City of Toronto

YONGE STREET NORTH
TRANSPORTATION MASTER PLAN

April 2022

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1 INTRODUCTION

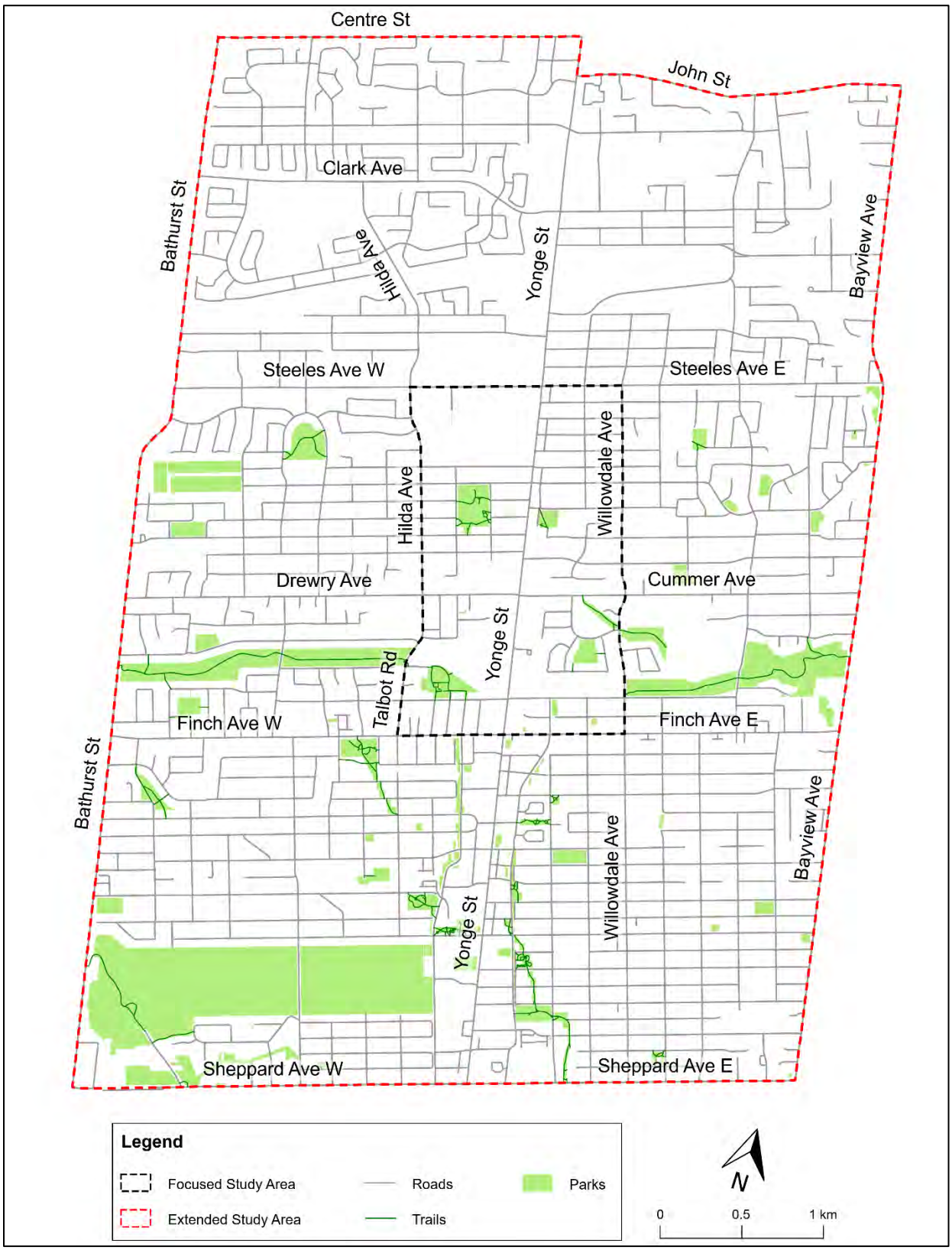
In 2013, a draft Transportation Master Plan (TMP) was prepared for the area surrounding the Yonge Street corridor between Finch Avenue and Steeles Avenue in the City of Toronto. This draft TMP was prepared as part of the Yonge Street North (YSN) Planning Study. In April 2019, the Province of Ontario announced a commitment to fund a portion of the planned extension of the existing Toronto Transit Commission (TTC) Line 1 Subway into York Region, extending the line from its current terminus at Finch Station in the City of Toronto. Subsequently, City staff undertook additional analysis and consultation as directed by the November 2013 Council Decision, on a plan that would reduce automobile reliance, encourage walking and cycling, and support new transit-oriented development, thereby reinitiating the Planning Study.

With the resumption of the YSN Planning Study, the need to undertake an updated TMP for the YSN area was identified due to the observed and anticipated changes along the corridor. The YSN Planning Study aims to develop a Secondary Plan that identifies a long-term vision to guide expected growth. The Yonge Street North Transportation Master Plan (YSNTMP) has been undertaken alongside the YSN Planning Study to recommend transportation improvements in support of the current and future populations anticipated for the YSN Study Area. It has been informed by stakeholder input and is designed to leverage the significant investment being made to the local transportation network. Building upon the completed planning work, the YSNTMP provides the detailed transportation policies, initiatives, strategies, and implementation priorities necessary to develop this portion of Yonge Street and support the surrounding community.

1.1 STUDY AREA AND BACKGROUND

For the purposes of assessing transportation activities for the YSNTMP, two study areas were established. The *Focused Study Area* is the primary Study Area and will be the focus of the majority of the analysis and future recommendations within this document. The *Extended Study Area* was identified as the area having influence on the Focused Study Area travel trends and is considered in the assessment of existing and future transportation conditions where appropriate. The Study Area is illustrated in **Figure 1-1**. The Focused Study Area is bounded by Steeles Avenue to the north, Willowdale Avenue to the east, Finch Avenue to the south, and Talbot Road/Hilda Avenue to the west. The Extended Study Area stretches to Centre Street in the City of Vaughan and John Street in the City of Markham to the north, Bayview Avenue to the east, Sheppard Avenue to the south, and Bathurst Street to the west.

Figure 1-1: YSNTMP Study Area – Extended and Focused



1.2 TRANSPORTATION MASTER PLAN AND MUNICIPAL CLASS EA PROCESS

1.2.1 TMP Process

A Transportation Master Plan (TMP) sets the vision and strategic plan for the City's transportation system. It informs and directs policies, programs, and infrastructure initiatives to meet the needs of the existing community and to support anticipated employment and residential growth. More specifically, the TMP provides the framework, direction, and implementation plan for a transportation network that serves pedestrians, cyclists, transit, and automobile users.

The TMP is reflective of the interests and priorities of stakeholders, representing the values of residents and businesses. Therefore, engaging the community is a key component in developing the TMP as public input is essential in identifying community needs and defining priorities. The phases of the study process are illustrated in **Figure 1-2.**

Figure 1-2: YSN Transportation Master Plan Process

1.2.2 Municipal Class Environmental Assessment (MCEA) Process

The Municipal Class Environmental Assessment (MCEA) process is a planning and design tool used to assess the possible effects of an infrastructure project on the surrounding environment. The MCEA is an approved standardized planning process developed by the Municipal Engineers Association (MEA) under the Ontario *Environmental Assessment Act* for municipal infrastructure projects. The MCEA process was first approved in 2000 and has subsequently been amended in 2007, 2011, and 2015.

There are five phases in the EA process:

- Phase 1: Identify the problem or opportunity
- Phase 2: Identify alternative solutions
- Phase 3: Examine alternative design concepts for the preferred solution
- Phase 4: Prepare an Environmental Study Report (ESR)
- Phase 5: Implementation

1.3 SUMMARY OF PUBLIC CONSULTATION AND COMMUNITY ENGAGEMENT

The public consultation process was a key component of the development of the YSNTMP. The YSNTMP utilized the consultation process established at the onset of the project plan and refined throughout the

project, including building off consultation activities undertaken for the Yonge Street North Secondary Plan. Despite COVID-19 restrictions limiting the ability to meet in-person for the majority of the study process, the consultation undertaken was comprehensive, and included online resources and virtual meetings and working groups with the public, city agencies, and stakeholders. In addition to facilitating a high-quality TMP, the consultation process was designed to satisfy requirements under Phases 1 and 2 of the *Environmental Assessment Act*.

Consultation activities that took place during the development of the YSNTMP Study include: multiple meetings and workshops with various stakeholders, three consultation meetings with a Technical Advisory Committee (TAC), three Virtual Community Consultation Meetings (CCM) open to the general public and held between September 2020 and May 2021, and the creation of online survey tools to solicit community feedback on specific proposals. The project team also worked closely with the local councillor and their staff to address community concerns and generate additional ideas.

This section provides an overview of the consultation undertaken and feedback received, and how comments were incorporated into the final project. A summary of consultation undertaken for the previous 2013 draft TMP is also provided to give some project background and a fuller history of the consultation conducted regarding future transportation improvements in the area.

1.3.1 Consultation Conducted for 2013 Draft YSNTMP

For the 2013 draft TMP, a number of consultation activities were conducted, including public and stakeholder workshops, formal public open houses, and various forms of public outreach such as mailings, project website pages, and emails. The following meetings were undertaken and facilitated public and stakeholder engagement in the decision making process for the 2013 draft TMP:

- **Community Consultation Meeting (CCM) #1:** The first CCM was held in-person on December 8, 2011, and provided an introduction to the study and an opportunity for the community to provide initial input and pose questions. The CCM included a presentation, participatory workshop, and opportunity for one-on-one questions between the public and project team members.
- **Community Consultation Meeting (CCM) #2:** The second CCM was held in-person on June 5, 2012, to review the proposed options for the TMP. The meeting consisted of a presentation and participatory workshop to gather feedback on the proposed Urban Structure and Transportation Alternatives being considered. Participants were able to provide input regarding their preferred option(s) as well as their issues and concerns.
- **Community Consultation Meeting (CCM) #3:** The third CCM was held in-person on May 9, 2013 to review the preferred land use and transportation options for the community. CCM #3 included a presentation and roundtable discussion where participants could provide their opinions and concerns.

The consultation activities conducted from 2011 to 2013 in support of the 2013 draft TMP were reviewed at the beginning of the YSNTMP in 2020 to provide an understanding of concerns from residents and stakeholders for the previous 2013 draft TMP. Additional info regarding the 2013 draft TMP timeline and consultation activities can be found on the City of Toronto's Yonge Street North Planning Study webpage. A contact is also provided to assist with retrieving reports and information related to the project.

1.3.2 Consultation Activities Conducted for 2021 YSNTMP

A significant amount of input was leveraged to ensure the YSNTMP will serve both existing and future residents and be a benefit to the community for decades to come. A summary of key consultation activities undertaken for the YSNTMP are provided below in **Table 1-1**. Additional details on the consultation program and CCM feedback form format are provided in **Appendix A**.

Table 1-1: Summary of Public and Stakeholder Consultation Activities

Engagement	Date	Summary
Technical Advisory Committee #1 **(TAC #1)**	Feb. 27, 2020	TAC #1 functioned as a general introduction to the project and involved: • Discussion of the project approach and guiding principles; • Confirmation of existing conditions and policy context; • Refinement of the draft *Problem and Opportunity Statement*; and • Introduction of the proposed evaluation criteria. Feedback was provided by various agencies including: Community Planning, Transportation Planning, Parks, Traffic Operations, Bike Share Toronto, Toronto Transit Commission (TTC), Metrolinx, Hydro One, and the City of Vaughan.
Technical Advisory Committee #2 **(TAC #2)**	Aug. 6, 2020	TAC #2 provided a final opportunity for the advisory committee to provide comment and feedback on the refined *Problem and Opportunity Statement* and *Evaluation Criteria* prior to commencing the study and engaging the public. The project team also provided an overview of the proposed process *for Alternative Solution Development and Refinement*, and introduced the key elements that would be the focus of the YSNTMP study: • Road network; • Active transportation; • Shared mobility; and • Parking management.
Community Consultation Meeting #1 **(CCM #1)**	Sept. 9, 2020	Attendees were provided information regarding the project background, policy context, and work conducted to date, including: • Introduction of the Draft Problem and Opportunity Statement; • Review of existing travel trends; • Review of existing conditions with respect to the transit, pedestrian, and cycling networks, vehicular traffic operations, road safety, and shared and sustainable mobility services; • Review of existing Natural Heritage, Built Cultural Heritage, and Archaeological conditions; • Preliminary road network considerations; and, • Introduction of the evaluation criteria.

Engagement	Date	Summary
		A high-level summary of the proposed *Alternative Road Network Solutions* and was provided to solicit public feedback early on in the process of developing alternative solutions. Approximately 115 members of the public attended Community Consultation Meeting (CCM) #1. In addition to the Transportation Master Plan, CCM #1 included a presentation from Community Planning regarding the Draft Yonge Street North Secondary Plan Boundary, Draft Boundary Expansion, and Missing Middle Housing building typologies being considered in the expanded boundary area.
Public Consultation Survey #1	Sept. 9, 2020 – Oct 13, 2020	Following CCM #1, a public consultation survey was made available online to solicit additional feedback from participants and invite comments from those unable to attend the meeting. 97 respondents provided answers to a series of multiple choice, ranked choice, and open-ended questions. The following transportation priorities and concerns were identified: • Respondents identified insufficient network capacity, automobile dependent development, and inadequate active transportation infrastructure as *very significant* problems. • Regarding street network *experience*: ✓ 77% of respondents identified "improving safety of all users" as a critical priority; ✓ 66% identified "managing traffic congestion" as a critical priority; and ✓ 59% identified "increasing comfort/safety for pedestrians and cyclists" as a critical priority. • Regarding *equity*, the top priority of respondents was accommodating users of all ages and abilities. • Regarding *health*, the top priority of respondents was encouraging safe walking and cycling. • Regarding *city building*, the top priority of respondents was managing the impact of new developments. Written responses indicated concern about increased vehicle traffic on local roads; advocated for improved access to the local highway network; and requested improved sidewalk infrastructure throughout the study area.
Community Consultation Meeting #2	Oct. 29, 2020	Transportation Network Concepts we presented to meeting attendees and a discussion period was provided at the end of the meeting to solicit feedback on specific links. The following concepts were presented:

Engagement	Date	Summary
(CCM #2)		• A new north-south connection to the east of Yonge Street that would run from Cummer Avenue to Steeles Avenue; • A series of new local road and pedestrian/cycling connection concepts within the Silverview area; • A series of realignment options to connect Connaught Avenue and Wedgewood Drive across Yonge Street; • A road-widening proposal for Dumont Street along with pedestrian/cycling links to improve north-south connections east of Yonge Street; • An extension and widening concept for Lariviere Road that would improve north-south connections west of Yonge Street by linking with the planned Beecroft Extension; and • A series of new local road and pedestrian/cycling connection concepts for the Centrepoint Mall site, which is expected to undergo major redevelopment in the future. Comments during the Q&A session were documented along with email feedback. This information was reviewed by the project team and grouped to identify overarching themes. They included: • Concern about increased traffic traveling at higher speeds on local roads if additional north-south connections were added; • Enthusiasm about new pedestrian and cycling infrastructure, with support for protected infrastructure to be added directly to the Yonge Street Corridor near future TTC stations; and • Concern about project timelines, costs, and community impact for north-south connections that would require property acquisition. Over 175 members of the public attended Community Consultation Meeting #2, and the project team documented 59 comments via email or phone.
Social Pinpoint Survey: Dynamic Feedback Map	Oct. 30, 2020 – Nov. 23, 2020	A map of all the Transportation Network Concepts presented during CCM #2 was created and uploaded to the engagement platform Social Pinpoint. Social Pinpoint allows users to "attach" comments to specific infrastructure proposals and classify them as: *Ideas & Suggestions*, *Like, Dislike, Walking Comment, Transit Comment,* and/or *Cycling Comment*. 89 comments were submitted by the public. Generally, the comments were positive for all concepts. The majority of positive comments were associated with the improvement of cycling and pedestrian infrastructure, and the addition of new connections to make the study area more walkable. The majority of negative comments were associated with the cost and neighbourhood impacts of proposed north-south connections, and the perception that new connections would increase vehicle traffic on local roads.

Engagement	Date	Summary
Technical Advisory Committee #3 (TAC #3)	May 6, 2021	TAC #3 provided an opportunity for TAC members to review the Preferred Transportation Solution as a whole and with a quadrant-by-quadrant breakdown. Details regarding the evaluation process and selection of each component that would comprise the resultant Preferred Transportation Solution were provided. An overview of the transportation analysis conducted was also presented, including a review of the proposed mode shift for the 2041 horizon year and comparison between the Status Quo and 2041 scenarios with and without the Yonge North Subway Extension. TAC members were given the opportunity to provide feedback during a Q&A session and via email following the meeting.
Community Consultation Meeting #3 (CCM #3)	May 10, 2021	The Preferred Transportation Solution —which was developed based on the feedback provided through the previous TAC meetings, CCMs, and public surveys— was presented at CCM #3. The evaluated concepts for the *street network, pedestrian network,* and *cycling network* were all presented, along with the overall Preferred Solution. A quadrant-by-quadrant breakdown of the changes that were being proposed within the study area was conducted, and members of the public were given an opportunity to provide feedback during a Q&A session. Around 200 members of the community attended Community Consultation Meeting #3, and the project team documented over 20 in-person and 8 emailed comments. In addition to the TMP, CCM #3 included presentations from City Staff regarding the various components of the overall Yonge Street North Planning Study, including the preferred built form and massing, the parks and open space network, and community services and facilities within the study area.
Public Consultation Survey #2	May 10, 2021 – May 31, 2021	Participants at CCM #3 and members of the public who were not able to attend were asked to answer a five-question, written-response survey. The first three questions asked for specific feedback regarding *walking and cycling needs*, *vehicle and transit needs, and parking and sustainability concerns*. Question four asked respondents to identify their top transportation infrastructure priority (aside from the Yonge North Subway Extension). Question five provided respondents with an opportunity to provide general feedback. In total, 133 comments were provided by 33 unique respondents.

1.3.3 Incorporation of Feedback

The following section details how the feedback received from public consultation was incorporated into the overall YSNTMP process and final YSNTMP recommendations.

1.3.3.1 Community Consultation Meetings

CCM #1 and Public Consultation Survey #1

Purpose: Provide a high-level summary of the proposed Alternative Solutions; discuss the existing conditions and the deficiencies of the current transportation network.

Feedback: A total of 97 respondents provided answers to a series of multiple choice, ranked choice, and open-ended questions. Respondents identified insufficient network capacity, automobile dependent development, and inadequate active transportation infrastructure as very significant problems. Respondents were concerned that the local road network was unsafe, heavy congestion was common at major intersections, and that the local network discouraged walking and cycling. There was a clear perception that new developments threatened to make these problems worse.

Response: The public comments were consolidated and reviewed to identify themes. As the team commenced with the process of developing network concepts, an emphasis was placed on ensuring:

- New connections would be created to improve neighbourhood walkability and conditions for all modes within transit-oriented nodes, address a disconnected road network that discourages walking and cycling, and help slow traffic on local roads;
- New development will be supported by new transit and active transportation infrastructure to ensure that residents will not have to rely on private vehicles, and as a result will not exacerbate local congestion; and
- Active transportation infrastructure and traffic calming measures (e.g. signal placement, quiet streets, intersection design) were strategically placed to slow down traffic on local roads and improve the real and perceived safety of the network.

CCM #2 and Social Pinpoint Survey

Purpose: Present the Transportation Network Concepts that had been developed following existing conditions research and the first round of public consultation. A variety of road network options were presented, along with the proposed location of walking, cycling, shared mobility, and parking infrastructure.

Feedback: Over 175 members of the public attended Community Consultation Meeting #2, and the project team documented 59 emailed/phone-in comments and 89 Social Pinpoint survey responses. The feedback to the transportation network concepts were consolidated and reviewed to identify themes. Comments regarding the proposed network concepts revolved around two key proposals:

- *New pedestrian/cycling connections and infrastructure*: there was an almost uniformly positive response to proposed pedestrian and cycling connections throughout the study area. Respondents showed support for the addition of new block connections and pedestrian-only cut throughs, as long as they would not increase vehicle volumes on local roads. Response was also generally positive regarding the addition of new sidewalks, the expansion of existing sidewalks and pedestrian realm improvements, as well as the addition of protected cycling lanes on collector and arterial roads.
- *New north-south connections*: multiple respondents indicated major concerns regarding the creation of new north-south roadways. There was a fairly uniform perception that these connections would lead to a higher number of vehicles using the neighbourhood as a short-cut, and would result in increased vehicle speeds and volumes on local roads. These concerns referred to both an increased level of local traffic, as well as traffic infiltration from the '905', or York Region, municipalities to the north via any north-south connections that would connect to Steeles Avenue. Multiple respondents

also expressed concerns about the costs and neighbourhood impacts of the land acquisition that would be required.

Response: The project team utilized the above feedback to refine the proposed network concepts and conduct a review of the minor, moderate, and major considerations that were presented for the transportation network alternatives. Brainstorming exercises were conducted to identify alternative solutions for the road links that created the most concern, and additional research was conducted to solidify the rationale for the Preferred Transportation Solution. As a result of the feedback garnered through CCM #2 and the Social Pinpoint survey, an emphasis was placed on ensuring:

- Connections through the Silverview Area were realigned and/or eliminated to accommodate community concern regarding impact to the existing neighbourhood structure and traffic volumes;
- Opportunities to improve laneway functionality were explored as an alternative to creating a major north-south connection that would require property acquisition;
- Additional network configurations and modelling were conducted to ensure proposed changes would not notably increase traffic volumes on local roads; and
- Opportunities to improve pedestrian connections in the northern portion of the study area were bolstered to align with public enthusiasm for an enhanced grid as part of the Centrepoint Mall redevelopment.

CCM #3 and Public Consultation Survey #1

Purpose: Present the minor, moderate, and major considerations network concepts; review the evaluation criteria and process that was utilized; present the Preferred Transportation Solution, which included preferred street, pedestrian and active transportation networks, shared mobility strategy, and parking management policy based on the evaluation outcome.

Feedback: Comments regarding the final proposal were mixed. A plurality of respondents indicated support for the project objectives of improving walkability, connectivity, and transit capacity, however there were still numerous concerns regarding the placement of new road connections and cycling infrastructure. Overall, the comments confirmed that there is an emerging consensus regarding the problems facing the study area transportation network, but that there is still a wide variety of opinions regarding how to best address those problems. While some comments thought that the plan was an overall step towards reducing the dominance of the personal automobile, improving safety, and supporting a shift towards a mixed-use urban form, others expressed concern that the Emerging Preferred Solution favoured future residents over existing residents, expressed concern regarding the timing of proposed new streets, and noted that cycling and shared mobility improvements might not be as useful for families and seniors who already live in the area.

- *Pedestrian Improvements:* Overall, there was support for improvements to pedestrian facilities within the Study Area. Many comments mentioned the gaps in existing sidewalk infrastructure and expressed positive feedback regarding the proposed improvements to cycling, particularly in the northeast quadrant of the Study Area. There was also positive reaction to proposed crossing locations, particularly those close to schools.
- *Cycling Improvements:* Feedback regarding the proposed cycling improvements were mixed, with some comments expressing positive reactions to expanding the cycling network in the area and provided dedicated facilities on key corridors. There were also comments expressing concern that too much space was being allocated to cyclists, given that there didn't seem to be significant need and

use of existing facilities, such as bike lanes on Willowdale south of Bishop Avenue. There was also some confusion as to what the proposed Neighbourhood Greenways proposed.

- *Proposed New Streets:* There were positive comments received regarding the provision of new north-south routes for vehicles, particularly for the proposed Beecroft and Lariviere Road extensions and proposed new streets on the current Centrepoint Mall property. Several comments expressing concern were also made, however, particularly regarding the new north-south street proposed between Yonge Street and Dumont Street. There were some concerns specifically that this street would impact the existing neighbourhood structure. As well, there was concern that the number of roads proposed was not necessary, particularly in the northeast quadrant.

Response: the project team documented the final comments and incorporated them as an additional metric within the evaluation process. Additional priority sidewalk improvements were added to the east-west streets in the northeast quadrant recognizing the need for pedestrian facility improvements throughout the Study Area. As well, the project team sought to add additional clarity regarding the proposed implementation plan for the proposed new streets, including those with cycling facilities proposed. The new street proposed in the northeast quadrant, for example, would be implemented through new development as development pressures along Yonge Street expand. There seemed to be a disconnect between when and why certain elements of the network were being proposed, which the implementation plan seeks to address.

2 CONTEXT

To provide an understanding of the existing conditions observed in the YSNTMP Study Area prior to commencement of the YSNTMP, a review has been undertaken of the applicable planning context and existing conditions, including the demographics, natural environment, archaeological, cultural heritage, contamination, and transportation aspects. The following review of the Study Area's planning context and existing conditions were subsequently used to identify current challenges facing the Study Area and opportunities to improve conditions through the YSNTMP.

2.1 PLANNING CONTEXT

2.1.1 Provincial

2.1.1.1 Provincial Policy Statement (2020)

The Provincial Policy Statement (PPS) is the strategic vision regulating land use and development within the province, with an emphasis on healthy communities, active modes of transportation, clean environment, and a strong economy. The transportation infrastructure system should be sustainable, multi-modal, and linked with land use considerations.

The PPS outlines policies that encourage the safe and energy efficient movement of people and goods, connectivity facilitated via a multi-modal transportation system, and land use patterns that aim to increase the use of active transportation and transit over other transportation modes.

2.1.1.2 Growth Plan for the Greater Golden Horseshoe (2020)

The Plan guides decisions on a wide range of issues (land use, urban form, housing, environment, resource protection, transportation, and infrastructure) in the interest of economic prosperity. The plan encourages intensification of development via transit-supportive growth, multi-modal transportation systems, and creation of mixed-use communities that feature commercial centres and surrounding communities.

The Growth Plan designates North York Centre, which overlaps with a portion of the YSNTMP Study Area, as an "Urban Growth Centre". Urban Growth Centres act as focal areas for investment in regional public service facilities to accommodate and support the transit network at the regional scale, to serve as high-density major employment centres, and to accommodate significant population and employment growth.

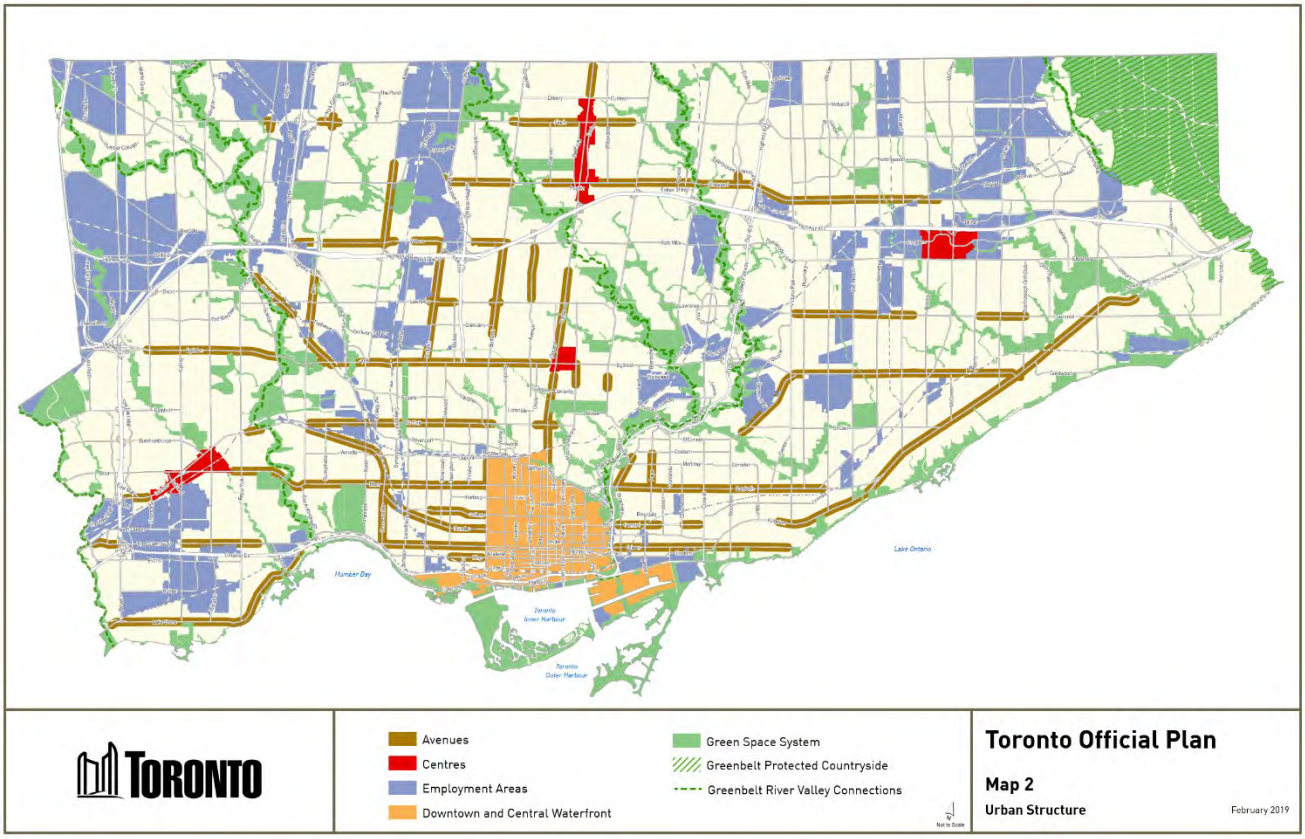
2.1.2 City of Toronto

2.1.2.1 Official Plan (2019)

The City of Toronto Official Plan provides a vision for managing growth within the City's jurisdictional boundaries. The Official Plan emphasizes the efficient use of street space with a focus on moving people instead of vehicles. It also provides clear objectives to reduce car dependency and encourage transit use, walking, and cycling as attractive alternatives. To achieve its comprehensive goals, the Official Plan encourages transit-oriented development in intensive, mixed-use, targeted growth areas such as North York Centre, which overlaps a portion of the YSNTMP Study Area.

The Official Plan designates North York Centre as one of the four Centres within the City. As such, this area is intended to play an important role in how growth is managed (**Figure 2-1**). Centres are focal points for surface transit routes drawing people from across the city, and from outlying suburbs, to either jobs within the Centres or to a rapid transit connection.

Figure 2-1: Map 2 of the Official Plan



2.1.2.2 North York Centre Secondary Plan (2015)

The North York Centre Secondary Plan envisions that the Centre will focus on transit-based employment and residential growth. The objectives of the plan include working towards reducing reliance on the use of automobiles, attaining a high-transit modal split, and ensuring that development levels do not exceed the capacity of infrastructure. The plan also provides the detailed vision for achieving targets with a vibrant mix of land uses supported by effective transit facilities, a high-quality public realm, and active transportation infrastructure.

2.1.2.3 Vision Zero

The Vision Zero Road Safety Plan is a comprehensive action plan focused on reducing traffic-related fatalities and serious injuries on Toronto's streets. The Plan prioritizes the safety of the most vulnerable road users through a range of extensive, proactive, targeted, and data driven initiatives. The Vision Zero Road Safety Plan addresses safety for the most vulnerable users of transportation systems, specifically: pedestrians, school children, older adults, and cyclists.

2.1.2.4 Toronto Green Standard

The Toronto Green Standard (TGS) is the City's sustainable design requirements for new private and public developments. The TGS was developed to address the City's environmental priorities concerning air quality, energy use, ecological protection, and storm water runoff. The standards are considered a vital tool in achieving the City's greenhouse gas emission reduction targets. Many of the transportation-related requirements fall under the air quality component, such as requirement AQ 1.1, which identifies the need for

new developments to demonstrate a reduction in single occupancy auto vehicle trips through implementing multimodal strategies and Transportation Demand Management (TDM) measures.

2.1.3 City of Vaughan Yonge Steeles Secondary Plan

The Yonge-Steeles Corridor Secondary Plan area is generally located along the west side of Yonge Street between Steeles Avenue to the south of Langstaff Road. The Vaughan Yonge Steeles Secondary Plan facilitates intensification at the intersection of Yonge Street and Steeles Avenue West. The Secondary Plan includes policies that permits a mix of uses, including residential, office, retail, community facilities, and will permit among the highest building heights and densities along a planned Regional Corridor in the City of Vaughan. The Secondary Plan is in keeping with the principle of establishing complete, walkable communities well served by rapid transit.

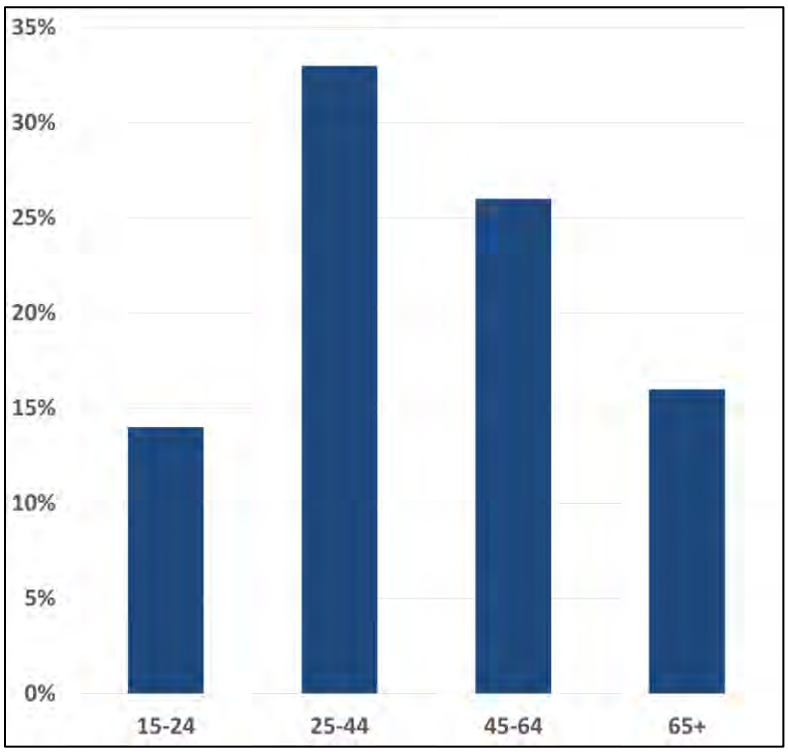
2.2 YONGE STREET NORTH STUDY AREA EXISTING CONDITIONS

2.2.1 Demographics Profile

Ward 18 Willowdale aligns closely with the Focused Study Area, sharing the same north, east, and west boundaries and extending slightly further south to Hwy 401. The demographic data compiled by the City of Toronto and adapted from Statistics Canada for Ward 18 was reviewed to provide a snapshot of recent demographic data and historic development trends for the Focused Study Area.

The total Ward 18 population was about 118,800 according to the 2016 Census. **Figure 2-2** shows to Ward 18 population by age group. The Ward experienced a roughly 19.2% growth in population between 2006 and 2016, compared to 9.1% citywide. The majority of buildings built within this time frame were apartment buildings of at least 5-storeys, indicating a shift away from the typical low-rise residential development towards higher-density residential.

Figure 2-2: Ward 18 – Willowdale Population by Age Group



Source: City Planning, 2018 (Adapted from Statistics Canada, Census 2016, 2011 & 2006)

2.2.2 Natural Environment

LEA Consulting Ltd. has completed a summary and evaluation of the existing natural heritage features within the Study Area. The full report is included in **Appendix B.**

Field reconnaissance of the 11 potential natural heritage areas was completed on February 5, 2020. The focus of the field reconnaissance was to confirm and evaluate the existing conditions. The Study Area is highly urbanized, and as such, areas on private property were not accessed. When access was restricted and where applicable, existing conditions were assessed from the roadway or other appropriate vantage point. The existing conditions included:

- Terrestrial Ecosystems;
- Aquatic Ecosystems; and
- Identified Potential Natural Heritage Areas.

The observed conditions, as assessed through a review of secondary source information and confirmed through a field reconnaissance evaluation, confirm the absence of any significant natural heritage features within the Study Area. The majority of the potential natural heritage feature sites evaluated as part of the field reconnaissance were parkland areas and school sports fields that were well maintained and landscaped for their intended use. Observed tree and shrub specimens were generally consistent with typical landscape plantings and species diversity was noted to vary minimally. Tree and shrub specimens noted do however provide habitat for typical wildlife and avian species found in urban environments. Evaluated potential natural

heritage areas within the Study Area were consistent with an urbanized environment and only provide habitat for adaptable and tolerant species.

2.2.3 Cultural Heritage

Unterman McPhail Associates (UMcA) undertook a review of the existing conditions for cultural heritage resources within the Focused Study Area. The full report is included in **Appendix C.**

Table 2-1 summarizes the cultural heritage resources found within the Yonge Street North TMP Study Area. The YSNTMP Study Area contains three (3) recognized municipal heritage properties that have statutory protection under the *Ontario Heritage Act* (OHA) with regard to potential change that may affect the cultural heritage value.

- 65 Centre Avenue, Designated under the OHA Part IV, By-Law 53-2015 Robertson House, circa 1912;
- 15 Patricia Avenue, Residence, circa 1900 (Listed); and
- 5926 Yonge Street, Newtonbrook Store (Listed).

City of Toronto Heritage Planning indicated three (3) heritage properties within the YSNTMP Study Area do not have statutory protection under the OHA; however, staff flagged the following properties as having the potential to hold heritage value or interest.

- 5800 Yonge Street, Toronto Hydro (Formerly North York Hydro Commission);
- 60 Hilda Avenue, Willowdale Christian School; and
- 155 Hilda Avenue, Newtonbrook Secondary School.

It is noted the City of Toronto received a Nomination Form for Municipal Designation under the OHA for the former Hydro-Electric Commission building at 5800 Yonge Street in 2018. Additionally, consultation with Heritage Preservation Services indicates the City intends to identify more properties of cultural heritage value or interest in this area of North York in the future. There are no provincially or federally owned or recognized heritage properties within the YSNTMP.

Three (3) commemorative plaques are identified within the YSNTMP Study Area:

- “Newtonbrook School Section No. 5”, 37 Drewry Avenue;
- “Newtonbrook Historic Community”, 5800 Yonge Street; and
- “The Right Honourable Lester Bowles Pearson, 1897-1972”.

There are no heritage properties on the *National Trust of Canada Endangered List* 2019 and no internationally recognized heritage properties or heritage properties on an endangered list within the YSNTMP.

Table 2-1: Summary of Cultural Heritage Resource Findings within the YSNTMP Study Area

Identified Heritage Recognition	Municipal	Provincial	Federal	International
Existing Statutory Protection under OHA	2 Properties (Listed): • 15 Patricia Ave. • 5926 Yonge St. 1 (Property Designated): • 65 Centre Ave.	0	N/A	N/A
Pending Statutory Protection under OHA	1 Pending (Designation) • 5800 Yonge St.	0		
Potential for heritage value or interest	3 Properties: • 5800 Yonge Street, former Hydro-Electric Commission, Township of North York (see above); • 60 Hilda Avenue, Willowdale Christian School; and • 155 Hilda Avenue, Newtonbrook Secondary School	0	N/A	N/A
Provincially-owned property or OHT heritage easement	N/A	0	N/A	N/A
Federal, international recognized heritage property	N/A	N/A	0	0
Commemorative Plaque	2 Plaques: • HT - 37 Drewry Ave., Newtonbrook School Section No. 5. • North York's Historic Communities - 5800 Yonge St., Newtonbrook Historic Community".	1 Plaque: • OHT - 53 Cummer Ave. – The Right Honourable Lester Bowles Pearson	0	0
Known Adjacent Cultural Heritage Resources	0	0	0	0

2.2.4 Archaeology

Archaeological Services Inc. (ASI) was contracted to conduct a Stage 1 Archaeological Assessment (Background Research) as part of the YSNTMP Municipal Class Environmental Assessment in the City of Toronto. The full report is included in **Appendix D**.

The Stage 1 Study Area is bordered by Hilda Avenue to the west, Willowdale Avenue to the east, Steeles Avenue to the north, and Finch Avenue to the south. The Stage 1 background study determined that two (2) previously registered archaeological sites are located within one (1) kilometre of the Study Area. Parts of the Study Area have been cleared of further archaeological concern through previous archaeological assessment and do not require further assessment. Parts of the Study Area exhibit archaeological potential and require Stage 2 Assessment if impacted by any future development.

Based on a Stage 1 Assessment, the following recommendations were made:

- The listed properties at 5926 Yonge Street and 15 Patricia Avenue are disturbed and do not require further archaeological assessment;
- The developed parcels along Yonge Street do not retain archaeological potential on account of deep and extensive land disturbance. These lands do not require further archaeological assessment;
- Any future developments within the Study Area, beyond existing rights-of-way or lands that have been assessed and cleared of any further archaeological concern by this or any previous Stage 1 Assessment, must be preceded by Stage 2 Archaeological Assessment. Such assessment(s) must be conducted in accordance with the Ministry of Heritage, Sport, Tourism, and Culture Industries' 2011 Standards and Guidelines for Consultant Archaeologists. Any Stage 2 Archaeological Assessment must be undertaken using methods appropriate to the urban context and character of the lands in question. Areas deemed to be disturbed or of no potential due to factors of slope, drainage, or previous disturbance during the Stage 2 Assessment process must be appropriately documented;
- This work is required prior to any land disturbing activities in order to identify any archaeological remains that may be present; and
- Should the proposed work extend beyond the current Study Area, further Stage 1 Archaeological Assessment should be conducted to determine the archaeological potential of the surrounding lands.

2.2.5 Contaminant Overview Study

Thurber Engineering Ltd. (Thurber) was retained by LEA to prepare a Contamination Overview Study (COS) in support of the Yonge Street North Transportation Master Plan. The full report is included in **Appendix E.**

The COS involved a desktop review and summary of available historical records obtained through a review of geologic maps, available past environmental and geotechnical reports pertaining to properties within the COS Study Area, and an EcoLog ERIS search that included city directories, aerial photographs, fire insurance plans, and federal, provincial, and private environmental databases. The site reconnaissance included a visual assessment of the Site and of the COS Study Area from publicly accessible locations.

Based on a review of the information, development since 1946 has generally occurred in areas that previously consisted of agricultural, residential or community (i.e., roadways) property uses, or on undeveloped/vacant lands. The first developed land use appeared to be circa 1801, with the construction of a schoolhouse in the Town of Newtonbrook. Since at least 1964, the commercial/industrial properties have primarily included gas stations, automotive repair and service garages, dry cleaners, and to a lesser extent, manufacturing operations. The COS Study Area was developed to near its present configuration by the 1970s, with

progressive re-development of high density residential, commercial facilities, and transportation infrastructure to the current conditions since approximately 1990.

The findings of the COS identified potentially contaminating activity (PCA) contributors to the site, which generally involved the presence of fill materials, typical vehicle spills within roadways and parking lots, the application of de-icing salts for the purposes of traffic and pedestrian safety, hydro facilities, or commercial/industrial operations at properties that were predominately along or proximal to Yonge Street, Steeles Avenue, Drewry Avenue, and Finch Avenue. The contaminants of potential concern were identified for the corresponding PCAs and areas of potential environmental concern that typically included metals and inorganics, petroleum hydrocarbons, benzene, toluene, ethylbenzene, xylene, volatile organic compounds, polycyclic aromatic hydrocarbons, polychlorinated biphenyls, and herbicides.

Based on the findings of the COS, there is the likelihood that contamination could be found within the proposed new streets recommended for the overall YSNTMP Transportation Network. As a result, a more detailed investigation will need to be undertaken as part of the Record of Site Condition, which will be required when acquiring the right-of-ways for the new streets proposed.

2.2.6 Transportation

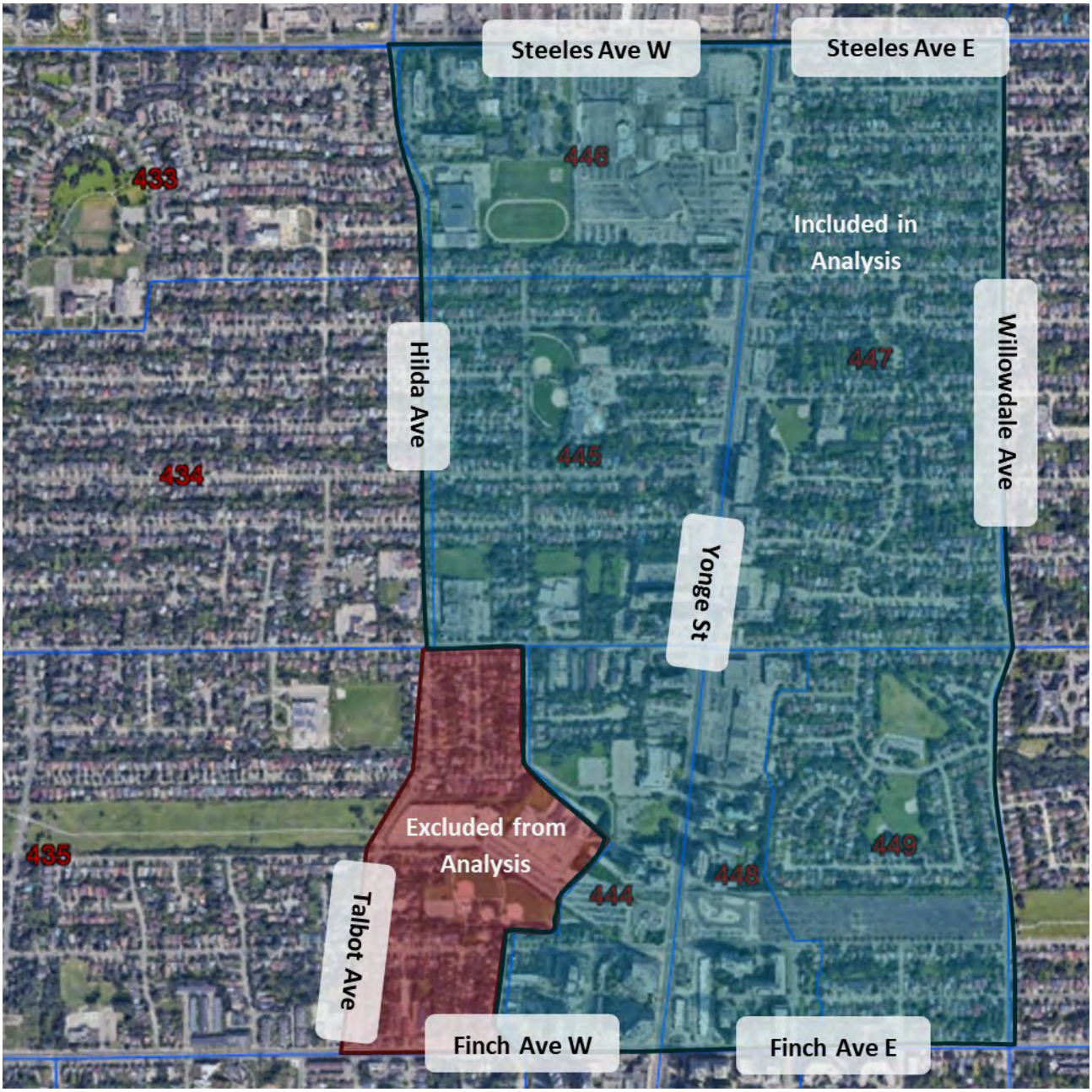
LEA conducted a review of the existing transportation conditions for the YSNTMP Study Area. The full existing transportation conditions report is provided in **Appendix F**, with a summary of the key findings provided in the following sections.

2.2.6.1 Travel Trends and Behaviours

An assessment of the existing transportation conditions within the YSNTMP Focused Study Area was conducted to provide an understanding of the existing travel trends and behaviour, as well as the existing transportation context for various modes. In addition to the overall travel trends and behaviour, the assessment was conducted for vehicle traffic, transit, active transportation, road safety, goods movement, and shared mobility.

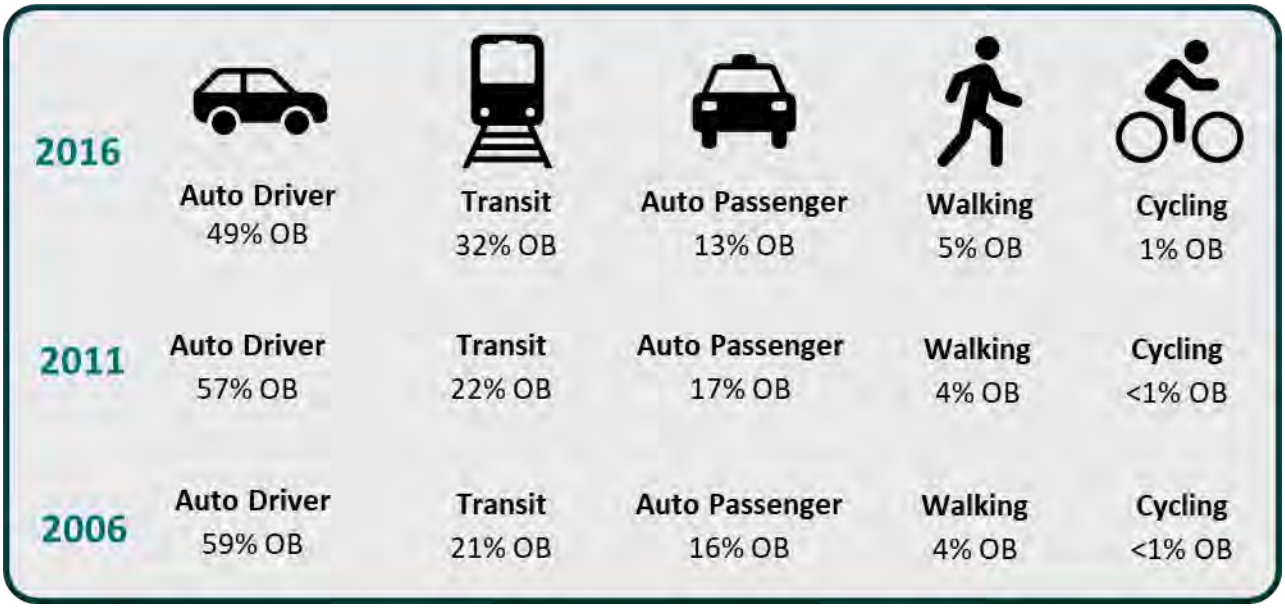
To determine the travel mode split trends for the Focused Study Area, and how the modal split for trips from the area has changed over time, the Transportation Tomorrow Survey (TTS) datasets for 2006, 2011, and 2016 were reviewed. To capture trips from the Focused Study Area, the "2006 GTA zone of destination and zone of origin" TTS datasets were filtered to include zones 444, 445, 446, 447, 448, 449, which represent the portion of the Focused Study Area shaded in blue and shown in **Figure 2-3**. Zone 435, which includes the red shaded area illustrated in **Figure 2-3**, was not included in the analysis as this zone extends as far west as Bathurst Street and is therefore primarily representative of travel outside of the Focused Study Area.

Figure 2-3: Extent of Focused Study Area Represented by TTS Zones in the Travel Trends Analysis



Travel data collected by the TTS over this 10-year period, from 2006 to 2016, indicates that the YSN Focused Study Area has experienced a decrease in auto driver modal split from 60% of all trips in 2006, to 49% in 2016. Over the same time period, the transit modal split increased from 20% to 33%. The modal split for active transportation, including walking and cycling, remained relatively consistent, increasing from around 4% to 5% over the 10-year period. **Figure 2-4** provides an overview of the change in modal splits over the years studied.

Figure 2-4: Outbound (OB) Modal Split for 2006, 2011 and 2016



To assess the relationship between trip distance and travel mode for trips originating in the Focused Study Area, a review was undertaken of TTS data from 2006 to 2016. The results of the analysis are shown in **Figure 2-5, Figure 2-6**, and **Figure 2-7** for 2006, 2011, and 2016, respectively. To compare the relationship between travel mode and trip length over a 10-year period, the same TTS zones were assessed. Between 2006 and 2016, the following trends were observed:

- Consistent auto driver modal share between 2006 and 2011, with auto driver representing the largest modal share for all distances except for trips less than 400 metres (2006) and trips between 15 – 20 km (2006 and 2011);
- Decrease in auto driver modal share for all trip length categories in 2016, apart from trips between 8 – 11 km and for trips 35 km or greater, which increased to 2006 levels;
- Increase in walking modal share for trips between 0 – 400 m to 78% in 2016 from 44% and 45% in 2011 and 2006, respectively;
- Increase in transit modal share for all trips less than 35 km, apart from trips between 8-11 km as transit modal share remained consistent between 2011 and 2016;
- Increase in cycling trips and modal share for trips less than 8 km.

Figure 2-5: Travel Mode by Trip Distance from the Focused Study Area in 2006

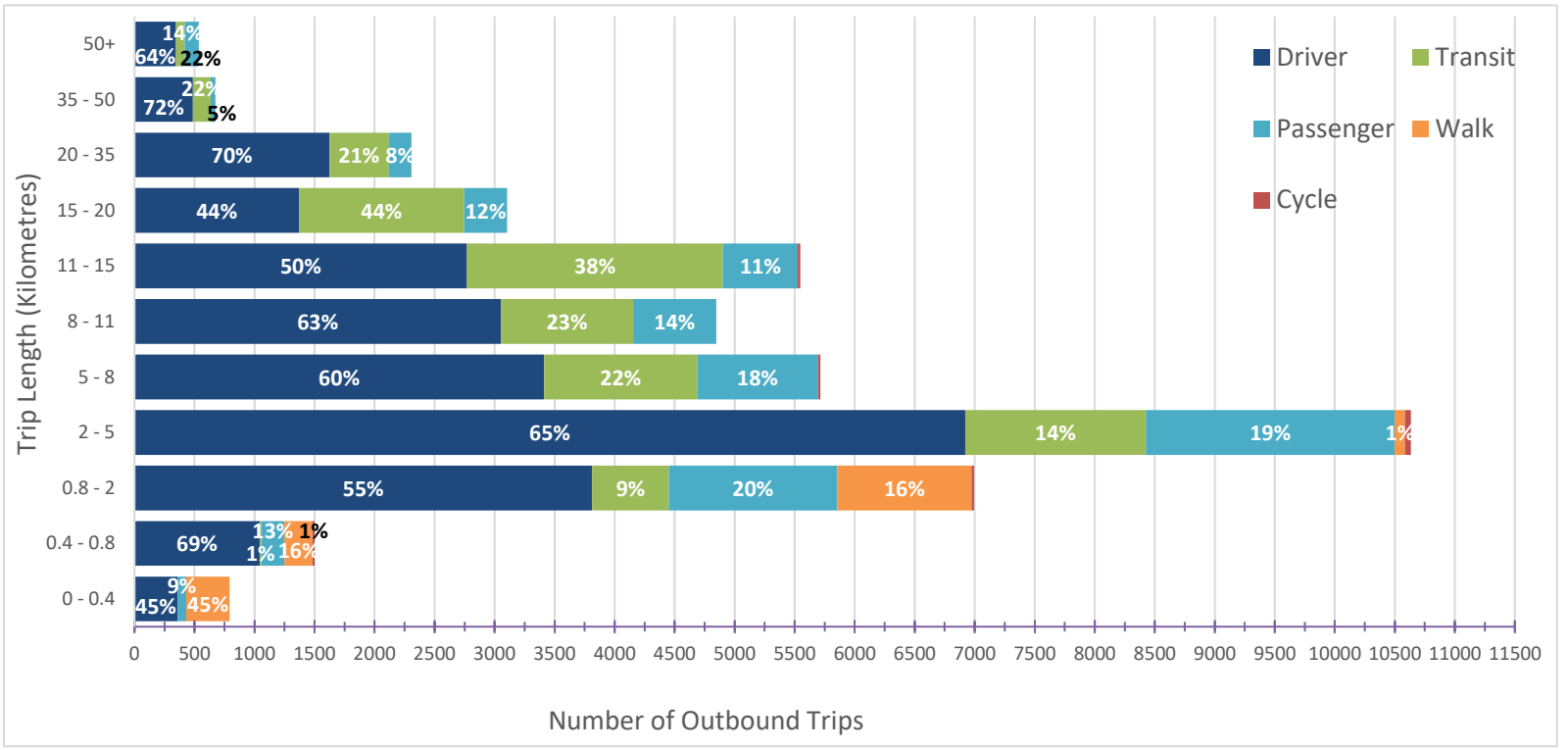


Figure 2-6: Travel Mode by Trip Distance from the Focused Study Area in 2011

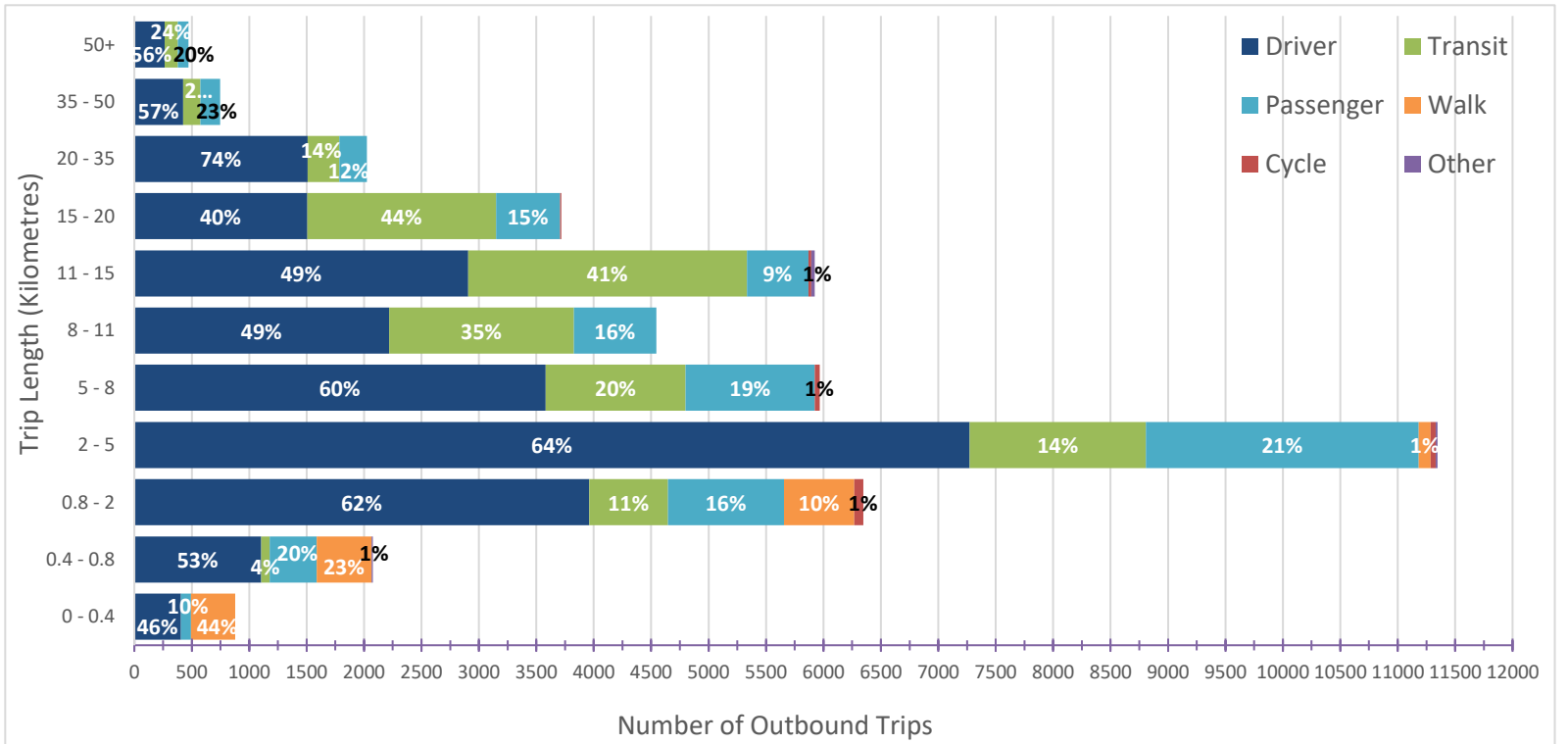
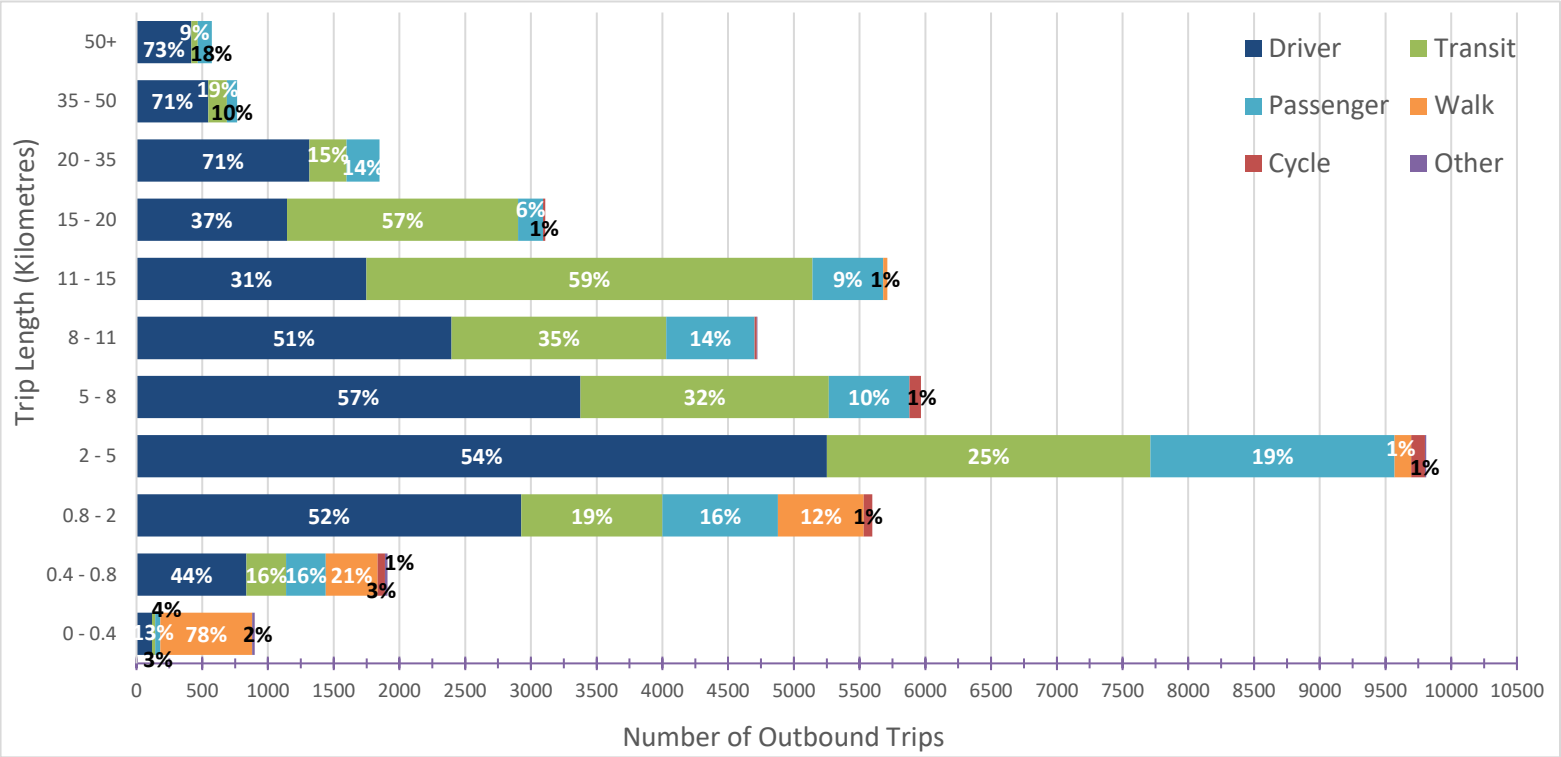


Figure 2-7: Travel Mode by Trip Distance from Focused Study Area in 2016



While the overall modal shares for transit and active transportation modes have increased between 2006 and 2016, auto driver continued to be the dominant mode in 2016 overall, with auto driver representing the highest mode share for trip lengths between 800 m – 11 km, and for all trips 20 km and longer.

A significant increase in transit modal share has been observed for the Focused Study Area over a 10-year period, without any significant investment to transit within the Focused Study Area. Further, the overall mode split for the Focused Study Area indicates that transit use is already well-established in travel behaviour for trips to and from the Focused Study Area, as well as for trips less than 20 km. Given the existing Focused Study Area travel behaviour trends, there are several opportunities to increase non-automobile travel trips and capitalize on proposed improvements and investments to the area's transportation network, such as the proposed Line 1 Subway extension. It is noted that the potential for additional density must be considered in terms of subway capacity. Line 1 currently faces existing constraints as a result of crowding, particularly at Bloor-Yonge Station, which inhibits transit ridership growth southbound to the downtown core from North and Northeast Toronto and, as documented by Metrolinx in the Ontario Line Initial Business Case (2019), represents a constraint to the ability to accommodate future growth in the City and Region.

In addition to shifting additional auto-oriented trips to transit, as observed between 2006 and 2016, there is the potential to increase the active modal split for shorter trips. The City's 2019 Cycling Network Plan Update considered trips within 5 km as bikeable trips, while shorter walking trips were considered to be within 1 km, and longer walking trips considered to be above 1 km. Additional thresholds of 400 m and 800 m were chosen to assess the active transportation and overall modal split for trips within an approximate 5-minute and 10-minute walking distance, respectively. There was a significant increase in the percentage of trips within 400m conducted by walking in 2016, as well as an increase in cycling trips taken within 8 km. There is the opportunity to further encourage active transportation as a travel mode for trips less than 8 km in length, as well as for last-mile trips facilitating connections to existing and proposed transit service within the Focused Study Area.

2.2.6.2 Vehicle Operations

Existing Street Network

Figure 2-8 illustrates how the Focused Study Area roadways are classified, based on the City of Toronto Road Classification System, which was adopted by City Council in April 2018. Within the Focused Study Area, there are:

- Three (3) major arterial roads, where traffic movement is the primary function and greater than 20,000 vehicles per day access the roadway:
    - Yonge Street
    - Finch Avenue
    - Steeles Avenue
- Two (2) minor arterial roads, where traffic movement is the primary function and between 8,000 and 20,000 vehicles per day access the roadway:
    - Willowdale Avenue
    - Drewry/Cummer Avenue
- Four (4) collector roads, where the primary function is to provide access to property while facilitating efficient traffic movement, and where expected volumes are between 2,500 and 8,000 vehicles per day:
    - Newton Drive
    - Patricia Avenue
    - Hendon/Bishop Avenue
    - Hilda/Talbot Avenue.

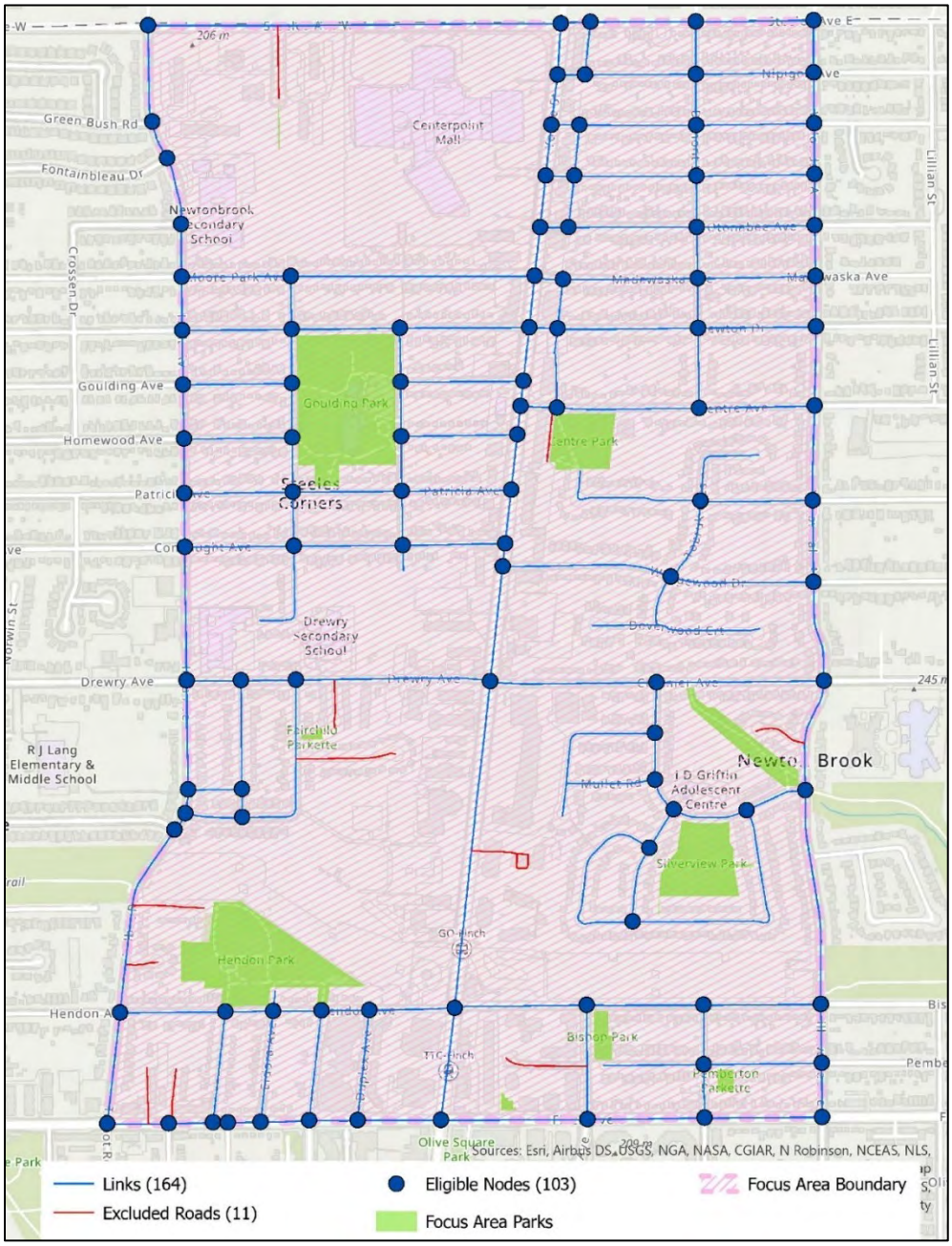
The remaining roadways are all local roads. Local roads have low traffic speeds, primarily exist to provide access to property, and are expected to see volumes of fewer than 2,500 vehicles per day.

Figure 2-8: Focused Study Area Road Classification

To determine the existing level of connectivity for the Focused Study Area street network, a connectivity index was developed. A street network connectivity index is determined by calculating the ratio of intersections, or nodes, to links within a defined area. The index for the Focused Study Area was developed based on The Calgary Transportation Plan (CTP) Connectivity Handbook (Draft) and LEED Neighbourhood Development Reference Guide.

Based on the criteria, the Focused Study Area includes 164 eligible links and 103 eligible nodes (intersections) and has a connectivity index of 1.59. A map of the connectivity index and eligible/ineligible links and nodes is shown in **Figure 2-9**. As noted in the CTP Connectivity Handbook, grid networks are considered to provide the highest levels of connectivity compared to modified grid and curvilinear networks, which provide fewer direct routes, feature more cul-de-sacs, and generally result in a higher ratio of links to nodes. Grid networks generally achieve higher connectivity indices closer or equal to 2.0 as a result, while curvilinear networks achieve lower indices around 1.3-1.4. The Focused Study Area connectivity index of 1.59 places roughly in the middle of this spectrum, which is reflective of the existing street network and overall built form of the Focused Study Area.

Figure 2-9: Street Network Connectivity Index



It is noted that there are areas within the Focused Study Area that lack a public street network entirely, which significantly constrains connectivity throughout the Focused Study Area for all modes. This includes the northwest section of the Focused Study Area between Moore Park Avenue, Hilda Avenue, Steeles Avenue West, and Yonge Street, as well as a large portion west of Yonge Street between Drewry Avenue, Hendon Avenue, and west of Fairchild Avenue.

Another major constraint on the local street network, and its connectivity, is the existing block sizes within the Focused Study Area. Generally, existing blocks are too long, which makes walking and cycling less desirable as it extends the time it takes to get from point A to point B. For instance, block lengths along Drewry/Cummer Avenue, Centre Avenue, Newton Drive, Yonge Street between Bishop/Hendon Avenue and Turnberry Court, Willowdale Avenue between Bishop Avenue and Silverview Drive, and Steeles Avenue West between Yonge Street and the Centrepoint Mall access in the Focused Study Area exceed 300 metres. Additionally, many of the east-west blocks in the Focused Study Area north of Drewry/Cummer Avenue and north-south blocks along Yonge Street approach or exceed 200 metres. The impact on existing neighbourhoods and future development potential will need to be considered in the development of alternative street network solutions, with the creation of shorter block lengths a key solution to improve walkability and the flow of vehicles. Further, the Focused Study Area has limited arterial and collector connections to accommodate the higher volumes of vehicle traffic that are expected to result from increased density.

There is opportunity to significantly improve street network connectivity for vehicles, pedestrians, and cyclists within the Focused Study Area through the introduction of new east-west and north-south street links. The introduction of new intersections and shorter links will provide more direct travel between destinations, and connectivity for all modes is needed to support sustainable and transit-oriented growth in the Focused Study Area.

Vehicle Traffic

To determine the overall vehicle traffic demand at each intersection, the total volumes observed for each turning movement at each intersection were combined. The directional vehicle traffic volumes on approach to each intersection were also identified to assess the overall traffic volumes between signalized intersections within the Focused Study Area. The overall intersection and corridor vehicle traffic demand is shown in **Figure 2-10** and **Figure 2-11**.

Figure 2-10: Vehicle Traffic Demand - AM Peak Hour

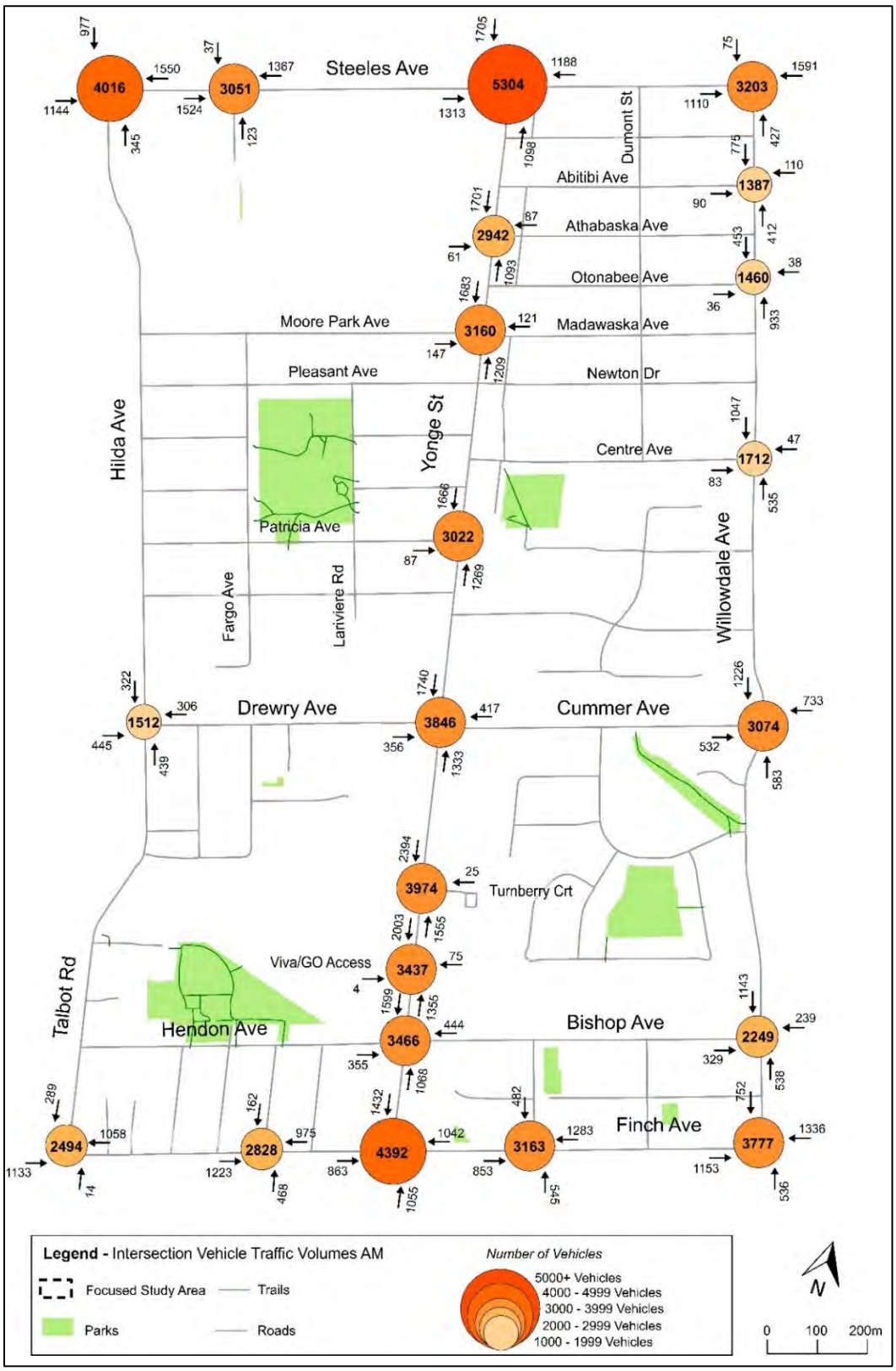
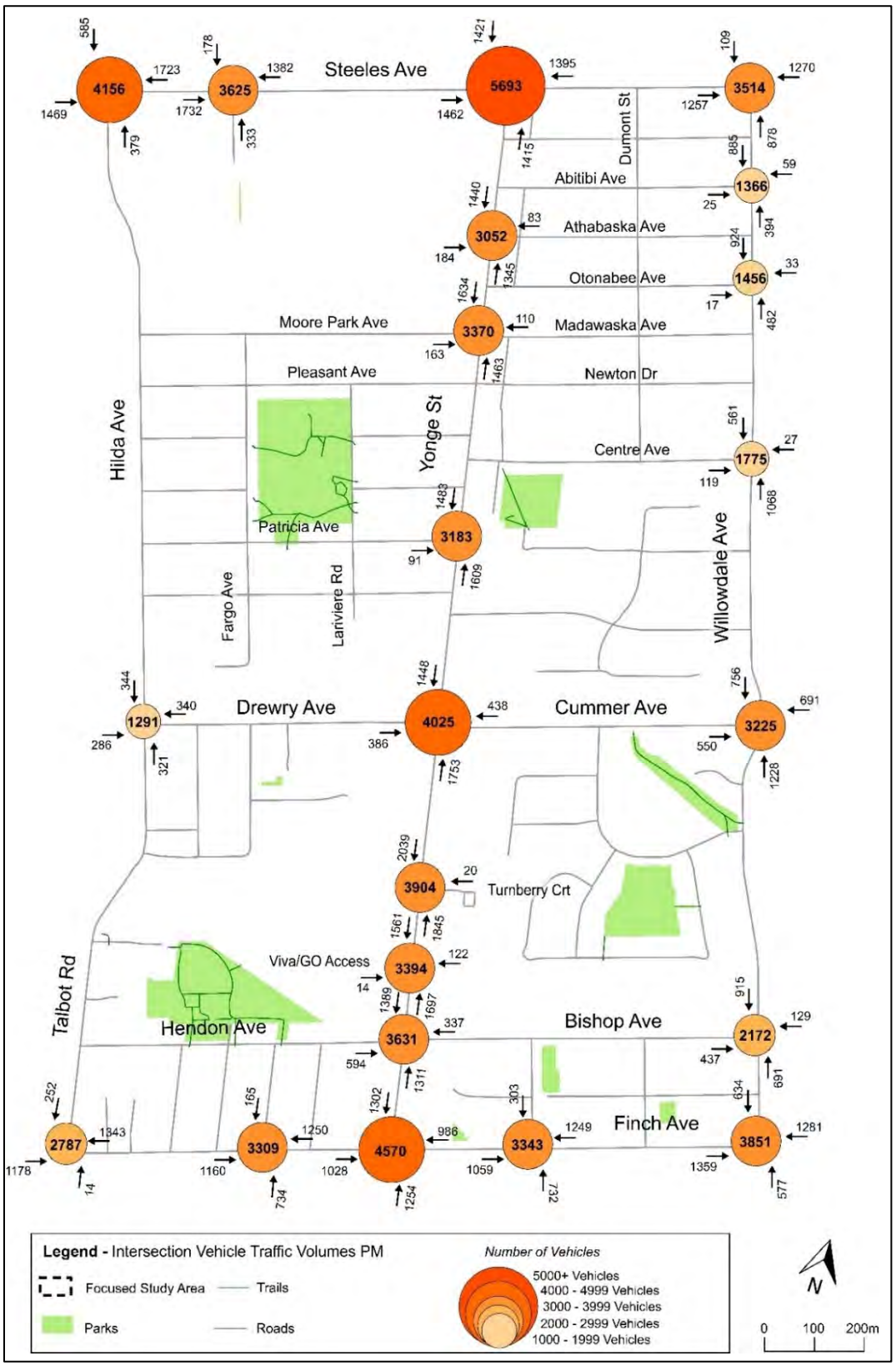


Figure 2-11: Vehicle Traffic Demand - PM Peak Hour



To determine the existing level of service and operations at individual signalized intersections within the Focused Study Area, an intersection capacity analysis was undertaken. Based on the intersection capacity analysis, the intersections were divided into three categories based on the level of control delay observed for each intersection. The control delay corresponded largely with the assigned LOS, as well as the V/C ratio for each intersection. The length of delay for signalized intersections within the Focused Study Area are illustrated in **Figure 2-12** and **Figure 2-13**.

Figure 2-12: AM Peak Hour Signalized Intersection Operations

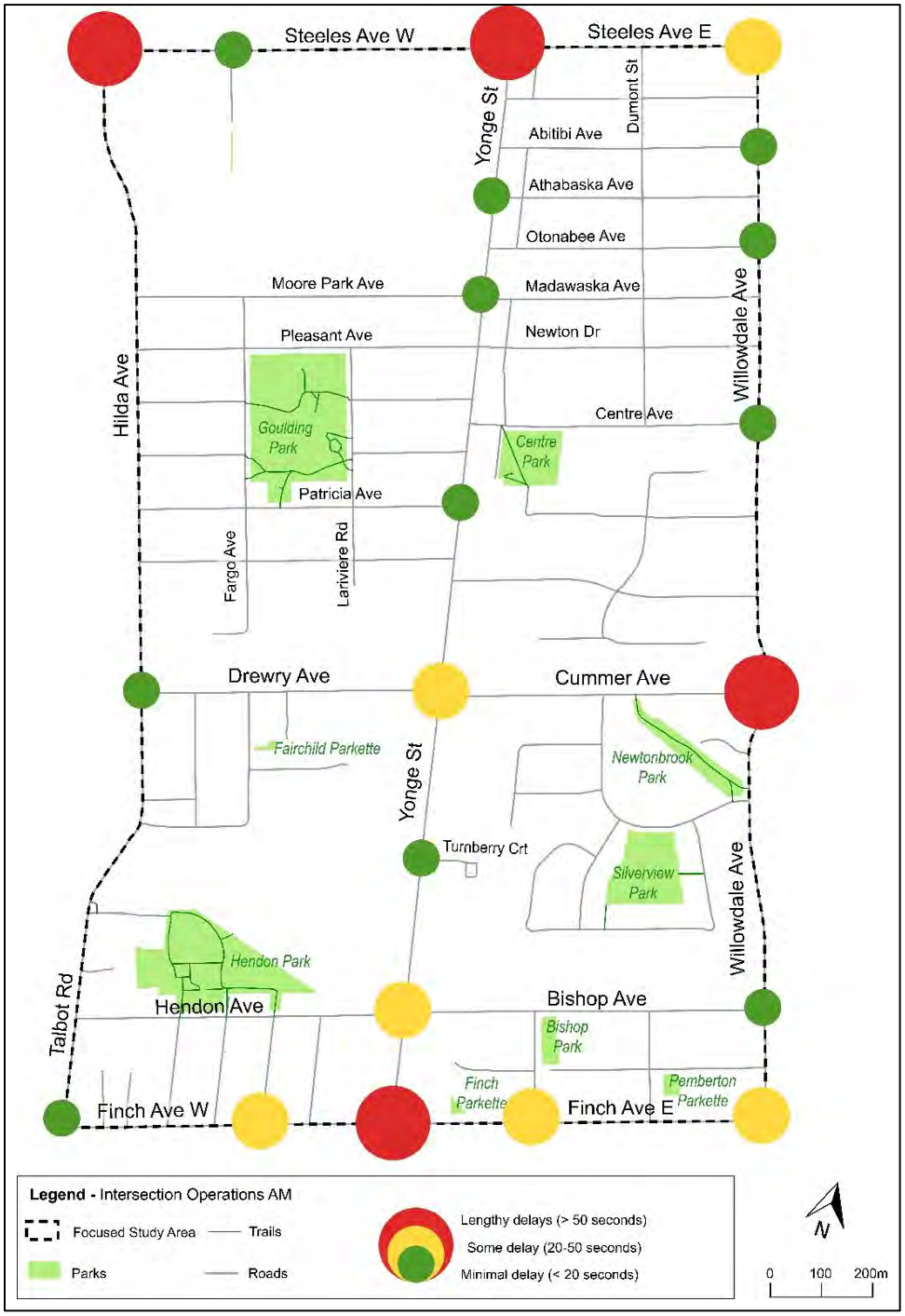
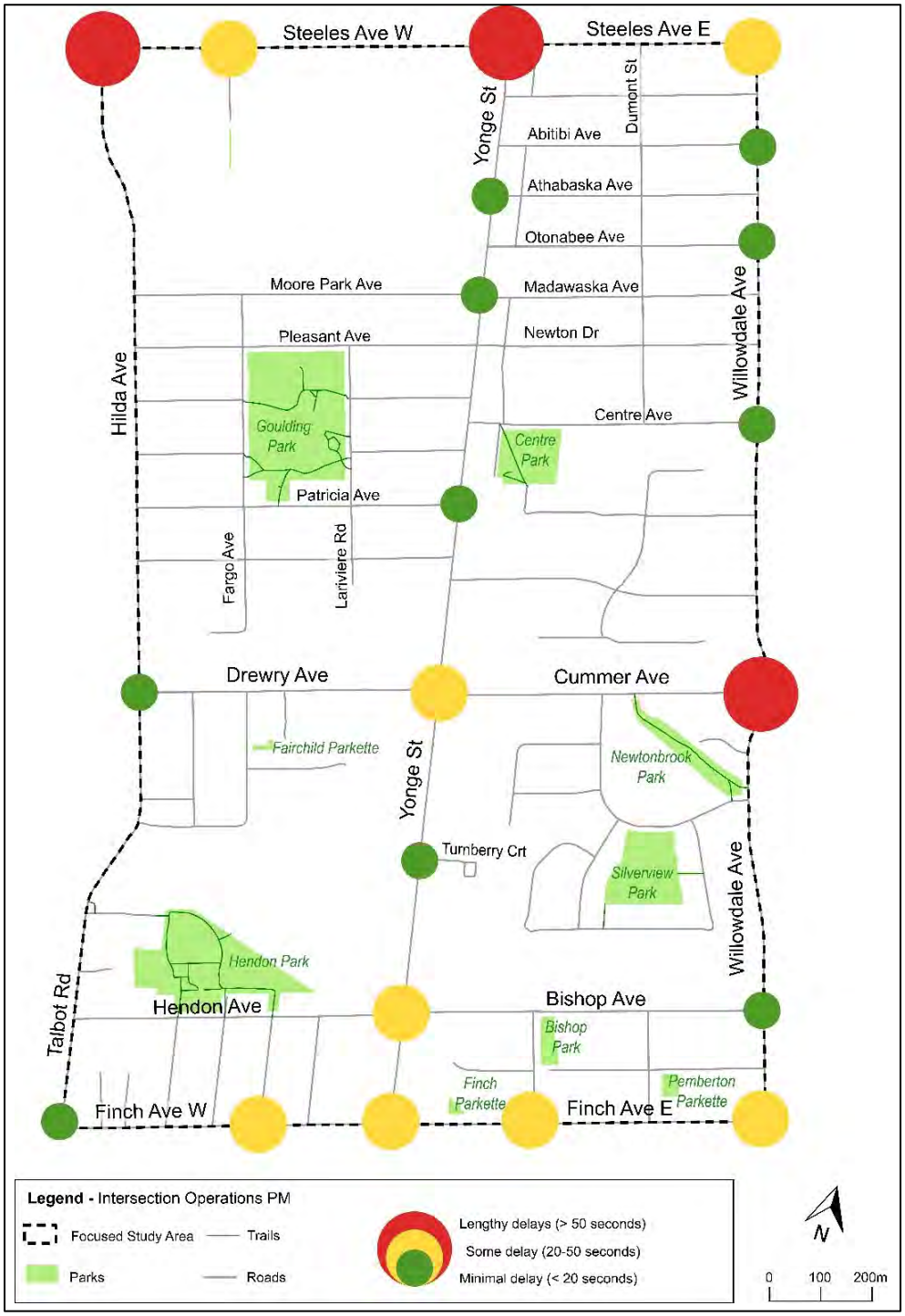


Figure 2-13: PM Peak Hour Signalized Intersection Operations



Several intersections in the Focused Study Area had lengthy delays in the AM and PM periods. Based on the results of the existing intersection analysis, the majority of constraints to vehicle traffic are observed at key intersections along the Focused Study Area boundary. However, there is opportunity to reduce the strain on the worst-performing intersections through the development of potential alternative solutions for the street

network. There is opportunity to add new links and intersections to improve connectivity for all road users and provide alternative routes for vehicle traffic.

Average Vehicle Travel Speeds

HERE travel data was obtained from the City of Toronto. The data was summarized based on HERE travel data for one year average for the weekday period between Monday to Friday. Travel time was provided for each roadway segment between signalized intersections. The analysis of the average travel speeds used the length of each road segment (km) and the time required to travel the length of the road segment (minutes converted to hours) in order to show the average speeds in km/hr. The travel speeds represent the average traffic speeds between two signalized intersections and not the average travel speed along the entire corridor.

In the AM Period, average vehicular traffic speeds are generally higher and less constrained than in the PM Period, with the majority of Finch Avenue, Steeles Avenue, Drewry Avenue, Willowdale Avenue, and Yonge Street northbound operating with an average speed greater than 30 km/h. Finch Avenue between Yonge Street and Kenneth/Doris Avenue operates with the lowest average speed in the AM Period, between 15-20 km/h. Vehicle traffic speeds are more constrained in the PM Period, as most of the street network operates with an average speed below 30 km/h. In both peak periods, it is noted that no section of roadway operates with an average speed that reaches the posted speed limit.

Lower vehicle traffic speeds generally improve pedestrian and cycling environments and the perception of safety along major roadways. Recognizing that no roadway reaches an average speed over 40 km/h during either the AM or PM peak hour, there is opportunity to encourage lower speeds by reducing posted speed limits where appropriate.

2.2.6.3 Transit

As shown in **Figure 2-14**, the Focused Study Area is connected to the TTC, York Region Transit (YRT), and GO Transit networks, facilitating local and regional connections. It is also located at the northern terminus of the TTC Line 1 Subway, which connects to the majority of local bus routes in the area as well as to GO Transit bus service via the Finch GO Bus Terminal.

Figure 2-14: Extended Study Area Existing Transit Network and Planned Subway Extension

Table 2-2 shows the headways for different TTC routes operating within the Focused Study Area and Extended Study Area. The majority of TTC transit service operates at frequent headways, with most routes operating every 15 minutes or better during the peak hour periods.

Table 2-2: TTC Route Headways Within the Extended Study Area

Subway Routes	Subway Route Headways
Line 1 - Yonge-University	Every 2 - 3 minutes at Peak Hour Every 4 - 5 minutes off Peak Hour
Line 4 - Sheppard	
10-Minute Bus Network	**10-Minute Bus Network Headways**
7 - Bathurst	Every 8-minutes All-day
36 - Finch West	Every 3- to 4-minutes at Peak Hour Every 5- to 8-minutes off Peak Hour
39 - Finch East	Every 4- to 5-minutes at Peak Hour Every 8- to 9-minutes off Peak Hour
53 - Steeles East	Every 6-minutes All-day
60 - Steeles West	Every 4- to 6-minutes All-day
84 - Sheppard West	Every 5- to 8-minutes at Peak Hour Every 8-minutes off Peak Hour
Regular Bus Routes	**Regular Bus Route Headways**
11A - Bayview	Every 15- to 16-minutes at Peak Hour Every 13- to 28-minutes off Peak Hour
42 - Cummer	Every 7-minutes at Peak Hour Every 14-minutes off Peak Hour
85 - Sheppard East	Every 15-minutes at Peak Hour Every 16- to 30-minutes off Peak Hour
97C - Yonge	Every 30-minutes all-day
98AC - Willowdale-Senlac	Every 16- to 17-minutes at Peak Hour Every 22- to 25-minutes off Peak Hour
160 - Bathurst North	Every 20- to 24-minutes at Peak Hour Every 24 to 25-minutes off Peak Hour

Table 2-3 shows the headways of different YRT routes operating within the Extended Study Area. Frequent YRT transit service is operated by the VIVA Blue and Pink routes, with all other routes operating at a 15-minute headway or better.

Table 2-3: YRT Route Headways Within the Extended Study Area

Viva Routes	Viva Route Headways
Viva Blue	Every 5- to 15-minutes All-day
Viva Pink	Every 10- to 15-minutes All-day
Regular Bus Routes	**Regular Bus Route Headways**
2 - Milliken	Every 20-minutes at Peak Hour Every 40-minutes off Peak Hour
3 - Thornhill	Every 30-minutes at Peak Hour Every 45-minutes off Peak Hour
5 - Clark	Every 15-minutes at Peak Hour Every 30-minutes off Peak Hour
23 - Thornhill Woods	Every 30-minutes at Peak Hour
77 - Highway 7	Every 15-minutes at Peak Hour Every 30-minutes off Peak Hour
77A - Highway 7	Every 50-minutes at Peak Hour
88 - Bathurst	Every 15-minutes at Peak Hour Every 35-minutes off Peak Hour
91/91A - Bayview	Every 15-minutes at Peak Hour Every 25-minutes off Peak Hour
98E - Yonge	Once a day @ 4:55pm
99 – Yonge	Every 30-minutes at Peak Hour Every 50-minutes off Peak Hour

Table 2-4 shows the headways of different GO Bus routes operating within the Extended Study Area. Most routes operate a daily service with shorter headways during peak periods.

Table 2-4: GO Bus Route Headways Within the Extended Study Area

GO Bus Routes	GO Bus Route Headways
19 – Mississauga/North York	Weekdays: Every 30 minutes during peak periods; every hour during off-peak periods Weekends: Every hour
27 – Milton/North York	Weekdays: Every 30 minutes during peak periods; every hour during off-peak periods Weekends: Every hour
34 – Pearson Airport/North York	Weekdays: Every hour between 5:00 AM to 9:00 AM; every two hours between 3:00 AM to 5:00 AM and 8:00 PM to 2:00 AM Weekends: Every hour between 3:00 PM to 8:00 PM; every two hours between 3:00 AM to 3:00 PM and 8:00 PM to 2:00 AM
67 – Keswick/North York	Weekdays Only: Four southbound trips in the AM between 5:40 AM and 8:15 AM; four northbound trips in the PM between 4:10 PM and 7:10 PM
96 – Oshawa/Finch Express	Weekdays: Every 30 minutes during AM peak periods westbound and PM peak periods eastbound; every hour during off-peak periods Weekends: Every hour

Under existing conditions, there is a high-occupancy vehicle (HOV) lane along Yonge Street between Steeles Avenue and Hendon/Bishop Avenue. The HOV lane is intended for use by vehicles with three (3) or more occupants only and would therefore be applicable to YRT (including VIVA) service operating along Yonge Street to and from the Finch Station Bus Terminal on the northeast corner of Yonge Street and Hendon/Bishop Avenue. While the HOV lane is generally considered to be beneficial to transit operations, it is recognized that a lack of enforcement and awareness could result in some vehicle traffic using it despite not meeting the criteria of three or more occupants.

Additionally, while Finch GO Bus Terminal currently serves as an important hub for GO Transit, the Metrolinx GO Bus Strategy includes plans to concentrate GO Bus services primarily along the 400-series highways, deviating short distances from the highway to drop off and pick up passengers at nearby rapid transit connections and mobility hubs. Other hubs within Toronto, such as Sheppard-Yonge Station or York Mills Station, also at Yonge Street, could become more important nodes for GO Transit in the future, reducing the number of GO buses and routes that would operate along Yonge Street within the Focused Study Area.

A comparison of the average scheduled run time versus the distance travelled along each TTC bus route that operates within the Focused Study Area indicated that the average linear scheduled run times are generally highest during the PM peak period. This comparison corresponds with the findings of the vehicle operations assessment, as signalized intersections generally performed worse and average vehicle travel speeds were generally lower during the PM peak period. However, there is the opportunity to introduce changes to existing routes and/or new routes within the Focused Study Area as new development and potential destinations, along with changes to the overall transportation network, are realized.

Lastly, major thoroughfares, particularly Finch Avenue, Yonge Street, and Steeles Avenue exhibited the highest levels of transit ridership. Transit ridership is significantly concentrated along major thoroughfares and at major intersections, while significantly lower levels of ridership were observed along Willowdale Avenue and Moore Park Avenue.

2.2.6.4 Active Transportation

Pedestrian Sidewalk Network

A review of the existing pedestrian sidewalk network within the Focused Study Area indicated that while most of the major roadways have sidewalks on either side of the street, several minor streets only include a sidewalk on one side of the street, and many neighbourhood streets have no sidewalks at all. **Figure 2-15** illustrates the existing Focused Study Area pedestrian sidewalk network.

There are critical gaps in the sidewalk network as several residential streets have either no sidewalks or sidewalks on only one side. Apart from Willowdale Avenue, Talbot Avenue and Yonge Street, there are no north-south routes with continuous sidewalks north of Hendon/Bishop Avenue, presenting further constraints to the pedestrian network.

These existing gaps in the pedestrian network also provide opportunities to add sidewalks and thereby improve connectivity for pedestrians, such as through redevelopment of properties along arterial roads and through identifying local streets to be considered for future sidewalk-improvement initiatives.

Figure 2-15: Existing Focused Study Area Pedestrian Sidewalk Network

Several constraints for pedestrians were identified through a level of service analysis of existing infrastructure. Main thoroughfares —such as Yonge Street, Steeles Avenue, and Finch Avenue— performed worse along sections with narrow sidewalks (less than 2 m wide) and where there was minimal or non-existent boulevard space (less than 0.5 m) to separate pedestrians from roads experiencing high vehicular traffic volumes. Most arterial and collector streets performed poorly overall as a result of consistently narrow sidewalks interrupted by driveways and discontinuous sidewalks along some residential blocks.

Given these constraints, there is a strong potential to improve the streetscape conditions for pedestrians along major streets through redevelopment and the further conversion of streets into mixed-use corridors. Further, there are opportunities to improve the pedestrian environment through improvements to street network connectivity by providing additional linkages and signalized pedestrian crossing opportunities.

Cycling Network

Under existing conditions, a multi-use trail to the north of Hendon Avenue and Bishop Avenue facilitates connections to the Finch Hydro Corridor Trail, with the remaining trail network located within Focused Study Area parks. Outside of the trail system, on-street cycling occurs in mixed traffic. With regards to planned future improvements to the Focused Study Area cycling network, the Cycling Network Plan's near-term implementation plan for 2019-2021 includes dedicated on-street cycling facilities along Willowdale Avenue. Additionally, the ReImagining Yonge Municipal Class Environmental Assessment Study, being undertaken for the Yonge Street corridor generally between Finch Avenue in the north and Sheppard Avenue to the south, was recently concluded in the last quarter of 2020. The recommendations from the City's Transportation Services Staff arising from the Study were detailed in a report to Council dated November 17, 2020. It was recommended that Yonge Street between Florence/Avondale Avenue and Bishop/Hendon Avenue be reconfigured to include a centre landscaped median and cycle tracks. Subsequently, on December 16, 2020, City Council voted in favour of proceeding with the recommendations of the ReImagining Yonge Study. Within the Focused Study Area, cycle tracks are now planned for Yonge Street between Finch Avenue and Bishop/Hendon Avenue, with construction tentatively planned to commence by 2026. **Figure 2-16** shows the existing Focused Study Area cycling networks, as well as existing planned cycling facilities within the Focused Study Area.

Figure 2-16: Existing Focused Study Area Cycling Network and Planned Cycling Network Plan Projects

The existing cycling environment is constrained primarily due to the lack of dedicated on-street cycling facilities, with the only dedicated facilities limited to the trail system. Constraints were also identified based on the nature of the on-street cycling environment in mixed-traffic along certain routes. Especially along key north-south routes, traffic speeds and volumes were both too high to create a comfortable cycling environment. However, many east-west local roads demonstrate that lower vehicle operating speeds and less cyclist exposure to vehicles can result in more attractive environments for cycling without requiring dedicated infrastructure or facilities. Overall, providing dedicated cycling facilities would increase the comfort and safety of cycling on routes where cycling within mixed traffic is unfavourable or unsafe.

2.2.6.5 Road Safety

Recorded collision trends involving death or serious injury were assessed for major Focused Study Area roadways, where data was available, to provide an understanding of which intersections and roadway segments experience higher numbers of serious collisions and where vulnerable road users are most involved in collisions. To align with the City of Toronto's Vision Zero Road Safety Plan, vulnerable users include both pedestrians and cyclists.

Collision data was recorded and provided by the City of Toronto and was collected from 2014-2018 for Yonge Street and Finch Avenue, and from 2015-2019 for Willowdale, Hilda, Talbot, Cummer, and Drewry Avenues. Where Finch Avenue intersects with Talbot and Willowdale Avenues, the more recent data set was assessed. Collison data was provided and assessed for intersections as well as mid-block roadway segments between intersections. Collisions were assessed based on three categories: total collisions involving death or serious injury; total collisions involving pedestrians and cyclists; and collisions involving death or serious injury of pedestrians or cyclists.

The results of the collision trend analysis indicated that the number of collisions involving death or serious injury over the assessed time period was approximately 22, with 11 occurring at intersections and 11 occurring at midblock locations. Further, the Yonge Street, Finch Avenue, and Steeles Avenue corridors saw the highest number of collisions involving pedestrians and cyclists. **Figure 2-17**, **Figure 2-18**, and **Figure 2-19** show the results of the collision trend assessments.

Intersections where the highest number of collisions involving pedestrians and cyclists occurred were Yonge Street and Steeles Avenue, Yonge Street and Hendon/Bishop Avenue, and Yonge Street and Finch Avenue. The highest number of total collisions involving death or serious injury occurred at Yonge Street and Turnberry Court, Yonge Street and Finch Avenue, and Willowdale and Cummer Avenue intersections. Lastly, the highest number of collisions involving death or serious injury of pedestrians and cyclists occurred at Yonge Street and Finch Avenue.

Figure 2-17: Total Collisions Involving Killed or Seriously Injured Persons (2013/14 - 2018/19)

Figure 2-18: Total Collisions Involving Pedestrians & Cyclists (2013/14 - 2018/19)

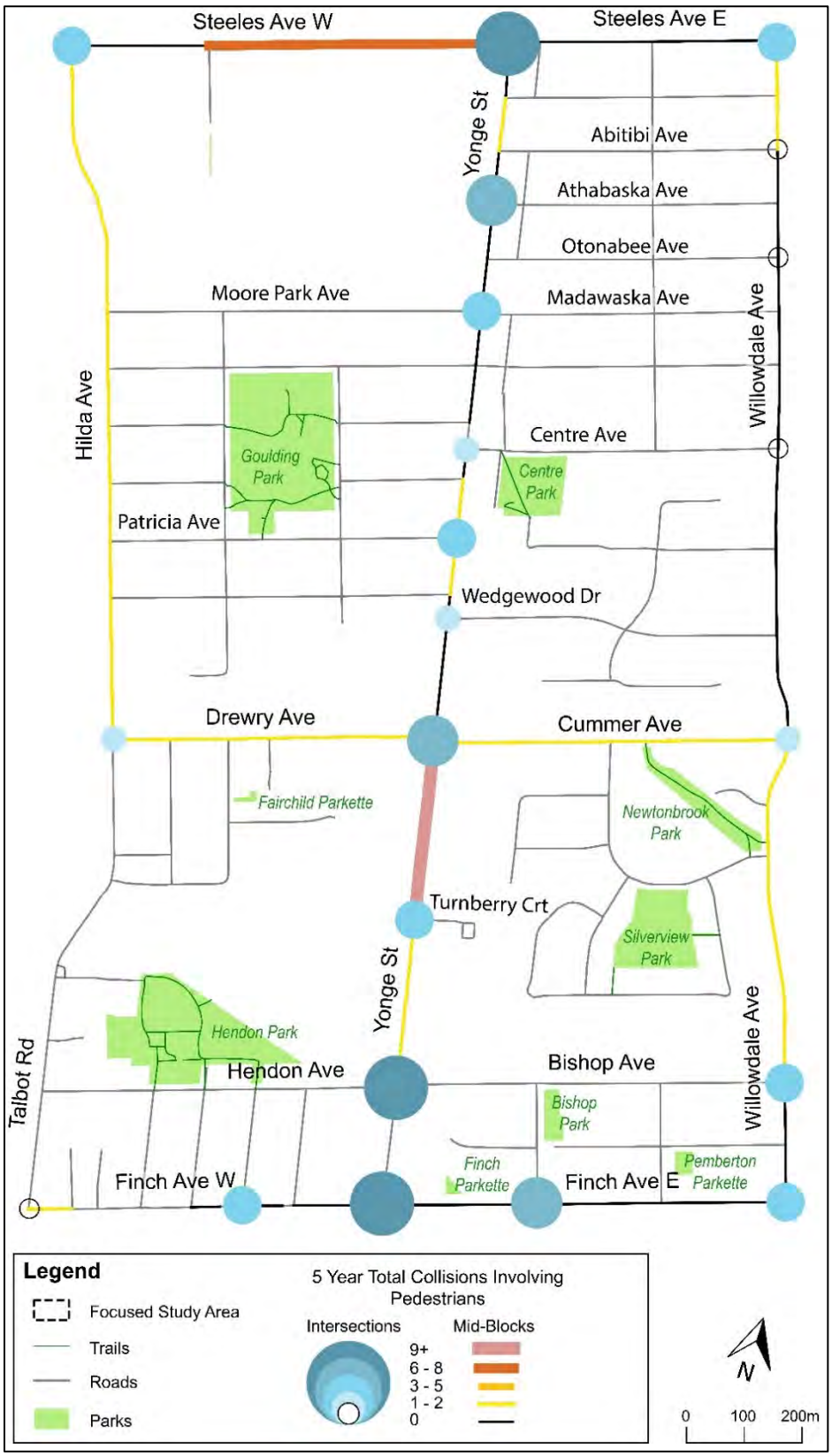


Figure 2-19: Collisions Involving Death or Serious Injury to Pedestrians & Cyclists (2013/14 - 2018/19)

The highest number of collisions involving death or serious injury over a 5-year period was two (2) collisions, and was recorded at the intersections of Yonge Street and Finch Avenue, Yonge Street and Turnberry Court, and Willowdale Avenue and Cummer Avenue. The mid-block segment that saw the highest number of collisions involving death or serious injury over a 5-year period recorded four (4) collisions and was located along Yonge Street between Turnberry Court and Drewry/Cummer Avenue.

Looking exclusively at collisions involving pedestrians and cyclists, the highest number of collisions involving death or serious injury at an intersection and mid-block segment was two (2) collisions, recorded at the Yonge Street and Finch Avenue intersection and along the segment of Yonge Street between Turnberry Court and Drewry/Cummer Avenue, respectively. Additionally, collisions involving death or serious injury to pedestrians and cyclists were primarily concentrated in the south of the Focused Study Area and did not occur as often along Yonge Street or Willowdale Avenue.

There is the opportunity to minimize the potential for collisions and to reduce the severity of collisions occurring within the Focused Study Area by incorporating measures from the City of Toronto Vision Zero road safety plan into the overall recommendations for the future transportation network and YSNTMP. Potential measures include speed limit reductions and improved pedestrian crossings. Additionally, there are opportunities to mitigate safety issues and concerns within the Focused Study Area through improvements to intersection design, wayfinding, and the implementation of dedicated cycling infrastructure as part of the YSNTMP recommendations.

2.2.6.6 Goods Movement

To provide a preliminary understanding of heavy vehicle travel typically associated with goods movement within the Focused Study area, a review was undertaken of the restrictions to heavy vehicles within the Focused Study Area street network. An assessment of existing heavy vehicle travel volumes was subsequently undertaken to determine where heavy vehicle traffic is observed within the Focused Study Area independent of the heavy vehicle restrictions in place.

A review of heavy vehicle restrictions within the Focused Study Area street network was undertake based on the *Toronto Municipal Code Chapter 950*, current to March 27, 2019. This chapter provides the location and time of heavy vehicle restrictions within the City of Toronto. Based on this review, heavy vehicles are restricted along all Focused Study Area roadways except for Yonge Street, Finch Avenue, and Steeles Avenue. **Figure 2-20** shows the applicable heavy vehicle restrictions.

To determine the existing level of heavy vehicle traffic at individual signalized intersections within the Focused Study Area, turning movement counts (TMCs) were obtained from the City of Toronto for 2019, and used as the source of traffic data. The overall heavy vehicle traffic demand for each signalized intersection, as well as the directional volumes, are shown in **Figure 2-21** and **Figure 2-22** for the AM and PM peak hours, respectively.

Figure 2-20: Heavy Vehicle Restrictions Within the Focused Study Area

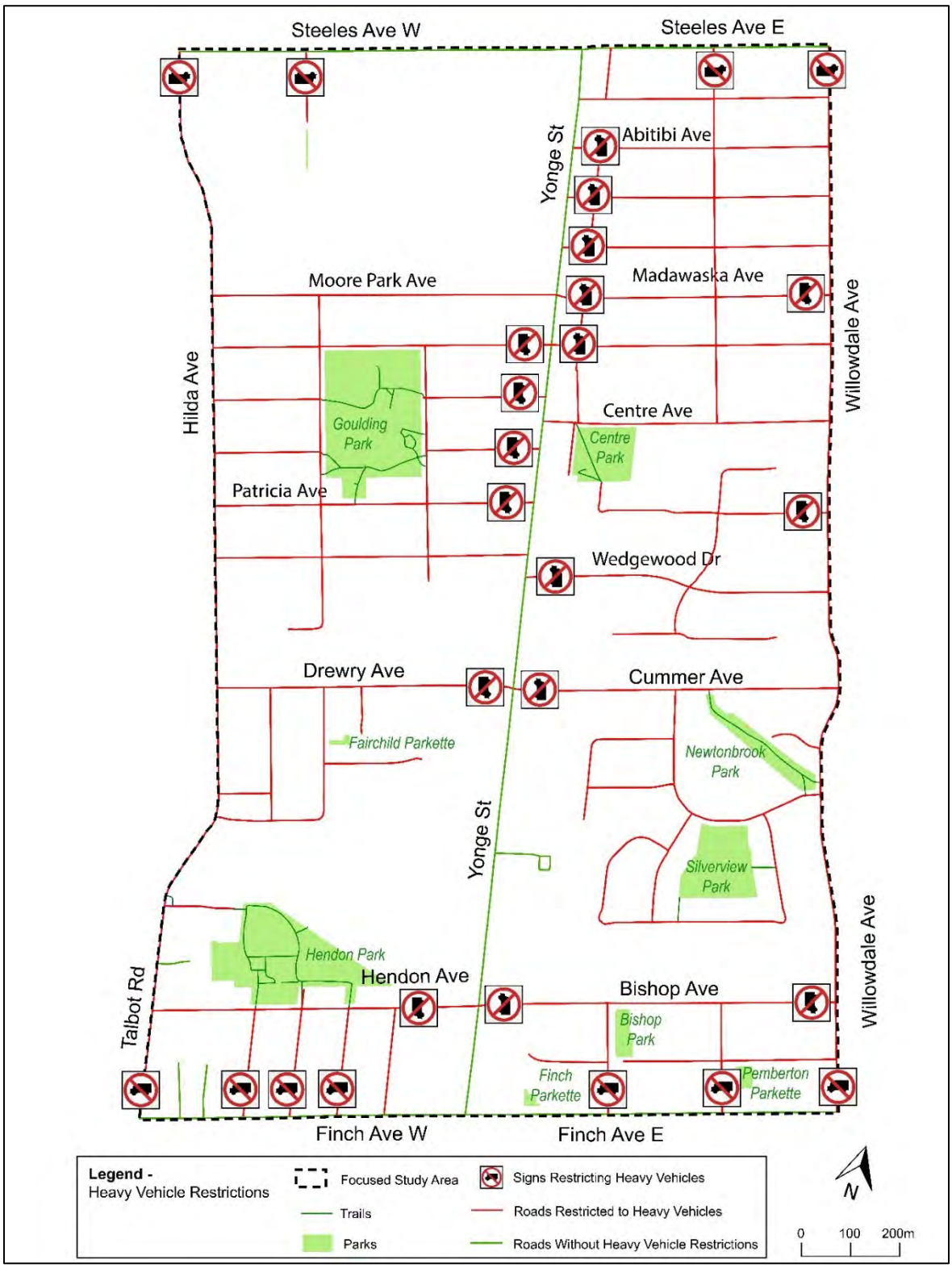


Figure 2-21: Heavy Vehicle Traffic Demand - AM Peak Hour

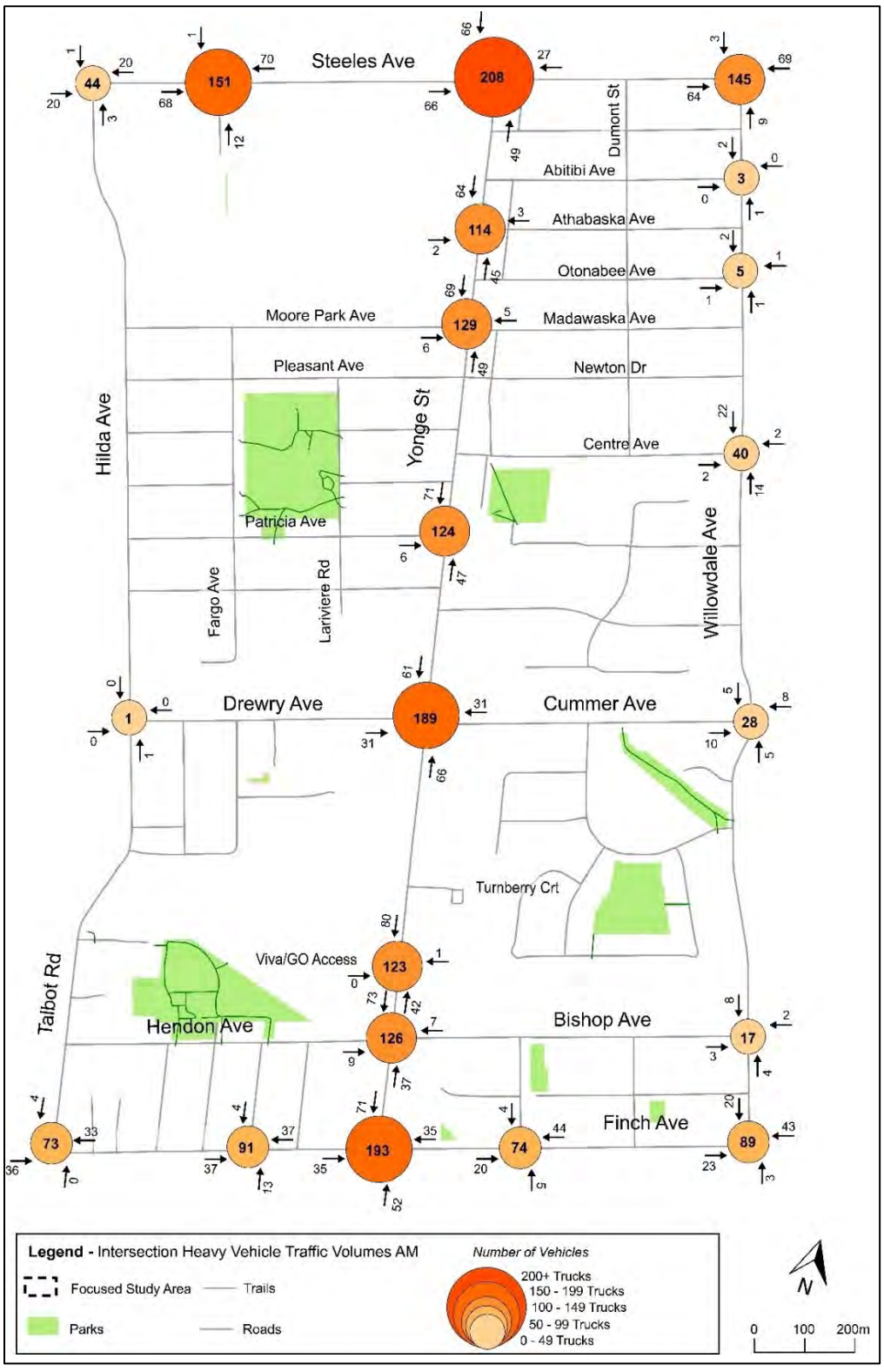
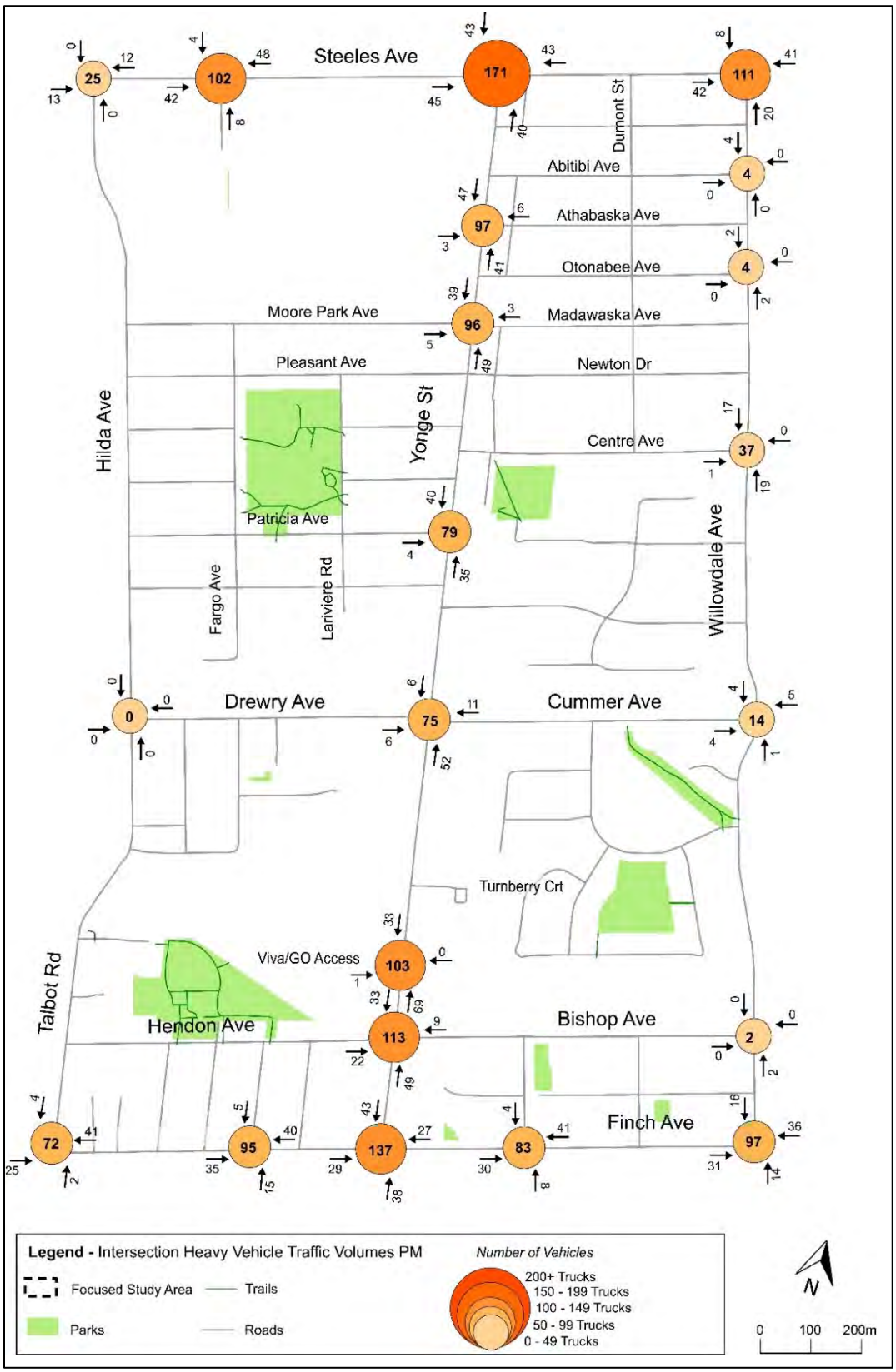


Figure 2-22: Heavy Vehicle Traffic Demand - PM Peak Hour



Heavy vehicle traffic associated with goods movement activities is constrained throughout the Focused Study Area and is currently limited to Yonge Street, Steeles Avenue, and Finch Avenue. Heavy vehicle traffic is therefore concentrated along these major roadways, which could constrain overall roadway conditions and the pedestrian and cyclist environment along those roadways due to the higher presence of heavy vehicles. Generally, heavy vehicle volumes represent less than 10% of vehicle volumes where they are permitted, with the exception of certain turning movements along Yonge Street and Steeles Avenue where overall vehicle volumes are lower.

Considering the significant restrictions in place for heavy vehicle traffic within the Focused Study Area, a review of the existing heavy vehicle traffic volumes indicates relatively high adherence to the truck restrictions. Generally, heavy vehicles were observed along roadway links where heavy vehicles are permitted, with the number of vehicles observed in prohibited areas being less than five. Based on these observations, there is minimal infiltration of truck traffic into the residential neighbourhoods located on either side of Yonge Street, and minimal demand for heavy vehicles needing to access these streets. Heavy vehicle traffic is well-managed under existing conditions as commercial and retail properties can be accessed via the main thoroughfares, while residential neighbourhoods experience minimal heavy vehicle traffic.

Recognizing that goods movement is largely occurring along Yonge Street because of the restrictions to heavy vehicle traffic within the Focused Study Area, there is the opportunity to coordinate improvements to goods movement with road safety measures and active transportation improvements along Yonge Street and adjacent corridors.

2.2.6.7 Parking

Vehicle Parking

Parking requirements vary based on land use and are prescribed differently for various portions of the Focused Study Area. Specifically, parking requirements within the Focused Study Area are governed by one of the following 3 frameworks:

- Citywide City of Toronto Zoning By-law 569-2013
- North York Centre Secondary Plan (NYCSP)
- Central Finch Area Secondary Plan (CFASP)

A review of the existing vehicle parking supply was undertaken to identify the existing publicly and commercially available parking supply within the Focused Study Area. The Study Area currently has approximately 7,400 publicly accessible parking spaces. The vast majority of these are concentrated around Finch Station and Centrepoint Mall. This total *does not include* private/residential parking facilities within apartment and condominium complexes.

A review of existing parking supply within the Focused Study Area notes the presence of large and small surface parking lots providing the majority of public parking supply. As development pressures increase, particularly along the Yonge Street corridor, the existing parking supply could become constrained as surface parking lots are redeveloped and the existing parking supply is replaced at a rate lower than one-to-one.

Currently, vehicle parking requirements for the different land uses present in the Focused Study Area are dictated by different policies; predominantly By-law 569-2013, the NYCSP, and the CFASP. The CFASP applies to lands along Finch Avenue between Talbot Road and Greenview Avenue and between Kenneth Avenue and Willowdale Avenue and maintains parking requirements through former City of North York By-law 7625. The NYCSP specifically allows for lower parking rates in response to existing subway infrastructure as far north as the existing Finch Station and Finch Station Bus Terminal to the north of Hendon and Bishop Avenues.

Despite this provision, the NYCSP requires at least one parking space per residential unit. The maximum parking rate is lower for sites with access to rapid transit, at 1.2 spaces per unit, compared to 1.4 spaces per unit for all other locations. This includes a 0.10 provision for visitor parking. The NYCSP does not differentiate between unit types.

For the areas where By-law 569-2013 applies, the rates are summarized in **Table 2-5**. Generally, Yonge Street between Drewry/Cummer Avenue is subject to Policy Area 4 rates while the rest of the Study Area is subject to 'all other areas of the City' rates.

Table 2-5: By-law 569-2013 Parking Rate Requirements

Residential Unit Type	City of Toronto By-law 569-2013			
	Policy Area 4		'All Other Areas'	
	Min.	Max.	Min.	Max.
Studio	0.7	1.0	0.8	n/a
1-Bedroom	0.8	1.2	0.9	n/a
2-Bedroom	0.9	1.3	1.0	n/a
3-Bedroom	1.1	1.6	1.2	n/a
Visitor	0.15	n/a	0.2	n/a
Total	**0.85 – 1.25**		**1.0 – 1.4**	

It is also noted that the City is undertaking a review of parking requirements for new developments citywide, with a general goal of limiting the supply of automobile parking in alignment with broader City goals to encourage alternative modes of transportation.

With the planned subway extension into York Region, there is the opportunity to provide more consistent, transit supportive, and generally lower rates throughout the entire Focused Study Area. Further, as development pressures along the Yonge Street corridor increase in response to planned transit investment, there is the opportunity to reduce the presence of surface parking lots through redevelopment and improve pedestrian, cyclist, and transit connectivity.

Bicycle Parking

Similar to vehicle parking policy, bicycle parking requirements vary based on land use and are prescribed based on the applicable planning policy framework in place for the area. Bicycle parking requirements within the Study Area are conformed to the general Zoning By-law for Bicycle Zone 2, except within the North York Centre Secondary Plan (NYCSP) area.

Based on a review of bicycle parking policy and existing publicly available bicycle parking within the Focused Study Area, the availability and types of bicycle parking are limited. A review of existing facilities indicates that publicly available bicycle parking is limited to the south end of the Study Area, despite the presence of retail and services along Yonge Street throughout the Study Area. The lack of bicycle parking could discourage bicycle trips to destinations within the Focused Study Area, as well as lead to improper bicycle parking, such as securing bikes to fences or poles.

Currently, there are a total of twelve longer-term, secure bicycle spaces provided via six bicycle lockers at Finch Station and six at the Finch Station Bus Terminal. Based on the existing demand generated from these lockers, there could be the opportunity to provide additional secure parking at existing or future locations where there is potential demand, such as at existing schools within the Focused Study Area or the planned subway station at Steeles Avenue.

Further, there is the opportunity to provide additional short-term bicycle parking throughout the Focused Study Area, particularly along Yonge Street and Finch Avenue, where there is a mixture of land uses to support bicycle trips to and from retail, businesses, services, and residential buildings.

2.2.6.8 Shared Mobility

Shared mobility refers to a range of transportation services and operations that are shared amongst users, as defined by a report titled *Shared Mobility in the Greater Toronto and Hamilton Area* prepared by Metrolinx and dated February 2017.

Carshare

A desktop review of the Focused and Extended Study Areas revealed that no carshare services are currently operating in the Focused Study Area. There are two carshare locations just south of Finch Avenue near the Study Area, with the majority of the carshare locations within the Study Area located along the east and west sides of Yonge Street near North York Centre and Sheppard Subway Stations. It is noted that all carshare locations identified within the Extended Study Area are operated by Zipcar, a private company that operates on a membership model and allows members to book a car using an app on an hourly or daily basis.

Bikeshare

Bikeshare in Toronto is currently operated by Bike Share Toronto, which operates bicycle docking stations where riders can unlock a bike to use on a half-hourly basis. Individuals can purchase a yearly membership, three-day pass, one-day pass, or single trip ride priced comparably to a TTC fare at $3.25. While the system is continually expanding and currently operates more than 620 stations, there are no Bike Share locations in either the Focused or Extended Study Areas. It is noted that a pilot project was announced to expand Bike Share service within North York between York University and Bathurst Street. The pilot began in the summer of 2020 and introduced seven new stations in the pilot area, including in the Finch Hydro Corridor area. The Toronto Parking Authority will monitor the stations' use and performance to help inform future Bike Share expansion in the pilot area and to other similar areas.

Additionally, it is recognized that there is the opportunity to expand Bike Share to include e-stations that can accommodate electric bicycle charging and docking stations. The installation of hardwired e-bike stations is part of Bike Share Toronto's e-bike pilot that the Toronto Parking Authority is currently undertaking. Bike Share Toronto will also be seeking to expand network coverage of e-bikes and e-stations as part of a future 30 Year Growth Plan, with the opportunity to co-locate these stations with public electric vehicle charging stations.

Electric Vehicle Charging Stations

Electric vehicle (EV) charging stations enable drivers to charge their electric vehicle. A desktop review of publicly available EV charging stations indicates that there is one located in the Focused Study Area at 5775 Yonge Street's underground public parking, two located on the north side of Steeles Avenue, and several located between North York Centre and Sheppard Subway Station in the Extended Study Area. The City currently has an Electric Vehicle Strategy in place that identifies strategies to support the City in achieving its goal of promoting sustainable transportation modes and having all transportation powered by zero-carbon energy sources. Action 2 and Activity 4 of the strategy specifically seeks to identify high-priority areas for public electric vehicle charging infrastructure.

Ridesharing

Another element of shared mobility is ridesharing, which can refer to traditional carpooling whereby individuals share a ride on an ad-hoc basis or by participating in a formal carpooling program, as well as

ridesharing that uses technology to match passengers and drivers. For the purposes of this report, a review of existing rideshare pick-up and drop-off trends for the Focused Study Area was undertaken. This data was provided by City Planning North York District and provided a preliminary understanding of the demand for pick-up and drop-off related to rideshare Transportation Network Companies (TNCs).

Based on the preliminary assessment of pick-up and drop-off activity in the Focused Study Area, it is noted that the level of pick-ups and drop-offs are largely associated with land use. The hotspots of pick-up and drop-off activity were mostly concentrated along Yonge Street, particularly near Finch Avenue and Hendon/Bishop Avenue, while additional points were noted near Centrepoint Mall towards Steeles Avenue. Minimal demand in the lower-density, interior residential neighbourhoods could limit the ability to support additional pick-up and drop-off activity and future shared mobility initiatives in these locations within the Focused Study Area.

The hotspot areas present opportunities to encourage pick-ups and drop-offs and support shared mobility initiatives at major Focused Study Area destinations, such as commercial and high-density residential uses near Finch Avenue, the transit terminal near Bishop and Hendon Avenue, and Centrepoint Mall in the northwest quadrant of the Focused Study Area. Further, areas with demonstrated pick-up and drop-off demand can inform recommendations with regards to curbside management, as there is the opportunity to identify curbside locations where designated pick-up and drop-off spots should be located based on demand. These hotspot areas also provide the opportunity to identify future hotspot areas where changes to density and land use is anticipated or proposed in the future in order to inform the curbside management strategy and whether designated pick-up and drop-off locations should be considered.

2.2.7 Other Related Transportation Projects

2.2.7.1 Yonge North Subway Extension

The Yonge North Subway Extension will transform the commute in York Region by extending TTC Line 1 service north from Finch Station to Vaughan, Markham, and Richmond Hill. The latest plans identify four (4) stations along an extension of roughly 8 kilometers. The proposed extension will connect to the Richmond Hill GO train and Highway 407 GO bus service, as well as local bus routes at every station. The proposed stations include locations at Steeles Avenue, Clark Avenue, within the Highway 7/407 corridor (Bridge Station), and at High Tech Road, which would serve future communities envisioned within the Richmond Hill Centre area.

2.2.7.2 Beecroft Extension

It is recognized that Beecroft Road is to be extended from its current terminus at Finch Avenue West through to Drewry Avenue in the north, replacing Greenview Avenue. This segment of roadway is currently being developed to a 30% design level and will be based upon the preferred alternative solution identified in the *Uptown Service Road and Associated Road Network Environment Study Report* completed in 1993 alongside the North York Centre Secondary Plan. The design for Beecroft Extension will include pedestrian and cycling infrastructure and accommodate space for street trees/plantings. The Beecroft Extension is assumed to be a Planned Street and is included in the set of Transportation Solutions being considered as part of this TMP. The overall preferred design will be consistent with the 30% design developed for Beecroft Extension.

3 TRANSPORTATION CHALLENGES AND OPPORTUNITIES

The core purpose of the YSNTMP is to support the Yonge Street North Planning Study by developing a vision for a transportation network that can serve this community for decades to come, as existing and anticipated development pressures increase. Centred on the Yonge Street corridor between Finch Avenue and Steeles Avenue, the envisioned transportation network will help transform how local residents, as well those traveling to and through the Study Area, get around. Specifically, the YSNTMP will help answer four critical questions:

1. How can we optimize the potential of new transportation infrastructure, and ensure that all residents can safely and conveniently access higher-order transit, local bus routes, and improved cycling and pedestrian facilities?
2. How can we ensure that as this neighbourhood grows – adding substantial new residential and employment density along key corridors – the area's transportation network becomes as efficient and safe as possible?
3. How can we shift local transportation trends to ensure that *new* residents are primarily traveling via sustainable options like transit and cycling for all daily trips, and that *existing* residents have more opportunities to utilize active transportation and reduce automobile dependency?
4. How can we capitalize on emerging mobility trends —from rideshare to transit to bikeshare – to decrease congestion, shorten commute times, and improve safety?

This section of the document explores the four questions above and outlines how the YSNTMP will play a critical role in the gradual transformation of this community. It begins to lay the framework of how the YSNTMP will harness planned infrastructure projects, respond to intensification, improve the convenience and efficiency of non-automobile modes, and accommodate emerging mobility trends.

3.1 HARNESSING THE PLANNED INFRASTRUCTURE PROJECTS

Currently, the Yonge Street North area is challenged by:

- A land-use pattern catering to auto dependency;
- Deficiencies in pedestrian and cyclist infrastructure;
- Poor roadway connectivity across Yonge Street and north-south through the Study Area; and,
- Significant traffic congestion during peak times at key intersections.

As such, governments at the municipal and provincial levels have identified a number of major infrastructure projects that will significantly improve the local transportation network and help address those constraints. The YSNTMP Focused Study Area is at the nexus of four major infrastructure investments:

3.1.1 Infrastructure Projects

- **Yonge North Subway Extension**: The Yonge North Subway extension will expand TTC Line 1 service north from Finch Station to Vaughan, Markham, and Richmond Hill. The latest plans identify four (4) stations along an extension of roughly 8 kilometers. The proposed extension will connect to the following six major transit services, as well as local bus routes at every station: the Richmond Hill GO train, Highway 407 GO bus service, a future Highway 407 Transitway service, York Region Viva bus rapid transit on Highway 7 (currently Viva Orange and Viva Purple), York Region Viva bus rapid transit on Yonge Street (currently Viva Blue), and future TTC rapid transit service on Steeles Avenue. The

planned stations include locations at Steeles Avenue, Clark Avenue, within the Highway 7/407 corridor (Bridge Station), and at High Tech Road, which would serve future communities envisioned within the Richmond Hill Centre area.

- **RapidTO**: The RapidTO program, which is part of the TTC 5-Year Service Plan and 10-Year Outlook, aims to improve the reliability, speed, and capacity on some of the busiest surface transit routes in the city. RapidTO will achieve these goals by providing designated, bus only lanes along key corridors. As a first step in the program, the City identified six routes to be included in the RapidTO program. Two of those routes, Steeles Avenue West and Finch Avenue East, border the YSNTMP Study Area. If approved, Steeles Avenue West from Yonge Street to Jane Street, and Finch Avenue East from Yonge Street to McCowan Road, will see the introduction of bus only lanes. Giving priority to buses along these corridors will allow for more reliable service and increased capacity, which will help keep transit riders on time.
- **Steeles Avenue Rapid Transit:** Steeles Avenue is identified in the Metrolinx 2041 Regional Transportation Plan (RPT) as a future Light Rail Transit (LRT) or Bus Rapid Transit (BRT) project. Additionally, as mentioned above, Steeles Avenue is identified as a corridor for surface transit improvements in the RapidTO program. Steeles Avenue between Jane Street and Milliken GO Station is also identified as a Surface Transit Priority Corridor in the City of Toronto Official Plan. In the planning and design of the planned subway station at Steeles Avenue, the need to consider rapid transit along Steeles Avenue has been identified. Future rapid transit along Steeles Avenue would service neighbourhoods on the boundary between Toronto and York Region, generally between Jane Street in the west and McCowan Road in the east. The final plan and design of rapid transit along Steeles Avenue is being undertaken separately from this TMP.
- **Willowdale Avenue Bike Lanes**: In the summer of 2020, the installation of separated bike lanes (cycle tracks) on Willowdale Avenue from Bishop Avenue to Empress Avenue was completed. The new cycle tracks are separated from vehicular traffic with a buffer and physical barrier, providing dedicated space for cyclists and improving safety and comfort for all road users. The bike lanes significantly expand the local cycling network by connecting to the existing Finch Hydro Corridor multi-use trail.
- **Beecroft Extension**: Beecroft Road is planned to be extended from its current terminus at Finch Avenue West and Greenview Avenue north to Drewry Avenue. The Beecroft Extension would maintain the existing Greenview Avenue alignment between Finch Avenue and Drewry Avenue and would shift east around the existing Hydro One Station. A new east-west street connecting the Beecroft Extension to Yonge Street at Turnberry Court, facilitating access across Yonge Street, is also proposed. The Beecroft Extension is planned to include intersections at Hendon Avenue, the TTC Parking Lot, the new east-west street, Inez Court, and Drewry Avenue as well as sidewalks and on-street bike lanes on both sides of the street. The preferred solution for Beecroft Extension was initially identified in the Uptown Service Road and Associated Road Network Environmental Study Report (1993). The project is currently in the 30% design stage.
- **REimagining Yonge Street**: The REimagining Yonge study recommended final design for the reconstruction of Yonge Street from Florence Avenue/Avondale Avenue to Hendon Avenue/Bishop Avenue. This portion of Yonge Street intersects with the southern extent of the YSNTMP Study Area. Proposed changes to Yonge Street within this corridor include:
    - A cross-section reduction from six to four vehicle lanes;
    - Wider sidewalks and boulevards;

- New and enhanced pedestrian crossings (i.e. traffic signals and turn restrictions at key intersections);
- A centre landscaped median;
- Protected bicycle lanes (cycle tracks);
- On-street lay-bys for parking, loading, and deliveries where right-of way width permits;
- The removal of both northbound and southbound left-turn lanes at the intersection of Yonge Street and Sheppard Avenue; and
- Modifications in the section of Finch Avenue and Hendon Avenue/Bishop Avenue to improve TTC bus travel.

3.1.2 Objectives

The goal of the YSNTMP is to optimize the potential of the above-mentioned projects and ensure that they are being well used by local residents and regional commuters alike. As further detailed in the remainder of this report, the YSNTMP will harness these infrastructure projects by pursing the following objectives:

- Improve station accessibility and accommodate additional density immediately adjacent to TTC hubs by creating new street connections, traffic signals, and a tighter overall street grid.
- Ensure both utilitarian cyclists (commuters) and recreational cyclists can safely and efficiently reach their destinations by adding new cycle tracks, buffer bike lanes, and neighbourhood greenways.
- Create a continuous cycling network by linking existing and planned infrastructure including the Willowdale cycle track, Finch Hydro Corridor Trail, and the proposed Yonge Street cycle track.
- Ensure walking is a viable first mile/last mile choice for transit riders by creating a tighter overall street grid, new traffic signals and crossings, pedestrian only cut-throughs, and sidewalk improvements.

Harnessing planned infrastructure projects is vital for a number of reasons. Perhaps, most importantly, is because it is only possible to add the planned density of residents and jobs if all of the above-mentioned infrastructure improvements are being utilized to their maximum potential. Put simply, harnessing these infrastructure projects will ensure that all road users remain safe, congestion is minimized, and commute times remain manageable. If the density targets for the Study Area are going to be met, transit ridership needs to grow, cycling and walking need to become viable options for errands and short-distance trips, and private vehicle trips need to change from being the obvious first choice to an occasional alternative.

The next section further discusses planned intensification, relevant policy objectives, and how increased density will be managed from a transportation planning perspective.

3.2 SUPPORTING WALKABLE AND TRANSIT-ORIENTED DEVELOPMENT

As noted in **Section 2.1**, the growth of the YSNTMP Study Area is guided by a number of high-level planning documents. Namely, the Provincial Policy Statement (PPS) and the Growth Plan for the Greater Golden Horseshoe (Growth Plan). The PPS sets the strategic vision regulating land use and development across the province, where the Growth Plan guides decisions on a wide range of land use, urban form, housing, environment, resource protection, transportation and infrastructure issues. Included within the Growth Plan are explicit targets for population density near Urban Growth Centres and Major Transit Station Areas (MTSA).

3.2.1 Growth Targets

Urban Growth Centres: The Growth Plan designates North York Centre, which overlaps with a portion of the YSNTMP Study Area, as an “Urban Growth Centre”. Urban Growth Centres act as focal areas for

investment to accommodate and support the transit network at the regional scale, to serve as high-density major employment centres, and to accommodate significant population and employment growth. With regard to the YSNTMP Study Area, the portion of Yonge Street between Finch Avenue and Cummer/Drewry Avenue is designated as an Urban Growth Centre. Within this boundary, the following density targets apply:

- *Urban growth centres will be planned to achieve, by 2031 or earlier, a minimum density target of 400 residents and jobs combined per hectare for each of the urban growth centres in the City of Toronto.*

Major Transit Station Areas: The YSNTMP Study Area is already home to one MTSA, the TTC Finch Station. With the proposed Yonge North Subway Extension, the area will see an additional MTSA at the intersection of Yonge Street and Steeles Avenue. Within a 500-800 metre radius of the future Yonge Street and Steeles Avenue MTSA, the following density targets would apply:

- *MTSAs on priority transit corridors or subway lines will be planned for a minimum density target of 200 residents and jobs combined per hectare.*

The alternative solutions proposed within this document were made with an understanding of the density targets outlined above. Underpinning the road, pedestrian, and cycling network proposals is the fact that significantly more people are going to be accessing the Study Area on a daily basis.

3.2.2 Objectives

The goal of the YSNTMP is to develop a transportation network that can handle this influx of density, while prioritizing the safety of all road users and decreasing vehicle congestion. As further detailed in the remainder of this report, the YSNTMP will respond to intensification by pursing the following objectives:

- Ensure that there is a sufficient supply of multi-modal transportation options —including continuous sidewalks, a comprehensive cycling grid, and shared mobility infrastructure— to accommodate the additional trips that will be generated in the vicinity of TTC Finch Station by the target density of 400 residents and jobs combined per hectare.
- Ensure that there is a sufficient supply of multi-modal transportation options to accommodate the additional trips that will be generated in the vicinity of both the potential future TTC Drewry/Cummer Station and the proposed TTC Steeles Station, which both will support target densities of 200 residents and jobs combined per hectare.
- Ensure that added vehicle trips can be accommodated, to the degree possible, on existing major arterial, minor arterial, and collector roads, so that vehicle volumes on local roads within the neighbourhood remain low.
- Provide new residents a viable alternative to driving by creating a network of continuous cycle tracks and buffer bike lanes along major routes —specifically, along the Yonge Street corridor— where the vast majority of new development/growth will be directed.
- Create a denser grid of streets and establish new pedestrian pathways and multi-use trail links to ensure that new and existing residents can achieve a larger share of their daily trips by walking or cycling.

In specifically tailoring the transportation network to accommodate the ambitious density targets laid out in the Growth Plan, the YSNTMP will ensure that the Land Use guidelines being developed as part of the Yonge Street North Secondary Plan can be achieved without overwhelming local and regional transportation

networks. Furthermore, it will help create a more vibrant and livable community by improving the public realm. This means that new residents and employees will spend more of their time in the community — walking and cycling to local businesses for lunch, recreation, and daily errands— which will in turn support local small businesses and the overall health of the community.

The next section further discusses how the transportation network being developed to accommodate intensification will help reduce automobile dependency and create a community where the vast majority of trips can be easily completed via transit, cycling or walking.

3.3 REDUCING AUTOMOBILE RELIANCE

Under existing conditions, approximately 62% of all trips taken in the YSNTMP Study Area are automobile trips (49% auto driver; 13% auto passenger). Based on the long-term policy objectives of the City of Toronto and the Province of Ontario, a central goal of the YSNTMP is to create a mode share where the majority of trips are taken by transit instead of automobile by the year 2041. This shift away from auto driver as the primary mode, to a focus on transit, can be achieved through an appropriate and gradual transition of the built form, density, and transportation network. This section highlights the relevant policy direction, and the high-level changes being proposed to the street, pedestrian, and cycling networks to reduce auto dependency and achieve the desired mode split.

3.3.1 Policy Direction

PPS *– Efficient development patterns optimize the use of land, resources and public investment in infrastructure and public service facilities. These land use patterns promote a mix of housing, including affordable housing, employment, recreation, parks and open spaces, and* ***transportation choices that increase the use of active transportation and transit before other modes of travel****.*

> 1.6.7 Transportation Systems: Transportation systems should be provided which are safe, energy efficient, facilitate the movement of people and goods, and are appropriate to address projected needs. Efficient use should be made of existing and planned infrastructure, including through the use of transportation demand management strategies, where feasible. As part of a multimodal transportation system, connectivity within and among transportation systems and modes should be maintained and, where possible, improved including connections which cross jurisdictional boundaries. A land use pattern, density and mix of uses should be promoted that ***minimize the length and number of vehicle trips and support current and future use of transit and active transportation***.

Growth Plan *– An integrated transportation network will allow people choices for easy travel both within and between urban centres throughout the region. Public transit will be fast, convenient, and affordable.* ***Automobiles will be only one of a variety of effective and well-used choices for transportation. Transit and active transportation will be practical elements of our urban transportation systems.***

Official Plan *– By improving and making better use of existing urban infrastructure and services before introducing new ones on the urban fringe, reurbanization helps to reduce our demands on nature and improve the livability of the urban region by* ***reducing our reliance on the private automobile, reducing greenhouse gas emissions, and reducing our consumption of non-renewable resources.***

3.3.2 Objectives

As further documented in **Section 5**, the YSNTMP will reduce auto dependency by proposing changes to the street, pedestrian, and cycling network:

- ***Street Network*** – proposed changes to the street network will create new road connections, add traffic signals at key intersections, and make design changes within the existing rights of way. These changes are meant to achieve a number of objectives. First, new road connections will shorten the walking distance between destinations and help moderate the volume and speed of vehicle traffic. Second, new traffic signals will provide safer crossings for all road users and help reduce vehicle speeds on local roads. Finally, design interventions will create more room for pedestrians and cyclists to operate safely and create a more appealing public realm. By implementing these changes near trip generators like transit stations, parks, and schools, the new street network will:
    - Reduce single occupancy vehicle trips by offering the alternative of a safer and more pleasant pedestrian and cycling environment;
    - Moderate potential congestion by offering more route options for local residents;
    - Reduce vehicle speeds on local roads by efficiently spacing traffic signals and implementing Vision Zero design interventions; and
    - Increase transit use by improving station accessibility and the ease of first mile/last mile trips.
- ***Pedestrian Network*** – proposed changes to the pedestrian network will create new pedestrian only crossings and "short cuts" through dead-end streets, add additional sidewalk infrastructure on local streets lacking pedestrian facilities, and create links between multi-use trails and park path networks. These changes are meant to achieve a number of objectives. First, new pedestrian-only crossings and cut-throughs will improve safety while allowing pedestrians to more quickly reach their destination. Second, new sidewalk infrastructure will create pedestrian only spaces that are safer for those with a wide range of mobility needs, especially parents with strollers, young children, and older residents. Finally, the creation of new connections between multi-use trails and the park path network will fix *missing links*, improving the continuity and connectiveness of important pedestrian routes like the Finch Hydro Corridor Recreational Trail. By implementing these changes near trip generators like transit stations, parks, and schools, the new pedestrian network will:
    - Increase the modal share of pedestrian trips by decreasing travel distances and improving safety;
    - Reduce congestion by giving local residents an alternative to using their vehicle for errands and short-distance trips; and
    - Increase transit use by improving station accessibility.
- ***Cycling Network*** – proposed changes to the cycling network will create new protected cycle tracks along major and minor arterials, new buffered bike lanes along collector and local roads, and neighbourhood greenways along local roads near parks and community facilities. These changes are meant to achieve a number of objectives. First, protected cycle tracks along key corridors will support utilitarian cyclists who commute to work via bike, and provide a safe environment for younger and less-experienced cyclists who are not traditionally comfortable cycling along high-volume routes. Second, buffered bike lanes on neighbourhood streets will provide a comfortable and efficient alternative to driving for short trips, and provide a safer environment for recreational cycling within the community. Lastly, neighbourhood greenways will provide access to local parks while moderating vehicle speeds in areas that are frequented by vulnerable road users like young children and older adults. By implementing these changes near trip generators like transit stations, parks, and schools, the new cycling network will:

- Increase the share of trips under 5 km completed by cycling by making it easier and safer to access local businesses, employment centres, parks, community facilities, and transit stations via bike;
- Increase transit ridership by establishing cycling as a viable first mile/last mile option for commuter trips originating or terminating at TTC Finch Station and the planned Steeles Station;
- Reduce congestion by giving local residents an alternative to using their vehicle for errands and medium-distance trips; and
- Reduce vehicle speeds and volumes on local streets by combining cycling infrastructure with appropriate safety interventions and road diets.

- ***Shared Mobility Strategy*** – proposed improvements to shared mobility will support a reduced reliance on automobile ownership and address a lack of shared and sustainable mobility infrastructure and facilities in the Focused Study Area. The Shared Mobility Strategy will identify potential locations for new Bike Share stations, carshare parking, passenger loading zones, and public electric vehicle parking. Implementing a Shared Mobility Strategy that includes these facilities will:
  - Support reduced automobile ownership by providing shared facilities, such as carshare and Bike Share, that can accommodate occasional travel by automobile and shorter regular trips by bike;
  - Support non-single occupant vehicle trips by providing dedicated locations for passenger pick-up and drop-off activities; and,
  - Encourage use of more sustainable transportation modes by locating Bike Share stations to facilitate short trips by bike and elective vehicle parking to help make travel by electric vehicles more accessible and convenient.

The changes outlined above will help reduce automobile dependency and increase the share of trips within the YSNTMP Focused Study Area that are conducted via transit, walking, and cycling. This will help achieve high-level objectives set out in provincial and municipal planning policy, and support the functioning of an efficient, multi-modal transportation network.

The next section further discusses how this shift away from automobile dependency toward transit and active transportation fits into emerging mobility trends being observed in both the YSNTMP Study Area and across the wider regional transportation network.

3.4 ACCOMMODATING THE EMERGING MOBILITY TRENDS

As discussed in **Section 2.2.6.1**, TTS datasets for 2006, 2011, and 2016, the three most recently conducted and available datasets, were examined to provide an understanding of the existing travel trends and behaviour within the YSNTMP Study Area. The analysis looked at behaviour relating to vehicle traffic, transit ridership, active transportation choice, road safety, goods movement, and shared mobility.

3.4.1 Emerging Trends

Though there is still significant progress to be made on a number of key metrics, the high-level trends within the Focused Study Area over the previous decade were promising. Of note:

- The share of trips completed by *auto drivers* decreased from 60% of all trips in 2006, to 49% of all trips in 2016; and
- The share of trips completed using *transit* increased from 20% to 33% of all trips over the same ten-year period.[1]

These trends were observed despite the fact that higher-order transit infrastructure in the area has remained relatively unchanged since TTC Finch Station was completed in 1974. With the Yonge North Subway Extension planned to add an additional higher-order transit station to the Study Area at Steeles Avenue, as well as the potential for an additional station near Drewry/Cummer Avenue, this represents a tremendous opportunity to further shift mode share away from car dependency.

As the area around TTC Finch Station has limited remaining development potential given the density of existing mid- and high-rise buildings, the obvious next step in the development of the area is for density to grow further north around Cummer/Drewry and around the proposed station at Steeles. To ensure that new developments in those areas can embrace the emerging trend of transit ridership over car dependency, the YSNTMP will take a node-based approach, specifically targeting improvements to increase the viability of transit ridership and active transportation for new residents.

3.4.2 Objectives

- **Steeles Node** – the hub of the Steeles Node is expected to be the planned Steeles Station and existing Centrepoint Mall site, which is anticipated to accommodate a substantial, multi-building, mixed-use development over the coming decades. The YSNTMP vision for this area is to aid the transition over time from the existing auto-oriented site without roads, to a walkable, transit-oriented form. As will be discussed in **Sections 5 and 6**, the preferred solution will aim to provide a dense grid of streets with cycle tracks and convenient pedestrian links to the intersection of Yonge Street and Steeles Avenue (the expected location of a future TTC Subway Station). This proposed transportation network will:
    - Create additional public streets to support development blocks;
    - Layout the new streets and signal positions to discourage vehicle 'cut-through' and limit the infiltration of vehicles into the existing community and local roads;
    - Establish new east-west and north-south connections, creating additional pedestrian routes and providing local residents with alternatives to using Yonge Street, Steeles Avenue, and Finch Avenue for local trips; and
    - Establish a *neighbourhood corridor* for pedestrians and cyclists along Dumont Street.
- **Development Near Cummer/Drewry** – the area around the Cummer/Drewry intersection is expected to undergo some intensification, particularly within the parcels of land immediately adjacent to the four corners of the intersection with Yonge Street, which are anticipated to see the addition of multiple mixed-use towers over the coming decades. Some high-rise developments have already been approved in the area, and additional mid-rise development is anticipated. The YSNTMP vision for this area is to support transit-oriented development in the vicinity of the area that improves the pedestrian environment as well, with signals to reduce long distances between crossing locations and an enhanced public realm. The YSNTMP vision for the area recognizes the opportunity to protect for a potential transit station in this location in the long-term. As will be discussed **in Sections 5 and 6,**

[1] Active transportation rates, including walking and cycling, remained stable at about 5% of all trips between 2006 and 2016.

the preferred solution is a modified grid of streets with additional connections and pedestrian crossings. This proposed transportation network will:

  - Create new north-south connections adjacent to Yonge Street, with a link to the west of Yonge created by the planned Beecroft Extension, and a link to the east of Yonge secured through future redevelopment; and
  - Create new east-west connections across Yonge Street by adding additional traffic signals near the potential future subway station.

- **Neighbourhood Connections** –existing neighbourhoods on either side of Yonge Street, outside of the Steeles Node and vicinity of the Cummer/Drewry intersection, have been identified as stable neighbourhoods where significant growth is not anticipated. The YSNTMP vision for these areas is to largely maintain the existing character and structure of these neighbourhoods while improving connectivity for active modes. As will be discussed in **Sections 5 and 6**, the preferred solution will include active transportation connections and improvements to the pedestrian and cycling environments. This proposed transportation network will:
  - Provide new multi-use trails to improve neighbourhood connectivity for active modes and create attractive and more direct connections between Dumont Street and Newtonbrook Park; and,
  - Implement sidewalk improvements to enhance pedestrian connectivity and environment along local streets such as Tobruk Crescent.

3.5 SUMMARY OF CHALLENGES AND OPPORTUNITIES

A number of challenges and deficiencies have been identified within the YSNTMP Study Area transportation network as it exists today. These include a land-use pattern that prioritizes the automobile and fosters auto dependency, deficiencies and lack of pedestrian and cyclist infrastructure, limited connectivity across Yonge Street and north-south through the Study Area, and significant traffic congestion during peak periods.

These challenges limit the efficacy of the network to facilitate safe, efficient, and accessible travel for all modes for existing residents, as well as the ability to accommodate future residents and meet key City Planning objectives such as reducing automobile reliance and encouraging travel by transit and active transportation modes.

The YSNTMP has the opportunity to address these challenges in four key ways:

- Harness planned infrastructure projects;
- Support walkable and transit-oriented development;
- Decrease automobile reliance; and,
- Accommodate emerging mobility trends.

Based on a review of the challenges, opportunities, and resulting objectives identified in this section, a Problem and Opportunity Statement has been developed for the YSNTMP. This statement has been referenced throughout the YSNTMP master planning process and has informed the development, evaluation, and ultimately the selection of alternative transportation planning solutions that will form the overall Recommended Transportation Solution for the YSNTMP.

4 PROBLEM AND OPPORTUNITY STATEMENT

Based on a review of the planning context and existing conditions of the YSNTMP Study Area, a number of challenges and opportunities were identified. A Problem and Opportunity Statement was subsequently developed to capture existing characteristics of the Study Area and identify opportunities to guide the development of the Study Area Transportation Network.

The **Problem and Opportunity Statement** is as follows:

The Yonge Street North area is anticipated to accommodate additional transit supportive development, with the northerly extension of the TTC Line 1 subway. The area is currently characterised by:

- *Land uses not reflective of transit-oriented growth;*
- *Deficiencies in pedestrian and cyclist infrastructure;*
- *Discontinuous roadways across Yonge Street and north-south through the study area; and,*
- *Insufficient capacity for travel by various modes.*

As the area responds to development and rapid transit improvements, there is strong opportunity for it to evolve in a manner that reduces automobile dependency, supports sustainable travel choices, improves safety for vulnerable road users, and manages transportation demand through multi-modal strategies and infrastructure. Yonge Street will be a distinct corridor with a vibrant public realm, where intensification will be focused.

The Problem and Opportunity Statement will contribute to the vision for the YSNTMP and will inform the guiding principles for the study. These guiding principles will in turn guide the development of alternative solutions to be considered for the YSNTMP and will ultimately form the basis for the Evaluation Criteria that will be used to evaluate these alternatives and identify a preferred transportation network.

5 DEVELOPMENT AND EVALUATION OF ALTERNATIVE PLANNING SOLUTIONS

5.1 PLANNING VISION AND GUIDING PRINCIPLES

From the Problem and Opportunity Statement, a number of Guiding Principles emerge. The future Transportation Network should support people by providing viable travel options that are safe, comfortable, and improve connectivity and access to sustainable modes beyond what is offered by the existing network.

Further, the Transportation Network must support new development while recognizing established neighbourhood structure and character. The future network must also be viable for the City to build, operate and maintain and support growth for the neighbourhood and broader City Planning goals identified in **Section 3**.

The following Guiding Principles have been established to guide development of alternative solutions being considered, and fall under three broader categories of People, Places, and Prosperity. The evaluation criteria subsequently developed to assess the alternative solutions being considered has been categorized according to these Guiding Principles, and includes eight corresponding sub-principles, as described in the following sections.

5.1.1 Guiding Principle #1: People

It is imperative that the YSNTMP recommends a future Transportation Network that puts people first. The needs of existing residents and future residents must be incorporated. Based on a review of the existing challenges facing the Study Area, identified opportunities through new transit infrastructure and development, and established planning policy and goals for the Study Area, the following three sub-principles have been selected:

- **Choice** – develop a balanced transportation network that connects and provides different travel modes
- **Experience** – ensure safe and comfortable travel across all modes
- **Social Equity –** provide equal and good access to work, school and other activities for all

5.1.2 Guiding Principle #2: Places

The YSNTMP is being conducted alongside the Yonge Street North Planning Study and Secondary Plan, which will provide the planning and land use vision and regulations to guide new development within the Study Area. The YSNTMP must provide a future Transportation Network that supports new development in a sustainable manner while balancing the needs of existing residents and neighbourhoods, in line with broader City of Toronto planning and city-building objectives. The following three principles have been selected:

- **Shaping the City –** encourage mixed-use and sustainable development
- **Healthy Neighbourhoods –** build connections with existing neighbourhoods, promote safe cycling & walking
- **Public Health & Environment –** enhance natural areas, encourage less reliance on the automobile

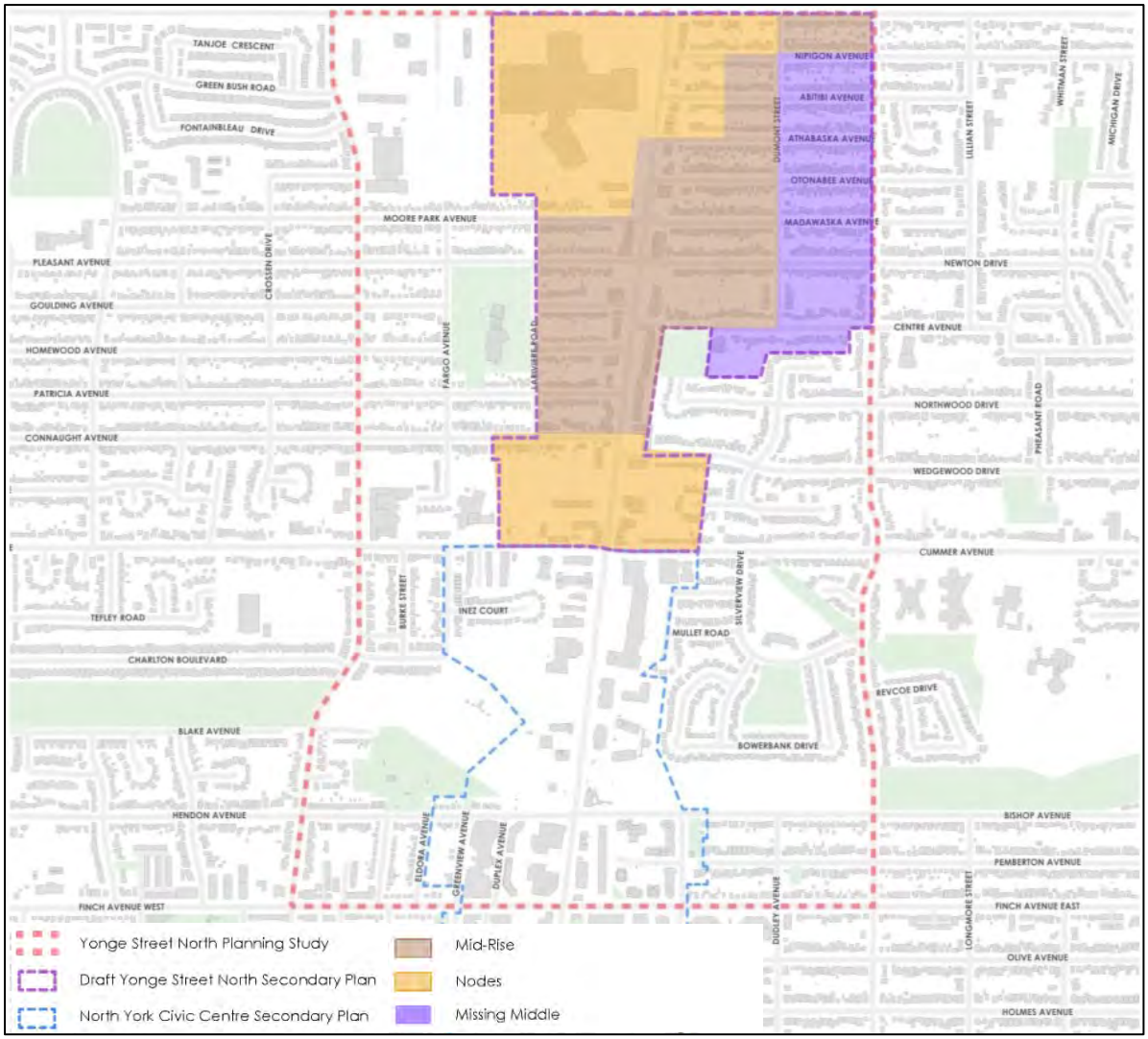
5.1.3 Guiding Principle #3: Prosperity

In order to ensure the recommendations of the YSNTMP can be implemented, the future Transportation Network must be realistic and viable. The future Transportation Network must be able to be implemented in a manner that will be reasonably affordable and that supports growth, not only of the Study Area, but of the broader City economy. The following two principles have been selected:

- **Affordability –** improvements should be affordable to build, maintain and operate
- **Supporting Growth –** encourage economic growth through improvements, allow goods to get to market efficiently

While the Guiding Principles were used as the basis of the evaluation criteria, the evaluation was undertaken in conjunction with the Yonge Street North Planning Study on the basis of the proposed land use for the Study Area to ensure that the future YSNTMP Transportation Network would support the preferred land use and built form as identified in the Planning Study. The Yonge Street North Planning Study boundaries and land use vision are shown in **Figure 5-1**.

Figure 5-1: Yonge Street North Planning Study Boundaries and Land Use Vision



5.2 DEVELOPMENT OF TRANSPORTATION NETWORK

With the three Guiding Principles and their sub-principles in mind, the alternative solutions for the future YSNTMP Transportation Network were developed. Guiding Principle 1, People, considered how each component network contributed to the sub-principles of Choice, Experience, and Social Equity. Guiding Principle 2, Places, considered the degree to which each component network contributing to the sub-principles of Shaping the City, developing Healthy Neighbourhoods, and supporting Public Health and the Environment. Guiding Principle 3, Prosperity, considered the sub-principles of the Affordability of each component network and their ability to Support Growth.

Recognizing that there are a number of elements to be considered, as outlined in the Guiding and Sub-Principles, a component approach to developing and evaluating the network was selected. The overall component approach, as well as the various components considered, is described in the following sections.

5.2.1 Component Approach

There are a number of components that comprise the overall transportation network in the Study Area. These include the following networks that form the foundation of the overall transportation network:

- **Street Network**, comprising the physical right-of-ways that facilitate the movement of people and goods, including pedestrians, cyclists and vehicles;
- **Pedestrian Network**, comprising the facilities and infrastructure dedicated to pedestrians specifically, including facilities incorporated into the overall Street Network (e.g., sidewalks) as well as separate, off-street facilities (e.g. multi-use trails); and,
- **Cycling Network**, comprising the facilities and infrastructure dedicated to cyclists specifically, including facilities incorporated into the overall Street Network (e.g. on-street cycling facilities) as well as separate, off-street active transportation facilities (e.g. multi-use trails, Finch Hydro Corridor Trail).

While the physical Street and Active Transportation Networks form the foundation of the overall Transportation Network in the Study Area, there are a number of additional components that feed into the Transportation Network and impact how people and goods move through the Study Area. These include the following:

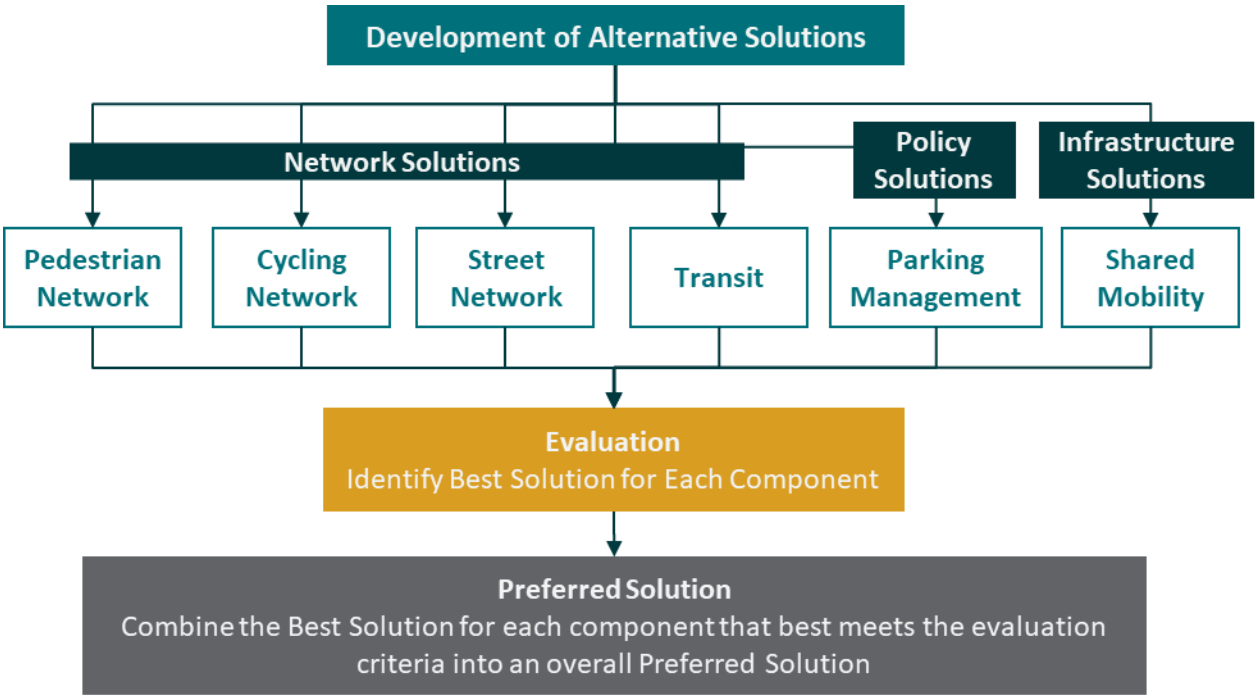
- **Infrastructure-Based Strategies** that can be incorporated into the Street and Active Transportation Networks, including:
    - **Shared Mobility**, comprising Bike Share, Car Share, Pick-Up/Drop-Off (PU/DO) Management, and Curbside Management strategies and infrastructure
- **Policy-Based Strategies** that could influence travel behaviour at the policy level, including:
    - **Parking Management**, comprising policy to guide the supply of parking in the Study Area
- **Planning and Engineering Solutions** that can be applied to address specific issues or advance specific elements of the overall Transportation Network and involve other municipal agencies. These types of solutions would apply to the overall network solutions to provide targeted improvements, including:
    - **Goods Movement; Road Safety; Transit Operations; and Vehicle Operations**

To reflect each of these components, the alternative solutions were developed and evaluated separately according to the component approach. This approach allows for a separate set of alternative solutions to be evaluated for the Street, Pedestrian and Cycling Networks, as well as for Policy Changes to Parking

Management and a Shared Mobility Strategy. This provides the flexibility to evaluate these components separately and select the best alternative for each component, as compared to a holistic approach, which would develop and evaluate alternative solutions at the Transportation Network level and could require compromises per mode.

The component approach illustrating how each component is being connected and considered is shown in **Figure 5-2**. The following sections detail how each component was considered in developing the alternative solutions and overall YSNTMP Transportation Network.

Figure 5-2: Component Evaluation Approach



5.2.2 Pedestrians

The pedestrian network was evaluated across the study area as a whole. The pedestrian network comprises the physical infrastructure and facilities that are dedicated to pedestrians and which contribute to pedestrian connectivity. This includes on-street infrastructure, such as sidewalks, and off-street pedestrian facilities, such as multi-use trails and pathways. The pedestrian network also includes pedestrian crossings, including signalized intersections and different variations of pedestrian crossings and crosswalks.

Four versions of alternative solutions for the pedestrian network were evaluated: Do Nothing, Minor, Moderate, and Major Considerations of the Pedestrian Network. Each was evaluated for the purpose of identifying the set of pedestrian solutions that best responds to the Problem and Opportunity Statement and Evaluation Criteria.

The Do Nothing solution represents the base-case scenario and includes the existing pedestrian network as well as new facilities that would be implemented through new streets already planned by the City of Toronto or through new development, independent of the YSNTMP. The Minor, Moderate and Major alternative solutions include an expansion of the pedestrian network in ascending order, with Minor representing the least number of new crossings and sidewalk expansion being considered and Major representing the most.

Pedestrians were also considered as part of the overall Street Network, which considers all on-street elements and signalized intersections being considered.

5.2.3 Cycling

The cycling network was evaluated across the study area as a whole. The cycling network comprises the physical infrastructure and facilities that are dedicated to cyclists and while contribute to cyclist connectivity. This includes the available on-street cycling facilities available, such as buffered bike lanes, cycle tracks, or shared lane with vehicles as part of a 'Neighbourhood Greenway' system. The cycling network also considers off-street facilities, such as multi-use trails and pathways, as well as crossing opportunities via intersections.

Four alternative solutions for the Cycling Network were evaluated: Do Nothing, Minor, Moderate, and Major Considerations of the Cycling Network. Each was evaluated for the purpose of identifying the set of cyclist solutions that best responds to the Problem and Opportunity Statement and Evaluation Criteria.

The Do Nothing solution represents the base-case scenario and includes the existing cycling network as well as planned cycling facilities that would be implemented regardless of the YSNTMP. The Minor, Moderate and Major alternative solutions include an expansion of the cycling network in ascending order, with Minor representing the least number of facilities and network expansion being considered and Major representing the most.

Cyclists were also considered as part of the overall Street Network, which considers all on-street elements and signalized intersections being considered.

5.2.4 Street Network

The street network comprises the physical right-of-way elements that facilitate the movement of people and goods, including pedestrians, cyclists and vehicles. The street network was assessed as a whole component to capture all of the elements that relate to multi-modal connectivity and facilitate the movement of all road users via public right-of-ways that will be owned, operated, and maintained by the City of Toronto.

The street network considers vehicle travel lanes that will facilitate movement of passenger vehicles, surface transit, and goods movement vehicles, as well as signalized intersections. Also included in the street network are the on-street facilities dedicated to other modes, including dedicated cycling and pedestrian (sidewalk) facilities.

Four alternative solutions for the street network were evaluated: Do Nothing, Minor, Moderate, and Major Considerations of the Street Network. Each was evaluated for the purpose of identifying the set of pedestrian solutions that best responds to the Problem and Opportunity Statement and Evaluation Criteria.

The Do Nothing solution represents the base-case scenario and includes the existing street network as well as planned new streets being undertaken by the City of Toronto or that would be implemented regardless of the YSNTMP. The Minor, Moderate and Major alternative solutions include an expansion of the street network in ascending order, with Minor representing the least number of new streets and signalized intersections being considered and Major representing the most.

5.2.5 Transit

Specific transit network solutions were not considered for this TMP. Transit was instead considered within the evaluation in two primary ways: from an operational perspective and from the perspective of improving multi-modal connections to transit. Transit was reflected in the evaluation criteria by considering how each set of network solutions addressed the following considerations for transit:

- Supporting travel options and improvements to network connectivity;
- Supporting efficient movement of surface transit by managing congestion and protected space for future bus service;
- Improving access to destinations by reducing need for vehicle ownership;
- Supporting transit-oriented development and network; and,
- Supporting new developments with accessibility to transit.

The Preferred Solution anticipates the Yonge North Subway Extension and the City would continue to work with transit providers to accommodate expected changes in bus service. Additionally, the Preferred Solution anticipates that surface transit improvements could be in place along Steeles Avenue from Yonge Street to the west, and along Finch Avenue from Yonge Street to the east, as part of the RapidTO program. Additionally, Steeles Avenue is identified as a future rapid transit corridor in the Metrolinx 2041 Regional Transportation Plan between Jane Street and McCowan Road. While it is anticipated that future rapid transit service will be in place along Steeles Avenue within the study area in the 2041 timeframe, the final design and implementation is to be determined through future study.

5.2.6 Policy Changes

Policy changes were considered to provide alternative solutions to Parking Management in the YSNTMP Study Area. Parking is currently managed through policy, either through the North York Secondary Plan or City of Toronto Zoning By-law 569-2013. Parking policy changes included consideration of calculating, reducing or eliminating minimum parking requirements alongside a TDM strategy.

Four alternative solutions for parking policy changes were evaluated: Do Nothing, Minor, Moderate, and Major Parking Strategies. The Do Nothing solution represents maintaining the current status quo and implementing no policy changes through the YSNTMP. Minor Considerations considered a strategy where Parking and TDM Policy is based on the existing City of Toronto Policy Area Strategy currently in place across most of the City. Moderate Considerations considered a strategy where Parking and TDM Policy is based on proximity to transit, while Major Considerations considered a strategy where minimum parking requirements are removed and Parking and TDM Policy is instead based on transportation infrastructure and the desired driving mode share.

5.2.7 Shared Mobility

Shared Mobility was considered as one comprehensive strategy to be applied to the overall YSNTMP Transportation network. The Shared Mobility Strategy considered various elements that would support sustainable travel and efficiency of the network by providing a set of shared mobility resources. These included locations for Bike Share, Car Share, Electric Vehicle Parking, Passenger/Curbside Loading Zones.

5.3 EVALUATION CRITERIA

The Evaluation Criteria were developed based on the three overarching Guiding Principles and the eight Sub-Principles identified. The evaluation criteria were presented to TAC Stakeholders from TAC #1 onwards to ensure their input was captured where provided.

To develop the final evaluation criteria, the eight principles were assigned corresponding questions and criteria to determine to what degree each alternative solution addressed the goals of the key Guiding Principles. A set of qualitative and quantitative measures were further assigned to each criteria to qualify the

response to each question. The evaluation methodology is illustrated in **Figure 5-3**. Evaluation criteria are summarized in **Table 5-1**. The alternatives were evaluated on a 5-point scale, with 5 representing the best.

Figure 5-3: Evaluation Methodology

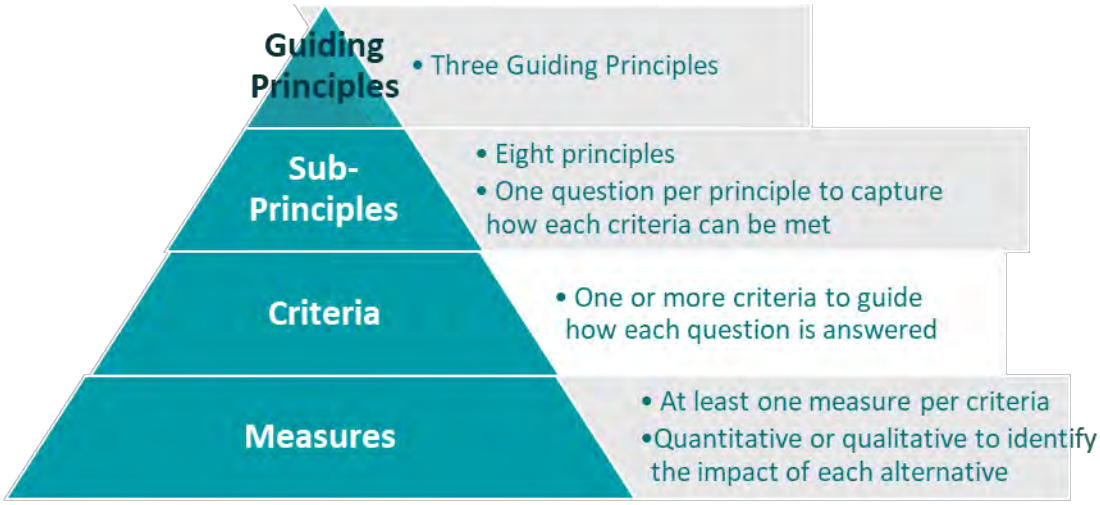


Table 5-1: Evaluation Criteria

Principle	Criteria	Measure
Guiding Principle #1: People		
Choice Will it increase travel options and improve network connectivity?	• Provides more route options for walking and cycling	• Total length of sidewalks and dedicated cycling infrastructure • Pedestrian and cycling demand analysis
	• Increases street network connectivity and continuity	• Road Network and Active Connectivity Index[2] • Based on the ratio of intersections to links in the study area network
	• Integrates connections between different modes of travel	• Transit transfer points connectivity to other modes
	• Supports new transportation technologies and shared mobility	• Bikeshare network expansion • Carshare network expansion • Electric vehicle charging stations • Curbside management considering rideshare needs
Experience	• Increases comfort and safety for pedestrians and cyclists	• Pedestrian level of service analysis • Cycling level of service analysis

[2] Details regarding the Road Network and Active Connectivity Index methodology can be found in Appendix F – Existing Transportation Conditions Report

Will it make travel more safe, comfortable, and convenient?	• Manages traffic congestion	• Vehicle travel times and intersection delays
	• Supports efficient surface transit	• Transit travel times • Protects space for future bus service
	• Provides adequate capacity for all modes of travel	• Person trip capacity analysis
	• Improves safety for all users	• Design to reduce potential fatalities and severity of collisions • Intersection and mid-block crossing locations that prioritize pedestrian safety and convenience
Social Equity Will it improve access to work, school, and services, for all?	• Reduces need for car ownership to access jobs and services	• Improves experience for transit, pedestrians, cyclists, high-occupancy vehicles.
	• Accommodates all modes of travel in road designs	• Proposed designs comply with Complete Street Guidelines
	• Accommodates the needs of users of all ages and abilities	• Proposed designs comply with Accessibility for Ontarians with Disabilities Act (AODA) and the City of Toronto's accessibility standards and practices
Guiding Principle #2: Places		
Healthy Neighbourhoods Will neighbourhoods be enhanced and support active travel?	• Improves public realm	• Space for landscaped boulevards and planting • Proposed designs comply with Toronto Green Standard v3, and Green Street Guidelines
	• Increases connectivity between neighbourhoods	• Connections to trails, parks, and open spaces, community facilities
	• Encourages safe walking and cycling for local trips	• Appropriately traffic calmed streets • Walking and cycling mode share
Shaping the City Will the transportation network encourage sustainable development?	• Supports transit-oriented development potential	• Complies with Official Plan policies and Growth Plan targets
	• Manages transportation impact of new developments	• Minimized parking requirements for new developments • Requirements for transportation demand management measures
	• Compatible with other Secondary Plans in the area	• Ensures connectivity and compatible policies
	• Minimizes impact on area ecology	• Area and extent of affected features

Public Health & Environment Will the natural environment be protected and enhanced?	• Minimizes impact on built/cultural heritage and archaeological potential	• Area and extent of affected features
	• Mitigates noise impacts	• Meets acceptable noise thresholds
	• Reduces local greenhouse gas emissions	• Complies with TransformTO goals
Guiding Principle #3: Prosperity		
Affordability Will costs of improvements be reasonable given their benefit?	• Provides improvements that are economically feasible to build, maintain, and operate.	• Construction costs • Operations and maintenance costs • Property requirement costs
Supporting Growth Will economic development be supported? Will goods be able to get to market efficiently?	• Improves access to employment areas	• Connections to Centres and employment areas
	• Supports efficient movement of goods	• Accommodates appropriate truck volumes • Provides adequate loading locations

The alternatives were assigned a score of one to five, with one indicating the problem and opportunity statement was not addressed and five indicating it was best addressed. The following sections will provide a summary of the evaluation of each Alternative Solution. Full evaluation results are provided in **Appendix G**.

5.4 EVALUATION OF ALTERNATIVE SOLUTIONS – STREET NETWORK

5.4.1 Minor Considerations

The Minor Street Network includes new streets already planned independent of the YSNTMP, which include the following:

- Planned Olympic Garden Drive; a planned public street to be built through development occurring along the east side of Yonge Street between Turnberry Court and Wedgewood Drive, with a planned cross-section that includes one vehicle travel lane per direction and buffered bike lanes
- Planned Beecroft Extension: a planned public street to be built by the City and through development occurring to the west of Yonge Street between Hendon Avenue and Drewry Avenue, which a planned cross-section that includes two vehicle travel lanes per direction and bicycle lanes with buffer space on either side
- Proposed Centrepoint Mall Street Network: a network of planned public streets to, from and within the Centrepoint Mall property is part of the Minor Street Network. This includes the extension of Athabaska Avenue using the existing signal at Yonge Street; new north-south streets between Athabaska and Steeles, new north-south street from Moore Park Avenue to the existing signal at Steeles Avenue, and a new east-west connection to Hilda Avenue.

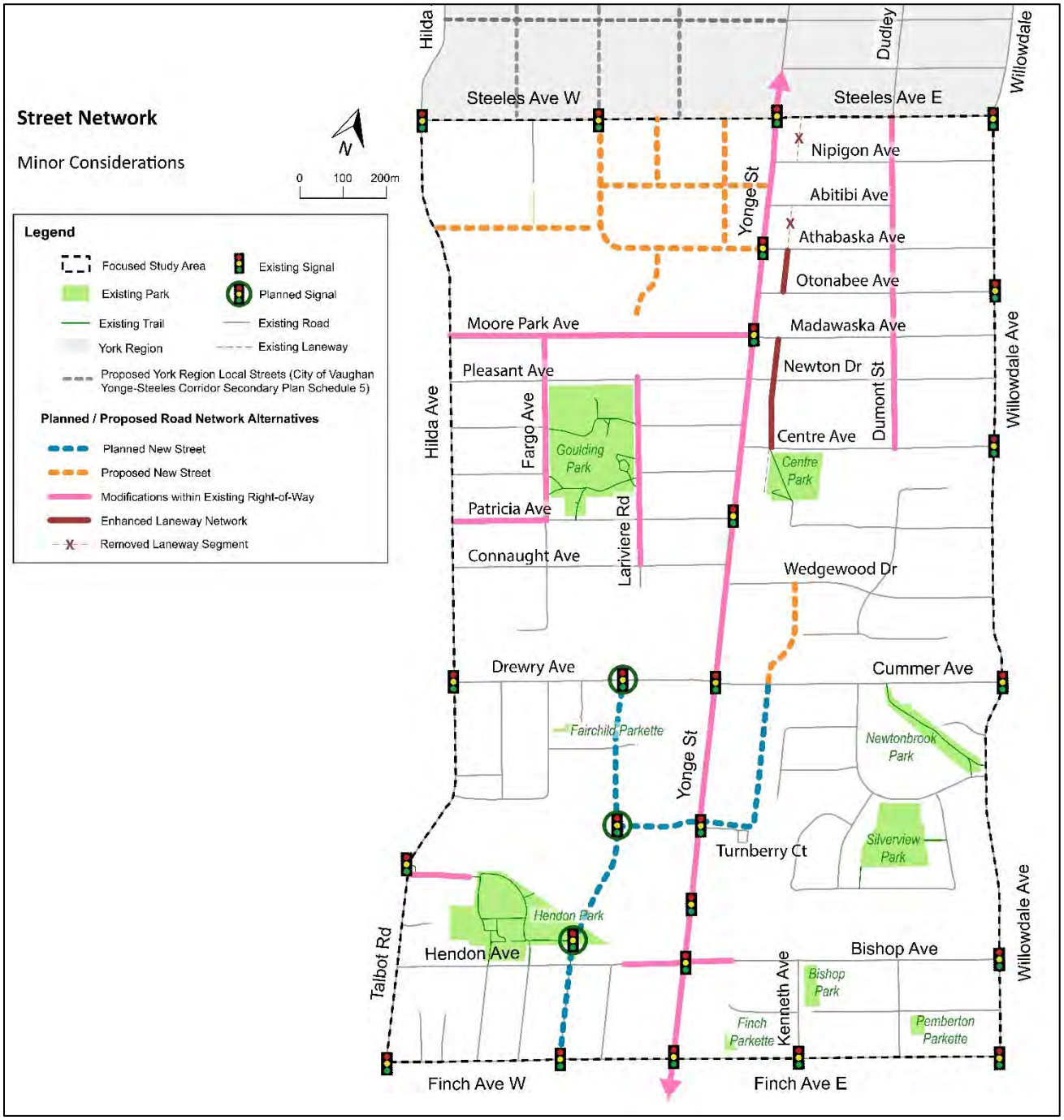
The Minor Street Network also includes several traffic calming treatments, along Lariviere Road and Dumont Street to improve multi-modal safety and discourage major traffic infiltration and speeding along these local streets. Traffic calming measures include narrowing the existing vehicle travel lanes. This will maintain the

existing landscaped areas on either side of the roadway, remove the opportunity for on-street parking, and provide additional space that could be allocated to other facilities and uses (e.g. sidewalks, etc.).

The Minor Street Network also includes proposed formalization of the existing laneways separating commercial properties fronting Yonge Street from residential neighbourhoods to the east to create an enhanced laneway network, consisting of a 6 m wide public laneway.

Modifications are also proposed for Yonge Street and Hendon and Bishop Avenues across Yonge Street to improve pedestrian and cycling access at an existing gap in the Finch Hydro Corridor Trail. The Minor Street Network alternative is shown in **Figure 5-4**.

Figure 5-4: Minor Street Network



Overall, the Minor Street Network aims to address concerns about safety and active transportation in neighbourhoods while proposing minimal extensions of the street network to limit impacts to neighbourhoods east and west of Yonge Street. A summary of the Minor Considerations evaluation is shown in **Table 5-2**.

Scale: 1 2 3 4 5

Table 5-2: Summary of Minor Street Network Evaluation Results

Principle	Question	Key Takeaways	Rank
Guiding Principle #1: People			
Choice	Will it increase travel options and improve network connectivity?	• Some opportunity for new pedestrian and cycling facilities • Limited new routes and vehicle travel options	**2**
Experience	Will it make travel more safe, comfortable, and convenient?	• Supports improvement to pedestrian environment • Does not support increase to vehicle capacity or reduced travel times (incl. for surface transit) • Minimal new signals and crossing opportunities	**2**
Social Equity	Will it improve access to work, school, and services, for all?	• Upgrades to sidewalk infrastructure; meets AODA • Incorporates Complete Streets considerations (e.g. opportunities for greening, speed reductions, etc.)	**3**
Guiding Principle #2: Places			
Healthy Neighbourhoods	Will neighbourhoods be enhanced and support active travel?	• Some increased access to amenities such as parks • Traffic calming proposed for local streets • Maintains existing neighbourhoods	**3**
Shaping the City	Will the transportation network encourage sustainable development?	• Minimal compliance with planning and policy vision • Supports some planned new development • Minimal new road improvements near subway stations (existing & proposed)	**2**
Public Health & Environment	Will the natural environment be protected and enhanced?	• Minimal environmental disruption & increased traffic noise anticipated	**4**
Guiding Principle #3: Prosperity			
Affordability	Will costs of improvements be reasonable given their benefit?	• Some new construction/maintenance costs • Minimal property requirements/costs required	**4**
Supporting Growth	Will economic development be supported? Will goods be able to get to market efficiently?	• Some additional road connections to North York Centre and York Region • Some new block sizes for development • Minimal alternative north-south and east-west routes; Yonge St, Finch Ave, Steeles Ave remain main arteries for passenger vehicles and trucks	**2**

Main Strengths of Minor Street Network: Limited disruption to existing neighbourhood structure, traffic calming efforts to improve pedestrian environment and multi-modal safety in neighbourhoods, and low property, construction and ongoing maintenance costs.

Main Limitations of Minor Street Network: Limited new route options for all travel modes, no new, continuous north-south or east-west routes, no relief for existing collector and arterial roads, limited new blocks or buffers created for existing neighbourhoods to support new development in Yonge Street corridor.

5.4.2 Moderate Considerations

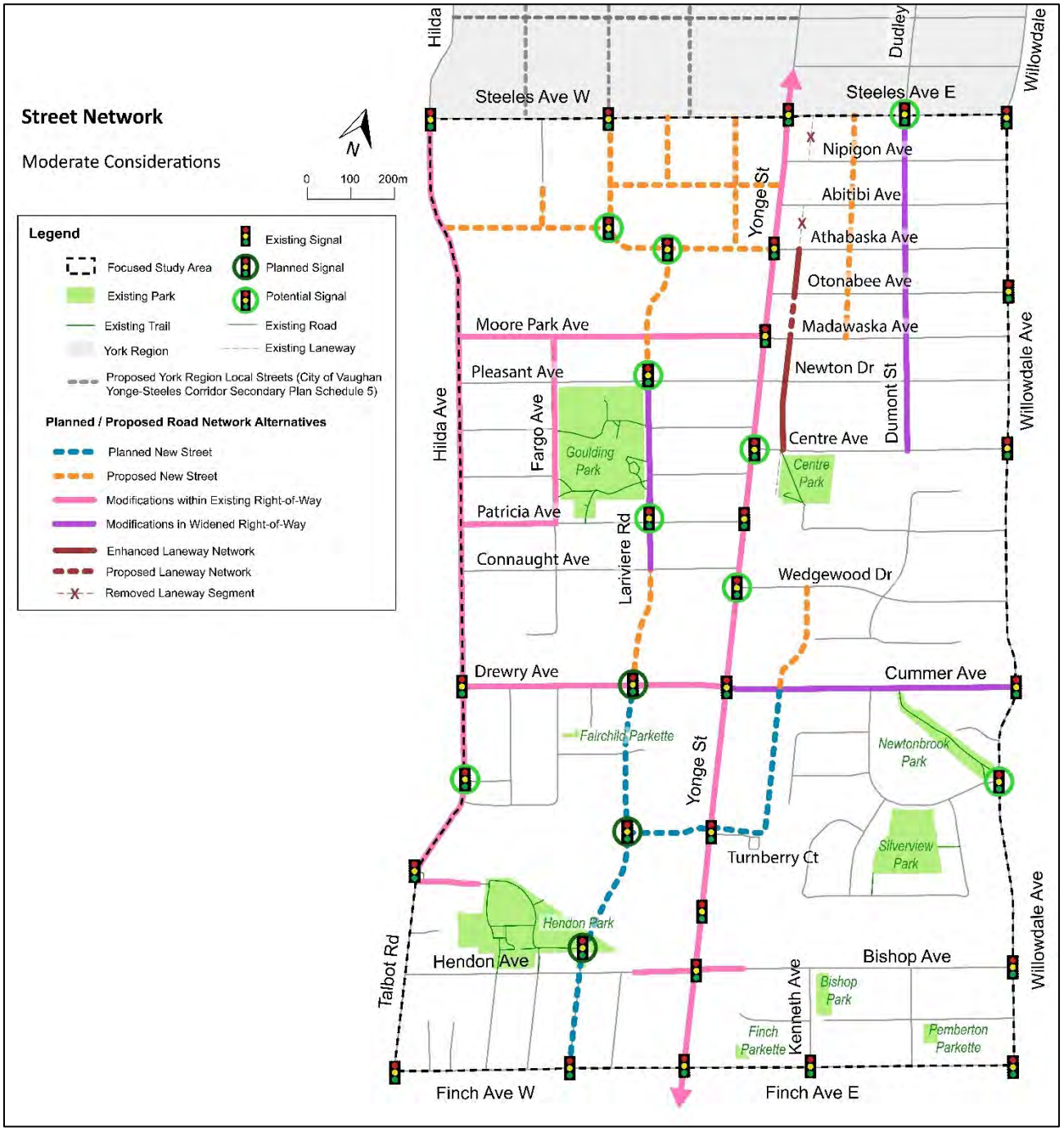
The Moderate Street Network includes alternatives oriented around improving local circulation and access to and from existing and proposed nodes and development areas. These areas include existing and planned subway stations and key intersections along Yonge Street. The Moderate Considerations network also includes the Minor Considerations being proposed.

The Moderate Street Network includes the following:

- Signalization/intersection improvements at Wedgewood Avenue and Yonge Street; proposed signalization and intersection improvements of Wedgewood Avenue at Yonge Street to improve safety at the existing offset intersection for all modes and provide a protected crossing of Yonge Street for pedestrian and cyclists.
- Proposed New Street Between Yonge Street and Dumont Street, to create a consistent road connection between Madawaska Avenue and Steeles Avenue.
- Proposed Expanded Laneway Network between Centre Avenue and Athabaska Avenue to provide a continuous, formalized connection and separation between uses fronting Yonge Street and properties to the east.
- Proposed New Street Connecting Lariviere Road, Beecroft Extension, and Centrepoint Mall Road; a proposed extension of Lariviere Road to connect with the planned Beecroft Extension and proposed Centrepoint Mall Road to create a consistent road connection between Finch Avenue and Steeles Avenue on the west side of Yonge Street.
- Right-of-way widening are proposed for Dumont Street, Cummer Avenue and Lariviere Road.

The Moderate Street Network alternative is shown in **Figure 5-5**.

Figure 5-5: Moderate Street Network



Overall, the Moderate Street Network aims to improve safety and active transportation in neighbourhoods while also providing new north-south connectivity and significant connectivity improvements around existing and proposed subway stations. A summary of the Moderate Considerations evaluation is shown in **Table 5-3**.

Scale: 1 2 3 4 5

Table 5-3: Summary of Moderate Street Network Evaluation Results

Principle	Question	Key Takeaways	Rank
Guiding Principle #1: People			
Choice	Will it increase travel options and improve network connectivity?	• Opportunities for new sidewalks and cycling facilities • Provides robust system of local road connections and new vehicle travel options • Improves connectivity and scores higher on the Street Connectivity Index	**4**
Experience	Will it make travel more safe, comfortable, and convenient?	• Supports improvement to pedestrian environment • Somewhat supports increase to vehicle capacity or travel times (incl. for surface transit) • New signals and crossing opportunities	**3**
Social Equity	Will it improve access to work, school, and services, for all?	• Upgrades to sidewalk infrastructure; meets AODA • Incorporates Complete Streets considerations • Improves multi-modal access in neighbourhoods	**4**
Guiding Principle #2: Places			
Healthy Neighbourhoods	Will neighbourhoods be enhanced and support active travel?	• Some increased access to amenities such as parks • Extensive traffic calming proposed for local streets • Maintains existing neighbourhoods, some property impacts • Support for new development blocks	**4**
Shaping the City	Will the transportation network encourage sustainable development?	• Complies with planning and policy vision • Supports planned new development • Develops system of local roads and enhances multi-modal connectivity near subway stations	**4**
Public Health & Environment	Will the natural environment be protected and enhanced?	• Minimal environmental disruption; moderate increase to traffic noise anticipated	**4**
Guiding Principle #3: Prosperity			
Affordability	Will costs of improvements be reasonable given their benefit?	• Moderate new construction/maintenance costs • Moderate property requirements/costs required	**3**
Supporting Growth	Will economic development be supported? Will goods be able to get to market efficiently?	• Supports some additional road connections to North York Centre and York Region • Supports new development through new blocks • Provides alternative north-south route to Yonge St, no new east-west route; Finch Ave, Steeles Ave still main arteries for passenger vehicles and trucks	**3**

Main Strengths of Moderate Street Network: Balances disruption to existing neighbourhoods against a need for alternative routes to Yonge Street, implements traffic calming measures along local, collector and arterial routes, supports new development in key locations, and improves connectivity around subway stations.

Main Limitations of Moderate Street Network: New north-south routes are disconnected east and Yonge Street and there are no new east-west routes proposed.

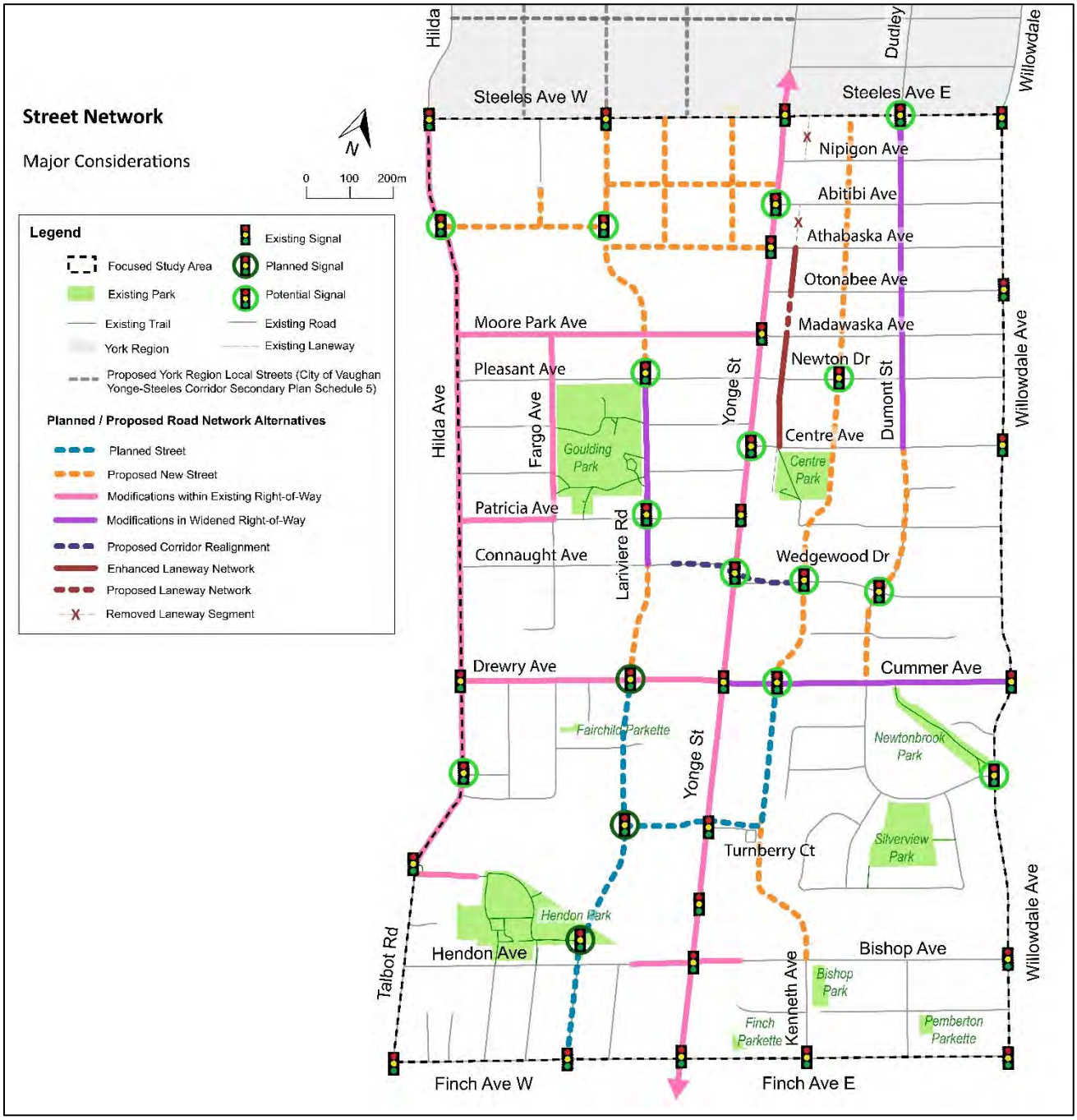
5.4.3 Major Considerations

The Major Street Network includes alternatives oriented towards improving multi-modal circulation and vehicle capacity in the north-south and east-west directions. The following alternatives, in addition to the Moderate/Minor Considerations, were considered:

- Connaught Avenue-Wedgewood Avenue Realignment; a proposed realignment of the existing offset intersection in this location to create a continuous east-west connection across Yonge Street and improve safety for all modes
- Proposed New Street Connecting Dumont Street to Cummer Avenue; which consists of a proposed extension of the street network east of Yonge street to connect Dumont Street and Tobruk Crescent to create a consistent road connection between Steeles Avenue and Cummer Avenue
- Proposed New Street Connecting the Planned Olympic Garden Drive to Kenneth/Doris Avenue; new street will create a consistent ring road connection to the planned Beecroft and Olympic Garden Drive and improve north-south connectivity between the study area and North York Centre to the south.

The Major Street Network alternative is shown in **Figure 5-6**.

Figure 5-6: Major Street Network



Overall, the Major Street Network considers significant extensions to the YSNTMP street network, prioritizing a significant increase in multi-modal capacity and connectivity while also providing significant changes at the neighbourhood level. A summary of the Major Considerations evaluation is shown in **Table 5-4**.

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Scale: 1 2 3 4 5

Table 5-4: Summary of Major Street Network Evaluation Results

Principle	Question	Key Takeaways	Rank
Guiding Principle #1: People			
Choice	Will it increase travel options and improve network connectivity?	• Opportunities for new sidewalks and cycling facilities • Develops continuous 'ring road system' and new vehicle travel options around subway stations • Improves connectivity and scores higher on the Street Connectivity Index	**4**
Experience	Will it make travel more safe, comfortable, and convenient?	• Supports improvement to pedestrian environment • Supports increase to vehicle capacity and travel times (incl. for surface transit) via new routes • New signals and crossing opportunities	**4**
Social Equity	Will it improve access to work, school, and services, for all?	• Upgrades to sidewalk infrastructure; meets AODA • Incorporates Complete Streets considerations • Improves multi-modal access in neighbourhoods	**4**
Guiding Principle #2: Places			
Healthy Neighbourhoods	Will neighbourhoods be enhanced and support active travel?	• Some increased access to amenities such as parks • Extensive traffic calming proposed for local streets • Extensive expansion of concrete and infrastructure into existing, stable neighbourhoods • Support for new development blocks	**3**
Shaping the City	Will the transportation network encourage sustainable development?	• Moderately complies with planning, policy vision • Supports planned new development; impacts existing stable neighbourhoods • Develops system of local roads and enhances multi-modal connectivity near subway stations	**3**
Public Health & Environment	Will the natural environment be protected and enhanced?	• Minimal environmental disruption; significant increases to traffic noise anticipated	**3**
Guiding Principle #3: Prosperity			
Affordability	Will costs of improvements be reasonable given their benefit?	• Significant new construction/maintenance costs • Significant property requirements/costs required	**1**
Supporting Growth	Will economic development be supported? Will goods be able to get to market efficiently?	• Supports additional road connections to North York Centre and York Region • Supports new development through new blocks • Provides alternative north-south, east-west routes	**4**

Main Strengths of Major Street Network: Provides alternate continuous north-south routes east and west of Yonge Street, supports new development in key locations, supports connectivity improvements around subway stations, the realignment of Connaught/Wedgewood intersection provides alternate east-west route.

Main Limitations of Major Street Network: Requires significant disruption to existing neighbourhood structure and traffic levels, potential for traffic infiltration into existing neighbourhoods from outside the Study Area, significant construction costs and property impacts.

5.5 EVALUATION OF ALTERNATIVE SOLUTIONS – PEDESTRIANS

5.5.1 Minor Considerations

The Minor Pedestrian Network aims to address gaps identified in the existing sidewalk network. This includes priority sidewalk improvements, such as widening to meet AODA standards, as well as twinning along sections of streets where there is a sidewalk on only one side under existing conditions. Sidewalk twinning under the Minor Pedestrian Network include the following roads:

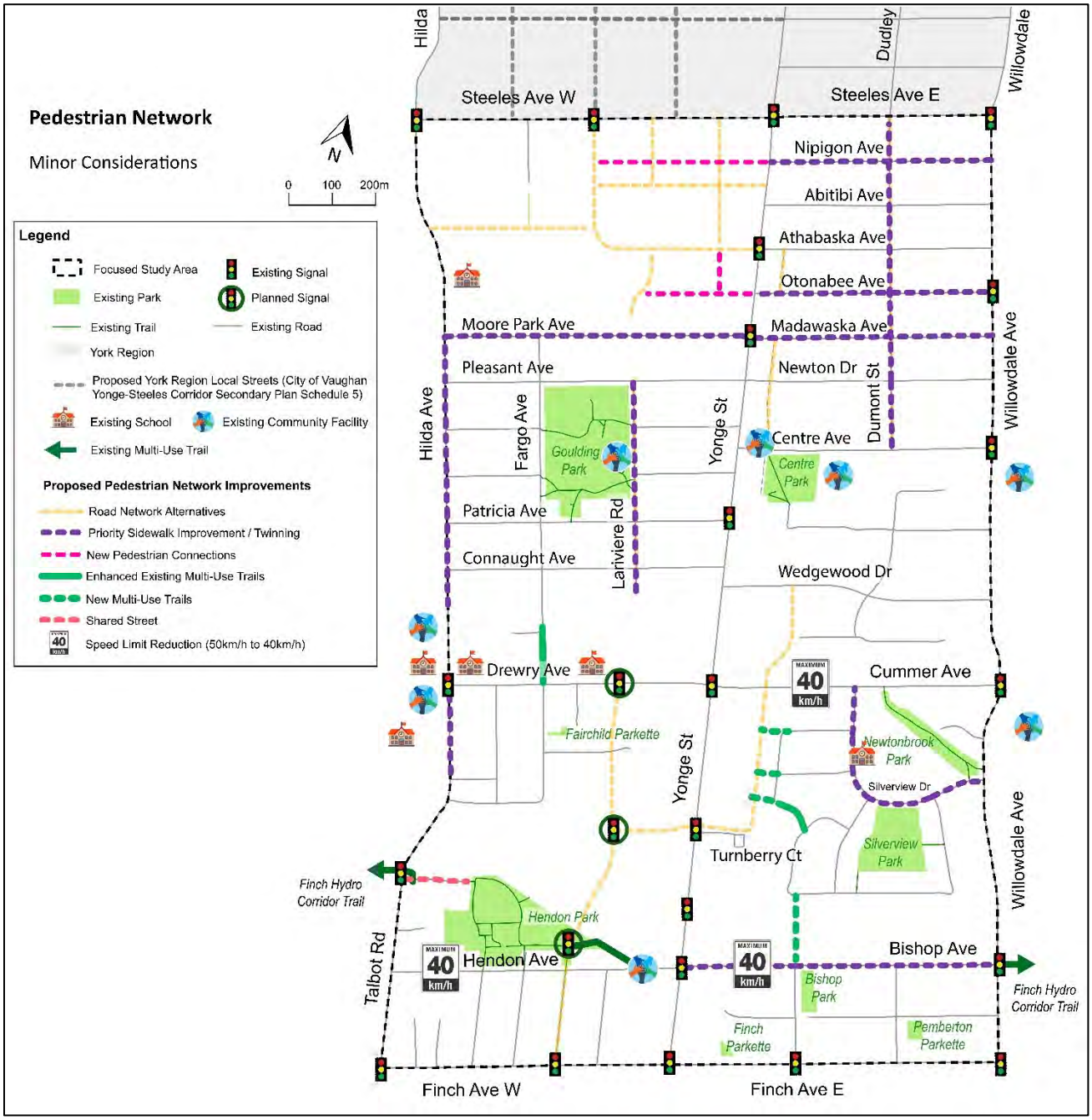
- Moore Park Avenue from Hilda Avenue to Yonge Street;
- Madawaska Avenue from Yonge Street to Willowdale Avenue;
- Otanabee Avenue from Yonge Street to Willowdale Avenue;
- Nipigon Avenue from Yonge Street to Willowdale Avenue;
- Silverview Drive from Cummer Avenue to Willowdale Avenue;
- Bishop Avenue from Yonge Street to Willowdale Avenue;
- Hilda Avenue from South of Connaught Avenue to Moore Park Avenue;
- Hilda Avenue from Drewry Avenue to Fairchild Avenue;
- Lariviere Road from south off Connaught Avenue to Pleasant Avenue

The Minor Pedestrian Network also considered new pedestrian/cycling links. New links facilitating pedestrian access were considered to address gaps in the existing network. The following areas were considered as part of the new pedestrian/cycling links:

- Fargo Avenue: a formalized multi-use trail is proposed to improve safety and provide a permanent connection in the event of future development of the existing site.
- Silverview from Averill Crescent, Mullet Road, and Deering Crescent include proposed multi-use trails to accommodate active transportation connections between the existing Silverview residential neighbourhood and the planned Olympic Garden Drive.
- Blake Avenue; a shared street is proposed for Blake Avenue to complete the existing gap with the Finch Hydro Corridor Trail without requiring new infrastructure to be implemented.
- New pedestrian links proposed for the Centrepoint Mall property to supplement the proposed public street system and improve pedestrian circulation and permeability through the site independent of the public street network.

The Minor Pedestrian Network alternative is shown in **Figure 5-7**.

Figure 5-7: Minor Pedestrian Network



Overall, the Minor Pedestrian Network aims to address gaps in sidewalk infrastructure and substandard facilities along existing streets, with new connections proposed to and from existing neighbourhoods. A summary of the Minor Considerations evaluation is shown in **Table 5-5**.

Scale: 1 2 3 4 5

Table 5-5: Summary of Minor Pedestrian Network Evaluation Results

Principle	Question	Key Takeaways	Rank
Guiding Principle #1: People			
Choice	Will it increase travel options and improve network connectivity?	• New sidewalks and improved pedestrian connectivity, incl. to shared mobility services • Limited new pedestrian crossing opportunities	**3**
Experience	Will it make travel more safe, comfortable, and convenient?	• Improved pedestrian levels of service • Minimal new signals and crossing opportunities; limited improvements to existing block sizes	**2**
Social Equity	Will it improve access to work, school, and services, for all?	• Upgrades to sidewalk infrastructure; meet AODA standards • Discontinuous sidewalk network • Some improvement to access to transit	**3**
Guiding Principle #2: Places			
Healthy Neighbourhoods	Will neighbourhoods be enhanced and support active travel?	• Some additional sidewalk infrastructure within neighbourhoods • Opportunities for street tree preservation and/or plantings	**3**
Shaping the City	Will the transportation network encourage sustainable development?	• Minimal compliance with Official Plan, Secondary Plans, and policy vision • Additional sidewalk connections to arterial roads near proposed subway stations	**2**
Public Health & Environment	Will the natural environment be protected and enhanced?	• Minimal environmental disruption • Increased traffic noise not anticipated	**3**
Guiding Principle #3: Prosperity			
Affordability	Will costs of improvements be reasonable given their benefit?	• Some new construction/maintenance costs • Minor property impacts	**3**
Supporting Growth	Will economic development be supported? Will goods be able to get to market efficiently?	• Pedestrian linkages provided at Centrepoint Mall site (new mixed-use centre, York Region)	**3**

Main Strengths of Minor Pedestrian Network: Limited disruption within existing neighbourhoods and improvements to pedestrian environment are achieved without significant new road infrastructure.

Main Limitations of Minor Pedestrian Network: Limited new route options and crossing opportunities are provided, and the distance between existing crossings is not improved.

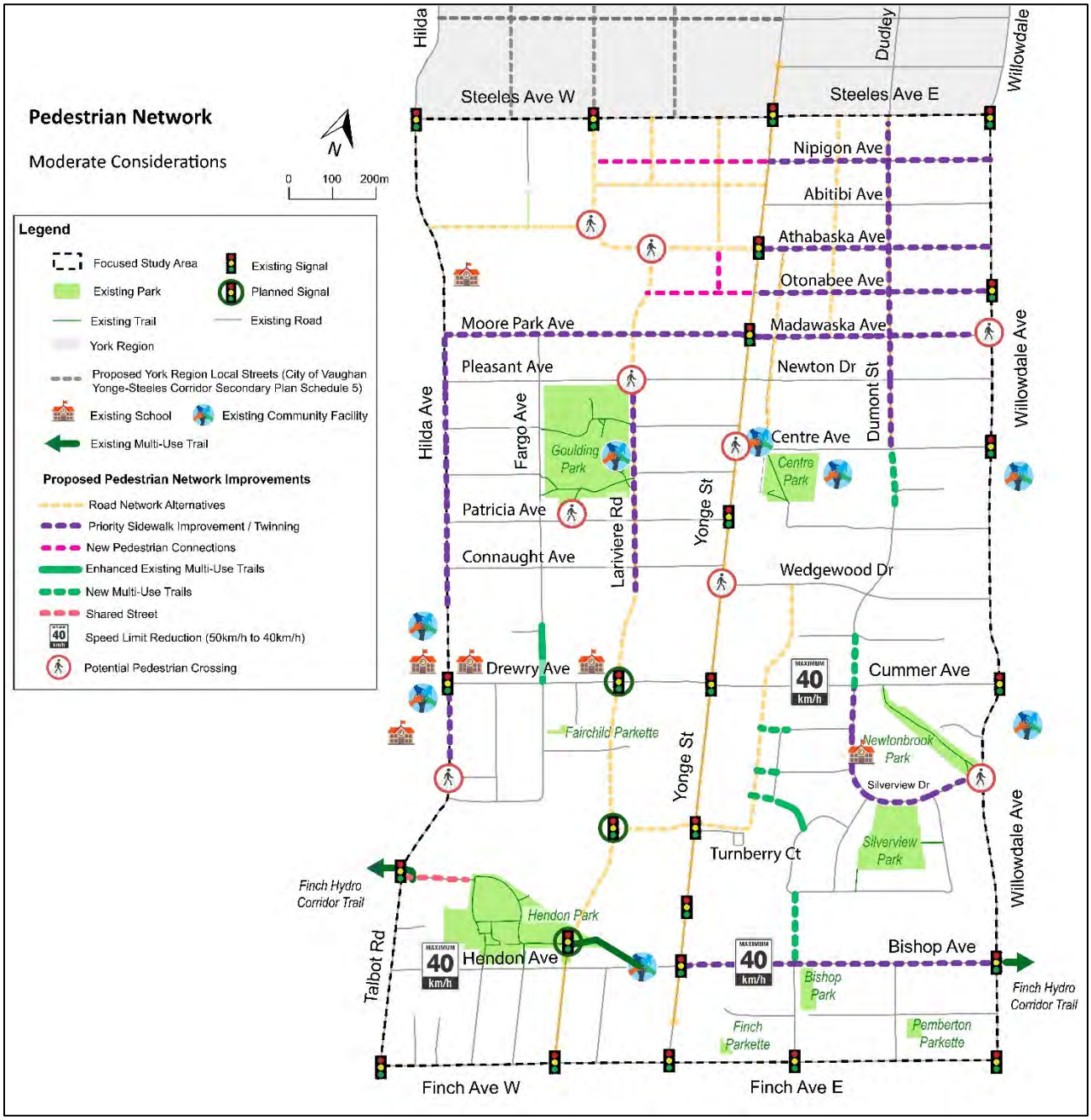
5.5.2 Moderate Considerations

The Moderate Pedestrian Network builds on the Minor Pedestrian Network considerations to include additional sidewalk priority improvements and speed limit reductions to improve safety and improve access between identified community uses. Speed limit reductions are being proposed for collector and minor arterial roads where the speed limit is currently 50 km/h. Reductions in the posted speed limit will help to improve pedestrian safety and the overall pedestrian environment along these roads. These speed limit reductions for collector roads will complement the City's current Vision Zero initiatives to reduce the posted speed limit to 30 km/h along local roads.

In addition, pedestrian crossings have been identified for intersections near community facilities and schools, at intersections with collector and arterial roadways, and along streets where sidewalk twinning and/or improvements are being recommended.

The Moderate Pedestrian Network alternative is shown in **Figure 5-8**.

Figure 5-8: Moderate Pedestrian Network



Overall, the Moderate Pedestrian Network aims to address gaps in sidewalk infrastructure and substandard facilities along existing streets, with new connections to and from existing neighbourhoods and several new pedestrian crossing locations proposed. A summary of the Moderate Considerations evaluation is shown in **Table 5-6**.

Scale: 1 2 3 4 5

Table 5-6: Summary of Moderate Pedestrian Network Evaluation Results

Principle	Question	Key Takeaways	Rank
Guiding Principle #1: People			
Choice	Will it increase travel options and improve network connectivity?	• New sidewalks and improved pedestrian connectivity, incl. to shared mobility services • New pedestrian crossing opportunities; moderate system of pedestrian links developed	**4**
Experience	Will it make travel more safe, comfortable, and convenient?	• Improved pedestrian levels of service • Improvements to existing block sizes via new signals and crossing opportunities	**3**
Social Equity	Will it improve access to work, school, and services, for all?	• Upgrades to sidewalk infrastructure; meet AODA standards • Some discontinuity to sidewalk infrastructure • Improved access to transit	**4**
Guiding Principle #2: Places			
Healthy Neighbourhoods	Will neighbourhoods be enhanced and support active travel?	• Some additional sidewalk infrastructure within neighbourhoods • Opportunities for street tree preservation and/or plantings	**3**
Shaping the City	Will the transportation network encourage sustainable development?	• Minimal compliance with Official Plan, Secondary Plans, and policy vision • Additional sidewalk connections to arterial roads near proposed subway stations	**3**
Public Health & Environment	Will the natural environment be protected and enhanced?	• Minimal environmental disruption • Increased traffic noise not anticipated • Additional pedestrian infrastructure	**4**
Guiding Principle #3: Prosperity			
Affordability	Will costs of improvements be reasonable given their benefit?	• Some new construction/maintenance costs • Minor property impacts	**2**
Supporting Growth	Will economic development be supported? Will goods be able to get to market efficiently?	• Pedestrian linkages provided at Centrepoint Mall site (new mixed-use centre, York Region)	**3**

Main Strengths of Moderate Pedestrian Network: Increased pedestrian connections and crossing opportunities that build off both the existing and Moderate Street Network being considered.

Main Limitations of Moderate Pedestrian Network: Some discontinuity to sidewalk infrastructure remains, and there are unrealized opportunities for additional crossing opportunities to address long block widths.

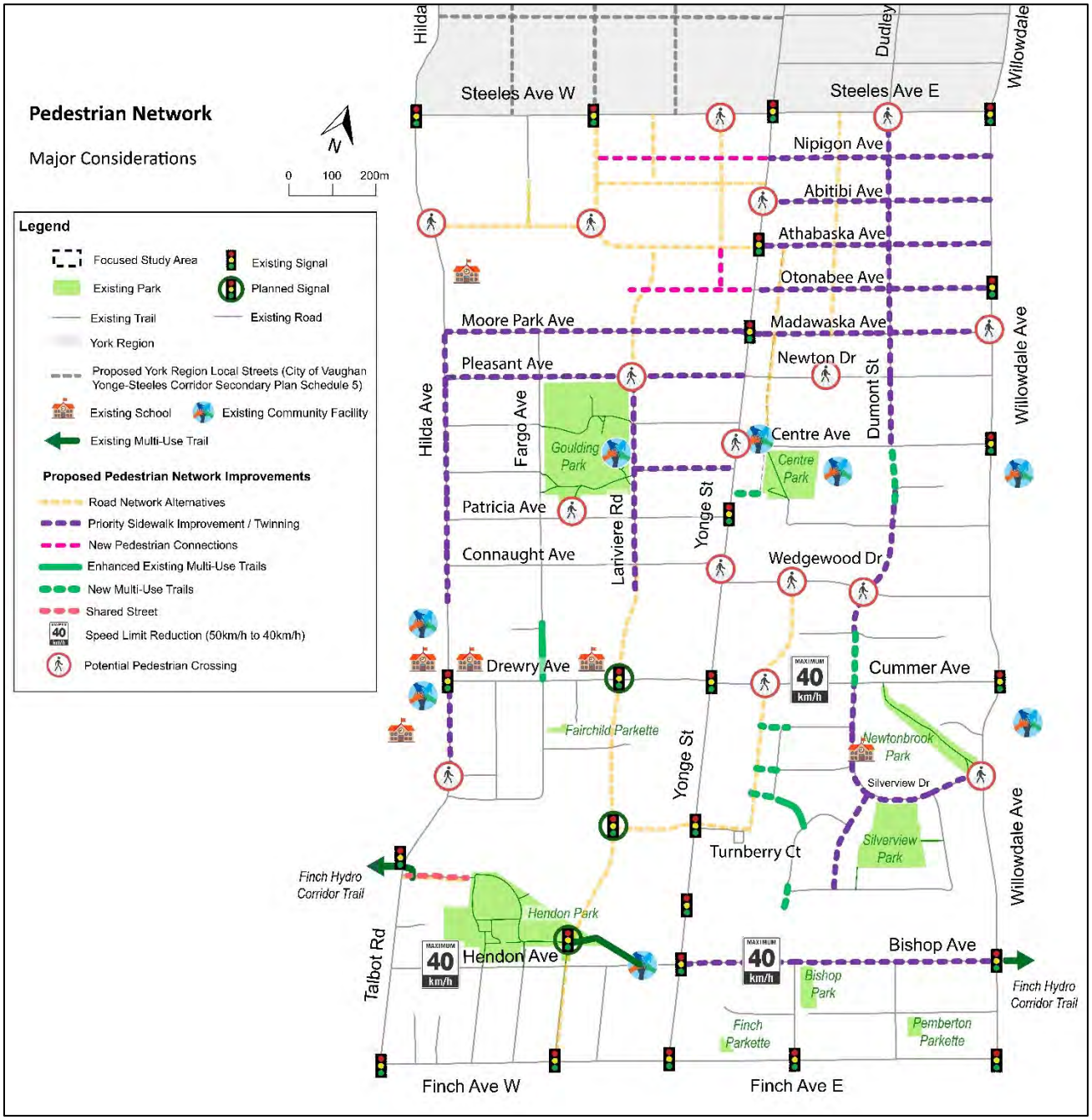
5.5.3 Major Considerations

The Major Pedestrian Network builds on the Moderate Pedestrian Network considerations to include additional sidewalk priority improvements, which include the following:

- Abitibi Avenue from Yonge Street to Willowdale Avenue;
- Dumont Extension from Centre Avenue to Tobruk Crescent;
- Cushendale Drive from Silverview Drive to Bowerbank Drive.

Additional pedestrian crossing locations are also proposed for both existing streets and new streets proposed as part of the Major Street Network. The Major Pedestrian Network alternative is shown in **Figure 5-9**.

Figure 5-9: Major Pedestrian Network



Overall, the Major Pedestrian Network aims to address gaps in sidewalk infrastructure and substandard facilities along existing streets, with new connections to and from existing neighbourhoods and several new pedestrian crossing locations proposed. A summary of the Major Considerations evaluation is shown in **Table 5-7**.

Scale: 1 2 3 4 5

Table 5-7: Summary of Major Pedestrian Network Evaluation Results

Principle	Question	Key Takeaways	Rank
Guiding Principle #1: People			
Choice	Will it increase travel options and improve network connectivity?	• New sidewalks and improved pedestrian connectivity, incl. to shared mobility services • New pedestrian crossing opportunities; moderate system of pedestrian links developed	**4**
Experience	Will it make travel more safe, comfortable, and convenient?	• Improved pedestrian levels of service • Improvements to existing block sizes via new signals and crossing opportunities	**4**
Social Equity	Will it improve access to work, school, and services, for all?	• Upgrades to sidewalk infrastructure; meet AODA standards • Continuous sidewalk infrastructure • Improved access to transit	**5**
Guiding Principle #2: Places			
Healthy Neighbourhoods	Will neighbourhoods be enhanced and support active travel?	• Additional sidewalk infrastructure within neighbourhoods • Opportunities for street tree preservation and/or plantings	**4**
Shaping the City	Will the transportation network encourage sustainable development?	• Complies with Official Plan, Secondary Plans, and policy vision • Additional sidewalk connections to arterial roads near proposed subway stations	**5**
Public Health & Environment	Will the natural environment be protected and enhanced?	• Minimal environmental disruption • Increased traffic noise not anticipated • Additional pedestrian infrastructure	**4**
Guiding Principle #3: Prosperity			
Affordability	Will costs of improvements be reasonable given their benefit?	• Greatest new construction/maintenance costs • Minor property impacts	**2**
Supporting Growth	Will economic development be supported? Will goods be able to get to market efficiently?	• Pedestrian linkages provided at Centrepoint Mall site (new mixed-use centre, York Region) and key intersections throughout study area	**5**

Main Strengths of Major Pedestrian Network: Increased pedestrian connections and crossing opportunities that improve connections within both the existing and proposed street networks.

Main Limitations of Major Pedestrian Network: Greatest cost associated with the Major Pedestrian Network considerations. Some pedestrian locations will require further review to confirm their functionality and viability.

5.6 EVALUATION OF ALTERNATIVE SOLUTIONS – CYCLING

5.6.1 Minor Considerations

The Minor Cycling Network includes planned cycling infrastructure improvements as well as improvements to the cycling environment along local streets to address gaps in cycling infrastructure and provide local connections to and from planned facilities. The Minor Cycling Network considers two recommended/planned cycle track projects, including the following:

- Cycle tracks currently recommended along Yonge street from Hendon/Bishop Avenue to south of Sheppard Avenue as part of the ReImagining Yonge Study; and,
- Cycle tracks currently planned by the City for Willowdale Avenue.

In addition to cycle tracks, buffered bike lanes are also proposed as part of the Minor Cycling Network. The Minor Cycling Network considers buffered bike lanes in the following locations:

- Along the planned Olympic Garden Drive;
- Across Yonge Street between the existing TTC Commuter Parking Lots to connect to the Finch Hydro Corridor Trail where there is currently a gap; and,
- Along the Beecroft Extension between Hendon Avenue and Drewry Avenue.

Neighbourhood Greenways are also considered along the following roads to improve the cyclist environment by implementing traffic calming measures. The Minor Cycling Network considers neighbourhood greenways along the following streets:

- Moore Park/Madawaska Avenue;
- Patricia Avenue;
- Dumont Street;
- Lariviere Road; and,
- Fargo Avenue.

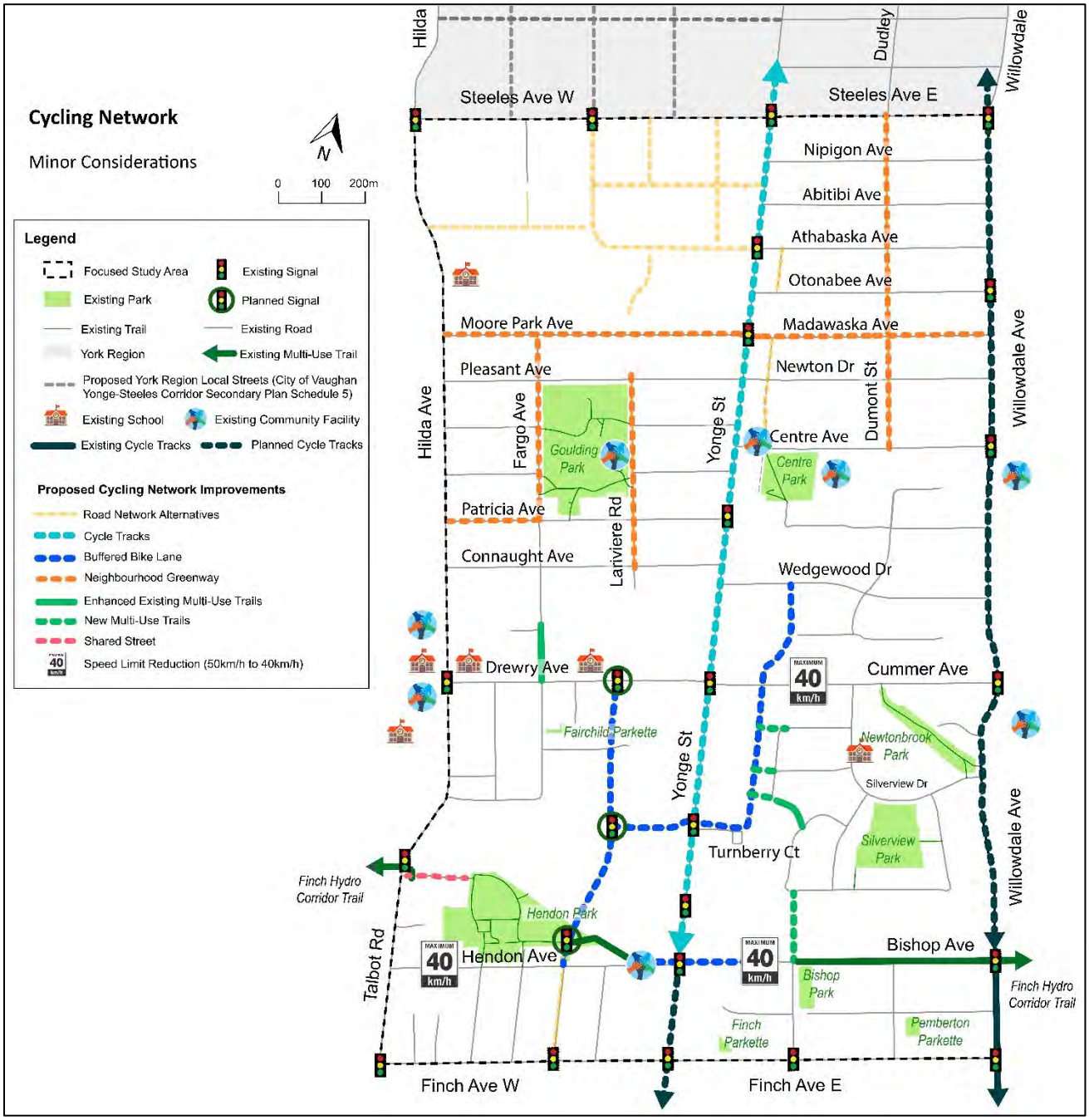
In addition, proposed multi-use trails are considered as part of the Minor Cycling Network. The following multi-use trail connections are considered to improve connectivity for cyclists via off-street connections:

- A multi-use trail connecting Fargo Avenue to Drewry Avenue;
- A multi-use trail connecting the planned Olympic Garden Drive to the Silverview neighbourhood; and,
- A multi-use trail connecting the Silverview neighbourhood to Kenneth Avenue at the existing multi-use trail along Bishop Avenue.

A shared street is also proposed for Blake Avenue to complete the existing gap with the Finch Hydro Corridor Trail without requiring new infrastructure to be implemented.

The Minor Cyclist Network alternative is shown in **Figure 5-10**.

Figure 5-10: Minor Cycling Network



Overall, the Minor Cyclist Network aims to enhance and extend the cycling network with a mixture of shared and dedicated facilities. A summary of the Minor Considerations evaluation is shown in **Table 5-8**.

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Table 5-8: Summary of Minor Cycling Network Evaluation Results

Scale: 1 2 3 4 5

Principle	Question	Key Takeaways	Rank
Guiding Principle #1: People			
Choice	Will it increase travel options and improve network connectivity?	• Some new dedicated cycling infrastructure • Limited crossing opportunities; some improved access to community facilities	**3**
Experience	Will it make travel more safe, comfortable, and convenient?	• Improved cycling levels of service • Minimal new signals and crossing opportunities; limited new route options for cyclists	**2**
Social Equity	Will it improve access to work, school, and services, for all?	• New Active Transportation Links will meet AODA standards • Cycling facilities are context-appropriate; limited opportunity to accommodate high volumes in future, minimally addresses future context	**4**
Guiding Principle #2: Places			
Healthy Neighbourhoods	Will neighbourhoods be enhanced and support active travel?	• Minimal additional connectivity limits opportunity to increase viability of cycling • Opportunities for street tree preservation and/or plantings	**2**
Shaping the City	Will the transportation network encourage sustainable development?	• Minimal compliance with Official Plan, Secondary Plans, and policy vision • Minimal connections to arterial roads near proposed subway stations	**3**
Public Health & Environment	Will the natural environment be protected and enhanced?	• Minimal environmental disruption • Increased traffic noise not anticipated	**4**
Guiding Principle #3: Prosperity			
Affordability	Will costs of improvements be reasonable given their benefit?	• Some construction costs and additional maintenance costs • Minor property impacts anticipated	**4**
Supporting Growth	Will economic development be supported? Will goods be able to get to market efficiently?	• New connections around Yonge/Bishop/Hendon and Yonge/Drewry/Cummer	**3**

Main Strengths of Minor Cycling Network: Limited disruption within existing neighbourhoods, proposed neighbourhood greenway system is context-appropriate, dedicated cycling infrastructure is planned for new streets to support development, and construction costs and property impacts are the lowest.

Main Limitations of Minor Cycling Network: Cycling network is still discontinuous, with limited opportunity to accommodate future volumes of cyclists and increases in cycling demand.

5.6.2 Moderate Considerations

The Moderate Cycling Network builds on the Minor Cycling Network considerations to include an extension of facilities in the north-south and east-west directions.

A Neighbourhood Greenway System is still maintained in the north sections of the YSNTMP Study Area to facilitate more comfortable cycling connections to dedicated facilities while minimizing impacts in neighbourhoods.

Additionally, buffered bike lanes are considered along Hilda Avenue between Steeles Avenue and the Finch Hydro Corridor Trail, and along the proposed new street extending from Wedgewood Drive to Madawaska Avenue.

Additional cycle tracks are proposed along Lariviere Road and the planned Beecroft Extension. These cycle tracks will follow a similar design to the bicycle facilities currently planned for Beecroft Extension, with added vertical separation between the vehicle travel lanes and cycle tracks.

A new multi-use trail is proposed for Dumont Street from Tobruk Crescent to Dumont Street and to Cummer Avenue to improve north-south active transportation connections east of Yonge Street.

The Moderate Cycling Network alternative is shown in **Figure 5-11**.

Figure 5-11: Moderate Cycling Network

Overall, the Moderate Cycling Network aims to address gaps in cycling infrastructure and significantly extend the cycling network throughout the YSNTMP Study Area. A summary of the Moderate Considerations evaluation is shown in **Table 5-9**.

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Scale: 1 2 3 4 5

Table 5-9: Summary of Moderate Cycling Network Evaluation Results

Principle	Question	Key Takeaways	Rank
Guiding Principle #1: People			
Choice	Will it increase travel options and improve network connectivity?	• Significant new dedicated cycling infrastructure • Balances existing and future cycling demand through new connections & crossings • Improved access to community facilities • Scores higher on the Active Connectivity Index	**4**
Experience	Will it make travel more safe, comfortable, and convenient?	• Improved cycling levels of service • Some new signals and crossing opportunities; new route options in north-south direction, limited new options in east-west direction	**4**
Social Equity	Will it improve access to work, school, and services, for all?	• New Active Transportation Links will meet AODA • Cycling facilities are context-appropriate; balances dedicated and non-dedicated facilities based on neighbourhood context	**5**
Guiding Principle #2: Places			
Healthy Neighbourhoods	Will neighbourhoods be enhanced and support active travel?	• Moderate additional connectivity to increase viability of cycling • Opportunities for street tree preservation and/or plantings	**5**
Shaping the City	Will the transportation network encourage sustainable development?	• Complies with Official Plan, Secondary Plans, and policy vision • Develops a u-shaped cycling network around proposed subway stations	**4**
Public Health & Environment	Will the natural environment be protected and enhanced?	• Minimal environmental disruption • Increased traffic noise not anticipated • Moderate addition of cycling facilities with moderate extension of street network	**4**
Guiding Principle #3: Prosperity			
Affordability	Will costs of improvements be reasonable given their benefit?	• Moderate new construction/maintenance costs • Moderate property impacts anticipated	**4**
Supporting Growth	Will economic development be supported? Will goods be able to get to market efficiently?	• New connections around Yonge/Bishop/Hendon and Yonge/Drewry/Cummer • Supports connections to York Region via proposed signal and dedicated facility at Steeles/Dumont and Steeles/Lariviere Extension	**5**

Main Strengths of Moderate Cycling Network: Opportunity to accommodate both existing and future cycling volumes and demand through a mixture of dedicated facilities where growth is anticipated, and shared facilities within existing, stable neighbourhoods. Opportunities for significant improvements to connectivity without extensive expansion of street network.

Main Limitations of Moderate Cycling Network: Some gaps in the network remain, and there are additional costs and property impacts from the Minor Considerations.

5.6.3 Major Considerations

The Major Cycling Network builds on the Moderate Cycling Network considerations to include an extension of facilities throughout the study area.

The Major Cycling Network includes buffered bike lanes along the proposed new extension of Newtonbrook Street to the south to Bishop Avenue and north to Steeles Avenue. Additional buffered bike lanes are proposed along Drewry/Cummer Avenue and Moore Park/Madawaska Avenue to provide continuous east-west cycling connections across the study area.

Cycle tracks are proposed as part of an extension of the proposed cycle tracks along the planned Beecroft Road Extension to Steeles Avenue. In addition, cycle tracks are proposed along Yonge Street, as part of the continuation of the Reimagining Yonge Street project. Cycle tracks are also proposed on Dumont Street, from Centre Street to Steeles Avenue.

An enhanced multi use trail is proposed for Dumont Street along Tobruk Crescent. In addition, additional neighborhood greenways are proposed along Patricia Avenue and Fargo Avenue to connect to cycling infrastructure on Lariviere Road and Drewry Avenue. The Major Cycling Network alternative is shown in **Figure 5-12.**

Figure 5-12: Major Cycling Network

Overall, the Major Cycling Network aims to address gaps in cycling infrastructure and significantly extend the cycling network throughout the YSNTMP Study Area. A summary of the Major Considerations evaluation is shown in **Table 5-10**.

Scale: 1 2 3 4 5

Table 5-10: Summary of Major Cycling Network Evaluation Results

Principle	Question	Key Takeaways	Rank
Guiding Principle #1: People			
Choice	Will it increase travel options and improve network connectivity?	• Significant new dedicated cycling infrastructure • Accommodates existing and future cycling demand through new connections & crossings; could overestimate future demand • Improved access to community facilities • Scores higher on the Active Connectivity Index	**4**
Experience	Will it make travel more safe, comfortable, and convenient?	• Improved cycling levels of service • New signals and crossing opportunities; new route options in north-south direction	**4**
Social Equity	Will it improve access to work, school, and services, for all?	• New Active Transportation Links will meet AODA • Some balance of dedicated and non-dedicated facilities based on neighbourhood context; could over-provide in some areas	**5**
Guiding Principle #2: Places			
Healthy Neighbourhoods	Will neighbourhoods be enhanced and support active travel?	• Significant additional connectivity to increase viability of cycling; disrupts stable neighbourhoods • Some opportunities for street tree preservation and/or plantings	**4**
Shaping the City	Will the transportation network encourage sustainable development?	• Moderately complies with Official Plan, Secondary Plans, and policy vision • Develops a u-shaped cycling network around proposed subway stations	**4**
Public Health & Environment	Will the natural environment be protected and enhanced?	• Minimal environmental disruption • Increased traffic noise not anticipated • Significant addition of cycling facilities with significant extension of street network	**4**
Guiding Principle #3: Prosperity			
Affordability	Will costs of improvements be reasonable given their benefit?	• Significant new construction/maintenance costs • Significant property impacts anticipated	**1**
Supporting Growth	Will economic development be supported? Will goods be able to get to market efficiently?	• New connections around Yonge/Bishop/Hendon and Yonge/Drewry/Cummer • Supports connections to York Region via proposed signal and dedicated facility at Steeles/Dumont and Steeles/Lariviere Extension	**5**

Main Strengths of Major Cycling Network: Significantly expands cycling network through the existing and proposed street network, significant opportunity to accommodate increases to cycling volumes and demand.

Main Limitations of Major Cycling Network: While most of the network gaps have been addressed, there could be an overestimation of the level of infrastructure needed in some areas and stable neighbourhoods would be impacted. Additionally, the costs related to construction, maintenance, and property impacts are highest.

5.7 EVALUATION RESULTS – NETWORK ALTERNATIVES

The results of the evaluation for each network component are summarized in **Table 5-11**. The Moderate Street Network, Major Pedestrian Network, and Moderate Cycling Network score the highest.

Table 5-11: Summary of Evaluation Results

Principle & Question	Street Network			Pedestrian Network			Cycling Network		
	Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major
Guiding Principle #1: People									
Choice Will it increase travel options and improve network connectivity?	2	4	4	3	4	4	3	4	4
Experience Will it make travel more safe, comfortable, and convenient?	2	3	4	2	3	4	2	4	4
Social Equity Will it improve access to work, school, and services, for all?	3	4	4	3	4	5	4	5	5
Guiding Principle #2: Places									
Healthy Neighbourhoods Will neighbourhoods be enhanced and support active travel?	3	4	3	3	3	4	2	4	4
Shaping the City Will the transportation network encourage sustainable development?	2	4	3	2	3	5	3	5	4
Public Health & Environment Will the natural environment be protected and enhanced?	4	4	3	3	4	4	4	4	4
Guiding Principle #3: Prosperity									
Affordability Will costs of improvements be reasonable given their benefit?	4	3	1	3	2	2	4	3	1
Supporting Growth Will economic development be supported? Will goods be able to get to market efficiently?	2	3	4	3	3	5	3	5	5
Ranking of Alternative Network Solutions	22	29	26	22	26	33	25	34	31

5.8 EVALUATION OF ALTERNATIVE SOLUTIONS – PARKING MANAGEMENT

In addition to the alternative network considerations, alternatives were developed for Parking Management to support the overall Transportation Network in reducing automobile dependency and encouraging travel by alternative travel modes.

The existing policy structure dictating parking requirements in the YSNTMP Study Area include both the City of Toronto Zoning By-law 569-2013 Policy Area 4 designation along Yonge Street between Drewry/Cummer Avenue and Steeles Avenue, 'all other areas of the City' designation elsewhere, and the North York Centre Secondary Plan for lands around Yonge Street south of Drewry/Cummer Avenue. It is also acknowledged that the City of Toronto began a review of parking requirements for new development citywide during the development of this TMP in order to better align requirements with objectives of the City's Official Plan.

Currently, parking rate reductions are considered on a site-by-site basis. An appropriate rate is typically determined based on parking demand studies that are predicated on proxy studies that use parking supply and demand at existing sites to determine what is appropriate for the new development. This approach is problematic for two key reasons.

First, past requirements do not align with current or future demand. Basing parking requirements on past projects does not account for the progress that has been made or that has been proposed in subsequent years in terms of transit expansion (e.g. Yonge North Subway Extension), active transportation infrastructure (e.g. ReImagining Yonge Study), carshare and bikeshare[3] and current planning goals and objectives.

More crucially, research has confirmed that increasing parking supply increases the number of drivers, therefore conducting surveys of existing parking facilities to determine utilization rates is not necessarily predictive of "real" demand.[4] Instead, it is simply an indication that if you build more parking lots, more drivers will come. A January 5, 2021 report from the City of Toronto titled, Proposed Review of Parking Requirements for New Developments, indicates that this could result in a future oversupply of parking.[5]

The following Parking Management Strategy alternatives were therefore developed to assess alternative ways to manage parking in the YSNTMP Study Area that are more in line with the goals and vision of the YSNTMP.

5.8.1 Minor Considerations

The Minor Parking Management Strategy involves updating and consolidating parking requirements based on the City of Toronto's current Policy Area Strategy. The Minor Considerations would involve updating parking policy to fall within By-law 569-2013 Policy Area 3 designation to align with the parking rate requirements currently applied to comparable areas of the City that have transit access but are outside of the downtown core. This would reduce residential parking requirements to 0.60 to 1.0 spaces per unit, plus an additional 0.10 spaces per unit for visitor parking. Commercial parking rate requirements would remain the same.

A summary of the Minor Considerations evaluation is shown in **Table 5-12**.

[3] Over 81% [326 of 398] of the mixed-use projects approved in Toronto in Q4 2019 received a planning approval with less parking than the ZBL 569-2013 minimums, indicating a rapidly changing planning context that is not well reflected by past standards/practice.
[4] https://people.ucsc.edu/~jwest1/articles/MillardBall_West_Rezaei_Desai_SFBMR_UrbanStudies.pdf
[5] https://www.toronto.ca/legdocs/mmis/2021/ph/bgrd/backgroundfile-159784.pdf

Scale: 1 2 3 4 5

Table 5-12: Summary of Minor Parking Management Strategy Evaluation Results

Principle	Question	Key Takeaways	Rank
Guiding Principle #1: People			
Choice	Will it increase travel options and improve network connectivity?	• Moderately supports access to Shared Mobility	**2**
Experience	Will it make travel more safe, comfortable, and convenient?	• Does not target traffic congestion specifically • Would reduce parking requirements that could indirectly improve traffic congestion	**2**
Social Equity	Will it improve access to work, school, and services, for all?	• Minimal improvement to multi-modal experience and reduction in need for personal car ownership	**2**
Guiding Principle #2: Places			
Healthy Neighbourhoods	Will neighbourhoods be enhanced and support active travel?	• TDM is responsibility of land owners/developers • Current policy is not prohibitive to development	**3**
Shaping the City	Will the transportation network encourage sustainable development?	• Moderately complies with Official Plan, Secondary Plans, and policy vision • Maintains 'status quo' for areas with higher-order transit access, but outside of the downtown core	**3**
Public Health & Environment	Will the natural environment be protected and enhanced?	• Minimally supports efforts to reduce greenhouse gas emissions (GHG) in Toronto through parking policy	**3**
Guiding Principle #3: Prosperity			
Affordability	Will costs of improvements be reasonable given their benefit?	• Minimal change from current costs of constructing parking due to reduced minimum requirements • Minimal potential for change to costs arising from parking construction passed on to tenants	**2**
Supporting Growth	Will economic development be supported? Will goods be able to get to market efficiently?	• Moderately reduces parking-related restrictions for new development along Yonge by reducing parking requirements that could be cost prohibitive	**3**

5.8.2 Moderate Considerations

The Moderate Parking Management Strategy involves reducing parking rate requirements based on a site's proximity to transit. Parking policy would be updated to reduce the minimum and maximum parking rate requirements that would apply to lands within 400 metres of an existing or planned frequent transit stop or station. The Moderate Parking Management Strategy would reflect the emerging transportation and land use context of the YSNTMP Study Area and would support transit-oriented developments by reducing auto dependence and vehicle travel demand in mixed-use centres and corridors where frequent transit operates.

It is recommended that rates as low as zero spaces per unit be considered under this strategy for site's within 400 metres of a frequent transit station or stop, with maximum parking requirements in line with the minimum parking rate requirements required in the City's Policy Areas 1 or 2 to avoid an oversupply of parking compared to more central and transit-accessible areas of the City. A summary of the Moderate Considerations evaluation is shown in **Table 5-13**.

Scale: 1 2 3 4 5

Table 5-13: Summary of Moderate Parking Management Strategy Evaluation Results

Principle	Question	Key Takeaways	Rank
Guiding Principle #1: People			
Choice	Will it increase travel options and improve network connectivity?	• Moderately supports access to Shared Mobility	**2**
Experience	Will it make travel more safe, comfortable, and convenient?	• Potential improvements to congestion by avoiding an oversupply of parking within typical 5-minute walking distance of frequent transit service	**4**
Social Equity	Will it improve access to work, school, and services, for all?	• Supports reduction in car ownership along transit-accessible corridors and within 5-minute walking distance of frequent transit stations and stops	**4**
Guiding Principle #2: Places			
Healthy Neighbourhoods	Will neighbourhoods be enhanced and support active travel?	• TDM is responsibility of land owners/developers • Can better support development by reducing costs of constructing parking, including along corridors where development is less prevalent today	**4**
Shaping the City	Will the transportation network encourage sustainable development?	• Complies with Official Plan, Secondary Plans, and policy vision • Progressive strategy to minimize parking requirements; supports 0 spaces per unit	**4**
Public Health & Environment	Will the natural environment be protected and enhanced?	• Supports efforts to reduce greenhouse gas emissions (GHG) in Toronto through parking policy	**4**
Guiding Principle #3: Prosperity			
Affordability	Will costs of improvements be reasonable given their benefit?	• Significant change from current costs of constructing parking closest to transit • Significant potential for change to costs arising from parking construction passed on to tenants	**4**
Supporting Growth	Will economic development be supported? Will goods be able to get to market efficiently?	• Significantly reduces parking-related restrictions for new development within 400m of existing/planned frequent transit stops/stations	**4**

5.8.3 Major Considerations

The Major Parking Management Strategy involves eliminating minimum parking requirements while maintaining maximum parking requirements that are based on policy objectives. Specifically, the desired mode share targets would be used to determine the maximum parking supply that can be provided in the YSNTMP Study Area. As will be discussed further in **Section 5.11.7.1**, modelling work undertaken for this TMP identified an assumed auto mode split based on consideration of the preferred network improvements and Transportation Tomorrow Survey (TTS) database for comparable areas in the City. The expected auto mode split adopted by the model was approximately 28% (18% auto driver and 10% auto passenger).

The Major Parking Management Strategy therefore recommends that minimum parking requirements be eliminated and a formula multiplying the proposed density (number of units or employees per 100m^2 GFA) by the desired auto driver mode split (%), divided by the average number of occupants per vehicle, be used to determine the maximum parking supply (spaces/unit or 100m^2 GFA) that can be permitted in the zoning by-law. It is recommended that the formula be used to inform the determination of maximum parking requirements, but not be integrated into the zoning by-law itself to avoid complexity and maintain flexibility for City Staff to adjust the determination of parking requirements. This formula would also be intended for residential apartment buildings and mixed-use buildings only.

This will allow new development in the area to provide parking up to a limit that is informed by transportation planning policy and desired mode split targets, and will enable the overall study area parking supply to balance existing, high parking supplies against new, reduced parking supplies for developments throughout the area.

A summary of the Major Considerations evaluation is shown in **Table 5-14**.

Scale: 1 2 3 4 5

Table 5-14: Summary of Major Parking Management Strategy Evaluation Results

Principle	Question	Key Takeaways	Rank
Guiding Principle #1: People			
Choice	Will it increase travel options and improve network connectivity?	• Moderately supports access to Shared Mobility	**2**
Experience	Will it make travel more safe, comfortable, and convenient?	• Potential improvements to congestion by avoiding an oversupply of parking based on target auto mode share along major corridors; directly tied to desired auto mode share	**5**
Social Equity	Will it improve access to work, school, and services, for all?	• Eliminates parking requirements and supports reduction in car ownership; City maintains control over target mode share and desired formula	**5**
Guiding Principle #2: Places			
Healthy Neighbourhoods	Will neighbourhoods be enhanced and support active travel?	• TDM is responsibility of land owners/developers • Formula for parking provides clarity to developers • No parking required significantly lowers costs of development	**5**
Shaping the City	Will the transportation network encourage sustainable development?	• Complies with Official Plan, Secondary Plans, and policy vision • Progressive strategy to minimize parking requirements; does not require any parking where desired	**4**
Public Health & Environment	Will the natural environment be protected and enhanced?	• Directly supports efforts to reduce greenhouse gas emissions (GHG) in Toronto through elimination of requirements and limiting max. supply based on desired auto mode share	**5**
Guiding Principle #3: Prosperity			
Affordability	Will costs of improvements be reasonable given their benefit?	• Significant change from current costs of constructing parking closest to transit • Significant potential for change to costs arising from parking construction passed on to tenants	**5**
Supporting Growth	Will economic development be supported? Will goods be able to get to market efficiently?	• Significantly reduces parking-related restrictions for new development which could unlock more land for development along major corridors and/or within policy areas where the City has a desired mode split	**5**

5.9 EVALUATION RESULTS – PARKING MANAGEMENT STRATEGY ALTERNATIVES

The results of the evaluation are summarized in **Table 5-15**. Based on the evaluation, the Major Parking Management Strategy alternative best meets the objectives and Guiding Principles of the YSNTMP.

Scale: 1 2 3 4 5

Table 5-15: Summary of Evaluation Results

Principle & Question	Parking Management Strategy		
	Minor	Moderate	Major
Choice Will it increase travel options and improve network connectivity?	2	2	2
Experience Will it make travel more safe, comfortable, and convenient?	2	4	5
Social Equity Will it improve access to work, school, and services, for all?	2	4	5
Healthy Neighbourhoods Will neighbourhoods be enhanced and support active travel?	3	4	5
Shaping the City Will the transportation network encourage sustainable development?	3	4	4
Public Health & Environment Will the natural environment be protected and enhanced?	3	4	5
Affordability Will costs of improvements be reasonable given their benefit?	2	4	5
Supporting Growth Will economic development be supported? Will goods be able to get to market efficiently?	3	4	5
Overall Ranking of Alternative Network Solutions	20	30	36

5.10 EVALUATION OF SAFETY

Following the evaluation of each alternative component considered, a safety review was conducted for the emerging preferred set of alternative solutions to support the development of the overall Preliminary Preferred Alternative Network for the YSNTMP Study Area. The safety review identified a number of measures to be considered based on key safety initiatives undertaken in the City of Toronto, including recommendations based on Vision Zero best practices, a review of existing collision data and general safety concerns in the Study Area, and a set of general safety design principles.

A set of detailed safety recommendations were identified for the YSNTMP Study Area through this review. For each recommendation, a high-level estimate of the implementation period is indicated as 0-5 years (short-term), 5-10 years (medium-term), and 10+ years (long-term).

While a 10% Functional Road Network design has been developed for the Preferred Transportation Network identified for the YSNTMP, there are a number of additional design elements that have been identified by the safety review and which will need to be considered. The following elements have been identified for further consideration as the design develops towards the implementation stage. It is recommended that these elements be considered at the 30% design level.

Intersection Traffic Calming Measures: Opportunities to improve safety for pedestrians and cyclists and help to slow down drivers and reduce traffic infiltration. Some examples of traffic calming measures are shown in **Figure 5-13** and **Figure 5-14**. This could include:

- Lowering posted speed limits to 30 km/h to reduce the risk and severity of collisions.
- Using speed bumps, chicanes, traffic islands to reduce vehicle speed. Chicanes and traffic islands are curb extensions on alternating or one side of streets, respectively, to narrow the street and force drivers to slow down. Speed humps similarly reduce drivers' speeds by raising a section of the street.
- Reducing curb radii at intersections, which helps slow down right-turning vehicles, improve intersection visibility for drives and reduce crossing distances for pedestrians.
- Providing directional closures to physically restrict one direction of traffic or diverters to force vehicles to turn instead of continuing straight through.
- Implementing turn-prohibitions and through-restrictions for certain peak hours.

Figure 5-13: Chicane at Yarmouth Rd., Toronto

Source: Google Maps

Figure 5-14: Traffic Circle at Humbercrest Blvd. and Baby Point Rd., Toronto

Source: Google Maps

Protected Intersections: Protected intersections prioritize the safety of pedestrians and cyclists by allowing them to cross further into the intersection to increase visibility and to slow down turning vehicles. An example of a protected intersection is shown in **Figure 5-15**. Some elements include:

- Corner refuge islands
- Setback crossings
- Forward stop bar for cyclists
- Pedestrian platforms
- Bicycle priority signal

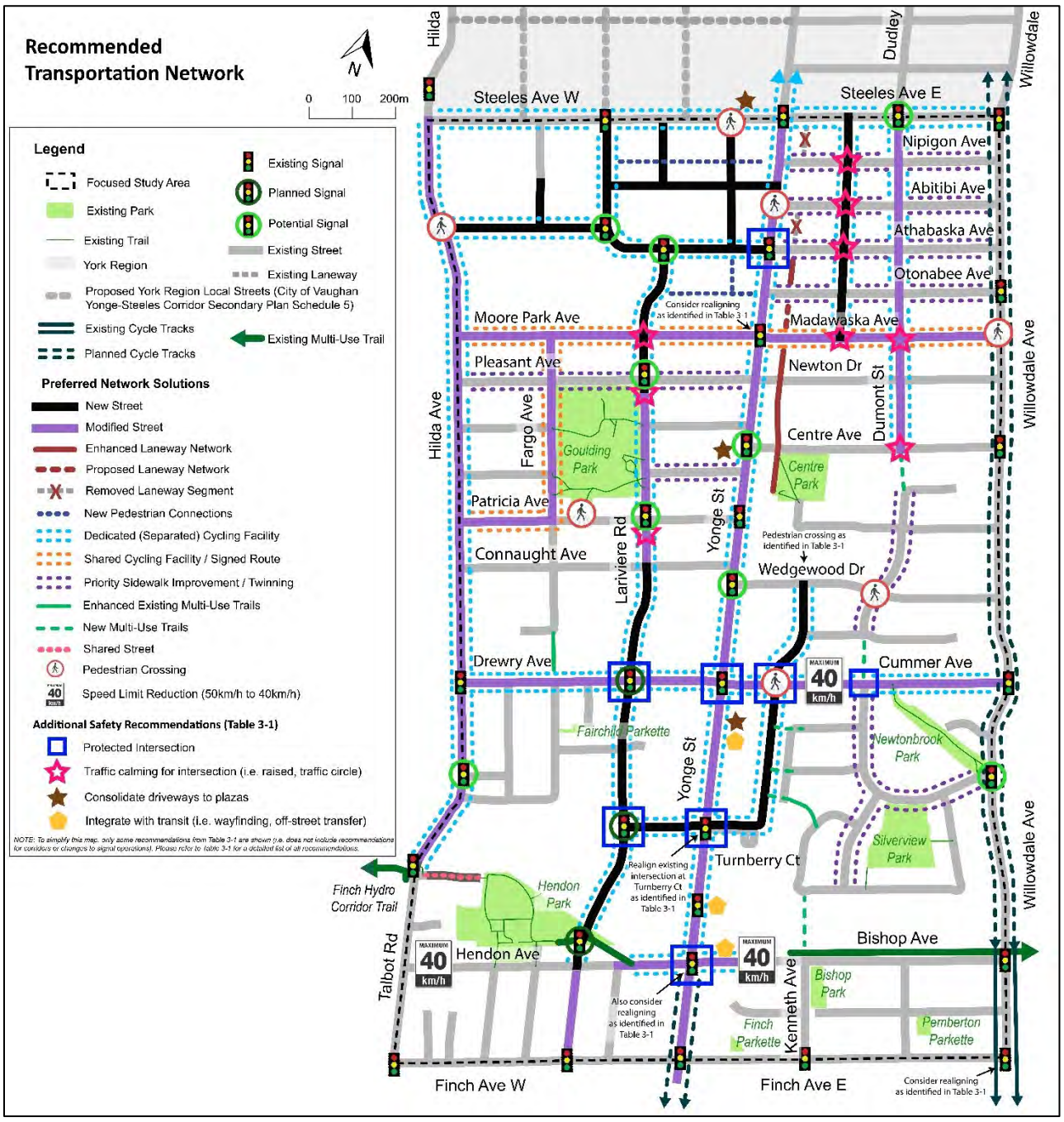
Figure 5-15: Protected Intersection at Quebec St. and East 1st Ave., Vancouver)

Source: Google Maps

Consolidated Plaza Driveways: Where multiple driveway openings and accesses to a plaza are provided via the same street, such as along Steeles Avenue West and Yonge Street, the number of driveway openings should be consolidated into one. This improves safety for pedestrians and cyclists by reducing the number of conflict points and interruptions to the sidewalk and adjacent cycling facility where applicable.

The main safety recommendations are shown overlayed on the Emerging Preferred Solution for the YSNTMP Transportation Network in **Figure 5-16**. A detailed memo of the safety review, including a description of each recommendation, is provided in **Appendix H.**

Figure 5-16: Main Recommendations to Mitigate Potential Safety Issues in the YSNTMP Study Area



5.11 PRELIMINARY PREFERRED ALTERNATIVE

The Preliminary Preferred Alternative includes the overall preferred solution for each component. These include changes to the cross section of several streets to accommodate the Preliminary Preferred Alternative. Based on the results of the evaluation, the following three alternative network solutions and associated cross-section modifications comprise the preliminary preferred alternative solution.

5.11.1 Moderate Street Network

Balances New Routes Against Impacts to Neighbourhoods: The Moderate Street Network was selected as it balances the creation of new routes for all modes with the goal of minimizing impacts to existing, stable neighbourhoods. This will create more crossing opportunities for all modes, reduce the strain on the existing collector and arterial roads, such as Yonge Street, while maintaining the existing neighbourhood character in areas of the YSNTMP Study Area that are not identified for growth under the Yonge Street North Planning Study. Additionally, the Moderate Street Network includes an extension of Lariviere Road to the proposed Centrepoint Mall street network instead of directly to Steeles Avenue West to discourage high levels of traffic infiltration from north of Steeles Avenue while still providing additional connectivity between the Steeles Node, development near Cummer/Drewry Avenue, and the mid-rise areas.

Fine-Grained Street Network: The Moderate Street Network provides a fine-grained network and supports the creation of transit-oriented nodes around the existing Finch Subway Station, Proposed Steeles Subway Station, and Potential Cummer Subway Station. This will support the creation of new development blocks where growth in areas identified for growth under the Yonge Street North Planning Study and will improve multi-modal connectivity throughout the YSNTMP Study Area, particularly around transit nodes.

Prioritizes Traffic Calming: The Moderate Street Network further prioritizes traffic calming in neighbourhoods to support improvements to the pedestrian and cycling environments and address safety concerns in a context-appropriate manner.

5.11.2 Major Pedestrian Network

New Traffic Signals and Pedestrian Crossings: The Major Pedestrian Network introduces several new pedestrian crossing opportunities to improve pedestrian connectivity by reducing distances between existing signals. This includes both new signalized intersections proposed as part of the Moderate Street Network as well as additional pedestrian crossings where demand is anticipated. The Major Pedestrian Network identifies the desired location for pedestrian crossings; the specific type and detailed design of each pedestrian crossing is to be determined through additional study at a later stage to identify the most suitable type of crossing based on factors such as pedestrian and vehicle traffic volumes, vehicle speeds, and lane widths.

Improves Accessibility: The Major Pedestrian Network identifies opportunities to upgrade sidewalks to current accessibility standards. Currently, many of the sidewalk facilities along local streets are less than 2.1m wide, which is the standard for accessibility in Ontario. The Major Pedestrian Network identifies areas that should be prioritized for sidewalk widening and/or twinning in the YSNTMP Study Area.

Addresses Gaps: The Major Pedestrian Network addresses gaps in the network, particularly where sidewalk infrastructure is substandard (i.e. too narrow) or non-existent (i.e. missing on one side of a street or from the street entirely). The Major Pedestrian Network provides continuous sidewalk facilities to support pedestrian movement through the YSNTMP Study Area, including in neighbourhoods.

5.11.3 Moderate Cycling Network

Extends Dedicated Network: The Moderate Cycling Network includes new dedicated, safer cycling facilities along arterial and collector roads in the YSNTMP Study Area to support and encourage cycling as a travel mode and address concerns regarding safety and discomfort.

Balance Cost and Impact Against Connectivity Improvements: The Moderate Cycling Network balances the cost of providing new facilities against increases to connectivity and capacity. The Moderate Cycling Network includes a mixture of new, dedicated facilities in the north-south and east-west directions where demand is anticipated, as well as improvements to shared facilities via traffic calming where demand is less anticipated, but connections are still desired (e.g., to facilitate travel to dedicated facilities from within a neighbourhood).

5.11.4 Major Parking Management Strategy

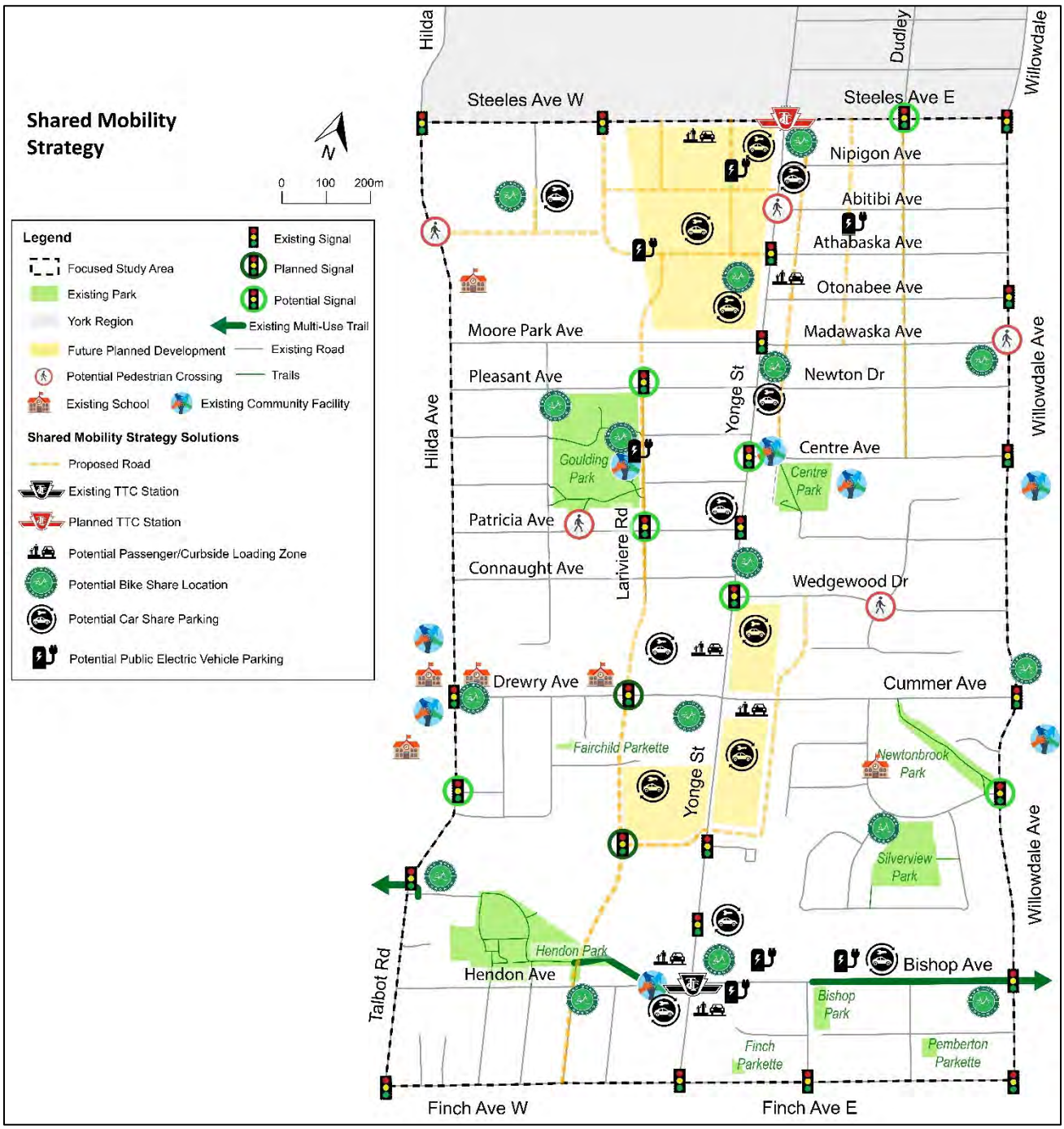
Ties Parking to Planning and Transportation Goals: The Major Parking Management Strategy is based on a desired mode-split method, which ties maximum parking requirements to future policy objectives as opposed to past practices. In addition, this approach includes eliminating minimum parking requirements, which would provide developers the flexibility to significantly reduce their parking requirements while maintaining control for City Staff to limit the amount of parking that can be provided. This approach will also enable City Staff to seek parking rates that balance overall planning goals towards promoting alternative travel methods against the current parking supply within the area, which has been dictated by zoning by-law requirements that do not reflect the future transportation goals and planned subway infrastructure for the area.

As will be discussed further in **Section 5.11.7.1**, modelling work undertaken for this TMP identified an assumed auto mode split based on consideration of the preferred network improvements and Transportation Tomorrow Survey (TTS) database for comparable areas in the City. The expected auto mode split adopted by the model was approximately 28% (18% auto driver and 10% auto passenger). The target mode share for the area should be used to guide determination of appropriate parking supplies for new developments within the YSNTMP Study Area to support the objectives of the TMP.

5.11.5 Shared Mobility Strategy

The Recommended Transportation Network will be further supported by a Shared Mobility Strategy. The Shared Mobility Strategy comprises recommended locations for Bike Share, Car Share, Pick-Up/Drop-Off (PU/DO) Management, and Curbside Management strategies and infrastructure to support movement by a shared set of facilities. The Shared Mobility Strategy also protects the opportunity to co-locate Bike Share stations at public electric vehicle charging stations to accommodate the expansion of e-bike and e-bike station coverage. The Recommended Shared Mobility Strategy is shown in **Figure 5-17**, with further details provided in a memo in **Appendix M**.

Figure 5-17: Recommended Shared Mobility Strategy



5.11.6 Future Transit Projects

While specific alternative solutions for transit service and infrastructure were not considered, the development of alternative solutions did consider planned transit infrastructure projects and changes to service within the YSNTMP Study Area. The future transit network will include the following planned infrastructure projects, as well as anticipated changes to surface transit service.

Steeles Avenue Rapid Transit: Steeles Avenue is identified as a rapid transit corridor in the Metrolinx 2041 Regional Transportation Plan and City of Toronto's Official Plan. Two scenarios for Steeles Avenue are considered: the Interim Condition and Ultimate Bus Rapid Transit (BRT) Condition. The interim condition would be realized prior to the implementation of a rapid transit system along Steeles Avenue East and West of Yonge Street and would support RapidTO operation with bus-only curbside lane to provide dedicated bus travel lanes, as described below.

The Ultimate BRT Condition on Steeles Avenue would include a BRT within a newly constructed centre median. The BRT would operate both east and west of Yonge Street, whereas the RapidTO initiative is identified for west of Yonge Street only. The ultimate condition of Steeles Avenue with a centre running BRT would require a separate Environmental Assessment involving Metrolinx, City of Toronto, City of Vaughan, City of Markham, and York Region. The design principles to be considered for the ultimate right-of-way include:

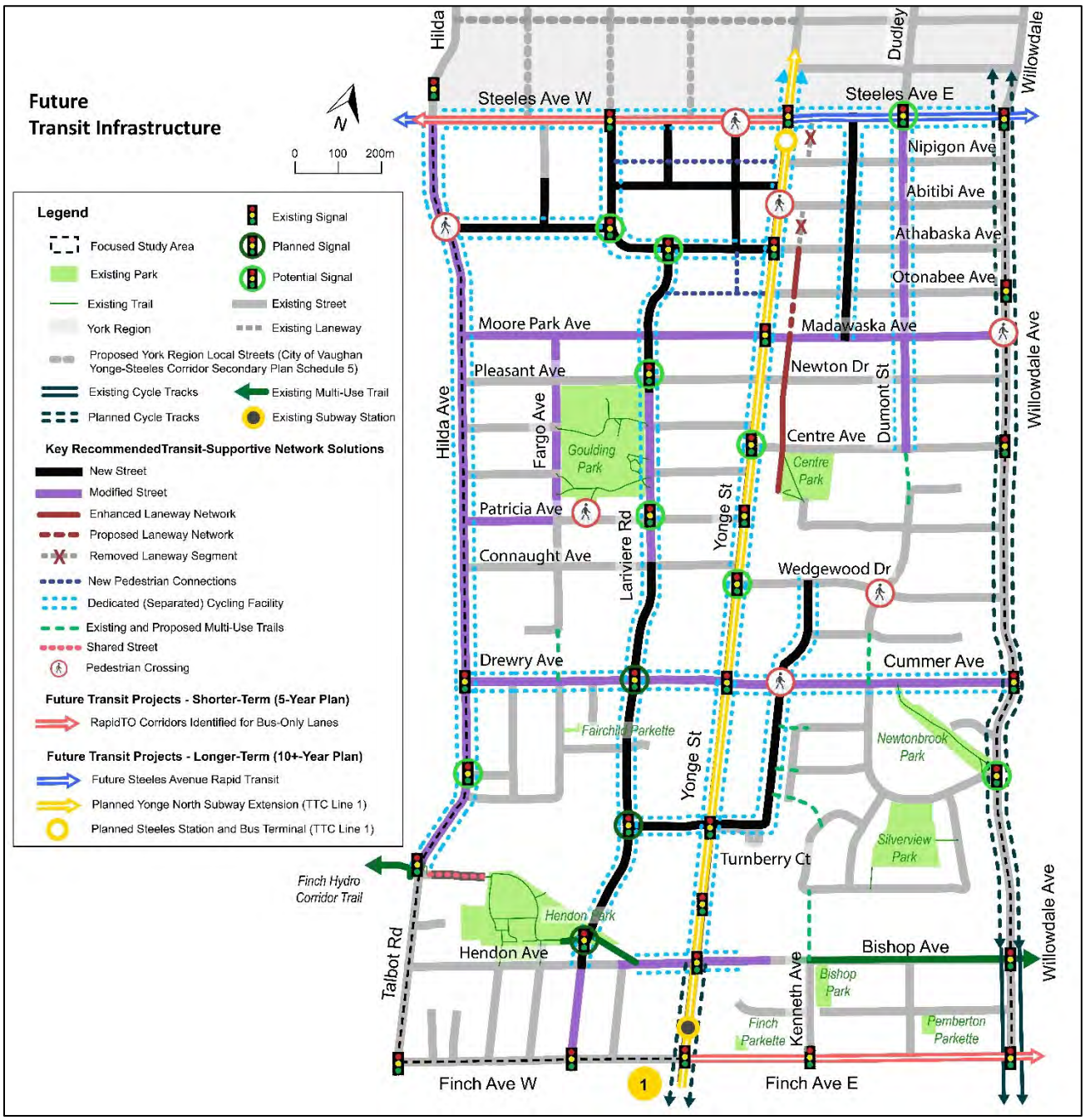
- Generous dedicated facilities for pedestrians and cyclists, with attractive landscaping and streetscaping
- Median at Yonge/Steeles to facilitate convenient and accessible transfers between on-street bus stop and Steeles subway station
- Minimize any need for roadway widening. Any required widening for transit facilities should mitigate negative safety and comfort impacts to pedestrians and cyclists, such as intersection design that minimizes crossing distances
- Minimum 10 metre boulevard width between the roadway curb to the face of buildings

RapidTO Initiative: Finch Avenue East of Yonge Street and Steeles Avenue West of Yonge Street within the YSNTMP Study Area are identified as corridors included in the RapidTO program. The RapidTO program is part of the TTC's 5-Year Service Plan and 10-Year Outlook and aims to improve reliability, speed, and capacity on busy surface transit routes by providing bus-only travel lanes. Steeles Avenue west of Yonge Street is one of the top 20 roadways identified to move forward in the next 10 years for further study, design, and implementation.

Yonge North Subway Extension: The extension of TTC Subway Line 1 into Richmond Hill will include a new station planned at Steeles Avenue. A new bus terminal is also being planned for this location.

The future transit infrastructure projects are shown in **Figure 5-18**.

Figure 5-18: Future Transit Infrastructure in the YSNTMP Study Area



5.11.7 Traffic Modelling and Results

Traffic modelling was undertaken for the YSNTMP Study Area to model future traffic conditions with the preferred Transportation Network for a horizon year of 2041. Traffic modelling was undertaken using two methods: AIMSUN software to assess travel behaviour at the mesoscopic level and Synchro software to assess signalized intersection operations.

5.11.7.1 Meso Model Transportation Analysis – Network Operations

First, AIMSUN software was used to create a mesoscopic (meso) model of future auto traffic, including transit routes, to the 2041 year. This produced anticipated travel patterns and travel times, taking into consideration the Preferred Transportation Network and planned transit improvements, namely the Yonge North Subway Extension. The model also produced anticipated link volumes which were then used to assess intersection operations using Synchro software, as summarized below.

The transportation analysis anticipates a shift away from auto driver as the primary travel mode in the YSNTMP Study Area to a focus on transit as the primary mode. A significant increase in active transportation modes is also anticipated to capitalize on short trips made within the Study Area and supported by improvements to pedestrian and cycling facilities and environments. These trends are consistent with expectations from the City's Cycling Network Plan Demand Forecasts and are consistent with mode splits observed in comparable transit-oriented areas of the City of Toronto.

The existing (2016) travel mode splits and anticipated mode shift is summarized in **Table 5-16**.

Table 5-16: Proposed Travel Mode Shift to 2041

Travel Mode	Existing (2016)	Proposed (2041)
Auto Driver	49%	18%
Transit	32%	40%
Auto Passenger	13%	10%
Walking and Cycling	6%	32%

Overall, traffic is projected to grow by about 18.6% in the AM peak hour from 2011 to 2041 volumes. In the PM peak hour, traffic is projected to grow by 24%. These projections assume the Yonge North Subway Extension (YNSE) is in place. Without the extension, it is projected that traffic would grow by 2-3% more in each peak hour. As shown in **Figure 5-19** and **Figure 5-20**, the heaviest vehicle volumes are projected to be focused on the existing and expanded collector and arterial road network under 2041 conditions, similar to the existing conditions scenario but with less pressure on Yonge Street, ensuring local roads continue to serve neighbourhoods primarily and traffic congestion is better distributed in the north-south direction.

A memo detailing the meso modelling methodology and results is provided in **Appendix I.**

Figure 5-19: 2041 Existing Network Traffic – PM

Figure 5-20: 2041 Preferred Network Traffic with YNSE – PM

5.11.7.2 Meso Model Transportation Analysis – Active Transportation Demand Analysis

Analysis was conducted considering two components: the estimation of pedestrian and cyclist travel demand under the 2041 growth scenario with the Yonge North Subway Extension (YNSE), and the estimated travel demand onto the 2041 Preferred Street Network with the Yonge North Subway Extension, as developed in the AIMSUN modelling. The pedestrian and cycling travel demand incorporated two demand profiles:

- A base travel demand representing general travel during the peak hours;
- A travel demand to and from the subway stations at Finch Avenue, and those proposed at Drewry/Cummer Avenue and Steeles Avenue.

A review of the Transportation Tomorrow Survey (TTS) 2016 for comparable areas in the City of Toronto in terms of transit access, land use, and walkability and cyclability, as well as consideration of the preferred Transportation Network and City's Cycling Network Plan Demand Forecasts, identified a target mode split for the study area for 2041 as shown in **Table 5-17**.

Table 5-17: 2041 Target Mode Split

Mode of Travel	Percentage Split
Auto Driver	18%
Auto Passenger	10%
Transit	40%
Walking	17%
Cycling	15%

The 2041 target mode split for the study area suggests that the vehicular travel modelled as part of the AIMSUN modelling accounted for a total of 28% of all travel demand in the study area. Trips made by walking as the primary mode of travel were considered to occur only traffic analysis zones (TAZ) pairs within 800 m of each other. As shown in **Figure 5-21** and **Figure 5-22**, future pedestrian traffic is depicted with the heaviest volumes shown in red, followed by orange, then green. Pedestrian traffic is heaviest in the AM period at the future subway stations, along Finch Avenue West and Yonge Street, and along the Beecroft Extension and Cummer and Drewry. Overall, the pedestrian analysis demonstrates clear hot spots around subway stations, and major intersections. Comparing pedestrian flow diagrams between the AM and PM peak hours, there are more short-distance trips during the PM peak hour, representative of the higher propensity for discretionary trips in the afternoon. While pedestrian volumes range from 150-800 on some links in the AM peak hour, they may exceed 1,000 pedestrians per hour during the PM peak hour.

Figure 5-21: 2041 Pedestrian Volumes – AM Peak Hour

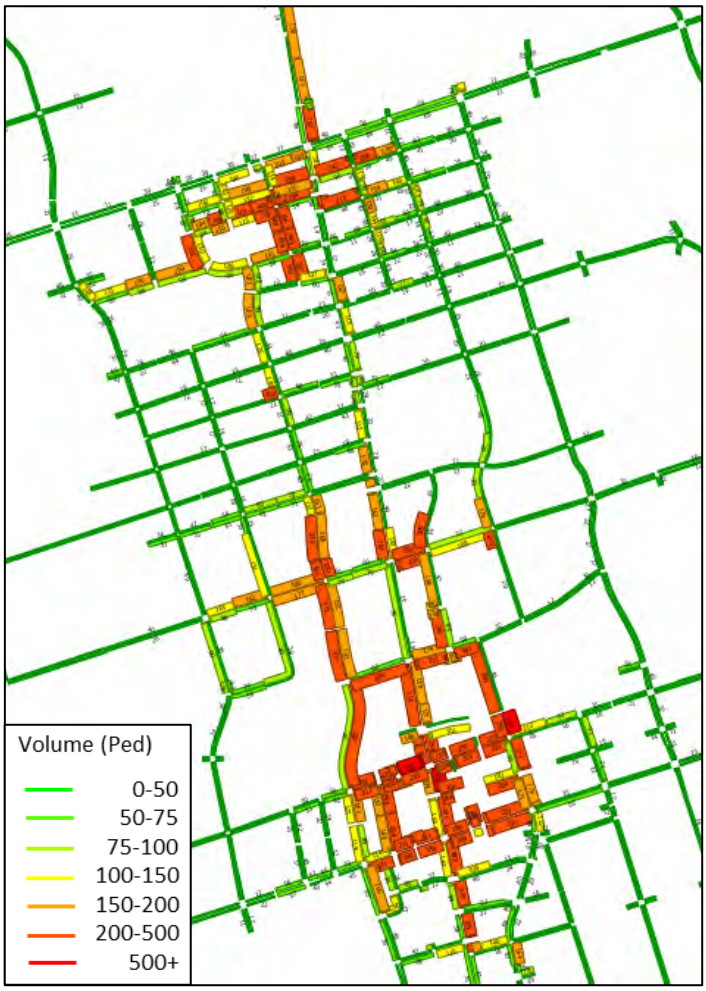
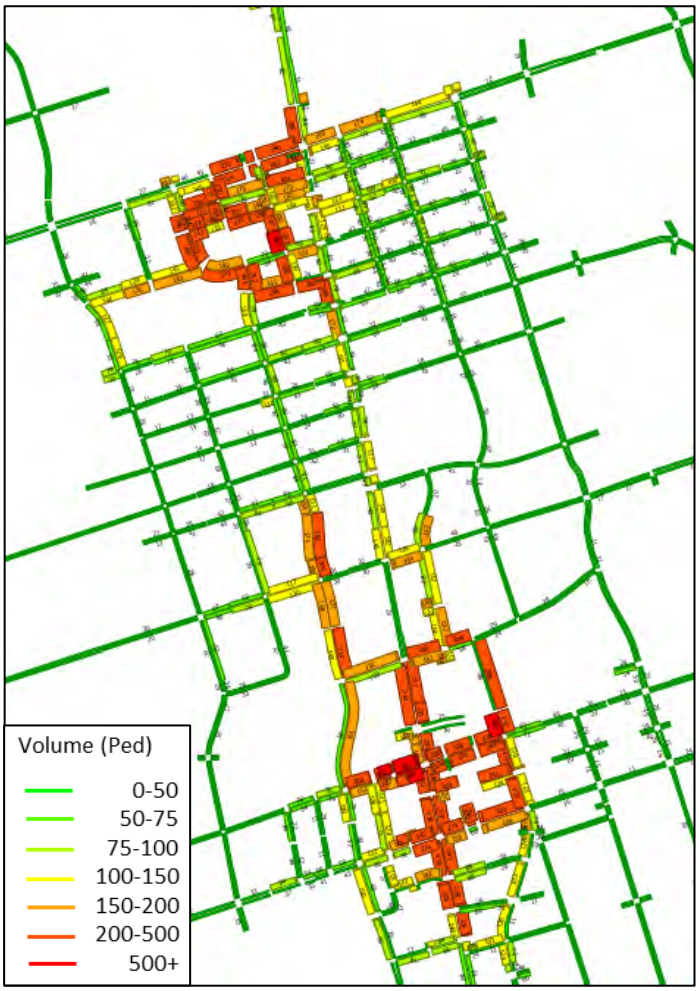


Figure 5-22: 2041 Pedestrian Volumes – PM Peak Hour



In addition to future pedestrian movements to the year 2041, cyclist movements were modelled during the same timeframe. Unlike walking trips, trips made by cycling as the primary mode of travel are closer in character to commuting trips, and thus reflect the same distributions as auto trips. Cycling access trips to subway stations were estimated in a manner similar to the pedestrian access trips, with the added limitation that subway access trips by cycling will be limited by bicycle parking spaces available at the stations. Assuming a trip distribution comparable to commuter travel, the majority of cyclists would be expected to arrive at the stations during the AM peak hour and leave the station during the PM peak hour. The modeling conducted for the cyclist involved classifying the road network according to the different facilities proposed. Roads with dedicated cycling tracks allow faster cycling speeds and are therefore more attractive to cyclist. **Figure 5-23** and **Figure 5-24** depict the future cyclist flows in 2041. Cycling flows are heavily focused on those roads that offer higher-grade cycling infrastructure, demonstrated good utilization of dedicated cycling facilities on roads parallel to the Yonge Street corridor. Higher cyclist volumes occur during the PM peak hour, primarily due to increased short-distance discretionary trips and a spread-out afternoon departure window.

Figure 5-23: 2041 Cyclist Volumes – AM Peak Hour

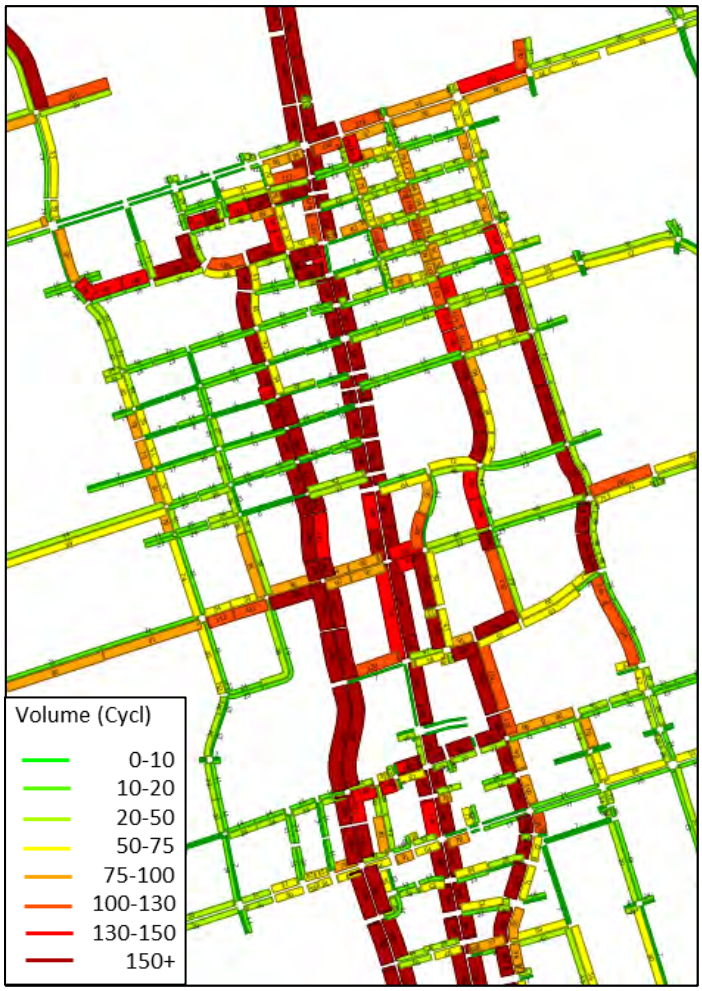
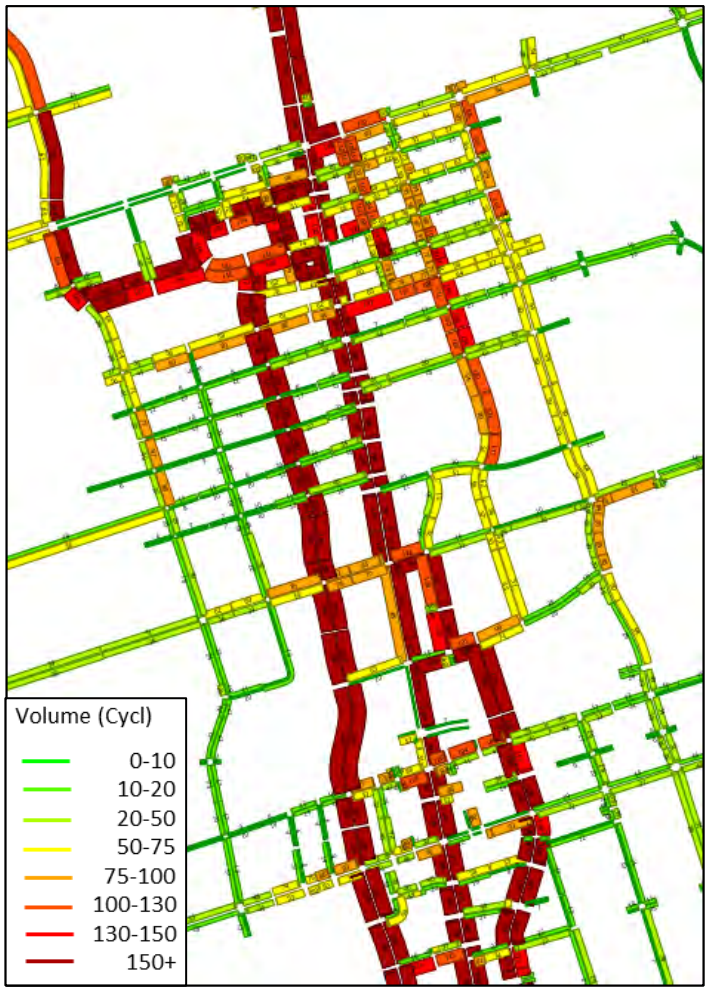


Figure 5-24: 2041 Cyclist Volumes – PM Peak Hour



5.11.7.3 Synchro Software Transportation Analysis – Intersection Operations

Following the AIMSUN meso transportation analysis, which provided an overview of projected traffic operations at the network level, an intersection capacity analysis was performed. This was performed using Synchro software to provide an understanding of how intersections could operate under 2041 future conditions based on the results of the AIMSUN model analysis.

Vehicular traffic volumes were extracted based on the AIMSUN meso model link volumes and existing travel behaviour patterns. The analysis was undertaken for signalized intersections only to facilitate a comparison between existing signalized intersection operations, which was conducted for the existing conditions review.

The results were filtered to show the critical movements anticipated. These included intersections and specific movements that are projected to operate with a volume to capacity (V/C) ratio of 0.85 or higher, indicating that the projected volume is approaching capacity, or a ratio of 1.0, as well as movements projected to operate with a Level of Service (LOS) of D or worse. The LOS provides an indication of the intersection capacity utilization ratio, with an LOS of D or worse indicated at least 82% utilization. **Table 5-18** and **Table 5-19** summarize the results of the critical intersections and movements in the AM and PM peak hour, respectively, with full Synchro reports provided in **Appendix J.** Movements that meet both criteria are highlighted in red.

While operating acceptably in the AM peak hour, the Finch Avenue and Talbot Road intersection was included for comparison purposes with the PM peak hour.

Table 5-18: Signalized Intersection Capacity Analysis - Critical Movements in the AM Peak Hour

Weekday AM Peak Hour									
Intersection	V/C	Delay (s)	LOS	Movement of Interest	V/C	Delay (s)	LOS	Queue (m)	
								50th	95th
Yonge St & Steeles Ave	1.03	73.6	E	EBL	0.89	70.6	E	25.7	64.6
				WBT	0.94	62.5	E	123.5	163.4
				NBL	0.81	58.5	E	18.0	53.4
				SBT	1.18	121.8	F	302.1	344.7
Yonge St & Athabaska Ave	0.61	14.9	B	EBL	0.75	62.2	E	45.1	66.6
Yonge St & Drewry /Cummer Ave	0.69	31.7	C	SBT	0.89	36.8	D	161.0	211.0
Willowdale Ave & Steeles Ave E	0.85	32.3	C	WBL	0.87	48.6	D	72.8	120.4
Willowdale Ave & Cummer Ave	0.82	32.6	C	EBT	0.88	51.4	D	72.5	128.1
				SBT	0.85	29.7	C	92.8	122.4
Willowdale Ave & Finch Ave E	0.87	38.3	D	EBT	0.92	45.1	D	148.2	199.6
				WBT	0.85	26.9	C	130.7	167.8
				NBL	0.69	64.5	E	10.8	34.3
				SBT	0.91	53.6	D	99.7	160.7
Talbot Rd & Finch Ave W	0.65	17.6	B	-	-	-	-	-	-
Beecroft Rd & Finch Ave W	0.88	52.0	D	EBT	1.11	73.5	E	208.8	251.5
				NBL	1.04	91.5	F	68.2	139.3

In the AM peak hour, constraints are largely observed for intersections of the primary Study Area corridors, particularly Yonge Street, Steeles Avenue, Finch Avenue and Willowdale Avenue.

Despite some movements operating with a V/C ratio greater than 0.85, only three movements exceed capacity. These are the eastbound through and northbound left-turn movements at Finch Avenue and Beecroft Road and the southbound through movement at Yonge Street and Steeles Avenue. Each intersection operates within capacity overall, however, except for Yonge Street and Steeles Avenue, which just exceeds capacity. These results can be attributed to greater traffic volumes and reduced capacity along Yonge Street and are in line with typical peak hour conditions for key movements. It is further noted that the Yonge Street and Steeles Avenue intersection experienced similar capacity constraints and lengthy delays under existing conditions for both the AM and PM peak hours.

Table 5-19: Signalized Intersection Capacity Analysis - Critical Movements in the PM Peak Hour

Weekday PM Peak Hour									
Intersection	V/C	Delay (s)	LOS	Movement of Interest	V/C	Delay (s)	LOS	Queue (m)	
								50th	95th
Yonge St & Steeles Ave	1.05	70.6	E	EBL	1.01	101.9	F	40.3	93.7
				EBT	0.92	59.5	E	121.2	158.8
				WBL	1.12	137.3	F	50.3	102.4
				WBT	1.03	80.8	F	150.7	192.1
				NBL	0.87	68.7	E	20.2	58.1
				NBT	0.90	47.1	D	146.4	187.7
				SBL	0.88	58.1	E	41.7	89.2
				SBT	1.08	84.5	F	236.3	279.4
Yonge St & Athabaska Ave	0.56	13.0	B	EBL	0.69	59.1	E	39.0	59.1
Yonge St & Patricia Ave	0.55	3.0	A	EBL	0.26	56.5	E	5.0	15.5
Yonge St & Drewry Ave/Cummer Ave	0.73	36.2	D	NBT	0.95	43.8	D	161.2	213.0
Yonge St & Finch Ave W/Finch Ave E	0.82	37.9	D	NBT	0.90	39.0	D	153.5	202.6
Willowdale Ave & Steeles Ave E	0.94	38.0	D	EBT	0.92	47.2	D	164.7	212.0
				WBL	0.87	64.7	E	36.2	80.1
				NBT	0.91	59.6	E	98.7	162.8
Willowdale Ave & Finch Ave E	0.85	33.1	C	WBT	0.91	31.2	C	129.3	180.7
Hilda Ave & Steeles Ave W	1.19	35.4	D	EBL	1.30	222.0	F	33.7	51.6
				WBL	0.86	59.6	E	7.4	58.6
				NBT	1.11	118.6	F	107.1	171.0
Talbot Rd & Finch Ave W	1.07	25.6	C	EBL	1.50	298.4	F	30.4	51.4
Beecroft Rd/Greenview Ave & Finch Ave W	0.82	28.8	C	EBT	1.00	39.5	D	34.8	143.6
				NBL	0.87	36.0	D	59.8	109.0

In the PM peak hour, there are a greater number of critical movements observed. This is consistent with the existing conditions analysis, which observed overall greater congestion in the PM peak hour compared to the AM peak hour. The Yonge Street and Steeles Avenue intersection experiences capacity constraints in all movements, which is indicative of greater traffic volumes and the intersection's role at the boundary of the City of Toronto and York Region.

All other intersections operate within capacity with the exception of Finch Avenue and Talbot Road. This intersection is anticipated to operate within capacity during the AM peak hour with no capacity constraints. Only the eastbound left-turn movement is considered critical at this intersection under the PM peak hour.

Comparing the existing traffic volumes to the projected volumes, a relatively minor increase in about 10 vehicles per hour is anticipated. Due to priority being given to other movements, particularly the eastbound through, all westbound, and southbound left and right-turn movements, the eastbound left-turn movement is found to operate with a significantly higher delay despite the relatively minor increase in vehicles anticipated to be making this movement. A snapshot of the Talbot Road and Finch Avenue intersection operations is shown in **Table 5-20**, with the eastbound left-turn movement highlighted in red.

Table 5-20: Talbot Road and Finch Avenue West Intersection Traffic Volumes – PM Peak hour

Intersection Detail		Existing Traffic		Future traffic from Meso Model (AM)				Future traffic from Meso Model (PM)			
		Weekday AM Peak Hour	Weekday PM Peak Hour	Sum for each direction	Link volume from Meso	Delta	Future AM Volumes	Sum for each direction	Link volume from Meso	Delta	Future PM Volumes
18 Finch Ave and Talbot Rd	NBL	7	5	14	18	1	8	14	10	-1	4
	NBT	2	4	14	18	0	2	14	10	-1	3
	NBR	5	5	14	18	1	6	14	10	-1	4
	SBL	188	123	289	258	-20	168	252	254	1	124
	SBT	2	1	289	258	0	2	252	254	0	1
	SBR	99	128	289	258	-11	88	252	254	1	129
	EBL	80	104	1133	1405	19	99	1178	1288	10	114
	EBT	1053	1070	1133	1405	253	1306	1178	1288	100	1170
	EBR	0	4	1133	1405	0	0	1178	1288	0	4
	WBL	5	3	1058	1137	0	5	1343	1449	0	3
	WBT	978	1187	1058	1137	73	1051	1343	1449	94	1281
	WBR	75	153	1058	1137	6	81	1343	1449	12	165

Overall, the majority of intersections are projected to operate within capacity under 2041 future conditions. A number of potential critical movements and intersections have been identified through the intersection operations analysis. These intersections, along with the overall network, can be monitored to identify when capacity constraints arise and be prioritized for improvements, such as signal timing optimization, being undertaken by the City of Toronto.

5.12 FEEDBACK FROM COMMUNITY CONSULTATION MEETINGS

As detailed in **Section 1.3** earlier in the report, a number of community and stakeholder consultation meetings were conducted throughout the YSNTMP process. his allowed for an iterative process to occur whereby comments received from various city agencies, members of the public, and the local area Councillor were incorporated into the alternative solutions being considered and ultimately helped to form the final Preferred Solution for the YSNTMP Transportation Network. Detailed comments received are provided in **Appendix K**.

Comments received from various City agencies helped to confirm correct standards that should be applied to the design of recommended infrastructure, such as cycling facilities, while comments received from the local area Councillor and members of the community helped to identify priority areas to focus recommended improvements, as well as establish concerns with the alternative solutions being considered.

While there was an overall consensus that improvements for active transportation modes, particularly pedestrian facilities, from a safety, connectivity, and design perspective, there were concerns regarding the potential to over-plan for cyclists given existing demand is not very high. Additionally, while some comments were in favour of the recommended street network, others expressed concern about the need for new streets, particularly in the northeast quadrant, and timing of their implementation. Fewer concerns were expressed regarding the extension of Lariviere Road and sidewalk improvements proposed.

These comments were incorporated into the overall selection of the Preferred Transportation Solution through the evaluation criteria and measures used to assess how each alternative network solution ranked. The Moderate Street and Moderate Cycling Networks were selected in order to balance the provision of new infrastructure against the need for additional capacity, connectivity, and conformity to the City of Toronto's broader planning and urban design objectives. The Major Pedestrian Network was selected as this alternative provided the greatest improvements for pedestrians from a connectivity, environment, accessibility, and safety perspective, which were largely favoured by the community.

6 RECOMMENDED TRANSPORTATION SOLUTION

Based on the results of the evaluation, safety review, transportation analysis, and input of community and stakeholder feedback, an overall recommended transportation solution was identified for the YSNTMP Transportation Network.

6.1 OVERALL RECOMMENDED TRANSPORTATION NETWORK

The overall Recommended Transportation Network includes the preferred components identified following the evaluation stage and further refined based on community and stakeholder feedback and an evaluation of safety. The overall Preferred Solution is shown in **Figure 6-1**. A Functional Road Network was subsequently designed to a 10% level to provide further detail as to how the Recommended Transportation Network could be realized. The 10% Functional Road Network design is provided in **Appendix L** and shows the recommended road, pedestrian, and cycling networks**.**

The key characteristics of the Recommended Transportation Network from a network perspective sought to answer the Problem and Opportunity Statement (**Section 4**) and meet the overall objectives and Guiding Principles developed for the YSNTMP (**Section 5**). The Recommended Transportation Network achieves this through the following key characteristics:

Guiding Principle #1: People

- The Recommended Transportation Network improves the principles of Choice, Experience, and Social Equity by:
    - Enhancing street connectivity around transit-oriented nodes;
    - Focuses on mobility improvements for active modes of transportation;
    - Improving access to key neighbourhood amenities, such as transit, parks, and schools;
    - Upgrading sidewalk and cycling infrastructure to meet current AODA and City Standards; and,
    - Supporting a reduction in the need for car ownership.

Guiding Principle #2: Places

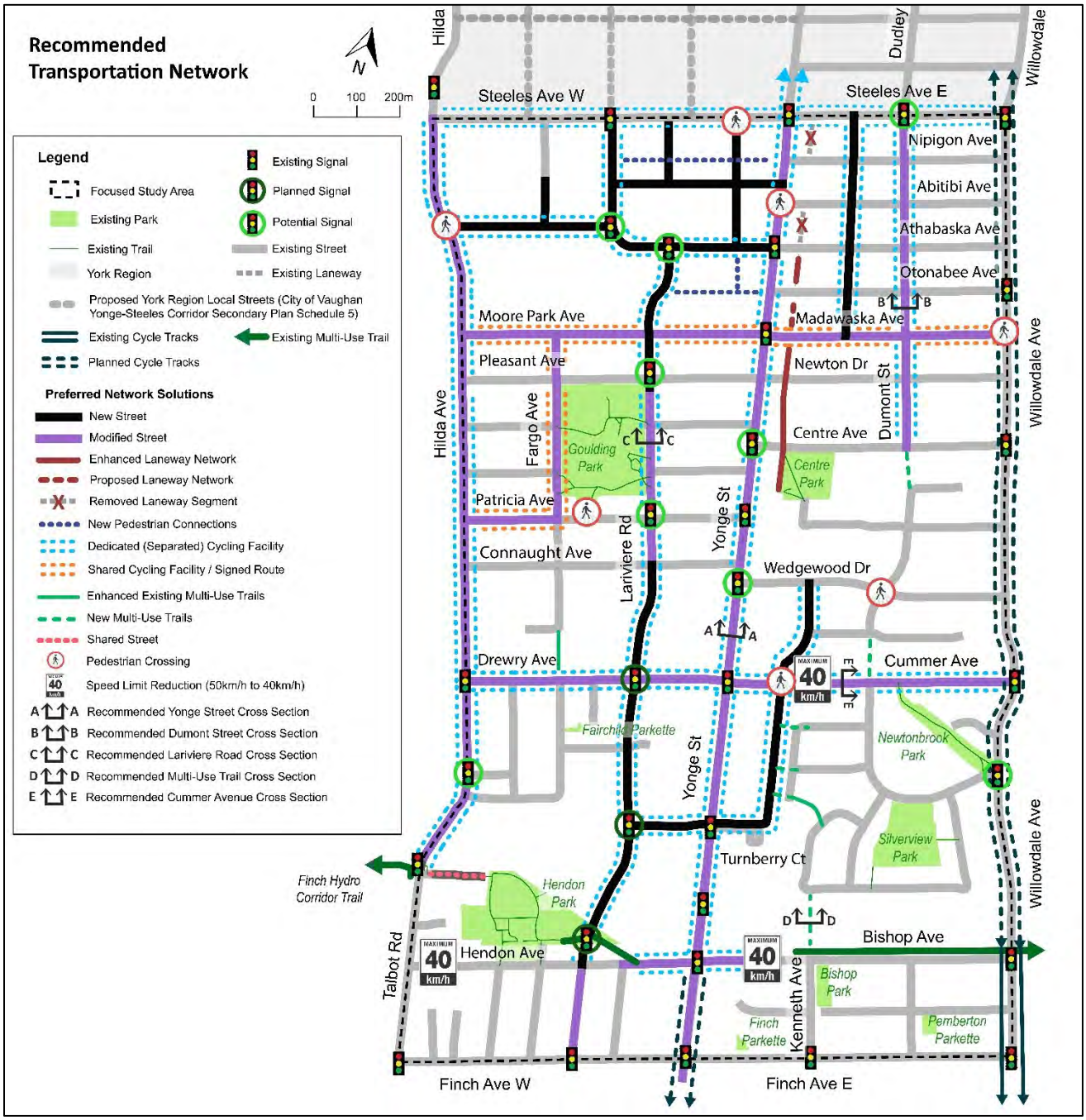
- The Recommended Transportation Network supports the principles of Shaping the City, Healthy Neighbourhoods, and Public Health and the Environment by:
    - Minimizes impacts to existing, stable neighbourhoods;
    - Minimizes potential for vehicle cut-through traffic; and,
    - Improves safety through redistributing space allocation within existing right-of-ways and adding additional signals to support safe crossing opportunities.

Guiding Principle #3: Prosperity

- The Recommended Transportation Network addresses the principles of Affordability and Supporting Growth by:
    - Providing a long-term implementation strategy that will see changes occur over time, both through redevelopment and through incorporation with planned capital projects; and,

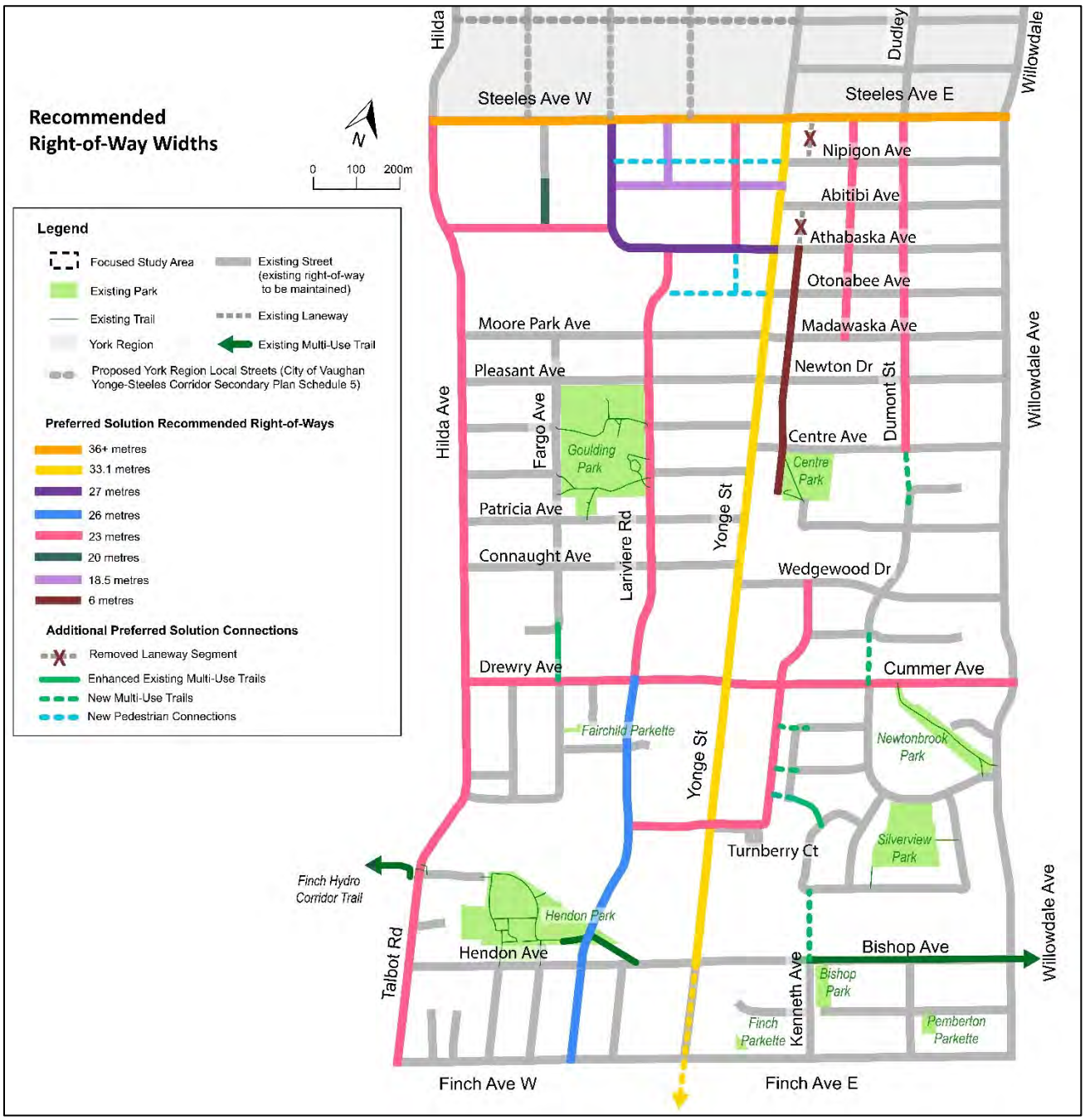
- Requiring further studies to identify property requirements for projects that will be undertaken by the City of Toronto.

Figure 6-1: Recommended YSNTMP Transportation Network



The recommended right-of-way widths for the new and modified streets comprising the Recommended Transportation Network are shown in **Figure 6-2**.

Figure 6-2: Recommended Right-of-Way Widths

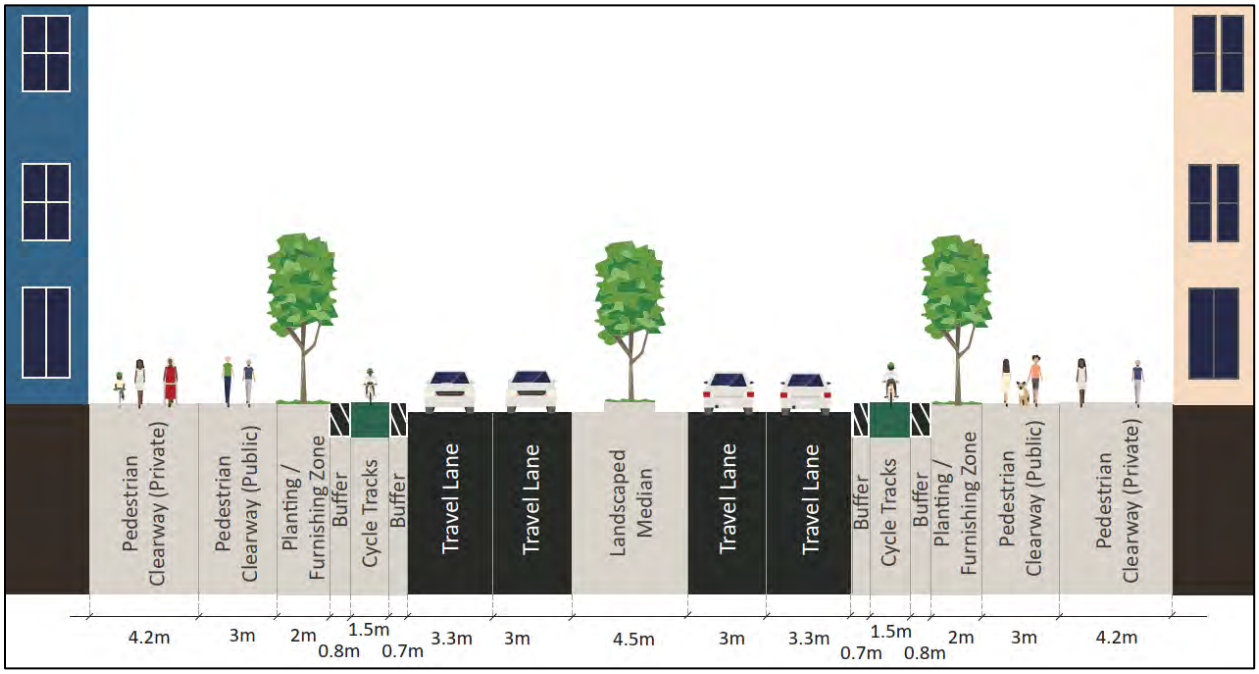


In addition to meeting the vision and goals developed for the YSNTMP, the Recommended Transportation Network will support the Yonge Street North Planning Study by providing transportation solutions in accordance with the nodes and corridors identified in the Planning Study. The following sections provide a detailed overview of how the Recommended Transportation Network will support each corridor and node. The Recommended Transportation Network will be further supported by the preferred Parking Management Strategy and overall Shared Mobility Strategy as discussed in **Section 5.11.4** and **5.11.5** and which will encourage and support travel by alternative modes to the car and reduce the need for car ownership.

6.1.1 Preferred Solution – Yonge Street

The vision for Yonge Street supports increase in walking and cycling, improves safety for all modes, and reinforces the corridor as an important civic space rather than thoroughfare for cars. The Yonge North Subway Extension further provides an opportunity to convert two current HOV lanes to space for cycle tracks, as well as an improved pedestrian realm. A centre median would be included in the cross-section and would provide a location for landscaping and could be converted into a dedicated left-turn lane at intersections where desired. These recommendations are generally consistent with the Reimagining Yonge project being undertaken south of Finch Avenue and will support a consistent vision for Yonge Street as a corridor for all. It is recognized that further design study and consultation will be required, and that the timing of Yonge Street modifications are to be co-ordinated with City capital project. The overall recommended Yonge Street cross-section (mid-block) is shown in **Figure 6-3**.

Figure 6-3: Recommended Yonge Street Cross Section – Mid-Block



6.1.2 Preferred Solution – Yonge and Steeles Node

The following transportation solutions (**Figure 6-4**) are recommended for the Yonge and Steeles Node to support planned growth in the area in response to the planned subway station at the Yonge Street and Steeles Avenue intersection.

Recommended Street Layout West of Yonge Street: Supports transition over time from existing auto-oriented urban form with few roads, to a walkable, transit-oriented urban form with shorter block lengths and greater pedestrian and cyclist permeability. Additional public roads and pedestrian linkages will support development blocks and the recommended extension of Lariviere Road will not meet Steeles Avenue directly to discourage vehicle cut-through opportunities. The recommended street layout will manage traffic infiltration and prioritize traffic calming.

Similar to the extension of Lariviere Road, the north-south roads shown on the Centrepoint Mall property will not all align with the planned roads shown in the City of Vaughan Yonge-Steeles Corridor Secondary Plan. This will serve two key goals for the transportation network. First, the connection at the western edge of the

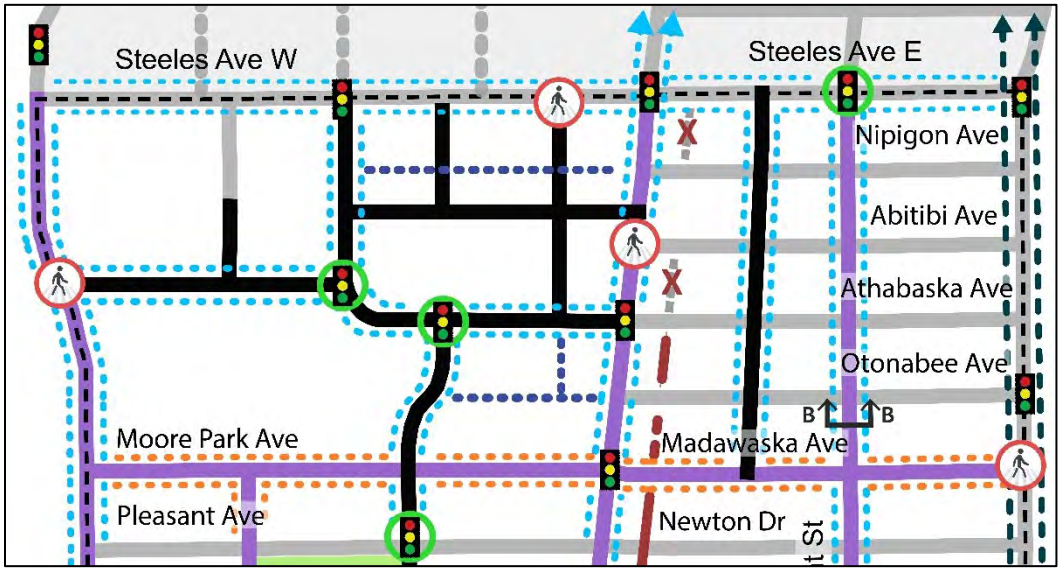
Centrepoint Mall property is sufficient to support north-south movement, considering that capacity along Lariviere Road is limited, and will help to discourage significant levels of through traffic travelling to and from north of Steeles Avenue West. Second, the functionality of Steeles Avenue as a major arterial roadway will need to be maintained. Providing connecting roads every 100 metres or so for local access purposes would reduce the functionality of Steeles Avenue as a major arterial. A pedestrian crossing, with the potential for signalization, is considered just west of Yonge Street to facilitate pedestrian connections to and from the planned subway station at Yonge Street and Steeles Avenue.

Enhanced Laneway System: A consistent laneway, including existing and new laneway segments, will be secured through redevelopment over time to support access and provide a dedicated area for loading to occur, as opposed to using existing streets. Existing laneways, where currently substandard, will be updated to standard. The existing laneway north of Athabaska Avenue is recommended to be removed to accommodate new development. The removal of laneways is subject to municipal servicing requirements and will be evaluated during the development application process.

New Public Street: A new public street east of Yonge Street, between Steeles Avenue and Madawaska Avenue is also recommended. This new street will have a 23-metre right-of-way that includes one lane in each direction and bi-directional bike lanes. This will support walkability and mobility for all modes and reduce the large east-west block length present under existing conditions. This will also provide an opportunity for access and servicing on this new road instead of existing roads, and will help reduce traffic infiltration into the adjacent neighbourhood east of Dumont Street.

Dumont Street: Modifications to Dumont Street are also recommended to establish a neighbourhood corridor for pedestrian and cyclists. This will be achieved through a 3 metre road widening on the west side of the street from its existing 20 metre right-of-way to a 23-metre right-of-way. The widening will be secured incrementally through new development and will provide sufficient space for sidewalks on both sides of the street as well as bi-directional cycling facilities. Traffic calming measures are also proposed via a reduction in the vehicle travel lane widths to 3 metres. Reducing the space allocated to vehicles will provide improvements to road safety, discourage high vehicle speeds and levels of cut-through traffic, and maintain space for planting zones on either side of the street. The existing and recommended cross-section for Dumont Street is shown in **Figure 6-5** and **Figure 6-6**, respectively**.**

Figure 6-4: Preferred Solution – Yonge and Steeles Node



Steeles Avenue: A dedicated cycling facility is recommended for Steeles Avenue. Steeles Avenue is identified as both a corridor for surface transit improvements under the City's RapidTO program and a Rapid Transit corridor under the Metrolinx 2041 Regional Transportation Plan. The Ultimate BRT Condition on Steeles Avenue would include a BRT within a newly constructed centre median that would operate both east and west of Yonge Street, whereas the RapidTO initiative is identified for west of Yonge Street only. While it is acknowledged that the ultimate condition of Steeles Avenue with a centre running BRT would require a separate Environmental Assessment involving Metrolinx, City of Toronto, City of Vaughan, City of Markham, and York Region, it is recommended that a dedicated cycling facility be provided along the corridor to provide dedicated cycling connections to and from the planned subway station at Yonge Street and Steeles Avenue and improve the overall pedestrian and cycling environment along the corridor.

Figure 6-5: Existing Dumont Street Cross Section

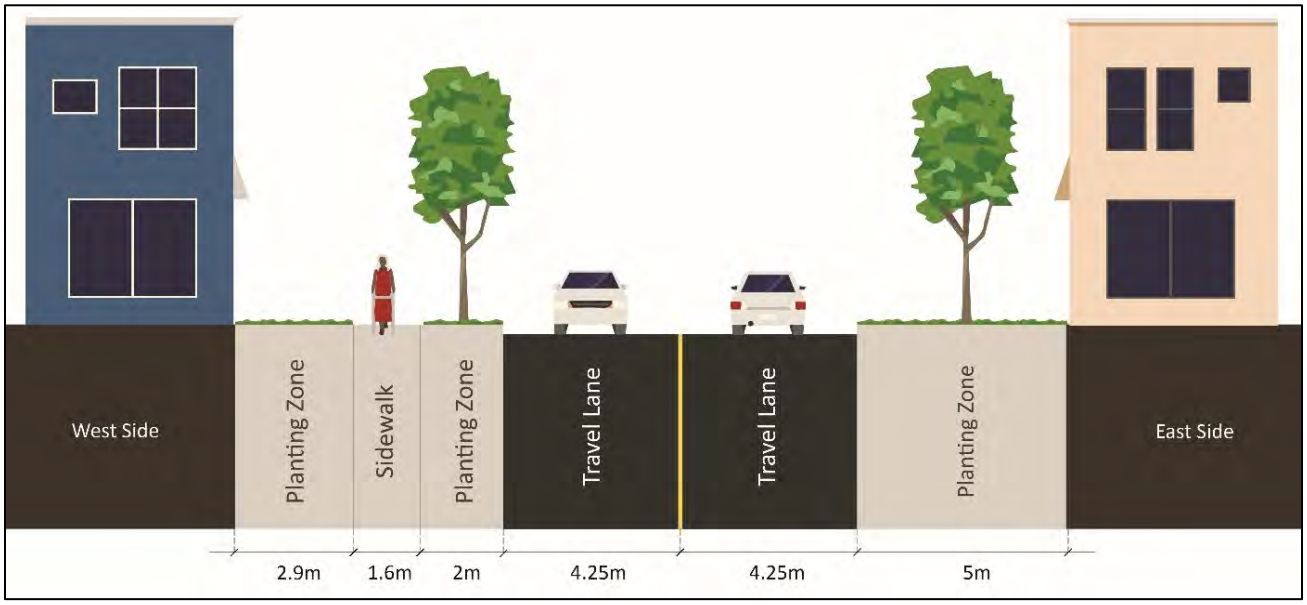
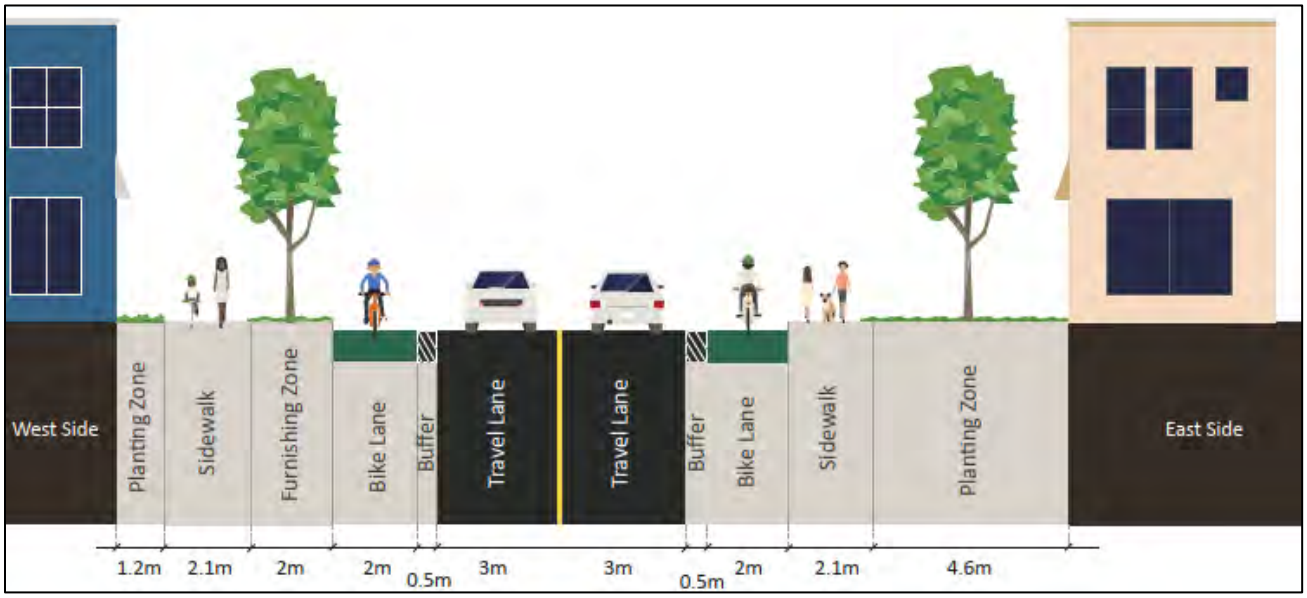


Figure 6-6: Recommended Dumont Street Cross Section



6.1.3 Preferred Solution – Mid-Rise Area

The following transportation solutions (**Figure 6-7**) are recommended for the centre of the Study Area, particularly west of Yonge Street, which has been identified as a mid-rise area under the Yonge Street North Planning Study.

New Signals and Enhanced Public Realm: The Yonge Street corridor between transit-oriented nodes is envisioned as a safer, more pedestrian supportive environment with new signals recommended to reduce long distances between crossing locations. An enhanced and accessible public realm are provided in the adjacent areas and neighbourhoods.

Extension and Modification of Lariviere Road: It is recommended that Lariviere Road is extended north of Moore Park Avenue and south to Drewry Avenue, to improve connectivity for all users. It is also recommended that Lariviere Road be widened from its existing 20 metre right-of-way to a 23 metre right-of-way. One vehicle lane will be retained in each direction, with dedicated cycling infrastructure and a generous pedestrian realm provided on either side. Traffic calming, comfort and safety for people walking and biking will be prioritized with a reduction in vehicle travel lane widths recommended to support this transformation. Sidewalks are provided on both sides of the street to improve the pedestrian realm, particularly on the east side where higher levels of pedestrian activity is anticipated. Lariviere Road is the general boundary between the proposed mid-rise area to the east, as identified in the Yonge Street North Planning Study, and the existing stable neighbourhood to the west. The preferred Lariviere Road cross section will support mid-rise intensification, with the additional 3 metres to be secured along the east side of the street as development occurs. The existing and recommended cross-section for Lariviere Road is shown in **Figure 6-8** and **Figure 6-9**, respectively.

Hilda Avenue Buffered Bike Lanes: Buffered bike lanes are recommended along Hilda Avenue to provide dedicated, north-south cycling facilities along the west side of the Study Area. This will support residents and schools along the street and will provide a dedicated connection between Steeles Avenue and the Finch Hydro Corridor Trail. Hilda Avenue currently has a 20 metre right-of-way with sidewalks and a planted buffer zone along both sides of the street. It is recommended that widening of Hilda Avenue to a 23 metre right-of-way be considered in the long-term as reconstruction or maintenance of the roadway is required.

Figure 6-7: Preferred Solution – Mid-Rise Area

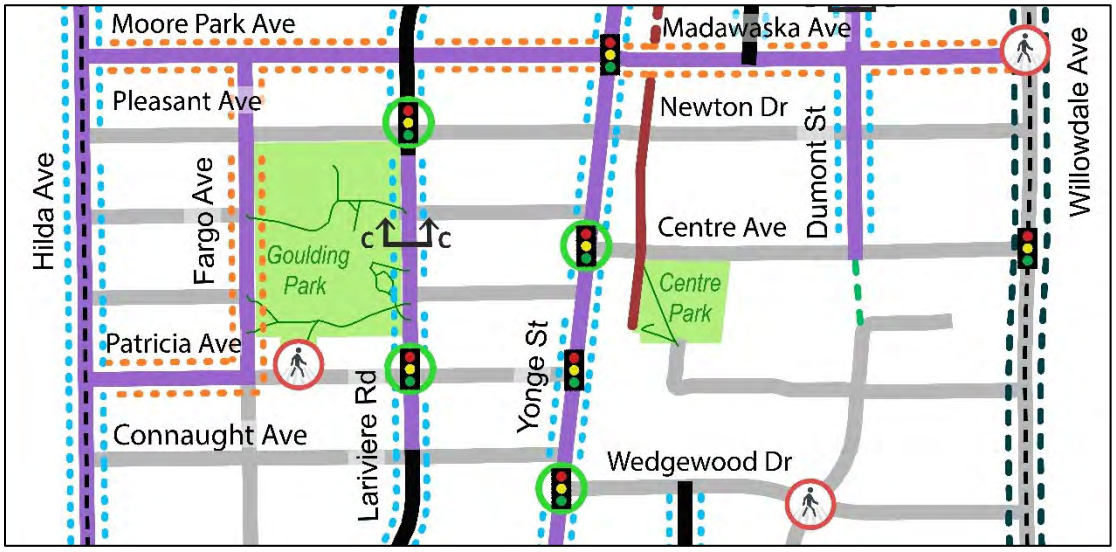


Figure 6-8: Existing Lariviere Road Cross Section

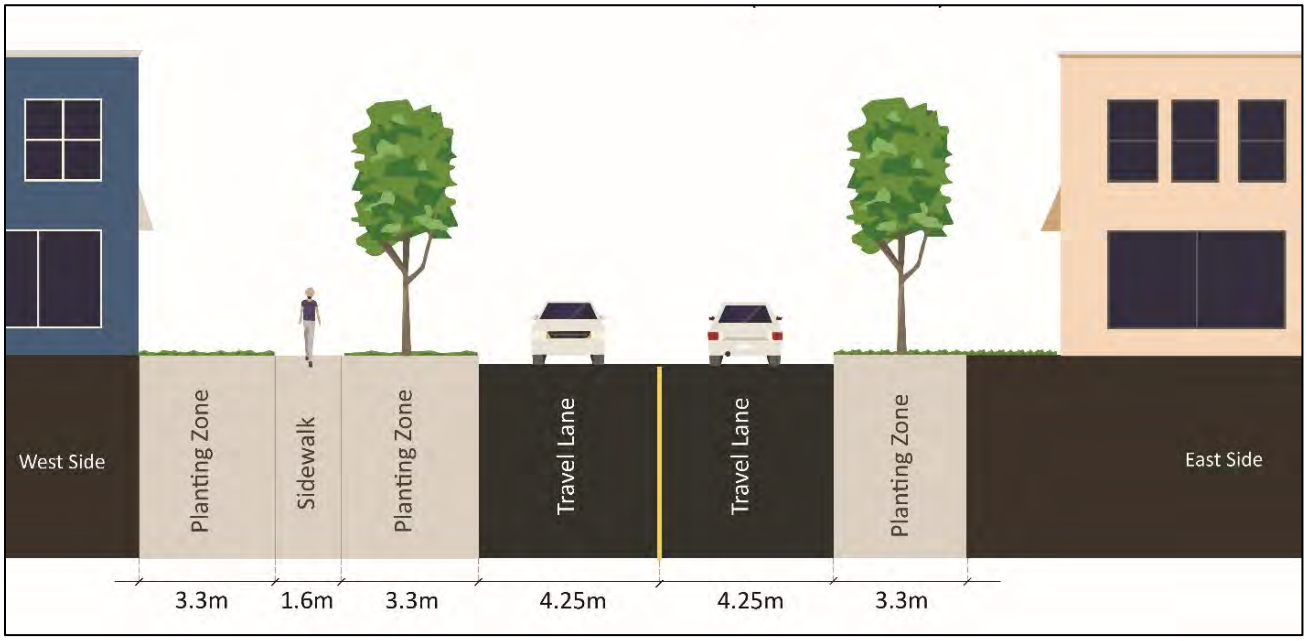
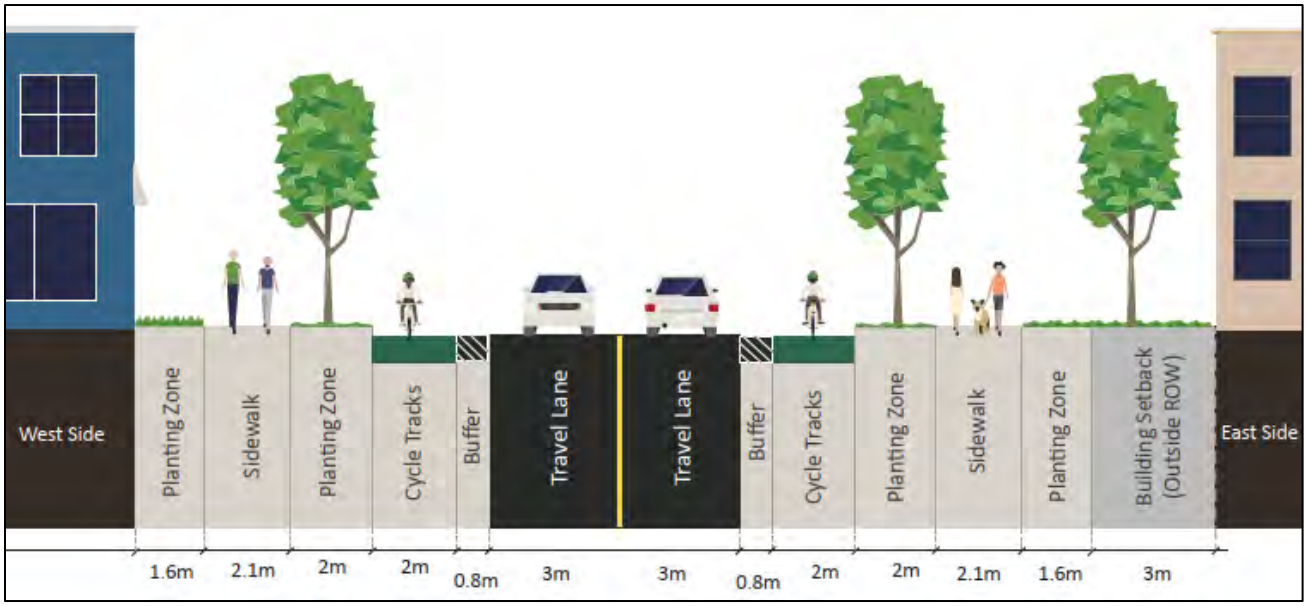


Figure 6-9: Recommended Lariviere Road Cross Section



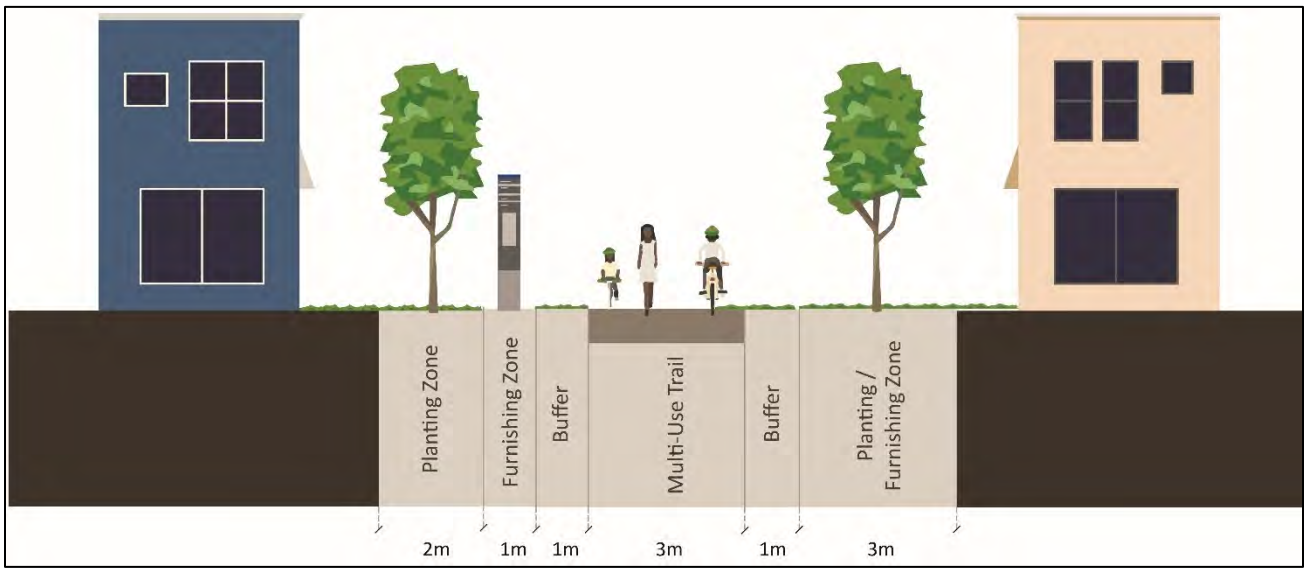
6.1.4 Preferred Solution – Neighbourhood Connections

East of Yonge Street, the following transportation solutions (**Figure 6-10**) are recommended to support improvements to connectivity in the existing neighbourhood without requiring major impacts to the existing neighbourhood structure.

Figure 6-10: Preferred Solution – Neighbourhood Connections

Multi-Use Trails: Multi-use trails are proposed to enhance neighbourhood connectivity for walking and biking only, creating an attractive and more direct connection between Dumont Street and Newtonbrook Park. Implementation would take place over the long term as opportunities arise. An 11 metre width is suggested to provide ample space for pedestrians and cyclists to use the trail simultaneously, as well as provide furnishing and planting on both sides. The recommended cross-sections for the multi-use trails is shown in **Figure 6-11**.

Figure 6-11: Recommended Multi-Use Trail Connection Cross Section



An enhanced multi-use trail is also proposed between Fargo Avenue and Drewry Avenue to provide a more direct connection for pedestrians from the existing neighbourhood to Drewry Avenue, which would improve

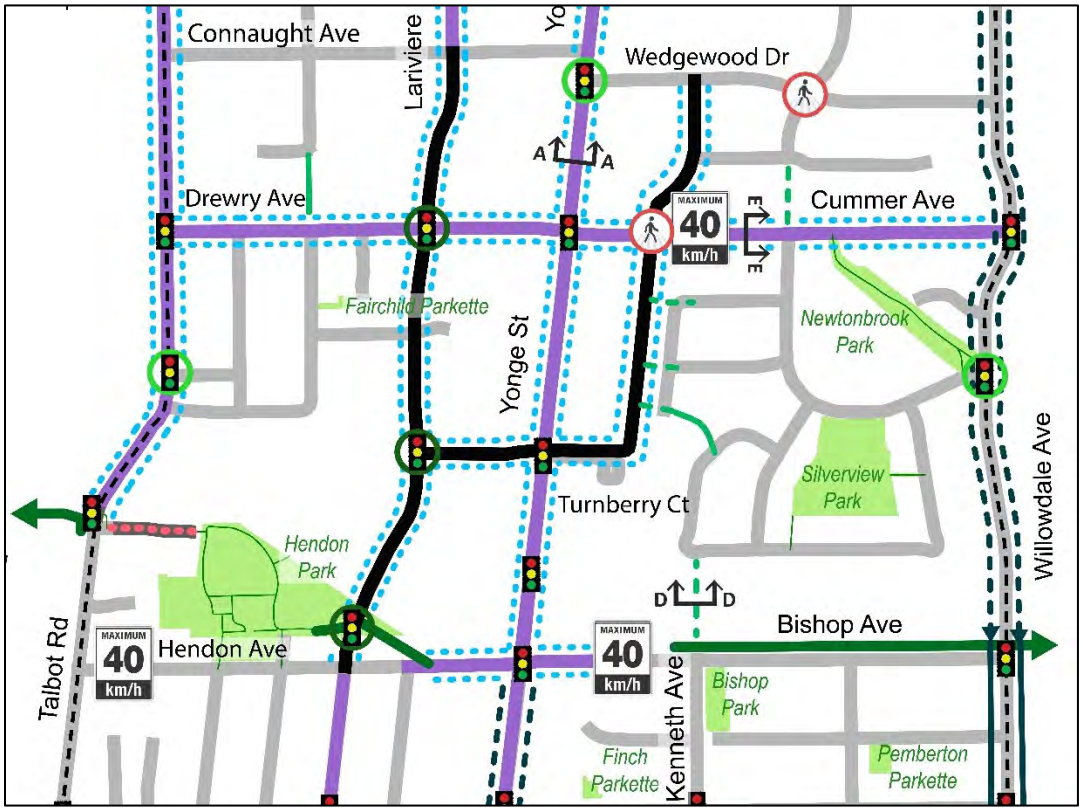
access to local transit stops. It is recognized that a trail connection already exists on the adjacent school property fronting Drewry Avenue east of Fargo Avenue. There is the potential to work with the school to provide an enhanced, AODA compliant connection on the school property, which would be an alternative solution to a capital project in this location.

Tobruk Crescent Sidewalk Improvements: It is recommended that opportunities for sidewalk implementation on both sides of the street be identified and constructed through the City's Missing Sidewalk program.

6.1.5 Preferred Solution – Yonge and Cummer Development Area

The following transportation solutions (**Figure 6-12**) are recommended for the Yonge and Cummer Node to support existing and future new development anticipated for the area.

Figure 6-12: Preferred Solution – Yonge and Cummer Development Area



New Public Road: A new public road is recommended between Cummer Avenue and Wedgewood Drive to reduce large block lengths to improve walkability and provide direct route choice, within transit-oriented node. This will be secured through redevelopment, with no vehicular connection planned to Doverwood Court to eliminate an opportunity for traffic infiltration further east.

Drewry Avenue/Cummer Avenue Cycle Tracks: A widening of 1.5m on both sides of Cummer Avenue is recommended to accommodate cycle tracks and sidewalks on both sides of the street. This will widen Cummer Avenue from its existing 20 metre right-of-way to a 23 metre right-of-way. This will provide dedicated space for cycling facilities on both sides of the street, as well as space for planting zones. Vehicle travel lanes will also be reduced to 3.3 metres, which will help to unlock space for cycling and pedestrian facilities while still maintaining sufficient width to accommodate TTC bus service along Cummer Avenue. A speed limit reduction is also recommended, from 50 km/h to 40 km/h, to improve pedestrian and cyclist safety and comfort along

the route. Partial property impacts would be required to accommodate this widening. The existing and recommended cross-section for Cummer Avenue is shown in **Figure 6-13** and **Figure 6-14**, respectively. It is understood that property acquisition will present a challenge to implementing the ultimate recommended 23 metre right-of-way. In the interim, a similar design can be achieved within the existing 20 metre right-of-way, with reduced bike lane and buffer widths, as shown in **Figure 6-15**.

Figure 6-13: Existing Cummer Avenue Cross Section

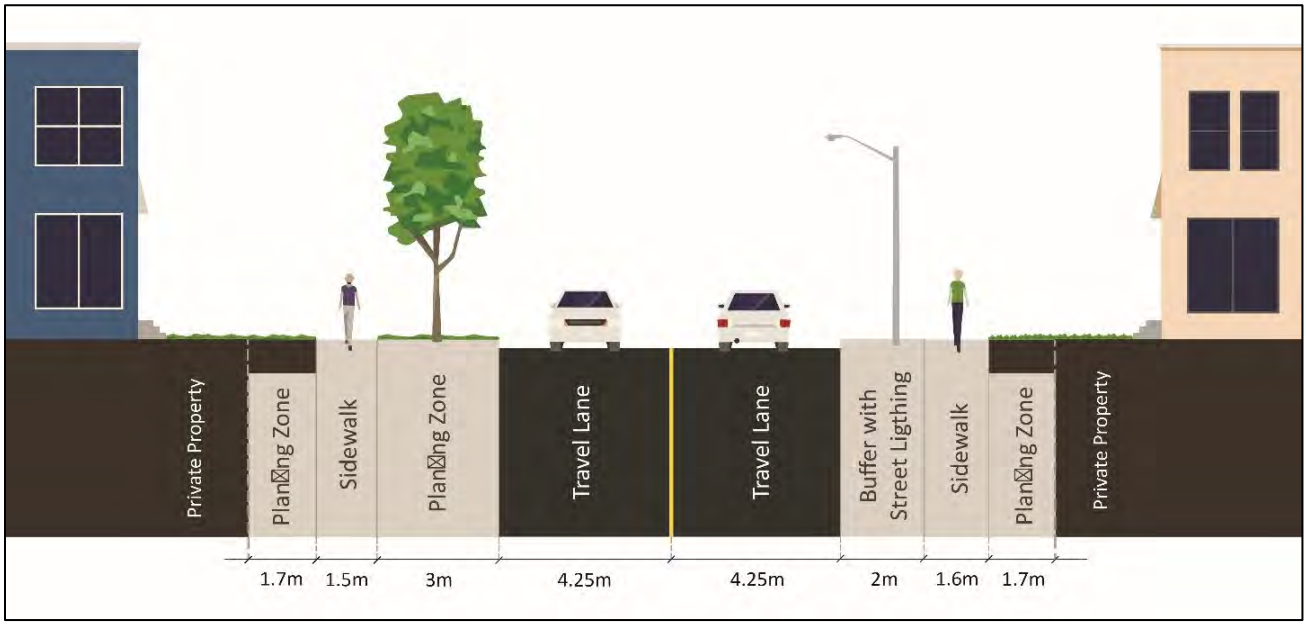


Figure 6-14: Recommended Cummer Avenue Cross Section

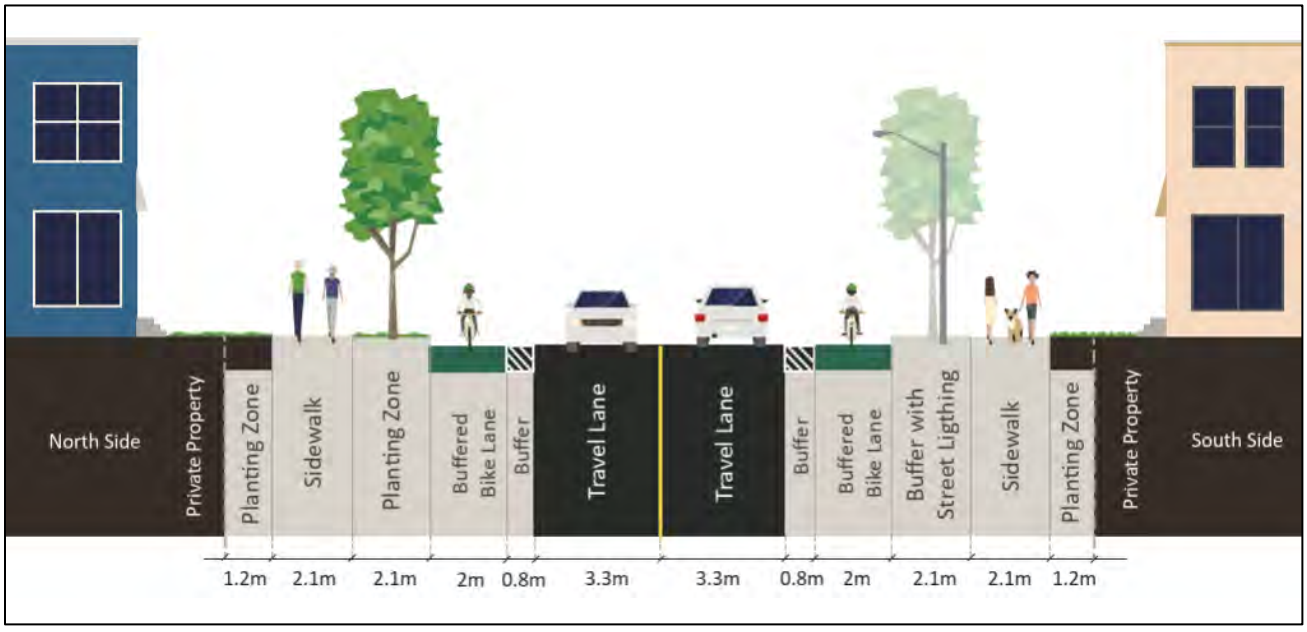
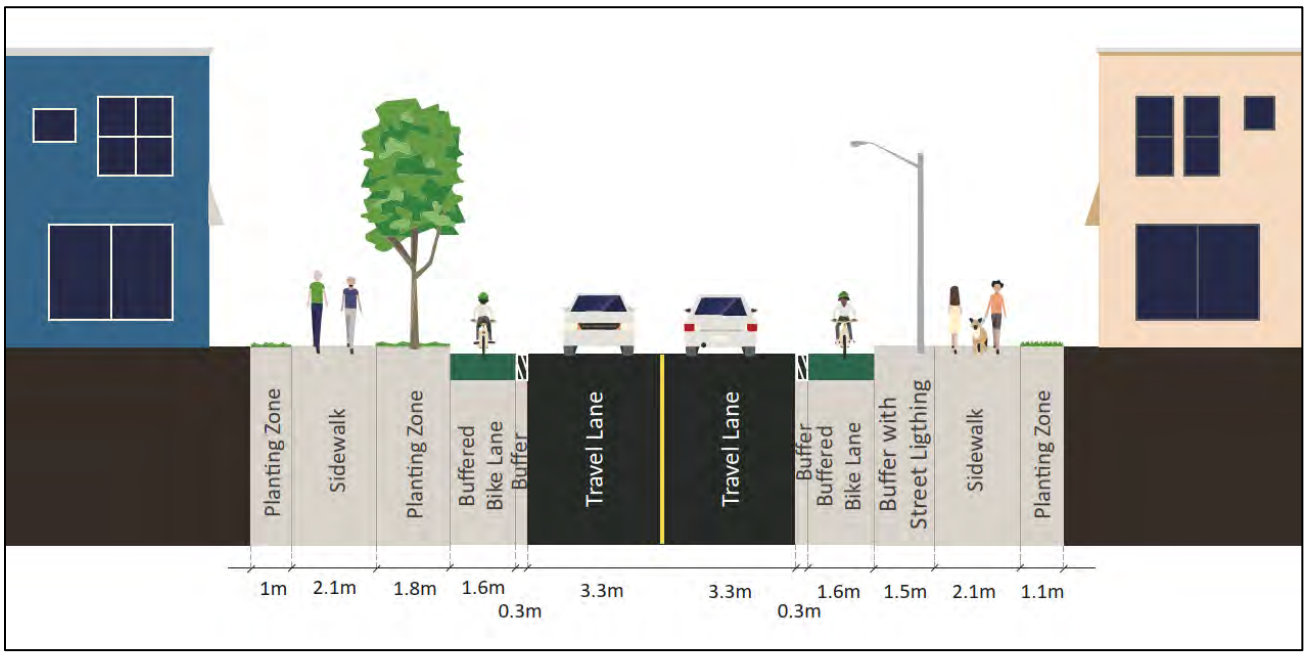


Figure 6-15: Potential Cummer Avenue Cross Section - Interim Condition



Connections to Olympic Garden Drive: It is recommended that pedestrian connections be incorporated through planned park, between new Olympic Garden Drive and Averill Crescent. There is a further longer term opportunity to widen existing pedestrian connection to/from Deering Crescent, improving neighbourhood access to park.

Finch Station Parking Area Pedestrian Link: As parking requirements at Finch Station are anticipated to change with the subway extension, it is recommended that discussions continue with Metrolinx and TTC to provide a pedestrian connection when the opportunity is available. This will support connectivity to Finch Avenue and the Finch Station for the Silverview neighbourhood when an appropriate opportunity for implementation is identified.

7 IMPLEMENTATION AND NEXT STEPS

The infrastructure improvements recommended as part of this Transportation Master Plan should be implemented in a logical way that minimizes its overall disruption to the surrounding residents and everyday users. The development of alternative transportation solutions include several roadway, active transportation, and pedestrian infrastructure improvements that have been recommended.

Recommended improvements are split into three categories: redevelopment, capital projects, and traffic operations/safety improvements.

Redevelopment improvements involve identifying improvements in areas that have been targeted for redevelopment. These types of redevelopment projects are often phased in over time. They may require an interim implementation strategy in order to help facilitate full build out.

Capital projects involve improvements that require coordinated implementation. Projects identified as capital projects provide the opportunity to bundle existing scheduled work with state-of-good-repair work.

Traffic operations and safety improvement include planning for new infrastructure such as new signals, speed limit changes, and traffic calming applications. They are typically carried out through warrant analysis, consultation, and reports to Council for changes to the local roadways. Often these types of changes to the roadways are coordinated with redevelopment applications as appropriate.

7.1 POLICY DIRECTIONS

To guide the development of the TMP strategy, several policy directions have been developed in regards to the new street and block network and potential amendments to the Official Plan, Cycling Network Plan, and the Zoning By-Law.

7.1.1 Amendments

Official Plan

To implement the preferred transportation strategy for Yonge Street North study area, several potential amendments may be required to the City's Official Plan. These include:

- Schedule 1: Add new public streets with ROW width greater than 20 m
- Schedule 2: Add new planned but unbuilt roads
- Map 3: Add the following streets:
    - Expanded ROW widths on Cummer Avenue (23 m)
    - New streets to be added:
        - Lariviere Road Extension
        - N-S Road (Steeles to Madawaska)
        - New public roads-Centrepoint Mall
- Provide policy directions to accommodate shared mobility

Zoning By-Law

As the City of Zoning By-Law 569-2013 governs the provision of parking by development, the potential for an amendment to the Zoning By-Law as it affects the Study Area should be considered to support the preferred solution.

The City's Zoning By-Law identifies Policy Areas which reflect the urban structure in terms of transit availability and population density. The YSN study area is part of Policy Area 4, and 'other areas of the city', meaning it has generous parking rates and requirements relative to the rest of the City. Parking rates are increased incrementally for Policy Areas 1, 2, and 3, with the highest rates for 'all other areas of the City'. Policy Areas 1 to 4 also dictate maximum parking rates, since oversupplying parking spaces can encourage a higher vehicle modal split.

On January 5, 2021, the Chief Planner and Executive Director of City Planning presented a report for action to the Planning and Housing Committee of the City of Toronto titled *Proposed Review of Parking Requirements for New Development* dictating that City Planning conduct a review of the parking requirements of Zoning By-law 569-2013 and report back with the results by Q4 2021. The report noted that 46% of projects with at least one planning approval in 2019 Q4 were approved with parking levels below the minimum parking standards specified by Zoning By-law 569-2013. Recognizing that the existing zoning by-law parking requirements do not reflect market demand based on the evolving transportation preferences of existing and future residents, the staff report stated that the planned by-law review should be guided by the principle that parking standards should only allow the maximum automobile parking that is reasonably required, and that minimums are only needed where they are necessary to ensure equitable access (e.g. areas difficult to serve with transit).

The review was officially completed in November 2021 and considered how limiting automobile parking can help encourage the use of transportation alternatives such as transit and active modes. Major components of the review included examining options related to:

- Replacing minimum automobile parking requirements with parking supply guidelines;
- Identification of other mobility infrastructure required if automobile parking requirements are reduced or removed;
- Identification of approaches to reduce the number of different parking rates, currently specified by land use;
- Development of new parking policy area boundaries to better reflect areas with good alternatives to automobile travel;
- Development of an approach to adjust parking requirements without a zoning by-law amendment as new transit infrastructure enters service;
- Identification of land uses and areas where the existing ZBL parking standards should be adjusted to meet the intent of the Official Plan by:
    - Reducing or eliminating automobile parking minimums; and
    - Reducing or introducing automobile parking maximums.

Following completion of this review in November 2021, City staff recommended the adoption of Zoning By-law Amendments to the city-wide Zoning By-law 569-2013 to modify the current parking standards. The draft Zoning By-law Amendment was subsequently approved in principle by City Council during a December 15th, 2021 meeting, indicating a direction towards eliminating most vehicle parking requirements. Key changes proposed through the Zoning By-law Amendment include removal of the minimum residential parking requirements for multi-unit residential buildings and introduction of updated maximum parking requirements and updated minimum accessible parking requirements for developments throughout the City. The YSN TMP parking recommendations are therefore in line with the latest parking policy direction.

7.2 SHORT-, MEDIUM-, AND LONG-TERM PRIORITIZATION OF PROJECTS

Within the Municipal Class EA (MCEA) Process, projects are defined by schedules based on their potential environmental impacts and costs. The schedules range from A, A+, B and C with an increasing level of potential environmental impact. The Environmental Assessment Act is currently undergoing a review under Bill 197. Bill 197 replaces Class EAs with a "streamlined" EA process that will be set out in the regulations. The streamlined process will apply to certain projects to be designed under the regulation. Currently approved EAs will continue to apply to undertakings in each class until each one is removed and replaced by regulations setting out streamlined EAs for those projects.

Changes to the MCEA are currently being reviewed by the Municipal Engineers Association and the Ministry of Environment, Conservation and Parks. Some of the proposed changes include:

- Changing requirements for some projects, including reducing requirements for certain projects, or exempting projects altogether
- Establishing or updating screening processes to determine the appropriate categorization for a project
- Updating the Class EAs to ensure consistency with the EAA as a result of the passage of More Homes, More Choice Act, 2019

The current MCEA process remains in practice, until each class is revoked and replaced by regulations setting out streamlined EAs for those projects.

The Yonge Street North Transportation Master Plan would complete Phase 2 of the Municipal Class Environmental Assessment (MCEA). Projects identified in the Yonge Street North Transportation Master Plan require review by the City of Toronto Transportation Services to determine the appropriate process and timing for implementation. Table 7-1 identifies the TMP recommendation of project priorities and potential need for further phases of the Municipal Class Environmental Assessment, which are subject to further review and co-ordination with the City's programming of capital projects. These projects often require medium- or long-term timing, in order to conduct a detailed environmental assessment and detailed design process. Projects identified in the Yonge Street North Transportation Master Plan require review by the City of Toronto Transportation Services to determine the appropriate process and timing for implementation.

Table 7-1 outlines the short, medium and long-term prioritization of projects identified in the Yonge Street North transportation master plan study area. A summary of the cost estimates is provided in **Table 7-2**, with detailed cost estimates provided in **Appendix N**. The summary of cost estimates includes an estimation of capital costs per project, as well as preliminary property cost estimates based on recent housing price data.

Table 7-1: Short, Medium and Long-Term Prioritization of YSNTMP Projects

Phasing	Road Section	Potential EA Schedule	MCEA Schedule Description	Phasing Rationale	Priority	Phasing and Implementation Prerequisites
Short Term (0-5 years)	New N-S Road (East of Yonge Street-Cummer to Wedgewood)	A	Construction of local roads which are required as a condition of approval on a site plan, consent, plan of subdivision or plan of condominium which will come into effect under the Planning Act prior to the construction of the road.	Expected to be provided through ongoing development applications	Medium – Improvement for local connectivity	Approval of related development applications
Short-Term to Long-Term (incremental)	New N-S Road (East of Yonge Street-Steeles to Madawaska)	C	Construction of new facilities and major expansions requiring full five-step EA process and public consultation	Following completion of a functional design or EA, implementation timing is largely determined by pace of development. Road will function with interim stages of implementation. Full implementation is expected to be in the long term.	Higher – Development applications already occurring in the area; required to reduce infiltration of traffic into neighborhood; and provide block structure for transit-oriented development at Yonge/Steeles node	Completing a functional design or EA to identify preferred design of road
Short Term	Multi-use Trail (Averill Crescent to Future Olympic Garden Drive links)	A+	Smaller capital projects with minimal environmental impacts (e.g. construction of sidewalks or bicycle paths or lanes within the right-of-way	Implementation ongoing with Parks, Forestry, and Recreation. To be integrated with future park on Olympic Garden Drive.	Medium – Improvement for local connectivity	

Phasing	Road Section	Potential EA Schedule	MCEA Schedule Description	Phasing Rationale	Priority	Phasing and Implementation Prerequisites
Short-term to long-term (incremental)	New public roads- Centrepoint Mall	A	Construction of local roads which are required as condition of approval on a site plan, consent, plan of subdivision or plan of condominium which will come into effect under the Planning Act prior to the construction of the road.	Potential for implementation through development applications that are expected in the short-term. Ultimate long-term implementation requires full redevelopment of Centrepoint Mall, and connection to Lariviere Road	High – Fine Grained Street network to support future Steeles Station node	Lariviere Road Extension to be implemented prior to connection to be a public road in the Centrepoint Mall area
Medium Term (5-10 years)	Silverview Drive (missing link sidewalk program)	A+	Smaller capital projects with minimal environmental impacts (e.g. construction of sidewalks or bicycle paths or lanes within the right-of-way	Part of a road maintenance plan		
Medium Term (5-10 years)	Cushendale Drive (missing links sidewalk program)	A+	Smaller capital projects with minimal environmental impacts (e.g. construction of sidewalks or bicycle paths or lanes within the right-of-way	Part of a road maintenance plan		
Medium Term (5-10 years)	Nipigon; Abitibi,	A+	Smaller capital projects with minimal environmental impacts	Part of a road maintenance plan		Twinning of sidewalks on each roadway

Phasing	Road Section	Potential EA Schedule	MCEA Schedule Description	Phasing Rationale	Priority	Phasing and Implementation Prerequisites
	Athabaska, Ontonabee		(e.g. construction of sidewalks or bicycle paths or lanes within the right-of-way			
Long Term (10+ years)	Dumont Street (Steeles to Centre)	A	Construction or removal of sidewalks or multi-purpose paths or cycling facilities within the existing or protected rights-of-way	Part of the capital program		
Long Term (10+ years)	Multi-Use Trail (Centre to Tobruk)	A+	New construction or removal of sidewalks, multi-purpose paths or cycling facilities outside of the existing right-of-way		Lower – Local improvement in neighbourhood area	City acquisition of required property
Long Term (10+ years)	Multi-Use Trail (Tobruk to Silverview)	A+	New construction or removal of sidewalks, multi-purpose paths or cycling facilities outside of the existing right-of-way		Lower – Local improvement in neighbourhood area	City acquisition of required property
Long Term (10+ years)	Finch Station-Active Transportation Link	A+	New construction or removal of sidewalks, multi-purpose paths or cycling facilities outside of the existing right-of-way	Finch Station parking area not expected to significantly change in function until after implementation of Yonge North Subway Extension	Medium – Significant improvement to neighbourhood connectivity	Co-ordination and agreement with Metrolinx and transit operators about modification of existing parking area

Phasing	Road Section	Potential EA Schedule	MCEA Schedule Description	Phasing Rationale	Priority	Phasing and Implementation Prerequisites
Long Term (10+ years)	Lariviere Road Extension and Cycle Tracks	A+	Reconstruction or widening where the reconstructed road or other linear paved facilities (e.g. HOV lanes will not be for the same purpose, use, capacity, or at the same location (e.g. additional motor vehicle lanes, continuous centre turn lane)	To be implemented when the future mid-rise intensification of the area to the east of the existing road occurs.	Higher – North-south corridor for all modes, to connect Beecroft with Steeles Avenue, and support future vision for Yonge Street	-Completion of Beecroft Extension (Finch Ave to Drewry Ave) Requires road widening through redevelopment along existing portion of Lariviere Road
Long Term (10+ years)	Drewry Ave/Cummer Ave Cycle tracks	A	Construction or removal of sidewalks or multi-purpose paths or cycling facilities within the existing or protected rights-of-way	Part of road maintenance plan through planned reconstruction		
Long Term (10+ years)	Hilda Ave/Talbot Rd Buffered Bike Lanes	A	Construction or removal of sidewalks or multi-purpose paths or cycling facilities within the existing or protected rights-of-way	Part of road maintenance plan through planned reconstruction		
Long Term (10+ years)	Multi-Use Trail (Fargo Ave to Drewry Avenue)	N/A		Due to existing walkway at Drewry Secondary School work with school to upgrade walkway to AODA standards as first priority.	Low – Existing connections can be made through adjacent park, however improved connection is desirable.	

Phasing	Road Section	Potential EA Schedule	MCEA Schedule Description	Phasing Rationale	Priority	Phasing and Implementation Prerequisites
Long Term (10+ years)	Multi-Use Trail (Deering Cresc to Averill Crescent)	N/A		To be implemented through future opportunities for park expansion	Lower – Local improvement in neighbourhood area	
Undetermined Timeframe	Yonge Street	C	Reconstruction or widening where the reconstructed road or other linear paved facilities (e.g. HOV lanes will not be for the same purpose, use, capacity or at the same location (e.g. additional motor vehicle lanes, continuous centre turn lane)	No timing has been identified for this project yet due to need for additional information and coordination with Metrolinx regarding the planned Yonge North Subway Extension project. City staff to identify implementation opportunities and timing through this ongoing coordination.	Higher – Key arterial road requiring reconstruction to support increase of active transportation mode share, safety improvements, connectivity improvements for the study area	Completion of Phase 1 Reimagining Yonge project from Avondale to Finch Hydro Corridor Trail Confirmation of construction plans and duration of Metrolinx Yonge North Subway Extension Project.

Table 7-2: Costing Estimate for of YSNTMP Projects (In 2021 $)

Phasing	Road Section	Type	Total Capital Cost	Total Capital + Property Costs - Low Estimate	Total Capital + Property Acquisition Costs - High Estimate
Short Term (0-5 years)	New N-S Road (Cummer to Wedgewood)	New Road with bike lanes	$1,593,600	$12,793,600	$15,193,600
	New N-S Road (Steeles to Madawaska)	New Road	$3,445,200	$37,045,200	$44,245,200
	New Public Roads-Centerpoint Mall (Hilda Ave to 'Mall Road A')	New Road	$2,398,000	$2,398,000	$2,398,000
		Traffic Signal	$531,200	$531,200	$531,200
	New Public Roads-Centerpoint Mall ('Mall Road A' - Steeles Ave to Yonge St)	New Road	$4,629,000	$4,629,000	$4,629,000
	New Public Roads-Centerpoint Mall ('Mall Road B' - Steeles Ave to east-west street)	New Road	$1,070,000	$1,070,000	$1,070,000
	New Public Roads-Centerpoint Mall ('Mall Road C' - Steeles Ave to Mall Road A)	New Road	$1,980,600	$1,980,600	$1,980,600
	New Public Roads-Centerpoint Mall (East-west street)	New Road	$2,777,400	$2,777,400	$2,777,400
	Multi-Use Trail (Averill Cresc to New Street - south link)	Off-Street Multi-Use Trail	$45,700	$45,700	$45,700
	Multi-Use Trail (Averill Cresc to New Street - middle link)	Off-Street Multi-Use Trail	$50,300	$50,300	$50,300
	Multi-Use Trail (Averill Cresc to New Street - north link)	Off-Street Multi-Use Trail	$45,700	$45,700	$45,700
Medium Term (5-10 years)	Tobruk Crescent (missing link sidewalk program)	Sidewalk - Both Sides	$42,200	$42,200	$42,200
	Silverview Drive (missing link sidewalk program)	Sidewalk - Both Sides	$269,900	$269,900	$269,900

	Cushendale Drive (missing links sidewalk program)	Sidewalk - Both Sides	$116,100	$116,100	$116,100
Long Term (10+ years)	Dumont Street (Steeles to Centre)	Bi-directional bike lanes	$2,348,100	$2,348,100	$2,348,100
		Traffic Signal(s)	$533,700	$533,700	$533,700
		Sidewalks - Both Sides	$384,200	$384,200	$384,200
	Multi-Use Trail (Centre to Tobruk)	Off-Street Multi-Use Trail	$143,300	$2,943,300	$5,243,300
	Multi-Use Trail (Tobruk to Silverview)	Off-Street Multi-Use Trail	$132,700	$2,932,700	$3,532,700
	Finch Station-Active Transportation Link	Off-Street Multi-Use Trail	$205,800	$1,605,800	$1,905,800
	Lariviere Road Extension and Cycle Tracks	New Road	$7,006,200	$8,406,200	$8,706,200
		Traffic Signals	$1,601,000	$1,601,000	$1,601,000
		Bi-directional bike lanes	$6,165,500	$6,165,500	$6,165,500
	Drewry Ave/Cummer Ave Cycle tracks	Bi-directional bike lanes	$3,991,800	$3,991,800	$3,991,800
	Hilda Ave/Talbot Rd Buffered Bike Lanes	Bi-directional bike lanes	$6,943,700	$6,943,700	$6,943,700
	Multi-Use Trail (Fargo Ave to Drewry Ave)	Off-Street Multi-Use Trail	$140,300	$140,300	$1,840,300
	Multi-Use Trail (Deering Cresc to Averill Cresc)	Off-Street Multi-Use Trail	$99,100	$5,699,100	$6,899,100
	Yonge Street	Road reconstruction	$16,650,300	$16,650,300	$16,650,300
		Traffic Signals	$1,067,300	$1,067,300	$1,067,300
		Total Costs	**$66,407,300**	**$125,207,300**	**$141,207,300**

7.3 MONITORING

Monitoring and reporting on the effectiveness of the Yonge Street North Transportation Master Plan is necessary to ensure that the planned initiatives are progressing well and align with the vision of this part of the City. Ongoing monitoring and assessment will evaluate travel behaviour and operations to help move the plan forward and adjust priorities as needed. As the transportation network and character of the area changes, and as new innovations and technologies are introduced, this plan must adapt its priorities and projects accordingly. The city will be monitoring road network operations and new development proposals are submitted to the city. Transportation impact studies, corridor studies, and a Transportation Monitoring Program will be used to evaluate and track changing patterns, growth, traffic conditions, and development.