP. The site aims to support Cooksville GO through reduced parking.

4.1.5 Region of Peel Official Plan (2022) and Vision Zero (2018-2022)

The *Region of Peel Official Plan (RPOP)* was adopted by Council in April 2022, which the site must conform to as one of three (3) lower-tier municipalities that make up this jurisdiction. Originally adopted by Council in 1996, the RPOP is a long-term policy framework that is periodically updated to manage and plan the Region's growth and development.

The RPOP supports intensification and the development of well-designed, transit-supportive, complete communities, which offer multiple transportation choices and accommodate an appropriate combination of mixed uses. Intensification and development within Urban Growth Centres, designated Intensification Corridors, nodes, and Major Transit Station Areas (MTSAs) are emphasized. Based on the site's proximity to the City Centre, it is also considered one of the City's designated Urban Growth Centres. Given its location along Hurontario Street as a Regional Intensification Corridor, it offers strong links between Mississauga and Brampton's Urban Growth Centres (e.g. Square One and Shoppers World). The Plan encourages these areas to support the development of compact, pedestrian-friendly, and transit-supportive urban forms which provide convenient access to higher-order transit, such as the Hurontario LRT, which is currently under construction adjacent to the site. Given the site's proximity to Hurontario LRT, it is subject to impacts as a designated MTSA. Developments within these areas must possess an interconnected and multimodal street pattern that encourages walking, cycling, and transit as opposed to personal vehicles.

Notably, the RPOP is highly supportive of active modes of transportation (e.g. non-automobile). By 2041, the Region hopes to achieve a 50% sustainable modal share split by providing sustainable transportation infrastructure and promoting its use. Ensuring that communities are developed and enhanced to support active transportation connections to higher-order transit is essential. In addition to the Hurontario LRT project that is currently underway, Dundas Street has been designated as a planned Bus Rapid Transit (BRT) corridor, which will support this goal.

Additionally, the RPOP encourages local municipalities, relevant agencies, and the private sector to develop parking management strategies that make more efficient use of parking resources and encourage the use of sustainable transportation modes. Working with municipalities to develop Transportation Demand Programs is a key aspect of this. Measures such as reducing parking standards and redeveloping existing surface parking lots, particularly within Major Transit Station Areas, to support intensification are highly encouraged.

4.1.5.1 VISION ZERO

Guided by the RPOP, the *Road Safety Strategic Plan* (RSSP) was approved by council in September 2018 as the Region's version of adopting *"Vision Zero"*, a road safety approach first introduced in Sweden in 1994. The RSSP aims to create safer roads by reducing motor vehicle collisions which result in injury or death until they are ultimately eliminated to zero.

To achieve this goal, the RSSP focuses on creating safer intersections, reducing aggressive driving, reducing distracted driving, reducing impacted driving, protecting pedestrians, and protecting cyclists. Vehicle-related countermeasures include increased traffic calming measures such as red-light cameras, automated speed enforcement, electronic radar speed signs and general infrastructure improvements. Pedestrian-related countermeasures include ladder crosswalks, midblock pedestrian connections and leading pedestrian intervals to allow pedestrians with safe passage on roadways. Cycling-related countermeasures focus on providing cyclists with designated road space using cross rides, bike boxes, and urban shoulders. As the City strives towards its 50% sustainable modal share split goal outlined in the RPOP, the implementation of these countermeasures will ensure that all road users are safe on the Region of Peel's roadways.

Notably, the proposed north-south Private Road has been designed with unique streetscaping elements and horizontal curvature to reduce vehicle speeds and the severity of potential vehicle collisions with pedestrians and cyclists.

4.1.6 Region of Peel Zero Emission Vehicle Strategy (2022)

The *Region of Peel Zero Emission Vehicle Strategy* was brought by Council in 2022, which the site is subject to as one of three (3) lower-tier municipalities that make up this jurisdiction. The Strategy aims to accelerate the uptake of light-duty battery and plug-in hybrid electric vehicles in the Peel Region over the next five (5) years.

The Strategy recognizes that passenger vehicles will continue to be a significant mode of travel within the Region of Peel and that their greenhouse gas emissions and air pollution levels may be reduced through adequate zero emission vehicle (ZEV) uptake. The Strategy has five (5) primary goals, including the following:

- To reduce greenhouse gas emissions and air pollution;
- To improve business and resident knowledge on the costs and benefits of ZEVs;
- To increase ZEV driving experiences, availability and ownership;
- To enhance planning processes and access to charging infrastructure; and
- To promote local job creation and economic development.

To achieve these goals, regional and municipal By-laws within the three (3) lower-tier municipalities have been updated. In addition to requiring new developments to include ZEV-ready parking spaces and meeting updated Green Development Standards, the Region is exploring municipal on-street ZEV charging infrastructure requirements within high-density areas, such as mixed-use developments, business improvement areas, and tourist locations. As a mixed-use development within a high-density area, the proposed site is an ideal candidate for on-street ZEV charging infrastructure.

4.2 Municipal Policies

4.2.1 Mississauga Official Plan Review and Strategic Plan (2009)

The *City of Mississauga Official Plan* (OP) outlines a policy framework that aims to protect the natural heritage system, direct growth to where it will benefit the urban form, support a strong public transportation system, and address the long-term sustainability of the City. A focus of the OP includes creating a multi-modal transportation system consisting of transit, vehicular, active transportation, rail, and air travel. The OP recognizes that vehicle trips will account for most of the total trips and intends to shorten trips lengths through the increase of opportunities to travel by transit, walking, and cycling.
The City is currently undertaking the process of reviewing and updating the plan to ensure it reflects the changing needs, opportunities, and aspirations of the City. To position Mississauga for the next phase of growth, an important change to the City's urban structure is derived from Growth Plan requirements to identify and plan for minimum density targets at major transit station areas (MTSAs). Thus, a key component of the review process includes a comprehensive policy review

related to the Transportation theme of the OP, as well as the implementation of new land-use and transportation-related policy initiatives and strategies. The site is located within the Hurontario LRT / 5 (Dundas) and Dundas BRT / 11 (Hurontario) MTSA boundary, which have a minimum density target of 300 residents and jobs per hectare. Although this MTSA already meets the Growth Plan minimum density of 160 residents and jobs per hectare, there are no established maximum density values thus regular monitoring and further planning should be explored to enhance existing conditions at the site level, including encouraging mixed uses and increasing walkability.

Six (6) proposed policy priority areas are to be captured in the new OP, which includes creating convenient alternatives to the car; establishing a "complete streets" network to promote shared space among all road users; increasing the use of active transportation, carpooling, etc. to support healthy communities; establishing development densities and patterns that support transit; supporting greater connectivity throughout the City; and supporting efficient and effective movement of good throughout the City.

The recommended policy changes to be made in the new OP addresses matters of conformity, simplification, certainty, and innovation that supports coordinated urban design, land use, and transportation planning. The OP Review is currently in the final phase of the three-year program, in which the Plan is to be finalized for regional submission this year.

Further, the site is currently located within the "Downtown Cooksville Character Area", which encourages pedestrian amenities, active mixed-use frontages, and intensified development in a more urban form along the key corridors, such as Hurontario Street.

4.2.1.1 OFFICIAL PLAN AMENDMENTS

In December 2021, the City's Planning and Development Committee received initial Draft Official Plan Amendments and Built Form Standards for the Downtown Cooksville Area, as well as Downtown Fairview and Hospital areas. The following proposed OPA By-laws have been prepared:

- OPA #145 (Zoning By-law 0193-2022 – Under appeal) – policies related to vision, guiding principles, infrastructure, urban design, pedestrian, and road connections; and
- OPA #146 (Zoning By-law 0194-2022 – Regional approval pending) – Protected Major Transit Station Area (PMTSA) policies related to heights and land uses.

Passed and enacted by City Council in August 2022, these OPA documents were developed to update the OP policies for this area (as well as two adjacent areas) given the substantial transit investments (e.g., Hurontario LRT, Dundas BRT, and two-way all-day GO Transit service) and expected growth in population and employment. OPA #145 is currently under appeal and OPA #146 is currently pending regional approval.

OPA #145 envisions Downtown Cooksville as a "15-minute city", in which basic amenities such as parks, jobs, grocery stores, medical offices, and schools, can be safely and conveniently accessed within 15 minutes on-foot. Guiding principles specified to achieve this includes a mixed-use community, planning for more housing and people, creating a walkable and connected community, and planning for high quality transit. Based on the latter, this OPA identifies the lands around the Cooksville GO Station (i.e., the site) as a one-stop destination where the greatest mix of uses and amenities are readily available and accessible by walking or cycling.

OPA #145 indicates the following new pedestrian connections (as illustrated in Figure 1 of the OPA and **Figure 10** of this report):

- North-south connection midpoint between Hurontario Street and Jaguar Valley Drive (extending from Kirwin Avenue in the north to Dundas Street East in the south, with a slight offset near Agnes street);
- North-south connection midpoint between Hurontario Street and Cook Street (extending from the existing Cooksville GO Station in the north to King Street West in the south);

- East-west connection south of Hillcrest Avenue and Kirwin Avenue (extending from Jaguar Valley Drive in the east to the existing TL Kennedy Secondary School in the west); and
- East west connection extending eastward of the current Agnes Street terminus (extending from Jaguar Valley Drive in the east to Agnes Street in the west).

In addition, OPA #145 indicates a network of a new conceptual road connection (as illustrated in Map 12-4.2 of the OPA and **Figure 5** of this report) immediately south of the site to form smaller blocks, including an east-west connection ('C' Street Type) approximately mid-way between Hillcrest Avenue and Agnes Street. This road connection would extend between January Valley Drive to the east and Confederation Parkway to the west. Provisions of this street type would support a pedestrian environment with vehicle / servicing access for multiple buildings with residential, retail, and commercial uses. Secondary entrances for pedestrian access and minimizing visual impacts of parking, loading, and service areas should also be considered.

Policy 12.1.8.3 indicates that any new developments should provide enhanced connections to transit routes and open spaces that can be accessed by cycling, walking, or transit, and with limited dependency of a vehicle. Vehicle access along the surrounding main streets is to be minimized to reduce conflicts with non-auto travelers within the area.

OPA #146 policies under Section 12.4.7 indicate the provision of "Special Site 2" within the Downtown Cooksville Character Area, which directly impacts the site. This area is generally bounded by the east and west sides of Hurontario Street, between the existing railway (Canadian Pacific Railway) and north of Agnes Street. According to policy 12.4.8.2.2, it is required that the Special Site provides three (3) floors of non-residential uses for buildings designated with mixed use or residential (high density) uses adjacent to Hurontario Street.

4.2.2 Mississauga Climate Change Action Plan (2021)

The *City of Mississauga Climate Action Change Plan* outlines a clear course of action for the City over the next 10 (ten) years and includes specific goals aimed at climate change adaptation and mitigation. The Plan outlines 89 actions to be implemented under five (5) 'pathways' over the next 10 years. From a transportation perspective, noted actions related to the Low Emissions Mobility pathway are key considerations for the site.

The primary goal of the Low Emissions Mobility pathway is to support the transition towards lower-emission transportation modes, such as transit and cycling, as well as accelerate the adoption of zero-emission vehicles. The City hopes to further diversify the travel mode use by encouraging driverless vehicles, electric vehicles and trucks, car-sharing, ride hailing, and e-bikes. The Plan also aims to encourage and enable micro-mobility systems through the establishment of a micro-mobility policy framework. The City plans to expand its bicycle parking supply on commercial, residential, and city-owned properties to facilitate the transition towards micro-mobility.

As of 2021, the City has set 16 low-emissions mobility related actions. Thus far, the City has completed its green fleet policy to prioritize electrification opportunities for all City fleets and equipment and continue to identify opportunities for proper vehicle allocation, route optimization, and right-sizing fleet. Actions, such as the electrification of light duty transit vehicles, assessment of charging infrastructure for future electrification of transit, identification of gaps and inconsistencies in the pedestrian network, and the development of a micro-mobility policy framework are underway. Moreover, actions related to developing a zero-emissions vehicle strategy and micro-mobility policy framework, expanding the City's bicycle parking supply, prioritizing active transportation improvements in roadway developments, and developing transportation demand management requirements for new developments are ongoing.

4.2.3 Mississauga Transportation Master Plan (2019), Vision Zero Action Plan (2021), and Pedestrian Master Plan (2021)

The *Transportation Master Plan* (TMP) is a long-term strategic plan which focuses on determining appropriate actions to achieve a city where people and goods can move safely, easily, and efficiently to anywhere at any time. The TMP particularly focuses on moving away from single-occupancy vehicle use towards more sustainable, equitable and accessible modes of travel. Travelling by transit, cycling, walking and other forms of active transportation are highly emphasized.

The TMP has outlined 100 specific actions to achieve six (6) primary goals – including safety, inclusion, integration, connectivity, health, and resilience – which outline changes to various guidelines, plans, programs, and standards. The site is located along a designated intensification corridor, therefore making it a key part of the City's transportation system. These corridors will have better sidewalks, road crossing points and new walkway connections to adjacent areas to increase accessibility to and from corridors. Improved connections between the street and the main entrances of destinations will also create a more pedestrian-friendly environment.

Corridors are also the focus of high-frequency transit services, such as the Hurontario LRT. To further promote intensification along the corridor, the TMP encourages changes to parking regulations to result in the rightsizing of parking lots and ideally free up additional land for other uses, such as housing, retail, and office space. The City also plans on expanding bicycle parking on municipal, commercial, and residential properties in line with the Cycling Master Plan to further promote active transportation methods. The site supports the City's transportation-related policies and plans by proposing reduced vehicle parking and bicycle parking for the development.

Based on the City's TMP, a new *Vision Zero Action Plan* was developed, which contributes to the Vision Zero goal of eliminating fatalities and serious injuries in the City's transportation system. The Action Plan expands upon the recommendations of the City's Transportation Master Plan (TMP) to prioritize vulnerable road users.

The City's plan discusses five (5) primary focus areas to enhance road safety conditions within the City. All recommended actions can be categorized under one of the following groups: evaluation, engineering, enforcement, empathy, and education. Actions such as narrower lane widths, speed reductions, protected and dedicated cycling infrastructure, protected pedestrian crossings, centre medians, improved transit stop infrastructure, increased street lighting and bicycle signals would be relevant to the roads located in the vicinity of the site.

Further building upon the City's TMP, the *Pedestrian Master Plan* (PMP) is a long-term plan that was developed and approved in 2021 to review the City's existing pedestrian network and identify improvements to be made to the network, infrastructure, policies, programs, and environment to enhance the pedestrian experience. Upon reviewing the City's existing pedestrian network, 232 kilometres of high-priority pedestrian gaps were identified. The Plan identifies numerous actions to fill in these gaps and develop a continuous pedestrian network across the City. Many of the actions identified within the Pedestrian Master Plan overlap with actions that have been identified and will be delivered through other City plans and initiatives, such as the TMP, Vision Zero, and the Changing Lanes Complete Streets Guidelines.

Near the site, pedestrian network gaps have been identified along both Hurontario Street and Dundas Street West. Given the site's prime location, these gaps are identified as high priority to be addressed as soon as possible. In addition to developing additional infrastructure to fill these gaps, the Plan lists numerous other actions which would enhance the pedestrian environment, such as establishing public amenity guidelines, planting street trees and landscaping, installing public art, increasing lighting, and installing pedestrian signals.

The site supports the City's pedestrian-related policies and plans by including walkways throughout the site to ensure the pedestrian network is cohesive and provides connections to and from the Hurontario Street intensification corridor. **Section 6.1.5** also discusses numerous pedestrian-related transportation demand management measures that will be taken to support active transportation and reduce vehicle dependency.

4.2.4 Mississauga Parking Master Plan (2019), Parking Regulations Study (2021), and Zoning By-law 0117-2022

Building upon the City's TMP, the *Parking Master Plan and Implementing Strategy* (PMPIS) has been developed and approved in June 2019 to review and analyze the evolving parking needs for all areas of the City. Recent parking trends and mobility characteristics has led to a push towards more balanced parking provisions and management strategies to support a multi-modal city. The PMPIS recommends that the minimum parking requirements be reduced and replaced with a policy designed to manage parking more deliberately.

Shortly after the approval of the PMPIS, the City developed the *Parking Regulations Study* and *Zoning By-law 0117-2022* in 2021 to amend the off-site parking regulations in the City's Comprehensive Zoning By-law 0225-2007. These are considered key action documents that focus on establishing an appropriate amount of (privately-owned) parking to be provided for new development applications in the City. The documents further aim to investigate existing and future parking demand and travel patterns, develop neighbourhood-specific "precincts" with specified rates across the City, and ensure that parking regulations appropriately reflect the number of zoning and minor variance applications being requested by landowners. The proposed off-street parking standards were passed (now in effect) by Council on June 8th, 2022.

As such, the site is subject to the standards in Precinct 1 of Zoning By-law 0117-2022, which proposes reduced residential parking rates to pre-amended standards of Zoning By-law 0225-2007. The subject Precinct also recommends a relatively high level of parking management strategies and consideration of parking maximums for most land uses.

4.2.5 Mississauga Cycling Master Plan (2018) and Zoning By-law 0118-2022

Building upon the City's TMP, the *Cycling Master Plan* was initially developed in 2010 (updated in 2018), which outlines specific recommendations and actions to foster a culture of cycling, improve the safety for cycling, increase the number of cycling trips in Mississauga, and build a connected, convenient, and comfortable bicycle network. One of the City's recommended actions in the Cycling Master Plan is to expand the City's bicycle parking supply, including short-term and long-term facilities on commercial, residential, and city-owned properties.

More recently, the City developed the Parking Regulations Study and *Zoning By-law 0118-2022*, both of which amend the latest off-street bicycle parking standards outlined in the Cycling Master Plan and Comprehensive Zoning By-law 0225-2007. These minimum bicycle parking rates are considered contemporary standards representing updated active transportation trends observed across the City. The proposed bicycle parking standards were passed (now in effect) by Council on June 8th, 2022.

The site supports the City's cycling-related policies and plans with an increased supply of both long-term and short-term bicycle parking spaces. This increase can supplement the proposed vehicle parking reduction while fostering the cycling culture within the City due to its close proximity to prominent cycling routes.

4.2.6 Vision Cooksville (2016)

Vision Cooksville is a City-led initiative that was established to develop a long-range community vision for the area of Downtown Cooksville through public engagement. The Downtown Cooksville study area is centred on the intersection of Dundas Street and Hurontario Street – it is bound by the railway in the north, King Street East in the south, Kirwin Avenue in the east, and Confederation Parkway in the west.

Transportation-related feedback received by the public includes the need to improve open spaces and walkability, increase safety for pedestrians in the area (e.g., concern for heavy traffic), enhancement of the public realm, and maintain the excellent access to public transit offered via GO and MiWay transit.

The site is located within the Downtown Cooksville study area. It is expected that the proposed development will directly influence and transform the character of the surrounding area in a way that supports and achieves the goals and objectives of the City's vision.

4.2.7 Dundas Connects Master Plan (2018)

The *Dundas Connects Maser Plan* was established, in collaboration with the City and Metrolinx, to undertake an environmental assessment (or Transit Project Assessment Process) for the planned bus rapid transit project along the Dundas Street corridor. The Dundas BRT is planned to extend 48 kilometres, connecting various municipalities, between Highway 7 in the City of Hamilton (in the west) to the Kipling Transit Hub in the City of Toronto (in the east). It is proposed for 20 out of 48 kilometres of the BRT to operate within a dedicated bus lane / right-of-way, permitting safer, faster, and more reliable transit connections.

A number of focus areas have been identified at key intersections along the BRT corridor, including Etobicoke Creek, Dixie, Cawthra, Cooksville, Erindale Station, Erin Mils, and Winston Churchill. These focus areas share the following transit, access, and development characteristics:

- Support for intensification as per Official Plan;
- Interchange transit area including one or more higher-order transit stations; and
- Gateway areas that border neighbouring municipalities.

Recognizing that the site is adjacent to / within the general Cooksville area, it is anticipated that any future development support or help achieve these characteristics with consideration to the planned Dundas BRT as a key integrated, multi-modal and regional transit system as identified in the Metrolinx RTP. This notion suggests capitalizing on such investments through encouraging existing and future transit ridership while limiting certain factors (e.g., provision of parking) opposing these characteristics and objectives.

4.2.7.1 METROLINX INITIAL BUSINESS CASE (2020)

As part of the *Initial Business Case* document prepared by Metrolinx in 2020, the exploration of several options and analyses confirmed the need and benefit of the Dundas BRT. Based upon the presented alignment concept, near the site, the BRT is contemplating transit stops at Confederation Parkway, Hurontario Street, and Kirwin Avenue / Camilla Road. In addition, within the site area, it is contemplated to provide a dedicated median-running transit lane with four travel lanes (two lanes in each direction) within the pavement right-of-way. The nearest concept transit stop at Hurontario Street would potentially be considered as an intermodal transit stop that coincides with the proposed Hurontario LRT stop, further discussed in **Section 4.2.8**.

4.2.8 Hurontario / Main Street Corridor Master Plan (2020)

With consideration to the future LRT, the *Hurontario / Main Street Corridor Master Plan* was developed for the evolving corridor within the cities of Mississauga and Brampton. This Master Plan places emphasis on integration planning for rapid transit, intensification, and enhanced urban design along Hurontario / Main Street.

The intent for the Hurontario / Main Street corridor is to link urban growth centres while traversing the mobility hubs (one being the Cooksville GO Station area) through transit-oriented development and general redevelopment.

Near the site, there is a proposed transit LRT station at the Hillcrest Avenue / Cooksville GO Station intersection, which will provide greater mobility opportunities as a gateway hub. This will allow for more intensified developments that leverage these transit investments and minimize the number of single occupant vehicle trips generated during the peak hours.

5.0 AREA TRANSPORTATION CONTEXT

5.1 Area Road Network

5.1.1 Existing Road Connections

The characteristics of the roads and intersections near the site are described below. The area road network and existing lane arrangements and traffic control are illustrated in **Figure 3** and **Figure 4**, respectively.

Hurontario Street

Hurontario Street is a north-south arterial road under the jurisdiction of the City of Mississauga, with a posted speed limit of 60 km/h within the site vicinity. This road generally extends between Lakeshore Road in the south and Steeles Avenue in the north, where it continues northward as Main Street.

Hurontario Street currently has a six (6) lane cross-section (3 travel lanes in each direction), with auxiliary left-turn lanes at key intersections within the vicinity of the site. It is noted that a lengthy extent of this road (between the Port Credit GO Station in the south to the Brampton Gateway Terminal in the north) is under construction to accommodate for the Hazel McCallion LRT. Within the site vicinity, it is being planned to reduce the number of travel lanes by one lane in both directions. Further information is provided in **Section 5.2.2**. Lastly, on-street parking is generally not permitted along this roadway. **Exhibit 1** illustrates the current condition of the roadway as of 2022.

Exhibit 1: Hurontario Street at Hillcrest Avenue / Kirwin Avenue (Facing South)

Kirwin Avenue

Kirwin Avenue is a north-south and east-west major collector road under the jurisdiction of the City of Mississauga with a posted speed limit of 40 km/h. Kirwin Avenue extends between Dundas Street East in the southeast to Hurontario Street in the northwest and continues westwards as Hillcrest Avenue. This road has a two (2) lane cross-section (1 travel lane in each direction) with auxiliary left-turn lanes at its intersections with Hurontario Street, Jaguar Valley Drive, and Dundas Street East. As part of the existing right-of-way, dedicated bicycle lanes are provided along both sides of the roadway. Further, on-street parking, for a maximum of 15 hours, is permitted along the north side for most of the roadway. No parking is allowed on Kirwin Avenue between Hurontario Street and Jaguar Valley Drive. **Exhibit 2** illustrates the current condition of the roadway.

Source: BA Group (August 2023)

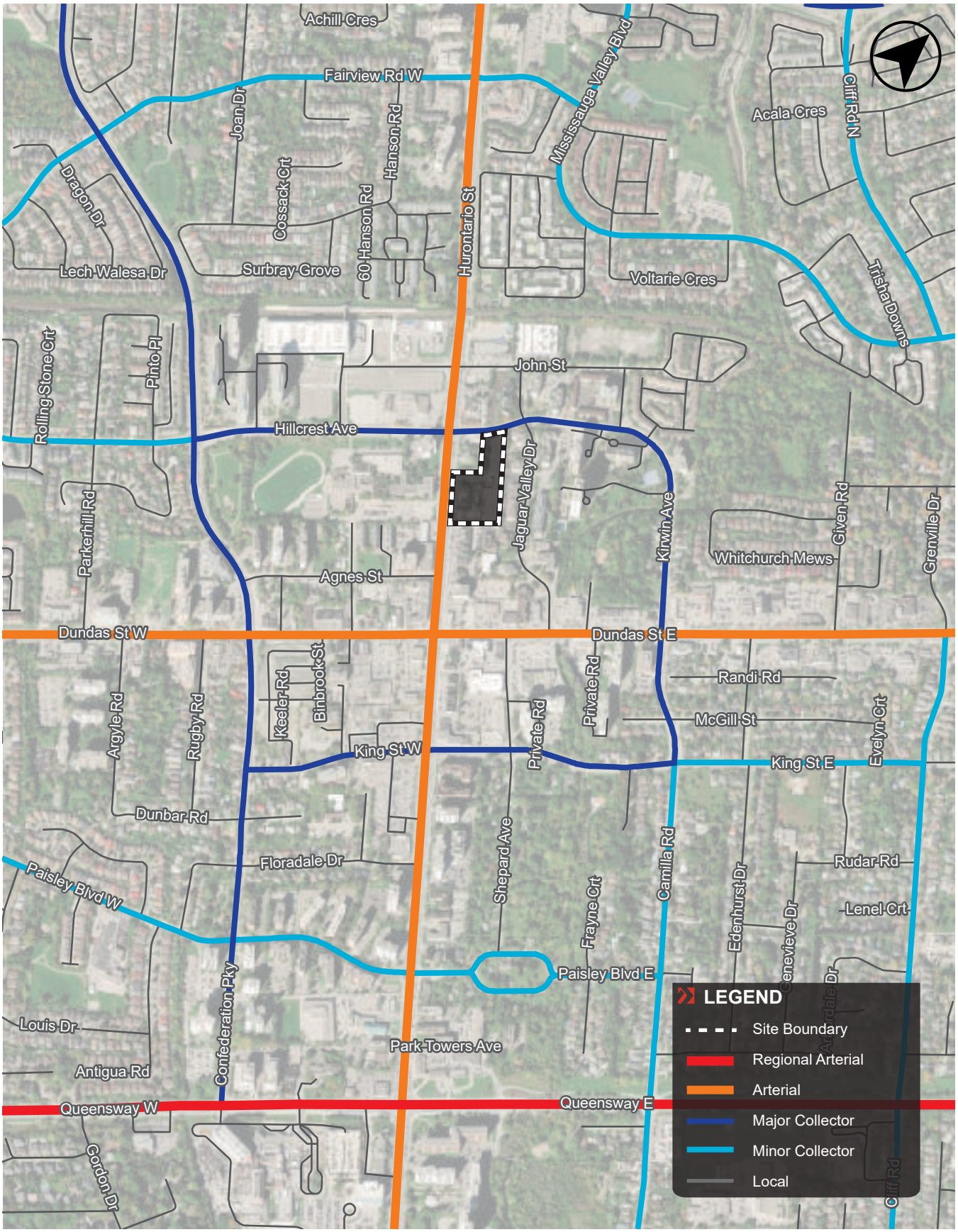
Exhibit 2: Kirwin Avenue / Hillcrest Avenue at Hurontario Street (Facing East)

Jaguar Valley Drive

Jaguar Valley Drive is a north-south local road under the jurisdiction of the City of Mississauga with a posted speed limit of 40 km/h. Jaguar Valley Drive extends between John Street in the north and Dundas Street East in the south. This road currently has a 2-lane cross-section (1 travel lane in each direction). The road forms intersections with John Street, Kirwin Avenue, and Dundas Street East, which all operate under STOP control. On-street parking is permitted along the east side of most of the roadway for a maximum of 15 hours.

Dundas Street

Dundas Street is an east-west arterial road under the jurisdiction of the City of Mississauga with a posted speed limit of 50 km/h. This road extends between Highway 6 in the City of Hamilton in the west and Kingston Road in the City of Toronto in the east. As noted, this road spans across the entire City and provides a direct connection to its neighbouring municipalities. In the vicinity of the site, Dundas Street has a four (4) lane cross section (2 travel lanes in each direction), with auxiliary left and right turn lanes at key intersections (e.g., Hurontario Street and Kirwin Avenue). On-street parking is generally not permitted along this roadway.



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Aerial maps provided courtesy of: Esri, DigitalGlobe, GeoEye, Earthstar Geographies, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, the GIS User Community and/or Google Earth/Maps.

FIGURE 3 EXISTING STREET NETWORK

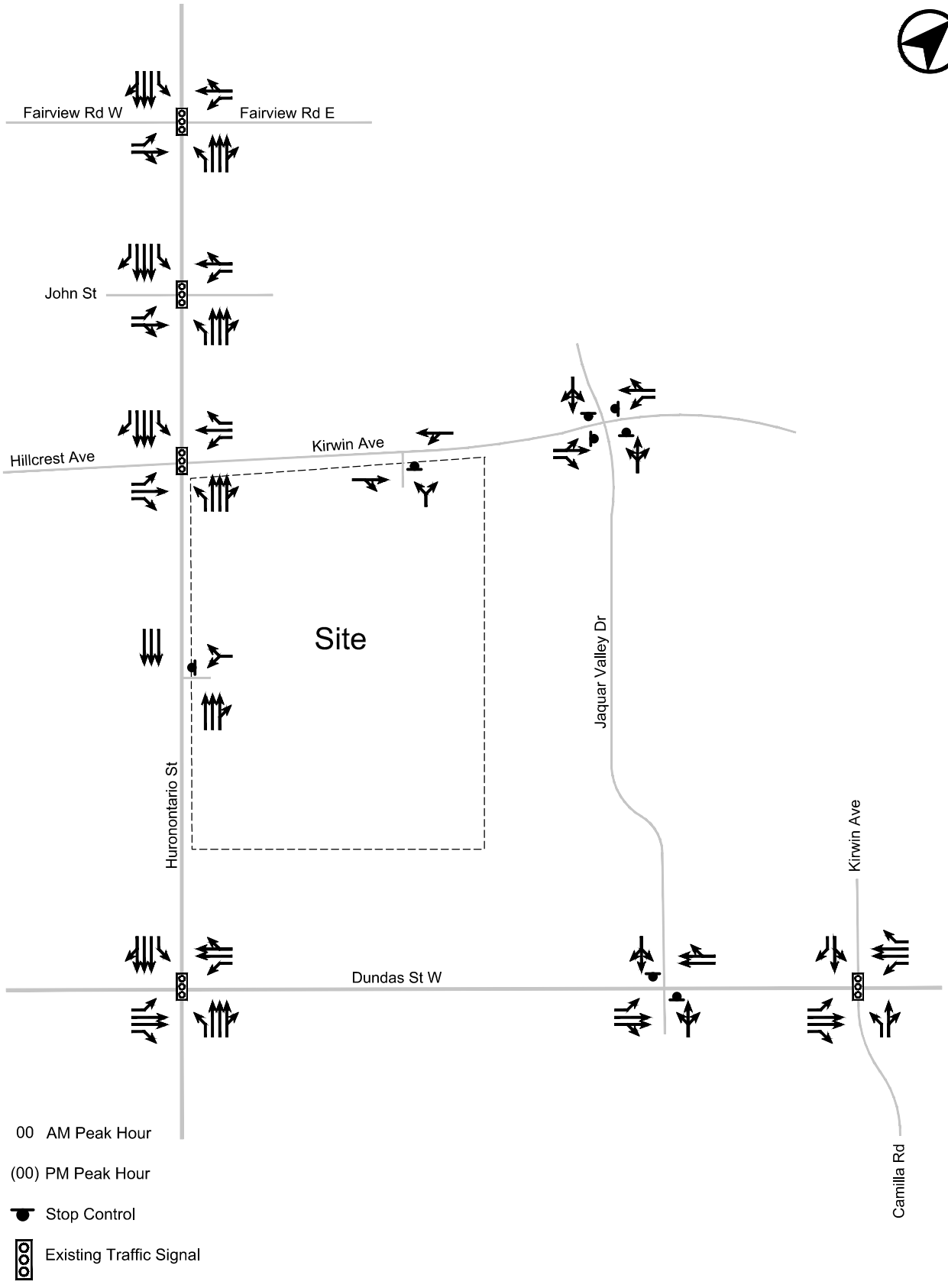

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FIGURE 4 EXISTING LANE CONFIGURATION & TRAFFIC CONTROL

5.1.2 Planned Road Connections

5.1.2.1 OPA 145 CONNECTIONS

As mentioned in **Section 4.2.1.1**, OPA #145 (under appeal) proposed a series of new midblock and full roadway connections to help strengthen the transportation system by forming a grid-like network for increased connectivity and accessibility for all mobility users. It is noted in the OPA that various improvements will be achieved through new development along existing and planned roads. Moreover, development along the Hurontario Street corridor is desired as transit-oriented developments.

As part of the key policy changes, the study area is planned to be improved through the transformation of the network based on three (3) street types guiding new development:

- 'A' Streets: primarily arterial streets with active frontages that will prioritize at-grade retail and commercial uses.
- 'B' Streets: primarily residential in character with suitable building setbacks to accommodate landscaping.
- 'C' Streets: intended to support a suitable pedestrian environment, as well as accommodate any consolidated or individual loading and parking access.

Figure 5 illustrates the proposed street network changes within the site area.

5.1.2.2 NEW EAST-WEST ON-SITE MUNICIPAL ROAD CONNECTION

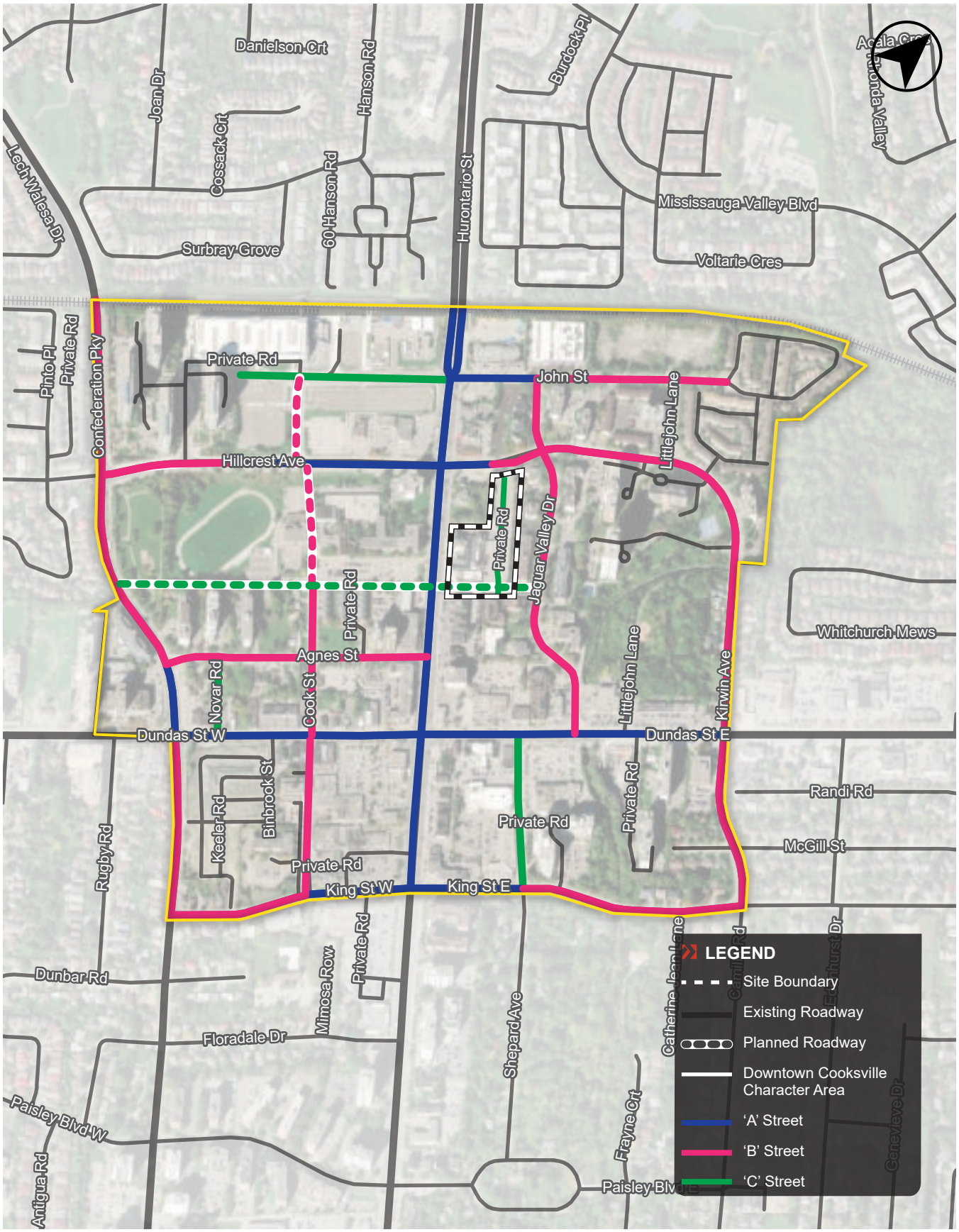
As guided by OPA #145 (under appeal), the site proposes a new east-west Municipal Road that will ultimately extend from Confederation Parkway in the west to Jaguar Valley Drive in the east. Within the site, this connection will extend along the southern edge of the property from Hurontario Street in the west to the eastern property limit in the east. The new public road will consist of a two-lane cross section (one travel lane in each direction) with sidewalks. Near the site, the ultimate implementation of the road will be contingent on the development of the adjacent properties to the east for the connection to Jaguar Valley Drive and the adjacent property to the south for the south boulevard.

Further details on the interim and ultimate functional road design are provided in **Section 10.0**.

5.1.2.3 NEW NORTH-SOUTH ON-SITE PRIVATE ROAD CONNECTION

The development of the site requires the new Private Road to be constructed for access to / from the current local road network. Specifically, the Private Road will run in a north-south direction and extend between the new Municipal Road (described above) and Kirwin Avenue. The new Private Road will consist of a two-lane cross section (one travel lane in each direction) with pedestrian sidewalks and landscaping. There will be laybys along both sides of the new Private Road and STOP-control signage at its intersections with Kirwin Avenue and the new Municipal Road.

Further details on the functional road design are provided in **Section 10.0**.



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Aerial maps provided courtesy of: Esri, DigitalGlobe, GeoEye, Earthstar Geographies, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, the GIS User Community and/or Google Earth/Maps.

FIGURE 5 PROPOSED STREET NETWORK CHANGES

5.2 Area Transit Network

5.2.1 Existing Transit Connections

The site is currently well served by transit services neighbouring the property and at the Cooksville GO Station, which accommodates bus services operated by the Mississauga transit service provider MiWay. GO Transit is also provided at Cooksville GO Station in the form of the 21 Milton bus service as well as train service on the Milton GO line, which provides peak hour service between Milton and Union Station in Toronto and Kipling Station on the Toronto Transit Commission (TTC) subway network. The bus routes adjacent to the site also provide access to the Square One GO Bus Terminal, which provides connections to locations such as Toronto, Kitchener, Milton, and Brampton. An existing MiWay transit stop is located northwest of the site at the intersection of Hurontario Street / Kirwin Avenue. Bus routes located within an 800-metre radius of the site are outlined below in **Table 2**. The existing transit network is illustrated in **Figure 6**.

Table 2 Existing Area Transit Services

Route	Nearest Stop Location	Peak Headway	Description
GO Metrolinx – Train Service			
Milton GO Line	Cooksville GO (John Street / GO Access Road)	Every 15 to 45 minutes during peak hours.	This GO train operates east-west between the Milton GO station and Union Station. This train offers weekday rush-hour service, operating eastward in the morning and westward in the afternoon.
GO Metrolinx – Bus Service			
21 Milton	Cooksville GO (John Street / GO Access Road)	Every 25 to 35 minutes during peak hours.	This bus service operates east-west between Union Station in the east and Milton GO station in the west. Within the study area, this bus service operates along Hurontario Street and Dundas Street East. This route operates from Monday to Friday.
MiWay Transit – Bus Service			
1 Dundas / 101 Dundas Express	Dundas Street / Hurontario Street	Every 15 minutes or less during peak hours.	This bus service operates east-west between the Kipling Bus Terminal in the east and Laird Road/Ridgeway Drive in the west. The Dundas Express service operates east-west between the Kipling Bus Terminal in the east and South Common Centre in the west. Both routes operate from Monday-Sunday along Dundas Street.
2 Hurontario / 103 Hurontario Express	Hurontario Street / Hillcrest Avenue	2 Hurontario: Every 10 minutes or less during peak hours. 103 Hurontario Express: Every 15 minutes during peak hours.	This bus service operates north-south between the City Centre Transit Terminal at Square One Shopping Centre in the north and the Port Credit GO Station in the south. Within the study area, this bus service operates along Hurontario Street. The express service of Hurontario operates north-south between Queensway at Confederation Parkway to the south and the Brampton Gateway Terminal to the north. Both routes operate from Monday-Sunday.

Route	Nearest Stop Location	Peak Headway	Description
4 Sherway Gardens	Hurontario Street / King Street East	Every 30 minutes during peak hours.	This bus service operates east-west between Sherway Gardens to the east and the Cooksville GO Station to the west.
28 Confederation	Confederation Parkway / Dundas Street West	Every 15 minutes or less during peak hours.	This bus service operates north-south between the City Centre Transit Terminal at Square One Shopping Centre in the north and the Trillium Health Partners Mississauga Hospital at Hurontario Street and the Queensway in the south. During peak hours, the bus services the Cooksville GO Station. Within the study area, this bus service operates along Confederation Parkway.
38 Creditview	Confederation Parkway / Dundas Street West	Every 30 minutes during peak hours.	This bus service operates north-south between the Meadowvale Town Centre in the north and the Cooksville GO Station in the south. Within the study area, this bus service operates along Creditview Road from Monday-Friday.
53 Kennedy	Hurontario Street / John Street	Every 15 minutes during peak hours.	This bus service operates north-south between the Hurontario/Highway 407 Park & Ride in the north and the Cooksville GO Station in the south. Within the study area, this bus service operates along Hurontario Street from Monday-Friday.

5.2.2 Planned Transit Connections

Based on the *MiWay Five Year Transit Service Plan (2021-2025*) several improvements are proposed to the local transit network. As the City continues to grow and evolve, new policies and plans have been established to further guide and shape future goals. As such, the MiWay Transit Plan works in conjunction with the Transportation Master Plan, Climate Change Action Plan, Parking Master Plan, and more to meet the future transit demand.

The transit-related improvements within the local area include the following items described below. The future area transit network is illustrated in **Figure 7**.

5.2.2.1 HAZEL MCCALLION LIGHT RAIL TRANSIT LINE

The Hazel McCallion Light Rail Transit (LRT) Line, also known as the Hurontario LRT, is a new and transformational transit service being introduced to the Region of Peel, primarily bridging the cities of Mississauga and Brampton. The LRT will provide 18 kilometres of higher-order transit and is proposed to run along Hurontario Street, between Port Credit (in the south) and Brampton (in the north). It will bring high quality and high frequency transit service to the Downtown Cooksville area, including the subject site.

The Hazel McCallion Line will also provide direct links to various other transit services, including GO Metrolinx (e.g., Port Credit station and Square One bus), the Mississauga Transitway, and key MiWay and Brampton Transit routes.

This new transit service will create a significant linkage to various businesses and residents along the Hurontario Street corridor; it also invites greater intensification and employment due to its rapid and reliable service operating in its own dedicated right-of-way.

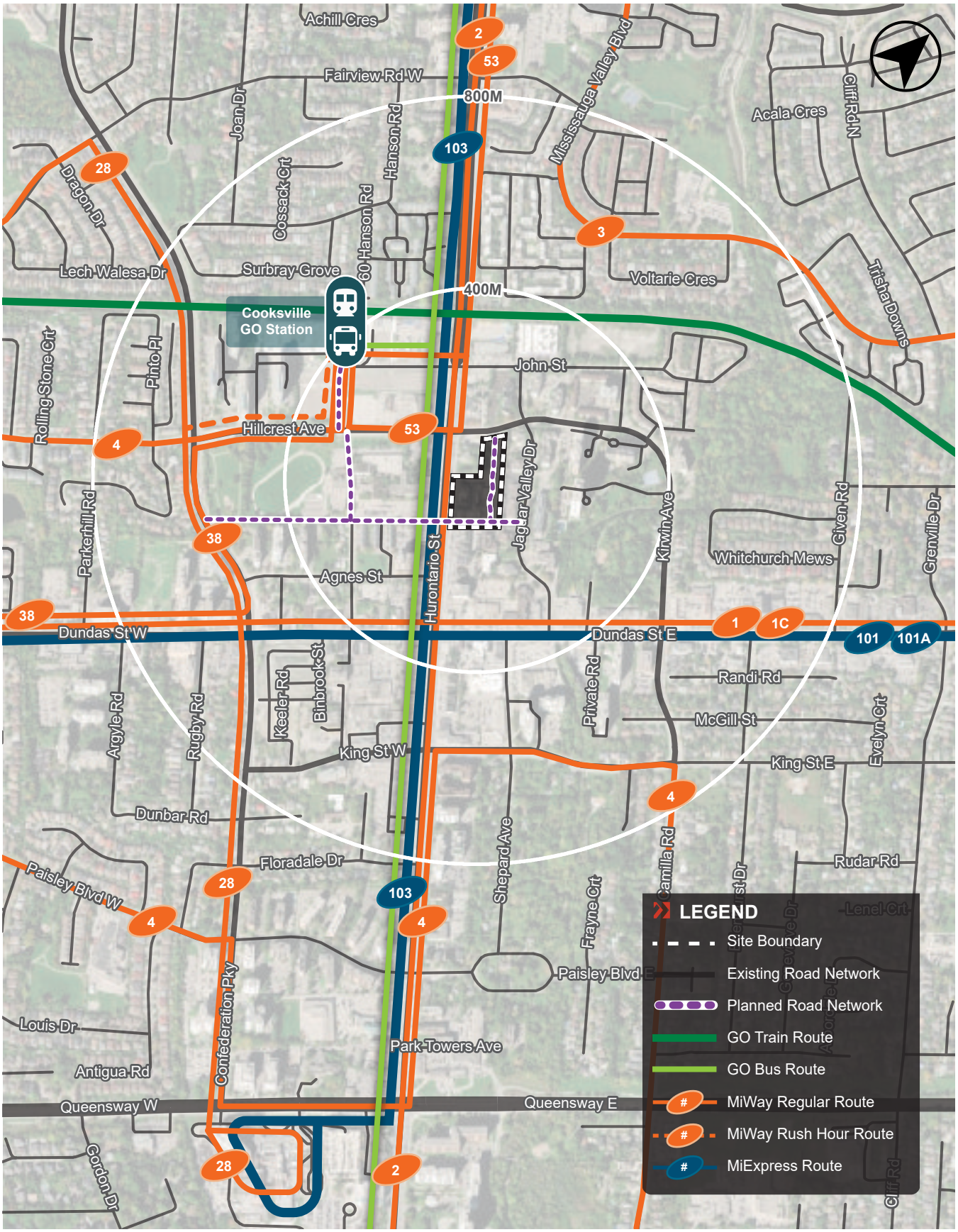
Construction began in spring 2020 with anticipated completion in fall 2024. The nearest LRT station to the site is located at the existing Cooksville Station located approximately 350 metres from the site.

5.2.2.2 OTHER TRANSIT SERVICE IMPROVEMENTS

In addition to the notable Hazel McCallion Line, there are further (broader) transit improvement projects within the City of Mississauga, including:

- Improvement of GO transit services (e.g., Cooksville and Port Credit stations);
- Development of Dundas Street BRT (i.e., Dundas Connects Master Plan);
- More service outside of weekday rush hours; and
- More express routes between key destinations and improved connectivity.

These improvements will further increase the transit mode share and assist in encouraging the use of alternative modes of transportation (other than personal vehicles) to residents and employees within the study area, particularly during the weekday morning and afternoon peak hours.



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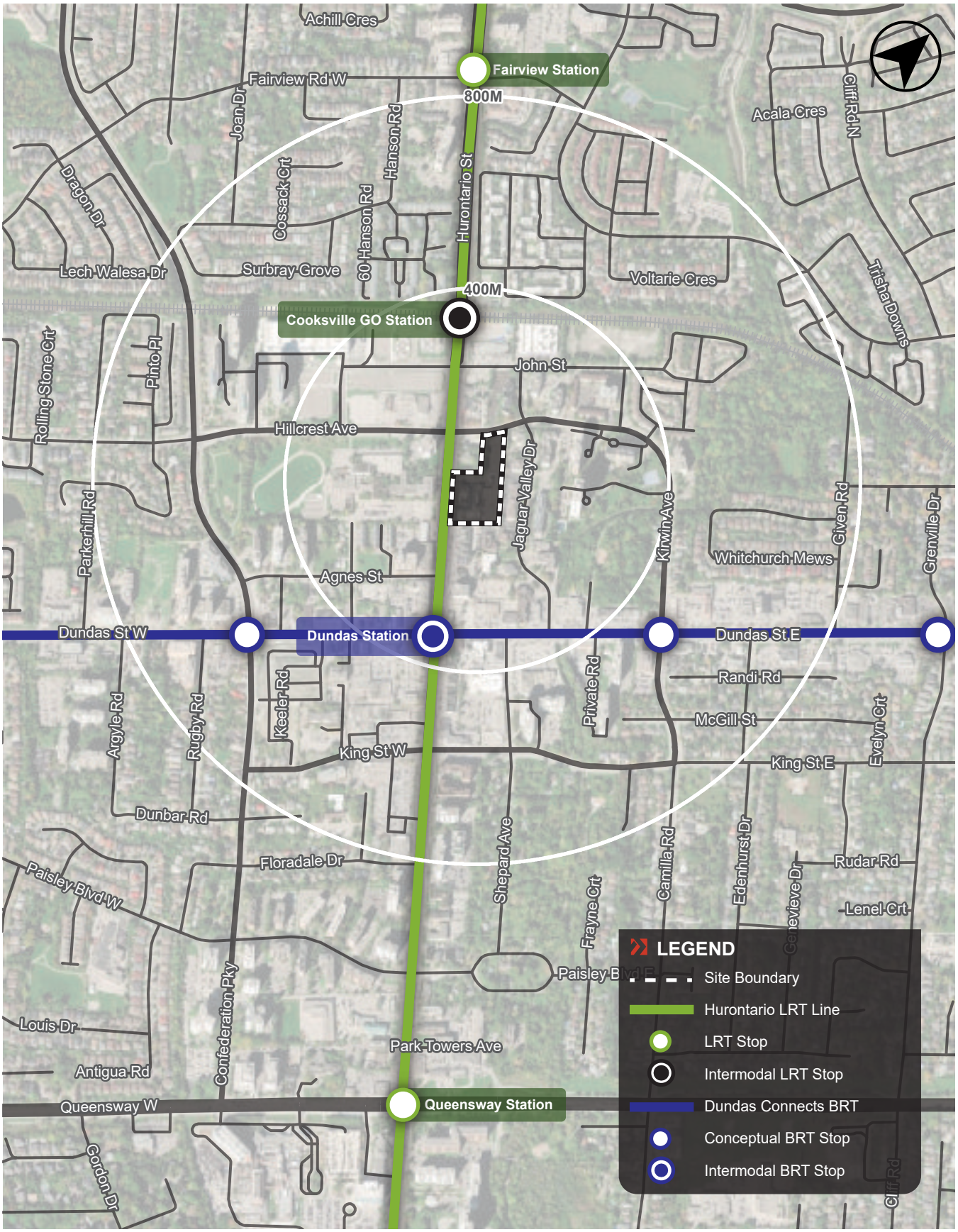
Aerial maps provided courtesy of: Esri, DigitalGlobe, GeoEye, Earthstar Geographies, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, the GIS User Community and/or Google Earth/Maps.

FIGURE 6 EXISTING TRANSIT NETWORK



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Aerial maps provided courtesy of: Esri, DigitalGlobe, GeoEye, Earthstar Geographies, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, the GIS User Community and/or Google Earth/Maps.

FIGURE 7 FUTURE TRANSIT NETWORK

5.2.3 Transit Reach Assessment

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

Existing Transit Travel Reach

A 15, 30, and 45-minute transit reach from the site during the weekday morning travel period was analysed for existing conditions as is illustrated in **Figure 8**. 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), 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 5.2.2** is illustrated in **Figure 9**. A comparison of areas that are reachable is provided in **Table 3** below.

Table 3 Existing and Future Transit Service Area Analysis Comparison

Transit Scenario	15-minute reach	30-minute reach	45-minute reach
Existing Conditions (Travel Away From Site)	• North along Hurontario St to the Hwy 403 corridor (access to City Centre Terminal and Square One GO Bus Terminal); • South along Hurontario St to just past the QEW corridor; • East along Dundas St E to short of Arena Rd (beyond Tomken Rd); and • West along Dundas St W to short of Erindale Station Rd / Glengarry Rd.	• North along Hurontario St to before Britannia Rd; • South along Hurontario St to the waterfront (access to Port Credit GO Station); • East along Dundas St E to Kipling Ave (access to Kipling Station), and along the Mississauga Transitway to Etobicoke Creek Station; and • West along Dundas St W to before Winston Churchill Blvd, and along Rathburn Rd W to Erindale GO Station.	• North along Hurontario St to beyond Steeles Ave (access to Brampton Gateway Terminal); • South along Hurontario St to the waterfront (access to Port Credit GO Station); • East along Bloor St W (via TTC Line 2) to Dundas West Station, along Eglinton Ave W to short of Islington Ave, and along the Lakeshore West GO Line to Long Branch GO Station; and • West along Dundas St W to Ninth Line, along the Hwy 407 corridor to Trafalgar Rd, and along the Lakeshore West GO Line to Clarkson GO Station.
Future Conditions (Travel Away From Site) *with the addition of Hazel McCallion LRT, Dundas BRT, etc.*	• North along Hurontario St (via future Hazel McCallion LRT) to City Centre Terminal (access to Square One GO Bus Terminal); • South along Hurontario St (via future Hazel McCallion LRT) to Port Credit GO Station and the waterfront; • East along Dundas St E (via planned Dundas BRT) to beyond Dixie Rd (access to Dixie GO Station); and • West along Dundas St E (via planned Dundas BRT) to just past Old Carriage Rd (short of The Credit Woodlands).	• North along Hurontario St (via future Hazel McCallion LRT) to future Derry Station; • South along Hurontario St (via future Hazel McCallion LRT) to Port Credit GO Station and the waterfront; • East along Dundas St E (via planned Dundas BRT) to Kipling Ave (access to Kipling Station), and along the existing Mississauga Transitway to Spectrum Station, and along the improved Lakeshore West GO Line to Long Branch GO Station; and • West along Dundas St W (via planned Dundas BRT) to beyond Ninth Line, and along the existing Mississauga Transitway to Erin Mills Station.	• North along Hurontario St (via future Hazel McCallion LRT) and Main St S to before Queen St; • South along Hurontario St (via future Hazel McCallion LRT) to Port Credit GO Station and the waterfront; • East along Dundas St E and Bloor St W (via planned Dundas BRT and existing TTC Line 2) to Lansdowne Station, along Eglinton Ave W (via future Eglinton Crosstown West Extension) to Royal York Rd, and along the improved Lakeshore West GO Line to Exhibition GO Station; and • West along Dundas St W (via planned Dundas BRT) to Third Line, along the Hwy 407 corridor to Trafalgar Rd, and along the improved Lakeshore West GO Line to Bronte GO Station.

Notable findings include:

- Within 15 minutes, a sizeable area around the site, including transit connections at City Centre Transit Terminal, Square One GO Bus Terminal and Cooksville GO Station, can be accessed under existing conditions, primarily north-south along Hurontario Street and east-west along Dundas Street. Under future conditions, completion of the Hazel McCallion LRT will greatly improve access south to Port Credit GO station and the waterfront. Additionally, implementation of the Dundas BRT will extend reach east to Dixie Rd, providing access to Dixie GO Station, and west to just short of The Credit Woodlands.

- Within 30 minutes, access expands throughout Mississauga and into neighbouring Toronto, extending north-south along Hurontario Street, east-west along Dundas Street, and east-west along the Mississauga Transitway corridor, providing access to Erindale GO, Dixie GO and Kipling GO stations, and to Kipling TTC Station. Under future conditions, completion of the Mississauga Transitway will extend reach north to future Derry Station, while implementation of the Dundas BRT will provide additional access west past Ninth Line. The completion of GO Expansion along the Lakeshore West GO Line will also extend access east to Long Branch GO Station, while general improvements to transit connections will slightly improve reach along the Mississauga Transitway to Spectrum Station.

- Within 45 minutes, transit reach now extends into Brampton, as well as further throughout Mississauga and deeper into Toronto, primarily along Hurontario Street to the north, along Bloor Street West and Eglinton Avenue West to the west (via the Mississauga Transitway and TTC Line 2 Bloor–Danforth) and along Dundas Street West, and the Highway 407 and Lakeshore West GO Line corridors to the west, providing access to Pearson Airport, Dundas West TTC Station, and Long Branch GO and Clarkson GO Stations. Under future conditions, completion of the Hazel McCallion LRT will extend reach north beyond Brampton Gateway Terminal to just short of Brampton GO Station, while implementation of the Dundas BRT will extend reach along Dundas Street and Bloor Street Wewwt to between Third Line and Lansdowne TTC Station. The completion of GO Expansion along the Lakeshore West GO Line will also provide further access between Exhibition GO and Bronte GO Stations, while projects including the Waterfront West LRT and Eglinton Crosstown West Extension will provide increased reach eastbound along the waterfront and Eglinton Avenue West, respectively.

In summary, under existing conditions, the site possesses good access to transit due to its proximity to several major transit corridors and hubs, including Hurontario St and the Mississauga Transitway, and City Centre Transit Terminal and Square One GO Bus Terminal. Furthermore, transit access from the site is set to improve greatly under future conditions with the completion of several Ontario priority projects, including the Hazel McCallion LRT, Dundas BRT, GO Expansion, Waterfront West LRT, and Eglinton Crosstown West Extension.

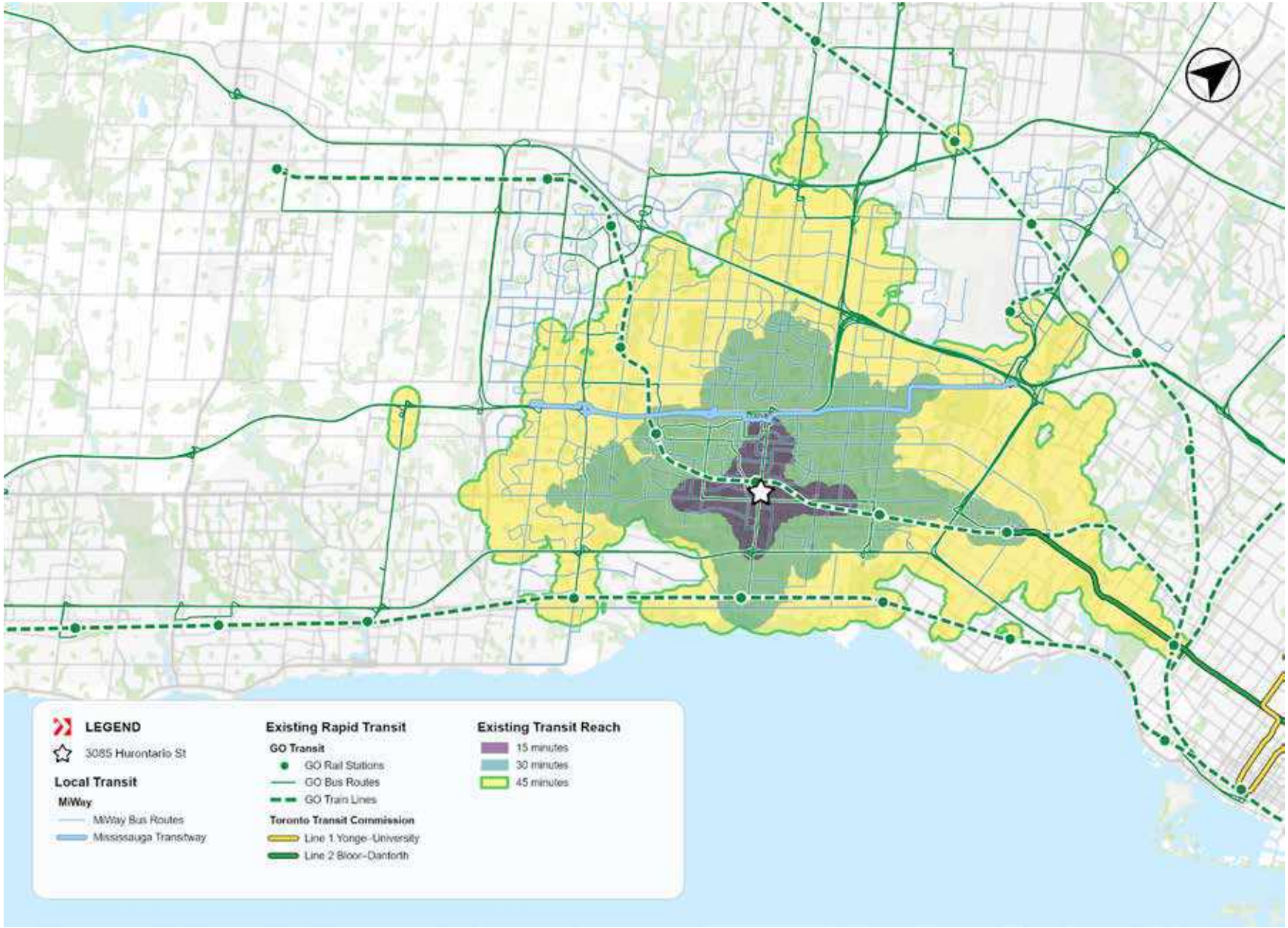

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FIGURE 8 EXISTING TRANSIT REACH

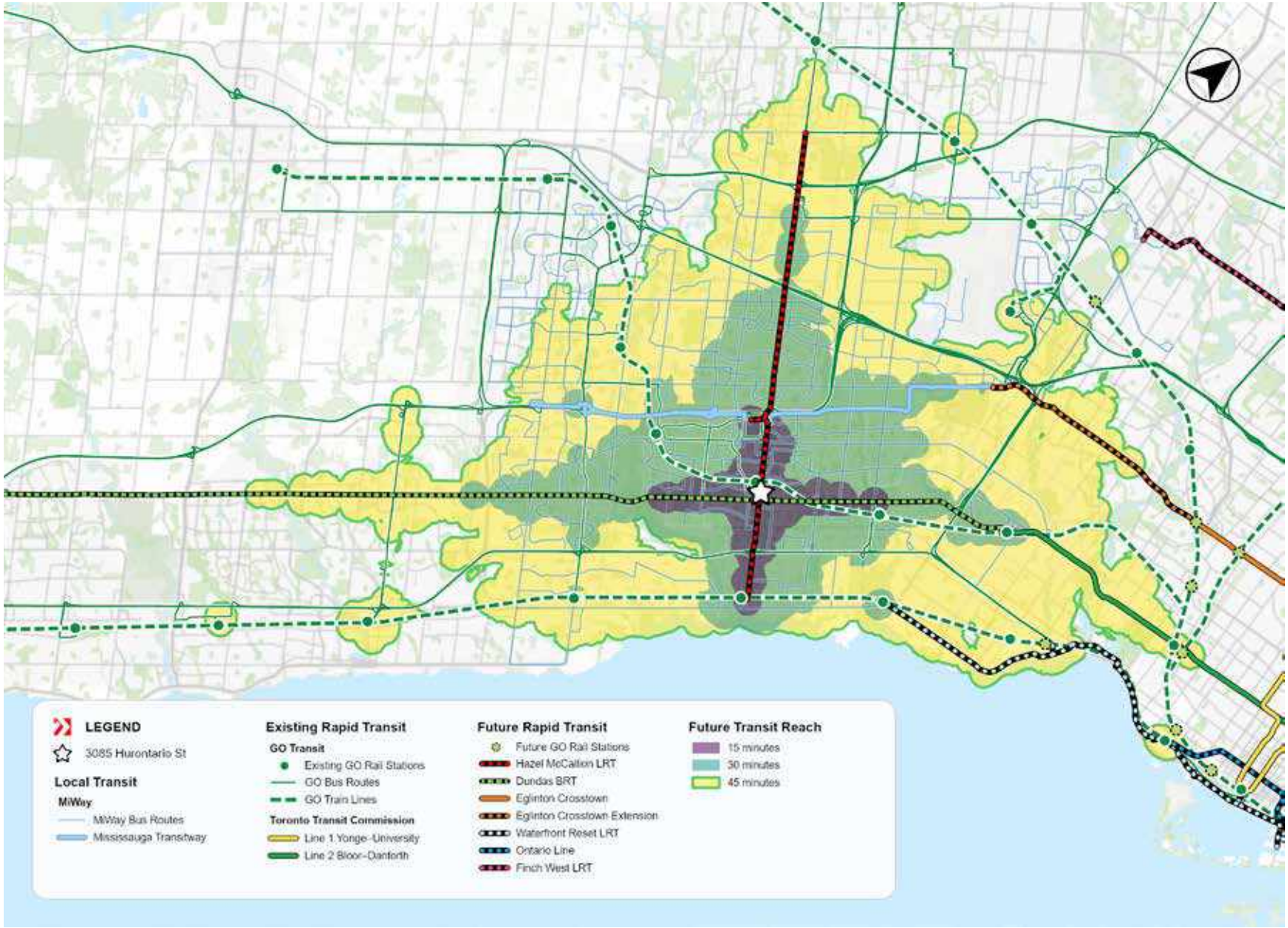

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FIGURE 9 FUTURE TRANSIT REACH

5.3 Area Active Transportation Context

5.3.1 Pedestrian Network

5.3.1.1 EXISTING PEDESTRIAN CONNECTIONS

Currently, pedestrian facilities are provided by means of sidewalks on both sides of all streets throughout the study area. Pedestrian signal heads and crosswalks are provided at all signalized intersections in the study area. There is a multi-use path that extends through John C. Price Park into Richard Jones Park, north of Dundas Street East. Destinations of note within 800 metres of the site include, but are not limited to: Cooksville Park, Richard Jones Park, Cooksville GO Station, Anderson College Mississauga Campus, and T.L. Kennedy Secondary School.

Additionally, Hurontario Street serves as an active frontage with mixed uses and provides pedestrians with convenient access to a variety of transit facilities, amenities, and services. Near the site, pedestrians can access GO and MiWay stations, restaurants, cafes, medical facilities, social services, schools, parks, community centres, grocery stores and more.

Crosswalk widths ranging from 2.1 metres to 3.1 metres are also provided at both major, signalized intersections as well as smaller, unsignalized intersections, which contribute to a positive pedestrian experience. There are existing sidewalk facilities along the public streets in the site vicinity including Hurontario Street, Kirwin Avenue, Hillcrest Avenue, Dundas Street East, and Dundas Street West.

An overview of the existing pedestrian network are illustrated in **Figure 10.**

5.3.1.2 PLANNED PEDESTRIAN CONNECTIONS

External Connections

As mentioned in **Section 4.2.1.1**, there are numerous planned improvements which would enhance the pedestrian environment in the vicinity of the site. As per City of Mississauga OPA #145, numerous new pedestrian connections have been planned, including the following:

- A north-south connection midpoint between Hurontario Street and Jaguar Valley Drive (extending from Kirwin Avenue in the north to Dundas Street East in the south, with a slight offset near Agnes Street) at the location of Private Street;
- A north-south connection midpoint between Hurontario Street and Cook Street (extending from the existing Cooksville GO Station in the north to King Street West in the south);
- An east-west connection south of Hillcrest Avenue and Kirwin Avenue (extending from Jaguar Valley Drive in the east to the existing TL Kennedy Secondary School in the west); and
- An east west connection extending eastward of the current Agnes Street terminus (extending from Jaguar Valley Drive in the east to Agnes Street in the west).

Additionally, OPA #146 policies under Section 12.4.7 indicates the provision of “Special Site 2” within the Downtown Cooksville Character Area, which directly impacts the site. It is suggested that the Special Site provides non-residential uses on the ground floor for buildings designated with mixed use or residential (high density) uses adjacent to Hurontario Street. The proposed development provides just over 1,000 m^2 of retail on the ground floor of the site, which would contribute to meeting these recommended standards.

As outlined in the City's Pedestrian Master Plan (PMP), the site is a part of an Urban Growth Centre and the Hurontario Intensification Corridor. As such, the provision of an extensive and complete pedestrian network is necessary. Near the site, the PMP outlines a pedestrian trail crossing gap along Hurontario Street as well as network gaps along Dundas Street West. These gaps have been identified as gaps with high priority to be addressed immediately to further enhance the pedestrian environment within the site vicinity. The PMP also outlines TDM requirements for new sites, such as reduced parking rates and enhanced pedestrian facilities to support and encourage walking as a viable mode of transport.

The PMP also discusses several general improvements to the City's pedestrian network, many of which would apply to the entire pedestrian network within the vicinity of the site. These improvements include, but are not limited to, the following:

- The establishment of urban and streetscape design guidelines and sidewalk design requirements;
- The establishment of public amenity guidelines, such as seating or washrooms, street trees and landscape treatments, public art and urban features;
- Increased lighting to enhance visibility;
- Pedestrian signals to ensure pedestrian safety;
- Proper maintenance and snow removal to limit obstructions year-round; and
- The establishment of monitoring programs such as pedestrian counters.

Internal Connections

As mentioned, a new east-west Municipal Road and north-south Private Road are being proposed on-site. These connections will provide continuous pedestrian connections along the roadway with sidewalks and accompanying landscaping for a comfortable walking experience throughout the site. In addition, park space between Buildings 3 and 4 and a village plaza along Hurontario Street between Buildings 1 and 2 are proposed to provide additional pedestrian connections that further permeate the site for convenient access from the adjacent public road network. Further details on the proposed right-of-way design including the pedestrian facilities along the new roadways are discussed in **Section 10.0**.

The improvements mentioned above will contribute to enhancing the pedestrian experience within the vicinity of the site as well as improved safety, accessibility, and comfort for site users. An overview of the existing and proposed active transportation network are illustrated in **Figure 10**. Further, the proposed on-site pedestrian facilities and pedestrian circulation plan are illustrated in **Figure 2** and **Appendix C.**

5.3.2 Cycling Network

5.3.2.1 EXISTING CYCLING CONNECTIONS

The site is currently served by several cycling infrastructure options including dedicated bike lanes, multi-use pathways, and on-street shared cycling routes. The following cycling-supportive routes and facilities are located within an 800-metre radius of the site:

- Multi-use path through Richard Jones Park;
- Bicycle lanes along Kirwin Avenue;
- Bicycle lanes along Camilla Road;
- Shared route along King Street East;
- Bicycle lanes along Confederation Parkway; and
- Shared route along Hillcrest Avenue.

The site is primarily served by north-south bicycle lanes located along both sides of Confederation Parkway. Cycling infrastructure along Kirwin Avenue provides connections to Camilla Road, which continues southwards towards dedicated cycling lanes along the Queensway. The cycling infrastructure along the Queensway extends eastward into Etobicoke and westward until its terminus at Old Carriage Road. The multi-use trail through Richard Jones Park extends northward towards Central Parkway East and provides connections to additional multi-use paths. These cycling supportive routes provide site users with access to a well-connected cycling network that spans the City of Mississauga. An overview of the existing and proposed active transportation network are illustrated in **Figure 10**.

5.3.2.2 PLANNED CYCLING CONNECTIONS

As mentioned in **Section 4.2.5**, the City of Mississauga has planned numerous improvements to the cycling infrastructure of the City. These cycling infrastructure improvements will contribute to the City's end goals of improving safety for cycling, increasing the number of cycling trips taken in the City, and building a connected, convenient, and comfortable cycling network. Based on the City's 2018 Cycling Master Plan, two cycling network improvements within an 800-metre radius of the site are planned, including the following:

- Cycle track / separated bike lane along Dundas Street; and
- Cycle track / separated bike lane along Hurontario Street.

The future bicycle facilities along Hurontario Street will enhance use experience to and from the site in north-south directions, while the bicycle facilities along Dundas Street would provide enhanced east-west connections. These connections would allow for the creation of a more robust network and would allow users of the site to access the greater cycling network that spans the city. An overview of the existing and proposed active transportation network are illustrated in **Figure 10.**

5.3.3 Other Active Mobility Options

As the City's transportation needs continue to evolve, it has begun to explore the feasibility of introducing other forms of active mobility within the City, such as the potential behind introducing bike-share and micro-mobility programs as discussed in the Mississauga Cycling Master Plan and Climate Change Action Plan, respectively, as per **Section 4.2**. Regarding the latter, the City is currently exploring how a shared micro-mobility system of bicycles, electric bikes (e-bikes), and / or electric scooters (e-scooters) may be used for travel.

As the City works to define an appropriate micro-mobility system that suits the City's needs and size, it has launched an e-scooter pilot program where users are able to choose between an e-bike and e-scooter for travel within Mississauga. This pilot program is based on a hybrid model of both docked and dockless parking systems and is privately owned and privately operated. Currently, e-scooters may be ridden on roads with a posted speed limit of 50km/h or less, on any designated bicycle lane or path, and on multi-use trails within the road right-of-way. As such, within the immediate vicinity of the site, e-scooters may be operated along Kirwin Avenue, Hillcrest Avenue, Dundas Street, and Jaguar Valley Drive.

An overview of the existing and proposed active transportation network are illustrated in **Figure 10.**

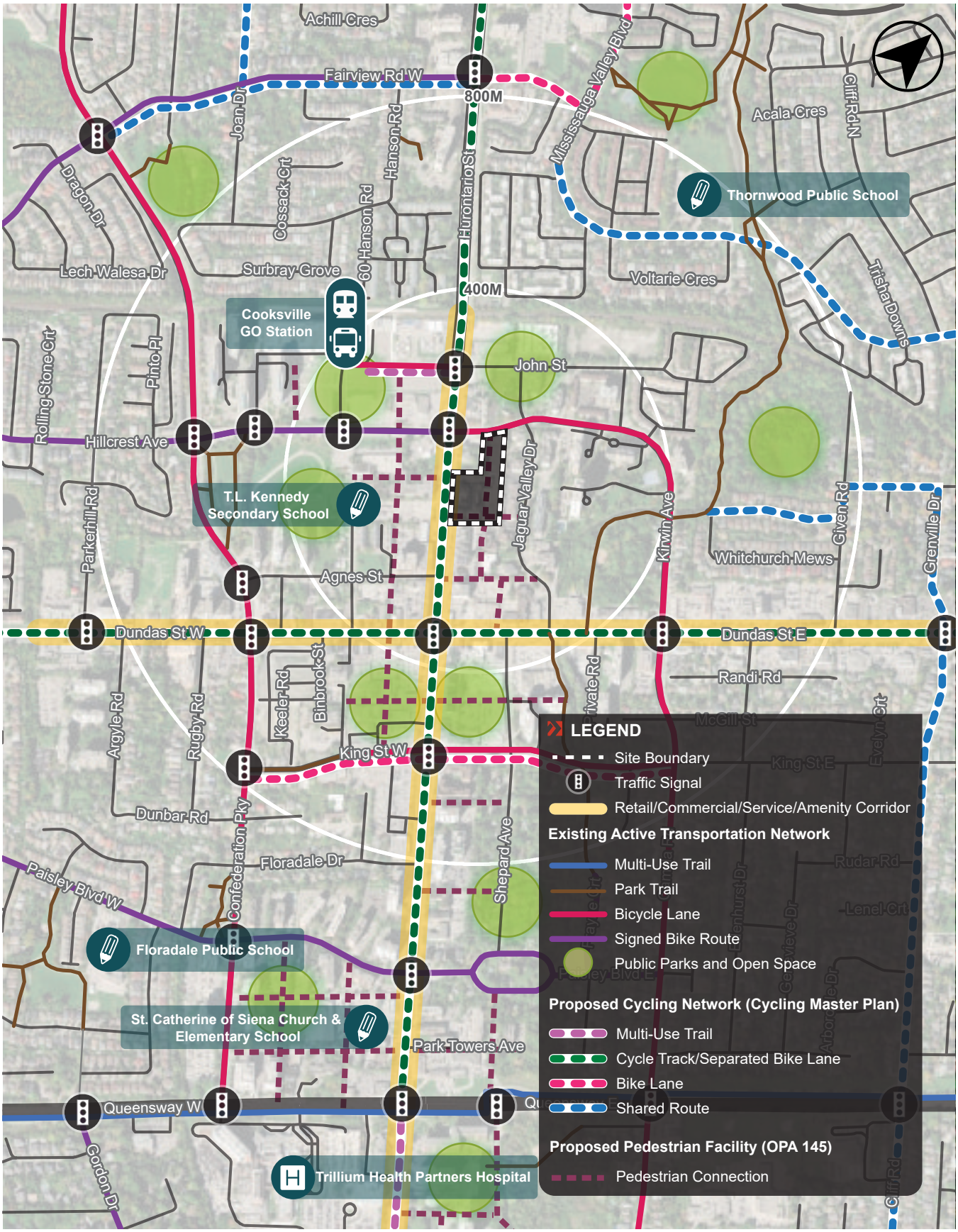

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FIGURE 10 EXISTING & PROPOSED ACTIVE TRANSPORTATION NETWORK

6.0 TRANSPORTATION DEMAND MANAGEMENT

6.1 Transportation Demand Management Plan

Transportation Demand Management (TDM) plans are developed with a focus on reducing single occupant vehicle trips and supporting alternative modes of transportation including walking, cycling and transit.

The site is located within the Downtown Cooksville area, which is a mixed-use area with residential, employment / commercial / retail, and educational uses. These land uses allow for residents to potentially live and work in close proximity to each other (i.e., the walkable 15-minute city envisioned by City policies). Around the site today, transit, sidewalks, and cycling paths are provided, which make non-vehicular modes of travel a viable alternative. Notably, the Cooksville GO Station is within a convenient distance to the site, along with the future Hurontario LRT (located at Cooksville GO Station) and Dundas BRT (located at Hurontario Street / Dundas Street intersection) stations.

In the future, in accordance with the Official Plan, intensification of the area is encouraged for the City of Mississauga, and the construction of new uses and transportation-related improvements will assist in supporting non-vehicular modes of travel for future site users.

The following strategies will be implemented as part of the preliminary TDM plan for the proposed mixed-use development. It is noted that the proposed TDM measures will be further discussed and refined throughout later stages (i.e., Site Plan Approval) of the application process.

The completed TDM checklist is provided in **Appendix C**.

6.1.1 Vehicular Travel Management

- Reduced vehicular parking supply from the City's current by-law rates.
- Resident parking spaces will be unbundled (i.e., sold separately from the unit).
- Provide on-site pick-up / drop-off facilities central to the residential and retail uses of the buildings to encourage carpooling or ridesharing.
- Provide a car share spaces on site. This number would be confirmed with the car share operator but anticipated to be in the order of 2-4 spaces.
- Provide a free one-year membership to the car share service to first time residents of each dwelling unit that do not purchase a parking space as a one-time provision.

6.1.2 Transit Incentives

- Provide a pre-loaded PRESTO card pass to first-time residents of each dwelling unit that do not purchase a parking space as a one-time provision.
- Provide transit information screens in the lobbies of each residential building.
- Distribute or display MiWay promotional materials to provide information on transit service to residents, employees, and visitors.

6.1.3 Bicycle Parking and Services

- Provide an ample number of bicycle parking spaces for the overall development based on City's current by-law rates.
- Provide wayfinding and signage for on-site bicycle parking, amenities, and nearby cycling facilities.

- Provide a $200 credit towards the purchase of a bicycle for first time residents of each dwelling unit that do not purchase a parking space as a one-time provision.
- Provide on-site bike repair stations adjacent to long-term bicycle parking areas.
- Provide information to residents and employees about City bike events.
- Provide copies of the City's Bikeway and Trails Map and Cyclists Handbook to residents and employees.
- Provide information about camps and "CAN-Bike" education / safety classes to residents and employees.

6.1.4 Micro-mobility Services

- Provide a shared micro-mobility service (e-bikes and e-scooters) on site.
- Provide a free one-year membership to the shared micro-mobility service to first time residents of each dwelling unit that do not purchase a parking space as a one-time provision
- In partnership with the City, support the provision of a City-wide shared micro-mobility system through the e-scooter pilot or other programs as they develop.

6.1.5 Pedestrian Access and Walkability

- Provide an improved public realm within and around the site, including the provision of landscaped pedestrian paths between the buildings that permeate the overall site.
- Provide wayfinding and signage to guide pedestrians within and around the site.

6.1.6 Land Use and Infrastructure

- Provide a complementary mix of uses on site (e.g., residential and retail).

6.2 Pedestrian Circulation Plan

As per the City of Mississauga Transportation Impact Study guidelines dated December 2022, a pedestrian circulation plan is required.

The proposed development includes a combination of sidewalks, pathways, plaza, and parks to create a safe and accessible pedestrian environment. Important pedestrian linkages within and around the site include:

- Sidewalks along Hurontario Street, Kirwin Avenue, and the new Municipal Road;
- Pathways along the new Private Road and the rear of Building 4;
- A Village Plaza connecting Hurontario and the new Private Road in between Building 1 and 2; and
- A Pocket Park connecting the new Private Road and the rear pathway of Building 4.

All functional building entrances are oriented towards the streets and plazas to create an active frontage. Lighting, benches, and street furniture are provided throughout the site. Portion of the Private Road is also raised as a traffic-calming measure and to allow pedestrians to cross the Private Road at the sidewalk level.

Access to public transit from the site can be made by walking along the pathways within the site to Hurontario Street, then north to the intersection of Hurontario Street / Kirwin Avenue or south to Hurontario Street / Dundas Street. Alternatively, pedestrians can also access short-term bicycle parking and transit stops by walking north along the Private Road, then west along Kirwin Avenue to the intersection of Hurontario Street / Kirwin Avenue.

The pedestrian circulation plan is provided in **Appendix C**.

7.0 BICYCLE PARKING CONSIDERATIONS

7.1 Zoning By-law Bicycle Parking Requirements

The site is subject to City of Mississauga Zoning By-law 0225-2007 general bicycle parking standards. The bicycle parking requirements for the overall Site are provided in **Table 4**.

Table 4 Zoning By-law 0225-2007 Minimum Bicycle Parking Requirements

Land Use	Units/GFA[1]	Minimum Rate	Minimum Requirement	
			Long-term (Class A)	Short-term (Class B)
Resident				
Residential	1,658 units	Long-Term: 0.60 spaces / unit Short-Term: 0.05 spaces / unit	995 spaces	83 spaces
Non-resident				
Retail	1,160 m^2	Long-Term: 0.15 spaces / 100 m^2 GFA Short-Term: 0.20 spaces / 100 m^2 GFA	2 spaces	2 spaces
Subtotal			*997 spaces*	*85 spaces*
Total Bicycle Parking Requirement			**1,082 spaces**	

Notes:
1. Based on site statistics provided by Diamond Schmitt Architects dated July 17, 2023.

Application of Zoning By-law 0225-2007 bicycle standards to the proposed development results in a minimum requirement of 1,082 bicycle spaces, including 997 Class A (long-term) spaces and 85 Class B (short-term) spaces.

As per the City of Mississauga Transportation Demand Management Strategy, bicycle parking spaces are to be provided as two types and are defined as:

- Class A (long-term): An indoor bicycle parking space in secure, enclosed, weather-protected areas with controlled access. Common forms include bicycle cages, bicycle rooms and bicycle lockers.
- Class B (short-term): Typically bicycle racks in visible, accessible locations that may or may not be weather-protected. Short-term bicycle parking is typically for customers or visitors.

As per Zoning By-law 0225-2007 Section 3.1.6.3, bicycle parking is to be provided in either of the following sizes:

1. Minimum length of 1.8 meters, a minimum width of 0.6 metres, and a minimum vertical clearance from the ground of 1.9 metres; or,
2. Minimum clearance from the wall of 1.2 metres, minimum width of 0.6 metres, and a minimum vertical clearance from the ground of 1.9 metres (reduced to 1.2 metres for stacked bicycle parking spaces).

7.2 Proposed Bicycle Parking Supply

The architectural plans illustrate a total of 1,303 total bicycle spaces on-site, including 1,217 long-term bicycle parking spaces and 86 bicycle spaces for short-term use.

Bicycle parking access will be provided via driveways off the new public roads. All short-term spaces will be distributed throughout the site at-grade for visitors, while all long-term spaces will be provided within underground parking garage for residents.

Further, it is noted that all the bicycle parking spaces will be provided with a width of approximately 0.45 metres, which is slightly deficient from the minimum zoning by-law requirement of 0.60 metres, as specified in **Section 7.1**. It is anticipated that the proposed bicycle parking width reduction is considered modest and standard practice in the Greater Toronto Area. As such, the proposed bicycle parking space dimensions remain appropriate for the development. Further details on the proposed bicycle parking space dimensions are provided in the architectural package or **Appendix B**.

Notwithstanding the minor adjustment to the bicycle parking space width, the proposed bicycle supply and arrangements are considered appropriate for the site given the multi-modal goals and objectives of reducing peak hour single occupant private vehicle travel.

8.0 LOADING CONSIDERATIONS

8.1 Zoning By-law Loading Requirements

The site is subject to City of Mississauga Zoning By-law 0225-2007 general loading standards. The loading requirements, per Building, are provided in **Table 5**.

Table 5 Zoning By-law 0225-2007 Minimum Loading Requirements

Building	Land Use	Units/GFA[1]	Threshold	Minimum Requirement
1	Resident	428 units	30 or more units	1 space
	Retail[2]	686 m^2	250 - 2,350 m^2	1 space
2	Resident	503 units	30 or more units	1 space
	Retail[2]	474 m^2	250 - 2,350 m^2	1 space
3	Resident	355 units	30 or more units	1 space
4	Resident	727 units	30 or more units	1 space
Total Loading Requirement				**6 spaces**

Notes:
1. Based on site statistics provided by Diamond Schmitt Architects dated July 17, 2023.
2. Loading requirement based upon uses other than office and/or medical office uses, as per Zoning By-law 0225-2007 Section 3.1.4.3.

Application of Zoning By-law 0225-2007 loading standards to the proposed development results in a minimum requirement of 6 loading spaces.

As per Zoning By-law 0225-2006 Section 3.1.4.4, a loading space shall have an unobstructed rectangular area with a minimum width of 3.5 metres and a minimum length of 9.0 metres.

8.2 Proposed Loading Supply

The architectural plans illustrate a total of 7 loading spaces, including 3 at-grade and 4 on the P1 level, within consolidated loading facilities at Buildings 1, 2, 3, and 4. Vehicular access provided off the new north-south Private Road (serving at-grade loading spaces via driveway) and east-west Municipal Road (serving below-grade loading spaces via ramp).

There are 3 loading spaces (1 for waste collection, 2 for commercial and residential loading) proposed at the ground floor at Building 1 to service garbage collection, retail / commercial activity, and residential activity within Building 1. The remaining 4 loading spaces on the P1 level are smaller to facilitate residential move-ins and accordingly are located near the elevators of Buildings 1, 2, 3, and 4.

As such, the loading provisions for the current proposal will meet the servicing needs of the overall site in a way that minimizes the amount of ground floor GFA set aside for loading activity.

9.0 PICK-UP / DROP-OFF CONSIDERATIONS

The emergence and convenience of auto-based shared mobility services, including car-share, taxi, and ride-hailing services (e.g., Uber and Lyft), and general carpooling, have grown in recent years and are being used as an increasingly suitable alternative for private vehicle ownership or single-occupancy vehicle travel. Furthermore, increased use in auto-based shared mobility services is often being observed in central, higher-density, and intensification areas of urban cities, including the City of Mississauga (e.g., along several major intersections and corridors with frequent heavy traffic). Based on the foregoing, pick-up / drop-off spaces, in the form of laybys and on-street spaces, are proposed within the new Private Road.

Within the site, laybys are proposed along both sides of the proposed north-south Private Road (sections on the east side adjacent to Building 3 and 4 and on the west side adjacent to Building 2) to generally serve all buildings. Two additional pick-up / drop-off are also proposed at-grade adjacent to the loading area of Building 1. These layby and pick-up / drop-off spaces will serve as efficient short-term parking facilities for day-to-day activities associated with each new Building (i.e., pizza delivery, passenger or retail-related pick-up / drop-off, and ride-sharing services). These spaces will be provided upon full completion of the Private Road.

As such, a total capacity of approximately 12 short-term pick-up / drop-off spaces are planned to meet the anticipated short-term parking demands of the proposed development. The locations of the layby spaces are illustrated in **Figure 2** and **Appendix B**.

The current pick-up / drop-off strategy is generally appropriate for the site and will operate safely to accommodate short-term parking activity for the proposed uses.

10.0 FUNCTIONAL ROAD PLAN

10.1 East-West Municipal Road

As per the City's Official Plan and in discussions with the City, staff identified the desire to see a new east-west Municipal Road as part of the proposed development which would connect to Hurontario Street and Jaguar Valley Drive. This road will serve as an additional connection for those destined to Hurontario Street from the Downtown Cooksville neighbourhood as well as create a more permeable roadway network which will improve the overall pedestrian and cycling network.

To satisfy this request, the site plan now identifies a 14.2 metre ROW along the south edge of the property. This ROW will allow for a 6.6 metre pavement width (one 3.3 metre travel lane in each direction), 5.6 metre boulevard on the north side (including a 2.2 metre sidewalk) and 1.5 metre boulevard on the south side for grading purposes. When the commercial property to the south develops, it is expected that they would make up the remaining boulevard including sidewalk on the south side of the Municipal Road.

The site does not have frontage on Jaguar Valley Drive. Consequently, in the interim, the Municipal Road will terminate as a dead-end at the east edge of the property. To facilitate a turnaround for City vehicles including snowplows, a custom-designed turnaround facility (mini-hammerhead) has been provided. This turnaround facility allows for the development of an efficient and urban built form that is compatible with both the interim and ultimate road condition. It is expected that when the properties immediately east of the site fronting onto Jaguar Valley Drive redevelop, the Municipal Road will be extended to Jaguar Valley Drive. Under both the ultimate and interim condition, the roadway will provide access to the north-south Private Road as well as the underground parking ramp located in Building 3.

It should be noted that the commercial property to the south has a driveway at its northerly edge adjacent to the proposed development site. To satisfy the City's request to provide the new Municipal Road at the location shown, this will require the closure of the south commercial property northerly driveway in order to avoid a side-by-each driveway condition. The commercial property to the south will continue to have a driveway to Hurontario Street and means of providing alternative access such as a potential connection to the Municipal Road will be explored.

The functional road plans for the interim and ultimate condition are illustrated in **Appendix E**.

10.2 North-South Private Road

As part of the revised proposal, a new north-south Private Road is provided to serve the new buildings on-site and extending between the Municipal Road in the south and Kirwin Avenue in the north. This road will serve as a connection for those destined to / from the site as well as create a more permeable roadway network which will improve the overall pedestrian and cycling network. The road configuration is proposed to include a 6.0 metre driveway, including two 3.0 metre travel lanes (one lane per direction), layby parking, pedestrian paths, and landscaping with alternating flush and mountable curbs along the entire extent of the roadway. The roadway design also resembles a winding pathway, which generally acts as a natural traffic calming measure to enhance safety for pedestrians and cyclists. The Private Road will provide access to one of the underground parking ramps and the at-grade loading area located in Building 1.

The north-south Private Road connects to Kirwin Avenue offset slightly to the west of the of the existing residential development driveway. The Private Road is located at the west edge of the property fronting Kirwin Avenue to create sufficient lot depth to allow for a viable building design. Although the Private Road and driveway are not aligned directly opposite each other, this is a typical condition in urban conditions with intensification like the downtown Cooksville area. Kirwin Avenue is a low-speed roadway with a 40 km/h posted speed limit and numerous other driveway connections which drivers will both be expecting and aware of.

The functional road plans for the private road are illustrated in **Appendix E**.

11.0 SITE ACCESS REVIEW

11.1 TAC Guideline Review

The specific design of the site driveways were reviewed against the *TAC Geometric Design Guide for Canadian Roads, June 2017,* (the "TAC Guide") guidelines based upon the following elements:

- Driveway corner clearance;
- Driveway spacing from adjacent driveways;
- Driveway width;
- Driveway clear throat length; and
- Driveway curb radii.

Drawings illustrating the Site driveway dimensions referenced in the subsequent sections, sight distance measurements demonstrating that adequate sightlines are provided, and relevant TAC references are provided in **Appendix F.**

The TAC driveway requirements are summarized in **Table 6.**

Table 6 Site Access Review Summary

TAC Measure	Guideline	Intersection Driveway Value		
		Private Road / Kirwin Road	Private Road / Municipal Road	Building 3 Ramp / Municipal Road
Driveway corner clearances[1]	15.0 metres	78.0 metres (east) 63.0 metres (west)	62.0 metres (west)	-
Driveway spacing[2]	3.0 metres	-	9.8 metres (east)	9.8 metres (west)
Driveway widths[3]	2.0 - 7.3 metres	6.0 metres	6.0 metres	7.6 metres
Driveway clear throat length[4]	25 metres	77.0 metres	5.6 metres	34.0 metres
Driveway right turn curb radius[5]	3.0 - 4.5 metres	5.0 metres (east) 5.0 metres (west)	5.0 metres (east) 8.5 metres (west)	5.0 metres (west)

Notes:
1. TAC Geometric Design Guide for Canadian Roads, June 2017, Figure 8.8.2
2. TAC Geometric Design Guide for Canadian Roads, June 2017, Figure 8.9.2
3. TAC Geometric Design Guide for Canadian Roads, June 2017, Table 8.9.1
4. TAC Geometric Design Guide for Canadian Roads, June 2017, Table 8.9.3
5. TAC Geometric Design Guide for Canadian Roads, June 2017, Table 8.9.1

Private Road / Kirwin Road Access

The driveway corner clearance length, spacing length, clear throat length, and driveway width meet the suggested dimensions in the TAC Guide for this access. Notably, the driveway curb radii are slightly larger than the suggested design standard for residential driveways identified in the TAC Guide. This acknowledges that adjusted curb radii are suitable where larger vehicles are anticipated to appropriately accommodate loading activity on-site. The proposed curb radii as a result of the loading manoeuvres analyzed for this access are illustrated in **Appendix D**.

Private Road / Municipal Road Access

The driveway corner clearance length, spacing length, and driveway width meet the suggested dimensions in the TAC Guide for this access. Notably, the clear throat length is slightly reduced to the suggested design standard for residential driveways identified in the TAC Guide. The Private Road is designed to be a relatively low-volume road, in an urban condition, where it is expected to primarily accommodate site-related traffic, such as pick-up / drop-off activity. As such, it is expected that this access will operate acceptably with the proposed clear throat length. In addition, the driveway curb radii are larger than the suggested design standard for residential driveways identified in the TAC Guide. This acknowledges that adjusted curb radii are suitable where larger vehicles are anticipated to appropriately accommodate loading activity on-site. The proposed curb radii as a result of the loading manoeuvres analyzed for this access are illustrated in **Appendix D**.

Building 3 Ramp / Municipal Road Access

The driveway corner clearance length, spacing length, and clear throat length meet the suggested dimensions in the TAC Guide for this access. Notably, the driveway width and driveway curb radii are slightly larger than the suggested design standard for residential driveways identified in the TAC Guide. These dimensional adjustments are required where larger vehicles are anticipated to appropriately accommodate loading activity below-grade. The proposed curb radii as a result of the loading manoeuvres analyzed for this access are illustrated in **Appendix D**.

11.2 Sight Distance Review

A review of the available sight distance for the Private Road on Kirwin Avenue was completed as part of this analysis and is attached in **Appendix F**.

The sight distance east and west of the Private Road on Kirwin Avenue meets the minimum intersection sight distance requirements as identified in the TAC Guidelines for a design speed of 50km/h (65 metres and 65 metres, respectively).

Therefore, there are no issues with the sight distance for the Private Road.

12.0 MULTIMODAL TRAVEL DEMAND FORECASTING

The existing context to the site provides various opportunities for non-automobile modes of travel (i.e., cycling, walking, and transit). As part of this study, travel demand forecasts have been established for both auto-based and non-auto-based trips for the residential and non-residential land uses.

12.1 Residential Travel Demand

12.1.1 Residential Person Trip Generation

The residential multi-modal travel demand is forecasted for the site based on several person trip surveys conducted for proximate developments and the Institute of Transportation Engineers' (ITE) Trip Generation Manual (11th Edition). A summary of the collected trip generation data and resulting trip rate is provided in **Table 7**.

Based on the selected trip rate, the residential uses on site expect in the order of 915 and 910 two-way person trips in the weekday morning and afternoon peak hours, respectively.

Table 7 Residential Proxies and Site Generated Person Trips

	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
3504 Hurontario Street Tuesday, January 28, 2020	0.07	0.33	0.40	0.25	0.15	0.40
3515 & 3525 Kariya Drive Tuesday, January 28, 2020	0.05	0.50	0.55	0.31	0.14	0.45
ITE Land Use Code 2022 (Close to Rail Transit), Dense Multi-Use Urban	0.16	0.49	0.65	0.34	0.23	0.57
Average Rate	0.09	0.44	0.53	0.30	0.17	0.47
Selected Rate	0.05	0.50	0.55	0.35	0.20	0.55
Residential Person Site Trips [1,658 total residential units]	**85**	**830**	**915**	**580**	**330**	**910**

Notes:
1. All site trips are rounded to the nearest five (5).
2. All trip rates are in trips per unit.
3. This information is property of BA Consulting Group Ltd. It should not be altered, abbreviated, taken out of context, or used for any purpose other than the intended purpose in connection with the 3085 Hurontario Street development application.

12.1.2 Residential Mode Splits

For the purposes of analysis, existing residential mode split data was adopted based on the 2016 Transportation Tomorrow Survey (TTS). The TTS data outputs are provided in **Appendix G**.

Given the site's proximity to the GO Station and the expected completion of Hurontario LRT, the auto mode splits for travel to and from the site are decreased by 7% to reflect a corresponding increase in the transit mode to reflect a transit mode split target of 30%. The existing and future site mode splits for the weekday morning and afternoon peak hours are summarized in **Table 8**.

Table 8 Existing and Future Mode Splits

Travel Mode	Directional Mode Splits			Difference	Future Adopted
	Inbound	Outbound	Average		
Auto Driver	50%	47%	*48%*	-5%	43%
Auto Passenger	14%	16%	*15%*	-2%	13%
Auto	**64%**	**63%**	***63%***	**-7%**	**56%**
Transit	21%	25%	*23%*	+7%	30%
Cycling	1%	1%	*1%*	--	1%
Walking	14%	11%	*13%*	--	13%
Non-Auto	**36%**	**37%**	***37%***	**+7%**	**44%**
Total	**100%**	**100%**	***100%***	**--**	**100%**

Notes:
1. Travel modes are based on home based trips within TTS zones 3723, 3724, 3862, 3867, 3871, and 3872.
2. The data presented in the table above have been filtered to only include apartment types.

The 2016 data demonstrates that a large proportion of home-based trips in the area rely on non-auto modes. Given the Site's proximity to the GO station and the presence of the future Hurontario LRT, the non-auto proportion is expected to increase. The future mode splits are applied to the external person trip generation derive multimodal trip forecasts for the residential uses on site.

It should be noted that the adopted 30% transit mode share represents a conservative, (i.e., erring on the low side) assumption. In the Hurontario / Main Street Corridor Master Plan (2010) prepared by the City of Mississauga and City of Brampton as part of the Hurontario LRT development process, it identified significantly higher transit mode shares in the 2031 base LRT case with transit mode shares in excess of 60%. If these transit mode share assumptions were carried through the analysis, it would result in substantially fewer auto trips being generated.

12.1.3 Residential Multimodal Forecasts

Residential multi-modal trip forecasts are calculated based on the external person trip generation summarized in **Section 12.1.1** and the area mode splits summarized in **Section 12.1.2**.

The forecasts are provided in **Table 9**. Of the total person trips, 390 and 400 two-way auto driver site trips are expected during the weekday morning and afternoon peak hours, respectively. These trips will be analyzed on the area road network.

Approximately 275 transit site trips are expected during both the weekday morning and afternoon peak hours, respectively.

Table 9 Multimodal Residential Site Trips

	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Person Site Trips	**85**	**830**	**915**	**580**	**330**	**910**
Auto Driver	35	355	390	255	145	400
Auto Passenger	15	105	120	70	40	110
Transit	25	250	275	175	100	275
Cycle	0	10	10	5	0	5
Walk	10	110	120	75	45	120

Notes:
1. All site trips are rounded to the nearest five (5).

12.2 Retail Travel Demand

12.2.1 Retail Person Trip Generation

The retail multi-modal travel demand is forecasts based on person trip surveys for shopping plazas published in the ITE Trip Generation Manual (11th Edition) and a proxy retail trip generation survey. The proxy survey consisted of door counts at multiple restaurants, services such as banks or dry-cleaners, convenience stores, coffee shops, a grocery store, and general retail.

A summary of the collected trip generation data and resulting trip rate is provided in **Table 10**.

The retail uses on site expect in order of 65 and 105 two-way person trips in the weekday morning and afternoon peak hours, respectively. It is noteworthy that a portion of these total person trips will be internal to the Site (i.e., not impact the external transportation network) and will be discussed further in relation to the mode splits.

Table 10 Retail Site Person Trips

	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Proxy Survey – Shoppes on Steeles & 404						
Person Trip Rate (Thursday, June 6, 2019)	3.89	2.95	6.84	4.29	5.13	9.42
ITE Trip Surveys – Land Use Code 821 Shopping Plaza (Without Supermarket)						
Person Trip Rate (General Urban / Suburban) • AM Peak: Weekday, AM Peak Hour of Generator PM Peak: Weekday, PM Peak Hour of Generator	3.36	3.37	6.73	6.03	5.80	11.83
Person Trip Rate (Dense Multi-Use Urban) • **AM Peak:** Weekday, AM Peak Hour of Generator **PM Peak:** Weekday, PM Peak Hour of Generator	1.38	0.91	2.29	2.94	2.72	5.66
Person Trip Rate (Dense Multi-Use Urban) • AM Peak: Street Peak Data Not Available. PM Peak: Peak Hour of Adjacent Street Traffic (Hour Between 4:00 p.m. to 6:00 p.m.)	No Data Available.			3.22	3.10	6.32
Adopted Trip Rate						
Selected Rate	3.20	2.80	6.00	4.45	4.55	9.00
Retail Person Site Trips [1,160 m^2 total retail GFA]	35	30	65	50	55	105

Notes:
1. All site trips are rounded to the nearest five (5).
2. All trip rates are in trips per 100 m^2 gross leasable area (GLA).
3. For the purposes of a conservative analysis, the gross leasable area (GLA) is assumed to be analogous to the gross floor area (GFA).
4. Since the ITE trip generation manual provides rates in trips / 1000 ft^2 GFA, the trip rates were converted to trips / 100 m^2 GFA.
5. This information is property of BA Consulting Group Ltd. It should not be altered, abbreviated, taken out of context, or used for any purpose other than the intended purpose in connection with the 3085 Hurontario Street development application.

12.2.2 Existing Retail Mode Splits

Existing market / retail mode split data were obtained from the 2016 Transportation of Tomorrow Survey (TTS). The mode splits for the weekday morning and afternoon peak hours are summarized in **Table 11**. The TTS data outputs are provided in **Appendix G**.

Table 11 Retail TTS Mode Splits

Travel Mode	Directional Mode Splits		
	Inbound	Outbound	Average
Auto Driver	60%	64%	*62%*
Auto Passenger	17%	18%	*17%*
Auto	**77%**	**82%**	***79%***
Transit	16%	11%	*14%*
Cycling	0%	0%	*0%*
Walking	7%	7%	*7%*
Non-Auto	**23%**	**18%**	***21%***
Total	**100%**	**100%**	***100%***

Notes:
1. Travel modes are based on market-based trips within TTS zones 3723, 3724, 3862, 3867, 3871, and 3872.

12.2.3 Retail Multi-modal Forecasts

Retail multi-modal trip forecasts are calculated based on the total person trip generation summarized in **Section 12.2.1** and the area mode splits summarized in **Section 12.2.2**. However, in recognizing the mixed-use nature of the proposed development, it is expected that most trips will be from the immediate surrounding area and from the residential uses located on site and so the cycling and walking trip mode splits have been increased accordingly.

The retail forecasts are summarized in **Table 12**. Approximately 10 and 25 transit site trips are expected during the weekday morning and afternoon peak hours, respectively.

Table 12 Multi-Modal Retail Site Trips

Travel Mode	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Persons / Total	**35**	**30**	**65**	**50**	**55**	**105**
Auto Driver	0	0	0	0	0	0
Auto Passenger	0	0	0	0	0	0
Transit	5	5	10	10	15	25
Cycling	5	5	10	10	10	20
Walking	25	20	45	30	30	60

Notes:
1. Retail site trips are rounded to the nearest five (5).

13.0 VEHICULAR TRAFFIC VOLUME FORECASTING

13.1 Existing Traffic Volumes

13.1.1 Recent Data Collection

On behalf of BA Group, Spectrum Traffic Inc. recently conducted turning movement counts (TMC) for the study area intersections in October of 2021, and November of 2022. The counts were completed during the weekday morning and afternoon peak periods (the busiest hours of traffic are between 7:30 a.m. to 9:30 a.m. and 4:00 p.m. to 6:00 p.m., respectively).

13.1.2 Pre-Pandemic Volume Calibration

Given that Hurontario Street is currently undergoing construction, with several lanes closed for traffic, historical counts were required to generate the existing base volume layer along the Hurontario Street corridor. Available traffic counts were conducted during the COVID-19 pandemic, and additional counts prior to the pandemic were also obtained dated 2019 (at Hurontario Street / Dundas Street) and 2020 (at Hurontario Street / Fairview Road). The pre-pandemic traffic counts serve as a reference for volume calibration within the study area. It is noteworthy that at the time of both of the pre-pandemic counts, the Cooksville GO Station was under construction and not fully operational.

The counts conducted in November of 2022 were used for existing site access intersections, as well as intersections along Dundas Street East and Kirwin Avenue (east of Hurontario Street).

Traffic count information adopted as the basis for the traffic operations analysis and undertaken to assess the operation impacts of the proposed development are summarized in **Table 13**. All count data is provided in **Appendix H**.

Table 13 Traffic Data Information

Intersection	Date of Count
Signals	
Hurontario Street / John Street	Wednesday, October 13, 2021
Hurontario Street / Hillcrest Avenue / Kirwin Avenue	
Hurontario Street / Fairview Road East & West	Wednesday, January 22, 2020
Hurontario Street / Dundas Street East & West	Thursday, September 19, 2019
Kirwin Avenue / Camilla Road / Dundas Street East	Wednesday, November 9, 2022
Unsignalized / "Stop" Control	
Hurontario Street / 3085 Hurontario Street Access	Wednesday, November 9, 2022
Kirwin Avenue / 3085 Hurontario Street Access	
Jaguar Valley Drive / Kirwin Avenue	
Jaguar Valley Drive / Dundas Street East / 60 Dundas Street East	

Notes:
1. All counts were conducted during peak travel periods between 7:30 a.m. to 9:30 a.m. and 4:00 p.m to 6:00 p.m.

13.1.3 Cooksville GO Station Traffic Forecasts

The construction of the Cooksville GO Station was recently completed in September of 2020. However, given pandemic restrictions and an increase in working-from-home at the time of the October 2021 counts, travel flows to and from the GO station (including transit ridership numbers) do not represent typical conditions.

To forecast the appropriate quantity of GO-related vehicle trips under typical conditions, BA Group conducted a review of typical trip generation rates at other GO stations in similar contexts. The vehicle trip generation rates are summarized in **Table 14** below. The difference between the anticipated typical GO-related trips and the currently observed GO-related trips (in the order of 1,580 and 1,405 two-way trips in the peak hours) were then manually assigned onto the area road network based on existing travel patterns in the area.

Table 14 GO Station Vehicle Trip Rates

		AM Peak Hour			PM Peak Hour		
		In	Out	2-Way	In	Out	2-Way
Observed Trip Rates (Trips / Parking Supply)	Parking	0.51	0.03	0.54	0.08	0.40	0.48
	Pick-Up / Drop-Off	0.09	0.09	0.18	0.08	0.08	0.16
	Total	0.60	0.12	0.72	0.16	0.48	0.64
Cooksville GO Generated Trips (~2,500 spaces)	Parking	220	225	445	195	200	395
	Pick-Up / Drop-Off	1265	75	1340	200	990	1190
	Total	1485	300	1785	395	1190	1585
Existing Cooksville GO Trips (October 2021 Count)	Parking	45	40	85	35	30	65
	Pick-Up / Drop-Off	95	25	120	30	85	115
	Total	140	65	205	65	115	180
Additional GO Trips[2] (Assigned in this Study)	Parking	175	185	360	160	170	330
	Pick-Up / Drop-Off	1170	50	1220	170	905	1075
	Total	1345	235	1580	330	1075	1405

Notes:
1. All site trips are rounded to the nearest five (5).
2. Difference between Cooksville GO Generated Trips and Existing Cooksville GO Trips

13.1.4 Resultant Baseline Existing Traffic Volumes

The baseline traffic volumes consist of the balanced count data and the adjusted GO vehicle trips that are expected under typical conditions. All turning movement volumes were rounded to the nearest five (5) vehicles and were reviewed to ensure a general consistency in the traffic volumes on links between intersections. Where necessary, traffic volume adjustments were made to balance through traffic volumes between intersections to ensure consistency along the corridor.

The baseline existing traffic volumes for the weekday morning and afternoon peak hours are illustrated in **Figure 11**.

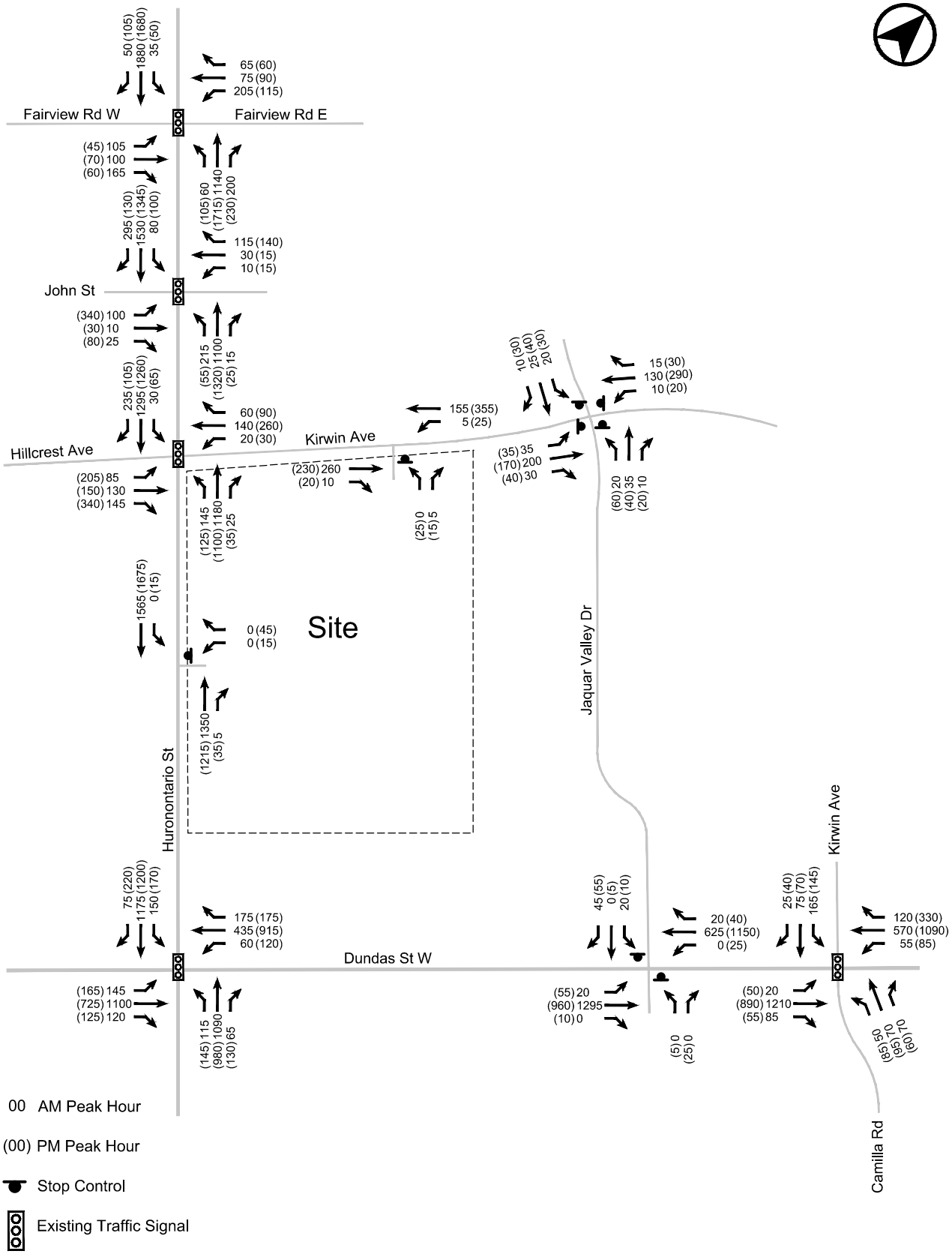

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FIGURE 11 BASELINE EXISTING TRAFFIC VOLUMES

13.2 Future Background Traffic Volumes

13.2.1 Background Development Traffic Allowances

Allowances were made under future traffic conditions to account for new traffic generated by other development proposals in proximity to the proposed site that are either under construction, approved, being reviewed, or for which an application is expected to be submitted to the City of Mississauga in the near future.

Based on current planning, there are 21 background developments planned for the area within the next five years. The total development programme for these 21 background developments includes approximately 11,246 residential units and 14,033 m^2 non-residential GFA. **Table 15** summarizes the list of background developments considered in this study.

Table 15 Background Developments List

Development	Description	Report Source	Traffic Source
1 Fairview Road East	485 residential units 270 m^2 retail GFA	LEA	TIS Report
600 Lolita Gardens	270 residential units	WSP	TIS Report
3575 Kaneff Crescent	282 residential units	Nextrans	TIS Report
16 Elm Drive	1,365 residential units 492 m^2 daycare GFA 452 m^2 retail GFA	Poulos & Chung	TIS Report
86-90 Dundas Street East	336 residential units 300 m^2 retail GFA	GHD	TIS Report
100 Dundas Street West	140 residential units	Not available	
85-95 Dundas Street West	419 residential units 385 m^2 retail GFA	GHD	TIS Report
2512-2532 Argyle Road	101 residential units	Nextrans	TIS Report
2444 Hurontario Street	215 residential units 3 live-work units	IBI	TIS Report
2487 Camilla Road	24 residential units	Nextrans	TIS Report
2570 Argyle Road	255 residential units	BA Group	TIS Report
3420 Hurontario Street	680 residential units 2,000 m^2 retail GFA	Crozier	TIS Report
3606 Hurontario Street	821 residential units 956 m^2 non-residential GFA	BA Group	TIS Report
45 Agnes Street	268 residential units	Not available	
71 Agnes Street	264 residential units	Not available	
185 Enfield Place (Phase 1)	366 residential units 116 m^2 retail GFA 121 m^2 office GFA	BA Group	TIS Report
60 Dundas Street East	1,224 residential units 847 m^2 retail GFA	Burnside	TIS Report
189 Dundas Street West	966 residential units 531 m^2 retail GFA	LEA	TIS Report
255 Dundas Street West	393 residential units 1,293 m^2 retail GFA	LEA	TIS Report
3016 Kirwin Avenue	148 residential units	LEA	TIS Report
33 Hillcrest Avenue	2,224 residential units 6,270 m^2 retail GFA	BA Group	TIS Report

Notes:

1. Where the TIS excerpts did not include background development traffic volumes, trip generation and distribution parameters similar to those adopted in this report were assumed.

13.2.2 Corridor Growth Calibration

Corridor growth rates provided by City of Mississauga staff are summarized in **Table 16**. The total growth rates along Hurontario Street from the current year of 2023 to the year of 2026 represent the traffic reduction resulting from the construction of the Hurontario LRT and the removal of vehicular travel lanes.

Table 16 Corridor Growth Rates

Corridor	Travel Direction	Existing 2023 to 2026		2026 to 2028	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Hurontario Street	Northbound	-20.5% *in total*	-20.5% *in total*	1.0% *per annum*	0.5% *per annum*
	Southbound	-23.5% *in total*	-17.5% *in total*	0.5% *per annum*	0.5% *per annum*
Dundas Street	Eastbound	0.0% *per annum*	0.5% *per annum*	0.0% *per annum*	0.0% *per annum*
	Westbound	1.0% *per annum*	0.0% *per annum*	0.0% *per annum*	0.0% *per annum*

Corridor volumes along Hurontario Street and Dundas Street at the 2028 horizon year were calibrated to the anticipated growth rates above.

13.2.3 Adjustments for Future Road Network

Several network changes in the site vicinity are planned alongside the construction of the Hurontario LRT and the Dundas BRT. These changes were incorporated into the analysis, including, but not limited to, the following:

- The removal of one through lane in either direction along Hurontario Street for the LRT;
- Hurontario Street / Agnes Street as a right-in / right-out (RIRO);
- Bus only-lanes at Hurontario Street / Dundas Street;
- Protected northbound and southbound left turn advance phases along Hurontario Street due to the LRT;
- Protected eastbound and westbound left turn advance phases along Dundas Street due to the BRT; and
- The prohibition of northbound left turns at Hurontario Street / Dundas Street.

As drivers continue to distribute along alternative routes and corridors to avoid congestion and extensive delays, notable shifts in travel patterns in the area are expected given the significant changes to the road network.

13.2.4 Resultant Future Background Traffic Volumes

The future traffic growth is a result of the summation of background development traffic allowances, the calibrated corridor growth trends, and the total traffic volume redistribution as a result of future network changes on the area road network.

Future background traffic volumes, comprising the established baseline existing traffic volumes growth and future traffic growth, are illustrated in **Figure 12**.

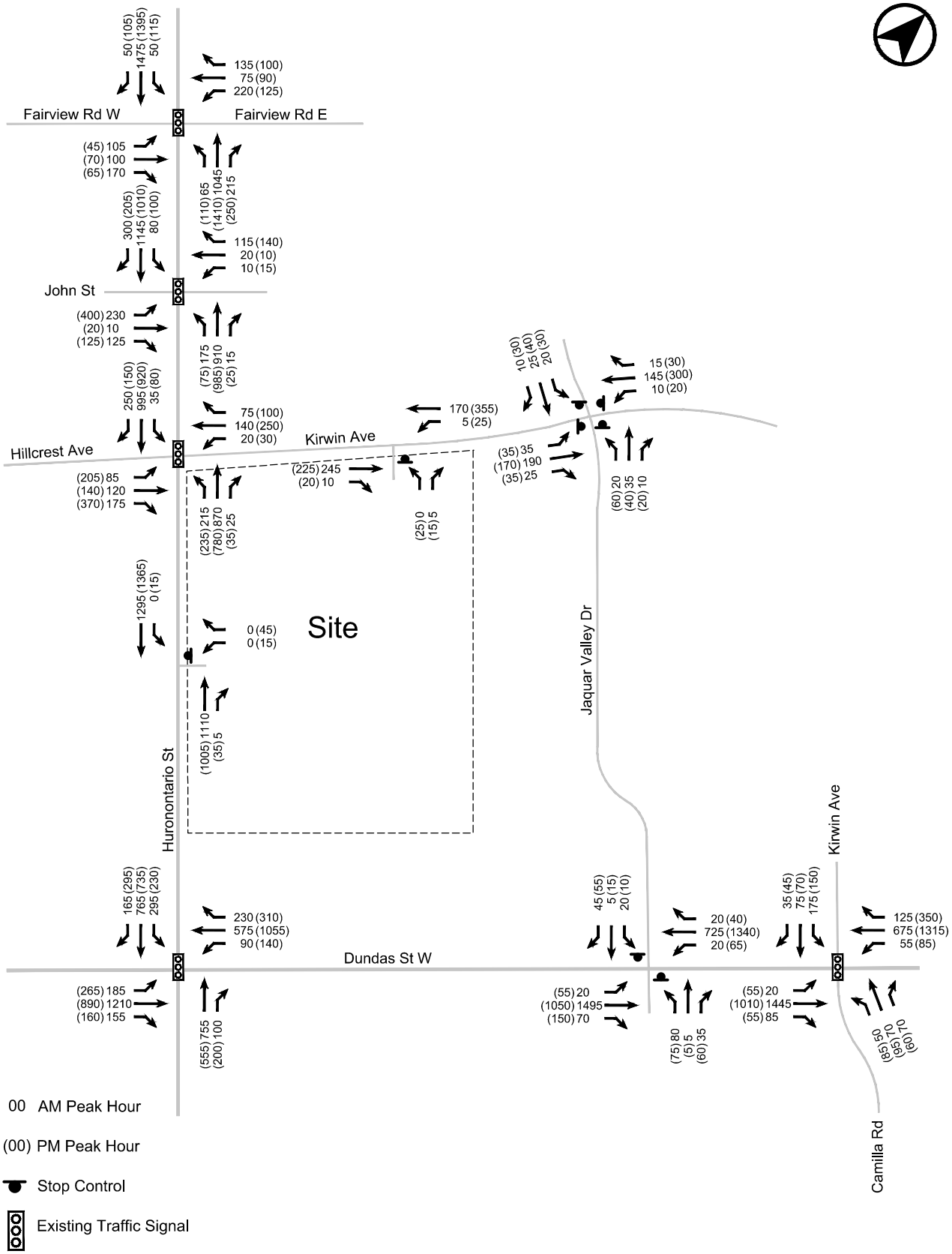

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FIGURE 12 FUTURE BACKGROUND TRAFFIC VOLUMES (2028 HORIZON YEAR)

13.3 Site Traffic Volumes

13.3.1 Existing Site Traffic Volumes

The existing site consists of several retail uses. With the proposed redevelopment, the vehicular traffic to and from these uses will be removed from the area road network. There are 25 and 195 existing site trips during the weekday morning and afternoon peak hours, respectively, as summarized in **Table 17**.

Table 17 Existing Site Traffic Volumes

	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Total Existing Site Trips (To Be Removed)	**20**	**5**	**25**	**95**	**100**	**195**

Notes:
1. All site trips are rounded to the nearest five (5).

13.3.2 Total Site Traffic Volumes

As previously discussed in **Section 12.0**, the site is expected to generate 390 and 400 two-way vehicle trips during the weekday morning and afternoon peak hours, respectively. These vehicle trips are summarized in **Table 18**.

Table 18 Total Site Traffic Volumes

	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Residential	35	355	390	255	145	400
Retail	0	0	0	0	0	0
Total	**35**	**355**	**390**	**255**	**145**	**400**

Notes:
1. All site trips are rounded to the nearest five (5).

13.3.3 Net New Site Traffic Volumes

Relative to existing conditions, the site redevelopment will generate an additional (or "net new") 365 and 205 two-way vehicle trips during the weekday morning and afternoon peak hours, respectively.

Table 19 Net New Site Traffic Volumes

	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Existing Site Trips (To Be Removed)	20	5	25	95	100	195
Total Site Trips	35	355	390	255	145	400
Net New Site Trips	**15**	**350**	**365**	**160**	**45**	**205**

Notes:
1. All site trips are rounded to the nearest five (5).

13.3.4 Site Trip Distribution

13.3.4.1 RESIDENTIAL TRIP DISTRIBUTION

Residential vehicle site trips were assigned onto the area road network based upon a review of travel information provided by the 2016 Transportation Tomorrow Survey (TTS) for home-based trips in the site environs. The TTS queries are provided in **Appendix G**.

The residential site traffic distribution is summarized in **Table 20**.

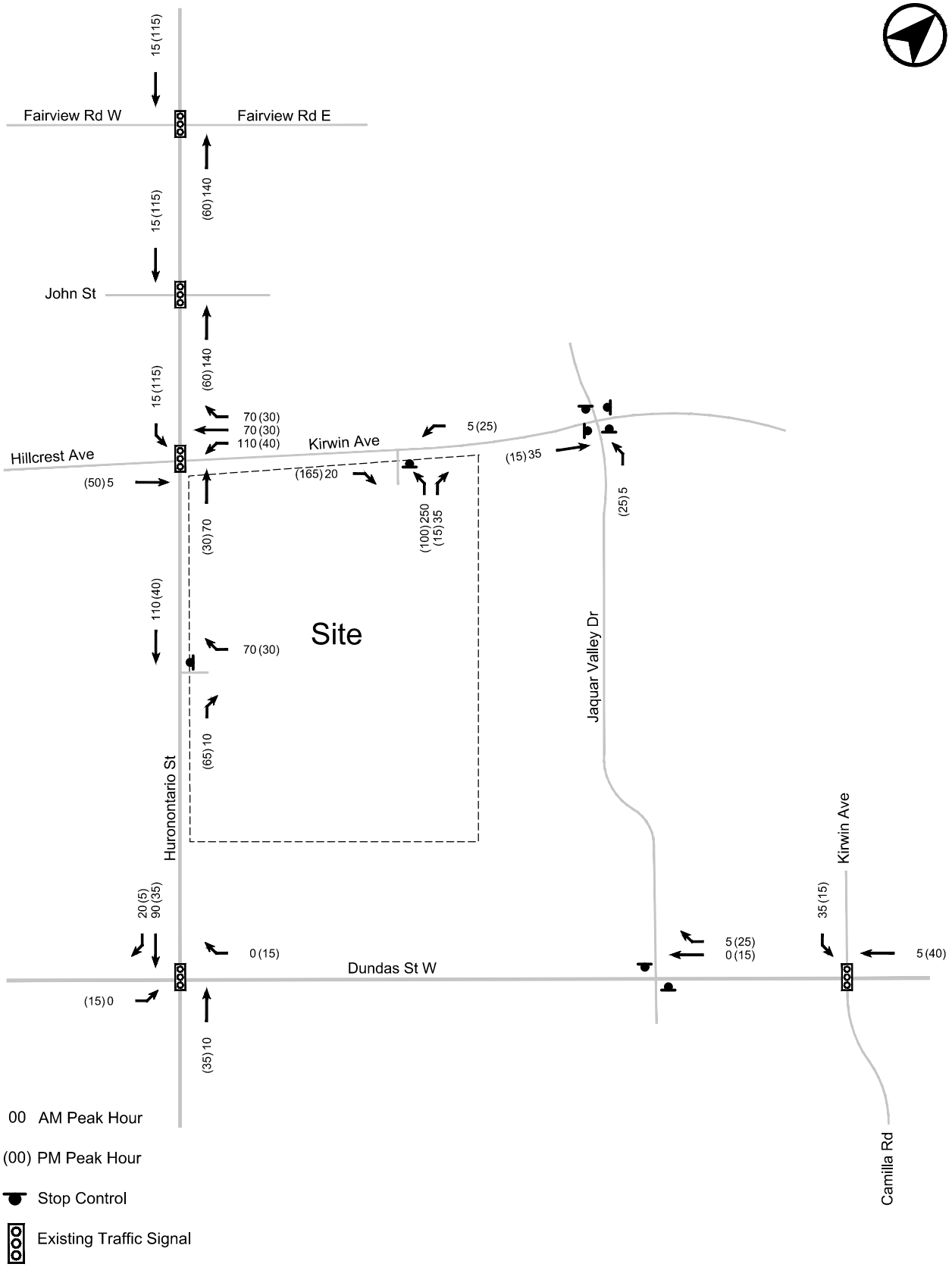
Table 20 Residential Site Traffic Distribution

To / From Cardinal Direction	Corridor	Inbound	Outbound
North	Hurontario Street	45%	40%
	Confederation Parkway	15%	15%
South	Hurontario Street	15%	25%
	Confederation Parkway	0%	0%
East	Dundas Street East	15%	10%
West	Hillcrest Avenue	5%	5%
	Dundas Street West	5%	5%
Total		**100%**	**100%**

Notes:
1. The studied 2016 TTS zones include 3723, 3724, 3862, 3867, 3871 and 3872.

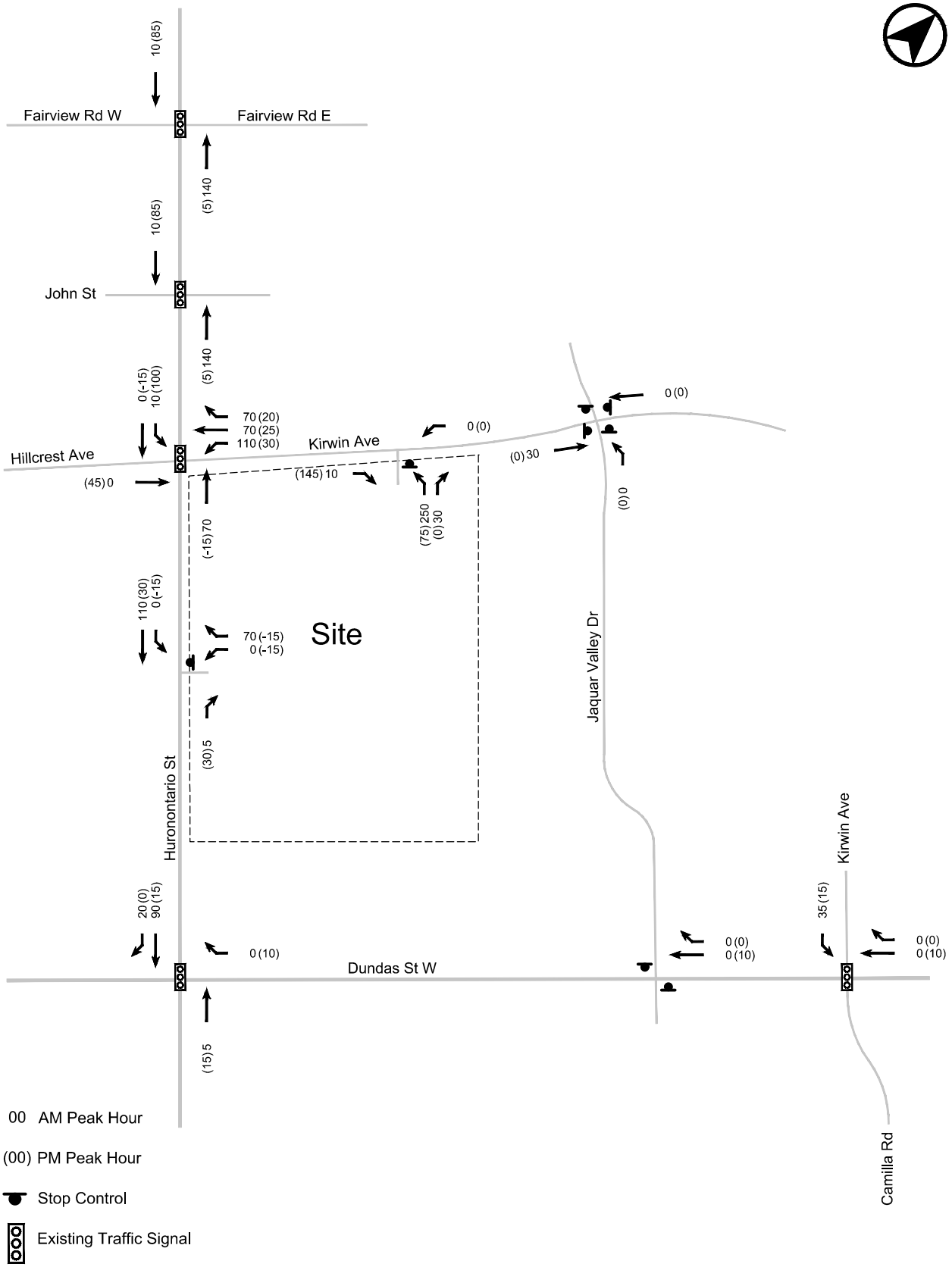
13.3.5 Site Traffic Volume Figures

Figure 13 and **Figure 14** illustrate the total and net new site traffic volumes on the study area road network, respectively.



Date Plotted: September 1, 2023 Filename: P:\63\74\69\Graphics\CAD\Fig13-00-Res_ST.dwg

FIGURE 13 RESIDENTIAL SITE TRAFFIC VOLUMES

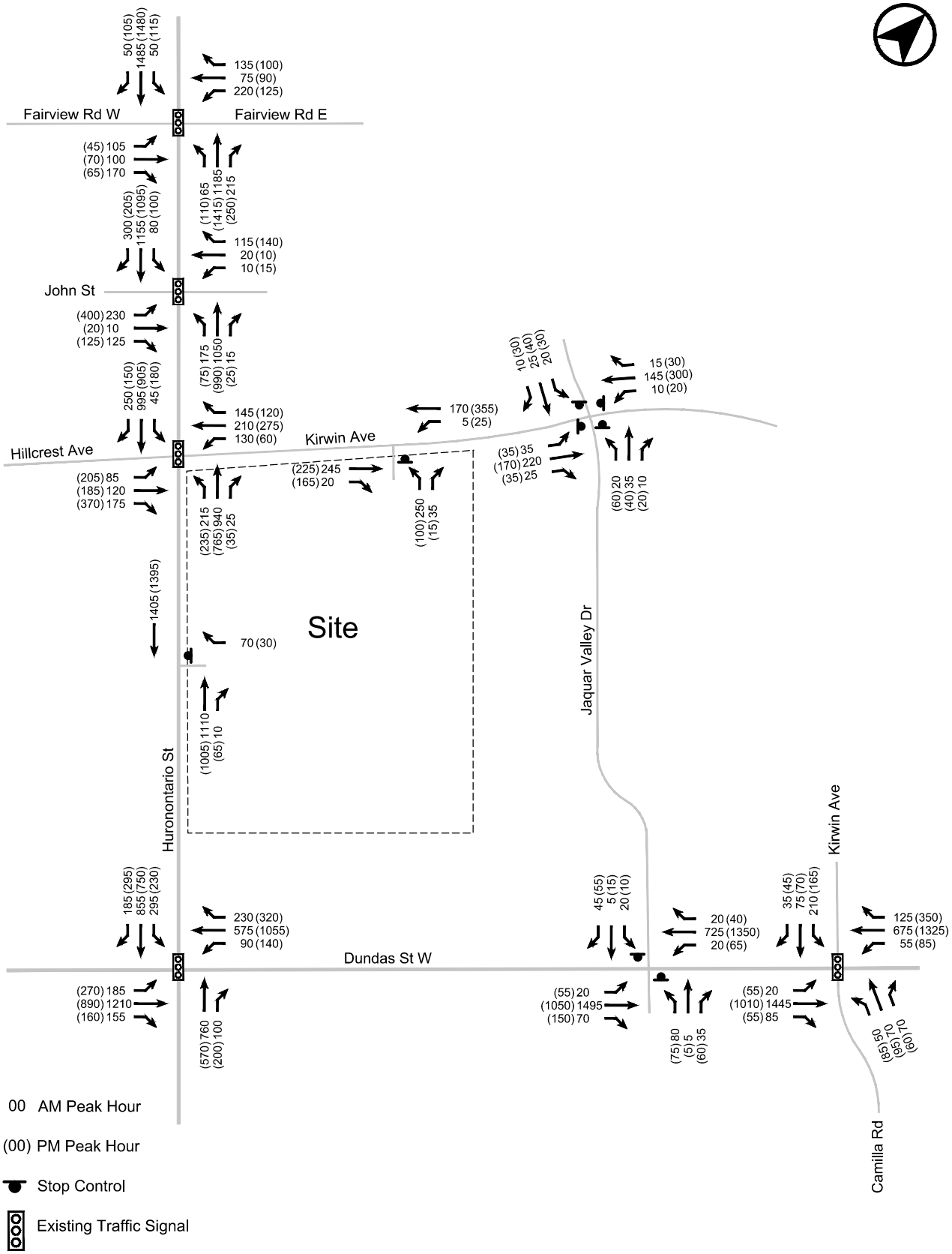


Date Plotted: September 1, 2023 Filename: P:\6374\69\Graphics\CAD\Fig14-00-NN.dwg

FIGURE 14 NET NEW SITE TRAFFIC VOLUMES

13.4 Future Total Traffic Volumes

Future total traffic volumes represent the summation of future background traffic volumes (**Figure 12**) and net new site traffic volumes (**Figure 14**), and are illustrated in **Figure 15**.



Date Plotted: September 1, 2023 Filename: P:\6374\69\Graphics\CAD\Fig15-00-FT.dwg

FIGURE 15 FUTURE TOTAL TRAFFIC VOLUMES (2028 HORIZON YEAR)

14.0 TRAFFIC OPERATIONS ANALYSIS

14.1 Analysis Methodology

The intersection capacity analysis was completed using Synchro Version 11.0 and the Highway Capacity Manual (HCM) methodology.

For signalized intersections, the volume-to-capacity ratio (v/c) is an indicator of the capacity utilization for the key movements in the intersection. A v/c of 1.00 indicates that certain governing traffic movements through the intersection are operating at or near maximum capacity. The primary overall level of service (LOS) indicator is delay, both on individual movements and expressed as an average for all vehicles processed. Many busy urban intersections operate at LOS D to E, which reflects average delays in the range of 35 to 80 seconds.

For unsignalized intersections, level of service (LOS) characterizes operational conditions for key movements in terms of delay within the traffic stream. LOS A represents a good level of service with short delays. LOS F represents a poor level of service with long delays. The volume to capacity ratio (v/c) is an indicator of the capacity utilization for key movements at the intersection and resultant residual capacity potential.

The LOS criteria provided by the HCM methodology is summarized as follows:

1. Signalized Intersection LOS

    a. LOS A: Control Delay ≤ 10s
    b. LOS B: 10s < Control Delay ≤ 20s
    c. LOS C: 20s < Control Delay ≤ 35s
    d. LOS D: 35s < Control Delay ≤ 55s
    e. LOS E: 55s < Control Delay ≤ 80s
    f. LOS F: Control Delay > 80s

2. Unsignalized Intersection LOS

    a. LOS A: Control Delay ≤ 10s
    b. LOS B: 10s < Control Delay ≤ 15s
    c. LOS C: 15s < Control Delay ≤ 25s
    d. LOS D: 25s < Control Delay ≤ 35s
    e. LOS E: 35s < Control Delay ≤ 50s
    f. LOS F: Control Delay > 50s

14.2 Modelling Input and Calibration Parameters

Road Network Configuration

Under existing traffic conditions, the Synchro models adopt the existing lane configurations as observed in the field at the time of the October 2021 traffic counts.

Under future traffic conditions, the Synchro model adopted the network changes previously discussed in **Section 13.2.3** given the Hurontario Street LRT and the Dundas Street BRT. In the future total traffic model, with the redevelopment of the site, access configurations will also be updated based on the proposed plans.

Signal Timing Plans and Transit Signal Priority

The existing signal timing plans at the study area's signalized intersections were provided by the City of Mississauga. Input parameters such as minimum green times, cycle lengths, and pedestrian clearance times were adopted in the Synchro models. The signal timings are attached in **Appendix I**.

Any changes to these plans will be proposed as "signal timing optimization". It is noteworthy that in all future scenarios, all Hurontario Street intersections will require signal timing changes with the construction of the LRT. All northbound and southbound left turn phases were assumed to operate as protected-only phases. At Hurontario Street / Dundas Street, the eastbound and westbound left turn phases were also assumed to operate as protected-only phases given the planned BRT.

Lost Time Adjustment

For all signalized intersections in the study area, a Lost Time Adjustment (LTA) of -1.0 seconds was applied to account for vehicles traversing the intersection during amber or all-red time. This adjustment is also recommended in the City of Toronto's *Guidelines for Using Synchro 11* (dated January 15, 2021).

Protected Left Turn Factor

The protected left turn factor (LTF) in the Synchro model influences the headways between vehicles making a left turn movement on protected left turn green phases. Values closer to 1.00 represent vehicles making left turns with smaller headways.

Under future conditions, the operations of several left turn lanes are approaching capacity. Drivers modify their behaviour in near-capacity conditions and operate with reduced headways. As such, a protected LTF of 1.00 (rather than a default of 0.95) has been adopted for the left turning movements at the Hurontario Street / Dundas Street intersection in the weekday afternoon peak hour.

Peak Hour Factor (PHF)

Under existing conditions, the peak hour factors at all study area intersections are based on the collected traffic count data. Under future background and future total conditions, at the intersection of Hurontario Street / Dundas Street in the weekday afternoon peak hour, a peak hour factor of 0.99 was adopted given the planned transit priority routes traversing the intersection in the east-west and north-south travel directions. As urban intersections approach capacity, vehicle trips will begin to equalize their distribution across the different peak 15-minute periods within the peak hour. This shift would result in an increasingly even distribution of trips over the course of the peak hour as drivers make trips earlier or later to reduce delays. During the data collection process in October of 2021, the volume distribution at the Hurontario Street / Hillcrest Avenue intersection produced a peak hour factor of 0.99 during the weekday afternoon peak hour. A similar factor can therefore be expected at other study area intersections.

Other Data Inputs

Heavy vehicle percentages and pedestrian and bicycle crossing volumes were derived from existing traffic counts. However, all pedestrian crossing volumes at the study area intersections were doubled (or multiplied by a factor of 2) to account for the pandemic restrictions at the time of the counts.

Where field data was not available, default values in the Synchro models were adopted.

14.3 Analysis Scenarios

The following analysis scenarios were reviewed for the weekday morning and afternoon peak hours:

1. 2023 Baseline existing traffic conditions (as illustrated in **Figure 11**);
2. 2028 Future background traffic conditions (as illustrated in **Figure 12**);
3. 2028 Future total traffic conditions (as illustrated in **Figure 15**);

All Synchro worksheets for the scenarios are provided in **Appendix J**.

14.4 Signalized Intersection Analysis

14.4.1 Hurontario Street / Fairview Road East & West

The intersection of Hurontario Street / Fairview Road operates under signal control with cycle lengths of 160 seconds in both peak hours. **Table 21** summarizes the results of the traffic operations analysis at the intersection.

Under existing traffic conditions, the intersection operates under capacity at overall v/c ratios of 0.88 and 0.59 during the weekday morning and afternoon peak hours, respectively.

Under future scenarios, with the Hurontario LRT and intersection configuration changes, signal timings were optimized at the intersection during both peak hours. Northbound and southbound left turn advance phases were modelled with protected-only phase timings.

Under future background traffic conditions, the intersection will continue to operate under capacity at overall v/c ratios of 0.92 and 0.80 or better during the weekday morning and afternoon peak hours, respectively.

Under future traffic conditions, the intersection will continue to operate under capacity at overall v/c ratios of 0.93 and 0.80 or better during the weekday morning and afternoon peak hours, respectively.

Based on the foregoing, no other mitigation measures, or improvements, aside from signal timing optimization, are recommended at this intersection.

Table 21 Hurontario Street / Fairview Road East & West Capacity Results

Movement	Existing		Future Background		Future Total	
	V/C	LOS	V/C	LOS	V/C	LOS
EBL	0.32 (0.27)	D (E)	0.55 (0.31)	E (E)	0.55 (0.31)	E (E)
EBTR	0.49 (0.35)	D (E)	0.86 (0.35)	F (E)	0.86 (0.35)	F (E)
WBL	0.96 (0.64)	F (E)	0.98 (0.73)	F (E)	0.97 (0.73)	F (E)
WBTR	0.25 (0.46)	D (E)	0.38 (0.53)	D (E)	0.38 (0.53)	D (E)
NBL	0.49 (0.50)	C (B)	0.83 (0.52)	F (E)	0.83 (0.52)	F (E)
NBTR	0.55 (0.56)	D (B)	0.82 (0.89)	D (D)	0.90 (0.89)	D (D)
SBL	0.35 (0.54)	C (C)	0.81 (0.51)	F (E)	0.81 (0.51)	F (E)
SBTR	0.87 (0.57)	D (B)	0.97 (0.77)	D (C)	0.97 (0.81)	D (C)
Overall	**0.88 (0.59)**	**D (B)**	**0.92 (0.80)**	**D (D)**	**0.93 (0.80)**	**E (D)**

14.4.2 Hurontario Street / John Street

The intersection of Hurontario Street / John Street operates under signal control with cycle lengths of 160 seconds in both peak hours. **Table 22** summarizes the results of the traffic operations analysis at the intersection.

Under existing traffic conditions, the intersection operates under capacity at overall v/c ratios of 0.54 and 0.59 during the weekday morning and afternoon peak hours, respectively.

Under future scenarios, with the Hurontario LRT and intersection configuration changes, signal timings were optimized at the intersection during both peak hours. Northbound and southbound left turn advance phases were modelled with protected-only phase timings.

Under future background traffic conditions, the intersection will continue to operate under capacity at overall v/c ratios of 0.77 and 0.69 or better during the weekday morning and afternoon peak hours, respectively.

Under future traffic conditions, the intersection will continue to operate under capacity at overall v/c ratios of 0.77 and 0.71 or better during the weekday morning and afternoon peak hours, respectively.

Based on the foregoing, no other mitigation measures or improvements, aside from signal timing optimization, are recommended at this intersection.

Table 22 Hurontario Street / John Street Capacity Results

Movement	Existing		Future Background		Future Total	
	V/C	LOS	V/C	LOS	V/C	LOS
EBL	0.39 (0.79)	D (D)	0.86 (0.86)	E (D)	0.87 (0.92)	E (E)
EBTR	0.04 (0.12)	D (C)	0.11 (0.13)	D (C)	0.11 (0.14)	D (C)
WBL	0.05 (0.08)	E (E)	0.04 (0.08)	D (E)	0.04 (0.08)	D (E)
WBTR	0.22 (0.16)	E (E)	0.12 (0.14)	D (E)	0.12 (0.14)	D (E)
NBL	0.72 (0.31)	E (B)	0.80 (0.54)	F (F)	0.80 (0.54)	F (F)
NBTR	0.41 (0.59)	A (B)	0.53 (0.72)	B (C)	0.61 (0.69)	B (C)
SBL	0.29 (0.49)	A (B)	0.62 (0.65)	F (F)	0.62 (0.65)	F (F)
SBT	0.63 (0.57)	B (C)	0.71 (0.70)	C (C)	0.72 (0.72)	C (C)
SBR	0.44 (0.18)	B (B)	0.45 (0.34)	A (B)	0.45 (0.33)	A (B)
Overall	**0.54 (0.59)**	**B (C)**	**0.77 (0.69)**	**C (D)**	**0.77 (0.71)**	**C (D)**

14.4.3 Hurontario Street / Hillcrest Ave & Kirwin Ave

The intersection of Hurontario Street / Hillcrest Avenue / Kirwin Avenue operates under signal control with cycle lengths of 160 seconds in both peak hours. **Table 23** summarizes the results of the traffic operations analysis at the intersection.

Under existing traffic conditions, the intersection operates under capacity at overall v/c ratios of 0.51 and 0.54 during the weekday morning and afternoon peak hours, respectively.

Under future scenarios, with the Hurontario LRT and intersection configuration changes, signal timings were optimized at the intersection during both peak hours. Northbound and southbound left turn advance phases were modelled with protected-only phase timings.

Under future background conditions, the intersection will continue to operate under capacity at overall v/c ratios of 0.76 and 0.66 or better during the weekday morning and afternoon peak hours, respectively.

Under future traffic conditions, the intersection will continue to operate under capacity at overall v/c ratios of 0.79 and 0.65 or better during the weekday morning and afternoon peak hours, respectively.

Based on the foregoing, no other mitigation measures or improvements, aside from signal timing optimization, are recommended at this intersection.

Table 23 Hurontario Street / Hillcrest Ave & Kirwin Ave Capacity Results

Movement	Existing		Future Background		Future Total	
	V/C	LOS	V/C	LOS	V/C	LOS
EBL	0.20 (0.47)	C (C)	0.29 (0.54)	D (D)	0.37 (0.57)	D (D)
EBT	0.18 (0.19)	C (C)	-- (--)	-- (--)	-- (--)	-- (--)
EBR	0.11 (0.38)	C (C)	-- (--)	-- (--)	-- (--)	-- (--)
EBTR	-- (--)	-- (--)	0.19 (0.28)	D (C)	0.19 (0.31)	D (C)
WBL	0.06 (0.08)	D (D)	0.08 (0.12)	D (D)	0.48 (0.24)	D (D)
WBT	0.26 (0.45)	D (D)	-- (--)	-- (--)	-- (--)	-- (--)
WBR	0.04 (0.09)	D (D)	-- (--)	-- (--)	-- (--)	-- (--)
WBTR	-- (--)	-- (--)	0.18 (0.31)	D (D)	0.29 (0.35)	D (D)
NBL	0.59 (0.55)	E (E)	0.95 (0.93)	F (F)	0.95 (0.93)	F (F)
NBTR	0.54 (0.55)	B (B)	0.48 (0.56)	B (C)	0.52 (0.61)	B (C)
SBL	0.16 (0.29)	C (B)	0.57 (0.54)	F (F)	0.73 (0.81)	F (F)
SBT	0.77 (0.64)	C (B)	-- (--)	-- (--)	-- (--)	-- (--)
SBR	0.21 (0.08)	A (A)	-- (--)	-- (--)	-- (--)	-- (--)
SBTR	-- (--)	-- (--)	0.95 (0.86)	C (C)	0.95 (0.86)	C (C)
Overall	**0.51 (0.54)**	**C (C)**	**0.72 (0.66)**	**C (D)**	**0.79 (0.65)**	**D (D)**

14.4.4 Hurontario Street / Dundas Street West & Dundas Street East

The intersection of Hurontario Street / Dundas Street operates under signal control with cycle lengths of 160 seconds in both peak hours. **Table 24** summarizes the results of the traffic operations analysis at the intersection.

Under existing traffic conditions, the intersection operates under capacity at overall v/c ratios of 0.77 and 0.84 during the weekday morning and afternoon peak hours, respectively.

Under future scenarios, with the Hurontario LRT, Dundas BRT and intersection configuration changes, signal timings were optimized at the intersection during both peak hours. All left turn advance phases were modelled with protected-only phase timings.

Under future background traffic conditions, the intersection will approach capacity in both weekday peak hours. The intersection is expected to operate with overall v/c ratios of 0.94 and 0.96 or better during the weekday morning and afternoon peak hours, respectively.

Under future traffic conditions, the intersection will approach capacity in both weekday peak hours. The intersection is expected to operate with overall v/c ratios of 0.94 and 0.97 or better during the weekday morning and afternoon peak hours, respectively. As post-pandemic travel conditions continue to evolve in conjunction with the planned implementation of significant transit improvements (i.e., the Hurontario LRT and the Dundas BRT), the operations at this intersection should continue to be monitored.

Based on the foregoing, no other mitigation measures or improvements, aside from signal timing optimization, are recommended at this intersection.

Table 24 Hurontario Street / Dundas Street West & Dundas Street East Capacity Results

Movement	Existing		Future Background		Future Total	
	V/C	LOS	V/C	LOS	V/C	LOS
EBL	0.51 (0.83)	C (E)	0.84 (0.93)	F (F)	0.84 (0.96)	F (F)
EBT	0.90 (0.56)	E (D)	-- (--)	-- (--)	-- (--)	-- (--)
EBR	0.15 (0.15)	C (C)	-- (--)	-- (--)	-- (--)	-- (--)
EBTR	-- (--)	-- (--)	0.97 (0.68)	E (D)	0.97 (0.68)	E (D)
WBL	0.45 (0.43)	E (D)	0.85 (0.64)	F (E)	0.87 (0.64)	F (E)
WBTR	0.60 (0.91)	E (E)	0.75 (0.99)	E (F)	0.75 (0.99)	E (F)
NBL	0.65 (0.83)	D (E)	-- (--)	-- (--)	-- (--)	-- (--)
NBTR	0.63 (0.61)	D (D)	0.90 (0.93)	E (F)	0.90 (0.95)	E (F)
SBL	0.72 (0.77)	E (E)	0.93 (0.99)	F (F)	0.93 (0.99)	F (F)
SBTR	0.67 (0.79)	E (E)	0.59 (0.82)	D (E)	0.66 (0.83)	D (E)
Overall	**0.77 (0.84)**	**E (E)**	**0.94 (0.96)**	**E (E)**	**0.94 (0.97)**	**E (E)**

14.4.5 Kirwin Avenue & Camilla Road / Dundas Street East

The intersection of Kirwin Avenue / Camilla Road / Dundas Street East operates under signal control with cycle lengths of 160 seconds in both peak hours. **Table 25** summarizes the results of the traffic operations analysis at the intersection.

Under existing traffic conditions, the intersection operates under capacity at overall v/c ratios of 0.65 and 0.55 during the weekday morning and afternoon peak hours, respectively.

Under future scenarios, with the Hurontario LRT and intersection configuration changes, signal timings were optimized at the intersection during both peak hours. Northbound and southbound left turn advance phases were modelled with protected-only phase timings.

Under future background conditions, the intersection will continue to operate under capacity at overall v/c ratios of 0.86 and 0.76 or better during the weekday morning and afternoon peak hours, respectively.

Under future traffic conditions, the intersection will continue to operate under capacity at overall v/c ratios of 0.91 and 0.77 or better during the weekday morning and afternoon peak hours, respectively.

Based on the foregoing, no other mitigation measures or improvements, aside from signal timing optimization, are recommended at this intersection.

Table 25 Kirwin Ave & Camilla Rd / Dundas Street East Capacity Results

Movement	Existing		Future Background		Future Total	
	V/C	LOS	V/C	LOS	V/C	LOS
EBL	0.07 (0.21)	A (A)	0.09 (0.67)	B (D)	0.09 (0.76)	B (E)
EBT	0.68 (0.44)	B (A)	-- (--)	-- (--)	-- (--)	-- (--)
EBR	0.09 (0.04)	A (A)	-- (--)	-- (--)	-- (--)	-- (--)
EBTR	-- (--)	-- (--)	0.94 (0.54)	C (B)	0.94 (0.55)	C (B)
WBL	0.50 (0.24)	D (B)	0.58 (0.29)	D (B)	0.58 (0.30)	D (B)
WBT	0.33 (0.48)	C (B)	-- (--)	-- (--)	-- (--)	-- (--)
WBR	0.09 (0.27)	B (B)	-- (--)	-- (--)	-- (--)	-- (--)
WBTR	-- (--)	-- (--)	0.46 (0.77)	C (C)	0.46 (0.79)	C (C)
NBL	0.16 (0.36)	C (D)	0.17 (0.36)	D (D)	0.19 (0.35)	D (D)
NBTR	0.20 (0.29)	C (D)	0.24 (0.28)	D (D)	0.24 (0.27)	D (D)
SBTL	0.57 (0.65)	D (E)	0.74 (0.65)	D (D)	0.85 (0.66)	E (D)
SBR	0.02 (0.03)	C (D)	0.03 (0.03)	C (D)	0.03 (0.03)	C (D)
Overall	**0.65 (0.55)**	**B (B)**	**0.86 (0.76)**	**C (C)**	**0.91 (0.77)**	**C (C)**

14.5 Unsignalized Intersection Analysis

Under future traffic conditions, all movements operate acceptably in both peak hours at levels-of-service (LOS) E or better, with the exception of the shared northbound movements at the 60 Dundas Street East Access / & Jaguar Valley Drive / Dundas Street East intersection under future conditions. The intersection's individual movements all operate at a v/c ratio below 1.0, which indicates that while vehicles along the minor approaches will experience delays, they will still be able to turn onto the major approach. A LOS of F is not uncommon for a minor street approach along an arterial road in urban conditions. No mitigation measures nor improvements are recommended.

Table 26 Unsignalized Intersection Capacity Results

Movement	Existing		Future Background		Future Total	
	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
Hurontario Street / 3085 Hurontario South Access						
WBLR	A (B)	0.0 (11.3)	-- (--)	-- (--)	-- (--)	-- (--)
WBR	-- (--)	-- (--)	A (--)	0.0 (--)	A (B)	9.7 (10.5)
WBRL	-- (--)	-- (--)	-- (B)	-- (12.7)	-- (--)	-- (--)
SBTL	-- (A)	-- (0.8)	-- (A)	-- (0.7)	-- (--)	-- (--)
3085 Hurontario North Access / Kirwin Avenue						
WBTL	A (A)	0.3 (0.7)	A (A)	0.3 (0.7)	A (A)	0.3 (0.8)
NBLR	B (B)	10.1 (13.7)	A (B)	9.9 (13.8)	C (C)	21.3 (21.0)
Jaguar Valley Dr / Kirwin Avenue						
EBTL	A (B)	9.9 (11.0)	A (B)	9.7 (11.1)	B (B)	10.3 (11.1)
EBR	A (A)	6.5 (7.2)	A (A)	6.5 (7.1)	A (A)	6.5 (7.1)
WBL	A (B)	7.7 (8.1)	A (B)	7.7 (8.1)	A (B)	7.7 (8.1)
WBTR	A (A)	8.4 (14.0)	A (A)	8.6 (14.4)	A (A)	8.7 (14.4)
NBTLR	A (B)	8.7 (10.5)	A (B)	8.7 (10.5)	A (B)	8.8 (10.5)
SBTLR	A (B)	8.7 (10.0)	A (B)	8.7 (10.1)	A (B)	8.8 (10.1)
60 Dundas St E Access & Jaguar Valley Dr / Dundas Street East						
EBL	A (B)	9.0 (12.1)	A (B)	9.2 (12.4)	A (B)	9.2 (12.3)
WBTL	-- (A)	-- (1.0)	A (A)	1.4 (3.2)	A (A)	1.4 (3.2)
NBTLR	A (B)	0.0 (14.7)	F (F)	83.1 (99.7)	F (F)	83.1 (88.7)
SBTLR	B (C)	11.2 (21.9)	C (F)	15.8 (50.2)	C (E)	15.8 (49.8)

15.0 TRANSIT TRAVEL ASSESSMENT

15.1 Area Transit Services

The site location provides a significant level of transit accessibility including services operated by MiWay and Metrolinx (GO Transit). The area transit network provides residents and visitors access to the Mississauga City Centre Transit Terminal and connections to key destinations in the Greater Toronto Area such as Toronto, Kitchener, Milton, and Brampton. Current transit mode share by area residents is in the order of 23 percent, which is expected to increase given the significant transit improvements in the proximate area.

Future transit routes available to residents and visitors of the proposed site development will include:

- MiWay Bus Route 1 Dundas / 101 Dundas Express;
- MiWay Bus Route 4 Sherway Gardens;
- MiWay Bus Route 28 Confederation;
- MiWay Bus Route 38 Creditview;
- MiWay Bus Route 53 Kennedy;
- GO Bus Route 21 Milton;
- GO Train Route *MI* Milton; and
- Hurontario Light Rail Transit (LRT)[1].

15.2 Transit Site Trip Assignment

15.2.1 Sensitivity Transit Mode Splits

Transit trips for the proposed development were projected based on the methodologies outlined in **Section 12.0**, and are summarized in **Table 27**.

Table 27 Transit Site Trip Generation

Land Use	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Residential	25	250	275	175	100	275
Retail	5	5	10	10	15	25
Total Transit Persons	**30**	**255**	**285**	**185**	**115**	**290**

Notes:
1. All site trips are rounded to the nearest five (5).

The vehicular trip generation forecasting methodology previously assumed existing mode splits for all non-residential uses. Auto mode splits (i.e., the auto driver and auto passenger mode splits) pertaining to residential uses were decreased by 7%, while the transit mode splits were increased by the same proportion. This ensures a likely conservative analysis of the study area intersections in the Synchro models.

However, for the purposes of the transit analysis, a sensitivity analysis with a 20% mode shift from the auto to transit modes was assumed for all proposed uses.

[1] Assumed to replace the existing MiWay Bus Routes 2 Hurontario and 103 Hurontario Express.

15.2.2 Transit Site Trip Generation

The sensitivity transit site trip generation is summarized in **Table 28**. With the 20% mode shift, the total site anticipates 340 and 360 two-way transit trips during the weekday morning and afternoon peak hours, respectively.

Table 28 *Sensitivity* Transit Site Trip Generation

Land Use	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Residential	30	300	330	210	120	330
Retail	10	10	20	15	15	30
Total Transit Persons	**40**	**310**	**350**	**225**	**135**	**360**

Notes:
1. All site trips are rounded to the nearest five (5).

15.2.3 Transit Site Trip Distribution

The distribution of transit site trips onto the surrounding area transit network is based on transit distribution data made available in the 2016 Transportation Tomorrow Survey (TTS) for each proposed land use. Note that the Hurontario LRT route was assumed to replace the 2 Hurontario and 103 Hurontario Express MiWay bus routes. Transit distribution to / from the site for the inbound and outbound directions is summarized in **Table 29**. The TTS data is presented in **Appendix G**.

Table 29 Transit Site Trip Distribution

General Route Travel Direction	Transit Route	Residential		Retail / Community		Office	
		In	Out	In	Out	In	Out
Northbound	28 Confederation	1%	4%		4%		10%
	38 Creditview	1%	3%				5%
	53 Kennedy		8%		25%		20%
	Hurontario LRT	15%	33%	2%	29%	5%	47%
Southbound	28 Confederation	9%	1%			18%	
	38 Creditview	2%		1%		4%	
	53 Kennedy	5%		32%		12%	
	Hurontario LRT	34%	17%	40%	3%	46%	
Eastbound	1 Dundas / 101 Dundas Express	3%	8%	18%			6%
	4 Sherway Gardens	1%		1%			
	21 Milton					2%	
	MI Milton		22%		4%	5%	6%
Westbound	1 Dundas / 101 Dundas Express	8%	3%	4%	27%	4%	
	4 Sherway Gardens				6%		
	21 Milton		1%				
	MI Milton	21%		2%	2%	4%	6%
Total		**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Notes:
1. All percentages are rounded to the nearest whole percentage value.

The resultant transit site trips onto each transit route are subsequently derived and summarized in **Table 30**.

Table 30 Transit Route Assignment

General Route Travel Direction	Transit Route	AM Peak Hour			PM Peak Hour		
		In	Out	2-Way	In	Out	2-Way
Northbound	28 Confederation	0	12	12	2	6	8
	38 Creditview	0	9	9	2	4	6
	53 Kennedy	0	27	27	0	14	14
	Hurontario LRT	5	102	107	32	44	76
Southbound	28 Confederation	3	3a	6	19	1	20
	38 Creditview	1	0	1	4	0	4
	53 Kennedy	5	0	5	16	0	16
	Hurontario LRT	15	51	66	77	20	97
Eastbound	1 Dundas / 101 Dundas Express	3	24	27	9	10	19
	4 Sherway Gardens	0	0	0	2	0	2
	21 Milton	0	0	0	0	0	0
	MI Milton	0	66	66	0	26	26
Westbound	1 Dundas / 101 Dundas Express	2	12	14	18	8	26
	4 Sherway Gardens	0	1	1	0	1	1
	21 Milton	0	3	3	0	1	1
	MI Milton	6	0	6	44	0	44
Total		**40**	**310**	**350**	**225**	**135**	**360**

15.3 Transit Capacity Review

Existing transit service frequencies for transit routes passing through the Cooksville GO station are summarized in **Table 31** below.

Table 31 Transit Service Frequencies

Service Owner	Route Number	Approximate Headways[1]	Number of Vehicles Per Peak Hour
MiWay	28 Confederation	15 minutes	4 vehicles per hour
	38 Creditview	30 minutes	2 vehicles per hour
	53 Kennedy	15 minutes	4 vehicles per hour
	4 Sherway Gardens	30 minutes	2 vehicles per hour
	1 Dundas	15 minutes	4 vehicles per hour
	101 Dundas Express	15 minutes	4 vehicles per hour
Metrolinx	Hurontario LRT	Assumed 10 minutes	6 vehicles per hour
	21 Milton (GO Bus)	30 minutes	2 vehicles per hour
	MI Milton (GO Train)	30 minutes	2 vehicles per hour

Notes:
1. All frequencies are based on the available headways outlined in **Section 5.2**

Based on these frequencies, the site-related transit trips per vehicle were calculated for the peak hours and summarized in **Table 32**.

Table 32 Transit Site Trips Per Vehicle

General Route Travel Direction	Transit Route	AM Peak Hour			PM Peak Hour		
		In	Out	2-Way	In	Out	2-Way
Northbound	28 Confederation	0	3	3	1	2	3
	38 Creditview	0	5	5	1	2	3
	53 Kennedy	0	7	7	0	4	4
	Hurontario LRT	1	17	18	6	8	14
Southbound	28 Confederation	1	1	2	5	1	6
	38 Creditview	1	0	1	2	0	2
	53 Kennedy	2	0	2	4	0	4
	Hurontario LRT	3	9	12	13	4	17
Eastbound	1 Dundas / 101 Dundas Express	1	3	4	2	2	4
	4 Sherway Gardens	0	0	0	1	0	1
	21 Milton (GO Bus)	0	0	0	0	0	0
	MI Milton (GO Train)	0	33	33	0	13	13
Westbound	1 Dundas / 101 Dundas Express	1	2	3	3	1	4
	4 Sherway Gardens	0	1	1	0	1	1
	21 Milton (GO Bus)	0	2	2	0	1	1
	MI Milton (GO Train)	3	0	3	22	0	22

15.4 Accommodation of Transit Trips

The resultant transit site trips per vehicle are then compared to typical capacities of each transit type and summarized in **Table 33**.

Considering the variety of routing options available to prospective users and the minimal levels of transit trips per vehicle on any given route, it is anticipated that new transit trips can be appropriately accommodated within existing and projected capacities.

Table 33 Capacity Utilization of Transit Site Trips

General Route Travel Direction	Transit Route	Capacity	Maximum Trips Per Vehicle		Max. Percentage of Capacity	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Northbound	28 Confederation	50	3	2	6%	4%
	38 Creditview	50	5	2	10%	4%
	53 Kennedy	50	7	4	14%	8%
	Hurontario LRT	336 (2)	17	8	5%	2%
Southbound	28 Confederation	50	1	5	2%	10%
	38 Creditview	50	1	2	2%	4%
	53 Kennedy	50	2	4	4%	8%
	Hurontario LRT	336	9	13	3%	4%
Eastbound	1 Dundas / 101 Dundas Express	50	3	2	6%	4%
	4 Sherway Gardens	50	0	1	0%	2%
	21 Milton (GO Bus)	81 (3)	0	0	0%	0%
	MI Milton (GO Train)	1,620 (4)	33	13	2%	1%
Westbound	1 Dundas / 101 Dundas Express	50	2	3	4%	6%
	4 Sherway Gardens	50	1	1	2%	2%
	21 Milton (GO Bus)	81	2	1	2%	1%
	MI Milton (GO Train)	1,620	3	22	0%	1%

Notes:

1. Capacity assumed based on Toronto Transit Commission buses: https://www.ttc.ca/riding-the-ttc/Real-Time-Bus-Occupancy-Info#:~:text=Note%3A%20Standard%20buses%20hold%20approximately,while%20articulated%20buses%20hold%2077.
2. Capacity assumed from Metrolinx website: https://web.archive.org/web/20180701111611/http://www.metrolinx.com/en/projectsandprograms/lrv/lrv.aspx
3. Capacity assumed from Government of Ontario webpage, with no standing: https://news.ontario.ca/en/release/41128/ontario-unveils-new-accessible-double-decker-go-buses
4. Capacity assumed from GO Transit information package (10 bi-level coaches, each with 162 seats and no standing): https://transittoronto.ca/archives/maps/GoTransit/GO-quick-facts-2013-06.pdf

16.0 AS-OF-RIGHT TRIP GENERATION COMPARISON

To satisfy the City's request, it is important to assess the cumulative overall impact on the site based on the difference between the currently permitted zoning/densities (i.e., as-of-right development) and proposed zoning/densities (i.e. proposed development).

As per City of Mississauga Zoning By-law 0225-2007, the site falls under the Commercial zone (Zone C4) and is subject to a maximum height / density of three storeys, plus 16 metres (sloped roof) or 12.5 metres (flat roof). For the simplicity of this comparison assessment, a maximum height of three storeys is assumed.

Based upon a review of the site's developable area (e.g., deducted building setbacks and applicable buffers), it covers approximately 14,650 m^2 with a maximum FSI of 2.45. As such, this results in a maximum permissible building GFA of approximately 35,894 m^2.

To quantify this difference, the ITE *Trip Generation Manual* (11th Edition) LUC 710 – General Office rates (i.e., assumed land use that is currently permitted) were applied to the as-of-right permitted GFA to determine the number of vehicle trips associated with as-of-right development for the site. The resulting trips, based on the maximum permitted GFA dedicated to office uses, are summarized in **Table 34**.

Table 34 Vehicle Trip Generation Comparison

	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
As of Right Trips[1]	470	65	535	85	425	510
Proposed Development Trips	25	255	390	255	145	400
Difference	**-435**	**290**	**-145**	**170**	**-280**	**-110**

Notes:
1. Fitted curve equation used.
2. Trips rounded to the nearest 5 vehicles.

The trip comparison indicates that the proposed development would generate 145 and 110 less trips in the weekday morning and afternoon peak hours, respectively, than the maximum permitted as-of-right zoning density.

Given the directional nature of residential uses as opposed to employment uses, the decreases in trips between the two plans versus the as-of-right development are largest in the inbound direction for the morning peak hour and in the outbound direction for the afternoon peak hour.

The net decrease in two-way traffic volumes between development proposal densities and as-of-right densities indicates that the development proposal is expected to operate under improved conditions in comparison to the as-of-right development scenario. As such, the traffic impact observed for the proposed site trips are considered suitable from a zoning perspective.

17.0 COMMUNITY IMPACTS

A key consideration in this new transportation report includes the generation of traffic resulting from the proposed development. While it is anticipated that the site will generate additional vehicular activity, impacts on the community are expected to be limited and localized on the local and arterial road network as discussed in the preceding sections, recognizing the future impacts of the Hurontario LRT. Furthermore, the new roads through the site provide more routes of travel for residents to / from the new retail destinations on-site and beyond.

The surrounding road network is designed to handle future traffic levels with the completion of the LRT and have sufficient capacity to accommodate the projected increase with the various improvements proposed as concluded in the capacity analysis included in this report. **Table 35** provides a summary of net-new two-way traffic volumes added to key road sections within the study area during peak hours.

Table 35 Net-New Two-Way Traffic Volume Summary

Road Name	Road Classification	Net-New Two-Way Volumes
Hurontario Street	Arterial	285 (245)
Dundas Street	Arterial	75 (95)
Hillcrest Avenue / Kirwin Avenue	Major Collector	340 (350)
Jaguar Valley Drive, New Municipal and Private Streets	Local	10 (30)

Notes:
1. xx (xx) = weekday morning peak hour (weekday afternoon peak hour).

On January 10, 2022, a virtual public meeting for the site was held by the Planning and Development Committee to discuss the proposed development based on the initial application submission dated July 2021. The following key transportation-related comments from councillors and residents were raised:

- Support for intensification in transit-oriented areas (LRT and GO) of the City;
- Concern for cycling and pedestrian access, circulation, and safety to / from site and to transit as per local policies and plans; and
- Concern for reduced visitor parking to the updated Zoning By-law standard.

In summary, the immediate residential areas surrounding the development would experience a modest increase in traffic flow generated by the proposed development. In addition, as part of this resubmission, the revised proposal aims to address community comments received by refining the design of the site and thoroughly reviewing the appropriateness of the vehicle, cycling, and pedestrian services, amenities, and provisions. As such, an updated TDM Plan (**Section 6.0**) and evolving policy and transportation context review (**Section 4.0** and **Section 5.0**) have been provided.

18.0 SUMMARY AND CONCLUSIONS

The following provides a summary overview of the study findings of our assessment of the transportation related aspects of the proposed development.

Introduction & Proposed Development

1. BA Group is retained by 3085 Hurontario Limited Partnership to provide transportation advisory services in support of a proposed mixed-use development for a revised ZBA application re-submission.

2. The proposed development comprises 1,658 residential units within four buildings, 1,160 m^2 of retail GFA. The subject property currently has a surface parking lot and commercial uses.

3. As part of this new Transportation Study, all parking matters will be provided under a separate cover and will be prepared by another transportation consultant.

Transportation Context

4. The site is located southeast of the existing Cooksville GO Station and has a strong level of transit, pedestrian, and cycling service.

5. Transportation improvements planned in the site include a new east-west municipal road and north-south private road for the required access and circulation and new pick-up / drop-off facilities.

6. Notable transit-specific improvements, such as the new Hurontario LRT, will be built and operational by fall 2024, which will improve the overall transit service and accessibility to / from the site. The Dundas Street BRT, currently in planning, will also put another higher order transit service station within walking distance of the site.

Transportation Demand Management Plan

7. A comprehensive TDM plan will be implemented to support the use of transit and active transportation while reducing the number of single-occupant vehicle trips during the peak hours.

8. Specific TDM strategies proposed include, but are not limited to, the provision of shared micro-mobility devices (e-scooters, e-bikes), provision of transit cards, credit towards new bicycles and shared mobility service memberships for new residents, distribution of promotional transit service materials, and the provision of on-site bicycle parking with a repair station.

Bicycle Parking Considerations

9. Application of bicycle parking standards outlined in Mississauga Zoning By-law 0225-2007 requires a minimum provision of 1,082 bicycle parking spaces (997 long-term / Class A and 85 short-term / Class B).

10. The proposed development includes 1,303 spaces (1,217 long-term spaces and 86 short-term spaces), which satisfies the supply requirement. It is proposed to adopt a bicycle parking space width of 0.45 metres.

Loading Considerations

11. Application of the City's Zoning By-law results in a requirement of six (6) loading spaces for the new residential and retail uses of the buildings.

12. Seven (7) loading spaces are proposed in total, which meets the servicing needs of the site.

13. Four (4) smaller loading spaces will be provided at the P1 level for residential move-in activity. Three (3) loading spaces will be provided at-grade within Building 1 for solid waste collection, commercial loading, and residential loading activity within Building 1.

Pick-up / Drop-off Considerations

14. A pick-up / drop-off facility in the form of layby parking will be provided along the new north-south Private Road to serve the short-term parking needs (e.g., quick food or item deliveries, passenger pick-up / drop-off) of the proposed Buildings.

15. Two additional short-term parking spaces are also proposed at-grade adjacent to the loading area of Building 1.

16. The pick-up / drop-off facilities accommodates approximately 12 vehicles and are distributed across the site, which is expected to accommodate the proposed units and retail GFA on-site.

Multimodal Travel Demand Forecasting

17. The site is expected to generate 980 and 1,015 two-way person trips during the weekday morning and afternoon peak hours, respectively.

Baseline Existing Traffic Volumes

18. On behalf of BA Group, Spectrum Traffic Inc. recently conducted turning movement counts for the study area intersections in October of 2021 and November 2022.

19. Given that the traffic counts were conducted during the COVID-19 pandemic, additional counts prior to the pandemic were also obtained dated 2019 and 2020. The pre-pandemic traffic counts serve as a reference for volume calibration within the study area. It is noteworthy that at the time of both of the obtained pre-pandemic counts, the Cooksville GO Station was under construction and not fully operational.

Background Traffic Growth

20. Allowances were made under future traffic conditions to account for new traffic generated by other development proposals in proximity to the proposed site that are either under construction, approved, being reviewed, or for which an application is expected to be submitted to the City of Mississauga in the near future.

21. Under the five-year horizon of the year 2028, the total development programme for the 16 background developments includes approximately 11,245 residential units and 14,033 m^2 non-residential GFA.

22. The City of Mississauga provided growth rates along Hurontario Street and Dundas Street. Corridor volumes along Hurontario Street and Dundas Street at the 2028 horizon year were calibrated to the provided growth rates.

23. Several network changes in the site vicinity are planned alongside the construction of the Hurontario LRT and the Dundas BRT. These changes were incorporated into the traffic models for analysis purposes.

24. Drivers are expected to redistribute along alternative routes and corridors to minimize delays given the significant changes to the road network such as the removal of a travel lane in each direction on Hurontario Street to accommodate the future LRT.

Site Traffic Volumes

25. The existing site consists of several retail uses. With the proposed redevelopment, the vehicular traffic to and from these uses will be removed from the area road network. There are 25 and 195 existing site trips during the weekday morning and afternoon peak hours, respectively.

26. The site is expected to generate 365 and 205 net new two-way vehicle trips during the weekday morning and afternoon peak hours, respectively.

Traffic Operations Analysis

27. Under existing traffic conditions, the Synchro models adopt the existing lane configurations as observed in the field at the time of the October 2021 traffic counts and the Cooksville GO's road layout master plan.

28. Under future traffic conditions, the Synchro models adopted network changes that are planned alongside the Hurontario Street LRT and the Dundas Street BRT. These network changes include:

    - The removal of one through lane in either travel direction along Hurontario Street for the LRT;
    - Hurontario Street / Agnes Street as a right-in / right-out (RIRO);
    - Bus only-lanes at Hurontario Street / Dundas Street;
    - Protected northbound and southbound left turn advance phases along Hurontario Street due to the LRT;
    - Protected eastbound and westbound left turn advance phases along Dundas Street due to the BRT; and
    - The prohibition of northbound left turns at Hurontario Street / Dundas Street.

29. All signalized intersections in the study area are expected to operate under capacity and accommodate site-related vehicular traffic. The intersection of Hurontario Street / Dundas Street is expected to approach capacity in both weekday peak hours. As post-pandemic travel conditions continue to evolve in conjunction with the planned implementation of significant transit improvements (i.e., the Hurontario LRT and the Dundas BRT), the operations at this intersection should continue to be monitored. No mitigation measures nor improvements are recommended aside from signal timing optimization at the following intersections:

    - Hurontario Street / Fairview Road East & West
    - Hurontario Street / John Street
    - Hurontario Street / Hillcrest Avenue / Kirwin Avenue
    - Confederation Parkway / Hillcrest Avenue
    - Hurontario Street / Dundas Street East & West

30. All movements at unsignalized intersections in the study area are expected to operate acceptably in both peak hours at levels-of-service (LOS) E or better except for the shared northbound movements at the 60 Dundas Street East Access / & Jaguar Valley Drive / Dundas Street East intersection under future conditions. The intersection's individual movements all operate at a v/c ratio below 1.0, which indicates that while vehicles along the minor approaches will experience delays, they will still be able to turn onto the major approach. A LOS of F is not uncommon for a minor street approach along an arterial road in urban conditions.

Transit Travel Assessment

31. The vehicular trip generation forecasting methodology assumed existing mode splits for all non-residential uses. Auto mode splits (i.e., the auto driver and auto passenger mode splits) pertaining to residential uses were decreased by 7%, while the transit mode splits were increased by the same proportion. This reflects a conservative traffic analysis of the study area intersections in the Synchro models. However, for the purposes of the transit analysis, a 20% mode shift from the auto to transit modes was assumed for all proposed uses.

32. With the 20% mode shift, the total site anticipates 350 and 360 two-way transit trips during the weekday morning and afternoon peak hours, respectively.

33. Considering the variety of routing options available to prospective users and the minimal levels of transit trips per vehicle on any given route, it is anticipated that new transit trips can be accommodated within existing and projected capacities.

As-of-right Trip Generation Comparison

34. The cumulative overall impact on the site was assessed based on the difference between the currently permitted zoning/densities (i.e., as-of-right development) and proposed zoning/densities (i.e., proposed development).

35. The ITE *Trip Generation Manual* (11th Edition) LUC 710 – General Office rates (i.e., assumed land use that is currently permitted) were applied to the as-of-right maximum permitted GFA of of approximately 35,894 m^2 to quantify the difference in trip generation to the proposed development.

36. The comparison in trips indicates that the proposed development would generate 145 and 110 less trips in the weekday morning and afternoon peak hours, respectively, than the maximum permitted as-of-right zoning density. As such, it is evident that the proposed site trips are considered suitable from a zoning perspective.

Overall

37. The proposed transportation-related elements of the development that accommodate traffic, bicycle parking, and loading activity are appropriate.