

The Corporation of the City of  
Vaughan

# Portage Parkway Class Environmental Assessment

Portage Parkway Widening  
and Easterly Extension to  
West of Black Creek  
Environmental Study Report  
Part A

July 2016

**CIMA**  
Partners in excellence



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Vaughan

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## 0. Executive Summary

The City of Vaughan Transportation Master Plan (TMP), *A New Path* identified Portage Parkway Widening and Easterly Extension to Creditstone Road as a strategic improvement and key element in support of the Vaughan Metropolitan Centre (VMC) and recommends completion of the Municipal Class Environmental Assessment.

This Environmental Assessment (EA) Study advances implementation of the Portage Parkway Widening and Easterly Extension to Creditstone Road in accordance with Schedule C of the Municipal Class Environmental Assessment (October 2000, as amended in 2007, 2011 and 2015).

The City of Vaughan retained CIMA+ in May 2015 to complete an EA study for the Portage Parkway Widening from Applewood Crescent to Jane Street (Part A) and Portage Parkway Extension from Jane Street to Creditstone Road (Part B) as two interrelated parts; the project limits of which were subject to refinement through the study process.

The study provides for comprehensive planning and design and pro-actively facilitates the logical and orderly staged implementation and construction of two road projects in the Portage Parkway corridor in step with the transformation of the VMC – the City’s downtown. More specifically, the Portage Parkway Widening and Easterly Extension to West of Black Creek (Part A) as more broadly part of the emerging street network, facilitates and supports imminent and emerging projects and initiatives in the vicinity of the Mobility Hub at the VMC Subway station and York Region Transit Terminal - capitalizing on significant regional and local transit infrastructure. The Portage Parkway Extension from West of Black Creek to Creditstone Road (Part B) project necessitating the crossing of the Black Creek channel is part of the anticipated relative longer term transformation of the VMC west of the Black Creek.

**Accordingly, this Environmental Study Report documents the planning and design process, in accordance with the Municipal Class EA for:**

**Portage Parkway Widening and Easterly Extension to West of Black Creek.** Part A was initially defined as the widening and improvements from Applewood Crescent to Jane Street. As the study progressed, the project limits were extended easterly to west of Black Creek in order to facilitate the required staged reconstruction of the extension/east leg of the Jane Street intersection and easterly extension of a local road to an interim terminus at cul-de-sac west of Black Creek.

**Documentation with respect to Part B is contained in a separate Environmental Study Report for Portage Parkway Extension from West of the Black Creek to Creditstone Road.**

### **Background and Study Context**

The City’s TMP, *A New Path* (2013), VMC Secondary Plan and supporting focused area transportation plans and studies identified the Portage Parkway Widening and Easterly Extension to Creditstone Road as a strategic network improvement to support development within the VMC.

Portage Parkway is an east-west road from its westerly connection at Chrislea Road and is currently built to a 4-lane urban cross section (2 lanes in each direction) from Applewood Crescent to Edgeley Boulevard. The current right-of-way through this section is approximately 26 metres. East of Edgeley Boulevard to Jane Street, Portage Parkway is currently built to 2 lane urban cross section to the

terminus at the signalized intersection with Jane Street. The right-of-way through this section is approximately 23 metres. Portage Parkway west to Chrislea Road features an overpass structure crossing Highway 400; a strategic connection in the City's transportation network and system that opened in late 2010.

The VMC Secondary Plan and focused area supporting plans and studies, in the context of broader area, provided a robust planning and design framework for advancing and completing the EA (planning and design) study process. These principally included:

- + VMC Transportation Plan (June 2012) and VMC and Surrounding Areas Transportation Study (March 2013)
- + Municipal Servicing Class EA Master Plan (November 2012)
- + Black Creek Stormwater Optimization Study Municipal Class EA Master Plan (February 2012) and ongoing Black Creek Renewal EA
- + VMC Streetscape and Open Space Plan (November 2015), City-wide Streetscape Implementation Manual and Financial Strategy (November 2014) and Design Criteria and Standard Drawing

The VMC Secondary Plan provides the following broader transportation planning and policy context for advancing and completing the planning and design of Portage Parkway:

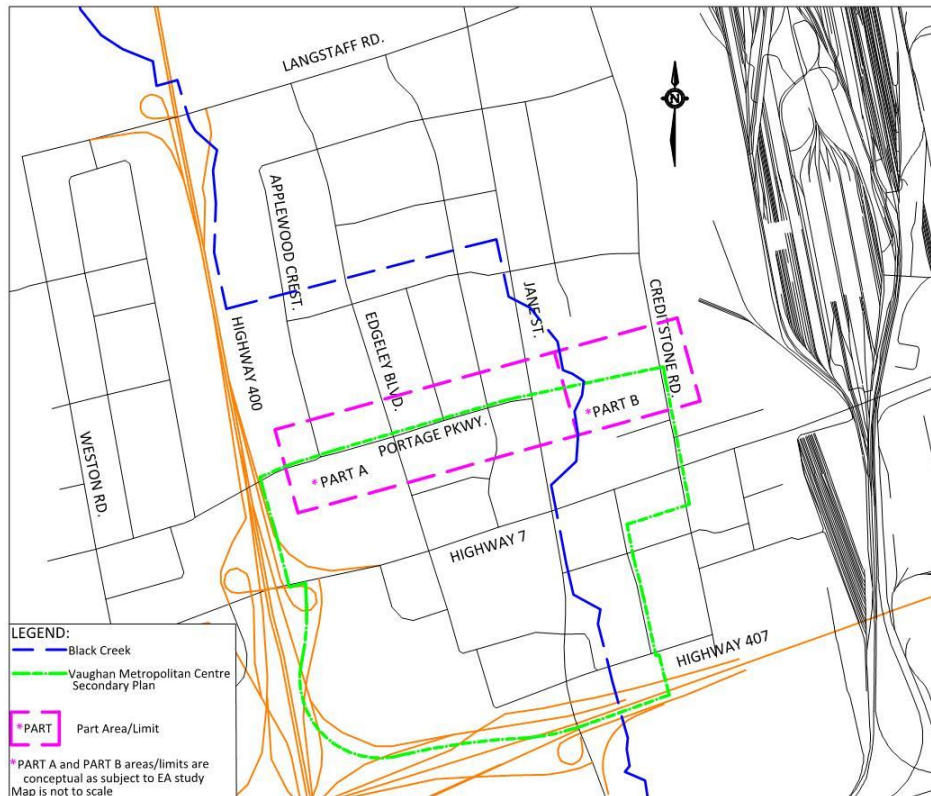
- + Encourage the use of Portage Parkway for through movements linking to Highway 400.
- + Support the extent of the right-of-way for the Spadina Subway Line to Portage Parkway to protect for future subway extension beyond the VMC.
- + Link Creditstone Road to Portage Parkway and link both roads to Highway 7 and Jane Street to establish a bypass (i.e., Creditstone-Portage-Applewood Bypass) to assist with mitigating through movements on Highway 7 and Jane Street. This bypass would require the southerly extension of Applewood Crescent from Portage Parkway.
- + Cooperate with York Region to implement rapid transit services on Jane Street.
- + Acquire right-of-way for an extension of Portage Parkway from Jane Street to Creditstone Road.

### **Study Area**

The figure below illustrates the study area for Part A and Part B. The total distance of the study area corridor is approximately 1.5 km. As the project progressed, it became clear that Part A widening had implications immediately east of Jane Street because of an existing driveway on the east side of the Jane Street/Portage Parkway intersection that would have to be relocated. Therefore, both Parts A and B considered implications of the alignment immediately east of Jane Street.

The EA study and recommended Preliminary Preferred Design is supported by a multi-disciplinary and comprehensive technical review and study of transportation, natural, socio-economic and built environment of the area corridor.





Study Area for Part A and Part B

### Class EA Process

Municipal projects that affect the purpose, capacity or function of a roadway, or propose new roadways, are subject to the Municipal Engineers Association *Municipal Class Environmental Assessment* (October 2000, as amended in 2007, 2011 and 2015).

The TMP *A New Path* (Appendix I), having addressed Phases 1 and 2, recommended completing the planning and design process in accordance with the Municipal Class EA. This EA study revisits Phases 1 and 2 and completes Phases 3 and 4 for the Portage Parkway Widening and Easterly Extension to West of Black Creek as a Schedule C project under the Municipal Class EA. Schedule C projects must follow Phases 1 through 5 of the Class EA process:

- Phase 1** Identify the problem or opportunity.
- Phase 2** Identify alternative solutions to address the problem or opportunity.
- Phase 3** Examine alternative methods of implementing the preferred solution.
- Phase 4** Document the rationale for the Preferred Solution and Design Concept, and the planning, design and consultation process in an Environmental Study Report for public and agency review.
- Phase 5** Complete contract drawings and documents, and proceed to construction, operation and environmental monitoring.

Accordingly, separate Environmental Study Reports for Part A and interrelated Part B will be prepared and available for the minimum 30 calendar days upon study completion for public and agency review. The Environmental Study Reports for Part A and Part B will document Phases 1 through 4 of the Class EA study.

### Consultation Plan

An extensive Consultation Plan was implemented to ensure meaningful consultation with internal and external stakeholders and reviewing agencies. The Consultation Plan, organized around study phases, included public information centres, stakeholder engagement and participation of technical review/regulatory agencies at study milestones.

The Consultation Plan was led by the Portage Parkway EA project team comprised of CIMA+ and City staff. The City's website, printed media and correspondence provided information on the study's progress and notice of key study milestones.

A mailing list was developed to notify potentially interested parties of opportunities for review and comment. Four notices to the public and internal and external stakeholders were undertaken:

- + Notice of Study Commencement, June 18 and 25, 2015
- + Notice of Public Information Centre No. 1, November 12 and 19, 2015
- + Notice of Public Information Centre No. 2, February 25 and March 3, 2016
- + Notice of Study Completion. Pending, 2016

To inform the general public of the study, each of the notices were advertised in two separate issues of the Vaughan Citizen and The Thornhill Liberal, and mailed to approximately 1,500 stakeholders and 93 agency representatives on the study mailing list. The Notices were also posted to the City's webpage at:

[http://www.vaughan.ca/projects/projects\\_and\\_studies/environmental\\_assessment\\_studies/Pages/Class-EA-Study-for-Portage-Parkway.aspx](http://www.vaughan.ca/projects/projects_and_studies/environmental_assessment_studies/Pages/Class-EA-Study-for-Portage-Parkway.aspx).

The Public Information Centres (PICs) were held at the Homewood Suites Hotel near Portage Parkway on:

- + November 25, 2015 from 5:00 pm to 8:00 pm
  - This PIC presented findings from Phases 1 and 2 of the project and asked for public input on the findings – 19 members of the public attended.
- + March 9, 2016 from 5:00 pm to 8:00 pm
  - This PIC presented findings from Phase 3 of the project, presenting alternative designs and the preliminary preferred design, and requested public input on the findings - 14 members of the public attended.

Two advisory groups were formed and met three (3) times to provide input to the study following commencement and in advance of each PIC. Invitations to participate on the study's Technical Agencies Committee were mailed to approximately 93 agency representatives. Invitations to participate on the study's Stakeholders Group were mailed to approximately 201 property owners

within 200 m north and south of Portage Parkway within the study limits.

- + A Stakeholders Group was established from interested owners of property within 200 m of the Portage Parkway study corridor, including representatives of active and proposed development in the area; and
- + A Technical Agencies Committee was established from interested representatives of regulatory and/or approving agencies on the study mailing list. Separate meetings were held with approving authorities as required to review project impacts, mitigation measures and approval requirements.

One-on-one meetings were held with several land owners whose property was directly impacted by the proposed road improvements so that their concerns were considered during the evaluation of options and mitigation measures developed as appropriate. An Open House further reaching out and engaging affected property owners along the corridor was held on May 5, 2016.

The Ministry of Aboriginal Affairs advised the following First Nations may have existing or asserted rights or claims in Ontario's land claims process or litigation which may be affected by the project:

- + Chippewas of Georgina Island
- + Chippewas of Rama
- + Beausoleil First Nation
- + Mississaugas of the New Credit First Nation

### **Phase 1 – Problem and Opportunity**

The EA study, building on the City's TMP and VMC Secondary Plan, corroborates the need to improve and design Portage Parkway as a multi-modal street.

#### **Needs and Justification**

A broader comprehensive traffic analysis was undertaken of the corridor that validates the need to widen Portage Parkway to 4 lanes from Applewood Crescent to Creditstone Road as a major collector road. The following highlights technical findings with respect to roadway performance and operations including under a "Do-Nothing" planning scenario:

- + Under existing traffic conditions, most intersections and turning movements operate satisfactorily during both the AM and PM peak hours;
- + Under future 2031 traffic conditions with a "Do Nothing" scenario (e.g. no widening on Portage Parkway), traffic operations along the corridor is expected to severely deteriorate, resulting in high levels of congestion; and
- + Under future 2031 traffic conditions with the proposed widening, all intersections and turning movements are expected to operate satisfactorily during the AM peak hour.

#### **Problem and Opportunity Statement**

The following Problem and Opportunity Statement was developed and used to guide the remainder of the planning process:

*Transportation improvements are needed to support growth and to provide alternative truck routes to Highway 7 within the VMC.*

*Improving Portage Parkway from Applewood Crescent to Jane Street is an opportunity to:*

- + Serve the VMC and surrounding employment area,
- + Create an alternative route for trucks to bypass the VMC core,
- + Improve connections to local and regional infrastructure,
- + Support transit-oriented nodes and corridors, and
- + Enhance transit ridership, cycling and walking.

*The extension of Portage Parkway from Jane Street to Creditstone Road is an opportunity to:*

- + Provide a continuous route for all modes of transportation from Weston Road crossing Highway 400 and the Black Creek channel to Creditstone Road, and
- + Alleviate traffic congestion on Highway 7 within the VMC.

## **Phase 2 – Alternative Planning Solutions**

Six (6) alternative planning solutions were identified and evaluated as part of Phase 1 and 2 of the Class EA process:

### **Do Nothing**

This solution would leave Portage Parkway unmodified in an 'as is' state.

### **Travel Demand Management Initiatives**

Travel demand management initiatives involve strategies and policies used to reduce travel demand or redistribute the demand spatially or temporally.

### **Alternative Modes of Transportation**

Promoting and facilitating the use of alternative modes of transportation, such as transit and cycling, can reduce the demand on a roadway.

### **Localized Intersection and Operational Improvements**

Operational improvements, such as the retiming of traffic signals and installation of turning lanes, can improve the overall efficiency of a roadway (i.e. maximize throughput) and the surrounding network.

### **Widening Portage Parkway from Applewood Crescent to Jane Street**

This solution would increase the capacity of the roadway between Applewood Crescent and Jane Street.

### **Extending Portage Parkway from Jane Street to Creditstone Road**

This solution addresses the local area network discontinuity by extending Portage Parkway from Jane Street to Creditstone Road.

An advantage/disadvantage evaluation process was used to compare the alternatives. Two (2) of the recommended solutions have previously been recommended as part of the TMP and are assumed to continue, which are:



- + Travel Demand Management Initiatives – Identified in the TMP and will be implemented by the City as a separate strategy.
- + Alternative Modes of Transportation – Identified in the TMP, including the provision for continuous sidewalks, cycling systems, connectivity of the subway extension to Highway 7, and rapid transit of Jane Street.

The other three (3) recommended solutions are:

- + Localized Intersection and Operational Improvements;
- + Widening Portage Parkway from Applewood Crescent to Jane Street; and
- + Extending Portage Parkway from Jane Street to Creditstone Road.

The alternative planning solutions and evaluation were presented to the Advisory Groups (Technical and Stakeholder) and also at the first PIC. Minor comments were received during this consultation process, mostly concerning requests to be kept up to date as the project proceeds.

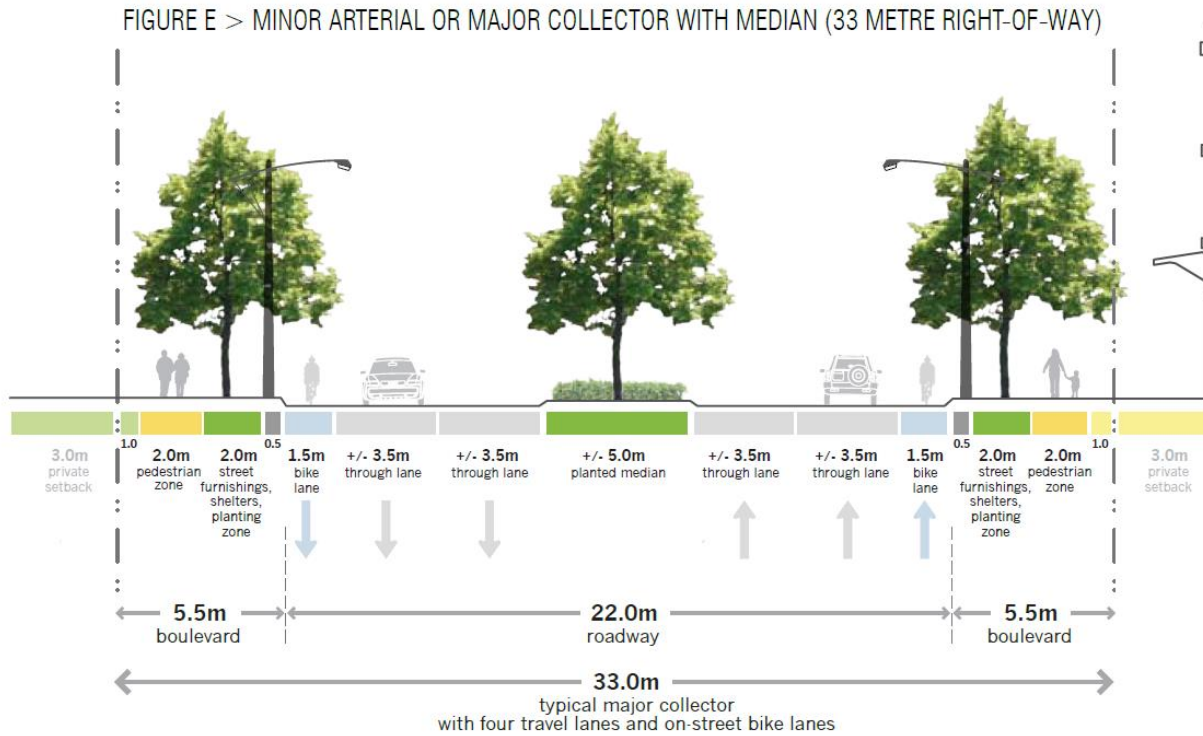
### **Phase 3 – Alternative Designs**

Development of the design concepts and options has to consider the three-dimensions of a road corridor; i.e. the cross-section, the horizontal alignment and vertical profile.

#### Cross-Section

The VMC Secondary Plan and supporting VMC Streetscape and Open Space Plan in the context of the City's broader City-wide Streetscape Implementation Manual and Financial Strategy and Design Criteria and Standard Drawings provided the planning and design context for the exploration of alternative typical cross-sections.

More specifically, the beginning point for development of a typical cross-section was the cross-section from the VMC Secondary Plan (see figure below). The symmetrical cross-section accommodated four 3.5m travel lanes, two 1.5m on-street bicycle lanes and 5.5m boulevards within a 33 metre right-of-way.



### Typical Cross-Section

Given the high truck volumes expected to continue on this roadway it was decided to provide extra protection for cyclists by changing the on-street bicycle lanes to an off-roadway bicycle track adjacent to a roll-over curb. The refined cross-section is shown in the figure below: A reduced right-of-way was adopted for the crossing of Black Creek, wherein the planted boulevard was omitted and the median reduced.

### Technical and Environmental Criteria

Each of the alternative design options was assessed against the following technical and environmental criteria:

## Technical Criteria

### *Economic*

- + Capital costs

### *Implementation*

- + Conformity with regulatory framework.
- + Construction staging and planning.
- + Impacts on existing municipal services and utilities.

### *Infrastructure Planning*

- + Improved road safety.
- + Opportunities for other travel modes (walking, cycling, and public transit).
- + Improving road capacity and/or traffic flow.
- + Conformity with official/secondary plans and transportation master plans.

## Environmental Criteria

### *Natural*

- + Impacts on avian and wildlife.
- + Encroachment onto natural areas
- + Impacts on species at risk.
- + Impacts on aquatic and watercourses.
- + Impacts on vegetation.

### *Cultural/Social*

- + Impacts on archaeology.
- + Impacts on built heritage and cultural landscapes.
- + Air quality.
- + Compatibility with emergency services requirements.
- + Property and parking access impacts.
- + Noise impacts (post construction).

## Part A - Applewood Crescent to Jane Street Widening Alternatives

Horizontal alignment constraints were presented by the existing stable built form on the north side (including parking) and consideration of the emerging transformation of the VMC on the south side; these considerations led to five alternative design concepts (including Do-Nothing) being developed with the horizontal alignment varying for each option.

As previously noted, while Part A was initially identified as being west of Jane Street, as the EA study progressed, it became clear that Part A widening had implications immediately east of Jane Street because of an existing off-set driveway on the east side of the Jane Street/Portage Parkway intersection that would have to be relocated. Therefore options were developed that considered both Parts A and B.

Four (4) design options to widen and improve Portage Parkway from Applewood Crescent to Jane Street were developed and carried forward for evaluation. The first option aligns the “widening equally on both sides”; once the business impacts (mainly loss of parking on the north side) of this option were apparent, further options were developed that varied the alignment to the south and north giving due consideration to constraints on both the north and south sides:

### **‘Do Nothing’ Option**

- + No widening of Portage Parkway from Applewood Crescent to Jane Street – this was used for comparative purposes in order to measure the net impacts.

### **Option 1: Widen Equally on Both Sides**

- + Widening equally about the centreline removes a row of parking from all properties on the North side.

**Option 2: Widen to the South with No Impact on North Side**

- + Widening to the South avoids **all** North side parking impacts, but adversely impacts parking and loading/unloading operations on the South side.

**Option 3: Widen to the South with Impact on North Side**

- + Holding the right-of-way at its current position on the North side adversely impacts parking within the right-of-way, as well as parking and loading/unloading operations on the South side.

**Option 4: Hold Right-of-Way on Majority of Parking Curb Lines (Both Sides) - *preferred***

- + Holding the right-of-way to the edge of the curb line for parking on the North and South sides minimizes property impacts on the North side (affects one North-side property which is constructed partly in the City's right-of-way).

Widening the right-of-way asymmetrically to the south - holding the future right-of-way on the majority of parking curb lines on the north and south sides (Option 4) - emerged as the preferred design option carried forward in consultation with stakeholders, technical agencies and the public.

Key features of the preferred design are as follows:

- + Minimizes impacts to existing on-site private parking on the north side;
- + The option is compatible with the preferred option for Part B;
- + Provides flexibility for a logical and orderly staging of the widening and improvements to Portage Parkway facilitating and in step with imminent and nearer term transformation of the VMC; and
- + Provides for seamlessly staging and advancing near term implementation of improvements in coordination with and in the context of the VMC planned street network.

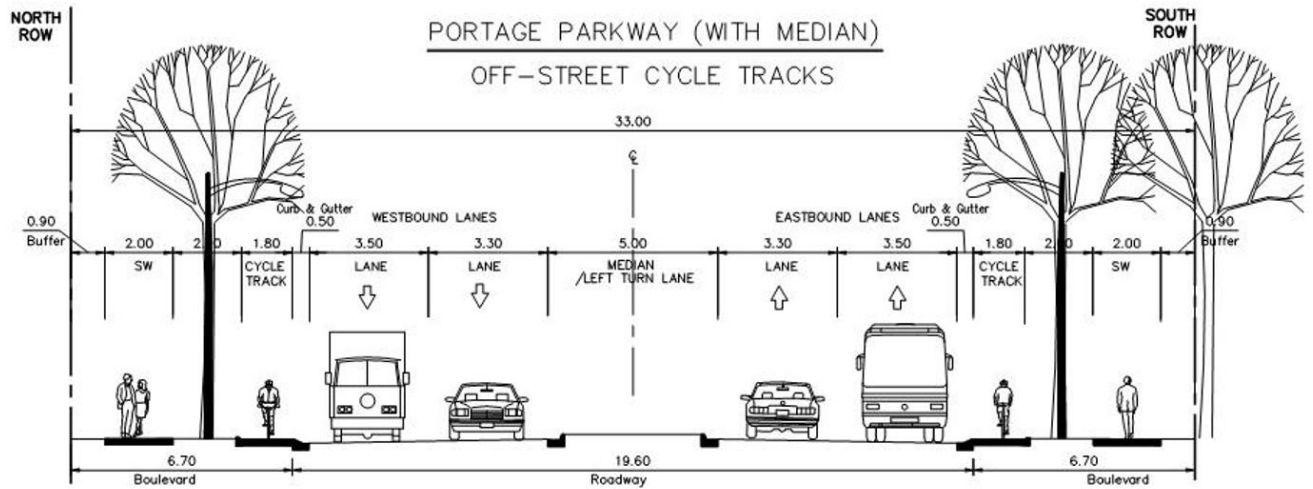
Meetings were held with stakeholders and agencies as well as with property owners where there was a significant property impact concern. A second Public Information Centre was also held to review the design options. There was general support for the preferred design options and some minor modifications developed to further minimize impacts wherever possible.

**Preliminary Preferred Design**

Based on the evaluation of alternative design concepts and consultation with the affected property owners, interested public and agencies, the recommended Preliminary Preferred Design (see **Figure 21**) is to:

- + Widen Portage Parkway from Applewood Crescent to Jane Street to 33 metre right-of-way. This preferred design minimizes impacts, improves access to several driveways through dedicated left turns, increases capacity of VMC sub-area network, improves level of service on Jane Street, and improves accommodation of active transportation.

The typical cross section for the preferred design is shown in the figure below.



**Typical Cross Section**

A 1.8 m wide cycle track is accommodated on both sides of the road and separated from the travel lanes by a roll-over curb. A 2.0 m sidewalk on each side is proposed just inside the property buffer. The south side (adjacent to the VMC) has proposed two lines of trees, one of which is on the adjacent development.

The existing vertical alignment is relatively flat. One section has a grade of less than 0.5%. The proposed vertical alignment is improved with a minimum grading of 0.5% for the entire study area.

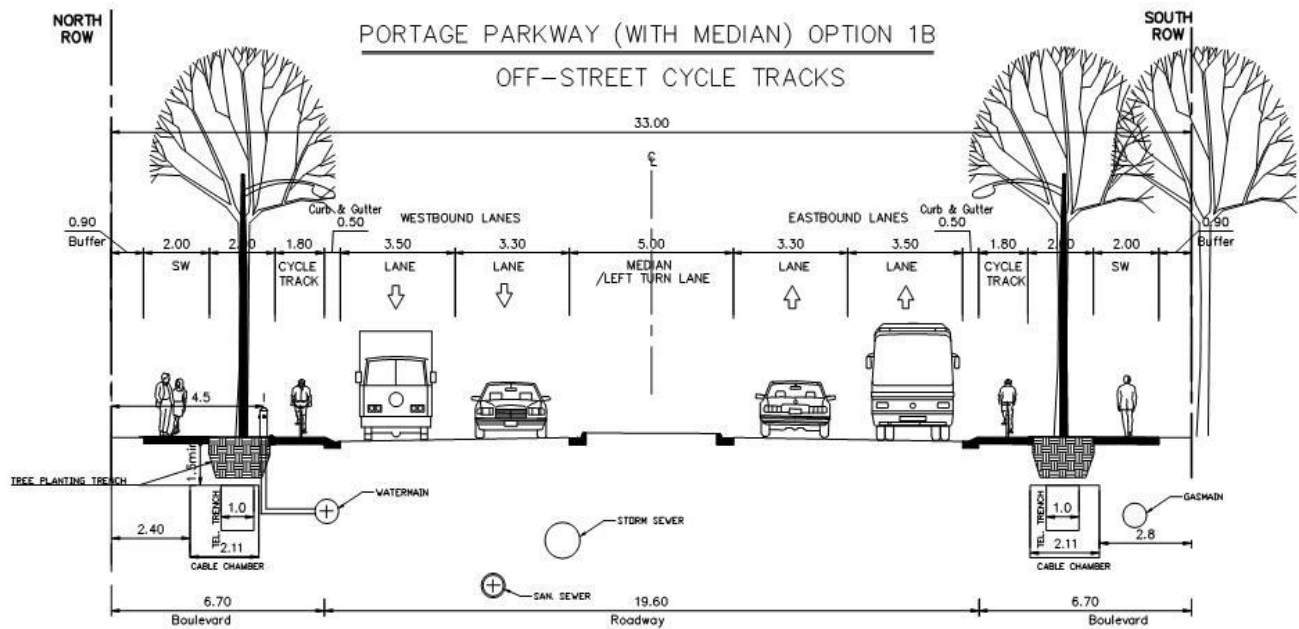
### **Municipal Infrastructure/Utilities**

The recommended Preliminary Preferred Design provides for the integrated and coordinated implementation of planned and approved municipal services (water and sanitary) as per the VMC Municipal Class EA Master Plan.

A number of utilities will require relocation to accommodate the recommended roadway design, such as:

- + Underground Bell cable, Rogers buried fibre, Enbridge pipe, All Stream underground ducts and cable, and PowerStream underground ducts and cable.

Based on the City Standards, the proposed locations of the relocated utilities are shown in the figure below.



Utility Locations

### Traffic Signals and Illumination

The EA study and recommended Preliminary Preferred Design provides for staging improvements to the existing signalized intersections at Applewood Crescent and Edgeley Boulevard and implementation of a new signalized intersection at and in coordination with the realignment of Millway Avenue.

### Implementation Plan

The EA study recommends advancing staging improvements in step with the transformation of the VMC and in coordination with the VMC planned street network. The key components of the Implementation Plan follow:

- + Advance detailed design and engineering for the reconstruction of Portage Parkway from Applewood Crescent to Jane Street;
- + Facilitate near term improvements and extension east of Jane Street to an interim terminus at cul-de-sac west of Black Creek;
- + Program and allocate funding accordingly for Part A dovetailing (where possible) with the ongoing and emerging detailed design of intersecting north-south VMC streets; and
- + Obtain approvals (permits etc.) and acquire property (where necessary) in a timely manner.

### Capital Cost Estimate

The estimated total project cost associated with the proposed improvements, including engineering, construction, utility relocations and other project costs is approximately \$9,200,000 for Part A, widening Portage Parkway from Applewood Crescent to West of Black Creek.

### ***Property Requirements***

Implementation of the recommended Preliminary Preferred Design for the widening, extension and improvements from Applewood Crescent to Jane Street will require lands from all properties on the north and south sides of Portage Parkway of up to 7.7 m from the south and 3.4 m from the north.

Traffic disruption will be minimized as much as possible during construction. During peak periods the City will attempt to keep one lane open per direction on Portage Parkway.

Every effort will be made to maintain driveway access during the widening and extension construction period. Driveways may be temporarily closed for short periods – if there are no alternative driveways available, half driveway width closures may be implemented temporarily.

### **Phase 4 – Notice of Completion**

The Environmental Study Report will be placed on the public record for a minimum 30 calendar days. The Notice of Completion will announce where the report can be reviewed and will include contact information and a date for receiving comments. The Notice will further explain the process for resolving concerns. The public must contact the City of Vaughan within the 30-day review period to discuss and resolve any outstanding issues. If the issues cannot be resolved, the public may request for the Minister of Environment and Climate Change to order the City to comply with Part II of the *Environmental Assessment Act*, which addresses Individual Environmental Assessments. Part II Order requests must be made to the Minister of Environment and Climate Change within the review period. Contact information for the Minister will be included in the Notice.

# 1. Introduction

## 1.1 Purpose

The City of Vaughan retained CIMA+ in May 2015 to complete an Environmental Assessment (EA) study for the Portage Parkway Widening and Easterly Extension to Creditstone Road, a strategic municipal network improvement facilitating development of the Vaughan Metropolitan Centre (VMC).

The study advances the planning and design process for Portage Parkway Widening and Easterly Extension to Creditstone Road in accordance with Schedule C of the *Municipal Class Environmental Assessment* (October 2000, as amended in 2007, 2011 and 2015), in two parts, the project limits of which were subject to refinement through the study process.

The study provides for comprehensive planning and design and pro-actively facilitates the logical and orderly staged implementation and construction of two road projects in the Portage Parkway corridor in step with the transformation of the VMC – the City’s downtown. More specifically, the Portage Parkway Widening and Easterly Extension to West of Black Creek (Part A) as more broadly part of the emerging street network, facilitates and supports imminent and emerging projects and initiatives in the vicinity of the Mobility Hub at the VMC Subway station and York Region Transit Terminal - capitalizing on significant regional and local transit infrastructure. The Portage Parkway Extension from West of Black Creek to Creditstone Road (Part B) project necessitating the crossing of the Black Creek channel is part of the anticipated relative longer term transformation of the VMC west of the Black Creek.

**Accordingly, this Environmental Study Report documents the planning and design process, in accordance with the Municipal Class EA for:**

### **Part A: Portage Parkway Widening from Applewood Crescent to West of the Black Creek<sup>1</sup>**

- + Part A is for the widening of Portage Parkway from two to four lanes from Applewood Crescent to west of the Black Creek.

Documentation with respect to Part B is contained in a separate Environmental Study Report for Portage Parkway from West of Black Creek to Creditstone Road.

## 1.2 Study Area and Project Location

**Figure 1** illustrates the study area corridor for Part A and Part B. The total distance of the study area corridor generally from Applewood Crescent to Creditstone Road is approximately 1.5 km. Part A was initially identified from Applewood Crescent to Jane Street. As the project progressed, it became clear that Part A widening had implications immediately east of Jane Street because of an existing driveway on the east side of the Jane Street/Portage Parkway intersection that would have to be relocated. Therefore, both Parts A and B considered implications of the alignment immediately east of Jane Street.

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<sup>1</sup> As the study progressed, the study area for Part A was extended easterly in order to accommodate the required reconstruction of the east leg of the Jane Street intersection and staging an interim terminus west of the Black Creek



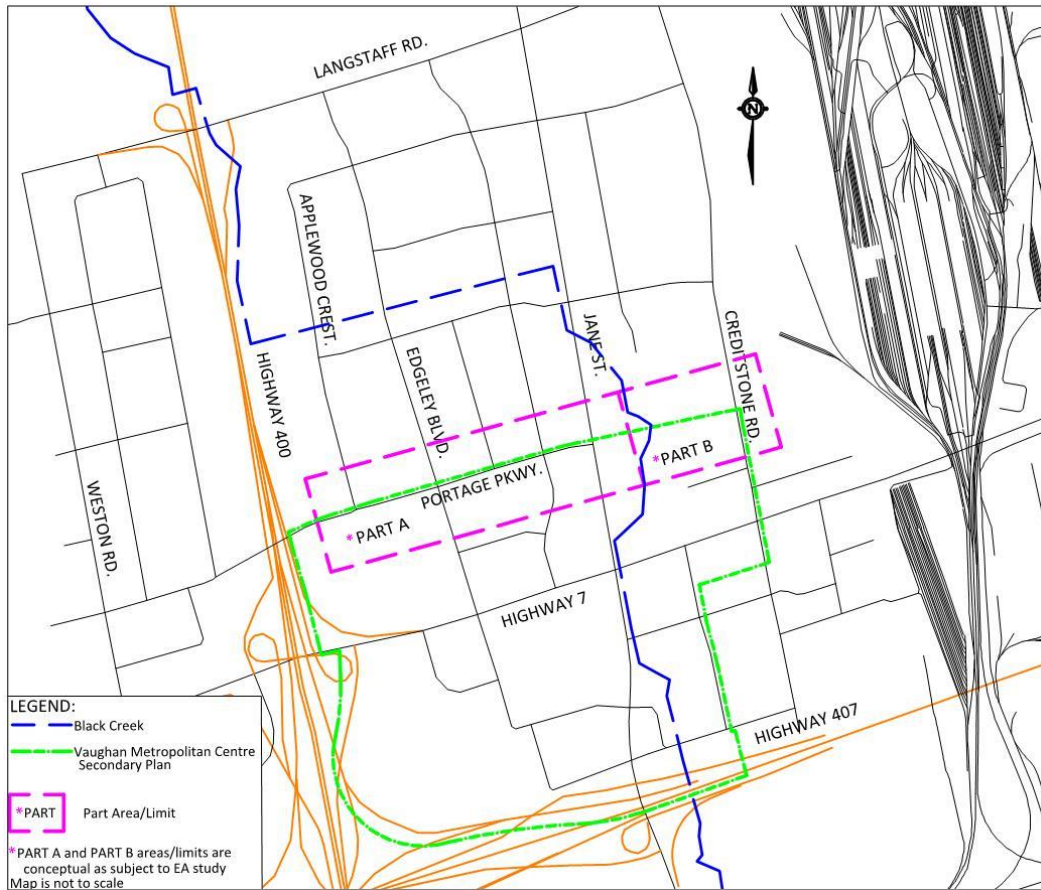


Figure 1: Study Area for Part A and Part B

### 1.3 Class EA Process

Municipal projects that affect the purpose, capacity or function of a roadway, or propose new roadways, are subject to the Municipal Engineers Association *Municipal Class Environmental Assessment* (October 2000, as amended in 2007, 2011 and 2015). The Municipal Class EA is a planning and design process for transportation/transit and water/wastewater infrastructure projects which have a predictable range of impacts that can be mitigated. The Municipal Class EA process is approved by the Ministry of Environment and Climate Change to meet the requirements of the *Environmental Assessment Act* (Government of Ontario, 2010).

Based on their potential range of impacts, projects are classified under the Municipal Class EA by Schedules:

**Schedule A** Activities have minimal environmental<sup>2</sup> effects. Projects are pre-approved.

<sup>2</sup> The EA Act defines “Environment” as “(a) air, land or water, (b) plant and animal life, including human life, (c) the social, economic and cultural conditions that influence the life of humans, or a community, (d) any building, structure, machine or other device or thing made by humans, (e) any solid, liquid, gas, odour, heat, sound, vibration or radiation resulting directly or indirectly from human activities, or (f) any part or combination of the foregoing and the interrelationships between any two or more of them, in or of Ontario.”

**Schedule A+** Activities have minimal environmental effects. Projects are pre-approved so long as the public is advised prior to implementation.

**Schedule B** Activities have some adverse environmental effects. Projects typically involve improvements and minor expansions to existing facilities. These projects proceed through a screening process (Phases 1 and 2 of the Class EA), including consultation with the potentially affected public.

**Schedule C** Activities have the potential for significant environmental effects. Projects typically involve the construction of new facilities and major expansions to existing facilities. These projects proceed through the full Class EA planning and design process (Phases 1 through 5).

In particular, road widening or extension with an estimated construction cost of \$2.3M or more is classified as a **Schedule C** project under the Municipal Class EA. As noted above, Schedule C projects must follow Phases 1 through 5 of the Class EA process:

**Phase 1** Identify the problem or opportunity.

**Phase 2** Identify alternative solutions to address the problem or opportunity.

This Phase will identify and assess the positive and negative effects of alternative solutions, taking into account the natural, social, cultural, and economic environment and input from agencies and the public.

**Phase 3** Examine alternative methods of implementing the preferred solution.

This Phase will identify and assess the positive and negative effects of alternative design concepts for the Preferred Solution, taking into account the natural, social, cultural, and economic environment and input from agencies and the public.

**Phase 4** Document the rationale for the Preferred Solution and Design Concept, and the planning, design and consultation process in an Environmental Study Report for public and agency review.

The Environmental Study Report is placed on the public record for at least 30 calendar days. Should the City not be able to resolve issues raised by the public or agencies during this review period, the public and agencies have a right to request the Minister of Environment and Climate Change to order the City of Vaughan to comply with Part II of the EA Act, which addresses Individual EAs. If no requests for a Part II Order are received during the review period, the project will proceed to Phase 5 for implementation.

**Phase 5** Complete contract drawings and documents, and proceed to construction, operation and environmental monitoring.

The City's Transportation Master Plan having addressed Phases 1 and 2 of the Municipal Class EA process, established the need and justification for widening Portage Parkway from Applewood Crescent to Jane Street and extending Portage Parkway easterly from Jane Street across the Black Creek channel to Creditstone Road. The Transportation Master Plan (2013) recommended completion

of Phases 3 and 4 of the Class EA process for the proposed improvements and extension to Portage Parkway. This EA study revisits Phases 1 and 2 and concurrently completes Phases 3 and 4 for **Portage Parkway Widening and Easterly Extension to West of Black Creek (Part A)** and Portage Parkway Extension from West of Black Creek to Creditstone Road (Part B) as Schedule C projects in accordance with the Municipal Class EA.

Accordingly, separate Environmental Study Reports for Part A and interrelated Part B will be prepared and available for at least 30 calendar days upon study completion for public and agency review. **This Environmental Study Report documents Phases 1 through 4 of the Class EA study for Portage Parkway Widening and Easterly Extension to West of Black Creek (Part A).**

## 1.4 Consultation Plan

An extensive Consultation Plan was implemented to ensure meaningful consultation with internal and external stakeholders as well as reviewing agencies. The Consultation Plan, organized around study phases, included public information centres, stakeholder engagement and participation of technical review/regulatory agencies at study milestones.

The Consultation Plan was led by the Portage Parkway EA project team comprised of CIMA+ and the City of Vaughan staff. The City's website and printed media provided information regarding the study's progress, including notices of key study milestones.

The Plan identified stakeholders and reviewing agencies based on a precursory review of study area characteristics and potential impacts of the project. A mailing list was developed to notify potentially interested parties of opportunities for review and comment. The key stakeholders included:

- + 407 Express Toll Route (ETR)
- + Canadian Environmental Assessment Agency
- + Canadian National (CN) Railway
- + First Nations and Metis Communities: Mississaugas of Scugog Island, The Chiefs of Ontario, The Metis Nation of Ontario, Chippewas of Georgina Island, Beausoleil First Nation (Christian Island), Chippewas of Rama, and Mississaugas of the New Credit First Nation
- + Metrolinx
- + Ministry of Natural Resources and Forestry
- + Ministry of the Environment and Climate Change
- + Ministry of Tourism, Culture and Sport
- + Ministry of Transportation
- + Tenants and/or Property Owners
- + Toronto and Region Conservation Authority
- + Toronto Transit Commission (Toronto-York Spadina Subway Extension)
- + Utilities (e.g., Powerstream)
- + York Catholic District School Board

- + York Region
- + York Region District School Board
- + York Region Rapid Transit Corporation (VivaNext)

Further information on consultation is found in **Section 6**. The final mailing list of reviewing agencies is provided in **Appendix B**. The final mailing list of land owners is not provided to respect the *Municipal Freedom of Information and Protection of Privacy Act* (Government of Ontario, 2016).

To inform the general public of the study, each of the following notices were advertised by the City of Vaughan in two separate issues of the *Vaughan Citizen* and *The Thornhill Liberal*, and mailed by CIMA+ to approximately 1,500 stakeholders and 93 agency representatives on the study mailing list:

- + Notice of Study Commencement,
- + Notice of Public Information Centre No. 1,
- + Notice of Public Information Centre No. 2, and
- + Notice of Study Completion.

The above notices were also posted to the City's webpage at:

[http://www.vaughan.ca/projects/projects\\_and\\_studies/environmental\\_assessment\\_studies/Pages/Class-EA-Study-for-Portage-Parkway.aspx](http://www.vaughan.ca/projects/projects_and_studies/environmental_assessment_studies/Pages/Class-EA-Study-for-Portage-Parkway.aspx). Details regarding the timing and content of each notice are provided in relevant sections of this report. Copies of correspondence in response to each notice are included in **Appendix B**.

To gather public input on the study, two Public Information Centres were held toward the end of Phase 2 and Phase 3 of the Class EA study.

Two advisory groups were formed to provide input to the study following commencement and in advance of each Public Information Centre.

A Stakeholders Group was established from interested owners of property within 200m of the Portage Parkway study corridor, including representatives of active and proposed development in the area. Additionally, individual meetings were held with several land owners whose property was directly impacted by the proposed road improvements. These meetings addressed the owners' concerns which were considered during the evaluation of solutions and mitigation measures.

A Technical Agencies Committee was established from interested representatives of regulatory and/or approving agencies on the study mailing list. Separate meetings were held with approving authorities as required to review project impacts, mitigation measures and approval requirements.

Meetings with agencies, stakeholders and the public are summarized in relevant sections of this report. Corresponding meeting notes and copies of correspondence are included in **Appendix B**.

## 1.5 Study Team

**Table 1** lists the lead Professionals and their roles for this study.

**Table 1: Study Team**

| Lead Professional                                       | Role   |
|---|--|
| <b>City of Vaughan (Proponent)</b>                      |  |
| Selma Hubjer  | Project Director                                 |
| Marta Roias   | Project Manager                                  |
| <b>CIMA+ (Prime Consultant)</b>                         |  |
| Stephen Keen, M.Sc., P.Eng.                             | Consultant Team Project Manager                  |
| Jaime Garcia, Ph.D., P.Eng.                             | Transportation Planner                           |
| Sonya Kapusin, MCIP, RPP                                | EA/Land Use Planner                              |
| Nicolas Charest, P.Eng.                                 | Structural Engineer                              |
| Hongtao Gao, P.Eng., PTOE                               | Road Designer                                    |
| Steve May, C.Tech.                                      | Topographical Surveyor                           |
| Lisa Cullen, OALA, CSLA                                 | Landscape Architect/Arborist                     |
| Maram Miri, B.Eng.                                      | Transportation Planner                           |
| <b>Golder Associates Ltd. (Golder) (Sub Consultant)</b> |  |
| Peter Popkin, Ph.D., CAHP, MCIFA                        | Archaeologist                                    |
| Michael Greguol, M.A., CAHP Intern                      | Cultural Heritage Specialist                     |
| Richard Booth, Ph.D.                                    | Ecologist  |
| Andrew Forbes, M.Sc., P.Geo                             | Geomorphologist                                  |
| Rafael Abdulla, M.Eng., P.Eng.                          | Geotechnical Engineer                            |
| John Piersol, M.Sc., P.Geo.                             | Hydrogeologist                                   |
| Joe Tomaselli, M.Eng.                                   | Noise Engineer                                   |
| Emily Casey, M.Env.Sc.                                  | Phase 1 Environmental Site Assessment Specialist |
| Christopher Davidson, B.A.Sc., P.Eng.                   | Water Resources Engineer                         |
| <b>Moon Matz Ltd. (Sub Consultant)</b>                  |  |
| Michael Matz, PMP, LC                                   | Street Lighting Specialist                       |

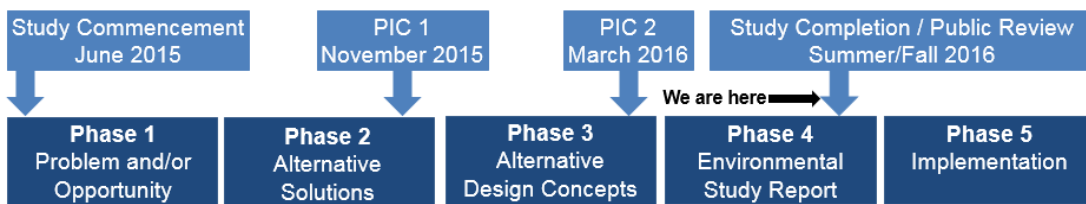
Internal stakeholder communication was integral to the Consultation Plan, which included coordination with the VMC Project Management Team with respect to ongoing and emerging projects and initiatives in the VMC and the City of Vaughan multi-disciplinary Technical Advisors. **Table 2** lists the City of Vaughan’s Technical Advisors to the study team.

**Table 2: Technical Advisors**

| Technical Advisor                | Advisory Role                                       |
|----------------------------------|---|
| Jennifer Cappola-Logullo, P. Eng | VMC Project Management                              |
| Amy Roots OALA, CSLA, LEED AP    | Development Engineering and Infrastructure Planning |
| Gerardo Paez Alonso, OALA, CSLA  | Urban Design<br>Parks Development                   |
| Musa Deo, P. Eng, PTOE           | Transportation and Traffic Specialists              |
| Winnie Lai, M.A. Sc., P. Eng     |   |
| Vince Suppa                      |   |

|                                 |  |
|---------------------------------|--|
| Frank Facchini, P. Eng          | Infrastructure Design and Construction |
| Andy Lee, P. Eng                | Environmental Engineering              |
| Stephen Lue, MES PL, MCIP, RPP  | Development Planning                   |
| Daniel Rende, M.Pl.             | Cultural Heritage                      |
| Gino Martino, B.A. C,Tech       | Infrastructure Design and Construction |
| Danny Woo, P.Eng                | Development Engineering                |
| Saad Yousaf, M.Sc., P. Eng, PMP | Stormwater Engineering                 |

**Figure 2** demonstrates the process for a Schedule C project under the Municipal Class EA. This study began on April 22, 2015 with completion scheduled for August, 2016.



**Figure 2: Municipal Class EA Flow Chart**

## 2. Background and Study Context

The VMC is the City's new downtown, encompassing all amenities of urban lifestyle with a subway station connecting to the City of Toronto's Yonge-University line. With subway service to the VMC Subway Station set to begin in late 2017 and the first phase of the VIVAnext Highway 7 fully dedicated Rapidway from Edgeley Boulevard to Bowes Road nearing completion, advancing implementation of the planned supporting street network that addresses travel demand, capacity and mobility needs of all users, with priority to transit and non-auto based modes of travel, is a key element to the transformation and building of the VMC as a pre-eminent downtown.

Council's adopted Official Plan (2010) and companion Transportation Master Plan - A New Path (2013) identified strategic road improvements to support regional initiatives and future development areas in step with and as part of the sustainable strategy for growth - Vaughan Tomorrow.

Portage Parkway is an east-west travel road that extends from Weston Road to Jane Street. Portage Parkway is currently four lanes from Weston Road to Edgeley Boulevard and two lanes east of Edgeley Boulevard to its terminus at the signalized intersection with Jane Street.

Portage Parkway features a four lane overpass structure crossing Highway 400, a strategic connection in the City of Vaughan's transportation network and system and a key element of the transportation infrastructure serving the broader area, which opened in late 2010.

Portage Parkway through the VMC frames the northern boundary of the Centre and is classified as a major collector with a planned right-of-way of 33 meters. **Figure 3** shows the location of the study area in Schedule C from the VMC Secondary Plan.

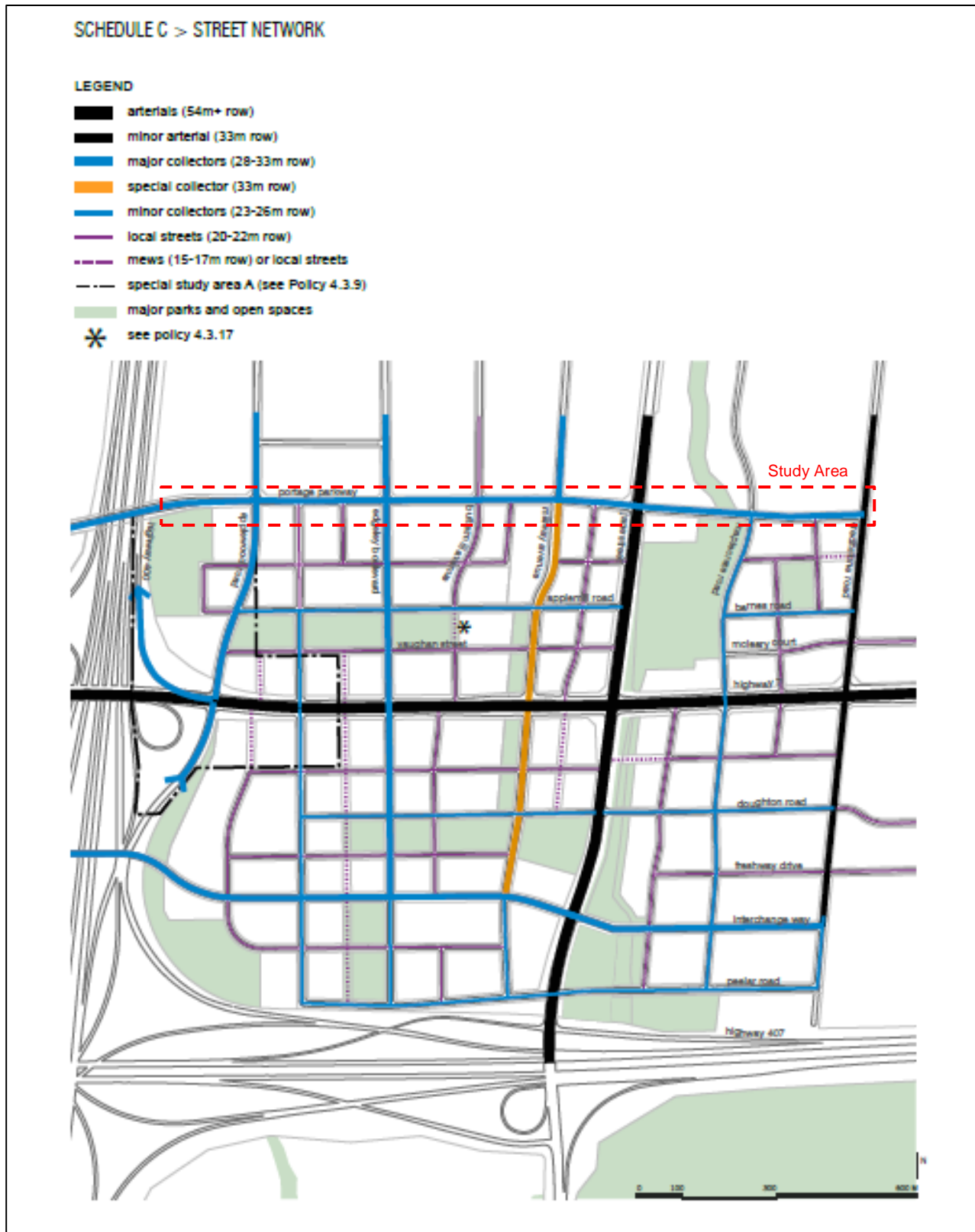


Figure 3: Schedule C of VMC Secondary Plan with Study Area



## 2.1 Overview of Planning Context

### 2.1.1 Provincial Planning Context

#### Provincial Policy Statement

The 2014 Provincial Policy Statement (PPS) sets out the foundation for sustainable land use vision and integrated land use planning policies. It accounts for the three (3) lenses of sustainability: economy, society and environment. The PPS provides for appropriate development and protects resources of public interest through long-term planning that integrates the principles of strong communities.

Section 1.6.7 of the PPS describes policies related to transportation systems, including:

- + “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 shall 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.”

Section 1.6.8 of the PPS describes policies related to transportation and infrastructure corridors, including:

- + “Planning authorities shall plan for and protect corridors and rights-of-way for infrastructure, including transportation, transit and electricity generation facilities and transmission systems to meet current and projected needs.”
- + “Major goods movement facilities and corridors shall be protected for the long term.”
- + “When planning for corridors and rights-of-way for significant transportation, electricity transmission, and infrastructure facilities, consideration will be given to the significant resources in Section 2: Wise Use and Management of Resources.” (e.g., protection of natural features and water quality/quantity; and conservation of built heritage resources and cultural heritage landscapes).

This EA study and the proposed widening and extension of Portage Parkway are consistent with the above policies by:

- + Providing additional capacity at all subject intersections, by means of geometric improvements (e.g. roadway widening) to reduce the potential for a failure of operations.
- + Considering travel demand management strategies as an alternative planning solution.
- + Providing connectivity within the existing road and transit network.
- + The Creditstone-Portage-Applewood bypass would provide a route virtually framing the VMC providing access to Highway 400, Jane Street and Creditstone Road. The reduction of heavy vehicles from arterial roads within the VMC, such as Highway 7, will reduce congestion during all hours of the day.

- + Natural Environment and Heritage Impact Assessments were completed to assess the impacts of the project.

### **Growth Plan for the Greater Golden Horseshoe**

The Provincial Growth Plan (2006) identifies the study area within a “built-up area” and designates the Vaughan Corporate Centre (now part of the VMC) as an Urban Growth Centre, which is expected to achieve 200 residents and jobs combined per hectare by 2031.

The proposed widening and extension of Portage Parkway is consistent with the following transportation policies:

- + “The *transportation system* within the *GGH* will be planned and managed to provide connectivity among transportation modes for moving people and for moving goods.” The extension of Portage Parkway will provide connectivity within the existing road and transit network.
- + “In planning for the development, optimization, and/or expansion of new or existing *transportation corridors*, the Ministers of Infrastructure and Transportation, other Ministers of the Crown, other public agencies and municipalities will ensure that corridors are identified and protected to meet current and projected needs for various travel modes.” This EA study and the proposed widening and extension of Portage Parkway incorporates facilities for different travel modes, such as sidewalks, cycle tracks and additional traffic lanes, including boulevards between sidewalks and cycle tracks.

### **The Big Move**

The Big Move (2008) is a regional transportation plan for the Greater Toronto and Hamilton Area, promoting the integration of GO Transit with all modes of transportation and local transit systems. The Spadina Subway extension to the Vaughan Corporate Centre (now part of the VMC) was identified as one of the top transit priorities for implementation within the first 15 years of the Plan’s inception.

## **2.1.2 Municipal and Local Planning Context**

### **York Region Official Plan and Transportation Master Plan**

Map 1 of York Region’s Official Plan (2010) shows the Region’s structure and identifies the Portage Parkway study area as a Regional Centre within an Urban Area. A northward subway extension is also identified in the study area. Maps 10 and 11 show the Regional cycling and transit networks, respectively, which identify cycling facilities and a Regional rapid transit corridor on Jane Street through the study area.

The 2009 York Region Transportation Master Plan shows the Regional road network planned for 2031. Similar to the Regional Official Plan, the study area is identified as part of the Regional Centre within an Urban Area. The Plan shows a new east-west local or regional road to the north of Highway 7 from Weston Road crossing over Highway 400 to Jane Street. The Plan further identifies road improvements on Jane Street to improve transit. Jane Street is also shown to have bike lanes and a sidewalk on one side.

## City of Vaughan Official Plan and Transportation Master Plan

The City of Vaughan Official Plan (2010) established the VMC Secondary Plan area boundary, which extends from Highway 400 in the west to Creditstone Road in the east, and from Portage Parkway in the north to Highway 407 in the south. The Official Plan prescribes land uses within the VMC, including residential, office, employment and mixed-use. The Plan further prescribes a centre with parks, open spaces and a “fine grain grid” street pattern. The Official Plan recommended that a Secondary Plan be developed to facilitate the design of the VMC.

The **City of Vaughan Transportation Master Plan – A New Path** (2013) identified projects to improve connections to local and regional infrastructure, provide access to future developments, support transit-oriented nodes and corridors, and enhance transit ridership, cycling and walking. The Plan identified the need to widen Portage Parkway from Applewood Crescent to Jane Street and extend Portage Parkway from Jane Street to Creditstone Road as a strategic improvement to the local transportation network, and in support of development within the VMC. Specifically, the Transportation Master Plan identified the need to widen Portage Parkway to four lanes from Applewood Crescent to Jane Street and establish a new four lane road from Jane Street to Creditstone Road.

The **VMC Secondary Plan** (2013) provides the following broader transportation planning and policy context for completing the planning and design of Portage Parkway:

- + Encourage the use of Portage Parkway for through movements linking to Highway 400.
- + Support the extent of the right-of-way for the Spadina Subway Line to Portage Parkway to protect for future subway extension beyond the VMC.
- + Link Creditstone Road to Portage Parkway and link both roads to Highway 7 and Jane Street to establish a bypass (i.e., Creditstone-Portage-Applewood Bypass) to assist with mitigating through movements on Highway 7 and Jane Street. This bypass would require the southerly extension of Applewood Crescent from Portage Parkway.
- + Cooperate with York Region to implement rapid transit services on Jane Street.
- + Acquire right-of-way for an extension of Portage Parkway from Jane Street to Creditstone Road.
- + The VMC Secondary Plan and supporting plans surrounding the study area provided a robust planning and design framework for advancing and completing the EA study process. These principally included the following:
  - VMC Transportation Plan (June 2012) and VMC and Surrounding Areas Transportation Study (March 2013).
  - VMC Municipal Servicing Class EA Master Plan (November 2012).
  - Black Creek Stormwater Optimization Study Municipal Class EA Master Plan (February 2012) and ongoing Black Creek Renewal EA.
  - VMC Streetscape and Open Space Plan (November 2015), City-wide Streetscape Implementation Manual and Financial Strategy (November 2014), and Design Criteria and Standard Drawings.

The focused area **VMC Transportation Plan** (2012) and the **VMC and Surrounding Areas Transportation Study** (2013) define the transportation infrastructure needed to facilitate planned (and potential) development within the VMC and surrounding areas to the 2031 planning horizon. The VMC and Surrounding Areas Transportation Study recommended initiating the planning and detailed design studies for Portage Parkway widening and extension as relative short term infrastructure improvements. More specifically, the VMC and Surrounding Areas Transportation Study recommended the following improvements by 2017, as part of a broader area strategy, advancing implementation of transportation infrastructure that strengthens the grid network in support of the VMC:

- + Portage Parkway widening to four lanes from Edgeley Boulevard to Jane Street, and
- + Portage Parkway extension with four lanes from Jane Street to Creditstone Road.



## 3. Problems and Opportunities

### 3.1 Transportation and Traffic Operations

#### 3.1.1 Existing Conditions

The study area corridor is currently occupied by low-density retail and industrial spaces as well as vacant land. Traffic volumes originating and destined from/for the area are fairly low and consist in large part of heavy vehicles.

Under existing traffic conditions, most intersections and turning movements operate satisfactorily during both the AM and PM peak hours, except for the following intersections and turning movements:

- + Westbound approach at the Edgeley Boulevard intersection during the PM peak hour is nearing capacity with a Volume to Capacity (v/c) ratio of 0.94;
- + Northbound approach at the Edgeley Boulevard intersection during the PM peak hour is over capacity with a v/c ratio of 1.11;
- + Millway Avenue intersection (all-way stop control) during the PM peak hour operates at a low level of service (F) with high delay for eastbound, westbound and southbound approaches;
- + Eastbound left turn movement at the Jane Street intersection during the PM peak hour operates at a low level of service (E); and
- + Northbound left turn movement at the Jane Street intersection during the AM peak hour is nearing capacity (though considered still acceptable) with a v/c ratio of 0.86.

**Figure 4** and **Figure 5** show the existing traffic volumes during the AM and PM peak hours in the study area. Queuing for the westbound and northbound approaches at the Edgeley Boulevard intersection are considered long with opportunity for improvement.

Portage Parkway generally operates at acceptable levels of service with a v/c ratio of less than 0.9 (v/c of 1.0 is at capacity). Detailed information is provided in the technical report documenting transportation and traffic in **Appendix A**.

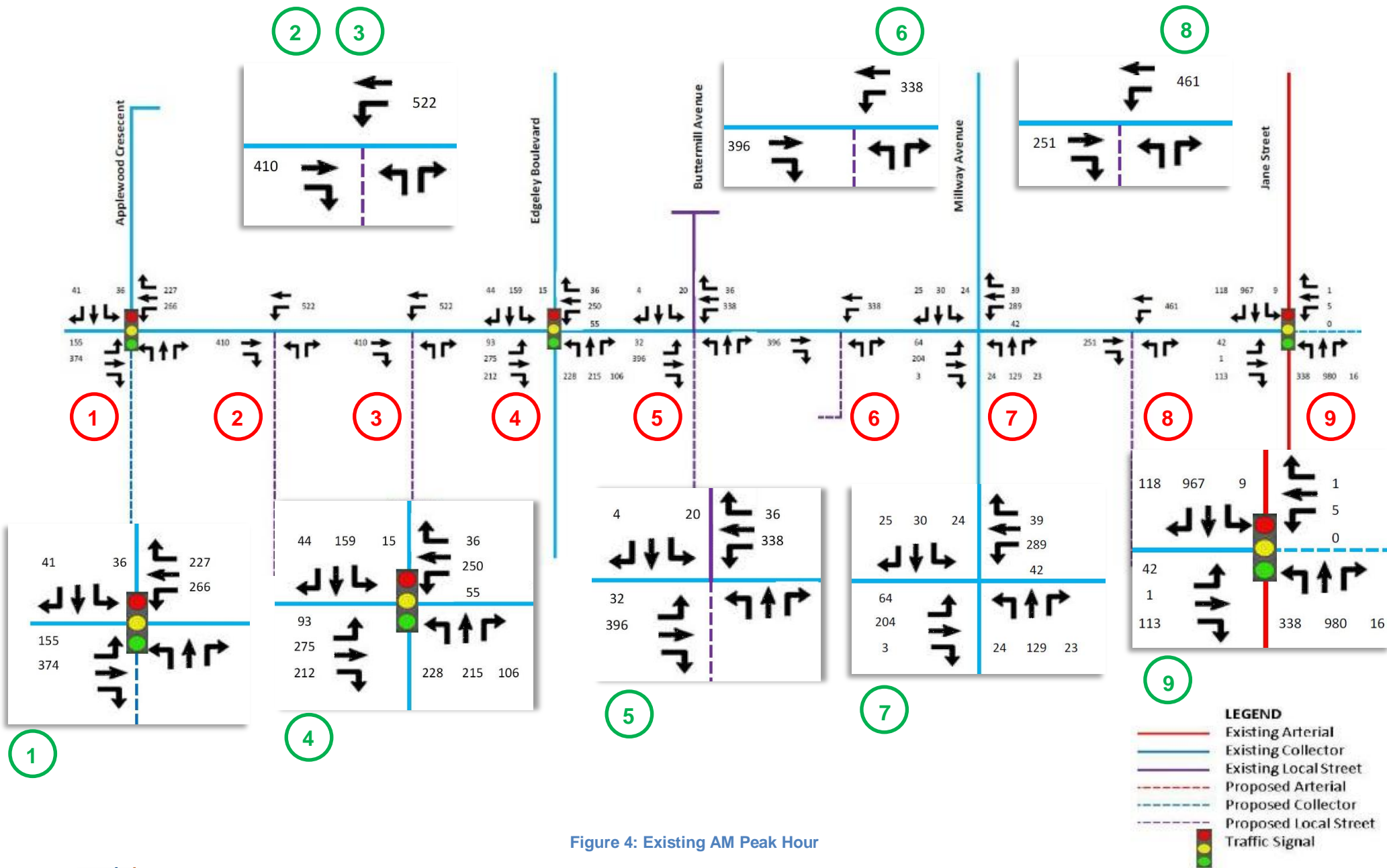


Figure 4: Existing AM Peak Hour

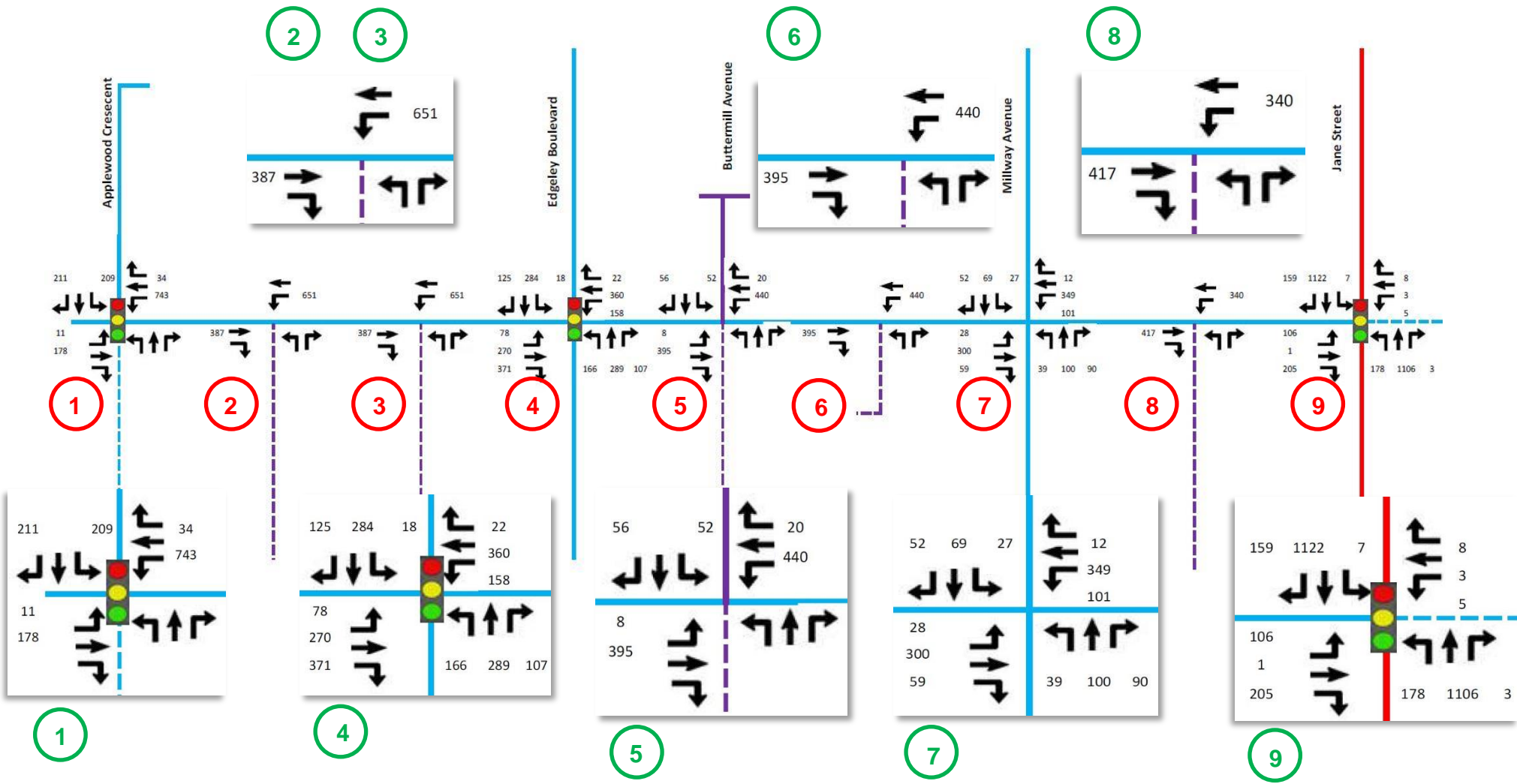


Figure 5: Existing PM Peak Hour

A large percentage of the traffic composition within the VMC are heavy vehicles, which can be attributed to its predominantly industrial land use. The extension of Portage Parkway would create an alternative route for heavy vehicles to bypass the VMC core. Trucks would be able to travel north-south on Creditstone Road and Applewood Crescent and east-west on Portage Parkway (see **Figure 6**). The Creditstone-Portage-Applewood bypass would provide a route virtually framing the VMC providing access to Highway 400, Jane Street and Creditstone Road. The reduction of heavy vehicles from arterial roads within the VMC, such as Highway 7, will reduce congestion during all hours of the day. For detailed information, the traffic analysis undertaken by CIMA+ is provided in **Appendix A**.





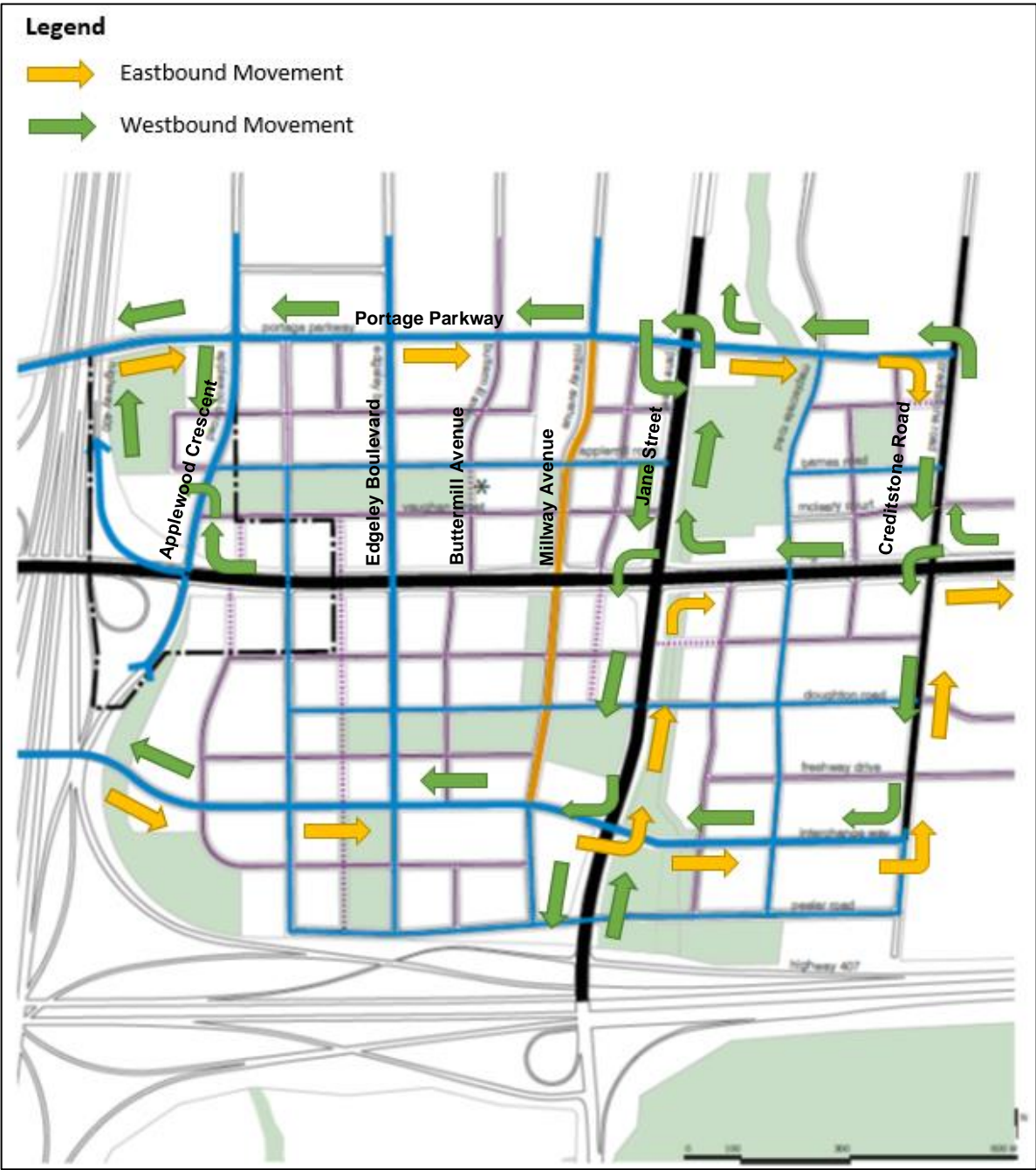


Figure 6: Proposed Truck Routes

### 3.1.2 Future Conditions

To forecast future vehicular trips to the 2031 planning horizon, an iterative process based on existing traffic volumes and growth rates that considered the planned street network and land use in the VMC was undertaken. **Figure 7** and **Figure 8** show the forecast future AM and PM peak hours.

The forecasted turning movement volumes provided the basis upon which the operational analysis of future scenarios was conducted utilizing synchro and Simtraffic software. The results of this analysis are summarized below and detailed in **Appendix A**:

#### 2031 Future Conditions “Do Nothing”

Future conditions traffic analysis was undertaken for a “Do Nothing” scenario. This scenario includes consideration for the future 2031 development and resulting trip generation, and applies these volumes to the existing cross-section configuration of Portage Parkway.

During the AM peak hour under future traffic conditions without any road widening, nearly all intersections are expected to be nearing or over capacity. The overall AM peak hour v/c ratios for each intersection, in descending order of severity, are as follows:

- Edgeley Boulevard (v/c ratio of 1.85);
- Jane Street (v/c ratio of 1.45);
- Millway Avenue (v/c ratio of 0.91); and
- Applewood Crescent (v/c ratio of 0.71).

During the PM peak hour, all intersections and the majority of turning movements are expected to be nearing or over capacity with very high delay. The overall PM peak hour v/c ratios for each intersection, in descending order of severity, are as follows:

- Jane Street (v/c ratio of 5.05);
- Millway Avenue (v/c ratio of 2.22);
- Edgeley Boulevard (v/c ratio of 1.66); and
- Applewood Crescent (v/c ratio of 0.91).

Overall intersection delay is expected to be very severe during the PM peak hour. The intersection at Edgeley Boulevard is expected to have the highest delay in both the AM and PM peak hours at 323.7 seconds and 1607.1 seconds, respectively, which reflects a breakdown of operations and intersection failure. It is evident that without sufficient widening to accommodate the expected 2031 traffic growth the intersections situated within the study area are expected to be fully congested during the PM peak hour. Increased capacity at all subject intersections, by means of geometric improvements (e.g. roadway widening) is required to reduce the potential for a failure of operations.

#### 2031 Future Conditions “with Widening”

Under future traffic conditions with the Portage Parkway widening and associated intersection geometric improvements as per our recommended proposed solution, all intersections and turning movements are expected to operate very satisfactorily during the AM peak hour; with some intersections nearing capacity during the PM peak hour. The overall future conditions v/c ratios for each intersection, in descending order to severity, are as follows:

- Edgeley Boulevard (v/c ratio of 0.98);
- Jane Street (v/c ratio of 0.96);
- Millway Avenue (v/c ratio of 0.93);
- Applewood Crescent (v/c ratio of 0.91); and
- Creditstone Road (v/c ratio of 0.89).

Overall intersection delay is expected to be fairly moderate, with traffic signal cycle lengths ranging from 120 to 130 seconds due to the increased demand.

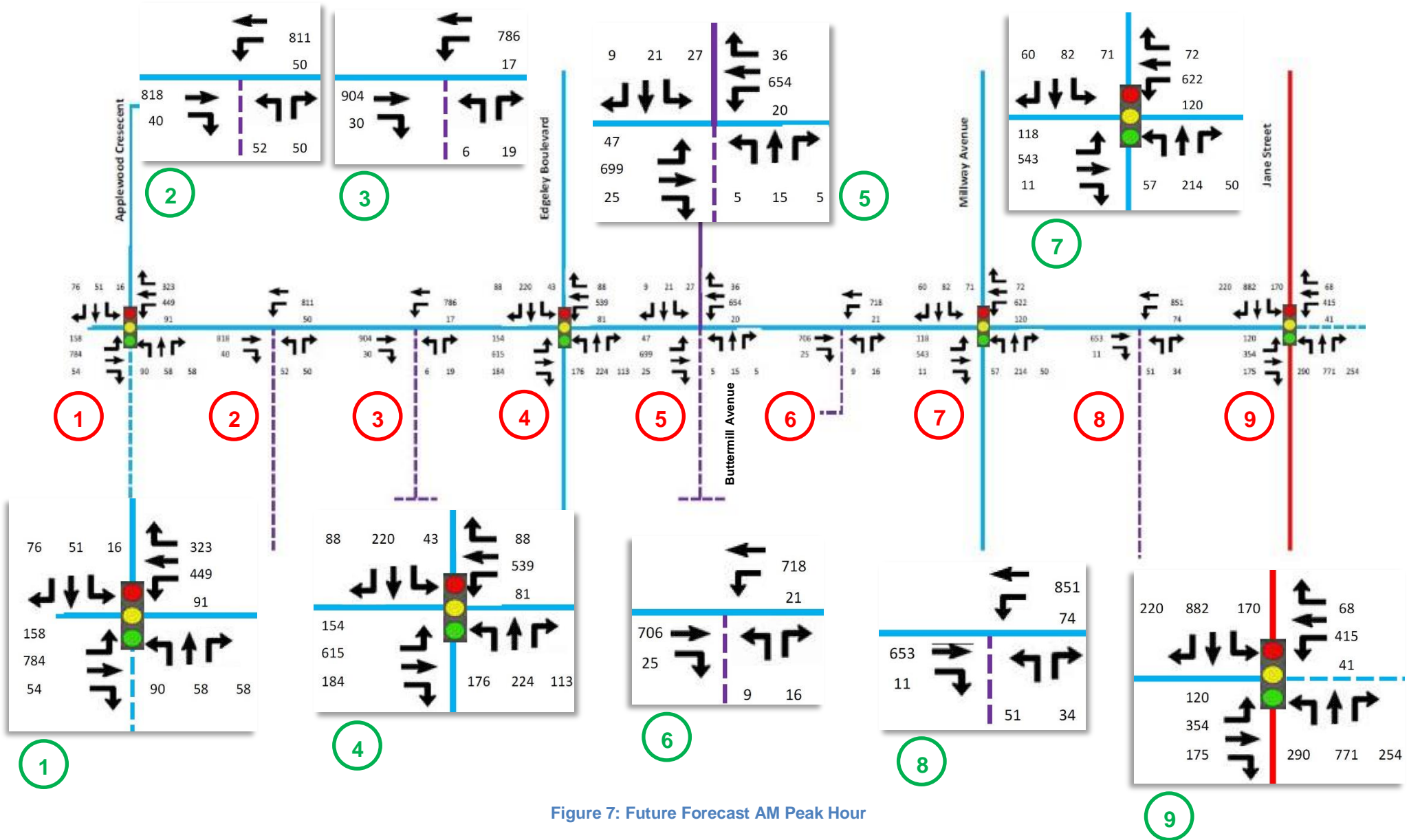


Figure 7: Future Forecast AM Peak Hour

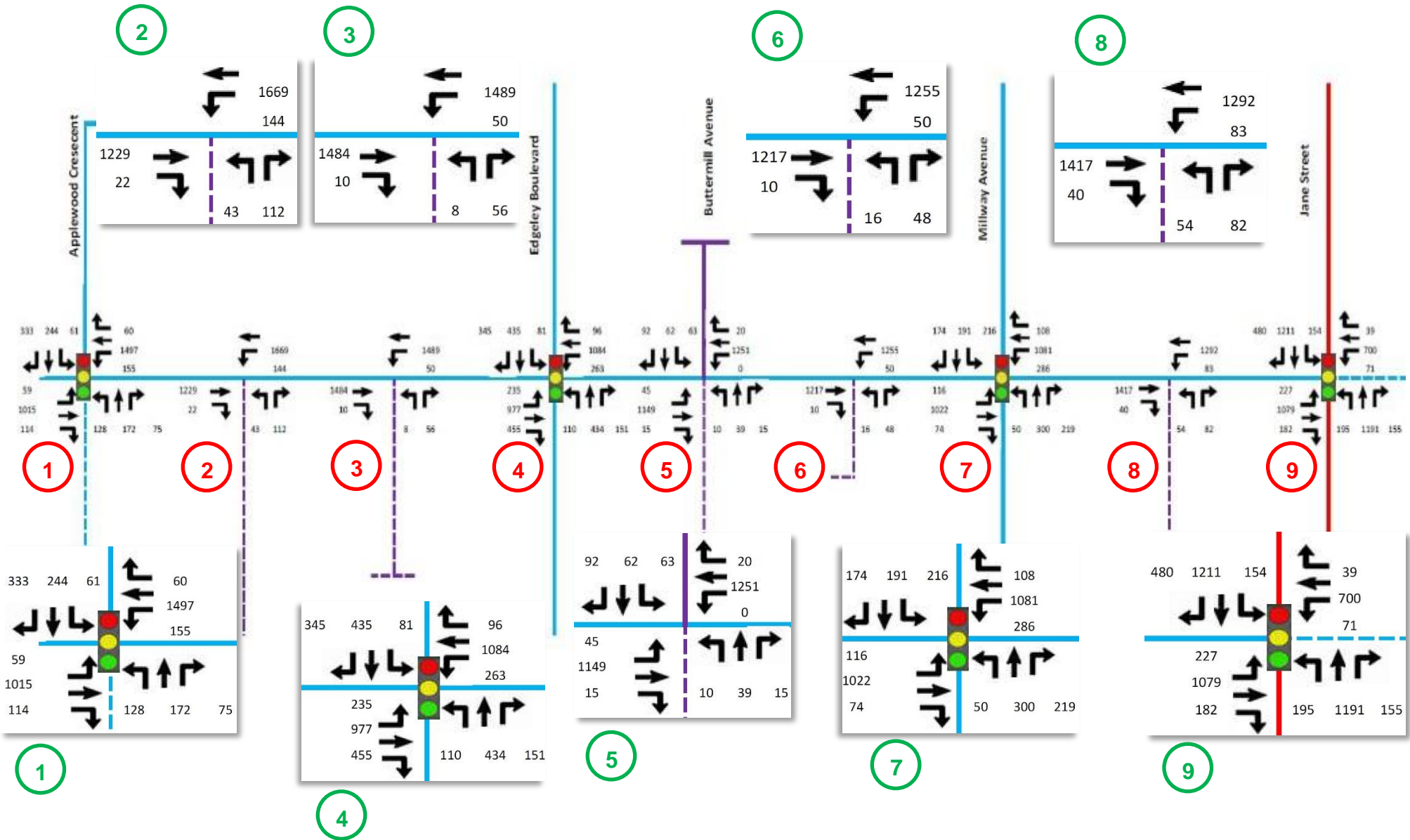


Figure 8: Future Forecast PM Peak Hour

## 3.2 Traffic Safety

A safety performance review of the existing conditions for the portion of Portage Parkway between Applewood Crescent and Jane Street was completed by CIMA+. A copy of the Safety Review of Existing Conditions report is provided in **Appendix A**.

Eleven (11) collisions were experienced within the study area between 2008 and 2013. All reported collisions were of the type “property damage”. Four turning movement collisions occurred at the intersection of Portage Parkway and Edgeley Boulevard.

The following safety improvements were suggested at the intersection of Applewood Crescent and Portage Parkway:

- + Repair the malfunctioning pedestrian signal head located in the northwest quadrant of the intersection;
- + Install Object Marker Signs on guiderails on both sides of the west approach of the intersection; and
- + Improve the turning radius for facilitating the westbound right turn movement for heavy vehicles.

The following safety improvements were suggested at the intersection of Edgeley Boulevard and Portage Parkway:

- + Improve the lane configuration at the intersection of Edgeley Boulevard and Portage Parkway by widening the portion of Portage Parkway east of Edgeley Boulevard to four lanes. As a short-term remedy, the pavement markings within this area can be improved in both directions. The existing “Right Lane Exits” sign (Wa-56R) can be moved to a point upstream of a private driveway providing access to the loading bay of 100 Edgeley Boulevard (LOWE’S Home Improvement Warehouse);
- + Improve the turning radius to facilitate the northbound right turn movement for heavy vehicles; and
- + Provide *Accessibility for Ontarians with Disabilities Act* (AODA) compatible pedestrian facilities (e.g. tactile surface provided at curb ramps should be aligned with crosswalks).

The following safety improvements were suggested at the intersection of Millway Avenue and Portage Parkway:

- + Increase the lateral offset of the temporary “Street Section Closed” sign.

The following safety improvements were suggested at the intersection of Jane Street and Portage Parkway:

- + Improve pedestrian infrastructure at Jane Street and Portage Parkway including improvements to the bus stop located on the southeast corner of the intersection of Jane Street and Portage Parkway by providing appropriate sidewalk, curb ramps, shelter, and a concrete pad; and
- + Provide a “Street Name” sign for the northbound traffic on the right side of Jane Street.

Overall, most of the safety issues would be resolved as the widening of Portage Parkway will give the opportunity of replacing the intersections entirely.

### 3.3 Transit Access

According to the **VMC Transportation Plan** (2012), the forecasted land use changes are projected to increase transit use from 6% in 2006 to 37% in 2031 (AECOM, 2012). The extension of Portage Parkway to Creditstone Road will further establish road network continuity within the VMC. A fully connected network promotes walking and cycling, which in turn promotes the use of public transit.

The extension of Portage Parkway would increase pedestrian accessibility from Creditstone Road to the Jane Street VivaNext station (see **Figure 9**). The potential Jane Street VivaNext station will be located on the north-east corner of Highway 7 and Jane Street, connecting to the potential Jane Street Rapidway. Currently, southbound Creditstone Road pedestrians would have to access the future Jane Street VivaNext station via Highway 7, a major arterial roadway and designated truck route.



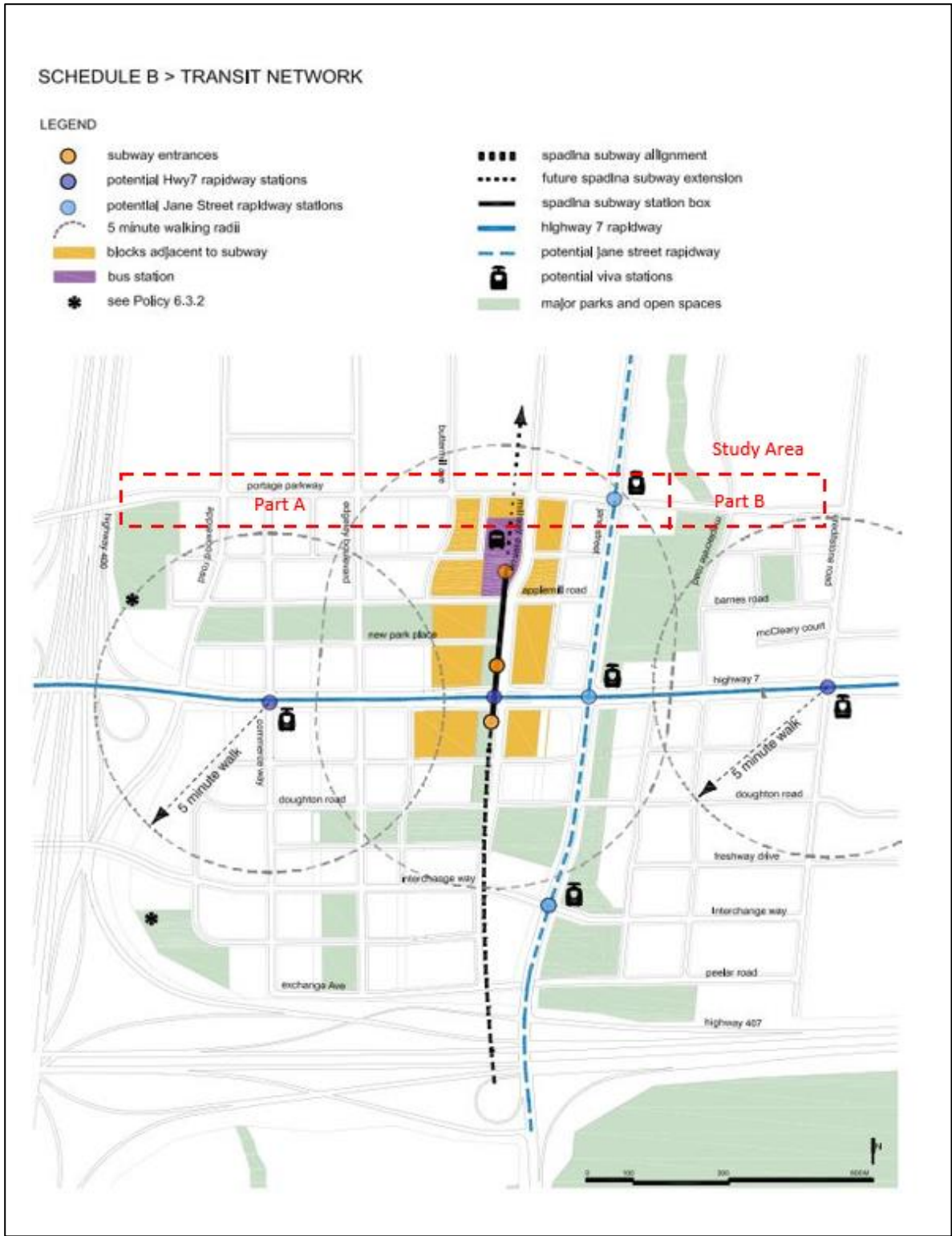


Figure 9: Location of VivaNext and VMC Station



The VMC Station at Highway 7 and Millway Avenue, an extension of the Spadina Subway line, is expected to be operational in 2017. The station will provide connection services to the York Region Transit Bus Terminal and to Highway 7 Viva Bus Transit and include a designated Passenger Pick-Up and Drop-Off. Resultantly, the link between Toronto's subway network, particularly the downtown core, and the VMC will increase trips of all transportation modes destined for the VMC. Therefore, the resultant network continuity resulting from the extension of Portage Parkway from Jane Street to Creditstone Road will alleviate congestion and divert vehicles from the core of the VMC.

### 3.4 Problem and Opportunity Statement

Transportation improvements are needed to support growth and to provide alternative truck routes to Highway 7 within the VMC.

Improving Portage Parkway from Applewood Crescent to Jane Street is an opportunity to:

- + Serve the VMC and surrounding employment area,
- + Create an alternative route facilitating trucks to bypass the VMC core,
- + Improve connections to local and regional infrastructure,
- + Support transit-oriented nodes and corridors, and
- + Enhance transit ridership, cycling and walking.

The extension of Portage Parkway from Jane Street to Creditstone Road is an opportunity to:

- + Provide a continuous route for all modes of transportation from Weston Road crossing Highway 400 and the Black Creek channel to Creditstone Road, and
- + Alleviate traffic congestion on Highway 7 within the VMC.

## 4. Existing Conditions

### 4.1 Natural Environment

#### 4.1.1 Natural Sciences

Golder conducted a field survey on September 1<sup>st</sup>, 2015 which focused on the publically accessible lands along Portage Parkway. A second field survey was conducted on July 6<sup>th</sup>, 2016 to address portions of the study area where access was previously restricted. Following the field surveys, a natural environment assessment for the study area was completed (see **Appendix A**).

#### Natural Heritage Policies

The Provincial Policy Statement (PPS) (MMAH 2014) must be considered when assessing potential interactions between projects and the natural environment. The Policy requires that both the natural feature and adjacent lands be evaluated for the potential negative impacts of a proposed development. Adjacent lands are classified as areas that are in close proximity to a specific natural heritage feature or area where it is probable that the development would have a negative impact on the feature. The extent of the adjacent lands may be recommended by the province or based on alternative municipal guidelines.

In addition to the PPS, further documents were reviewed in order to develop an understanding of the natural heritage features and regulations that are relevant to the site. The following applicable natural heritage policies were reviewed:

- + *The Endangered Species Act (ESA)* (*Endangered Species Act, 2007*. S.O. 2007) which identifies species at risk in Ontario that may not be harmed under the ESA.
- + *The Species at Risk Act (SARA)* protects species that have been identified as endangered or threatened by providing protection to critical habitats.
- + *The Fisheries Act* manages the threat to Canada's commercial, recreational and Aboriginal (CRA) fisheries.
- + *The Migratory Birds Convention Act (MBCA)* protects bird species from disturbance and destruction across Canada.

#### Vegetation

The study area is located in a region of the City that is currently experiencing ongoing substantial growth. Due to this development, the naturally occurring vegetation is limited and the majority of the study area contains fragmented natural areas with a cultural origin. Due to the ongoing development, there is limited naturally occurring vegetation and most of the surrounding area is comprised of woody plants and manicured grass (e.g., Kentucky bluegrass, *Poa pratensis*), which occur predominantly within existing boulevards on Portage Parkway.

The study area along Portage Parkway from Applewood Crescent to Jane Street consists of urban boulevard with manicured grasses and typical urban landscaped tree plantings. The study area at the

Black Creek channel contains old field cultural meadow (CUM1-1), cultural woodland (CUW), Hawthorn Cultural Thicket (CUT1-7) and un-vegetated disturbed areas. Refer to **Figure 10** for a map of plant communities between Jane Street and the Black Creek Channel.



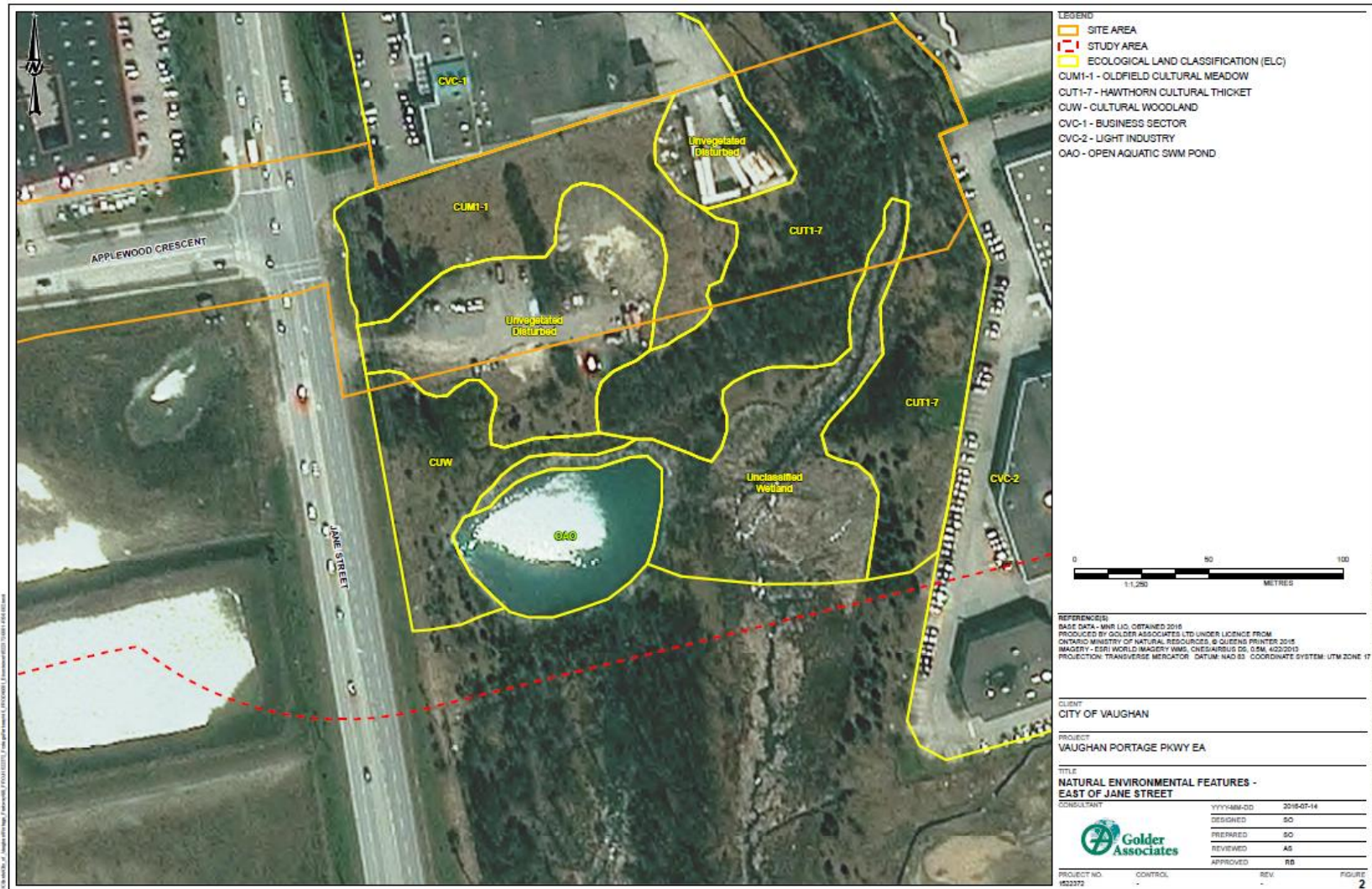


Figure 10: Plant Communities

## Wildlife

Landscape trees within the study area may provide nesting habitat for birds protected under the *Migratory Birds Convention Act*. These trees include white ash (*Fraxinus Americana*), Norway maple (*Acer platanoides*), blue spruce (*Picea pungens*), red pine (*Pinus resinosa*), and black locust (*Robinia pseudoacacia*).

## Aquatic

The study area crosses Black Creek, which is a highly urbanized, disturbed watercourse that supports a warm water fish community. The creek at this crossing has been modified through channelization, impoundment and realignment. These modifications limit the suitability of this section of Black Creek to support fish. The most common fish species in Black Creek include White Sucker (*Catostomus commersonii*), Blacknose Dace (*Rhinichthys atratulus*), Fathead Minnow (*Pimephales promelas*) and Creek Chub (*Semotilus atromaculatus*) (TRCA, 2008). Black Creek does not consist of aquatic Species at Risk (SAR).

The study area is situated within the Humber River watershed and Black Creek subwatershed, within the jurisdiction of the Toronto and Region Conservation Authority.

## Species at Risk

Desktop assessment indicated the potential for Species at Risk (SAR) to occur in the study area. Of these, one species Monarch (*Danaus plexippus*) was assessed to have moderate potential to occur within the study area, however this species was not observed during field surveys. The host plant for this species (Milkweed) was observed in the study area.

In summary, the natural features within the study area are considered common in the province and larger region, and are unlikely to pose significant constraints to the proposed widening and extension of Portage Parkway.

### 4.1.2 Fluvial Geomorphology

Golder completed a fluvial geomorphic assessment at Black Creek within the study area (see **Appendix A**). The assessment characterized channel morphology, assessed bed and bank stability, determined the meander potential of the stream near the proposed crossing, and determined the long-term erosion potential of the stream at the proposed crossing.

The results of the field reconnaissance suggest that the channel is generally stable. The channel geometry was observed to be moderately entrenched in several sections (i.e., well-incised between steeply sloped banks); the channel planform was observed to be largely confined to the surrounding stream valley; and instances of bank erosion were observed in a number of locations. However, the banks and riparian zones were observed to be well protected against erosion with a dense cover of vegetation.

The meander belt width of the channel was determined to be approximately 76m and the 100-year erosion limit of the channel ranges from approximately 20 to 22m. According to protocols of the

Toronto and Region Conservation Authority, crossing structures should be constructed outside of the meander belt width of a watercourse to the extent possible or, alternatively, the features should be designed to match or exceed the 100-year erosion limit of the channel.

However, for the study reach at Black Creek, it is recognized that spanning a crossing structure the length of the estimated belt width or 100-year erosion limit of the channel would be impractical and cost prohibitive. Furthermore, Golder is of the opinion that the estimated dimensions of the meander belt width and 100-year erosion limit for this particular study are overly conservative.

For the reasons identified above and from the standpoint of fluvial geomorphology, it is recommended that the proposed culvert at Portage Parkway include a width of at least 8m. The suggested crossing dimension represents two (2) times the average bank full width of the channel. The suggested span for the proposed culvert is expected to provide sufficient opportunities to maintain channel form and/or function (e.g., sediment transport and fish passage).

### 4.1.3 Environmental Site Assessment

Golder completed a Phase 1 Environmental Site Assessment (ESA) in accordance with Ontario Regulation (O.Reg.) 153/04 (see **Appendix A**). **Figure 11** maps the Potentially Contaminating Areas (PCAs) within the study area for the proposed widening and extension of Portage Parkway. Areas of Potential Environmental Concern (APECs) were identified within:

- + Part A of the study area due to potential presence of contaminated groundwater migrating from the industrial operations at 200 and 207 Edgeley Boulevard.

A Phase 2 ESA is required to support submission of a Record of Site Condition (RSC) for the study area(s), should a RSC be required.

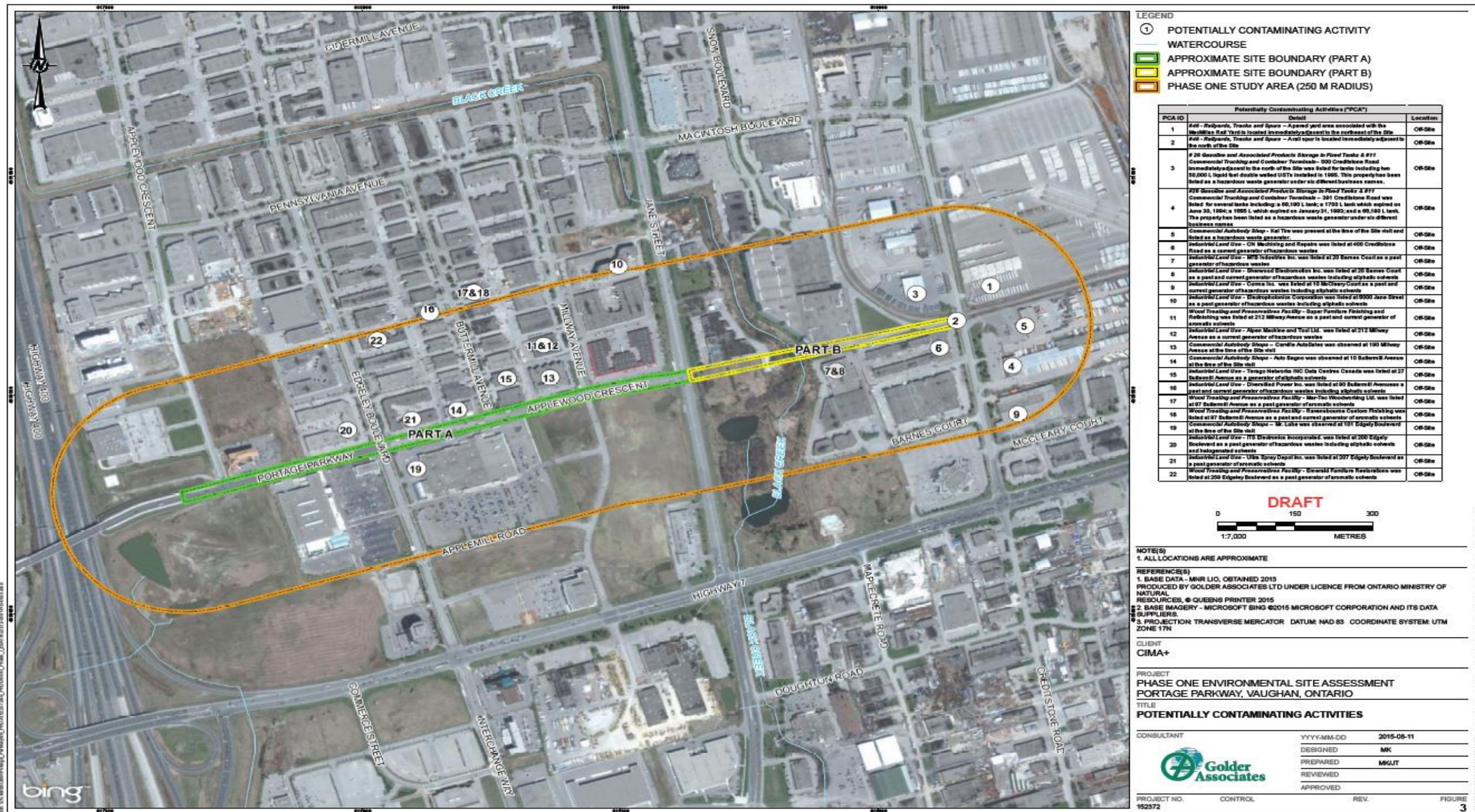


Figure 11: Potentially Contaminating Activities

#### 4.1.4 Air Quality

Golder completed a semi-qualitative air quality assessment for the proposed widening and extension of Portage Parkway (See **Appendix A**). Based on existing monitoring data in the Project area, the levels of particulate matter, nitric oxide (NO<sub>x</sub>), carbon monoxide (CO) and 1, 3-butadiene are shown to be below current standards and guidelines. The annual benzene concentrations are greater than the annual Ambient Air Quality Criteria (AAQC) and are typically associated with traffic emissions. Roadways typically only have a very localized influence on air quality and predicted concentrations decline within a very short distance from the road edge. The project is anticipated to be a relatively minor source when compared to other larger sources within the area, and the impact on overall air quality in the region is expected to be negligible.

#### 4.1.5 Tree Inventory and Assessment

CIMA+ completed a tree inventory and assessment report (See **Appendix A**). The report includes a list of tree species, construction management and assessment of construction impact. It is recommended that new tree planting take place along the road corridor where space allows, possibly including on adjacent private property. Species should be non-invasive and tolerant of urban conditions.

#### 4.1.6 Source Water Protection

CIMA+ identified that the study area is not within a source water protection vulnerable area, through the Source Water Protection Map available on the Government of Ontario website (MOECC, 2010). The map also provided that the study area is not in a wellhead protection area (WHPA), intake protection zone (IPZ) and/or issue contributing area (ICA).

### 4.2 Social Environment

#### 4.2.1 Existing Land Use

The City of Vaughan is situated within the Regional Municipality of York. Its neighbouring municipalities include the Township of King to the north, the Towns of Richmond Hill and Markham to the east, the City of Toronto to the south, and Peel Region (Town of Caledon and City of Brampton) to the west. The Portage Parkway study area is situated within the southeastern portion of Vaughan (Ward 4).

Existing land uses within the study area are predominantly industrial and commercial, as illustrated in in **Figure 12**. Of note for Part A is some undeveloped land on the south side of Portage Parkway. Of note for Part B is the Black Creek channel crossing north-south, generally within the western half of the study area; some undeveloped land between Jane Street and the Black Creek channel; and the CN MacMillan Rail yard at the east end of the study area.

The Portage Parkway study area corridor falls within the Urban Area as defined by the City of Vaughan Official Plan (2010). Schedule 13 (see **Figure 13**) of the City's Official Plan identifies most of the land immediately north of Portage Parkway within the study area as Prestige Employment, with the



exception of Natural Areas adjacent to the Black Creek, and General Employment between the Creek's natural area and Creditstone Road. The VMC is identified immediately south of Portage Parkway within the study area.

Portage Parkway delineates the northern boundary of the VMC Secondary Plan (2013) area. Schedule F (see **Figure 14**) of the VMC Secondary Plan (2013) identifies Neighbourhood Precincts immediately south of Portage Parkway, from Applewood Crescent to Edgeley Boulevard, and on the east side of Maplecrete Road; Station Precincts from Edgeley Boulevard to a mid-point generally between Jane Street and Maplecrete Road, followed by Major Parks and Open Spaces up to Maplecrete Road; and Technology/Office Precincts on the west side of Creditstone Road.





Figure 12: Existing Land Uses

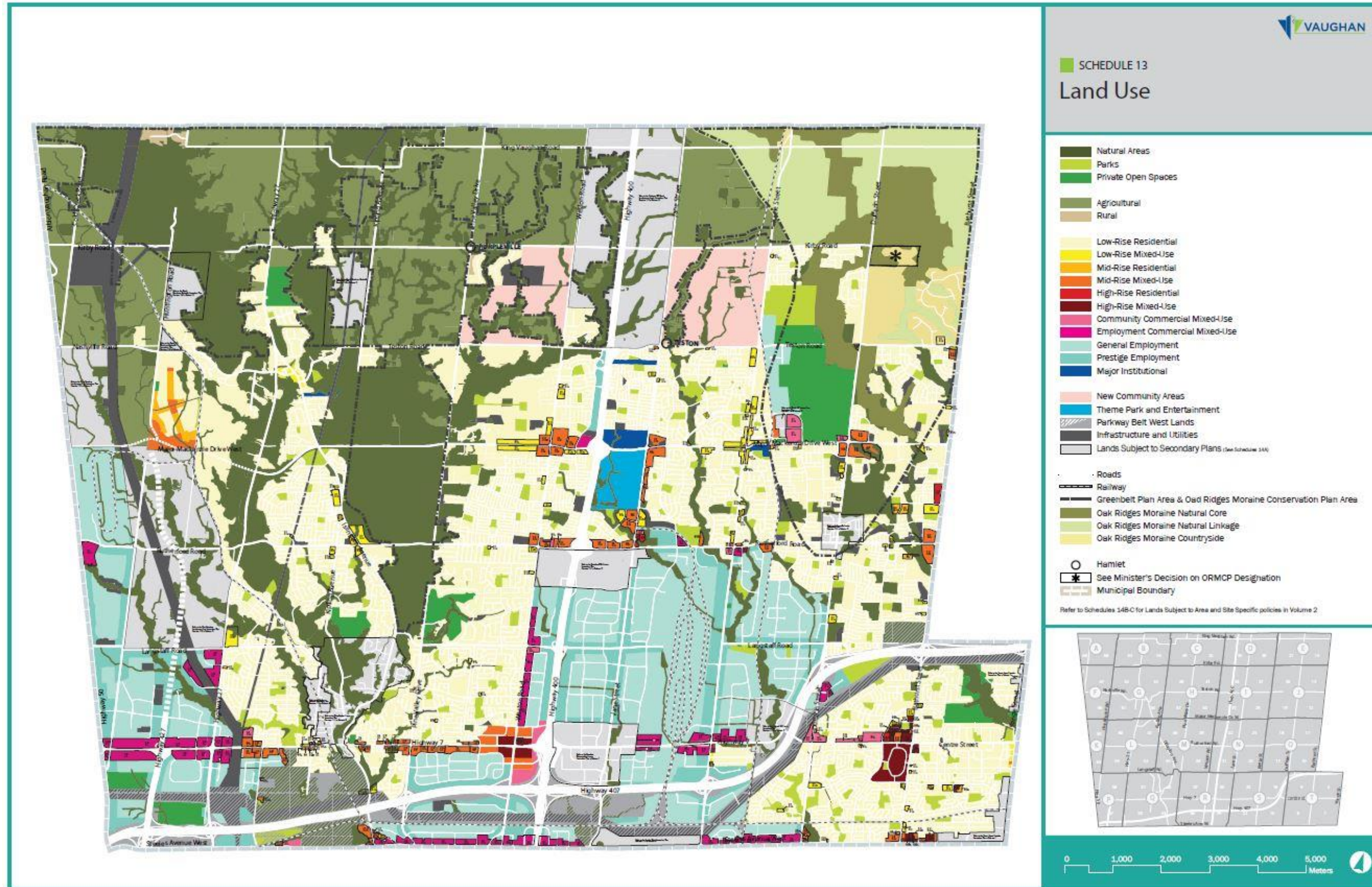


Figure 13: Schedule 13 Land Use

SCHEDULE F > LAND USE PRECINCTS

LEGEND

- station precinct
- south precinct
- neighbourhood precincts
- west and east employment precincts
- major parks and open spaces
- land use designations and identification of mews are subject to results of the VMC Black Creek Renewal EA (Stages 3 & 4) and final results of the VMC Servicing and Stormwater Management Master Plan (see also Schedules C, D and J, and Policies 5.6.4 - 5.6.10, 8.1.2, 8.2.4 & 8.4.2)
- existing floodplain (see Policies 5.6.4-5.6.10)
- office uses permitted (see Policy 8.4.3)
- see Policy 6.3.2



NOVEMBER 2015

Figure 14: Schedule F Land Use

## 4.2.2 Noise Impact Study

Golder completed a Noise Impact Study for the proposed widening and extension of Portage Parkway (see **Appendix A**), to assess the potential noise impact on sensitive receptors. The assessment concluded that York Region's noise level limit criterion of 55 dBA has been exceeded. However, the expected increase in levels associated with this project are expected to be less than 5 dB at the identified study area, therefore, no mitigation effort is required.

## 4.3 Cultural Environment

### Aboriginal Interests

The Ministry of Aboriginal Affairs (July, 2015) advised the following First Nations may have existing or asserted rights or claims in Ontario's land claims process or litigation which may be affected by the project:

- + Chippewas of Georgina Island,
- + Beausoleil First Nation (Christian Island),
- + Chippewas of Rama, and
- + Mississaugas of the New Credit First Nation.

In addition to the communities listed above, the following First Nations were consulted:

- + Mississaugas of Scugog Island,
- + The Chiefs of Ontario, and
- + The Metis Nation of Ontario.

### Built Heritage and Cultural Heritage Landscapes

Golder completed a Heritage Impact Assessment for the proposed widening and extension of Portage Parkway within the study area (see **Appendix A**). No cultural heritage value or interest was identified along the study corridor and therefore no impacts to cultural heritage resources are anticipated. The nearest heritage properties are located at 7961 Jane Street (registered under the *Ontario Heritage Act*) and 8001 Jane Street (cemetery listed under the Vaughan Heritage Inventory).

### Archaeological Potential

Golder completed a Stage 1 Archaeological Assessment for the proposed widening and extension of Portage Parkway within the study area (see **Appendix A**). Most of the study area was found to be disturbed and to have low to no archaeological potential. Sections of the study area that required further archaeological assessment were determined through separate investigations to be of no further archaeological concern. Therefore, no further archaeological assessment of the study area is required.

## 4.4 Economic Environment

The City of Vaughan's Community Profile (2011) reports on 2006 census data from Statistics Canada to describe the City's economic state. Among the highest labour force by occupation are Business

and Finance (22.2%) and Sales and Services (21.8%). The top three sectors by employment are Manufacturing (33.1%), Retail Trade (14.3%), and Construction (13.5%). The 2013 York Region Employment Survey shows similar results, identifying the top three areas of employment by industry as Manufacturing (23%), Construction (12.6%), and Retail Trade (12%).

According to the City of Vaughan's Economic Development website (2016), the City is the largest employment centre in York Region with over 10,000 businesses employing over 194,000 people. The City has plans in place to protect 28 areas of employment lands. Most relevant to this study are the lands protected under the employment area of "Vaughan 400". This area is bounded by Langstaff Road to the North, the CN Rail yard to the east, Highway 7 to the south, and Highway 400 to the west. Within this employment area, there are five properties identified as "Vacant – Serviced" near the Portage Parkway study area corridor.

## 4.5 Transportation Infrastructure

### Road Network

Portage Parkway is a major east-west collector with a posted speed limit of 50 km/h. Portage Parkway extends from Chrislea Road to Jane Street and is the northern boundary of the VMC. Currently, Portage Parkway is constructed as a four (4) lane urban cross-section from Chrislea Road to Edgeley Boulevard and a two (2) lane urban cross-section from Edgeley Boulevard extending east to its terminus intersection with Jane Street. West of Jane Street, the existing Portage Parkway right-of-way is 23m.

The horizontal alignment of the roadway is relatively straight within the study limits. The eastern portion of the study area between Millway Avenue and Jane Street consists of a slight horizontal curve.

Portage Parkway intersects five north-south roadways within the study corridor, and numerous driveway accesses exist servicing commercial and retail establishments of varying size. Three of the intersections are signalized and two are unsignalized. The signalized intersections are located at Applewood Crescent, Edgeley Boulevard, and Jane Street. The two unsignalized intersections are located at Buttermill Avenue (stop control on minor approach) and Millway Avenue (all-way stop control).

### Transit

According to the York Region Transit System Map (2015), Route 20 Jane transit service is available along Portage Parkway within the study area. Route 20 provides service from Monday to Friday. Transit bus stops for Route 20 are located at the following locations:

- + Edgeley Boulevard and Portage Parkway
- + Portage Parkway and Buttermill Avenue
- + Portage Parkway and Jane Street (West Side)

Additionally, York Region Transit provides the following services to roads crossing Portage Parkway within the study area:

- + Route 35D on Edgeley Boulevard. Route 35D provides rush hour service from Monday to Friday.
- + Route 20 (Jane) on Millway Avenue.
- + Routes 20 and 20A (Jane) and 760 (Vaughan Mills / Wonderland) on Jane Street. Route 20A provides service from Monday through Sunday and on Holidays. Route 760 provides service on Saturday and Sunday, and on Holidays.

The Spadina Subway Transit Strategy plans for the northerly extension of the Toronto-York Spadina Subway line to the VMC at Millway Avenue and Highway 7, south of the Portage Parkway study area corridor. **Figure 15** shows the York Region Transit System Map surrounding the study area.

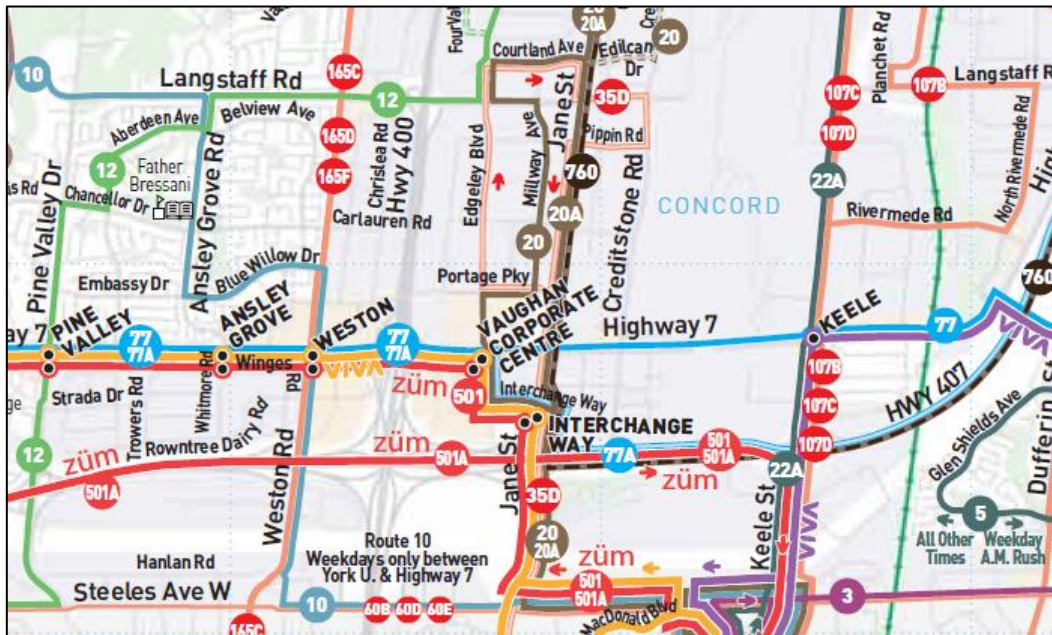


Figure 15: York Region Transit System Map (2015)

## 4.6 Municipal Infrastructure

### Water Distribution

The VMC Servicing Class EA Master Plan (2012) identified the following existing water distribution system within the study area, as shown in **Figure 16**:

- + 300 mm diameter watermain along Portage Parkway, Applewood Crescent, Edgeley Boulevard (north of Portage Parkway), and Buttermill Avenue,
- + 400 mm diameter watermain along Edgeley Boulevard (south of Portage Parkway),
- + 500 mm diameter watermain along Millway Avenue, and
- + 600 mm diameter watermain along Jane Street.

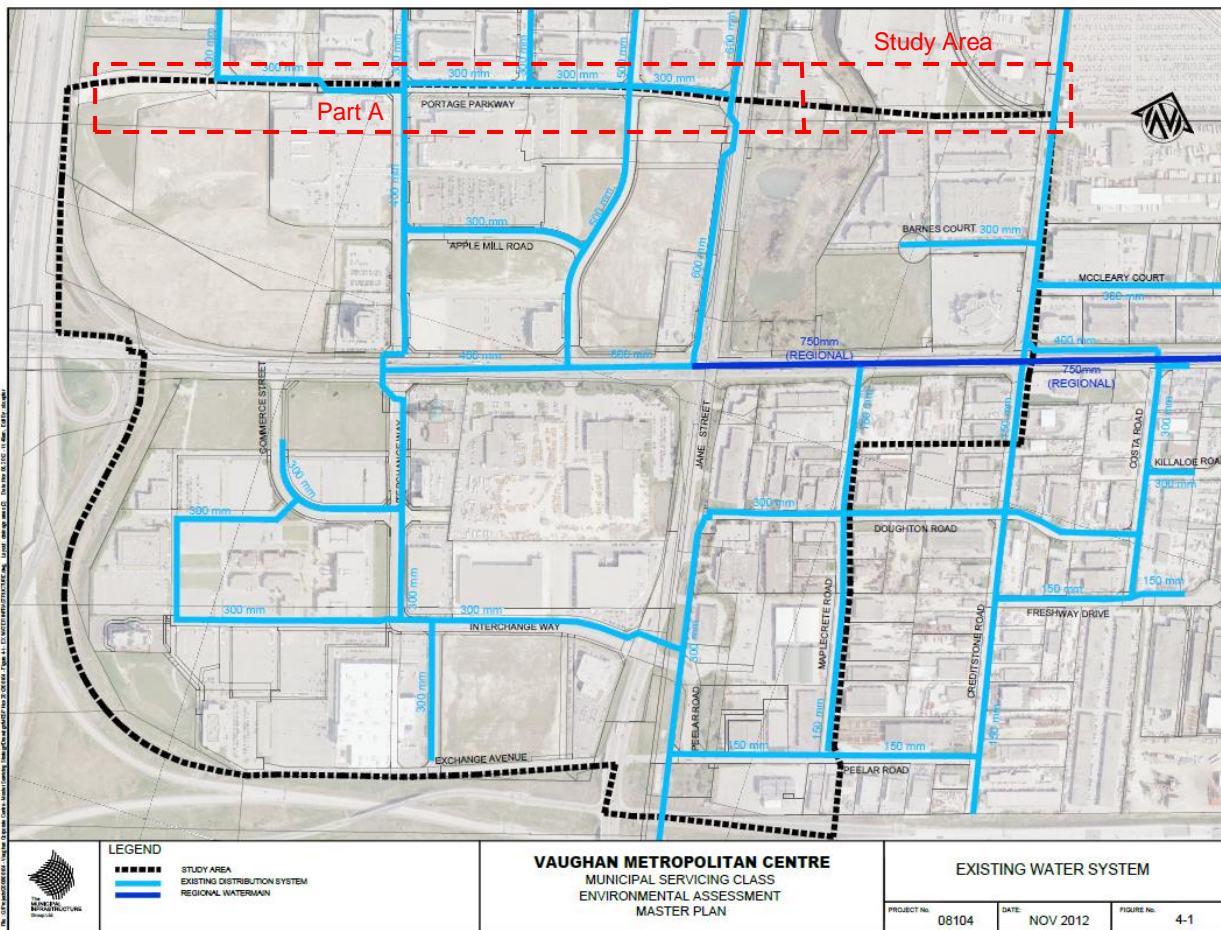


Figure 16: VMC Municipal Servicing Class EA Master Plan (2012)

### Sanitary System

The VMC Municipal Servicing Class EA Master Plan (2012) identified the following existing sanitary sewer system within the study area:

- + 300 mm diameter sanitary sewer along Portage Parkway from Applewood Crescent to Edgeley Boulevard and along Applewood Crescent,
- + 200 mm diameter sanitary sewer along Portage Parkway from east of Buttermill Avenue to Millway Avenue,
- + 250 mm diameter sanitary sewer along Edgeley Boulevard (north of Portage Parkway) and Buttermill Avenue,
- + 450 mm diameter sanitary sewer along Edgeley Boulevard (south of Portage Parkway), and
- + 600 mm diameter sanitary sewer along Millway Avenue and the Black Creek Channel.



## Stormwater System

The major stormwater constraints for the proposed Portage Parkway widening and extension can be found in Golder's technical report which is provided in **Appendix A**. The following is a summary of the constraints:

- + Widening and roadway construction should ensure that the functionality of the existing adjacent stormwater sewer systems is maintained, and
- + The existing regional flow water level for Black Creek through the site is approximately 202.41m, and the 1:100 year return period flow through the site is approximately 202.01m.

## Storm Sewer System

The existing storm sewer system was mostly constructed between 1987 and 1989 and includes the following:

- + A stormwater management pond located southeast of the Portage Parkway bridge over Highway 400, which collects stormwater runoff from the following:
  - 1095mm diameter storm sewer flowing south along Applewood Crescent; and
  - 900mm diameter storm sewer flowing west along Portage Parkway, collecting stormwater runoff from the majority of Portage Parkway between Edgeley Boulevard and Applewood Crescent.
- + A stormwater management pond south of Portage Parkway located southeast of the intersection with Jane Street, which collects stormwater runoff from the following:
  - 1350mm diameter storm sewer flowing south along Edgeley Boulevard, crossing Portage Parkway;
  - 1200mm diameter storm sewer flowing south along Buttermill Avenue. This storm sewer continues along Portage Parkway as a 1350mm diameter storm sewer from Buttermill Avenue to Millway Avenue; and
  - 1350mm diameter storm sewer flowing south along Millway Avenue, crossing Portage Parkway and collecting stormwater runoff from 1350mm and 600mm diameter storm sewers along Portage Parkway. This storm sewer continues south of Portage Parkway along Millway Avenue as an 1800mm diameter storm sewer.

For detailed information, the Stormwater Management Report is provided in **Appendix A**.

## 4.7 Utilities

Street lighting poles and fire hydrants are visible throughout the study corridor. Existing utilities include telephone (Bell Canada), Gas (Enbridge Gas), Hydro (Powerstream), cable (Rogers Cable), and All Stream. Hydro poles are present on the east side along Jane Street.

## 5. Planned Municipal Infrastructure

### Water Distribution

Water servicing projects were recommended in the Class EA Master Plan for municipal servicing (City of Vaughan, 2012) to support new roads identified by the VMC Secondary Plan, including:

- + 300mm diameter watermain along Applewood Crescent (south side of Portage Parkway),
- + A new 300-400mm diameter watermain along the future Portage Parkway from Jane Street to Creditstone Road, for a total length of approximately 570m, and
- + 400mm diameter watermain along Creditstone Road (south side of Portage Parkway).

The proposed water distribution system included:

- + 400mm diameter watermain along extended Portage Parkway from Jane Street to the proposed North-South Road east of Black Creek,
- + 300mm diameter watermain along extended Portage Parkway from the proposed North-South Road east of Black Creek to Creditstone Road, and
- + 400mm diameter watermain along the south leg of proposed North-South Road east of Black Creek.

### Stormwater System

Recommendations of the City's Black Creek Stormwater Optimization Study (2012) most relevant to the study area, included:

- + Replacing the Black Creek channel with a naturalized channel between the stormwater management pond on the east side of Jane Street to the south of Portage Parkway (Edgeley Pond) and Highway 407,
- + Retrofitting the Edgeley stormwater management pond, and
- + Constructing new bridges at road crossings.

## 6. Consultation

### 6.1 Notices

#### 6.1.1 Notice of Study Commencement

A Notice of Study Commencement was prepared to inform the public of the study and future opportunities for review and input. The notice was placed in the *Vaughan Citizen* and *The Thornhill Liberal* on June 18 and 25, 2015. It was mailed to approximately 1,500 land owners within the boundaries of Langstaff Road to the north, the CN Rail yard to the east, Highway 407 to the south and Weston Road to the west. Copies of these notices are provided in **Appendix B**. As previously noted, the mailing list of land owners is not provided to respect the *Municipal Freedom of Information and Protection of Privacy Act* (Government of Ontario, 2016).

Invitations to participate on the study's Technical Agencies Committee were mailed to approximately 93 agency representatives. Invitations to participate on the study's Stakeholders Group were mailed to 201 property owners within 200m north and south of Portage Parkway within the study limits. The invitations were sent in letter format and were accompanied by the notice and a reply form to indicate interest in the study and/or the Technical Agencies Committee or Stakeholders Group, respectively. Copies of the invitations and a mailing list of agencies can be found in **Appendix B**.

The study team received correspondence from 22 individuals representing the public and 16 agency representatives. Correspondence was received by reply forms, letters, electronic mail (email), and telephone (phone). **Appendix B** includes a copy of the correspondence received during this study.

Of the individuals representing the public, 20 indicated an interest to be kept informed of the study and eight (8) indicated an interest in participating as a member of the Stakeholders Group. Further, 15 individuals indicated an interest in Part A and Part B; and three (3) individuals indicated an interest in Part A of the study area. Comments generally focused on the following opportunities for improvement:

- + To move traffic quicker and safer, add an advance green or a turning arrow for the left turn from Pennsylvania Avenue to southbound Applewood Crescent, and from eastbound Portage Parkway to northbound Applewood Crescent,
- + To improve safety, extend the sidewalk on Applewood Crescent north of Portage Parkway; The sidewalk ends near Pennsylvania Avenue where people walk on the street,
- + To achieve traffic relief from Highway 7, extend Portage Parkway to Keele Street over the CN property; and study the extension of Langstaff Road from Creditstone Road to Keele Street, and
- + To meet municipal and provincial planning objectives, add a dedicated truck route to the Portage Parkway Extension.

Of the agency representatives, six (6) indicated an interest to be kept informed of the study and four (4) indicated an interest in participating on the Technical Agencies Committee. Further, three (3) representatives indicated an interest in Part A and Part B; and one (1) indicated an interest in Part B of the study area. Comments generally advised on how to determine if the study area:

- + Applies to the Canadian Environmental Assessment Act,
- + Falls within the Ministry of Transportation Permit Control Area,
- + Has archaeological potential or consists of built heritage resources or cultural heritage landscapes with respect to the Ontario Heritage Act,
- + Includes property managed by Infrastructure Ontario,
- + May be of interest to Aboriginal communities, including the First Nations identified by the Ministry of Aboriginal Affairs: Chippewas of Georgina Island, Beausoleil First Nation (Christian Island), Chippewas of Rama, Mississaugas of the New Credit First Nation, Mississaugas of Scugog Island, The Chiefs of Ontario and the Metis Nation of Ontario,
- + Requires measures for protecting sensitive species.

In addition, the Ministry of Environment and Climate Change outlined its expectations for the content of the Environmental Study Report as it relates to the following:

- + Aboriginal Consultation,
- + Groundwater and Soil Conditions,
- + Growth Plan for the Greater Golden Horseshoe and Provincial Policy Statement,
- + Stormwater Management,
- + Underground Storage Tanks and Transmission Lines, and
- + Waste Disposal Sites.

### 6.1.2 Notice of Public Information Centre No. 1

A Notice of Public Information Centre No. 1 was prepared to invite the public to review and provide input to the study at a Public Information Centre on November 25, 2015. The notice was placed in the *Vaughan Citizen* and *Thornhill/Richmond Hill Liberal* on November 12 and 19, 2015. It was mailed to approximately 1,500 land owners within the boundaries of Langstaff Road to the north, the CN Rail yard to the east, Highway 407 to the south and Weston Road to the west. Invitations were mailed to 121 agency representatives and 22 stakeholders on November 12, 2015. Copies of these notices are provided in **Appendix B**. As previously noted, the mailing list of land owners is not provided to respect the *Municipal Freedom of Information and Protection of Privacy Act* (Government of Ontario, 2016).

### 6.1.3 Notice of Public Information Centre No. 2

A Notice of Public Information Centre No. 2 was prepared to invite the public to review and provide input to the study at a Public Information Centre on March 9, 2016. The notice was placed in the *Vaughan Citizen* and *Thornhill/Richmond Hill Liberal* on February 25 and March 3, 2016. It was mailed to approximately 1,500 landowners within the boundaries of Langstaff Road to the north, the CN Rail yard to the east, Highway 407 to the south and Weston Road to the west. Invitations were mailed to 121 agency representatives and 42 stakeholders on February 24, 2016. Copies of these notices are

provided in **Appendix B**. As previously noted, the mailing list of land owners is not provided to respect the *Municipal Freedom of Information and Protection of Privacy Act* (Government of Ontario, 2016).

#### 6.1.4 Notice of Study Completion

A Notice of Study Completion will be prepared to inform the public of the preferred solution and design, and invite the public to review the Environmental Study Report. The notice will be placed in the *Vaughan Citizen* and *Thornhill/Richmond Hill Liberal* on two separate dates each; mailed to land owners within the boundaries of Langstaff Road to the north, the CN Rail yard to the east, Highway 407 to the south and Weston Road to the west; and mailed to agency representatives and other stakeholders.

### 6.2 Meetings

#### 6.2.1 Regulatory Agencies

A meeting with the Toronto and Region Conservation Authority was held on May 15, 2015. The main purpose of the meeting was to initiate discussion regarding hydraulic modelling and criteria for the Black Creek crossing at Portage Parkway. The Toronto and Region Conservation Authority advised that, at a minimum, there should be no impacts to existing flood levels. Details of the discussion are documented in the meeting notes in **Appendix B**.

A follow-up meeting was held with Toronto and Region Conservation Authority on March 7, 2016 to review the results of the hydrological modelling and geomorphology assessment. Details of the meeting are documented in **Appendix B**.

#### 6.2.2 Technical Agencies Committee

##### Meeting #1

The first meeting with the Technical Agencies Committee was held as a joint meeting with the Stakeholders Group on July 16, 2015. Twenty-one (21) agency representatives were invited to attend via email on July 3, 2015. Twenty-two (22) people attended, including four (4) agency representatives, seven (7) technical staff from the City of Vaughan, the City's Project Manager, and two (2) representatives from the Consultant Team. The remaining attendees represented the Stakeholders Group. In addition, nine (9) agency representatives and 10 technical staff who could not attend were sent a copy of the meeting notes for information. Input was limited to comments provided by the Stakeholders Group, as described below, in **Section 6.2.4 Meeting #1**. Detailed meeting notes are provided in **Appendix B**.

##### Meeting #2

The second Technical Agencies Committee meeting was held on October 20, 2015. Twenty-two (22) agency representatives were invited to attend via email on September 23, 2015. Fourteen (14) people attended, including four (4) agency representatives, seven (7) technical staff from the City of Vaughan, the City's Project Manager, and two (2) representatives from the Consultant Team. In addition, eleven

(11) agency representatives and eleven (11) technical staff who could not attend were sent a copy of the meeting notes for information. Detailed meeting notes are provided in **Appendix B**. One area of concern related to the effect of the project on underground utilities.

### Meeting #3

The third meeting with the Technical Agencies Committee was held on February 2, 2016. Seventeen (17) representatives were invited to attend via email on January 15, 2016. Eleven (11) people attended, including six (6) agency representatives, two (2) technical staff from the City of Vaughan, the City's Project Manager, and two (2) representatives from the Consultant Team. In addition, six (6) agency representatives and nineteen (19) technical staff who could not attend were sent a copy of the meeting notes for information. Detailed meeting notes are provided in **Appendix B**.

## 6.2.3 Stakeholders

Six (6) separate meetings were held with individual stakeholders during the study, representing:

- + 7895 Jane Street on September 22, 2015;
- + 70 Talman Court on October 7, 2015;
- + 700 Applewood Crescent on December 17, 2015 and January 7, 2016;
- + 7941 Jane Street on February 4, 2016; and
- + 10 Buttermill Avenue on May 12, 2016.

The purpose of each meeting was to review project impacts on the respective property, such as restricted/modified accesses, loss of parking, changes to on-site traffic circulation, or potential for land requirements.

## 6.2.4 Stakeholders Group

### Meeting #1

The first meeting with the Stakeholders Group was held as a joint meeting with the Technical Agencies Committee on July 16, 2015. Fifteen (15) stakeholders were invited to attend via email on July 3, 2015. Twenty-two (22) people attended, including eight (8) stakeholders, seven (7) technical staff from the City of Vaughan, the City's Project Manager, and two (2) representatives from the Consultant Team. The remaining attendees represented agencies. The meeting notes can be found in **Appendix B**.

The following considerations were highlighted by the Stakeholders Group:

- + Concerns over the proximity of the road extension to the existing CN Rail spur; Criteria of a 30m buffer from the rail to the nearest curb cut was a Transport Canada standard.
- + Concern around the future viability of the area for industry given the various bicycle/pedestrian and potential mixed used development being introduced into this predominately industrial area.
- + Staging of intersection improvements and driveways as part of new developments will need to be compatible with the ultimate design for Portage Parkway.

- + Functionality and landscaping are important factors for Portage Parkway given the needs of the adjacent employment area.

### **Meeting #2**

The second meeting with the Stakeholders Group was held on October 20, 2015. Nineteen (19) stakeholders were invited to attend via email on September 23, 2015. A total of fourteen (14) people attended, including six (6) stakeholders, two (2) technical staff from the City of Vaughan, the City's Project Manager, and two (2) representatives from the Consultant Team. The meeting notes can be found in **Appendix B**.

### **Meeting #3**

The third meeting with the Stakeholders Group was held on February 2, 2016. Twenty-One (21) stakeholders were invited to attend via email on January 15, 2016. A total of nineteen (19) people attended, including eleven (11) stakeholders, five (5) technical staff from the City of Vaughan, the City's Project Manager, and two (2) representatives from the Consultant Team. The meeting notes can be found in **Appendix B**.

## **6.3 Public Information Centres**

### **Public Information Centre #1**

A Public Information Centre (PIC) was held on November 25, 2015 from 5:00 pm to 8:00 pm. The PIC was held to present the study, including information on alternative planning solutions, existing conditions, evaluation criteria and design considerations. The PIC served as an opportunity for the public to review project information, ask questions or discuss comments with members of the study team. As discussed above, a notice announcing the PIC was advertised in the *Vaughan Citizen* and *Thornhill/Richmond Hill Liberal* on November 12 and November 19, 2015. Also, invitations were mailed to 121 agency representatives and 22 stakeholders on November 12, 2015.

During the PIC, the public was invited to review presentation boards and ask questions or discuss comments with the study team. The boards presented information on the following topics:

- + Study Area, Process, Background
- + Safety Review
- + Natural Environment
- + Socio-Economic and Cultural Environment
- + Needs Assessment
- + Problem and/or Opportunity Statement
- + Alternative Solutions
- + Evaluation Criteria
- + Evaluation of Alternative Solutions

- + Stakeholder Comments
- + Preliminary Preferred Solution
- + Next Steps

Nineteen (19) people signed into the PIC. Most attendees were area residents and/or adjacent property owners. Four (4) members of the study team were present, including the City of Vaughan’s Project Director and Project Manager, and CIMA+’s Project Manager and EA/Land Use Planner.

Comment sheets were available for the public to fill out and submit at the PIC or mail in by December 13, 2015. A total of four (4) comment sheets were submitted: two (2) by local residents, one (1) by a local business representative, and one (1) by an agency representative. Three (3) comments were received out of four (4) comment sheets. A summary of the comments is provided in **Table 3** and copies of the completed comment sheets are included in **Appendix B**.

**Table 3: PIC 1 Comments/Feedback and Study Team’s Response**

| Comments/Feedback  | Project Team Response   |
|--|---|
| Thanks for keeping us updated.   | Comment noted.  |
| Please add to stakeholder group.   | PIC participants who asked to be added to the stakeholder group were added. |
| I am interested in the Portage EA as it affects the VMC subway station and Millway Avenue. | Comment noted.  |

## Public Information Centre #2

A Public Information Centre (PIC) was held on March 9, 2016 from 5:00 pm to 8:00 pm. The PIC was held to present the alternative design concepts, evaluation of alternatives, and recommended design. The PIC served as an opportunity for the public to review the alternative design concepts, ask questions or discuss comments with members of the study team. As discussed above, a notice announcing the PIC was advertised in the *Vaughan Citizen* and *Thornhill/Richmond Hill Liberal* on February 25 and March 3, 2016. Also, invitations were mailed to 121 agency representatives and 42 stakeholders on February 24, 2016.

During the PIC, the public was invited to review presentation boards and ask questions or discuss comments with the study team. The boards presented information on the following topics:

- + Class EA Process, Study Area, Background
- + Summary of PIC No. 1 and Public Comments
- + Summary of Environmental Investigations
- + Design Constraints and Considerations
- + Design Evaluation Criteria
- + Typical Cross-Sections Portage Parkway Widening Options West of Jane Street
- + Evaluation of Widening West of Jane Street



- + Portage Parkway Road Extension East of Jane Street
- + Evaluation of Extension East of Jane Street
- + Preliminary Preferred Widening and Extension Options (Roll Plan)
- + Black Creek Crossing Preliminary Design Concepts
- + Impacts and Mitigation
- + Next Steps and Contact Information

Fourteen (14) people signed into the PIC. Most attendees were area residents and/or adjacent property owners. Five (5) members of the study team were present, including the City of Vaughan’s Project Director and Project Manager, and CIMA+’s Project Manager, EA/Land Use Planner, and Transportation Planner. Comment sheets were available for the public to fill out and submit at the PIC or mail in by March 23, 2016. A summary of the comments is provided in **Table 4**.

**Table 4: PIC 2 Comments/Feedback and Study Team’s Response**

| Comments/Feedback   | Project Team Response |
|---|-----------------------|
| Preliminary preferred design is appropriate and satisfactory as it relates to our development located at 7895 Jane Street. We request notification of future stages of the study process to its completion. | Comment noted.        |

## 6.4 Public Open House

A Public Open House was held on May 5, 2016 from 4:00 pm to 8:00 pm. The Open House was an opportunity for landowners along Portage Parkway, within the study limits, to meet with the study team to review specific issues associated with the preliminary preferred design and their individual property. An invitation to the Open House was mailed to landowners within 200m of the study corridor on April 21, 2016. The invitation was extended to the Technical Agencies Committee and Stakeholders Group by email on April 25 and 26, 2016. The invitation explained the requirement for property on both sides of Portage Parkway and for the easterly extension of Portage Parkway to Creditstone Road. A description of the preliminary preferred design and access to a plan showing the proposed road improvements was provided in the invitation. Three landowners attended the Open House to review the plans and effects specific to their respective property. A copy of the invitation is included in **Appendix B**.

## 6.5 Council Report

City of Vaughan Council at their meeting on June 28, 2016 ratified the recommendation with respect to issuing Notices of Completion and placing the Environmental Study Reports on public record for the minimum 30 day review period for the Portage Parkway Widening and Easterly Extension to West of Black Creek (Part A) Schedule C project and the Portage Parkway Extension from West of Black to Creditstone Road (Part B) Schedule C project. An extract is included in **Appendix B**.



## 6.6 Public Review Period

The Environmental Study Report will be placed on the public record for a minimum 30 calendar days. The Notice of Study Completion will announce where the report can be reviewed and will include contact information and a date for receiving comments. The notice will further explain the process for resolving concerns. The public must contact the City of Vaughan within the 30-day review period to discuss and resolve any outstanding issues. If the issues cannot be resolved, the public may request for the Minister of Environment and Climate Change to order the City to comply with Part II of the *Environmental Assessment Act*, which addresses Individual Environmental Assessments. Part II Order requests must be made to the Minister of Environment and Climate Change within the 30-day review period. The requester shall also forward a copy of the request to the proponent and the Director of the Ministry of the Environment and Climate Change's Environmental Approvals Branch. Contact information is as follows:

**Minister of the Environment and Climate Change**

Honorable Glen Murray  
77 Wellesley Street West, 11<sup>th</sup> Floor  
Toronto, ON M7A 2T5

**Director, Environmental Approvals Branch**

**Ministry of the Environment and Climate Change**  
135 St. Clair Avenue West, 1<sup>st</sup> Floor  
Toronto, ON M4V 1P5

**City of Vaughan**

Development Engineering and Infrastructure Planning  
2141 Major Mackenzie Drive  
Vaughan, ON L6A 1T1

## 7. Alternative Solutions

Alternative solutions were identified and evaluated as part of Phase 1 and 2 of the Class EA process, as there are multiple ways to address the future travel demands of Portage Parkway. Six (6) alternatives were examined as part of this EA study, namely:

### Do Nothing

This solution would leave Portage Parkway unmodified in an ‘as is’ state.

### Travel Demand Management Initiatives

Travel demand management initiatives involve strategies and policies used to reduce travel demand or redistribute the demand spatially or temporally.

### Alternative Modes of Transportation

Promoting and facilitating the use of alternative modes of transportation, such as transit and cycling, can reduce the demand on a roadway.

### Localized Intersection and Operational Improvements

Operational improvements, such as the retiming of traffic signals and installation of turning lanes, can improve the overall efficiency of a roadway (i.e. maximize throughput) and the surrounding network.

### Widening Portage Parkway from Applewood Crescent to Jane Street

This solution would increase the capacity of the roadway between Applewood Crescent and Jane Street.

### Extending Portage Parkway from Jane Street to Creditstone Road

This solution addresses the local area network discontinuity by extending Portage Parkway from Jane Street to Creditstone Road.

An advantage/disadvantage evaluation process was used to evaluate the appropriateness of the above alternatives. The advantages and disadvantages of each alternative are illustrated in **Table 5**.

**Table 5: Alternative Solution Advantage/Disadvantage Evaluation**

| Alternative                          | Advantage(s)   | Disadvantage(s)  |
|--------------------------------------|--|--|
| Do Nothing                           | <ul style="list-style-type: none"> <li>No natural environmental impacts</li> </ul>   | <ul style="list-style-type: none"> <li>Does not accommodate future traffic growth</li> <li>Does not conform to VMC Secondary Plan/Transportation Master Plan (TMP)</li> <li>No improvements to traffic safety</li> </ul> |
| Travel Demand Management Initiatives | <ul style="list-style-type: none"> <li>Indirect improvements encourage alternative transportation</li> <li>Long term potential for increased traffic capacity</li> <li>Partially conforms to VMC Secondary Plan/TMP</li> <li>Long term potential for reduction in vehicular emissions</li> </ul> | <ul style="list-style-type: none"> <li>Does not accommodate future traffic growth</li> <li>No improvements to traffic safety</li> </ul>  |

| Alternative   | Advantage(s)   | Disadvantage(s)  |
|---|--|--|
| Alternative Modes of Transportation                             | <ul style="list-style-type: none"> <li>• Direct and indirect improvements encourage alternative transportation</li> <li>• Partial reduction of traffic volumes</li> <li>• Partially conforms to VMC Secondary Plan/TMP/Pedestrian and Cycling Master Plan</li> <li>• Potential for minor improvements to aesthetics and streetscape</li> <li>• Low construction/implementation costs</li> </ul>  | <ul style="list-style-type: none"> <li>• Does not accommodate future traffic growth</li> <li>• No impact to traffic safety</li> <li>• Low potential for archaeological impact</li> </ul>   |
| Localized Intersection and Operational Improvements             | <ul style="list-style-type: none"> <li>• Marginally improves Level of Service (LOS) for traffic</li> <li>• Opportunity for gateway intersections per Streetscape and Open Space Plan</li> </ul>  | <ul style="list-style-type: none"> <li>• Does not accommodate future traffic growth</li> <li>• Low construction costs</li> </ul>   |
| Widening Portage Parkway from Applewood Crescent to Jane Street | <ul style="list-style-type: none"> <li>• Opportunity to encourage alternative transportation</li> <li>• Improves LOS for traffic</li> <li>• Conforms to VMC Secondary Plan/TMP</li> <li>• Opportunity to address traffic operations</li> <li>• Opportunity to improve aesthetics and streetscape per VMC Streetscape and Open Space Plan</li> <li>• Improves access to industry and business</li> <li>• Improves emergency access</li> </ul> | <ul style="list-style-type: none"> <li>• Increases surface area contributing to storm water runoff</li> <li>• Low potential for archaeological impact</li> <li>• Property required</li> <li>• High construction costs</li> </ul>   |
| Extending Portage Parkway from Jane Street to Creditstone Road  | <ul style="list-style-type: none"> <li>• Opportunity to encourage alternative transportation</li> <li>• Conforms to VMC Secondary Plan/TMP</li> <li>• Provides alternative route for truck traffic</li> <li>• Improves access to industry and businesses</li> <li>• Improves emergency route</li> </ul>  | <ul style="list-style-type: none"> <li>• Increases surface area contributing to storm water runoff</li> <li>• Potential traffic noise impact</li> <li>• Potential environmental issues</li> <li>• Low potential for archaeological impact</li> <li>• Property required</li> <li>• High construction costs</li> </ul> |

The advantage/disadvantage evaluation process yielded a combination of the aforementioned alternatives as the recommended solution for Portage Parkway. Two (2) of the recommended solutions have also been recommended as part of the TMP, which are:

- + Travel Demand Management Initiatives – Identified in the TMP and will be implemented by the City as a separate strategy.

- + Alternative Modes of Transportation – Identified in the TMP, including the provision for continuous sidewalks, cycling systems, connectivity of the subway extension to Highway 7, and rapid transit of Jane Street.

The other three (3) recommended solutions are:

- + Localized Intersection and Operational Improvements;
- + Widening Portage Parkway from Applewood Crescent to Jane Street; and
- + Extending Portage Parkway from Jane Street to Creditstone Road.



## 8. Alternative Designs

### 8.1 Planning and Design Context

#### Active Transportation

The City of Vaughan Pedestrian and Bicycle Master Plan (2007) is a guide for improvements to existing and proposed pedestrian and cycling facilities. Map 4 of the Master Plan shows the type of facilities proposed for the City's pedestrian and bicycle network. Portage Parkway and Edgeley Boulevard are identified under Class 2 Bike Lanes with paved shoulders and sidewalks. Specifically, both roads within the study area are marked as Neighbourhood Bike Lanes with formal pavement markings and signs, and the possibility of road widening.

Currently, sidewalks are present on the south side of Portage Parkway from Applewood Crescent to Jane Street and intermittently along the north side. Sidewalks on the north side generally appear on approach to intersections. Sidewalks are separated from the roadway by grassed boulevards with street trees.

There are no cycling facilities on Portage Parkway within the study area.

#### Streetscape and Open Space

The VMC Streetscape and Open Space Plan (2015) is a guideline for landscape design of streets and public spaces within the VMC. The primary objective is to create a public realm that integrates the design of public spaces with the design of privately owned spaces.

The Plan identifies Portage Parkway at Applewood Crescent and Portage Parkway at Jane Street as Mobility Hub Gateway Intersections. Gateway intersections are described in the Plan as “distinguishable places of change within the urban landscape” that “convey a sense of arrival”. A mobility hub gateway intersection conveys a sense of arrival to transit users. The remaining eight intersections within the study area are identified as minor intersections, which are described as intersections that “bring together all the varying urban conditions at grade”.

Typical landscape treatments for Major Collector roads, such as Portage Parkway, are illustrated in **Figure 17**. As described in the Plan, the purpose of a Major Collector is to collect and distribute traffic between neighbourhoods and arterial streets, provide access to commercial land uses, and support strong connections between schools and parks. The Plan recognizes Portage Parkway as a transitional zone between a green urban centre and employment lands. The treatments shown in **Figure 17** include large scale street trees, understorey planting and topographical changes to mitigate noise.



Figure 5.9: Portage Parkway (Typical Mid-block)

Figure 17: Typical Landscape Elements

The typical cross-section from the VMC plan shown above was refined during the EA process while the basic elements were retained.

## 8.2 Generating Design Alternatives

Alternative design concepts for the corridor were initially generated using the existing centreline, but then modified with consideration for the constraints presented by the existing stable built form on the north side, and consideration to the emerging transformation of the VMC.

Several design constraints were considered in the development of alternative design concepts. However, the major constraints included:

- + Ensuring that the impact of the proposed roadway improvements on Regional storm events are equal to or less than the existing conditions (within Toronto and Region Conservation Authority guidelines).

More specifically, these alternative designs address:

- + How can property and access impacts be avoided and minimized;
- + What horizontal alignment should the extension take east of Jane Street;
- + What type of structure is needed to traverse Black Creek east of Jane Street; and

- + Transport Canada's Grade Crossing Standards (July 2014) with respect to restrictions on the proximity of intersections and driveways to public grade crossings.

While Part A was initially identified as being west of Jane Street, as the project progressed, it became clear that Part A widening had implications immediately east of Jane Street because of an existing off-set driveway on the east side of the Jane Street/Portage Parkway intersection that would have to be relocated. Therefore, both Parts A and B consider implications of the alignment immediately east of Jane Street.

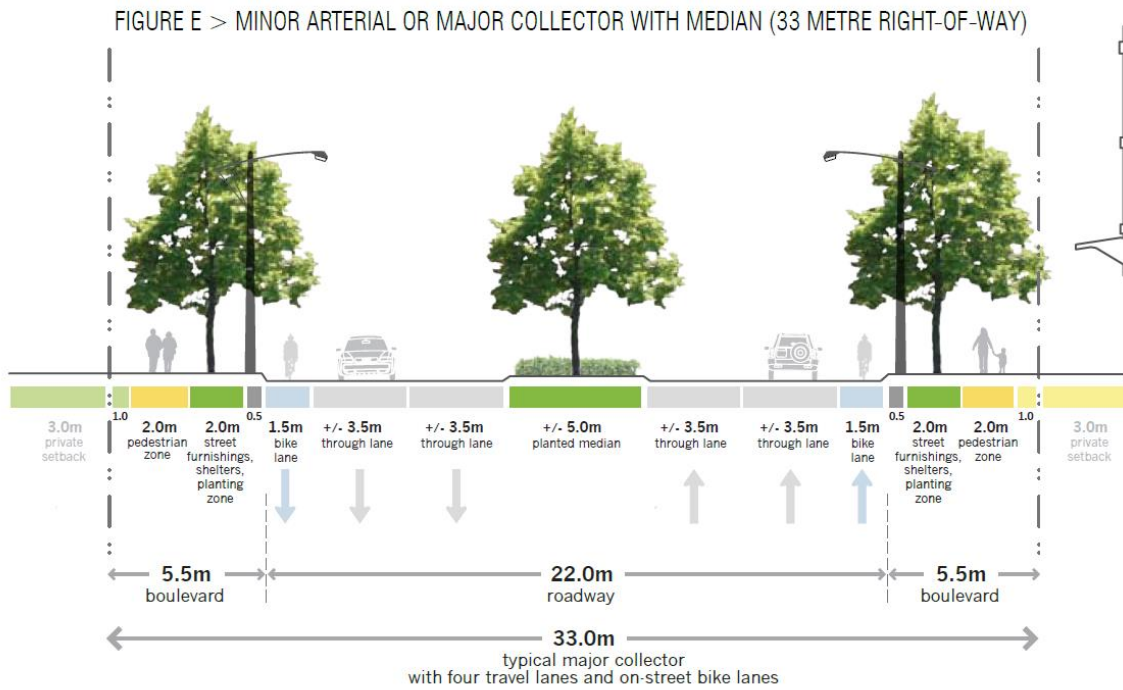
Development of the design has to consider the three-dimensions of a road corridor (i.e., the cross-section, horizontal alignment and vertical profile).

### **Cross-Section**

The VMC Secondary Plan (**Figure 18**) and VMC Streetscape and Open Space Plan, as coordinated with the City's broader City-wide Streetscape Implementation Manual and Financial Strategy, and Design Criteria and Standard Drawings, provided the planning and design context and framework for the exploration of alternative typical cross-sections.

The beginning point for the development of a typical cross-section was the street cross-section from the VMC Secondary Plan (**Figure 18**) and organization of streetscape infrastructure as guided by the VMC Streetscape and Open Space Plan. The symmetrical street cross-section in the VMC Secondary Plan accommodates four 3.5m travel lanes, two 1.5m on-street bicycle lanes, and 5.5m boulevards within a 33m right-of-way. The VMC Streetscape and Open Space Plan incorporates cycling facilities into the street network to build a cohesive and permeable network identifying a cycle track for Portage Parkway.





**Figure 18: VMC Secondary Plan Typical Cross-section**

Recognizing high truck volumes associated in large part with the surrounding industrial areas, the preferred typical cross-section was refined to provide a wider 3.5m curb lane (relative to 3.3m inside lane) and a wider raised off-road cycle track at 1.8m separated by a rolled curb facilitating trucks and cyclists, respectively.

### 8.3 Technical and Environmental Criteria

Each of the alternative designs was assessed against the following technical and environmental criteria:

| Technical Criteria  | Environmental Criteria  |
|---|---|
| <p><i>Economic</i></p> <ul style="list-style-type: none"> <li>+ Capital costs</li> </ul> <p><i>Implementation</i></p> <ul style="list-style-type: none"> <li>+ Conformity with regulatory framework.</li> <li>+ Construction staging and planning.</li> <li>+ Impacts on existing municipal services and utilities.</li> </ul> <p><i>Infrastructure Planning</i></p> <ul style="list-style-type: none"> <li>+ Improved road safety.</li> <li>+ Opportunities for other travel modes (walking, cycling, and public transit).</li> <li>+ Improving road capacity and/or traffic flow.</li> <li>+ Conformity with official/secondary plans and transportation master plans.</li> </ul> | <p><i>Natural</i></p> <ul style="list-style-type: none"> <li>+ Impacts on avian and wildlife.</li> <li>+ Encroachment onto natural areas</li> <li>+ Impacts on species at risk.</li> <li>+ Impacts on aquatic and watercourses.</li> <li>+ Impacts on vegetation.</li> </ul> <p><i>Cultural/Social</i></p> <ul style="list-style-type: none"> <li>+ Impacts on archaeology.</li> <li>+ Impacts on built heritage and cultural landscapes.</li> <li>+ Air quality (vehicle emissions).</li> <li>+ Compatibility with emergency services requirements.</li> <li>+ Property and parking access impacts.</li> <li>+ Noise impacts (post construction).</li> </ul> |

### 8.4 Part A – Applewood Crescent to Jane Street

Horizontal alignment constraints were presented by the existing stable built form on the north side (including parking). Five (5) alternative designs of the horizontal alignment, which include a Do-Nothing option, were developed by considering the emerging transformation of the VMC on the south side.

As previously noted, while Part A was initially identified as being west of Jane Street, as the EA study progressed, it became clear that Part A widening had implications immediately east of Jane Street because of an existing off-set driveway on the east side of the Jane Street/Portage Parkway intersection that would have to be relocated. Therefore options were developed that considered both Parts A and B.

Four (4) design options to widen and improve Portage Parkway from Applewood Crescent to Jane Street were developed and carried forward for evaluation. The first option aligns with “widening equally on both sides”. Once the business impacts (mainly loss of parking on the north side) of this option were apparent, further options were developed that varied the alignment to the south and north giving due consideration to constraints on both the north and south sides.

### **'Do Nothing' Option**

- + No widening of Portage Parkway from Applewood Crescent to Jane Street – this was used for comparative purposes in order to measure the net impacts.

Each of the following four (4) options are entirely similar. They vary from one another by their placement in relation to the existing right-of-way. Option 1 begins with an equidistance widening about the centreline which produces grievous impact on the north-side parking. Options 2 and 3 are very similar, as they are both shifted southerly, however, option 2 is shifted more towards the south to avoid any impact on the north-side, and option 3 has an impact on parking within the right-of-way. Option 4 holds the right-of way from both sides to minimize the property impact, however it affects one property within the City's right-of-way.

#### **Option 1: Widen Equally on Both Sides**

- + Widening equally from the centreline removes a row of parking from all properties on the North side.

#### **Option 2: Widen to the South with No Impact on North Side**

- + Widening to the South avoids **all** North side parking impacts, but adversely impacts parking and loading/unloading operations on the South side.

#### **Option 3: Widen to the South with Impact on North Side**

- + Holding the right-of-way at its current position on the North side adversely impacts parking within the right-of-way, as well as parking and loading/unloading operations on the South side.

#### **Option 4: Hold Right-of-Way on Majority of Parking Curb Lines (Both Sides)**

- + Holding the right-of-way to the edge of the curb line for parking on the North and South sides minimizes property impacts on the North side (affects one North-side property which is constructed partly in the City's right-of-way).



Option 1 – Widen Equally on Both Sides



Option 2 – Widen to the South with No Impact on North Side



Option 3 – Widen to the South with Minor Impact on North Side

































**Option 4 – Hold Right-of-Way on Majority of Parking Curb Lines (Both Sides)**

**Figure 19: Alternative Designs for Road Widening**

Each option was assessed against each of the identified technical and environmental criteria, and ranked from least to most positive based on the level of net impact on the corresponding criteria. To determine net impacts, the assessment considered both positive and negative effects of each option, with measures in place to mitigate any negative effect. This assessment is summarized in **Table 6**. Each option was then evaluated and ranked from least to most positive based on the level of overall net impact. The evaluation is summarized in **Table 7**, respectively.

Table 6: Alternative Designs Evaluation































| Technical Criteria   | Do Nothing  | 1   | 2   | 3   | 4   |
|--|---|---|---|---|---|
| <b>Cultural</b>  |   |   |   |   |   |
| <b>Archaeological Features</b>   | <br>No impact.   | <br>Land outside of existing right-of-way has low to no archaeological potential.  | <br>Land outside of existing right-of-way has low to no archaeological potential.  | <br>Land outside of existing right-of-way has low to no archaeological potential.  | <br>Land outside of existing right-of-way has low to no archaeological potential.  |
| <b>Built Heritage Resources (BHRs) and Cultural Heritage Landscapes (CHLs)</b><br>BHRs – none<br>CHLs – none | <br>No BHRs or CHLs adjacent to Portage Parkway within the study area. | <br>No BHRs or CHLs adjacent to Portage Parkway within the study area.   | <br>No BHRs or CHLs adjacent to Portage Parkway within the study area.   | <br>No BHRs or CHLs adjacent to Portage Parkway within the study area.   | <br>No BHRs or CHLs adjacent to Portage Parkway within the study area.   |
| <b>Economic</b>  |   |   |   |   |   |
| <b>Capital Costs</b>   | <br>No impact.   | <br>\$5.5M not including property costs  | <br>\$5.5M not including property costs  | <br>\$5.5M not including property costs  | <br>\$5.5M not including property costs  |
| <b>Implementation</b>  |   |   |   |   |   |
| <b>Regulatory Framework</b>  | <br>No regulatory approvals apply.                                     | <br>No regulatory approvals anticipated.   | <br>No regulatory approvals anticipated.   | <br>No regulatory approvals anticipated.   | <br>No regulatory approvals anticipated.   |
| <b>Construction Staging and Phasing</b>  | <br>No staging is required.  | <br>Construction staging required (i.e. lane closures and temporary conditions at intersections).<br><br>Temporary Road required between Jane Street and Black Creek to support access to existing and future land uses. | <br>Construction staging required (i.e. lane closures and temporary conditions at intersections).<br><br>Temporary Road required between Jane Street and Black Creek to support access to existing and future land uses. | <br>Construction staging required (i.e. lane closures and temporary conditions at intersections).<br><br>Temporary Road required between Jane Street and Black Creek to support access to existing and future land uses. | <br>Construction staging required (i.e. lane closures and temporary conditions at intersections).<br><br>Temporary Road required between Jane Street and Black Creek to support access to existing and future land uses.<br><br>Flexibility/responsive to interim constraints on the south side, facilitating transformation of VMC. |
| <b>Municipal Servicing and Utilities Coordination</b>  | <br>No coordination with municipal servicing and utilities required. | <br>Coordination with municipal servicing and utilities required.  | <br>Coordination with municipal servicing and utilities required.  | <br>Coordination with municipal servicing and utilities required.  | <br>Coordination with municipal servicing and utilities required.  |

|   |   |  |   |   |
|---|---|--|---|---|
|  |  |  |  |  |
| Very Low Impact (Most Positive)   | Fairly Low Impact   | Medium Impact  | Fairly High Impact  | Very High Impact (Least Positive)   |

































| Technical Criteria   | Do Nothing   | (1) Widen Equally on Both Sides   | (2) Widen to the South with No Impact on North Side   | (3) Widen to the South with impact on North Side  | (4) Hold Right-of-Way on Majority of Parking Curb Lines (Both Sides)  |
|--|--|---|---|---|---|
| <b>Infrastructure Planning</b>   |  |   |   |   |   |
| <b>Alternative Transportation</b>  | ○<br>No opportunities to improve alternative transportation infrastructure.  | ●<br>Proposed sidewalk, cycle tracks and future transit improvements.   | ●<br>Proposed sidewalk, cycle tracks and future transit improvements.   | ●<br>Proposed sidewalk, multi-use pathway, cycle tracks and future transit improvements.                                      | ●<br>Proposed sidewalk, cycle tracks and future transit improvements.   |
| <b>Streetscape</b>   | ●<br>Modifications to streetscape not required.  | ●<br>Boulevards and street trees are provided in proposed cross-section with potential for planting more trees than existing. | ●<br>Boulevards and street trees are provided in proposed cross-section with potential for planting more trees than existing. | ●<br>Boulevards and street trees are provided in proposed cross-section with potential for planting more trees than existing. | ●<br>Boulevards and street trees are provided in proposed cross-section with potential for planting more trees than existing. |
| <b>Level of Service and Network Capacity</b>   | ○<br>No opportunities to improve level of service or increase network capacity. Operations expected to severely deteriorate for future 2031 without widening improvements. | ●<br>Improves level of service and Increases network capacity.  | ●<br>Improves level of service and Increases network capacity.  | ●<br>Improves level of service and Increases network capacity.  | ●<br>Improves level of service and Increases network capacity.  |
| <b>Planning Policy (Official Plan, VMC Secondary Plan, Transportation Master Plan)</b> | ○<br>Not consistent with Official/Secondary Plan and Transportation Master Plan.   | ●<br>Conforms to Official/Secondary Plan and Transportation Master Plan.  | ●<br>Conforms to Official/Secondary Plan and Transportation Master Plan.  | ●<br>Conforms to Official/Secondary Plan and Transportation Master Plan.  | ●<br>Conforms to Official/Secondary Plan and Transportation Master Plan.  |
| <b>Stormwater Management</b>   | ●<br>No impact.  | ◐<br>Treatment for increased runoff will be determined.<br>Black Creek crossing evaluation tabled separately.                 | ◐<br>Treatment for increased runoff will be determined.<br>Black Creek crossing evaluation tabled separately.                 | ◐<br>Treatment for increased runoff will be determined.<br>Black Creek crossing evaluation tabled separately.                 | ◐<br>Treatment for increased runoff will be determined.<br>Black Creek crossing evaluation tabled separately.                 |
| <b>Traffic Safety</b>  | ○<br>No opportunities to improve traffic safety.   | ●<br>Improves overall safety.   | ●<br>Improves overall safety.   | ●<br>Improves overall safety.   | ●<br>Improves overall safety.   |

|  |                          |                      |                           |  |
|--|--------------------------|----------------------|---------------------------|--|
| ●                                      | ◐                        | ◑                    | ◒                         | ○  |
| <b>Very Low Impact (Most Positive)</b> | <b>Fairly Low Impact</b> | <b>Medium Impact</b> | <b>Fairly High Impact</b> | <b>Very High Impact (Least Positive)</b> |






| Technical Criteria        | Do Nothing  | (1) Widen Equally on Both Sides   | (2) Widen to the South with No Impact on North Side   | (3) Widen to the South with Impact on North Side  | (4) Hold Right-of-Way on Majority of Parking Curb Lines (Both Sides)  |
|---------------------------|---|---|---|---|---|
| <b>Natural</b>            |   |   |   |   |   |
| <b>Aquatic</b>            | <br>No impact.   | <br>Represents minimal level of intrusion into aquatic habitat.  | <br>Represents minimal level of intrusion into aquatic habitat.  | <br>Represents minimal level of intrusion into aquatic habitat.  | <br>Represents minimal level of intrusion into aquatic habitat.  |
| <b>Avian and Wildlife</b> | <br>No impact.   | <br>Represents minimal level of intrusion into woodlands and associated wildlife habitat.  | <br>Represents minimal level of intrusion into woodlands and associated wildlife habitat.  | <br>Represents minimal level of intrusion into woodlands and associated wildlife habitat.  | <br>Represents minimal level of intrusion into woodlands and associated wildlife habitat.  |
| <b>Natural Areas</b>      | <br>No impact.   | <br>No natural areas to be disturbed.  | <br>No natural areas to be disturbed.  | <br>No natural areas to be disturbed.  | <br>No natural areas to be disturbed.  |
| <b>Species at Risk</b>    | <br>No impact.   | <br>Boulevard trees may provide nesting habitat for birds protected under the Migratory Birds Protection Act (1994); however little value for wildlife.                | <br>Boulevard trees may provide nesting habitat for birds protected under the Migratory Birds Protection Act (1994); however little value for wildlife.                | <br>Boulevard trees may provide nesting habitat for birds protected under the Migratory Birds Protection Act (1994); however little value for wildlife.                  | <br>Boulevard trees may provide nesting habitat for birds protected under the Migratory Birds Protection Act (1994); however little value for wildlife.                |
| <b>Vegetation</b>         | <br>No impact.   | <br>Displaces roadside trees and part of hedgerows on both sides of Portage Parkway. Represents moderate level of intrusion. Vegetation will be replaced or replanted. | <br>Displaces roadside trees and part of hedgerows on both sides of Portage Parkway. Represents moderate level of intrusion. Vegetation will be replaced or replanted. | <br>Displaces roadside trees and part of hedgerows on south side of Portage Parkway only. Represents minor level of intrusion. Vegetation will be replaced or replanted. | <br>Displaces roadside trees and part of hedgerows on both sides of Portage Parkway. Represents moderate level of intrusion. Vegetation will be replaced or replanted. |
| <b>Watercourses</b>       | <br>No impact. | <br>No watercourses within study area.   | <br>No watercourses within study area.   | <br>No watercourses within study area.   | <br>No watercourses within study area.   |

|   |   |  |   |   |
|---|---|--|---|---|
|  |  |  |  |  |
| Very Low Impact<br>(Most Positive)  | Fairly Low Impact   | Medium Impact  | Fairly High Impact  | Very High Impact<br>(Least Positive)  |






| Technical Criteria  | Do Nothing  | (1) Widen Equally on Both Sides   | (2) Widen to the South with No Impact on North Side   | (3) Widen to the South with impact on North Side  | (4) Hold Right-of-Way on Majority of Parking Curb Lines (Both Sides)  |
|---|---|---|---|---|---|
| <b>Social</b>   |   |   |   |   |   |
| <b>Air Quality</b>  | <br>Congestion may lead to increased emissions and worsen air quality.   | <br>No measurable impact anticipated.  | <br>No measurable impact anticipated.  | <br>No measurable impact anticipated.  | <br>No measurable impact anticipated.  |
| <b>Businesses</b>   | <br>Congestion may increase travel times in VMC sub-area road network.   | <br>Removes 143 parking spaces from 5 commercial buildings on north side of Portage Parkway.   | <br>Impacts Walmart operations (no access to loading docks).   | <br>Removes 18 parking spaces from commercial building at northwest corner of Buttermill Avenue intersection.<br><br>Impacts Walmart operations (no access to loading docks).              | <br>Removes 18 parking spaces from commercial building at northwest corner of Buttermill Avenue intersection.  |
| <b>Emergency Services</b>   | <br>Congestion may impact emergency vehicle operations.  | <br>Improved access for emergency response vehicles.   | <br>Improved access for emergency response vehicles.   | <br>Improved access for emergency response vehicles.   | <br>Improved access for emergency response vehicles.   |
| <b>Property Requirements (approximate subject to detailed design)</b> | <br>No impact.   | <br>7,720 sq. m of property required.  | <br>7,900 sq. m of property required.  | <br>7,060 sq. m of property required.  | <br>7,550 sq. m of property required.  |
| <b>Noise Impacts</b>  | <br>No noise sensitive receptors in study area.  | <br>No noise sensitive receptors in study area.  | <br>No noise sensitive receptors in study area.  | <br>No noise sensitive receptors in study area.  | <br>No noise sensitive receptors in study area.  |
| <b>Property Access</b>  | <br>Congestion may reduce vehicle accessibility for commercial businesses on Portage Parkway.<br><br>Lack of dedicated left-turn lanes at several driveways may also worsen accessibility. | <br>Improved left-turn storage for 3 driveways.<br><br>Proposed raised centre medians to reduce vehicle accessibility at 2 driveways.<br><br>2 opportunities for driveway consolidation. | <br>Improved left-turn storage for 3 driveways.<br><br>Proposed raised centre medians to reduce vehicle accessibility at 2 driveways.<br><br>2 opportunities for driveway consolidation. | <br>Improved left-turn storage for 3 driveways.<br><br>Proposed raised centre medians to reduce vehicle accessibility at 2 driveways.<br><br>2 opportunities for driveway consolidation. | <br>Improved left-turn storage for 3 driveways.<br><br>Proposed raised centre medians to reduce vehicle accessibility at 2 driveways.<br><br>2 opportunities for driveway consolidation. |

|   |   |  |   |   |
|---|---|--|---|---|
|  |  |  |  |  |
| Very Low Impact (Most Positive)   | Fairly Low Impact   | Medium Impact  | Fairly High Impact  | Very High Impact (Least Positive)   |

Table 7: Part A – Recommended Alternative Design

| Technical Criteria      | Do Nothing  | (1) Widen Equally on Both Sides   | (2) Widen to the South with No Impact on North Side  | (3) Widen to the South with impact on North Side   | (4) Hold Right-of-Way on Majority of Parking Curb Lines (Both Sides)   |
|-------------------------|---|---|--|--|--|
| <b>Summary</b>          |   |   |  |  |  |
| <b>Overall Findings</b> | <br>Positive impacts include savings in capital costs as well as reduced impact on parking supply of local businesses.<br><br>Negative impacts are expected to be substantial, and are primarily associated with expected increased delay and overall congestion in the VMC sub-area road network. | <br>Positive impacts primarily concern improvements to existing transportation facilities, resulting in increased capacity of VMC sub-area network, improved level of service of Jane Street, and improved accommodation of active transportation.<br><br>Negative impacts primarily concern reduction of 143 parking spaces from 5 commercial buildings on north side of Portage Parkway. | <br>Positive impacts primarily concern improvements to existing transportation facilities, resulting in increased capacity of VMC sub-area network, improved level of service of Jane Street, and improved accommodation of active transportation.<br><br>Negative impacts primarily concern impact on Walmart operations (no access to loading docks). | <br>Positive impacts primarily concern improvements to existing transportation facilities, resulting in increased capacity of VMC sub-area network, improved level of service of Jane Street, and improved accommodation of active transportation.<br><br>Negative impacts primarily concern impact on Walmart operations (no access to loading docks) and reduction in 18 parking spaces from commercial building at northwest corner of Buttermilk Avenue intersection. | <br>Positive impacts primarily concern improvements to existing transportation facilities, resulting in increased capacity of VMC sub-area network, improved level of service of Jane Street, and improved accommodation of active transportation.<br><br>Negative impacts primarily concern reduction of 18 parking spaces from commercial building at northwest corner of Buttermilk Avenue intersection. |
| <b>Recommendation</b>   | Not carried forward   | Not carried forward   | Not carried forward  | Not carried forward  | <b>Recommended</b>   |

|   |   |  |   |   |
|---|---|--|---|---|
|  |  |  |  |  |
| <b>Very Low Impact (Most Positive)</b>  | <b>Fairly Low Impact</b>  | <b>Medium Impact</b>   | <b>Fairly High Impact</b>   | <b>Very High Impact (Least Positive)</b>  |

The alternative designs for Part A were compared to select the recommended design for widening Portage Parkway to four (4) through lanes as shown in **Table 6** and **Table 7**. The preferred design holds the right-of-way on the majority of parking curb lines on the North and South sides. It significantly minimizes property impact, affecting one property on the North side within the City’s right-of-way.

## 8.5 Preferred Design

Based on the evaluation of alternative design concepts and public consultation, the horizontal alignment of the preferred design is to:

- + Widen Portage Parkway to 4 through lanes, holding the right-of-way to the edge of the curb line for parking along the majority of the North side and along 101 Edgeley Boulevard (Walmart) on the South side. This preferred design significantly minimizes impacts, affecting one property on the North side. Improvements include improved access to several driveways through dedicated left turns, increased capacity of the VMC sub-area network, improved level of service on Jane Street, and improved accommodation of active transportation.

Key features of the preferred design are as follows:

- + Minimizes impacts to existing on-site private parking on the north side;
- + Compatible with the preferred option for Part B;
- + Provides flexibility for a logical and orderly staging of the widening and improvements to Portage Parkway, facilitating and in step with imminent and nearer term transformation of the VMC; and
- + Provides for seamless staging and advancing of improvements in coordination with the VMC planned street network.

The typical cross-section for the preferred design is shown in **Figure 20**, and the preferred design is shown in **Figure 21**.

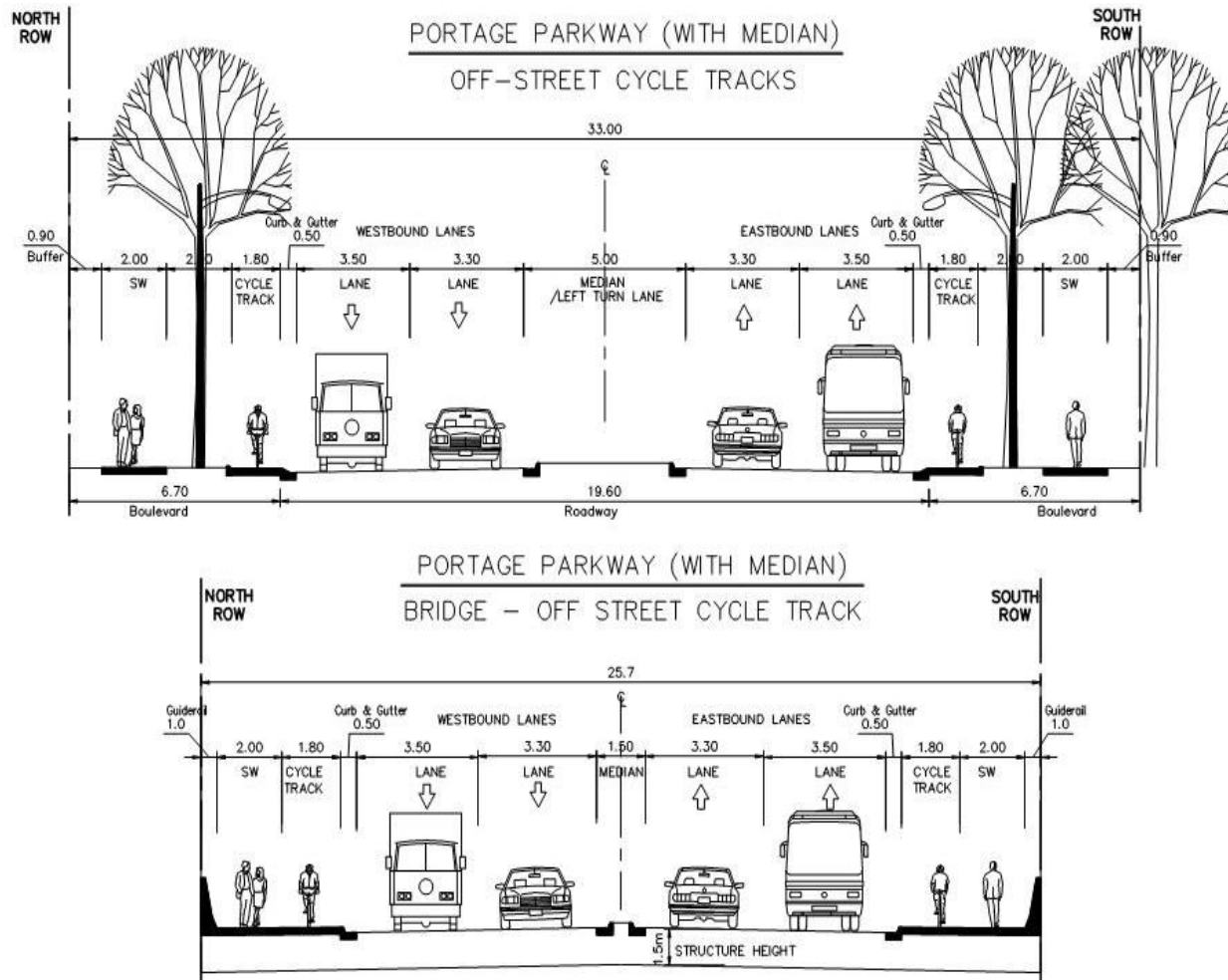
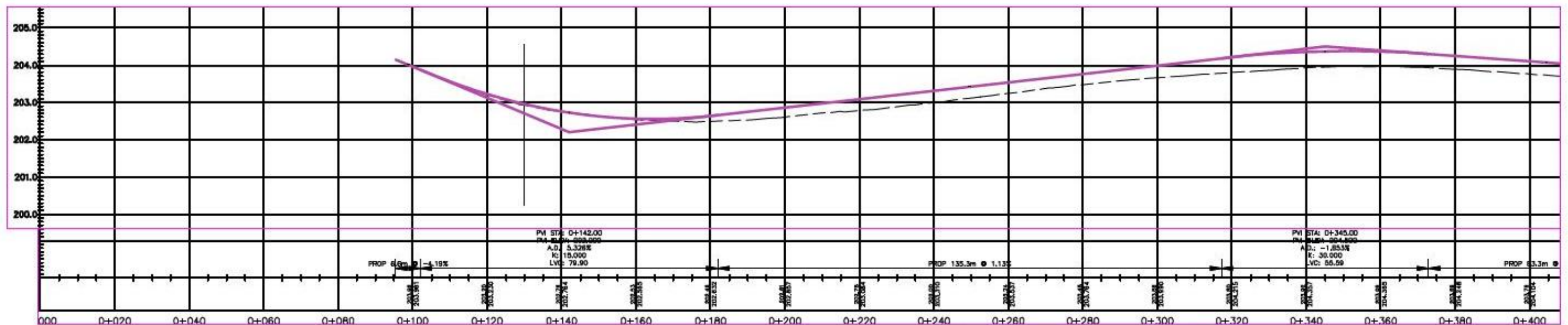
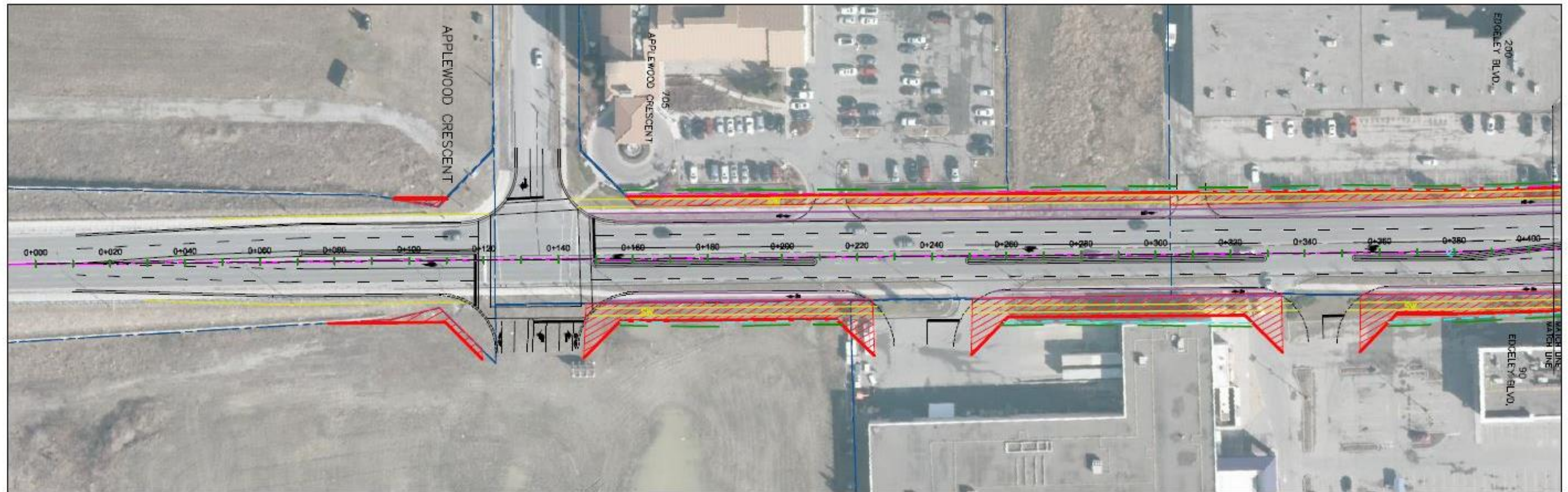
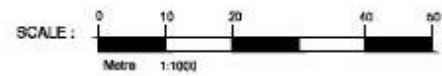


Figure 20: Portage Parkway Preferred Design Typical Cross-Sections



Portage Parkway Class EA  
 Preliminary Preferred Plan with Profile  
 Plate 1 of 3

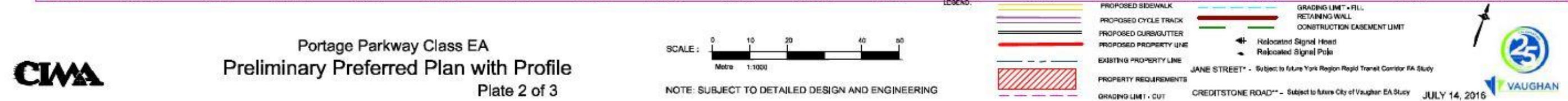
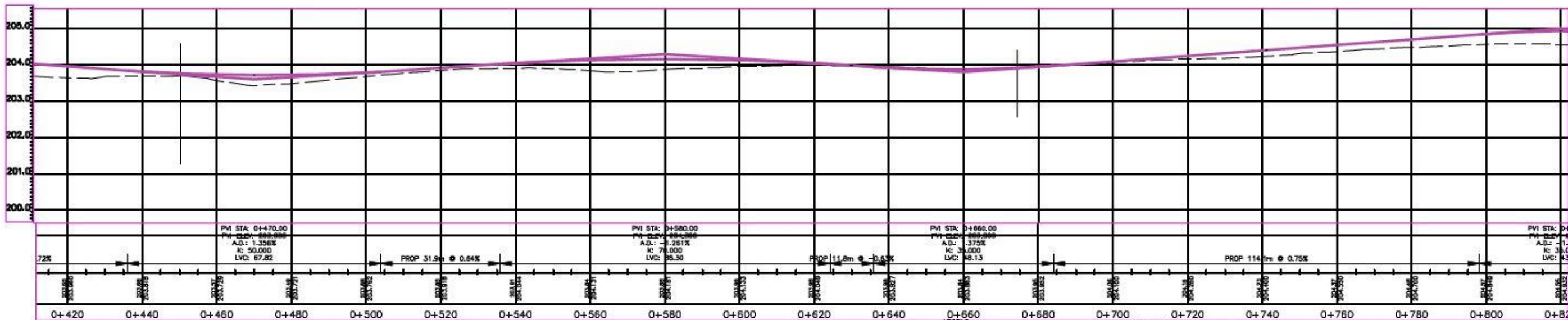
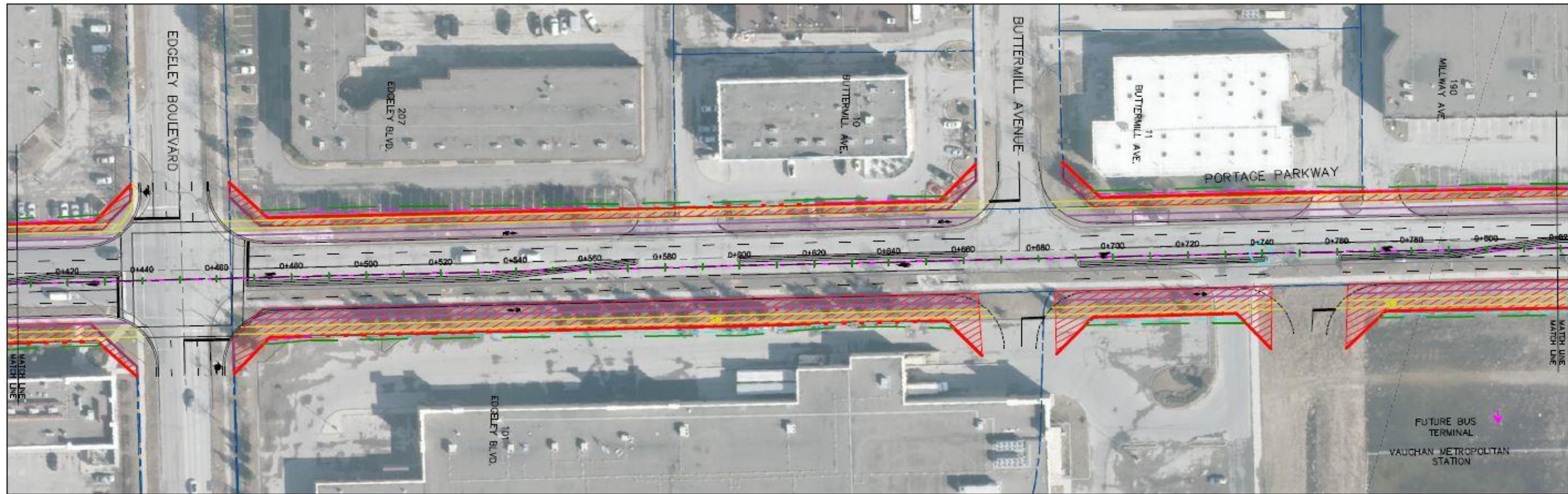


NOTE: SUBJECT TO DETAILED DESIGN AND ENGINEERING

LEGEND:

- PROPOSED SIDEWALK
- PROPOSED CYCLE TRACK
- PROPOSED CURB/GUTTER
- PROPOSED PROPERTY LINE
- EXISTING PROPERTY LINE
- PROPERTY REQUIREMENTS
- GRADING LIMIT - CUT
- GRADING LIMIT - FILL
- RETAINING WALL
- CONSTRUCTION EASEMENT LIMIT
- Relocated Signal Head
- Relocated Signal Pole
- JANE STREET\* - Subject to future York Region Rapid Transit Corridor EA Study
- CREDITSTONE ROAD\*\* - Subject to future City of Vaughan EA Study



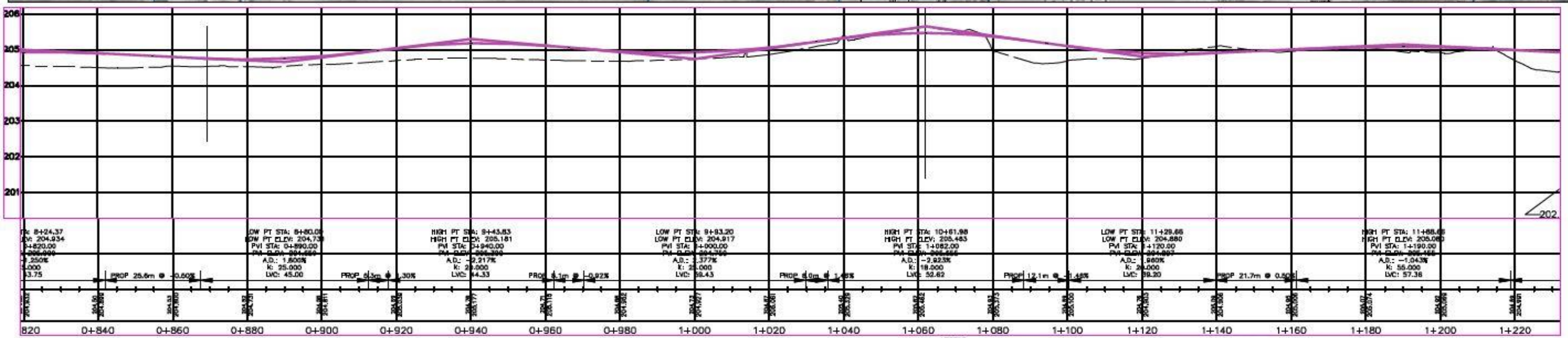
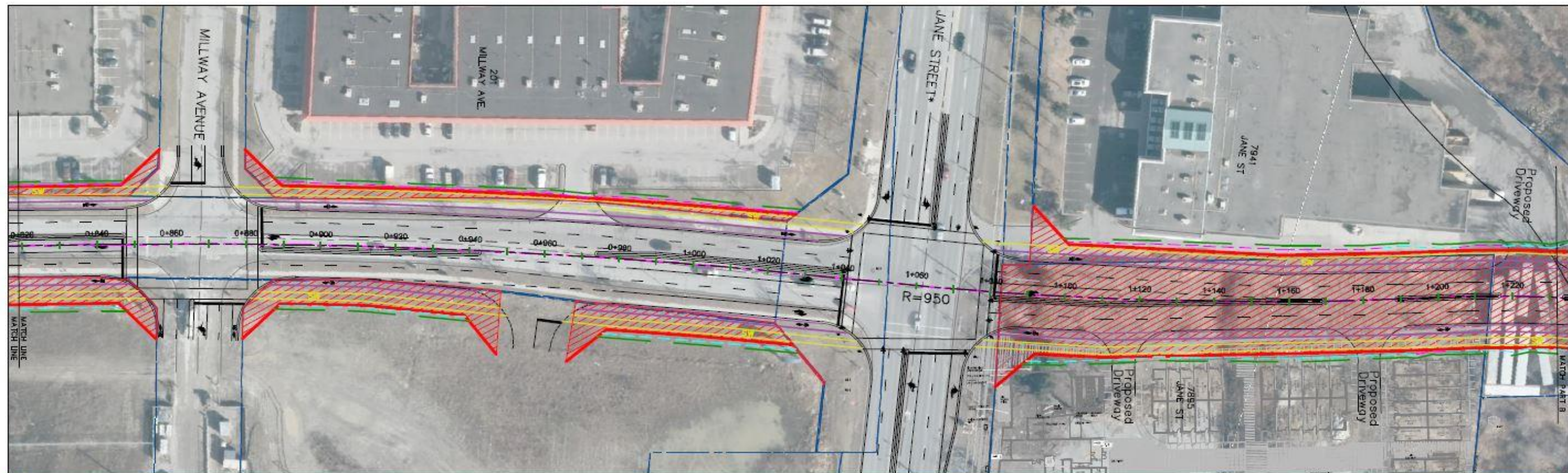


Portage Parkway Class EA  
 Preliminary Preferred Plan with Profile  
 Plate 2 of 3



JULY 14, 2016





Portage Parkway Class EA  
 Preliminary Preferred Plan with Profile  
 Plate 3 of 3

SCALE: 0 10 20 40 50  
 Metres 1:1000

NOTE: SUBJECT TO DETAILED DESIGN AND ENGINEERING

LEGEND:

- PROPOSED SIDEWALK
- PROPOSED CYCLE TRACK
- PROPOSED CURB/CUTTER
- PROPOSED PROPERTY LINE
- EXISTING PROPERTY LINE
- PROPERTY REQUIREMENTS
- GRADING LIMIT - CUT
- GRADING LIMIT - FILL
- RETAINING WALL
- CONSTRUCTION EASEMENT LIMIT
- Relocated Signal Head
- Relocated Signal Pole

JANE STREET\* - Subject to future York Region Rapid Transit Corridor EA Study  
 CREDITSTONE ROAD\*\* - Subject to future City of Vaughan EA Study

JULY 14, 2016



Figure 21: Preferred Design

## 9. Project Description

This section identifies the main features of the preferred design for the Portage Parkway corridor. Drawings for the preferred design for Portage Parkway are provided in **Figure 21**.

### 9.1 Design Criteria

Table 8: Design Criteria

| Parameter                      |                                       | Unit         | Values |                          |
|--------------------------------|---------------------------------------|--------------|--------|--------------------------|
| Classifications                |                                       |              | UCD 60 |                          |
| Design Speed                   |                                       | km/h         | 60     |                          |
| Number of Through Lanes        |                                       |              | 4      |                          |
| Design Vehicle                 |                                       |              | WB-20  |                          |
| Stopping Sight Distance        |                                       | m            | 85     |                          |
| Horizontal Alignment           | Minimum Radius                        | m            | 150    |                          |
|                                | Minimum Radius with Normal Crown      | m            | 1290   |                          |
|                                | Minimum Spiral Parameter A            | m            | 90     |                          |
| Vertical Alignment             | Grade                                 | Maximum      | %      | 5                        |
|                                |                                       | Minimum      | %      | 0.5                      |
|                                | K Value                               | Crest Curve  |        | 13                       |
|                                |                                       | Sag Curve    |        | 9                        |
| Cross-Section                  | Max. Superelevation                   |              | m/m    | 0.04                     |
|                                | Lane Width                            | Through Lane | m      | 3.5 (Outer) 3.3m (Inner) |
|                                |                                       | Turning Lane | m      | 3.5                      |
|                                |                                       | Bicycle Lane | m      | 1.5                      |
|                                | Median Width                          |              | m      | 5                        |
|                                | Sidewalk Width                        |              | m      | 2.0                      |
|                                | Cycling Track Width One-Way/(Two-Way) |              | m      | 1.8/(3.0)                |
|                                | Boulevard Width (Planting Area)       |              | m      | 2.0                      |
| Cross Fall                     |                                       | %            | 2      |                          |
| Intersection Daylight Triangle |                                       | m            | 15/10  |                          |
| Right-of-Way                   | Without Median                        |              | m      | 28                       |
|                                | With Median                           |              | m      | 33                       |

### 9.2 Plan and Profile

Currently, Portage Parkway is a two-way undivided Major Collector roadway with a maximum speed limit of 50km/h. The horizontal alignment is relatively straight within the study limits, and numerous driveway accesses exist servicing commercial and retail properties.

Portage Parkway from Applewood Crescent to Jane Street is to be widened to 4 through lanes with left turn lanes at intersections. A 1.8m cycle track on each side is proposed at boulevard level and

against the curb. A 2.0m sidewalk on each side is proposed just inside the property buffer. The proposed property width is 33m.

The extension from Jane Street to Creditstone Road has a similar cross-section as the widening section, except the right-of-way is narrowed to 25.7m at the creek crossing.

The existing vertical alignment is relatively flat. Some sections have grading less than 0.5%. The proposed vertical alignment is improved with minimum grading 0.5% for the entire study area.

### 9.3 Drainage and Stormwater Management Plan

For the existing section from Applewood Crescent to Edgeley Boulevard, it is anticipated that the proposed widening will have a negligible effect on the rate of stormwater runoff for this area and a new storm sewer system or enlargement of the existing storm sewers west of Edgeley Boulevard will not be required. However, relocation of catchbasin structures will be required during the detailed design to line up with the edge of the road and the revised profile.

A new local storm sewer system is proposed east of Edgeley Boulevard extending up to and outletting directly into Black Creek. The new local storm sewer system is proposed to help alleviate ponding concerns that the City of Vaughan has noticed along Millway Avenue, south of Portage Parkway. The preliminary design for the new sewer system consists of:

- + 450mm and 675mm diameter storm sewers installed along the south edge of Portage Parkway;
- + Installation at grades of 0.2% to 0.4% in order to maintain the minimum cover of 1.2m at Edgeley Boulevard; and,
- + Outlets into Black Creek at an invert elevation of 199.20m.

The City of Vaughan does not require quantity control of stormwater runoff from Portage Parkway prior to discharge to Black Creek, as Black Creek has an existing online stormwater management facility. Quality control of stormwater runoff will be managed through the use of an oil/grit separator prior to discharge into Black Creek. Stormceptors are proposed to provide enhanced level of quality control. Two Stormceptor units are proposed, one for each outlet into Black Creek. The 675mm diameter storm sewer on the west side of Black Creek will be serviced by a Stormceptor STC9000, which will provide 80% removal of Total Suspended Solids (TSS). For detailed information, the Stormwater Management Report is provided in **Appendix A**.

### 9.4 Municipal Infrastructure

There is a sanitary sewer along the north side of Portage Parkway. Depending upon the condition of the sewer, it will either be protected or replaced during reconstruction of the roadway. This will be a consideration during detailed design and engineering.

The City has watermains within the study area that may need to be replaced as part of the road construction. The exact requirements for replacing watermains will be examined more closely in the detail design stage.

Water servicing projects were recommended in the VMC Municipal Servicing Class EA Master Plan as part of infrastructure supporting the VMC Secondary Plan, including:

- + 300mm diameter watermain along Applewood Crescent (south side of Portage Parkway),
- + New 300-400mm diameter watermain along the future Portage Parkway from Jane Street to Creditstone Road, for a total length of approximately 570m.

## 9.5 Utilities

A number of utilities will require relocation to accommodate the recommended roadway design, such as:

- + Underground bell cable may require relocation where it is needed.
- + Rogers buried fiber may require relocation where it is needed.
- + Enbridge pipe which is significant within the study corridor. The pipes are generally located on the south side of Portage Parkway. The exact locations need to be confirmed in the detailed design.
- + All Stream underground ducts and cable may require relocation where it is needed.
- + PowerStream underground ducts and cable may require relocation where it is needed.
- + If possible, avoid placement of utilities under planting area.

The proposed utility relocations are shown in **Figure 22**. Placing the cable chamber under the boulevard is preferred, as it is easy to construct and maintain. Placing the cable chamber under the sidewalk or cycle track will not provide flexibility for any future maintenance.

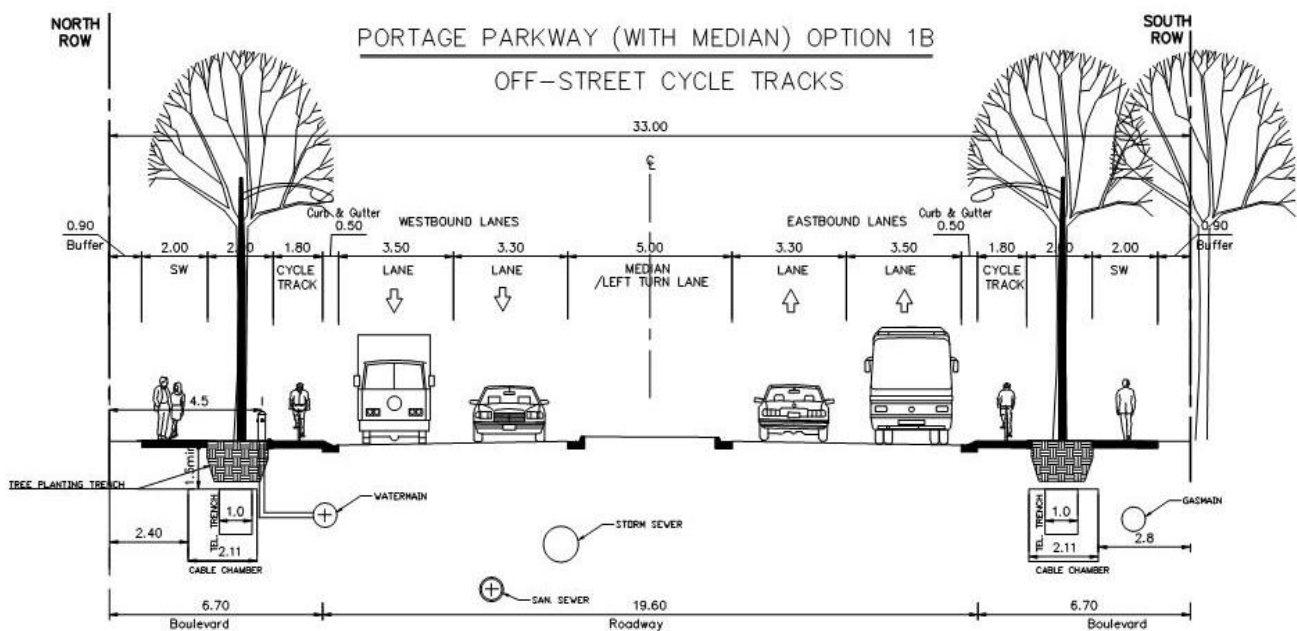


Figure 22: Preliminary Utility Locations subject to Detail Design

## 9.6 Cycling and Pedestrian Facilities

### 9.6.1 Portage Parkway (Part A)

The preferred design includes a 6.7m wide boulevard on the north and south side, which can accommodate both cycling and pedestrian facilities. Within the boulevard, a 2.0m sidewalk, 1.8m cycle track, continuous tree trenches, and 0.9m buffer are proposed.

### 9.6.2 Black Creek Channel Crossing

The preferred design of the ConSpan culvert crossing includes a 3.8m wide boulevard on the north and south side, which can accommodate both cycling and pedestrian facilities. Within the boulevard, a 1.8m cycle track and a 2.0m sidewalk are proposed.

## 9.7 Traffic Signals and Illumination

In addition to the three existing signalized intersections, the other intersection at Millway Avenue is proposed to be signalized. For the three existing traffic signals, modifications, such as pole, signal head, and handwell relocations, are required due to the road widening. The signal modifications and new traffic signal design will be determined in the detail design stage.

The preferred design includes boulevards on both sides of the street which provide street illumination consistent with a Standard Urban streetscape in the City-wide Streetscape Implementation Manual and Financial Strategy.

## 9.8 Streetscape

The preferred design includes boulevards on both sides of the street and landscape elements with the exception of intersections and bridge crossing. In facilitating implementation of Standard Urban streetscape, consistent with the City-wide Streetscape Implementation Manual and Financial Strategy, streetscape infrastructure will function as vital green infrastructure contributing to creating a robust urban canopy, with open planters capturing storm water and contribute to the overall aesthetics of the road corridor and provide a safe, pedestrian-friendly environment in the broader context of improving and extending Portage Parkway as a multi-modal street. Street furnishings will be coordinated with the VMC Streetscape and Open Space as the project continues through the detailed design stages of the project.

## 9.9 Driveway Regrading

Road widening will reduce driveway length and increase driveway grading. During reconstruction, all driveways will be regraded to obtain an acceptable grade.



## 9.10 Property Requirements

The preferred design for the widening and improvements will require acquiring lands (as subject to applicable processes) from all properties along Portage Parkway of approximately 7.7m from the south and 3.6m from the north, from generally west of Applewood Crescent to Jane Street.

In order to establish a new right-of-way, the extension from Jane Street to the interim terminus west of Black Creek will require the acquisition of lands (as subject to applicable processes) in keeping with VMC Secondary Plan polices.

## 9.11 Pavement

A geotechnical investigation will be completed for the detail design.

## 9.12 Traffic Maintenance and Construction Staging

Traffic disruption will be minimized as much as possible during construction. During peak periods, the City will attempt to keep one lane open per direction on Portage Parkway.

Every effort will be made to maintain driveway access during the widening and extension construction period. Driveways may be temporarily closed for short periods. If there are no alternative driveways available, half driveway width closures may be implemented temporarily.

### 9.13 Capital Cost Estimate

The estimated total project cost associated with the proposed improvements, including engineering, construction, utility relocations and other project costs is approximately:

- + \$9,200,000 for Part A, widening Portage Parkway from Applewood Crescent to West of the Black Creek. The detailed cost estimate for Part A is shown in **Table 9**.

**Table 9: Part A – Detailed Cost Estimate**

| Part A – Cost Estimate – Section 1 (0+110-1+238) 1128m                                    |                                  |                |                    |                |                       |
|---|----------------------------------|----------------|--------------------|----------------|-----------------------|
| Item No.  | Description                      | Unit           | Estimated Quantity | Unit Price     | Total Price           |
| 1   | Clearing and Grubbing            | m <sup>2</sup> | 29500              | \$13.50        | \$398,250             |
| 2   | Earth Borrow                     | m <sup>3</sup> | 9000               | \$13.00        | \$117,000             |
| 3   | Earth Excavation                 | m <sup>3</sup> | 9000               | \$13.50        | \$121,500             |
| 4   | Remove Asphalt                   | m <sup>2</sup> | 7700               | \$11.50        | \$88,550              |
| 5   | Asphalt HL-1                     | t              | 1980               | \$115.00       | \$227,700             |
| 6   | HDBC                             | t              | 6160               | \$100.00       | \$616,000             |
| 7   | Granular A                       | m <sup>3</sup> | 4428               | \$23.00        | \$101,844             |
| 8   | Granular B                       | m <sup>3</sup> | 15498              | \$14.60        | \$226,271             |
| 9   | Concrete Sidewalk                | m <sup>2</sup> | 4510               | \$200.00       | \$902,000             |
| 10  | Concrete Median                  | m <sup>2</sup> | 2200               | \$75.00        | \$165,000             |
| 11  | Asphalt Cycle Track              | m              | 2256               | \$300.00       | \$676,800             |
| 12  | Cycle Track Curb                 | m              | 672                | \$75.00        | \$50,400              |
| 13  | Concrete Curb & Gutter           | m              | 4522               | \$75.00        | \$339,150             |
| 14  | Catch Basin                      | each           | 58                 | \$3,500.00     | \$203,000             |
| 15  | Storm Pipe                       | m              | 1128               | \$700.00       | \$789,600             |
| 16  | Pavement Marking & Symbols       | m              | 6760               | \$5.00         | \$33,800              |
| 17  | Utility Relocation               | LS             | 1                  | \$1,000,000.00 | \$1,000,000           |
| 18  | Traffic Signal Modifications     | each           | 3                  | \$110,000      | \$330,000             |
| 19  | New Traffic Signal Installations | each           | 1                  | \$250,000      | \$250,000             |
| 20  | Street Lighting                  | m              | 1128               | \$400.00       | \$451,200             |
| <b>Sub-Total Construction Cost</b>  |                                  |                |                    |                | <b>\$7,088,065</b>    |
| Minor Items (20% of Construction Cost)  |                                  |                |                    |                | \$1,417,612.96        |
| Estimated Engineering - Civil, Geo, Etc. (10%)  |                                  |                |                    |                | \$708,806.48          |
| <b>Total Construction Cost</b>  |                                  |                |                    |                | <b>\$9,214,484.24</b> |
| Notes: Property cost is not included.<br>COST SUBJECT TO DETAILED DESIGN AND ENGINEERING. |                                  |                |                    |                |                       |

## 10. Implementation and Mitigation Plan

The EA study sets out an Implementation and Mitigation Plan to facilitate the logical and orderly staging of the widening, extension and improvements. These plans are in accordance with the ongoing and emerging transformation of the VMC with priority to advancing Portage Parkway Widening and Easterly Extension to West of Black Creek (Part A), particularly in the vicinity of the mobility hub/VMC subway station.

Key elements of the plan, recognizing broadly that timelines of construction are commensurate with the transformation of the VMC, include and facilitate:

- + Completion of design and engineering for the reconstruction of Portage Parkway from Applewood Crescent to Jane Street as currently programmed in the Capital Budget in 2016-2017,
- + Programming and allocation of funding for the reconstruction of Part A dovetailing (where possible) with the ongoing and emerging detailed design of intersecting north-south VMC streets,
- + Obtaining approvals (permits, etc.) and acquiring property (where necessary) in a timely manner,
- + Co-ordination of improvements, works and construction activities on Jane Street and at the Jane Street intersection as subject to the future Rapid Transit Corridor EA,
- + Improvements on Portage Parkway from Jane Street to the re-aligned Millway Avenue in the vicinity of the mobility hub/VMC subway station and York Region Transit (YRT) bus terminal, including auxiliary turn lanes from the signalized intersection with the re-aligned Millway Avenue to Jane Street in 2017-2018,
- + Improvements to Portage Parkway from Applewood Crescent to Edgeley Boulevard, including auxiliary/turn lanes at Applewood Crescent at the currently signalized intersection,
- + Completion of widening from two to four lanes from Edgeley Boulevard to Jane Street facilitating bicycles and streetscape infrastructure,
- + Provision of traffic control signals at the Buttermill Avenue (local street) intersection, and
- + Extension from the Jane Street intersection to a terminus/cul-de-sac west of the Black Creek Channel in 2017-2018.

**Table 10** summarizes the impacts, mitigation measures and commitments for this Class EA project.

**Table 10: Impacts, Mitigation Measures and Commitments**

| Issue / Impact   | Approval Agency / Concerned Party              | Mitigation Measures / Commitments  |
|--|--|--|
| <b>Air Quality</b><br>Temporary construction operations may result in dust production. | Ministry of the Environment and Climate Change | Apply best management practices to manage emissions from construction operations (i.e. construction dust). Please note that the Ministry recommends that non-chloride dust suppressants be applied. For a comprehensive list of fugitive dust prevention and control measures, refer to Cheminfo Services Inc. Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities; Report prepared for Environment Canada (March 2005). |



| Issue / Impact  | Approval Agency / Concerned Party   | Mitigation Measures / Commitments   |
|---|---|---|
|   |   | Monitoring and mitigation measures will be part of the special provisions to construction tender documents.   |
| <p><b>Archaeology</b><br/>           Underground archaeological resources may be identified during construction activities. These resources may be harmed if not properly identified and protected.</p> | <p>Ministry of Tourism, Culture and Sport</p>   | <p>The entirety of the Portage Parkway Municipal Class EA Archaeological Project Area may be considered free from further archaeological concern. No further archaeological assessment of the project area is required.</p> <p>Should deeply buried archaeological resources be identified during ground disturbance activity associated with future development of the study area, ground disturbance activities should be immediately halted and the Archaeology Division of the Culture Programs Unit of the Ministry of Tourism, Culture and Sport notified.</p>  |
| <p><b>Environmental Site Conditions</b><br/>           Contaminated soil may be identified during construction activities.</p>  | <p>Ministry of the Environment and Climate Change</p>   | <p>Based on the Phase 1 ESA, a Phase 2 ESA is required to support submission of a Record of Site Condition (“RSC”) for the study area corridor prior to construction, should a RSC be required.</p> <p>Prior to construction, routine soil sampling along the alignment of the preferred alternative should be conducted for analysis of metals, volatile organic compounds, and petroleum hydrocarbons to assist with the management of excess fill generated during construction activities. The removal, movement and storage of soil should be managed in accordance with the Ministry of the Environment and Climate Change document “Management of Excess Soil – A Guide for Best Management Practices” (2014).</p> <p>Updated Phase 1 ESAs, including a site visit, should be conducted for each property at 20 Barnes Court and 400 Creditstone Road prior to construction.</p> <p>Contact the Ministry’s York Durham District Office for further consultation if contaminated sites are present.</p>   |
| <p><b>Natural Environment</b><br/>           Construction activities may harm natural environments such as waterbodies, fish habitats and bird habitations.</p>   | <p>Fisheries and Oceans Canada<br/>           Ministry of Natural Resources and Forestry<br/>           Toronto and Region Conservation Authority</p> | <p>Conduct breeding bird surveys and further assessment of potential riparian wetlands to inform the design and permitting stages of the project.</p> <p>If construction limits extend to within 30m of a waterbody, a self-assessment for impacts must be conducted for Fisheries and Oceans Canada; If impacts are unavoidable, a Project Review is required for Fisheries and Oceans Canada.</p> <p>Work within watercourses, wetlands or waterbodies must be in compliance with Ontario Regulation (O. Reg.) 166/06 <i>Toronto and Region Conservation Authority Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses</i>.</p> <p>Adhere to restricted activity construction timing windows for fish and fish habitat (April 1 to June 30) for works near water.</p> <p>Avoid removal of vegetation during the active season for breeding birds (April 15 to August 15), unless construction disturbance is preceded by a nesting survey conducted by a qualified biologist.</p> <p>Avoid activities resulting in major noise and vibration levels during the breeding bird season (April 15 to August 15).</p> |



| Issue / Impact  | Approval Agency / Concerned Party   | Mitigation Measures / Commitments   |
|---|---|---|
|   |   | Implement standard best management practices, including sediment and erosion controls and spills prevention, during construction.   |
| <b>Noise</b><br>Construction activities may cause a temporary increase in noise levels within the study area.   | Ministry of the Environment and Climate Change (MOECC)<br>Property Owners | All construction equipment should be properly maintained according to manufacturer's recommendation and be in accordance with MOECC model and municipal noise control by law. If any construction activities involve piling or blasting, they should be carried out in accordance with OPSS 120 and MOECC NPC-119. Construction equipment or activities typically known to be of annoyance should consider limited operating time within the day time period, maintain an acceptable setback distance from Noise Sensitive Areas (NSAs), carry out additional noise studies or monitoring program, implement noise barriers or investigate alternative construction equipment<br>Implement a process for dealing with noise complaints during the construction phase.                       |
| <b>Property Acquisition</b><br>Lands are required from all properties along Portage Parkway from generally west of Applewood Crescent to Jane Street and for the extension to the interim terminus west of Black Creek. | City of Vaughan<br>Property Owners  | The City of Vaughan will contact the affected property owners regarding property acquisition, during detail design and prior to construction.<br>10 Buttermilk Avenue – opportunity for further exploring options for accommodating/arranging parking in association with property acquisition process.<br>It is recommended that the orphan parcel from the property at the south east of 7941 Jane Street, resulting from and not otherwise required for the Portage Parkway right-of-way, be considered to form part of the VMC Environmental Open Space, as subject to future process(es) for property acquisition.   |
| <b>Stormwater Management</b><br>New stormwater infrastructure will be required in order to reduce ponding.  | City of Vaughan<br>Toronto and Region Conservation Authority              | A new local storm sewer system is proposed east of Edgeley Boulevard extending up to Black Creek to help alleviate ponding concerns.<br>The catchbasins on Portage Parkway, at the intersections of Edgeley Boulevard and Millway Avenue, will need to be relocated to low points created on the adjacent streets, as Portage Parkway will become the major road at both of these intersections.  |
| <b>Traffic Management Access and Parking</b><br>Traffic operations will be restricted and driveway access will be reduced during construction.  | City of Vaughan<br>York Region<br>Property Owners<br>Road Users           | The City of Vaughan will keep one (1) lane per direction open during construction.<br>7941 Jane Street access includes: <ul style="list-style-type: none"> <li>• Relocated access north on Jane Street permitting right-in/right out and left in movements (left-out restricted).</li> <li>• Full moves access to Portage Parkway at the east property limits.</li> <li>• Opportunity for additional westerly access restricted to right-in/right only movements to be further investigated through future processes.</li> </ul> Submit an application to York Region for Corridor Control Permits with all necessary information for the Region to review, including detailed engineering design, construction plan, traffic management plan, etc. Access to Jane Street is subject to the |

| Issue / Impact   | Approval Agency / Concerned Party   | Mitigation Measures / Commitments   |
|--|---|---|
|  |   | <p>findings of future Environmental Assessment Study for Rapid Transit.</p> <p>A construction staging plan will be developed during detail design.</p>  |
| <p><b>Trees and Landscape</b><br/>           Trees may be harmed or may require removal during construction.</p>                             | <p>City of Vaughan</p>  | <p>Trees removed during construction will be replaced.</p> <p>A landscape plan will be developed during detail design.</p> <p>Grade changes and construction activities that could cause soil compaction should be kept away from trees as much as possible.</p> <p>If roots will be damaged by excavation equipment, it is better to cut roots cleanly with sharp pruning tools rather than allow them to be torn by large equipment.</p> <p>Equipment and materials should not be stored near trees and equipment should not be left idling where exhaust could burn foliage.</p> <p>In developing the site, new potential targets will be introduced and this must be considered when developing a tree preservation plan.</p> |
| <p><b>Utility Relocation</b><br/>           A number of utilities will require relocation to accommodate the recommended roadway design.</p> | <p>City of Vaughan<br/>           All Stream<br/>           Bell Canada<br/>           Enbridge Gas<br/>           Hydro One Networks<br/>           Powerstream<br/>           Rogers Cable<br/>           York Region</p> | <p>Utilities will be relocated prior to construction.</p>   |
| <p><b>Waste Disposal</b><br/>           Waste will be produced during construction which requires proper disposal.</p>                       | <p>Ministry of the Environment and Climate Change</p>   | <p>All waste generated during construction must be disposed of in accordance with the Ministry requirements.</p>  |
| <p><b>Permits</b><br/>           Based on detail design plans, control permits may be required.</p>  | <p>Ministry of Transportation Ontario<br/> <br/>           Toronto and Region Conservation Authority<br/> <br/>           Ministry of the Environment and Climate Change</p>  | <p>Send detail design plans to the Ministry of Transportation to determine the need for control permits.</p> <p>Confirm the need for permits with approval authorities during detail design (e.g. Development, Interference with Wetlands and Alterations to Shorelines and Watercourses (Ontario Regulation 166/06) from TRCA, and Permit to Take Water from the Ministry of Environment and Climate Change).</p>  |



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## **Appendix A – Technical Reports**

## **Appendix B – Consultation**



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